3GPP2 C.S0057-F

Version 1.0

Date: September 2015

Band Class Specification for cdma2000 Spread Spectrum Systems

Revision	Description of Changes	Date
Rev E v1.0	L-band and S-band for xHPRD operation added. S-band for 1x and HRPD operation added	October 2010
Rev F v1.0	Mobile Satellite System Band for xHRPD added.	May 2015
Rev F v1.0	Re-publication text to fix editorial issues	September 2015

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FOREWORD

(This foreword is not part of this Standard)

This Standard was prepared by Technical Specification Group C of the Third Generation Partnership Project 2 (3GPP2). This Standard contains the band class specifications of the IMT-2000 CDMA Multi-Carrier Mode. The IMT-2000 CDMA Multi-Carrier Mode consists of cdma2000®[1] Spread Spectrum Systems air interface specification [1], the CDMA High Rate Packet Data Air Interface Specification [2], and the Ultra Mobile Broadband™[2] Air Interface Specification [10]. Other specifications are required to complete the air interface and the rest of the system. Some of these specifications are listed in the References section.

Twenty different operating bands have been specified. Equipment built to this Standard can be used in a band subject to allocation of the band and the rules and regulations of the country to which the allocated band has been assigned.

[1] cdma2000® is the trademark for the technical nomenclature for certain specifications and standards of the Organizational Partners (OPs) of 3GPP2. Geographically (and as of the date of publication), cdma2000® is a registered trademark of the Telecommunications Industry Association (TIA-USA) in the United States.

[2] Ultra Mobile Broadband™ and (UMB™) are trade and service marks owned by the CDMA Development Group (CDG).

FOREWORD

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NOTES

This volume defines the band classes of the CDMA Spreading Rate 1 and Spreading Rate 3 multi-carrier air interface standard for [1], all the band classes for [2], and all the band classes for [10]. This volume consists of the following sections:

1. General. This section defines the terms and numeric indications used in this document. This section also describes the tolerances used throughout the document.

2. Requirements for Operation of [1]. This section describes the band classes for mobile stations and base stations complying with [1]. This section also describes the open loop output powers for the mobile stations operating in different band classes.

3. Requirements for Operation of [2]. This section describes the band classes for access terminals and access networks complying with [2]. This section also describes the open loop output powers for the access terminals operating in different band classes.

4. Requirements for Operation of [10]. This section describes the band classes for access terminals and access networks complying with [10].

NOTES

1. Compatibility, as used in connection with this Standard, is understood to mean: Any mobile station is able to place and receive calls. Conversely all base stations are able to place and receive calls for any mobile station.
2. This compatibility Standard is based upon spectrum allocations that have been defined by various governmental administrations.
3. Standards [3], [4], [5], [6], [11], and [12] provide specifications and measurement methods for base stations and mobile stations.
4. Those wishing to deploy systems compliant with this standard should also take notice of the requirement to be compliant with the applicable rules and regulations of local administrations.
5. Those wishing to deploy systems compliant with this Standard should also take notice of the electromagnetic exposure criteria for the general public and for radio frequency carriers with low frequency amplitude modulation.
6. “Base station” refers to the functions performed on the land side, which are typically distributed among a cell, a sector of a cell, and a mobile switching center.
7. “Shall” and “shall not” identify requirements to be followed strictly to conform to the standard and from which no deviation is permitted. “Should” and “should not” indicate that one of several possibilities is recommended as particularly suitable, without mentioning or excluding others, that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is discouraged but not prohibited. “May” and “need not” indicate a course of action permissible within the limits of the standard. “Can” and “cannot” are used for statements of possibility and capability, whether material, physical, or causal.
8. Footnotes appear at various points in this Standard to elaborate and further clarify items discussed in the body of the Standard.
9. Unless indicated otherwise, this Standard presents numbers in decimal form. Binary numbers are distinguished in the text by the use of single quotation marks.

1 GENERAL

1.1 Terms

Access Channel. A Reverse CDMA Channel used by mobile stations for communicating to the base station. The Access Channel is used for short signaling message exchanges, such as call originations, responses to pages, and registrations. The Access Channel is a slotted random access channel.

Access Network. The network equipment providing data connectivity between a packet switched data network (typically the Internet) and the access terminals. An access network is equivalent to a base station in [1].

Access Probe. A sequence of signaling transmitted by the Access Terminal to establish a connection to the Access Network.

Access Terminal. A device providing data connectivity to a user. An access terminal may be connected to a computing device such as a laptop personal computer or it may be a self-contained data device such as a personal digital assistant. An access terminal is equivalent to a mobile station in [1].

Band Class. A set of frequency channels and a numbering scheme for these channels.

Band Subclass. A set of frequency channels and a numbering scheme for these channels representing a subset of Band Class frequency coverage requirements.

Base Station. A fixed station used for communicating with mobile stations. Depending upon the context, the term base station may refer to a cell, a sector within a cell, an MSC, or other part of the wireless system. See also MSC.

CDMA. See Code Division Multiple Access.

CDMA Cellular System. The entire system supporting Domestic Public Cellular Service operation as embraced by this Standard.

CDMA Channel. The set of channels transmitted between the base station and the mobile stations within a given CDMA frequency assignment.

CDMA Channel Number. An 11-bit number corresponding to the center of the CDMA frequency assignment.

CDMA Chip Rate. For the base cdma2000 system [1], the chip rate is equivalent to the spreading rate and is either 1.2288 Mcps or 3.6864 Mcps. For the CDMA High Rate Packet Data Air Interface Specification [2], the chip rate is equivalent to the spreading rate of the channel and is 1.2288 Mcps.

CDMA Frequency Assignment. A 1.23 or 3.69 MHz segment of spectrum. The center of a CDMA frequency assignment is given by a CDMA Channel Number.

CDMA Preferred Set. The set of CDMA channel numbers in a CDMA system corresponding to frequency assignments that a mobile station will normally search to acquire a CDMA Pilot Channel. For CDMA cellular systems, the primary and secondary channels comprise the CDMA Preferred Set.

Chip Rate. See CDMA Chip Rate or UMB Chip Rate.

Code Division Multiple Access (CDMA). A technique for spread-spectrum multiple-access digital communications that creates channels through the use of unique code sequences.

Enhanced Access Channel. A reverse channel used by the mobile for communicating to the base station. The Enhanced Access Channel operates in the Basic Access Mode and the Reservation Access Mode. It is used for transmission of short messages, such as signaling, MAC messages, response to pages, and call originations. It can also be used to transmit moderate-sized data packets.

GHz. Gigahertz (10^9 Hertz).

Invalid Channel Number. A channel number that shall not be mapped to a physical frequency.

MC. See Multi-Carrier.

Mcps. Megachips per second (10^6 chips per second).

Mean Output Power. The total transmitted calorimetric power measured in a specified bandwidth at the antenna connector when the transmitter is active.

MHz. Megahertz (10^6 Hertz).

Mobile Station. A station that communicates with the base station.

Multi-Carrier. A CDMA mode in the International Telecommunications Union IMT-2000 family of standards. The mode uses N ($N \geq 1$) adjacent 1.2288 Mcps direct-sequence spread RF carriers on the Forward CDMA Channel and a single direct-sequence spread RF carrier on the Reverse CDMA Channel.

Orthogonal Frequency Division Multiple Access (OFDMA). A multi-user version of the OFDM digital modulation scheme. Multiple access is achieved in OFDMA by assigning subsets of subcarriers to individual users.

Orthogonal Frequency Division Multiplexing (OFDM). A modulation technique that utilizes multiplexing based on orthogonal complex harmonic basis functions together with a cyclic prefix to allow multi-path resilience.

PCS. See Personal Communications Services.

PCS System. See Personal Communications Services System.

Personal Communications Services System. A configuration of equipment that provides PCS radiotelephone services.

Personal Communications Services (PCS). A family of mobile and portable radio communications services for individuals and businesses that may be integrated with a variety of competing networks. Broadcasting is prohibited and fixed operations are to be ancillary to mobile operations.

Physical Layer. The part of the communication protocol between the mobile station and the base station that is responsible for the transmission and reception of data. The physical layer in the transmitting station is presented a frame and transforms it into an over-the-air

waveform. The physical layer in the receiving station transforms the waveform back into a frame.

Primary CDMA Channel. A pre-assigned channel in a CDMA Cellular System for Spreading Rate 1 used by the mobile station for initial acquisition. See also Secondary CDMA Channel.

Radio Configuration. A set of Forward Traffic Channel and Reverse Traffic Channel transmission formats that are characterized by physical layer parameters such as data rates, modulation characteristics, and spreading rate.

RC. See Radio Configuration.

Reservation Access Mode. A mode used on the Enhanced Access Channel and Reverse Common Control Channel where a mobile station transmits an Enhanced Access preamble and an Enhanced Access header in the Enhanced Access probe. The Enhanced Access data is transmitted on a Reverse Common Control Channel using closed loop power control.

Reverse Common Control Channel. A portion of a Reverse CDMA Channel used for the transmission of digital control information from one or more mobile stations to a base station. The Reverse Common Control Channel can operate in the Reservation Access Mode. It can be power controlled and may support soft handoff.

Reverse Fundamental Channel. A portion of a Reverse Traffic Channel which carries higher-level data and control information from a mobile station to a base station.

Reverse Supplemental Channel. A portion of a Radio Configuration 3, 4, 5, 6, and 8 Reverse Traffic Channel which operates in conjunction with the Reverse Fundamental Channel or the Reverse Dedicated Control Channel in that Reverse Traffic Channel to provide higher data rate services, and on which higher-level data is transmitted.

Reverse Supplemental Code Channel. A portion of a Radio Configuration 1 and 2 Reverse Traffic Channel which operates in conjunction with the Reverse Fundamental Channel in that Reverse Traffic Channel, and (optionally) with other Reverse Supplemental Code Channels to provide higher data rate services, and on which higher-level data is transmitted.

Reverse Traffic Channel. A traffic channel on which data and signaling are transmitted from a mobile station to a base station. For Radio Configurations 1 and 2, the Reverse Traffic Channel is composed of a Reverse Fundamental Channel and up to seven Reverse Supplemental Code Channels. For Radio Configurations 3 through 6, the Reverse Traffic Channel is composed of a Reverse Fundamental Channel, a Reverse Dedicated Control Channel, or both and up to two Reverse Supplemental Channels. For Radio Configuration 8, the Reverse Traffic Channel is composed of a Reverse Fundamental Channel or up to two Reverse Supplemental Channels.

Secondary CDMA Channel. A pre-assigned channel in a CDMA Cellular System for Spreading Rate 1 used by the mobile station for initial acquisition. See also Primary CDMA Channel.

Serving Frequency. The CDMA frequency on which a mobile station is currently communicating with one or more base stations.

Spreading Rate. The PN chip rate of the Forward CDMA Channel or the Reverse CDMA Channel, defined as a multiple of 1.2288 Mcps.

Spreading Rate 1. Spreading Rate 1 is often referred to as "1X." A Spreading Rate 1 Forward CDMA Channel uses a single direct-sequence spread carrier with a chip rate of 1.2288 Mcps. A Spreading Rate 1 Reverse CDMA Channel uses a single direct-sequence spread carrier with a chip rate of 1.2288 Mcps.

Spreading Rate 3. Spreading Rate 3 is often referred to as "3X." A Spreading Rate 3 Forward CDMA Channel uses three direct-sequence spread carriers (see Multiple-Carrier Forward Channel) each with a chip rate of 1.2288 Mcps. A Spreading Rate 3 Reverse CDMA Channel uses a single direct-sequence spread carrier with a chip rate of 3.6864 Mcps.

SR. See Spreading Rate.

Sync Channel. A code channel in the Forward CDMA Channel which transports the synchronization message to the mobile station.

UMB Channel Number. An integer number from 0 to 65534 that is used to specify the center frequency of a UMB channel.

UMB Chip Rate. The chip rate for the Ultra Mobile Broadband Air Interface Specification [10] can be 1.2288 Mcps, 2.4576 Mcps, 4.9152 Mcps, 9.8304 Mcps, or 19.6608 Mcps.

UMB Preferred Set. The set of UMB channel numbers in a UMB system corresponding to frequency assignments that a mobile station will normally search to acquire a UMB superframe preamble.

1.2 Numeric Information

1.2.1 Mobile Station Stored Parameters

1XRL_FREQ_OFFSET$_S$ – A 2-bit parameter indicating the offset between the Reverse Link carrier frequency and the Forward Link carrier frequency when a Reverse Traffic Channel with Radio Configuration 3, 4, or 8 is used with a Forward Traffic Channel with Radio Configuration 6, 7, 8, 9, 11, or 12.

CDMACH$_S$ – CDMA Channel number. The CDMA Channel number currently used by the mobile station.

EACH_INIT_PWR$_S$ – Initial power offset for the Enhanced Access Channel.

EACH_PWR_STEP$_S$ – Power increment for successive Enhanced Access probes on the Enhanced Access Channel, in units of 1.0 dB.

INIT_PWR$_S$ – Initial power offset for Access Channel probes.

NOM_PWR$_S$ – Nominal transmit power offset. A correction factor to be used by mobile stations in the open loop power estimate, initially applied on the Access Channel.

NOM_PWR_EXT$_S$ – Extended nominal transmit power offset. A correction factor to be used by mobile stations in the open loop power estimate.

PWR_STEP$_S$ – Power increment for successive Access probes on the Access Channel, in units of 1.0 dB.

RCCCH_INIT_PWR$_S$ – Initial power offset for the Reverse Common Control Channel.

RCCCH_NOM_PWR$_S$ – Nominal transmit power offset. A correction factor to be used by mobile stations in the open loop power estimate, initially applied on the Reverse Common Control Channel.

RLGAIN_ADJ$_S$ – Gain adjustment applied to the Traffic Channel output power relative to the transmission power on the Access Channel, the Enhanced Access Channel, or the Reverse Common Control Channel.

RTC_NOM_PWR$_S$ – Reverse Traffic Channel Nominal Power. The nominal power to be used by the mobile station for its initial transmission if the mobile station does not use the Access Channel, the Enhanced Access Channel, or the Reverse Common Control Channel.

1.3 Tolerances

Unless otherwise specified, all values indicated are exact unless an explicit tolerance is stated. Also refer to [3], [4], [5], [6], [11], and [12].

1.4 System Selection Code

Table 1.4-1 lists the band class values and the system selection codes for the various band classes. See [7] (for Code) and [14] (for band class value and related standards) for more details.[3]

Table 1.4-1: System Selection Codes

Selected System	Band Class Value (Binary)	Code
Band Class 0, A-Band	00000	00
Band Class 0, B-Band	00000	01
Band Class 1, A Block	00001	02
Band Class 1, B Block	00001	03
Band Class 1, C Block	00001	04
Band Class 1, D Block	00001	05
Band Class 1, E Block	00001	06
Band Class 1, F Block	00001	07
Band Class 2, A-Band	00010	08
Band Class 2, B-Band	00010	09
Band Class 3, A-Band	00011	10

[3] Re-use of Codes 02 through 07 is permissible because the Band Class 14 A-Block through F-Block are exactly the same spectrum allocation as the Band Class 1 A-Block through F-Block.

Selected System	Band Class Value (Binary)	Code
Band Class 3, B-Band	00011	11
Band Class 4, A-Band	00100	12
Band Class 4, B-Band	00100	13
Band Class 4, C-Band	00100	14
Band Class 5, A-Band	00101	15
Band Class 5, B-Band	00101	16
Band Class 5, C-Band	00101	17
Band Class 5, D-Band	00101	18
Band Class 5, E-Band	00101	19
Band Class 5, F-Band	00101	20
Band Class 5, G-Band	00101	21
Band Class 5, H-Band	00101	22
Band Class 6	00110	23
Band Class 7, C-Band	00111	24
Band Class 8	01000	28
Band Class 9	01001	29
Band Class 10, A-Band	01010	30
Band Class 10, B-Band	01010	31
Band Class 10, C-Band	01010	32
Band Class 10, D-Band	01010	33
Band Class 10, E-Band	01010	34
Band Class 11, A-Band	01011	35
Band Class 11, B-Band	01011	36
Band Class 11, C-Band	01011	37
Band Class 11, D-Band	01011	38
Band Class 11, E-Band	01011	39
Band Class 11, F-Band	01011	40
Band Class 12, A-Band	01100	41
Band Class 12, B-Band	01100	42
Band Class 13, A-Band	01101	43

Selected System	Band Class Value (Binary)	Code
Band Class 13, B-Band	01101	44
Band Class 13, C-Band	01101	45
Band Class 13, D-Band	01101	46
Band Class 13, E-Band	01101	47
Band Class 13, F-Band	01101	48
Band Class 13, G-Band	01101	49
Band Class 13, H-Band	01101	50
Band Class 13, I-Band	01101	51
Band Class 13, J-Band	01101	52
Band Class 13, K-Band	01101	53
Band Class 13, L-Band	01101	54
Band Class 13, M-Band	01101	55
Band Class 13, N-Band	01101	56
Band Class 14, A-Band	01110	02
Band Class 14, B-Block	01110	03
Band Class 14, C-Block	01110	04
Band Class 14, D-Block	01110	05
Band Class 14, E-Block	01110	06
Band Class 14, F-Block	01110	07
Band Class 14, G-Block	01110	57
Band Class 15, A-Band	01111	58
Band Class 15, B-Band	01111	59
Band Class 15, C-Band	01111	60
Band Class 15, D-Band	01111	61
Band Class 15, E-Band	01111	62
Band Class 15, F-Band	01111	63
Band Class 16, A-Band	10000	64
Band Class 16, B-Band	10000	65
Band Class 16, C-Band	10000	66
Band Class 16, D-Band	10000	67

Selected System	Band Class Value (Binary)	Code
Band Class 18, D-Band	10001	68
Band Class 18, Public Safety Broadband	10001	69
Band Class 19, A-Band	10010	25
Band Class 19, B-Band	10010	26
Band Class 19, C-Band	10010	27
Band Class 20	10011	70
Band Class 21, A-Band	10100	71
Band Class 21. B-Band	10100	72
Band Class 22	10101	73
Reserved	10110-11110	74 through 99
Band Class 31	11111	Not Assigned

1.5 List of Band Classes

Table 1.5-1 lists the band classes defined in this specification. The band classes are listed in the order that they are used in the band class information record bit-map of [9].

Table 1.5-1: Band Class List

Subfield (see [9])	Subfield Description
BAND_CLASS_0	800 MHz cellular band
BAND_CLASS_1	1.8 to 2.0 GHz PCS band
BAND_CLASS_2	872 to 960 MHz TACS band
BAND_CLASS_3	832 to 925 MHz JTACS band
BAND_CLASS_4	1.75 to 1.87 GHz Korean PCS band
BAND_CLASS_5	450 MHz NMT band
BAND_CLASS_6	2 GHz IMT-2000 band
BAND_CLASS_7	Upper 700 MHz band
BAND_CLASS_8	1800 MHz band
BAND_CLASS_9	900 MHz band
BAND_CLASS_10	Secondary 800 MHz band
BAND_CLASS_11	400 MHz European PAMR band
BAND_CLASS_12	800 MHz PAMR band
BAND_CLASS_13	2.5 GHz IMT-2000 Extension Band
BAND_CLASS_14	US PCS 1.9GHz Band
BAND_CLASS_15	AWS Band
BAND_CLASS_16	US 2.5GHz Band
BAND_CLASS_17	US 2.5GHz Forward Link Only Band
BAND_CLASS_18	700 MHz Public Safety Band
BAND_CLASS_19	Lower 700 MHz Band
BAND_CLASS_20	L-Band
BAND_CLASS_21	S-Band
BAND_CLASS_22	Mobile Satellite System Band
BAND_CLASS_31	Wildcard Band Class

1.6 Wildcard Band Class

BAND_CLASS_31 is defined as Wildcard Band Class.

If BAND_CLASS_31 is received, the mobile station shall consider the band class has not been changed from the Band Class previously stored. Then, the mobile station shall store BAND_CLASS_31 as the current band class.

If the mobile station receives a different band class while it stores BAND_CLASS_31, it shall consider the band class has not been changed. Then, the mobile station shall store newly received Band Class as the current band class.

BAND_CLASS_31 shall be used by other RAT that supports 1x interworking, e.g., [C.S0097]. It shall not be used in the 1x network.

1.7 References

Normative References

The following specifications contain provisions which, through reference in this text, constitute provisions of this specification. At the time of publication, the editions indicated were valid. If the specification version number is included, the reference is specific. Parties implementing this Specification should use the specific versions of the indicated specification. If the specification version number is not included, the reference is non-specific. Parties implementing this Specification are encouraged to investigate the possibility of applying the most recent editions of the indicated specifications.

1. C.S0002-F v2.0, *Physical Layer Standard for cdma2000 Spread Spectrum Systems*, March 2014.
2. C.S0024-200-C v2.0, *Physical Layer for cdma2000 High Rate Packet Data Air Interface Specification*, December 2011.
3. C.S0010-E v2.0, *Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations*,March 2014.
4. C.S0011-E v2.0, *Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Mobile Stations*, March 2014.
5. C.S0032-D v2.0, *Recommended Minimum Performance Standards for cdma2000 High Rate Packet Data Access Network,* March 2014.
6. C.S0033-D v2.0, *Recommended Minimum Performance Standards for cdma2000 High Rate Packet Data Access Terminal,* March 2014.
7. C.S0016-D v2.0, *Over-the-Air Service Provisioning of Mobile Stations in Spread Spectrum Standards*, Arpil 2012.
8. Reserved.
9. C.S0005-F v2.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems*, May 2014.
10. C.S0084-001-0 v3.0, *Physical Layer for Ultra Mobile Broadband (UMB) Air Interface Specification*, Augest 2008.
11. C.S0088-0 v1.0, *Recommended Minimum Performance Standards for cdma2000 Ultra Mobile Broadband (UMB) Access Network, April 2009.*
12. C.S0089-0 v1.0, *Recommended Minimum Performance Standards for cdma2000 Ultra Mobile Broadband (UMB) Access Terminal, April 2009.*
13. C.S0024-A v3.0, *cdma2000 High Rate Packet Data Air Interface Specification*, Sept. 2006
15. C.S0098-200-A v1.0*, Physical Layer for cdma2000 Extended Cell High Rate Packet Data Air Interface Specification,* March 2015.
16. C.S0104-A v1.0, *Recommended Minimum Performance Standards for Extended Cell cdma2000 High Rate Packet Data Access Terminal*, May 2015.

Informative References

The following documents do not contain provisions of the Specification. They are listed to aid in better understanding this Specification.

14. C.R1001-I v1.0, Administration of Parameter Value Assignments for cdma2000 Spread Spectrum Standards, January 2014.

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2 REQUIREMENTS FOR THE OPERATION OF THE "*PHYSICAL LAYER STANDARD FOR CDMA2000 SPREAD SPECTRUM SYSTEMS*"

This section defines requirements and operation for both the mobile station and the base station that are specific to cdma2000 equipment that conforms to [1]. A CDMA mobile station or base station may support operation in one or more band classes and spreading rates.

2.1 Channel Spacing and Designation

This section specifies the frequency parameters of the CDMA equipment conforming to [1] that support CDMA operation. Note that CDMA equipment in this section could be interpreted to mean a base station, a mobile station, or both.

2.1.1 Band Class 0 (800 MHz Band)

The Band Class 0 system designators for the CDMA equipment shall be as specified in Table 2.1.1-1. There are four band subclasses specified for Band Class 0. CDMA equipments supporting Band Class 0 shall support at least one band subclass belonging to Band Class 0. CDMA equipments supporting Band Class 0 shall be capable of transmitting in Band Class 0.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 0 shall be as specified in Table 2.1.1-2. CDMA equipments supporting Band Class 0 and Spreading Rate 1 shall support transmission on the valid channel numbers shown in Table 2.1.1-3.[4] CDMA equipments supporting Band Class 0 and Spreading Rate 3 shall support transmission on the valid channel numbers shown in Table 2.1.1-4.[5]

Channel numbers for the Primary CDMA Channels and the Secondary CDMA Channels are given in Table 2.1.1-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.1-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 41$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 41$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

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[4] Note that the Korean Cellular Band uses Band Subclass 1 and has additional valid channels that a Band Class 0 mobile station should support to permit roaming to Korea.

[5] Note that the Korean Cellular Band uses Band Subclass 1 and has additional valid channels that a Band Class 0 mobile station should support to permit roaming to Korea.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 45.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be 45.0 – 1.23 × (1XRL_FREQ_OFFSET$_S$ – 1) MHz lower than the carrier frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 0 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 41 CDMA Channels (1.23 MHz separation).

