SUBMITTED MEASURED DATA

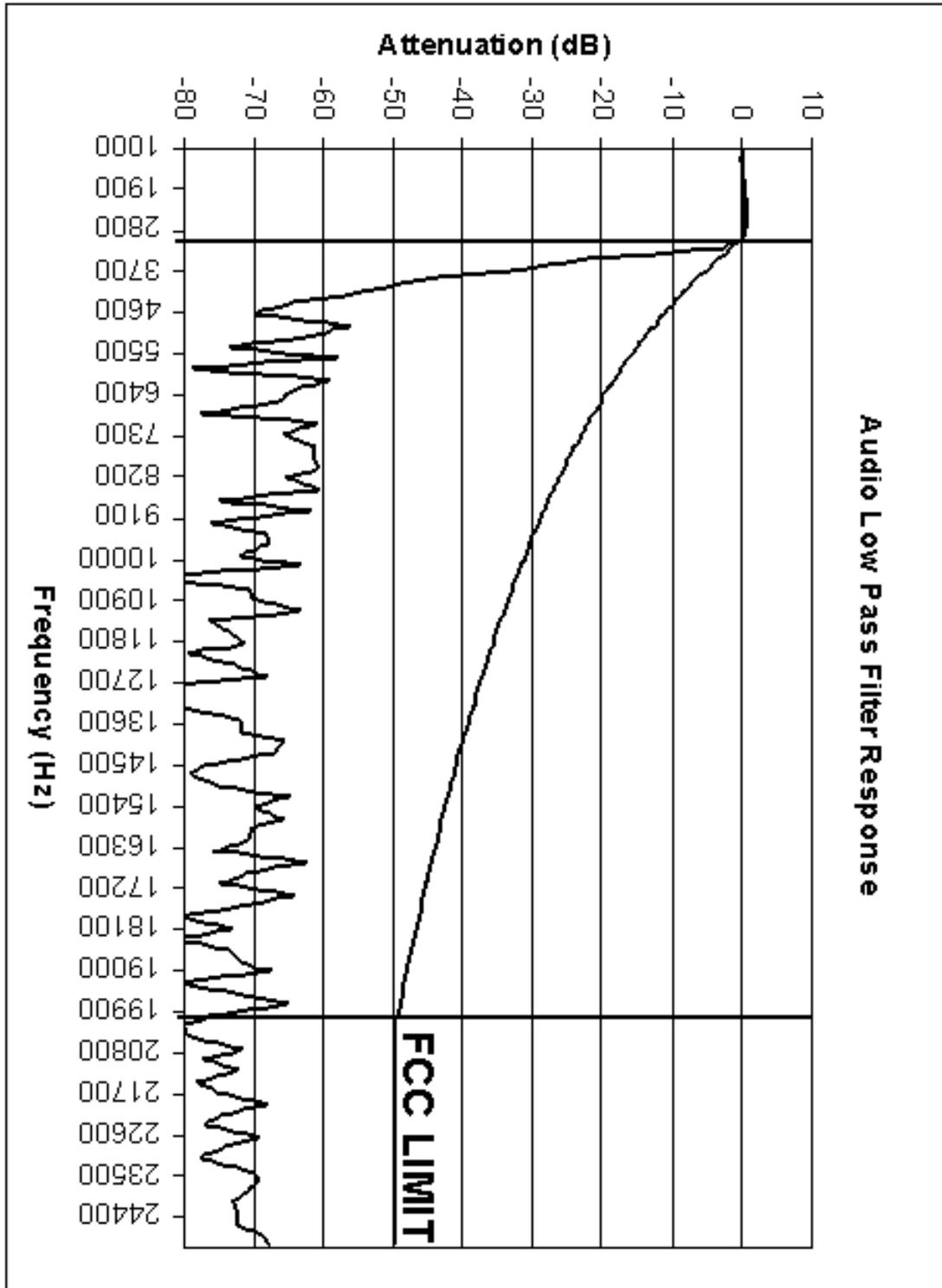| MEASUREMENT		EXHIBIT	NUMBER OF PAGES
I	RF Power Output Data	6A	1
II	Audio Response & Low Pass Filter Response	6B & 6C	3
III	Modulation Limiting	6D	2
IV	Occupied Bandwidth	6E	8
V	Conducted Spurious Emissions	6F	3
VI	Radiated Spurious Emissions	6G	4
VII	Frequency Stability		
	A. Temperature	6H-1	1
	B. Supply Voltage	6H-2	1

EXHIBIT 6

RF POWER OUTPUT DATA

The RF power output was measured with the indicated voltage applied to and current into the final RF amplifying device.

Measured RF output	1.2 Watt
Nominal DC voltage	7.5 Volts
Nominal DC Current	820 mAmps
Primary Supply Voltage	7.5 Volts

Measured RF output	2.2 Watt
Nominal DC voltage	7.5 Volts
Nominal DC Current	1075 mAmps
Primary Supply Voltage	7.5 Volts

Measured RF output	3.0 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	1230 mAmps
Primary Supply Voltage	7.5 Volts

EXHIBIT 6A

TX ADUIO FREQUENCY RESPONSE
Frequency = 860.0125 MHz   Channel Spacing = 12.5kHz

TX ADUIO FREQUENCY RESPONSE
Frequency = 860.0125 MHz   Channel Spacing = 25kHz

Deviation (dB Relative to 1kHz)

Audio Frequency (Hz)

Upper Limit

Lower Limit

— Dev. (dB)
— UpperSpec
— LowerSpec

EXHIBIT 6B-2

Audio Low Pass Filter Response

EXHIBIT 6C

MODULATION LIMITER RESPONSE
Frequency = 860.0125 MHz   Channel Spacing = 12.5 kHz

Peak Deviation (Hz)

Audio Frequency (Hz)

Dev. - (Hz)
Dev. + (Hz)
UpperSpec

EXHIBIT 6D-1

MODULATION LIMITER RESPONSE
Frequency = 860.0125 MHz   Channel Spacing = 25 kHz

Peak Deviation (Hz)

Audio Frequency (Hz)

