Submitted Measured Data

MEASUREMENT		EXHIBIT	NUMBER OF PAGES
1.	RF Power Output Data	6A	1
2.	Audio Frequency Response	6B	1
3.	Audio Low Pass Filter Response	6C	1
4.	Modulation Limiting	6D	1
5.	Occupied Bandwidth	6E	5
6.	Radiated Spurious Emissions	6F	2
7.	Conducted Spurious Emissions	6G	2
8.	Power Line Conducted Emissions	6H	1
9.	Frequency Stability (Volt/Temp)	6I	1
10.	Transient Frequency Behavior	6J	2

RF Power Output Data

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

484.975 MHz

Measured RF output	5.3 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	1.79 Amps
Primary Supply Voltage	7.5 Volts
Measured RF output	3.0 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	1.30 Amps
Primary Supply Voltage	7.5 Volts
Measured RF output	1.0 Watt
Nominal DC voltage	7.5 Volts
Nominal DC Current	0.80 Amps
Primary Supply Voltage	7.5 Volts

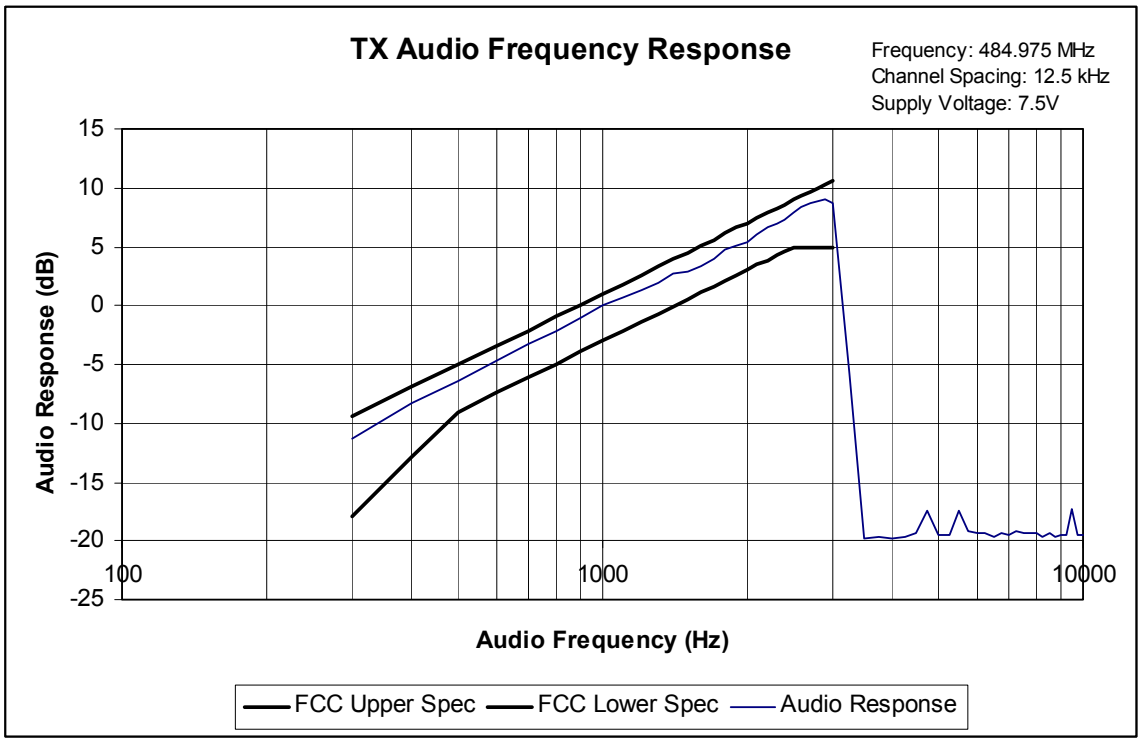


EXHIBIT 6B-1

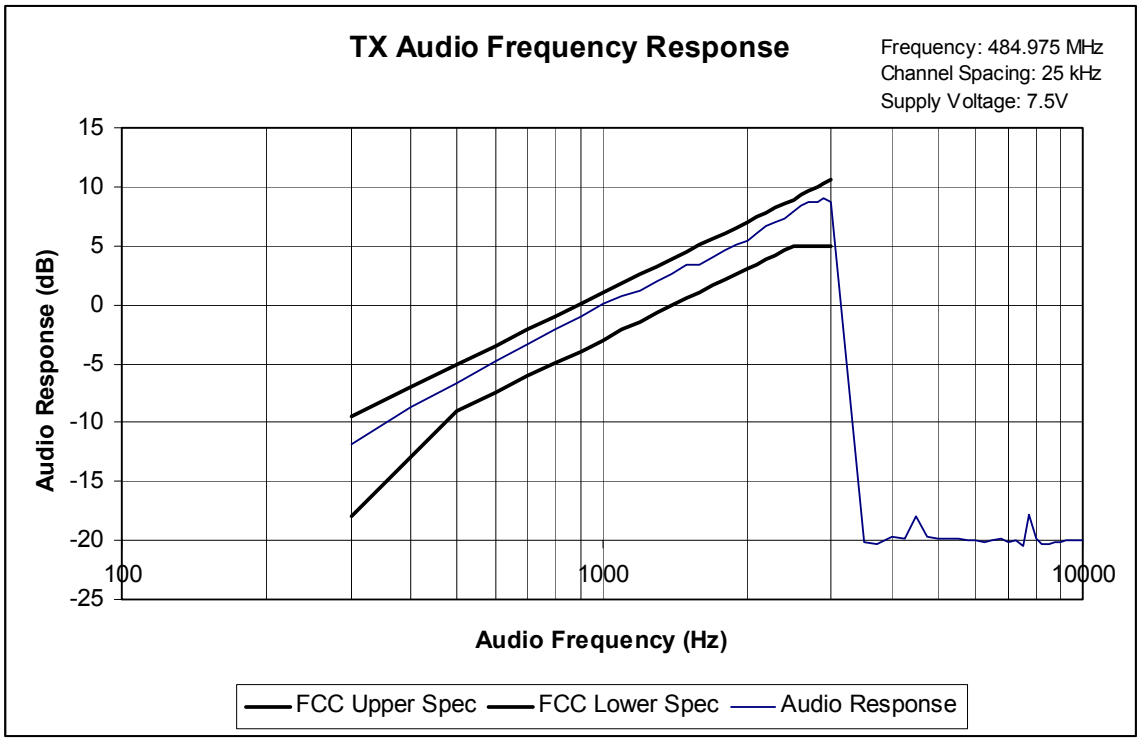


EXHIBIT 6B-2

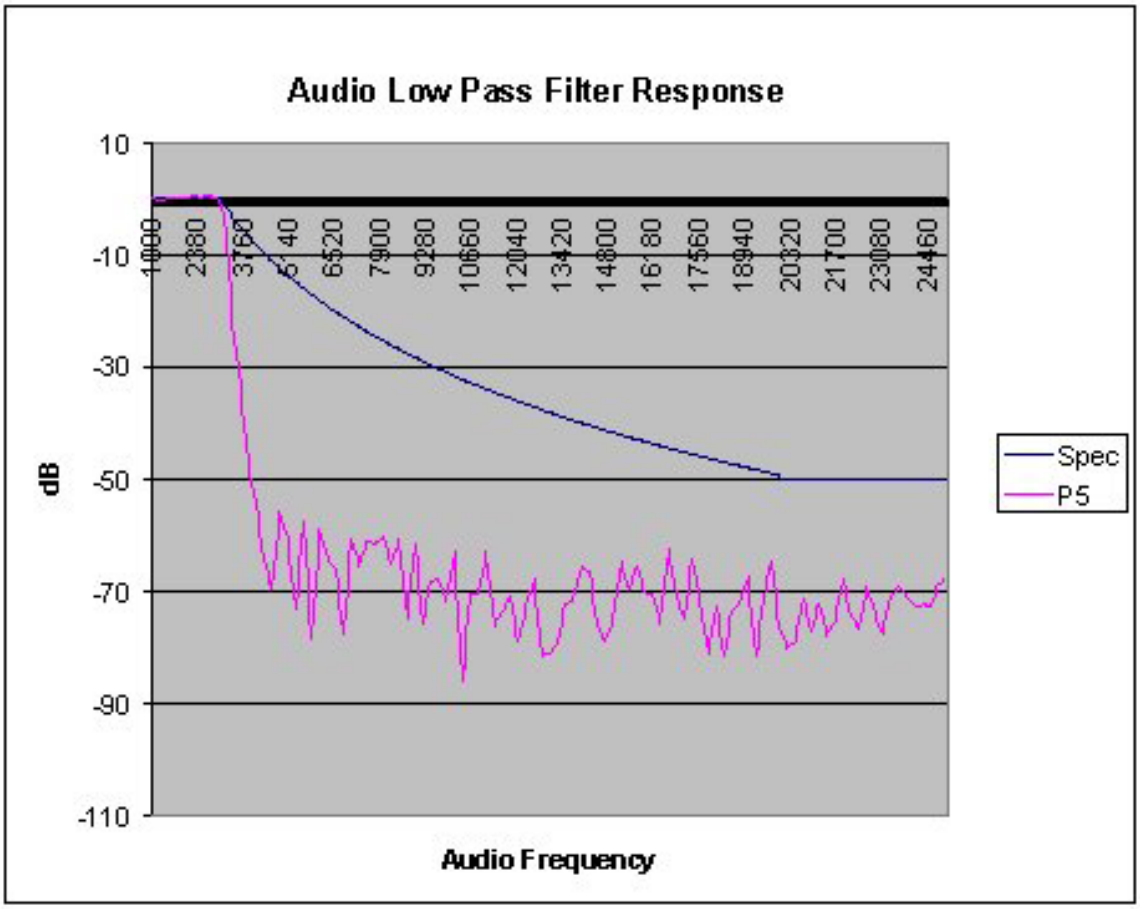
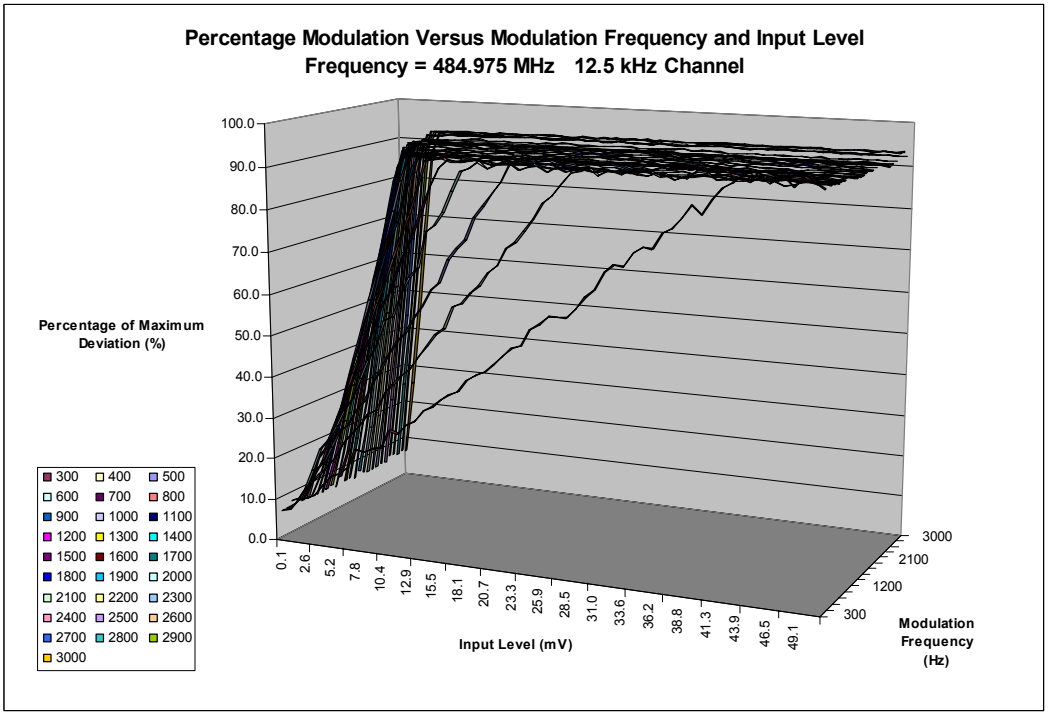
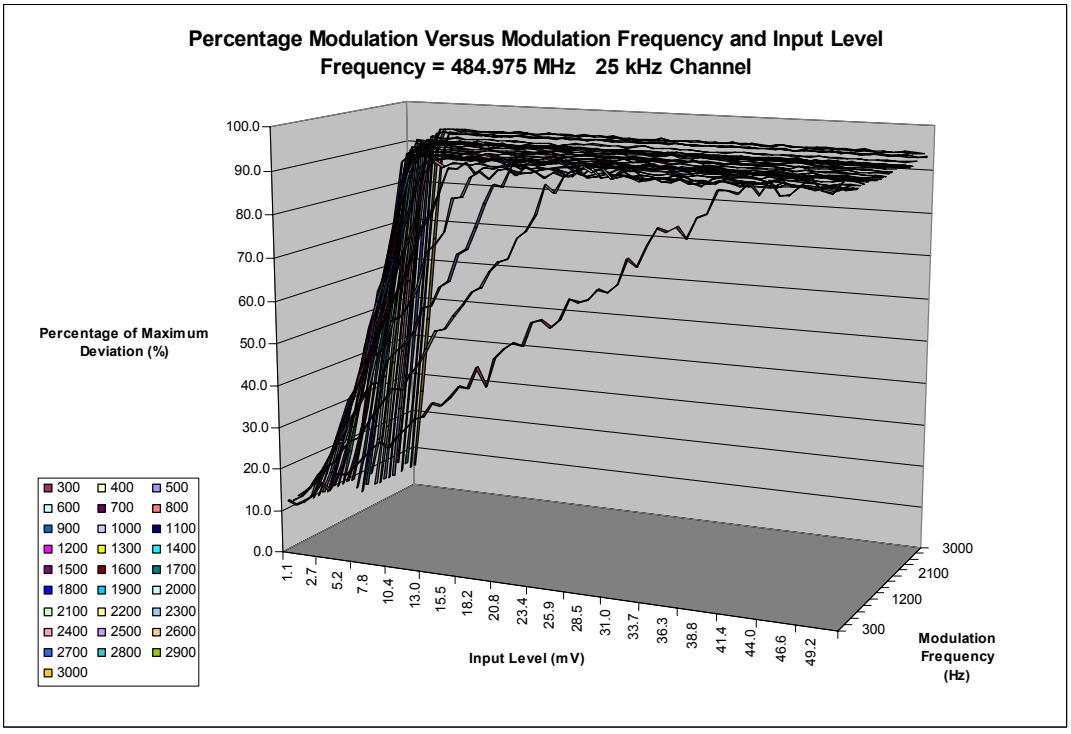