Table 2.1.1-1. Band Class 0 System Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
A	0	824.025–835.005 844.995–846.495	869.025–880.005 889.995–891.495
	1	824.025–835.005 844.995–848.985	869.025–880.005 889.995–893.985
	2	824.025-829.995	869.025-874.995
	3	815.025-829.995	860.025-874.995
B	0	835.005–844.995 846.495–848.985	880.005–889.995 891.495–893.985
	1	835.005–844.995	880.005–889.995

Table 2.1.1-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 0

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$1 \le N \le 799$	0.030 N + 825.000
	$991 \le N \le 1023$	0.030 (N – 1023) + 825.000
	$1024 \le N \le 1323$	0.030 (N – 1024) + 815.040
Base Station	$1 \le N \le 799$	0.030 N + 870.000
	$991 \le N \le 1023$	0.030 (N – 1023) + 870.000
	$1024 \le N \le 1323$	0.030 (N – 1024) + 860.040

Table 2.1.1-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 0 and Spreading Rate 1

Band Subclass	System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
				Mobile Station	Base Station
0	A″ (1 MHz)	Not Valid Valid	991–1012 1013–1023	824.040–824.670 824.700–825.000	869.040–869.670 869.700–870.000
	A (10 MHz)	Valid Not Valid	1–311 312–333	825.030–834.330 834.360–834.990	870.030–879.330 879.360–879.990
	B (10 MHz)	Not Valid Valid Not Valid	334–355 356–644 645–666	835.020–835.650 835.680–844.320 844.350–844.980	880.020–880.650 880.680–889.320 889.350–889.980
	A′ (1.5 MHz)	Not Valid Valid Not Valid	667–688 689–694 695–716	845.010–845.640 845.670–845.820 845.850–846.480	890.010–890.640 890.670–890.820 890.850–891.480
	B′ (2.5 MHz)	Not Valid Valid Not Valid	717–738 739–777 778–799	846.510–847.140 847.170–848.310 848.340–848.970	891.510–892.140 892.170–893.310 893.340–893.970
1	A″ (1 MHz)	Not Valid Valid	991–1012 1013–1023	824.040–824.670 824.700–825.000	869.040–869.670 869.700–870.000
	A (10 MHz)	Valid Not Valid	1–311 312–333	825.030–834.330 834.360–834.990	870.030–879.330 879.360–879.990
	B (10 MHz)	Not Valid Valid Not Valid	334–355 356–644 645–666	835.020–835.650 835.680–844.320 844.350–844.980	880.020–880.650 880.680–889.320 889.350–889.980
	A′ (1.5 MHz)	Not Valid Valid	667–688 689–716	845.010–845.640 845.670–846.480	890.010–890.640 890.670–891.480
	A‴ (2.5 MHz)	Valid Not Valid	717–779 780–799	846.510–848.370 848.400–848.970	891.510–893.370 893.400–893.970
2	A″ (1 MHz)	Valid	991–1023	824.040–825.000	869.040–870.000
	A (5 MHz)	Valid Not Valid	1-142 143-166	825.030-829.260 829.290-829.980	870.030-874.260 874.290-874.980
3	A⁗ (9 MHz)	Not Valid Valid	1024-1047 1048-1323	815.040-815.730 815.760-824.010	860.040-860.730 860.760-869.010
	A″ (1 MHz)	Valid	991–1023	824.040–825.000	869.040–870.000
	A (5 MHz)	Valid Not Valid	1-142 143-166	825.030-829.260 829.290-829.980	870.030-874.260 874.290-874.980

Table 2.1.1-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 0 and Spreading Rate 3

Band Subclass	System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
				Mobile Station	Base Station
0	A″ (1 MHz)	Not Valid	991–1023	824.040–825.000	869.040–870.000
	A (10 MHz)	Not Valid Valid Not Valid	1–36 37–262 263–333	825.030–826.080 826.110–832.860 832.890–834.990	870.030–871.080 871.110–877.860 877.890–879.990
	B (10 MHz)	Not Valid Valid Not Valid	334–404 405–595 596–666	835.020–837.120 837.150–842.850 842.880–844.980	880.020–882.120 882.150–887.850 887.880–889.980
	A′ (1.5 MHz)	Not Valid	667–716	845.010–846.480	890.010–891.480
	B′ (2.5 MHz)	Not Valid	717–799	846.510–848.970	891.510–893.970
1	A″ (1 MHz)	Not Valid	991–1023	824.040–825.000	869.040–870.000
	A (10 MHz)	Not Valid Valid Not Valid	1–36 37–262 263–333	825.030–826.080 826.110–832.860 832.890–834.990	870.030–871.080 871.110–877.860 877.890–879.990
	B (10 MHz)	Not Valid Valid Not Valid	334–403 404–595 596–666	835.020–837.090 837.120–842.850 842.880–844.980	880.020–882.090 882.120–887.850 887.880–889.980
	A′ (1.5 MHz)	Not Valid	667–716	845.010–846.480	890.010–891.480
	A‴ (2.5 MHz)	Not Valid Valid Not Valid	717–737 738 739–799	846.510–847.110 847.140 847.170–848.970	891.510–892.110 892.140 892.170–893.970
2	Not Specified	Not Specified	Not Specified	Not Specified	Not Specified
3	Not Specified	Not Specified	Not Specified	Not Specified	Not Specified

Table 2.1.1-5. CDMA Preferred Set of Frequency Assignments for Band Class 0

Band Subclass	System Designator	Spreading Rate	Preferred Set Channel Numbers
0	A	1	283 (Primary) and 691 (Secondary)
		3	37, 78, 119, 160, 201, 242[6]
	B	1	384 (Primary) and 777 (Secondary)
		3	425[3], 466, 507, 548, 589
1	A	1	779 (Primary) and 738 (Secondary)
		3	37, 78, 119, 160, 201, 242, 738[7]
	B	1	486 (Primary) and 568 (Secondary)
		3	404, 445, 486, 527, 568[4]
2	A	1	40 (Primary) and 1022 (Secondary)
		3	Not Specified
3	A	1	1273 (Primary) and 40 (Secondary)
		3	Not Specified

Table 2.1.1-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 0

Band Subclass	System Designator	Preferred Set of Channel Numbers
0	A	37, 160, 283
	B	384, 507, 630
1	A	37, 160, 283, 779
	B	363, 486, 609
2	A	Not Specified
3	A	Not Specified

[6] The use of preferred channel numbers 242 or 425 for Spreading Rate 3 ensures that overlaid multi-channel Forward Link systems with 1.23 MHz inter-channel spacing will contain a Spreading Rate 1 Forward CDMA Channel that aligns with one of the Spreading Rate 1 preferred channel numbers.

[7] The use of preferred channel numbers 738, 445, 486, 527, or 568 for Spreading Rate 3 ensures that overlaid multi-channel Forward Link systems with 1.23 MHz inter-channel spacing will contain a Spreading Rate 1 Forward CDMA Channel that aligns with one of the Spreading Rate 1 preferred channel numbers.

2.1.2 Band Class 1 (1900 MHz Band)

The Band Class 1 block designators for the CDMA equipment shall be as specified in Table 2.1.2-1. CDMA equipments supporting Band Class 1 shall be capable of transmitting in Band Class 1.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 1 shall be as specified in Table 2.1.2-2. CDMA equipments supporting Band Class 1 and Spreading Rate 1 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.2-3. CDMA equipments supporting Band Class 1 and Spreading Rate 3 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.2-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.2-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.2-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 80.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $80.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 1 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.2-1. Band Class 1 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	1850–1865	1930–1945
D	1865–1870	1945–1950
B	1870–1885	1950–1965
E	1885–1890	1965–1970
F	1890–1895	1970–1975
C	1895–1910	1975–1990

Table 2.1.2-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 1

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 1199$	1850.000 + 0.050 N
Base Station	$0 \le N \le 1199$	1930.000 + 0.050 N

Table 2.1.2-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 1 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (15 MHz)	Not Valid	0–24	1850.000–1851.200	1930.000–1931.200
	Valid	25–275	1851.250–1863.750	1931.250–1943.750
	Cond. Valid	276–299	1863.800–1864.950	1943.800–1944.950
D (5 MHz)	Cond. Valid	300–324	1865.000–1866.200	1945.000–1946.200
	Valid	325–375	1866.250–1868.750	1946.250–1948.750
	Cond. Valid	376–399	1868.800–1869.950	1948.800–1949.950
B (15 MHz)	Cond. Valid	400–424	1870.000–1871.200	1950.000–1951.200
	Valid	425–675	1871.250–1883.750	1951.250–1963.750
	Cond. Valid	676–699	1883.800–1884.950	1963.800–1964.950
E (5 MHz)	Cond. Valid	700–724	1885.000–1886.200	1965.000–1966.200
	Valid	725–775	1886.250–1888.750	1966.250–1968.750
	Cond. Valid	776–799	1888.800–1889.950	1968.800–1969.950
F (5 MHz)	Cond. Valid	800–824	1890.000–1891.200	1970.000–1971.200
	Valid	825–875	1891.250–1893.750	1971.250–1973.750
	Cond. Valid	876–899	1893.800–1894.950	1973.800–1974.950
C (15 MHz)	Cond. Valid	900–924	1895.000–1896.200	1975.000–1976.200
	Valid	925–1175	1896.250–1908.750	1976.250–1988.750
	Not Valid	1176–1199	1908.800–1909.950	1988.800–1989.950

Table 2.1.2-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 1 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (15 MHz)	Not Valid	0–49	1850.000–1852.450	1930.000–1932.450
	Valid	50–250	1852.500–1862.500	1932.500–1942.500
	Cond. Valid	251–299	1862.550–1864.950	1942.550–1944.950
D (5 MHz)	Cond. Valid	300–349	1865.000–1867.450	1945.000–1947.450
	Valid	350	1867.500	1947.500
	Cond. Valid	351–399	1867.550–1869.950	1947.550–1949.950
B (15 MHz)	Cond. Valid	400–449	1870.000–1872.450	1950.000–1952.450
	Valid	450–650	1872.500–1882.500	1952.500–1962.500
	Cond. Valid	651–699	1882.550–1884.950	1962.550–1964.950
E (5 MHz)	Cond. Valid	700–749	1885.000–1887.450	1965.000–1967.450
	Valid	750	1887.500	1967.500
	Cond. Valid	751–799	1887.550–1889.950	1967.550–1969.950
F (5 MHz)	Cond. Valid	800–849	1890.000–1892.450	1970.000–1972.450
	Valid	850	1892.500	1972.500
	Cond. Valid	851–899	1892.550–1894.950	1972.550–1974.950
C (15 MHz)	Cond. Valid	900–949	1895.000–1897.450	1975.000–1977.450
	Valid	950–1150	1897.500–1907.500	1977.500–1987.500
	Not Valid	1151–1199	1907.550–1909.950	1987.550–1989.950

Table 2.1.2-5. CDMA Preferred Set of Frequency Assignments for Band Class 1

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275
	3	50, 75, 100, 125, 150, 175, 200, 225, 250
D	1	325, 350, 375
	3	350
B	1	425, 450, 475, 500, 525, 550, 575, 600, 625, 650, 675
	3	450, 475, 500, 525, 550, 575, 600, 625, 650
E	1	725, 750, 775
	3	750
F	1	825, 850, 875
	3	850
C	1	925, 950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150, 1175
	3	950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150

Table 2.1.2-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 1

Block Designator	Preferred Set of Channel Numbers
A	75, 150, 225
D	350
B	475, 550, 625
E	750
F	850
C	975, 1050, 1125

2.1.3 Band Class 2 (TACS Band)

The Band Class 2 block designators for the CDMA equipment shall be as specified in Table 2.1.3-1. CDMA equipments supporting Band Class 2 shall be capable of transmitting in Band Class 2 using at least one band subclass. The band subclasses for Band Class 2 are specified in Table 2.1.3-2.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 2 shall be as specified in Table 2.1.3-3. CDMA equipments supporting Band Class 2 and Spreading Rate 1 shall support transmission on the valid channel numbers

shown in Table 2.1.3-4. CDMA equipments supporting Band Class 2 and Spreading Rate 3 shall support transmission on the valid channel numbers shown in Table 2.1.3-5.

A preferred set of CDMA frequency assignments is given in Table 2.1.3-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

For CDMA equipment supporting band subclasses 0, 1, and 2, if the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 45.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $45.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver. For CDMA equipment supporting band subclass 3, only Spreading Rate 1 shall be supported, and the nominal mobile station transmit carrier frequency shall be 45.0 MHz higher than the frequency of the base station transmit signal as measured at the mobile station receiver.

At the base station, if a Band Class 2 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 50 CDMA Channels (1.25 MHz separation).

Table 2.1.3-1. Band Class 2 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	872.0125–879.9875 890.0125–897.4875 905.0125–908.9875	917.0125–924.9875 935.0125–942.4875 950.0125–953.9875
B	880.0125–887.9875 897.5125–904.9875 909.0125–914.9875	925.0125–932.9875 942.5125–949.9875 954.0125–959.9875
ATG	894.000-895.500	849.000-850.500

Table 2.1.3-2. Band Class 2 Band Subclasses

Band Subclass	Number of Channels Covered	Channels Covered
0	600	1–600
1	1000	1–1000
2	1320	1329–2047 and 0–600
3	61	2048–2108

Table 2.1.3-3. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 2

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 1000$	0.025 N + 889.9875
	$1329 \le N \le 2047$	0.025 (N – 1328) + 871.9875
	$2048 \le N \le 2108$	0.025 (N – 2048) + 894.000
Base Station	$0 \le N \le 1000$	0.025 N + 934.9875
	$1329 \le N \le 2047$	0.025 (N – 1328) + 916.9875
	$2048 \le N \le 2108$	0.025 (N – 2048) + 849.000

Table 2.1.3-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 2 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A ETACS (8 MHz)	Not Valid Valid-1320	1329–1355 1356–1648	872.0125–872.6625 872.6875–879.9875	917.0125–917.6625 917.6875–924.9875
B ETACS (8 MHz)	Valid-1320	1649–1941	880.0125–887.3125	925.0125–932.3125
Unassigned (2 MHz)	Cond. Valid-1320	1969–2047 0	888.0125–889.9625 889.9875	933.0125–934.9625 934.9875
A (7.5 MHz)	Cond. Valid-1320 Valid	1–28 29–300	890.0125–890.6875 890.7125–897.4875	935.0125–935.6875 935.7125–942.4875
B (7.5 MHz)	Valid Cond. Valid-1000	301–573 574–600	897.5125–904.3125 904.3375–904.9875	942.5125–949.3125 949.3375–949.9875
A′ (4 MHz)	Valid-1000	601–760	905.0125–908.9875	950.0125–953.9875
B′ (6 MHz)	Valid-1000 Not Valid	761–973 974–1000	909.0125–914.3125 914.3375–914.9875	954.0125–959.3125 959.3375–959.9875
ATG (1.5 MHz)	Not Valid Valid-ATG Not Valid	2048–2072 2073–2083 2084–2108	894.000-894.600 894.625-894.875 894.900-895.500	849.000-849.600 849.625-849.875 849.900-850.500

Valid refers to 600, 1000, and 1320 channel mobile stations. Valid-1000 refers to 1000 channel mobile stations. Valid-1320 refers to 1320 channel mobile stations. Valid-ATG refers to Air-To-Ground mobile stations.

Table 2.1.3-5. CDMA Channel Numbers and Corresponding Frequencies for Band Class 2 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A ETACS (8 MHz)	Not Valid Valid-1320	1329-Not specified Not specified-1648	872.0125-Not specified Not specified-879.9875	917.0125-Not specified Not specified-924.9875
B ETACS (8 MHz)	Valid-1320	1649–1941	880.0125–887.3125	925.0125–932.3125
Unassigned (2 MHz)	Cond. Valid-1320	1969–2047 0	888.0125–889.9625 889.9875	933.0125–934.9625 934.9875

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (7.5 MHz)	Cond. Valid-1320 Valid	1-Not specified Not specified-300	890.0125-Not specified Not specified-897.4875	935.0125-Not specified Not specified-942.4875
B (7.5 MHz)	Valid Cond. Valid-1000	301–573 Not specified-600	897.5125–904.3125 Not specified-904.9875	942.5125–949.3125 Not specified-949.9875
A′ (4 MHz)	Valid-1000	601–760	905.0125–908.9875	950.0125–953.9875
B′ (6 MHz)	Valid-1000 Not Valid	761-Not specified Not specified-1000	909.0125-Not specified Not specified-914.9875	954.0125-Not specified Not specified-959.9875
ATG (1.5 MHz)	Not specified	Not specified	Not specified	Not specified

Valid refers to 600, 1000, and 1320 channel mobile stations. Valid-1000 refers to 1000 channel mobile stations. Valid-1320 refers to 1320 channel mobile stations.

Table 2.1.3-6. CDMA Preferred Set of Frequency Assignments for Band Class 2

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	79, 679, or 1365
	3	Not specified
B	1	379, 947, or 1932
	3	Not specified
ATG	1	2078
	3	Not specified

2.1.4 Band Class 3 (JTACS Band)

The Band Class 3 system designators for the CDMA equipment shall be as specified in Table 2.1.4-1. CDMA equipments supporting Band Class 3 shall be capable of transmitting in Band Class 3.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 3 shall be as specified in

Table 2.1.4-2. CDMA equipments supporting Band Class 3 and Spreading Rate 1 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.4-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

Channel numbers for the Primary CDMA Channels and the Secondary CDMA Channels are given in Table 2.1.4-4.

If the mobile station uses Spreading Rate 1 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 55.0 MHz higher than the frequency of the base station transmit signal as measured at the mobile station receiver.

At the base station, if a Band Class 3 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 50 CDMA Channels (1.25 MHz separation).

Table 2.1.4-1. Band Class 3 System Frequency Correspondence

System Designator	Transmit Frequency Band (MHz)	
	Mobile Station	**Base Station**
A	887.0125–888.9875 893.0125–898.0000 898.0125–900.9875 915.0125–924.9875	832.0125–833.9875 838.0125–843.0000 843.0125–845.9875 860.0125–869.9875
B	Not specified	Not specified

Table 2.1.4-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 3

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	1 ≤ N ≤ 799	0.0125 N + 915.000
	801 ≤ N ≤ 1039	0.0125 (N – 800) + 898.000
	1041 ≤ N ≤ 1199	0.0125 (N – 1040) + 887.000
	1201 ≤ N ≤ 1600	0.0125 (N – 1200) + 893.000
Base Station	1 ≤ N ≤ 799	0.0125 N + 860.000
	801 ≤ N ≤ 1039	0.0125 (N – 800) + 843.000
	1041 ≤ N ≤ 1199	0.0125 (N – 1040) + 832.000
	1201 ≤ N ≤ 1600	0.0125 (N – 1200) + 838.000

In this table, only even-valued N values are valid.

Table 2.1.4-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 3 and Spreading Rate 1

System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A1 (2 MHz)	Not Valid	1041–1099	887.0125–887.7375	832.0125–832.7375
	Valid	1100–1140	887.7500–888.2500	832.7500–833.2500
	Not Valid	1141–1199	888.2625–888.9875	833.2625–833.9875
A3 (5 MHz)	Not Valid	1201–1259	893.0125–893.7375	838.0125–838.7375
	Valid	1260–1540	893.7500–897.2500	838.7500–842.2500
	Cond. Valid	1541–1600	897.2625–898.0000	842.2625–843.0000
A2 (3 MHz)	Cond. Valid	801–859	898.0125–898.7375	843.0125–843.7375
	Valid	860–980	898.7500–900.2500	843.7500–845.2500
	Not Valid	981–1039	900.2625–900.9875	845.2625–845.9875
A (10 MHz)	Not Valid	1–59	915.0125–915.7375	860.0125–860.7375
	Valid	60–740	915.7500–924.2500	860.7500–869.2500
	Not Valid	741–799	924.2625–924.9875	869.2625–869.9875
B	Not specified	Not specified	Not specified	Not specified

Table 2.1.4-4. CDMA Preferred Set of Frequency Assignments for Band Class 3

System Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	76 (Primary) and 872 (Secondary)
B	1	Not specified

2.1.5 Band Class 4 (Korean PCS Band)

The Band Class 4 block designators for the CDMA equipment shall be as specified in Table 2.1.5-1. CDMA equipments supporting Band Class 4 shall be capable of transmitting in Band Class 4.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 4 shall be as specified in Table 2.1.5-2. CDMA equipments supporting Band Class 4 and Spreading Rate 1 shall support transmission on the valid channel numbers shown in Table 2.1.5-3. CDMA equipments supporting Band Class 4 and Spreading Rate 3 shall support transmission on the valid channel numbers shown in Table 2.1.5-4.

A preferred set of CDMA frequency assignments is given in Table 2.1.5-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.5-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 90.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $90.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 4 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.5-1. Band Class 4 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	1750–1760	1840–1850
B	1760–1770	1850–1860
C	1770–1780	1860–1870

Table 2.1.5-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 4

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \leq N \leq 599$	0.050 N + 1750.000
Base Station	$0 \leq N \leq 599$	0.050 N + 1840.000

Table 2.1.5-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 4 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (10 MHz)	Not Valid	0–24	1750.000–1751.200	1840.000–1841.200
	Valid	25–175	1751.250–1758.750	1841.250–1848.750
	Cond. Valid	176–199	1758.800–1759.950	1848.800–1849.950
B (10 MHz)	Cond. Valid	200–224	1760.000–1761.200	1850.000–1851.200
	Valid	225–375	1761.250–1768.750	1851.250–1858.750
	Cond. Valid	376–399	1768.800–1769.950	1858.800–1859.950
C (10 MHz)	Cond. Valid	400–424	1770.000–1771.200	1860.000–1861.200
	Valid	425–575	1771.250–1778.750	1861.250–1868.750
	Not Valid	576–599	1778.800–1779.950	1868.800–1869.950

Table 2.1.5-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 4 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (10 MHz)	Not Valid	0–49	1750.000–1752.450	1840.000–1842.450
	Valid	50–150	1752.500–1757.500	1842.500–1847.500
	Cond. Valid	151–199	1757.550–1759.950	1847.550–1849.950
B (10 MHz)	Cond. Valid	200–249	1760.000–1762.450	1850.000–1852.450
	Valid	250–350	1762.500–1767.500	1852.500–1857.500
	Cond. Valid	351–399	1767.550–1769.950	1857.550–1859.950
C (10 MHz)	Cond. Valid	400–449	1770.000–1772.450	1860.000–1862.450
	Valid	450–550	1772.500–1777.500	1862.500–1867.500
	Not Valid	551–599	1777.550–1779.950	1867.550–1869.950

Table 2.1.5-5. CDMA Preferred Set of Frequency Assignments for Band Class 4

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	25, 50, 75, 100, 125, 150, 175
	3	50, 75, 100, 125, 150
B	1	225, 250, 275, 300, 325, 350, 375
	3	250, 275, 300, 325, 350
C	1	425, 450, 475, 500, 525, 550, 575
	3	450, 475, 500, 525, 550

Table 2.1.5-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 4

Block Designator	Preferred Set of Channel Numbers
A	75, 150
B	275, 350
C	475, 550

2.1.6 Band Class 5 (450 MHz Band)

The Band Class 5 block designators for the CDMA equipment shall be as specified in Table 2.1.6-1. There are fourteen band subclasses[8] specified for Band Class 5. Each band subclass corresponds to a specific block designator (see Table 2.1.6-1). Each band subclass includes all the channels designated for that block. CDMA equipments supporting Band Class 5 shall be capable of transmitting in at least one band subclass belonging to Band Class 5. For CDMA equipments capable of transmitting in more than one band subclass belonging to Band Class 5, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the CDMA equipment's home system.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 5 shall be as specified in Table 2.1.6-2. Note that certain channel assignments are not valid and others are conditionally valid. Mobile stations supporting Band Class 5 and Spreading Rate 1 shall support operations on the valid and conditionally valid channel numbers of the supported blocks shown in Table 2.1.6-3. Base stations supporting Band Class 5 and Spreading Rate 1 shall support operations on the valid and may support operations on the conditionally valid channel numbers of the supported blocks shown in Table 2.1.6-3. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained. CDMA equipments supporting Band Class 5 and Spreading Rate 3 shall support operation on the valid channel numbers of the supported blocks shown in Table 2.1.6-4.

A preferred set of CDMA frequency assignments is given in Table 2.1.6-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.6-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel and is operating in block A, B, C, E, I, J, K, or L, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel and is operating in block F, G, or H; then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 62$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 62$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

[8] Blocks I, J and K occupy the same frequency band as blocks H, G and F respectively. Channel spacing is 20 kHz for blocks F, G and H, while channel spacing is 25 kHz for blocks I, J and K. Blocks I, J or K should be used for new deployments instead of blocks H, G or F respectively.

If the mobile station is transmitting and receiving using the same spreading rate and is operating in blocks A, B, C, D, E, F, G, H, I, J, K, and L, the nominal mobile station transmit carrier frequency shall be 10.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting and receiving using spreading rate 1 and is operating in blocks M and N, the nominal mobile station transmit carrier frequency shall be at least 10.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. Spreading rate 3 is not supported for mobile stations operating in blocks M and N. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3 and is operating in block A, B, C, E, I, J, K, or L, the nominal mobile station transmit carrier frequency shall be $10.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3 and is operating in block F, G, or H, the nominal mobile station transmit carrier frequency shall be $10.0 - 1.24 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 5 carrier operates with Spreading Rate 3 in block A, B, C, E, I, J, or K, then all three carriers shall be separated by 50 CDMA Channels (1.25 MHz separation). If a Band Class 5 carrier operates with Spreading Rate 3 in block F, G, or H, then all three carriers shall be separated by 62 CDMA Channels (1.24 MHz separation).

Table 2.1.6-1. Band Class 5 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
A	0	452.500–457.475	462.500–467.475
B	1	452.000–456.475	462.000–466.475
C	2	450.000–454.800	460.000–464.800
D	3	411.675–415.850	421.675–425.850
E	4	415.500–419.975	425.500–429.975
F	5	479.000–483.480	489.000–493.480
G	6	455.230–459.990	465.230–469.990
H	7	451.310–455.730	461.310–465.730
I	8	451.325–455.725	461.325–465.725
J	9	455.250–459.975	465.250–469.975
K	10	479.000–483.475	489.000–493.475
L	11	410.000–414.975	420.000–424.975
M	12	450.000–457.475	461.250–469.975
N	13	450.000–457.475	460.000–469.975

Table 2.1.6-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 5

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	1 ≤ N ≤ 400	0.025 (N – 1) + 450.000
	472 ≤ N ≤ 871	0.025 (N – 472) + 410.000
	1039 ≤ N ≤ 1473	0.020 (N – 1024) + 451.010
	1536 ≤ N ≤ 1715	0.025 (N – 1536) + 479.000
	1792 ≤ N ≤ 2016	0.020 (N – 1792) + 479.000
	N = 2017	451.150
	N = 2018	451.475
Base Station	1 ≤ N ≤ 400	0.025 (N – 1) + 460.000
	472 ≤ N ≤ 871	0.025 (N – 472) + 420.000
	1039 ≤ N ≤ 1473	0.020 (N – 1024) + 461.010
	1536 ≤ N ≤ 1715	0.025 (N – 1536) + 489.000
	1792 ≤ N ≤ 2016	0.020 (N – 1792) + 489.000
	N = 2017	467.725
	N = 2018	467.725

Table 2.1.6-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 5 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (4.5 MHz)	Not Valid	121–125	453.000–453.100	463.000–463.100
	Cond. Valid	126–145	453.125–453.600	463.125–463.600
	Valid	146–275	453.625–456.850	463.625–466.850
	Not Valid	276–300	456.875–457.475	466.875–467.475
A′ (0.5 MHz)	Not Valid	101–120	452.500–452.975	462.500–462.975
B (4.5 MHz)	Not Valid	81–105	452.000–452.600	462.000–462.600
	Valid	106–235	452.625–455.850	462.625–465.850
	Not Valid	236–260	455.875–456.475	465.875–466.475
C (4.8 MHz)	Not Valid	1–25	450.000–450.600	460.000–460.600
	Valid	26–168	450.625–454.175	460.625–464.175
	Not Valid	169–193	454.200–454.800	464.200–464.800

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
D (4.2 MHz)	Not Valid Valid Not Valid	539–563 564–681 682–706	411.675–412.275 412.300–415.225 415.250–415.850	421.675–422.275 422.300–425.225 425.250–425.850
E (4.5 MHz)	Not Valid Valid Not Valid	692–716 717–846 847–871	415.500–416.100 416.125–419.350 419.375–419.975	425.500–426.100 426.125–429.350 429.375–429.975
F (4.5 MHz)	Not Valid Valid Not Valid	1792–1822 1823–1985 1986–2016	479.000–479.600 479.620–482.860 482.880–483.480	489.000–489.600 489.620–492.860 492.880–493.480
G (4.78 MHz)	Not Valid Valid Not Valid	1235–1265 1266–1442 1443–1473	455.230–455.830 455.850–459.370 459.390–459.990	465.230–465.830 465.850–469.370 469.390–469.990
H (4.44 MHz)	Not Valid Valid Not Valid	1039–1069 1070–1229 1230–1260	451.310–451.910 451.930–455.110 455.130–455.730	461.310–461.910 461.930–465.110 465.130–465.730
I (4.425 MHz)	Not Valid Valid Not Valid	54-78 79-205 206-230	451.325-451.925 451.950-455.100 455.125-455.725	461.325-461.925 461.950-465.100 465.125-465.725
J (4.75 MHz)	Not Valid Valid Not Valid	211–234 235–376 377–400	455.250–455.825 455.850–459.375 459.400–459.975	465.250–465.825 465.850–469.375 469.400–469.975
K (4.5 MHz)	Not Valid Valid Not Valid	1536–1560 1561–1690 1691–1715	479.000–479.600 479.625–482.850 482.875–483.475	489.000–489.600 489.625–492.850 492.875–493.475
L (4.5 MHz)	Not Valid Valid Not Valid	472–504 505–646 647–671	410.000–410.800 410.825–414.350 414.375–414.975	420.000–420.800 420.825–424.350 424.375–424.975
M (7.5 MHz Mobile Station Transmit, 8.75 MHz Base Station Transmit)	Not Valid Valid Valid for Base Station Transmit Only Not Valid Valid Valid	1–96 97–275 276–375 376–400 2017 2018	450.000–452.375 452.400–456.850 456.875–459.350 459.375–459.975 451.150 451.475	460.000–462.375 462.400–466.850 466.875–469.350 469.375–469.975 467.725 467.725

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
N (7.5 MHz Mobile Station Transmit, 10 MHz Base Station Transmit)	Not Valid Valid Valid for Base Station Transmit Only Not Valid Valid Valid	1–25 26–275 276–375 376–400 2017 2018	450.000–450.600 450.625–456.850 456.875–459.350 459.375–459.975 451.150 451.475	460.000–460.600 460.625–466.850 466.875–469.350 469.375–469.975 467.725 467.725

Table 2.1.6-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 5 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (4.5 MHz)	Not Valid Valid Not Valid	121–209 210 211–300	453.000–455.200 455.225 455.250–457.475	463.000–465.200 465.225 465.250–467.475
A′ (0.5 MHz)	Not Valid	101–120	452.500–452.975	462.500–462.975
B (4.5 MHz)	Not Valid Valid Not Valid	81–169 170 171–260	452.000–454.200 454.225 454.250–456.475	462.000–464.200 464.225 464.250–466.475
C (4.8 MHz)	Not Valid Valid Not Valid	1–96 97 98–193	450.000–452.375 452.400 452.425–454.800	460.000–462.375 462.400 462.425–464.800
D (4.2 MHz)	Not Valid	539–706	411.675–415.850	421.675–425.850
E (4.5 MHz)	Not Valid Valid Not Valid	692–780 781 782–871	415.500–417.700 417.725 417.750–419.975	425.500–427.700 427.725 427.750–429.975
F (4.5 MHz)	Not Valid Valid Not Valid	1792–1903 1904 1905–2016	479.000–481.220 481.240 481.260–483.480	489.000–491.220 491.240 491.260–493.480
G (4.78 MHz)	Not Valid Valid Not Valid	1235–1353 1354 1355–1473	455.230–457.590 457.610 457.630–459.990	465.230–467.590 467.610 467.630–469.990

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
H (4.44 MHz)	Not Valid Valid Not Valid	1039–1149 1150 1151–1260	451.310–453.510 453.530 453.550–455.730	461.310–463.510 463.530 463.550–465.730
I (4.425 MHz)	Not Valid Valid Not Valid	54-141 142 143-230	451.325-453.500 453.525 453.550-455.725	461.325-463.500 463.525 463.550-465.725
J (4.75 MHz)	Not Valid Valid Not Valid	211–304 305 306–400	455.250–457.575 457.600 457.625–459.975	465.250–467.575 467.600 467.625–469.975
K (4.5 MHz)	Not Valid Valid Not Valid	1536–1624 1625 1626–1715	479.000–481.200 481.225 481.250–483.475	489.000–491.200 491.225 491.250–493.475
L (4.5 MHz)	Not Valid	472–671	410.000–414.975	420.000–424.975
M (7.5 MHz Mobile Station Transmit, 8.75 MHz Base Station Transmit)	Not Valid	1–2018	450.000–457.475	461.250–469.975
N (7.5 MHz Mobile Station Transmit, 10 MHz Base Station Transmit)	Not Valid	1–2018	450.000–457.475	460.000–469.975

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Table 2.1.6-5. CDMA Preferred Set of Frequency Assignments for Band Class 5

Block Designator	Preferred Set Channel Numbers
A	160, 210*, 260
B	120, 170, 220*
C	47, 97, 147*
D	573, 623, 673*
E	731*, 781, 831
F	1841*, 1903, 1965
G	1291*, 1353, 1415
H	1089, 1151, 1213*
I	92, 142, 192*
J	255*, 305, 355
K	1575*, 1625, 1675
L	Not Specified
M	97, 110, 147, 160, 210*, 260, 2017, 2018
N	47, 97, 110, 147, 160, 210*, 260, 2017, 2018

* CDMA frequency assignments that support inter-block roaming

Table 2.1.6-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 5

Block Designator	Preferred Set Channel Numbers
A	210
B	220
C	147
E	731
F	1841
G	1291
H	1213
I	192
J	255
K	1575
L	Not Specified
M	Not Specified
N	Not Specified

2.1.7 Band Class 6 (2 GHz Band)

The Band Class 6 block designators for the CDMA equipment are not specified, since licensee allocations vary by regulatory body. CDMA equipments supporting Band Class 6 shall be capable of transmitting in Band Class 6.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 6 shall be as specified in Table 2.1.7-1. CDMA equipments supporting Band Class 6 and Spreading Rate 1 shall support transmission on the valid channel numbers shown in Table 2.1.7-2. CDMA equipments supporting Band Class 6 and Spreading Rate 3 shall support transmission on the valid channel numbers shown in Table 2.1.7-3.

