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(12)

(KR)
(B1)

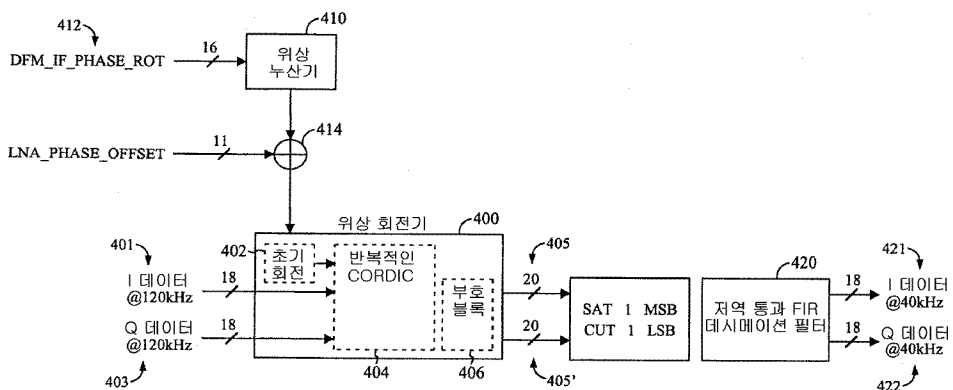
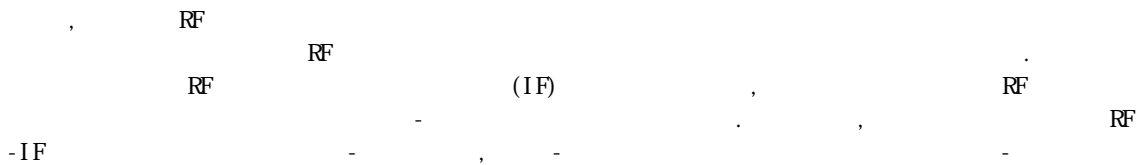
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(21)		10-2004-7008070		92121-1714	
(22)	()	2002 11 27	(72)	5775	
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(65)		10-2004-0062653			5447
(43)		2004 07 07			
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(87)		WO 2003/047092			4257
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	10/067, 611	2002 02 04	(US)	(74)	
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	WO2001031798 A1				
	GB2348345 A				
	:	34			:

(54)

(57)



1

RF RF ,
RF - , RF
(low) IF
;

2

1 ,

3

2 ,

4

1 ,

5

1 ,

6

5 ,

IF

7

6 ,

8

7 ,

9

8 ,

10

1

1

11

10

2

12

RF

RF

(low) IF

RF

-IF

13

12

14

12

15

16

12

(mixing)

17

16

18

12

RF

19

18

20

19

1/2

21

19

22

18

23

12

24

RF

RF

RF

IF

RF

-IF

25

RF

RF

(low) IF

RF

-IF

26

25

27

25

28

25

(mixing)

29

28

30

25

RF

31

30

32

31

1/2

33

31

34

30

35

25

[0001] _____

[0002] _____ (RF)

_____ (down-converting)

[0003] _____

[0004] AMPS (Advanced Mobile Phone System) (FDMA)

30 kHz , FDMA (co-channel interference)

(CDMA)

(single stage) RF- (direct downconversion) , LO RF ,

(homodyne) (zero intermediate frequency; ZIF) (inter-modulation) DC (A/D) DC (bit manipulations) , ZIF

AMPS , CDMA

RF

RF (low) RF (IF) RF ; RF RF IF

1 (front-end)

2 , RF

3 (low)