Dev. - (Hz)
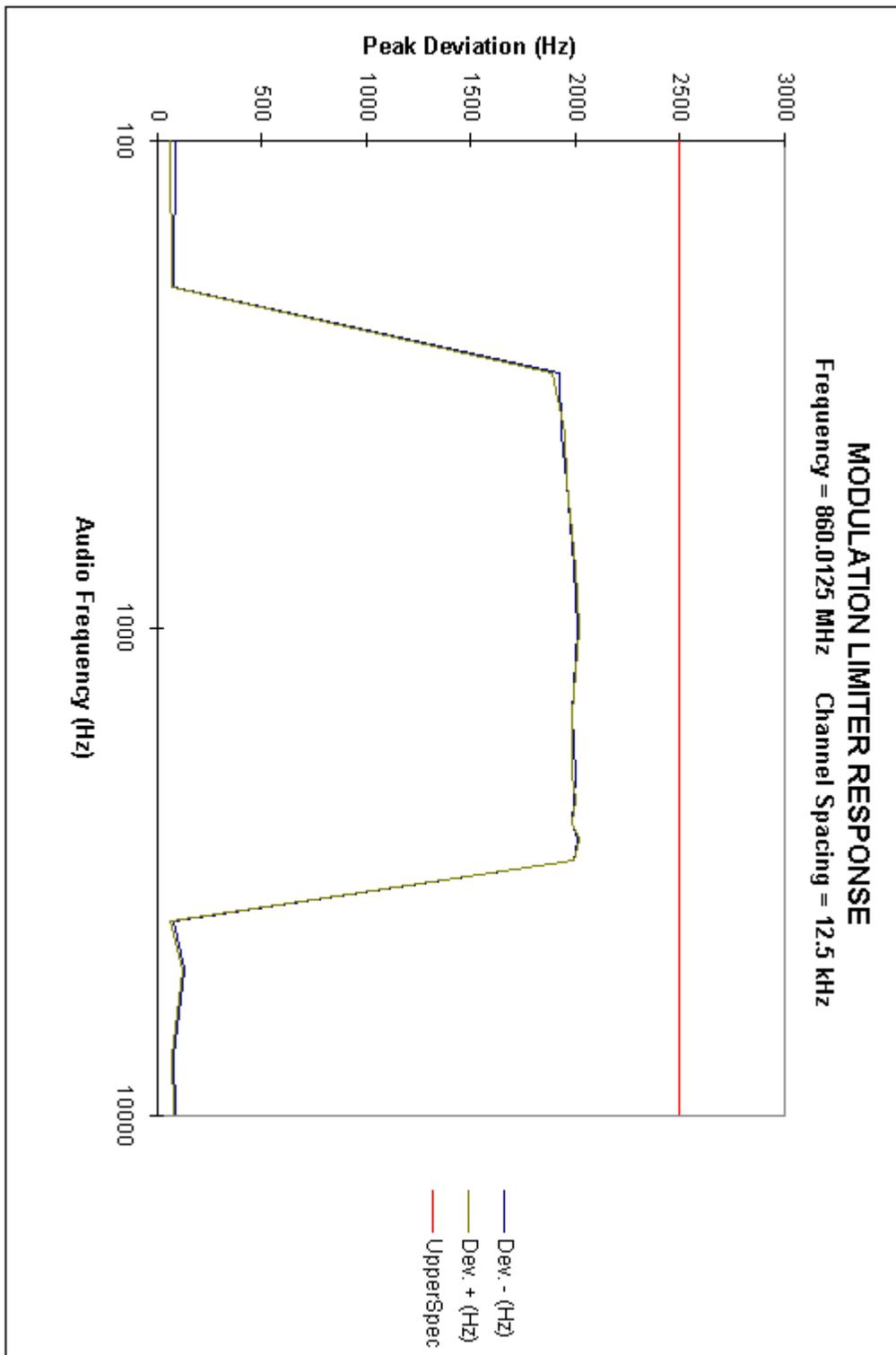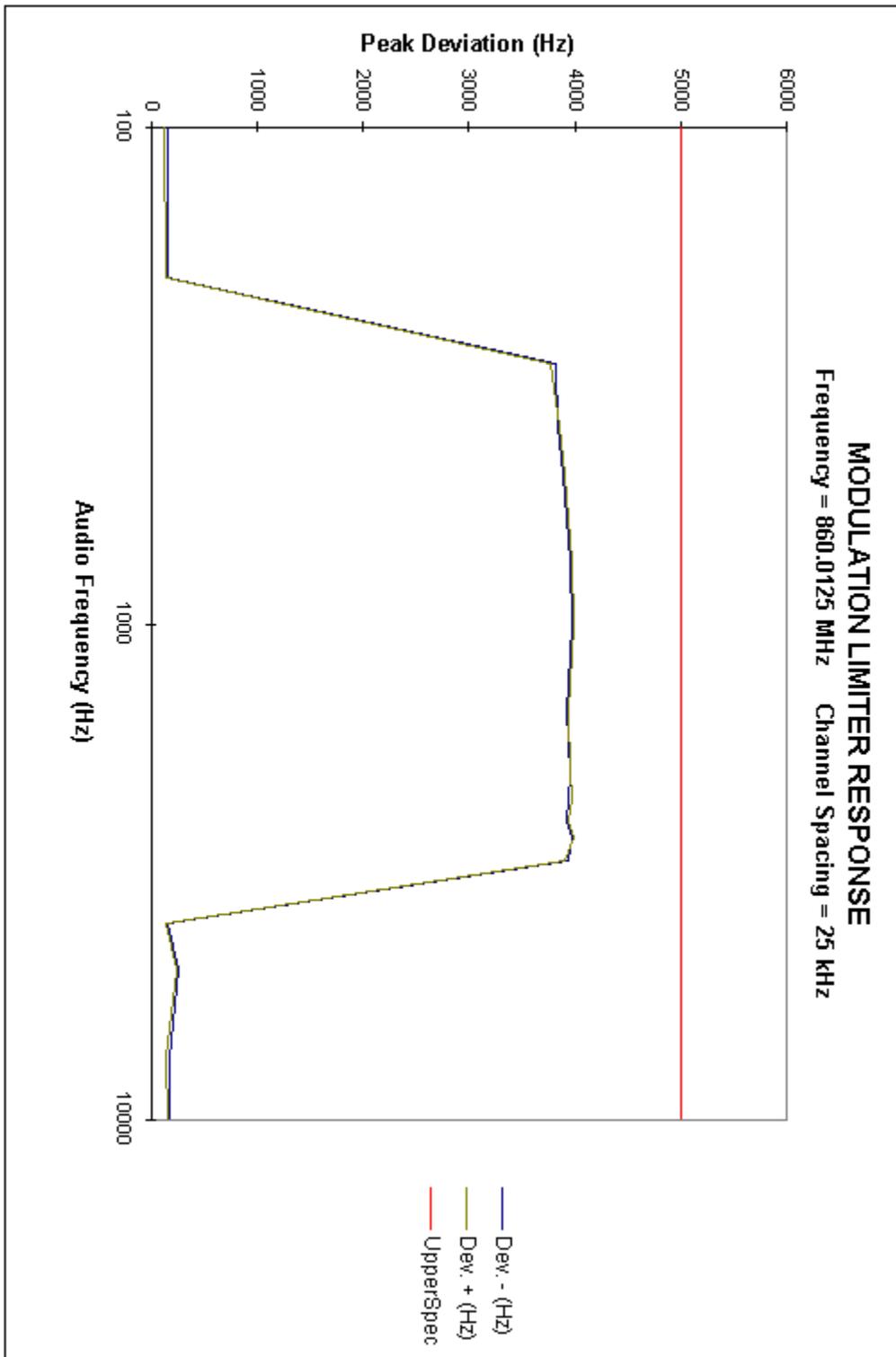Dev. + (Hz)
UpperSpec

EXHIBIT 6D-2

<u>OCCUPIED BANDWIDTH DATA</u>

BANDWIDTH CALCULATIONS**:**

Carson's Rule for FM modulation is utilized to compute the bandwidth shown in the FCC emission designator. Carson's Rule is:

BW = 2 * (M + D)   where: BW = Bandwidth
                                              M= Maximum modulating frequency
                                              D = Deviation

Shown below are the calculations required for FCC ID: **AZ489FT5817**

EXHIBIT 6E-1
<u>Standard Audio Modulation (25 kHz Channelization, Analog Voice):</u>
Emission Designator   16K0F3E

In this case, the maximum modulating frequency is 3 kHz with a 5 kHz deviation.

BW = 2(M+D) = 2*(3 kHz + 5 kHz) = 16 kHz ===> 16K0
F3E portion of the designator indicates voice.

Therefore, the entire designator for 25 kHz channelization analog voice is 16K0F3E.

EXHIBIT 6E-2
<u>Standard Audio Modulation (12.5 kHz Channelization, Analog Voice):</u>
Emission Designator   11K0F3E

In this case, the maximum modulating frequency is 3.0 kHz with a 2.5 kHz deviation.

BW = 2(M+D) = 2*(3.0 kHz + 2.5 kHz) = 11 kHz ===> 11K0
F3E portion of the designator indicates voice.

Therefore, the entire designator for 12.5 KHz channelization analog voice is 11K0F3E.

