

Submitted Measured Data

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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	5.8 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	2.35 Amps
Primary Supply Voltage	7.5 Volts
Measured RF output	2.3 Watts
Nominal DC voltage	7.5 Volts
Nominal DC Current	1.258 Amps
Primary Supply Voltage	7.5 Volts
Measured RF output	1.3 Watt
Nominal DC voltage	7.5 Volts
Nominal DC Current	0.969 Amps
Primary Supply Voltage	7.5 Volts

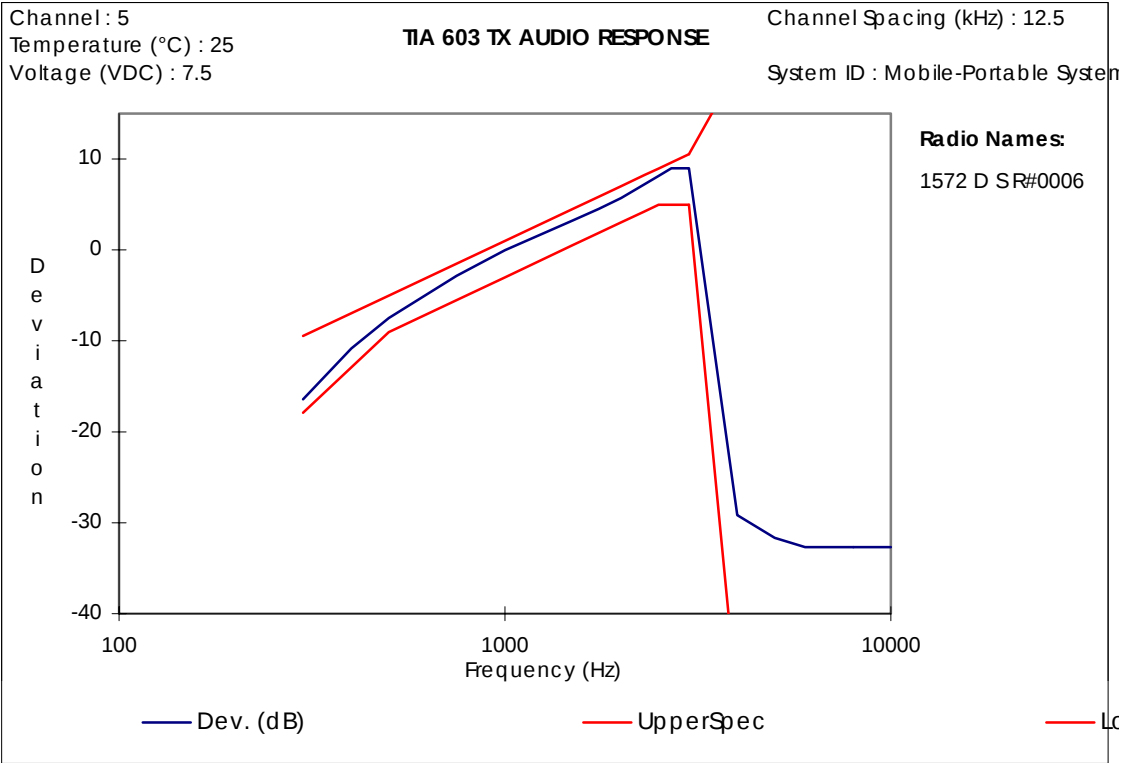


EXHIBIT 6B-1

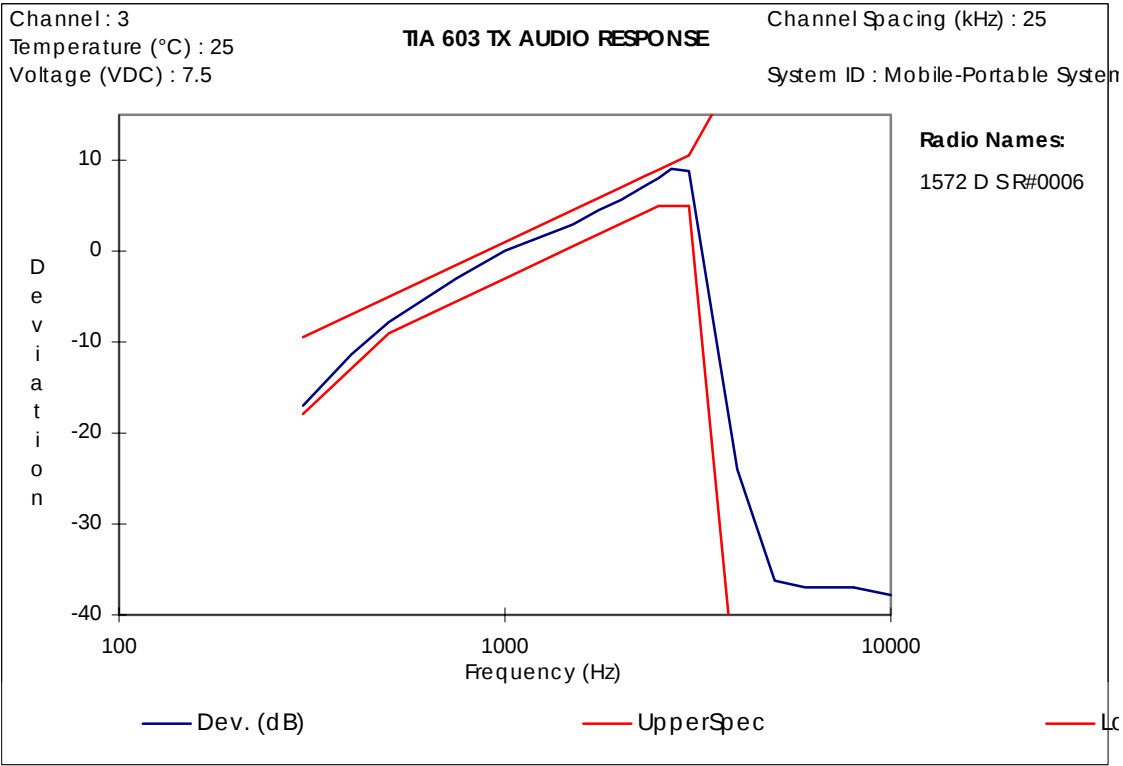


EXHIBIT 6B-2

