



**Test Report**

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**MOTOROLA**

FCC ID: AZ489FT3819

**RF POWER OUTPUT DATA**

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

**1.0Watts**

Frequency	151.8800MHz
Measured Conducted RF output*	1.02 Watts
Normal DC Voltage	7.80 Volts
Normal DC Current	560 milli amps
Primary Supply Voltage	7.80 Volts

**2.0Watts**

Frequency	151.70MHz
Measured Conducted RF output*	2.30 Watts
Normal DC Voltage	7.80 Volts
Normal DC Current	745 milli amps
Primary Supply Voltage	7.80 Volts

\*Note: RF Conducted output power measured at 7.80Volts

EXHIBIT 6A



### Audio Response

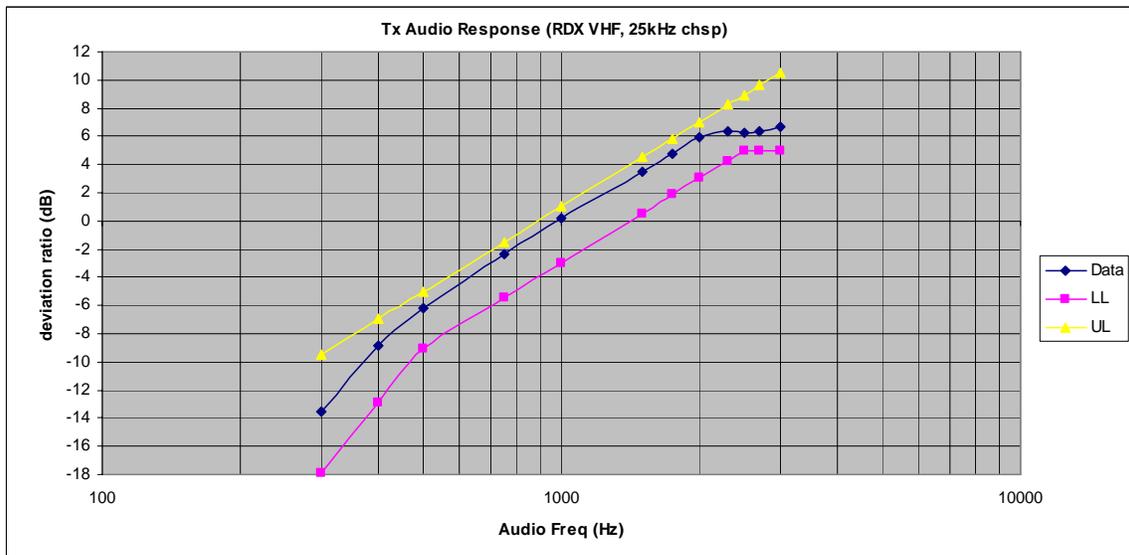
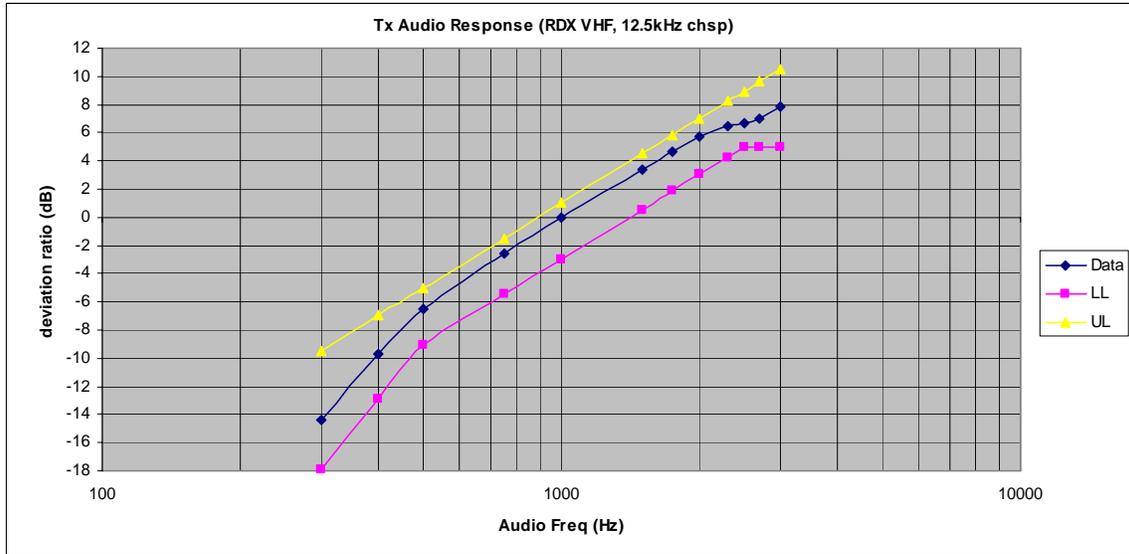
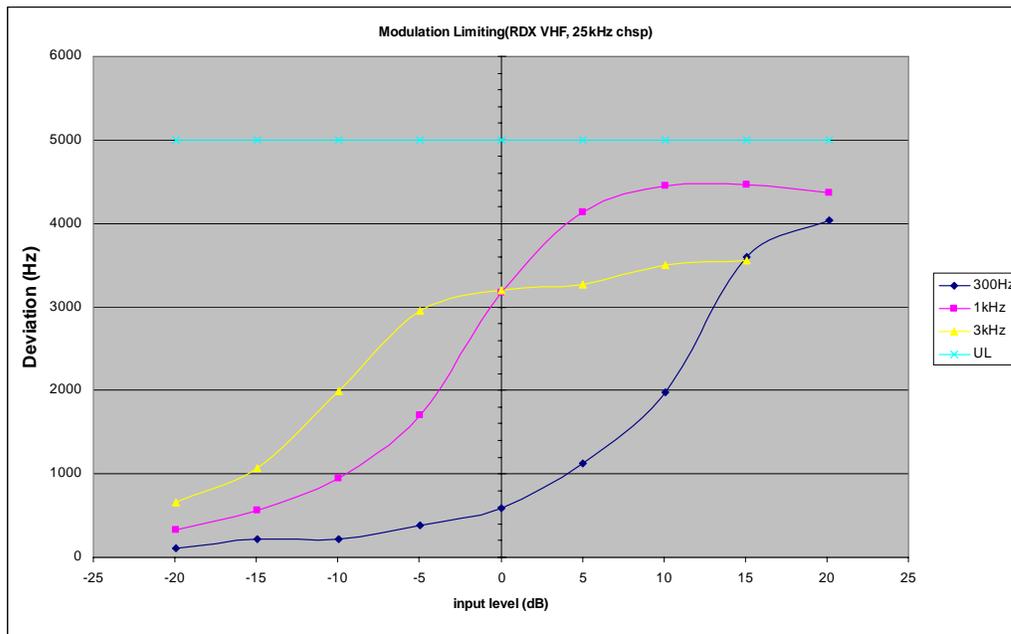
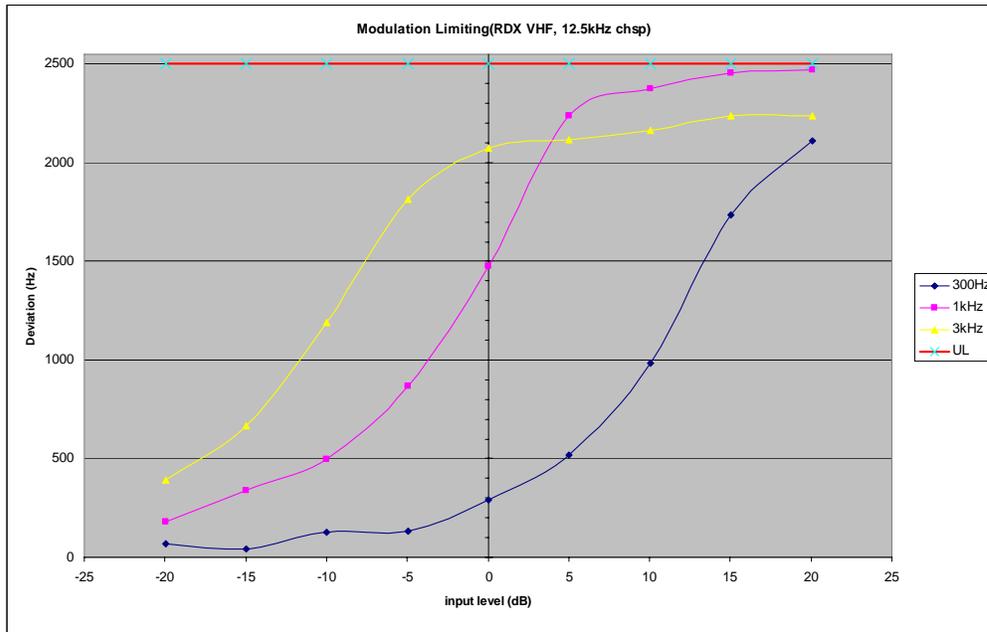


