

가 가

2

I.

II.

RF M 가 (, BPSK, QPSK, OQPSK,), M (, M-Q AM) 가

(specification)

가

가

/ 가

1 (100) 가 (112) (TX) (T
MTR; 116)

4) 가 (132) (RCVR; 134) (13
(RX) (136)
(138)

(100) (FDMA) (CDMA) (TDMA) (, GSM
),

, CDMA 'TIA/EIA/IS-95-A Mobile Station-Base Station Compatibility Standard for Dual-
Mode Wideband Spread Spectrum Cellular System' (, IS-98), 'TIA/EIA/IS-98 Recommende
d Minimum Standard for Dual-Mode Wideband Spread Spectrum Cellular Mobile Station' (, IS-98
), '3rd Generation Partnership Project' (3GPP) 3G TS 25.2
11, 3G TS 25.212, 3G TS 25.213 3G TS 25.214 (, W-CDMA
), 'TIA/EIA/IS-2000.2-A TR-45 Physical Layer Standard for cdma2000 Spread Spectrum Syst
ems' (, CDMA 2000) CDMA

가
IS-95 CDMA 가 FER)
가 가
가

2 IS-95 1 (114) 가 (CRC),
(212) (214)
(216) (216)
(, 28.8Ksps)
, 4 , 8 (220) 1/8 (218) (,
) (220) 6 64-
(224) (224)
(222) ()
(226)
(224) PN (228a, 228b) PNI PNQ

IS-95CDMA QPSK 가 (228b)
 (230) (228a)
 (230) (232a, 232b)
 - (DAC; 234a, 234b)
 IS-95
 3 IS-95 (220)
 가 가
 3 20msec 가 (1.25msec)
 16 IS-95 (,) (,)
).
 4 IS-95 1 , 800bps 8.6 Kbps
 (, ') , 3 ,
 , 가
 , 1/4 1/4 , 1/8 1/8
 IS-95 , 2 (data burst randomizer)
 , (216)
 IS-95
 4 (114) I Q
 (116) , I Q 가 (412)
 a, 412b) , DAC , I Q DAC sinx/x (416a)
 (roll-off)). , I Q (, 가) (414a, 414b) , (416b)
 (, IF LO) IF LO
 IF IF LO , (424) (422) IF IF LO IF
 (428) (420; splitter) IF (416a, 416b) IF (432)
 , (spurious signal) 가
 , (434) IF ()
 , 가 (VGA; 436) ,
 2 IF , (VCO, 440) RF LO (442)
 (444) (438) (RF) (438) RF
 (446) (448; PA) 4)
 4 IF RF
 (image reject filter)
 4
 , (116) (가)
 4 가 가 I Q
 , RF

5 (500) RF LO (500) IS-95CDMA
 (520) (116) (536) (514) (514) (516) (516), (518), (534), (114)
 (520), (518), (534), IS-95 CDMA
 (500) RF LO RF (VCO, 540) 가 (IS-95
 CDMA), VCO RF LO 2 가 /
 5 (PLL) , VCO (540) (542; divider), (544), (546)
 (542) (542) () (5
 46) VCO (540) VCO (540) RF (516) (534)
 , RF LO (552) 5 , 가
 (556a, 556b) RF LO (554a, 554b) 0° 90° ,
 I Q RF ILO QLO, (116)
 (560) (518) RF (558) (520)
 (534) (520) (518)
 (576) (534) VCO (540) RF LO (534) (LNA; 572)
 (576) (576) (574)
 (534) RF LO RF (57
 8) (536)
 IS-95 CDMA
 가 가 , ,
 () 가
 (3 ,)
 (, POWER_ON) 가 (114)
 4 (116) (,
 IF LO RF LO), 가
 (554), (556), RF (558), (560)
 (560) () , 가

6 , (ON OFF) , 6 , RF LO (,)
 RF LO 가 RF LO RF LO

IS-95 , 800Hz 1.25msec 800Hz
 가 , RF LO RF 가 RF LO (546)

5 , RF LO
 IS-95 CDMA , 가

RF LO (516) (signal trace) , RF LO (550)

BER, FER) (, RF LO)
 가 (,)

5 , (550) 가
 (516) (552) 가 , VCO (540) (516) (552)

(가 , (554), (556), RF (558), (560)) VC
 O (540) (rippling) (516) (552) (550) (534)

(534) (574) VCO (540) (576), RF (578))
 (534) 가 , LNA (572),

(552) , VCO (540) (554) 가

(marginally)

LO 4 ,
 IF LO RF LO

(,) , 5 RF LO
 (544), (546), VCO (540), (542) RF
 , VCO (540) (, (552, 578))

VCO

(,

).

4 , IF LO (420) (422), (424), (426) IF LO
 (426)
 (516) (534) , LO
 () , 5 (552, 574) LO

, LO

)

VCO

가

IS-95 CDMA

가

가

(57)

1.

가

;

가

가

가

2.

1

1 3. , RF 1 (VCO)

3 4. , IF 2 VCO

1 5. , 가

1 6. , 가 , 가

6 7. , 가

1 8. , , 가 , 가

8 9. , RF

1 10. , ,

10 11. ,

1.25msec

1 12. ,

IS-95

1 13. ,

IS-95 CDMA

RF 14. ,

가 ;

가 ;

가 ,

가 ,

가

15. ,

;

;

15 16. ,

15 17. ,

RF

15 18. ,

19.