1

4 2

5 DFM IF

6 5 DFM

- [0020] , 1 , , (10)
- [0021] , 2 RF RF (100) LNA (low noise amplifier; 110) RF (110), (ZIF) (120), (132) (100), RF (134) (130), (140), DC (150), (SBI; 160), (AGC) (170), (DACA; 180), (190)
- [0022] ZIF RF (LO) ZIF (mixing) LO , DC LO (DC) , 0 Hertz 30 kHz DC DC
- [0023] 3 (TOM) (130) (130) (140) (I) (Q)
- [0024] I Q , DC (150) 2 DC DC (150) DC (150) 2 DC (SBI; 160) RF 2 DC (coarse) (10) SBI (160) LNA (110) ZIF (120) (DAC) LNA (110) ZIF (120)
- [0025] DC (150) (stimulus) (AGC; 170) AGC (170) , SBI (160) (DACA; 180) (190) , LNA (110) ZIF (120)
- [0026] DACA (180) , DC (150) (registered logic) RF (IM)

[0027]

1 (10) (roam) (,) , AMPS , DC

[0028]

RF (1F) AMPS , ZIF DC IF -IF " (jammers)" AMPS RF DC

[0029]

2 RF (200) 2 (200) (210) (220) (230 240) " 1" " 2" (220) (LO (250) , LO (250) LO f_{LO} (line spectrum) f_{LO} (220) (+) (210) $\frac{1}{2}$ (220) , LO (250) (220) (220) (non)- f_{LO} (220) (, (230, 240)) (overlap) I/Q , LO f_{LO} LO (260) (mirror) (220) (230 240) ,

[0030]

3 2 (220) -1F f_{IF} (220) 3 (230) (230'), (240) - (240), 1 (250) , 3 (220), (230 240) - (anti-aliasing) (222, 232, 242) I Q (static) , 1 (140) (210) f_{LO} (220) 0

[0031]

3 1 (140) (mask) (270) , 1 (140) (240, 2) , 1 (140) (230, 1) - (230) (240, 2)

- [0032] (230 ; 1) (220')
4 (220')
(220') (230') (230')
(230; 1) (230') 2
, 2
(220), (220') (300)
(310) 4
- [0033] 5 (220')
(220') IF (400), (410),
(low pass decimation filter; 420)
(400), (410), (420) 1 DC
(150) 1 DCA (180)
- [0034] LNA (110)
- [0035] (410) (410)
(stepping value) (412) 30 kHz
, 1/2 15 kHz (410)
- (410) (412) (414)
(412) 16 (414)
14
- [0036] (400) (410) (414) (402),
(Coordinate Rotation Digital Computer (CORDIC) ; 404) (406) CORDIC
CORDIC (402) CORDIC
(406) CORDIC (404) (410) (414)
, CORDIC (404) (1; 150) DC
120 kHz 18 I (401) 18 Q (403)
(410) CORDIC (404)
(LUT) IF (405, 405) (420)
, 20 I 20 Q (420)
, 18 I (421) 18 Q (422) 40 kHz
(IIR) DCA (1; 180)
(420) 2
, IIR (420)
- [0037] 6 (400) (410)
(500) (500)
CORDIC
- [0038] (500) (502) (502) 2
(504) (506)
(506) (504) 2
- [0039] 5 6 (502)

(506) 11 (M&B) (508)

(508) (510)

(508) (512)

(508) 2 CR (514)

CR (514) (516) (516)

(518; "quad")

[0040] (512) (520) (520)

(522) (522) (524; "sign0")

(524) / (526) / (526)

(528) (524)

(528) / (526)

/ (530) / (530) (532; "sign1")

(528) / (530) /

(530) (520)

14

[0041] 6 (532 534) 1 DC (150) I

Q (532, 534) (536, 538)

(536, 538) (540, 542) (540, 542)

(shift right registers; 544, 546) (544, 546)

"n" , "n"

(544, 546) (532, 534) (548)

(540, 542) / (550, 552)

(544, 546) / (550, 552)

/ (550, 552) (524; sign0')

[0042] / (550, 552) / (554, 556) /

(550, 552)

(558) n+2 (560) n+1

(558, 560) / (554, 556)

