



FCC ID: AZ489FT4850

TEST REPORT

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EXHIBIT 6



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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.

Measured Conducted RF output (GMRS)	1.04	Watts
Measured Conducted RF output (FRS)	0.580	Watts
* Calculated Radiated RF output (GMRS)	0.599	Watts
* Calculated Radiated RF output (FRS)	0.357	Watts
Normal DC Voltage	4.20	Volts
Normal DC Current (GMRS)	760	ma
Normal DC Current (FRS)	542	ma
Primary Supply Voltage	4.50	Volts

RF Conducted output measured at 4.5v

*Calculated Radiated RF output. The conducted power measurements converted to dBm minus the antenna loss, Which is 2.4dB (see exhibit 6A-2) and converted back to watts ERP

Example: GMRS conducted RF output = 1.04 Watts

$10\log(1.0w/1w) = 30.17\text{dBm}$

$\text{ERP} = 30.17\text{dBm} - 2.4\text{dB} = 27.77\text{dBm}$

$\text{ERP} = 10^{(27.77/10)} = 10^{2.777} = 599 \text{ mWatts.}$

The antenna gain (loss) is measured in an anechoic chamber free of outside radiation, refraction, defraction and interference. The anechoic chamber's path loss = 37.9 dBm. The antenna was placed on an infinite ground plane, and 10dBm was transmitted from the antenna. The receiving spectrum analyzer registered -30.3 dBm. Therefore, the antenna gain = $P_r - P_t + \text{Path loss} = -30.3 - 10 + 37.9 = -2.4 \text{ dB.}$

Antenna performance data over frequency is on the next page.

EXHIBIT: 6A-1



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Degree	Coil (Cu25 u) dBi	
	460 MHz	470MHz
0	-2.05	-2.53
45	-2.15	-2.68
90	-3.15	-2.35
135	-3.49	-2.68
180	-2.02	-2.35
225	-2.05	-2.01
270	-2.95	-2.51
315	-3.15	-2.68
Average	-2.61	-2.47