EXHIBIT 6E-3
<u>Digital (12.5 kHz Channelization, Digital Data):</u>
Emission Designator   8K10F1D

Measurements per Rule Part 2.202 Section C (4) were done because Part 2.202 Section g Table III A, 1 formulation produces an excessive result using the value of K recommended in the Table. Therefore, the 99% energy rule (title 47CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It basically states that 99% of the modulation energy falls within X KHz, in this case, 8.10 kHz Measurements were performed in accordance with TIA/EIA 102.CAAB Section 2.2.5.2. The emission mask was obtained from 47CFR 90.210(d).

F1D portion of the designator indicates digital data.

Therefore, the entire designator for 12.5 kHz channelization digital data is 8K10F1D.

EXHIBIT 6E

EXHIBIT 6E-4

Digital (12.5 kHz Channelization, Digital Voice with Encryption):
Emission Designator   8K10F1E (Per 47CFR 90.212(b))

Measurements per Rule Part 2.202 Section C (4) were done because Part 2.202 Section g Table III A, 1 formulation produces an excessive result using the value of K recommended in the Table. Therefore, the 99% energy rule (title 47CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It basically states that 99% of the modulation energy falls within X KHz, in this case, 8.10 kHz. Measurements were performed in accordance with TIA/EIA 102.CAAB Section 2.2.5.2. The emission mask was obtained from 47CFR 90.210(d).

F1E portion of the designator indicates digital voice.

Therefore, the entire designator for 12.5 kHz channelization digital voice (with encryption) is 8K10F1E.

EXHIBIT 6E-5
Digital (12.5 kHz Channelization, Digital Voice):
Emission Designator   8K10F1E

Measurements per Rule Part 2.202 Section C (4) were done because Part 2.202 Section g Table III A, 1 formulation produces an excessive result using the value of K recommended in the Table. Therefore, the 99% energy rule (title 47CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It basically states that 99% of the modulation energy falls within X KHz, in this case, 8.10 kHz. Measurements were performed in accordance with TIA/EIA 102.CAAB Section 2.2.5.2. The emission mask was obtained from 47CFR 90.210(d).

F1E portion of the designator indicates digital voice.

Therefore, the entire designator for 12.5 kHz channelization digital voice is 8K10F1E.
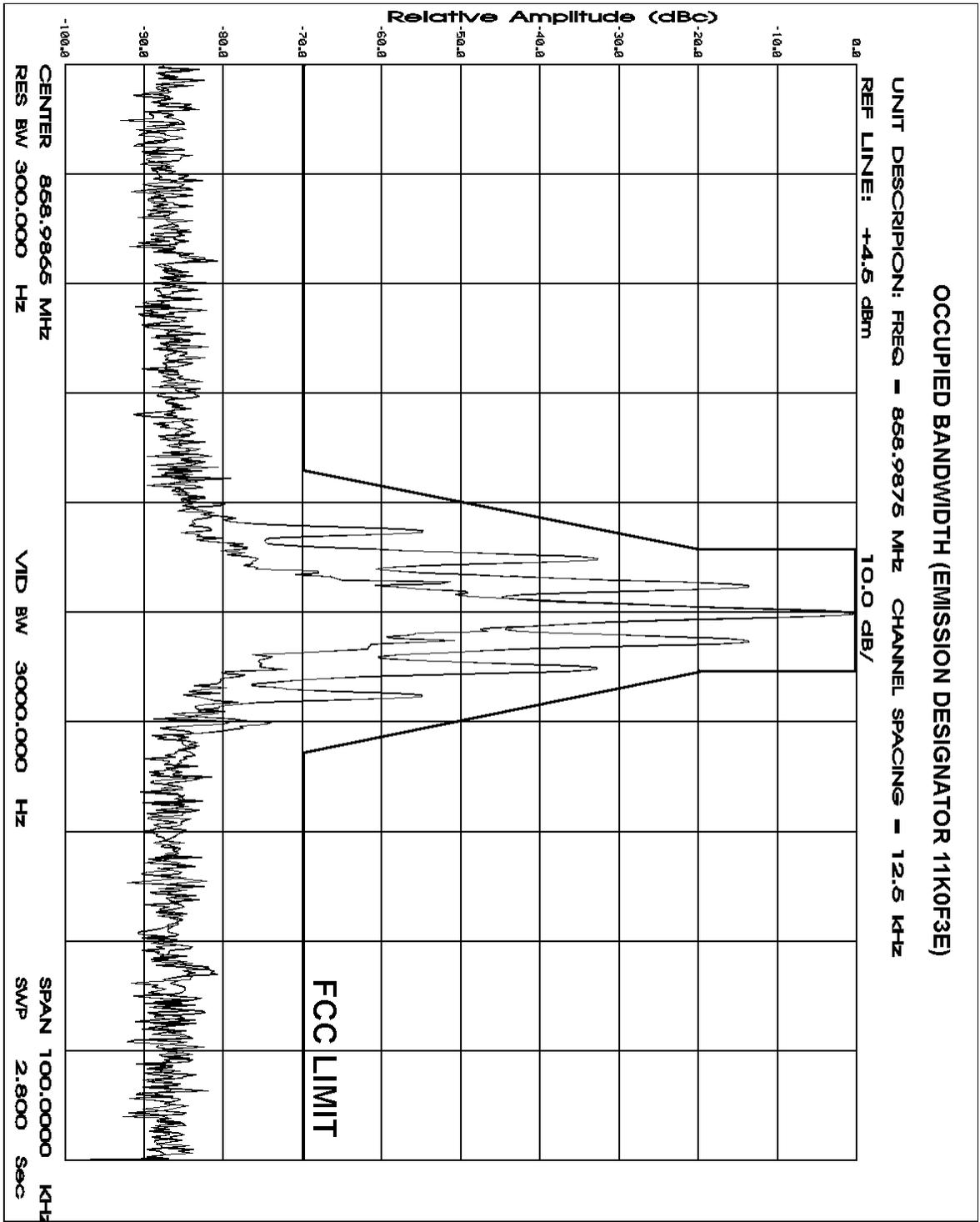

EXHIBIT 6E

Note: The 90.203(j) efficiency standard for "F1D" emission is met by sending 2 bits at a time, at a rate of 4800 symbols/second. This yields 9600 bits/second, which is achieved using the modulation technique described in the note below. Modulation results from one of the digital 4-level standard symbol patterns applied to the modulation at a rate of 9600 bits/second. The

modulation technique is 4-level FM. The information bits are commonly represented by a symbol that corresponds to one of 4 levels of FM deviation according to the following table.

