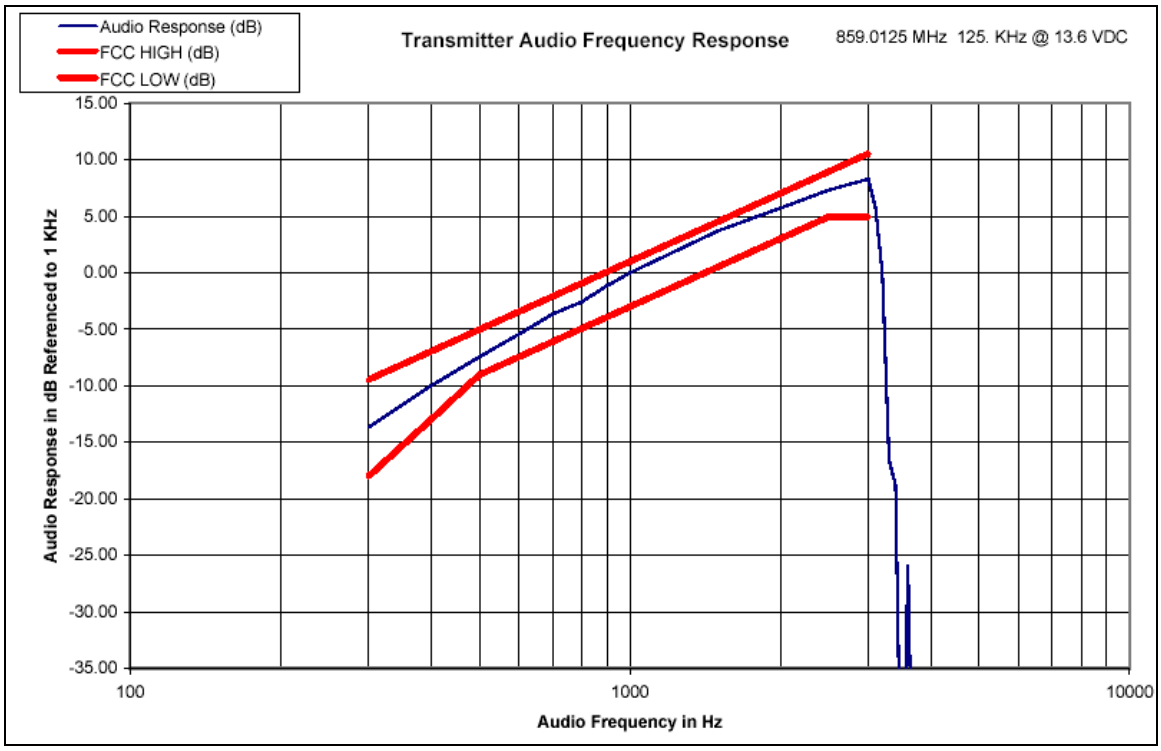
SUBMITTED MEASURED DATA

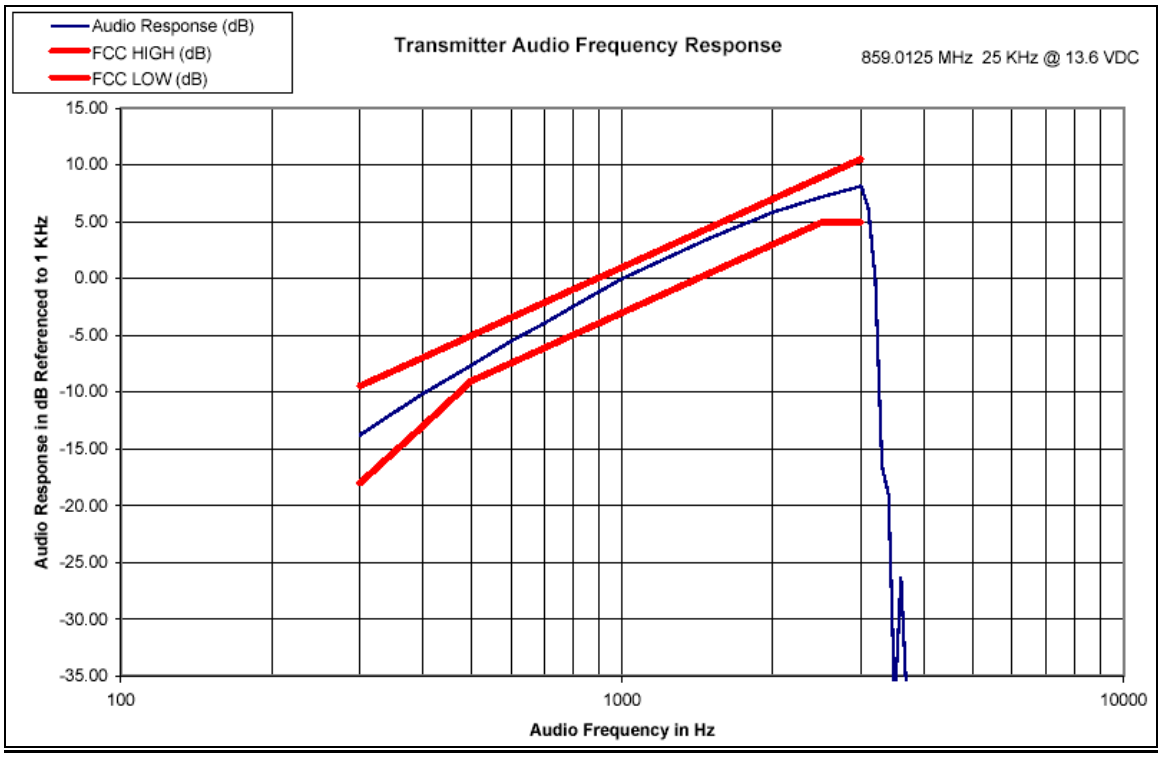
MEASUREMENT		EXHIBIT	NUMBER OF PAGES
I	RF Power Output Data	6A	1
II	Audio Response &	6B	1
	Low Pass Filter Response	6C	1
III	Modulation Limiting	6D	1
IV	Occupied Bandwidth	6E	9
V	Adjacent Channel Coupled Power Ratio	6F	3
VI	Conducted Spurious Emissions	6G	8
VII	Radiated Spurious Emissions	6H	8
VIII	1559-1610 Radiated Spurious	6I	3
IX	Frequency Stability		
	A. Temperature	6J-1	1
	B. Supply Voltage	6J-2	1

RF POWER OUTPUT DATA

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

Frequency (MHz)	RF Output Power (W)	Nominal DC Voltage (Volts)	Nominal DC Current (Amps)
764.0125	2	13.6	2.64
764.0875	3.5	13.6	3.34
	18	13.6	6.44
	36	13.6	9.02
823.9875	3.5	13.6	2.78
	21	13.6	5.60
	42	13.6	8.7
868.9875	3.5	13.6	2.7
	21	13.6	5.35
	42	13.6	8.06


Audio Response (dB)
FCC HIGH (dB)
FCC LOW (dB)
Transmitter Audio Frequency Response
859.0125 MHz 125. KHz @ 13.6 VDC
Audio Response in dB Referenced to 1 KHz
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
100
1000
10000
Audio Frequency in Hz


Audio Response (dB)
FCC HIGH (dB)
FCC LOW (dB)
Transmitter Audio Frequency Response
859.0125 MHz 25 KHz @ 13.6 VDC
Audio Response in dB Referenced to 1 KHz
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
100
1000
10000
Audio Frequency in Hz

