

RMU Test Report

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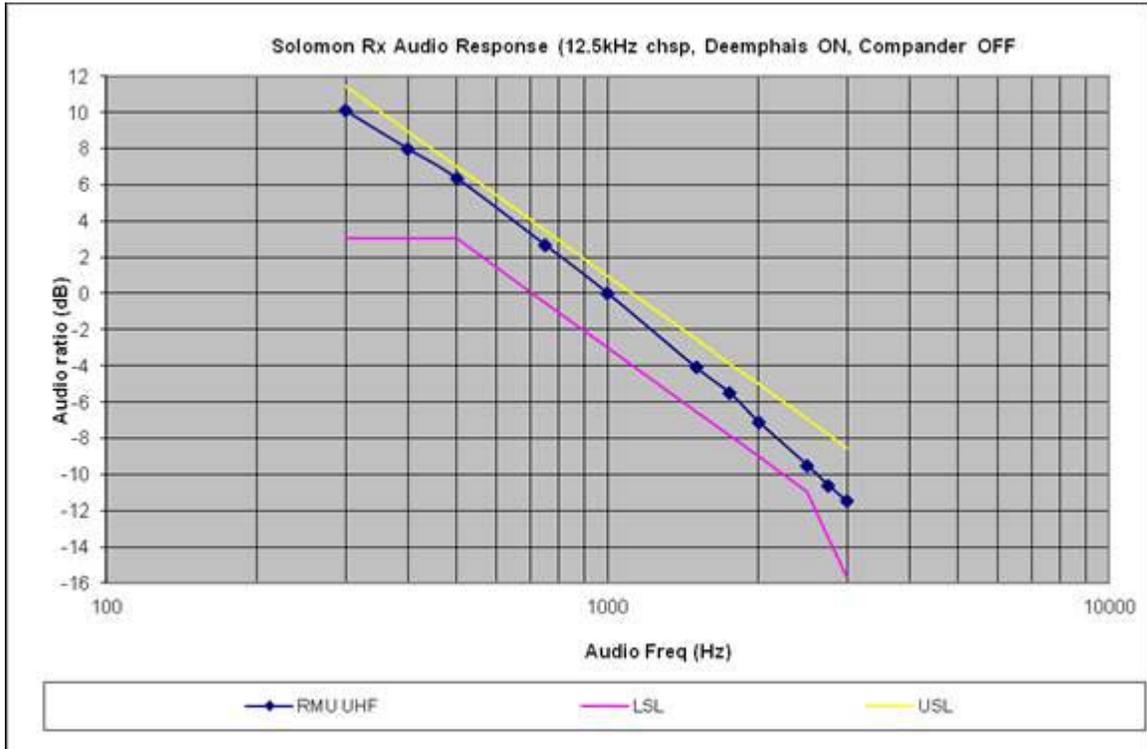
RF POWER OUTPUT DATA

