

1.General

ITEM	CDMA	AMPS
Tx Freq. range	824 ~ 849MHz	824 ~ 849MHz
Rx Freq. range	869 ~ 894MHz	869 ~ 894MHz
Channel Bandwidth	1.23MHz	30KHz
Channel Spacing	30KHz	30KHz
Number of Channel	832	832
Duplex Separation	45MHz	45MHz
Type of Emission	40K0F8W,40K0F1D	40K0F8W,40K0F1D
In/Output Impedance	50	50
Tx Intermediate Freq.	130.38MHz	130.38MHz
Rx Intermediate Freq.	85.38MHz	85.38MHz
Tx Local Freq.	1st($F_{TX}+130.38\text{MHz}$) 2nd(260.76MHz)	1st($F_{TX}+130.38\text{MHz}$) 2nd(260.76MHz)
Rx Local Freq	1st(170.76MHz) 2nd($F_{RX}+85.38\text{MHz}$)	1st(170.76MHz) 2nd($F_{RX}+85.38\text{MHz}$)
TCXO freq.	19.68MHz	19.68MHz
Freq. Stability	($F_{RX}-45\text{MHz}$) 300Hz	2.5ppm
Operating Temperature	-30~ +60	-30~ +60
Supply Voltage	3.6V	
Size and Weight	Slim : 88mm X 50mm X 23.5mm, 105 g, 500 mA STD : 88mm X 50mm X 25.7mm, 135 g, 1000 mA EXT : 88mm X 50mm X 27.5mm, 151 g, 1600 mA	

1. 800MHz CDMA

1). General

Frequency Range

.Transmitter : 824 i- 849 MHz

.Receiver : 869 i- 894MHz

Channel Bandwidth : 1.23MHz

Channel Spacing : 30kHz

Number of Channels : 832

Duplex Separation : 45 MHz

Type of Emission : 40K0F8W,40K0F1D

Input/Output Impedance : 50 Ω

Intermediate Frequency

.Transmitter : 130.38MHz

.Receiver : 85.38MHz

Local Frequency

.Transmitter : 1st($F_{TX}+130.38\text{MHz}$), 2nd(260.76MHz)

.Receiver : 1st($F_{RX}+85.38\text{MHz}$), 2nd(170.76MHz)

TCXO Frequency : 19.68MHz

Frequency Stability : ($F_{RX}-45\text{MHz}$) i 300Hz

Operation Temperature : -30°C i- 60°C

Supply Voltage : +3.6V

2).Transmitter

Waveform Quality :0.944 or more

Open Loop Power Control Range

. -25dBm : -57.5dBm i- -38.5dBm

. -65dBm : -17.5dBm i- +1.5dBm

. -104dBm : +18.0dBm i- +30dBm

Minimum Tx Power Control : below -50dBm

Closed Loop Power Control Range : i 24dB

Maximum RF Output Power : 200mW(+23dBm)

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

: -25dBm, 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 = $\pm \frac{3}{4}$ 900 kHz

Intermodulation Spurious Response Attenuation : lower than 1 %

Rx power = -101dBm

Tone 1 power = -43dBm

Tone 2 power = -43dBm

Tone 1 offset from carrier = $\pm \frac{3}{4}$ 900kHz

Tone 2 offset from carrier = $\pm \frac{3}{4}$ 1.700MHz

2. 800MHz AMPS

1). General

Frequency Range

.Transmitter : 824i-849 MHz

.Receiver : 869i-894MHz

Channel Spacing :30kHz

Number of Channels : 832

Duplex Spacing : 45MHz

Frequency Stability : $\pm 2.5\text{ppm}$ (-30iÉi- 60iÉi, -22i£F i-140i£F)

Modulation/Demodulation

.Voice : PM

.Data : FM

Operating Temperature :-30iÉi- 60iÉi, -22i£F i- 140i£F

Supply Voltate : 3.6V

2). Transmitter

RF output power : 0.6W(+2/-4dB)

Carrier ON/OFF conditions

"ON" Condition : within $\pm 3\text{dB}$ of specification output(in 2 ms)

"OFF" Condition : below -60dBm(in 2ms)

Compressor

Compression Rate : 2 : 1

Attack Time : 3ms

Recovery Time : 13.5ms

Reference Input : input power level for producing a nominal $\pm 2.9\text{kHz}$

: peak frequency deviation of transmitted carrier

Preamphasis : 6dB/OCT within 0.3 i- 3 kHz

Maximum Frequency Deviation

F3 of G3 : $\pm 12\text{ kHz}$

Supervisory Audio Tone : $\pm 2\text{ kHz}$ ($\pm 10\%$)

Signaling Tone : $\pm 8\text{ kHz}$ ($\pm 10\%$)

Wideband Data : $\pm 8\text{ kHz}$ ($\pm 10\%$)

Post Deviation Limiter Filter

3.0 kHz - 5.9 kHz : above 40 LOG(F/3000)dB

5.9 kHz - 6.1 kHz : above 35dB

6.1 kHz - 15 kHz : above 40 LOG(F/3000)dB

Over 15 kHz : above 28 dB

Spectrum Noise Suppression

For all modulation

$f_o + 20 \text{ kHz}$ - $f_o + 45 \text{ kHz}$: above 26dB

For modulation by voice and SAT

$f_o + 45 \text{ kHz}$: above 63dB+10LOG(PY)dB

For modulation by WBD(without SAT) and ST(with SAT)

$f_o + 45 \text{ kHz}$ - $f_o + 60 \text{ kHz}$: above 45 dB

$f_o + 60 \text{ kHz}$ - $f_o + 90 \text{ kHz}$: above 65 dB

$f_o + 90 \text{ kHz}$ - $2 f_o$: above 63 dB + 10 LOG(PY) dB

(where f_o = carrier frequency

PY=mean output power in watts)

Harmonic and conducted Spurious Emissions : below 43 + 10 LOG(PY) dB

3). Receiver

De-emphasis : -6dB/OCT within 0.3 kHz - 3 kHz

Expander

Expander Rate : 1 : 2

Attack time : within 3 ms

Recovery Time : within 13.5 ms

Reference input : output power level to a 1000Hz tone from a carrier within $\pm 2.9 \text{ kHz}$
peak frequency deviation

Sensitivity : 12 dB SINAD/-116dBm

Intermodulation Spurious Response Attenuation : above 65dB

RSSI Range : above 60dB

Protection Against Spurious Response Interference : above 60dB

In Band Conducted Spurious Emission

Transmit Band : below -60 dBm

Receive Band : below -80 dBm

Out of Band Conducted Spurious Emissions : below -47dBm

Radiated Spurious Emission

Frequency Range : Maximum Allowable EIRP

25 j- 70MHz : -45dBm

70 j- 130MHz : -41dBm

130 j- 174 MHz : -41 j- -32dBm

174 j- 260 MHz : -32 dBm

260 j- 470 MHz : -32 j- -26 dBm

470 j- 1G MHz : -21 dBm
