SUBMITTED MEASURED DATA

MEASUREMENT		EXHIBIT	NUMBER OF PAGES
I	RF Power Output Data	6A	1
II	Audio Response & Low Pass Filter Response	6B 6C	2 1
III	Modulation Limiting	6D	2
IV	Occupied Bandwidth	6E	17
V	Conducted Spurious Emissions	6F	30
VI	Radiated Spurious Emissions	6G	12
VII	Frequency Stability		
	A. Temperature	6H-1	1
	B. Supply Voltage	6H-2	1
VIII	Transient Frequency Behavior	6I	4

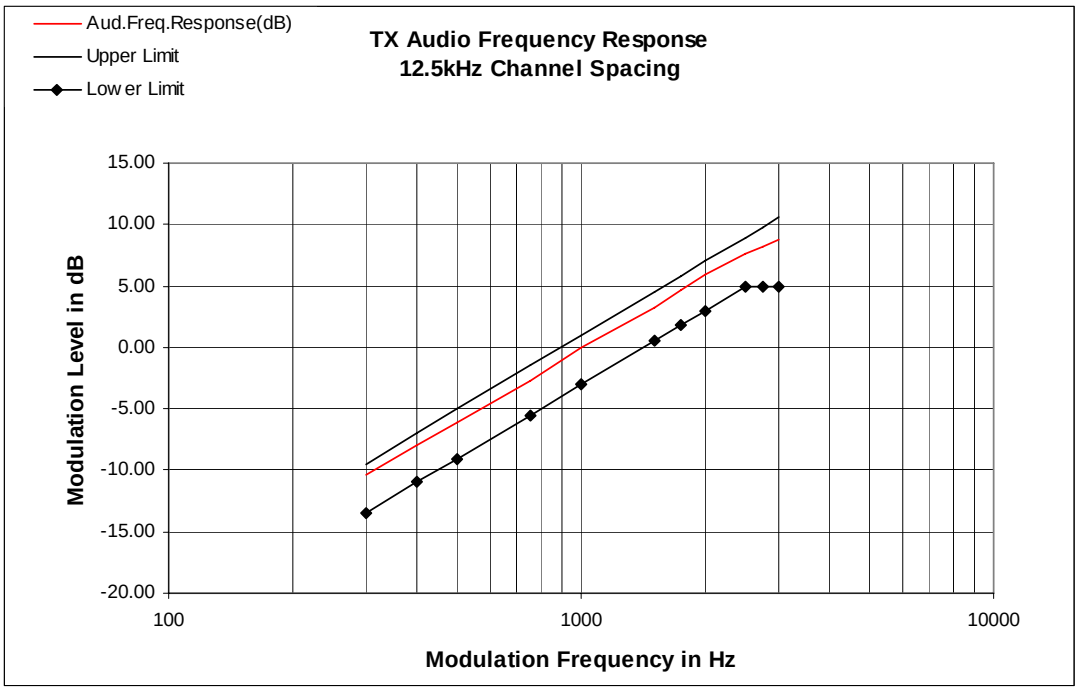
RF POWER OUTPUT DATA

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)
136.0125	11	13.6	4.34
	60	13.6	9.38
155.0125	11	13.6	3.66
	60	13.6	7.90
173.9875	11	13.6	4.01
	60	13.6	8.70
450.0125	4	13.6	1.91
	54	13.6	7.87
484.9875	4	13.6	2.00
	54	13.6	7.79
511.9875	4	13.6	2.06
	48	13.6	7.44
519.9875	4	13.6	2.01
	30	13.6	5.32

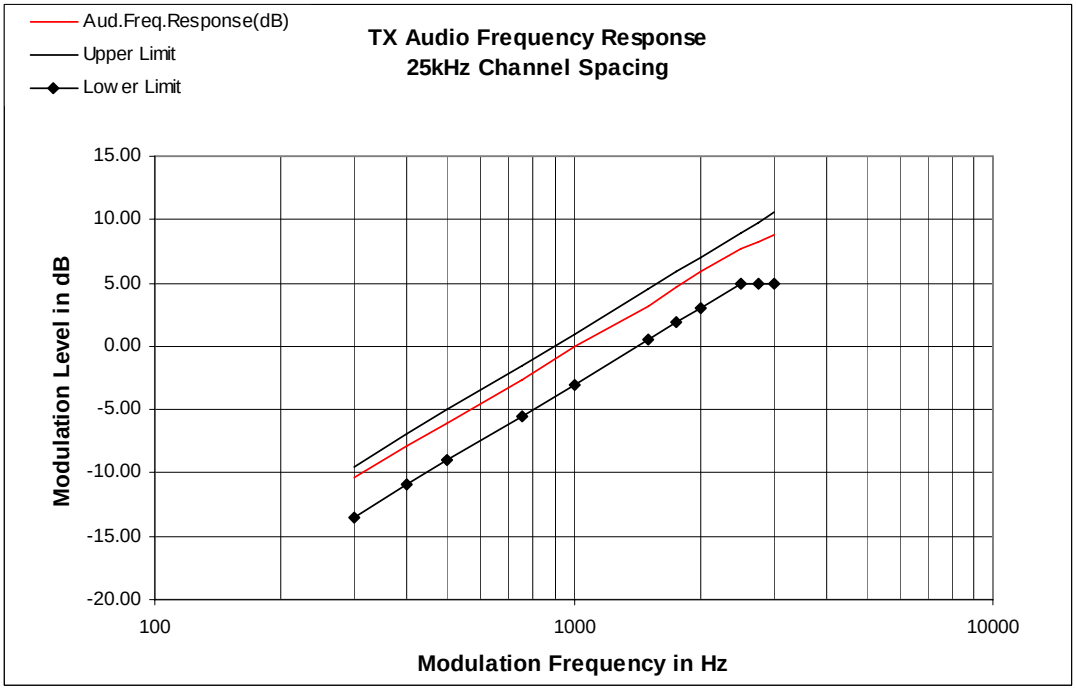
Audio Frequency Response

(Freq: 155.0125MHz, ChSp: 12.5 kHz)



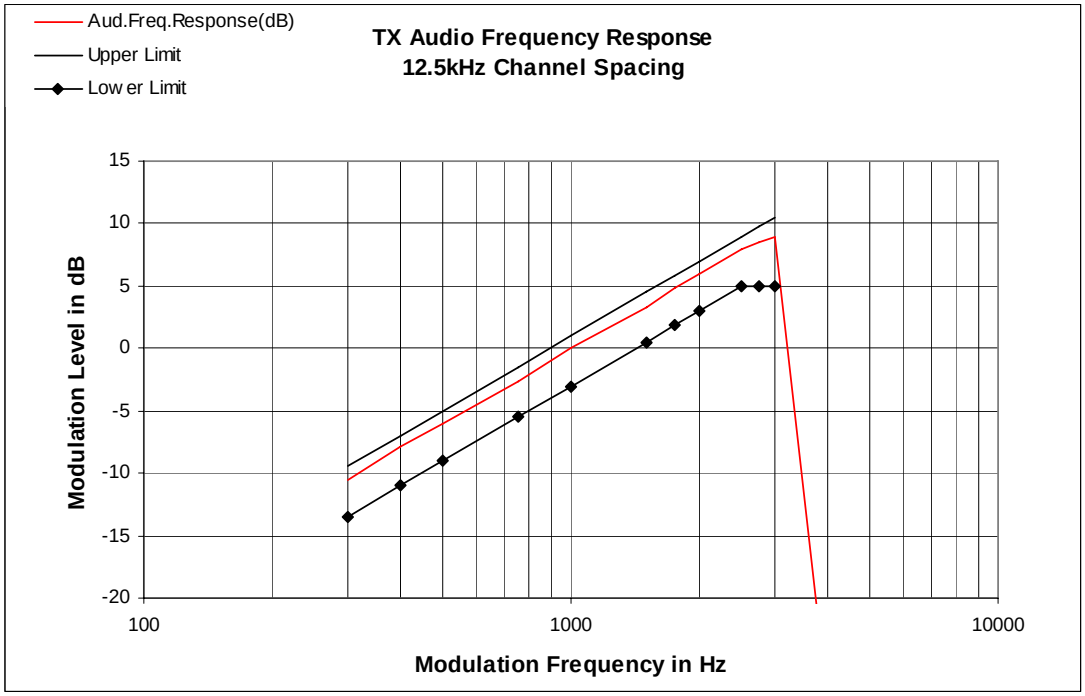
Audio Frequency Response

(Freq: 155.0125MHz, ChSp: 25 kHz)



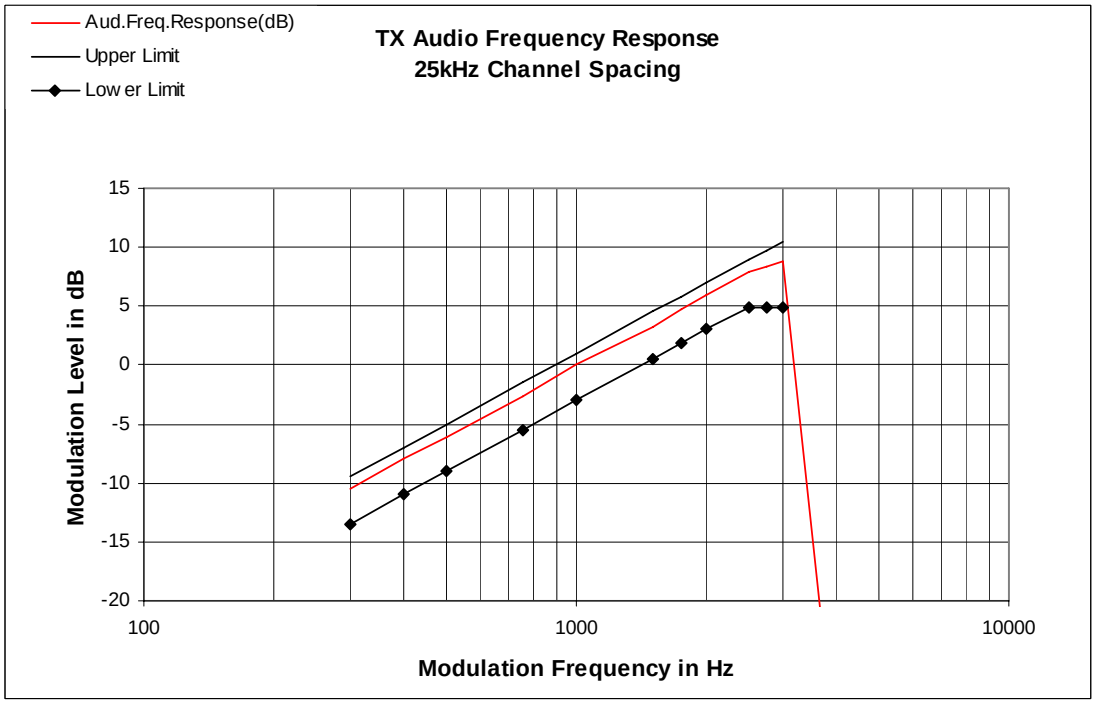
Audio Frequency Response

(Freq: 484.9875 MHz, ChSp: 12.5 kHz)



Audio Frequency Response

(Freq: 484.9875 MHz, ChSp: 25 kHz)



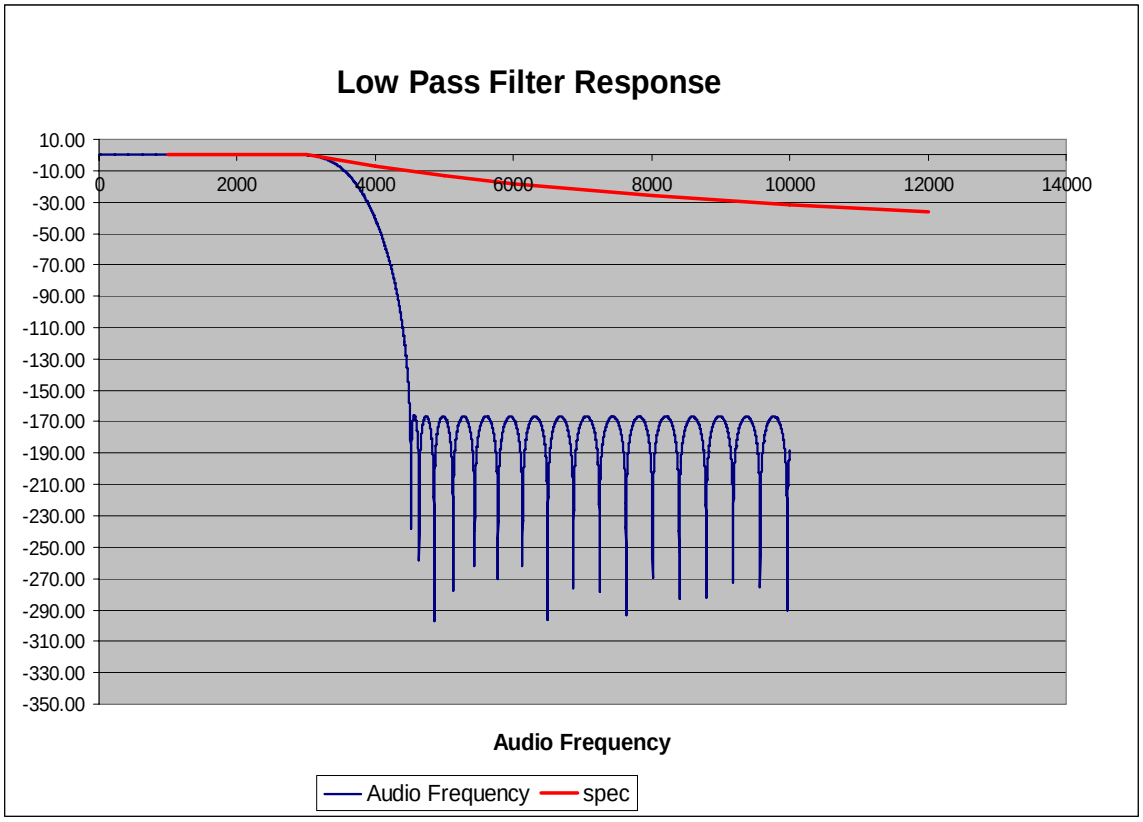
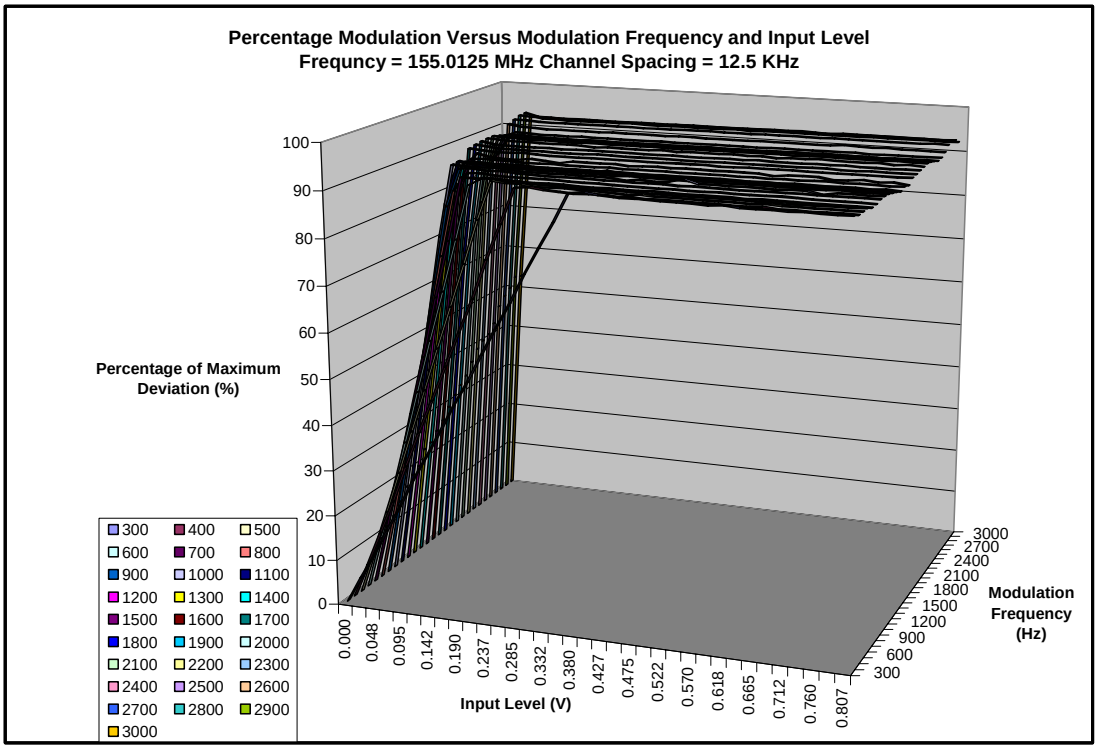
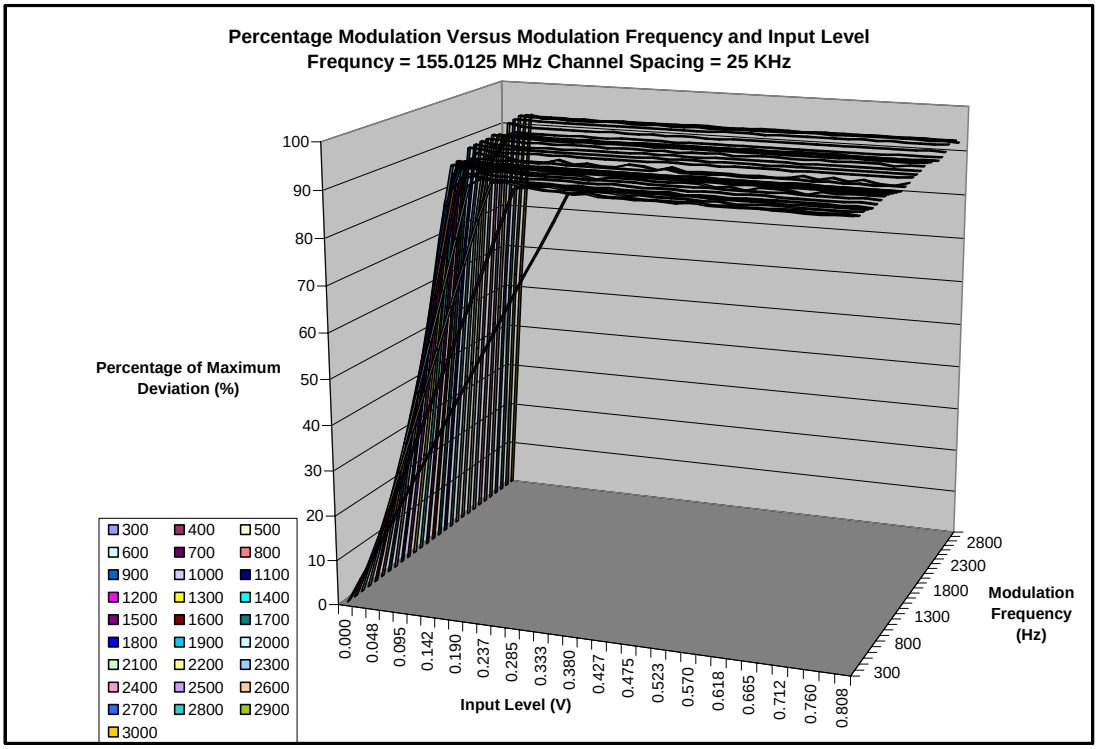

Low Pass Filter Response
10.00
-10.00
-30.00
-50.00
-70.00
-90.00
-110.00
-130.00
-150.00
-170.00
-190.00
-210.00
-230.00
-250.00
-270.00
-290.00
-310.00
-330.00
-350.00
0
2000
4000
6000
8000
10000
12000
14000
Audio Frequency
Audio Frequency
spec

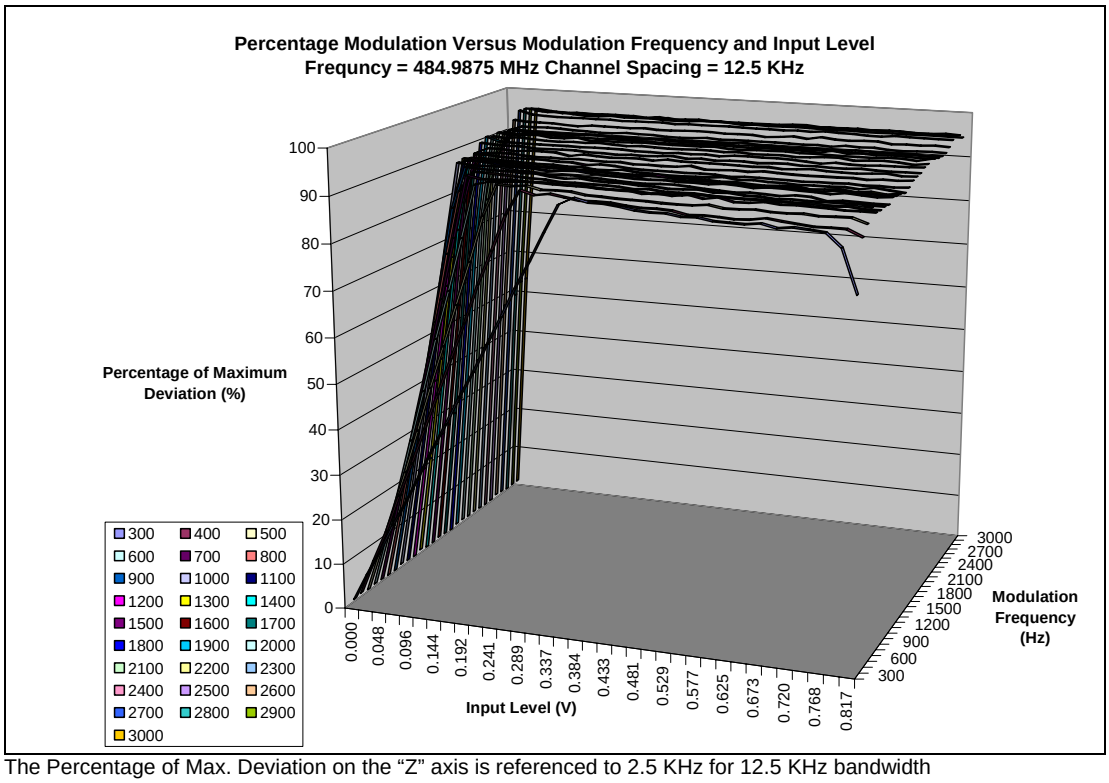
EXHIBIT 6C



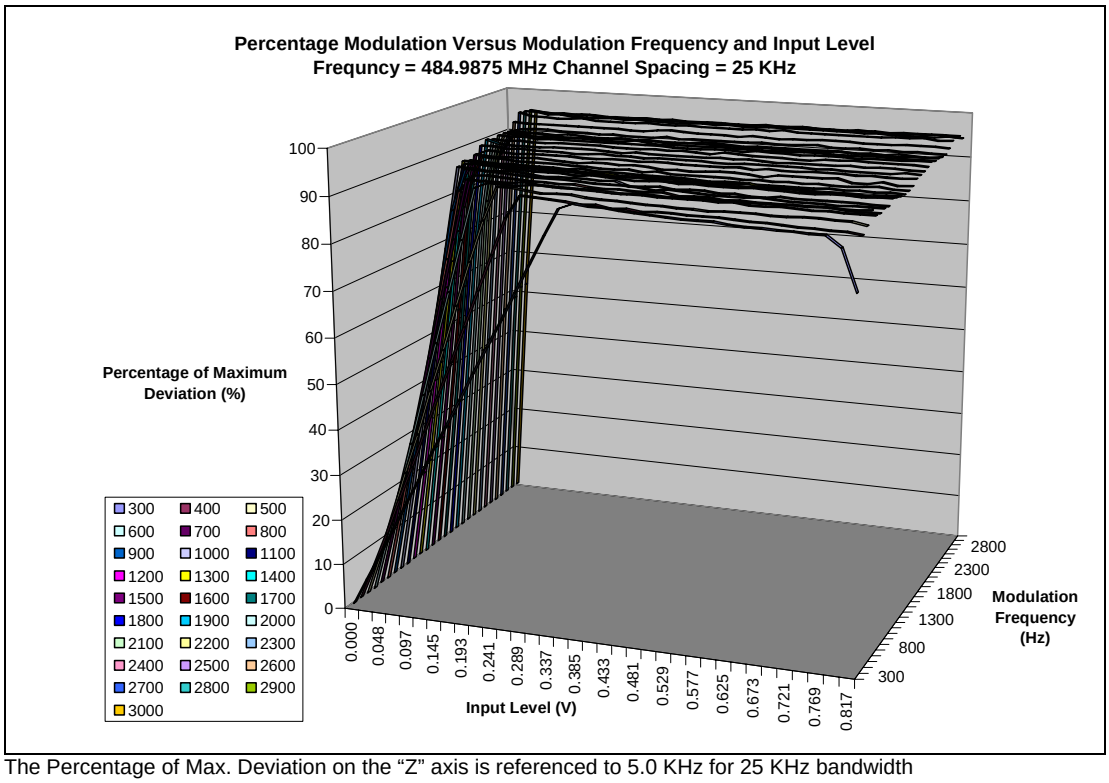
The Percentage of Max. Deviation on the "Z" axis is referenced to 2.5 KHz for 12.5 KHz bandwidth



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 2.5 KHz for 12.5 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: AZ492FT7047**

EXHIBITS 6E-1 & 6E-8
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.

EXHIBITS 6E-2 & 6E-9
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.

EXHIBITS 6E-3 & 6E-10
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.

EXHIBITS 6E-4 & 6E-11
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.

EXHIBITS 6E-5 & 6E-12
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.

EXHIBITS 6E-6 & 6E-13
Digital (12.5 kHz Channelization, Digital TDMA):
Emission Designator 8K10F1W

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).

F1W portion of the designator indicates digital TDMA.
Therefore, the entire designator for 12.5 kHz channelization digital TDMA is 8K10F1W.