Audio Low Pass Filter Response
10
-10
-30
-50
-70
-90
-110
dB
1000
2380
3760
5140
6520
7900
9280
10660
12040
13420
14800
16180
17560
18940
20320
21700
23080
24460
Audio Frequency
Spec
P5

EXHIBIT 6C



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

EXHIBIT 6D-1



The Percentage of Max. Deviation on the "Z" axis is referenced to 5.0kHz for 25kHz bandwidth

EXHIBIT 6D-2

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: AZ489FT5804.

EXHIBIT 6E-1
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-2
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-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 TSB102.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 TSB102.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 Modulation (20 kHz Channelization, Digital Voice with encryption):
Emission Designator 20K0F1E

In this case, the maximum modulating frequency is 6 kHz with a 4 kHz deviation.

BW = 2(M+D) = 2*(6 kHz + 4 kHz) = 20 kHz ===> 20K0
F1E portion of the designator indicates digital voice.

Therefore, the entire designator for 20 kHz channelization analog voice is 20K0F1E.

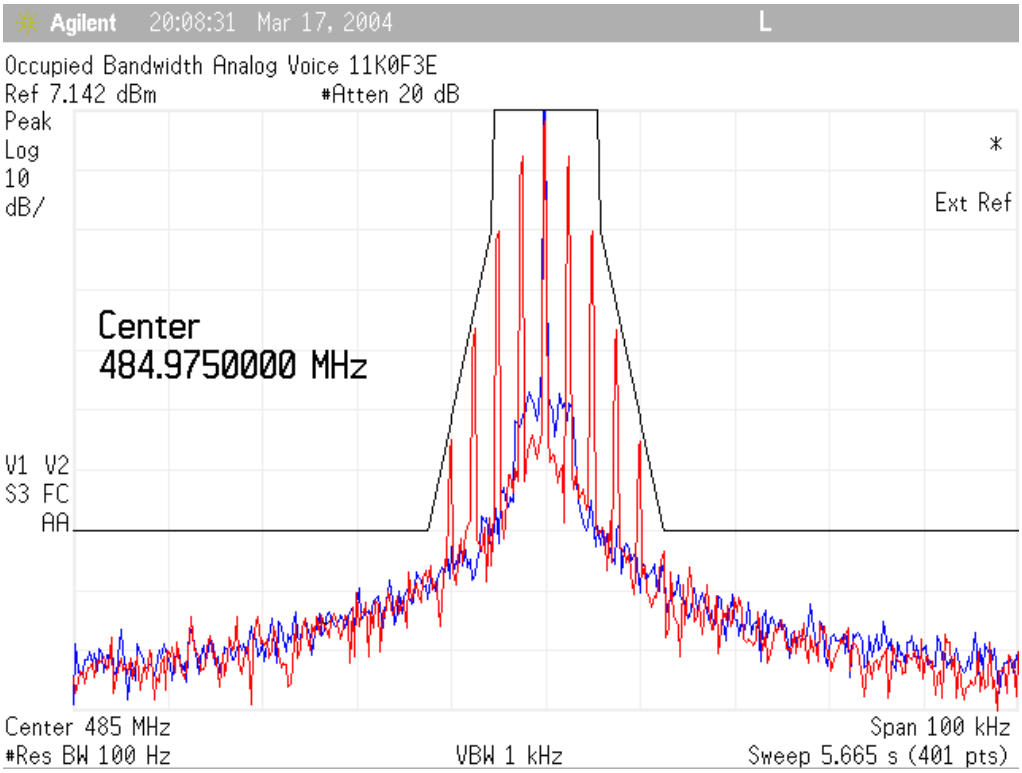


EXHIBIT 6E-1

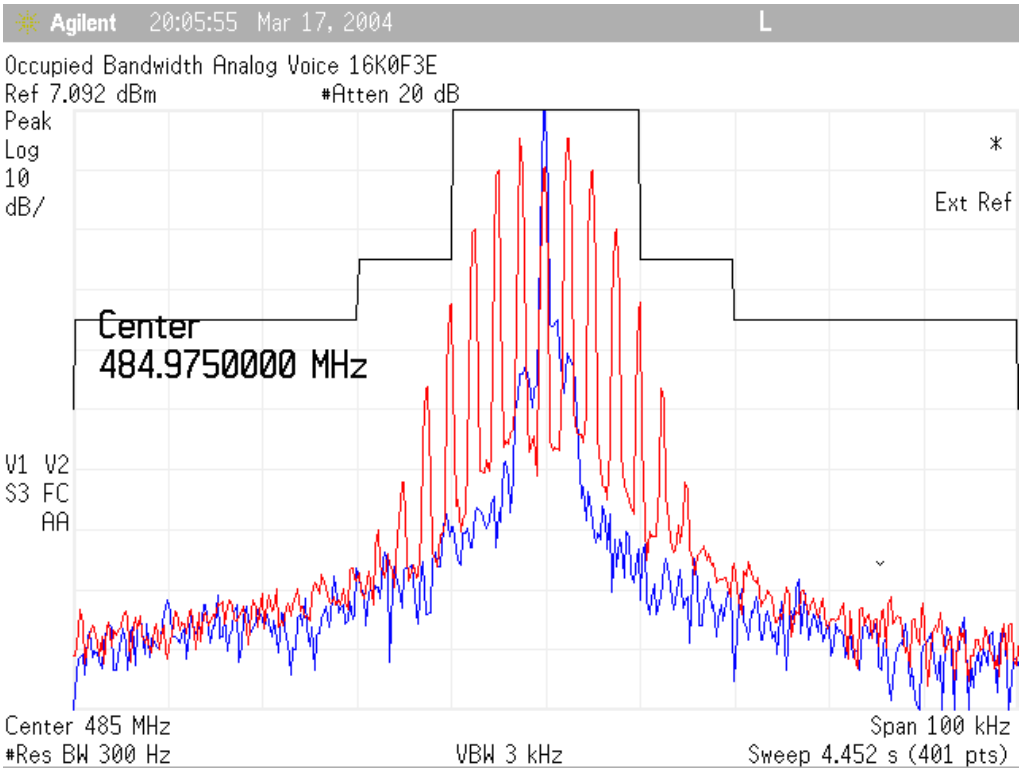


EXHIBIT 6E-2

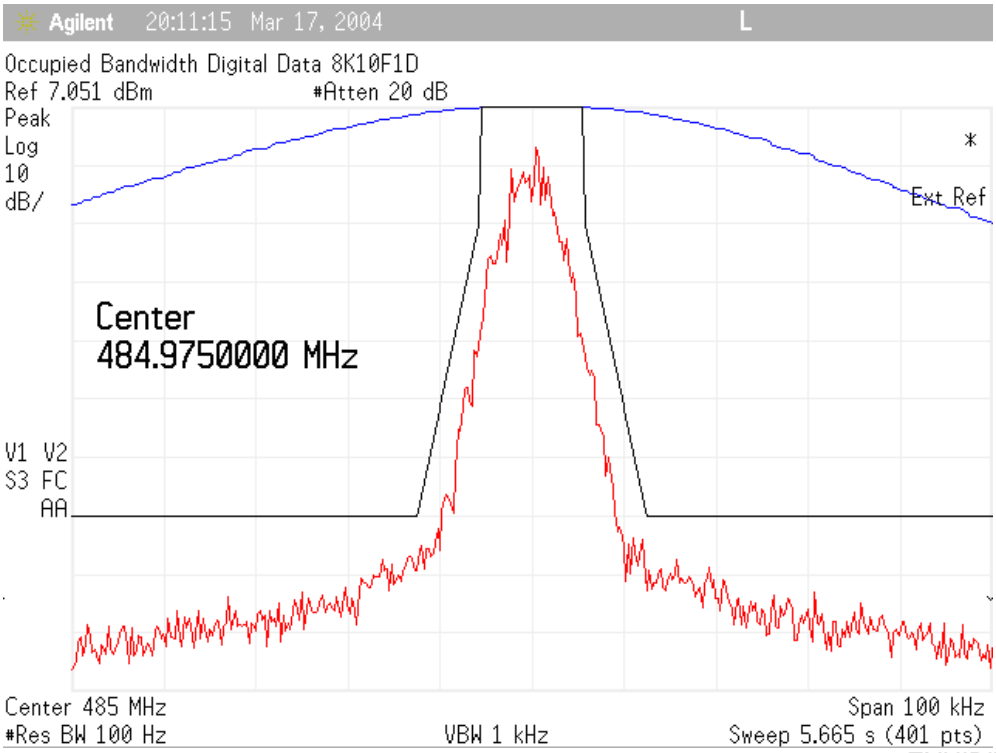


EXHIBIT 6E-3

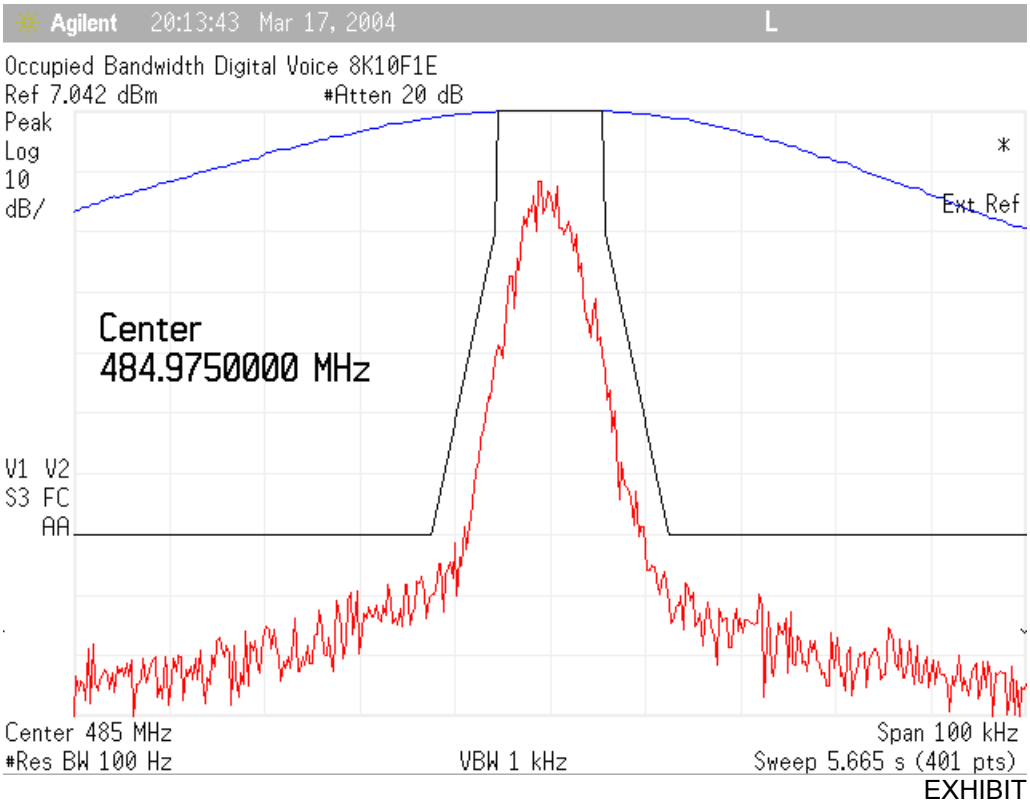


EXHIBIT 6E-4

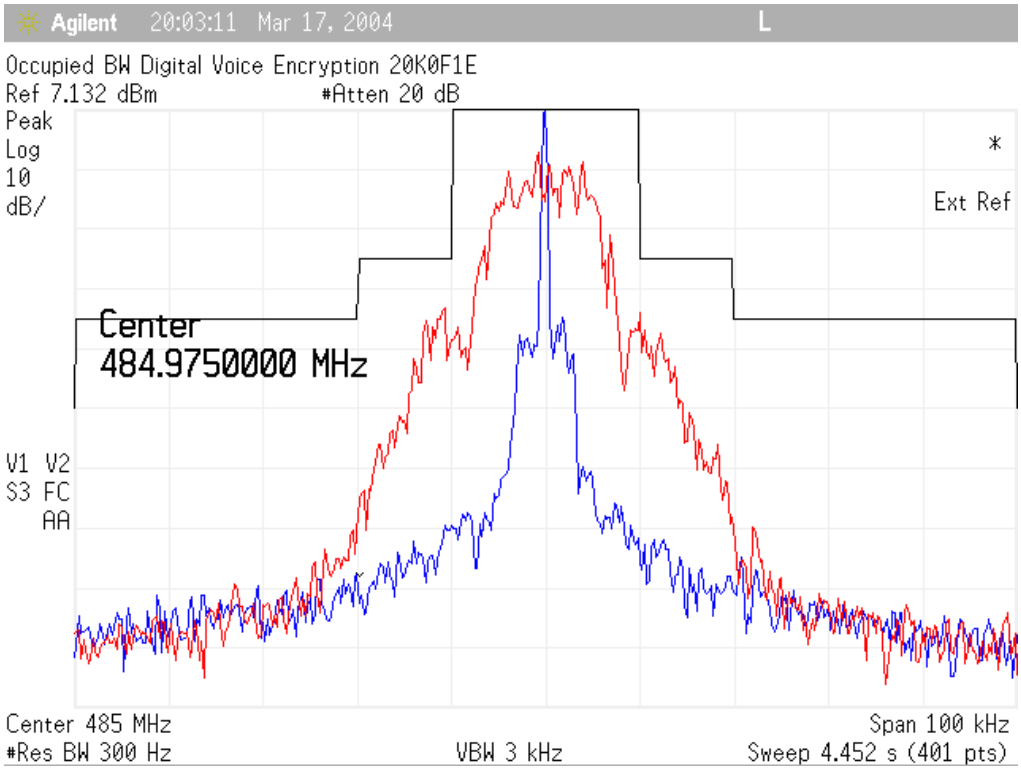
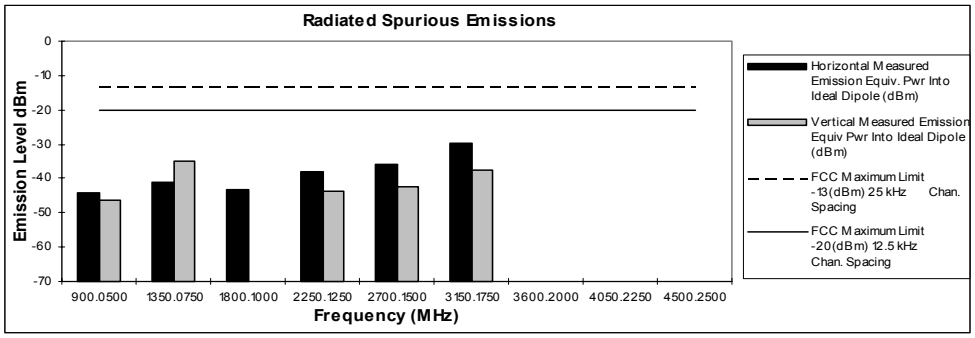