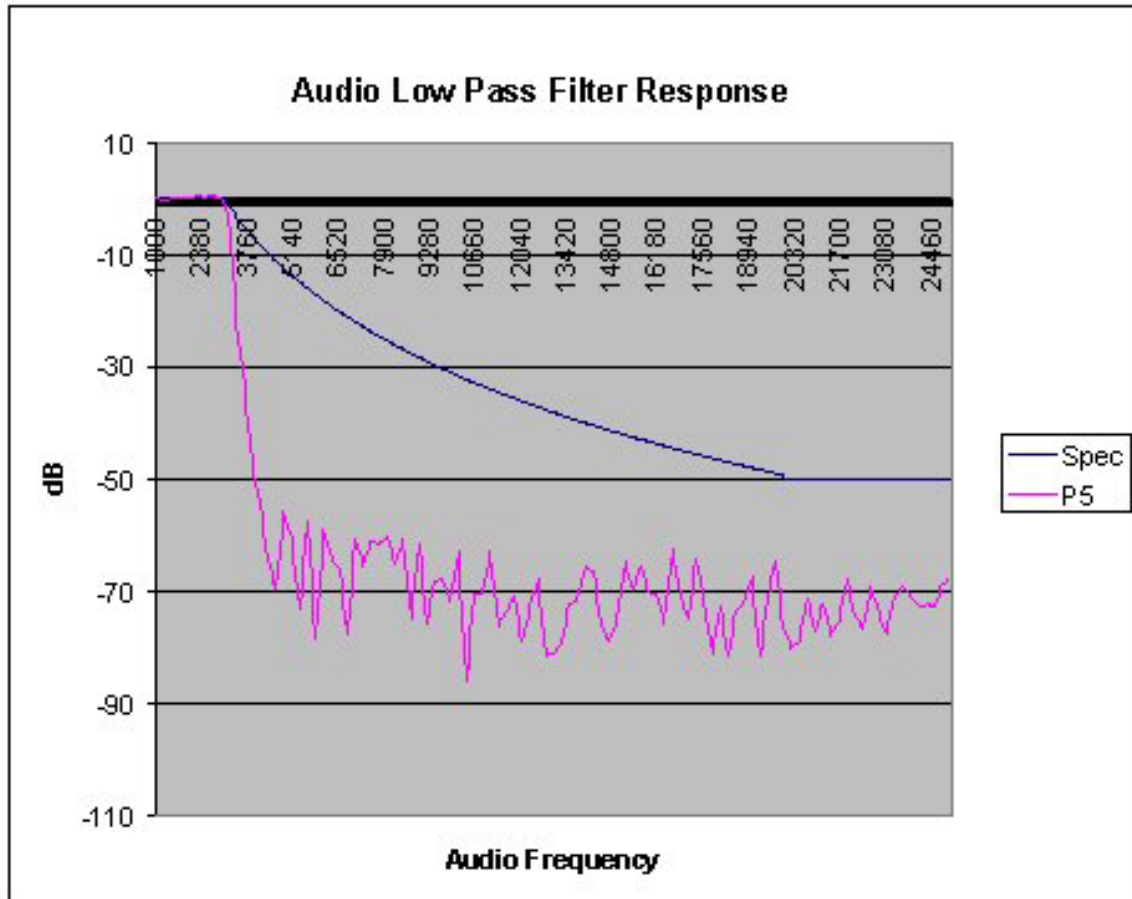


EXHIBIT 6C

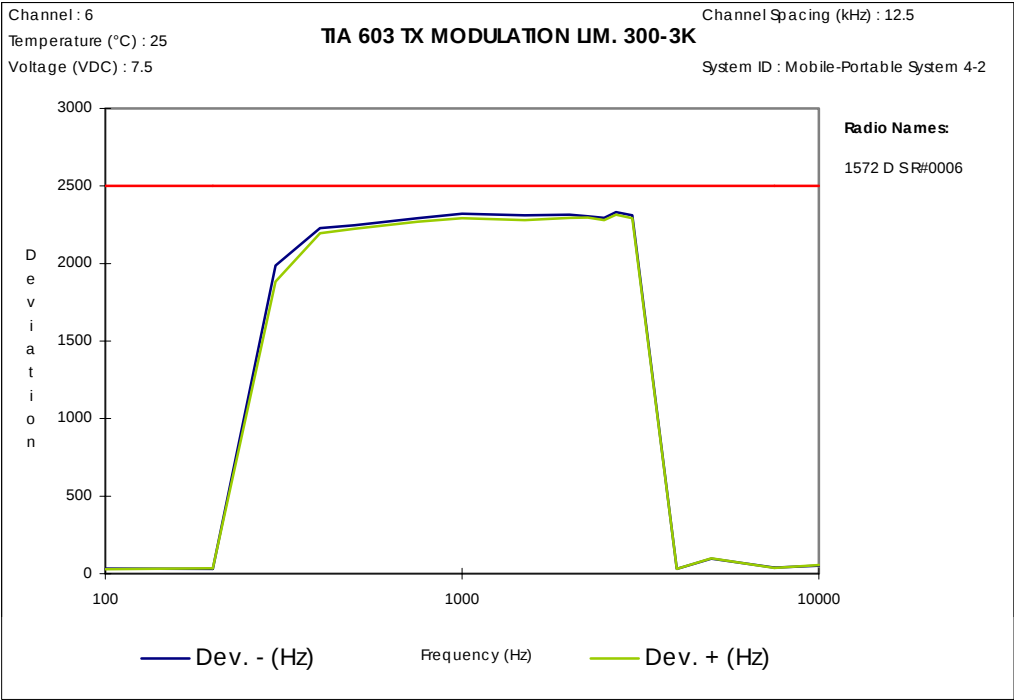


EXHIBIT 6D-1

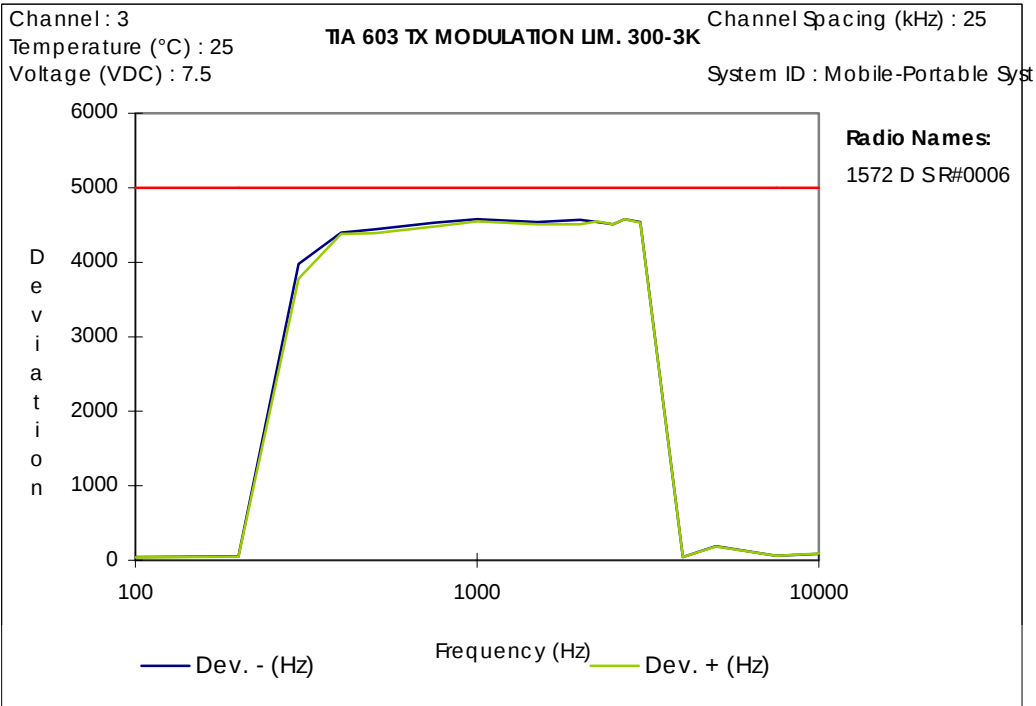
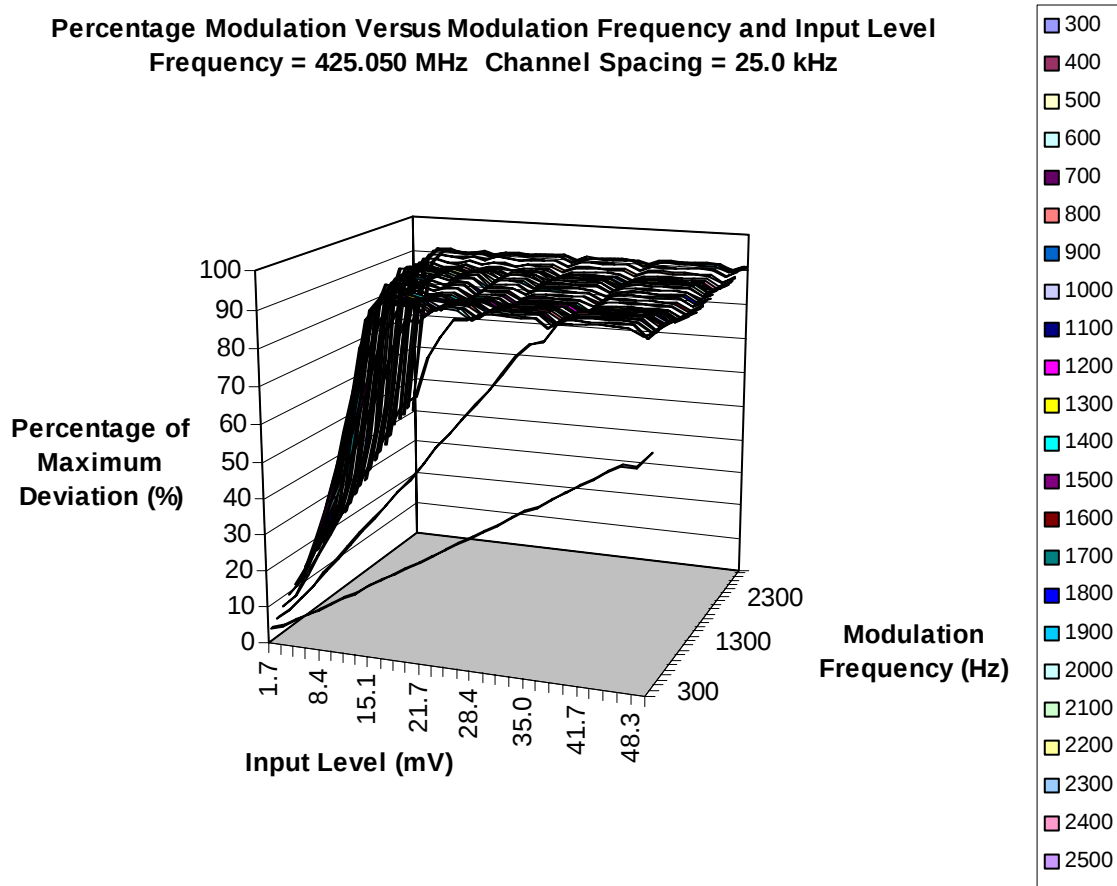
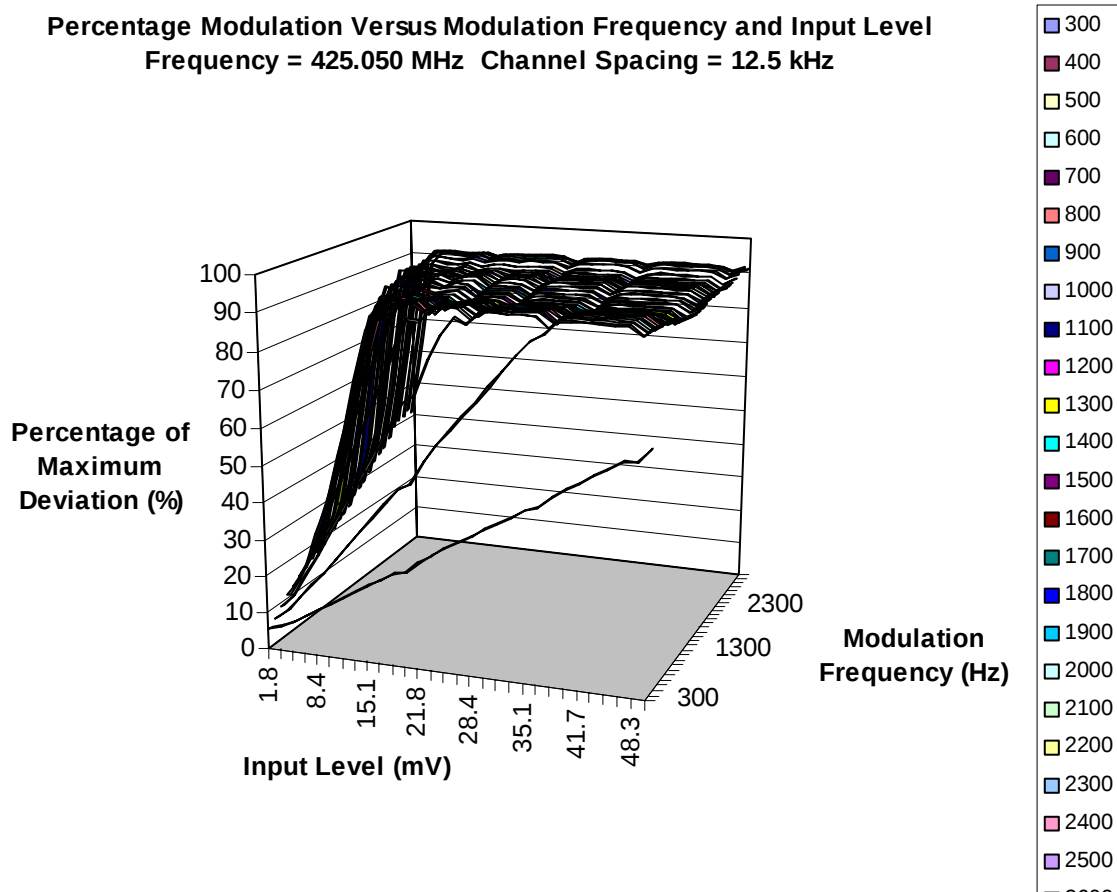


EXHIBIT 6D-2

Percentage Modulation Versus Modulation Frequency and Input Level
Frequency = 425.050 MHz Channel Spacing = 25.0 kHz



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



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:

$$BW = 2 * (M + D) \quad \text{where: } BW = \text{Bandwidth}$$

M= Maximum modulating frequency

D = Deviation