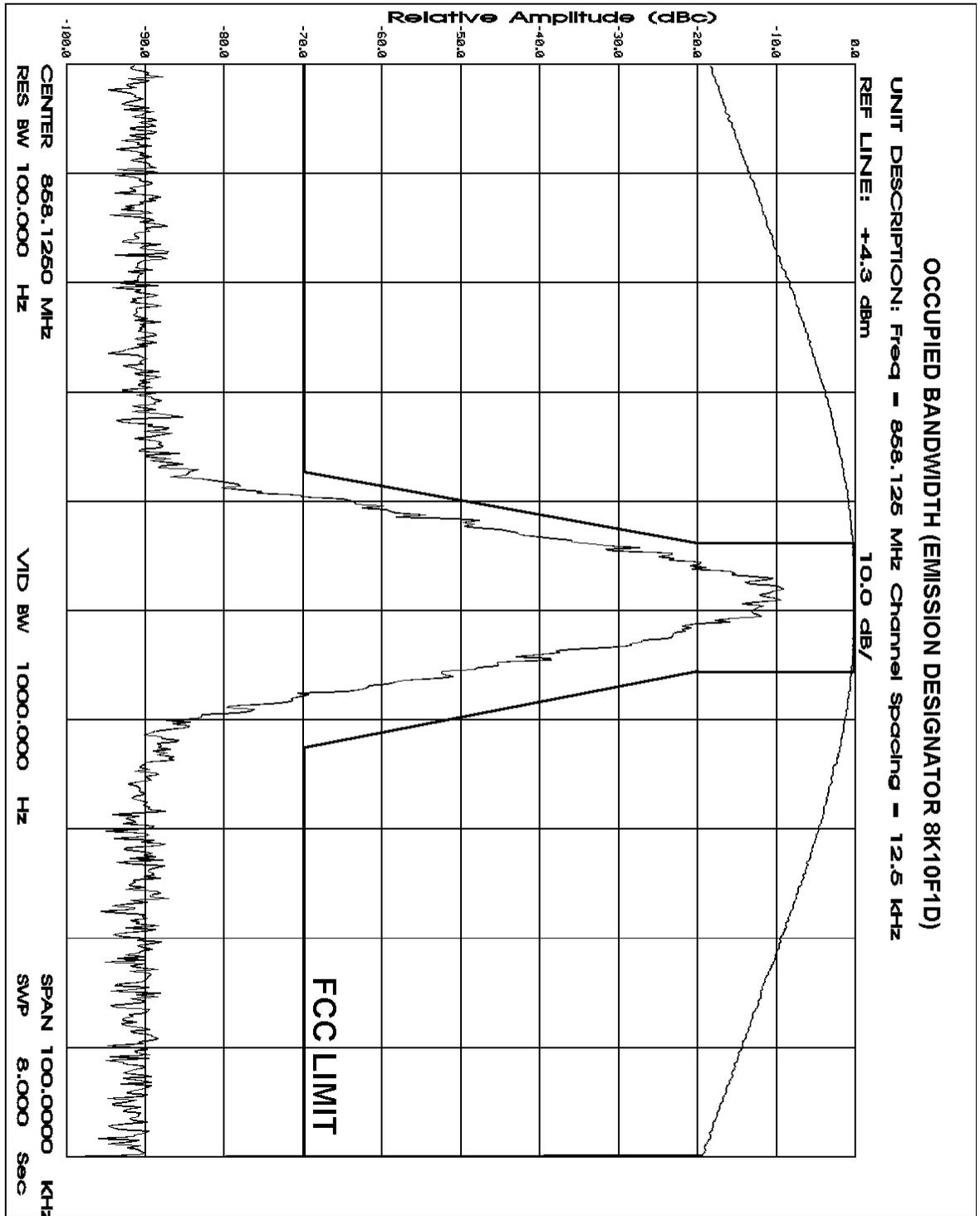| Information Bits	Symbol	C4FM Deviation
01	+3	+1.8 kHz
00	+1	+0.6 kHz
10	-1	-0.6 kHz
11	-3	-1.8 kHz

For example, an 8-bit binary pattern of 0010 1101 would be sent as symbols +1, -1, -3, +3, which would cause a modulation signal (Frequency-Shift-Keyed) of +1.8 kHz, -600 Hz, -1.8 kHz, and +1.8 kHz. This results in 9600 bits/second of information being sent on a 12.5 kHz channel, which is the equivalent of 4800 bits/second per 6.25 kHz.

Note: The "F1D" and "F1E" signal parameters are described as follows: The modulation is 4-level FSK with +/-600 Hz and +/-1.8 kHz shifting (+/-600 Hz and +/-1.8 kHz are the 4 distinct levels of signals). The digital voice test pattern is created by a 2500 Hz sine wave modulated at a level that is 16 dB above that required to produce 50% deviation at the radio output. The digital data test signal is generated by an internally generated pseudo random test pattern based on ITU-T 0.153 (formally CCITT V.52).

EXHIBIT 6E

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 16K0F3E)

UNIT DESCRIPION: FREQ = 868.9875 MHz CHANNEL SPACING = 25.0 kHz

REF LINE: +4.5 dBm

10.0 dB/

Relative Amplitude (dBc)

CENTER 858.9865 MHz

RES BW 300.000 Hz

VID BW 3000.000 Hz

SPAN 100.000 KHz

SWP 2.800 Sec

FCC LIMIT

Mask B

EXHIBIT 6E-1

Mask D

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 8K10F1D)

UNIT DESCRIPTION: Freq = 868.125 MHz Channel Spacing = 12.5 kHz

REF LINE: +4.3 dBm   10.0 dB/

CENTER 868.1250 MHz   VID BW 1000.000 Hz   SPAN 100.0000 KHz
RES BW 100.000 Hz   SWP 8.000 Sec
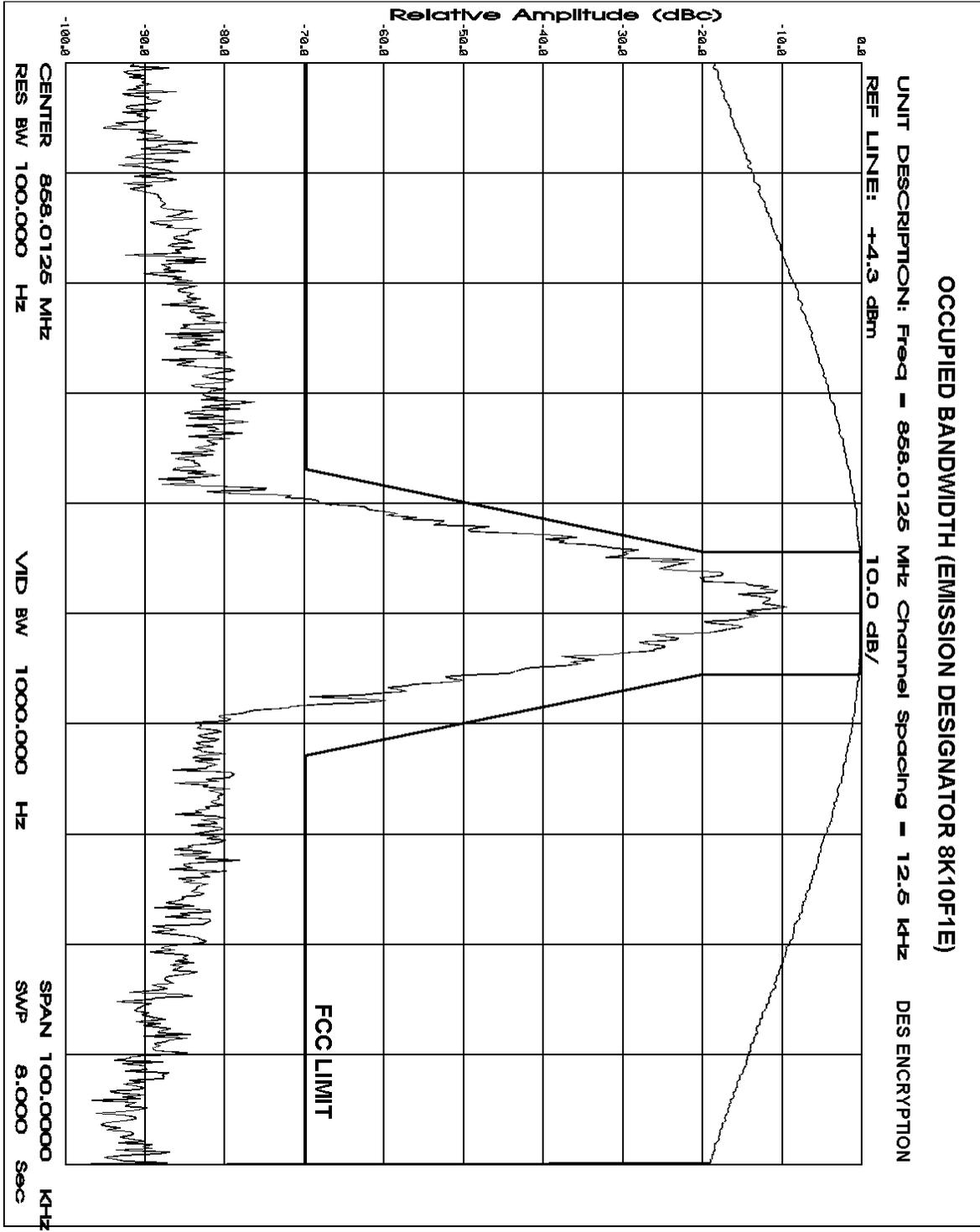
FCC LIMIT