EXHIBITS 6E-7 & 6E-14
Securenet Mode (20.0 kHz Channelization, Analog Voice with 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 securenet mode (analog voice with 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”, “F1E” and “F1W” 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 -- Standard Audio Modulation (25 kHz Channelization, Analog Voice) - 16K0F3E - 60 Watts

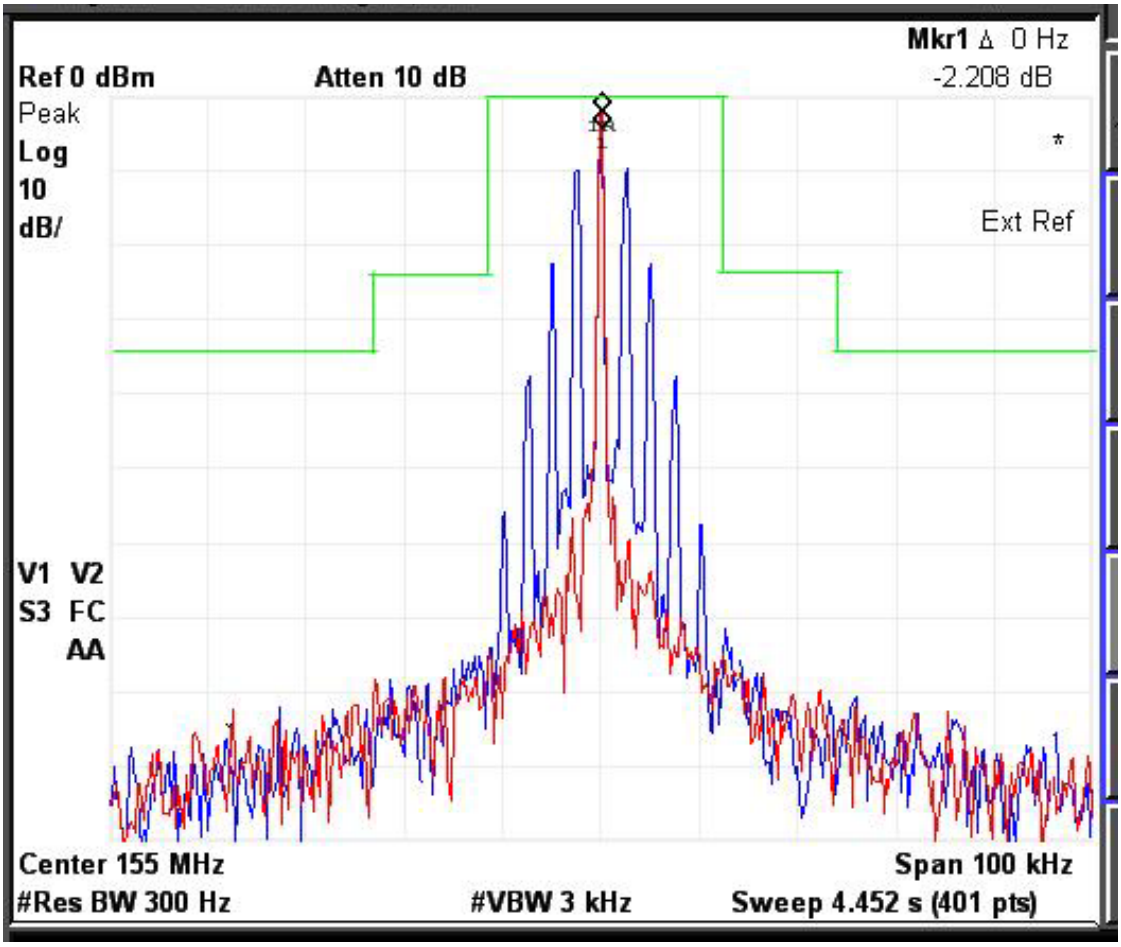
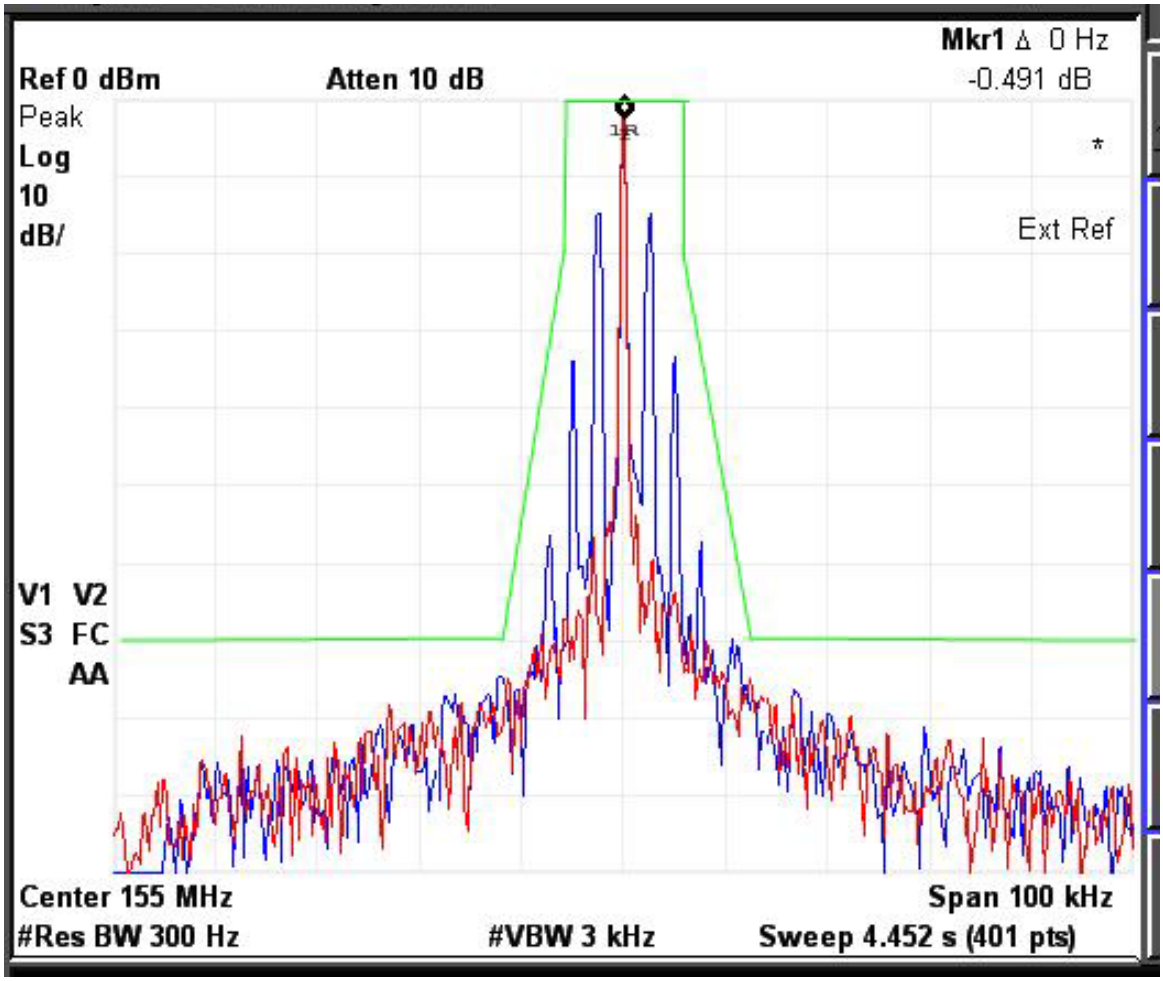


EXHIBIT 6E-1

Occupied Bandwidth -- Standard Audio Modulation (12.5 kHz Channelization, Analog Voice) - 11K0F3E - 60 Watts



Occupied Bandwidth -- Digital (12.5 kHz Channelization, Digital Data)
- 8K10F1D - 60 Watts

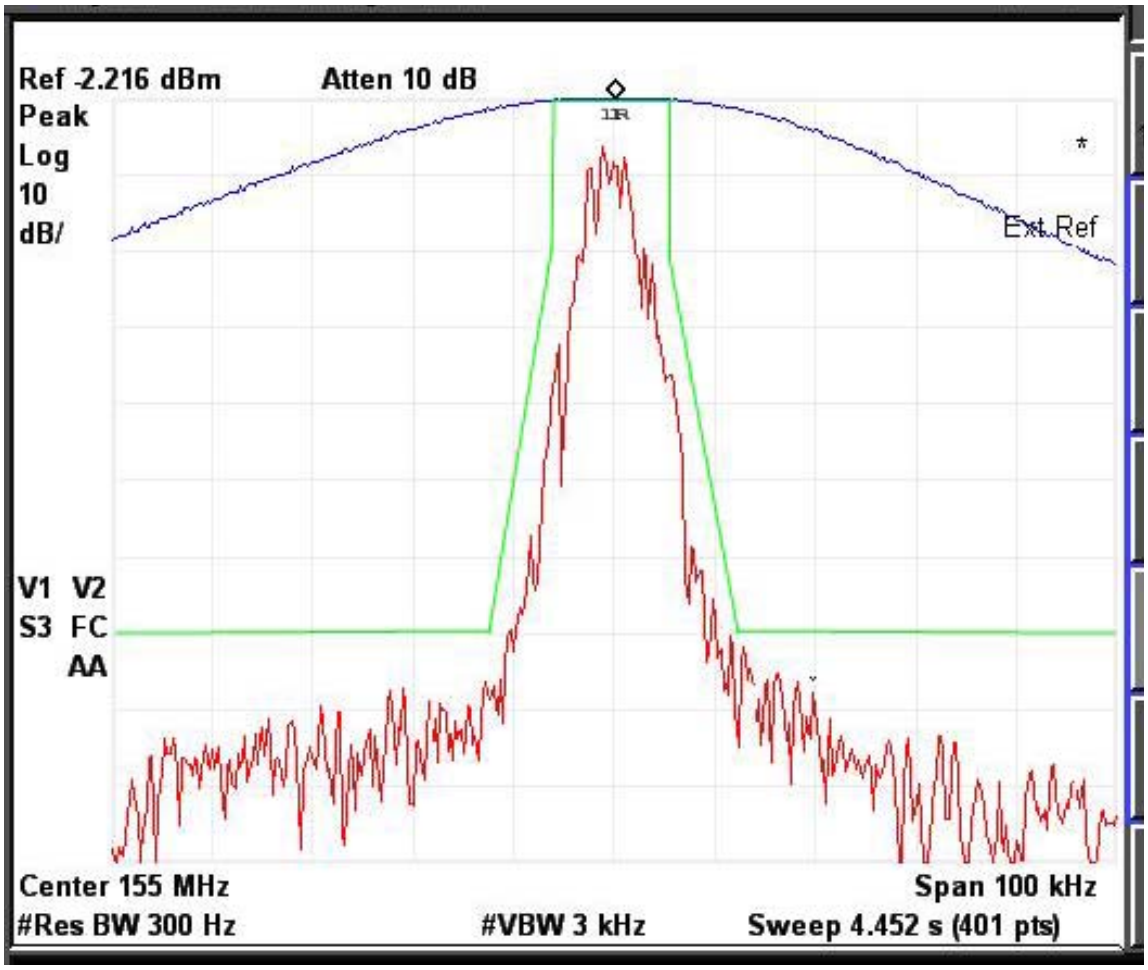


EXHIBIT 6E-3

Occupied Bandwidth -- Digital (12.5 kHz Channelization, Digital Voice)
- 8K10F1E – 60 Watts

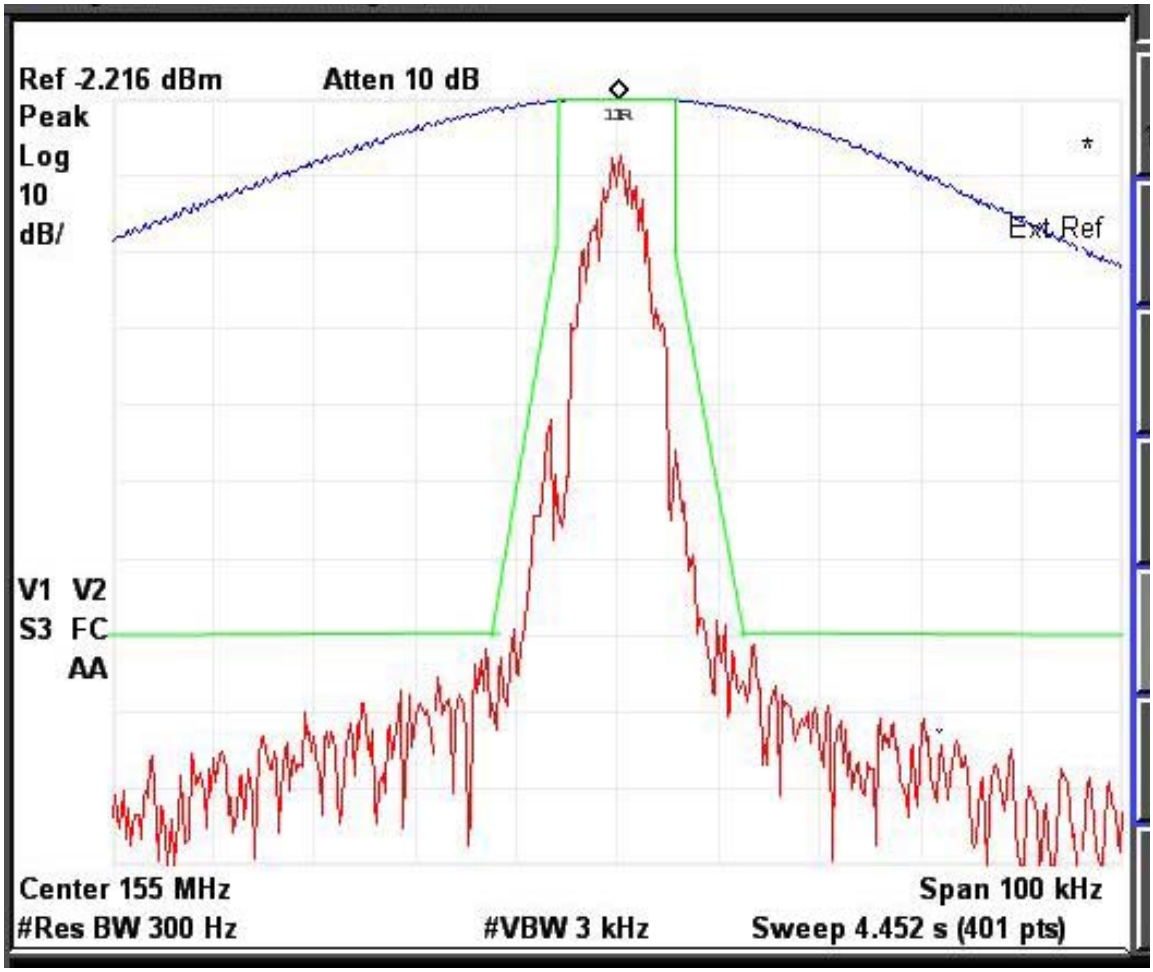
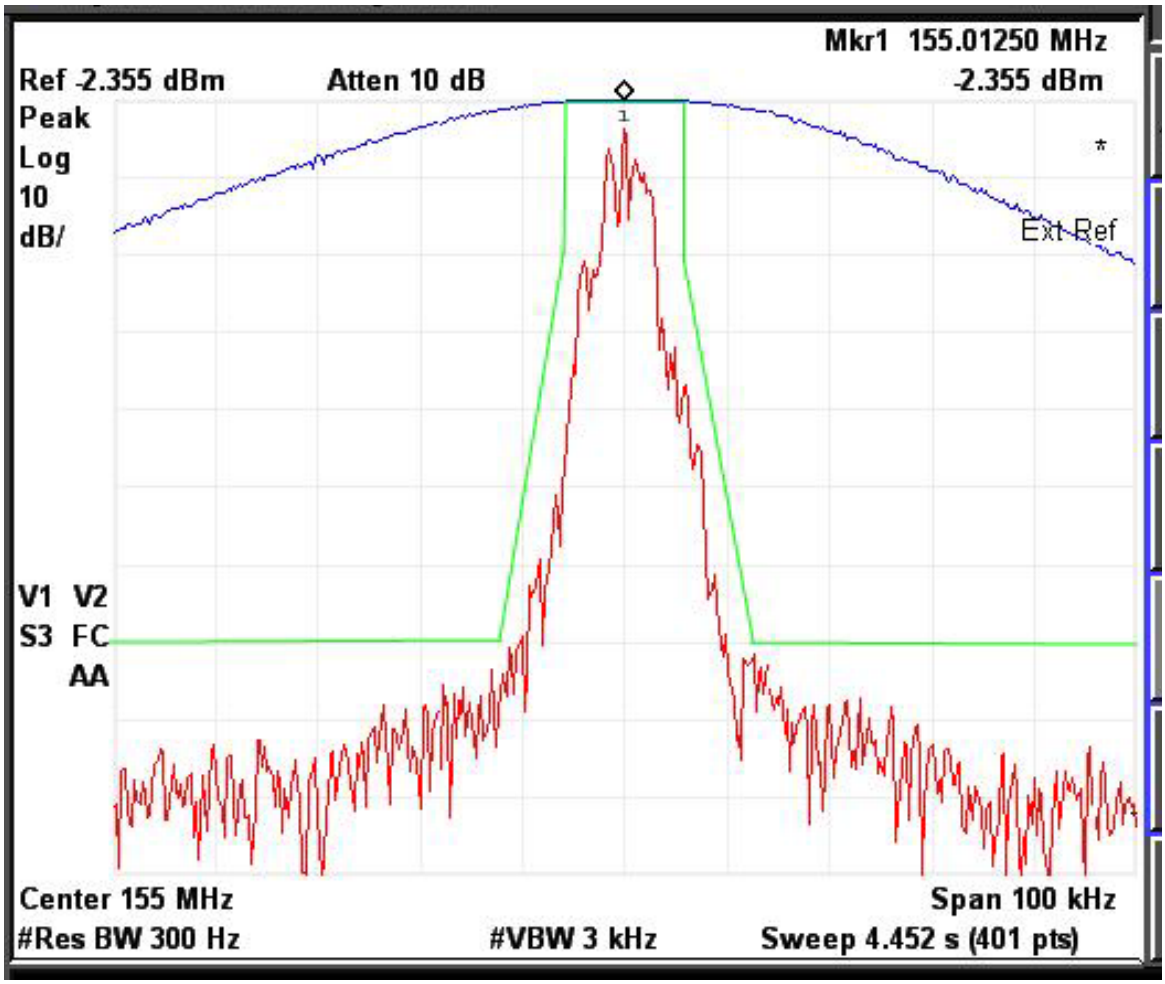
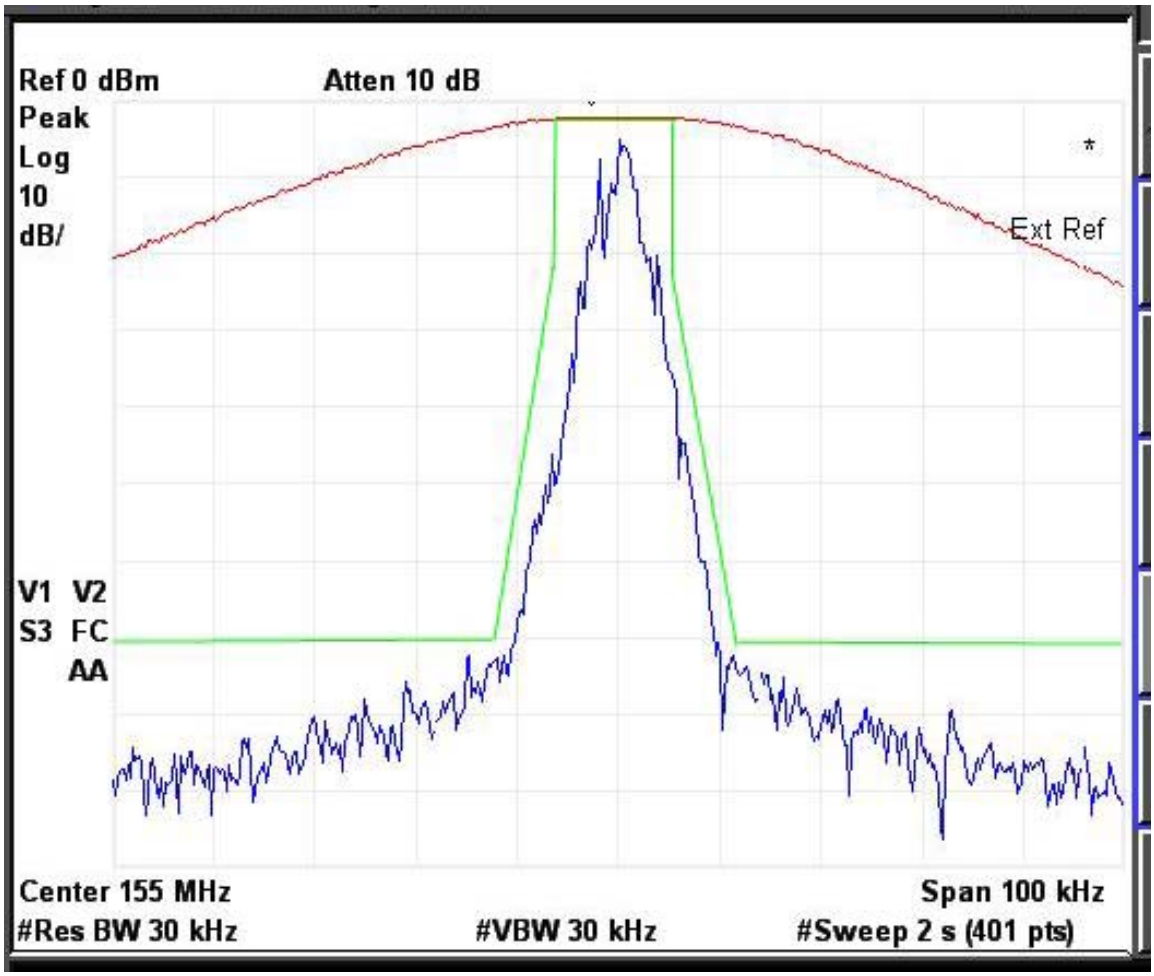


EXHIBIT 6E-4

Occupied Bandwidth -- Digital (12.5 kHz Channelization, Digital Voice Encryption) - 8K10F1E - 60 Watts



Occupied Bandwidth – Digital (12.5 kHz Channelization, Digital TDMA)
- 8K10F1W - 60 Watts
-



Occupied Bandwidth - Standard Audio Modulation (20 kHz Channelization, Analog Encryption) - 20K0F1E - 60 Watts

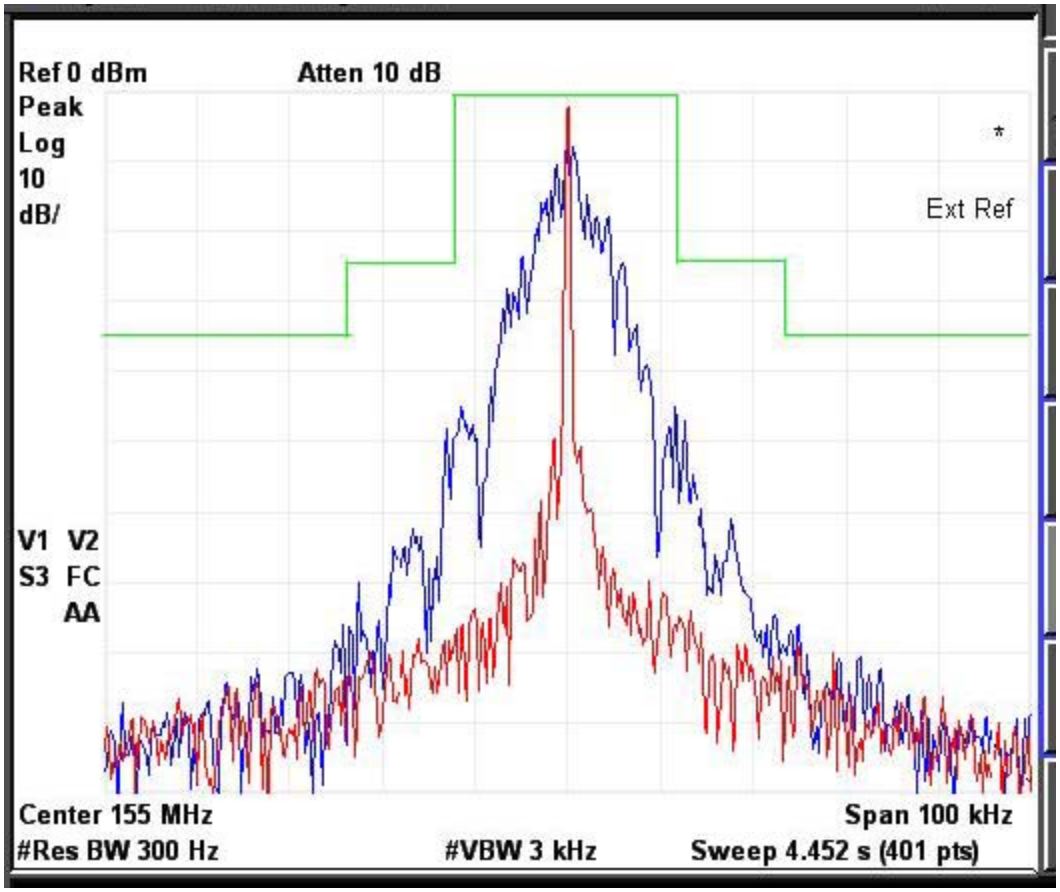


EXHIBIT 6E-7

Occupied Bandwidth -- Standard Audio Modulation (25 kHz Channelization, Analog Voice) - 16K0F3E - 54 Watts

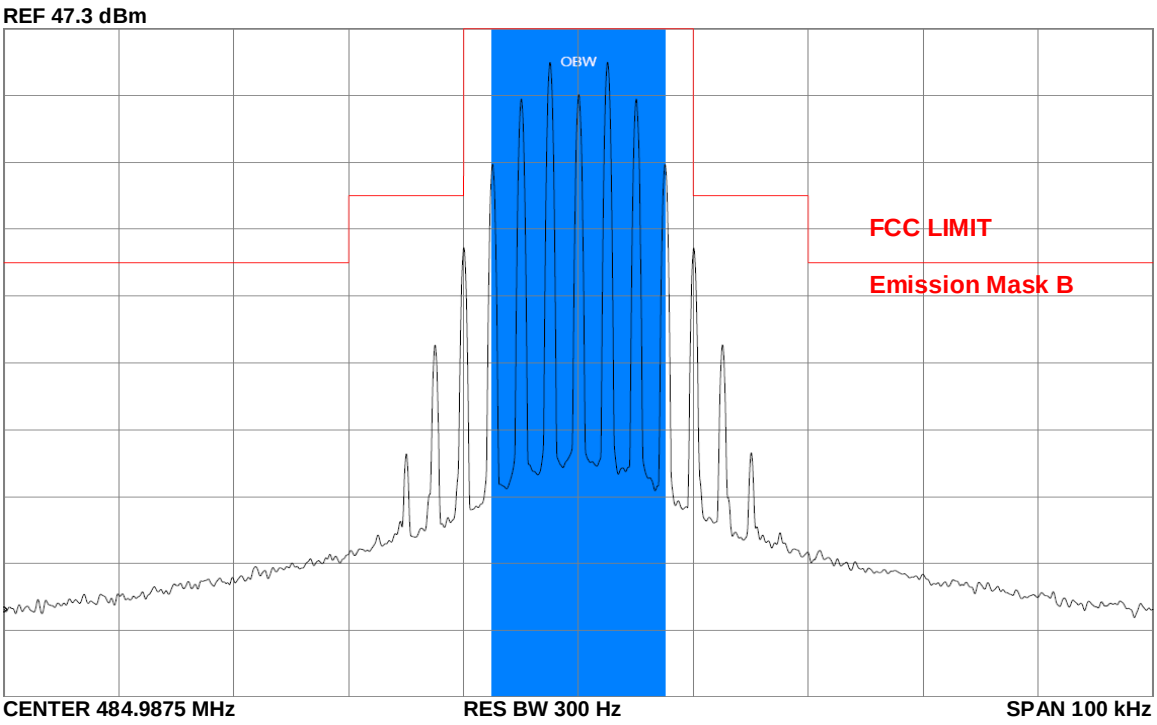


EXHIBIT 6E-8

Occupied Bandwidth -- Standard Audio Modulation (12.5 kHz Channelization, Analog Voice) - 11K0F3E - 54 Watts