/ (554, 556) (532; "sign1") /

(554, 556) (558, 560) (558, 560)

(562, 564) (562, 564)

(518; "quad") (562, 564)

DVGA

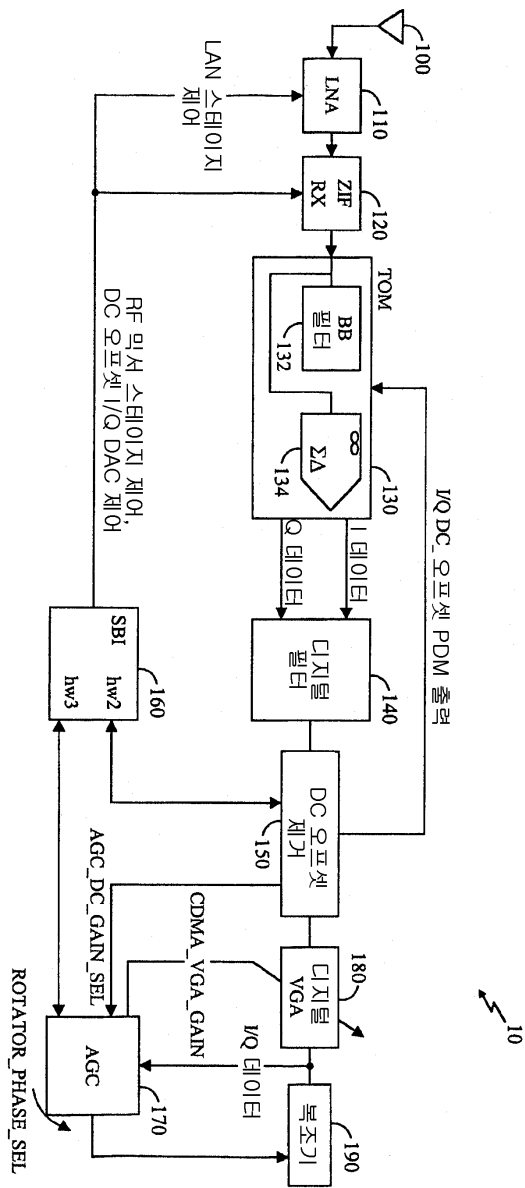
[0043] (522, 540 542) (532, 534)