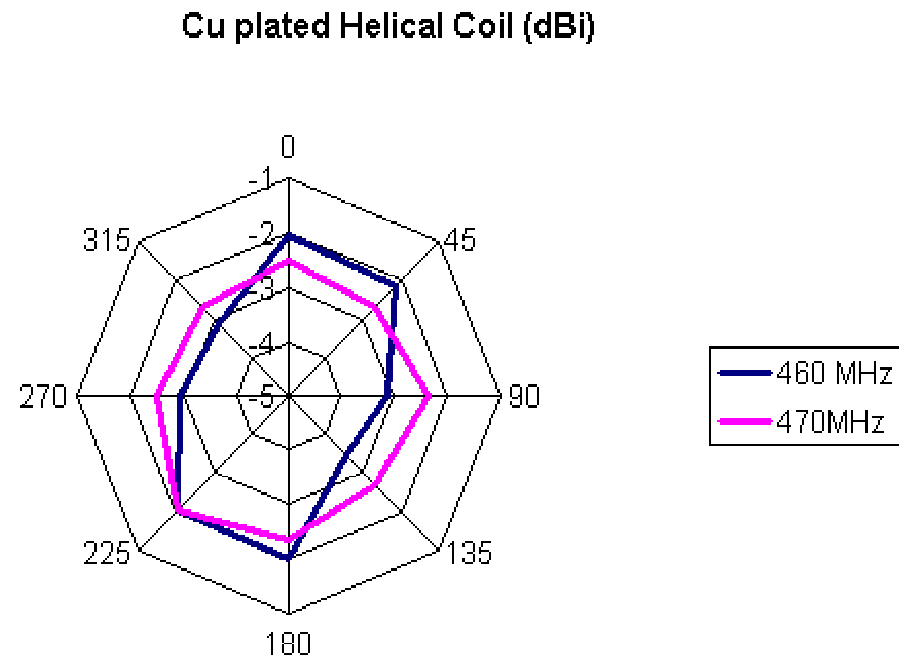


EXHIBIT 6A-2



MOTOROLA

FCC ID: AZ489FT4850

AUDIO RESPONSE

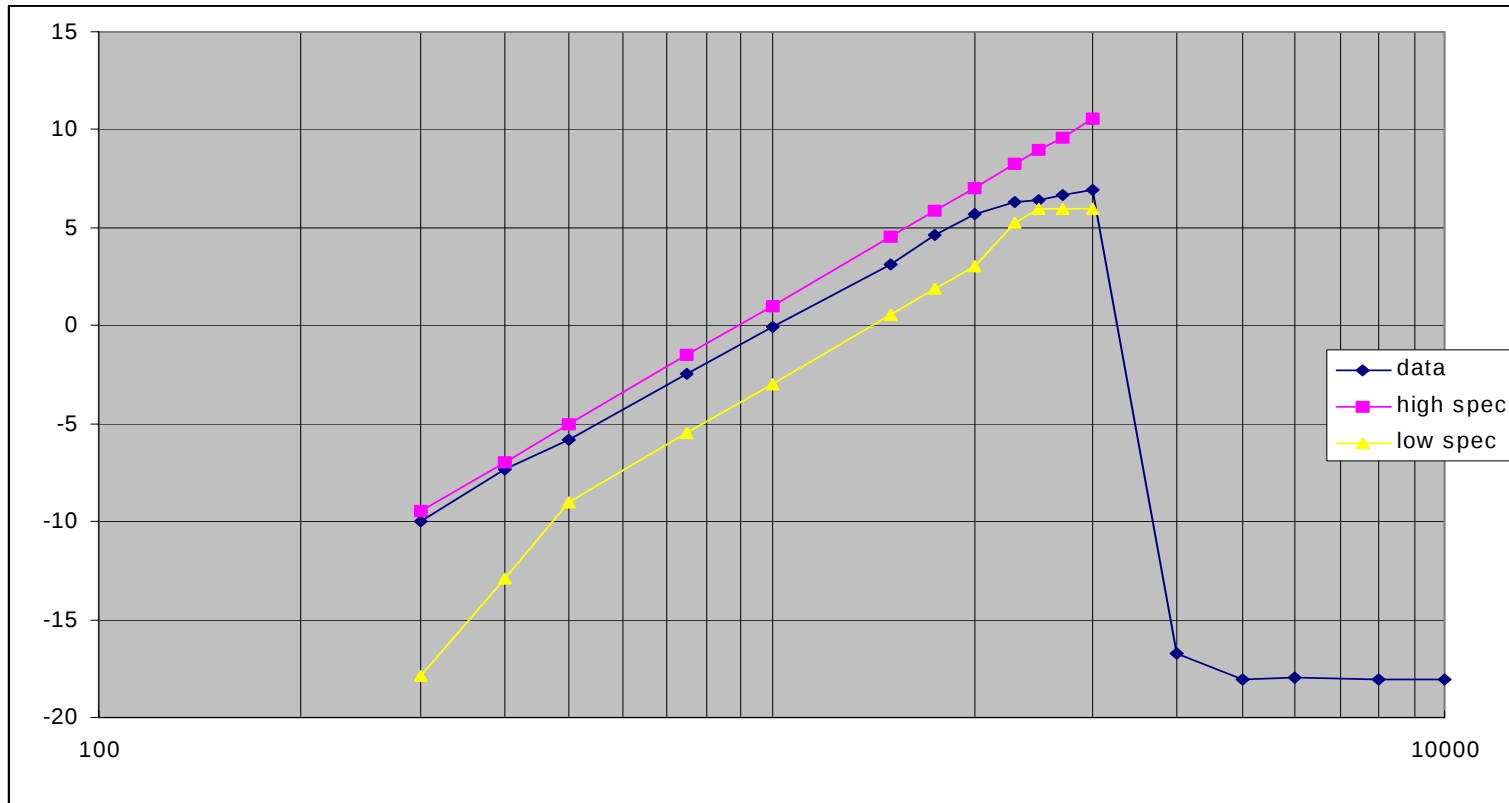


EXHIBIT 6B



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Mod limiting Vs. Amplitude

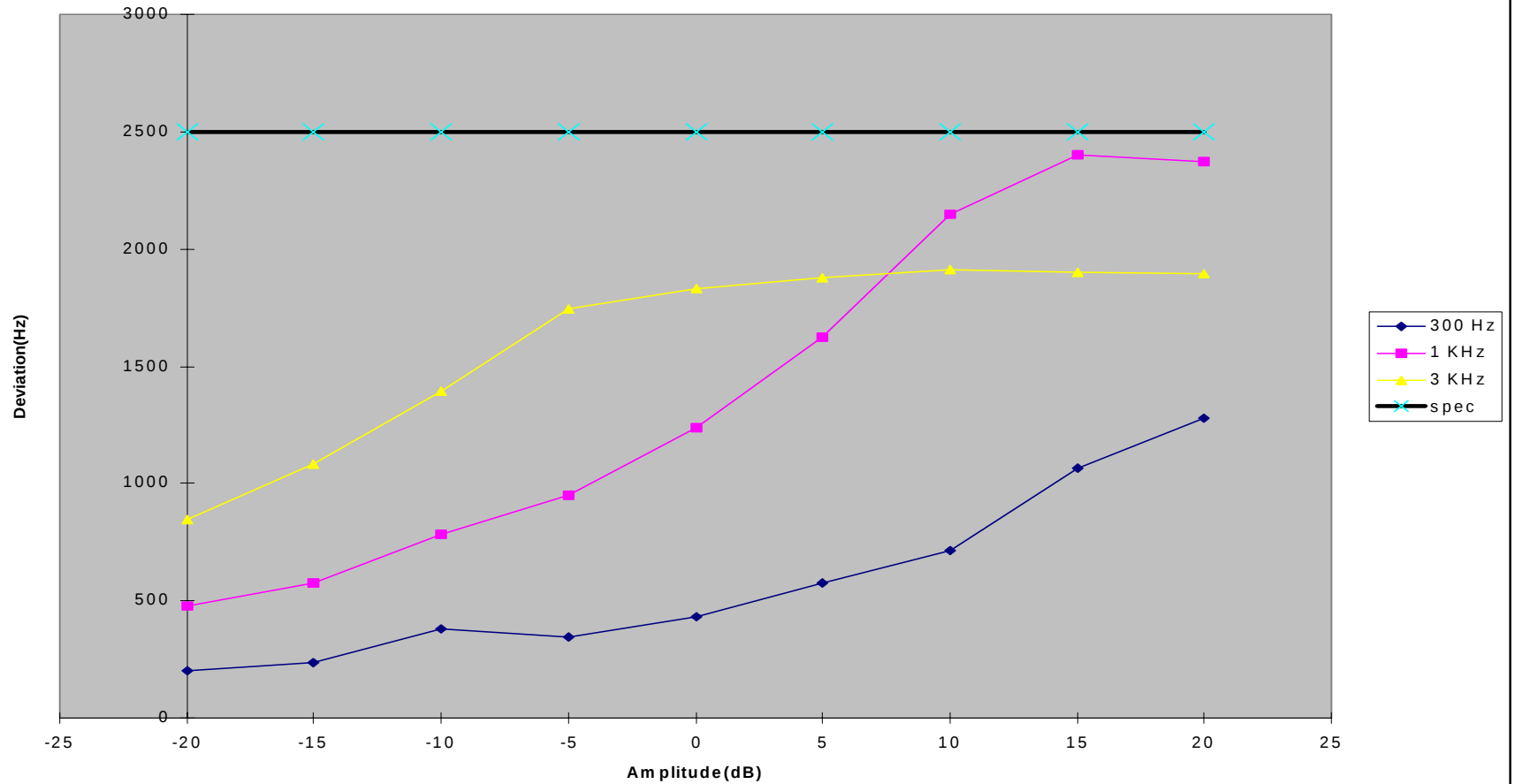


EXHIBIT 6C



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OCCUPIED BANDWIDTH DATA

12.5 kHz Channel Spacing
EXHIBIT 6E-1
2500 Hz Audio Modulation
Emission Type: 11K0F3E
Horizontal: 5 kHz/Div.
Vertical: 10 dB/Div.
Carrier Ref: 0 dB
Specification Mask D, 90.210

EXHIBIT 6E-2
2500 Hz & 77 Hz Tone "PL" Modulation
Emission Type: 11K0F3E
Horizontal: 5 kHz/Div.
Vertical: 10 dB/Div.
Carrier Ref: 0 dB
Specification Mask D, 90.210