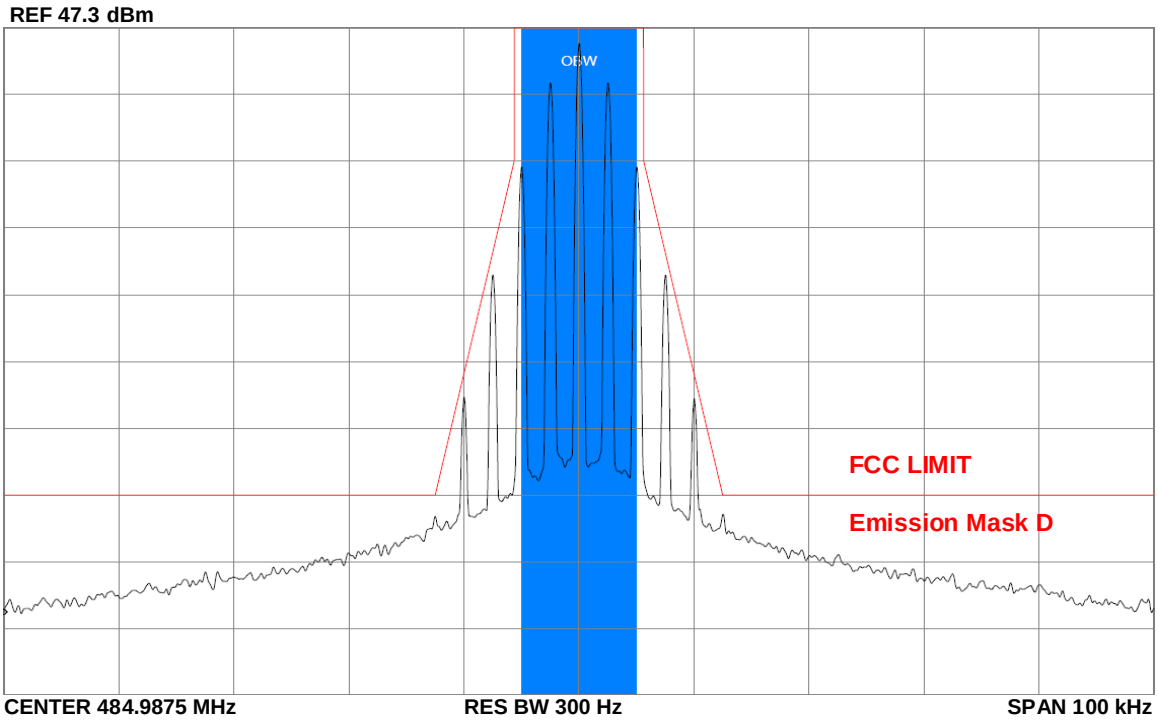


EXHIBIT 6E-9

Occupied Bandwidth -- Digital (12.5 kHz Channelization, Digital Data) - 8K10F1D - 54 Watts

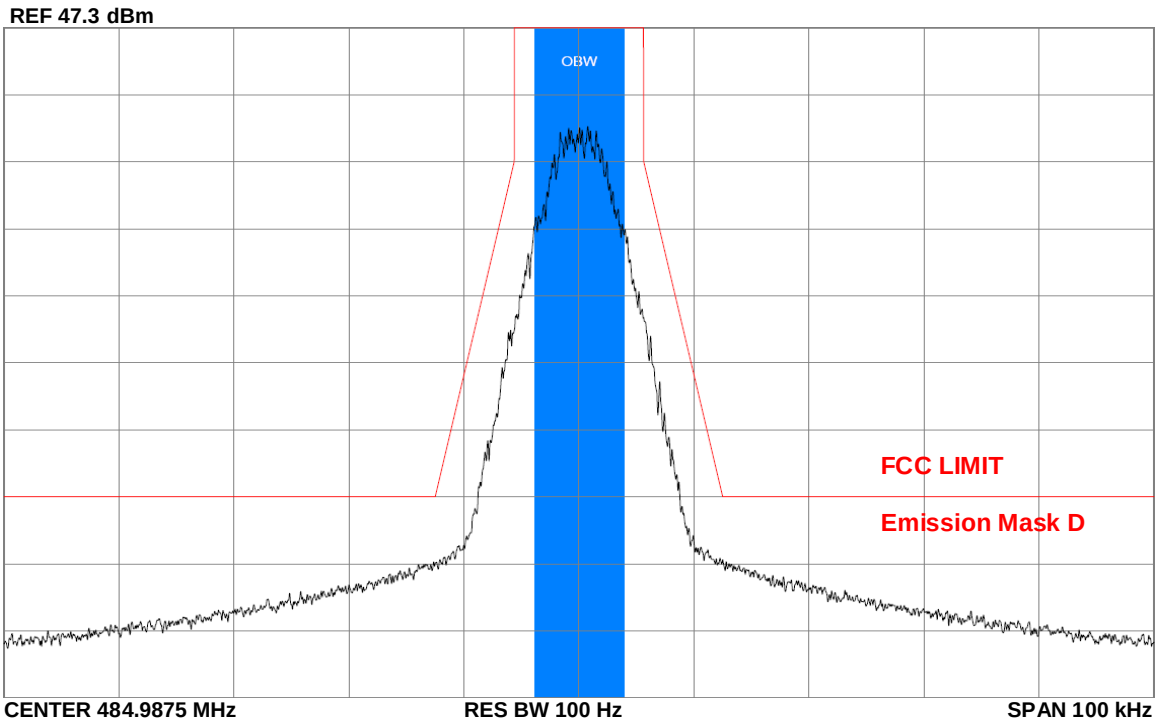


EXHIBIT 6E-10

Occupied Bandwidth -- Digital (12.5 kHz Channelization, Digital Voice) - 8K10F1E – 54 Watts

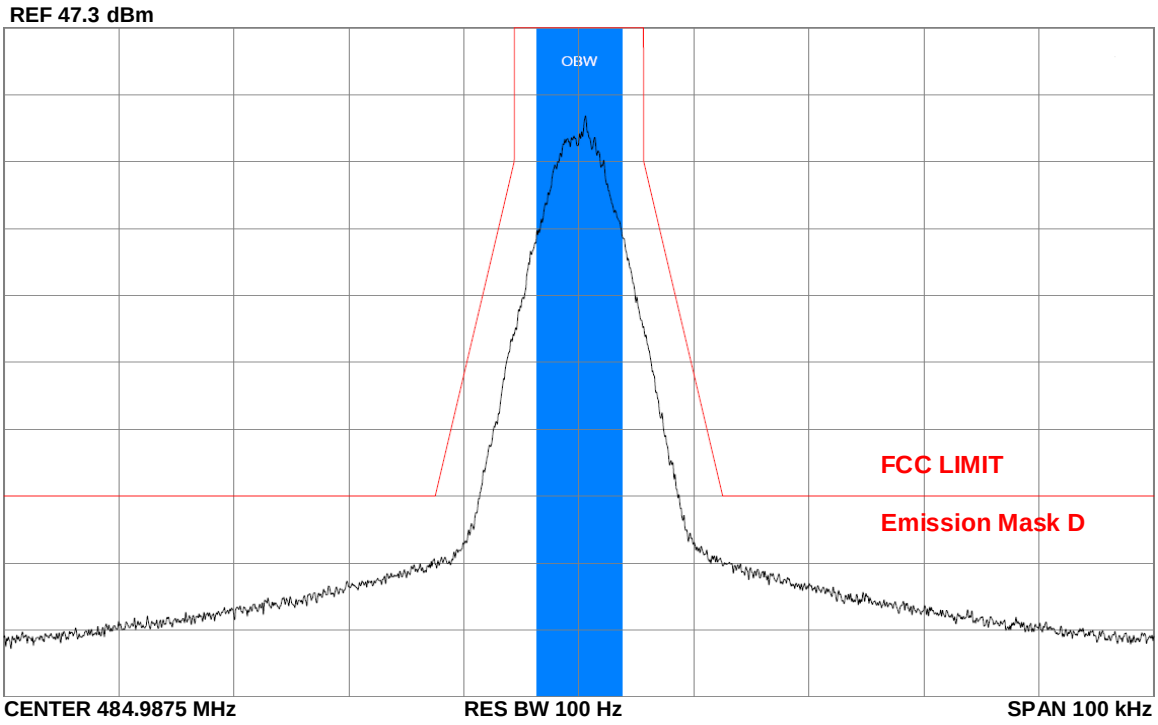


EXHIBIT 6E-11

Occupied Bandwidth -- Digital (12.5 kHz Channelization, Digital Voice Encryption) - 8K10F1E - 54 Watts

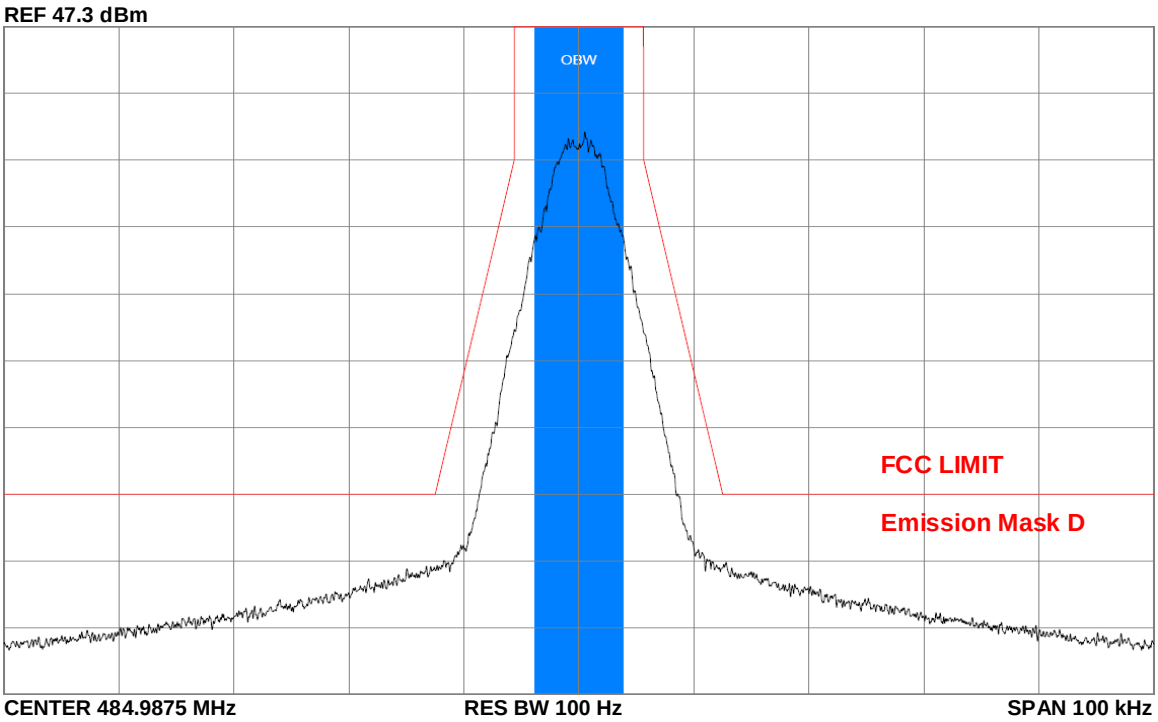


EXHIBIT 6E-12

Occupied Bandwidth – Digital (12.5 kHz Channelization, Digital TDMA)
- 8K10F1W - 54 Watts
-

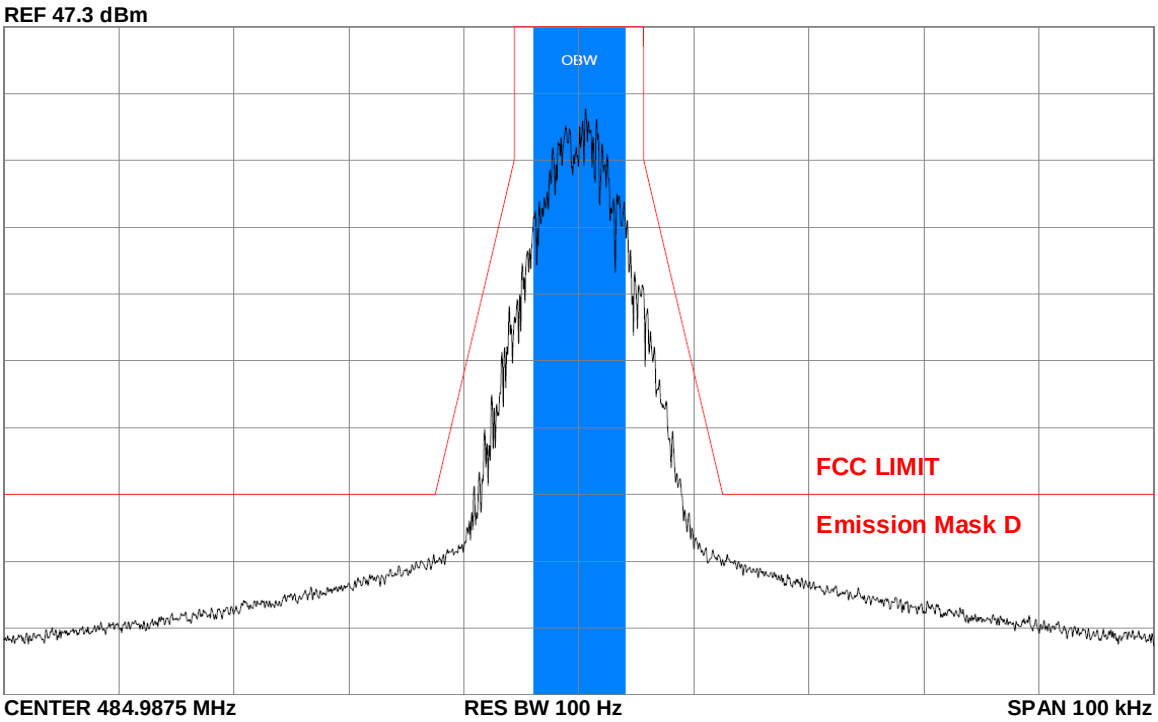


EXHIBIT 6E-13

Occupied Bandwidth - Standard Audio Modulation (20 kHz Channelization, Analog Encryption) - 20K0F1E - 54 Watts

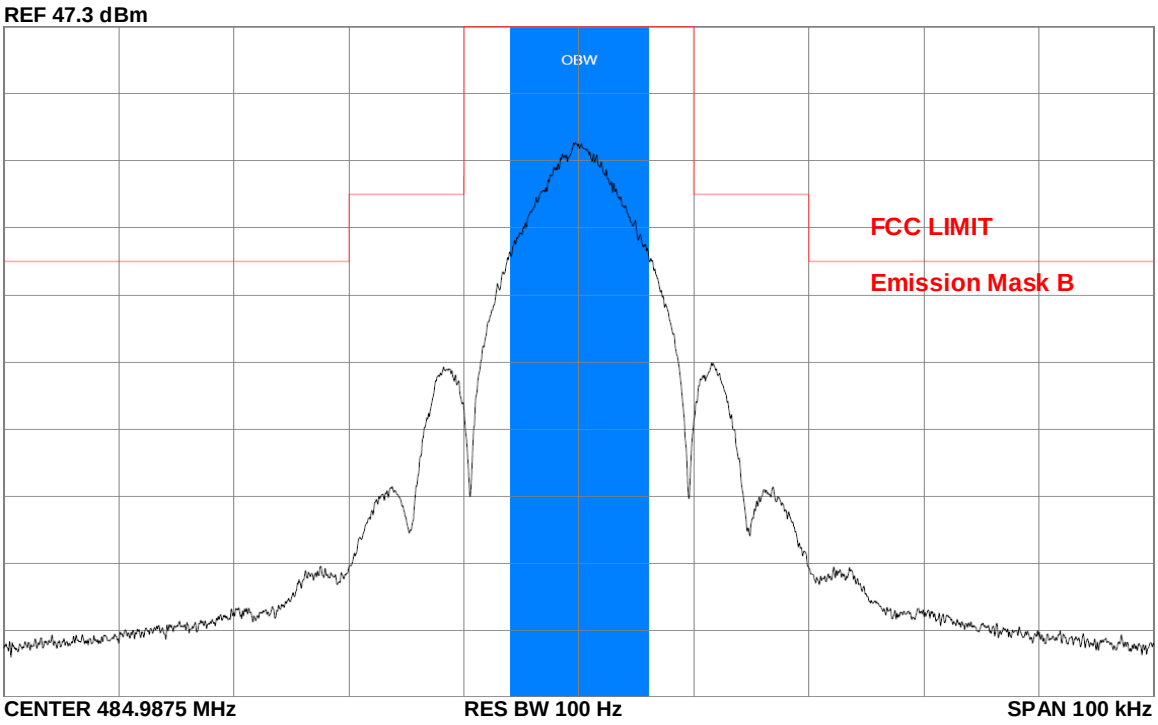


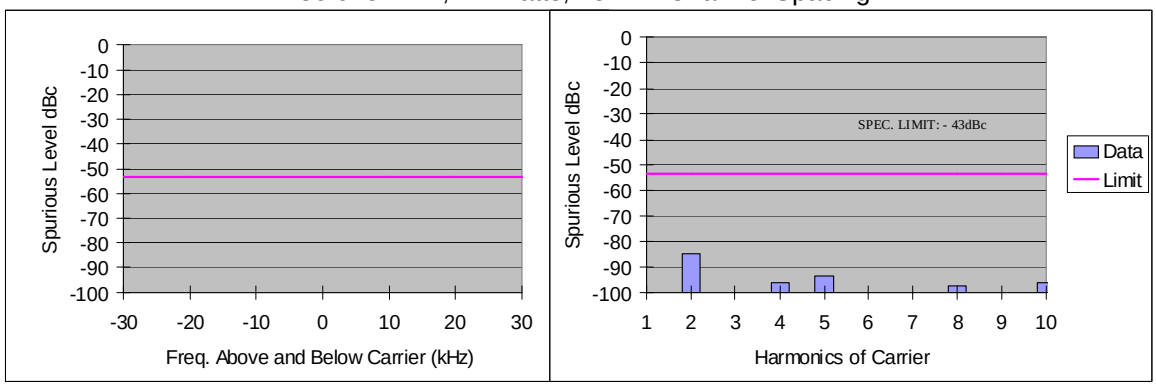
EXHIBIT 6E-14

CONDUCTED SPURIOUS EMISSIONS

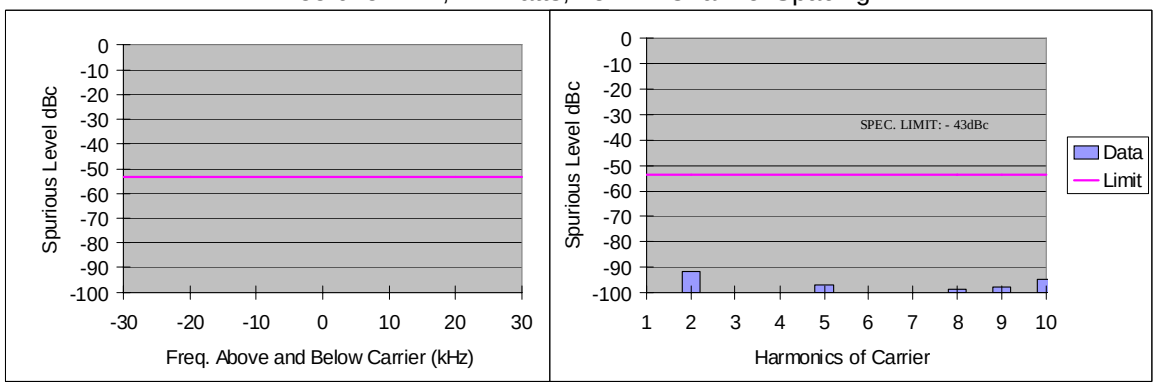
Analog Mode:

Note: Red lines on graphs correspond to the FCC limit of –20 dBm for 12.5 kHz channel spacing and -13 dBm for 25 kHz channel spacing.

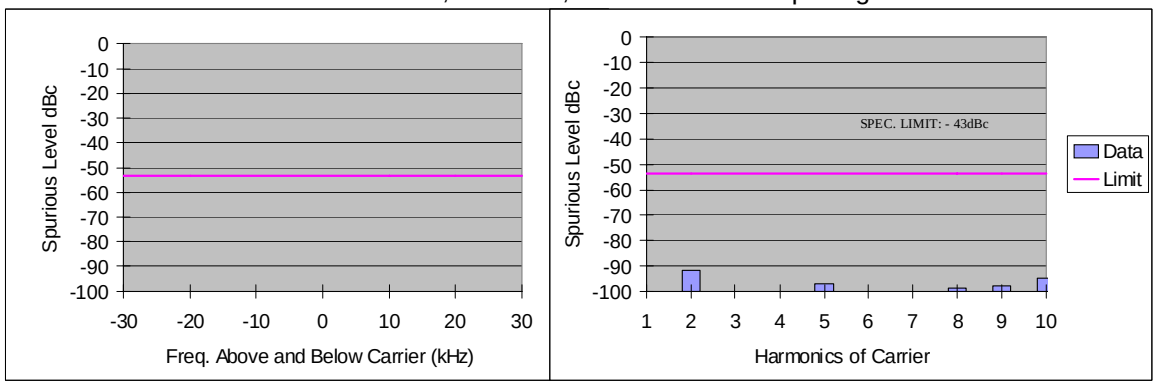
136.025 MHz, 11 Watts, 25 kHz Channel Spacing



155.025 MHz, 11 Watts, 25 kHz Channel Spacing



173.975 MHz, 11 Watts, 25 kHz Channel Spacing

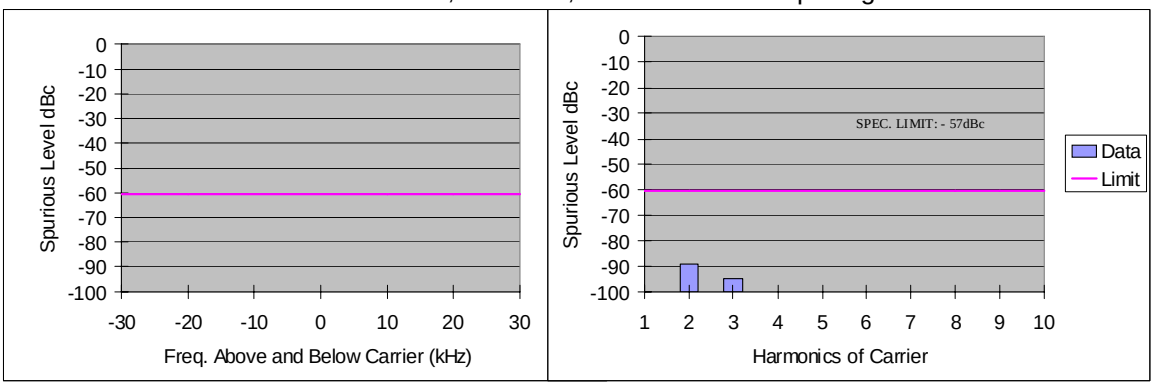


CONDUCTED SPURIOUS EMISSIONS

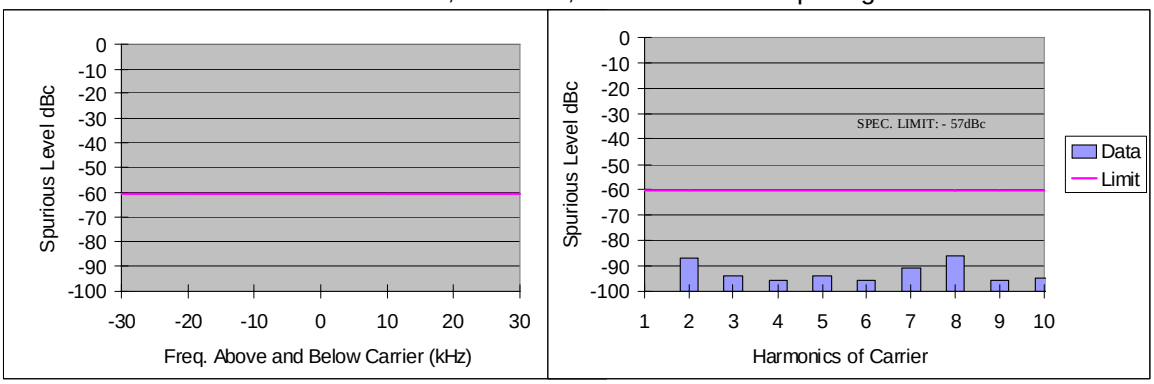
Analog Mode:

Note: Red lines on graphs correspond to the FCC limit of –20 dBm for 12.5 kHz channel spacing and -13 dBm for 25 kHz channel spacing.

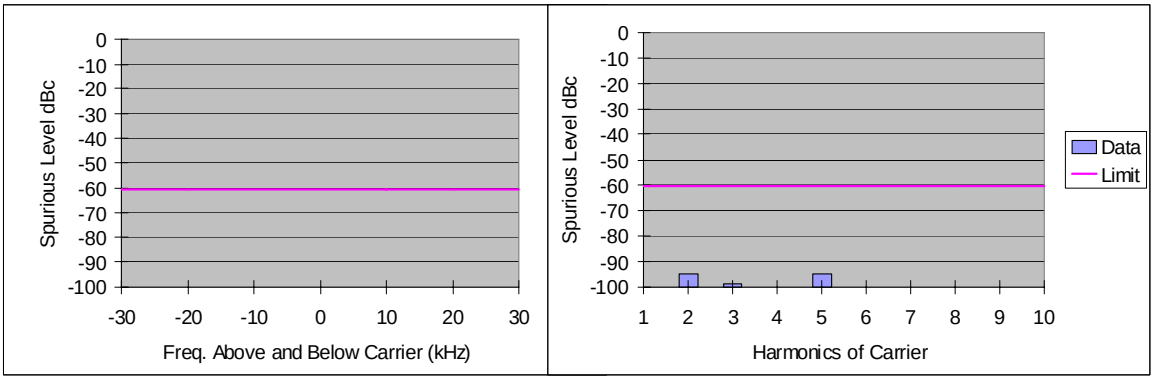
136.0125 MHz, 60 Watts, 25 kHz Channel Spacing



155.0125 MHz, 60 Watts, 25 kHz Channel Spacing



173.9875 MHz, 60 Watts, 25 kHz Channel Spacing

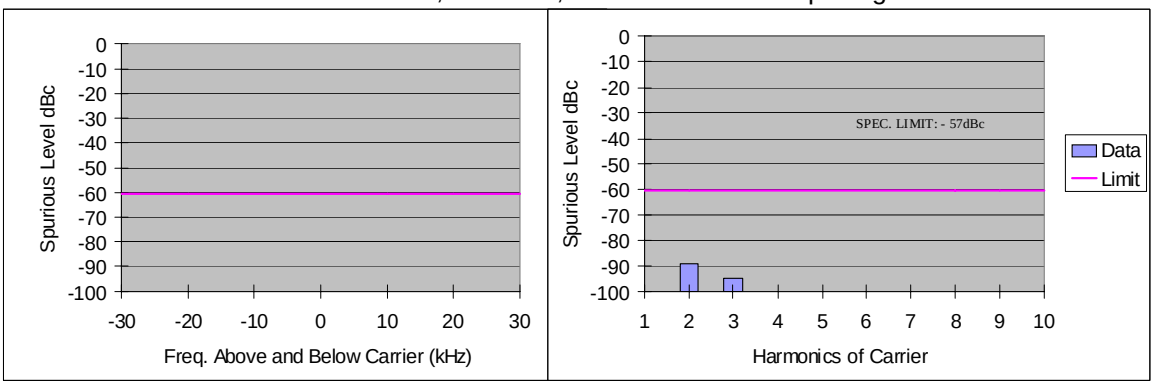


CONDUCTED SPURIOUS EMISSIONS

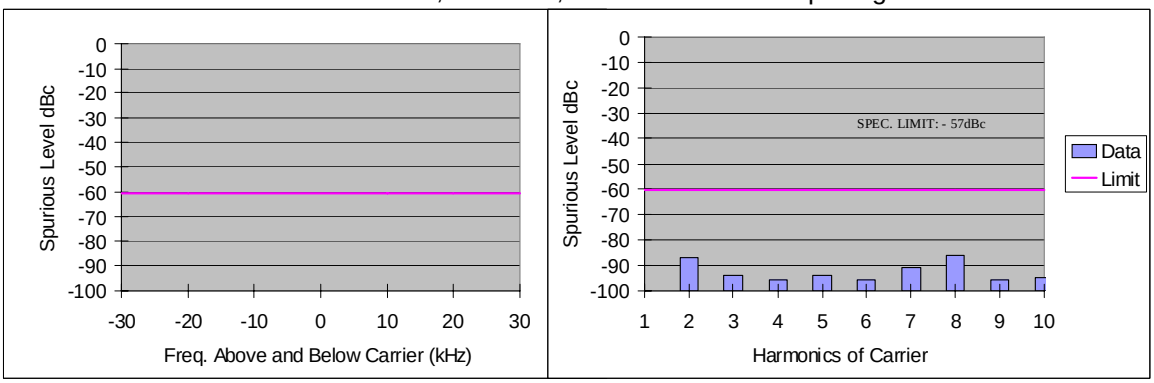
APCO Digital Mode:

Note: Red lines on graphs correspond to the FCC limit of –20 dBm for 12.5 kHz channel spacing and -13 dBm for 25 kHz channel spacing.