EXHIBIT 6B

MODULATION LIMITING





**MOTOROLA**

FCC ID: AZ489FT3819

**OCCUPIED BANDWIDTH DATA**

**2Watt**

12.5 / 25 kHz Channel Spacing

EXHIBIT 6D-1

2500 Hz Audio Modulation

Emission Type: 11K0F3E

Specification Mask D, 90.210 – 12.5 kHz

EXHIBIT 6D-2

2500 Hz Audio Modulation

Emission Type: 16K0F3E

Specification Mask B, 90.210 – 25 kHz

EXHIBIT 6D-3

2500 Hz & 77Hz Tone "PL" Modulation

Emission Type: 11K0F3E

Specification Mask D, 90.210 – 12.5 kHz

EXHIBIT 6D-4

2500 Hz & 77Hz Tone "PL" Modulation

Emission Type: 16K0F3E

Specification Mask B, 90.210 – 25 kHz

**CARSON'S RULE: 11K0F3E**

$BW = 2(M+D)$

$BW = 2$  (3 kHz maximum modulation frequency + 2.5 kHz deviation)

$BW = 2$  (5.5)

$BW = 11K0$

**CARSON'S RULE: 16K0F3E**

$BW = 2(M+D)$

$BW = 2$  (3 kHz maximum modulation frequency + 5 kHz deviation)

$BW = 2$  (8)

$BW = 16K0$

EXHIBIT 6D



**MOTOROLA**

FCC ID: AZ489FT3819

2- Watt 12.5 kHz  
Mask D, Rule Part: 90.210  
Emission Type: 11K0F3E

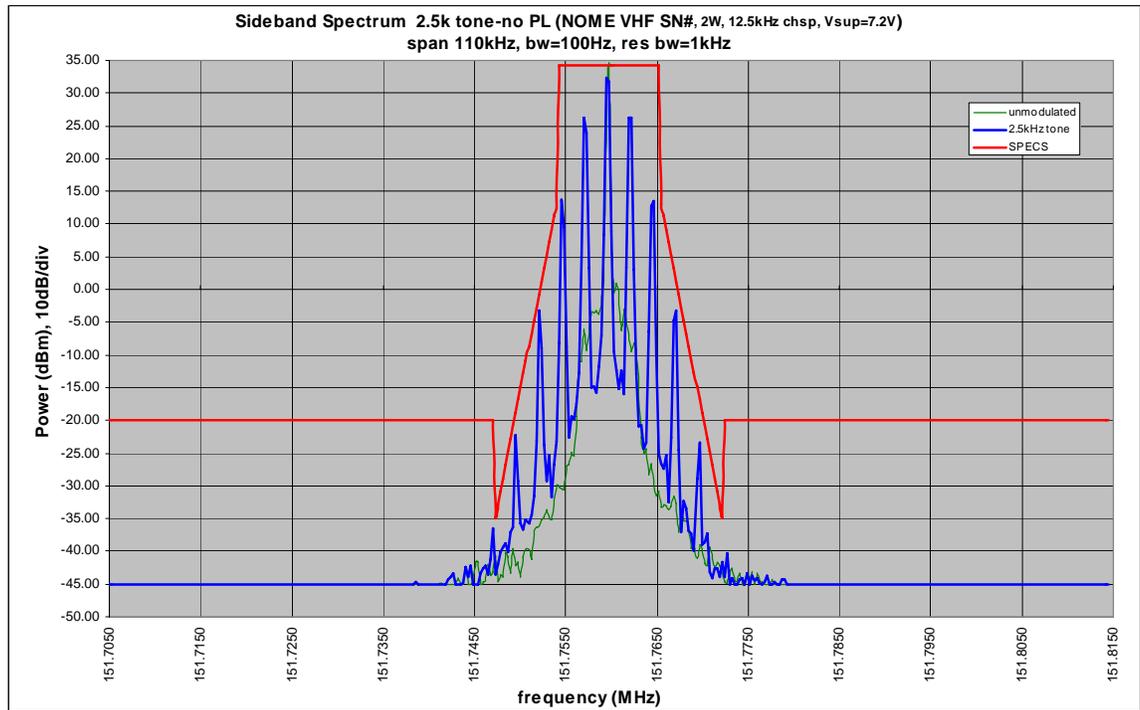


EXHIBIT 6D-1



**MOTOROLA**

FCC ID: AZ489FT3819

2- Watt 25 kHz  
Mask B, Rule Part: 90.210  
Emission Type: 16K0F3E

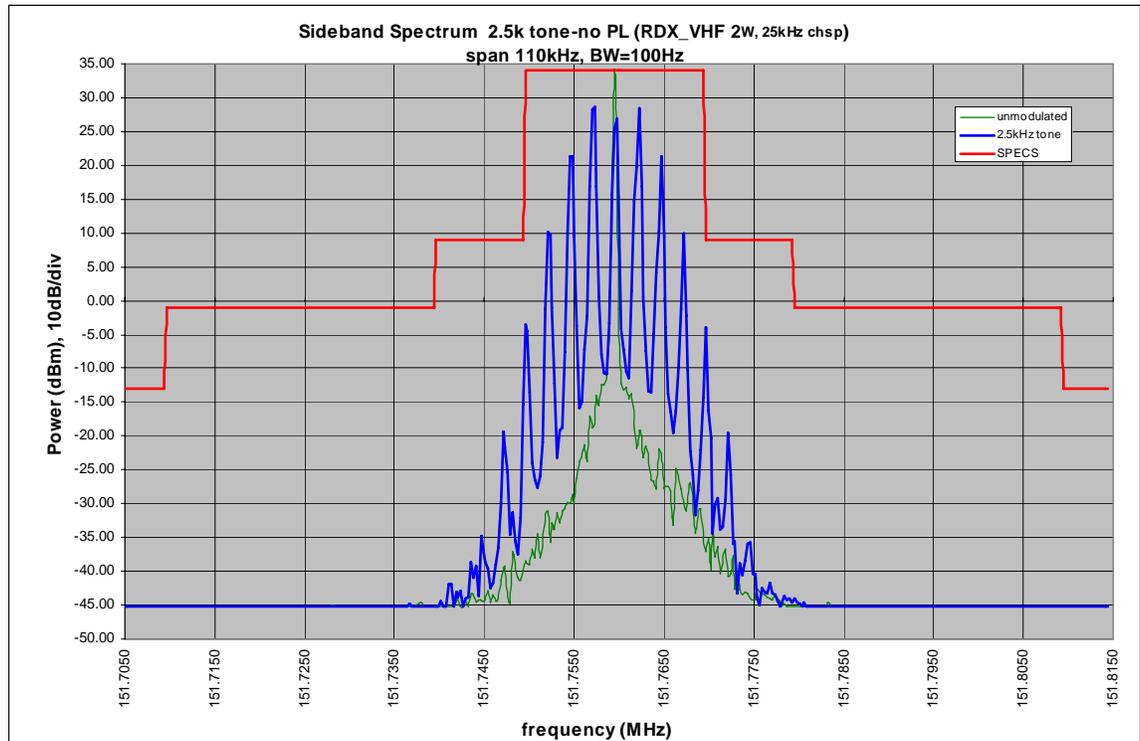


EXHIBIT 6D-2



**MOTOROLA**

FCC ID: AZ489FT3819

2- Watt 12.5 kHz  
2500 Hz & 77Hz Tone "PL" Modulation  
Mask D, Rule Part: 90.210  
Emission Type: 11K0F3E

