Submitted Measured Data

MEASUREMENT		EXHIBIT	NUMBER OF PAGES
1.	RF Power Output Data	6A	1
2.	Audio Frequency Response	6B	1
3.	Low Pass Filter Response	6C	1
4.	Modulation Limiting	6D	1
5.	Occupied Bandwidth	6E	5
6.	Radiated Spurious Emissions	6F	6
7.	Conducted Spurious Emissions	6G	3
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9.	Transient Frequency Behavior	6I	4

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.

425.05 MHz

Measured RF output	2.8 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	1.274 Amps
Primary Supply Voltage	7.5 Volts

Measured RF output	.026 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	.267 Amps
Primary Supply Voltage	7.5 Volts

Measured RF output	.020 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	.252 Amps
Primary Supply Voltage	7.5 Volts

Channel : 5
Temperature (°C) : 25
Voltage (VDC) : 7.5

TIA 603 TX AUDIO RESPONSE

Channel Spacing (kHz) : 12.5

System ID : Mobile-Portable System

Radio Names:

1572 D S R#0006

Dev. (dB)　　　　　UpperSpec　　　　　Lc

EXHIBIT 6B-1

Channel : 3
Temperature (°C) : 25
Voltage (VDC) : 7.5

TIA 603 TX AUDIO RESPONSE

Channel Spacing (kHz) : 25

System ID : Mobile-Portable System

Radio Names:

1572 D S R#0006

Dev. (dB)　　　　　UpperSpec　　　　　Lc

EXHIBIT 6B-2

Audio Low Pass Filter Response

EXHIBIT 6C

Channel : 6
Temperature (°C) : 25
Voltage (VDC) : 7.5

Channel Spacing (kHz) : 12.5
System ID : Mobile-Portable System 4-2

TIA 603 TX MODULATION LIM. 300-3K

Radio Names:

1572 D SR#0006

EXHIBIT 6D-1

Channel : 3
Temperature (°C) : 25
Voltage (VDC) : 7.5

Channel Spacing (kHz) : 25
System ID : Mobile-Portable Syst

TIA 603 TX MODULATION LIM. 300-3K

Radio Names:

1572 D SR#0006

EXHIBIT 6D-2

Percentage Modulation Versus Modulation Frequency and Input Level
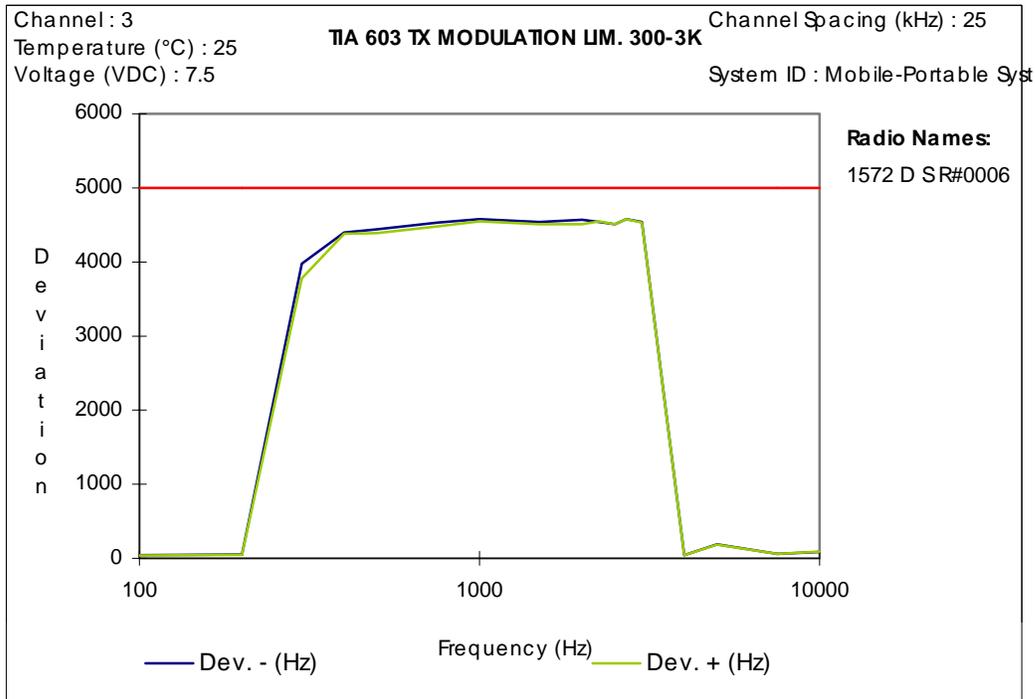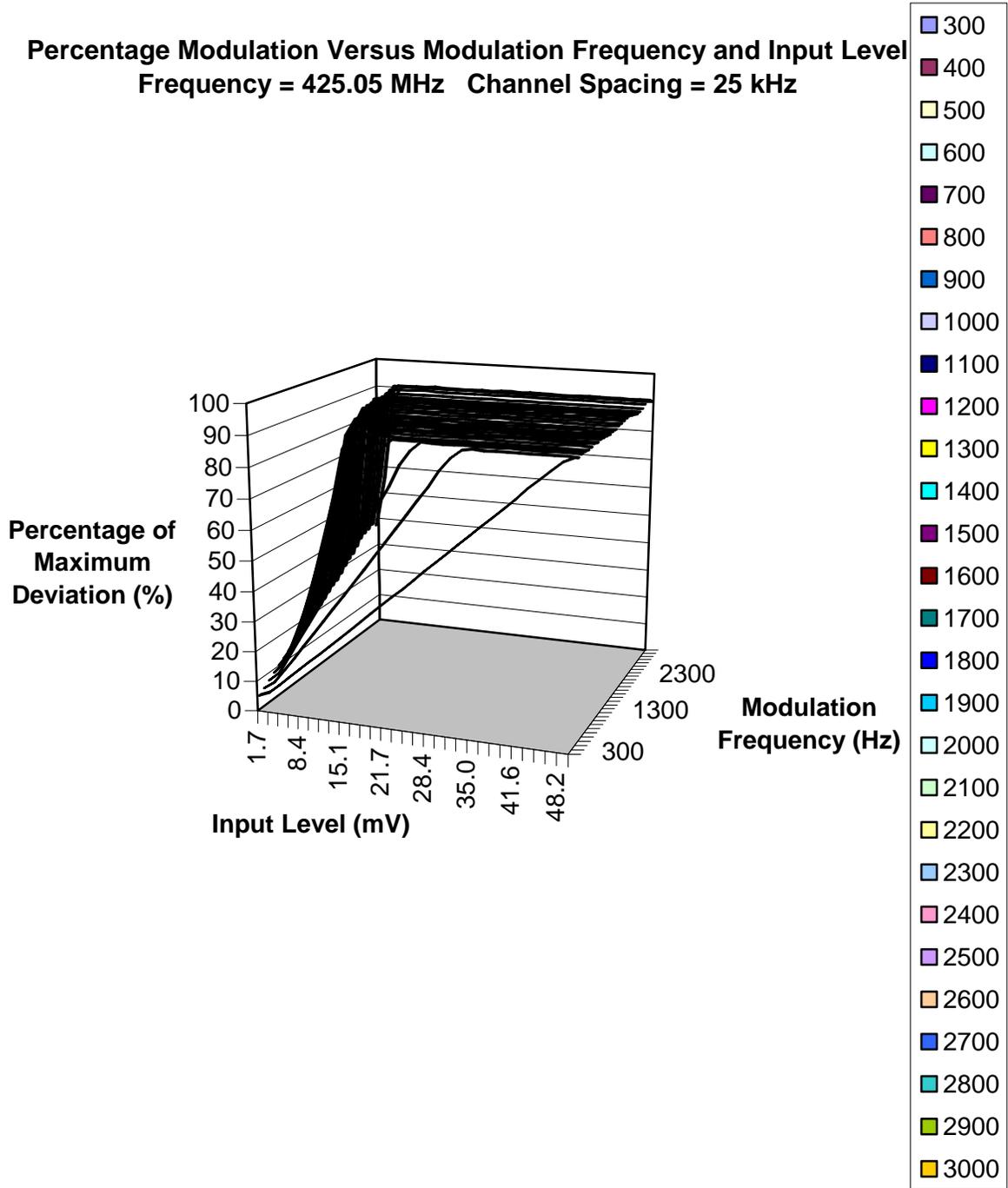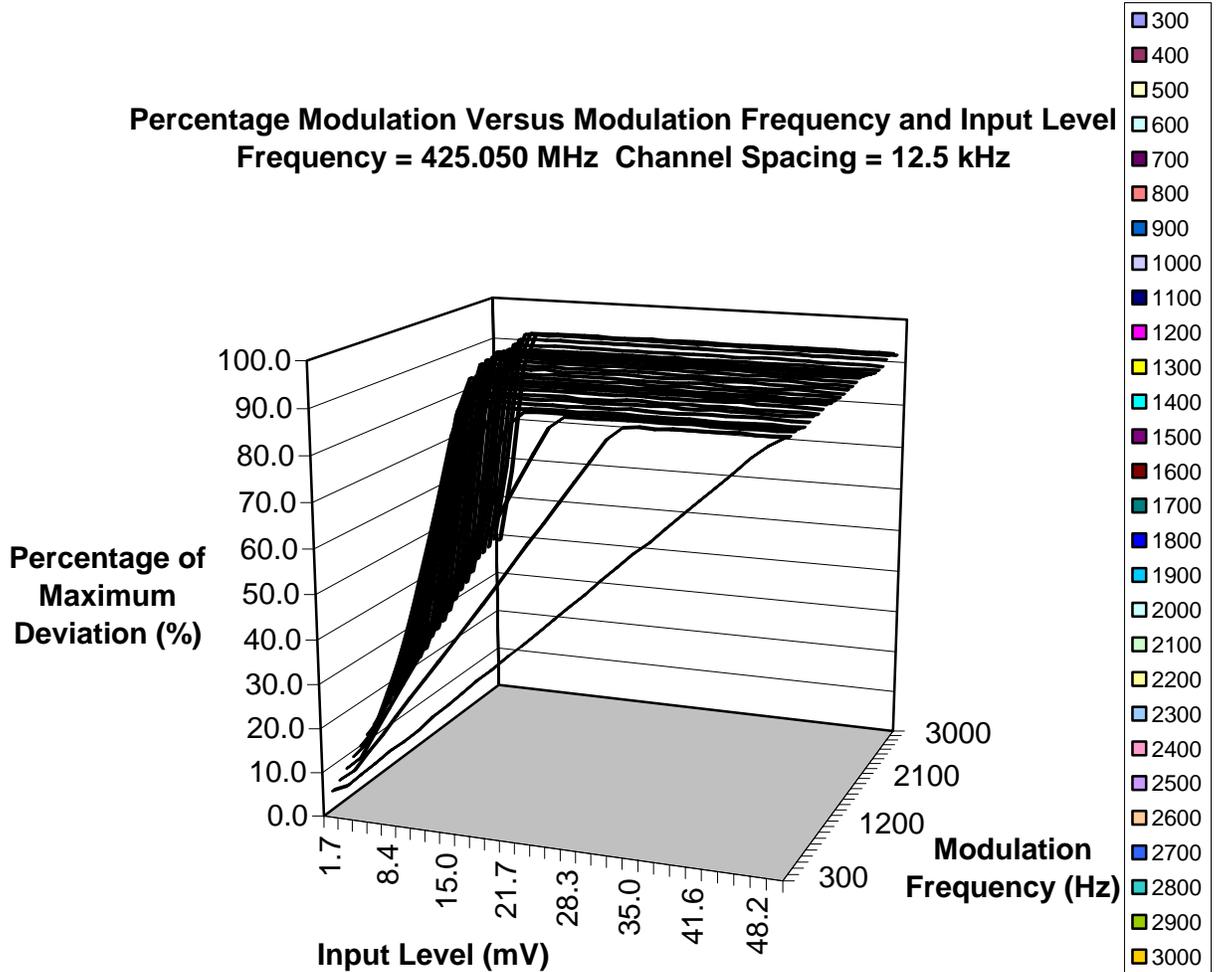**Frequency = 425.05 MHz   Channel Spacing = 25 kHz**