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

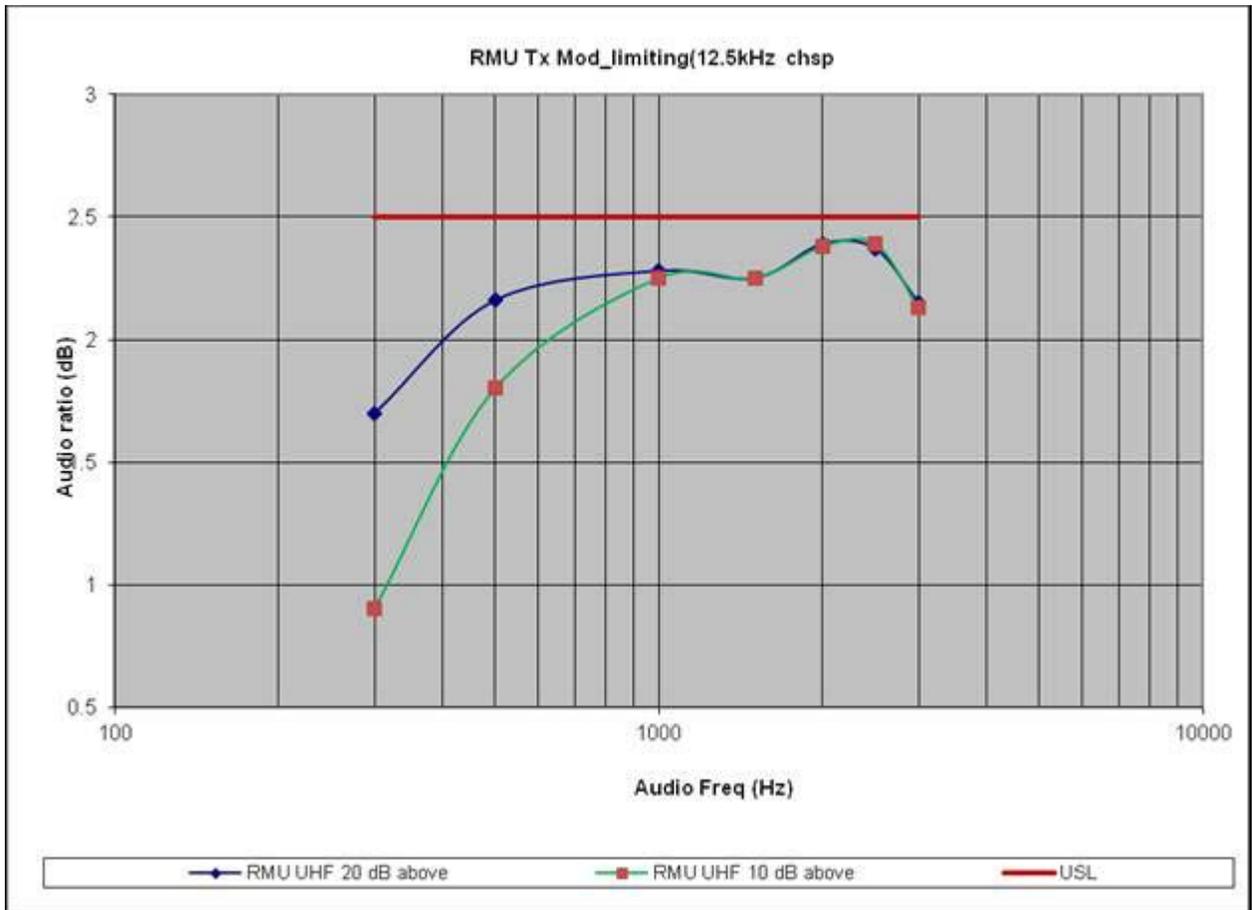
Frequency	450.20 MHz
Measured Conducted RF output*	1.90 Watts
Frequency	462.50 MHz
Measured Conducted RF output*	2.00 Watts
Frequency	469.80 MHz
Measured Conducted RF output*	1.993 Watts
Normal DC Voltage	3.70 Volts
Normal DC Current	1.36350A
Primary Supply Voltage	3.80 Volts
Frequency	450.20 MHz
Measured Conducted RF output*	1.157 Watts
Frequency	462.50 MHz
Measured Conducted RF output*	1.141 Watts
Frequency	469.80 MHz
Measured Conducted RF output*	1.143 Watts
Normal DC Voltage	3.70 Volts
Normal DC Current	1.051 A
Primary Supply Voltage	3.80 Volts

*Note: RF Conducted output power measured at 3.80 Volts

Audio Response 12.5 kHz



MODULATION LIMITING 12.5 kHz



OCCUPIED BANDWIDTH DATA

1 Watt / 2 Watts
12.5 / 2 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 & 77Hz Tone "PL" Modulation
Emission Type: 11K0F3E
Specification Mask D, 90.210 – 12.5 kHz

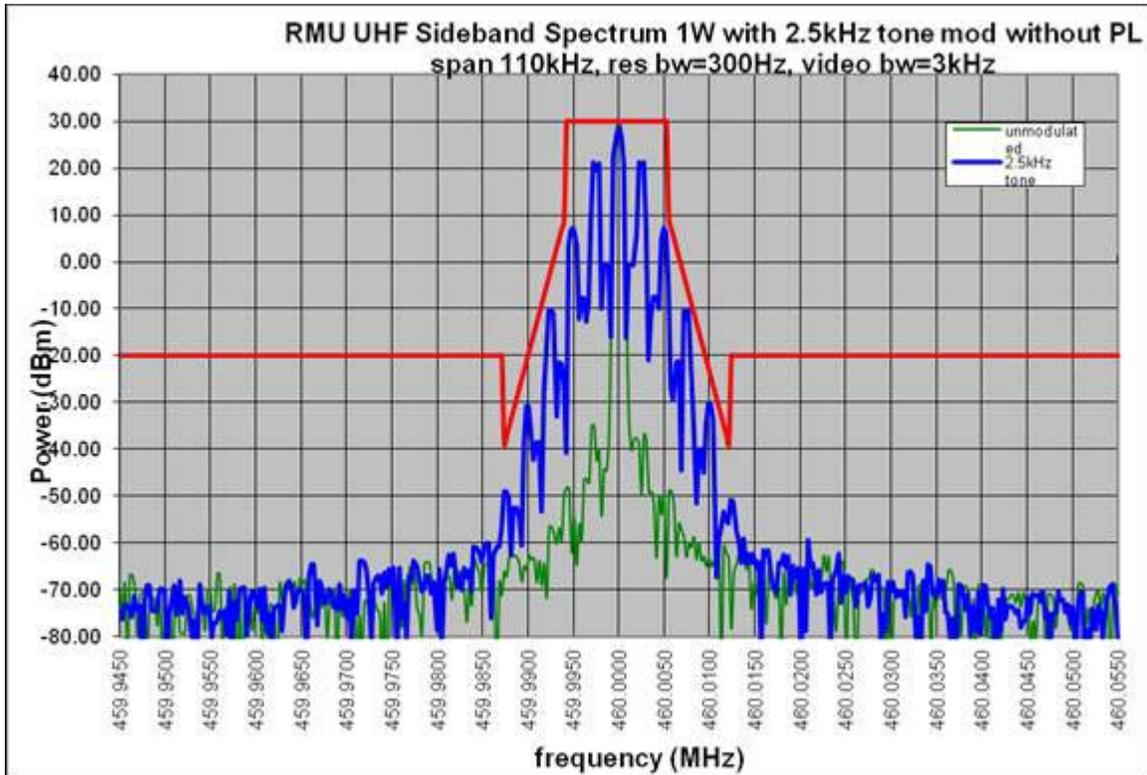
EXHIBIT 6D-3 / 2 Watts
2500 Hz Audio Modulation
Emission Type: 11K0F3E
Specification Mask D, 90.210 – 12.5 kHz