CARSON'S RULE

11K0F3E:
 $BW = 2(M + D)$
 $BW = 2 (3 \text{ kHz maximum modulation frequency} + 2.5 \text{ kHz deviation})$
 $BW = 2 (5.5)$
 $BW = 11 \text{ kHz}$



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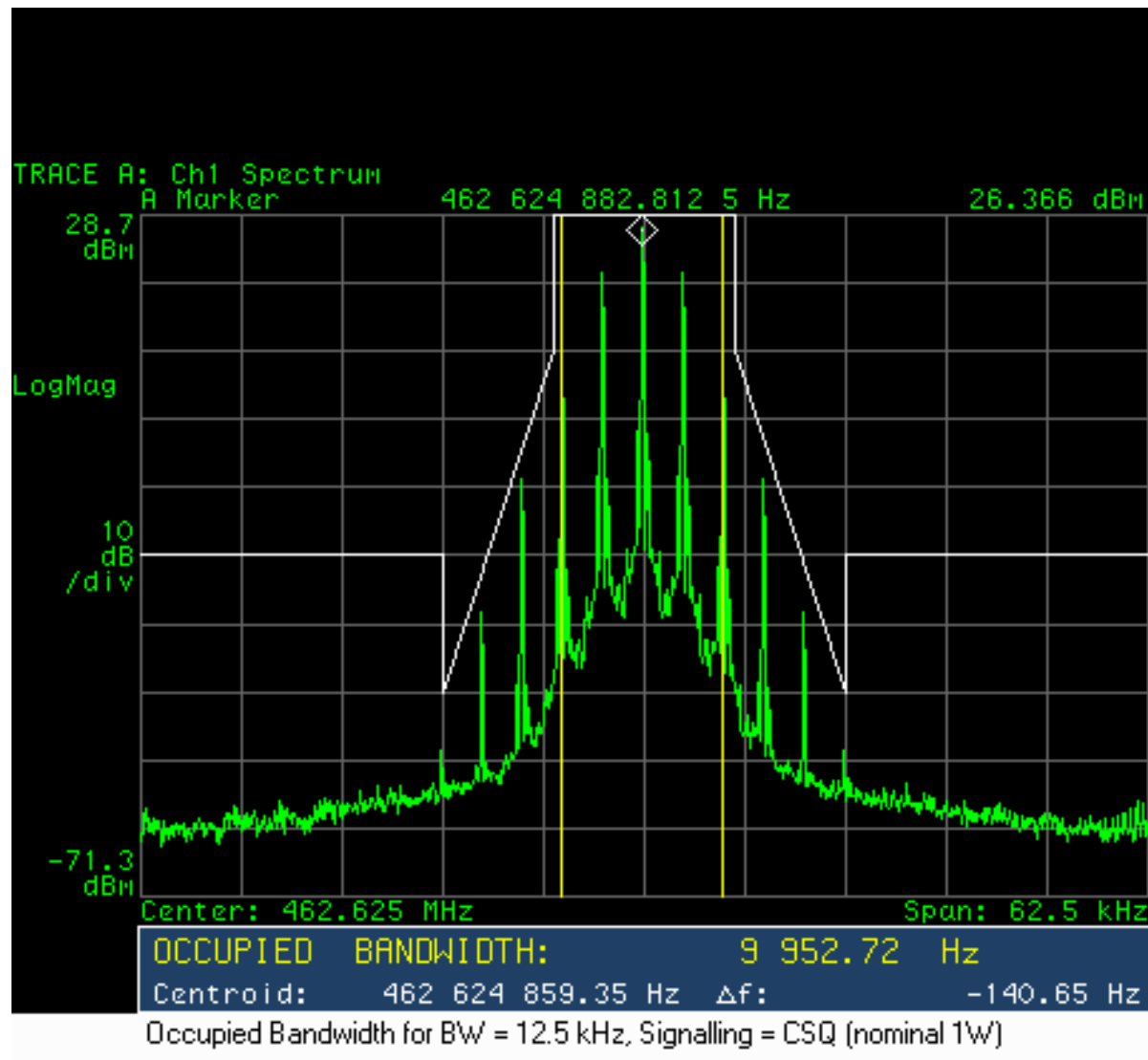