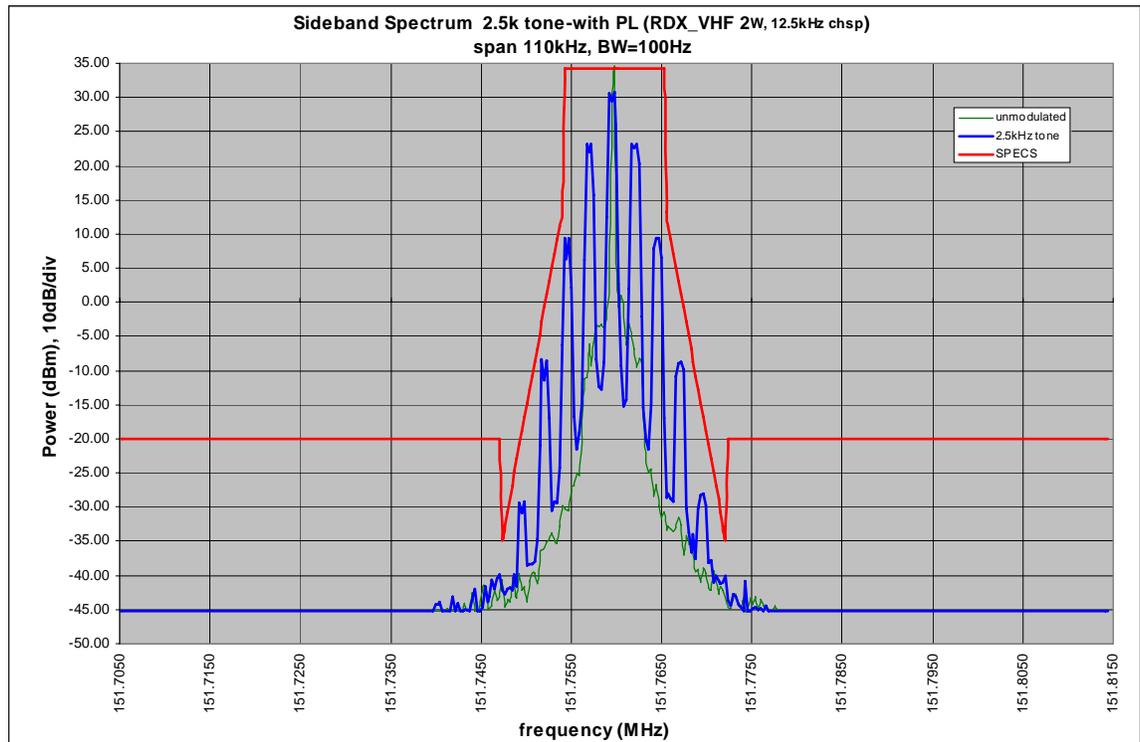


EXHIBIT 6D-3



**MOTOROLA**

FCC ID: AZ489FT3819

2- Watt 25 kHz  
2500 Hz & 77Hz Tone "PL" Modulation  
Mask B, Rule Part: 90.210  
Emission Type: 16K0F3E

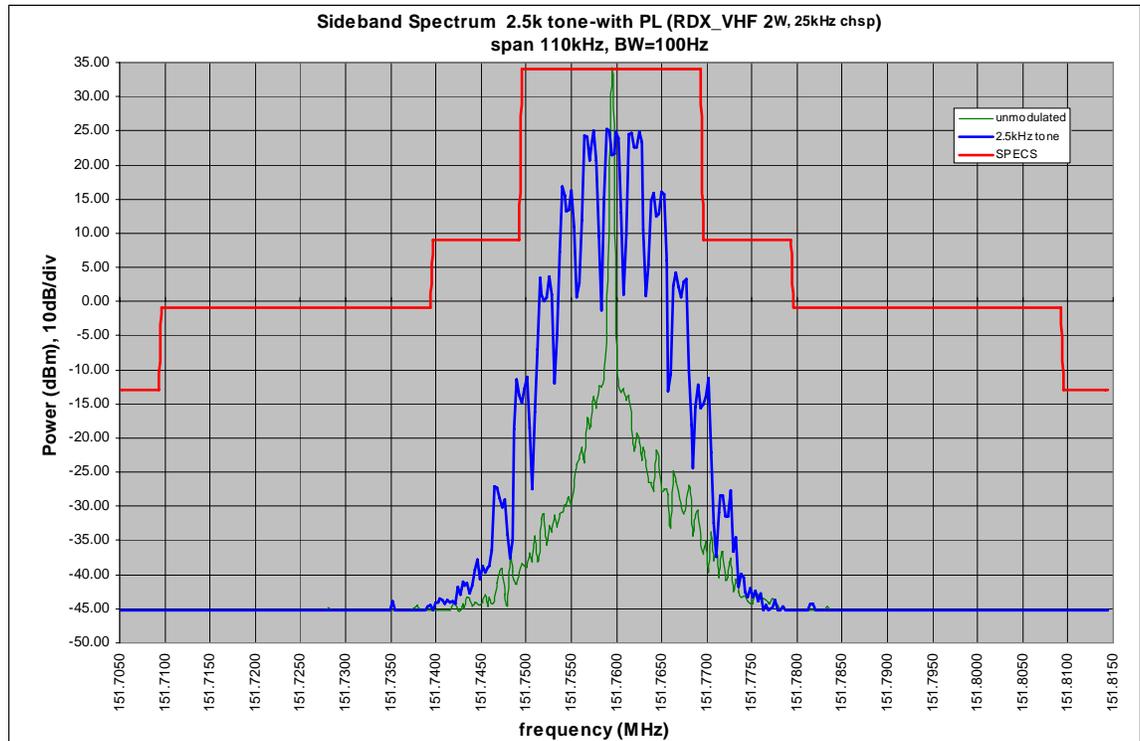


EXHIBIT 6D-4



**MOTOROLA**

FCC ID: AZ489FT3819

**1 Watt/ 12.5kHz**

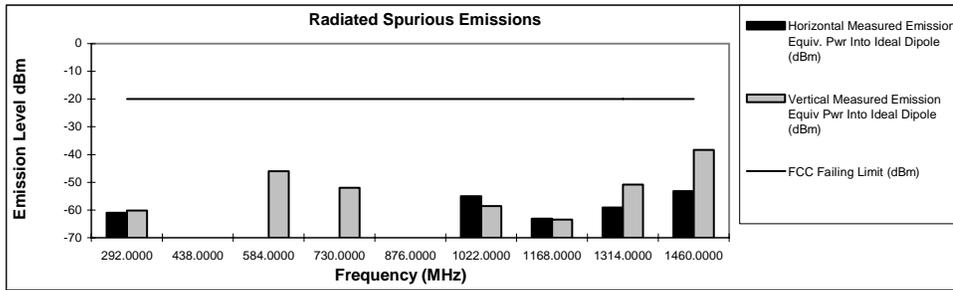
Motorola Inc.

FCC ID:AZ489FT3819

**Transmit Radiated Spurious Emissions: CP110 RBR**  
**Tx Power: 1 Watts**

**146 MHz** **Channel Spacing 12.5kHz | S/N 3**

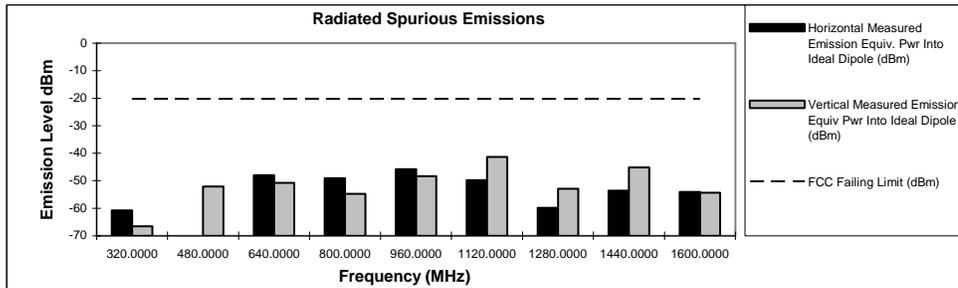
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
292.0000	-20	-60.98	-60.22
438.0000	-20	*	*
584.0000	-20	*	-46.02
730.0000	-20	*	-51.97
876.0000	-20	*	*
1022.0000	-20	-55.10	-58.60
1168.0000	-20	-63.11	-63.43
1314.0000	-20	-59.14	-50.82
1460.0000	-20	-53.21	-38.36



**Transmit Radiated Spurious Emissions: CP110 RBR**  
**Tx Power: 1 Watts**

**160 MHz** **Channel Spacing 12.5kHz | S/N 3**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
320.0000	-20	-60.77	-66.55
480.0000	-20	*	-52.08
640.0000	-20	-48.01	-50.74
800.0000	-20	-49.03	-54.76
960.0000	-20	-45.78	-48.37
1120.0000	-20	-49.80	-41.32
1280.0000	-20	-59.89	-52.88
1440.0000	-20	-53.60	-45.17
1600.0000	-20	-54.02	-54.32



\* 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.

Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan  
FCC Registration: 91932 / Industry Canada: IC3679A-1

July 2, 2007

EXHIBIT 6E-1



**MOTOROLA**

FCC ID: AZ489FT3819

**1 Watt/ 12.5kHz**

Motorola Inc.