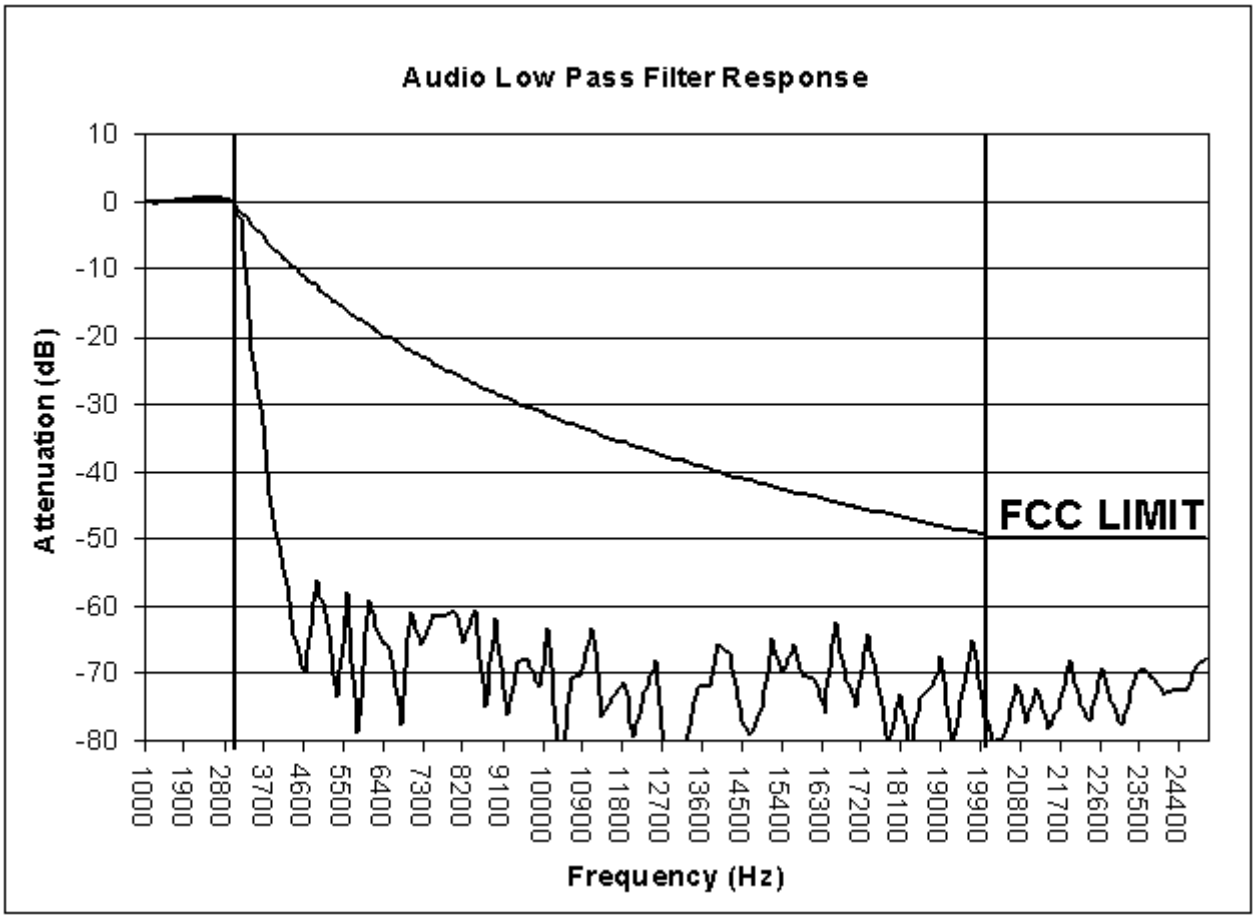
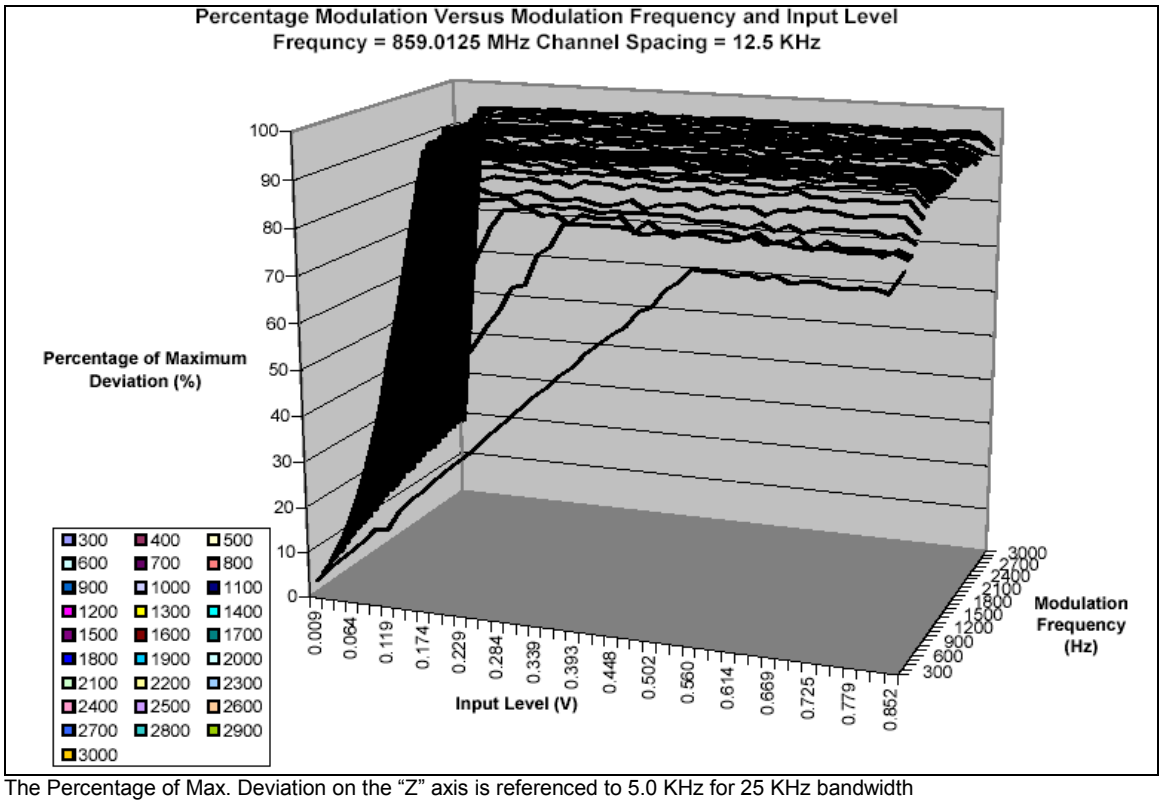
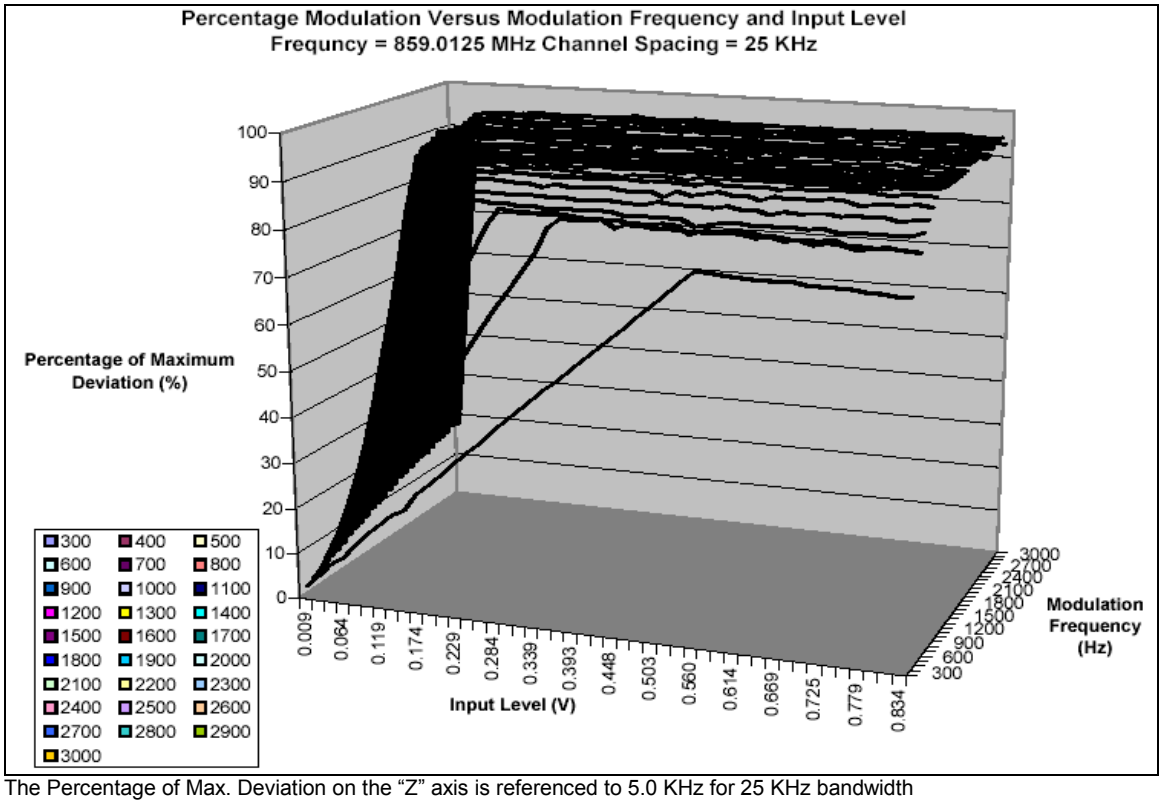

Audio Low Pass Filter Response
Attenuation (dB)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
FCC LIMIT
1000
1900
2800
3700
4600
5500
6400
7300
8200
9100
10000
10900
11800
12700
13600
14500
15400
16300
17200
18100
19000
19900
20800
21700
22600
23500
24400
Frequency (Hz)

EXHIBIT 6C



The Percentage of Max. Deviation on the “Z” axis is referenced to 5.0 KHz for 25 KHz bandwidth



The Percentage of Max. Deviation on the “Z” axis is referenced to 5.0 KHz for 25 KHz bandwidth

OCCUPIED BANDWIDTH DATA

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: AZ492FT5823**

EXHIBIT 6E-1
Standard Audio Modulation (25 kHz Channelization, Analog Voice):
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
Standard Audio Modulation (12.5 kHz Channelization, Analog Voice):
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
Digital (12.5 kHz Channelization, Digital Data):
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-4
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-5
Digital (12.5 kHz Channelization, Digital Voice 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-6
Secure Mode (20.0 kHz Channelization, Digital Voice Encryption):
Emission Designator 20K0F1E

In this case, the maximum modulating frequency is 6.0 kHz with a 4.0 kHz deviation.

BW = 2(M+D) = 2*(6.0 kHz + 4.0 kHz) = 20 kHz ===> 20K0
F1E portion of the designator indicates digital voice.

Therefore, the entire designator for 20.0 kHz channelization secure mode (digital voice encryption) is 20K0F1E.

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

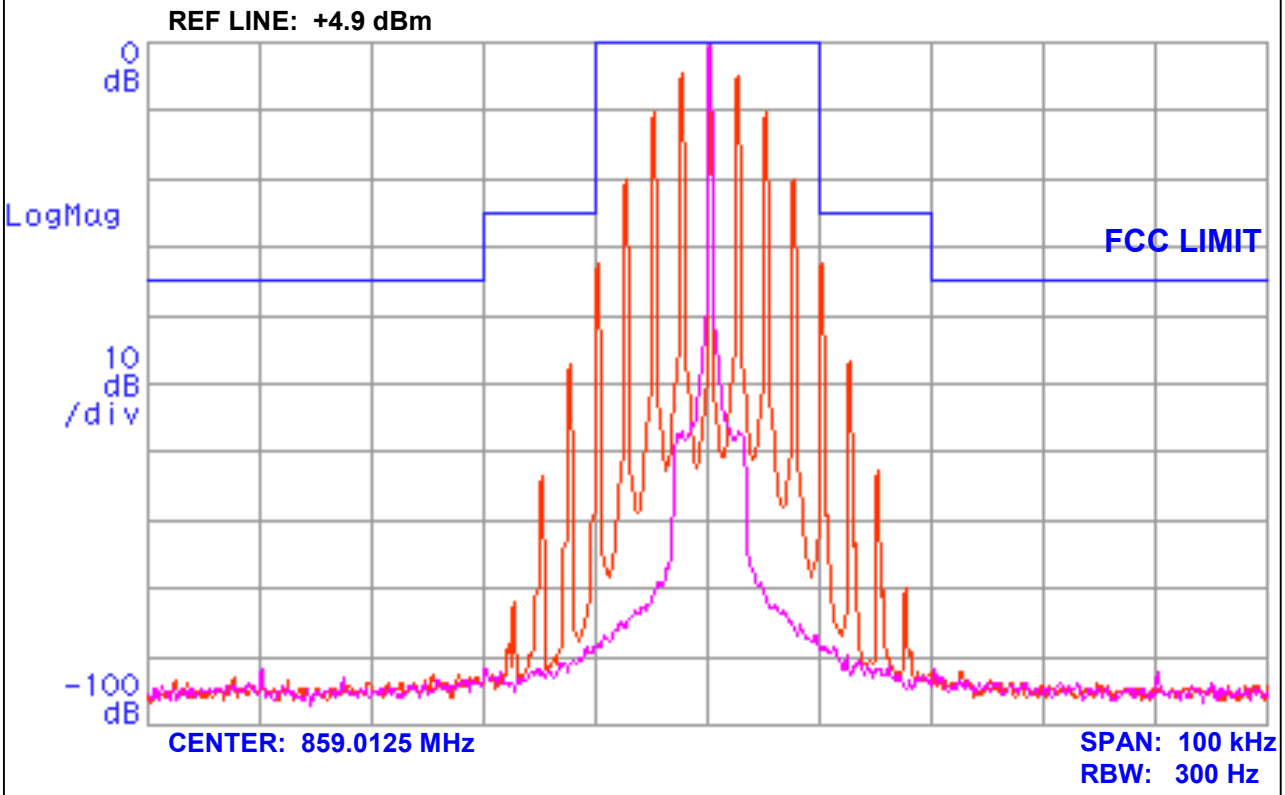
For example, an 8-bit binary pattern of 0010 1101 would be sent as symbols +1, -1, -3, +3, which would cause a modulation signal (Frequency-Shift-Keyed) of +1.8 kHz, -600 Hz, -1.8 kHz, and +1.8 kHz. This results in 9600 bits/second of information being sent on a 12.5 kHz channel, which is the equivalent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

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 16K0F3E)

