3.0 FCC Rules and Regulations Part 2 §2.1051: Spurious Emissions at Antenna Terminals

3.1 Test Procedure

ANSI/TIA/EIA-603-1992, Section 2.2.13

The transmitter is terminated with a 50 Ω load and interfaced with a spectrum analyzer.
The transmitter is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that required to produce 50% of the rated system deviation at 1000 Hz.

3.2 Test Data

3.2.1 47 CFR Part 90 Requirements

Frequency range of measurement per Part 2.1057: 9kHz to 10 x Fc

Limits: Mask B (dBm): P(dBm) – (43+10xLOG P(W))
Mask D (dBm): P(dBm) – (50+10xLOG P(W))

The following channel (in MHz) were investigated: 450.025, 469.975, 487.975

The worst case (unwanted emissions) channels are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

20 Watt and 25 kHz Channel Bandwidth: Mask B

Frequency (MHz)	Level Measured (dBm)	Limit (dBm)	Margin (dB)
975.9505	-34.3	-13.0	-21.3
1463.9295	-40.1	-13.0	-27.1
1951.8948	-40.1	-13.0	-27.1
2439.8655	-39.5	-13.0	-26.5
2927.8402	-46.8	-13.0	-33.8
3415.8075	-40.3	-13.0	-27.3
3903.7842	-46.6	-13.0	-33.6

40 Watt and 25 kHz Channel Bandwidth: Mask B

Frequency (MHz)	Level Measured (dBm)	Limit (dBm)	Margin (dB)
975.9505	-28.8	-13.0	-15.8
1463.9262	-37.8	-13.0	-24.8
1951.9105	-47.3	-13.0	-34.3
2439.8658	-42.0	-13.0	-29.0
2927.8372	-47.1	-13.0	-34.1
3415.8075	-44.1	-13.0	-31.1
3903.7812	-44.8	-13.0	-31.8

20 Watt and 12.5 kHz Channel Bandwidth: Mask D

Frequency (MHz)	Level Measured (dBm)	Limit (dBm)	Margin (dB)
975.9508	-34.3	-20.0	-14.3
1463.9262	-44.0	-20.0	-24.0
1951.8988	-45.1	-20.0	-25.1
2439.8755	-40.8	-20.0	-20.8
2927.8488	-47.3	-20.0	-27.3
3415.8228	-44.1	-20.0	-24.1
3903.8092	-44.5	-20.0	-24.5

3.2.2 IC RSS-119 Requirements

30 Watt and 25 kHz Channel Bandwidth

Channel 1 450.025 MHz			
Frequency (MHz)	**Level (dBuV)**	**Limit (dBuV)**	**Margin (dB)**
900.0556	79.2	94	-14.8
1350.071	77.0	94	-17.0
1800.878	75.3	94	-18.7
2250.107	75.8	94	-18.2
2700.136	76.2	94	-17.8
3150.15	80.2	94	-13.8

Channel 2 469.975 MHz			
Frequency (MHz)	**Level (dBuV)**	**Limit (dBuV)**	**Margin (dB)**
939.9542	79	94	-15.0
1409.92	76.5	94	-17.5
1879.902	76.8	94	-17.2

Channel 3 487.975 MHz			
Frequency (MHz)	**Level (dBuV)**	**Limit (dBuV)**	**Margin (dB)**
975.943	82.2	94	-11.8
1463.92	80.5	94	-13.5
2439.891	76.3	94	-17.7

3.3 Test Equipment

Audio generator:
Synthesized Level Generator HP3336B s/n 2127A00559
Audio Signal Analyzer Tektronix ASG 100 s/n B032374

Spectrum analyzer:
HP8564E s/n 3943A01719
HP8546A s/n 3525A00159