FCC ID:AZ489FT3819

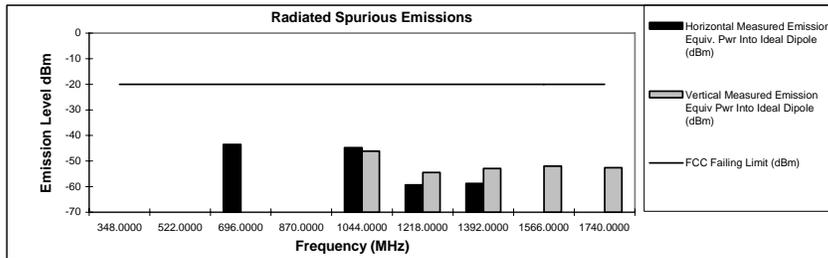
Transmit Radiated Spurious Emissions: CP110 RBR

Tx Power: 1 Watts

174 MHz

Channel Spacing 12.5kHz | S/N 3

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
348.0000	-20	*	*
522.0000	-20	*	*
696.0000	-20	-43.51	*
870.0000	-20	*	*
1044.0000	-20	-44.74	-46.13
1218.0000	-20	-59.36	-54.52
1392.0000	-20	-58.77	-52.88
1566.0000	-20	*	-52.03
1740.0000	-20	*	-52.57



\* 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.

Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan  
 FCC Registration: 91932 / Industry Canada: IC3679A-1

July 2, 2007

EXHIBIT 6E-1A



**1 Watt/ 25kHz**

Motorola Inc.

FCC ID:AZ489FT3819

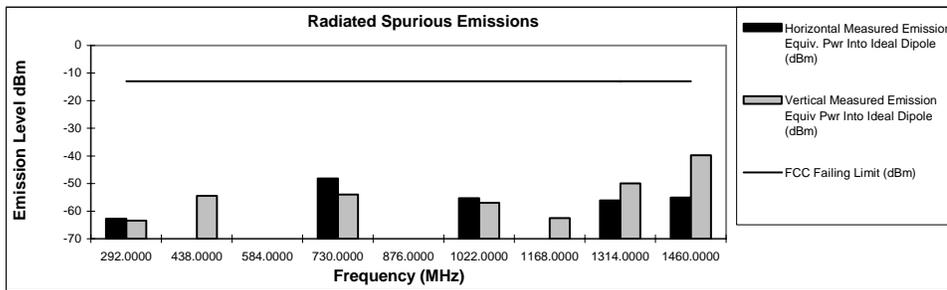
**Transmit Radiated Spurious Emissions: CP110 RBR**

**Tx Power: 1 Watts**

**146 MHz**

**Channel Spacing 25kHz | S/N 3**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
292.0000	-13	-62.71	-63.46
438.0000	-13	*	-54.47
584.0000	-13	*	*
730.0000	-13	-48.13	-53.96
876.0000	-13	*	*
1022.0000	-13	-55.36	-57.01
1168.0000	-13	*	-62.48
1314.0000	-13	-56.16	-49.96
1460.0000	-13	-55.03	-39.79



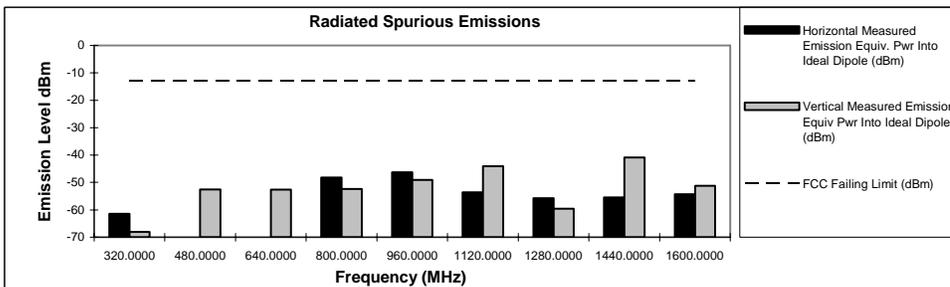
**Transmit Radiated Spurious Emissions: CP110 RBR**

**Tx Power: 1 Watts**

**160 MHz**

**Channel Spacing 25kHz | S/N 3**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
320.0000	-13	-61.43	-68.02
480.0000	-13	*	-52.51
640.0000	-13	*	-52.64
800.0000	-13	-48.20	-52.38
960.0000	-13	-46.34	-49.07
1120.0000	-13	-53.64	-44.07
1280.0000	-13	-55.71	-59.58
1440.0000	-13	-55.45	-40.89
1600.0000	-13	-54.36	-51.21



\* 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.



**MOTOROLA**

FCC ID: AZ489FT3819

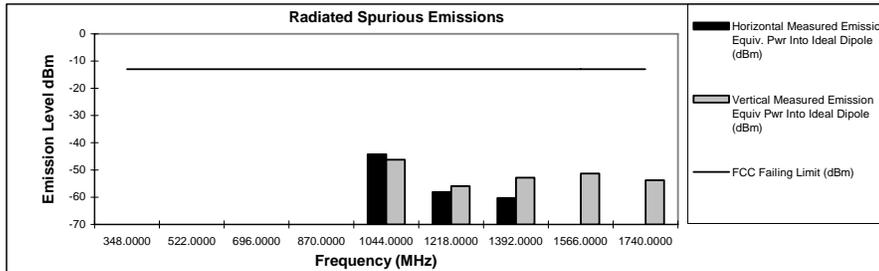
**1 Watt/ 25kHz**

Motorola Inc.

FCC ID:AZ489FT3819

Transmit Radiated Spurious Emissions: CP110 RBR  
Tx Power: 1 Watts

174 MHz		Channel Spacing 25kHz   S/N 3	
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
348.0000	-13	*	*
522.0000	-13	*	*
696.0000	-13	*	*
870.0000	-13	*	*
1044.0000	-13	-44.28	-46.25
1218.0000	-13	-58.07	-55.91
1392.0000	-13	-60.37	-52.87
1566.0000	-13	*	-51.33
1740.0000	-13	*	-53.73



\* 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.

Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan  
FCC Registration: 91932 / Industry Canada: IC3679A-1

July 2, 2007

EXHIBIT 6E-2A



**2Watts / 12.5 kHz**

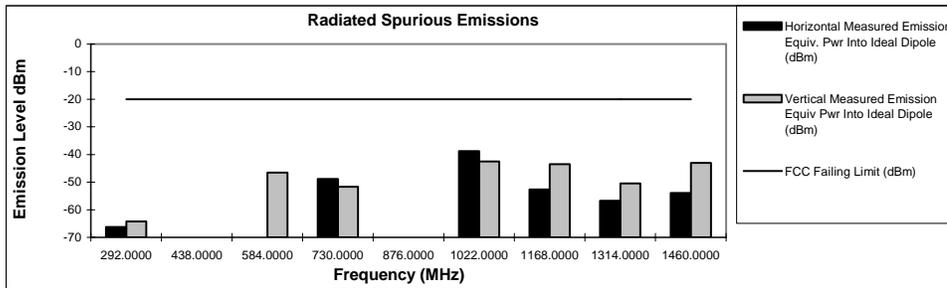
Motorola Inc.

FCC ID:AZ489FT3819

**Transmit Radiated Spurious Emissions: CP110 RBR**  
Tx Power: 2 Watts

**146 MHz Channel Spacing 12.5kHz | S/N 3**

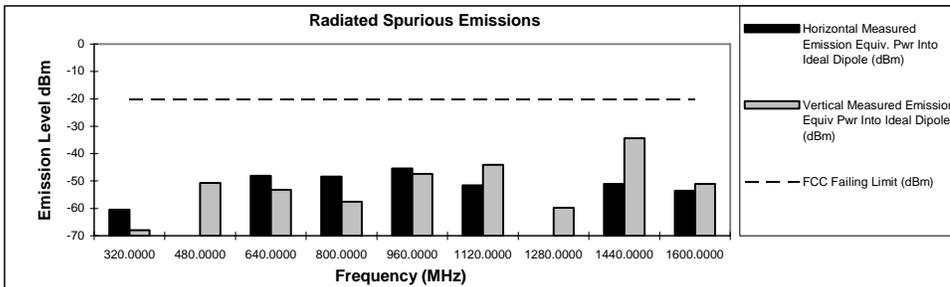
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
292.0000	-20	-66.29	-64.26
438.0000	-20	*	*
584.0000	-20	*	-46.60
730.0000	-20	-48.90	-51.71
876.0000	-20	*	*
1022.0000	-20	-38.77	-42.55
1168.0000	-20	-52.67	-43.50
1314.0000	-20	-56.78	-50.47
1460.0000	-20	-53.90	-43.08



**Transmit Radiated Spurious Emissions: CP110 RBR**  
Tx Power: 2 Watts

**160 MHz Channel Spacing 12.5kHz | S/N 3**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
320.0000	-20	-60.43	-67.97
480.0000	-20	*	-50.70
640.0000	-20	-48.08	-53.21
800.0000	-20	-48.33	-57.53
960.0000	-20	-45.44	-47.39
1120.0000	-20	-51.55	-44.11
1280.0000	-20	*	-59.79
1440.0000	-20	-51.01	-34.36
1600.0000	-20	-53.56	-51.04



\* 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.



