
2. Specification

2-1 General

Item	PCS	CDMA	GPS
Tx Freq. range	1851.25~1908.75MHz	824.04~848.97MHz	-
Rx Freq. range	1931.25~1988.75MHz	869.04~893.97MHz	1574.42~1576.42MHz
Channel Bandwidth	1.23MHz	1.23MHz	2MHz
Channel Spacing	50KHz	30KHz	-
Number of Channel	1200	20FA	-
Duplex Separation	80MHz	45MHz	-
Type of Emission	1M25F9W	1M25F9W	-
In/Output Impdace	50Ω	50Ω	50Ω
Tx Intermediate Frequency	263.6MHz	228.6MHz	-
Rx Intermediate Frequency	183.6MHz	183.6MHz	183.6MHz
Tx Local Frequency	1st(F _{TX} +263.6MHz) 2nd(527.2MHz)	1st(F _{TX} +228.6MHz) 2nd(457.2MHz)	-
Rx Local Frequency	1st(F _{RX} +183.6MHz) 2nd(367.2MHz)	1st(F _{RX} +183.6MHz)*2 2nd(367.2MHz)	1st(F _{RX} -183.6MHz)*1.5 2nd(367.2MHz)
TCXO Frequency	19.2MHz	19.2MHz	19.2MHz
Freq. Stability	(F _{RX} - 80 MHz) ± 150Hz	(F _{RX} - 45 MHz) ± 300Hz	-
Operating Temperature	-30deg ~ +60deg	-30deg ~ +60deg	-30deg ~ +60deg
Supply Voltage	3.80V		
Size and Weight	84mm X 46mm X 25mm 1000mA		

2-2 1.9GHz CDMA(US PCS)

1) General

Frequency Range	
. Transmitter	: 1851.25 ~ 1908.75MHz
. Receiver	: 1931.25 ~ 1988.75MHz
Channel Bandwidth	: 1.23MHz
Channel Spacing	: 50kHz
Number of Channels	: 1200
Duplex Separation	: 80 MHz
Type of Emission	: 1M25F9W
Input/Output Impedance	: 50 ohms
Intermediate Frequency	
. Transmitter	: 263.6MHz
. Receiver	: 183.6MHz
Local Frequency	
. Transmitter	: 1st($F_{TX} + 263.6\text{MHz}$), 2nd(527.2MHz)
. Receiver	: 1st($F_{RX} + 183.6\text{MHz}$), 2nd(367.2MHz)
TCXO Frequency	: 19.2MHz
Frequency Stability	: ($F_{RX} - 80\text{MHz}$) +/- 150Hz
Operation Temperature	: -30deg 60deg
Supply Voltage	: +3.8V

2) Transmitter

Waveform Quality	: 0.944 or more
Open Loop Power Control Range	
. -25dBm	: -60.5dBm -41.5dBm
. -65dBm	: -20.5dBm +1.5dBm
. -104dBm	: +15.0dBm +25.5dBm
Minimum Tx Power Control	: below -50dBm
Closed Loop Power Control Range	: +/-24dB
Maximum RF Output Power	: 25.5dBm
Occupied Bandwidth	: 1.23MHz
Conducted Spurious Emission @1.25 MHz	: -42dBc/30kHz

3) Receiver

Rx Sensitivity and Dynamic Range	: -104dBm, FER=0.5% or less
Conducted Spurious Emission	
. 1930 1990 MHz	: <-81dBm
. 1850 1910 MHz	: <-61dBm
. All Other Frequencies	: <-47dBm
Single Tone Desensitization	: lower than 1 %
. Rx power level = -101dBm	
. Tone power level = -30dBm	
. Tone offset from carrier = +/-1.25 MHz	
Intermodulation Spurious Response Attenuation	: lower than 1 %
. Rx power = -101dBm	
. Tone 1 power = -43dBm	
. Tone 1 power = -43dBm	
. Tone 1 offset from carrier = +/-1.25 MHz	
. Tone 2 offset from carrier = +/-2.05 MHz	

2-3 800MHz CDMA

1) General

Frequency Range	
. Transmitter	: 824.70 ~ 848.31MHz
. Receiver	: 869.70 ~ 893.31MHz
Channel Bandwidth	: 1.23MHz
Channel Spacing	: 30kHz
Number of Channels	: 20FA
Duplex Separation	: 45MHz
Type of Emission	: 1M25F9W
Input/Output Impedance	: 50 ohms
Intermediate Frequency	
. Transmitter	: 228.6MHz
. Receiver	: 183.6MHz
Local Frequency	
. Transmitter	: 1st($F_{TX} + 228.6\text{MHz}$), 2nd(457.2MHz)
. Receiver	: 1st($F_{RX} + 183.6\text{MHz}$), 2nd(367.2MHz)
TCXO Frequency	: 19.2MHz
Frequency Stability	: ($F_{RX} - 45\text{MHz}$) +/- 300Hz
Operation Temperature	: -30deg 60deg
Supply Voltage	: +3.8V

2) Transmitter

Waveform Quality	: 0.944 or more
Open Loop Power Control Range	
. -25dBm	: -57.5dBm -38.5dBm
. -65dBm	: -17.5dBm +1.5dBm
. -104dBm	: +18.0dBm +30dBm
Minimum Tx Power Control	: below -50dBm
Closed Loop Power Control Range	: +/-24dB
Maximum RF Output Power	: 26dBm
Occupied Bandwidth	: 1.23MHz
Conducted Spurious Emission @900 KHz	: -42dBc/30kHz
@1.25 MHz	: -54dBc/30kHz

3) Receiver

Rx Sensitivity and Dynamic Range	: -104dBm, FER=0.5% or less
Conducted Spurious Emission	
. 869 894 MHz	: <-81dBm
. 824 849 MHz	: <-61dBm
All Other Frequencies	: <-47dBm
Single Tone Desensitization	: lower than 1 %
. Rx power level = -101dBm	
. Tone power level = -30dBm	
. Tone offset from carrier = +/-900KHz	
Intermodulation Spurious Response Attenuation	: lower than 1 %
. Tone 1 offset from carrier = +/-900KHz	
. Tone 2 offset from carrier = +/-1.700MHz	

- Test 1, 2

Rx power = -101dBm

Tone 1 power = -43dBm

Tone 2 power = -43dBm

- Test 3, 4

Rx power = -90dBm

Tone 1 power = -32dBm

Tone 2 power = -32dBm

- Test 5, 6

Rx power = -79dBm

Tone 1 power = -21dBm

Tone 2 power = -21dBm

2-4 GPS

1) General

Frequency Range

. Receiver : 1574.42~1576.42 MHz

Channel Bandwidth

: 2MHz

Input/Output Impedance

: 50 ohms

Intermediate Frequency

. Receiver : 183.6MHz

Local Frequency

. Receiver : 1st(FRX -183.6MHz)x1.5, 2nd(367.2MHz)

TCXO Frequency

: 19.2MHz

Operation Temperature

: -30deg ~ 60deg

Supply Voltage

: +3.8V