Mask D
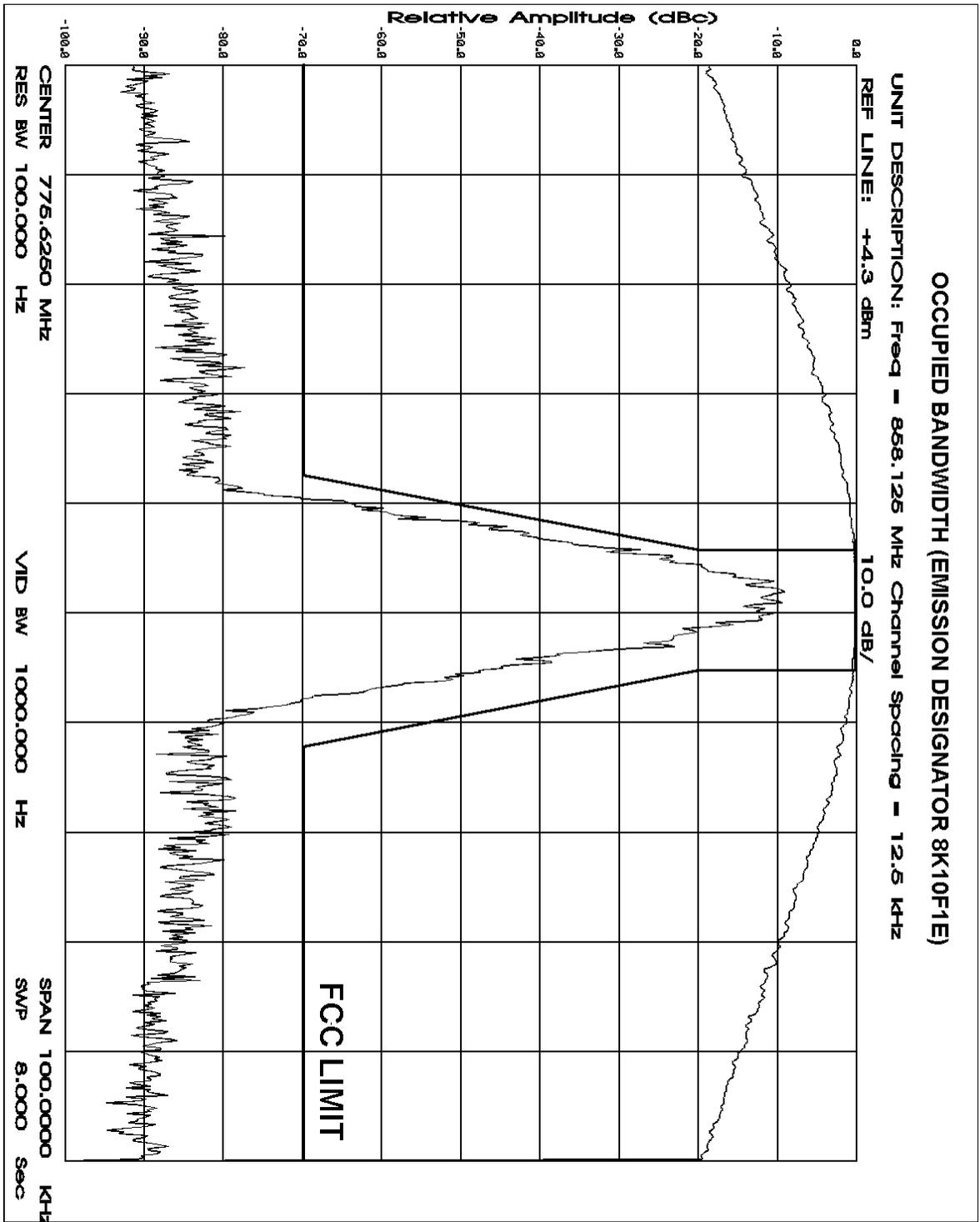
EXHIBIT 6E-3

Mask D

EXHIBIT 6E-4

Mask D

Transmitter Conducted Spurious Emissions   FCC ID: AZ489FT5817

814.01250 MHz   Power 3.0W

Spur Frequency	FCC Limit	Measured Value (dBm)
1513.00000	-13.0	-42.0

Transmitter Conducted Spurious Emissions

Motorola Plantation ATE Lab   Fri, Aug 17, 2001

Note: All Transmitter Spurious Emissions Tested to the 10th Harmonic
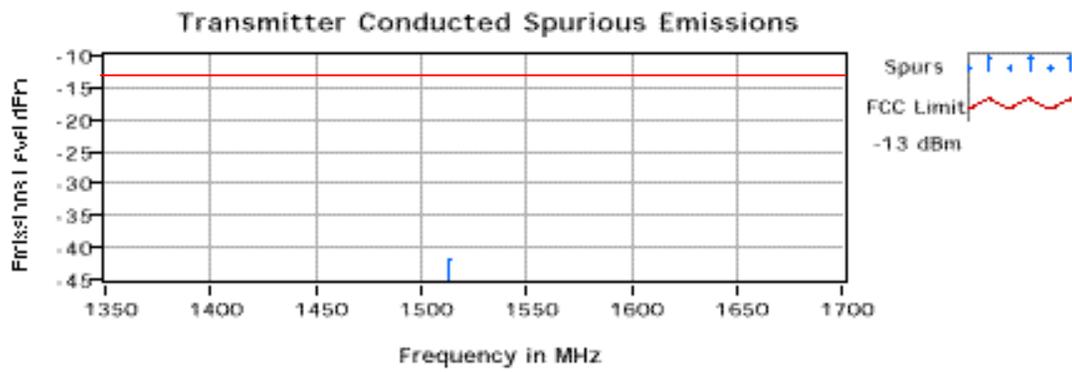
EXHIBIT 6F-1

Transmitter Conducted Spurious Emissions   FCC ID: AZ489FT5817

851.01250 MHz   Power 3.0W

Spur Frequency	FCC Limit	Measured Value (dBm)
1445.80000	-13.0	-41.2

Transmitter Conducted Spurious Emissions

Motorola Plantation ATE Lab   Fri, Aug 17, 2001

Note: All Transmitter Spurious Emissions Tested to the 10th Harmonic

EXHIBIT 6F-2
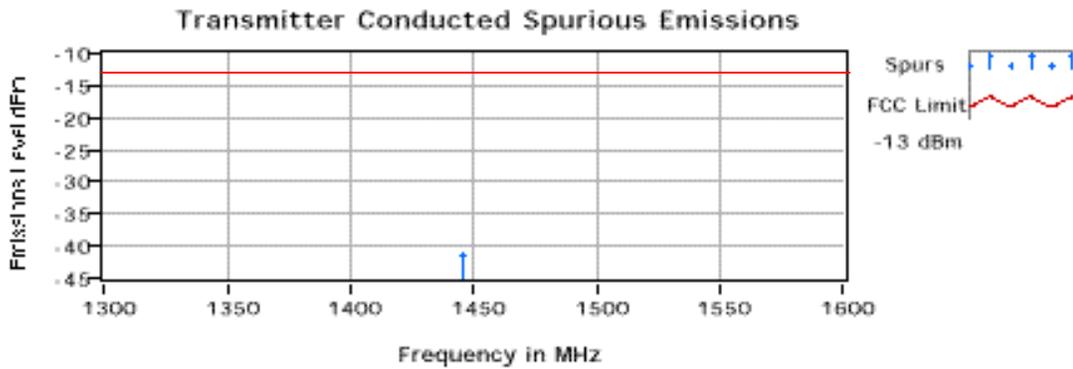
Transmitter Conducted Spurious Emissions   FCC ID: AZ489FT5817