UNIT DESCRIPTION: FREQ = 859.0125 MHz

ANALOG VOICE
CHANNEL SPACING = 25.0 kHz

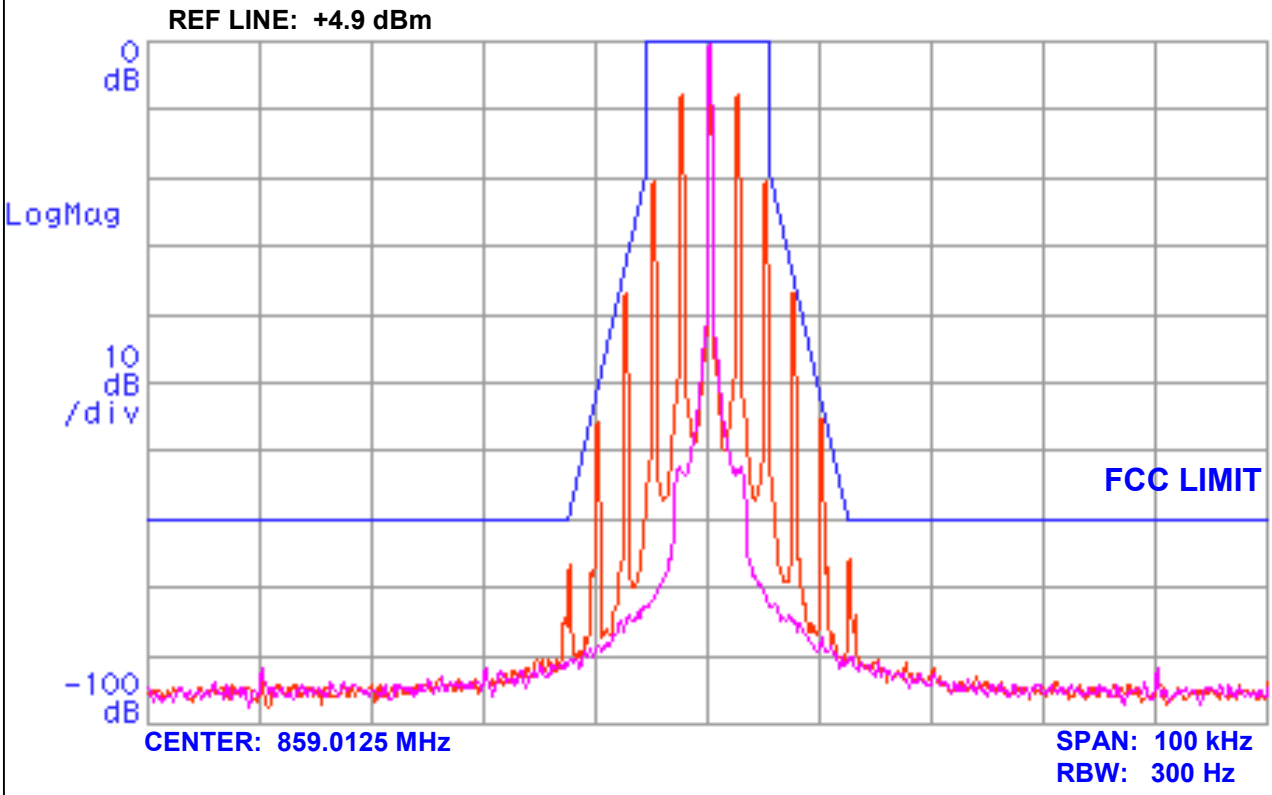


Mask B

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 11K0F3E)

UNIT DESCRIPTION: FREQ = 859.0125 MHz

ANALOG VOICE
CHANNEL SPACING = 12.5 kHz

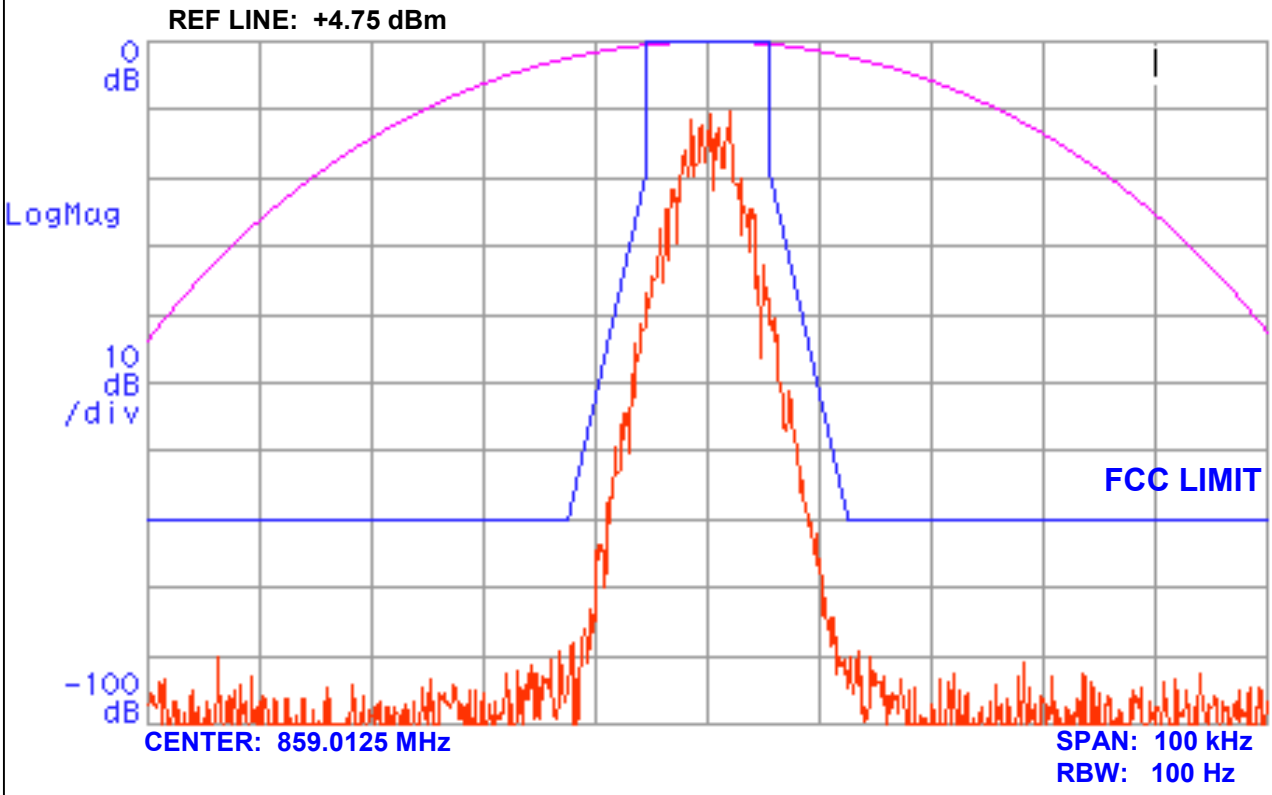


Mask D

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 8K10F1D)

UNIT DESCRIPTION: FREQ = 859.0125 MHz

DIGITAL DATA
CHANNEL SPACING = 12.5 kHz

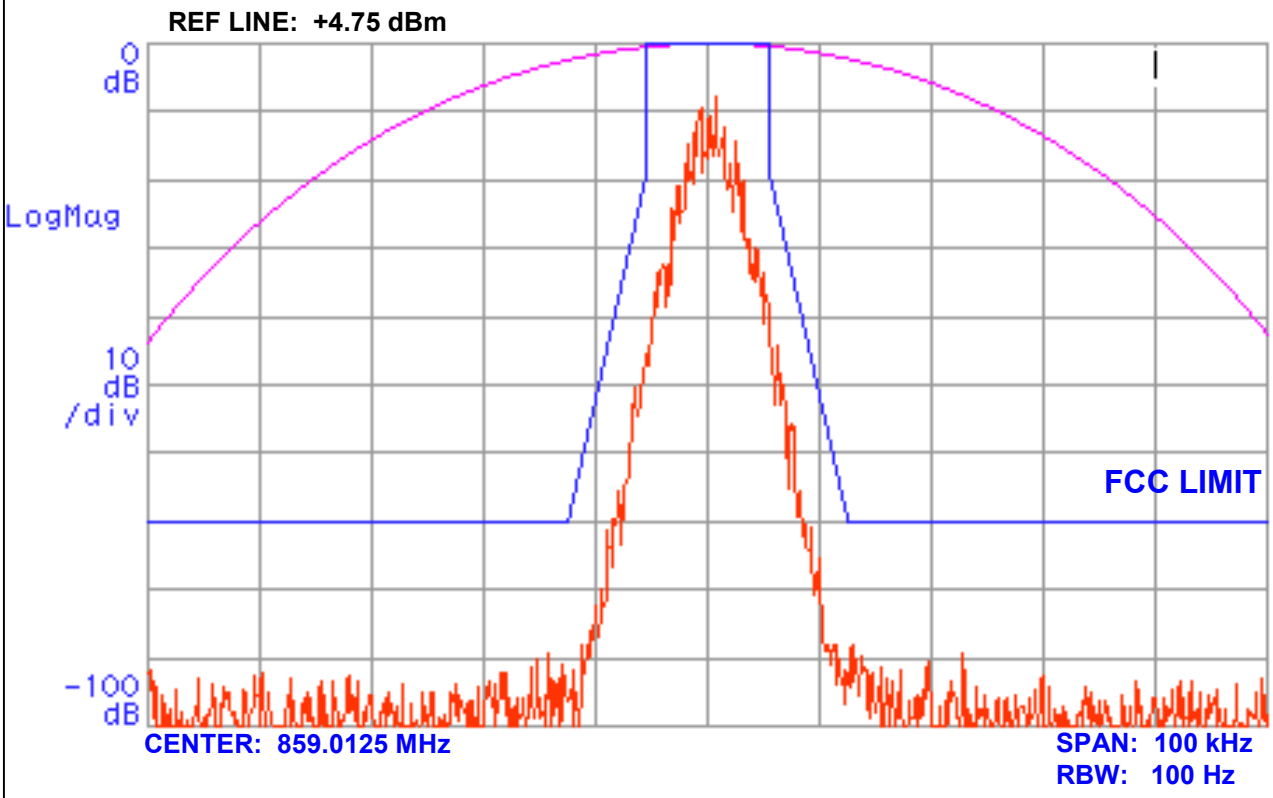


Mask D

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 8K10F1E)

UNIT DESCRIPTION: FREQ = 859.0125 MHz

DIGITAL VOICE
CHANNEL SPACING = 12.5 kHz

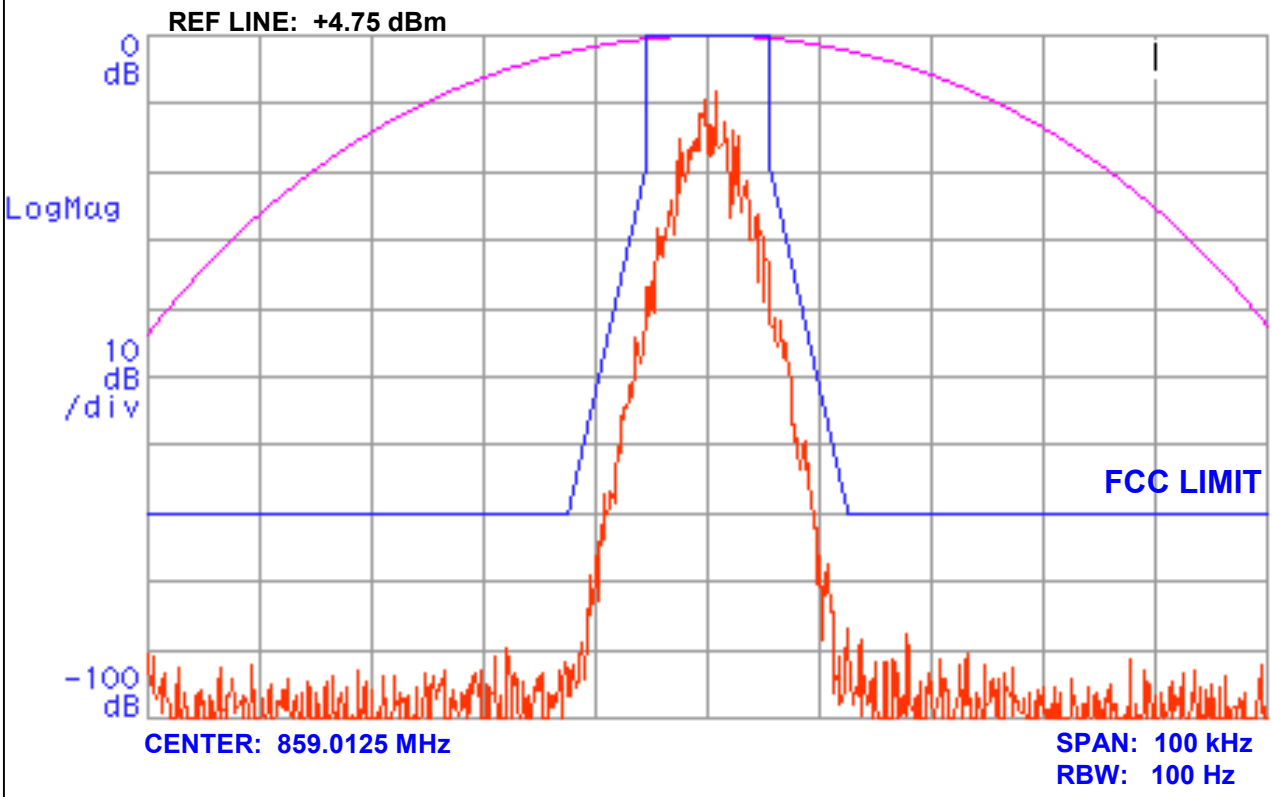


Mask D

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 8K10F1E)