EXHIBIT 6D-4 / 2 Watts
2500 Hz & 77Hz Tone "PL" Modulation
Emission Type: 11K0F3E
Specification Mask D, 90.210 – 12.5 kHz

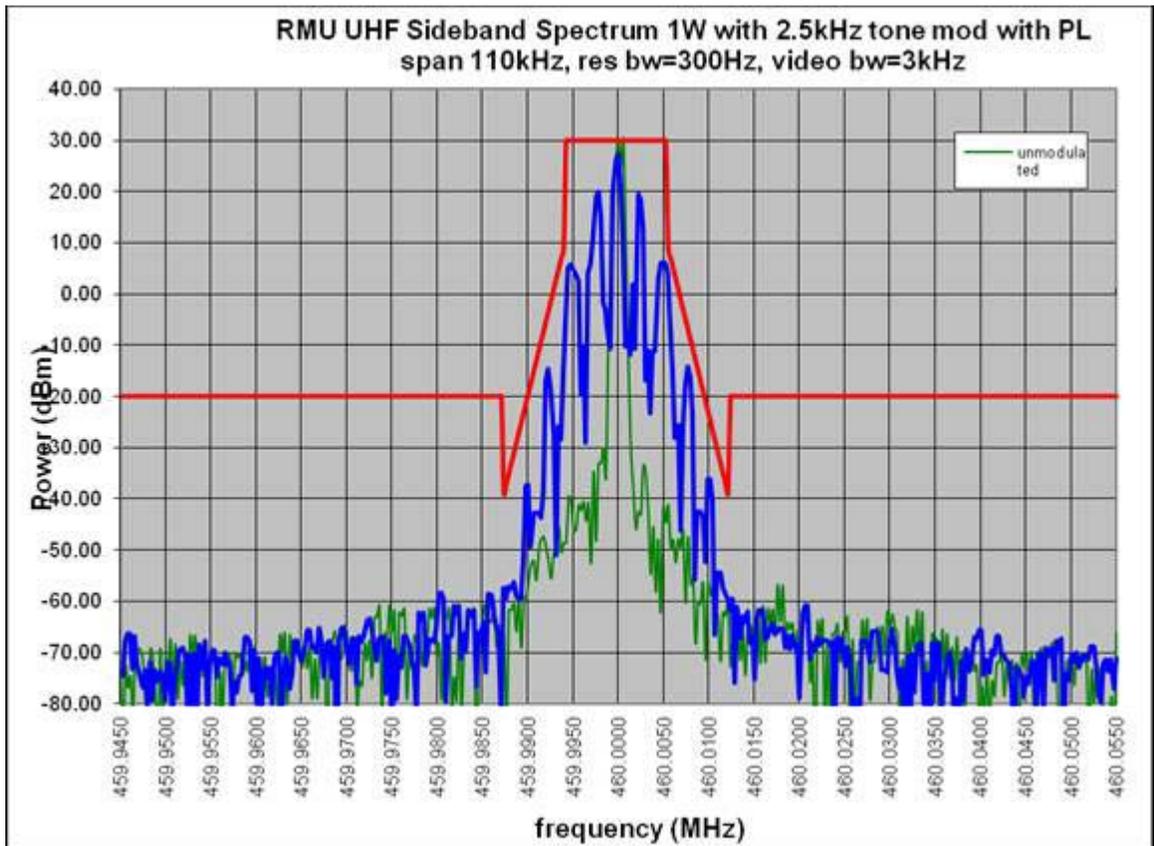
CARSON'S RULE: 11K0F3E

BW= 2(M+D)
BW=2 (3 kHz maximum modulation frequency +2.5 kHz deviation)
BW=2 (5.5)
BW= 11K0