Shown below are the calculations required for FCC ID: AZ489FT4855.

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.

$$BW = 2(M+D) = 2*(3.0 \text{ kHz} + 2.5 \text{ kHz}) = 11 \text{ kHz} \implies 11K0$$

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.

$$BW = 2(M+D) = 2*(3 \text{ kHz} + 5 \text{ kHz}) = 16 \text{ kHz} \implies 16K0$$

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

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

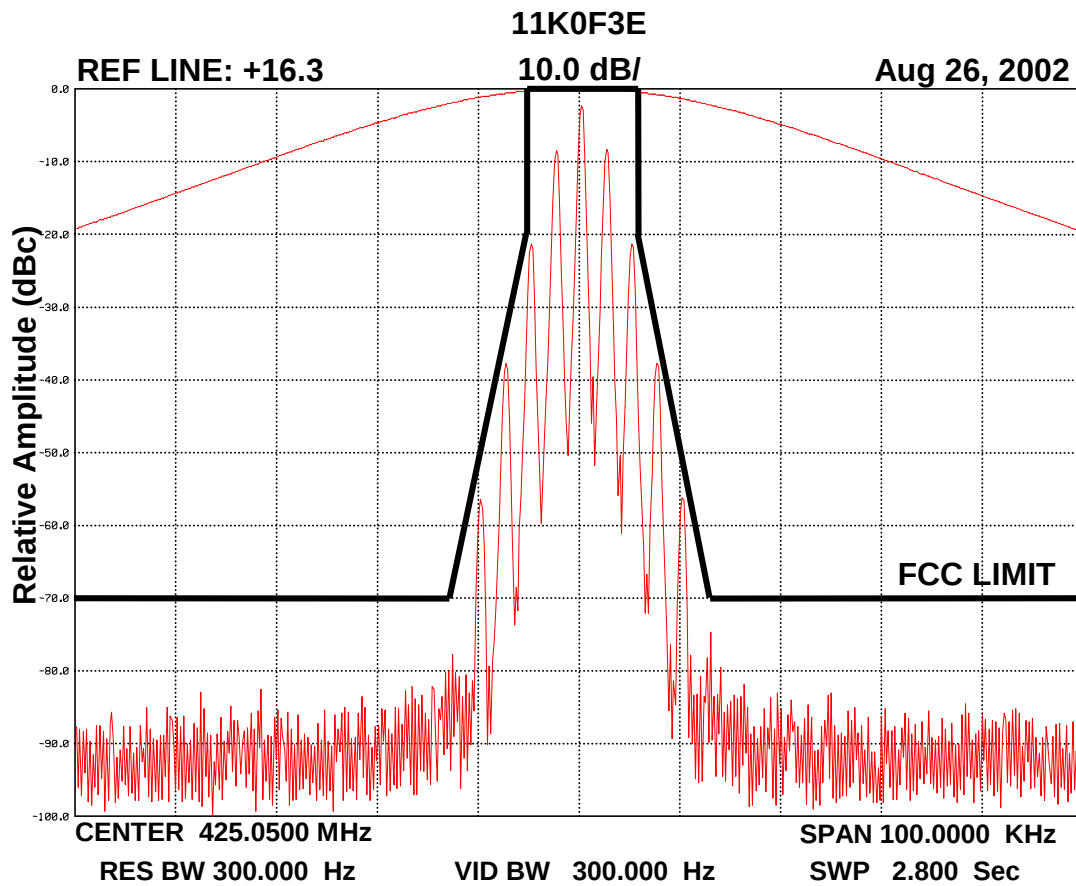
In this case, the maximum modulating frequency is 6 kHz with a 4 kHz deviation.