UNIT DESCRIPTION: FREQ = 859.0125 MHz

DIGITAL VOICE ENCRYPTION
CHANNEL SPACING = 12.5 kHz



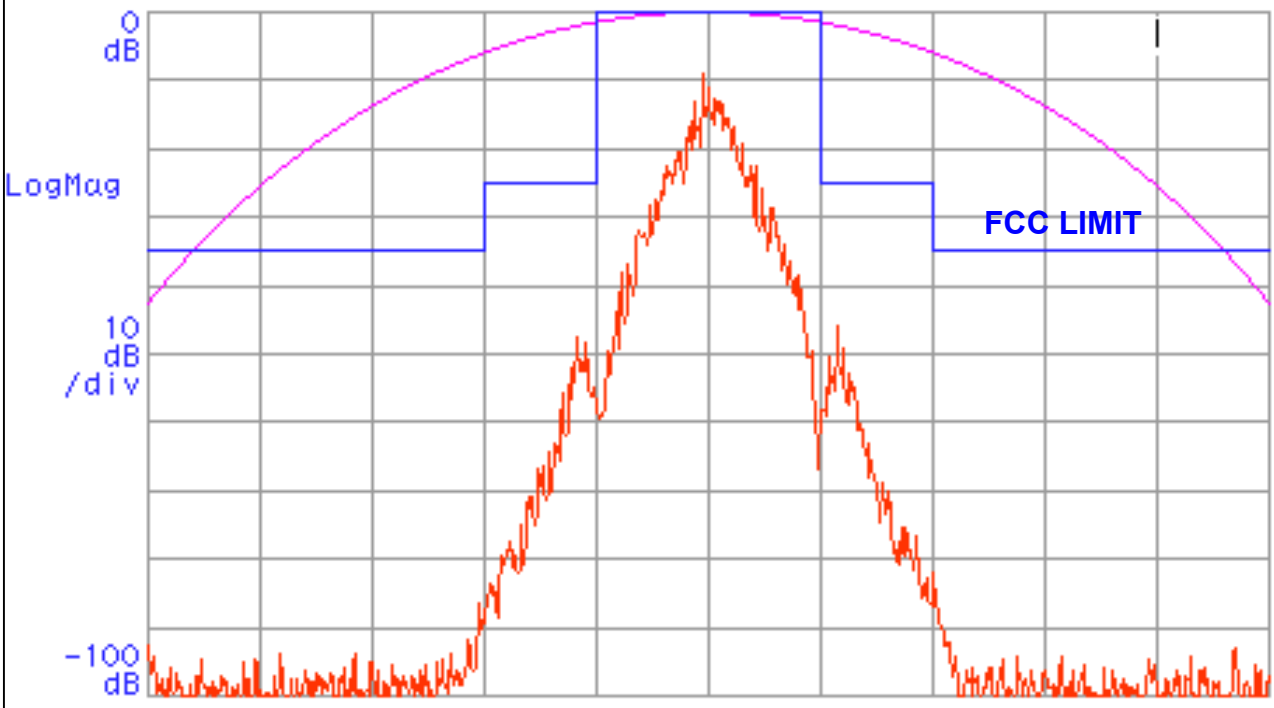
Mask D

OCCUPIED BANDWIDTH (EMISSION DESIGNATOR 20K0F1E)

UNIT DESCRIPTION: FREQ = 859.0125 MHz

DIGITAL VOICE ENCRYPTION
CHANNEL SPACING = 20.0 kHz

REF LINE: +5.00 dBm



CENTER: 859.0125 MHz

SPAN: 100 kHz
RBW: 100 Hz

Adjacent Channel Coupled Power Ratios

794.0875 MHz 25.0 kHz Channel Spacing ANALOG

Emission Designator 16K0F3E

Ref Power Level (dBm) = 4.2

Offset (kHz)	Measurement Bandwidth (kHz)	Resolution Bandwidth (Hz)		ACP (dBc) Lower	Upper	Spec (dBc)
15.625	6.250	100		-78.1	-75.7	-60
21.875	6.250	100		-84.9	-84.9	-60
37.500	25.000	300		-81.2	-81.0	-65
62.500	25.000	300		-81.9	-81.0	-65
87.500	25.000	300		-81.0	-81.2	-65
150.000	100.000	1100		-76.1	-76.1	-65
250.000	100.000	1100		-77.2	-76.4	-65
350.000	100.000	1100		-77.4	-77.7	-65
>400kHz-12MHz	30 (swept)	30000		< -75		-75
12M-RX Band	30 (swept)	30000		< -75		-75
in RX Band	30 (swept)	30000		< -100		-100

794.0875 MHz 12.5 kHz Channel Spacing ANALOG

Emission Designator 11K0F3E

Ref Power Level (dBm) = 4.2

Offset (kHz)	Measurement Bandwidth (kHz)	Resolution Bandwidth (Hz)		ACP (dBc) Lower	Upper	Spec (dBc)
9.375	6.250	100		-54.1	-50.2	-40
15.625	6.250	100		-82.5	-82.0	-60
21.875	6.250	100		-85.0	-84.7	-60
37.500	25.000	300		-81.6	-81.0	-65
62.500	25.000	300		-81.0	-81.4	-65
87.500	25.000	300		-81.0	-80.5	-65
150.000	100.000	1100		-76.0	-75.5	-65
250.000	100.000	1100		-76.6	-76.7	-65
350.000	100.000	1100		-77.3	-78.0	-65
>400kHz-12MHz	30 (swept)	30000		< -75		-75
12M-RX Band	30 (swept)	30000		< -75		-75
in RX Band	30 (swept)	30000		< -100		-100

Adjacent Channel Coupled Power Ratios

794.0875 MHz 12.5 kHz Channel Spacing DIGITAL DATA

Emission Designator 8K10F1D

Ref Power Level (dBm) = 4.6

Offset (kHz)	Measurement Bandwidth (kHz)	Resolution Bandwidth (Hz)		ACP (dBc) Lower	Upper	Spec (dBc)
9.375	6.250	100		-43.1	-42.3	-40
15.625	6.250	100		-81.4	-81.2	-60
21.875	6.250	100		-84.4	-84.4	-60
37.500	25.000	300		-81.0	-81.4	-65
62.500	25.000	300		-81.9	-81.6	-65
87.500	25.000	300		-82.1	-81.4	-65
150.000	100.000	1100		-75.9	-76.0	-65
250.000	100.000	1100		-77.4	-76.8	-65
350.000	100.000	1100		-78.9	-77.5	-65
>400kHz-12MHz	30 (swept)	30000		< -75		-75
12M-RX Band	30 (swept)	30000		< -75		-75
in RX Band	30 (swept)	30000		< -100		-100

794.0875 MHz 12.5 kHz Channel Spacing DIGITAL VOICE

Emission Designator 8K10F1E

Ref Power Level (dBm) = 4.6

Offset (kHz)	Measurement Bandwidth (kHz)	Resolution Bandwidth (Hz)		ACP (dBc) Lower	Upper	Spec (dBc)
9.375	6.250	100		-41.8	-41.7	-40
15.625	6.250	100		-81.4	-81.1	-60
21.875	6.250	100		-84.6	-84.3	-60
37.500	25.000	300		-80.7	-80.2	-65
62.500	25.000	300		-81.6	-81.1	-65
87.500	25.000	300		-81.7	-81.8	-65
150.000	100.000	1100		-76.3	-75.6	-65
250.000	100.000	1100		-76.9	-76.0	-65
350.000	100.000	1100		-77.3	-77.8	-65
>400kHz-12MHz	30 (swept)	30000		< -75		-75
12M-RX Band	30 (swept)	30000		< -75		-75
in RX Band	30 (swept)	30000		< -100		-100

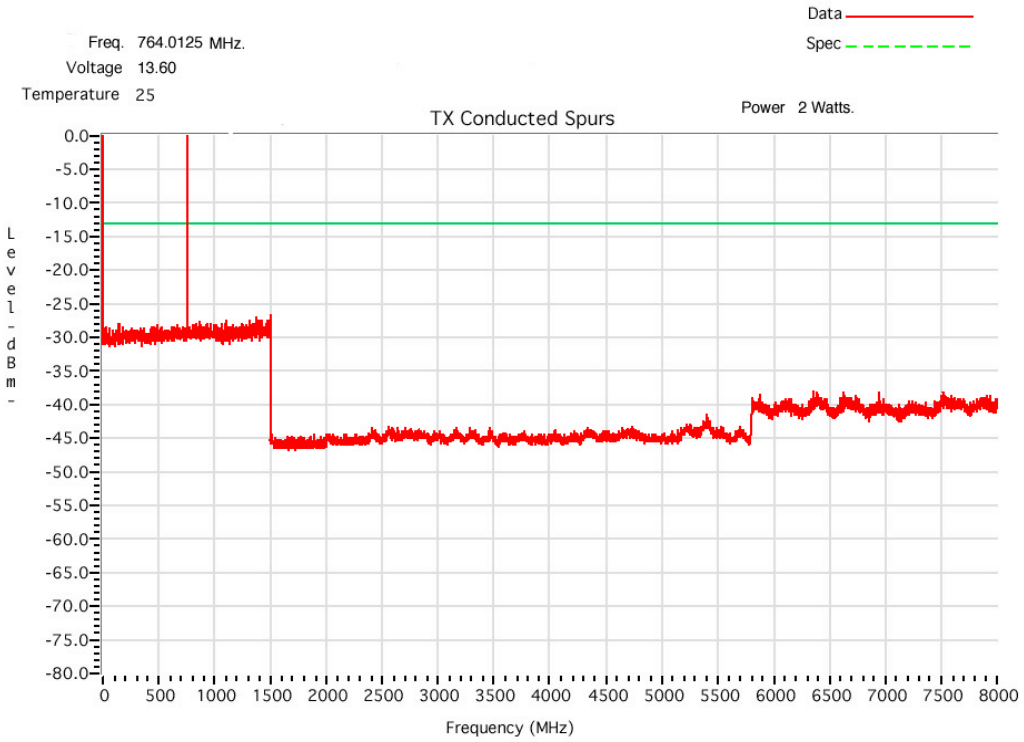
Adjacent Channel Coupled Power Ratios

794.0875 MHz 12.5 kHz Channel Spacing DIGITAL VOICE ENCRYPTION

Emission Designator 8K10F1E

Ref Power Level (dBm) = 4.6

Offset (kHz)	Measurement Bandwidth (kHz)	Resolution Bandwidth (Hz)		ACP (dBc) Lower	Upper	Spec (dBc)
9.375	6.250	100		-42.0	-42.1	-40
15.625	6.250	100		-82.0	-81.8	-60
21.875	6.250	100		-84.9	-84.9	-60
37.500	25.000	300		-80.4	-80.7	-65
62.500	25.000	300		-81.2	-81.4	-65
87.500	25.000	300		-80.8	-79.9	-65
150.000	100.000	1100		-75.8	-75.4	-65
250.000	100.000	1100		-77.0	-76.8	-65
350.000	100.000	1100		-77.4	-77.5	-65
>400kHz-12MHz	30 (swept)	30000		< -75		-75
12M-RX Band	30 (swept)	30000		< -75		-75
in RX Band	30 (swept)	30000		< -100		-100