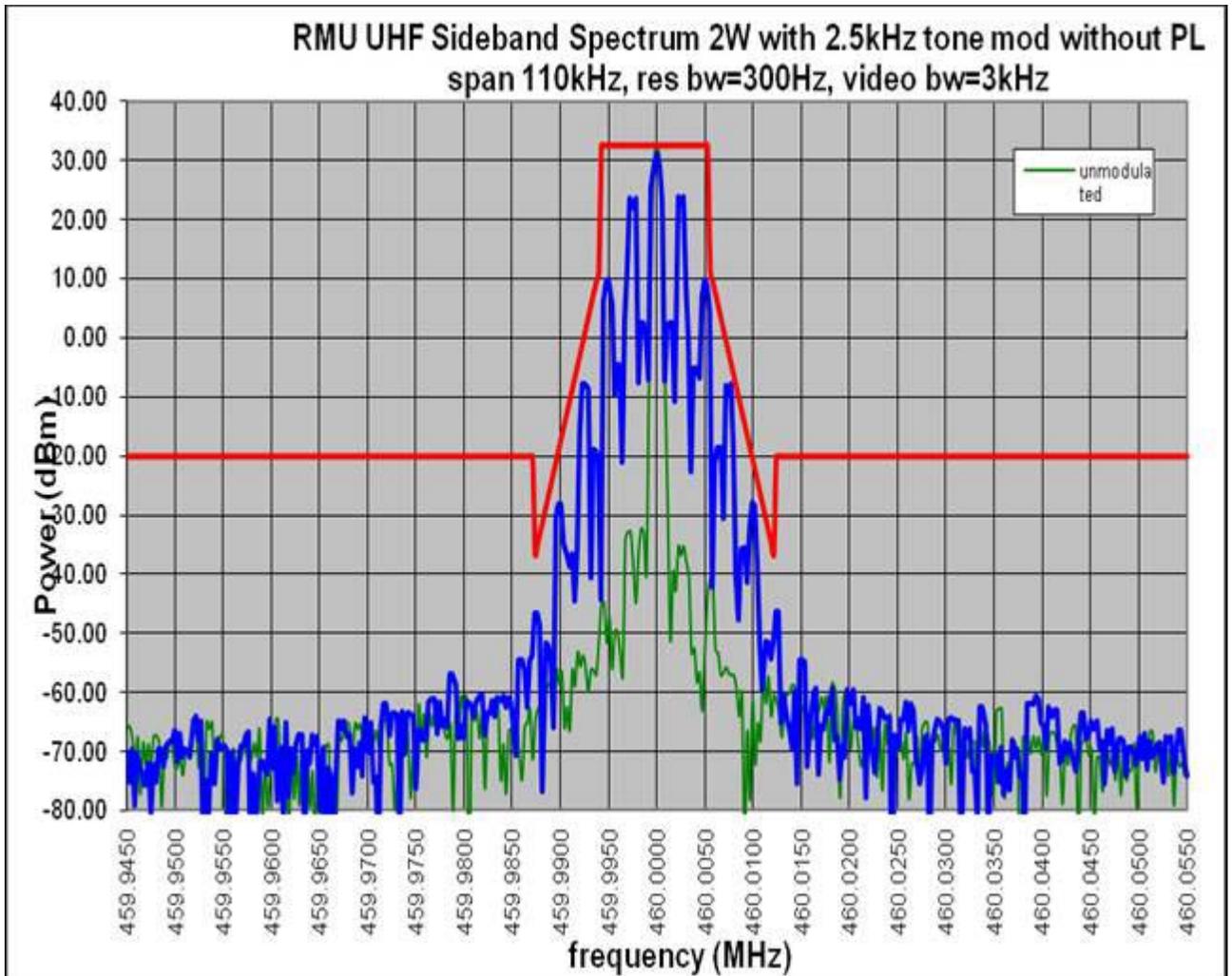
1 Watt 12.5 kHz
Mask D, Rule Part: 90.210
Emission Type: 11K0F3E