**MOTOROLA**

FCC ID: AZ489FT3819

**2Watts / 12.5 kHz**

Motorola Inc.

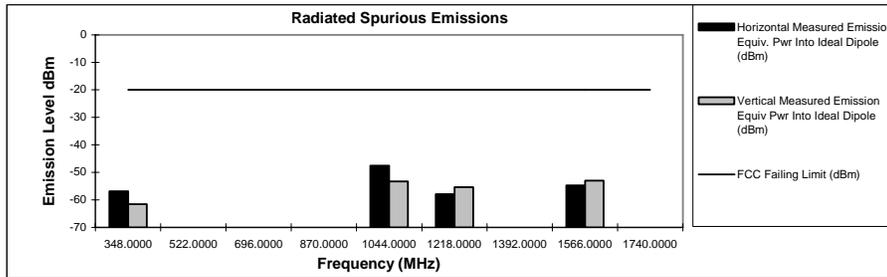
FCC ID:AZ489FT3819

**Transmit Radiated Spurious Emissions: CP110 RBR**  
**Tx Power: 2 Watts**

174 MHz

Channel Spacing 12.5kHz | S/N 3

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
348.0000	-20	-56.96	-61.56
522.0000	-20	*	*
696.0000	-20	*	*
870.0000	-20	*	*
1044.0000	-20	-47.55	-53.36
1218.0000	-20	-57.93	-55.41
1392.0000	-20	*	*
1566.0000	-20	-54.75	-53.01
1740.0000	-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.

Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan  
FCC Registration: 91932 / Industry Canada: IC3679A-1

June 16, 2007

EXHIBIT 6E-3A



**2Watts / 25 kHz**

Motorola Inc.

FCC ID:AZ489FT3819

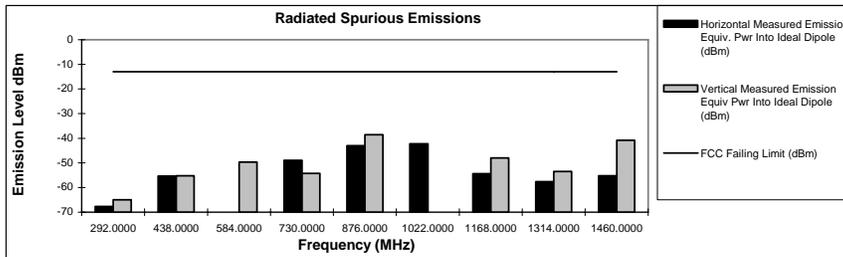
**Transmit Radiated Spurious Emissions: CP110 RBR**

**Tx Power: 2 Watts**

**146 MHz**

**Channel Spacing 25kHz | S/N 3**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
292.0000	-13	-67.69	-64.92
438.0000	-13	-55.35	-55.22
584.0000	-13	*	-49.69
730.0000	-13	-48.99	-54.29
876.0000	-13	-43.05	-38.56
1022.0000	-13	-42.24	*
1168.0000	-13	-54.32	-47.97
1314.0000	-13	-57.62	-53.48
1460.0000	-13	-55.25	-40.86



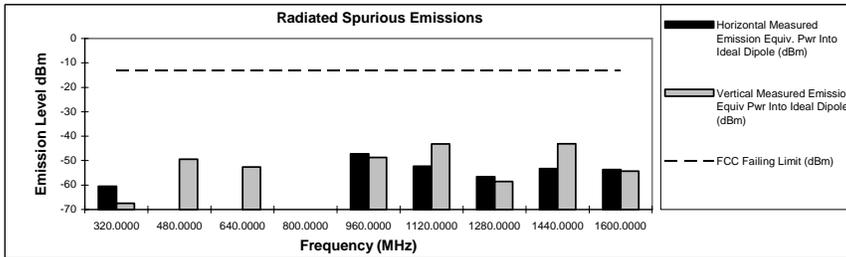
**Transmit Radiated Spurious Emissions: CP110 RBR**

**Tx Power: 2 Watts**

**160 MHz**

**Channel Spacing 25kHz | S/N 3**

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
320.0000	-13	-60.46	-67.43
480.0000	-13	*	-49.47
640.0000	-13	*	-52.68
800.0000	-13	*	*
960.0000	-13	-47.20	-48.75
1120.0000	-13	-52.28	-43.19
1280.0000	-13	-56.52	-58.50
1440.0000	-13	-53.29	-43.14
1600.0000	-13	-53.62	-54.35



\* 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.



**MOTOROLA**

FCC ID: AZ489FT3819

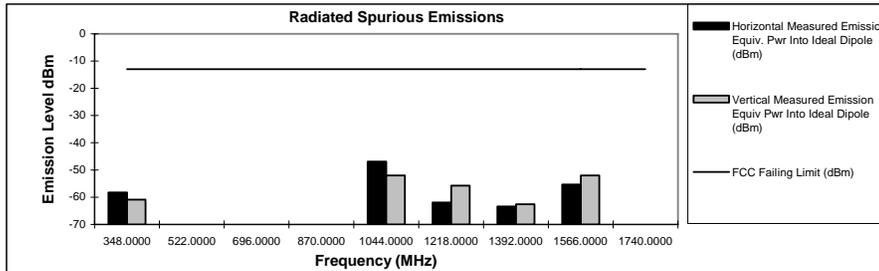
**2Watts / 25 kHz**

Motorola Inc.

FCC ID:AZ489FT3819

Transmit Radiated Spurious Emissions: CP110 RBR  
Tx Power: 2 Watts

174 MHz		Channel Spacing 25kHz   S/N 3	
Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
348.0000	-13	-58.26	-60.88
522.0000	-13	*	*
696.0000	-13	*	*
870.0000	-13	*	*
1044.0000	-13	-46.93	-52.03
1218.0000	-13	-61.95	-55.75
1392.0000	-13	-63.46	-62.54
1566.0000	-13	-55.34	-52.03
1740.0000	-13	*	*



\* 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.

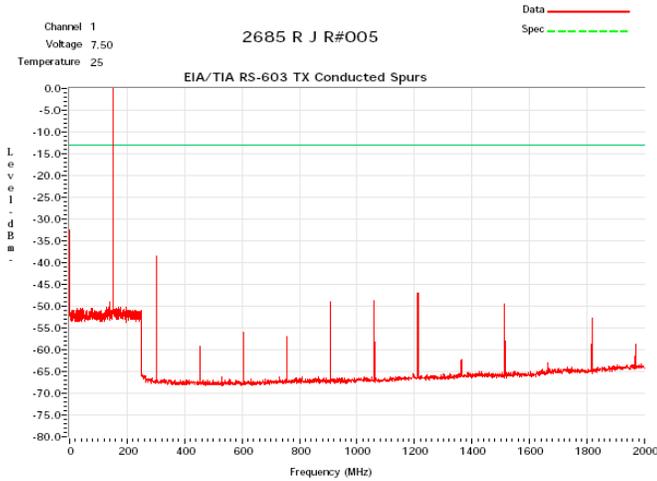
Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan  
FCC Registration: 91932 / Industry Canada: IC3679A-1