EXHIBIT 6D-1



MOTOROLA

FCC ID: AZ489FT4850

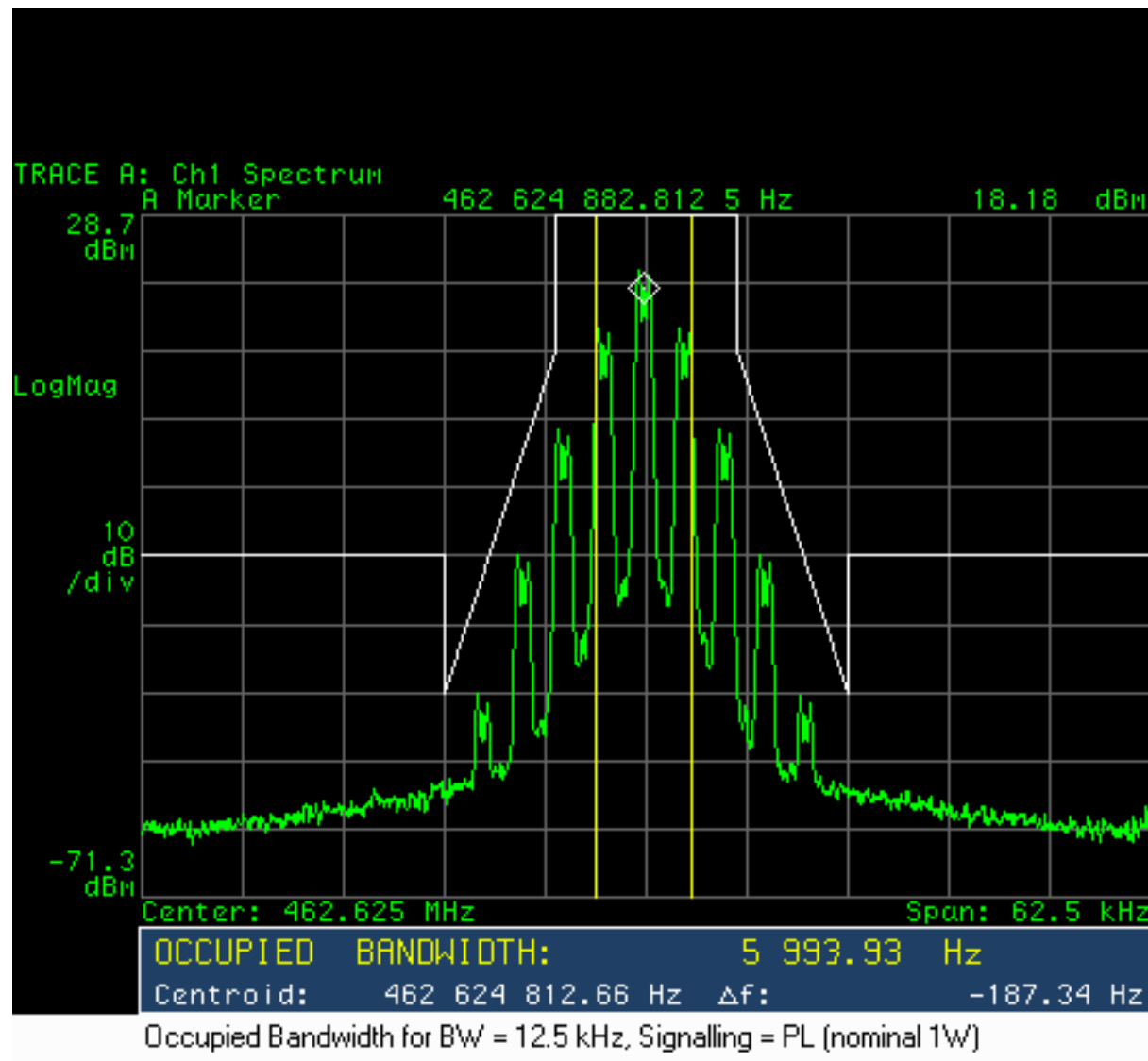


EXHIBIT 6D-2



MOTOROLA

FCC ID: AZ489FT4850

Transmitter Conducted Spurious Emissions

FCC ID: AZ489FT4850

462.56250 MHz

Power 1.0W

Spur Frequency	FCC Limit	Measured Value (dBm)
924.80000	-13.0	-41.7
1387.00000	-13.0	-27.9
1850.00000	-13.0	-43.0
2312.00000	-13.0	-53.1
2772.00000	-13.0	-47.1
3237.00000	-13.0	-39.1
3700.00000	-13.0	-46.3
4162.00000	-13.0	-51.7
4624.00000	-13.0	-42.7