$$BW = 2(M+D) = 2*(6 \text{ kHz} + 4 \text{ kHz}) = 20 \text{ kHz} \implies 20K0$$

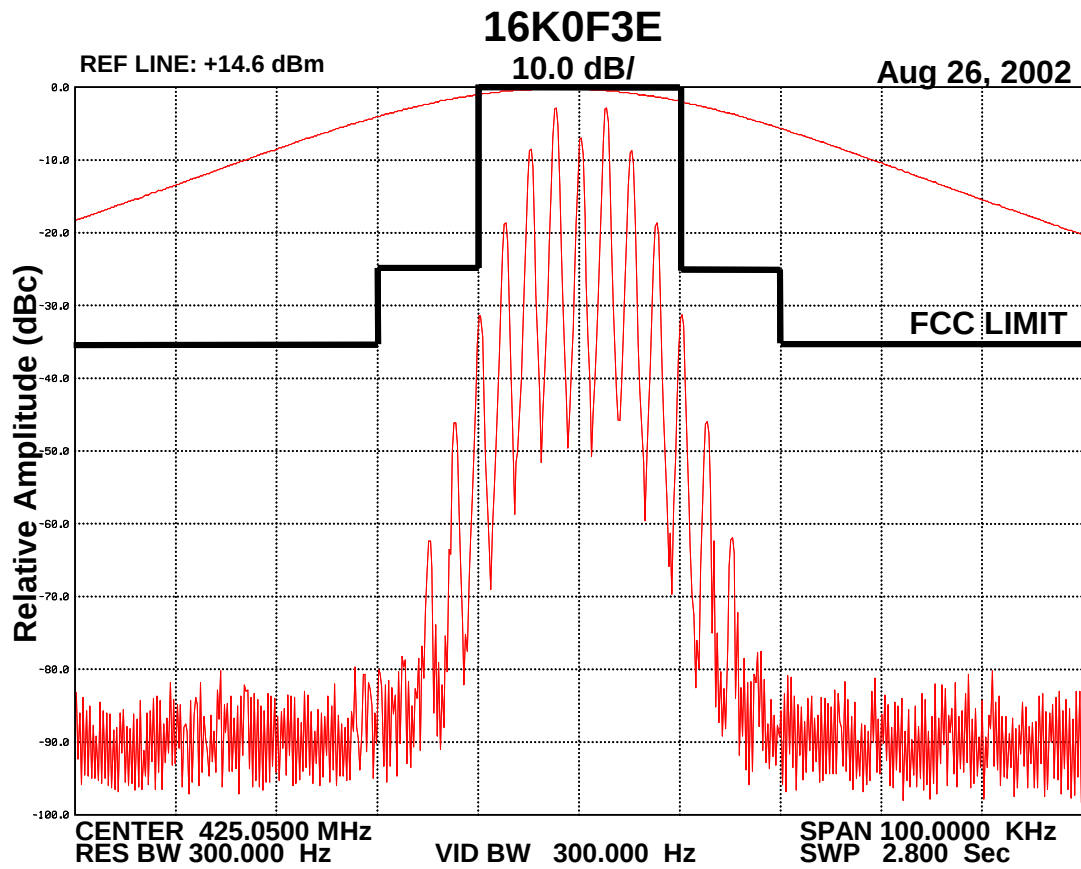
F1E portion of the designator indicates digital voice.