A preferred set of CDMA frequency assignments is given in Table 2.1.7-4.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s$ – 25 if $1XRL\_FREQ\_OFFSET_s$ equals '00', on the CDMA Channel designated by $CDMACH_s$ if $1XRL\_FREQ\_OFFSET_s$ equals '01', or on the CDMA Channel designated by $CDMACH_s$ + 25 if $1XRL\_FREQ\_OFFSET_s$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 190.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If

the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be 190.0 – 1.25 × (1XRL_FREQ_OFFSET$_S$ – 1) MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 6 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.7-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 6

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 1199$	1920.000 + 0.050 N
Base Station	$0 \le N \le 1199$	2110.000 + 0.050 N

Table 2.1.7-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 6 and Spreading Rate 1

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–24	1920.000–1921.200	2110.000–2111.200
Valid	25–1175	1921.250–1978.750	2111.250–2168.750
Not Valid	1176–1199	1978.800–1979.950	2168.800–2169.950

Channel numbers less than 1.25 MHz from the licensee's band edge are not valid.

Table 2.1.7-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 6 and Spreading Rate 3

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–49	1920.000–1922.450	2110.000–2112.450
Valid	50–1150	1922.500–1977.500	2112.500–2167.500
Not Valid	1151–1199	1977.550–1979.950	2167.550–2169.950

Channel numbers less than 2.5 MHz from the licensee's band edge are not valid.

Table 2.1.7-4. CDMA Preferred Set of Frequency Assignments for Band Class 6

Spreading Rate	Preferred Set Channel Numbers
1	25, 50,..., 1150, 1175
3	50, 75,..., 1125, 1150

2.1.8 Band Class 7 (Upper 700 MHz Band)

The Band Class 7 block designators for the CDMA equipment shall be as specified in Table 2.1.8-1. CDMA equipments supporting Band Class 7 shall be capable of transmitting in Band Class 7.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 7 shall be as specified in Table 2.1.8-2. CDMA equipments supporting Band Class 7 and Spreading Rate 1 shall support operations on the valid and conditionally valid channel numbers shown in Table 2.1.8-3. CDMA equipments supporting Band Class 7 and Spreading Rate 3 shall support operations on the valid and conditionally valid channel numbers shown in Table 2.1.8-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible

if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.8-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.8-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channels, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 30.0 MHz higher than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $30.0 + 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz higher than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 7 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.8-1. Band Class 7 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
C	776–787	746–757
A	787–788	757–758

Table 2.1.8-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 7

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 240$	776.000 + 0.050 N
Base Station	$0 \le N \le 240$	746.000 + 0.050 N

Table 2.1.8-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 7 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
C (11 MHz)	Not Valid Valid Not Valid	0–22 23–198 199–219	776.000–777.100 777.150-785.900 785.950-786.950	746.000–747.100 747.150-755.900 755.950-756.950
A (1 MHz)	Not Valid	220-240	787.000–788.000	757.000-758.000

Table 2.1.8-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 7 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
C (11 MHz)	Not Valid Valid Not Valid	0–47 48-173 174-219	776.000–778.350 778.400-784.650 784.700-786.950	746.000–748.350 748.400-754.650 754.700-756.950
A (1 MHz)	Not Valid	220–240	787.000-788.000	757.000-758.000

Table 2.1.8-5. CDMA Preferred Set of Frequency Assignments for Band Class 7

Block Designator	Spreading Rate	Preferred Set Channel Numbers
C	1	23, 48, 73, 98, 123, 148, 173, 198
	3	48, 73, 98, 123, 148, 173
A	N/A	None

Table 2.1.8-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 7

Block Designator	Preferred Set of Channel Numbers
C	73, 148
A	None

2.1.9 Band Class 8 (1800 MHz Band)

The Band Class 8 block designators for the CDMA equipment are not specified. CDMA equipments supporting Band Class 8 shall be capable of transmitting in Band Class 8.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 8 shall be as specified in Table 2.1.9-1. CDMA equipments supporting Band Class 8 and Spreading Rate 1 shall support transmission on the valid channel numbers shown in Table 2.1.9-2. CDMA equipments supporting Band Class 8 and Spreading Rate 3 shall support transmission on the valid channel numbers shown in Table 2.1.9-3.

A preferred set of CDMA frequency assignments is given in Table 2.1.9-4.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s - 25$ if $1XRL\_FREQ\_OFFSET_s$ equals '00', on the CDMA Channel designated by $CDMACH_s$ if $1XRL\_FREQ\_OFFSET_s$ equals '01', or on the CDMA Channel designated by $CDMACH_s + 25$ if $1XRL\_FREQ\_OFFSET_s$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 95.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $95.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_s - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 8 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.9-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 8

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 1499$	1710.000 + 0.050 N
Base Station	$0 \le N \le 1499$	1805.000 + 0.050 N

Table 2.1.9-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 8 and Spreading Rate 1

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–24	1710.000–1711.200	1805.000–1806.200
Valid	25–1475	1711.250–1783.750	1806.250–1878.750
Not Valid	1476–1499	1783.800–1784.950	1878.800–1879.950

Channel numbers less than 1.25 MHz from the licensee's band edge are not valid.

Table 2.1.9-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 8 and Spreading Rate 3

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–49	1710.000–1712.450	1805.000–1807.450
Valid	50–1450	1712.500–1782.500	1807.500–1877.500
Not Valid	1451–1499	1782.550–1784.950	1877.550–1879.950

Channel numbers less than 2.5 MHz from the licensee's band edge are not valid.

Table 2.1.9-4. CDMA Preferred Set of Frequency Assignments for Band Class 8

Spreading Rate	Preferred Set Channel Numbers
1	25, 50,..., 1450, 1475
3	50, 75,..., 1425, 1450

2.1.10 Band Class 9 (900 MHz Band)

The Band Class 9 block designators for the CDMA equipment are not specified. CDMA equipments supporting Band Class 9 shall be capable of transmitting in Band Class 9.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 9 shall be as specified in Table 2.1.10-1. CDMA equipments supporting Band Class 9 and Spreading Rate 1 shall support transmission on the valid channel numbers shown in Table 2.1.10-2. CDMA equipments supporting Band Class 9 and Spreading Rate 3 shall support transmission on the valid channel numbers shown in Table 2.1.10-3.

A preferred set of CDMA frequency assignments is given in Table 2.1.10-4.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA

Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 45.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $45.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 9 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.10-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 9

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 699$	880.000 + 0.050 N
Base Station	$0 \le N \le 699$	925.000 + 0.050 N

Table 2.1.10-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 9 and Spreading Rate 1

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–24	880.000–881.200	925.000–926.200
Valid	25–675	881.250–913.750	926.250–958.750
Not Valid	676–699	913.800–914.950	958.800–959.950

Channel numbers less than 1.25 MHz from the licensee's band edge are not valid.

Table 2.1.10-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 9 and Spreading Rate 3

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–49	880.000–882.450	925.000–927.450
Valid	50–650	882.500–912.500	927.500–957.500
Not Valid	651–699	912.550–914.950	957.550–959.950

Channel numbers less than 2.5 MHz from the licensee's band edge are not valid.

Table 2.1.10-4. CDMA Preferred Set of Frequency Assignments for Band Class 9

Spreading Rate	Preferred Set Channel Numbers
1	25, 50,..., 650, 675
3	50, 75,..., 625, 650

2.1.11 Band Class 10 (Secondary 800 MHz Band)

The Band Class 10 system designators for the CDMA equipment shall be as specified in Table 2.1.11-1. There are five band subclasses specified for Band Class 10. CDMA equipments supporting Band Class 10 shall support at least one band subclass belonging to Band Class 10. CDMA equipments supporting Band Class 10 shall be capable of transmitting in Band Class 10.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 10 shall be as specified in Table 2.1.11-2. CDMA equipments supporting Band Class 10 and Spreading Rate 1 shall support transmission on the valid channel numbers shown in Table 2.1.11-3. CDMA equipments supporting Band Class 10 and Spreading Rate 3 shall support operations on the valid channel numbers shown in Table 2.1.11-4.

A preferred set of CDMA frequency assignments is given in Table 2.1.11-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.11-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 45.0 MHz (Band Subclasses 0, 1, 2, and 3) or 39.0 MHz (Band Subclass 4) lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be 45.0 – 1.25 × (1XRL_FREQ_OFFSET$_S$ – 1) MHz (Band Subclass 0, 1, and 2) or 39.0 – 1.25 × (1XRL_FREQ_OFFSET$_S$ – 1) MHz (Band Subclass 3) lower than the carrier frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 10 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 50 CDMA Channels (1.25 MHz separation).

Table 2.1.11-1. Band Class 10 System Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
A	0	806.000–810.975	851.000–855.975
B	1	811.000–815.975	856.000–860.975
C	2	816.000–820.975	861.000–865.975
D	3	821.000–823.975	866.000–868.975
E	4	896.000–900.975	935.000–939.975

Table 2.1.11-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 10

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 719$	0.025 N + 806.000
	$720 \le N \le 919$	0.025 (N – 720) + 896.000
Base Station	$0 \le N \le 719$	0.025 N + 851.000
	$720 \le N \le 919$	0.025 (N – 720) + 935.000

Table 2.1.11-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 10 and Spreading Rate 1

Band Subclass	System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
				Mobile Station	Base Station
0	A	Not Valid Valid Cond. Valid	0–49 50–150 151–199	806.000–807.225 807.250–809.750 809.775–810.975	851.000–852.225 852.250–854.750 854.775–855.975
1	B	Cond. Valid Valid Cond. Valid	200–249 250–350 351–399	811.000–812.225 812.250–814.750 814.775–815.975	856.000–857.225 857.250–859.750 859.775–860.975
2	C	Cond. Valid Valid Cond. Valid	400–449 450–550 551–599	816.000–817.225 817.250–819.750 819.775–820.975	861.000–862.225 862.250–864.750 864.775–865.975
3	D	Cond. Valid Valid Not Valid	600–649 650–670 671–719	821.000–822.225 822.250–822.750 822.775–823.975	866.000–867.225 867.250–867.750 867.775–868.975
4	E	Not Valid Valid Not Valid	720–769 770–870 871–919	896.000–897.225 897.250–899.750 899.775–900.975	935.000–936.225 936.250–938.750 938.775–939.975

Table 2.1.11-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 10 and Spreading Rate 3

Band Subclass	System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
				Mobile Station	Base Station
0	A	Not Valid Valid Cond. Valid	0–99 100 101–199	806.000–808.475 808.500 808.525–810.975	851.000–853.475 853.500 853.525–855.975
1	B	Cond. Valid Valid Cond. Valid	200–299 300 301–399	811.000–813.475 813.500 813.525–815.975	856.000–858.475 858.500 858.525–860.975
2	C	Cond. Valid Valid Cond. Valid	400–499 500 501–599	816.000–818.475 818.500 818.525–820.975	861.000–863.475 863.500 863.525–865.975
3	D	Cond. Valid Not Valid	600–620 621–719	821.000–821.500 821.525–823.975	866.000–866.500 866.525–868.975
4	E	Not Valid Valid Not Valid	720–769 770–870 871–919	896.000–897.225 897.250–99.750 899.775–900.975	935.000–936.225 936.250–938.750 938.775–939.975

Table 2.1.11-5. CDMA Preferred Set of Frequency Assignments for Band Class 10

Band Subclass	System Designator	Spreading Rate	Preferred Set Channel Numbers
0	A	1	50, 100, 150
		3	100
1	B	1	250, 300, 350
		3	300
2	C	1	450, 500, 550
		3	500
3	D	1	650, 670
		3	Not applicable
4	E	1	770, 820, 870
		3	820

Table 2.1.11-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 10

Band Subclass	System Designator	Preferred Set of Channel Numbers
0	A	150
1	B	300
2	C	450, 500
3	D	Not applicable
4	E	820

2.1.12 Band Class 11 (400 MHz European PAMR Band)

The Band Class 11 block designators for the CDMA equipment shall be as specified in Table 2.1.12-1. There are twelve band subclasses specified for Band Class 11. Each band subclass corresponds to a specific block designator (see Table 2.1.12-1). Each band subclass includes all the channels designated for that block. CDMA equipments supporting Band Class 11 shall be capable of transmitting in at least one band subclass belonging to Band Class 11. For CDMA equipments capable of transmitting in more than one band subclass belonging to Band Class 11, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the CDMA equipment's home system.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 11 shall be as specified in Table 2.1.12-2. Note that certain channel assignments are not valid and others are conditionally valid. Mobile stations supporting

Band Class 11 and Spreading Rate 1 shall support operations on the valid and conditionally valid channel numbers of the supported blocks shown in Table 2.1.12-3. Base stations supporting Band Class 11 and Spreading Rate 1 shall support operations on the valid and may support operations on the conditionally valid channel numbers of the supported blocks shown in Table 2.1.12-3. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained. CDMA equipments supporting Band Class 11 and Spreading Rate 3 shall support operation on the valid channel numbers of the supported blocks shown in Table 2.1.12-4.

A preferred set of CDMA frequency assignments is given in Table 2.1.12-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.12-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 50$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 10.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $10.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver.

At the base station, if a Band Class 11 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 50 CDMA Channels (1.25 MHz separation).

Table 2.1.12-1. Band Class 11 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
A	0	452.500–457.475	462.500–467.475
B	1	452.000–456.475	462.000–466.475
C	2	450.000–454.800	460.000–464.800
D	3	411.675–415.850	421.675–425.850
E	4	415.500–419.975	425.500–429.975
F	5	Not specified	Not specified
G	6	Not specified	Not specified
H	7	Not specified	Not specified
I	8	451.325–455.725	461.325–465.725
J	9	455.250–459.975	465.250–469.975
K	10	479.000–483.475	489.000–493.475
L	11	410.000–414.975	420.000–424.975

Table 2.1.12-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 11

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$1 \le N \le 400$	$0.025 (N - 1) + 450.000$
	$472 \le N \le 871$	$0.025 (N - 472) + 410.000$
	$1039 \le N \le 1473$	Reserved
	$1536 \le N \le 1715$	$0.025 (N - 1536) + 479.000$
	$1792 \le N \le 2016$	Reserved
Base Station	$1 \le N \le 400$	$0.025 (N - 1) + 460.000$
	$472 \le N \le 871$	$0.025 (N - 472) + 420.000$
	$1039 \le N \le 1473$	Reserved
	$1536 \le N \le 1715$	$0.025 (N - 1536) + 489.000$
	$1792 \le N \le 2016$	Reserved

Table 2.1.12-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 11 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (4.5 MHz)	Not Valid	121–125	453.000–453.100	463.000–463.100
	Cond. Valid	126–145	453.125–453.600	463.125–463.600
	Valid	146–275	453.625–456.850	463.625–466.850
	Not Valid	276–300	456.875–457.475	466.875–467.475
A′ (0.5 MHz)	Not Valid	101–120	452.500–452.975	462.500–462.975
B (4.5 MHz)	Not Valid	81–105	452.000–452.600	462.000–462.600
	Valid	106–235	452.625–455.850	462.625–465.850
	Not Valid	236–260	455.875–456.475	465.875–466.475
C (4.8 MHz)	Not Valid	1–25	450.000–450.600	460.000–460.600
	Valid	26–168	450.625–454.175	460.625–464.175
	Not Valid	169–193	454.200–454.800	464.200–464.800
D (4.2 MHz)	Not Valid	539–563	411.675–412.275	421.675–422.275
	Valid	564–681	412.300–415.225	422.300–425.225
	Not Valid	682–706	415.250–415.850	425.250–425.850
E (4.5 MHz)	Not Valid	692–716	415.500–416.100	425.500–426.100
	Valid	717–846	416.125–419.350	426.125–429.350
	Not Valid	847–871	419.375–419.975	429.375–429.975
F	Not specified	Not specified	Not specified	Not specified
G	Not specified	Not specified	Not specified	Not specified
H	Not specified	Not specified	Not specified	Not specified
I (4.425 MHz)	Not Valid	54-78	451.325-451.925	461.325-461.925
	Valid	79-205	451.950-455.100	461.950-465.100
	Not Valid	206-230	455.125-455.725	465.125-465.725
J (4.75 MHz)	Not Valid	211–234	455.250–455.825	465.250–465.825
	Valid	235–376	455.850–459.375	465.850–469.375
	Not Valid	377–400	459.400–459.975	469.400–469.975
K (4.5 MHz)	Not Valid	1536–1560	479.000–479.600	489.000–489.600
	Valid	1561–1690	479.625–482.850	489.625–492.850
	Not Valid	1691–1715	482.875–483.475	492.875–493.475
L (4.5 MHz)	Not Valid	472–504	410.000–410.800	420.000–420.800
	Valid	505–646	410.825–414.350	420.825–424.350
	Not Valid	647–671	414.375–414.975	424.375–424.975

Table 2.1.12-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 11 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (4.5 MHz)	Not Valid Valid Not Valid	121–209 210 211–300	453.000–455.200 455.225 455.250–457.475	463.000–465.200 465.225 465.250–467.475
A′ (0.5 MHz)	Not Valid	101–120	452.500–452.975	462.500–462.975
B (4.5 MHz)	Not Valid Valid Not Valid	81–169 170 171–260	452.000–454.200 454.225 454.250–456.475	462.000–464.200 464.225 464.250–466.475
C (4.8 MHz)	Not Valid Valid Not Valid	1–96 97 98–193	450.000–452.375 452.400 452.425–454.800	460.000–462.375 462.400 462.425–464.800
D (4.2 MHz)	Not Valid	539–706	411.675–415.850	421.675–425.850
E (4.5 MHz)	Not Valid Valid Not Valid	692–780 781 782–871	415.500–417.700 417.725 417.750–419.975	425.500–427.700 427.725 427.750–429.975
F	Not specified	Not specified	Not specified	Not specified
G	Not specified	Not specified	Not specified	Not specified
H	Not specified	Not specified	Not specified	Not specified
I (4.425 MHz)	Not Valid Valid Not Valid	54-141 142 143-230	451.325-453.500 453.525 453.550-455.725	461.325-463.500 463.525 463.550-465.725
J (4.75 MHz)	Not Valid Valid Not Valid	211–304 305 306–400	455.250–457.575 457.600 457.625–459.975	465.250–467.575 467.600 467.625–469.975
K (4.5 MHz)	Not Valid Valid Not Valid	1536–1624 1625 1626–1715	479.000–481.200 481.225 481.250–483.475	489.000–491.200 491.225 491.250–493.475
L (4.5 MHz)	Not Valid	472–671	410.000–414.975	420.000–424.975

Table 2.1.12-5. CDMA Preferred Set of Frequency Assignments for Band Class 11

Block Designator	Preferred Set Channel Numbers
A	160, 210*, 260
B	120, 170, 220*
C	47, 97, 147*
D	573, 623, 673*
E	731*, 781, 831
F	Not specified
G	Not specified
H	Not specified
I	92, 142, 192*
J	255*, 305, 355
K	1575*, 1625, 1675
L	Not Specified

* CDMA frequency assignments that support inter-block roaming

Table 2.1.12-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 11

Block Designator	Preferred Set Channel Numbers
A	210
B	220
C	147
E	731
F	Not specified
G	Not specified
H	Not specified
I	192
J	255
K	1575
L	Not Specified

2.1.13 Band Class 12 (800 MHz PAMR Band)

The Band Class 12 block designators for the CDMA equipment shall be as specified in Table 2.1.13-1. There are three band subclasses specified for Band Class 12. Each band subclass corresponds to a specific block designator (see Table 2.1.13-1). Each band subclass includes all the channels designated for that block. CDMA equipments supporting Band Class 12 shall be capable of transmitting in at least one band subclass belonging to Band Class 12. For CDMA equipments capable of transmitting in more than one band subclass belonging to Band Class 12, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the CDMA equipment's home system.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 12 shall be as specified in Table 2.1.13-2. Note that certain channel assignments are not valid and others are conditionally valid. Mobile stations supporting Band Class 12 and Spreading Rate 1 shall support operations on the valid and conditionally valid channel numbers shown in Table 2.1.13-3. Base stations supporting Band Class 12 and Spreading Rate 1 shall support operations on the valid and may support operations on the conditionally valid channel numbers shown in Table 2.1.13-3. Mobile stations supporting Band Class 12 and Spreading Rate 3 shall support operations on the valid and conditionally valid channel numbers shown in Table 2.1.13-4. Base stations supporting Band Class 12 and Spreading Rate 3 shall support operations on the valid and may support operations on the conditionally valid channel numbers shown in Table 2.1.13-4. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.13-5.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s - 50$ if $1XRL\_FREQ\_OFFSET_s$ equals '00', on the CDMA Channel designated by $CDMACH_s$ if $1XRL\_FREQ\_OFFSET_s$ equals '01', or on the CDMA Channel designated by $CDMACH_s + 50$ if $1XRL\_FREQ\_OFFSET_s$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 45.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $45.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_s - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 12 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 50 CDMA Channels (1.25 MHz separation).