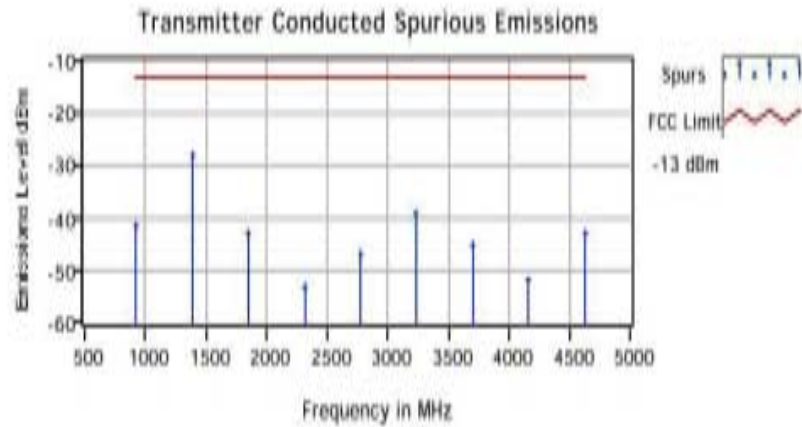


EXHIBIT 6E-1



MOTOROLA

FCC ID: AZ489FT4850

Transmitter Conducted Spurious Emissions FCC ID: AZ489FT4850

467.61250 MHz

Power 500mW

Spur Frequency	FCC Limit	Measured Value (dBm)
934.90000	-13.0	-41.7
935.30000	-13.0	-41.1
1402.00000	-13.0	-30.9
1870.00000	-13.0	-44.5
2802.00000	-13.0	-46.5
3272.00000	-13.0	-31.3
3740.00000	-13.0	-43.5
4675.00000	-13.0	-47.3