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

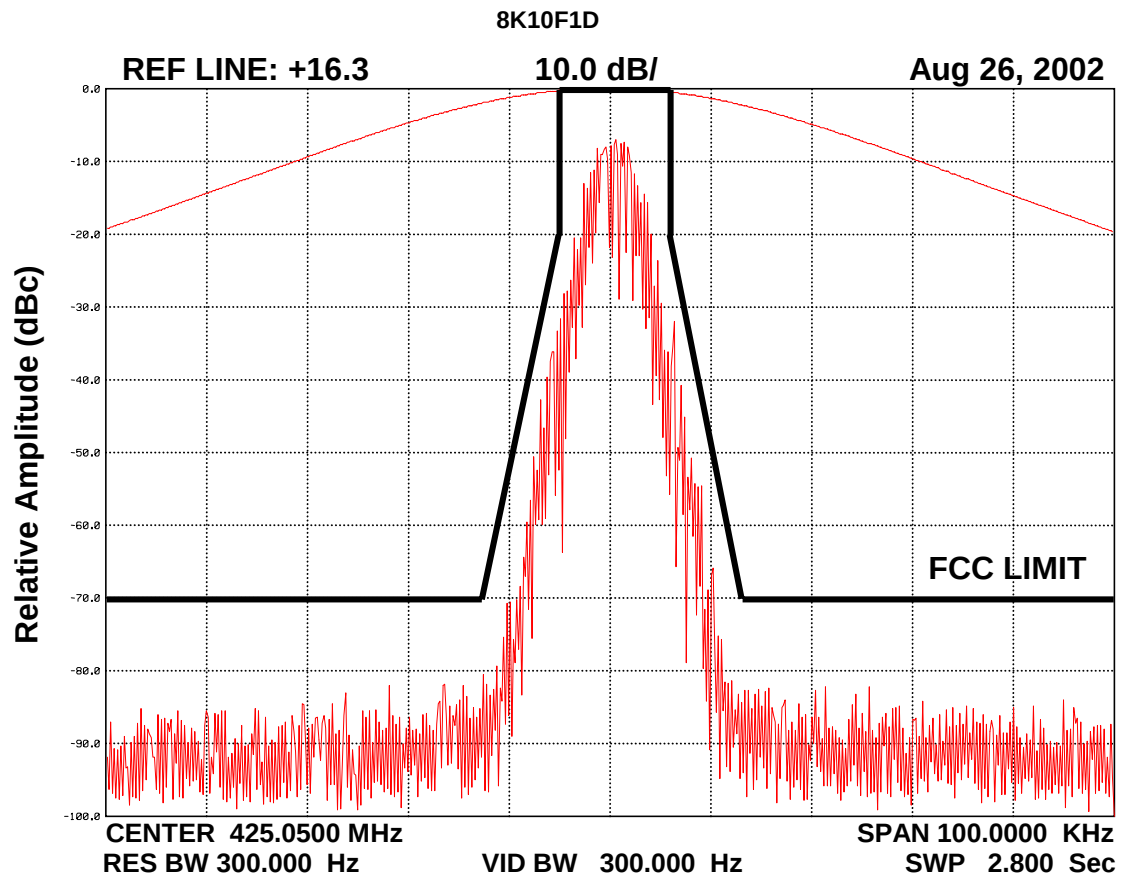
Occupied Bandwidth for UHF Range 1



Occupied Bandwidth for UHF Range 1



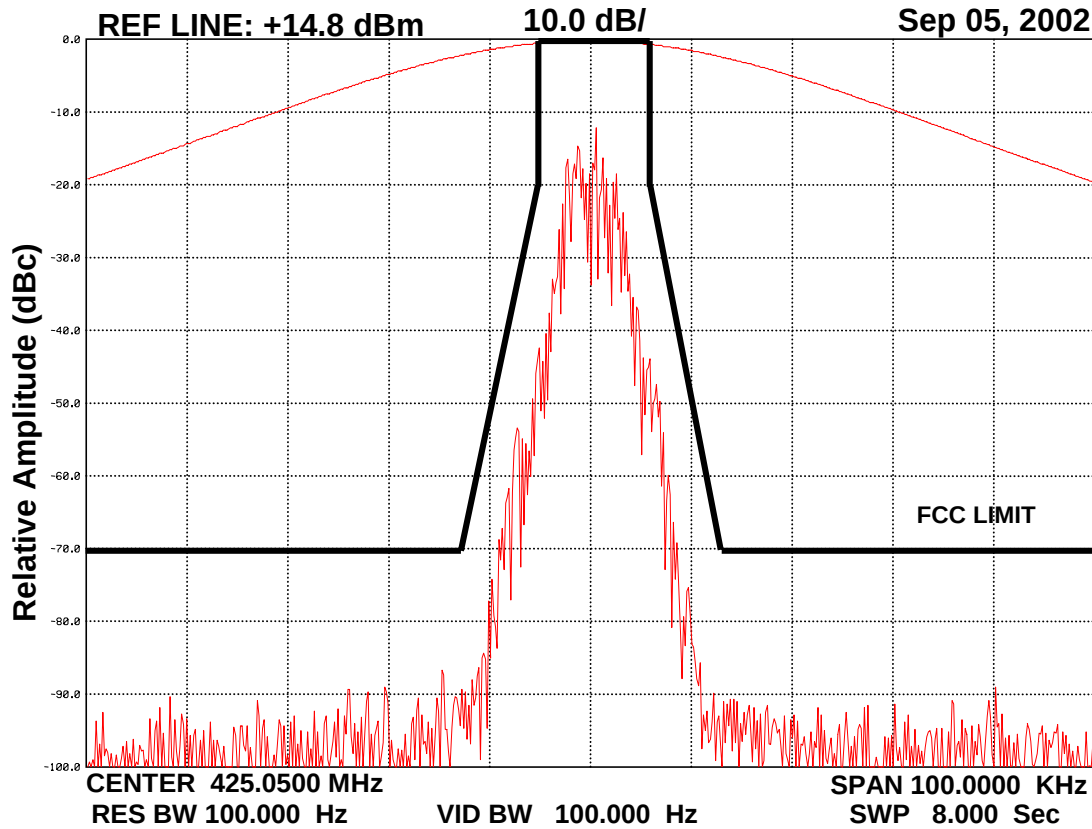
Occupied Bandwidth for UHF Range 1



Occupied Bandwidth for UHF Range 1

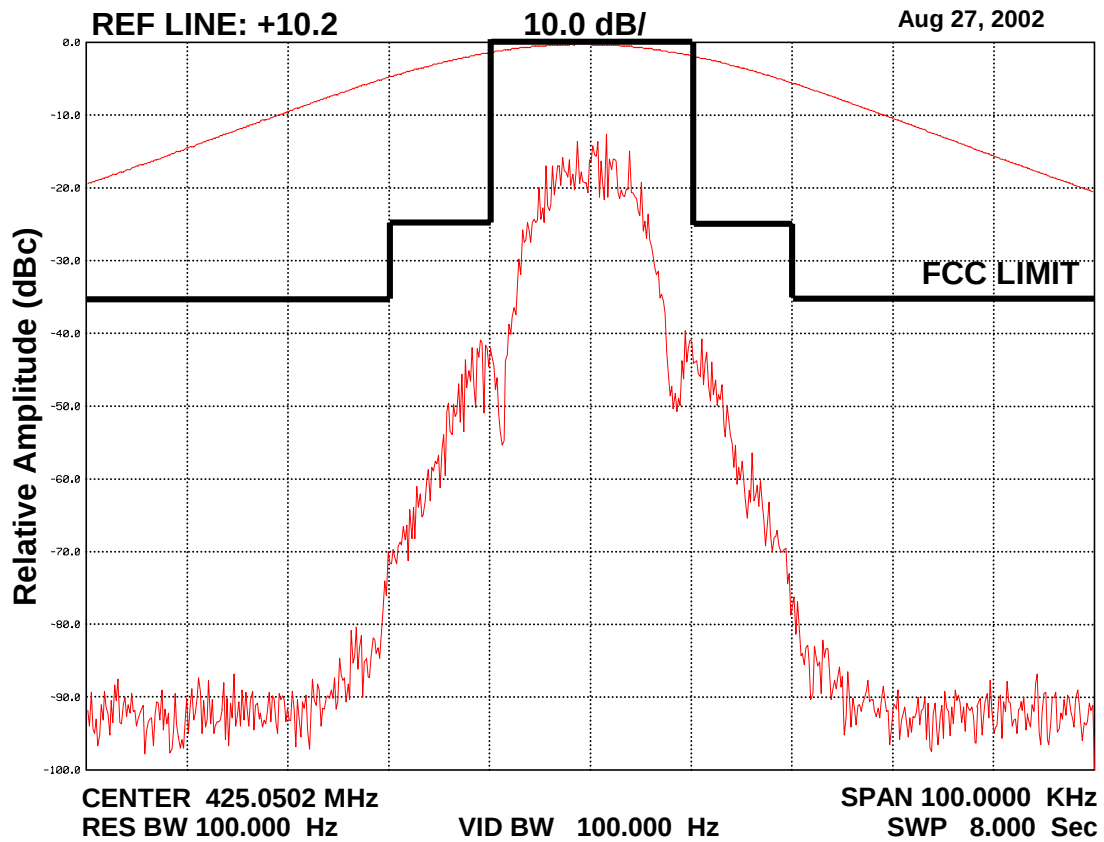
DIGITAL ENCRYPTION

8K10F1E



Occupied Bandwidth for UHF Range 1

20K0F1E



Transmitter Radiated Spurious Emissions: XTS 5000 UHF R1

380.05 MHz

5.3 Watts

Channel Spacing 25kHz | S/N #2

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spec.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spec.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
760.1000	-13	-20	-50.24	-53.25
1140.1500	-13	-20	*	*
1520.2000	-13	-20	*	-46.58
1900.2500	-13	-20	*	*
2280.3000	-13	-20	*	*
2660.3500	-13	-20	*	*
3040.4000	-13	-20	*	*
3420.4500	-13	-20	*	*
3800.5000	-13	-20	*	*

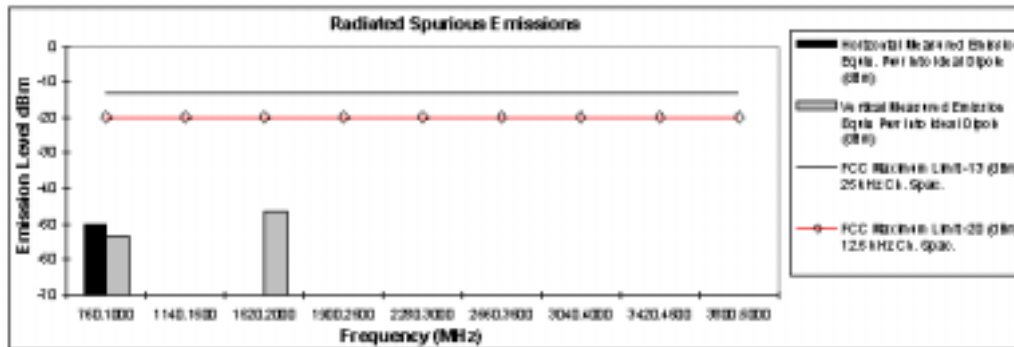


EXHIBIT 6F-1

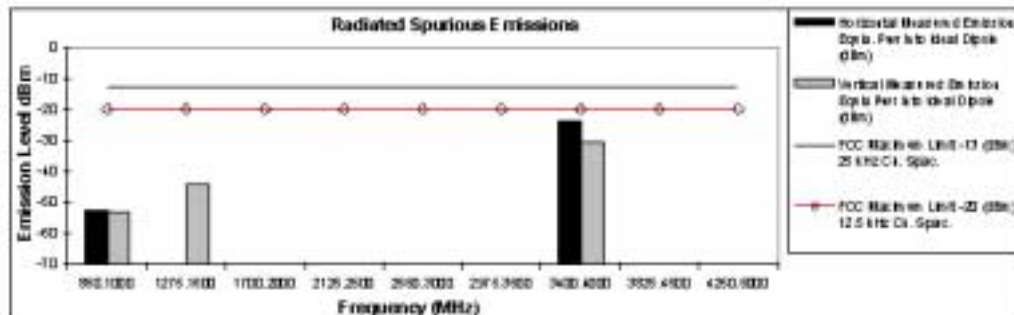
Transmitter Radiated Spurious Emissions: XTS 5000 UHF R1