860.01250 MHz   Power 3.0W

Spur Frequency	FCC Limit	Measured Value (dBm)

Transmitter Conducted Spurious Emissions

No Spurs Found Above -45 dBm
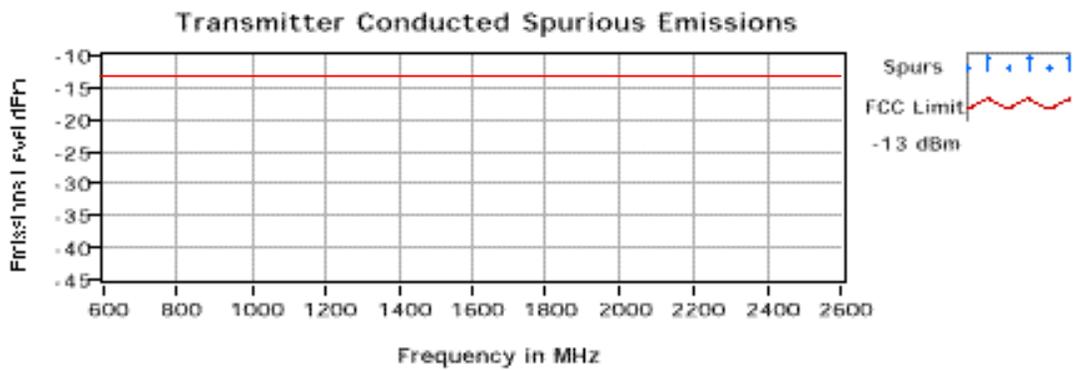
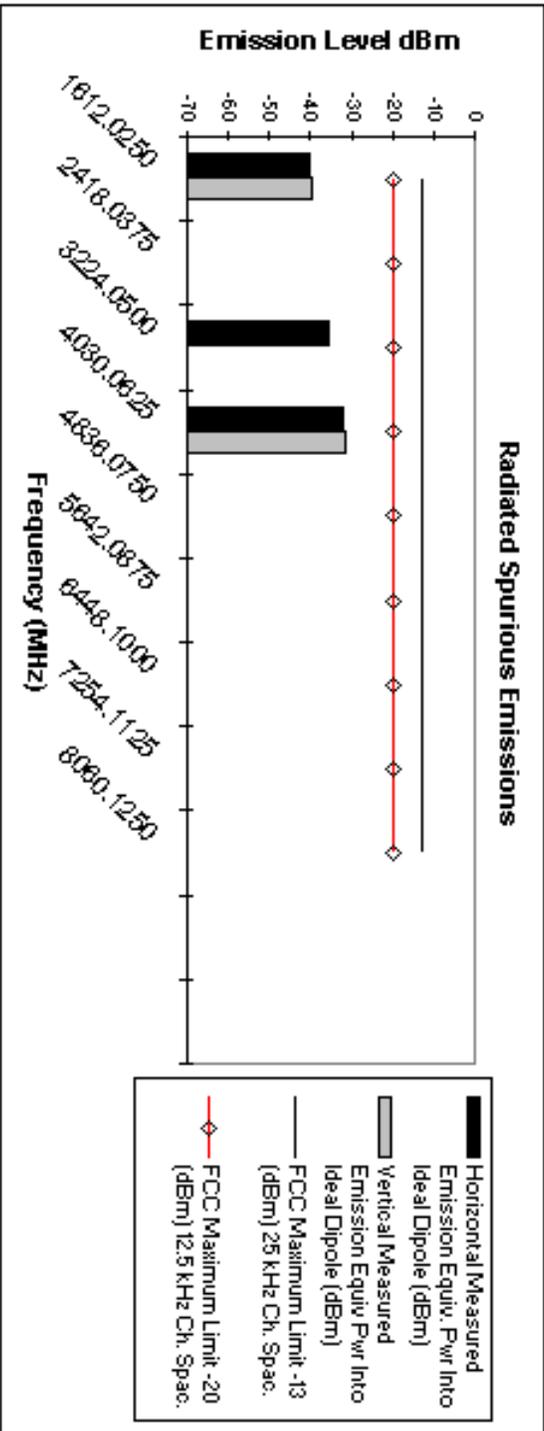Motorola Plantation ATE Lab   Fri, Aug 17, 2001

Note: All Transmitter Spurious Emissions Tested to the 10th Harmonic

EXHIBIT 6F-3

Transmitter Radiated Spurious Emissions: XTS 5000 700/800 MHz

806.0125 MHz   3.2 Watts   Channel Spacing 12.5kHz | S/N PROTOTYPE

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1612.0250	-13	-20	-40.54	-39.44
2418.0375	-13	-20	*	*
3224.0500	-13	-20	-35.40	*
4030.0625	-13	-20	-31.94	-31.57
4836.0750	-13	-20	*	*
5642.0875	-13	-20	*	*
6448.1000	-13	-20	*	*
7254.1125	-13	-20	*	*
8060.1250	-13	-20	*	*

Radiated Spurious Emissions

Legend:
- ■ Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
- ▨ Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
- — FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.
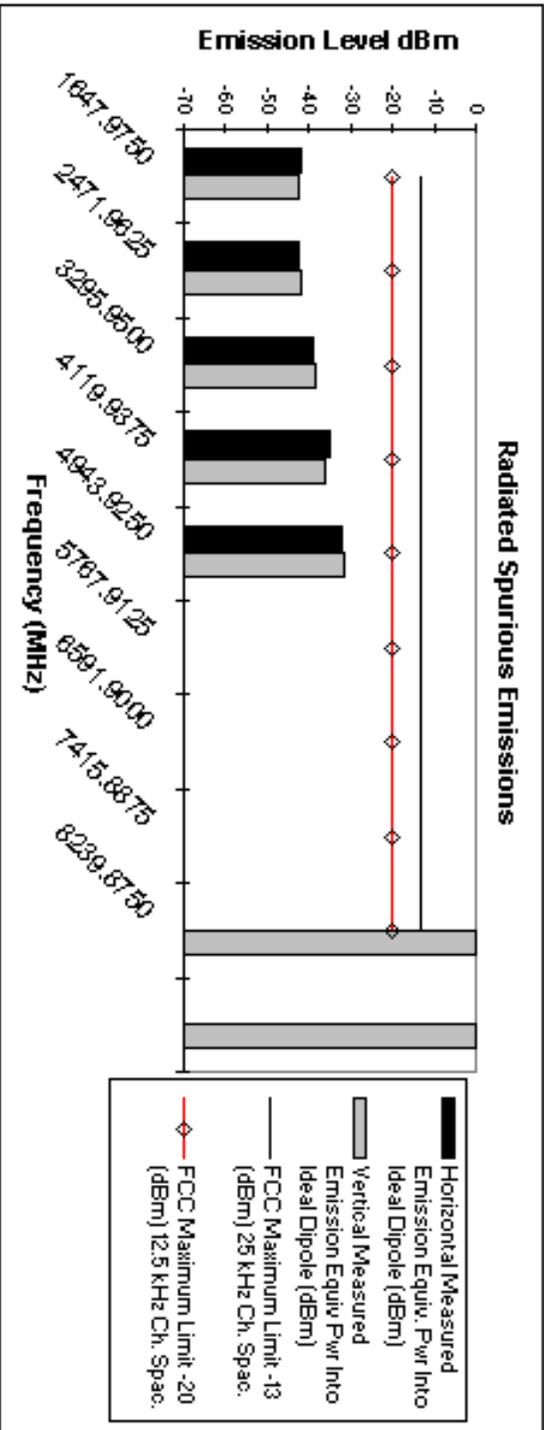- ◇ FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.