가

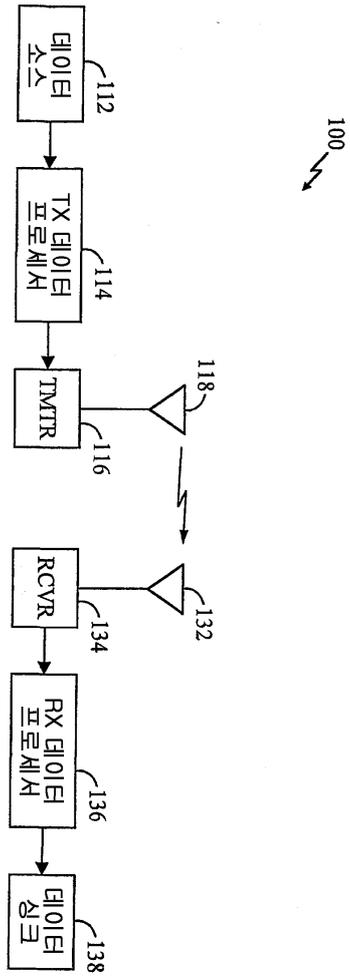
20.

19

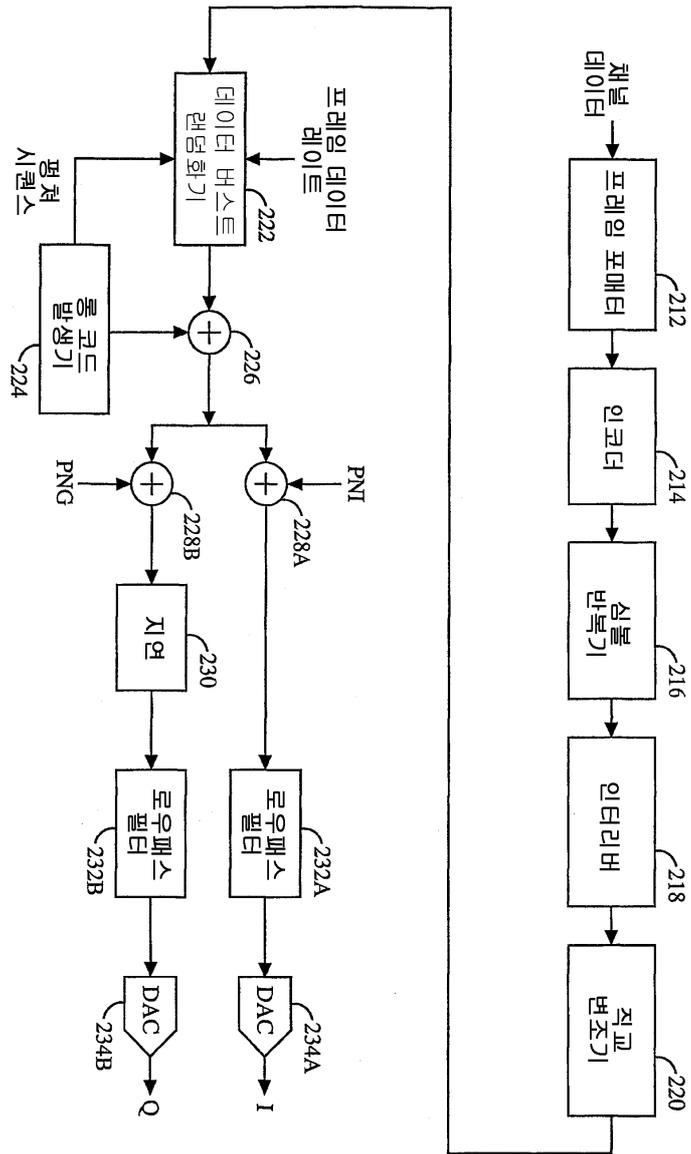
21.

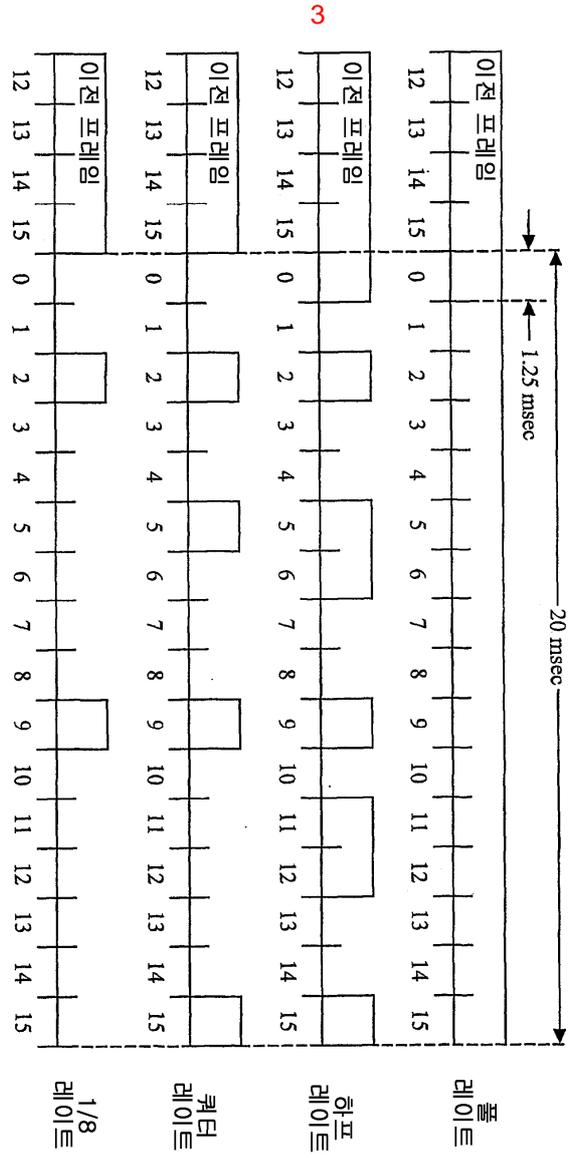
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1



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