July 2, 2007

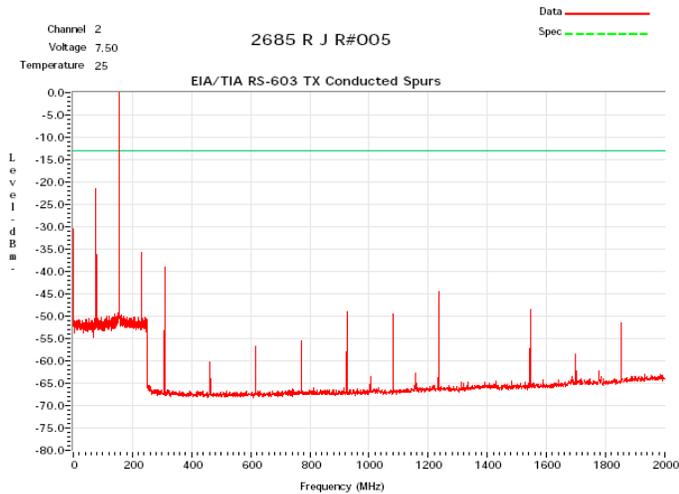


**Conducted Emissions**

**2Watt TX Frequency 151.5215MHz (25 kHz Channel spacing)**



**2Watt TX Frequency 154.5400MHz (25 kHz Channel spacing)**





**MOTOROLA**

FCC ID: AZ489FT3819

Conducted Emissions

2Watt TX Frequency 146.000MHz (25 kHz Channel spacing)

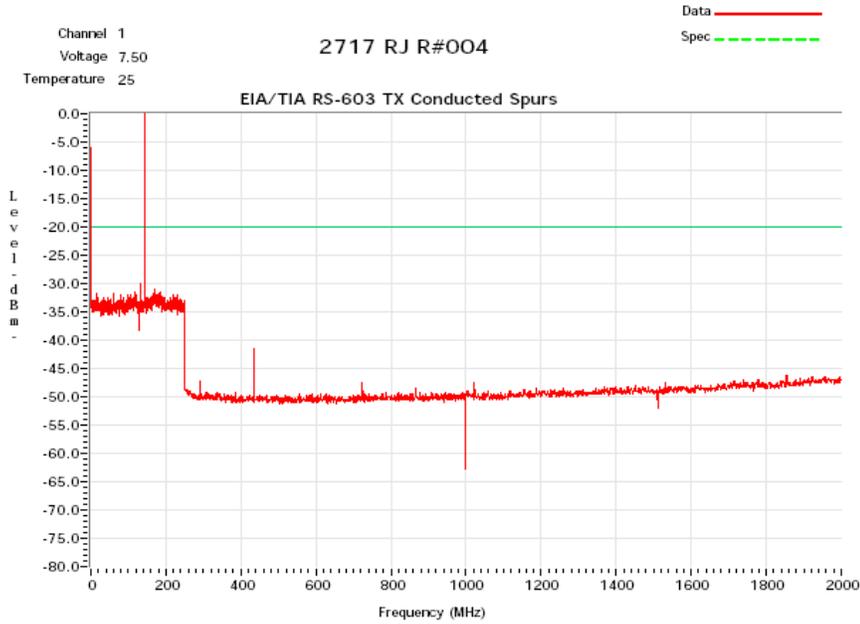


EXHIBIT 6E-6



**MOTOROLA**

FCC ID: AZ489FT3819

**Conducted Emissions**

**2Watt TX Frequency 160.0000MHz (12.5 kHz Channel spacing)**

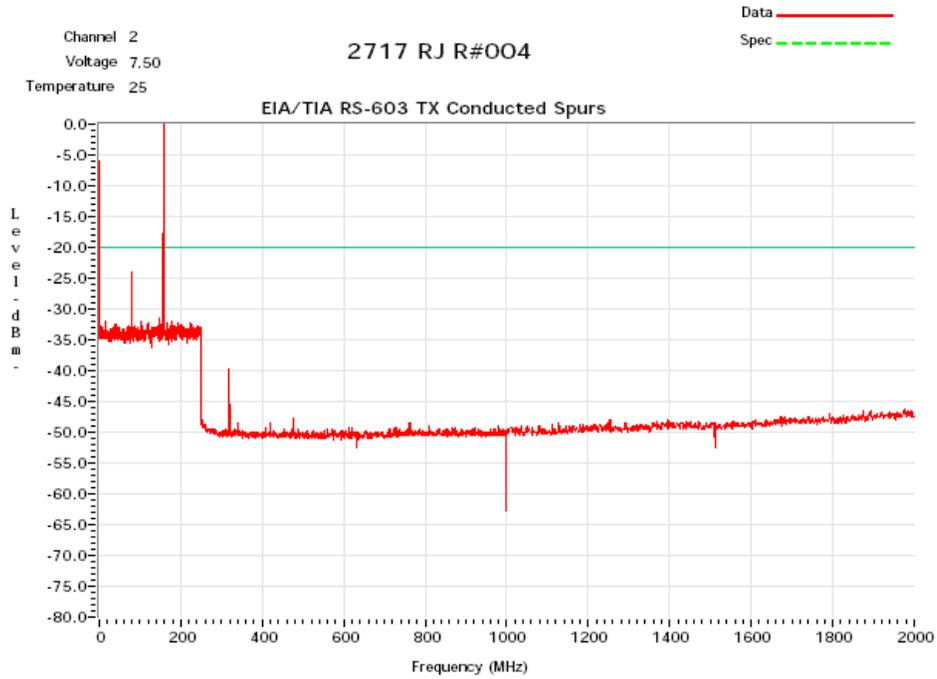


EXHIBIT 6E-7



**MOTOROLA**

FCC ID: AZ489FT3819

**Conducted Emissions**

**2Watt TX Frequency 174.0000MHz (25 kHz Channel spacing)**

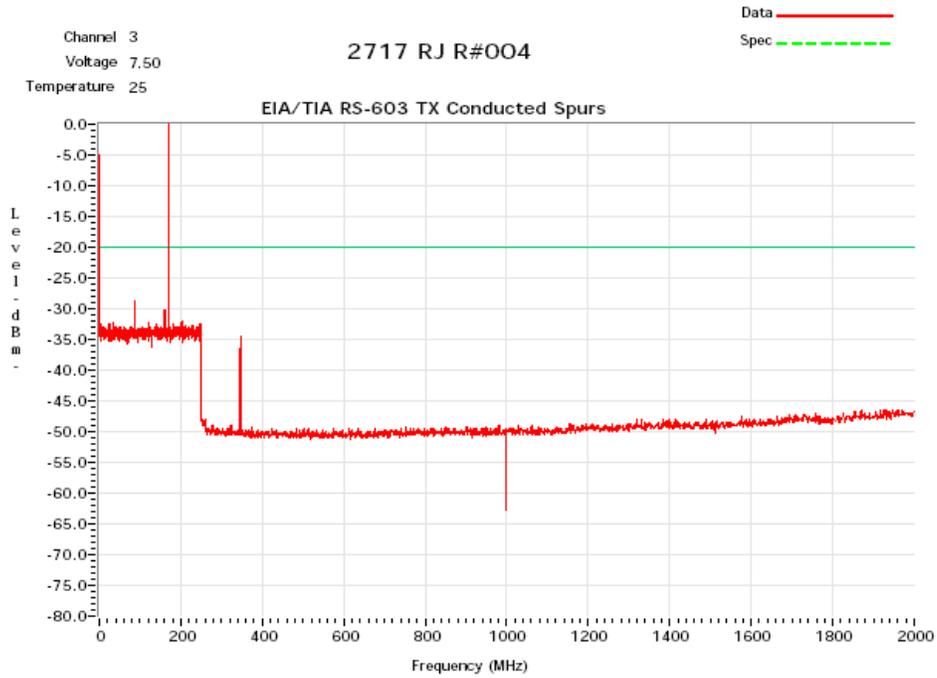
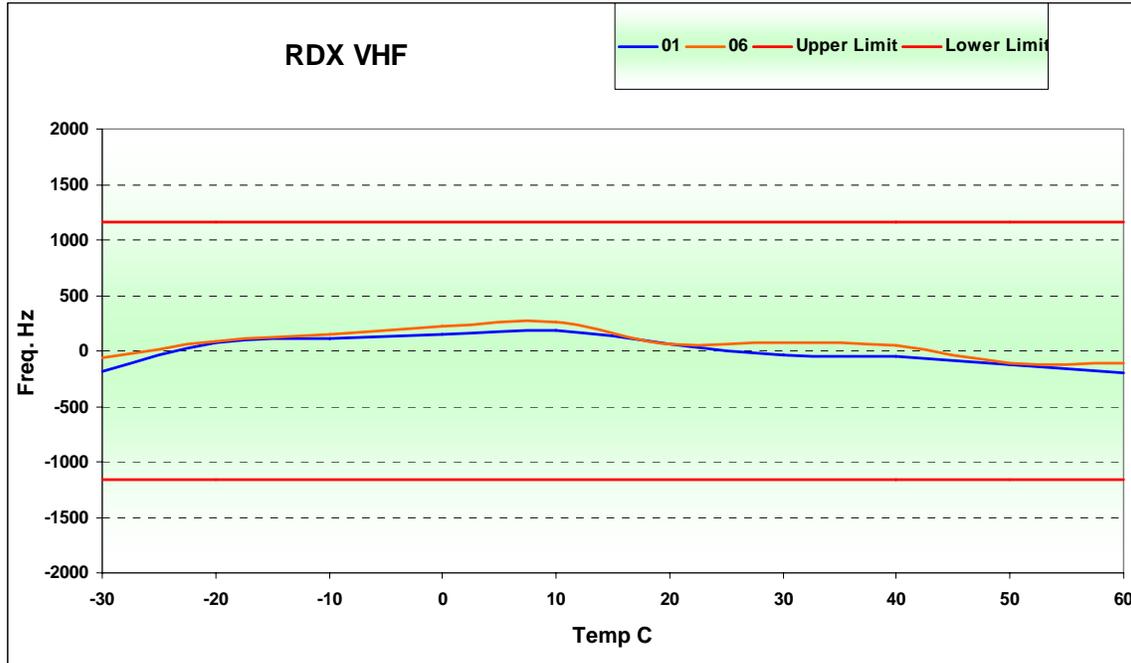