Data
Spec
Freq. 764.0125 MHz.
Voltage 13.60
Temperature 25
TX Conducted Spurs
Power 2 Watts.
Level - dBm -
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000
Frequency (MHz)

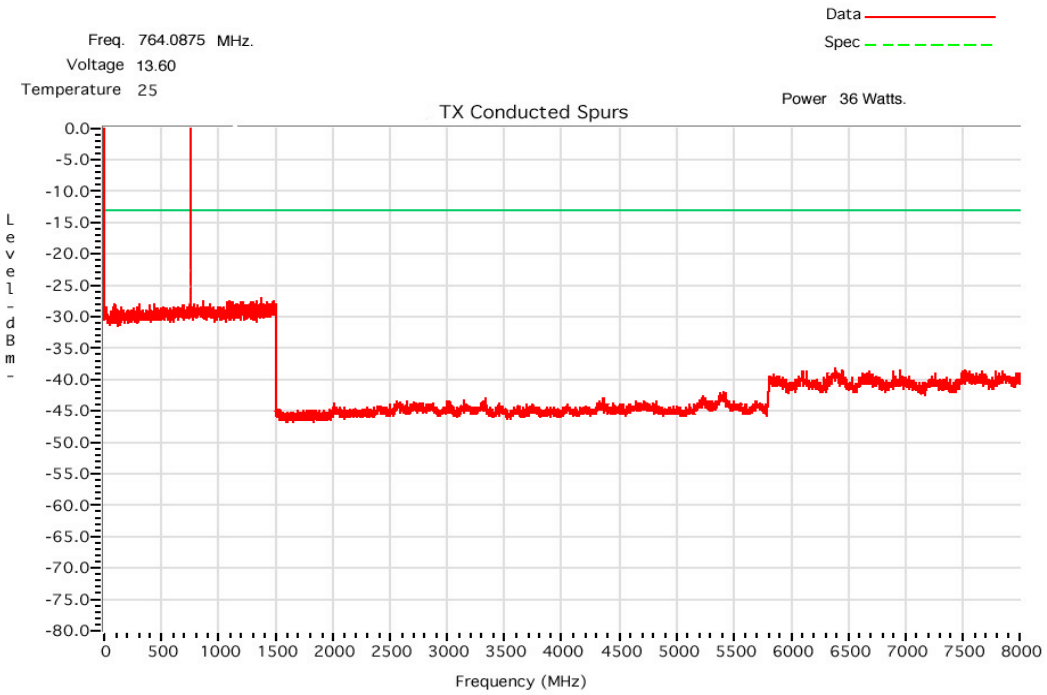
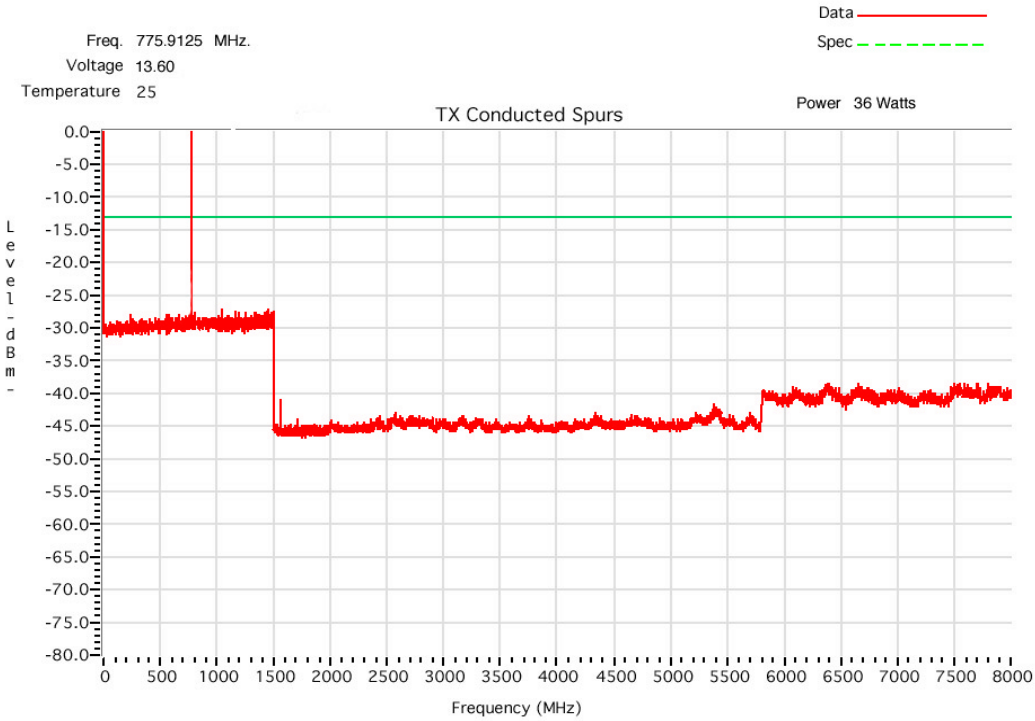

Data
Spec
Freq. 764.0875 MHz.
Voltage 13.60
Temperature 25
Power 36 Watts.
TX Conducted Spurs
Level - dBm -
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000
Frequency (MHz)

EXHIBIT 6G-2


Data
Spec
Freq. 775.9125 MHz.
Voltage 13.60
Temperature 25
Power 36 Watts
TX Conducted Spurs
Level - dBm -
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
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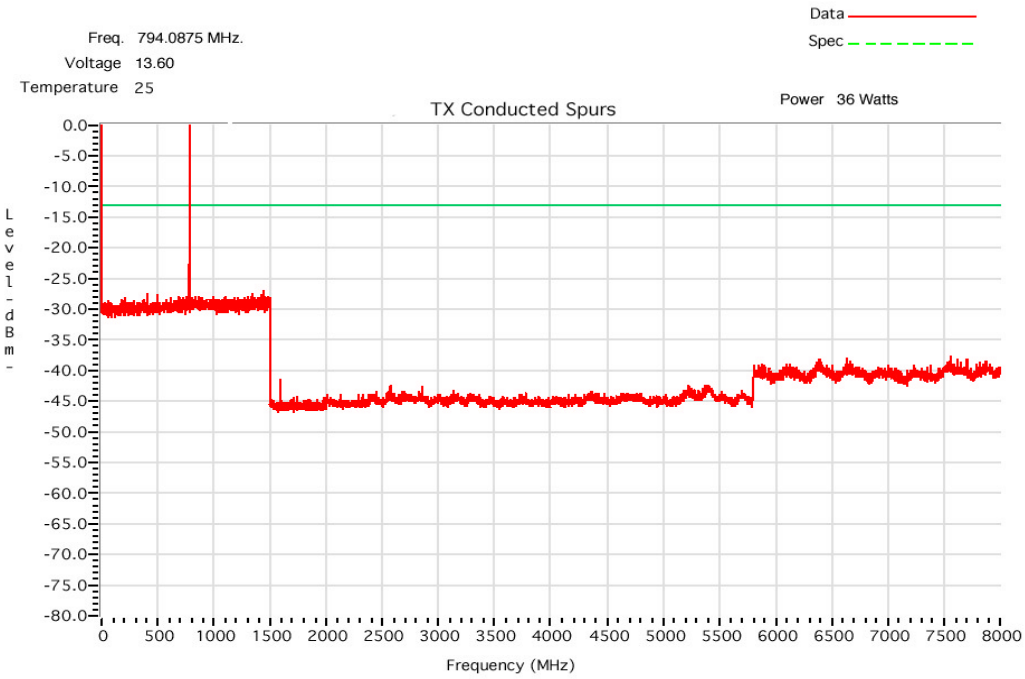
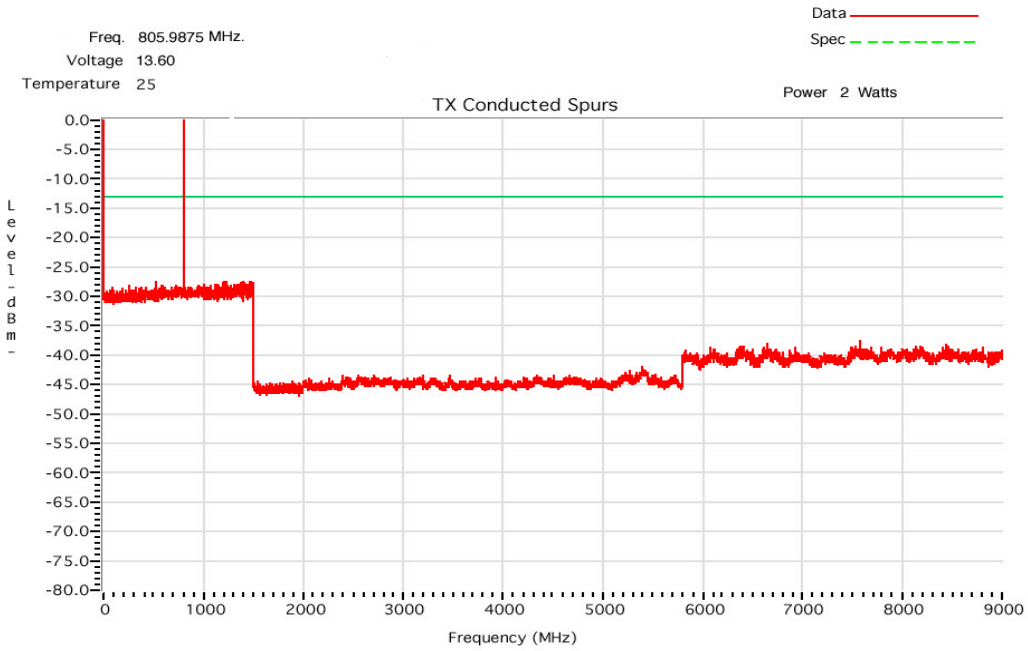
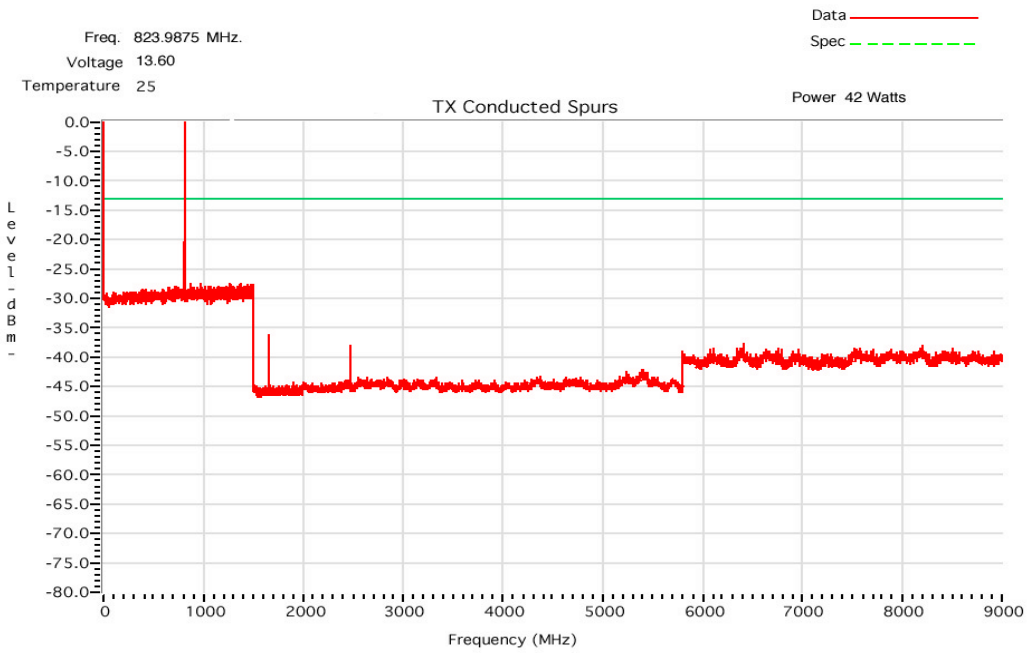
Frequency (MHz)