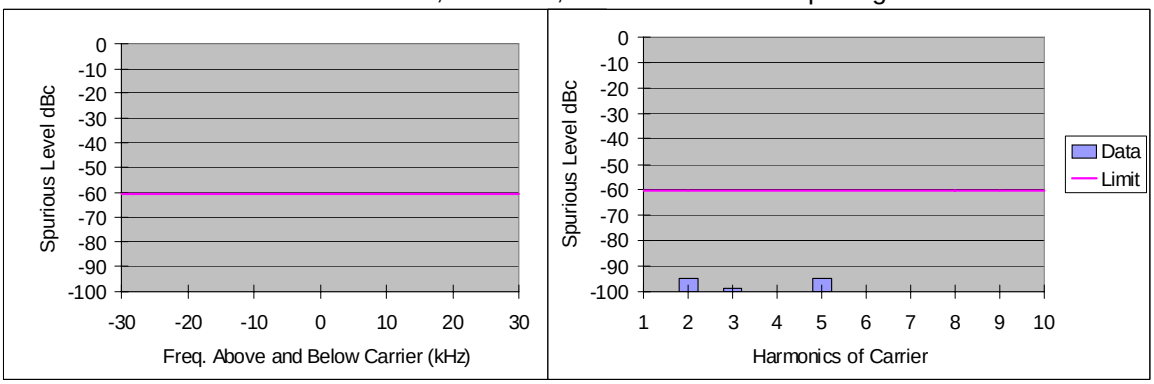
136.0125 MHz, 11 Watts, 12.5 kHz Channel Spacing



155.0125 MHz, 11 Watts, 12.5 kHz Channel Spacing



173.9875 MHz, 11 Watts, 12.5 kHz Channel Spacing

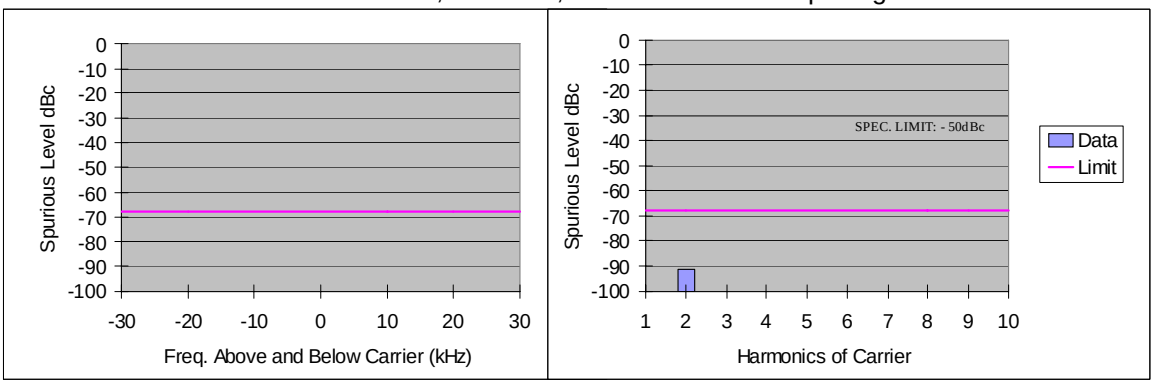


CONDUCTED SPURIOUS EMISSIONS

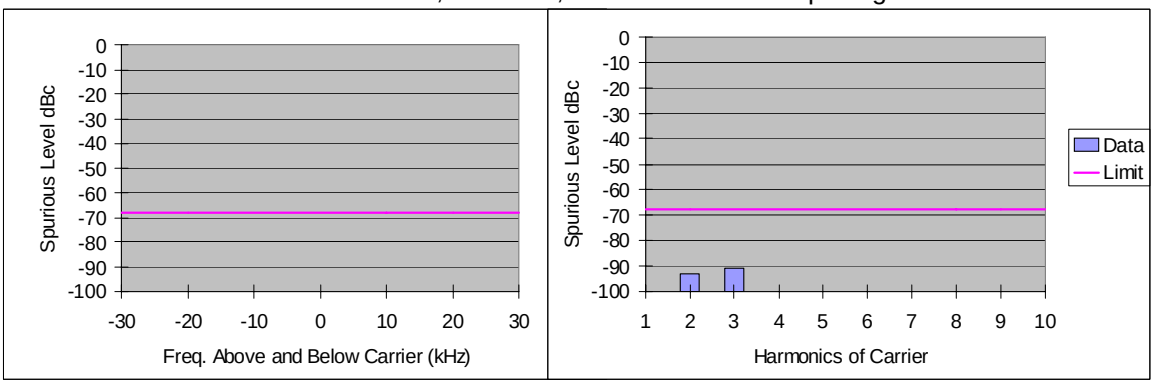
APCO Digital Mode:

Note: Red lines on graphs correspond to the FCC limit of –20 dBm for 12.5 kHz channel spacing and -13 dBm for 25 kHz channel spacing.

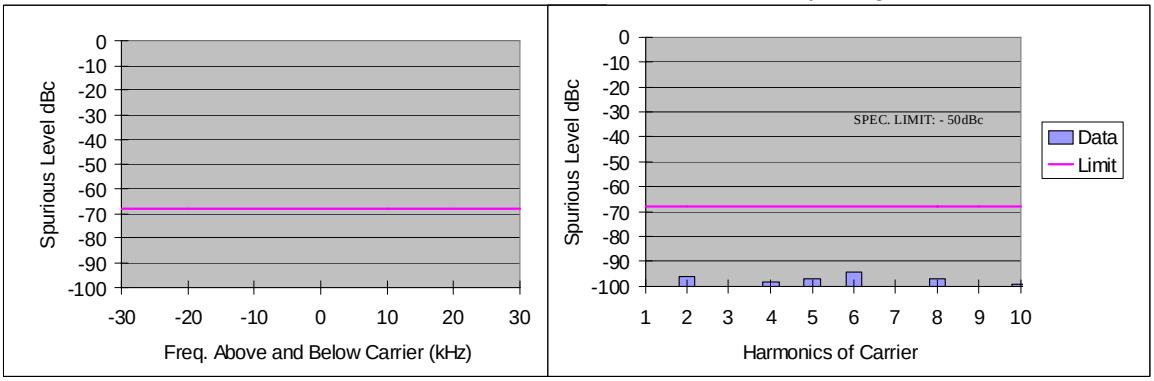
136.0125 MHz, 60 Watts, 12.5 kHz Channel Spacing



155.0125 MHz, 60 Watts, 12.5 kHz Channel Spacing



173.9875 MHz, 60 Watts, 12.5 kHz Channel Spacing

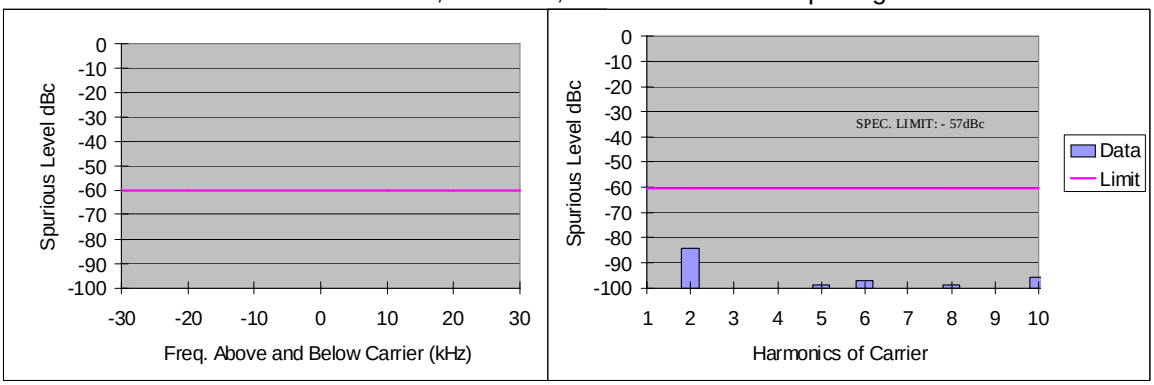


CONDUCTED SPURIOUS EMISSIONS

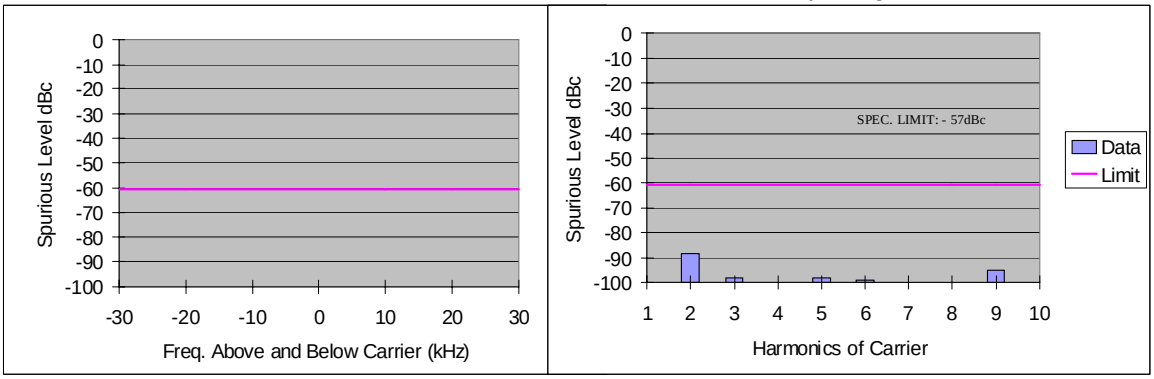
Digital TDMA Mode:

Note: Red lines on graphs correspond to the FCC limit of –20 dBm for 12.5 kHz channel spacing and -13 dBm for 25 kHz channel spacing.

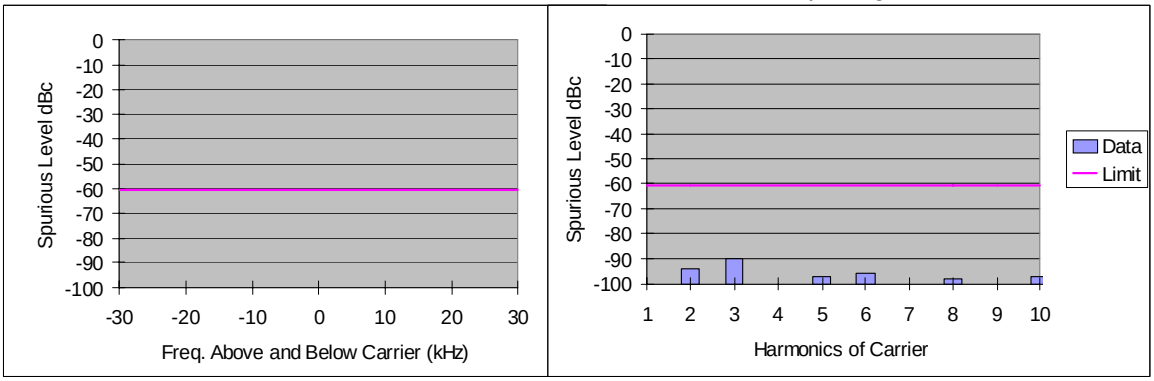
136.0125 MHz, 11 Watts, 12.5 kHz Channel Spacing



155.0125 MHz, 11 Watts, 12.5 kHz Channel Spacing



173.9875 MHz, 11 Watts, 12.5 kHz Channel Spacing

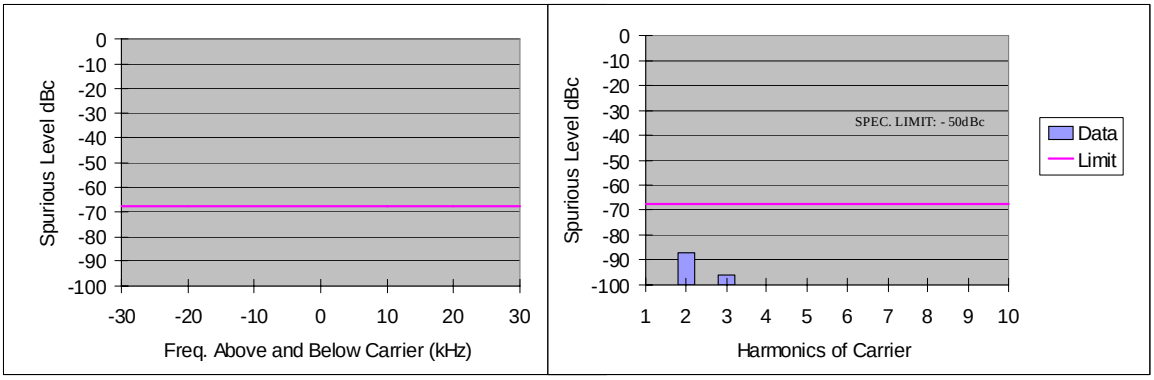


CONDUCTED SPURIOUS EMISSIONS

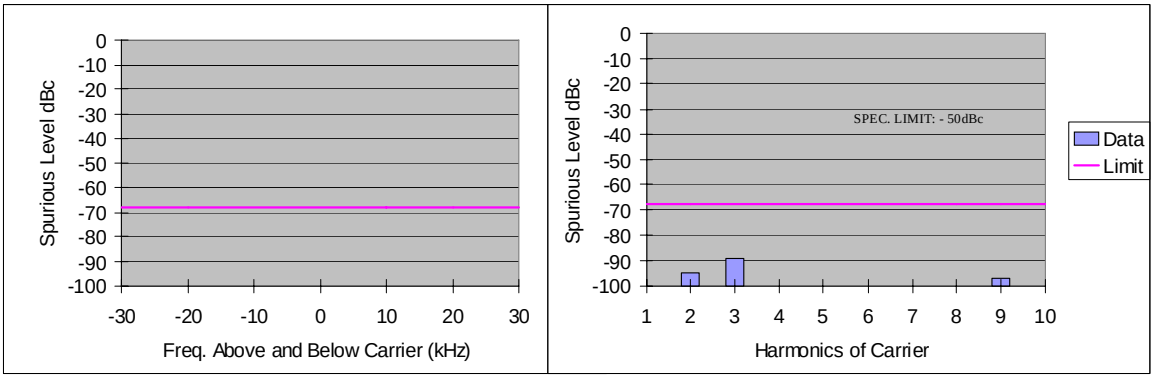
Digital TDMA Mode:

Note: Red lines on graphs correspond to the FCC limit of –20 dBm for 12.5 kHz channel spacing and -13 dBm for 25 kHz channel spacing.

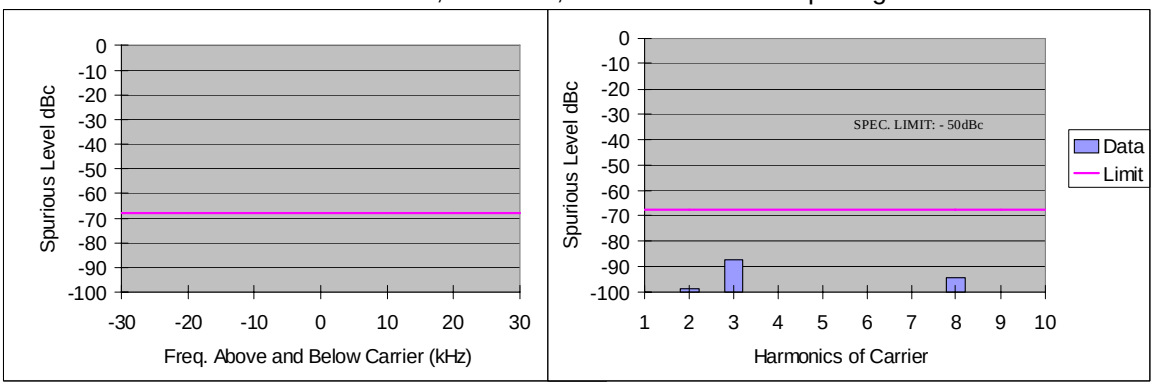
136.0125 MHz, 60 Watts, 12.5 kHz Channel Spacing



155.0125 MHz, 60 Watts, 12.5 kHz Channel Spacing



173.9875 MHz, 60 Watts, 12.5 kHz Channel Spacing



ANALOG MODE – 450.0125 MHz

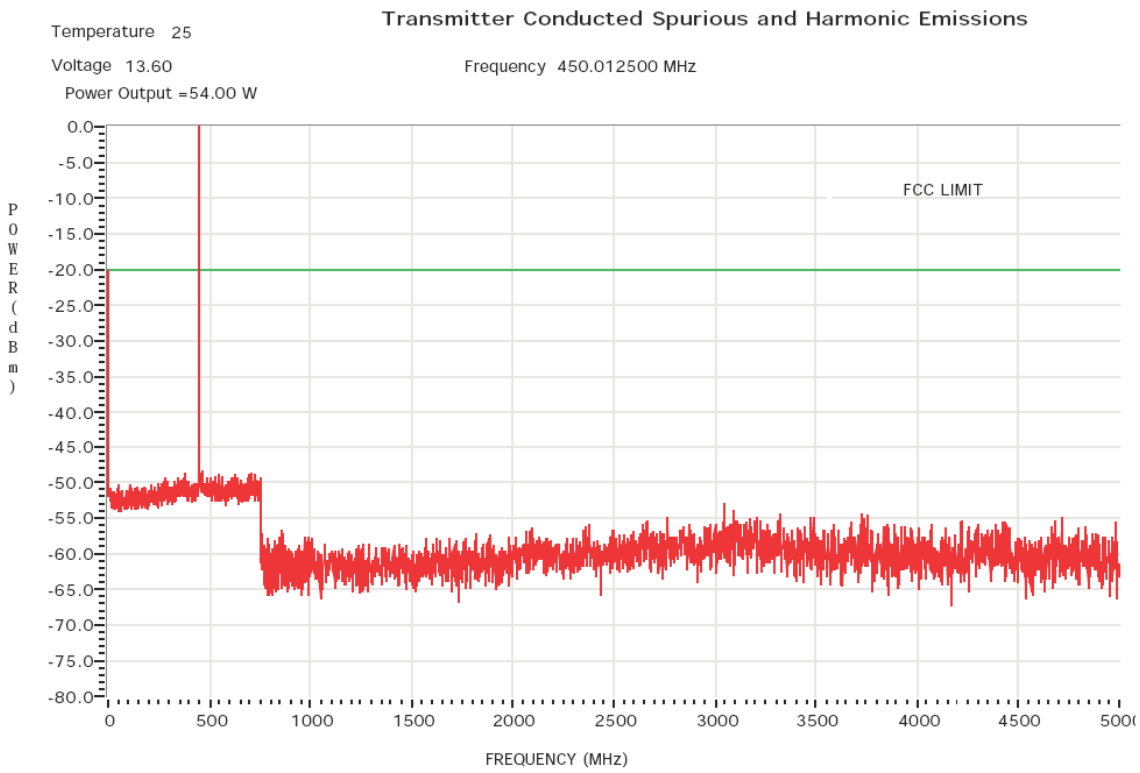
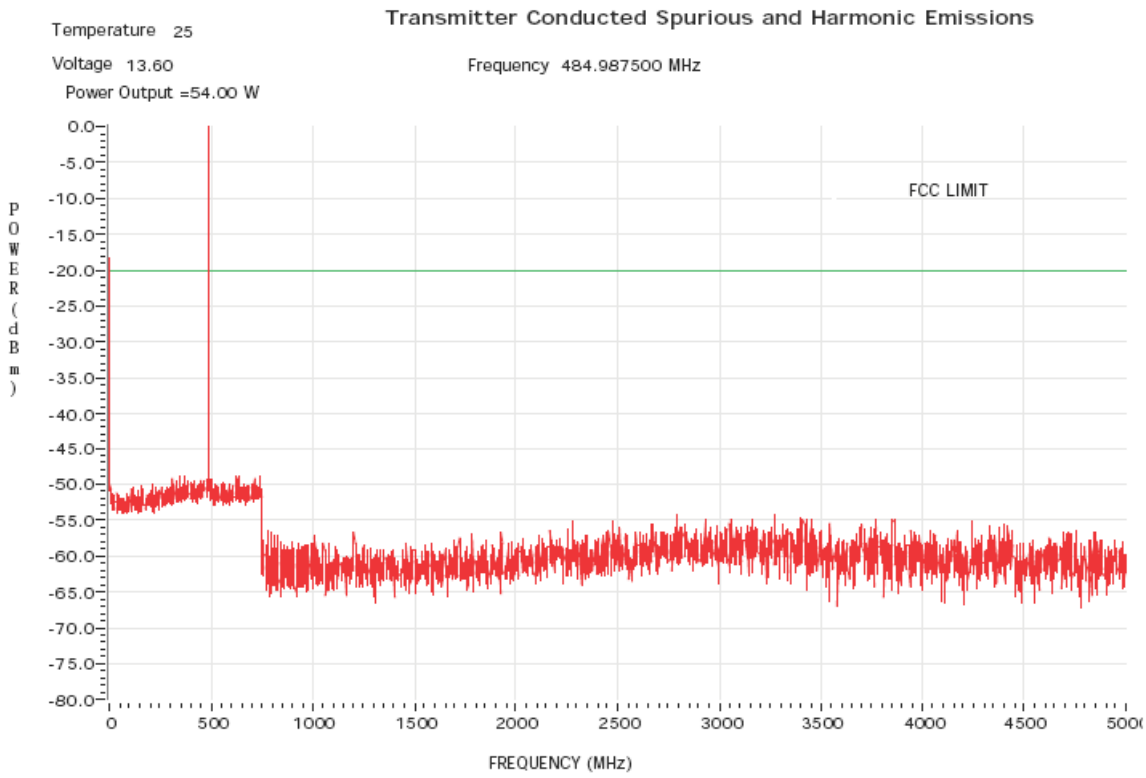
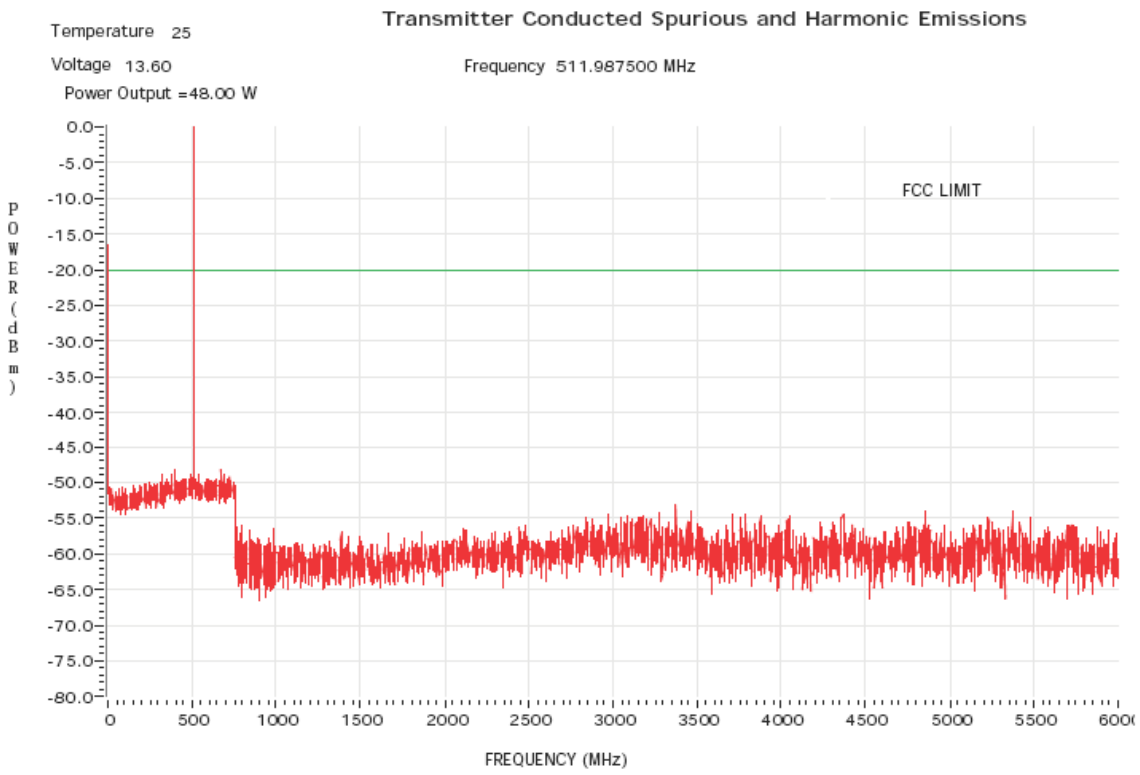