EXHIBIT 6D-3

Percentage Modulation Versus Modulation Frequency and Input Level Frequency = 425.050 MHz Channel Spacing = 12.5 kHz

EXHIBIT 6D-4

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: AZ489FT4857.

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):
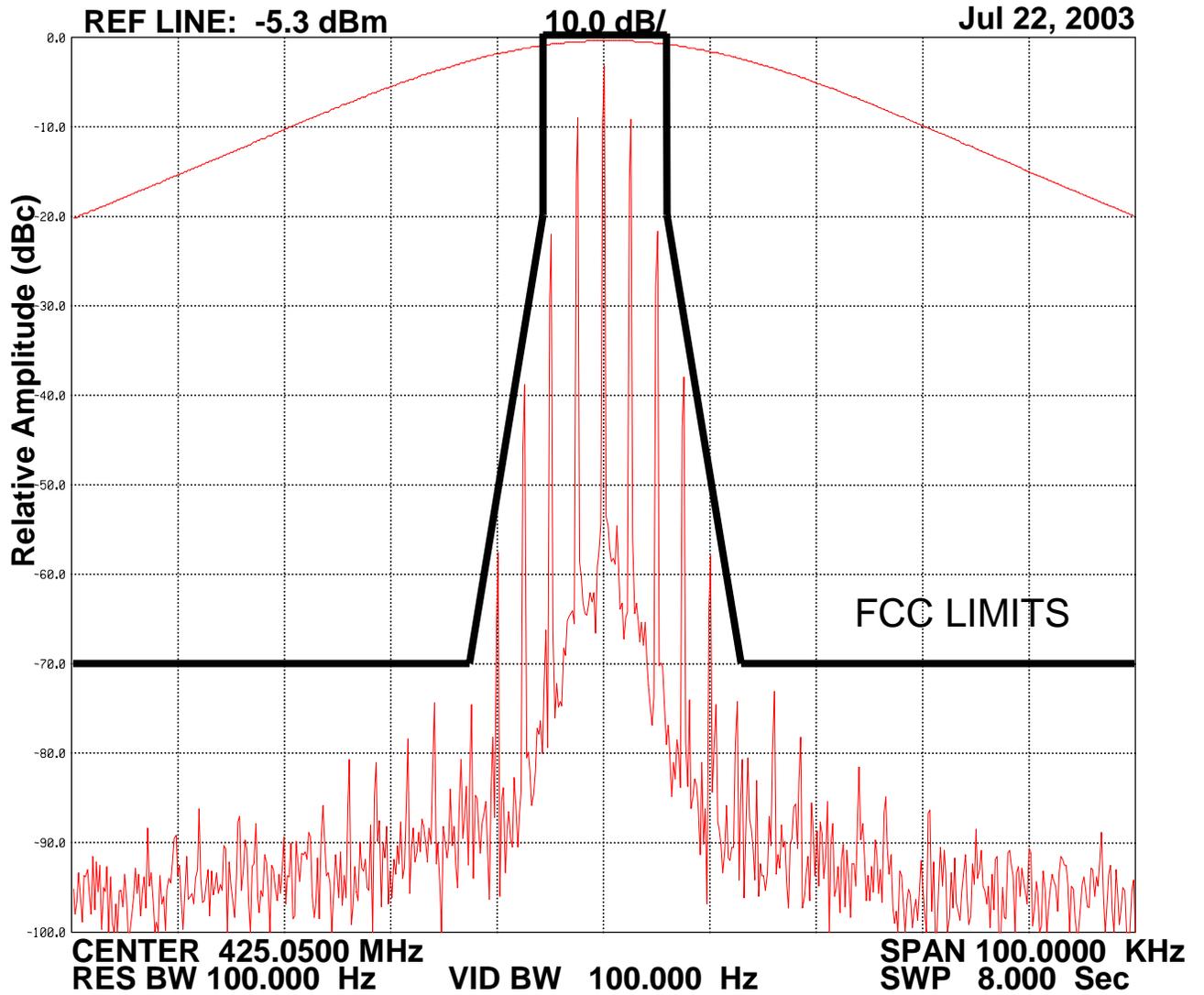Emission Designator   20K0F1E

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.