Table 2.1.13-1. Band Class 12 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
A	0	870.0125–875.9875	915.0125–920.9875
B	1	871.5125–874.4875	916.5125–919.4875
C	2	870.0125–875.9875	915.0125–920.9875

Table 2.1.13-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 12

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 239$	870.0125 + 0.025 N
Base Station	$0 \le N \le 239$	915.0125 + 0.025 N

Table 2.1.13-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 12 and Spreading Rate 1

Block Designator	Valid CDMA Frequency Assignment	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (6MHz)	Not Valid	0–64	870.0125–871.6125	915.0125–916.6125
	Valid	65–214	871.6375–875.3625	916.6375–920.3625
	Not Valid	215–239	875.3875–875.9875	920.3875–920.9875
B (3 MHz)	Not Valid	60–93	871.5125–872.3375	916.5125–917.3375
	Valid	94–144	872.3625–873.6125	917.3625–918.6125
	Not Valid	145–179	873.6375–874.4875	918.6375–919.4875
C (6MHz)	Not Valid	0–24	870.0125–870.6125	915.0125–915.6125
	Cond. Valid	25–104	870.6375–872.6125	915.6375–917.6125
	Valid	105–206	872.6375–875.1625	917.6375–920.1625
	Cond. Valid	207–214	875.1875–875.3625	920.1875–920.3625
	Not Valid	215–239	875.3875–875.9875	920.3875–920.9875

Table 2.1.13-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 12 and Spreading Rate 3

Block Designator	Valid CDMA Frequency Assignment	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (6MHz)	Not Valid Valid Not Valid	0–138 139 140–239	870.0125–873.4625 873.4875 873.5125–875.9875	915.0125–918.4625 918.4875 918.5125–920.9875
B (3 MHz)	Not Valid	60–179	871.5125–874.4875	916.5125–919.4875
C (6 MHz)	Not Valid Cond. Valid Valid Not Valid	0–98 99–155 156 157–239	870.0125–872.4625 872.4875–873.8875 873.9125 873.9375–875.9875	915.0125–917.4625 917.4875–918.8875 918.9125 918.9375–920.9875

Table 2.1.13-5. CDMA Preferred Set of Frequency Assignments for Band Class 12

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	89, 139, 189
	3	139
B	1	94, 144
	3	None
C	1	106, 156, 206
	3	156

2.1.14 Band Class 13 (2.5 GHz IMT-2000 Extension Band)

The Band Class 13 block designators for the CDMA equipment shall be as specified in Table 2.1.14-1.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 13 shall be as specified in Table 2.1.14-2. CDMA equipment supporting Band Class 13 and Spreading Rate 1 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.14-3. CDMA equipment supporting Band Class 13 and Spreading Rate 3 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.14-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.14-5. Preferred Sync Channel frequency assignments for the multi-carrier mode are given in Table 2.1.14-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 120.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $120.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 13 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.14-1. Band Class 13 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	2500–2505	2620–2625
B	2505–2510	2625–2630
C	2510–2515	2630–2635
D	2515–2520	2635–2640
E	2520–2525	2640–2645
F	2525–2530	2645–2650
G	2530–2535	2650–2655
H	2535–2540	2655–2660
I	2540–2545	2660–2665
J	2545–2550	2665–2670
K	2550–2555	2670–2675
L	2555–2560	2675–2680
M	2560–2565	2680–2685
N	2565–2570	2685–2690

Table 2.1.14-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 13

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 1399$	2500.000 + 0.050 N
Base Station	$0 \le N \le 1399$	2620.000 + 0.050 N

Table 2.1.14-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 13 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (5 MHz)	Not Valid	0–24	2500.000–2501.200	2620.000–2621.200
	Valid	25–75	2501.250–2503.750	2621.250–2623.750
	Cond. Valid	76–99	2503.800–2504.950	2623.800–2624.950
B (5 MHz)	Cond. Valid	100–124	2505.000–2506.200	2625.000–2626.200
	Valid	125–175	2506.250–2508.750	2626.250–2628.750
	Cond. Valid	176–199	2508.800–2509.950	2628.800–2629.950
C (5 MHz)	Cond. Valid	200–224	2510.000–2511.200	2630.000–2631.200
	Valid	225–275	2511.250–2513.750	2631.250–2633.750
	Cond. Valid	276–299	2513.800–2514.950	2633.800–2634.950
D (5 MHz)	Cond. Valid	300–324	2515.000–2516.200	2635.000–2636.200
	Valid	325–375	2516.250–2518.750	2636.250–2638.750
	Cond. Valid	376–399	2518.800–2519.950	2638.800–2639.950
E (5 MHz)	Cond. Valid	400–424	2520.000–2521.200	2640.000–2641.200
	Valid	425–475	2521.250–2523.750	2641.250–2643.750
	Cond. Valid	476–499	2523.800–2524.950	2643.800–2644.950
F (5 MHz)	Cond. Valid	500–524	2525.000–2526.200	2645.000–2646.200
	Valid	525–575	2526.250–2528.750	2646.250–2648.750
	Cond. Valid	576–599	2528.800–2529.950	2648.800–2649.950
G (5 MHz)	Cond. Valid	600–624	2530.000–2531.200	2650.000–2651.200
	Valid	625–675	2531.250–2533.750	2651.250–2653.750
	Cond. Valid	676–699	2533.800–2534.950	2653.800–2654.950
H (5 MHz)	Cond. Valid	700–724	2535.000–2536.200	2655.000–2656.200
	Valid	725–775	2536.250–2538.750	2656.250–2658.750
	Cond. Valid	776–799	2538.800–2539.950	2658.800–2659.950
I (5 MHz)	Cond. Valid	800–824	2540.000–2541.200	2660.000–2661.200
	Valid	825–875	2541.250–2543.750	2661.250–2663.750
	Cond. Valid	876–899	2543.800–2544.950	2663.800–2664.950

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
J (5 MHz)	Cond. Valid Valid Cond. Valid	900–924 925–975 976–999	2545.000–2546.200 2546.250–2548.750 2548.800–2549.950	2665.000–2666.200 2666.250–2668.750 2668.800–2669.950
K (5 MHz)	Cond. Valid Valid Cond. Valid	1000–1024 1025–1075 1076–1099	2550.000–2551.200 2551.250–2553.750 2553.800–2554.950	2670.000–2671.200 2671.250–2673.750 2673.800–2674.950
L (5 MHz)	Cond. Valid Valid Cond. Valid	1100–1124 1125–1175 1176–1199	2555.000–2556.200 2556.250–2558.750 2558.800–2559.950	2675.000–2676.200 2676.250–2678.750 2678.800–2679.950
M (5 MHz)	Cond. Valid Valid Cond. Valid	1200–1224 1225–1275 1276–1299	2560.000–2561.200 2561.250–2563.750 2563.800–2564.950	2680.000–2681.200 2681.250–2683.750 2683.800–2684.950
N (5 MHz)	Cond. Valid Valid Not Valid	1300–1324 1325–1375 1376–1399	2565.000–2566.200 2566.250–2568.750 2568.800–2569.950	2685.000–2686.200 2686.250–2688.750 2688.800–2689.950

Table 2.1.14-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 13 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (5 MHz)	Not Valid Valid Cond. Valid	0–49 50 51–99	2500.000–2502.450 2502.500 2502.550–2504.950	2620.000–2622.450 2622.500 2622.550–2624.950
B (5 MHz)	Cond. Valid Valid Cond. Valid	100–149 150 151–199	2505.000–2507.450 2507.500 2507.550–2509.950	2625.000–2627.450 2627.500 2627.550–2629.950
C (5 MHz)	Cond. Valid Valid Cond. Valid	200–249 250 251–299	2510.000–2512.450 2512.500 2512.550–2514.950	2630.000–2632.450 2632.500 2632.550–2634.950
D (5 MHz)	Cond. Valid Valid Cond. Valid	300–349 350 351–399	2515.000–2517.450 2517.500 2517.550–2519.950	2635.000–2637.450 2637.500 2637.550–2639.950
E (5 MHz)	Cond. Valid Valid Cond. Valid	400–449 450 451–499	2520.000–2522.450 2522.500 2522.550–2524.950	2640.000–2642.450 2642.500 2642.550–2644.950

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
F (5 MHz)	Cond. Valid Valid Cond. Valid	500–549 550 551–599	2525.000–2527.450 2527.500 2527.550–2529.950	2645.000–2647.450 2647.500 2647.550–2649.950
G (5 MHz)	Cond. Valid Valid Cond. Valid	600–649 650 651–699	2530.000–2532.450 2532.500 2532.550–2534.950	2650.000–2652.450 2652.500 2652.550–2654.950
H (5 MHz)	Cond. Valid Valid Cond. Valid	700–749 750 751–799	2535.000–2537.450 2537.500 2537.550–2539.950	2655.000–2657.450 2657.500 2657.550–2659.950
I (5 MHz)	Cond. Valid Valid Cond. Valid	800–849 850 851–899	2540.000–2542.450 2542.500 2542.550–2544.950	2660.000–2662.450 2662.500 2662.550–2664.950
J (5 MHz)	Cond. Valid Valid Cond. Valid	900–949 950 951–999	2545.000–2547.450 2547.500 2547.550–2549.950	2665.000–2667.450 2667.500 2667.550–2669.950
K (5 MHz)	Cond. Valid Valid Cond. Valid	1000–1049 1050 1051–1099	2550.000–2552.450 2552.500 2552.550–2554.950	2670.000–2672.450 2672.500 2672.550–2674.950
L (5 MHz)	Cond. Valid Valid Cond. Valid	1100–1149 1150 1151–1199	2555.000–2557.450 2557.500 2557.550–2559.950	2675.000–2677.450 2677.500 2677.550–2679.950
M (5 MHz)	Cond. Valid Valid Cond. Valid	1200–1249 1250 1251–1299	2560.000–2562.450 2562.500 2562.550–2564.950	2680.000–2682.450 2682.500 2682.550–2684.950
N (5 MHz)	Cond. Valid Valid Not Valid	1300–1349 1350 1351–1399	2565.000–2567.450 2567.500 2567.550–2569.950	2685.000–2687.450 2687.500 2687.550–2689.950

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Table 2.1.14-5. CDMA Preferred Set of Frequency Assignments for Band Class 13

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	25, 50, 75
	3	50
B	1	125, 150, 175
	3	150
C	1	225, 250, 275
	3	250
D	1	325, 350, 375
	3	350
E	1	425, 450, 475
	3	450
F	1	525, 550, 575
	3	550
G	1	625, 650, 675
	3	650
H	1	725, 750, 775
	3	750
I	1	825, 850, 875
	3	850
J	1	925, 950, 975
	3	950
K	1	1025, 1050, 1075
	3	1050
L	1	1125, 1150, 1175
	3	1150
M	1	1225, 1250, 1275
	3	1250
N	1	1325, 1350, 1375
	3	1350

Table 2.1.14-6. Sync Channel Preferred Frequency Assignments for Spreading Rate 3 for Band Class 13

Block Designator	Sync Channel Preferred Channel Numbers
A	50
B	150
C	250
D	350
E	450
F	550
G	650
H	750
I	850
J	950
K	1050
L	1150
M	1250
N	1350

2.1.15 Band Class 14 (US PCS 1.9GHz Band)

The Band Class 14 block designators for the CDMA equipment shall be as specified in Table 2.1.15-1.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 14 shall be as specified in Table 2.1.15-2. CDMA equipment supporting Band Class 14 and Spreading Rate 1 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.15-3. CDMA equipment supporting Band Class 14 and Spreading Rate 3 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.15-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.15-5.

Preferred Sync Channel frequency assignments for the multi-carrier mode are given in Table 2.1.15-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it

shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$ – 25 if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S$ + 25 if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 80.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $120.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 14 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.15-1. Band Class 14 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	1850–1865	1930–1945
D	1865–1870	1945–1950
B	1870–1885	1950–1965
E	1885–1890	1965–1970
F	1890–1895	1970–1975
C	1895–1910	1975–1990
G	1910–1915	1990–1995

Table 2.1.15-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 14

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 1299$	1850.000 + 0.050 N
Base Station	$0 \le N \le 1299$	1930.000 + 0.050 N

Table 2.1.15-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 14 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (15 MHz)	Not Valid	0–24	1850.000–1851.200	1930.000–1931.200
	Valid	25–275	1851.250–1863.750	1931.250–1943.750
	Cond. Valid	276–299	1863.800–1864.950	1943.800–1944.950
D (5 MHz)	Cond. Valid	300–324	1865.000–1866.200	1945.000–1946.200
	Valid	325–375	1866.250–1868.750	1946.250–1948.750
	Cond. Valid	376–399	1868.800–1869.950	1948.800–1949.950
B (15 MHz)	Cond. Valid	400–424	1870.000–1871.200	1950.000–1951.200
	Valid	425–675	1871.250–1883.750	1951.250–1963.750
	Cond. Valid	676–699	1883.800–1884.950	1963.800–1964.950
E (5 MHz)	Cond. Valid	700–724	1885.000–1886.200	1965.000–1966.200
	Valid	725–775	1886.250–1888.750	1966.250–1968.750
	Cond. Valid	776–799	1888.800–1889.950	1968.800–1969.950
F (5 MHz)	Cond. Valid	800–824	1890.000–1891.200	1970.000–1971.200
	Valid	825–875	1891.250–1893.750	1971.250–1973.750
	Cond. Valid	876–899	1893.800–1894.950	1973.800–1974.950
C (15 MHz)	Cond. Valid	900–924	1895.000–1896.200	1975.000–1976.200
	Valid	925–1175	1896.250–1908.750	1976.250–1988.750
	Cond. Valid	1176–1199	1908.800–1909.950	1988.800–1989.950
G (5 MHz)	Cond. Valid	1200–1224	1910.000–1911.200	1990.000–1991.200
	Valid	1225–1275	1911.250–1913.750	1991.250–1993.750
	Not Valid	1276–1299	1913.800–1914.950	1993.800–1994.950

Table 2.1.15-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 14 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (15 MHz)	Not Valid	0–49	1850.000–1852.450	1930.000–1932.450
	Valid	50–250	1852.500–1862.500	1932.500–1942.500
	Cond. Valid	251–299	1862.550–1864.950	1942.550–1944.950
D (5 MHz)	Cond. Valid	300–349	1865.000–1867.450	1945.000–1947.450
	Valid	350	1867.500	1947.500
	Cond. Valid	351–399	1867.550–1869.950	1947.550–1949.950
B (15 MHz)	Cond. Valid	400–449	1870.000–1872.450	1950.000–1952.450
	Valid	450–650	1872.500–1882.500	1952.500–1962.500
	Cond. Valid	651–699	1882.550–1884.950	1962.550–1964.950
E (5 MHz)	Cond. Valid	700–749	1885.000–1887.450	1965.000–1967.450
	Valid	750	1887.500	1967.500
	Cond. Valid	751–799	1887.550–1889.950	1967.550–1969.950
F (5 MHz)	Cond. Valid	800–849	1890.000–1892.450	1970.000–1972.450
	Valid	850	1892.500	1972.500
	Cond. Valid	851–899	1892.550–1894.950	1972.550–1974.950
C (15 MHz)	Cond. Valid	900–949	1895.000–1897.450	1975.000–1977.450
	Valid	950–1150	1897.500–1907.500	1977.500–1987.500
	Cond. Valid	1151–1199	1907.550–1909.950	1987.550–1989.950
G (5 MHz)	Cond. Valid	1200–1249	1910.000–1912.450	1990.000–1992.450
	Valid	1250	1912.500	1992.500
	Not Valid	1251–1299	1912.550–1914.950	1992.550–1994.950

Table 2.1.15-5. CDMA Preferred Set of Frequency Assignments for Band Class 14

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275
	3	50, 75, 100, 125, 150, 175, 200, 225, 250
D	1	325, 350, 375
	3	350
B	1	425, 450, 475, 500, 525, 550, 575, 600, 625, 650, 675
	3	450, 475, 500, 525, 550, 575, 600, 625, 650
E	1	725, 750, 775
	3	750
F	1	825, 850, 875
	3	850
C	1	925, 950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150, 1175
	3	950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150
G	1	1225, 1250, 1275
	3	1250

Table 2.1.15-6. Sync Channel Preferred Frequency Assignments for Spreading Rate 3 for Band Class 14

Block Designator	Preferred Set of Channel Numbers
A	75, 150, 225
D	350
B	475, 550, 625
E	750
F	850
C	975, 1050, 1125
G	1250

2.1.16 Band Class 15 (AWS Band)

The Band Class 15 block designators for the CDMA equipment shall be as specified in Table 2.1.16-1.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 15 shall be as specified in Table 2.1.16-2. CDMA equipment supporting Band Class 15 and Spreading Rate 1 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.16-3. CDMA equipment supporting Band Class 15 and Spreading Rate 3 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.16-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.16-5.

Preferred Sync Channel frequency assignments for the multi-carrier mode are given in Table 2.1.16-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 400.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $400.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 15 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.16-1. Band Class 15 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	1710–1720	2110–2120
B	1720–1730	2120–2130
C	1730–1735	2130–2135
D	1735–1740	2135–2140
E	1740–1745	2140–2145
F	1745–1755	2145–2155

Table 2.1.16-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 15

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \leq N \leq 899$	1710.000 + 0.050 N
Base Station	$0 \leq N \leq 899$	2110.000 + 0.050 N

Table 2.1.16-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 15 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (10 MHz)	Not Valid	0–24	1710.000–1711.200	2110.000–2111.200
	Valid	25–175	1711.250–1718.750	2111.250–2118.750
	Cond. Valid	176–199	1718.800–1719.950	2118.800–2119.950
B (10 MHz)	Cond. Valid	200–224	1720.000–1721.200	2120.000–2121.200
	Valid	225–375	1721.250–1728.750	2121.250–2128.750
	Cond. Valid	376–399	1728.800–1729.950	2128.800–2129.950
C (5 MHz)	Cond. Valid	400–424	1730.000–1731.200	2130.000–2131.200
	Valid	425–475	1731.250–1733.750	2131.250–2133.750
	Cond. Valid	476–499	1733.800–1734.950	2133.800–2134.950
D (5 MHz)	Cond. Valid	500–524	1735.000–1736.200	2135.000–2136.200
	Valid	525–575	1736.250–1738.750	2136.250–2138.750
	Cond. Valid	576–599	1738.800–1739.950	2138.800–2139.950
E (5 MHz)	Cond. Valid	600–624	1740.000–1741.200	2140.000–2141.200
	Valid	625–675	1741.250–1743.750	2141.250–2143.750
	Cond. Valid	676–699	1743.800–1744.950	2143.800–2144.950
F (10 MHz)	Cond. Valid	700–724	1745.000–1746.200	2145.000–2146.200
	Valid	725–875	1746.250–1753.750	2146.250–2153.750
	Not Valid	876–899	1753.800–1754.950	2153.800–2154.950

Table 2.1.16-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 15 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (10 MHz)	Not Valid	0–49	1710.000–1712.450	2110.000–2112.450
	Valid	50–150	1712.500–1717.500	2112.500–2117.500
	Cond. Valid	151–199	1717.550–1719.950	2117.550–2119.950
B (10 MHz)	Cond. Valid	200–249	1720.000–1722.450	2120.000–2122.450
	Valid	250–350	1722.500–1727.500	2122.500–2127.500
	Cond. Valid	351–399	1727.550–1729.950	2127.550–2129.950
C (5 MHz)	Cond. Valid	400–449	1730.000–1732.450	2130.000–2132.450
	Valid	450	1732.500	2132.500
	Cond. Valid	451–499	1732.550–1734.950	2132.550–2134.950
D (5 MHz)	Cond. Valid	500–549	1735.000–1737.450	2135.000–2137.450
	Valid	550	1737.500	2137.500
	Cond. Valid	551–599	1737.550–1739.950	2137.550–2139.950
E (5 MHz)	Cond. Valid	600–649	1740.000–1742.450	2140.000–2142.450
	Valid	650	1742.500	2142.500
	Cond. Valid	651–699	1742.550–1744.950	2142.550–2144.950
F (10 MHz)	Cond. Valid	700–749	1745.000–1747.450	2145.000–2147.450
	Valid	750–850	1747.500–1752.500	2147.500–2152.500
	Not Valid	851–899	1752.550–1754.950	2152.550–2154.950

Table 2.1.16-5. CDMA Preferred Set of Frequency Assignments for Band Class 15

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	25, 50, 75, 100, 125, 150, 175
	3	50, 75, 100, 125, 150
B	1	225, 250, 275, 300, 325, 350, 375
	3	250, 275, 300, 325, 350
C	1	425, 450, 475
	3	450
D	1	525, 550, 575
	3	550
E	1	625, 650, 675
	3	650
F	1	725, 750, 775, 800, 825, 850, 875
	3	750, 775, 800, 825, 850

Table 2.1.16-6. Sync Channel Preferred Frequency Assignments for Spreading Rate 3 for Band Class 15

Block Designator	Sync Channel Preferred Channel Numbers
A	75, 150
B	275, 350
C	450
D	550
E	650
F	775, 850

2.1.17 Band Class 16 (US 2.5GHz Band)

The Band Class 16 block designators for the CDMA equipment shall be as specified in Table 2.1.17-1. CDMA equipments supporting Band Class 16 shall be capable of transmitting in Band Class 16.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 16 shall be as specified in Table 2.1.17-2. CDMA equipment supporting Band Class 16 and Spreading Rate 1 shall support transmission on the valid and conditionally valid channel numbers shown in Table 2.1.17-3. CDMA equipment supporting Band Class 16 and Spreading Rate 3 shall support transmission on the valid and conditionally valid

channel numbers shown in Table 2.1.17-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.17-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.17-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 122.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $122.0 - 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 16 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.17-1. Band Class 16 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	2502–2518.5	2624-2640.5
B	2518.5–2535	2640.5-2657
C	2535-2551.5	2657-2673.5
D	2551.5-2568	2673.5-2690

Table 2.1.17-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 16

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$140 \le M \le 1459$	2495.000 + 0.050 M
Base Station	$140 \le N \le 1459$	2617.000 + 0.050 N

Table 2.1.17-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 16 and Spreading Rate 1

Block Designator	CDMA Channel Validity	Mobile Station CDMA Channel Number (M)	Mobile Station Transmit Frequency Band (MHz)	Base Station CDMA Channel Number (N)	Base Station Transmit Frequency Band (MHz)
A (16.5 MHz)	Not Valid Valid Cond. Valid	140–164 165–445 446–459	2502.000–2503.200 2503.250–2517.250 2517.300–2518.450	140–164 165–445 446–459	2624.000-2625.200 2625.250-2639.250 2639.300-2640.450
B (16.5 MHz)	Cond. Valid Valid Cond. Valid	470–494 495–775 776–799	2518.500–2519.700 2519.750–2533.750 2533.800–2534.950	470–494 495–775 776–799	2640.500-2641.700 2641.750-2655.750 2655.800-2656.950
C (16.5 MHz)	Cond. Valid Valid Cond. Valid	800–824 825–1105 1106–1129	2535.000-2536.200 2536.250-2550.250 2550.300-2551.450	800–824 825–1105 1106–1129	2657.000-2658.200 2658.250-2672.250 2672.300-2673.450
D (16.5 MHz)	Cond. Valid Valid Not Valid	1130–1154 1155–1435 1436–1459	2551.500-2552.700 2552.750-2566.750 2566.800-2567.950	1130–1154 1155–1435 1436–1459	2673.500-2674.700 2674.750-2688.750 2688.800-2689.950

Table 2.1.17-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 16 and Spreading Rate 3

Block Designator	CDMA Channel Validity	Mobile Station CDMA Channel Number (M)	Mobile Station Transmit Frequency Band (MHz)	Base Station CDMA Channel Number (N)	Base Station Transmit Frequency Band (MHz)
A (16.5 MHz)	Not Valid Valid Cond. Valid	140–289 190–420 421–469	2502.000-2504.450 2504.500-2516.000 2516.050-2518.450	140–289 190–420 421–469	2624.000-2626.450 2626.500-2638.000 2638.050-2640.450
B (16.5 MHz)	Cond. Valid Valid Cond. Valid	470-519 520-750 751-799	2518.500-2520.950 2521.000-2532.500 2532.550-2534.950	470-519 520-750 751-799	2640.500-2642.950 2643.000-2654.500 2654.550-2656.950
C (16.5 MHz)	Cond. Valid Valid Cond. Valid	800-849 850-1080 1081-1129	2535.000-2537.450 2537.500-2549.000 2549.050-2551.450	800-849 850-1080 1081-1129	2657.000-2659.450 2659.500-2671.000 2671.050-2673.450
D (16.5 MHz)	Cond. Valid Valid Not Valid	1130–1179 1180–1410 1411–1459	2551.500-2553.950 2554.000-2565.500 2565.550-2567.950	1130–1179 1180–1410 1411–1459	2673.500-2675.950 2676.000-2687.500 2687.550-2689.950

Table 2.1.17-5. CDMA Preferred Set of Frequency Assignments for Band Class 16

Block Designator	Spreading Rate	Mobile Station Preferred Set Channel Numbers
A	1	165, 190, 215, 240, 265, 290, 315, 340, 365, 390, 415, 440
	3	190, 215, 240, 265, 290, 315, 340, 365, 390, 415
B	1	495, 520, 545, 570, 595, 620, 645, 670, 695, 720, 745, 770
	3	520, 545, 570, 595, 620, 645, 670, 695, 720, 745
C	1	825, 850, 875, 900, 925, 950, 975, 1000, 1025, 1050, 1075, 1100
	3	850, 875, 900, 925, 950, 975, 1000, 1025, 1050, 1075
D	1	1155, 1180, 1205, 1230, 1255, 1280, 1305, 1330, 1355, 1380, 1405, 1430
	3	1180, 1205, 1230, 1255, 1280, 1305, 1330, 1355, 1380, 1405

Table 2.1.17-6. Sync Channel Preferred Frequency Assignments for Spreading Rate 3 for Band Class 16

Block Designator	Preferred Set of Channel Numbers
A	215, 290, 365, 470
B	555, 620, 695, 770
C	875, 950, 1025, 1100
D	1205, 1280, 1355, 1430

2.1.18 Band Class 17 (US 2.5GHz Forward Link Only Band)

Not specified.

2.1.19 Band Class 18 (700 MHz Public Safety Band)

The Band Class 18 block designators for the CDMA equipment shall be as specified in Table 2.1.19-1. CDMA equipments supporting Band Class 18 shall be capable of transmitting in Band Class 18.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 18 shall be as specified in Table 2.1.19-2. CDMA equipments supporting Band Class 18 and Spreading Rate 1 shall support operations on the valid and conditionally valid channel numbers shown in Table 2.1.19-3. CDMA equipments supporting Band Class 18 and Spreading Rate 3 shall support operations on the valid and conditionally valid channel

numbers shown in Table 2.1.19-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.19-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.19-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channels, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S - 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S + 25$ if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 30.0 MHz higher than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $30.0 + 1.25 \times (1XRL\_FREQ\_OFFSET_S - 1)$ MHz higher than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 18 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.19-1. Band Class 18 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	787-788	757-758
D	788-793	758-763
Public Safety Broadband	793-798	763-768
Public Safety Guard Band	798-799	768-769

Table 2.1.19-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 18

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 240	787.000 + 0.050 N
Access Network	0 ≤ N ≤ 240	757.000 + 0.050 N

Table 2.1.19-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 18 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Mobile Station
A (1 MHz)	Not Valid	0–19	787.000–787.950	757.000-757.950
D (5 MHz)	Not Valid Valid Cond. Valid	20–44 45–95 96–119	788.000–789.200 789.250-791.750 791.800-792.950	758.000-759.200 759.250-761.750 761.800-762.950
Public Safety Broadband (5 MHz)	Cond. Valid Valid Not Valid	120–144 145–195 196–219	793.000–794.200 794.250-796.750 796.800-797.950	763.000-764.200 764.250-766.750 766.800-767.950
Public Safety Guard Band (1 MHz)	Not Valid	220–240	798.000-799.000	768.000-769.000

Table 2.1.19-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 18 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (1 MHz)	Not Valid	0–19	787.000–787.950	757.000–757.950
D (5 MHz)	Not Valid Valid Cond. Valid	20–69 70 71–119	788.000–790.450 790.500 790.550-792.950	758.000–760.450 760.500 760.550-762.950
Public Safety Broadband (5 MHz)	Cond. Valid Valid Not Valid	120–169 170 171–219	793.000–795.450 795.500 795.550–797.950	763.000–765.450 765.500 765.550-767.950
Public Safety Guard Band (1 MHz)	Not Valid	220–240	798.000-799.000	768.000-769.000

Table 2.1.19-5. CDMA Preferred Set of Frequency Assignments for Band Class 18

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	N/A	None
D	1	45, 70, 95
	3	70
Public Safety Broadband	1	145, 170, 195
	3	170
Public Safety Guard Band	N/A	None

Table 2.1.19-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 18

Block Designator	Preferred Set of Channel Numbers
A	None
D	70
Public Safety Broadband	170
Public Safety Guard Band	None

2.1.20 Band Class 19 (Lower 700 MHz Band)

The Band Class 19 block designators for the CDMA equipment shall be as specified in Table 2.1.20-1. CDMA equipments supporting Band Class 19 shall be capable of transmitting in Band Class 19.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 19 shall be as specified in Table 2.1.20-2. CDMA equipments supporting Band Class 19 and Spreading Rate 1 shall support operations on the valid and conditionally valid channel numbers shown in Table 2.1.20-3. CDMA equipments supporting Band Class 19 and Spreading Rate 3 shall support operations on the valid and conditionally valid channel numbers shown in Table 2.1.20-4. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

A preferred set of CDMA frequency assignments is given in Table 2.1.20-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.20-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channels, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s - 25$ if $1XRL\_FREQ\_OFFSET_s$ equals '00', on the CDMA Channel designated by $CDMACH_s$ if $1XRL\_FREQ\_OFFSET_s$ equals '01', or on the CDMA Channel designated by $CDMACH_s + 25$ if $1XRL\_FREQ\_OFFSET_s$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 30.0 MHz higher than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be 30.0 + 1.25 ×

(1XRL_FREQ_OFFSET$_S$ – 1) MHz higher than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 19 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.20-1. Band Class 19 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	698-704	728-734
B	704-710	734-740
C	710-716	740-746

Table 2.1.20-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 19

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 360	698.000 + 0.050 N
Access Network	0 ≤ N ≤ 360	728.000 + 0.050 N

Table 2.1.20-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 19 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (6 MHz)	Not Valid	0–22	698.000–699.100	728.000–729.100
	Valid	23–98	699.150-702.900	729.150-732.900
	Cond. Valid	99–119	702.950-703.950	732.950-733.950
B (6 MHz)	Cond. Valid	120–142	704.000–705.100	734.000–735.100
	Valid	143–218	705.150-708.900	735.150-738.900
	Cond. Valid	219–239	708.950-709.950	738.950-739.950
C (6 MHz)	Cond. Valid	240–262	710.000–711.100	740.000–741.100
	Valid	263–338	711.150-714.900	741.150-744.900
	Not Valid	339–360	714.950-716.000	744.950-746.000

Table 2.1.20-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 19 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (6 MHz)	Not Valid	0–47	698.000–700.350	728.000–730.350
	Valid	48-73	700.400-701.650	730.400-731.650
	Cond. Valid	74-119	701.700-703.950	731.700-733.950
B (6 MHz)	Cond. Valid	120–167	704.000–706.350	734.000–736.350
	Valid	168–193	706.400-707.650	736.400-737.650
	Cond. Valid	194–239	707.700-709.950	737.700-739.950
C (6 MHz)	Cond. Valid	240–287	710.000–712.350	740.000–742.350
	Valid	288-313	712.400-713.650	742.400-743.650
	Not Valid	314-360	713.700-716.000	743.700-746.000

Table 2.1.20-5. CDMA Preferred Set of Frequency Assignments for Band Class 19

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	23, 48, 73, 98
	3	48, 73
B	1	143, 168, 193, 218
	3	168, 193
C	1	263, 288, 313, 338
	3	288, 313

Table 2.1.20-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 19

Block Designator	Preferred Set of Channel Numbers
A	73
B	193
C	288

2.1.21 Band Class 20 (L-Band)

The Band Class 20 block designators for the CDMA equipment are not specified. CDMA equipments supporting Band Class 20 shall be capable of transmitting in Band Class 20.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 20 shall be as specified in Table 2.1.21-1. CDMA equipments supporting Band

Class 20 and Spreading Rate 1 shall support transmission on the valid channel numbers shown in Table 2.1.21-2. CDMA equipments supporting Band Class 20 and Spreading Rate 3 shall support transmission on the valid channel numbers shown in Table 2.1.21-3.