425.05 MHz

5.3 Watts

Channel Spacing 25kHz | S/N #2

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spec.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spec.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
850.1000	-13	-20	-52.47	-53.11
1275.1500	-13	-20	*	-44.13
1700.2000	-13	-20	*	*
2125.2500	-13	-20	*	*
2550.3000	-13	-20	*	*
2975.3500	-13	-20	*	*
3400.4000	-13	-20	-23.70	-30.51
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 ambient.

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

EXHIBIT 6F-2

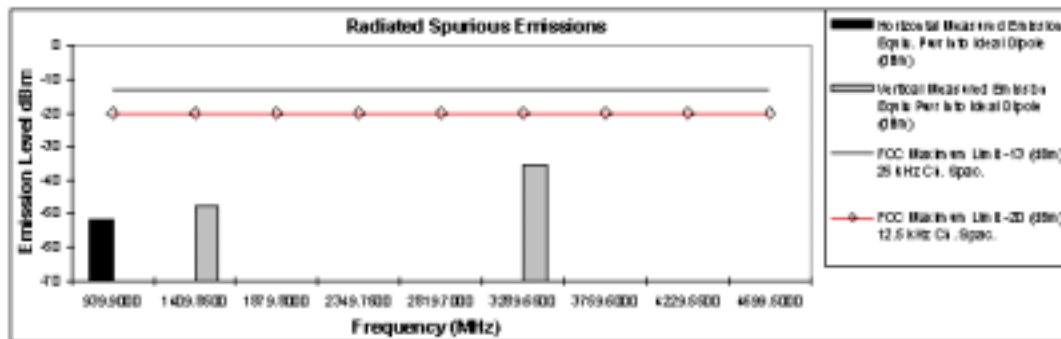
Transmitter Radiated Spurious Emissions: XTS 5000 UHF R1

469.95 MHz

5.3 Watts

Channel Spacing 25kHz | S/N #2

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spec.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spec.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)
939.9000	-13	-20	-51.89	*
1409.8500	-13	-20	*	-47.77
1879.8000	-13	-20	*	*
2349.7500	-13	-20	*	*
2819.7000	-13	-20	*	*
3289.6500	-13	-20	*	-36.30
3759.6000	-13	-20	*	*
4229.5500	-13	-20	*	*
4699.5000	-13	-20	*	*



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

EXHIBIT 6F-3

Transmitter Conducted Spurious Emissions**FREQ: 380.02500 MHz****Power 5.2 W****Channel Spacing: 12.50 kHz**

Spurious Frequency	FCC Limit	Measured Value (dBm)
366.10000	-20.0	-26.5
1138.00000	-20.0	-43.6
1140.00000	-20.0	-44.0

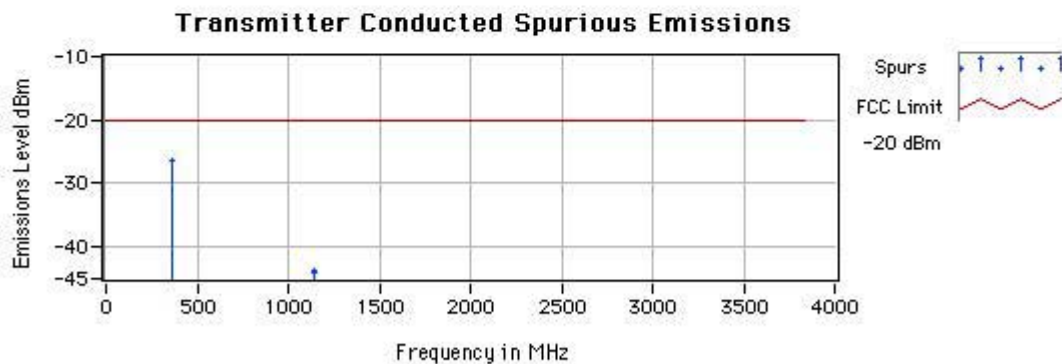
**All Transmitter Spurious Emissions tested to the 10th Harmonic****Motorola Plantation ATE Lab****Wednesday, 4th September 2002**Test Performed By: **Jerry Simpson**

Exhibit 6G – 1 (12.5kHz Ch Sp)

Transmitter Conducted Spurious Emissions**FREQ: 425.02500 MHz****Power 5.2 W****Channel Spacing: 12.50 kHz**

Spurious Frequency	FCC Limit	Measured Value (dBm)
411.00000	-20.0	-26.7
420.00000	-20.0	-39.2
1272.00000	-20.0	-48.8
3395.00000	-20.0	-43.4
4248.00000	-20.0	-43.1
4667.00000	-20.0	-41.7

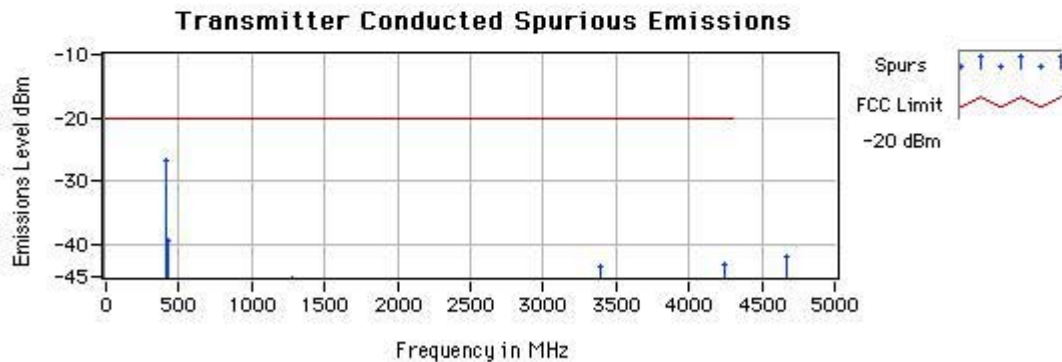
**All Transmitter Spurious Emissions tested to the 10th Harmonic****Motorola Plantation ATE Lab****Wednesday, 4th September 2002**Test Performed By: **Jerry Simpson**

Exhibit 6G – 2 (12.5kHz Ch Sp)

Transmitter Conducted Spurious Emissions**FREQ: 469.92500 MHz****Power 5.2 W****Channel Spacing: 12.50 kHz**

Spurious Frequency	FCC Limit	Measured Value (dBm)
456.00000	-20.0	-26.5
3286.00000	-20.0	-39.1
4227.00000	-20.0	-42.6
4690.00000	-20.0	-45.8