* Indicates the spurious emission could not be detected due to noise limitations or ambients.

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmitter Radiated Spurious Emissions: XTS 5000 700/800 MHz

823.9875 MHz   3.2 Watts   **Ch.Sp.: 12.5kHz**
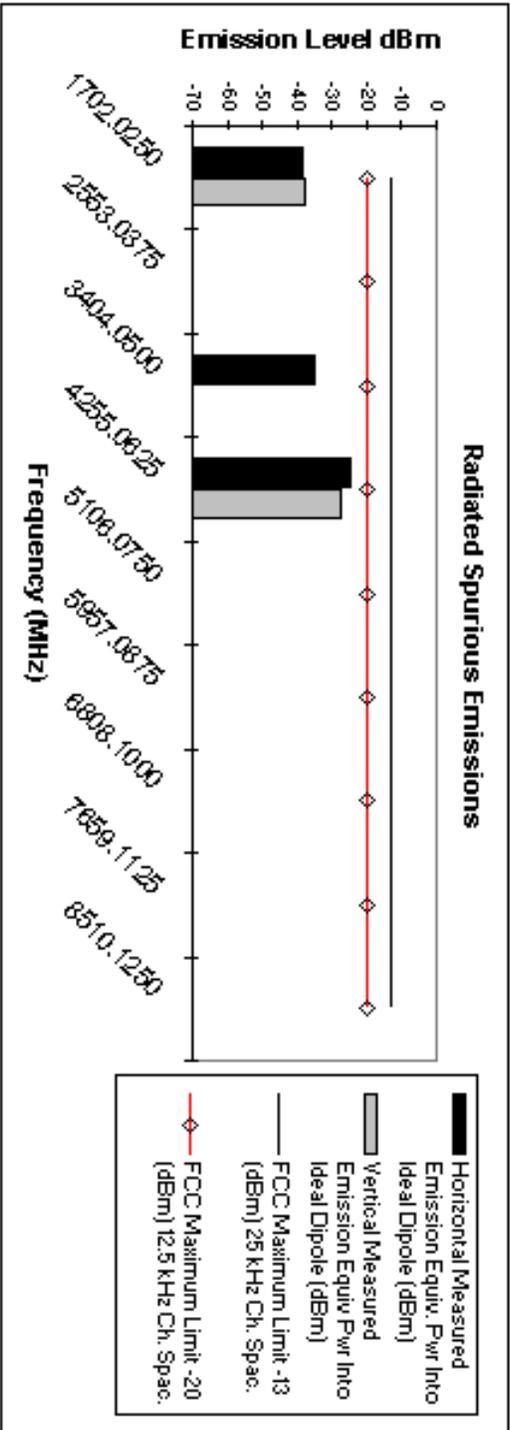
Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
1647.9750	-13	-20	-41.79	-42.41
2471.9625	-13	-20	-42.29	-41.69
3295.9500	-13	-20	-38.96	-38.36
4119.9375	-13	-20	-35.15	-36.34
4943.9250	-13	-20	-32.33	-31.30
5767.9125	-13	-20	*	*
6591.9000	-13	-20	*	*
7415.8875	-13	-20	*	*
8239.8750	-13	-20	*	3.2 Watts

Radiated Spurious Emissions

Emission Level dBm (0, -10, -20, -30, -40, -50, -60, -70)

Frequencies: 1647.9750, 2471.9625, 3295.9500, 4119.9375, 4943.9250, 5767.9125, 6591.9000, 7415.8875, 8239.8750

Frequency (MHz)

Legend:
- ■ Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
- ▨ Vertical Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
- — FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.
- ◇— FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.

* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients. The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmitter Radiated Spurious Emissions: XTS 5000 700/800 MHz

851.0125 MHz   **3.2 Watts**   **Channel Spacing 12.5kHz**   **S/N PROTOTYPE**

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
1702.0250	-13	-20	-38.34	-37.72
2553.0375	-13	-20	*	*
3404.0500	-13	-20	-34.89	*
4255.0625	-13	-20	-25.00	-27.43
5106.0750	-13	-20	*	*
5957.0875	-13	-20	*	*
6808.1000	-13	-20	*	*
7659.1125	-13	-20	*	#REF!
8510.1250	-13	-20	*	*

Radiated Spurious Emissions

Chart: Emission Level dBm vs Frequency (MHz)

Legend:
- Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
- Vertical Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
- FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.
- FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.

* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.
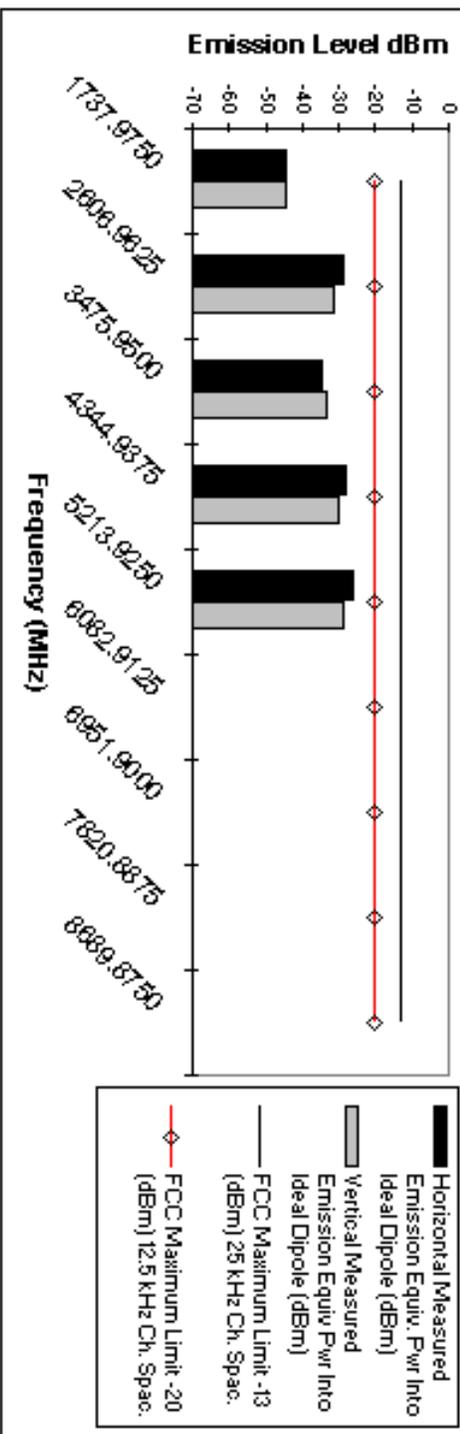
EXHIBIT 6G-3