Agilent 20:03:11 Mar 17, 2004
L
Occupied BW Digital Voice Encryption 20K0F1E
Ref 7.132 dBm
#Atten 20 dB
Peak
Log
10
dB/
*
Ext Ref
Center
484.9750000 MHz
V1 V2
S3 FC
AA
Center 485 MHz
Span 100 kHz
#Res BW 300 Hz
VBW 3 kHz
Sweep 4.452 s (401 pts)

EXHIBIT 6E-5

Transmitter Radiated Spurious Emissions: XTS5000

450.025 MHz **5.3 Watts** **Channel Spacing 12.5kHZ | S/N #68**

Frequency (MHz)	FCC Maximum Limit -13(dBm) 25 kHz Chan. Spacing	FCC Maximum Limit -20(dBm) 12.5 kHz Chan. Spacing	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
900.0500	-13	-20	-44.00	-46.17
1350.0750	-13	-20	-41.33	-35.22
1800.1000	-13	-20	-43.40	*
2250.1250	-13	-20	-37.94	-43.83
2700.1500	-13	-20	-35.76	-42.52
3150.1750	-13	-20	-29.92	-37.49
3600.2000	-13	-20	*	*
4050.2250	-13	-20	*	*
4500.2500	-13	-20	*	*



* 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.

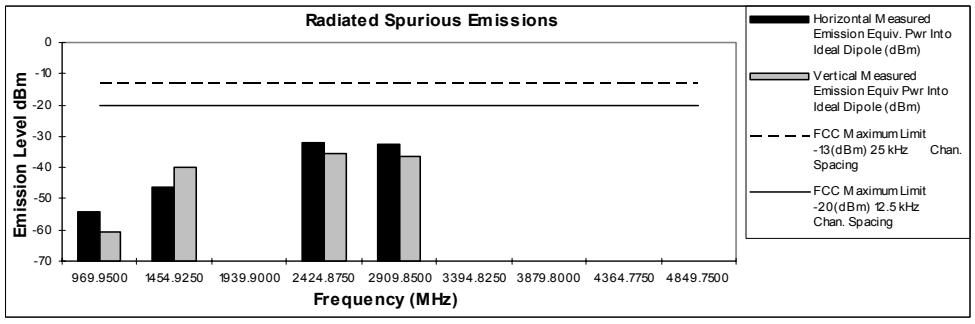
Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan **March 18, 2004**
FCC Registration: 91932 / Industry Canada: IC3679

EXHIBIT 6F-1

Transmitter Radiated Spurious Emissions: XTS5000

484.975 MHz **5.3 Watts** **Channel Spacing 12.5kHZ | S/N #68**

Frequency (MHz)	FCC Maximum Limit -13(dBm) 25 kHz Chan. Spacing	FCC Maximum Limit -20(dBm) 12.5 kHz Chan. Spacing	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
969.9500	-13	-20	-54.44	-60.50
1454.9250	-13	-20	-46.37	-40.10
1939.9000	-13	-20	*	*
2424.8750	-13	-20	-31.84	-35.30
2909.8500	-13	-20	-32.57	-36.69
3394.8250	-13	-20	*	*
3879.8000	-13	-20	*	*
4364.7750	-13	-20	*	*
4849.7500	-13	-20	*	*



* 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.

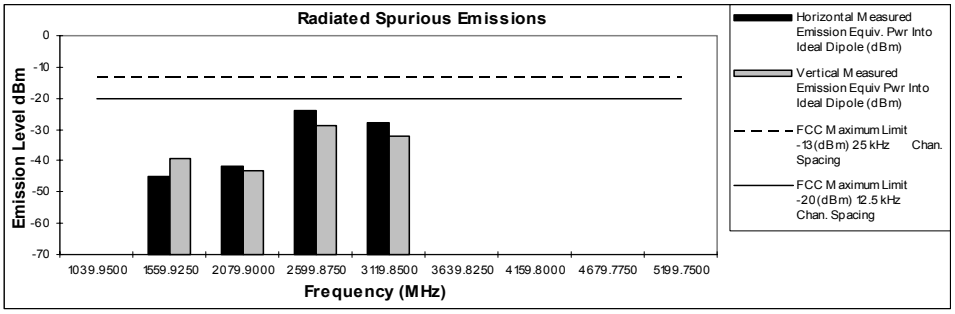
Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan **March 18, 2004**
FCC Registration: 91932 / Industry Canada: IC3679

EXHIBIT 6F-2

Transmitter Radiated Spurious Emissions: XTS5000

519.975 MHz **5.3 Watts** **Channel Spacing 12.5kHZ | S/N #68**

Frequency (MHz)	FCC Maximum Limit -13(dBm) 25 kHz Chan. Spacing	FCC Maximum Limit -20(dBm) 12.5 kHz Chan. Spacing	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
1039.9500	-13	-20	*	*
1559.9250	-13	-20	-44.90	-39.16
2079.9000	-13	-20	-41.58	-43.34
2599.8750	-13	-20	-23.84	-28.99
3119.8500	-13	-20	-27.84	-32.17
3639.8250	-13	-20	*	*
4159.8000	-13	-20	*	*
4679.7750	-13	-20	*	*
5199.7500	-13	-20	*	*



* 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.

Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan **March 18, 2004**
FCC Registration: 91932 / Industry Canada: IC3679

Transmitter Conducted Spurious and Harmonic Emissions

Frequency: 450.025 MHz **Power Out: 5.3 W** **Channel Spacing 12.5 kHz**

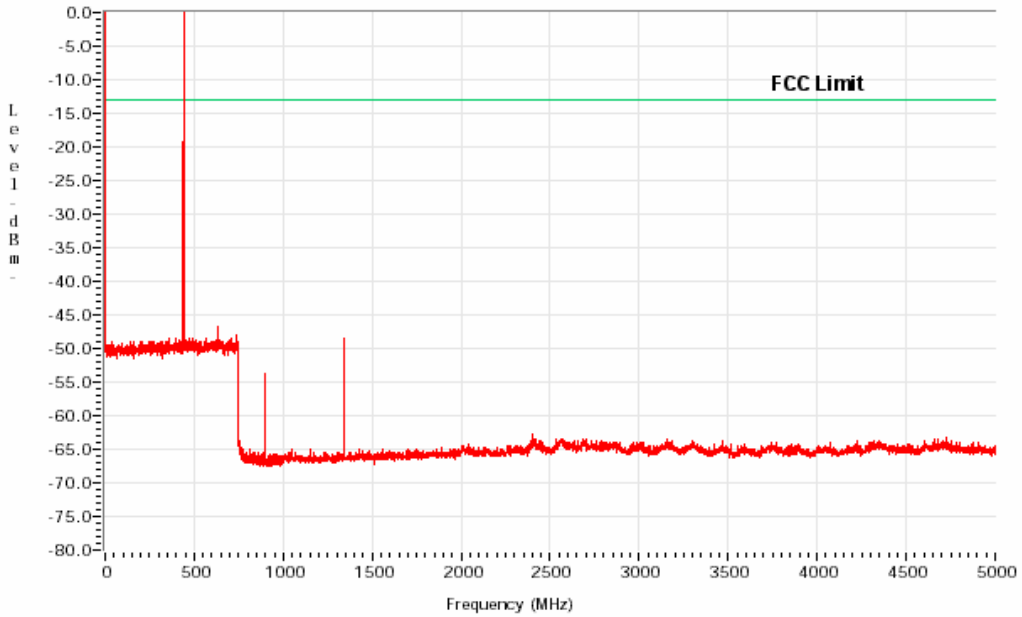


Exhibit 6G – 1

Transmitter Conducted Spurious and Harmonic Emissions

Frequency: 484.975 MHz **Power Out: 5.3 W** **Channel Spacing 12.5 kHz**

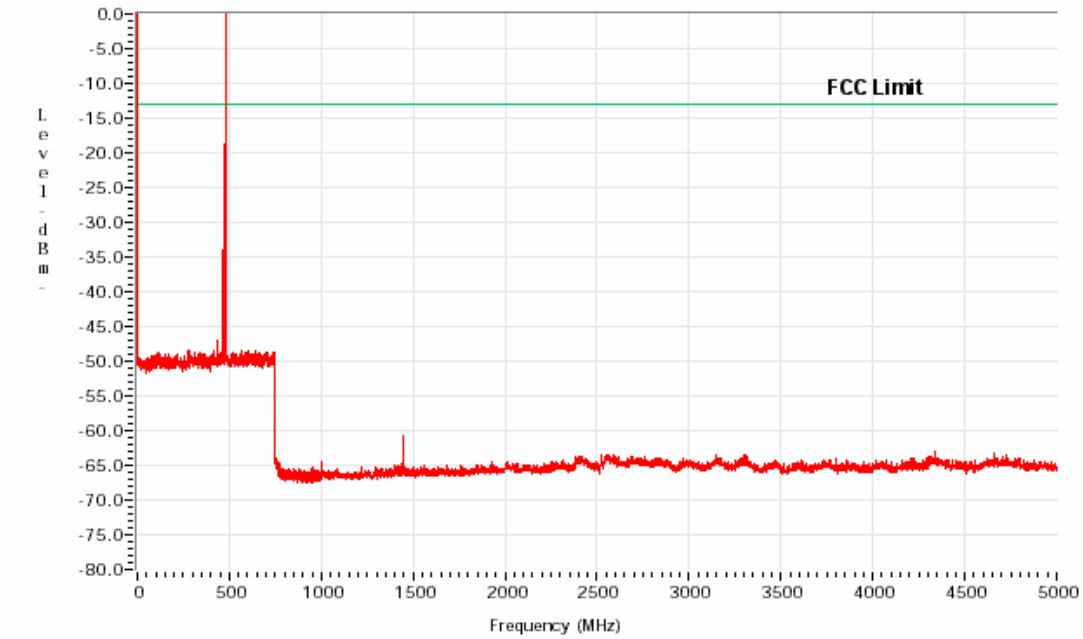


Exhibit 6G – 2

Transmitter Conducted Spurious and Harmonic Emissions

Frequency: 519.025 MHz **Power Out: 5.3 W** **Channel Spacing 12.5 kHz**

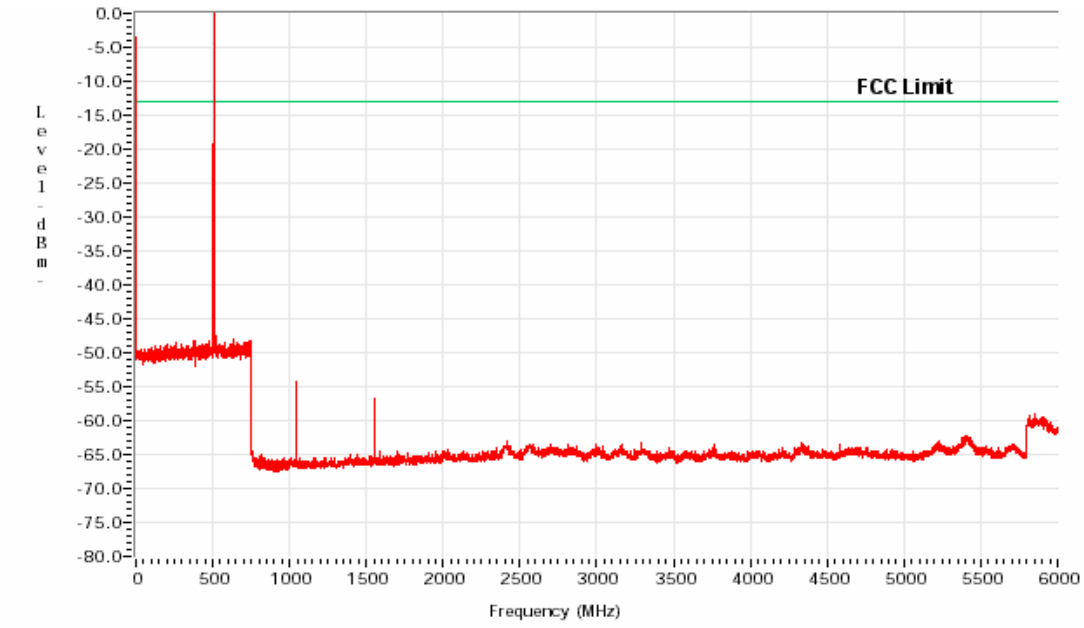


Exhibit 6G – 3

Power Line Conducted Spurious Emissions

Scan Parameters: Hardware Setup latest FCC class B - [EMI conducted]

Subrange 1

Freq. Range:	150kHz - 30MHz
Receiver:	ESMI
Transducer:	LISN / ESMI-LISN

Test frequencies were swept from 150kHz to 30Mhz in accordance with FCC 15.107. The tables below list the worst-case quasi-peak and average detector values for both Line and Neutral.