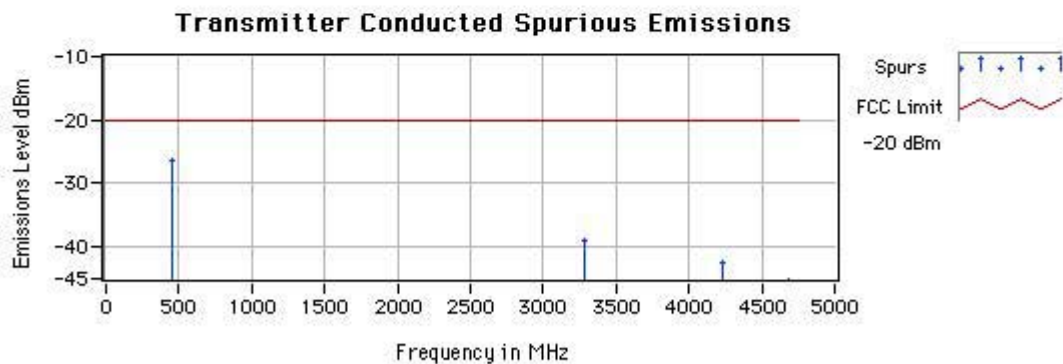
**All Transmitter Spurious Emissions tested to the 10th Harmonic****Motorola Plantation ATE Lab****Wednesday, 4th September 2002**Test Performed By: **Jerry Simpson**

Exhibit 6G – 3 (12.5kHz Ch Sp)