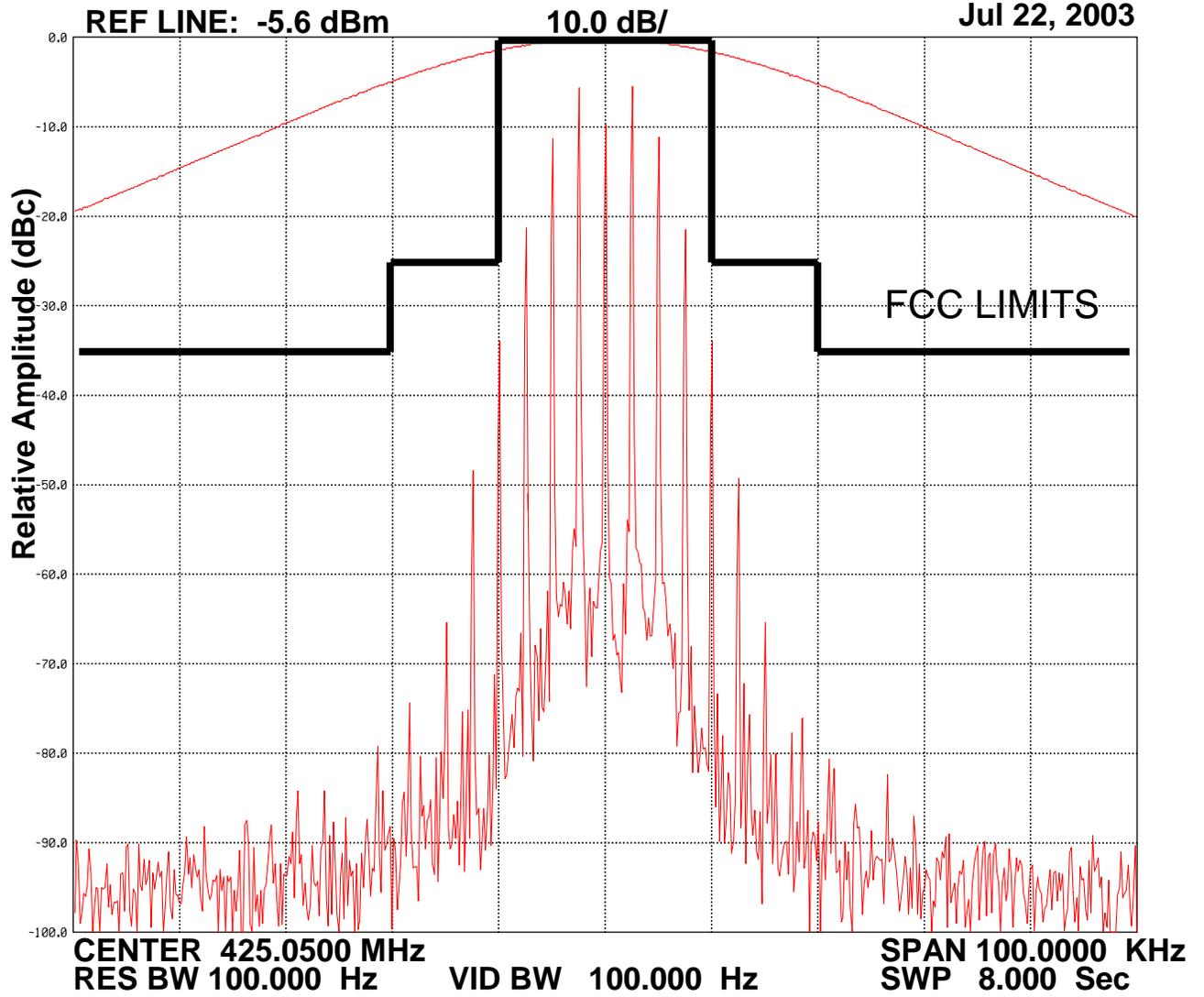Therefore, the entire designator for 20 kHz channelization analog voice is 20K0F1E.

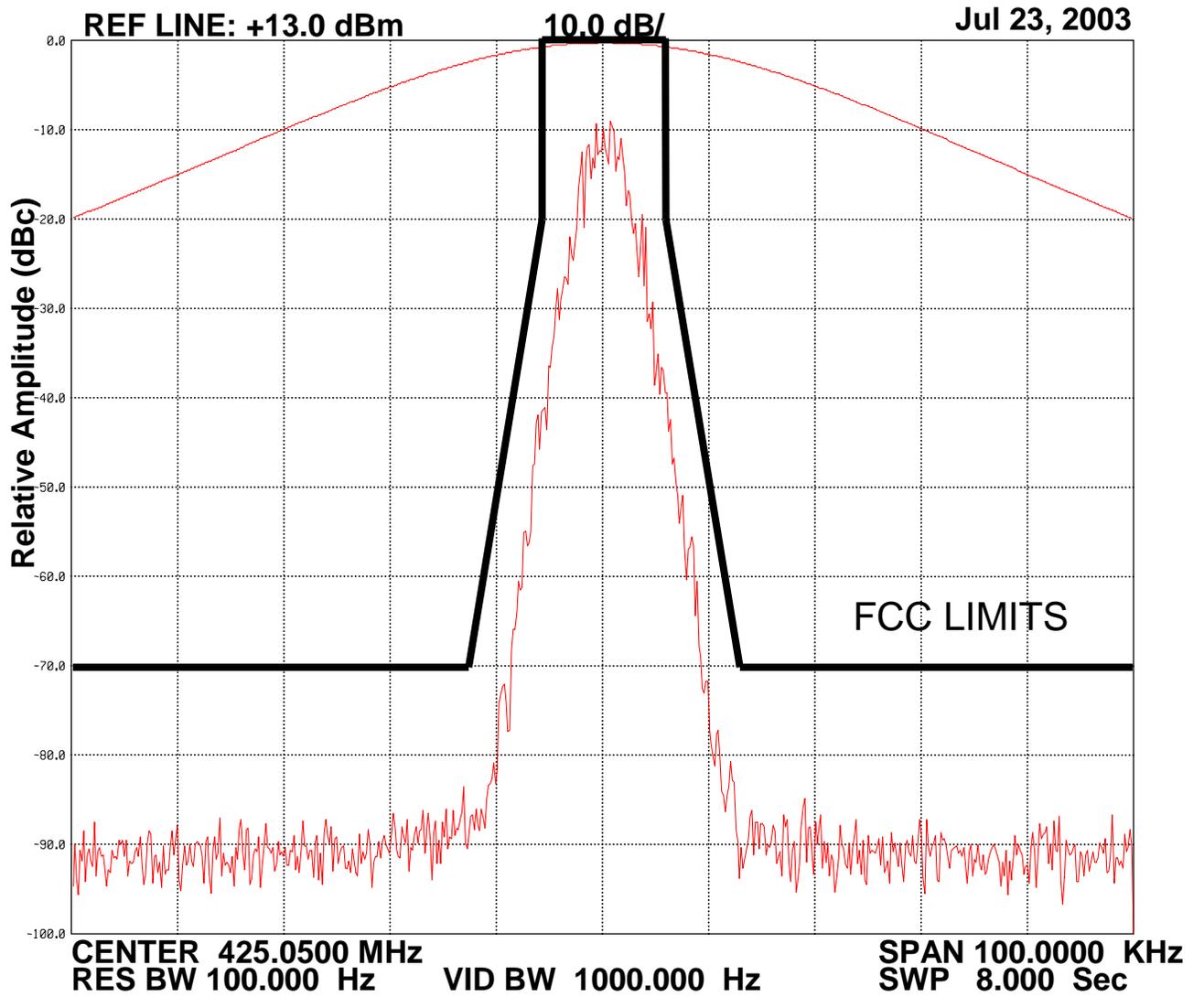# Occupied Bandwidth for 12.5 kHz Analog Voice