EXHIBIT 6F-7

ANALOG MODE – 484.9875 MHz



ANALOG MODE – 511.9875 MHz



ANALOG MODE – 519.9875 MHz

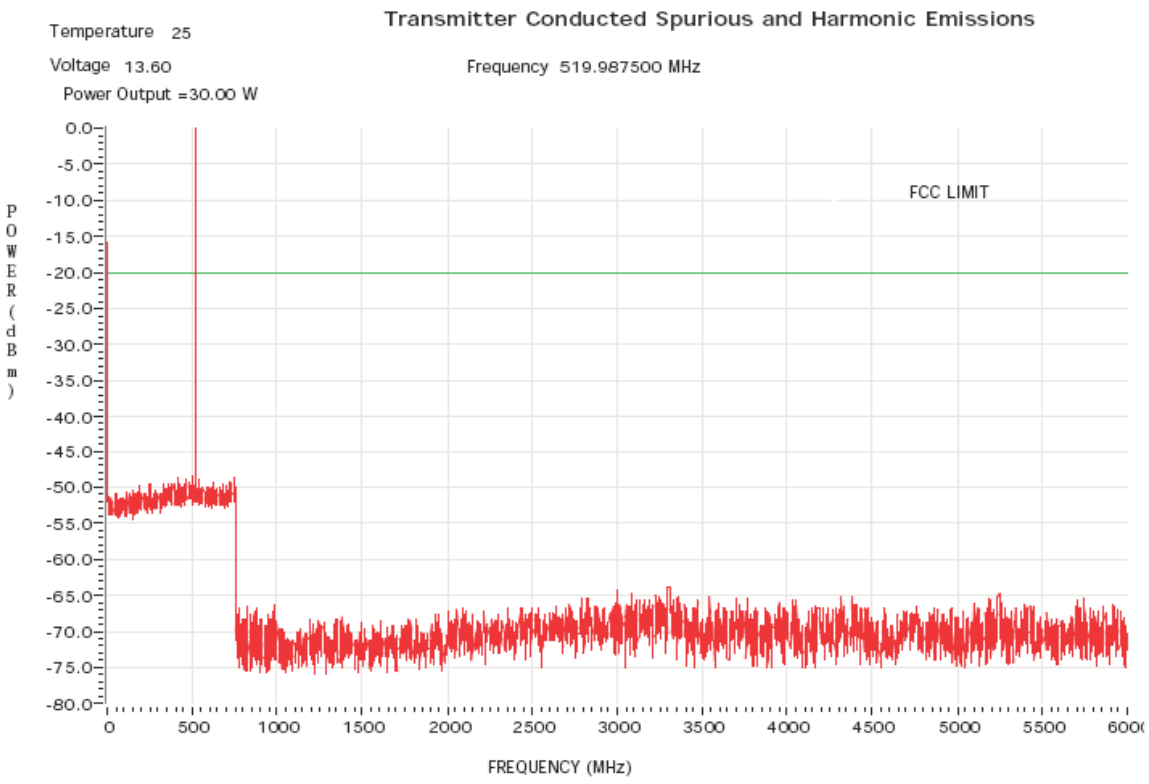
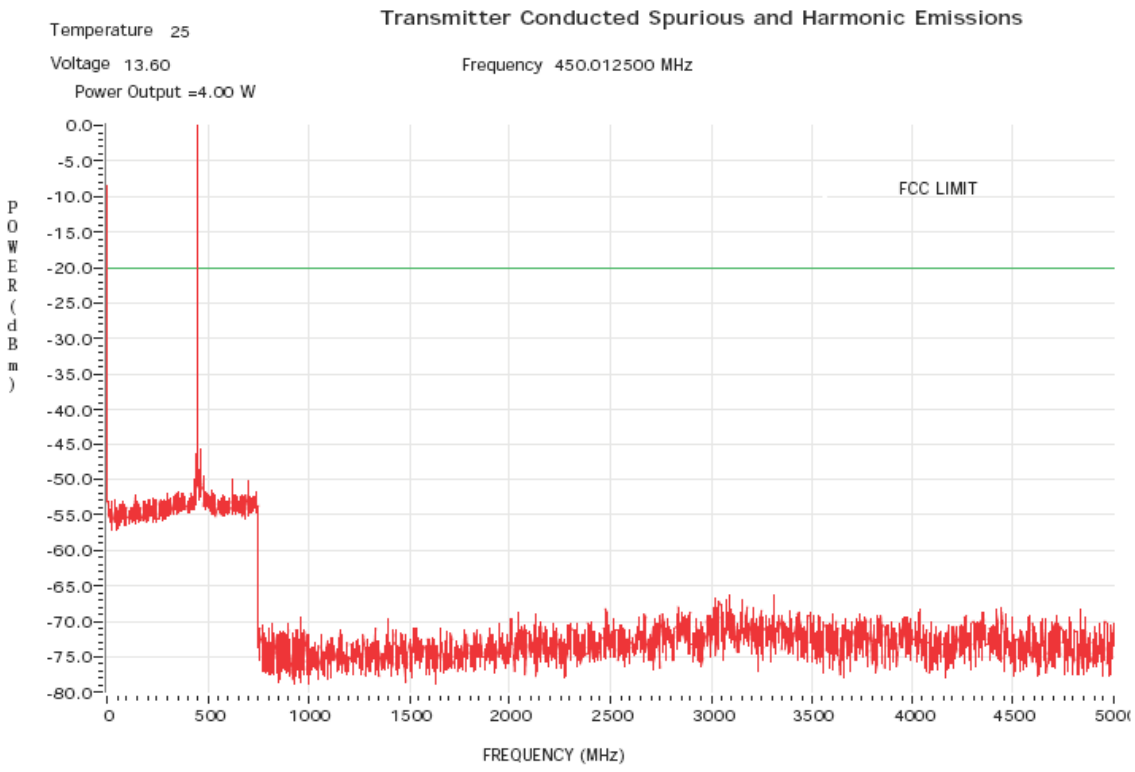
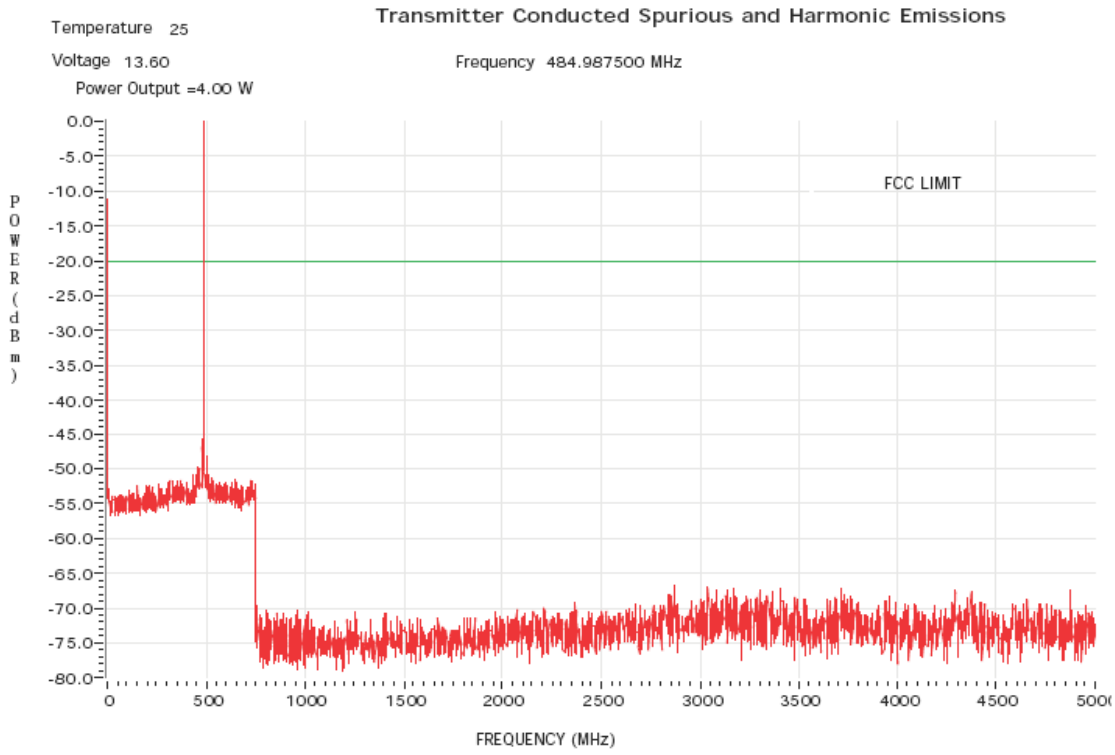


EXHIBIT 6F-10

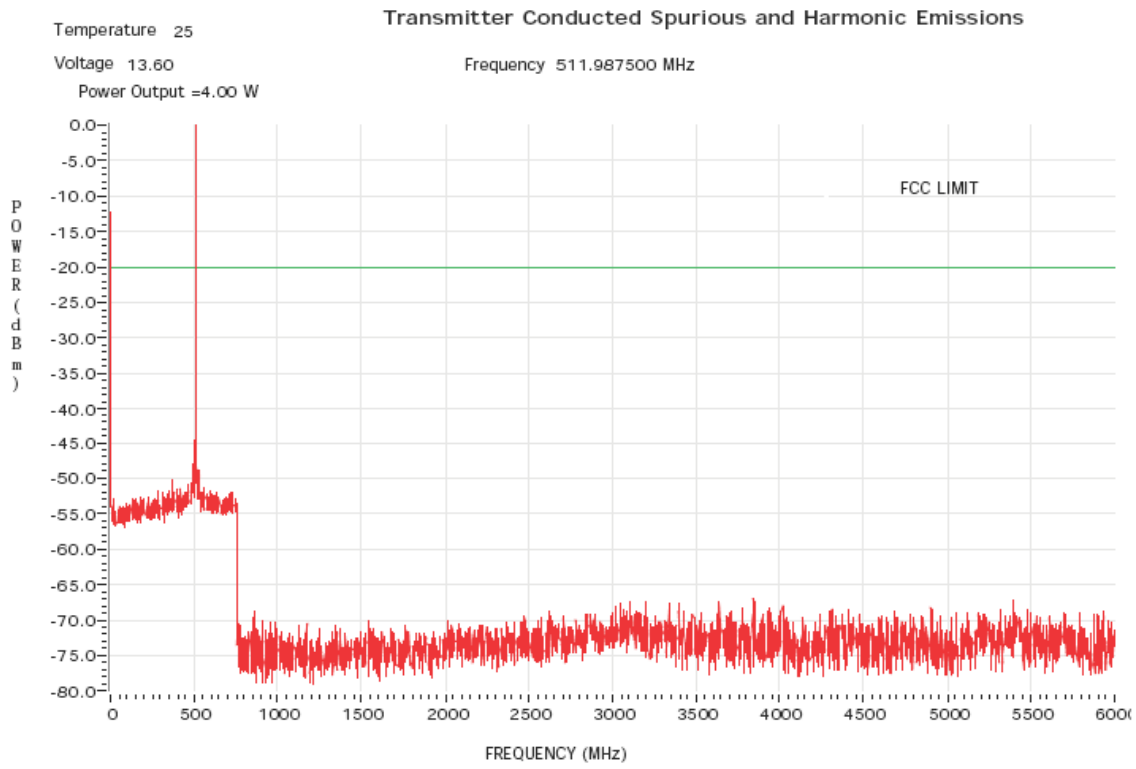
ANALOG MODE – 450.0125 MHz



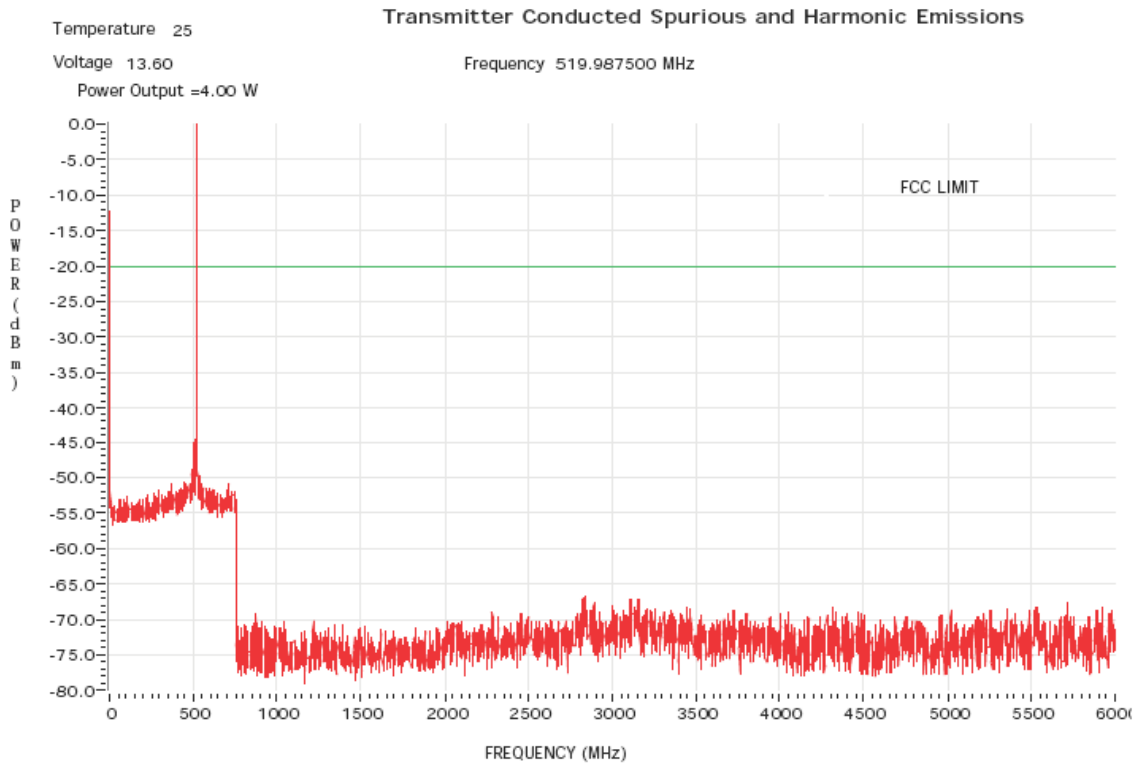
ANALOG MODE – 484.9875 MHz



ANALOG MODE – 511.9875 MHz



ANALOG MODE – 519.9875 MHz



APCO DIGITAL MODE – 450.0125 MHz

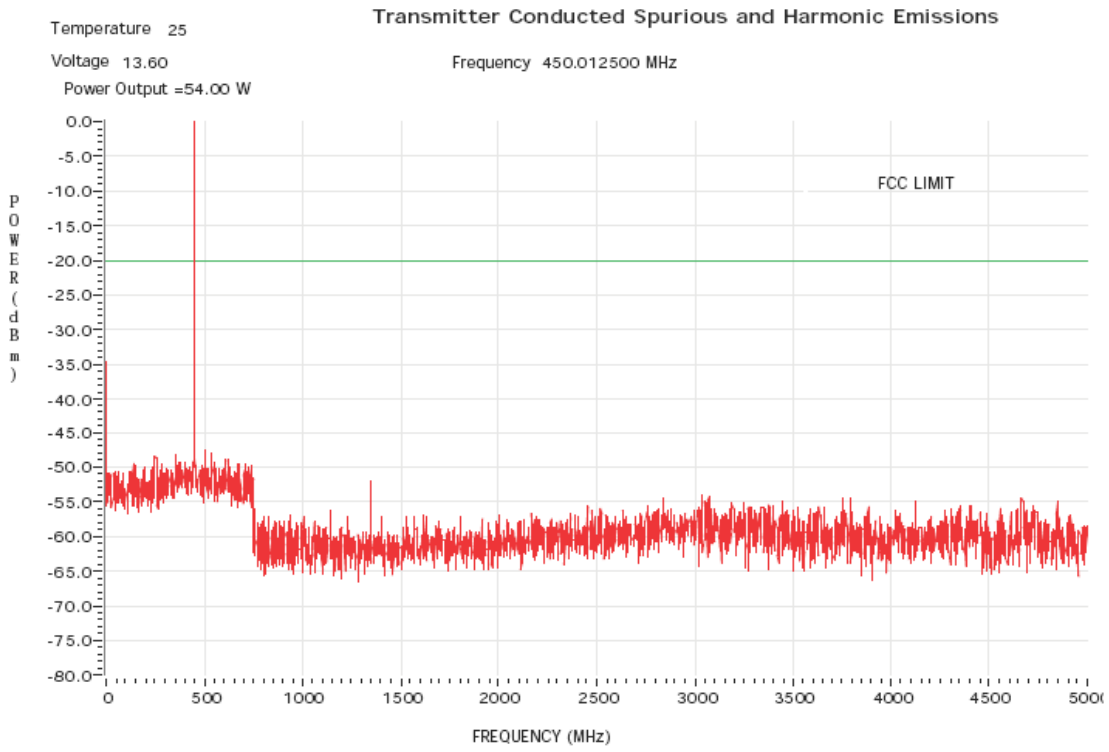


EXHIBIT 6F-15

APCO DIGITAL MODE – 484.9875 MHz

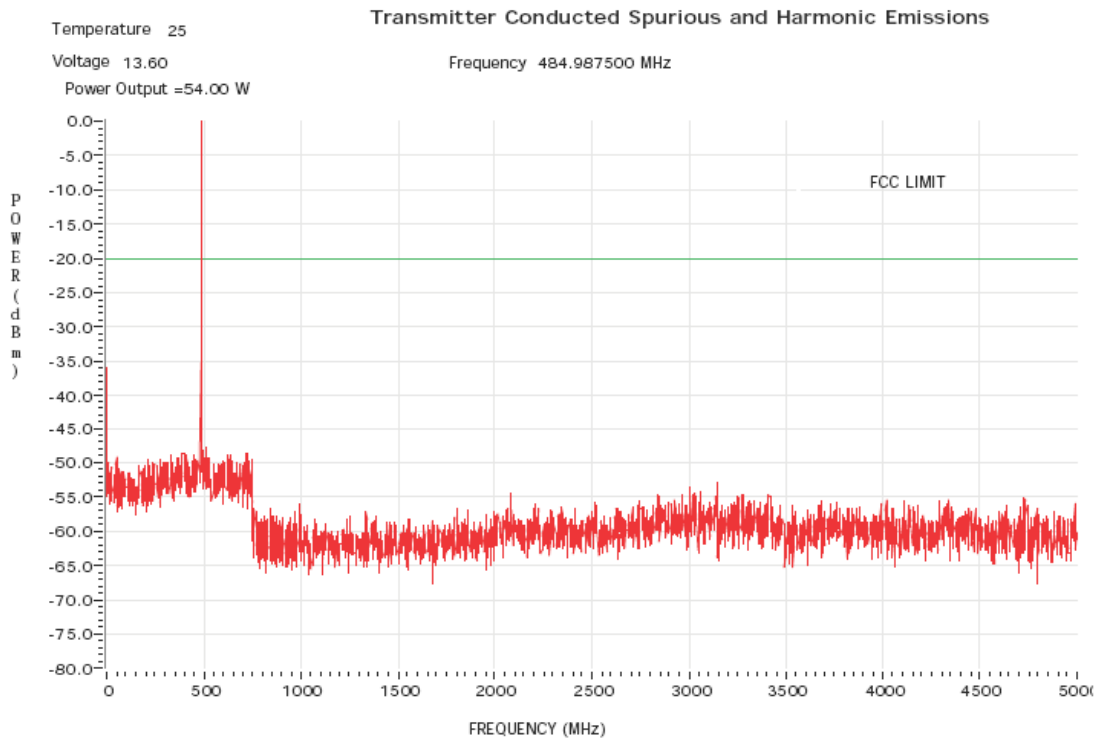
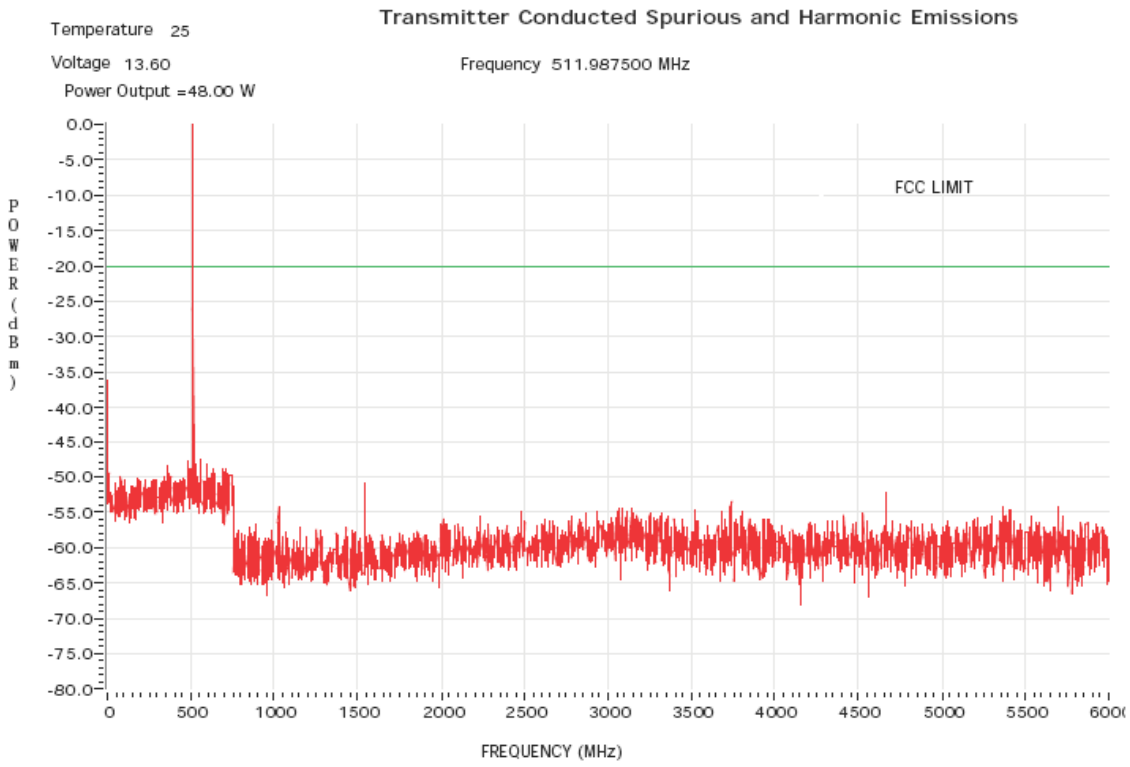
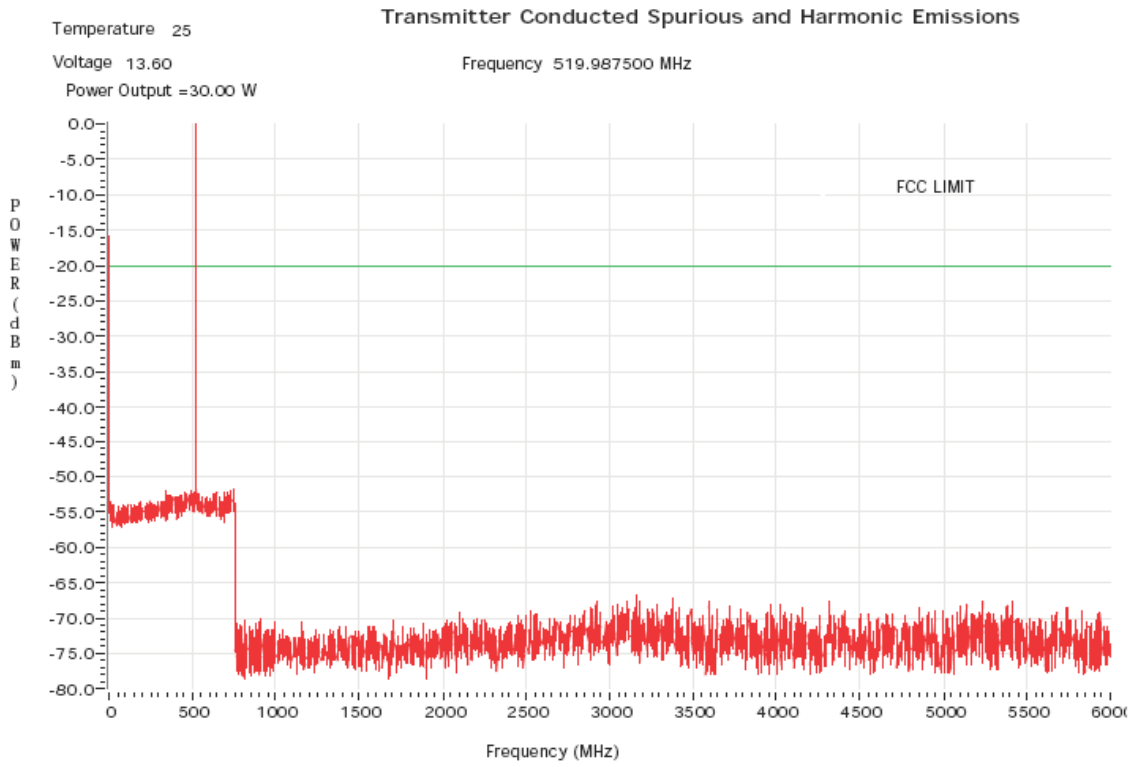