A preferred set of CDMA frequency assignments is given in Table 2.1.21-4.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_s - 25$ if $1XRL\_FREQ\_OFFSET_s$ equals '00', on the CDMA Channel designated by $CDMACH_s$ if $1XRL\_FREQ\_OFFSET_s$ equals '01', or on the CDMA Channel designated by $CDMACH_s + 25$ if $1XRL\_FREQ\_OFFSET_s$ equals '10'.

If the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 101.5 MHz higher than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be $101.5 - 1.25 \times (1XRL\_FREQ\_OFFSET_s - 1)$ MHz higher than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 20 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.21-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 20

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Mobile Station	$0 \le N \le 680$	1626.500 + 0.050 N
Base Station	$0 \le N \le 680$	1525.000 + 0.050 N

Table 2.1.21-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 20 and Spreading Rate 1

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–12	1626.500–1627.100	1525.000–1525.600
Valid	13–667	1627.150–1659.850	1525.650–1558.350
Not Valid	668–680	1659.900–1660.500	1558.400–1559.000

Table 2.1.21-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 20 and Spreading Rate 3

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Mobile Station	Base Station
Not Valid	0–37	1626.500–1628.350	1525.000–1526.850
Valid	38–642	1628.400–1658.600	1526.900–1557.100
Not Valid	643–680	1658.650–1660.500	1557.150–1559.000

Table 2.1.21-4. CDMA Preferred Set of Frequency Assignments for Band Class 20

Spreading Rate	Preferred Set Channel Numbers
1	25, 50,..., 625, 650
3	50, 75,..., 600, 625

2.1.22 Band Class 21 (S-Band)

The Band Class 21 block designators for the CDMA equipment shall be as specified in Table 2.1.20-1. CDMA equipments supporting Band Class 21 shall be capable of transmitting in Band Class 21.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 21 shall be as specified in Table 2.1.20-2. CDMA equipments supporting Band Class 21 and Spreading Rate 1 shall support operations on the valid channel numbers shown in Table 2.1.20-3. CDMA equipments supporting Band Class 21 and Spreading Rate 3 shall support operations on the valid channel numbers shown in Table 2.1.20-4.

A preferred set of CDMA frequency assignments is given in Table 2.1.20-5.

A preferred set of Sync Channel frequency assignments for the multi-carrier mode is given in Table 2.1.20-6.

If the mobile station uses Spreading Rate 1 or Spreading Rate 3 for both Forward and Reverse Traffic Channels, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$. If the mobile station uses Spreading Rate 3 for the Forward Traffic Channel and uses Spreading Rate 1 for the Reverse Traffic Channel, then it shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$ – 25 if $1XRL\_FREQ\_OFFSET_S$ equals '00', on the CDMA Channel designated by $CDMACH_S$ if $1XRL\_FREQ\_OFFSET_S$ equals '01', or on the CDMA Channel designated by $CDMACH_S$ + 25 if $1XRL\_FREQ\_OFFSET_S$ equals '10'.

For a mobile station operation in block A, if the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 190.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall

be 190.0 + 1.25 × (1XRL_FREQ_OFFSET$_S$ – 1) MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

For a mobile station operation in block B, if the mobile station is transmitting and receiving using the same spreading rate, the nominal mobile station transmit carrier frequency shall be 170.0 MHz lower than the frequency of the base station transmit signal as measured at the mobile station receiver. If the mobile station is transmitting on Spreading Rate 1 and receiving on Spreading Rate 3, the nominal mobile station transmit carrier frequency shall be 170.0 + 1.25 × (1XRL_FREQ_OFFSET$_S$ – 1) MHz lower than the center frequency of the center CDMA channel transmitted by the base station as measured at the mobile station receiver.

At the base station, if a Band Class 21 carrier operates with Spreading Rate 3, then all three carriers shall be separated by 25 CDMA Channels (1.25 MHz separation).

Table 2.1.22-1. Band Class 21 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Mobile Station	Base Station
A	2000-2010	2190-2200
B	2010-2020	2180-2190

Table 2.1.22-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 21

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 200	2000.000 + 0.050 N
	201 ≤ N ≤ 399	2010.000 + 0.050 (N – 200)
Access Network	0 ≤ N ≤ 200	2190.000 + 0.050 N
	201 ≤ N ≤ 399	2180.000 + 0.050 (N – 200)

Table 2.1.22-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 21 and Spreading Rate 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (10 MHz)	Not Valid	0-24	2000.000-2001.200	2190.000-2191.200
	Valid	25-175	2001.250-2008.750	2191.250-2198.750
	Not Valid	176-200	2008.800-2010.000	2198.800-2200.000
B (10 MHz)	Not Valid	201-224	2010.050-2011.200	2180.050-2181.200
	Valid	225-375	2011.250-2018.750	2181.250-2188.750
	Not Valid	376-399	2018.800-2019.950	2188.800-2189.950

Table 2.1.22-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 21 and Spreading Rate 3

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Mobile Station	Base Station
A (10 MHz)	Not Valid	0-49	2000.000-2002.450	2190.000-2192.450
	Valid	50-150	2002.500-2007.500	2192.500-2197.500
	Not Valid	151-200	2007.550-2010.000	2197.550-2200.000
B (10 MHz)	Not Valid	201-249	2010.050-2012.450	2180.050-2182.450
	Valid	250-350	2012.500-2017.500	2182.500-2187.500
	Not Valid	351-399	2017.550-2019.950	2187.550-2189.950

Table 2.1.22-5. CDMA Preferred Set of Frequency Assignments for Band Class 21

Block Designator	Spreading Rate	Preferred Set Channel Numbers
A	1	25, 50, 75, 100, 125, 150, 175
	3	50, 75, 100, 125, 150
B	1	225, 250, 275, 300, 325, 350, 375
	3	250, 275, 300, 325, 350

Table 2.1.22-6. Sync Channel Preferred Set of Frequency Assignments for Spreading Rate 3 for Band Class 21

Block Designator	Preferred Set of Channel Numbers
A	50, 75, 100, 125, 150
B	250, 275, 300, 325, 350

2.1.23 Band Class 22 (Mobile Satellite System Band)

Not specified.

2.2 Frequency Tolerance

The mobile station shall meet the requirements of the current version of [4]. The base station transmit carrier frequency shall be maintained within $\pm 5 \times 10^{-8}$ of the CDMA frequency assignment (±0.05 ppm).

2.3 Power Output Characteristics: Controlled Output Power

All power levels are referenced to the mobile station antenna connector unless otherwise specified. The mobile station shall provide three independent means of output power adjustment: an open loop estimation performed by the mobile station, a closed loop correction involving both the mobile station and the base station, and possible code channel attribute adjustments for certain channels and radio configurations.

2.3.1 Open Loop Output Power for Reverse Link Channels

In Table 2.3.1-1, the mean power is referenced to the nominal CDMA Channel bandwidth of 1.23 MHz for Spreading Rate 1 or 3.69 MHz for Spreading Rate 3. The estimated open loop output power for the various Reverse Link Channels is summarized in Table 2.3.1-1. For simplicity, in Table 2.3.1-1, the Offset Power constants are expressed without units. For example, –73 is equal to $10 \times \log_{10} (10^{-7.3}\ \text{mW}^2)$.

Table 2.3.1-1. Open Loop Power Offsets

Band Class	Forward Spreading Rate	Reverse Spreading Rate	Reverse Channels	Offset Power
0, 2, 3, 5, 7, 9, 10, 11, 12, 18, and 19	1	1	Access Channel Reverse Traffic Channel (RC = 1 or 2)	–73
			Enhanced Access Channel Reverse Common Control Channel Reverse Traffic Channel (RC = 3, 4, or 8) Reverse Packet Data Channel (RC = 7)	–81.5
	3	1	Reverse Traffic Channel (RC = 3 or 4)	–76.5
		3	Enhanced Access Channel Reverse Common Control Channel Reverse Traffic Channel (RC = 5 or 6)	–76.5
1, 4, 6, 8, 13, 14, 15, 16, and 20	1	1	Access Channel Reverse Traffic Channel (RC = 1 or 2)	–76
			Enhanced Access Channel Reverse Common Control Channel Reverse Traffic Channel (RC = 3, 4, or 8) Reverse Packet Data Channel (RC = 7)	–84.5
	3	1	Reverse Traffic Channel (RC = 3 or 4)	–79.5
		3	Enhanced Access Channel Reverse Common Control Channel Reverse Traffic Channel (RC = 5 or 6)	–79.5

The open loop output power when transmitting the access probe on the Reverse Access Channel is summarized in Table 2.3.1-2. Note that the term CORRECTION in Table 2.3.1-2 refers to $NOM\_PWR_S - 16 \times NOM\_PWR\_EXT_S$.

Table 2.3.1-2. Access Probe Open Loop Power on the Reverse Access Channel

Parameter	Band Class	Value
Range of CORRECTIONS	1,2,4,5,6,7,8,9,10,11,12,13,14, 15, 16, 18, 19, and 20	–24 to +7 dB
	0 and 3	–8 to +7 dB

The open loop output power when transmitting on the various Reverse Link Channels are summarized in Table 2.3.1-3. The supported range of combined corrections refers to a number of different parameters for the different Reverse Link Channels, and are summarized below Table 2.3.1-3.

Table 2.3.1-3. Open Loop Output Power

Channel	Band Class	Supported Combined Range of Corrections
Access Channel	0,2,3,5,7,9,10,11, 12, 18, and 19	At least ±32 dB
	1,4,6, 8,13,14,15, 16, and 20	At least ±40 dB
Enhanced Access Channel	0,2,3,5,7,9,10,11, 12, 18, and 19	At least ±32 dB
	1,4,6,8,13,14,15, 16, and 20	At least ±40 dB
Common Control Channel	0,2,3,5,7,9,10,11, 12, 18, and 19	At least ±32 dB
	1,4,6,8,13,14,15, 16, and 20	At least ±40 dB
Reverse Traffic Channel (RC 1 or 2)	0,2,3,5,7,9,10,11, 12, 18, and 19	At least ±32 dB
	1,4,6,8,13,14,15, 16, and 20	At least ±40 dB
Reverse Traffic Channel (RC 3, 4, 5, 6, or 7)	0,2,3,5,7,9,10,11, 12, 18, and 19	At least ±32 dB
	1,4,6,8,13,14,15, 16, and 20	At least ±40 dB

For the Reverse Access Channel, the term "Supported Combined Range of Corrections" refers to a total combined range of interference correction, NOM_PWR_S, $NOM\_PWR\_EXT_S$, $INIT\_PWR_S$, and $PWR\_STEP_S \times PWR\_LVL$ (see [1]).

For the Reverse Enhanced Access Channel, the term "Supported Combined Range of Corrections" refers to a total combined range of interference correction, $EACH\_NOM\_PWR_S$, $EACH\_INIT\_PWR_S$, $PWR\_LVL \times EACH\_PWR\_STEP_S$, and closed loop power control corrections (if applicable).

For the Reverse Common Control Channel, the term "Supported Combined Range of Corrections" refers to a total combined range of interference correction, $RCCCH\_NOM\_PWR_S$, $RCCCH\_INIT\_PWR_S$, PREV_CORRECTIONS (see [1]), and closed loop power control corrections.

For the Reverse Traffic Channel operating with Radio Configuration 1 or 2, the term "Supported Combined Range of Corrections" refers to a total combined range of interference correction, ACC_CORRECTIONS (see [1]), $RLGAIN\_ADJ_S$, and closed loop power control corrections.

For the Reverse Traffic Channel operating with Radio Configuration 3, 4, 5, 6, or 7, the term “Supported Combined Range of Corrections” refers to a total combined range of interference correction, ACC_CORRECTIONS, $RLGAIN\_ADJ_S$, $RTC\_NOM\_PWR_S$, and closed loop power control corrections.

3 REQUIREMENTS FOR THE OPERATION OF THE "*CDMA2000 HIGH RATE PACKET DATA AIR INTERFACE*"

This section defines requirements and operation for both the access terminal and the access network that are specific to CDMA High Rate Packet Data Equipment conforming to [2]. A CDMA access terminal or access network may support operation in one or more band classes.

3.1 Channel Spacing and Designation

This section specifies the frequency parameters of the CDMA equipment conforming to [2] that support CDMA operation. Note that CDMA equipment in this section could be interpreted to mean an access network, an access terminal, or both.

3.1.1 Band Class 0 (800-MHz Band)

The Band Class 0 system designators for the access terminal and access network shall be as specified in Table 3.1.1-1.

There are four band subclasses specified for Band Class 0. Access terminals supporting Band Class 0 shall support at least one band subclass belonging to Band Class 0.

Access terminals supporting Band Class 0 shall be capable of transmitting in Band Class 0.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 0 shall be as specified in Table 3.1.1-2. Access terminals supporting Band Class 0 shall support transmission on the valid channel numbers shown in Table 3.1.1-3.[9]

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 45.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

[9] Note that the Korean Cellular Band uses Band Subclass 1 and has additional valid channels that a Band Class 0 access terminal should support to permit roaming to Korea.

Table 3.1.1-1. Band Class 0 System Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	824.025–835.005 844.995–846.495	869.025–880.005 889.995–891.495
	1	824.025–835.005 844.995–848.985	869.025–880.005 889.995–893.985
	2	824.025-829.995	869.025-874.995
	3	815.025-829.995	860.025-874.995
B	0	835.005–844.995 846.495–848.985	880.005–889.995 891.495–893.985
	1	835.005–844.995	880.005–889.995

Table 3.1.1-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 0

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$1 \le N \le 799$	$0.030 N + 825.000$
	$991 \le N \le 1023$	$0.030 (N - 1023) + 825.000$
	$1024 \le N \le 1323$	$0.030 (N - 1024) + 815.040$
Access Network	$1 \le N \le 799$	$0.030 N + 870.000$
	$991 \le N \le 1023$	$0.030 (N - 1023) + 870.000$
	$1024 \le N \le 1323$	$0.030 (N - 1024) + 860.040$

Table 3.1.1-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 0

Band Subclass	System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
				Access Terminal	Access Network
0	A" (1 MHz)	Not Valid Valid	991–1012 1013–1023	824.040–824.670 824.700–825.000	869.040–869.670 869.700–870.000
	A (10 MHz)	Valid Not Valid	1–311 312–333	825.030–834.330 834.360–834.990	870.030–879.330 879.360–879.990
	B (10 MHz)	Not Valid Valid Not Valid	334–355 356–644 645–666	835.020–835.650 835.680–844.320 844.350–844.980	880.020–880.650 880.680–889.320 889.350–889.980
	A' (1.5 MHz)	Not Valid Valid Not Valid	667–688 689–694 695–716	845.010–845.640 845.670–845.820 845.850–846.480	890.010–890.640 890.670–890.820 890.850–891.480
	B' (2.5 MHz)	Not Valid Valid Not Valid	717–738 739–777 778–799	846.510–847.140 847.170–848.310 848.340–848.970	891.510–892.140 892.170–893.310 893.340–893.970
1	A" (1 MHz)	Not Valid Valid	991–1012 1013–1023	824.040–824.670 824.700–825.000	869.040–869.670 869.700–870.000
	A (10 MHz)	Valid Not Valid	1–311 312–333	825.030–834.330 834.360–834.990	870.030–879.330 879.360–879.990
	B (10 MHz)	Not Valid Valid Not Valid	334–355 356–644 645–666	835.020–835.650 835.680–844.320 844.350–844.980	880.020–880.650 880.680–889.320 889.350–889.980
	A' (1.5 MHz)	Not Valid Valid	667–688 689–716	845.010–845.640 845.670–846.480	890.010–890.640 890.670–891.480
	A''' (2.5 MHz)	Valid Not Valid	717–779 780–799	846.510–848.370 848.400–848.970	891.510–893.370 893.400–893.970
2	A" (1 MHz)	Valid	991–1023	824.040–825.000	869.040–870.000
	A (5 MHz)	Valid Not Valid	1-142 143-166	825.030-829.260 829.290-829.980	870.030-874.260 874.290-874.980
3	A'''' (9 MHz)	Not Valid Valid	1024-1047 1048-1323	815.040-815.730 815.760-824.010	860.040-860.730 860.760-869.010
	A" (1 MHz)	Valid	991–1023	824.040–825.000	869.040–870.000
	A (5 MHz)	Valid Not Valid	1-142 143-166	825.030-829.260 829.290-829.980	870.030-874.260 874.290-874.980

3.1.2 Band Class 1 (1900-MHz Band)

The Band Class 1 block designators for the access terminal and access network shall be as specified in Table 3.1.2-1.

Access terminals supporting Band Class 1 shall be capable of transmitting in Band Class 1.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 1 shall be as specified in Table 3.1.2-2. Access terminals supporting Band Class 1 shall support transmission on the valid and conditionally valid channel numbers shown in Table 3.1.2-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 80.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.2-1. Band Class 1 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1850–1865	1930–1945
D	1865–1870	1945–1950
B	1870–1885	1950–1965
E	1885–1890	1965–1970
F	1890–1895	1970–1975
C	1895–1910	1975–1990

Table 3.1.2-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 1

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 1199$	1850.000 + 0.050 N
Access Network	$0 \le N \le 1199$	1930.000 + 0.050 N

Table 3.1.2-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 1

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (15 MHz)	Not Valid	0–24	1850.000–1851.200	1930.000–1931.200
	Valid	25–275	1851.250–1863.750	1931.250–1943.750
	Cond. Valid	276–299	1863.800–1864.950	1943.800–1944.950
D (5 MHz)	Cond. Valid	300–324	1865.000–1866.200	1945.000–1946.200
	Valid	325–375	1866.250–1868.750	1946.250–1948.750
	Cond. Valid	376–399	1868.800–1869.950	1948.800–1949.950
B (15 MHz)	Cond. Valid	400–424	1870.000–1871.200	1950.000–1951.200
	Valid	425–675	1871.250–1883.750	1951.250–1963.750
	Cond. Valid	676–699	1883.800–1884.950	1963.800–1964.950
E (5 MHz)	Cond. Valid	700–724	1885.000–1886.200	1965.000–1966.200
	Valid	725–775	1886.250–1888.750	1966.250–1968.750
	Cond. Valid	776–799	1888.800–1889.950	1968.800–1969.950
F (5 MHz)	Cond. Valid	800–824	1890.000–1891.200	1970.000–1971.200
	Valid	825–875	1891.250–1893.750	1971.250–1973.750
	Cond. Valid	876–899	1893.800–1894.950	1973.800–1974.950
C (15 MHz)	Cond. Valid	900–924	1895.000–1896.200	1975.000–1976.200
	Valid	925–1175	1896.250–1908.750	1976.250–1988.750
	Not Valid	1176–1199	1908.800–1909.950	1988.800–1989.950

3.1.3 Band Class 2 (TACS Band)

The Band Class 2 block designators for the access terminal and access network shall be as specified in Table 3.1.3-1.

Access terminals supporting Band Class 2 shall be capable of transmitting in Band Class 2 using at least one band subclass. The band subclasses for Band Class 2 are specified in Table 3.1.3-2.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 2 shall be as specified in Table 3.1.3-3. Access terminals supporting Band Class 2 shall support transmission on the valid and conditionally valid channel numbers shown in Table 3.1.3-4. Transmission on the conditionally valid channels is permissible if valid authorization has been obtained.

For CDMA equipment supporting band subclass 0, 1, and 2 and conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 45.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver. For CDMA equipment supporting band subclass 3 and conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 45.0 MHz higher than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.3-1. Band Class 2 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	872.0125–879.9875 890.0125–897.4875 905.0125–908.9875	917.0125–924.9875 935.0125–942.4875 950.0125–953.9875
B	880.0125–887.9875 897.5125–904.9875 909.0125–914.9875	925.0125–932.9875 942.5125–949.9875 954.0125–959.9875
ATG	894.000-895.500	849.000-850.500

Table 3.1.3-2. Band Class 2 Band Subclasses

Band Subclass	Number of Channels Covered	Channels Covered
0	600	1–600
1	1000	1–1000
2	1320	1329–2047 and 0–600
3	61	2048–2108

Table 3.1.3-3. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 2

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 1000	0.025 N + 889.9875
	1329 ≤ N ≤ 2047	0.025 (N – 1328) + 871.9875
	2048 ≤ N ≤ 2108	0.025 (N – 2048) + 894.000
Access Network	0 ≤ N ≤ 1000	0.025 N + 934.9875
	1329 ≤ N ≤ 2047	0.025 (N – 1328) + 916.9875
	2048 ≤ N ≤ 2108	0.025 (N – 2048) + 849.000

Table 3.1.3-4. CDMA Channel Numbers and Corresponding Frequencies for Band Class 2

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A ETACS (8 MHz)	Not Valid Valid-1320	1329–1355 1356–1648	872.0125–872.6625 872.6875–879.9875	917.0125–917.6625 917.6875–924.9875
B ETACS (8 MHz)	Valid-1320 Cond. Valid-1320	1649–1941 1942–1968	880.0125–887.3125 887.3375–887.9875	925.0125–932.3125 932.3375–932.9875
Unassigned (2 MHz)	Cond. Valid-1320	1969–2047 0	888.0125–889.9625 889.9875	933.0125–934.9625 934.9875
A (7.5 MHz)	Cond. Valid-1320 Valid	1–27 28–300	890.0125–890.6625 890.6875–897.4875	935.0125–935.6625 935.6875–942.4875
B (7.5 MHz)	Valid Valid-1000	301–573 574–600	897.5125–904.3125 904.3375–904.9875	942.5125–949.3125 949.3375–949.9875
A′ (4 MHz)	Valid-1000	601–760	905.0125–908.9875	950.0125–953.9875
B′ (6 MHz)	Valid-1000 Not Valid	761–973 974–1000	909.0125–914.3125 914.3375–914.9875	954.0125–959.3125 959.3375–959.9875
ATG (1.5 MHz)	Not Valid Valid-ATG Not Valid	2048–2072 2073–2083 2084–2108	894.000-894.600 894.625-894.875 894.900-895.500	849.000-849.600 849.625-849.875 849.900-850.500

Valid and Not Valid apply to the channels for the access terminals of all three band subclasses. Valid-1000 means that the channels are only valid for the access terminals of band subclass 1. Valid-1320 means that the channels are only valid for the access terminals of band subclass 2. Valid-ATG means that the channels are only valid for the access terminals of band subclass 3. Cond. Valid-1320 means that the channels are conditionally valid for the access terminals of band subclass 2, and that they are not valid for the access terminals of band subclasses 0 and 1.

3.1.4 Band Class 3 (JTACS Band)

The Band Class 3 system designators for the access terminal and access network shall be as specified in Table 3.1.4-1.

Access terminals supporting Band Class 3 shall be capable of transmitting in Band Class 3.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 3 shall be as specified in Table 3.1.4-2. Access terminals supporting Band Class 3 shall support transmission on the valid channel numbers shown in Table 3.1.4-3.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 55.0 MHz higher than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.4-1. Band Class 3 System Frequency Correspondence

System Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	887.0125–888.9875 893.0125–898.0000 898.0125–900.9875 915.0125–924.9875	832.0125–833.9875 838.0125–843.0000 843.0125–845.9875 860.0125–869.9875
B	Not specified	Not specified

Table 3.1.4-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 3

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	1 ≤ N ≤ 799	0.0125 N + 915.000
	801 ≤ N ≤ 1039	0.0125 (N – 800) + 898.000
	1041 ≤ N ≤ 1199	0.0125 (N – 1040) + 887.000
	1201 ≤ N ≤ 1600	0.0125 (N – 1200) + 893.000
Access Network	1 ≤ N ≤ 799	0.0125 N + 860.000
	801 ≤ N ≤ 1039	0.0125 (N – 800) + 843.000
	1041 ≤ N ≤ 1199	0.0125 (N – 1040) + 832.000
	1201 ≤ N ≤ 1600	0.0125 (N – 1200) + 838.000

In this table, only even-valued N values are valid.

Table 3.1.4-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 3

System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A1 (2 MHz)	Not Valid	1041–1099	887.0125–887.7375	832.0125–832.7375
	Valid	1100–1140	887.7500–888.2500	832.7500–833.2500
	Not Valid	1141–1199	888.2625–888.9875	833.2625–833.9875
A3 (5 MHz)	Not Valid	1201–1259	893.0125–893.7375	838.0125–838.7375
	Valid	1260–1540	893.7500–897.2500	838.7500–842.2500
	Cond. Valid	1541–1600	897.2625–898.0000	842.2625–843.0000
A2 (3 MHz)	Cond. Valid	801–859	898.0125–898.7375	843.0125–843.7375
	Valid	860–980	898.7500–900.2500	843.7500–845.2500
	Not Valid	981–1039	900.2625–900.9875	845.2625–845.9875
A (10 MHz)	Not Valid	1–59	915.0125–915.7375	860.0125–860.7375
	Valid	60–740	915.7500–924.2500	860.7500–869.2500
	Not Valid	741–799	924.2625–924.9875	869.2625–869.9875
B	Not specified	Not specified	Not specified	Not specified

3.1.5 Band Class 4 (Korean PCS Band)

The Band Class 4 block designators for the access terminal and access network shall be as specified in Table 3.1.5-1.