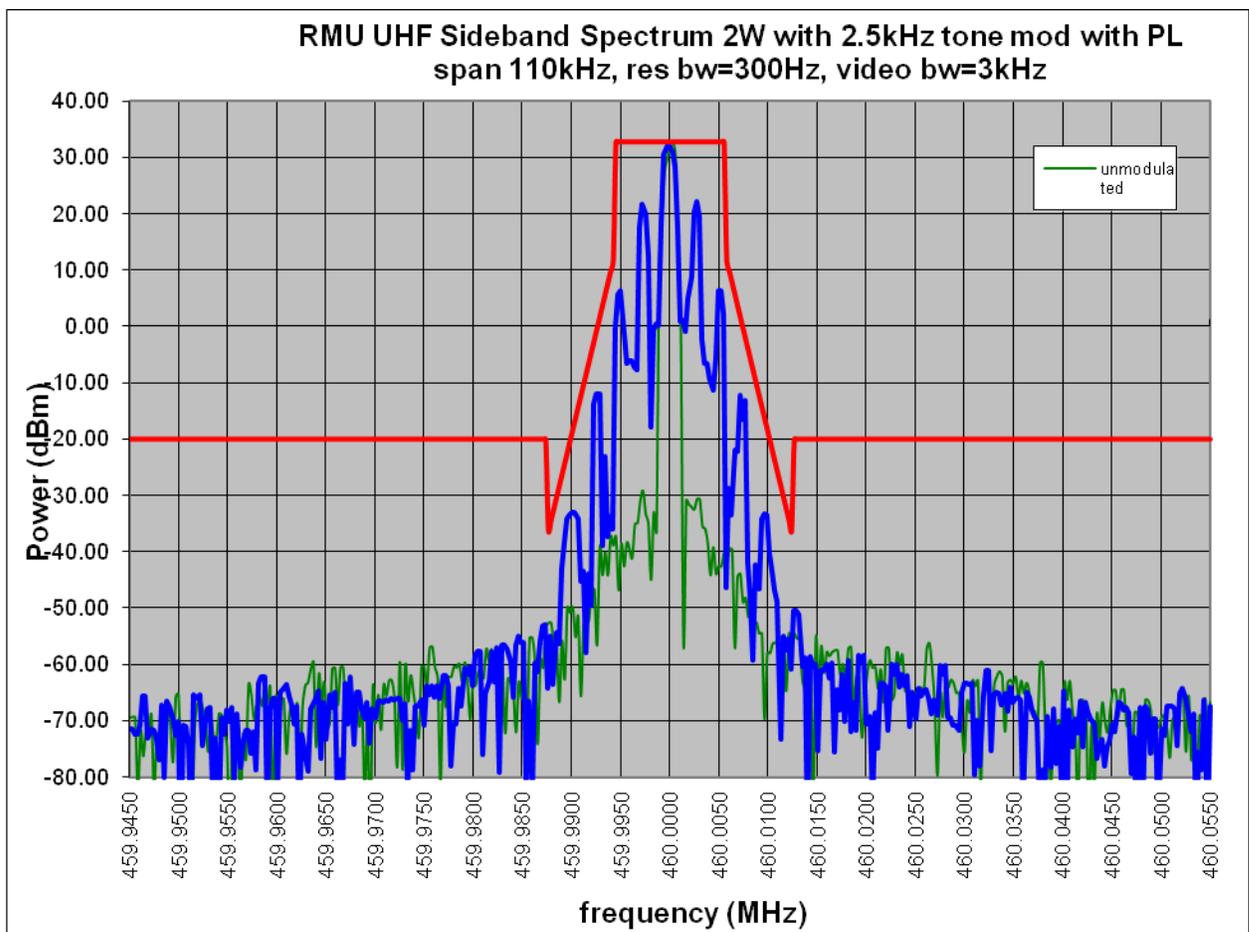
1 Watt 12.5 kHz
2500 Hz & 77Hz Tone "PL" Modulation
Mask D, Rule Part: 90.210
Emission Type: 11K0F3E