Data
Spec
Freq. 794.0875 MHz.
Voltage 13.60
Temperature 25
TX Conducted Spurs
Power 36 Watts
Level -dBm-
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000
Frequency (MHz)


Data
Spec
Freq. 805.9875 MHz.
Voltage 13.60
Temperature 25
Power 2 Watts
TX Conducted Spurs
Level -dBm-
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Frequency (MHz)


Data
Spec
Freq. 823.9875 MHz.
Voltage 13.60
Temperature 25
TX Conducted Spurs
Power 42 Watts
Level -dBm-
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Frequency (MHz)

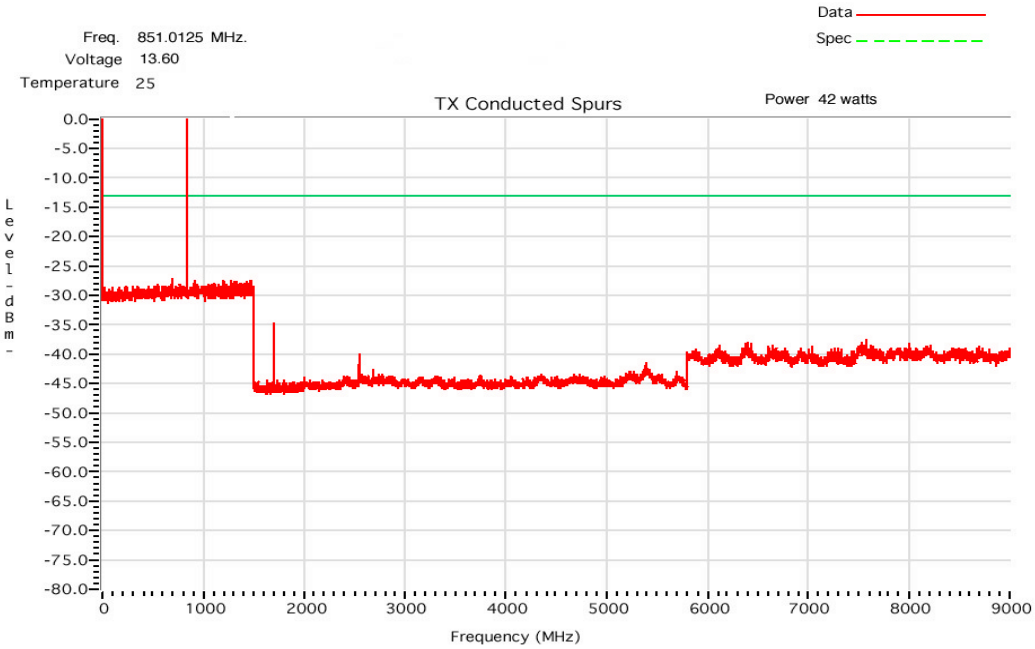

Data
Spec
Freq. 851.0125 MHz.
Voltage 13.60
Temperature 25
TX Conducted Spurs
Power 42 watts
Level - dBm -
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Frequency (MHz)

EXHIBIT 6G-7

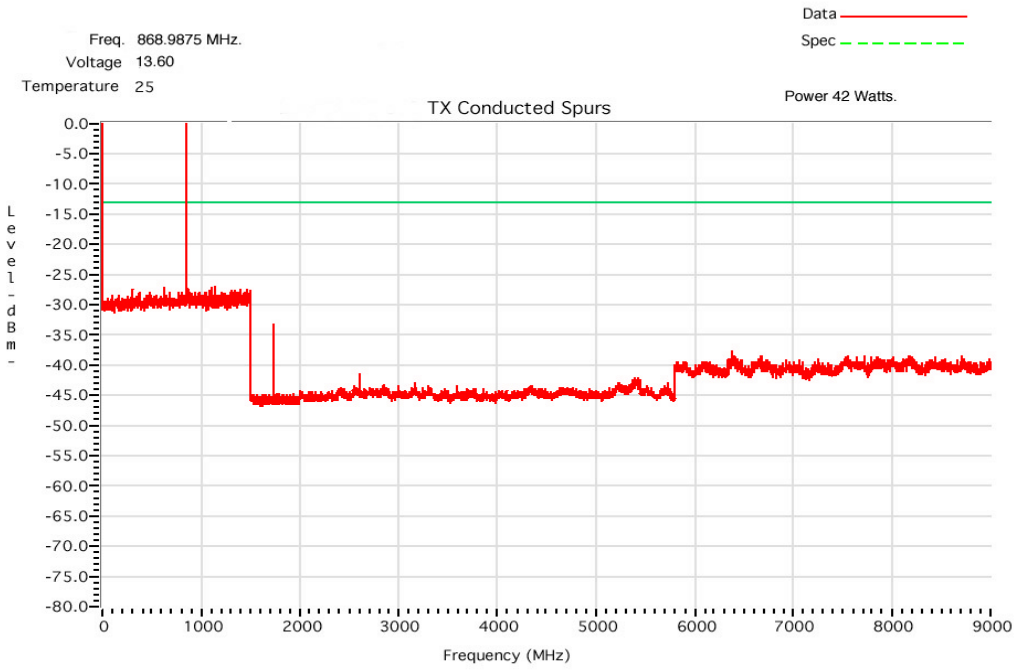
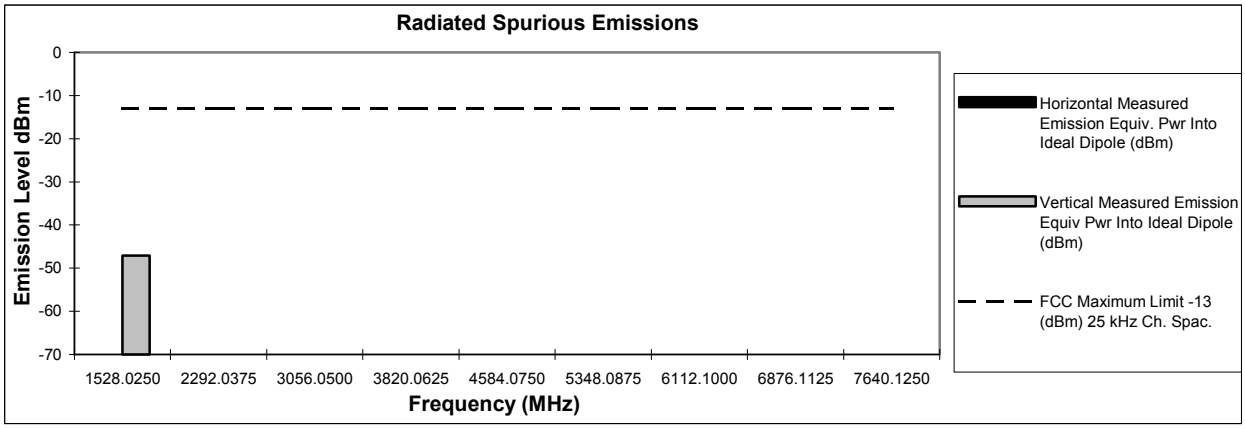

Data
Spec
Freq. 868.9875 MHz.
Voltage 13.60
Temperature 25
TX Conducted Spurs
Power 42 Watts.
Level -dBm-
0.0
-5.0
-10.0
-15.0
-20.0
-25.0
-30.0
-35.0
-40.0
-45.0
-50.0
-55.0
-60.0
-65.0
-70.0
-75.0
-80.0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Frequency (MHz)

EXHIBIT 6G-8

Transmit Radiated Spurious Emissions: XTL5000

764.0125 MHz **2 Watts**

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1528.0250	-13	*	-47.07
2292.0375	-13	*	*
3056.0500	-13	*	*
3820.0625	-13	*	*
4584.0750	-13	*	*
5348.0875	-13	*	*
6112.1000	-13	*	*
6876.1125	-13	*	*
7640.1250	-13	*	*



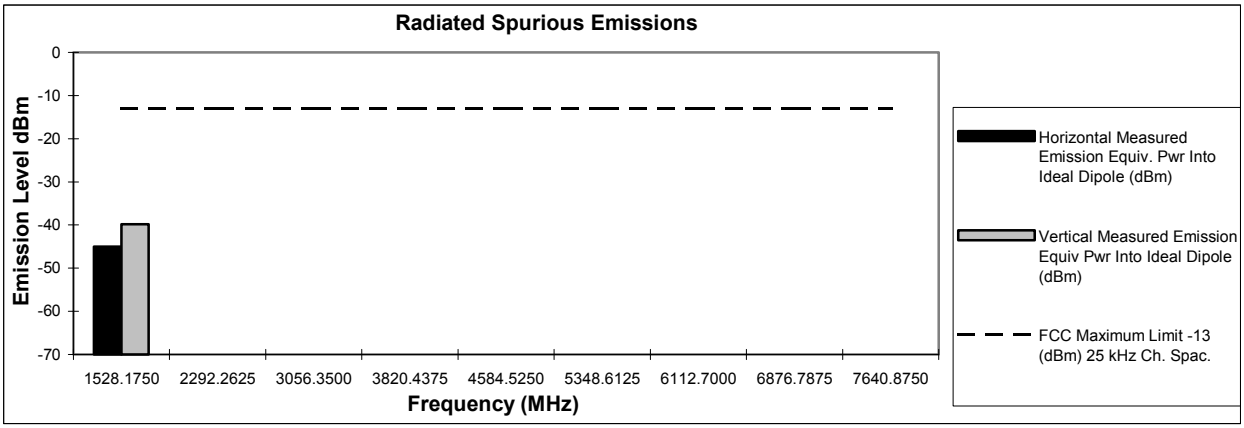
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: XTL5000

764.0875 MHz **36 Watts**

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1528.1750	-13	-44.98	-39.83
2292.2625	-13	*	*
3056.3500	-13	*	*
3820.4375	-13	*	*
4584.5250	-13	*	*
5348.6125	-13	*	*
6112.7000	-13	*	*
6876.7875	-13	*	*
7640.8750	-13	*	*