Access terminals supporting Band Class 4 shall be capable of transmitting in Band Class 4.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 4 shall be as specified in Table 3.1.5-2. Access terminals supporting Band Class 4 shall support transmission on the valid and conditionally valid channel numbers shown in Table 3.1.5-3. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 90.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.5-1. Band Class 4 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1750–1760	1840–1850
B	1760–1770	1850–1860
C	1770–1780	1860–1870

Table 3.1.5-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 4

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 599	0.050 N + 1750.000
Access Network	0 ≤ N ≤ 599	0.050 N + 1840.000

Table 3.1.5-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 4

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (10 MHz)	Not Valid	0–24	1750.000–1751.200	1840.000–1841.200
	Valid	25–175	1751.250–1758.750	1841.250–1848.750
	Cond. Valid	176–199	1758.800–1759.950	1848.800–1849.950
B (10 MHz)	Cond. Valid	200–224	1760.000–1761.200	1850.000–1851.200
	Valid	225–375	1761.250–1768.750	1851.250–1858.750
	Cond. Valid	376–399	1768.800–1769.950	1858.800–1859.950
C (10 MHz)	Cond. Valid	400–424	1770.000–1771.200	1860.000–1861.200
	Valid	425–575	1771.250–1778.750	1861.250–1868.750
	Not Valid	576–599	1778.800–1779.950	1868.800–1869.950

3.1.6 Band Class 5 (450-MHz Band)

The Band Class 5 block designators for the access terminal and access network shall be as specified in Table 3.1.6-1.

There are fourteen band subclasses[10] specified for Band Class 5. Each band subclass corresponds to a specific block designator (see Table 3.1.6-1). Each band subclass includes all the channels designated for that system. Access terminals supporting Band Class 5 shall be capable of transmitting in at least one band subclass belonging to Band Class 5. For access terminals capable of transmitting in more than one band subclass belonging to Band Class 5, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 5 shall be as specified in Table 3.1.6-2. Note that certain channel assignments are not valid and others are conditionally valid. Access terminals supporting Band Class 5 shall support operations on the valid and conditionally valid channel numbers of the supported blocks shown in Table 3.1.6-3. Access networks supporting Band Class 5 shall

[10] Blocks I, J and K are occupy the same frequency band as blocks H, G and F, respectively. Channel spacing is 20 kHz for blocks F, G and H, while channel spacing is 25 kHz for blocks I, J and K. Blocks I, J or K should be used for new deployments instead of blocks H, G or F respectively.

support operations on the valid and may support operations on the conditionally valid channel numbers of the supported blocks shown in Table 3.1.6-3. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment operating in blocks A, B, C, D, E, F, G, H, I, J, K, and L, and conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 10.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver. For CDMA equipment operating in blocks M and N, the nominal access terminal transmit carrier frequency shall be at least 10.0 MHz lower than the frequency of the access network transmit signal as measured at the mobile station receiver.

Table 3.1.6-1. Band Class 5 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	452.500–457.475	462.500–467.475
B	1	452.000–456.475	462.000–466.475
C	2	450.000–454.800	460.000–464.800
D	3	411.675–415.850	421.675–425.850
E	4	415.500–419.975	425.500–429.975
F	5	479.000–483.480	489.000–493.480
G	6	455.230–459.990	465.230–469.990
H	7	451.310–455.730	461.310–465.730
I	8	451.325–455.725	461.325–465.725
J	9	455.250–459.975	465.250–469.975
K	10	479.000–483.475	489.000–493.475
L	11	410.000–414.975	420.000–424.975
M	12	450.000–457.475	461.250–469.975
N	13	450.000–457.475	460.000–469.975

Table 3.1.6-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 5

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	1 ≤ N ≤ 400	0.025 (N – 1) + 450.000
	472 ≤ N ≤ 871	0.025 (N – 472) + 410.000
	1039 ≤ N ≤ 1473	0.020 (N – 1024) + 451.010
	1536 ≤ N ≤ 1715	0.025 (N – 1536) + 479.000
	1792 ≤ N ≤ 2016	0.020 (N – 1792) + 479.000
	N = 2017	451.150
	N = 2018	451.475
Access Network	1 ≤ N ≤ 400	0.025 (N – 1) + 460.000
	472 ≤ N ≤ 871	0.025 (N – 472) + 420.000
	1039 ≤ N ≤ 1473	0.020 (N – 1024) + 461.010
	1536 ≤ N ≤ 1715	0.025 (N – 1536) + 489.000
	1792 ≤ N ≤ 2016	0.020 (N – 1792) + 489.000
	N = 2017	467.725
	N = 2018	467.725

Table 3.1.6-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 5

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (4.5 MHz)	Not Valid	121–125	453.000–453.100	463.000–463.100
	Cond. Valid	126–145	453.125–453.600	463.125–463.600
	Valid	146–275	453.625–456.850	463.625–466.850
	Not Valid	276–300	456.875–457.475	466.875–467.475
A′ (0.5 MHz)	Not Valid	101–120	452.500–452.975	462.500–462.975
B (4.5 MHz)	Not Valid	81–105	452.000–452.600	462.000–462.600
	Valid	106–235	452.625–455.850	462.625–465.850
	Not Valid	236–260	455.875–456.475	465.875–466.475
C (4.8 MHz)	Not Valid	1–25	450.000–450.600	460.000–460.600
	Valid	26–168	450.625–454.175	460.625–464.175
	Not Valid	169–193	454.200–454.800	464.200–464.800
D (4.2 MHz)	Not Valid	539–563	411.675–412.275	421.675–422.275
	Valid	564–681	412.300–415.225	422.300–425.225
	Not Valid	682–706	415.250–415.850	425.250–425.850
E (4.5 MHz)	Not Valid	692–716	415.500–416.100	425.500–426.100
	Valid	717–846	416.125–419.350	426.125–429.350
	Not Valid	847–871	419.375–419.975	429.375–429.975
F (4.5 MHz)	Not Valid	1792–1822	479.000–479.600	489.000–489.600
	Valid	1823–1985	479.620–482.860	489.620–492.860
	Not Valid	1986–2016	482.880–483.480	492.880–493.480
G (4.78 MHz)	Not Valid	1235–1265	455.230–455.830	465.230–465.830
	Valid	1266–1442	455.850–459.370	465.850–469.370
	Not Valid	1443–1473	459.390–459.990	469.390–469.990
H (4.44 MHz)	Not Valid	1039–1069	451.310–451.910	461.310–461.910
	Valid	1070–1229	451.930–455.110	461.930–465.110
	Not Valid	1230–1260	455.130–455.730	465.130–465.730
I (4.425 MHz)	Not Valid	54-78	451.325-451.925	461.325-461.925
	Valid	79-205	451.950-455.100	461.950-465.100
	Not Valid	206-230	455.125-455.725	465.125-465.725
J (4.75 MHz)	Not Valid	211–234	455.250–455.825	465.250–465.825
	Valid	235–376	455.850–459.375	465.850–469.375
	Not Valid	377–400	459.400–459.975	469.400–469.975
K (4.5 MHz)	Not Valid	1536–1560	479.000–479.600	489.000–489.600
	Valid	1561–1690	479.625–482.850	489.625–492.850
	Not Valid	1691–1715	482.875–483.475	492.875–493.475

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
L (4.5 MHz)	Not Valid	472–504	410.000–410.800	420.000–420.800
	Valid	505–646	410.825–414.350	420.825–424.375
	Not Valid	647–671	414.375–414.975	423.875–424.975
M (7.5 MHz Mobile Station Transmit, 8.75 MHz Base Station Transmit)	Not Valid	1–96	450.000–452.375	460.000–462.375
	Valid	97–275	452.400–456.850	462.400–466.850
	Valid for Base Station Transmit Only	276–375	456.875–459.350	466.875–469.350
	Not Valid	376–400	459.375–459.975	469.375–469.975
	Valid	2017	451.150	467.725
	Valid	2018	451.475	467.725
N (7.5 MHz Mobile Station Transmit, 10 MHz Base Station Transmit)	Not Valid	1–25	450.000–450.600	460.000–460.600
	Valid	26–275	450.625–456.850	460.625–466.850
	Valid for Base Station Transmit Only	276–375	456.875–459.350	466.875–469.350
	Not Valid	376–400	459.375–459.975	469.375–469.975
	Valid	2017	451.150	467.725
	Valid	2018	451.475	467.725

3.1.7 Band Class 6 (2-GHz Band)

The Band Class 6 block designators for the access terminal and access network are not specified, since licensee allocations vary by regulatory body.

Access terminals supporting Band Class 6 shall be capable of transmitting in Band Class 6.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 6 shall be as specified in Table 3.1.7-1. Access terminals supporting Band Class 6 shall support transmission on the valid channel numbers shown in Table 3.1.7-2.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 190.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.7-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 6

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 1199$	1920.000 + 0.050 N
Access Network	$0 \le N \le 1199$	2110.000 + 0.050 N

Table 3.1.7-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 6

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
Not Valid	0–24	1920.000–1921.200	2110.000–2111.200
Valid	25–1175	1921.250–1978.750	2111.250–2168.750
Not Valid	1176–1199	1978.800–1979.950	2168.800–2169.950

Channel numbers less than 1.25 MHz from the licensee's band edge are not valid.

3.1.8 Band Class 7 (Upper 700-MHz Band)

The Band Class 7 block designators for the access terminal and access network shall be as specified in Table 3.1.8-1.

Access terminals supporting Band Class 7 shall be capable of transmitting in Band Class 7.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 7 shall be as specified in Table 3.1.8-2. Access terminals supporting Band Class 7 shall support operations on the valid and conditionally valid channel numbers shown in Table 3.1.8-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 30.0 MHz higher than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.8-1. Band Class 7 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
C	776–787	746–757
A	787–788	757–758

Table 3.1.8-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 7

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 240$	776.000 + 0.050 N
Access Network	$0 \le N \le 240$	746.000 + 0.050 N

Table 3.1.8-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 7

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
C (11 MHz)	Not Valid	0–22	776.000–777.100	746.000–747.100
	Valid	23–198	777.150-785.900	747.150-755.900
	Not Valid	199–219	785.950-786.950	755.950-756.950
A (1 MHz)	Not Valid	220-240	787.000–788.000	757.000-758.000

3.1.9 Band Class 8 (1800-MHz Band)

The Band Class 8 block designators for the access terminal and the access network are not specified.

Access terminals supporting Band Class 8 shall be capable of transmitting in Band Class 8.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 8 shall be as specified in Table 3.1.9-1. Access terminals supporting Band Class 8 shall support transmission on the valid channel numbers shown in Table 3.1.9-2.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 95.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.9-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 8

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 1499$	1710.000 + 0.050 N
Access Network	$0 \le N \le 1499$	1805.000 + 0.050 N

Table 3.1.9-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 8

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
Not Valid	0–24	1710.000–1711.200	1805.000-1806.200
Valid	25–1475	1711.250-1783.750	1806.250-1878.750
Not Valid	1476–1499	1783.800-1784.950	1878.800-1879.950

Channel numbers less than 1.25 MHz from the licensee's band edge are not valid.

3.1.10 Band Class 9 (900-MHz Band)

The Band Class 9 block designators for the access terminal and the access network are not specified.

Access terminals supporting Band Class 9 shall be capable of transmitting in Band Class 9.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 9 shall be as specified in Table 3.1.10-1. Access terminals supporting Band Class 9 shall support transmission on the valid channel numbers shown Table 3.1.10-2.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 45.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.10-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 9

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 699$	880.000 + 0.050 N
Access Network	$0 \le N \le 699$	925.000 + 0.050 N

Table 3.1.10-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 9

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
Not Valid	0–24	880.000–881.200	925.000-926.200
Valid	25–675	881.250-913.750	926.250-958.750
Not Valid	676–699	913.800-914.950	958.800-959.950

Channel numbers less than 1.25 MHz from the licensee's band edge are not valid.

3.1.11 Band Class 10 (Secondary 800 MHz Band)

The Band Class 10 system designators for the CDMA equipment shall be as specified in Table 3.1.11-1. There are five band subclasses specified for Band Class 10. CDMA equipments supporting Band Class 10 shall support at least one band subclass belonging to Band Class 10. CDMA equipments supporting Band Class 10 shall be capable of transmitting in Band Class 10.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 10 shall be as specified in Table 3.1.11-2. CDMA equipments supporting Band Class 10 shall support transmission on the valid channel numbers shown in Table 3.1.11-3.

For CDMA equipment conforming to [13], or its older versions, the access terminal shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$, and the nominal access terminal transmit carrier frequency shall be 45.0 MHz (Band Subclasses 0, 1, 2, and 3) or 39.0 MHz (Band Subclass 4) lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.11-1. Band Class 10 System Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	806.000–810.975	851.000–855.975
B	1	811.000–815.975	856.000–860.975
C	2	816.000–820.975	861.000–865.975
D	3	821.000–823.975	866.000–868.975
E	4	896.000–900.975	935.000–939.975

Table 3.1.11-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 10

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 719$	0.025 N + 806.000
	$720 \le N \le 919$	0.025 (N – 720) + 896.000
Access Network	$0 \le N \le 719$	0.025 N + 851.000
	$720 \le N \le 919$	0.025 (N – 720) + 935.000

Table 3.1.11-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 10

Band Subclass	System Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
				Access Terminal	Access Network
0	A	Not Valid	0–49	806.000–807.225	851.000–852.225
		Valid	50–150	807.250–809.750	852.250–854.750
		Cond. Valid	151–199	809.775–810.975	854.775–855.975
1	B	Cond. Valid	200–249	811.000–812.225	856.000–857.225
		Valid	250–350	812.250–814.750	857.250–859.750
		Cond. Valid	351–399	814.775–815.975	859.775–860.975
2	C	Cond. Valid	400–449	816.000–817.225	861.000–862.225
		Valid	450–550	817.250–819.750	862.250–864.750
		Cond. Valid	551–599	819.775–820.975	864.775–865.975
3	D	Cond. Valid	600–649	821.000–822.225	866.000–867.225
		Valid	650–670	822.250–822.750	867.250–867.750
		Not Valid	671–719	822.775–823.975	867.775–868.975
4	E	Not Valid	720–769	896.000–897.225	935.000–936.225
		Valid	770–870	897.250–899.750	936.250–938.750
		Not Valid	871–919	899.775–900.975	938.775–939.975

3.1.12 Band Class 11 (400 MHz European PAMR Band)

The Band Class 11 block designators for the CDMA equipment shall be as specified in Table 3.1.12-1. There are twelve band subclasses specified for Band Class 11. Each band subclass corresponds to a specific block designator (see Table 3.1.12-1). Each band subclass includes all the channels designated for that block. CDMA equipments supporting Band Class 11 shall be capable of transmitting in at least one band subclass belonging to Band Class 11. For CDMA equipments capable of transmitting in more than one band subclass belonging to Band Class 11, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 11 shall be as specified in Table 3.1.12-2. Note that certain channel assignments are not valid and others are conditionally valid. Access terminals supporting Band Class 11 shall support operations on the valid and conditionally valid channel numbers of the supported blocks shown in Table 3.1.12-3. Access networks supporting Band Class 11 shall support operations on the valid and may support operations on the conditionally valid channel numbers of the supported blocks shown in Table 3.1.12-3. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the access terminal shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$, and the nominal access terminal transmit carrier frequency shall be 10.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.12-1. Band Class 11 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	452.500–457.475	462.500–467.475
B	1	452.000–456.475	462.000–466.475
C	2	450.000–454.800	460.000–464.800
D	3	411.675–415.850	421.675–425.850
E	4	415.500–419.975	425.500–429.975
F	5	Not specified	Not specified
G	6	Not specified	Not specified
H	7	Not specified	Not specified
I	8	451.325–455.725	461.325–465.725
J	9	455.250–459.975	465.250–469.975
K	10	479.000–483.475	489.000–493.475
L	11	410.000–414.975	420.000–424.975

Table 3.1.12-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 11

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$1 \le N \le 400$	$0.025 (N - 1) + 450.000$
	$472 \le N \le 871$	$0.025 (N - 472) + 410.000$
	$1039 \le N \le 1473$	Reserved
	$1536 \le N \le 1715$	$0.025 (N - 1536) + 479.000$
	$1792 \le N \le 2016$	Reserved
Access Network	$1 \le N \le 400$	$0.025 (N - 1) + 460.000$
	$472 \le N \le 871$	$0.025 (N - 472) + 420.000$
	$1039 \le N \le 1473$	Reserved
	$1536 \le N \le 1715$	$0.025 (N - 1536) + 489.000$
	$1792 \le N \le 2016$	Reserved

Table 3.1.12-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 11

Block Designator	Valid CDMA Frequency Assignments	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (4.5 MHz)	Not Valid	121–125	453.000–453.100	463.000–463.100
	Cond. Valid	126–145	453.125–453.600	463.125–463.600
	Valid	146–275	453.625–456.850	463.625–466.850
	Not Valid	276–300	456.875–457.475	466.875–467.475
A′ (0.5 MHz)	Not Valid	101–120	452.500–452.975	462.500–462.975
B (4.5 MHz)	Not Valid	81–105	452.000–452.600	462.000–462.600
	Valid	106–235	452.625–455.850	462.625–465.850
	Not Valid	236–260	455.875–456.475	465.875–466.475
C (4.8 MHz)	Not Valid	1–25	450.000–450.600	460.000–460.600
	Valid	26–168	450.625–454.175	460.625–464.175
	Not Valid	169–193	454.200–454.800	464.200–464.800
D (4.2 MHz)	Not Valid	539–563	411.675–412.275	421.675–422.275
	Valid	564–681	412.300–415.225	422.300–425.225
	Not Valid	682–706	415.250–415.850	425.250–425.850
E (4.5 MHz)	Not Valid	692–716	415.500–416.100	425.500–426.100
	Valid	717–846	416.125–419.350	426.125–429.350
	Not Valid	847–871	419.375–419.975	429.375–429.975
F	Not specified	Not specified	Not specified	Not specified
G	Not specified	Not specified	Not specified	Not specified
H	Not specified	Not specified	Not specified	Not specified
I (4.425 MHz)	Not Valid	54-78	451.325-451.925	461.325-461.925
	Valid	79-205	451.950-455.100	461.950-465.100
	Not Valid	206-230	455.125-455.725	465.125-465.725
J (4.75 MHz)	Not Valid	211–234	455.250–455.825	465.250–465.825
	Valid	235–376	455.850–459.375	465.850–469.375
	Not Valid	377–400	459.400–459.975	469.400–469.975
K (4.5 MHz)	Not Valid	1536–1560	479.000–479.600	489.000–489.600
	Valid	1561–1690	479.625–482.850	489.625–492.850
	Not Valid	1691–1715	482.875–483.475	492.875–493.475
L (4.5 MHz)	Not Valid	472–504	410.000–410.800	420.000–420.800
	Valid	505–646	410.825–414.350	420.825–424.350
	Not Valid	647–671	414.375–414.975	424.375–424.975

3.1.13 Band Class 12 (800 MHz PAMR Band)

The Band Class 12 block designators for the CDMA equipment shall be as specified in Table 3.1.13-1. There are three band subclasses specified for Band Class 12. Each band subclass corresponds to a specific block designator (see Table 3.1.13-1). Each band subclass includes all the channels designated for that block. CDMA equipments supporting Band Class 12 shall be capable of transmitting in at least one band subclass belonging to Band Class 12. For CDMA equipments capable of transmitting in more than one band subclass belonging to Band Class 12, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 12 shall be as specified in Table 3.1.13-2. Note that certain channel assignments are not valid and others are conditionally valid. Access terminals supporting Band Class 12 shall support operations on the valid and conditionally valid channel numbers of the supported blocks shown in Table 3.1.13-3. Access networks supporting Band Class 12 shall support operations on the valid and may support operations on the conditionally valid channel numbers of the supported blocks shown in Table 3.1.13-3. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the access terminal shall transmit the Reverse Traffic Channel on the CDMA Channel designated by $CDMACH_S$, and the nominal access terminal transmit carrier frequency shall be 45.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.13-1. Band Class 12 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	870.0125–875.9875	915.0125–920.9875
B	1	871.5125–874.4875	916.5125–919.4875
C	2	870.0125–875.9875	915.0125–920.9875

Table 3.1.13-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 12

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 239$	870.0125 + 0.025 N
Access Network	$0 \le N \le 239$	915.0125 + 0.025 N

Table 3.1.13-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 12

Block Designator	Valid CDMA Frequency Assignment	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (6MHz)	Not Valid	0–64	870.0125–871.6125	915.0125–916.6125
	Valid	65–214	871.6375–875.3625	916.6375–920.3625
	Not Valid	215–239	875.3875–875.9875	920.3875–920.9875
B (3 MHz)	Not Valid	60–93	871.5125–872.3375	916.5125–917.3375
	Valid	94–144	872.3625–873.6125	917.3625–918.6125
	Not Valid	145–179	873.6375–874.4875	918.6375–919.4875
C (6MHz)	Not Valid	0–24	870.0125–870.6125	915.0125–915.6125
	Cond. Valid	25–104	870.6375–872.6125	915.6375–917.6125
	Valid	105–206	872.6375–875.1625	917.6375–920.1625
	Cond. Valid	207–214	875.1875–875.3625	920.1875–920.3625
	Not Valid	215–239	875.3875–875.9875	920.3875–920.9875

3.1.14 Band Class 13 (2.5 GHz IMT-2000 Extension Band)

The Band Class 13 block designators for the access terminal and access network shall be as specified in Table 3.1.14-1.

Access terminals supporting Band Class 13 shall be capable of transmitting in Band Class 13.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 13 shall be as specified in Table 3.1.14-2. Access terminals supporting Band Class 13 shall support transmission on the valid and conditionally valid channel numbers shown in Table 3.1.14-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 120.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.14-1. Band Class 13 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	2500–2505	2620–2625
B	2505–2510	2625–2630
C	2510–2515	2630–2635
D	2515–2520	2635–2640
E	2520–2525	2640–2645
F	2525–2530	2645–2650
G	2530–2535	2650–2655
H	2535–2540	2655–2660
I	2540–2545	2660–2665
J	2545–2550	2665–2670
K	2550–2555	2670–2675
L	2555–2560	2675–2680
M	2560–2565	2680–2685
N	2565–2570	2685–2690

Table 3.1.14-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 13

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \leq N \leq 1399$	2500.000 + 0.050 N
Access Network	$0 \leq N \leq 1399$	2620.000 + 0.050 N

Table 3.1.14-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 13

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (5 MHz)	Not Valid	0–24	2500.000–2501.200	2620.000–2621.200
	Valid	25–75	2501.250–2503.750	2621.250–2623.750
	Cond. Valid	76–99	2503.800–2504.950	2623.800–2624.950
B (5 MHz)	Cond. Valid	100–124	2505.000–2506.200	2625.000–2626.200
	Valid	125–175	2506.250–2508.750	2626.250–2628.750
	Cond. Valid	176–199	2508.800–2509.950	2628.800–2629.950
C (5 MHz)	Cond. Valid	200–224	2510.000–2511.200	2630.000–2631.200
	Valid	225–275	2511.250–2513.750	2631.250–2633.750
	Cond. Valid	276–299	2513.800–2514.950	2633.800–2634.950
D (5 MHz)	Cond. Valid	300–324	2515.000–2516.200	2635.000–2636.200
	Valid	325–375	2516.250–2518.750	2636.250–2638.750
	Cond. Valid	376–399	2518.800–2519.950	2638.800–2639.950
E (5 MHz)	Cond. Valid	400–424	2520.000–2521.200	2640.000–2641.200
	Valid	425–475	2521.250–2523.750	2641.250–2643.750
	Cond. Valid	476–499	2523.800–2524.950	2643.800–2644.950
F (5 MHz)	Cond. Valid	500–524	2525.000–2526.200	2645.000–2646.200
	Valid	525–575	2526.250–2528.750	2646.250–2648.750
	Cond. Valid	576–599	2528.800–2529.950	2648.800–2649.950
G (5 MHz)	Cond. Valid	600–624	2530.000–2531.200	2650.000–2651.200
	Valid	625–675	2531.250–2533.750	2651.250–2653.750
	Cond. Valid	676–699	2533.800–2534.950	2653.800–2654.950
H (5 MHz)	Cond. Valid	700–724	2535.000–2536.200	2655.000–2656.200
	Valid	725–775	2536.250–2538.750	2656.250–2658.750
	Cond. Valid	776–799	2538.800–2539.950	2658.800–2659.950
I (5 MHz)	Cond. Valid	800–824	2540.000–2541.200	2660.000–2661.200
	Valid	825–875	2541.250–2543.750	2661.250–2663.750
	Cond. Valid	876–899	2543.800–2544.950	2663.800–2664.950
J (5 MHz)	Cond. Valid	900–924	2545.000–2546.200	2665.000–2666.200
	Valid	925–975	2546.250–2548.750	2666.250–2668.750
	Cond. Valid	976–999	2548.800–2549.950	2668.800–2669.950
K (5 MHz)	Cond. Valid	1000–1024	2550.000–2551.200	2670.000–2671.200
	Valid	1025–1075	2551.250–2553.750	2671.250–2673.750
	Cond. Valid	1076–1099	2553.800–2554.950	2673.800–2674.950
L (5 MHz)	Cond. Valid	1100–1124	2555.000–2556.200	2675.000–2676.200
	Valid	1125–1175	2556.250–2558.750	2676.250–2678.750
	Cond. Valid	1176–1199	2558.800–2559.950	2678.800–2679.950

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
M (5 MHz)	Cond. Valid	1200–1224	2560.000–2561.200	2680.000–2681.200
	Valid	1225–1275	2561.250–2563.750	2681.250–2683.750
	Cond. Valid	1276–1299	2563.800–2564.950	2683.800–2684.950
N (5 MHz)	Cond. Valid	1300–1324	2565.000–2566.200	2685.000–2686.200
	Valid	1325–1375	2566.250–2568.750	2686.250–2688.750
	Not Valid	1376–1399	2568.800–2569.950	2688.800–2689.950

3.1.15 Band Class 14 (US PCS 1.9GHz Band)

The Band Class 14 block designators for the access terminal and access network shall be as specified in Table 3.1.15-1.

Access terminals supporting Band Class 14 shall be capable of transmitting in Band Class 14.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 14 shall be as specified in Table 3.1.15-2. Access terminals supporting Band Class 14 shall support transmission on the valid and conditionally valid channel numbers shown in Table 3.1.15-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 80.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.15-1. Band Class 14 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1850–1865	1930–1945
D	1865–1870	1945–1950
B	1870–1885	1950–1965
E	1885–1890	1965–1970
F	1890–1895	1970–1975
C	1895–1910	1975–1990
G	1910–1915	1990–1995

Table 3.1.15-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 14

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 1299	1850.000 + 0.050 N
Access Network	0 ≤ N ≤ 1299	1930.000 + 0.050 N

Table 3.1.15-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 14

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (15 MHz)	Not Valid	0–24	1850.000–1851.200	1930.000–1931.200
	Valid	25–275	1851.250–1863.750	1931.250–1943.750
	Cond. Valid	276–299	1863.800–1864.950	1943.800–1944.950
D (5 MHz)	Cond. Valid	300–324	1865.000–1866.200	1945.000–1946.200
	Valid	325–375	1866.250–1868.750	1946.250–1948.750
	Cond. Valid	376–399	1868.800–1869.950	1948.800–1949.950
B (15 MHz)	Cond. Valid	400–424	1870.000–1871.200	1950.000–1951.200
	Valid	425–675	1871.250–1883.750	1951.250–1963.750
	Cond. Valid	676–699	1883.800–1884.950	1963.800–1964.950
E (5 MHz)	Cond. Valid	700–724	1885.000–1886.200	1965.000–1966.200
	Valid	725–775	1886.250–1888.750	1966.250–1968.750
	Cond. Valid	776–799	1888.800–1889.950	1968.800–1969.950
F (5 MHz)	Cond. Valid	800–824	1890.000–1891.200	1970.000–1971.200
	Valid	825–875	1891.250–1893.750	1971.250–1973.750
	Cond. Valid	876–899	1893.800–1894.950	1973.800–1974.950
C (15 MHz)	Cond. Valid	900–924	1895.000–1896.200	1975.000–1976.200
	Valid	925–1175	1896.250–1908.750	1976.250–1988.750
	Cond. Valid	1176–1199	1908.800–1909.950	1988.800–1989.950
G (5 MHz)	Cond. Valid	1200–1224	1910.000–1911.200	1990.000–1991.200
	Valid	1225–1275	1911.250–1913.750	1991.250–1993.750
	Not Valid	1276–1299	1913.800–1914.950	1993.800–1994.950

3.1.16 Band Class 15 (AWS Band)

The Band Class 15 block designators for the access terminal and access network shall be as specified in Table 3.1.16-1.