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

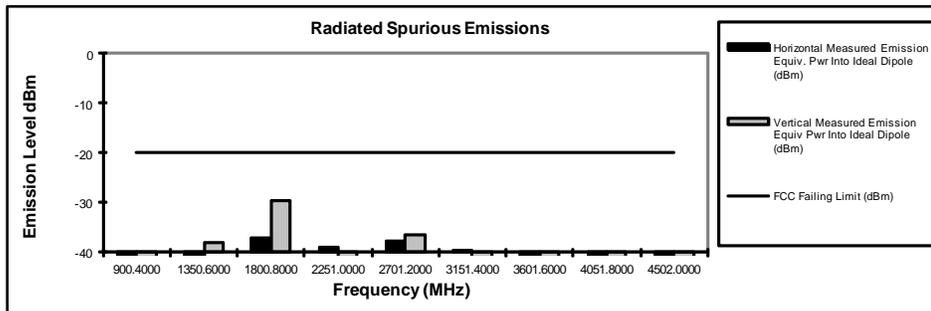


2 Watt 12.5 kHz
2500 Hz & 77Hz Tone "PL" Modulation
Mask D, Rule Part: 90.210
Emission Type: 11K0F3E

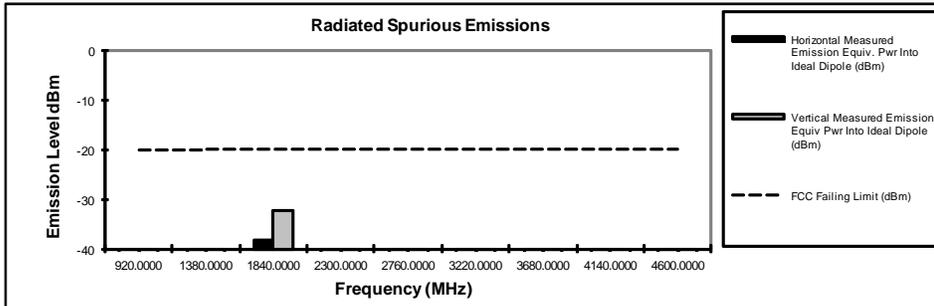


Motorola Solutions
FCC ID:AZ489FT4913
Transmit Radiated Spurious Emissions: RMU2080
Tx Power: 2 Watts
450.2 MHz
Channel Spacing 12.5kHz | S/N 024TPB0156

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
900.4000	-20	*	*
1350.6000	-20	*	-38.01
1800.8000	-20	-37.10	-29.68
2251.0000	-20	-38.89	*
2701.2000	-20	-37.80	-36.42
3151.4000	-20	-39.91	*
3601.6000	-20	*	*
4051.8000	-20	*	*
4502.0000	-20	*	*


Transmit Radiated Spurious Emissions: RMU2080
Tx Power: 2 Watts
460 MHz
Channel Spacing 12.5kHz | S/N 024TPB0156

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
920.0000	-20	*	*
1380.0000	-20	*	*
1840.0000	-20	-38.28	-32.17
2300.0000	-20	*	*
2760.0000	-20	*	*
3220.0000	-20	*	*
3680.0000	-20	*	*
4140.0000	-20	*	*
4600.0000	-20	*	*



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

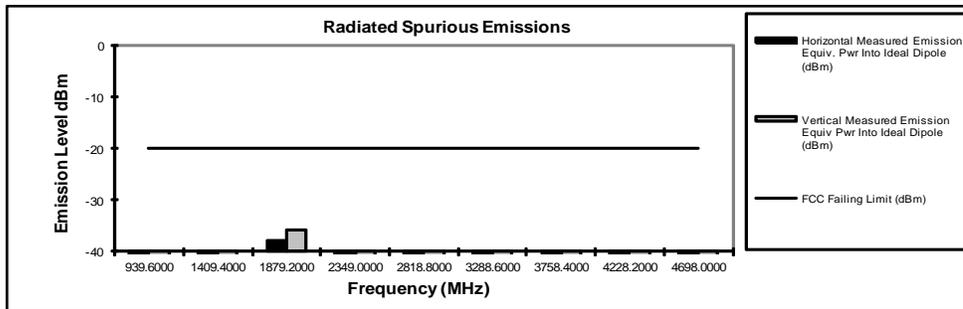
Pursuant to CFR 47 Part 2.1057(c), emissions attenuated more than 20 dB below the permissible limit are not reported.

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
April 20, 2013
FCC Registration: 91932 / Industry Canada: IC109U-1

Motorola Solutions
FCC ID:AZ489FT4913
Transmit Radiated Spurious Emissions: RMU2080
Tx Power: 2 Watts
469.8 MHz
Channel Spacing 12.5kHz | S/N 024TPB0156

Frequency (MHz)	FCC Failing Limit (dBm)	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
939.6000	-20	*	*
1409.4000	-20	*	*
1879.2000	-20	-37.83	-35.70
2349.0000	-20	*	*
2818.8000	-20	*	*
3288.6000	-20	*	*
3758.4000	-20	*	*
4228.2000	-20	*	*
4698.0000	-20	*	*



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

Pursuant to CFR 47 Part 2.1057(c), emissions attenuated more than 20 dB below the permissible limit are not reported.