11K0F3E

REF LINE: -5.3 dBm   **10.0 dB/**   **Jul 22, 2003**

CENTER 425.0500 MHz   SPAN 100.0000 KHz
RES BW 100.000 Hz   VID BW 100.000 Hz   SWP 8.000 Sec

EXHIBIT 6E-1

Occupied Bandwidth for 25 kHz Analog Voice

16K0F3E

REF LINE: -5.6 dBm   10.0 dB/   **Jul 22, 2003**

Relative Amplitude (dBc)

FCC LIMITS

CENTER 425.0500 MHz   SPAN 100.0000 KHz
RES BW 100.000 Hz   VID BW 100.000 Hz   SWP 8.000 Sec

EXHIBIT 6E-2

Occupied Bandwidth for 12.5 kHz Digital Data

8K10F1D

REF LINE: +13.0 dBm　　　　　10.0 dB/　　　　　　Jul 23, 2003

FCC LIMITS

Relative Amplitude (dBc)

0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100.0

CENTER　425.0500 MHz　　　　　　　　　　　SPAN 100.0000 KHz
RES BW 100.000 Hz　　　VID BW 1000.000 Hz　　　SWP 8.000 Sec

EXHIBIT 6E-3

Occupied Bandwidth for 12.5 kHz Digital Voice

8K10F1E

REF LINE: +13.5 dBm   10.0 dB/   Jul 23, 2003

Relative Amplitude (dBc)

FCC LIMITS

CENTER 425.0500 MHz   SPAN 100.0000 KHz
RES BW 100.000 Hz   VID BW 1000.000 Hz   SWP 8.000 Sec

EXHIBIT 6E-4
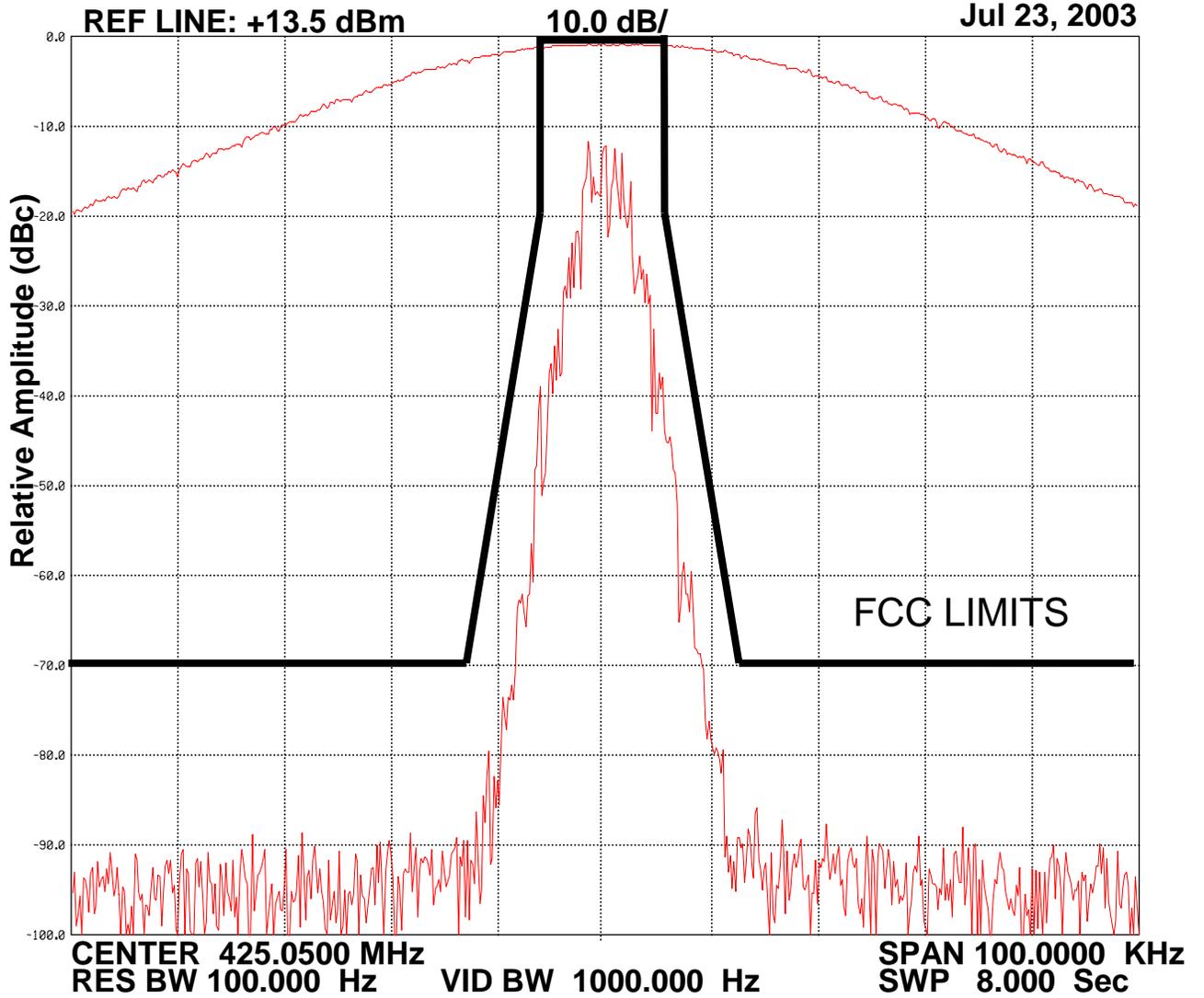
Occupied Bandwidth for 25 kHz Analog Encryption