Access terminals supporting Band Class 15 shall be capable of transmitting in Band Class 15.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 15 shall be as specified in Table 3.1.16-2. Access terminals supporting Band

Class 15 shall support transmission on the valid and conditionally valid channel numbers shown in Table 3.1.16-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 400.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.16-1. Band Class 15 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1710–1720	2110–2120
B	1720–1730	2120–2130
C	1730–1735	2130–2135
D	1735–1740	2135–2140
E	1740–1745	2140–2145
F	1745–1755	2145–2155

Table 3.1.16-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 15

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 899$	1710.000 + 0.050 N
Access Network	$0 \le N \le 899$	2110.000 + 0.050 N

Table 3.1.16-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 15

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (10 MHz)	Not Valid	0–24	1710.000–1711.200	2110.000–2111.200
	Valid	25–175	1711.250–1718.750	2111.250–2118.750
	Cond. Valid	176–199	1718.800–1719.950	2118.800–2119.950
B (10 MHz)	Cond. Valid	200–224	1720.000–1721.200	2120.000–2121.200
	Valid	225–375	1721.250–1728.750	2121.250–2128.750
	Cond. Valid	376–399	1728.800–1729.950	2128.800–2129.950
C (5 MHz)	Cond. Valid	400–424	1730.000–1731.200	2130.000–2131.200
	Valid	425–475	1731.250–1733.750	2131.250–2133.750
	Cond. Valid	476–499	1733.800–1734.950	2133.800–2134.950
D (5 MHz)	Cond. Valid	500–524	1735.000–1736.200	2135.000–2136.200
	Valid	525–575	1736.250–1738.750	2136.250–2138.750
	Cond. Valid	576–599	1738.800–1739.950	2138.800–2139.950
E (5 MHz)	Cond. Valid	600–624	1740.000–1741.200	2140.000–2141.200
	Valid	625–675	1741.250–1743.750	2141.250–2143.750
	Cond. Valid	676–699	1743.800–1744.950	2143.800–2144.950
F (10 MHz)	Cond. Valid	700–724	1745.000–1746.200	2145.000–2146.200
	Valid	725–875	1746.250–1753.750	2146.250–2153.750
	Not Valid	876–899	1753.800–1754.950	2153.800–2154.950

3.1.17 Band Class 16 (US 2.5GHz Band)

The Band Class 16 block designators for the access terminal and access network shall be as specified in Table 3.1.17-1.

Access terminals supporting Band Class 16 shall be capable of transmitting in Band Class 16.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 16 shall be as specified in Table 3.1.17-2. Access terminals supporting Band Class 16 shall support transmission on the valid and conditionally valid channel numbers shown in Table 3.1.17-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 122.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.17-1. Band Class 16 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	2502–2518.5	2624-2640.5
B	2518.5–2535	2640.5-2657
C	2535-2551.5	2657-2673.5
D	2551.5-2568	2673.5-2690

Table 3.1.17-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 16

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$140 \le M \le 1459$	2495.000 + 0.050 M
Access Network	$140 \le N \le 1459$	2617.000 + 0.050 N

Table 3.1.17-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 16

Block Designator	CDMA Channel Validity	Access Terminal CDMA Channel Number (M)	Access Terminal Transmit Frequency Band (MHz)	Access Network CDMA Channel Number (N)	Access Network Transmit Frequency Band (MHz)
A (16.5 MHz)	Not Valid Valid Cond. Valid	140–164 165–445 446–459	2502.000–2503.200 2503.250–2517.250 2517.300–2518.450	140–164 165–445 446–459	2624.000-2625.200 2625.250-2639.250 2639.300-2640.450
B (16.5 MHz)	Cond. Valid Valid Cond. Valid	470–494 495–775 776–799	2518.500–2519.700 2519.750–2533.750 2533.800–2534.950	470–494 495–775 776–799	2640.500-2641.700 2641.750-2655.750 2655.800-2656.950
C (16.5 MHz)	Cond. Valid Valid Cond. Valid	800–824 825–1105 1106–1129	2535.000-2536.200 2536.250-2550.250 2550.300-2551.450	800–824 825–1105 1106–1129	2657.000-2658.200 2658.250-2672.250 2672.300-2673.450
D (16.5 MHz)	Cond. Valid Valid Not Valid	1130–1154 1155–1435 1436–1459	2551.500-2552.700 2552.750-2566.750 2566.800-2567.950	1130–1154 1155–1435 1436–1459	2673.500-2674.700 2674.750-2688.750 2688.800-2689.950

3.1.18 Band Class 17 (US 2.5GHz Forward Link Only Band)

The Band Class 17 block designators for the access network shall be as specified in Table 3.1.18-1.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 17 shall be as specified in Table 3.1.18-2. The valid and conditionally valid channel numbers are shown inTable 3.1.18-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

CDMA equipment conforming to [13] or older shall not transmit on Band Class 17.

Table 3.1.18-1. Band Class 17 Block Frequency Correspondence

Block Designator	Access Network Transmit Frequency Band (MHz)
A	2624-2640.5
B	2640.5-2657
C	2657-2673.5
D	2673.5-2690

Table 3.1.18-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 17

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Network	$140 \le N \le 1459$	2617.000 + 0.050 N

Table 3.1.18-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 17

Block Designator	CDMA Channel Validity	Access Network CDMA Channel Number (N)	Access Network Transmit Frequency Band (MHz)
A (16.5 MHz)	Not Valid Valid Cond. Valid	140–1644 165–445 446–469	2624.000-2625.200 2625.250-2639.250 2639.300-2640.450
B (16.5 MHz)	Cond. Valid Valid Cond. Valid	470–494 495–775 776–799	2640.500-2641.700 2641.750-2655.750 2655.800-2656.950
C (16.5 MHz)	Cond. Valid Valid Cond. Valid	800–824 825–1105 1106–1129	2657.000-2658.200 2658.250-2672.250 2672.300-2673.450

Block Designator	CDMA Channel Validity	Access Network CDMA Channel Number (N)	Access Network Transmit Frequency Band (MHz)
D (16.5 MHz)	Cond. Valid Valid Not Valid	1130–1254 1155–1435 1436–1459	2673.500-2674.700 2674.750-2688.750 2688.800-2689.950

3.1.19 Band Class 18 (700 MHz Public Safety Band)

The Band Class 18 block designators for the access terminal and access network shall be as specified in Table 3.1.19-1.

Access terminals supporting Band Class 18 shall be capable of transmitting in Band Class 18.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 18 shall be as specified in Table 3.1.19-2. Access terminals supporting Band Class 18 shall support operations on the valid and conditionally valid channel numbers shown in Table 3.1.19-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 30.0 MHz higher than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.19-1. Band Class 18 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	787-788	757-758
D	788-793	758-763
Public Safety Broadband	793-798	763-768
Public Safety Guard Band	798-799	768-769

Table 3.1.19-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 18

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 240	787.000 + 0.050 N
Access Network	0 ≤ N ≤ 240	757.000 + 0.050 N

Table 3.1.19-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 18

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (1 MHz)	Not Valid	0–19	787.000–787.950	757.000-757.950
D (5 MHz)	Not Valid Valid Cond. Valid	20–44 45–95 96–119	788.000–789.200 789.250-791.750 791.800-792.950	758.000-759.200 759.250-761.750 761.800-762.950
Public Safety Broadband (5 MHz)	Cond. Valid Valid Not Valid	120–144 145–195 196–219	793.000–794.200 794.250-796.750 796.800-797.950	763.000-764.200 764.250-766.750 766.800-767.950
Public Safety Guard Band (1 MHz)	Not Valid	220–240	798.000-799.000	768.000-769.000

3.1.20 Band Class 19 (Lower 700 MHz Band)

The Band Class 19 block designators for the access terminal and access network shall be as specified in Table 3.1.20-1.

Access terminals supporting Band Class 19 shall be capable of transmitting in Band Class 19.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 19 shall be as specified in Table 3.1.20-2. Access terminals supporting Band Class 19 shall support operations on the valid and conditionally valid channel numbers shown in Table 3.1.20-3. Note that certain channel assignments are not valid and others are conditionally valid. Transmission on conditionally valid channels is permissible if the adjacent block is allocated to the same licensee or if other valid authorization has been obtained.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 30.0 MHz higher than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.20-1. Band Class 19 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	698-704	728-734
B	704-710	734-740
C	710-716	740-746

Table 3.1.20-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 19

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 360$	698.000 + 0.050 N
Access Network	$0 \le N \le 360$	728.000 + 0.050 N

Table 3.1.20-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 19

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (6 MHz)	Not Valid	0–22	698.000–699.100	728.000–729.100
	Valid	23–98	699.150-702.900	729.150-732.900
	Cond. Valid	99–119	702.950-703.950	732.950-733.950
B (6 MHz)	Cond. Valid	120–142	704.000–705.100	734.000–735.100
	Valid	143–218	705.150-708.900	735.150-738.900
	Cond. Valid	219–239	708.950-709.950	738.950-739.950
C (6 MHz)	Cond. Valid	240–262	710.000–711.100	740.000–741.100
	Valid	263–338	711.150-714.900	741.150-744.900
	Not Valid	339–360	714.950-716.000	744.950-746.000

3.1.21 Band Class 20 (L-Band)

The Band Class 20 block designators for the access terminal and the access network are not specified.

Access terminals supporting Band Class 20 shall be capable of transmitting in Band Class 20.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 20 shall be as specified in Table 3.1.21-1. Access terminals supporting Band Class 20 shall support transmission on the valid channel numbers shown in Table 3.1.21-2.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 101.5 MHz higher than the frequency of the access network transmit signal as measured at the access terminal receiver.

Table 3.1.21-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 20

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 680$	1626.500 + 0.050 N
Access Network	$0 \le N \le 680$	1525.000 + 0.050 N

Table 3.1.21-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 20

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
Not Valid	0–12	1626.500–1627.100	1525.000–1525.600
Valid	13–667668–6	1627.150–1659.850	1525.650–1558.350
Not Valid	80	1659.900–1660.500	1558.400–1559.000

3.1.22 Band Class 21 (S-Band)

The Band Class 21 block designators for the access terminal and access network shall be as specified in Table 3.1.20-1.

Access terminals supporting Band Class 21 shall be capable of transmitting in Band Class 21.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 21 shall be as specified in Table 3.1.20-2. Access terminals supporting Band Class 21 shall support operations on the valid channel numbers shown in Table 3.1.20-3.

For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 190.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver, if the CDMA channel is in block A. For CDMA equipment conforming to [13], or its older versions, the nominal access terminal transmit carrier frequency shall be 170.0 MHz lower than the frequency of the access network transmit signal as measured at the access terminal receiver, if the CDMA channel is in block B.

Table 3.1.22-1. Band Class 21 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	2000-2010	2190-2200
B	2010-2020	2180-2190

Table 3.1.22-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 21

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 200$	$2000.000 + 0.050\ N$
	$201 \le N \le 399$	$2010.000 + 0.050\ (N - 200)$
Access Network	$0 \le N \le 200$	$2190.000 + 0.050\ N$
	$201 \le N \le 399$	$2180.000 + 0.050\ (N - 200)$

Table 3.1.22-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 21

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (10 MHz)	Not Valid	0-24	2000.000-2001.200	2190.000-2191.200
	Valid	25-175	2001.250-2008.750	2191.250-2198.750
	Not Valid	176-200	2008.800-2010.000	2198.800-2200.000
B (10 MHz)	Not Valid	201-224	2010.050-2011.200	2180.050-2181.200
	Valid	225-375	2011.250-2018.750	2181.250-2188.750
	Not Valid	376-399	2018.800-2019.950	2188.800-2189.950

3.1.23 Band Class 22 (Mobile Satellite System Band)

Not specified.

3.2 Frequency Tolerance

The access terminal shall meet the requirements of the current version of [6]. The access network transmit carrier frequency shall be maintained within $\pm 5 \times 10^{-8}$ of the CDMA frequency assignment (±0.05 ppm).

3.3 Power Output Characteristics: Controlled Output Power

All power levels are referenced to the access terminal antenna connector unless otherwise specified. The access terminal shall provide three independent means of output power adjustment: an open loop estimation performed by the access terminal, a closed loop correction involving both the access terminal and the access network, and possible code channel attribute adjustments for certain channels.

3.3.1 Estimated Open Loop Output Power for Reverse Link Channels

The access terminal shall support a total combined range of initial offset parameters, access probe corrections, and closed-loop power control corrections, of at least ±32 dB for access terminals operating in Band Classes 0, 2, 3, 5, 7, 9, 10, 11, 12, 18, and 19 and ±40 dB for access terminals operating in Band Classes 1, 4, 6, 8, 13, 14, 15, 16, and 20.

While transmitting the first access probe in an access sequence, the open loop power offset is from –81 to –66 dB for Band Classes 0, 2, 3, 5, 7, 9, 10, 11, 12, 18 and 19 and from –100 to –69 dB for Band Classes 1, 4, 6, 8, 13, 14, 15, 16, and 20.

4 REQUIREMENTS FOR THE OPERATION OF THE "*ULTRA MOBILE BROADBAND AIR INTERFACE*"

This section defines requirements and operation for both the access terminal and the access network that are specific to Ultra Mobile Broadband (UMB) Air Interface conforming to [10]. A UMB access terminal or access network may support operation in one or more band classes.

4.1 Channel Spacing and Designation

This section specifies the frequency parameters of the UMB equipment conforming to [10] that support UMB operation. Note that UMB equipment in this section could be interpreted to mean an access network, an access terminal, or both.

The UMB channel numbers specified in this section are integer numbers from 0 to 65534.

Note that since UMB is a variable bandwidth system, the channel number only determines the center frequency of the transmission bandwidth. The actual bandwidth of operation is determined by other parameters defined in [10] such as the FFT size and the number of guard subcarriers.

4.1.1 Band Class 0 (800-MHz Band)

The Band Class 0 system designators for the access terminal and access network shall be as specified in Table 4.1.1-1 There are four band subclasses specified for Band Class 0. Each band subclass includes all the channels designated for that band subclass. UMB equipments supporting Band Class 0 shall be capable of transmitting in at least one band subclass belonging to Band Class 0. For UMB equipments capable of transmitting in more than one band subclass belonging to Band Class 0, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 0 shall be as specified in Table 4.1.1-2. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.1-3

Table 4.1.1-1. Band Class 0 Block Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	824.000–835.000 845.000–846.500	869.000–880.000 890.000–891.500
B		835.000–845.000 846.500–849.000	880.000–890.000 891.500–894.000
A	1	824.000–835.000 845.000–849.000	869.000–880.000 890.000–894.000
B		835.000–845.000	880.000–890.000
A	2	824.000–830.000	869.000–875.000
A	3	815.000–830.000	860.000–875.000

Table 4.1.1-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 0

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8193 \le N \le 8991$	$\lfloor(0.030\ (N - 8192))/0.0096+0.5\rfloor * 0.0096 + 825.0384$
	$9183 \le N \le 9215$	$\lfloor(0.030\ (N - 9215))/0.0096+0.5\rfloor * 0.0096 + 825.0384$
	$9216 \le N \le 9515$	$\lfloor(0.030\ (N - 9216) - 9.96)/0.0096+0.5\rfloor * 0.0096 + 825.0384$
Access Network	$1 \le N \le 799$	$\lfloor(0.030\ N)/0.0096+0.5\rfloor * 0.0096 + 870.0384$
	$991 \le N \le 1023$	$\lfloor(0.030\ (N - 1023))/0.0096+0.5\rfloor * 0.0096 + 870.0384$
	$1024 \le N \le 1323$	$\lfloor(0.030\ (N - 1024) - 9.96)/0.0096+0.5\rfloor * 0.0096 + 870.0384$
Channel numbers 0, 800-990, 1324-8192,8992-9182, and 9516-65534 are invalid and are reserved for future use.		

Table 4.1.1-3 UMB Preferred Set of Frequency Assignments for Band Class 0

System Designator	Band Subclass	Preferred Set Channel Numbers
A	0	37, 78, 119, 160, 201, 242, 283, 691
B		384, 425, 466, 507, 548, 589, 777
A	1	37, 78, 119, 160, 201, 242, 283, 738, 779
B		404, 445, 486, 527, 568
A	2	40, 81, 122, 1022
A	3	40, 81, 122, 1022, 1068, 1109, 1150, 1191, 1232, 1273, 1314

4.1.2 Band Class 1 (1900-MHz Band)

The Band Class 1 block designators for the access terminal and access network shall be as specified in Table 4.1.2-1.

Access terminals supporting Band Class 1 shall be capable of transmitting in Band Class 1.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 1 shall be as specified in Table 4.1.2-2. Access terminals supporting Band Class 1 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.2-3.

Table 4.1.2-1. Band Class 1 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1850–1865	1930–1945
D	1865–1870	1945–1950
B	1870–1885	1950–1965
E	1885–1890	1965–1970

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
F	1890–1895	1970–1975
C	1895–1910	1975–1990

Table 4.1.2-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 1

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8192 \le N \le 9391$	$\lfloor(0.050\ (N - 8192))/0.0096 + 0.5\rfloor * 0.0096 + 1850.0384$
Access Network	$0 \le N \le 1199$	$\lfloor(0.050\ N)/0.0096 + 0.5\rfloor * 0.0096 + 1930.0384$
Channel numbers 1200-8191 and 9392-65534 are invalid and are reserved for future use.		

Table 4.1.2-3 UMB Preferred Set of Frequency Assignments for Band Class 1

Block Designator	Preferred Set Channel Numbers
A	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275
D	300, 325, 350, 375
B	400, 425, 450, 475, 500, 525, 550, 575, 600, 625, 650, 675
E	700, 725, 750, 775
F	800, 825, 850, 875
C	900, 925, 950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150, 1175

4.1.3 Band Class 2 (TACS Band)

The Band Class 2 block designators for the access terminal and access network shall be as specified in Table 4.1.3-1. There are four band subclasses specified for Band Class 2. Each band subclass includes all the channels designated for that band subclass. The channels supported in each band subclass are listed in Table 4.1.3-2. UMB equipments supporting Band Class 2 shall be capable of transmitting in at least one band subclass belonging to Band Class 2.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 2 shall be as specified in

Table **4.1.3-3**. Access terminals supporting Band Class 2 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.3-4.

Table 4.1.3-1. Band Class 2 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	872.0125–879.9875 890.0125–897.4875 905.0125–908.9875	917.0125–924.9875 935.0125–942.4875 950.0125–953.9875
B	880.0125–887.9875 897.5125–904.9875 909.0125–914.9875	925.0125–932.9875 942.5125–949.9875 954.0125–959.9875
ATG	894.000-895.500	849.000-850.500

Table 4.1.3-2. Band Class 2 Band Subclasses

Number of Channels Covered	Band Subclass	FL Channels Covered	RL Channels Covered
600	0	1–600	8193–8792
1000	1	1–1000	8193–9192
1320	2	1329–2047 and 0–600	9521–10293 and 8192–8792
61	3	2048–2108	10240–10300

Table 4.1.3-3. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 2

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8192 ≤ N ≤ 9192	⌊(0.025 (N – 8192))/0.0096 + 0.5⌋ * 0.0096 + 890.0259
	9521 ≤ N ≤ 10239	⌊(0.025 (N – 9520))/0.0096 + 0.5⌋ * 0.0096 + 872.0259
	10240 ≤ N ≤ 10300	⌊(0.025 (N – 10240))/0.0096 + 0.5⌋ * 0.0096 + 894.0384
Access Network	0 ≤ N ≤ 1000	⌊(0.025 N)/0.0096 + 0.5⌋ * 0.0096 + 935.0259
	1329 ≤ N ≤ 2047	⌊(0.025 (N – 1328))/0.0096 + 0.5⌋ * 0.0096 + 917.0259
	2048 ≤ N ≤ 2108	⌊(0.025 (N – 2048))/0.0096 + 0.5⌋ * 0.0096 + 849.0384

Table 4.1.3-4. UMB Preferred Set of Frequency Assignments for Band Class 2

Block Designator	Preferred Set Channel Numbers
A	79, 679, or 1365
B	379, 947, or 1932
ATG	2078

4.1.4 Band Class 3 (JTACS Band)

Not specified

4.1.5 Band Class 4 (Korean PCS Band)

The Band Class 4 block designators for the access terminal and access network shall be as specified in Table 4.1.5-1.

Access terminals supporting Band Class 4 shall be capable of transmitting in Band Class 4.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 4 shall be as specified in Table 4.1.5-2. Access terminals supporting Band Class 4 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion

of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.5-3.

Table 4.1.5-1. Band Class 4 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1750–1760	1840–1850
B	1760–1770	1850–1860
C	1770–1780	1860–1870

Table 4.1.5-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 4

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8192 \le N \le 8791$	$\lfloor(0.050\ (N - 8192))/0.0096 + 0.5\rfloor * 0.0096 + 1750.0384$
Access Network	$0 \le N \le 599$	$\lfloor(0.050\ N)/0.0096 + 0.5\rfloor * 0.0096 + 1840.0384$
Channel numbers 600-8191 and 8792-65534 are invalid and are reserved for future use.		

Table 4.1.5-3 UMB Preferred Set of Frequency Assignments for Band Class 4

Block Designator	Preferred Set Channel Numbers
A	25, 50, 75, 100, 125, 150, 175
B	200, 225, 250, 275, 300, 325, 350, 375
C	400, 425, 450, 475, 500, 525, 550, 575

4.1.6 Band Class 5 (450-MHz Band)

The Band Class 5 block designators for the access terminal and access network shall be as specified in Table 4.1.6-1. There are twelve band subclasses specified for Band Class 5. Each band subclass corresponds to a specific block designator (see Table 4.1.6-1). Each band subclass includes all the channels designated for that block. UMB equipments supporting Band Class 5 shall be capable of transmitting in at least one band subclass

belonging to Band Class 5. For UMB equipments capable of transmitting in more than one band subclass belonging to Band Class 5, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 5 shall be as specified in Table 4.1.6-2. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.6-3.

Table 4.1.6-1. Band Class 5 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	452.500–457.475	462.500–467.475
B	1	452.000–456.475	462.000–466.475
C	2	450.000–454.800	460.000–464.800
D	3	411.675–415.850	421.675–425.850
E	4	415.500–419.975	425.500–429.975
F	5	Not specified	Not specified
G	6	Not specified	Not specified
H	7	Not specified	Not specified
I	8	451.325–455.725	461.325–465.725
J	9	455.250–459.975	465.250–469.975
K	10	479.000–483.475	489.000–493.475
L	11	410.000–414.975	420.000–424.975

Table 4.1.6-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 5

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8193 ≤ N ≤ 8592	⌊(0.025 (N – 8193))/0.0096 + 0.5⌋ * 0.0096 + 450.0384
	8664 ≤ N ≤ 9063	⌊(0.025 (N – 8664))/0.0096 + 0.5⌋ * 0.0096 + 410.0384
	9231 ≤ N ≤ 9665	Reserved
	9728 ≤ N ≤ 9907	⌊(0.025 (N – 9728))/0.0096 + 0.5⌋ * 0.0096 + 479.0384
	9984 ≤ N ≤ 10208	Reserved
Access Network	1 ≤ N ≤ 400	⌊(0.025 (N – 1))/0.0096 + 0.5⌋ * 0.0096 + 460.0384
	472 ≤ N ≤ 871	⌊(0.025 (N – 472))/0.0096 + 0.5⌋ * 0.0096 + 420.0384
	1039 ≤ N ≤ 1473	Reserved
	1536 ≤ N ≤ 1715	⌊(0.025 (N – 1536))/0.0096 + 0.5⌋ * 0.0096 + 489.0384
	1792 ≤ N ≤ 2016	Reserved
Channel numbers 0, 401-471, 872-1038, 1474-1535, 1716-1791, 2017-8192, 8593-8663, 9064-9230, 9666-9727, 9908-9983, and 10209-65534 are invalid and are reserved for future use.		

Table 4.1.6-3 UMB Preferred Set of Frequency Assignments for Band Class 5

Block Designator	Preferred Set Channel Numbers
A	160, 210, 260
B	120, 170, 220
C	47, 97, 147
D	573, 623, 673
E	731, 781, 831
F	Not specified
G	Not specified
H	Not specified
I	92, 142, 192
J	255, 305, 355
K	1575, 1625, 1675
L	522, 572, 622

4.1.7 Band Class 6 (2-GHz IMT2000 Band)

The Band Class 6 block designator for the access terminal and access network are not specified, since licensee allocations vary by regulatory body.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 6 shall be as specified in Table 4.1.7-1. Access terminals supporting Band Class 6 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within the band class. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.7-2.

Table 4.1.7-1. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 6

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8192 ≤ N ≤ 9391	1920.0384 + ⌊(0.050 (N – 8192))/0.0096 + 0.5⌋ * 0.0096
Access Network	0 ≤ N ≤ 1199	2110.0384 + ⌊(0.050 N)/0.0096 + 0.5⌋ * 0.0096
Channel numbers 1200-8191 and 9392-65534 are invalid and are reserved for future use.		

Table 4.1.7-2 UMB Preferred Set of Frequency Assignments for Band Class 6

Preferred Set Channel Numbers
25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, 575, 600, 625, 650, 675, 700, 725, 750, 775, 800, 825, 850, 875, 900, 925, 950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150, 1175

4.1.8 Band Class 7 (Upper 700-MHz Band)

The Band Class 7 block designators for the access terminal and access network shall be as specified in Table 4.1.8-1.

Access terminals supporting Band Class 7 shall be capable of transmitting in Band Class 7.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 7 shall be as specified in Table 4.1.8-2. Access terminals supporting Band Class 7 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.8-3.

Table 4.1.8-1. Band Class 7 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
C	776–787	746–757
A	787–788	757–758

Table 4.1.8-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 7

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8192 ≤ N ≤ 8432	776.0384 + ⌊(0.050 (N – 8192))/0.0096 + 0.5⌋ * 0.0096
Access Network	0 ≤ N ≤ 240	746.0384 + ⌊(0.050 N)/0.0096 + 0.5⌋ * 0.0096
Channel numbers 241-8191 and 8433-65534 are invalid and are reserved for future use.		

Table 4.1.8-3 UMB Preferred Set of Frequency Assignments for Band Class 7

Block Designator	Preferred Set Channel Numbers
C	23, 48, 55, 73, 98, 110, 123, 148, 165, 173, 198
A	Not specified

4.1.9 Band Class 8 (1800-MHz Band)

The Band Class 8 block designator for the access terminal and access network are not specified.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 8 shall be as specified in Table 4.1.9-1. Access terminals supporting Band Class 8 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) lies within the band class. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.9-2.

Table 4.1.9-1. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 8

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8192 ≤ N ≤ 9691	1710.0384 + ⌊(0.050 (N – 8192))/0.0096 + 0.5⌋ * 0.0096
Access Network	0 ≤ N ≤ 1499	1805.0384 + ⌊(0.050 N)/0.0096 + 0.5⌋ * 0.0096
Channel numbers 1500-8191 and 9692-65534 are invalid and are reserved for future use.		

Table 4.1.9-2 UMB Preferred Set of Frequency Assignments for Band Class 8

Preferred Set Channel Numbers
25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, 575, 600, 625, 650, 675, 700, 725, 750, 775, 800, 825, 850, 875, 900, 925, 950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150, 1175, 1200, 1225, 1250, 1275, 1300, 1325, 1350, 1375, 1400, 1425, 1450, 1475

4.1.10 Band Class 9 (900-MHz Band)

The Band Class 9 block designator for the access terminal and access network are not specified.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 9 shall be as specified in Table 4.1.10-1. Access terminals supporting Band Class 9 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) lies within the band class. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.10-2.