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

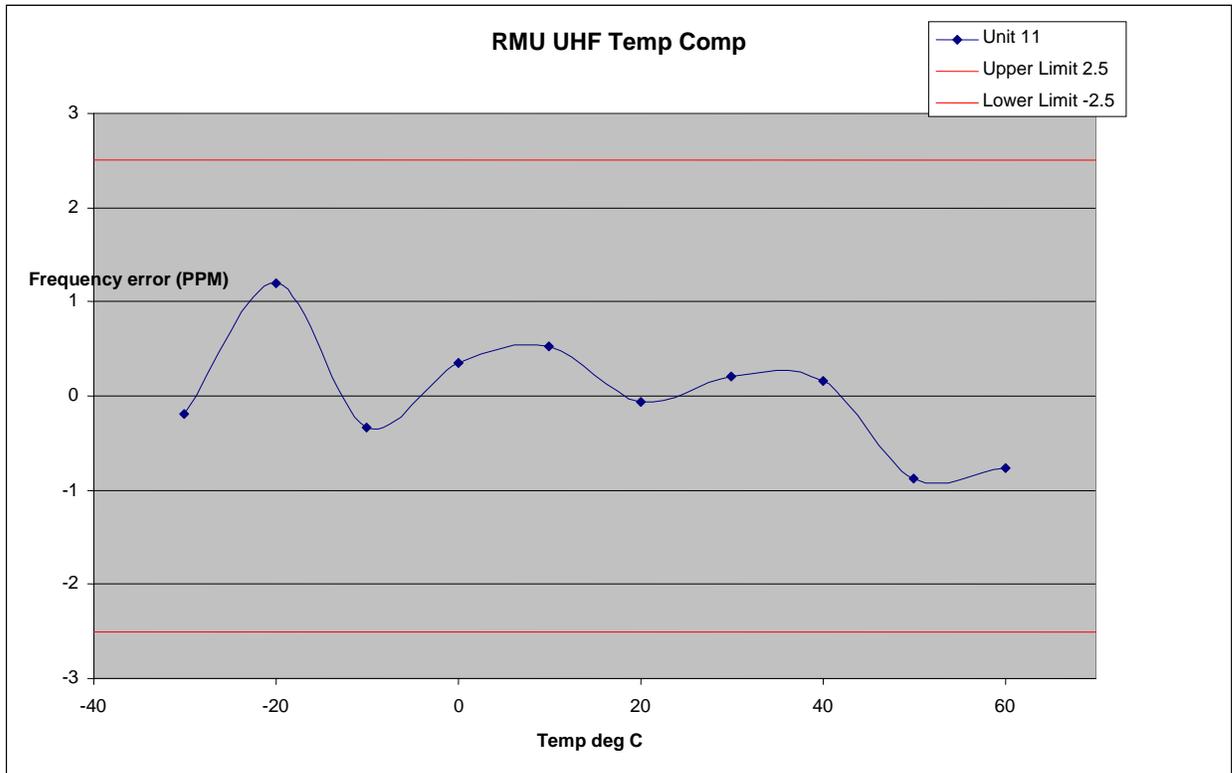
Motorola Plantation EMC Lab – Test Performed by: Curt Mc Lennan

April 20, 2013

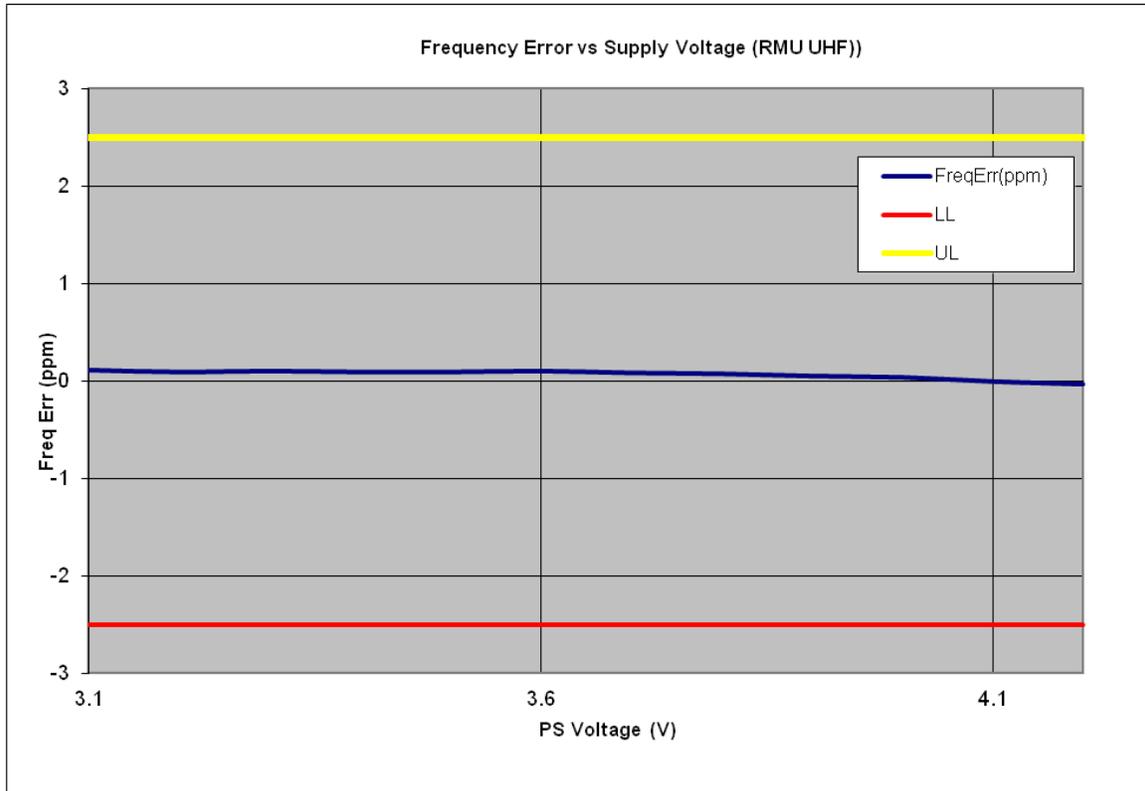
FCC Registration: 91932 / Industry Canada: IC109U-1