EXHIBIT 6E-8

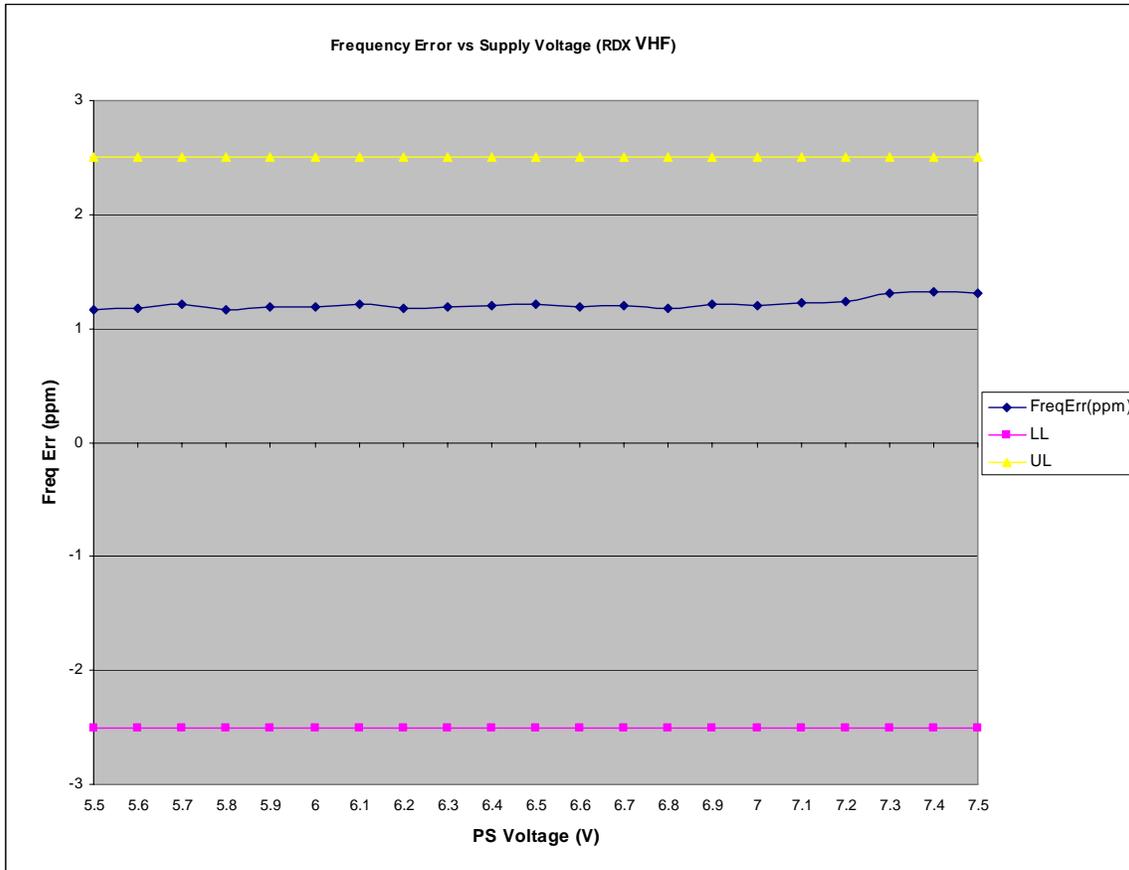


### Frequency Stability over Temperature





### Frequency Error over Voltage



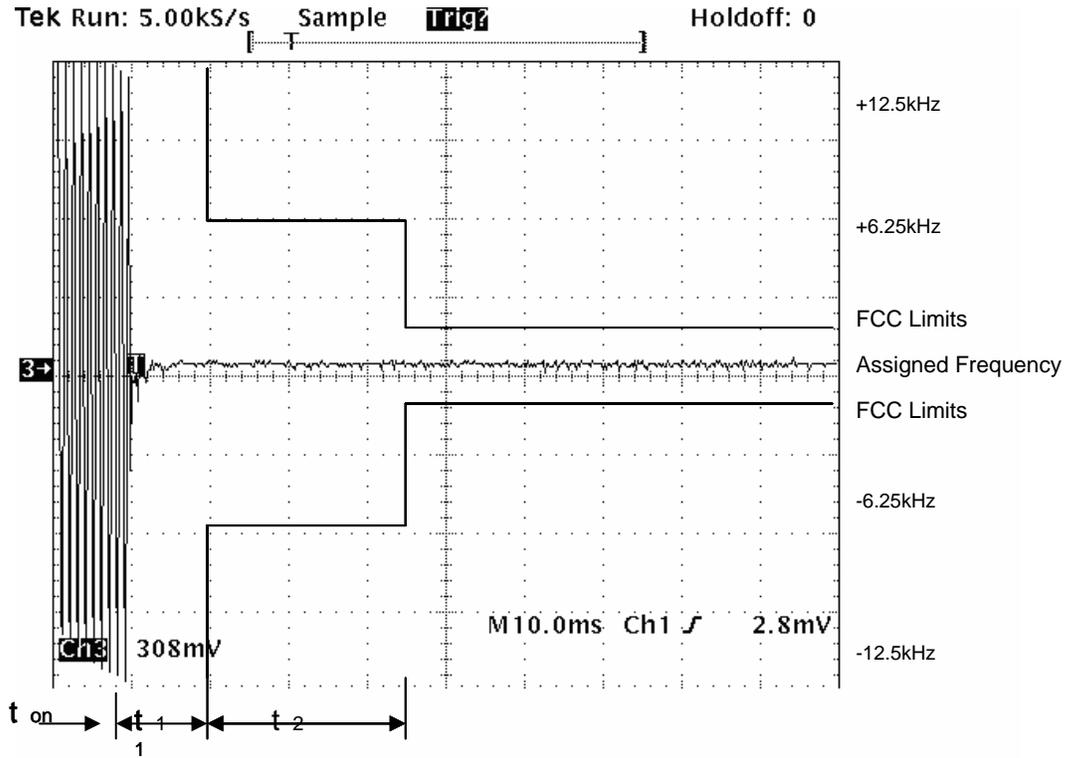
Reset Voltage 5.0volts



**MOTOROLA**

FCC ID: AZ489FT3819

### Transient Frequency Response TX on 2 Watt 12.5 kHz

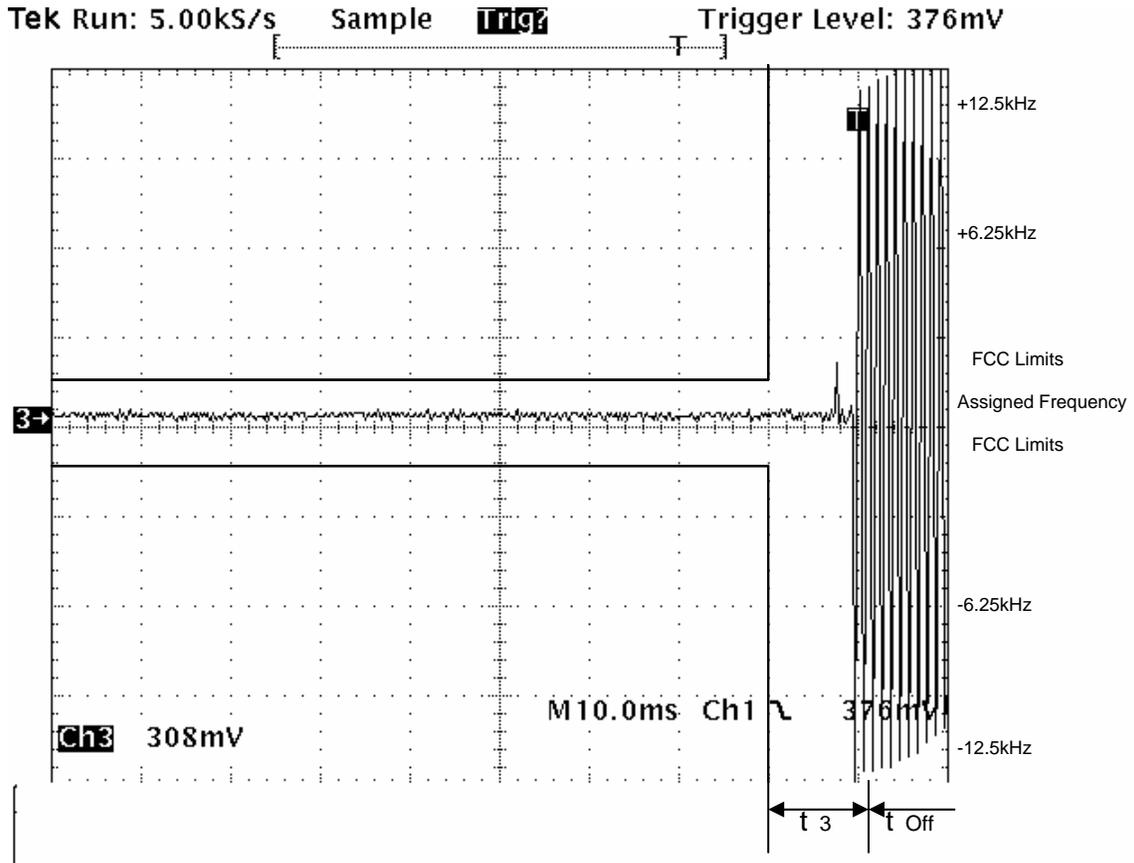