20K0F1E

REF LINE: +13.0 dBm   **10.0 dB/**   **Jul 23, 2003**

FCC LIMITS

Relative Amplitude (dBc) — vertical axis

CENTER 425.0500 MHz   **SPAN 100.0000 KHz**
RES BW 100.000 Hz   **VID BW 1000.000 Hz**   **SWP 8.000 Sec**
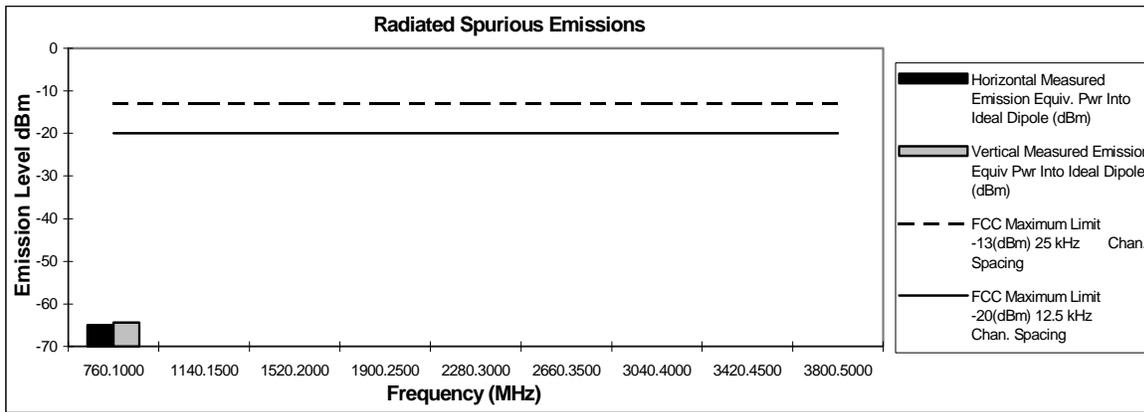
EXHIBIT 6E-5
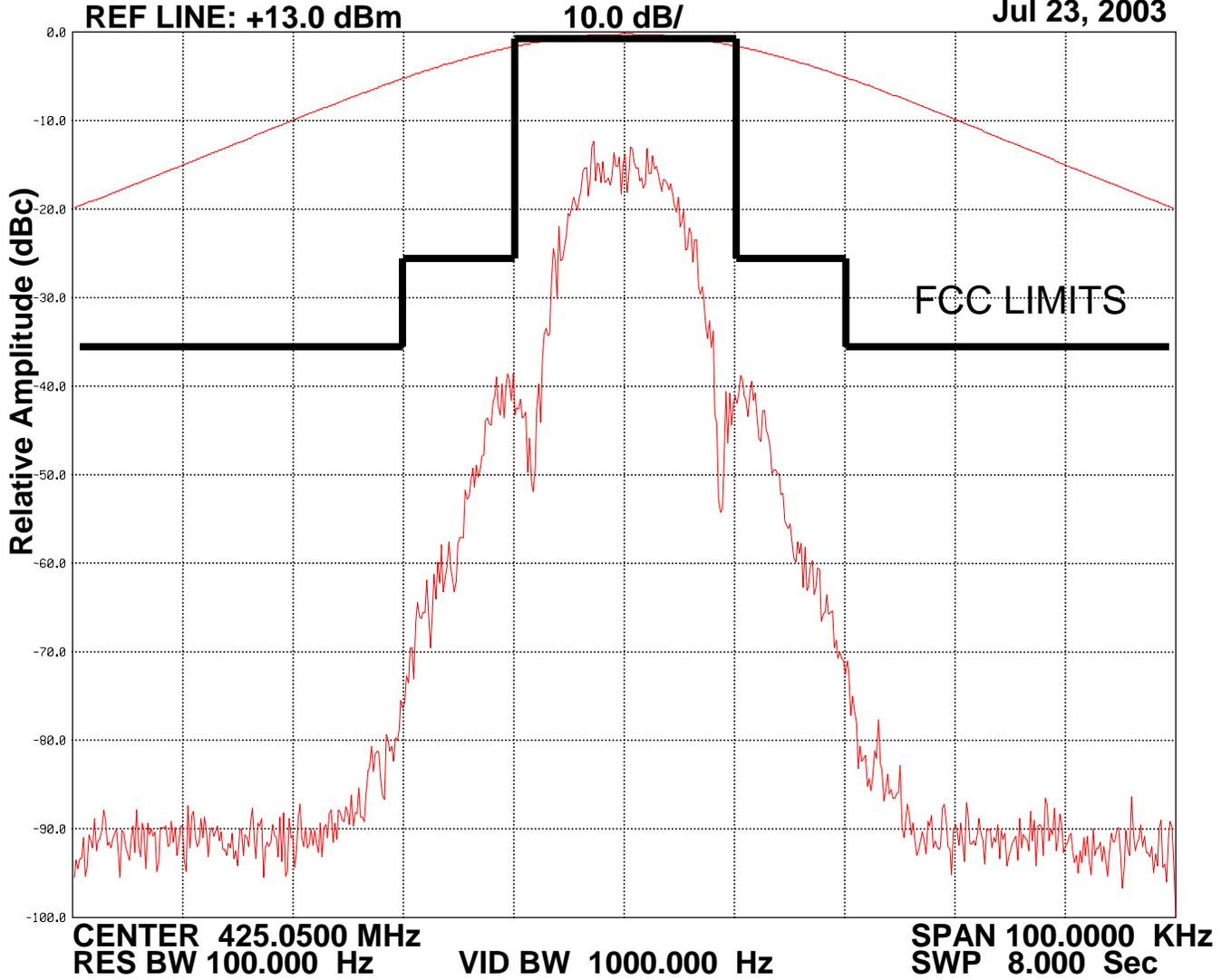
Transmitter Radiated Spurious Emissions: XTS5000

380.05 MHz   **0.02 Watts**   **Channel Spacing 25KHZ | S/N #006**

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)
760.1000	-13	-20	-64.95	-64.37
1140.1500	-13	-20	*	*
1520.2000	-13	-20	*	*
1900.2500	-13	-20	*	*
2280.3000	-13	-20	*	*
2660.3500	-13	-20	*	*
3040.4000	-13	-20	*	*
3420.4500	-13	-20	*	*
3800.5000	-13	-20	*	*

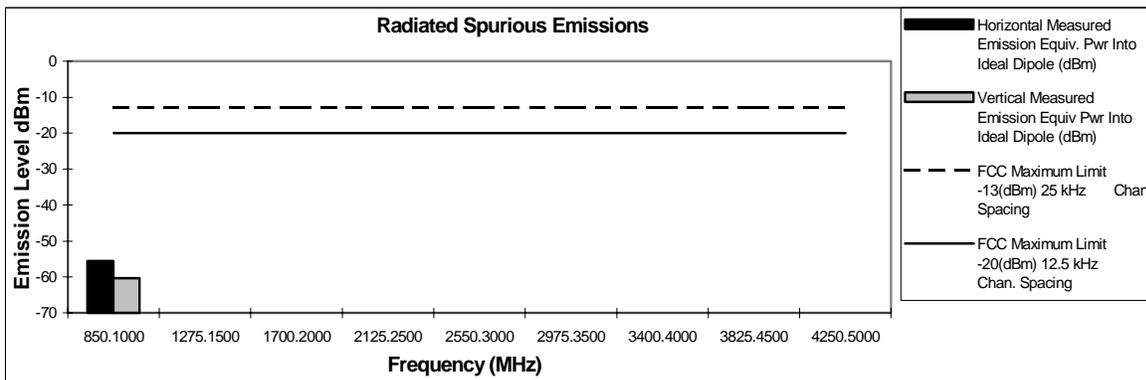## Transmitter Radiated Spurious Emissions: XTS5000   EXHIBIT 6F-1

425.05 MHz   **0.02 Watts**   **Channel Spacing 25KHZ | S/N #006**

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)
850.1000	-13	-20	-55.58	-60.31
1275.1500	-13	-20	*	*
1700.2000	-13	-20	*	*
2125.2500	-13	-20	*	*
2550.3000	-13	-20	*	*
2975.3500	-13	-20	*	*
3400.4000	-13	-20	*	*
3825.4500	-13	-20	*	*
4250.5000	-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.
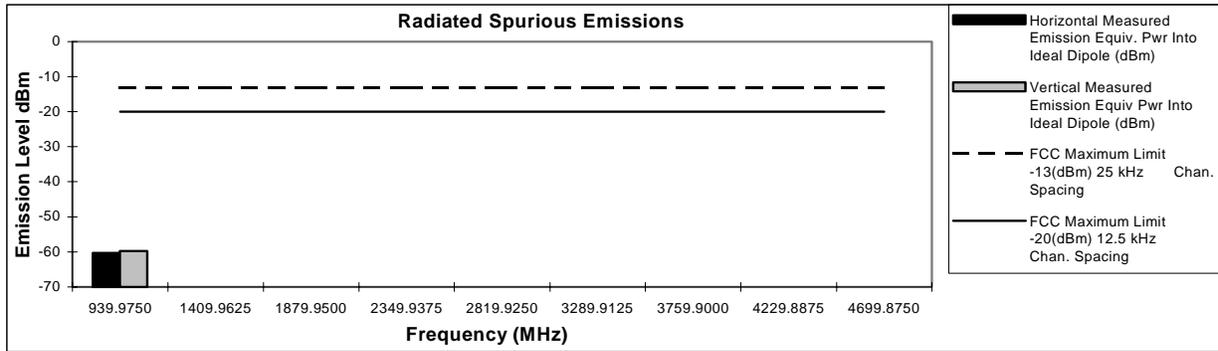
EXHIBIT 6F-2