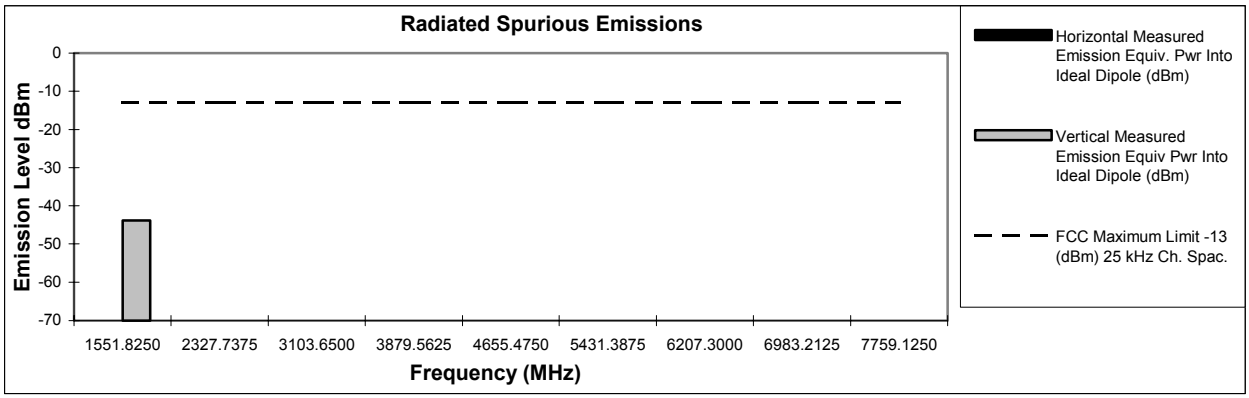
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: XTL5000

775.9125 MHz **36 Watts**

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1551.8250	-13	*	-43.88
2327.7375	-13	*	*
3103.6500	-13	*	*
3879.5625	-13	*	*
4655.4750	-13	*	*
5431.3875	-13	*	*
6207.3000	-13	*	*
6983.2125	-13	*	*
7759.1250	-13	*	*



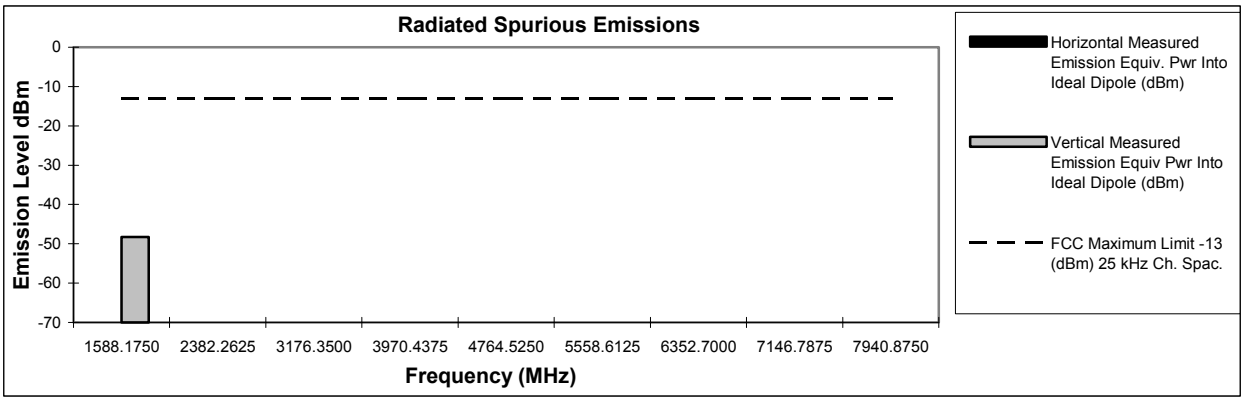
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: XTL5000

794.0875 MHz **36 Watts**

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1588.1750	-13	*	-48.23
2382.2625	-13	*	*
3176.3500	-13	*	*
3970.4375	-13	*	*
4764.5250	-13	*	*
5558.6125	-13	*	*
6352.7000	-13	*	*
7146.7875	-13	*	*
7940.8750	-13	*	*



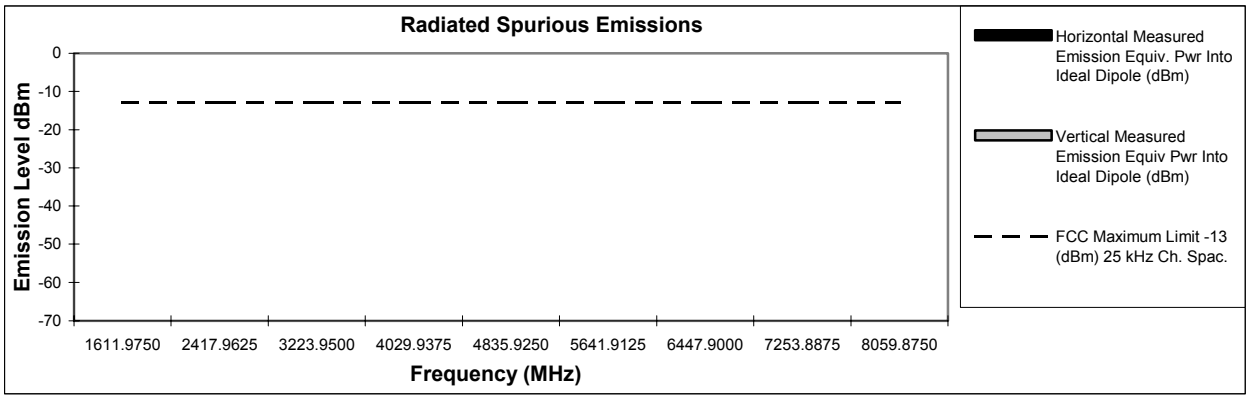
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: XTL5000

805.9875 MHz **2 Watts**

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1611.9750	-13	*	*
2417.9625	-13	*	*
3223.9500	-13	*	*
4029.9375	-13	*	*
4835.9250	-13	*	*
5641.9125	-13	*	*
6447.9000	-13	*	*
7253.8875	-13	*	*
8059.8750	-13	*	*



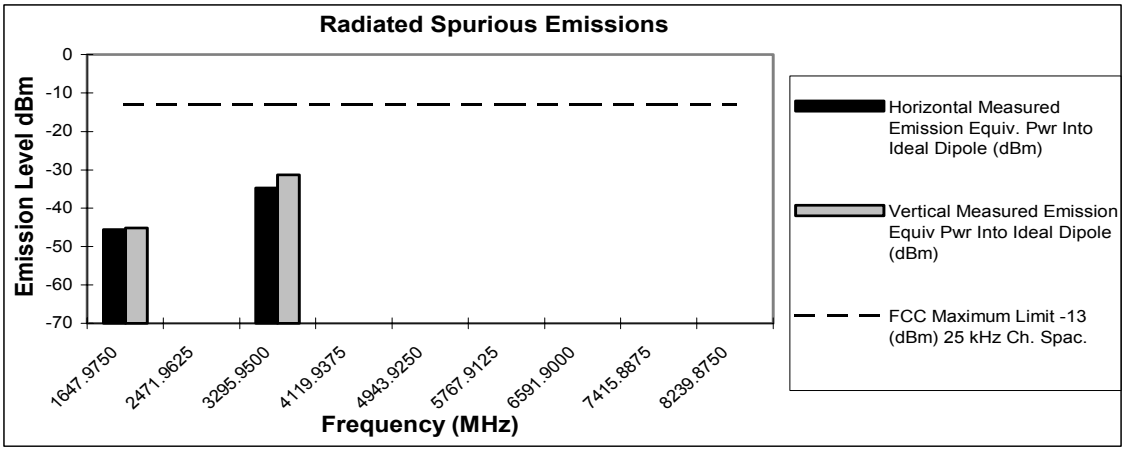
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: XTL5000

823.9875 MHz 42 Watts

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1647.9750	-13	-45.58	-45.16
2471.9625	-13	*	*
3295.9500	-13	-34.72	-31.34
4119.9375	-13	*	*
4943.9250	-13	*	*
5767.9125	-13	*	*
6591.9000	-13	*	*
7415.8875	-13	*	*
8239.8750	-13	*	*



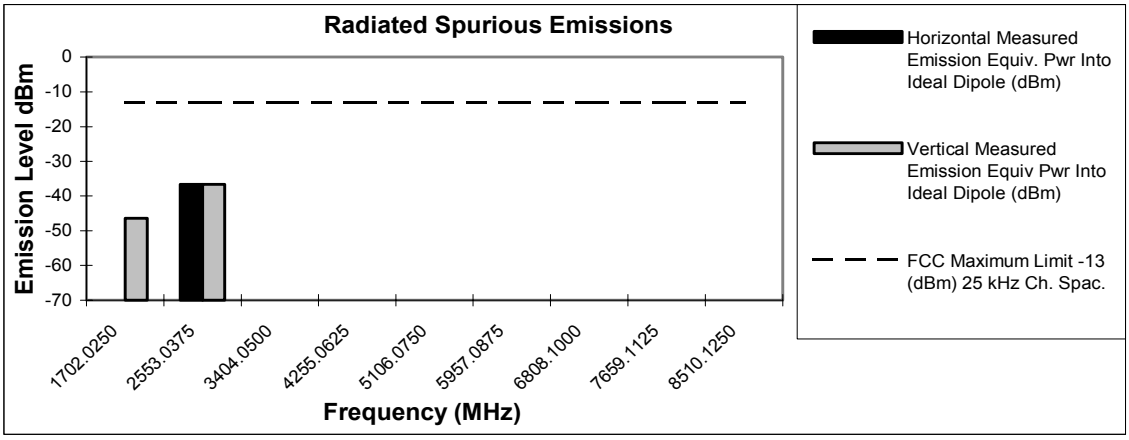
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: XTL5000

851.0125 MHz 42 Watts

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1702.0250	-13	*	-46.38
2553.0375	-13	-36.68	-36.65
3404.0500	-13	*	*
4255.0625	-13	*	*
5106.0750	-13	*	*
5957.0875	-13	*	*
6808.1000	-13	*	*
7659.1125	-13	*	*
8510.1250	-13	*	*



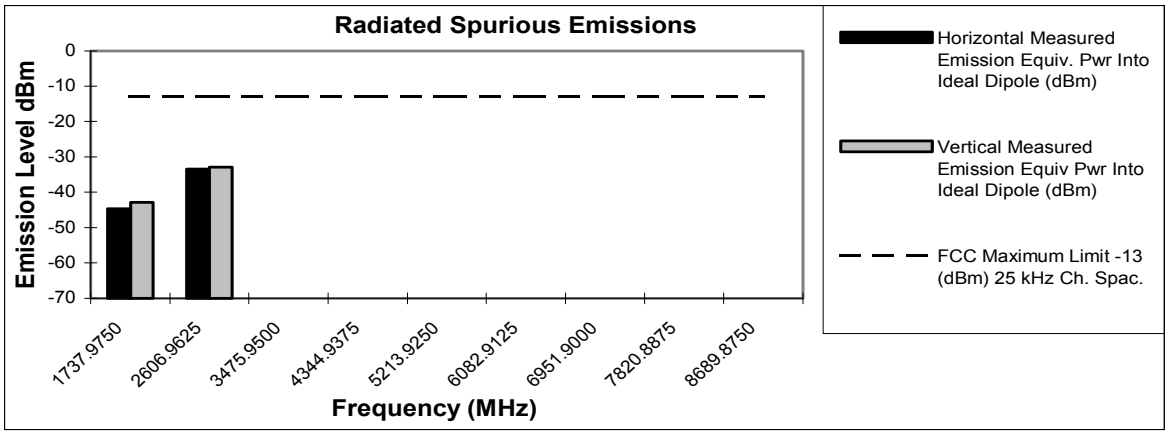
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: XTL5000

868.9875 MHz 42 Watts

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1737.9750	-13	-44.72	-42.85
2606.9625	-13	-33.51	-32.85
3475.9500	-13	*	*
4344.9375	-13	*	*
5213.9250	-13	*	*
6082.9125	-13	*	*
6951.9000	-13	*	*
7820.8875	-13	*	*
8689.8750	-13	*	*



* 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.