EXHIBIT 6F-16

APCO DIGITAL MODE – 511.9875 MHz



APCO DIGITAL MODE – 519.9875 MHz



APCO DIGITAL MODE – 450.0125 MHz

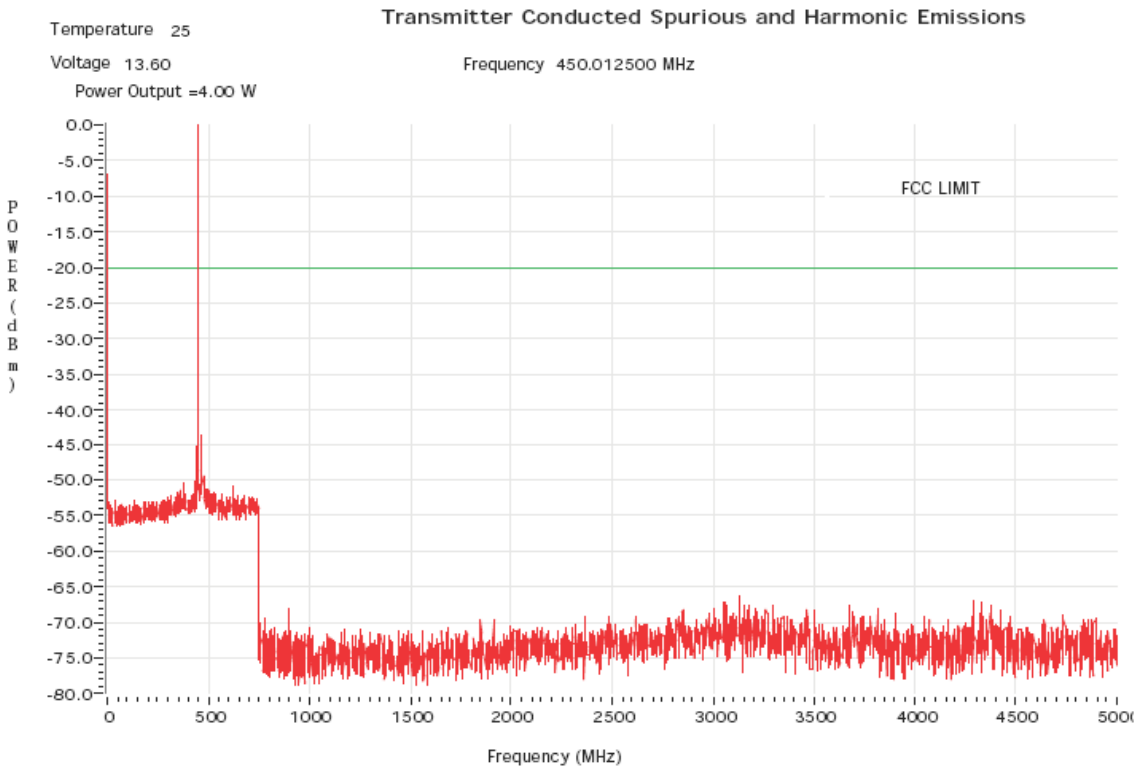


EXHIBIT 6F-19

APCO DIGITAL MODE – 484.9875 MHz

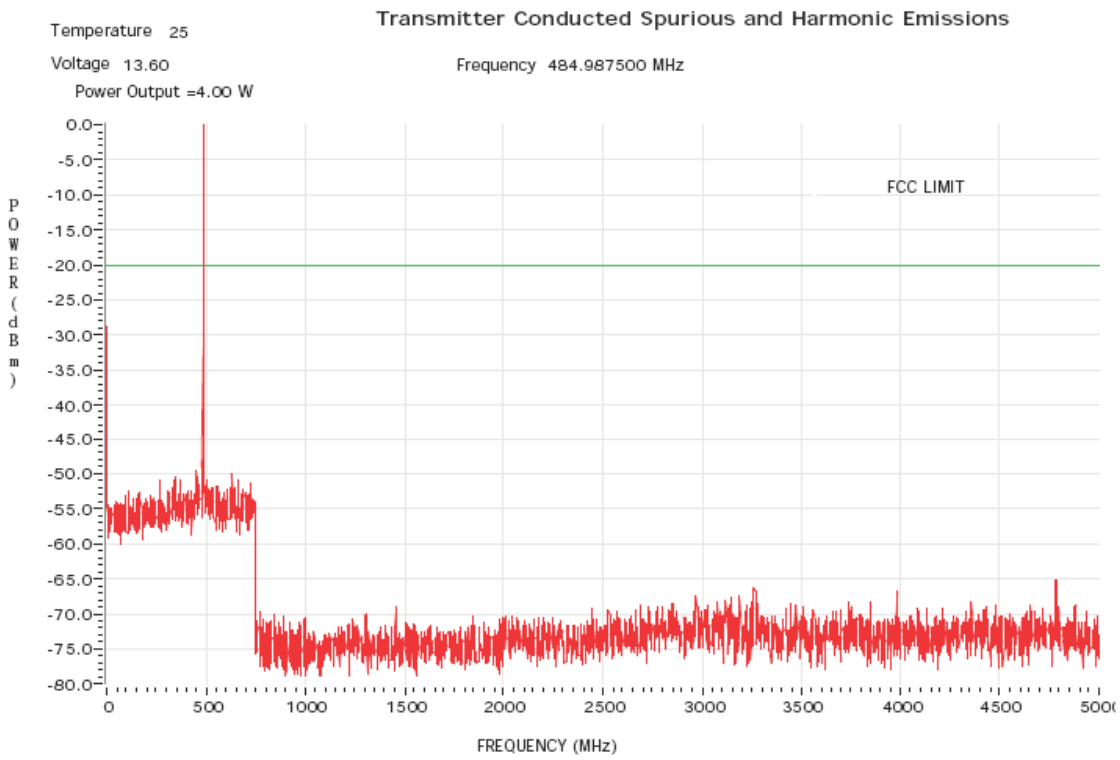
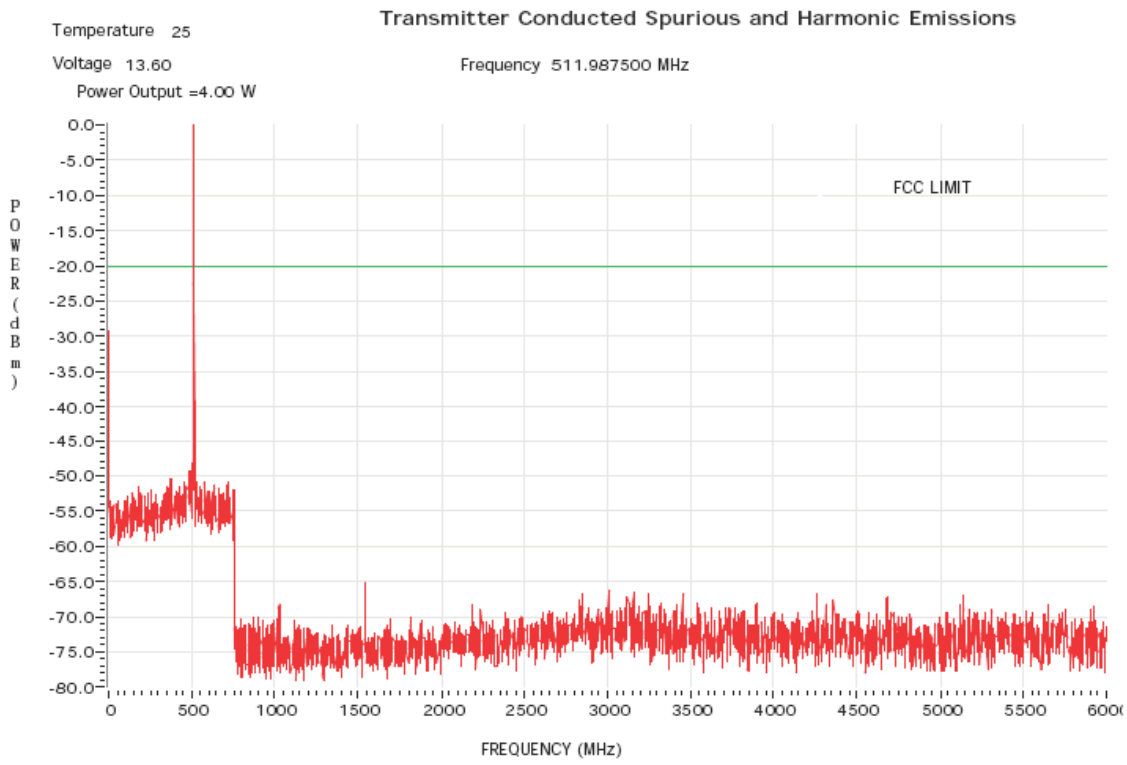


EXHIBIT 6F-20

APCO DIGITAL MODE – 511.9875 MHz



APCO DIGITAL MODE – 519.9875 MHz

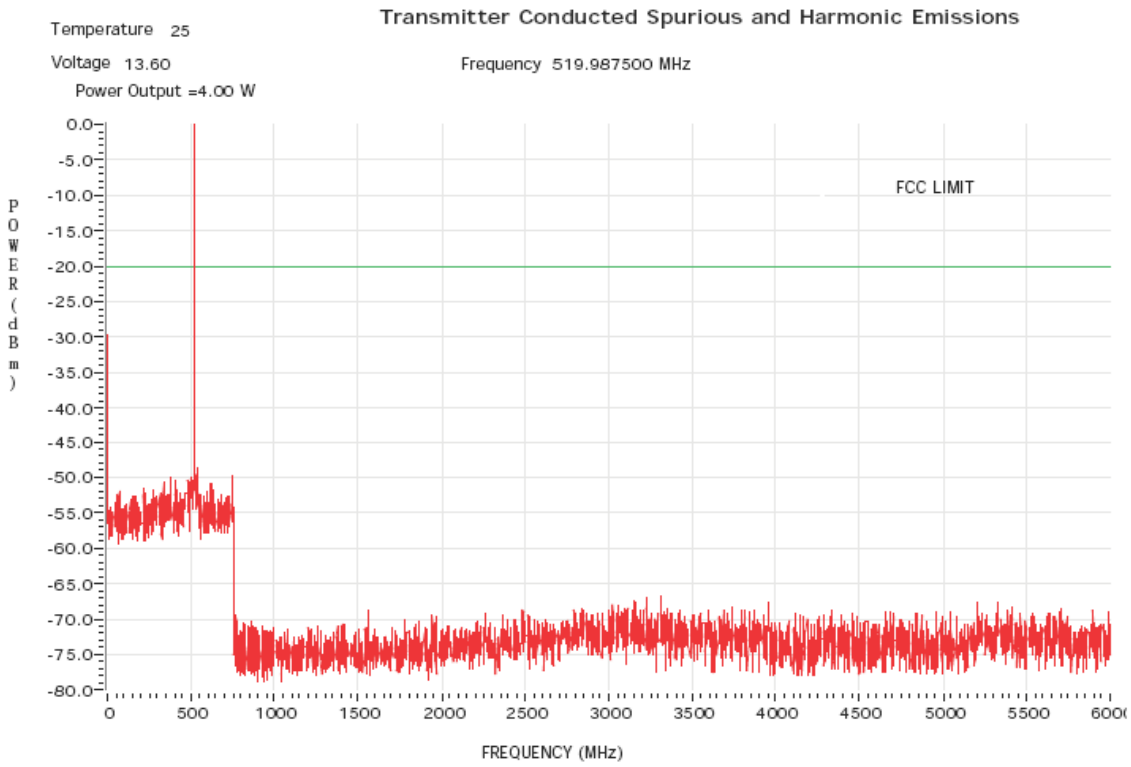


EXHIBIT 6F-22

DIGITAL TDMA MODE – 450.0125 MHz

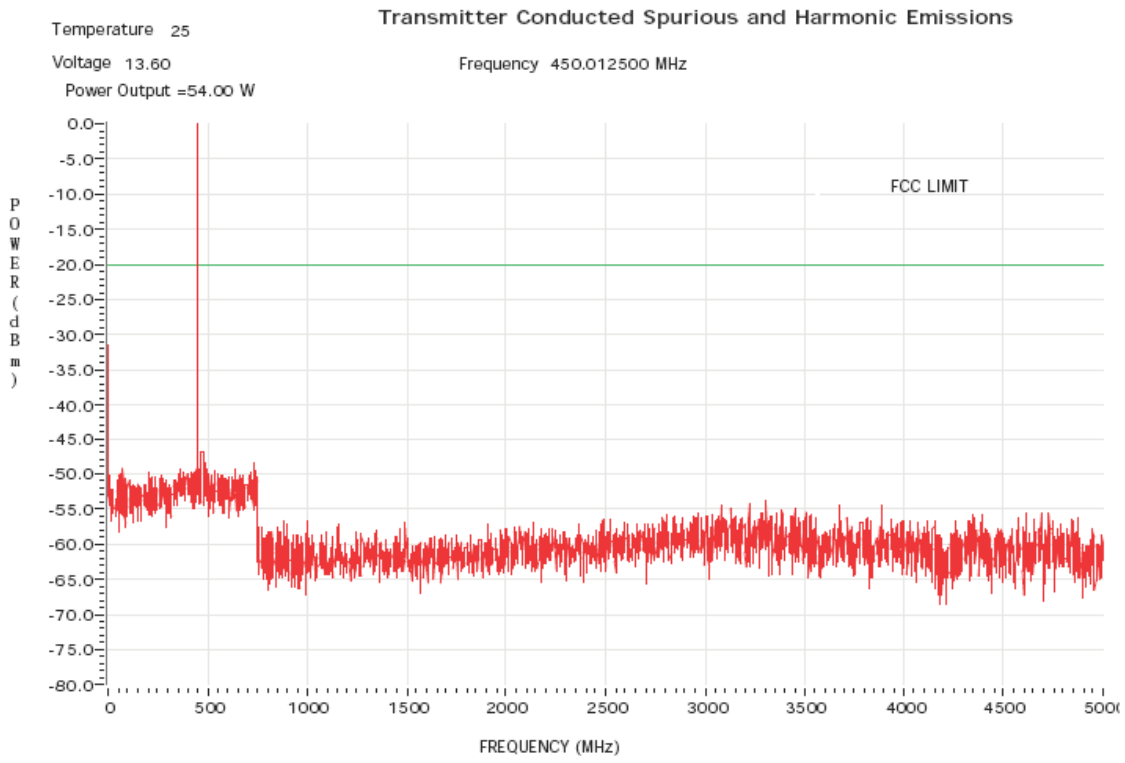
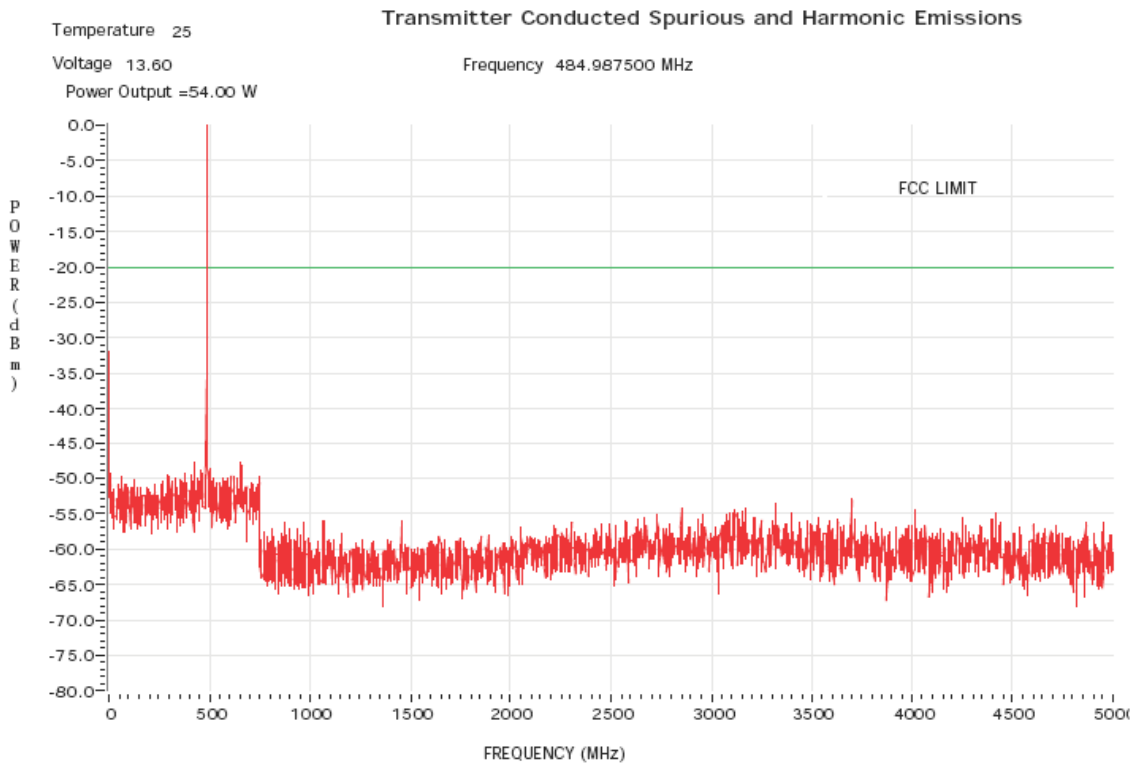
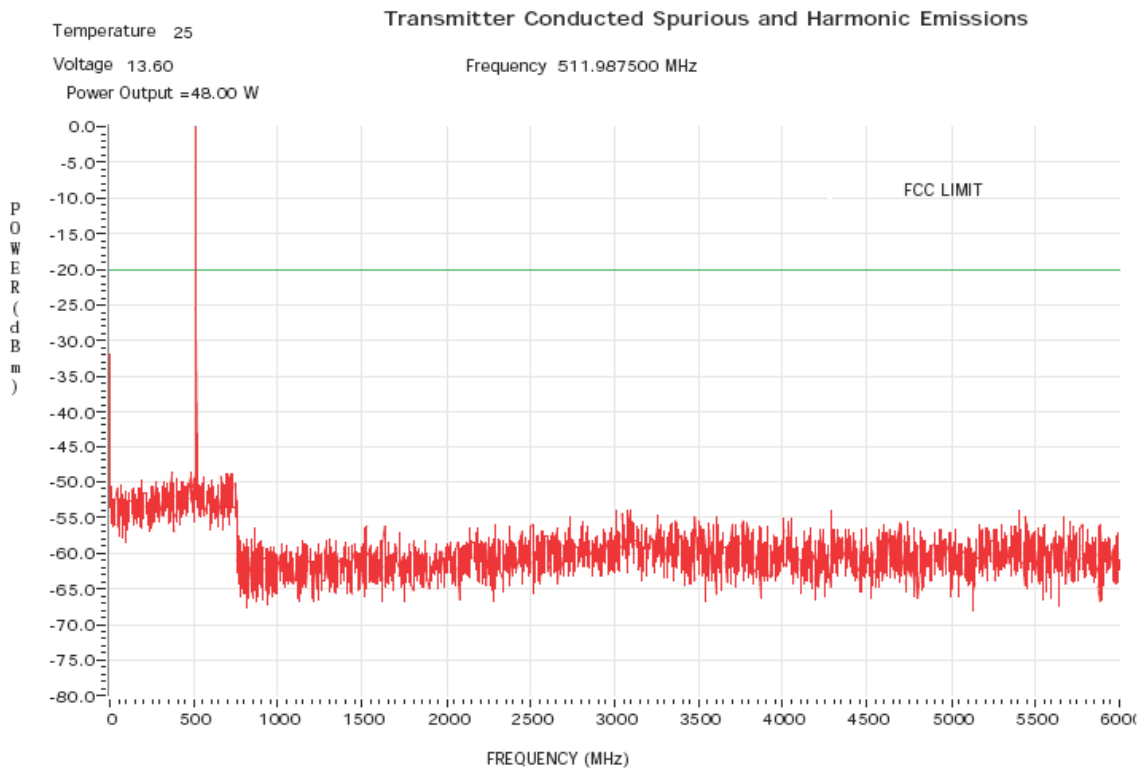