(532, 534) 120 kHz

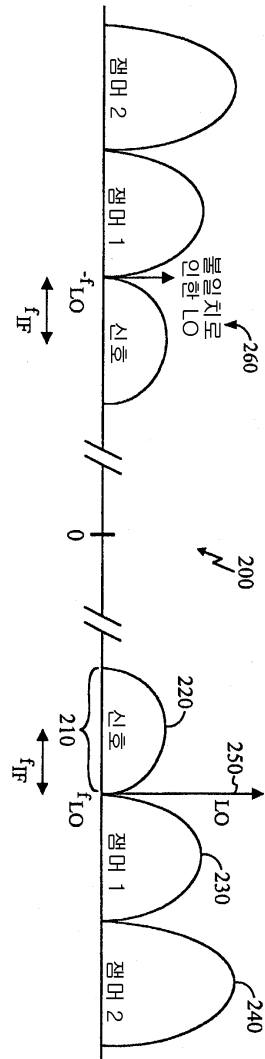
720 kHz

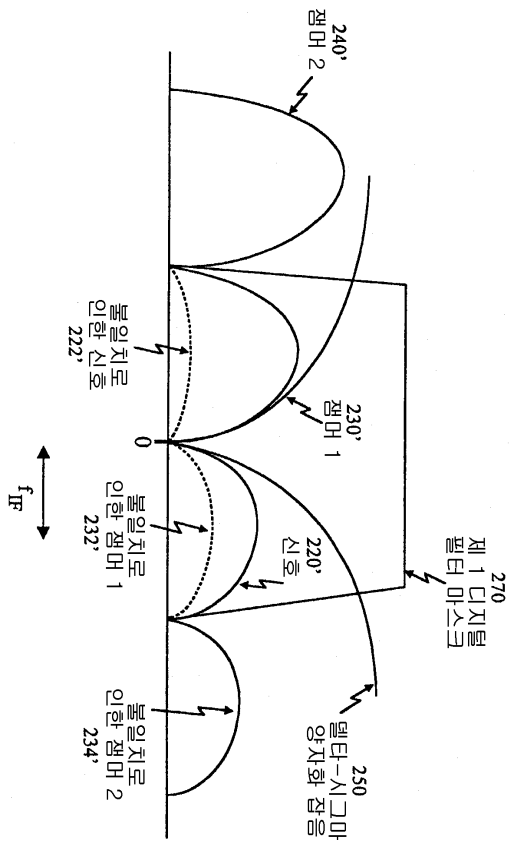
[0044]

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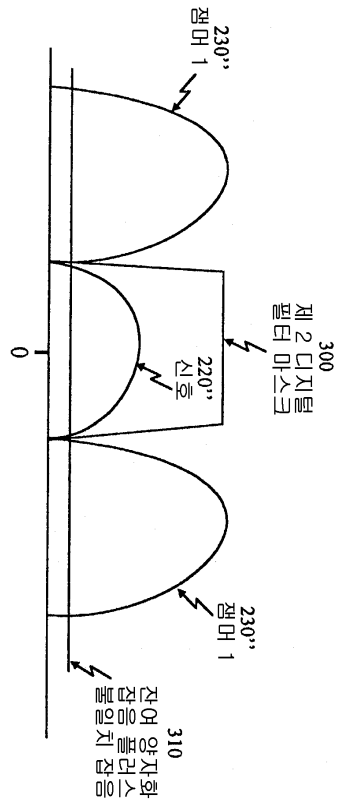


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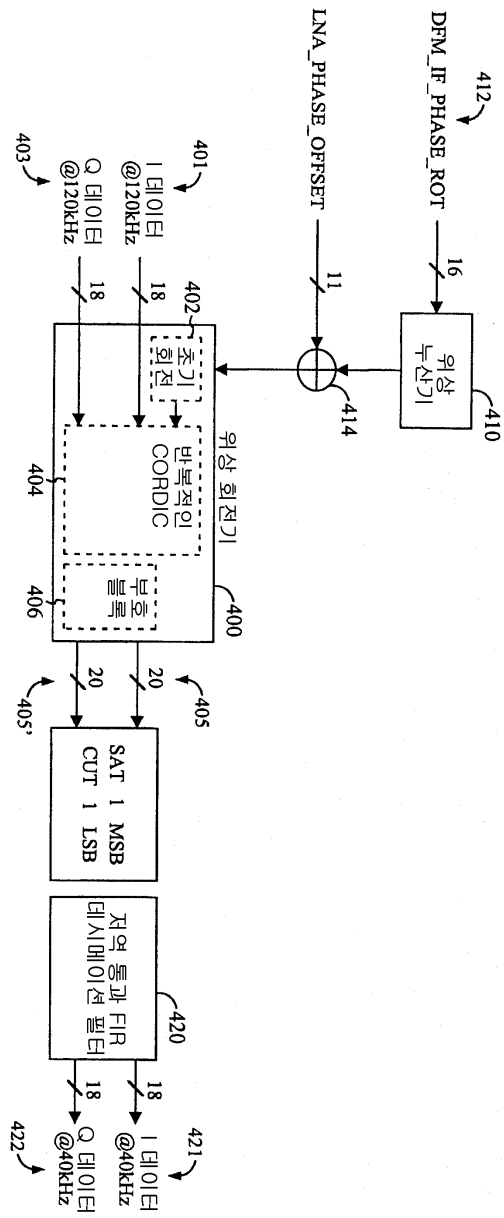




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5



6