GNSS Testing
At 3 Meters ERP, ADD +2.15 dB for EIRP

Date:	4/28/2003	**EMC#:**	EMC04242003-189	**Temp:**	88F 62%
Product:	Quest Millenium	**S/N**	CAM0305RXG	Channel Spacing: 12.5kHz	
		Notes:		GNSS	ANT-Quarter Wave

Tx Freq. 794.0875

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1588.1750	*	-75.29

		Notes:		GNSS	ANT-Quarter Wave

Tx Freq. 805.9125

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1611.8250	-88.57	-77.94

GNSS Testing
At 3 Meters ERP, ADD +2.15 dB for EIRP

Date:	4/28/2003	**EMC#:**	EMC04242003-189	**Temp:**	88F 62%
Product:	Quest Millenium	**S/N**	CAM0305RXG	Channel Spacing: 12.5kHz	
		Notes:		GNSS	ANT- 3dB Low Profile

Tx Freq. 794.0875

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1588.1750	-83.51	-74.66

		Notes:		GNSS	ANT- 3dB Low Profile

Tx Freq. 805.9125

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1611.8250	-83.37	-73.10

Note 1: The reported emissions are wideband (>700Hz) spurs.

GNSS Testing
At 3 Meters ERP, ADD +2.15 dB for EIRP

Date: 4/28/2003 **EMC#:** EMC04242003-189 **Temp:** 88F 62%
Product: Quest Millenium **S/N** CAM0305RXG Channel Spacing: 12.5kHz
Notes: GNSS 3 dB Collinear

Tx Freq. 794.0875

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1588.1750	-80.89	-74.11

Notes: GNSS 3 dB Collinear

Tx Freq. 805.9125

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1611.8250	-83.35	-72.44

GNSS Testing
At 3 Meters ERP, ADD +2.15 dB for EIRP

Date: 4/28/2003 **EMC#:** EMC04242003-189 **Temp:** 88F 62%
Product: Quest Millenium **S/N** CAM0305RXG Channel Spacing: 12.5kHz
Notes: GNSS ANT- 3dB Elevated Feed

Tx Freq. 794.0875

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1588.1750	-83.06	-70.93

Notes: GNSS ANT- 3dB Elevated Feed

Tx Freq. 805.9125

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1611.8250	-82.01	-73.02

Note 1: The reported emissions are wideband (>700Hz) spurs.

GNSS Testing
At 3 Meters ERP, ADD +2.15 dB for EIRP

Date: 5/5/2003 **EMC#:** EMC05052003-204 **Temp:** 88F 62%
Product: Quest Millenium **S/N** CAM0305RXG Channel Spacing: 12.5kHz
Notes: GNSS 3dB Low Profile

Tx Freq. 794.0875

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1588.1750	-50.51	-44.79

Notes: GNSS 3 dB Low Profile

Tx Freq. 805.9125

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1611.8250	-51.99	-43.40

GNSS Testing
At 3 Meters ERP, ADD +2.15 dB for EIRP

Date: 5/5/2003 **EMC#:** EMC05052003-204 **Temp:** 88F 62%
Product: Quest Millenium **S/N** CAM0305RXG Channel Spacing: 12.5kHz
Notes: GNSS 3dB base loaded collinear

Tx Freq. 794.0875

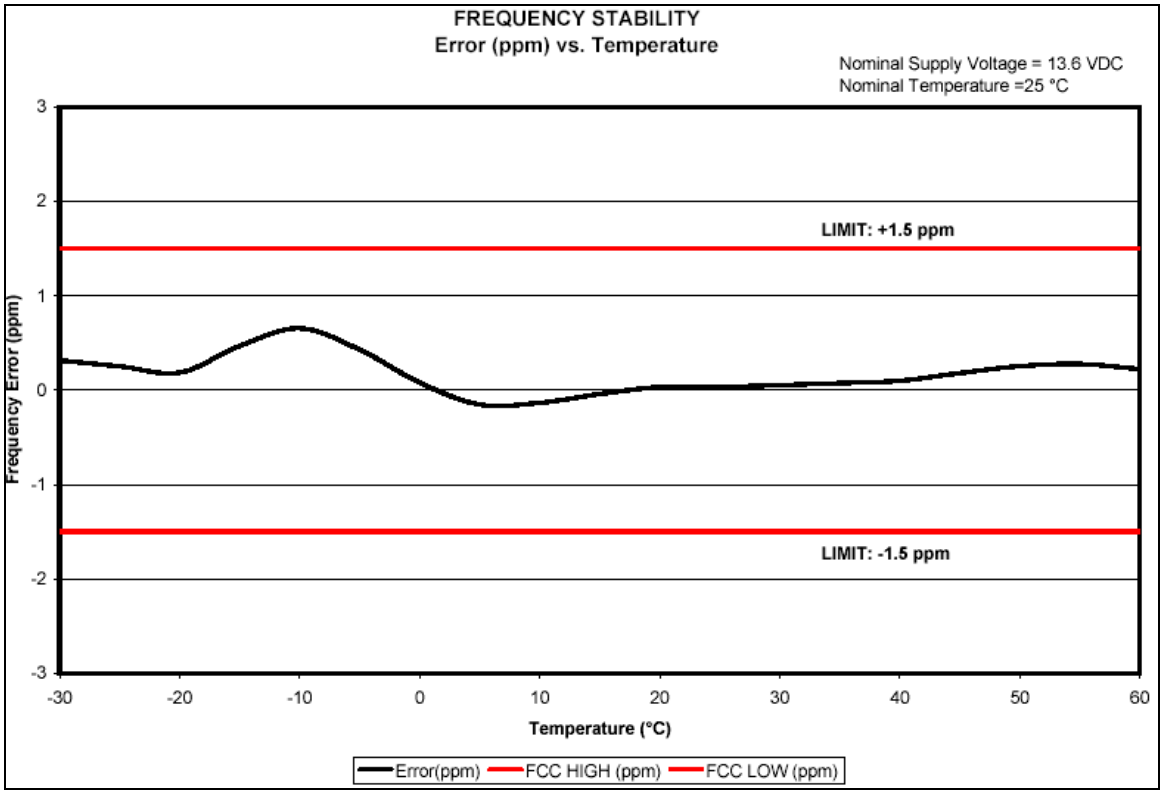
Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1588.1750	-62.58	-54.24

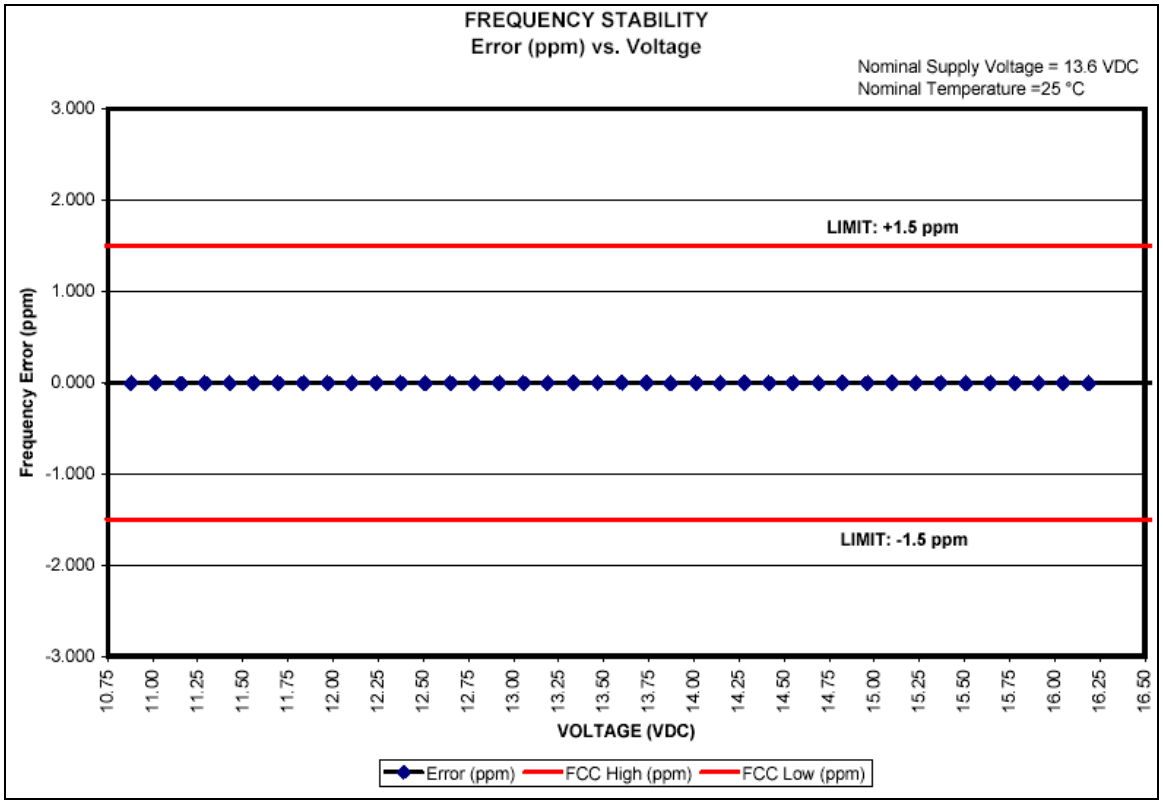
Notes: GNSS 3dB base loaded collinear

Tx Freq. 805.9125

Spur	Frequency MHz	Horizontal Radiated Spur. Emiss. (dBm)	Vertical Radiated Spur. Emiss. (dBm)
2XFund	1611.8250	-63.31	-54.38

Note 1: The reported emissions are wideband (>700Hz) spurs.


FREQUENCY STABILITY
Error (ppm) vs. Temperature
Nominal Supply Voltage = 13.6 VDC
Nominal Temperature =25 °C
LIMIT: +1.5 ppm
LIMIT: -1.5 ppm
Frequency Error (ppm)
3
2
1
0
-1
-2
-3
-30
-20
-10
0
10
20
30
40
50
60
Temperature (°C)
Error(ppm)
FCC HIGH (ppm)
FCC LOW (ppm)


FREQUENCY STABILITY
Error (ppm) vs. Voltage
Nominal Supply Voltage = 13.6 VDC
Nominal Temperature =25 °C
3.000
2.000
1.000
0.000
-1.000
-2.000
-3.000
Frequency Error (ppm)
LIMIT: +1.5 ppm
LIMIT: -1.5 ppm
10.75
11.00
11.25
11.50
11.75
12.00
12.25
12.50
12.75
13.00
13.25
13.50
13.75
14.00
14.25
14.50
14.75
15.00
15.25
15.50
15.75
16.00
16.25
16.50
VOLTAGE (VDC)
Error (ppm)
FCC High (ppm)
FCC Low (ppm)