**MOTOROLA**

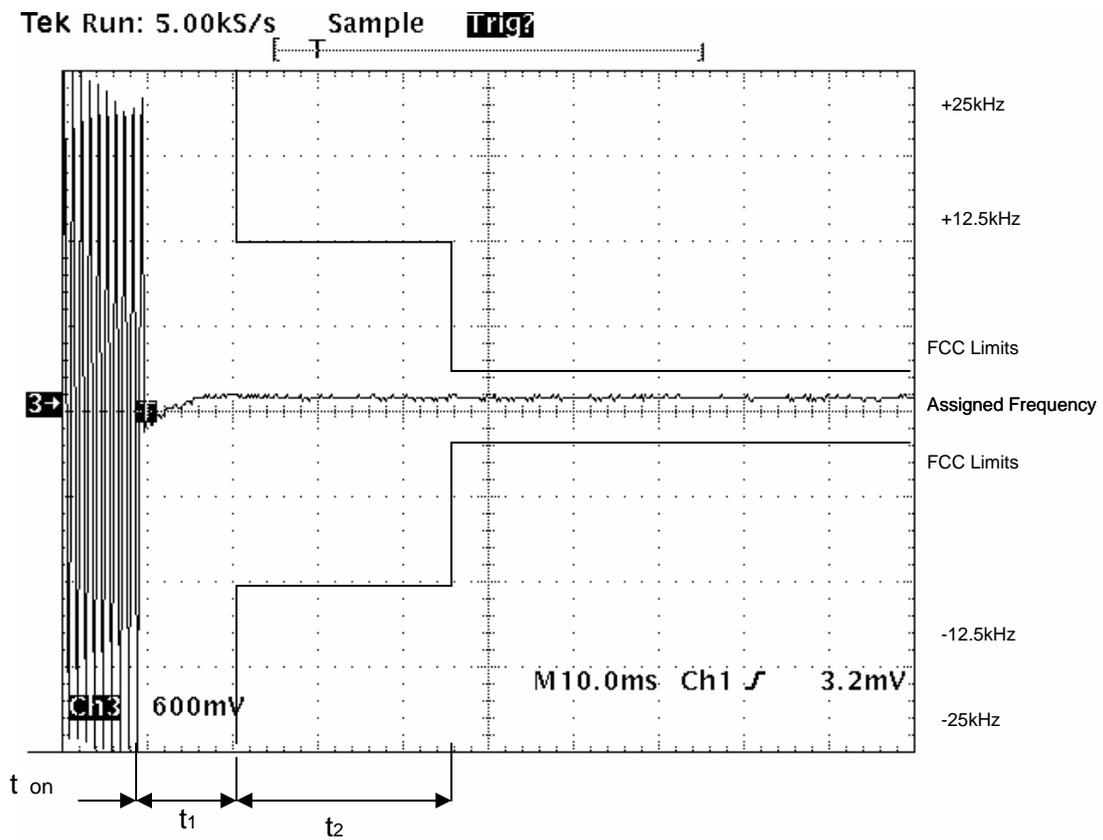
FCC ID: AZ489FT3819

### Transient Frequency Response TX off 2 Watt 12.5 kHz





### Transient Frequency Response TX on 2 Watt 25 kHz





**MOTOROLA**

FCC ID: AZ489FT3819

### Transient Frequency Response TX off 2 Watt 25 kHz

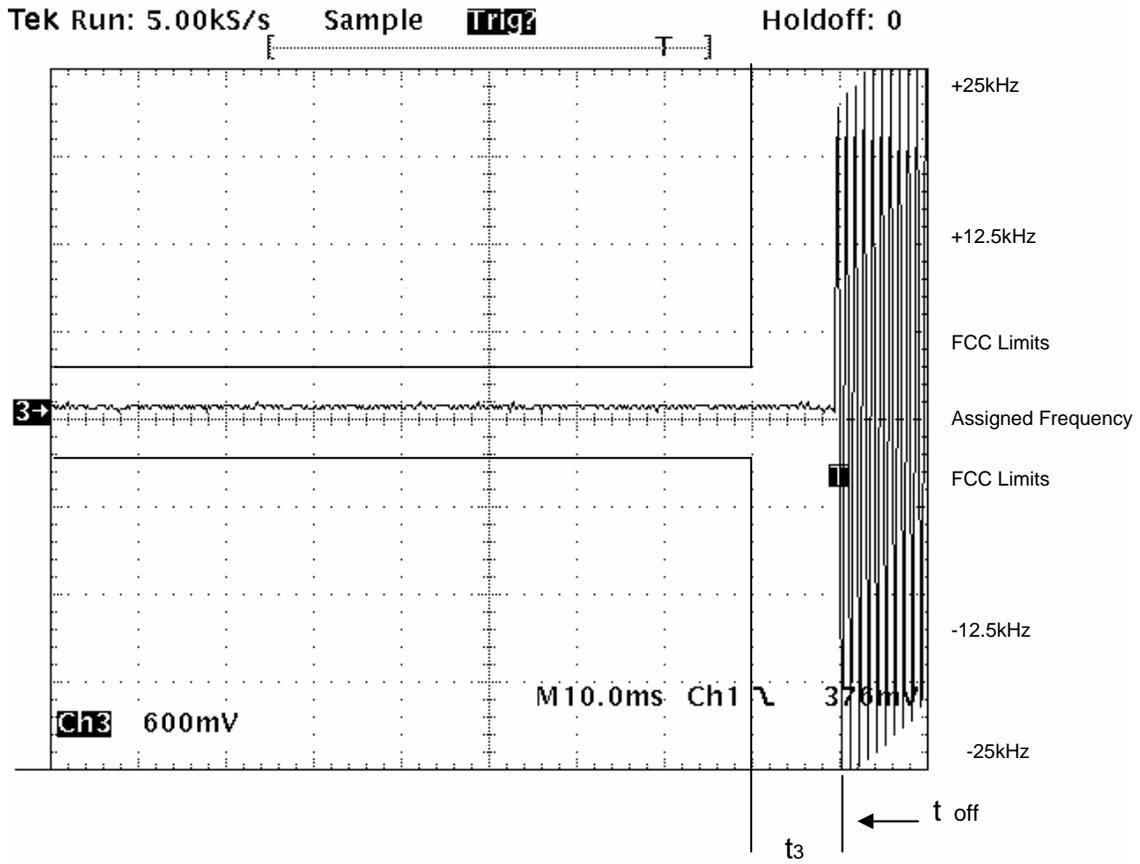


EXHIBIT 6G-4