Transmitter Radiated Spurious Emissions: XTS5000

469.9875 MHz   **0.02 Watts**   **Channel Spacing 25KHZ | S/N #006**

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)
939.9750	-13	-20	-60.26	-59.75
1409.9625	-13	-20	*	*
1879.9500	-13	-20	*	*
2349.9375	-13	-20	*	*
2819.9250	-13	-20	*	*
3289.9125	-13	-20	*	*
3759.9000	-13	-20	*	*
4229.8875	-13	-20	*	*
4699.8750	-13	-20	*	*

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

EXHIBIT 6F-3

The data presented here was taken using the substitution method as found in the TIA/EIA-603 document.
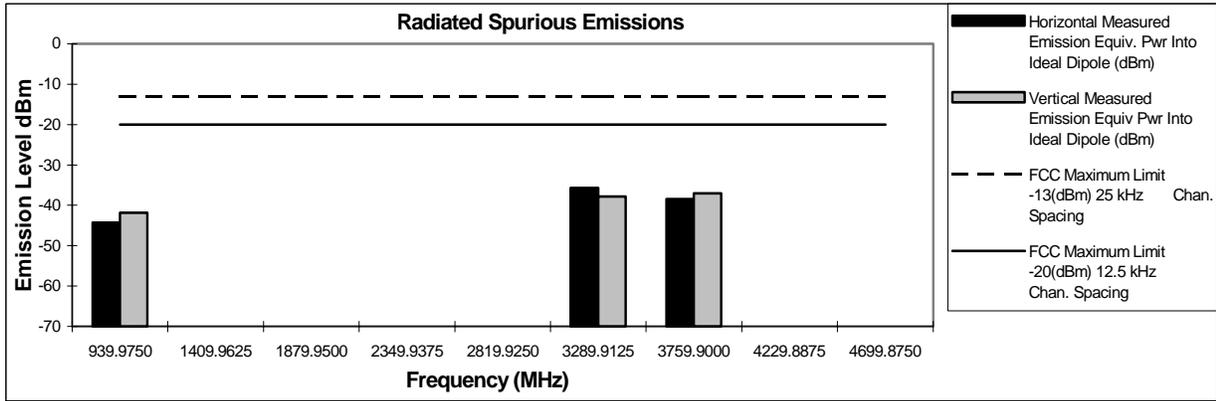
Transmitter Radiated Spurious Emissions: XTS5000

469.9875 MHz   **2.8 Watts**   **Channel Spacing 25KHZ | S/N #006**

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)
939.9750	-13	-20	-44.34	-41.83
1409.9625	-13	-20	*	*
1879.9500	-13	-20	*	*
2349.9375	-13	-20	*	*
2819.9250	-13	-20	*	*
3289.9125	-13	-20	-35.71	-37.84
3759.9000	-13	-20	-38.43	-37.07
4229.8875	-13	-20	*	*
4699.8750	-13	-20	*	*

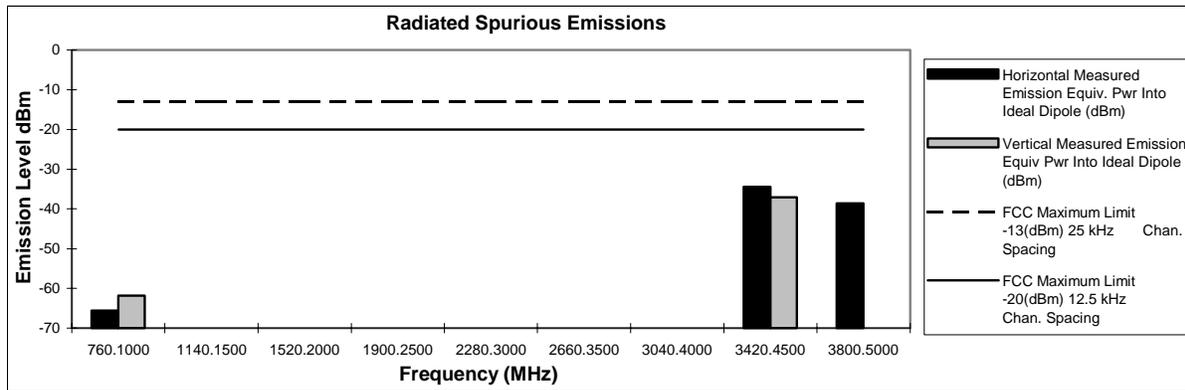
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

EXHIBIT 6F-4

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

Transmitter Radiated Spurious Emissions: XTS5000

380.05 MHz   **2.8 Watts**   **Channel Spacing 25KHZ | S/N #006**

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)
760.1000	-13	-20	-65.55	-61.82
1140.1500	-13	-20	*	*
1520.2000	-13	-20	*	*
1900.2500	-13	-20	*	*
2280.3000	-13	-20	*	*
2660.3500	-13	-20	*	*
3040.4000	-13	-20	*	*
3420.4500	-13	-20	-34.44	-37.09
3800.5000	-13	-20	-38.55	*

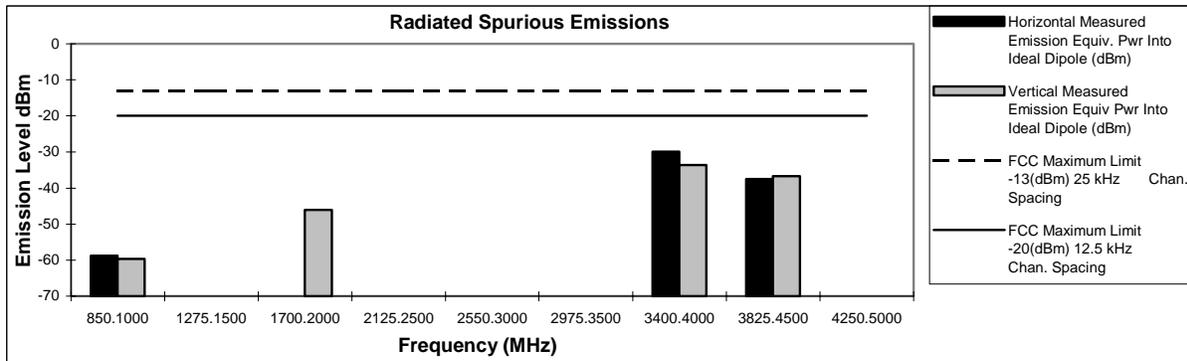## Transmitter Radiated Spurious Emissions: XTS5000   EXHIBIT 6F-5

425.05 MHz   **2.8 Watts**   **Channel Spacing 25KHZ | S/N #006**

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)
850.1000	-13	-20	-58.78	-59.70
1275.1500	-13	-20	*	*
1700.2000	-13	-20	*	-46.06
2125.2500	-13	-20	*	*
2550.3000	-13	-20	*	*
2975.3500	-13	-20	*	*
3400.4000	-13	-20	-29.87	-33.66
3825.4500	-13	-20	-37.48	-36.71
4250.5000	-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.
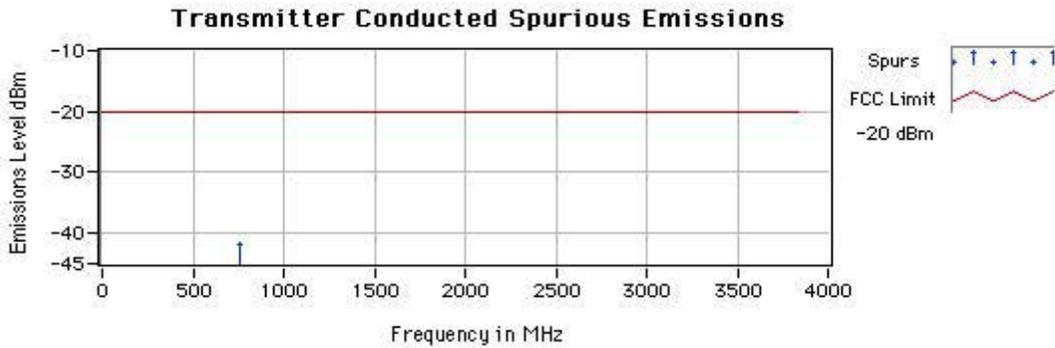
EXHIBIT 6F-6

