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Model: UGEA3A

Emission Designation**NECESSARY BANDWIDTH - § 2.202**

1. Type of Emission: F8W, F1D

Necessary Bandwidth:

40K0F1D

40K0F8W

Calculation for 40K0F8W

(1)Voice + SAT

Modulation: Voice is 2.5 kHz and SAT is 6kHz, thus the maximum modulation is $M = 6$ kHzDeviation: Voice is 12kHz and SAT is 2kHz, thus the maximum deviation is $D = 12+2 = 14$ kHz $B_n = 2 \times M + 2 \times DK$ with $K = 1$ $B_n = 40$ kHz

(2) Signaling Tone (ST) + SAT

Modulation: ST is 10 kHz and SAT is 6kHz, thus the maximum modulation is $M = 10$ kHzDeviation: ST is 8kHz and SAT is 2kHz, thus the maximum deviation is $D = 8+2 = 10$ kHz $B_n = 2 \times M + 2 \times DK$ with $K = 1$ $B_n = 40$ kHz

Calculation for 40K0F1D (wide Band Data)

Wideband + SAT

Modulation: Wideband Data is 10 kHz and SAT is 6kHz, thus the maximum modulation is $M = 10$ kHzDeviation: Wideband Data is 8kHz and SAT is 2kHz, thus the maximum deviation is $D = 8+2 = 10$ kHz $B_n = 2 \times M + 2 \times DK$ with $K = 1$ $B_n = 40$ kHzNote: B_n : Necessary band width, M : Maximum modulation frequency, D : Peak Frequency modulation.

2. Type of Emission: F9W

Necessary bandwidth:

1M23F9W

(1) CDMA Mode when operating in a P_REV 5 or less network

The CDMA mode is from the TIA/EIA/IS-95B Standard. The transmitted data on baseband is 1.2288Mbps and spread as the chip rate of 1.2288Mcps.

Thus the necessary band width is 1.23MHz.

(2) CDMA mode when operating in a P_REV 6 or above Network

The CDMA mode is from IS-2000.2 Standard.

This CDMA data module can only invoke a Spreading Rate 1 operational mode described in table 2.1.3.1.2.1-1 "Access channel modulation parameters for Spreading Rate 1" of the page 24 of the "Description of modulated systems for CDMA data module", attached separately.

The chip rate is the same as IS-95B.

Thus, the necessary bandwidth is 1.23MHz, too.