EXHIBIT 6E-2

Frequency Stability over Temperature



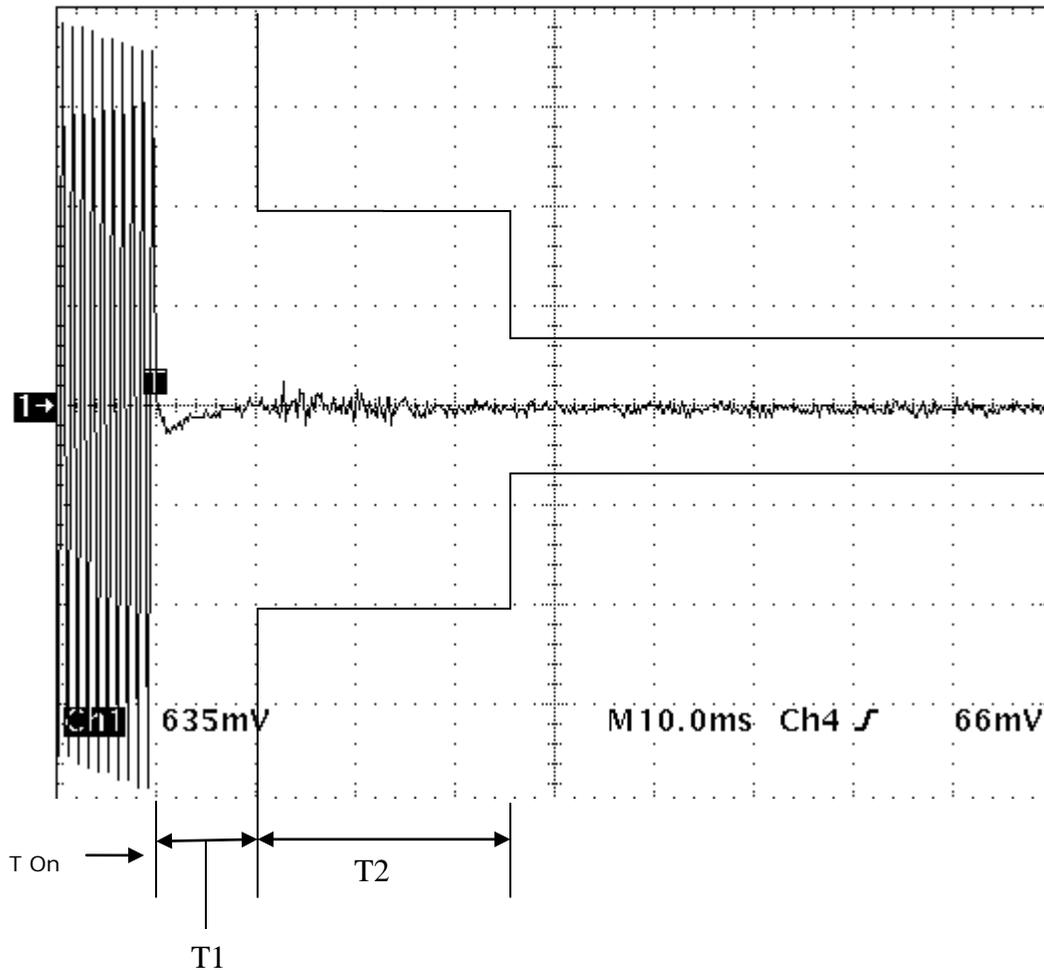
Frequency Error over Voltage



Reset Voltage 3.3 Volts

Transient Frequency Response TX on 2 Watt 12.5 kHz

UHF 464.55 MHz



$$\frac{(\text{Freq}) * (\text{PPM}) * (\pm 4)}{\text{BW}}$$

$$\frac{(464\text{MHz}) * (2.5\text{PPM}) * (\pm 4)}{12.5 \text{ kHz}}$$

$$= \pm 0.3712 \text{ div}$$

Transient Frequency Response TX off 2 Watt 12.5 kHz
UHF 464.55 MHz