Transmitter Conducted Spurious Emissions
FREQ: 380.02500 MHz
Power 2.2 W
Channel Spacing: 12.50 kHz

Spurious Frequency	FCC Limit	Measured Value (dBm)
760.30000	-20.0	-42.0

Transmitter Conducted Spurious Emissions

All Transmitter Spurious Emissions tested to the 10th Harmonic

Motorola Plantation ATE Lab   **Thursday, 24**[th] **July 2003**

Test Performed By :   **Jerry Simpson**
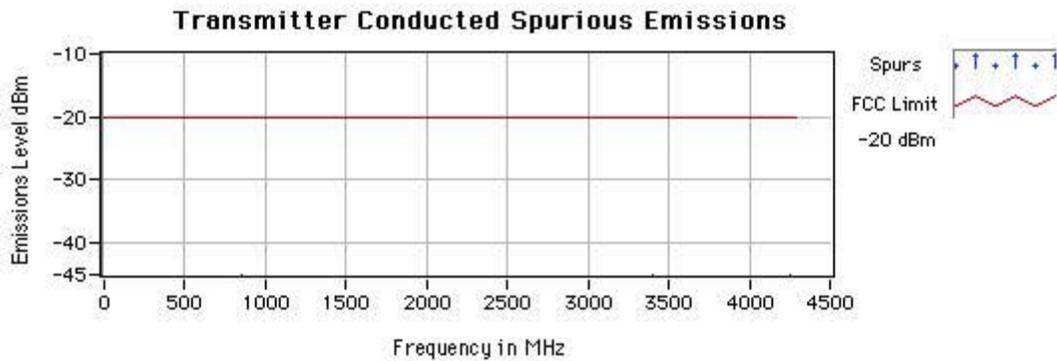
Exhibit 6G – 1 (12.5kHz Ch Sp)

Transmitter Conducted Spurious Emissions
FREQ: 425.02500 MHz
Power 2.2 W
Channel Spacing: 12.50 kHz

Spurious Frequency	FCC Limit	Measured Value (dBm)
849.00000	-20.0	-45.8
3394.00000	-20.0	-49.8
4247.00000	-20.0	-46.6

Transmitter Conducted Spurious Emissions

All Transmitter Spurious Emissions tested to the 10th Harmonic

Motorola Plantation ATE Lab   **Thursday, 24**th **July 2003**

Test Performed By: **Jerry Simpson**
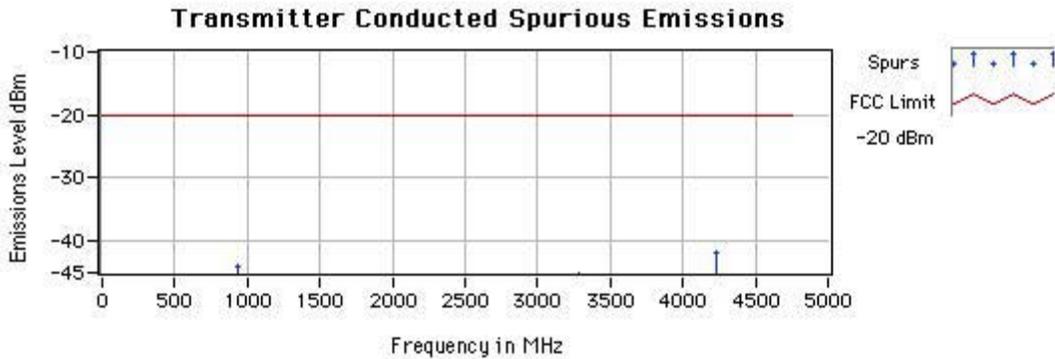
Exhibit 6G – 2 (12.5kHz Ch Sp)

Transmitter Conducted Spurious Emissions
FREQ: 469.92500 MHz
Power 2.2 W
Channel Spacing: 12.50 kHz

Spurious Frequency	FCC Limit	Measured Value (dBm)
937.80000	-20.0	-44.2
3286.00000	-20.0	-47.2
4226.00000	-20.0	-42.0

Transmitter Conducted Spurious Emissions

All Transmitter Spurious Emissions tested to the 10th Harmonic

Motorola Plantation ATE Lab   **Thursday, 24th July 2003**

Test Performed By : **Jerry Simpson**

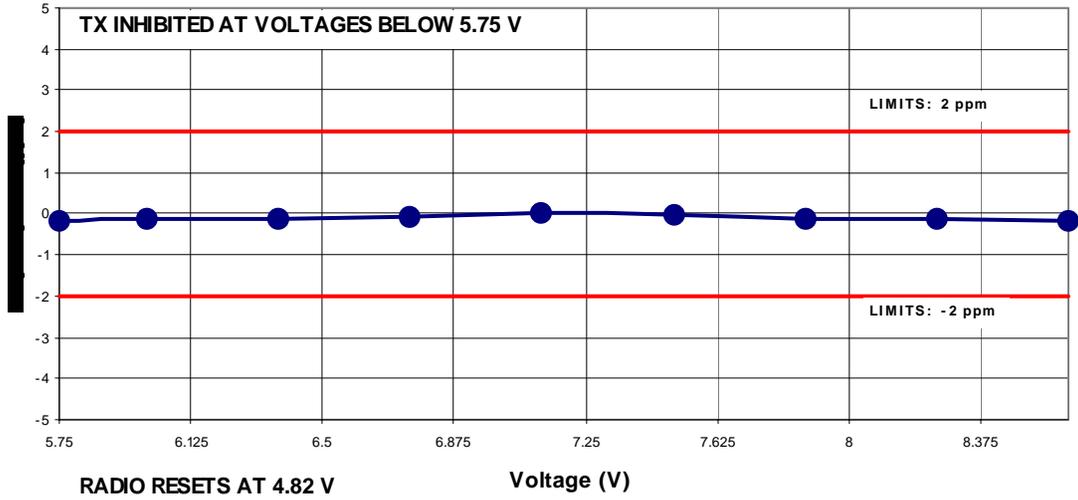Exhibit 6G – 3 (12.5kHz Ch Sp)

FREQUENCY STABILITY

TX INHIBITED AT VOLTAGES BELOW 5.75 V

LIMITS: 2 ppm

LIMITS: -2 ppm

RADIO RESETS AT 4.82 V   **Voltage (V)**

EXHIBIT 6H-1

FREQUENCY STABILITY

LIMITS: 2 ppm

Frequency error (ppm)