EXHIBIT 6F-23

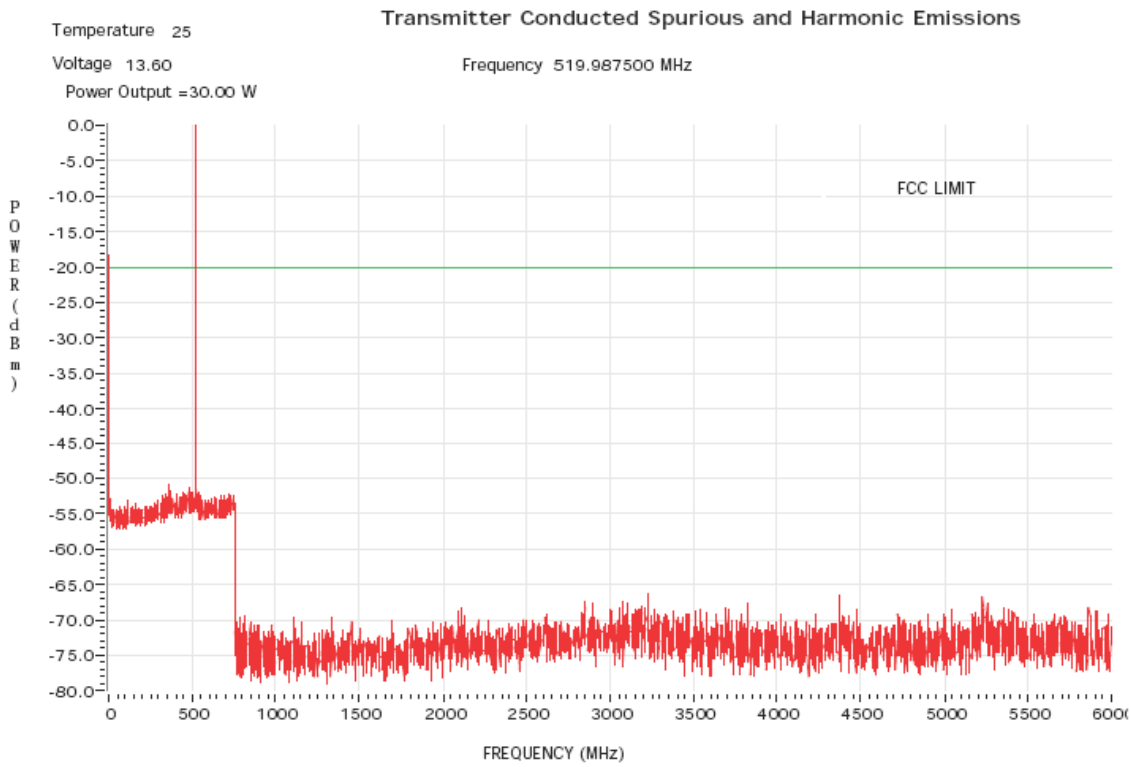
DIGITAL TDMA MODE – 484.9875 MHz



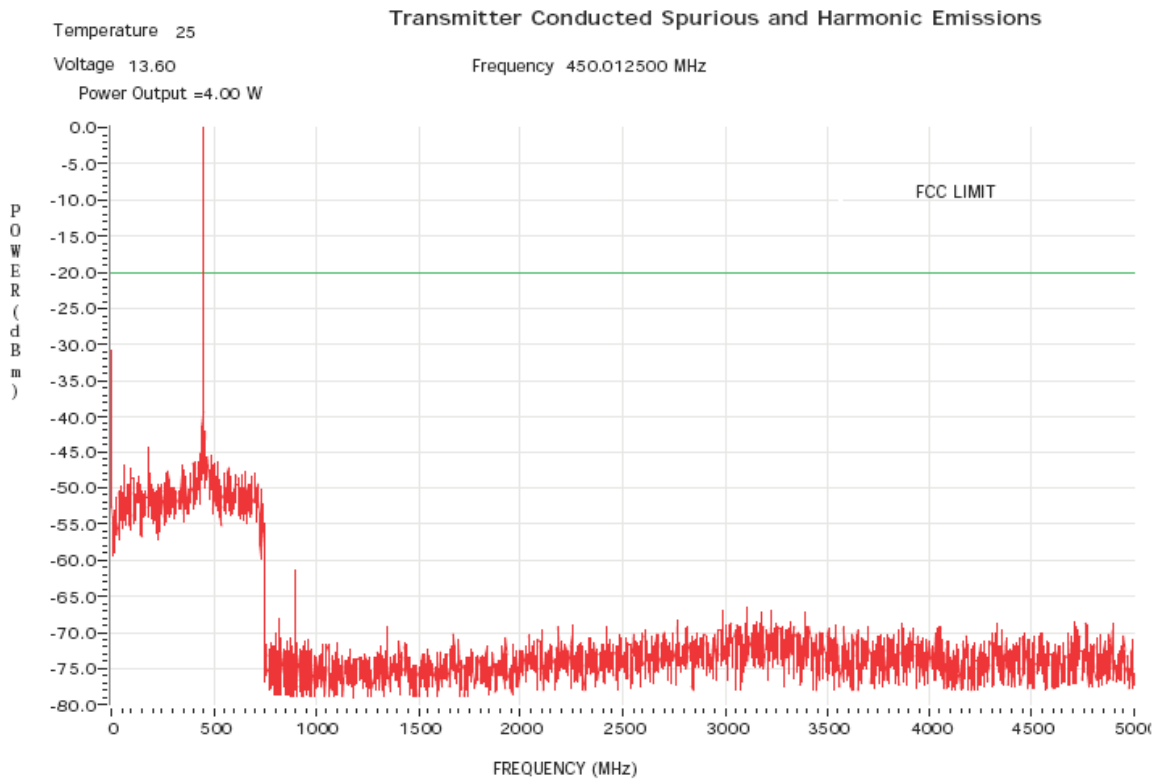
DIGITAL TDMA MODE – 511.9875 MHz



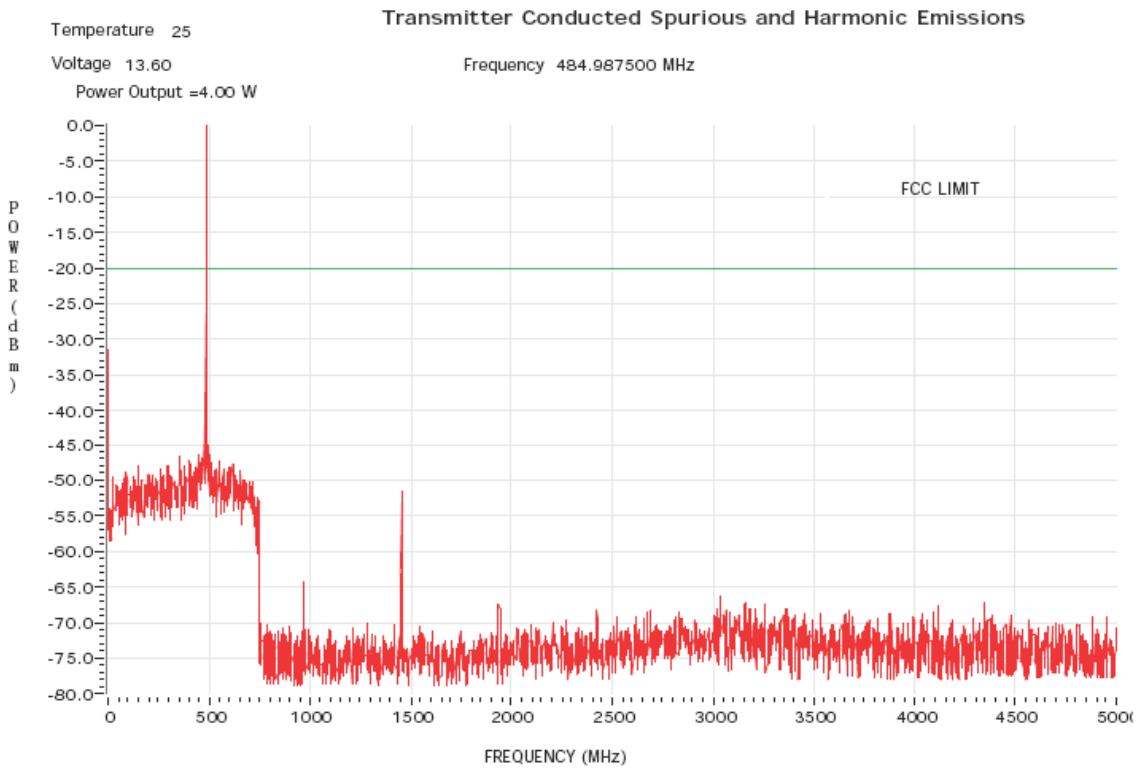
DIGITAL TDMA MODE – 519.9875 MHz



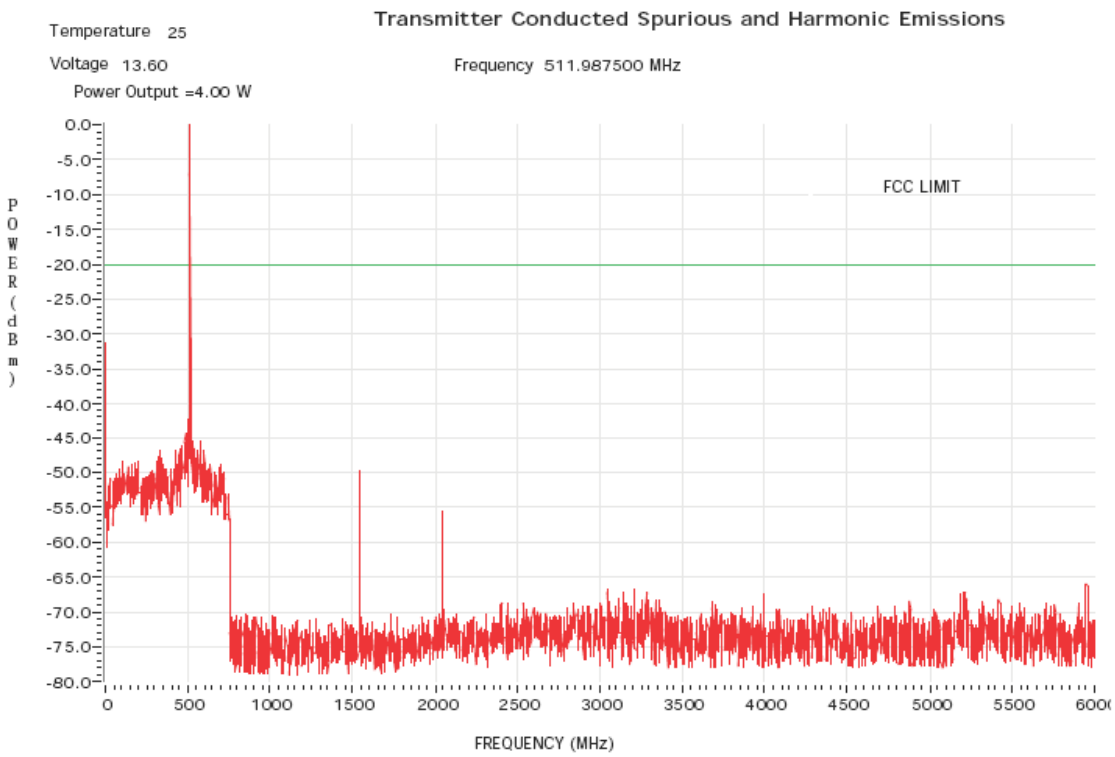
DIGITAL TDMA MODE – 450.0125 MHz



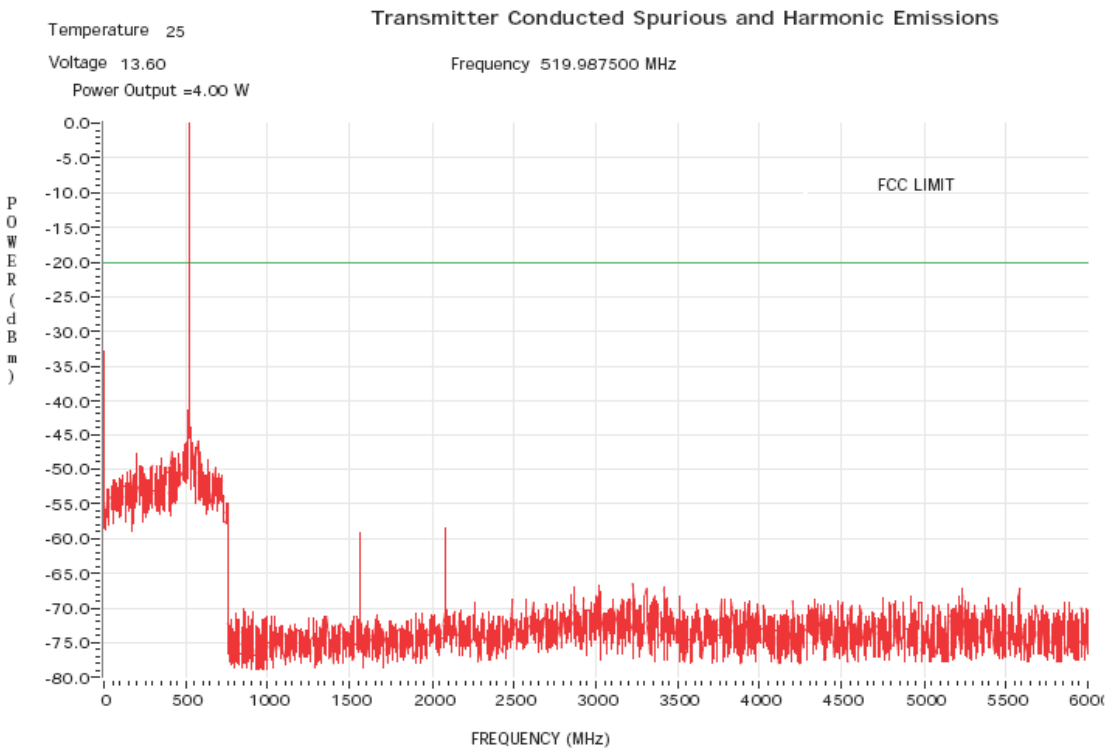
DIGITAL TDMA MODE – 484.9875 MHz



DIGITAL TDMA MODE – 511.9875 MHz



DIGITAL TDMA MODE – 519.9875 MHz

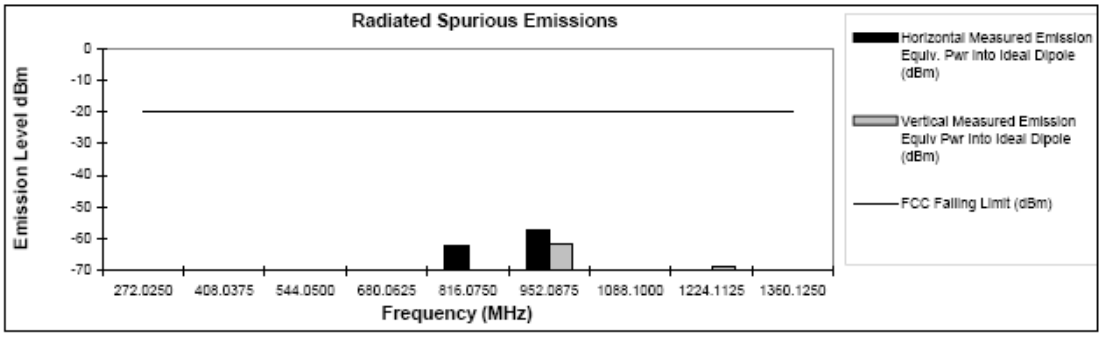


Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 57 Watts

136.0125 MHz **Channel Spacing 12.5kHz | S/N QM0KW05X**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
272.0250	-20	*	*
408.0375	-20	-76.84	-72.42
544.0500	-20	*	*
680.0625	-20	*	*
816.0750	-20	-62.12	*
952.0875	-20	-57.04	-61.42
1088.1000	-20	*	*
1224.1125	-20	-71.03	-68.77
1360.1250	-20	-74.99	*

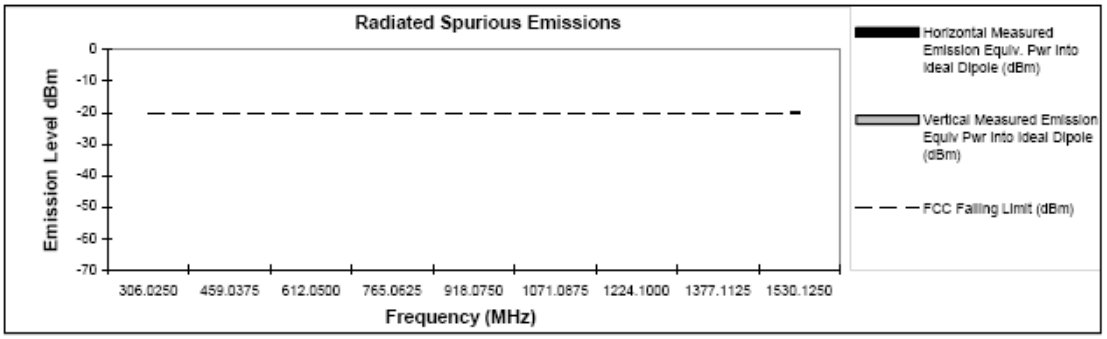


Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 57 Watts

153.0125 MHz **Channel Spacing 12.5kHz | S/N QM0KW05X**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
306.0250	-20	*	*
459.0375	-20	-81.30	*
612.0500	-20	*	*
765.0625	-20	-72.27	*
918.0750	-20	-71.57	*
1071.0875	-20	*	*
1224.1000	-20	-76.51	*
1377.1125	-20	*	*
1530.1250	-20	*	*



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

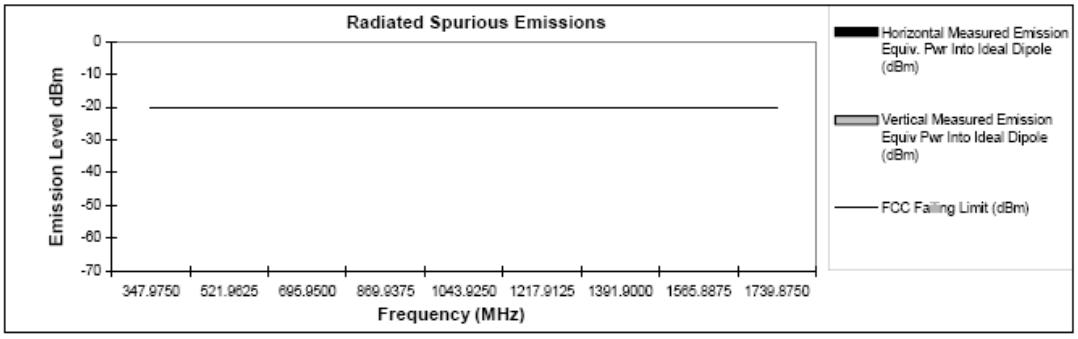
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 57 Watts

173.9875 MHz **Channel Spacing 12.5kHz | S/N QM0KW05X**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
347.9750	-20	*	*
521.9625	-20	*	*
695.9500	-20	*	*
869.9375	-20	*	*
1043.9250	-20	*	*
1217.9125	-20	*	*
1391.9000	-20	*	*
1565.8875	-20	*	*
1739.8750	-20	*	*



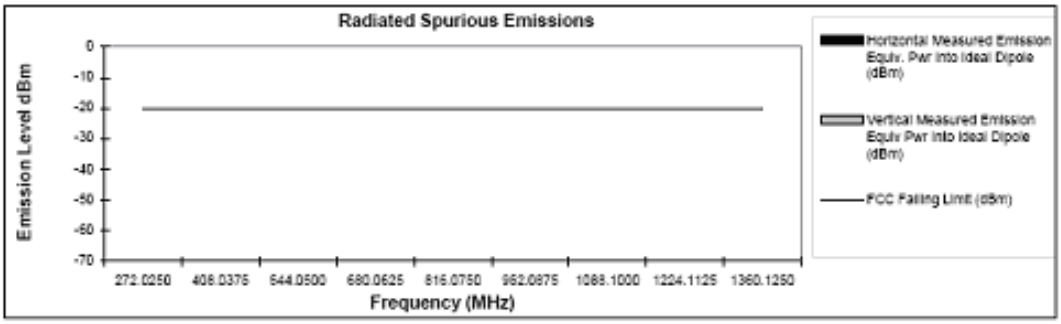
* Indicates the spurious emission could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: Mackinaw APX7500
Tx Power: 11 Watts

136.0125 MHz **Channel Spacing 12.5kHz | S/N QM0KW05X**

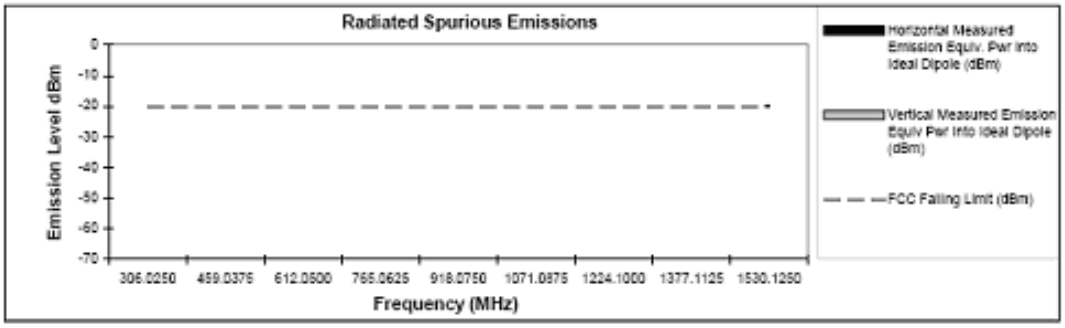
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
272.0250	-20	*	*
408.0375	-20	*	*
544.0500	-20	*	*
680.0625	-20	*	*
816.0750	-20	*	*
952.0875	-20	*	*
1088.1000	-20	*	*
1224.1125	-20	*	*
1360.1250	-20	*	*



Transmit Radiated Spurious Emissions: Mackinaw APX7500
Tx Power: 11 Watts

153.0125 MHz **Channel Spacing 12.5kHz | S/N QM0KW05X**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
306.0250	-20	*	*
459.0375	-20	*	*
612.0500	-20	*	*
765.0625	-20	*	*
918.0750	-20	*	*
1071.0875	-20	*	*
1224.1000	-20	*	*
1377.1125	-20	*	*
1530.1250	-20	*	*



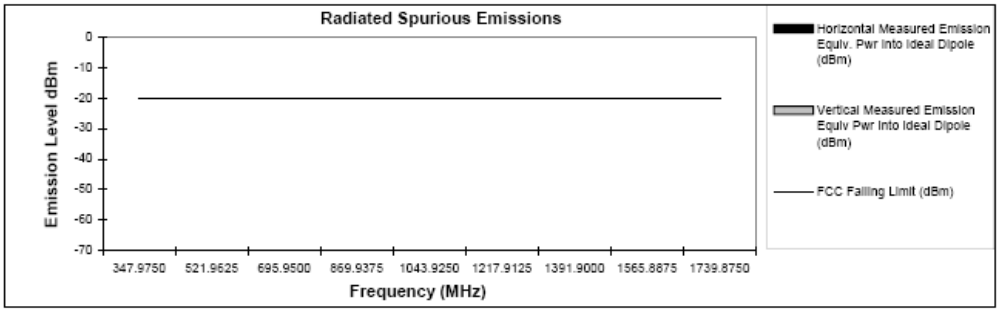
* Indicates the spurious emission could not be detected due to noise limitations or ambients.

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

Transmit Radiated Spurious Emissions: Mackinaw APX7500
Tx Power: 11 Watts

173.9875 MHz **Channel Spacing 12.5kHz | S/N QM0KW05X**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
347.9750	-20	*	*
521.9625	-20	*	*
695.9500	-20	*	*
869.9375	-20	*	*
1043.9250	-20	*	*
1217.9125	-20	*	*
1391.9000	-20	*	*
1565.8875	-20	*	*
1739.8750	-20	*	*



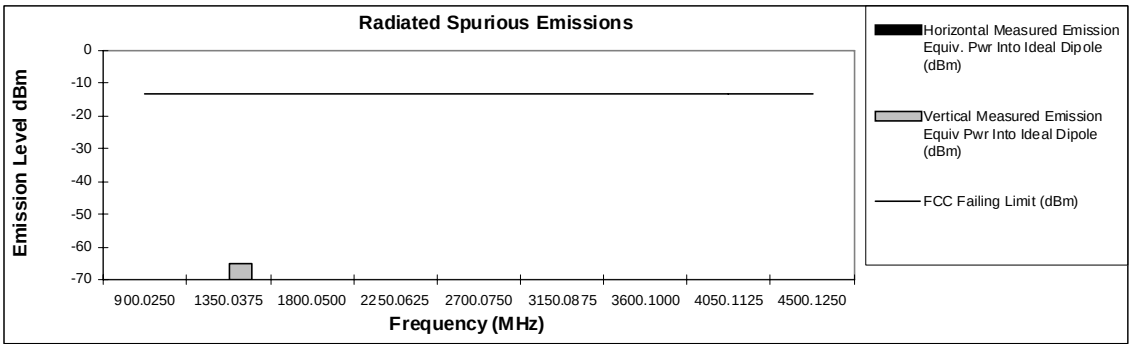
* Indicates the spurious emission could not be detected due to noise limitations or ambients.
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 54 Watts

450.0125 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
900.0250	-13	-71.63	-71.88
1350.0375	-13	-70.01	-64.90
1800.0500	-13	*	*
2250.0625	-13	*	*
2700.0750	-13	*	*
3150.0875	-13	*	*
3600.1000	-13	*	*
4050.1125	-13	*	*
4500.1250	-13	*	*



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

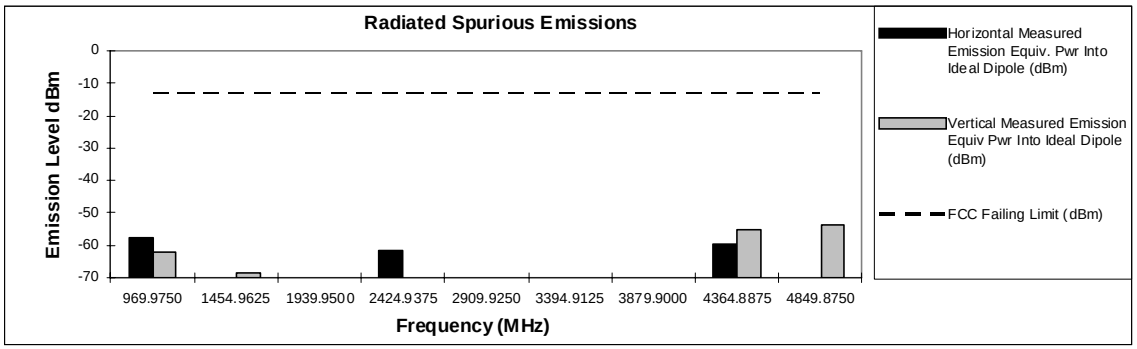
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 54 Watts

484.9875 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
969.9750	-13	-57.60	-62.31
1454.9625	-13	-71.76	-68.74
1939.9500	-13	*	*
2424.9375	-13	-61.56	*
2909.9250	-13	*	*
3394.9125	-13	*	*
3879.9000	-13	*	*
4364.8875	-13	-59.78	-55.17
4849.8750	-13	*	-53.84



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

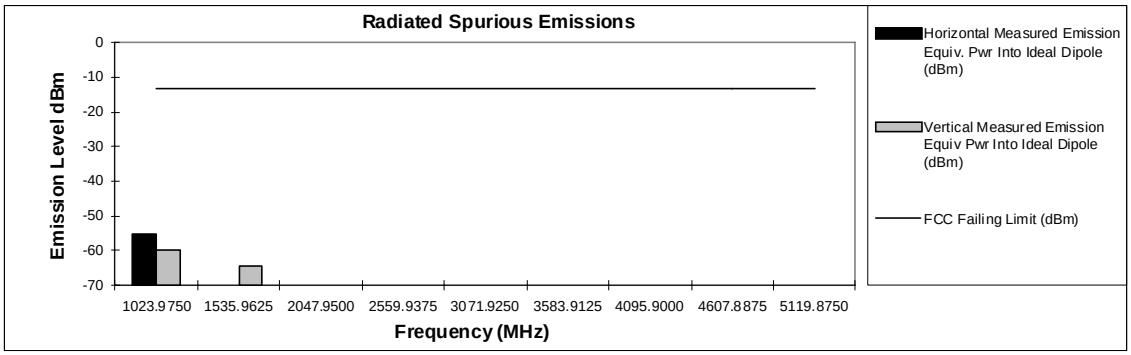
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 48 Watts

511.9875 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1023.9750	-13	-55.24	-59.73
1535.9625	-13	-70.22	-64.30
2047.9500	-13	*	*
2559.9375	-13	*	*
3071.9250	-13	*	*
3583.9125	-13	*	*
4095.9000	-13	*	*
4607.8875	-13	*	*
5119.8750	-13	*	*



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

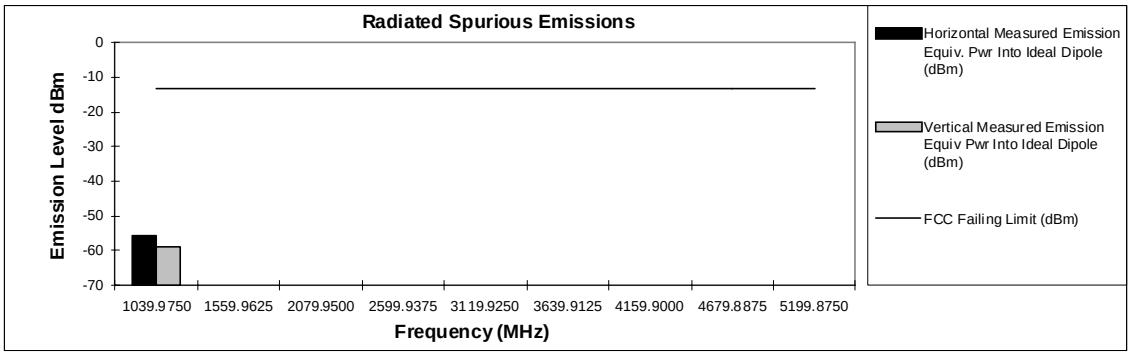
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 30 Watts

519.9875 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1039.9750	-13	-55.65	-58.90
1559.9625	-13	-74.49	-70.38
2079.9500	-13	*	*
2599.9375	-13	*	*
3119.9250	-13	*	*
3639.9125	-13	*	*
4159.9000	-13	*	*
4679.8875	-13	*	*
5199.8750	-13	*	*



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

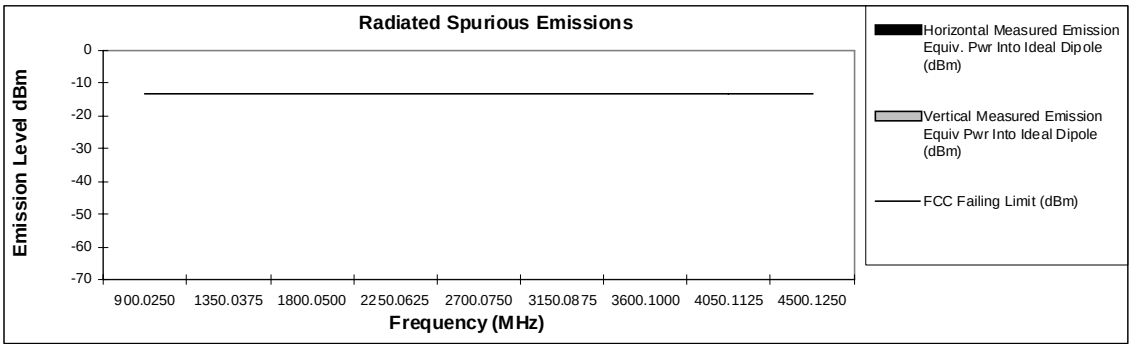
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 4 Watts

450.0125 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
900.0250	-13	-70.24	*
1350.0375	-13	*	*
1800.0500	-13	*	*
2250.0625	-13	*	*
2700.0750	-13	*	*
3150.0875	-13	*	*
3600.1000	-13	*	*
4050.1125	-13	*	*
4500.1250	-13	*	*



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

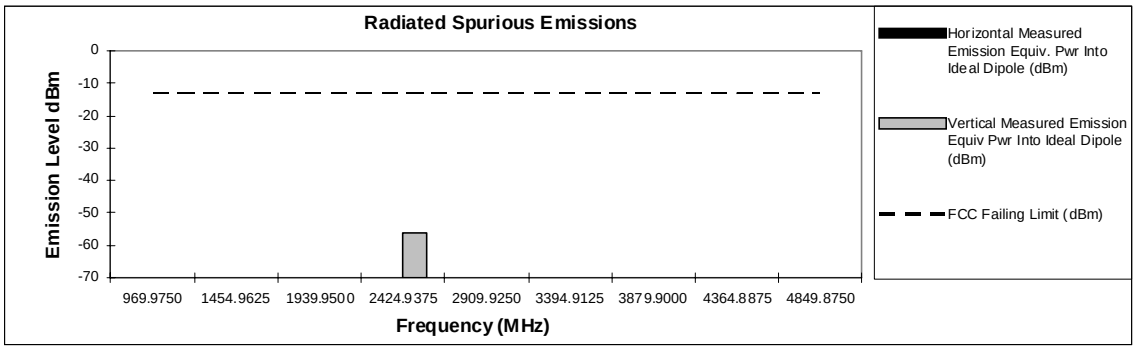
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 4 Watts

484.9875 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
969.9750	-13	*	*
1454.9625	-13	*	*
1939.9500	-13	*	*
2424.9375	-13	*	-56.21
2909.9250	-13	*	*
3394.9125	-13	*	*
3879.9000	-13	*	*
4364.8875	-13	*	*
4849.8750	-13	*	*



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

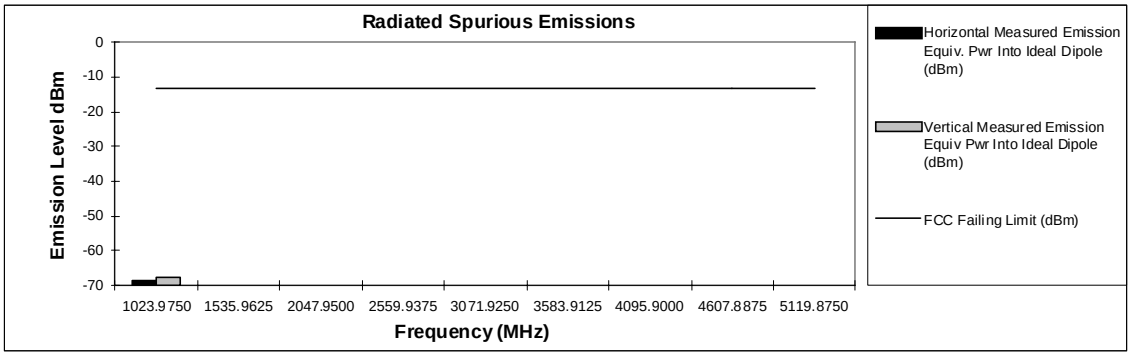
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 4 Watts

511.9875 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1023.9750	-13	-68.60	-67.80
1535.9625	-13	*	*
2047.9500	-13	*	*
2559.9375	-13	*	*
3071.9250	-13	*	*
3583.9125	-13	*	*
4095.9000	-13	*	*
4607.8875	-13	*	*
5119.8750	-13	*	*



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

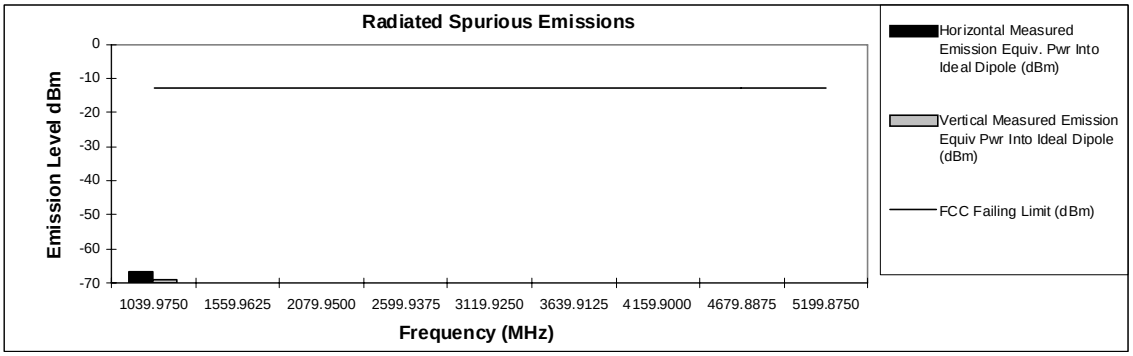
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