Test Information

EMC03222004-112 **#68** Mode **OFF** using impres charger WPLN4114 and NiCd Battery

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)
0.178000	47.2	37.4
0.186000	48.3	39.5
0.270000	47.8	40.7
0.274000	46.4	37.7
0.366000	38.0	32.2
0.546000	35.5	32.2

EXHIBIT 6H-1

Test Information

EMC03222004-112 **#68** **Tx** 465.225MHz using impres charger WPLN4114 & NiCd Battery

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)
0.182000	47.2	37.6
0.274000	44.1	39.4
0.366000	42.7	39.8
0.454000	42.4	32.0

EXHIBIT 6H-2

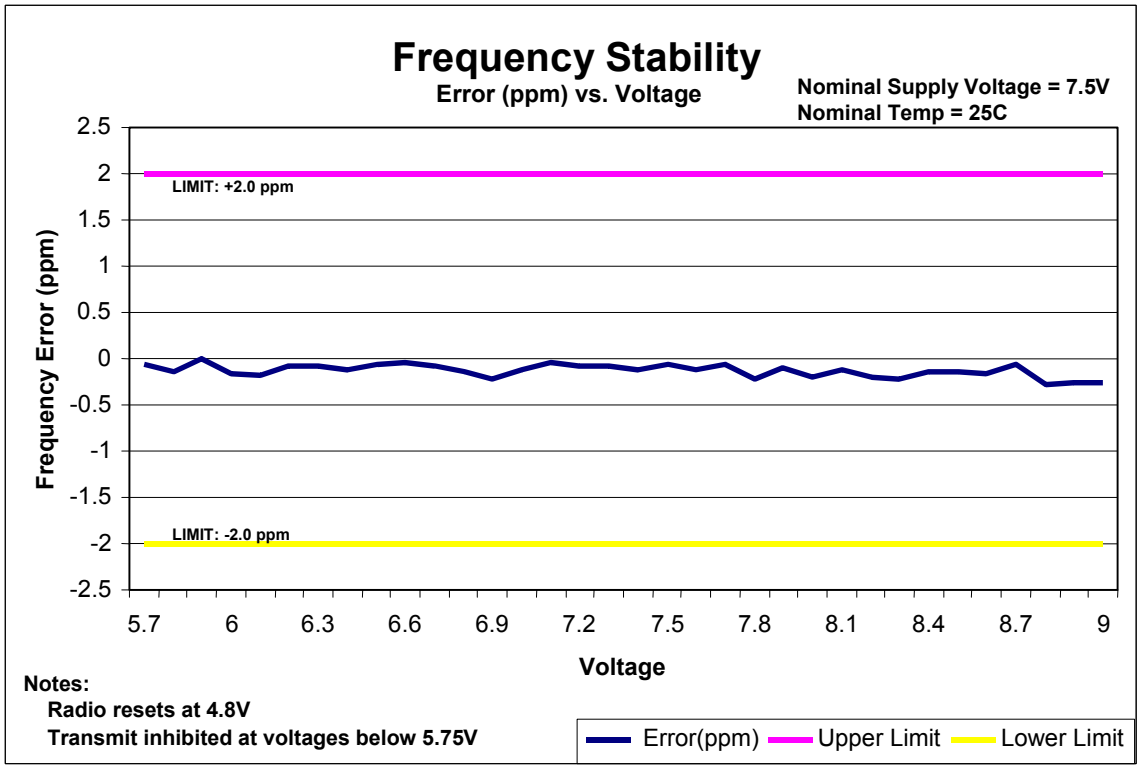


EXHIBIT 6I-1

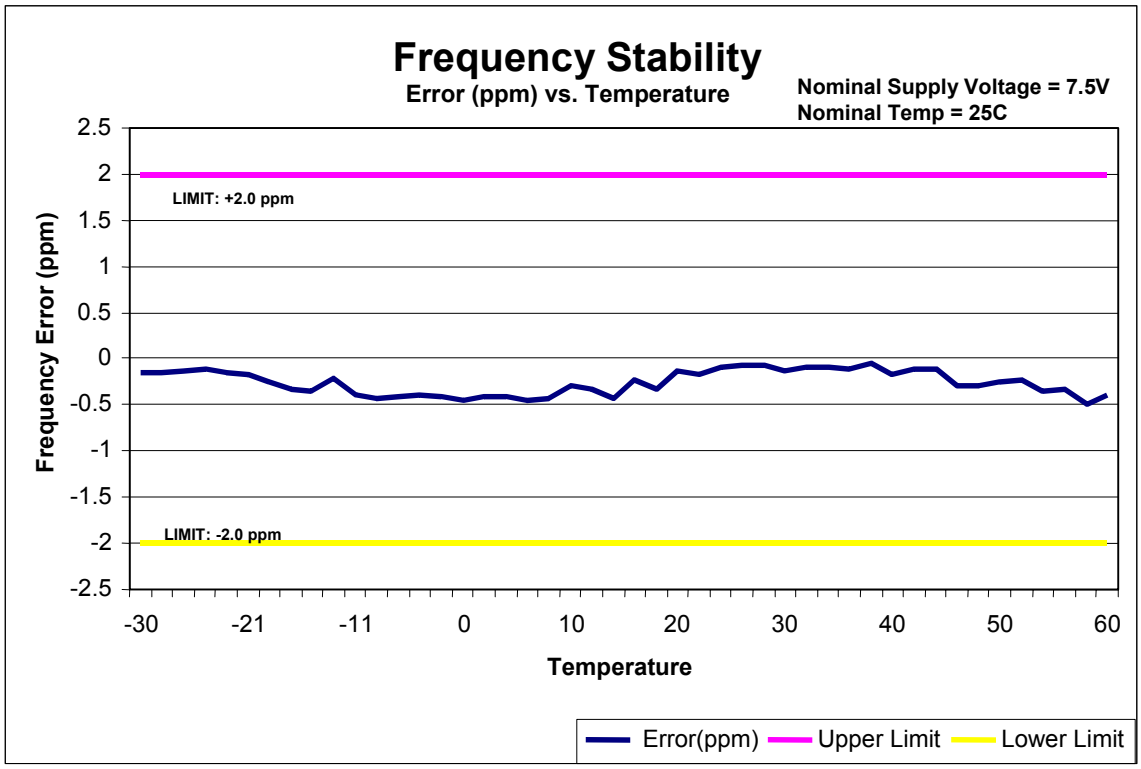


EXHIBIT 6I-2

Transmitter Transient Frequency Behavior
Frequency = 484.975 MHz Channel Spacing = 12.5 kHz