LIMITS: -2 ppm
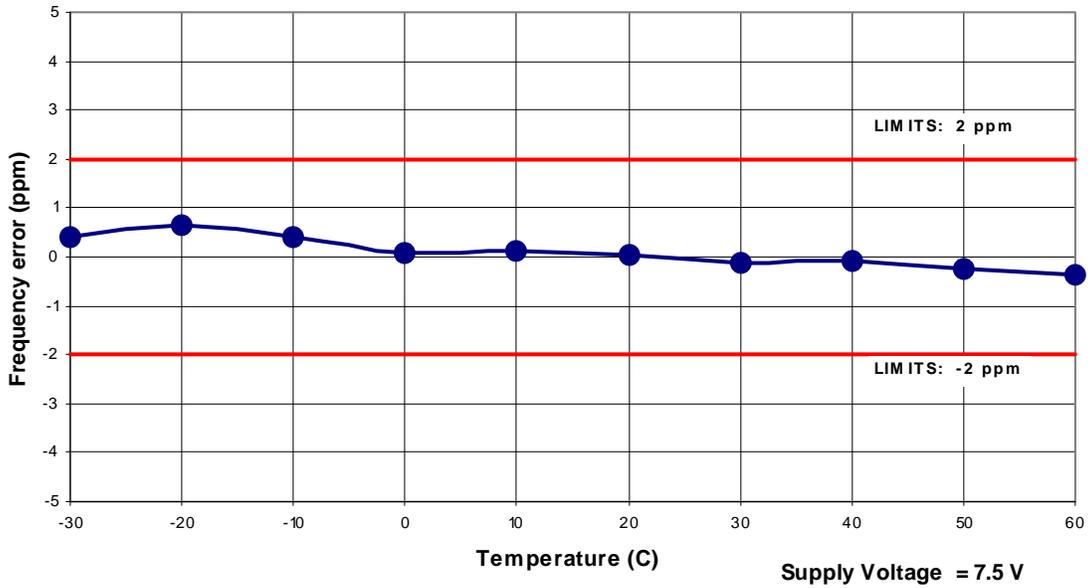
Temperature (C)

Supply Voltage = 7.5 V

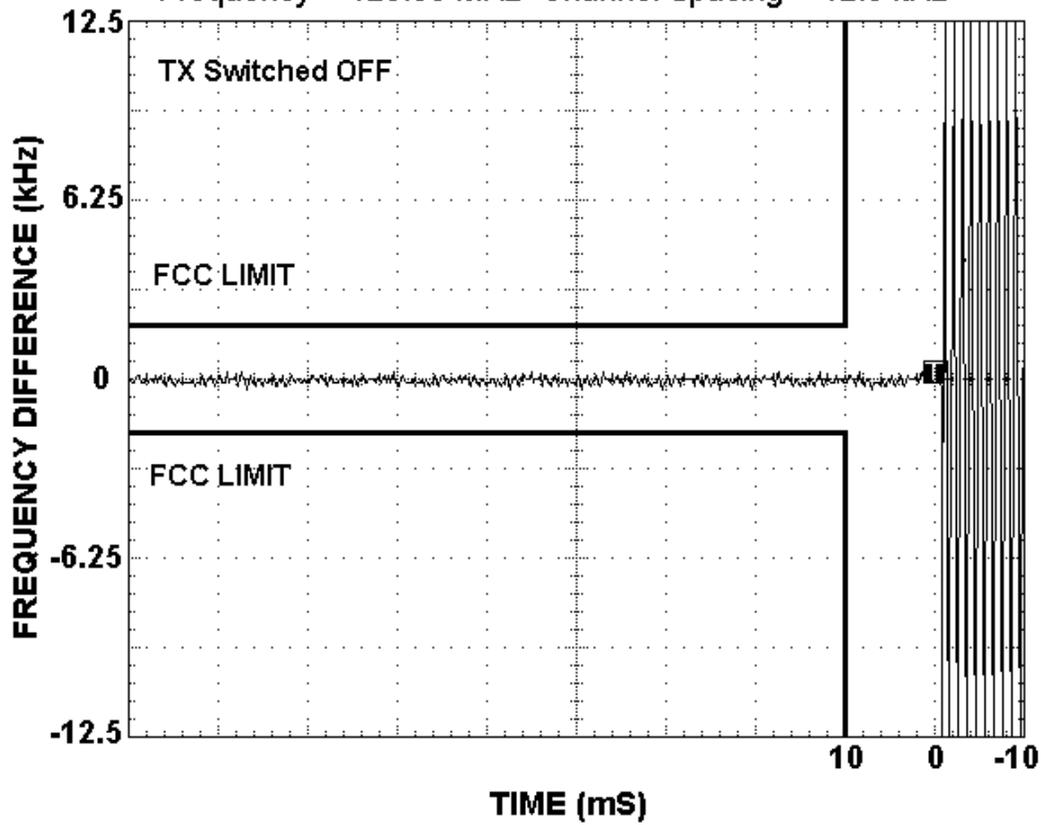EXHIBIT 6H-2

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR

Frequency = 425.05 MHz Channel Spacing = 12.5 kHz

EXHIBIT 6I-1

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR
Frequency = 425.05 MHz Channel Spacing = 12.5 kHz
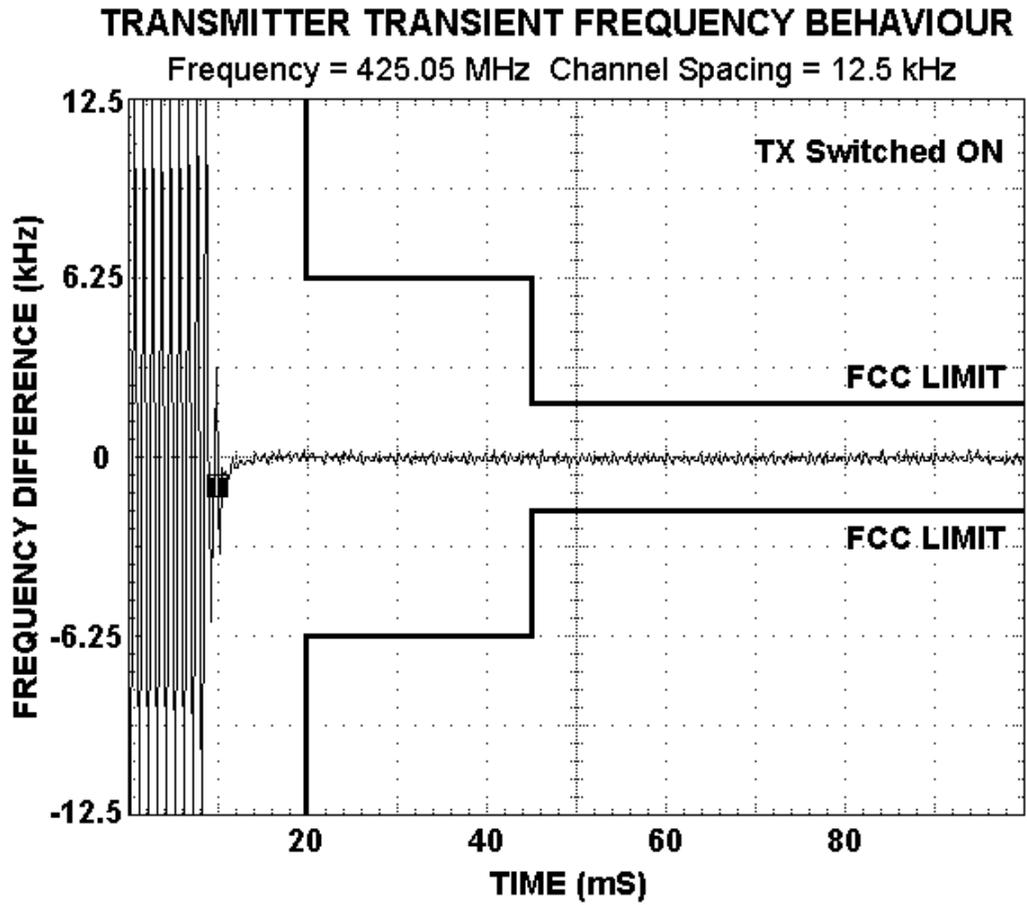

EXHIBIT 6I-2

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR
Frequency = 425.05 MHz Channel Spacing = 25.0 kHz

EXHIBIT 6I-3

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR

Frequency = 425.05 MHz Channel Spacing = 25 kHz