FREQUENCY STABILITY

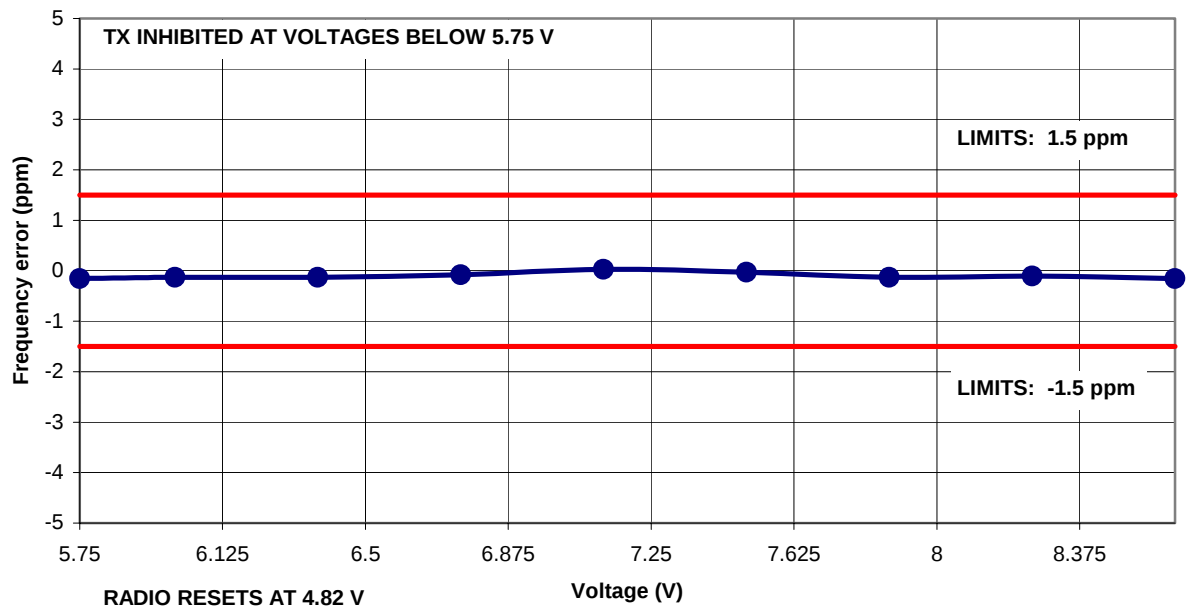


EXHIBIT 6H-1

FREQUENCY STABILITY

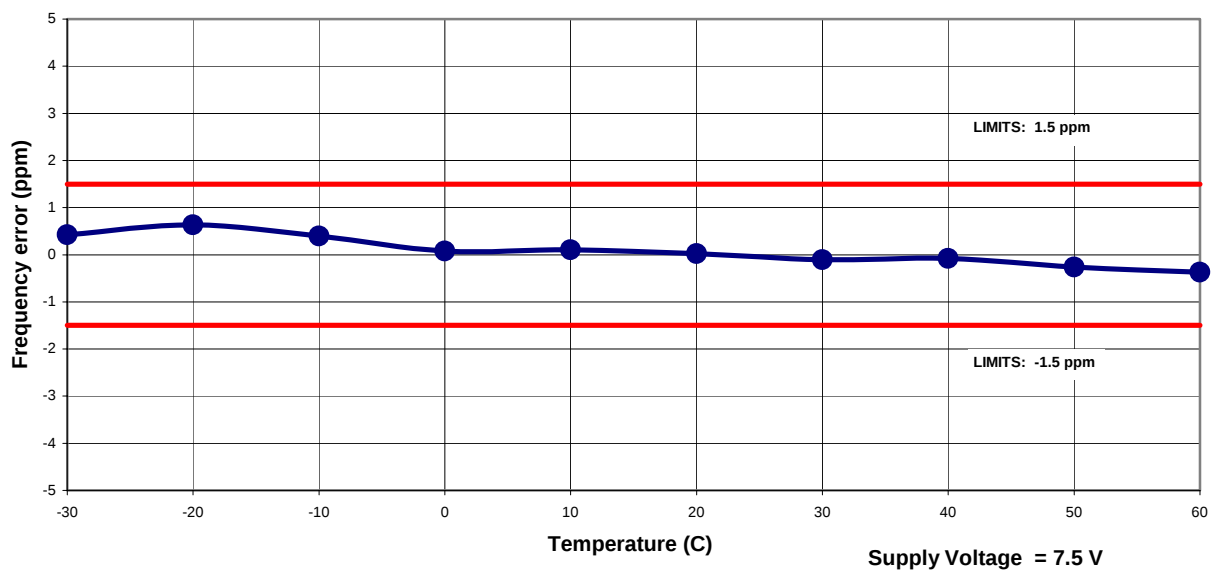


EXHIBIT 6H-2

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR

Frequency = 425.000 MHz Channel Spacing = 12.5 kHz

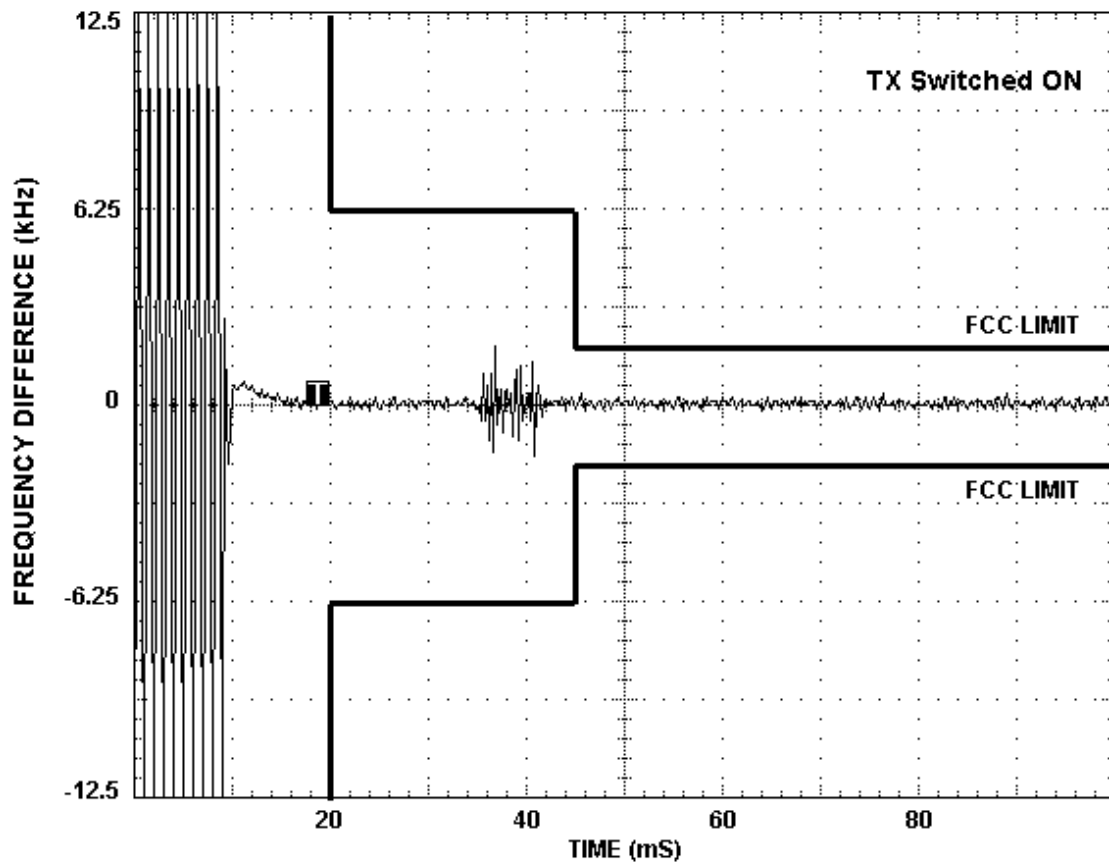
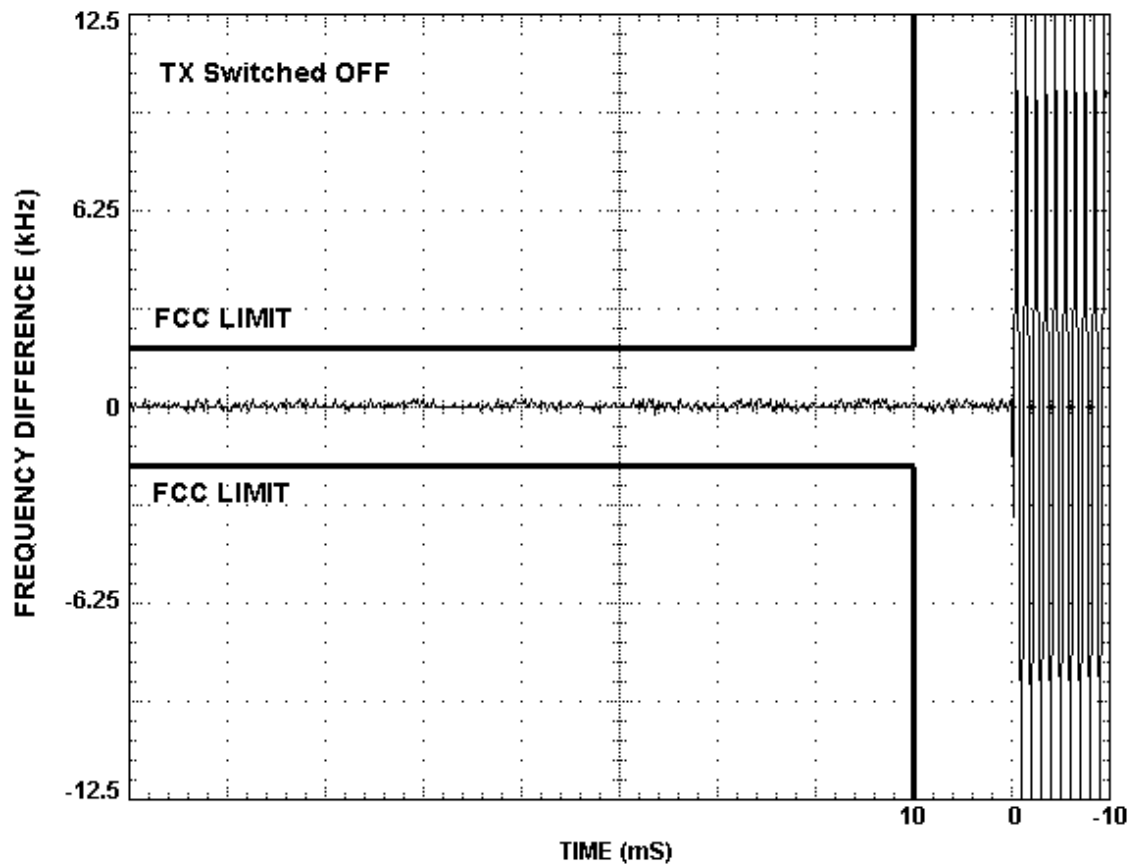
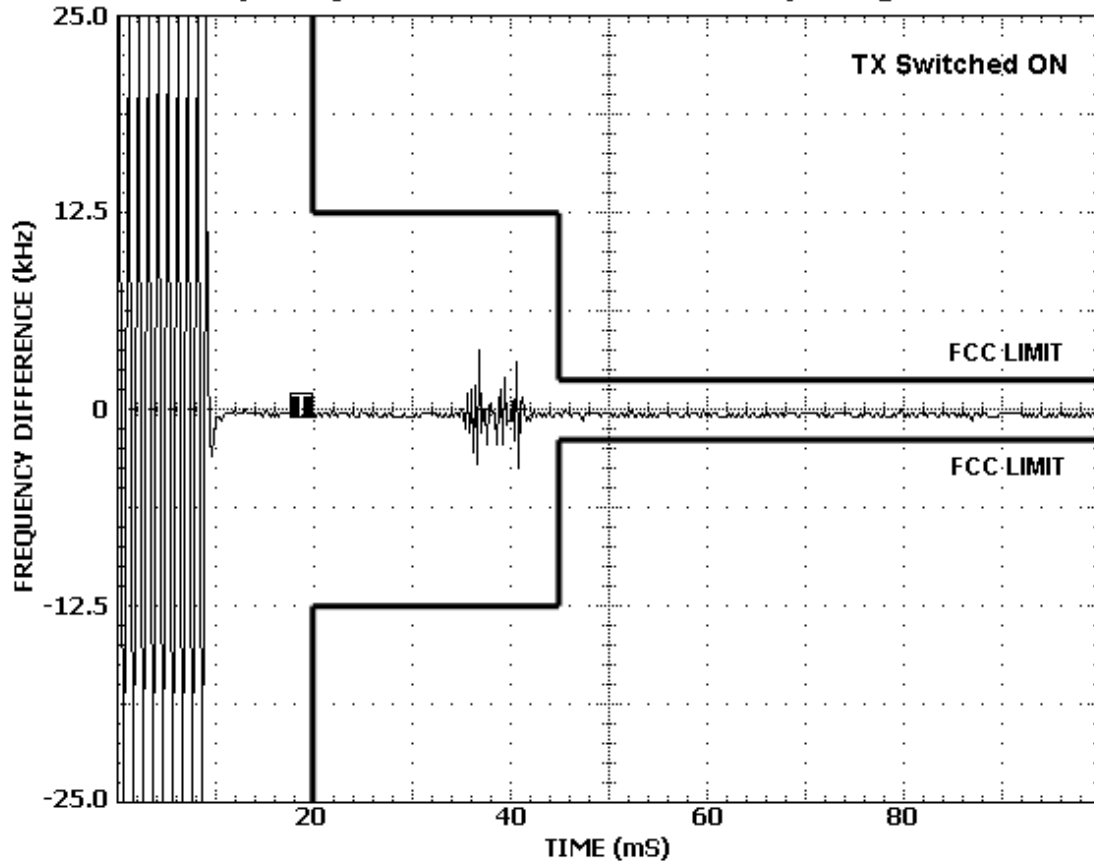


EXHIBIT 6I-1

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR**Frequency = 425.000 MHz Channel Spacing = 12.5 kHz**

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR**Frequency = 425.000 MHz Channel Spacing = 25 kHz**

TRANSMITTER TRANSIENT FREQUENCY BEHAVIOUR**Frequency = 425.000 MHz Channel Spacing = 25.0 kHz**