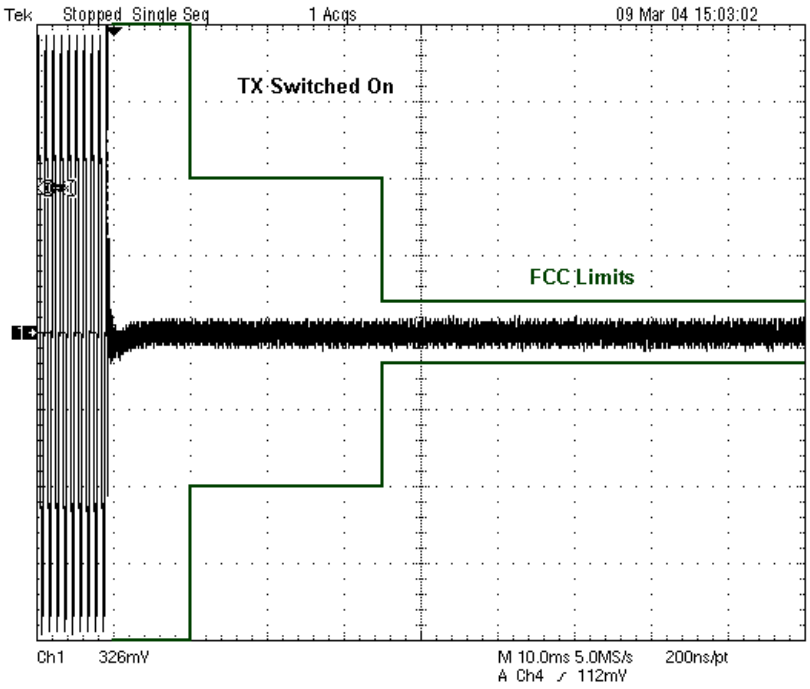


EXHIBIT 6J-1

Transmitter Transient Frequency Behavior
Frequency = 484.975 MHz Channel Spacing = 12.5 kHz

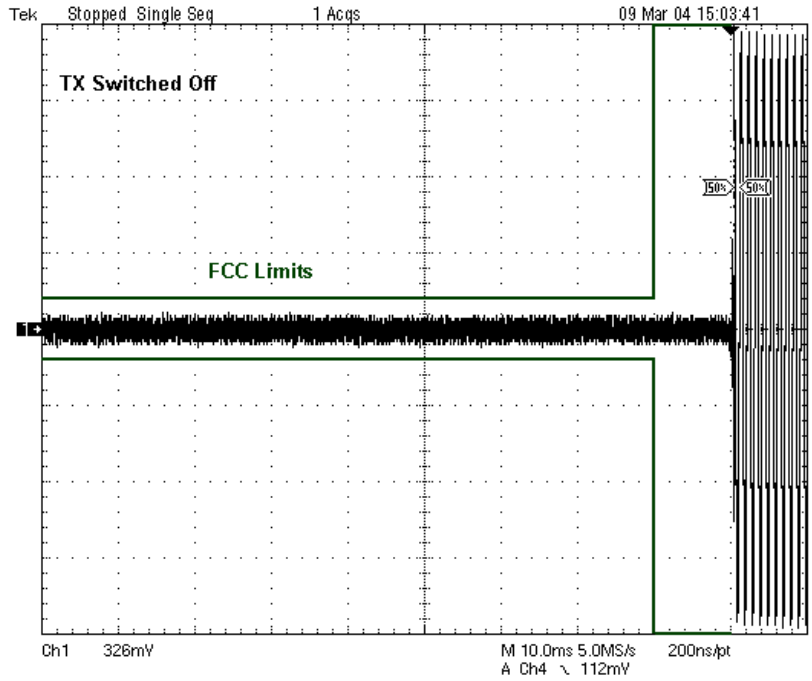


EXHIBIT 6J-2

Transmitter Transient Frequency Behavior
Frequency = 484.975 MHz Channel Spacing = 25 kHz

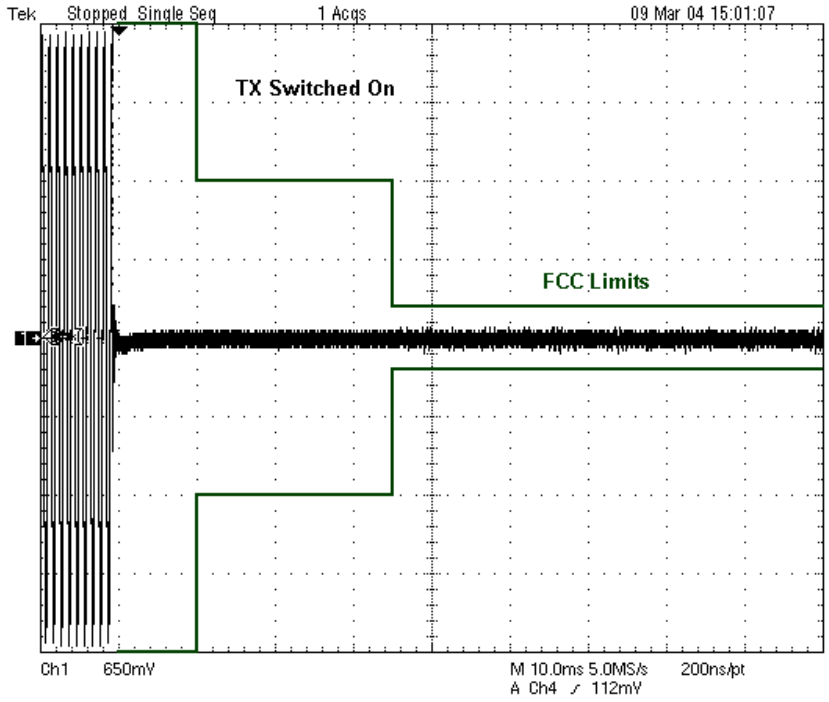


EXHIBIT 6J-3

Transmitter Transient Frequency Behavior
Frequency = 484.975 MHz Channel Spacing = 25 kHz

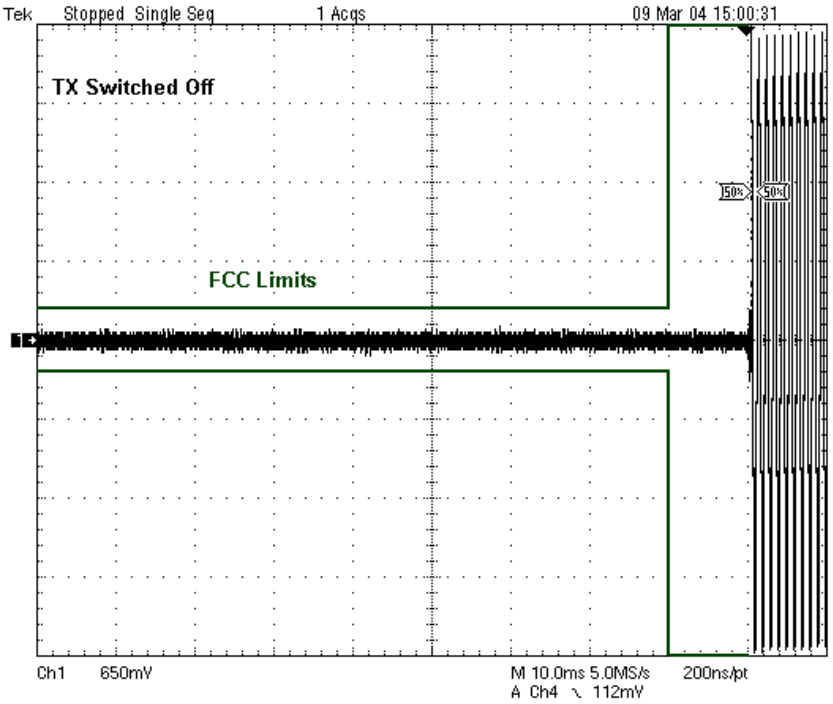


EXHIBIT 6J-4