Transmit Radiated Spurious Emissions: Mackinaw APX7500

Tx Power: 4 Watts

519.9875 MHz **Channel Spacing 12.5KHz | S/N QMKNJ02R**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1039.9750	-13	-66.43	-68.89
1559.9625	-13	*	*
2079.9500	-13	*	*
2599.9375	-13	*	*
3119.9250	-13	*	*
3639.9125	-13	*	*
4159.9000	-13	*	*
4679.8875	-13	*	*
5199.8750	-13	*	*

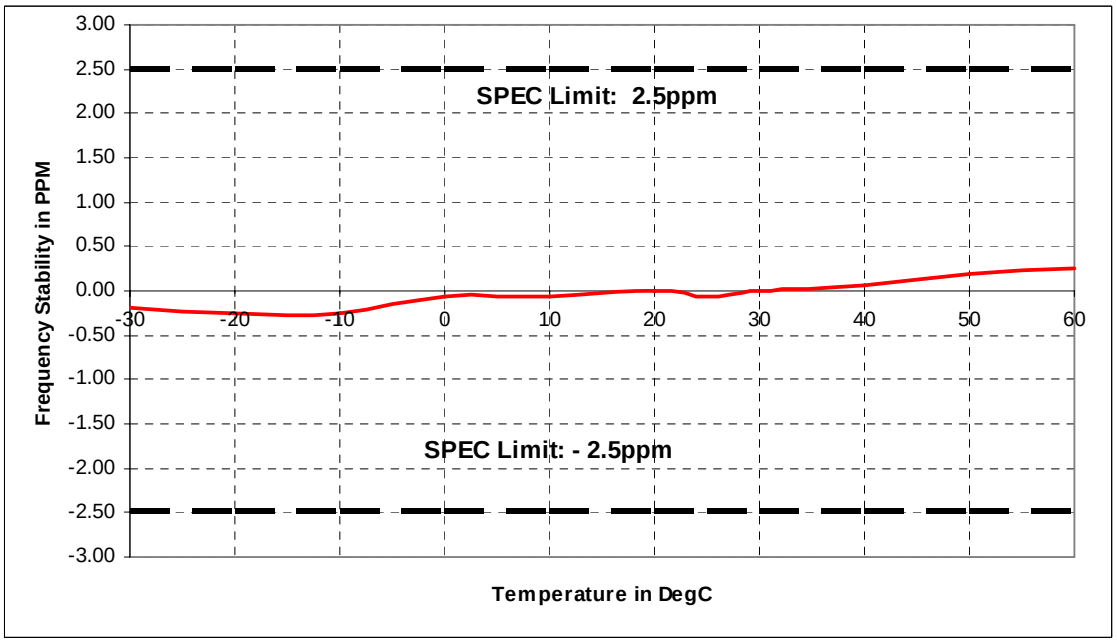


* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

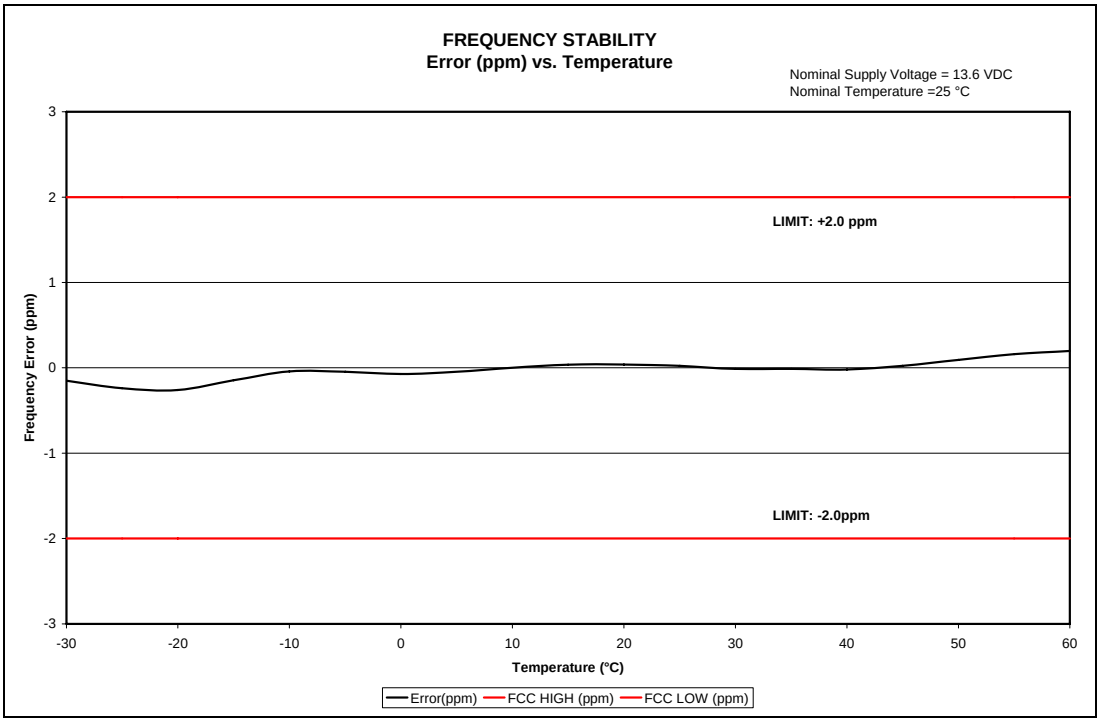
The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.

FREQUENCY STABILITY

155.0125 MHz

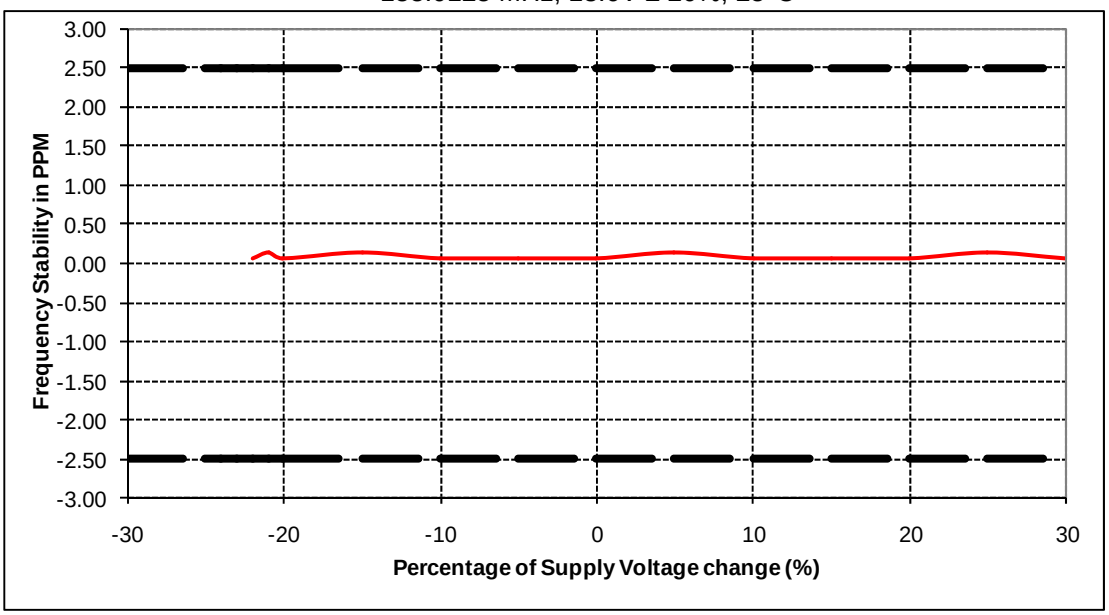


484.9875 MHz

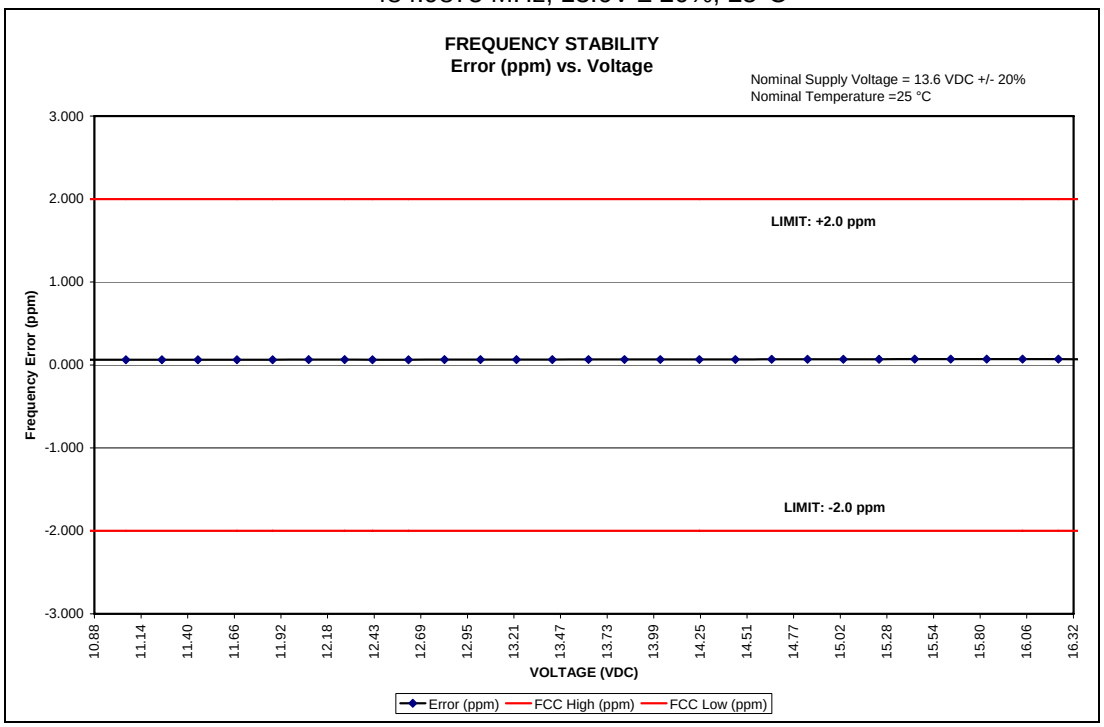


FREQUENCY STABILITY

155.0125 MHz, 13.6V ± 20%, 25°C

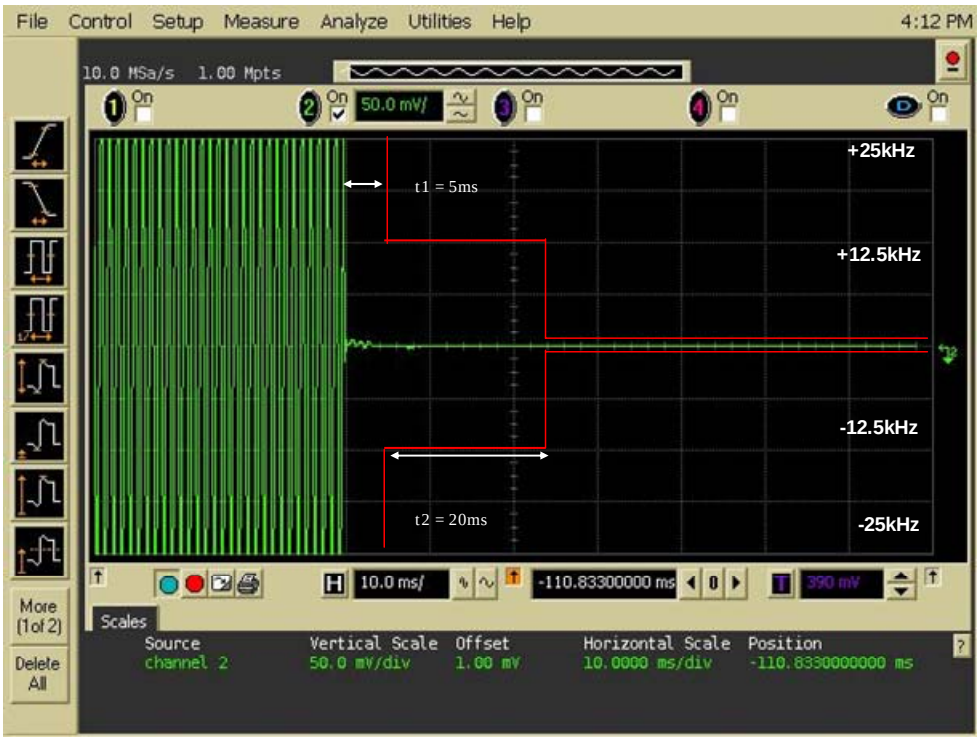


484.9875 MHz, 13.6V ± 20%, 25°C

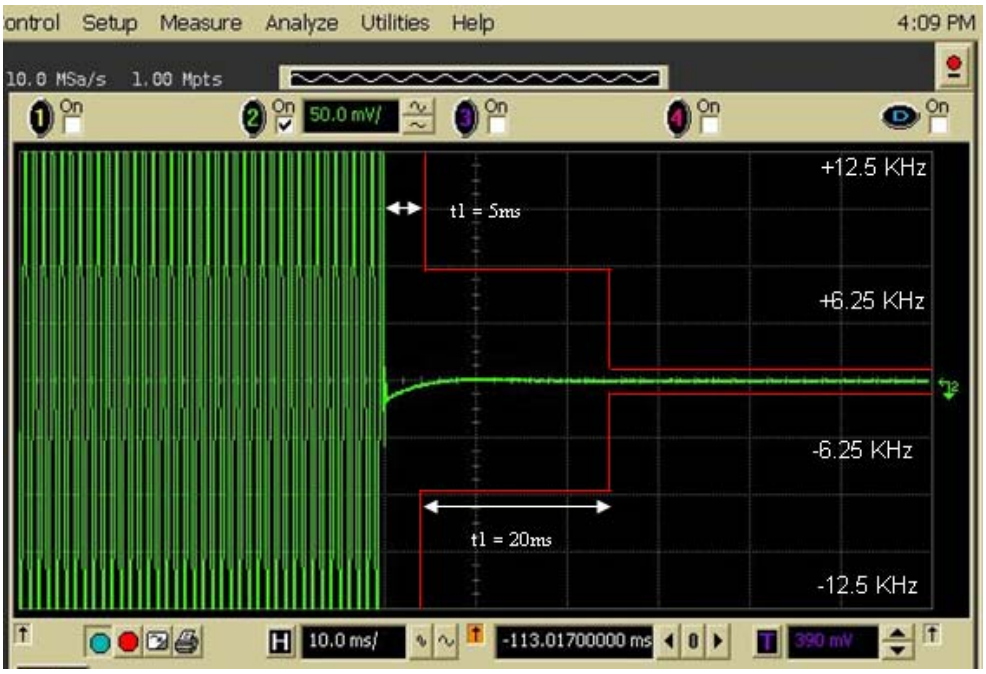


TRANSIENT FREQUENCY BEHAVIOR

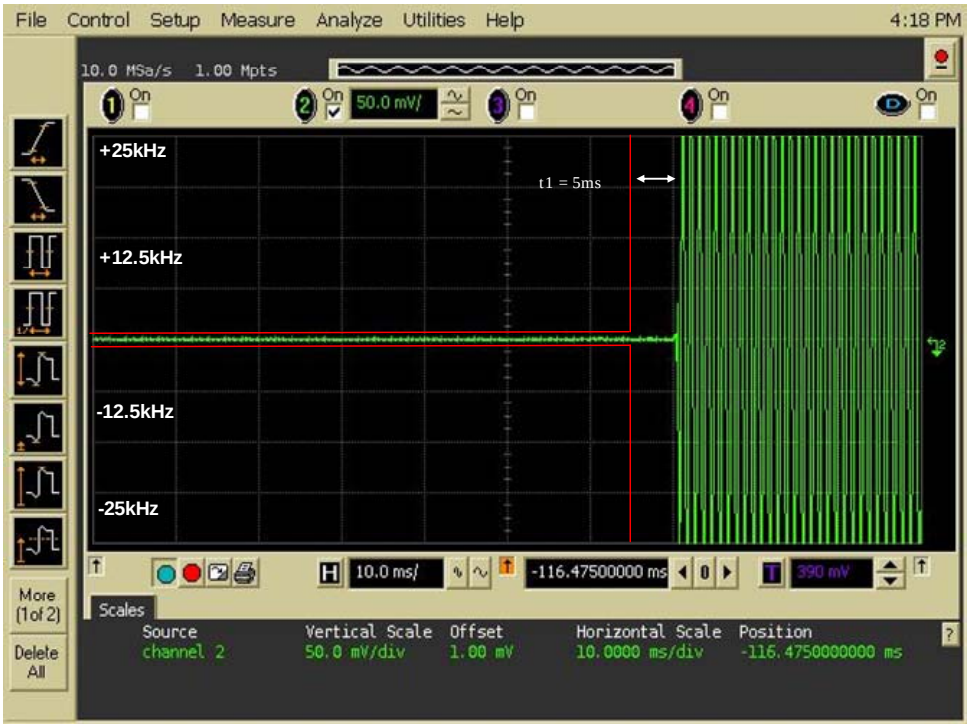
Transient Frequency Behavior – 25 kHz Channelization – Key-up – 155.0125MHz/ 60 Watts



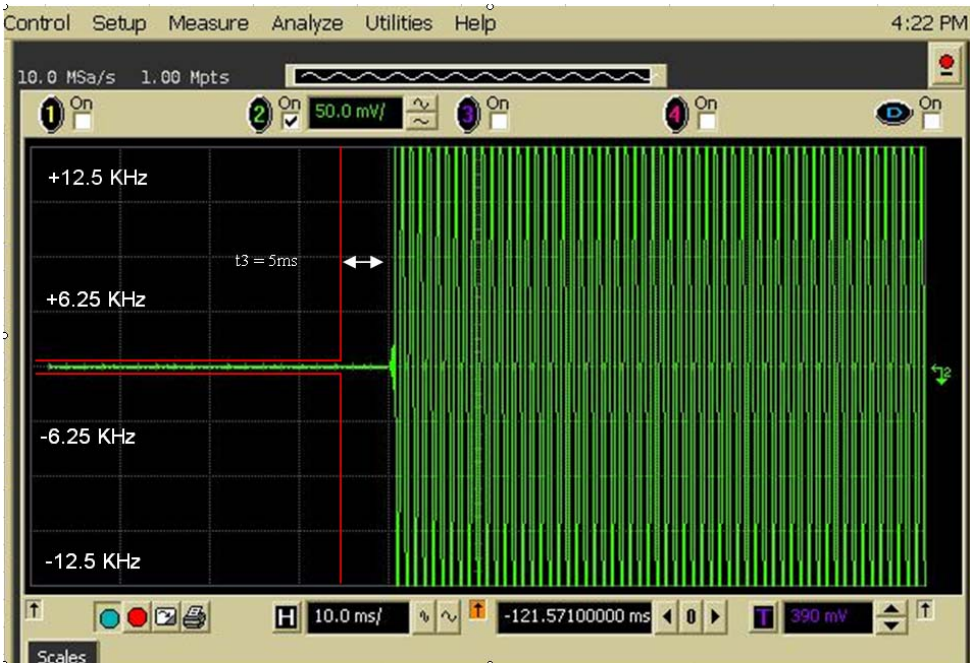
Transient Frequency Behavior – 12.5 kHz Channelization – Key-up – 155.0125 MHz/ 60 Watts



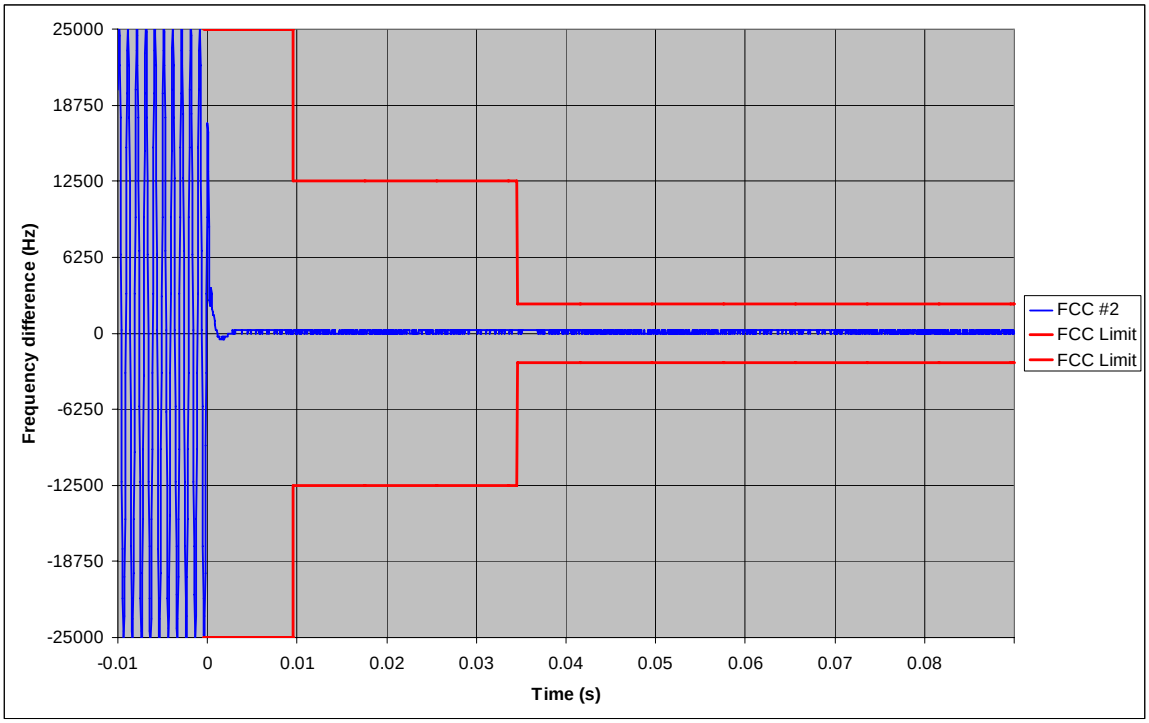
Transient Frequency Behavior – 25 kHz Channelization – De-Key – 155.0125 MHz/ 60 Watts



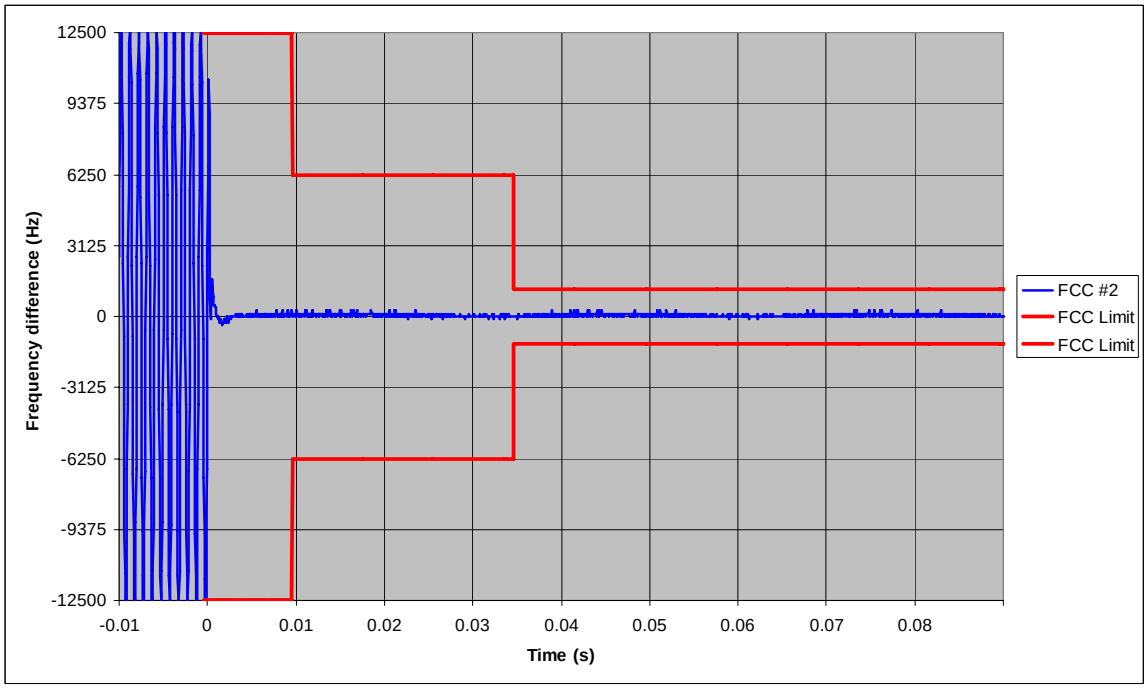
Transient Frequency Behavior – 12.5 kHz Channelization – De-Key – 155.0125 MHz/ 60 Watts



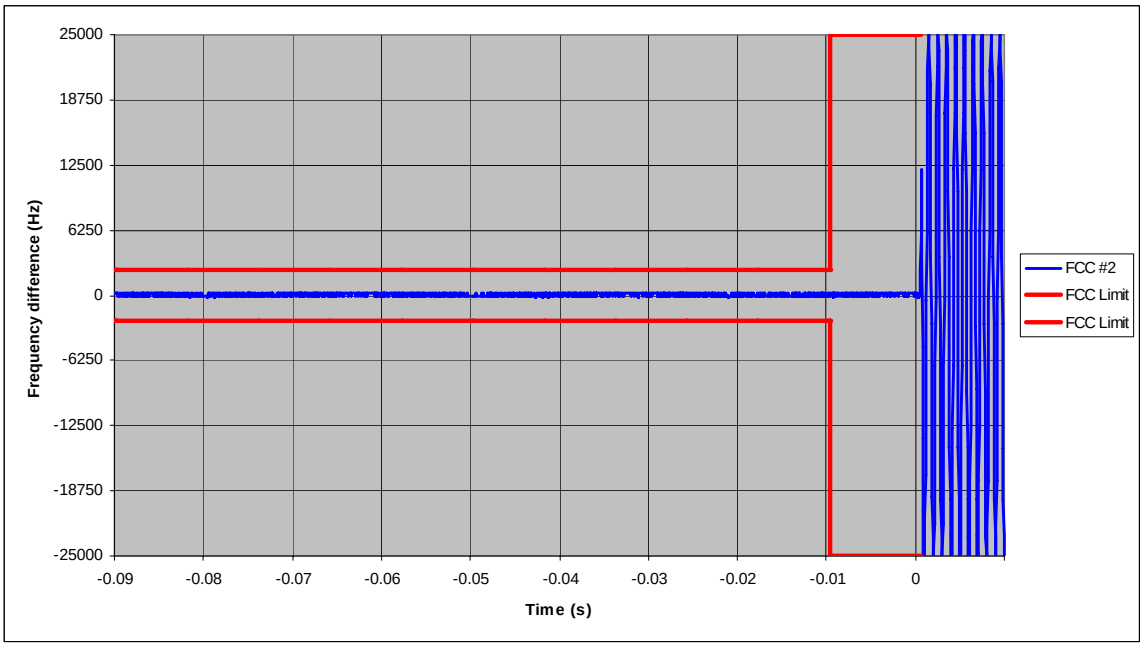
Transient Frequency Behavior – 25 kHz Channelization – Key-up – 484.9875 MHz/ 54 Watts



Transient Frequency Behavior – 12.5 kHz Channelization – Key-up – 484.9875 MHz/ 54 Watts



Transient Frequency Behavior – 25 kHz Channelization – De-Key – 484.9875 MHz/ 54 Watts



Transient Frequency Behavior – 12.5 kHz Channelization – De-Key – 484.9875 MHz/ 54 Watts