Table 4.1.10-1. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 9

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8192 ≤ N ≤ 8891	880.0384 + ⌊(0.050 (N – 8192))/0.0096 + 0.5⌋ * 0.0096
Access Network	0 ≤ N ≤ 699	925.0384 + ⌊(0.050 N)/0.0096 + 0.5⌋ * 0.0096
Channel numbers 700-8191 and 8892-65534 are invalid and are reserved for future use.		

Table 4.1.10-2 UMB Preferred Set of Frequency Assignments for Band Class 9

Preferred Set Channel Numbers
25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300, 325, 350, 375, 400, 425, 450, 475, 500, 525, 550, 575, 600, 625, 650, 675

4.1.11 Band Class 10 (Secondary 800 MHz Band)

The Band Class 10 system designators for the access terminal and access network shall be as specified in Table 4.1.11-1. There are five band subclasses specified for Band Class 10. Each band subclass corresponds to a specific block designator (see Table 4.1.11-1). Each band subclass includes all the channels designated for that block. UMB equipments supporting Band Class 10 shall be capable of transmitting in at least one band subclass belonging to Band Class 10. For UMB equipments capable of transmitting in more than one band subclass belonging to Band Class 10, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 10 shall be as specified in Table 4.1.11-2. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.11-3.

Table 4.1.11-1. Band Class 10 Block Frequency Correspondence

System Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	806.000–811.000	851.000–856.000
B	1	811.000–816.000	856.000–861.000
C	2	816.000–821.000	861.000–866.000
D	3	821.000–824.000	866.000–869.000
E	4	896.000–901.000	935.000–940.000

Table 4.1.11-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 10

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8192 \le N \le 8911$	$\lfloor(0.025\ (N - 8192))/0.0096 + 0.5\rfloor * 0.0096 + 806.0384$
	$8912 \le N \le 9111$	$\lfloor(0.025\ (N - 8912))/0.0096 + 0.5\rfloor * 0.0096 + 896.0384$
Access Terminal	$0 \le N \le 719$	$\lfloor(0.025\ N)/0.0096 + 0.5\rfloor * 0.0096 + 851.0384$
	$720 \le N \le 919$	$\lfloor(0.025\ (N - 720))/0.0096 + 0.5\rfloor * 0.0096 + 935.0384$
Channel numbers 920-8191 and 9112-65534 are invalid and are reserved for future use.		

Table 4.1.11-3 UMB Preferred Set of Frequency Assignments for Band Class 10

Block Designator	Preferred Set Channel Numbers
A	50, 100, 150
B	200, 250, 300, 350
C	400, 450, 500, 550
D	600, 650, 670
E	770, 820, 870

4.1.12 Band Class 11 (400 MHz European PAMR Band)

The Band Class 11 block designators for the access terminal and access network shall be as specified in Table 4.1.12-1. There are twelve band subclasses specified for Band Class 11. Each band subclass corresponds to a specific block designator (see Table 4.1.12-1). Each band subclass includes all the channels designated for that block. UMB equipments supporting Band Class 11 shall be capable of transmitting in at least one band subclass

belonging to Band Class 11. For UMB equipments capable of transmitting in more than one band subclass belonging to Band Class 11, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 11 shall be as specified in Table 4.1.12-2. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.12-3.

Table 4.1.12-1. Band Class 11 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	452.500–457.475	462.500–467.475
B	1	452.000–456.475	462.000–466.475
C	2	450.000–454.800	460.000–464.800
D	3	411.675–415.850	421.675–425.850
E	4	415.500–419.975	425.500–429.975
F	5	Not specified	Not specified
G	6	Not specified	Not specified
H	7	Not specified	Not specified
I	8	451.325–455.725	461.325–465.725
J	9	455.250–459.975	465.250–469.975
K	10	479.000–483.475	489.000–493.475
L	11	410.000–414.975	420.000–424.975

Table 4.1.12-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 11

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8193 ≤ N ≤ 8592	⌊(0.025 (N – 8193))/0.0096 + 0.5⌋ * 0.0096 + 450.0384
	8664 ≤ N ≤ 9063	⌊(0.025 (N – 8664))/0.0096 + 0.5⌋ * 0.0096 + 410.0384
	9231 ≤ N ≤ 9665	Reserved
	9728 ≤ N ≤ 9907	⌊(0.025 (N – 9728))/0.0096 + 0.5⌋ * 0.0096 + 479.0384
	9984 ≤ N ≤ 10208	Reserved
Access Network	1 ≤ N ≤ 400	⌊(0.025 (N – 1))/0.0096 + 0.5⌋ * 0.0096 + 460.0384
	472 ≤ N ≤ 871	⌊(0.025 (N – 472))/0.0096 + 0.5⌋ * 0.0096 + 420.0384
	1039 ≤ N ≤ 1473	Reserved
	1536 ≤ N ≤ 1715	⌊(0.025 (N – 1536))/0.0096 + 0.5⌋ * 0.0096 + 489.0384
	1792 ≤ N ≤ 2016	Reserved
Channel numbers 0, 401-471, 872-1038, 1474-1535, 1716-1791, 2017-8192, 8593-8663, 9064-9230, 9666-9727, 9908-9983, and 10209-65534 are invalid and are reserved for future use.		

Table 4.1.12-3 UMB Preferred Set of Frequency Assignments for Band Class 11

Block Designator	Preferred Set Channel Numbers
A	160, 210, 260
B	120, 170, 220
C	47, 97, 147
D	573, 623, 673
E	731, 781, 831
F	Not specified
G	Not specified
H	Not specified
I	92, 142, 192
J	255, 305, 355
K	1575, 1625, 1675
L	522, 572, 622

4.1.13 Band Class 12 (800 MHz PAMR Band)

The Band Class 12 block designators for the access terminal and access network shall be as specified in Table 4.1.13-1. There are three band subclasses specified for Band Class 12. Each band subclass corresponds to a specific block designator (see Table 4.1.13-1). Each band subclass includes all the channels designated for that block. UMB equipments supporting Band Class 12 shall be capable of transmitting in at least one band subclass belonging to Band Class 12. For UMB equipments capable of transmitting in more than one band subclass belonging to Band Class 12, one band subclass shall be designated as the Primary Band Subclass, which is the band subclass used by the access terminal's home system.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 12 shall be as specified in Table 4.1.13-2. Access terminals supporting Band Class 12 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.13-3.

Table 4.1.13-1. Band Class 12 Block Frequency Correspondence and Band Subclasses

Block Designator	Band Subclass	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
A	0	870.0000–876.0000	915.0000–921.0000
B	1	871.5000–874.5000	916.5000–919.5000
C	2	870.0000–876.0000	915.0000–921.0000

Table 4.1.13-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 12

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8192 \le N \le 8431$	$870.0509 + \lfloor (0.025\ (N - 8192))/0.0096 + 0.5 \rfloor * 0.0096$
Access Network	$0 \le N \le 239$	$915.0509 + \lfloor (0.025\ N)/0.0096 + 0.5 \rfloor * 0.0096$
Channel numbers 240-8191 and 8432-65534 are invalid and are reserved for future use.		

Table 4.1.13-3 UMB Preferred Set of Frequency Assignments for Band Class 12

Block Designator	Preferred Set Channel Numbers
A	89, 120, 139, 189
B	94, 120, 144
C	106, 120, 156, 206

4.1.14 Band Class 13 (2.5 GHz IMT-2000 Extension Band)

The Band Class 13 block designators for the access terminal and access network shall be as specified in Table 4.1.14-1.

Access terminals supporting Band Class 13 shall be capable of transmitting in Band Class 13.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 13 shall be as specified in Table 4.1.14-2. Access terminals supporting Band Class 13 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.14-3.

Table 4.1.14-1. Band Class 13 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	2500–2505	2620–2625
B	2505–2510	2625–2630
C	2510–2515	2630–2635
D	2515–2520	2635–2640
E	2520–2525	2640–2645
F	2525–2530	2645–2650
G	2530–2535	2650–2655
H	2535–2540	2655–2660
I	2540–2545	2660–2665
J	2545–2550	2665–2670
K	2550–2555	2670–2675
L	2555–2560	2675–2680
M	2560–2565	2680–2685
N	2565–2570	2685–2690

Table 4.1.14-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 13

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8192 ≤ N ≤ 9591	2500.0384 + ⌊(0.050 (N – 8192))/0.0096 + 0.5⌋ * 0.0096
Access Network	0 ≤ N ≤ 1399	2620.0384 + ⌊(0.050 N)/0.0096 + 0.5⌋ * 0.0096
Channel numbers 1400-8191 and 9592-65534 are invalid and are reserved for future use.		

Table 4.1.14-3 UMB Preferred Set of Frequency Assignments for Band Class 13

Block Designator	Preferred Set Channel Numbers
A	25, 50, 75
B	100, 125, 150, 175
C	200, 225, 250, 275
D	300, 325, 350, 375
E	400, 425, 450, 475
F	500, 525, 550, 575
G	600, 625, 650, 675
H	700, 725, 750, 775
I	800, 825, 850, 875
J	900, 925, 950, 975
K	1000, 1025, 1050, 1075
L	1100, 1125, 1150, 1175
M	1200, 1225, 1250, 1275
N	1300, 1325, 1350, 1375

4.1.15 Band Class 14 (US PCS 1.9GHz Band)

The Band Class 14 block designators for the access terminal and access network shall be as specified in Table 4.1.15-1.

Access terminals supporting Band Class 14 shall be capable of transmitting in Band Class 14.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 14 shall be as specified in Table 4.1.15-2. Access terminals supporting Band

Class 14 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.15-3.

Table 4.1.15-1. Band Class 14 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1850–1865	1930–1945
D	1865–1870	1945–1950
B	1870–1885	1950–1965
E	1885–1890	1965–1970
F	1890–1895	1970–1975
C	1895–1910	1975–1990
G	1910–1915	1990–1995

Table 4.1.15-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 14

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	8192 ≤ N ≤ 9491	1850.0384 + ⌊(0.050 (N – 8192))/0.0096 + 0.5⌋ * 0.0096
Access Network	0 ≤ N ≤ 1299	1930.0384 + ⌊(0.050 N)/0.0096 + 0.5⌋ * 0.0096
Channel numbers 1300-8191 and 9492-65534 are invalid and are reserved for future use.		

Table 4.1.15-3 UMB Preferred Set of Frequency Assignments for Band Class 14

Block Designator	Preferred Set Channel Numbers
A	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275
D	300, 325, 350, 375
B	400, 425, 450, 475, 500, 525, 550, 575, 600, 625, 650, 675
E	700, 725, 750, 775
F	800, 825, 850, 875
C	900, 925, 950, 975, 1000, 1025, 1050, 1075, 1100, 1125, 1150, 1175
G	1200, 1225, 1250, 1275

4.1.16 Band Class 15 (AWS Band)

The Band Class 15 block designators for the access terminal and access network shall be as specified in Table 4.1.16-1.

Access terminals supporting Band Class 15 shall be capable of transmitting in Band Class 15.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 15 shall be as specified in Table 4.1.16-2. Access terminals supporting Band Class 15 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.16-3.

Table 4.1.16-1. Band Class 15 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	1710–1720	2110–2120
B	1720–1730	2120–2130
C	1730–1735	2130–2135
D	1735–1740	2135–2140
E	1740–1745	2140–2145
F	1745–1755	2145–2155

Table 4.1.16-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 15

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8192 \le N \le 9091$	$1710.0384 + \lfloor(0.050\ (N - 8192))/0.0096 + 0.5\rfloor * 0.0096$
Access Network	$0 \le N \le 899$	$2110.0384 + \lfloor(0.050\ N)/0.0096 + 0.5\rfloor * 0.0096$
Channel numbers 900-8191 and 9092-65534 are invalid and are reserved for future use.		

Table 4.1.16-3 UMB Preferred Set of Frequency Assignments for Band Class 15

Block Designator	Preferred Set Channel Numbers
A	25, 50, 75, 100, 125, 150, 175
B	200, 225, 250, 275, 300, 325, 350, 375
C	400, 425, 450, 475
D	500, 525, 550, 575
E	600, 625, 650, 675
F	700, 725, 750, 775, 800, 825, 850, 875

4.1.17 Band Class 16 (US 2.5GHz Band)

The Band Class 16 block designators for the access terminal and access network shall be as specified in Table 4.1.17-1.

Access terminals supporting Band Class 16 shall be capable of transmitting in Band Class 16.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 16 shall be as specified in Table 4.1.17-2. Access terminals supporting Band Class 16 shall support transmission on all the valid channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in

Table 4.1.17-3.

Table 4.1.17-1. Band Class 16 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	2502–2518.5	2624-2640.5
B	2518.5–2535	2640.5-2657
C	2535-2551.5	2657-2673.5
D	2551.5-2568	2673.5-2690

Table 4.1.17-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 16

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8332 \le N \le 9651$	$2495.0384 + \lfloor(0.050\ (N - 8192))/0.0096 + 0.5\rfloor * 0.0096$
Access Network	$140 \le N \le 1459$	$2617.0384 + \lfloor(0.050\ N)/0.0096 + 0.5\rfloor * 0.0096$
Channel numbers 0-139, 1460-8331, and 9652-65534 are invalid and are reserved for future use.		

Table 4.1.17-3 UMB Preferred Set of Frequency Assignments for Band Class 16

Block Designator	Preferred Set Channel Numbers
A	165, 190, 215, 240, 265, 290, 305, 315, 340, 365, 390, 415, 440
B	495, 520, 545, 570, 595, 620, 635, 645, 670, 695, 720, 745, 770
C	825, 850, 875, 900, 925, 950, 965, 975, 1000, 1025, 1050, 1075, 1100
D	1155, 1180, 1205, 1230, 1255, 1280, 1295, 1305, 1330, 1355, 1380, 1405, 1430

4.1.18 Band Class 17 (US 2.5GHz Forward Link Only Band)

The Band Class 17 block designators for the access terminal and access network shall be as specified in Table 4.1.18-1.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 17 shall be as specified in Table 4.1.18-2. Access networks supporting Band Class 17 shall support transmission on all the valid channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-BW_{occ}/2, F_c+BW_{occ}/2) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

A preferred set of UMB frequency assignments is given in Table 4.1.18-3.

Table 4.1.18-1. Band Class 17 Block Frequency Correspondence

Block Designator	Access Network Transmit Frequency Band (MHz)
A	2624-2640.5
B	2640.5-2657
C	2657-2673.5
D	2673.5-2690

Table 4.1.18-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 17

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Base Station	140 ≤ N ≤ 1459	2617.0384 + ⌊(0.050 N)/0.0096 + 0.5⌋ * 0.0096
Channel numbers 0-139 and 1460-65534 are invalid and are reserved for future use.		

Table 4.1.18-3 UMB Preferred Set of Frequency Assignments for Band Class 17

Block Designator	Preferred Set Channel Numbers
A	165, 190, 215, 240, 265, 290, 305, 315, 340, 365, 390, 415, 440
B	495, 520, 545, 570, 595, 620, 635, 645, 670, 695, 720, 745, 770
C	825, 850, 875, 900, 925, 950, 965, 975, 1000, 1025, 1050, 1075, 1100
D	1155, 1180, 1205, 1230, 1255, 1280, 1295, 1305, 1330, 1355, 1380, 1405, 1430

4.1.19 Band Class 18 (700 MHz Public Safety Band)

The Band Class 18 block designators for the access terminal and access network shall be as specified in Table 4.1.19-1.

Access terminals supporting Band Class 18 shall be capable of transmitting in Band Class 18.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 18 shall be as specified in Table 4.1.19-2. Access terminals supporting Band Class 18 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12]

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel

number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.19-3.

Table 4.1.19-1. Band Class 18 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	787-788	757-758
D	788-793	758-763
Public Safety Broadband	793-798	763-768
Public Safety Guard Band	798-799	768-769

Table 4.1.19-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 18

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8192 \le N \le 8432$	$787.0384 + \lfloor (0.050\ (N - 8192))/0.0096 + 0.5 \rfloor * 0.0096$
Access Network	$0 \le N \le 240$	$757.0384 + \lfloor (0.050\ N)/0.0096 + 0.5 \rfloor * 0.0096$
Channel numbers 241-8191 and 8433-65534 are invalid and are reserved for future use.		

Table 4.1.19-3 UMB Preferred Set of Frequency Assignments for Band Class 18

Block Designator	Preferred Set Channel Numbers
A	Not specified
D	45, 70, 95
Public Safety Broadband	120, 145, 170, 195
Public Safety Guard Band	Not specified

4.1.20 Band Class 19 (Lower 700-MHz Band)

The Band Class 19 block designators for the access terminal and access network shall be as specified in Table 4.1.20-1.

Access terminals supporting Band Class 19 shall be capable of transmitting in Band Class 19.

The channel spacing, UMB channel designations, and transmitter center frequencies of Band Class 19 shall be as specified in Table 4.1.20-2. Access terminals supporting Band Class 19 shall support transmission on all the channel numbers in the band class. Transmission on a valid channel number with transmit center frequency F_c and an Occupied Bandwidth BW_{occ} is permissible if the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) lies within a single block designator. Transmission is also permissible for the case when the range (F_c-$BW_{occ}/2$, F_c+$BW_{occ}/2$) spans multiple block designators, if all the relevant blocks are allocated to the same licensee or if other valid authorization has been obtained. The notion of Occupied Bandwidth is related to the emissions requirements and is as specified in [11,12].

For UMB equipment conforming to [10], the default reverse channel number corresponding to forward channel number i shall be given by i+8192. Note that the reverse channel number may also be specified explicitly, in which case it overrides the default reverse channel number.

A preferred set of UMB frequency assignments is given in Table 4.1.20-3.

Table 4.1.20-1. Band Class 19 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	698-704	728-734
B	704-710	734-740
C	710-716	740-746

Table 4.1.20-2. UMB Channel Number to UMB Frequency Assignment Correspondence for Band Class 19

Transmitter	UMB Channel Number	Center Frequency for UMB Channel (MHz)
Access Terminal	$8192 \le N \le 8552$	$698.0384 + \lfloor(0.050 (N - 8192))/0.0096 + 0.5\rfloor * 0.0096$
Access Network	$0 \le N \le 360$	$728.0384 + \lfloor(0.050 N)/0.0096 + 0.5\rfloor * 0.0096$
Channel numbers 361-8191 and 8553-65534 are invalid and are reserved for future use.		

Table 4.1.20-3 UMB Preferred Set of Frequency Assignments for Band Class 19

Block Designator	Preferred Set Channel Numbers
A	23, 48, 60, 73, 98
B	143, 168, 180, 193, 218
C	263, 288, 300, 313, 338

4.1.21 Band Class 20 (L-Band)

Not specified.

4.1.22 Band Class 21 (S-Band)

Not specified.

4.1.23 Band Class 22 (Mobile Satellite System Band)

Not specified.

5 REQUIREMENTS FOR THE OPERATION OF THE "CDMA2000 EXTENDED CELL HIGH RATE PACKET DATA AIR INTERFACE"

This section defines requirements and operation for both the access terminal and the access network that are specific to cdma2000 Extended Cell High Rate Packet Data Equipment conforming to [15]. A CDMA access terminal or access network may support operation in one or more band classes.

5.1 Channel Spacing and Designation

This section specifies the frequency parameters of the CDMA equipment conforming to [15] that support CDMA operation. Note that CDMA equipment in this section could be interpreted to mean an access network, an access terminal, or both.

5.1.1 Band Class 0 (800-MHz Band)

Not specified.

5.1.2 Band Class 1 (1900-MHz Band)

Not specified.

5.1.3 Band Class 2 (TACS Band)

Not specified.

5.1.4 Band Class 3 (JTACS Band)

Not specified.

5.1.5 Band Class 4 (Korean PCS Band)

Not specified.

5.1.6 Band Class 5 (450-MHz Band)

Not specified.

5.1.7 Band Class 6 (2-GHz IMT2000 Band)

Not specified.

5.1.8 Band Class 7 (Upper 700-MHz Band)

Not specified.

5.1.9 Band Class 8 (1800-MHz Band)

Not specified.

5.1.10 Band Class 9 (900-MHz Band)

Not specified.

5.1.11 Band Class 10 (Secondary 800 MHz Band)

Not specified.

5.1.12 Band Class 11 (400 MHz European PAMR Band)

Not specified.

5.1.13 Band Class 12 (800 MHz PAMR Band)

Not specified.

5.1.14 Band Class 13 (2.5 GHz IMT-2000 Extension Band)

Not specified.

5.1.15 Band Class 14 (US PCS 1.9GHz Band)

Not specified.

5.1.16 Band Class 15 (AWS Band)

Not specified.

5.1.17 Band Class 16 (US 2.5GHz Band)

Not specified.

5.1.18 Band Class 17 (US 2.5GHz Forward Link Only Band)

Not specified.

5.1.19 Band Class 18 (700 MHz Public Safety Band)

Not specified.

5.1.20 Band Class 19 (Lower 700-MHz Band)

Not specified.

5.1.21 Band Class 20 (L-Band)

The Band Class 20 block designators for the access terminal and the access network are not specified.

Access terminals supporting Band Class 20 shall be capable of transmitting in Band Class 20.

The channel spacing, CDMA channel designations, and CDMA channel center frequencies of Band Class 20 shall be as specified in Table 3.1.21-1. Each reverse link CDMA Channel is further divided into 192 non-overlapping assignment units, each with a bandwidth of 6.4 KHz. An access terminal can be assigned a narrow band channel consists of K continuous 6.4 KHz units for CDMA operation with a total bandwidth of 6.4 × K KHz. The center frequency of the narrow band channel is

$$f_{NarrowBand,\ center} = f_{CDMAChannel,\ center} + (i - 0.5 \times (192 - K)) \times 0.0064,$$

where $f_{CDMAChannel,\ center}$ is access terminal CDMA channel center frequency as specified in Table 5.1.21-1, i = 0, …, 191 is the index to the first 6.4 KHz assignment unit assigned to the access terminal, and K is the number of continuous 6.4 KHz assignment units assigned to the access terminal.

Access terminals supporting Band Class 20 shall support transmission on the valid channel numbers shown in Table 3.1.21-2.

Table 5.1.21-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 20

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 680	1626.500 + 0.050 N
Access Network	0 ≤ N ≤ 680	1525.000 + 0.050 N

Table 5.1.21-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 20

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
Not Valid	0–12	1626.500–1627.100	1525.000–1525.600
Valid	13–667	1627.150–1659.850	1525.650–1558.350
Not Valid	668–680	1659.900–1660.500	1558.400–1559.000

5.1.22 Band Class 21 (S-Band)

The Band Class 21 block designators for the access terminal and access network shall be as specified in Table 5.1.22-1.

Access terminals supporting Band Class 21 shall be capable of transmitting in Band Class 21.

The channel spacing, CDMA channel designations, and transmitter center frequencies of Band Class 21 shall be as specified in Table 5.1.22-2. Each reverse link CDMA Channel is further divided into 192 non-overlapping assignment units, each with a bandwidth of 6.4 KHz. An access terminal can be assigned a narrow band channel consists of K continuous 6.4 KHz units for CDMA operation with a total bandwidth of 6.4 × K KHz. The center frequency of the narrow band channel is

$$f_{NarrowBand,\ center} = f_{CDMAChannel,\ center} + (i - 0.5 \times (192 - K)) \times 0.0064,$$

where $f_{CDMAChannel,\ center}$ is access terminal CDMA channel center frequency as specified in Table 5.1.22-2, i = 0, …, 191 is the index to the first 6.4 KHz assignment unit assigned to the access terminal, and K is the number of continuous 6.4 KHz assignment units assigned to the access terminal.

Access terminals supporting Band Class 21 shall support operations on the valid channel numbers shown in Table 5.1.22-3.

Table 5.1.22-1. Band Class 21 Block Frequency Correspondence

Block Designator	Transmit Frequency Band (MHz)	
	Access Terminal	Access Network
A	2000-2010	2190-2200
B	2010-2020	2180-2190

Table 5.1.22-2. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 21

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	$0 \le N \le 200$	$2000.000 + 0.050\ N$
	$201 \le N \le 399$	$2010.000 + 0.050\ (N - 200)$
Access Network	$0 \le N \le 200$	$2190.000 + 0.050\ N$
	$201 \le N \le 399$	$2180.000 + 0.050\ (N - 200)$

Table 5.1.22-3. CDMA Channel Numbers and Corresponding Frequencies for Band Class 21

Block Designator	CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
			Access Terminal	Access Network
A (10 MHz)	Not Valid	0-24	2000.000-2001.200	2190.000-2191.200
	Valid	25-175	2001.250-2008.750	2191.250-2198.750
	Not Valid	176-200	2008.800-2010.000	2198.800-2200.000
B (10 MHz)	Not Valid	201-224	2010.050-2011.200	2180.050-2181.200
	Valid	225-375	2011.250-2018.750	2181.250-2188.750
	Not Valid	376-399	2018.800-2019.950	2188.800-2189.950

5.1.23 Band Class 22 (Mobile Satellite Band)

The Band Class 22 block designators for the access terminal and the access network are not specified.

Access terminals supporting Band Class 22 shall be capable of transmitting in Band Class 22.

The channel spacing, CDMA channel designations, and CDMA channel center frequencies of Band Class 22 shall be as specified in Table 5.1.23-1. Each reverse link CDMA Channel is further divided into 192 non-overlapping assignment units, each with a bandwidth of 6.4 KHz. An access terminal can be assigned a narrow band channel consists of K continuous 6.4 KHz units for CDMA operation with a total bandwidth of 6.4 × K KHz. The center frequency of the narrow band channel is

$$f_{NarrowBand,\ center} = f_{CDMAChannel,\ center} + (i - 0.5 \times (192 - K)) \times 0.0064,$$

where $f_{CDMAChannel,\ center}$ is access terminal CDMA channel center frequency as specified in Table A, i = 0, …, 191 is the index to the first 6.4 KHz assignment unit assigned to the access terminal, and K is the number of continuous 6.4 KHz assignment units assigned to the access terminal.

Access terminals supporting Band Class 22 shall support transmission on the valid channel numbers shown in Table 5.1.23-2.

Table 5.1.23-1. CDMA Channel Number to CDMA Frequency Assignment Correspondence for Band Class 22

Transmitter	CDMA Channel Number	Center Frequency for CDMA Channel (MHz)
Access Terminal	0 ≤ N ≤ 599	1980.000 + 0.050 N
Access Network	0 ≤ N ≤ 599	2170.000 + 0.050 N

Table 5.1.23-2. CDMA Channel Numbers and Corresponding Frequencies for Band Class 22

CDMA Channel Validity	CDMA Channel Number	Transmit Frequency Band (MHz)	
		Access Terminal	Access Network
Not Valid	0–24	1980.000–1981.200	2170.000–2171.200
Valid	25–575	1981.250–2008.750	2171.250–2198.750
Not Valid	576–599	2008.800–2009.950	2198.800–2199.950

5.2 Frequency Tolerance

The access terminal shall meet the requirements of the current version of [16]. The access network shall meet the requirements of the current version of [16].

5.3 Power Output Characteristics: Controlled Output Power

All power levels are referenced to the access terminal antenna connector unless otherwise specified. The access terminal shall provide two independent means of output

power adjustment: an open loop estimation performed by the access terminal, a closed loop correction involving both the access terminal and the access network.

5.3.1 Estimated Open Loop Output Power for Reverse Link Channels

The access terminal shall support a total combined range of initial offset parameters, access probe corrections, and closed-loop power control corrections, of at least ±40 dB for access terminals operating in Band Class 20.

While transmitting the first access probe in an access sequence, the open loop power offset is from -100 to -69 dB for Band Class 20.