Transmitter Radiated Spurious Emissions: XTS 5000 700/800 MHz
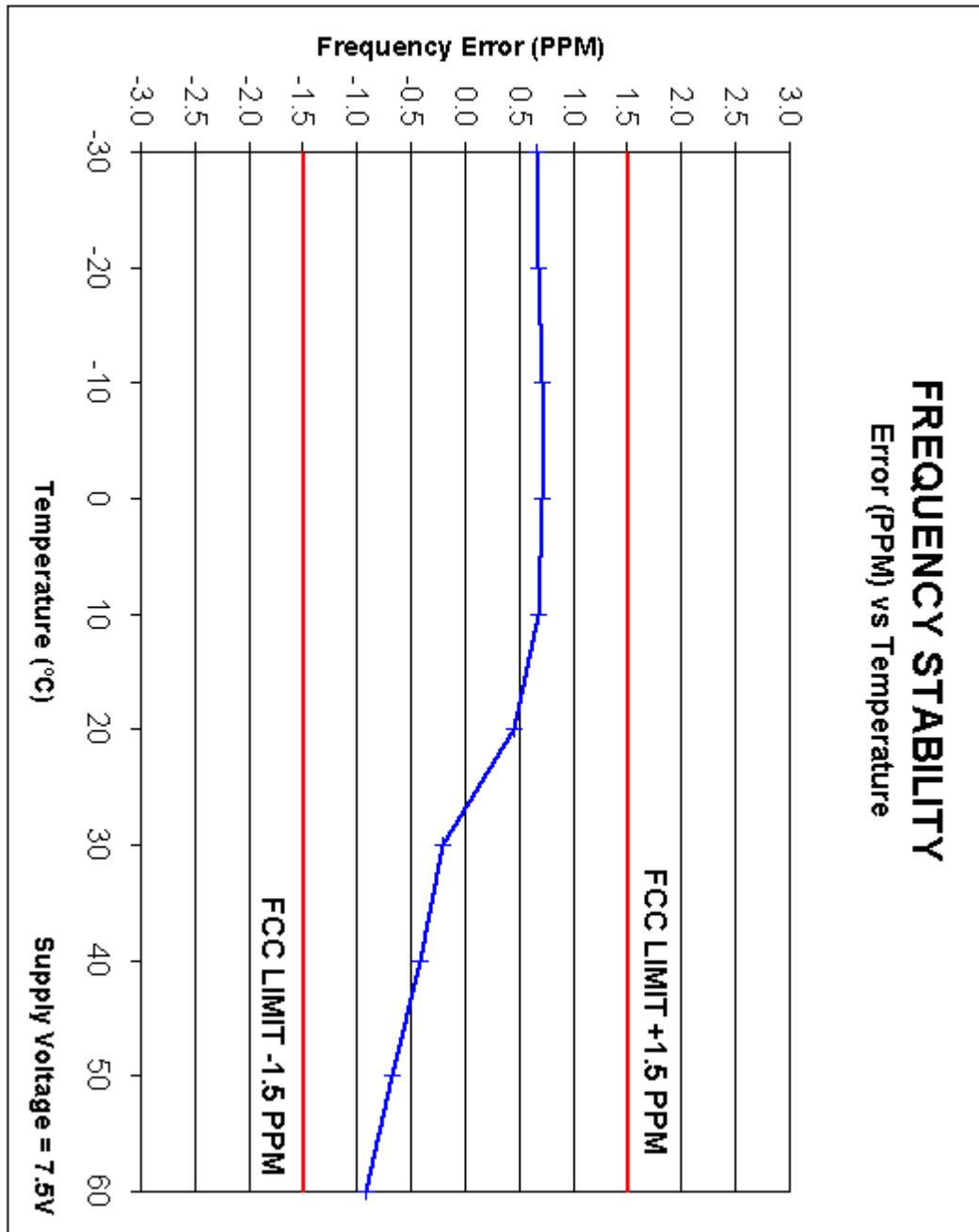
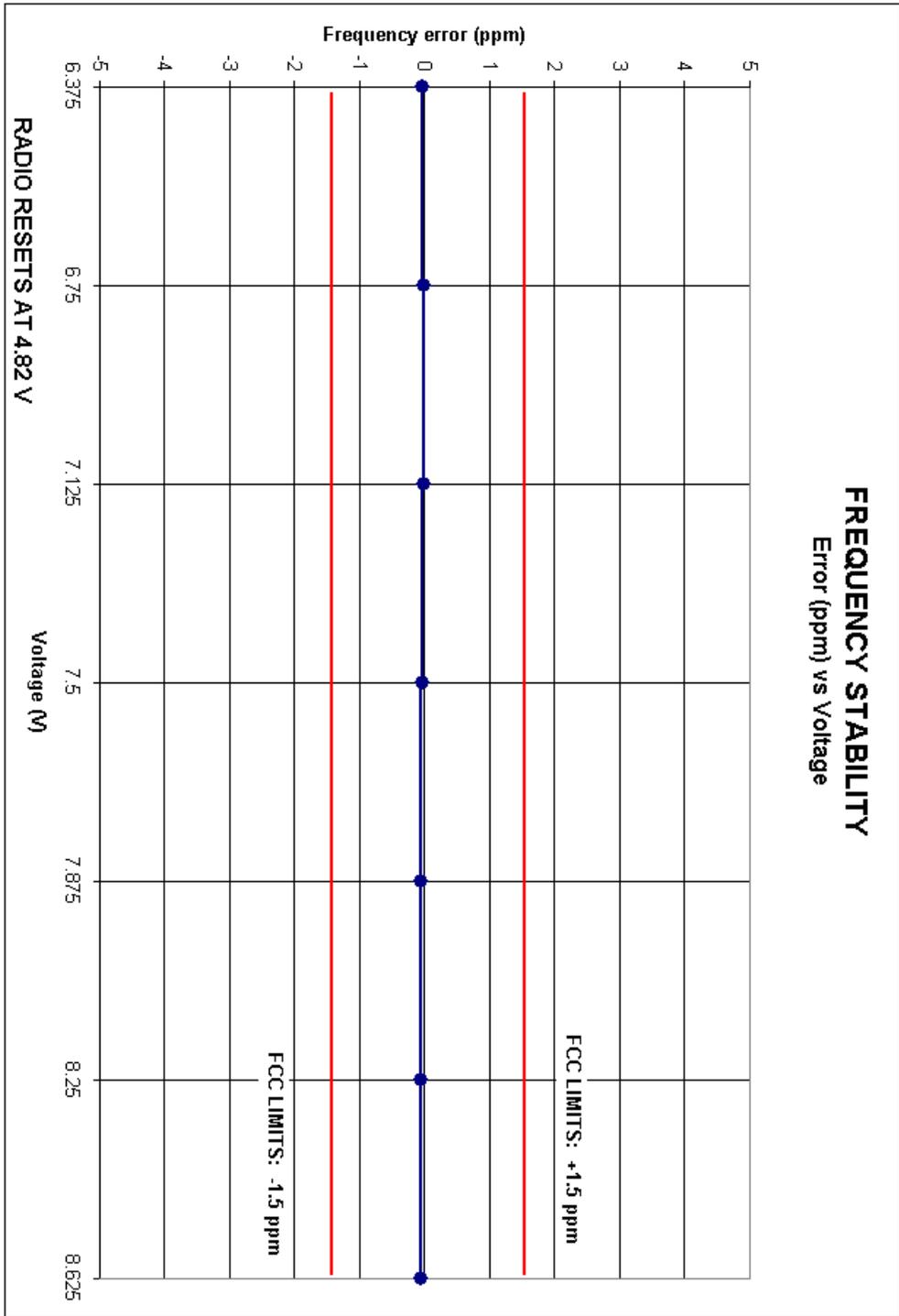**868.9875 MHz   3.2 Watts   Ch.Sp.: 12.5kHz**

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1737.9750	-13	-20	-44.27	-44.50
2606.9625	-13	-20	-28.54	-31.13
3475.9500	-13	-20	-34.38	-33.27
4344.9375	-13	-20	-28.09	-30.27
5213.9250	-13	-20	-26.20	-28.76
6082.9125	-13	-20	*	*
6951.9000	-13	-20	*	*
7820.8875	-13	-20	*	*
8689.8750	-13	-20	*	*

Radiated Spurious Emissions

Horizontal Spurious Emissions

Legend:
- Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
- Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
- FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.
- FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.

* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

EXHIBIT 6G-4

FREQUENCY STABILITY
Error (PPM) vs Temperature

EXHIBIT 6H-1

Radio Resets @ 4.82 volts

EXHIBIT 6H-2