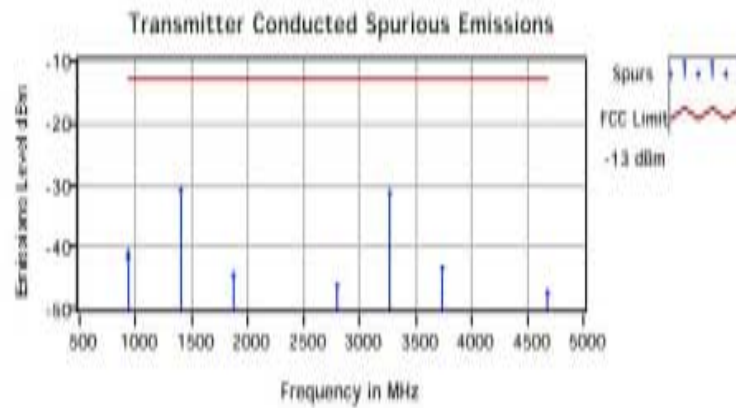


EXHIBIT 6E-2



MOTOROLA

FCC ID: AZ489FT4850

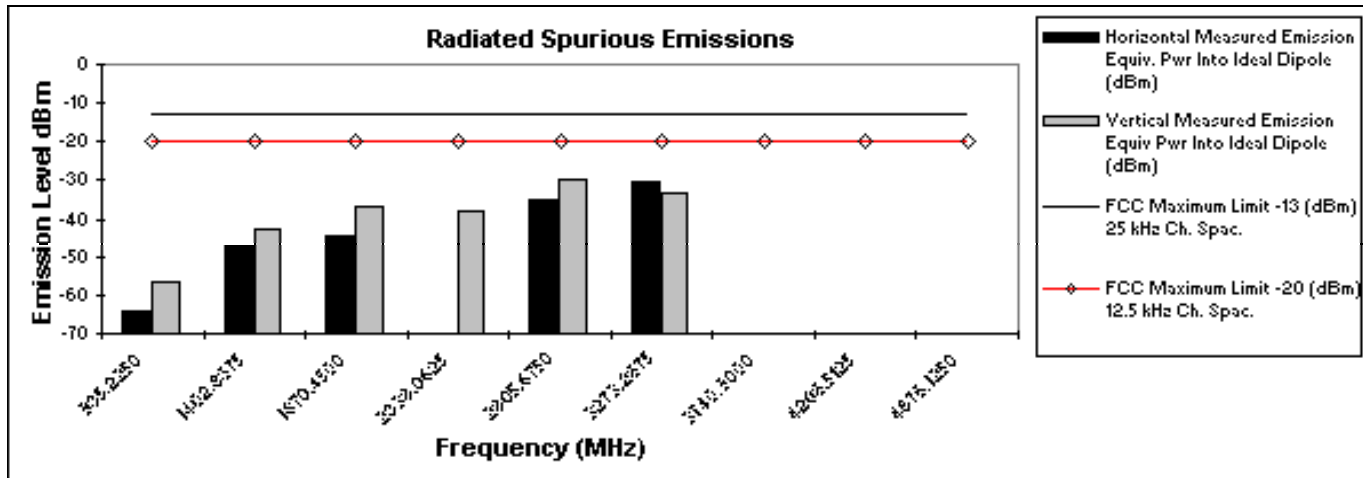
Transmitter Radiated Spurious Emissions: TalkAbout

467.6125 MHz

0.5 Watts

Channel Spacing 12.5

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
935.2250	-13	-20	-64.04	-56.57
1402.8375	-13	-20	-47.34	-42.84
1870.4500	-13	-20	-44.27	-36.81
2338.0625	-13	-20	*	-37.77
2805.6750	-13	-20	-34.74	-29.75
3273.2875	-13	-20	-30.08	-33.51
3740.9000	-13	-20	*	*
4208.5125	-13	-20	*	*
4676.1250	-13	-20	*	*



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

EXHIBIT 6F-1



MOTOROLA

FCC ID: AZ489FT4850

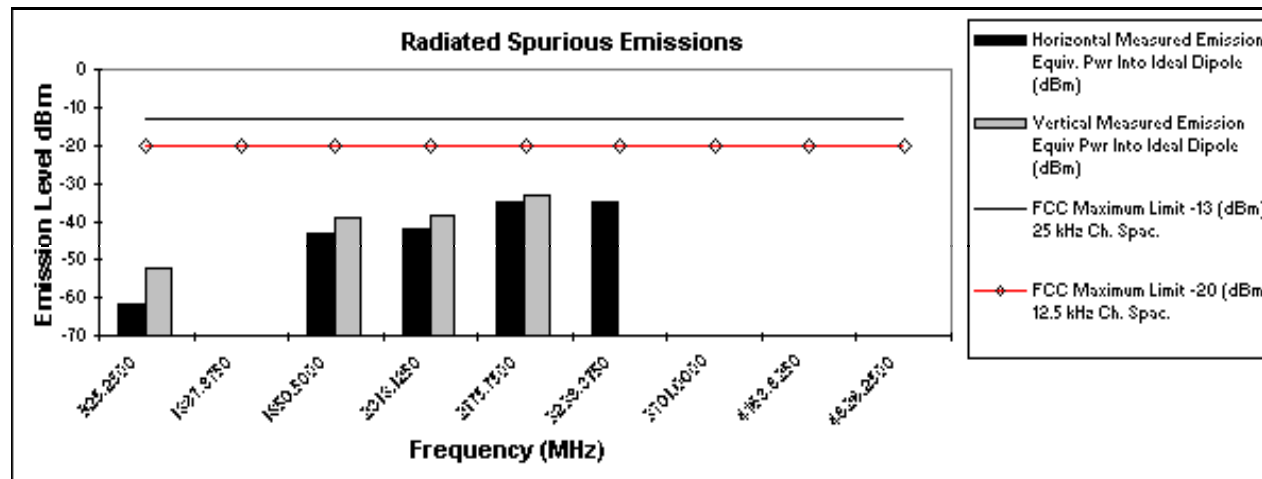
Transmitter Radiated Spurious Emissions: TalkAbout

462.625 MHz

1 Watts

Channel Spacing 12.5

Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
925.2500	-13	-20	-61.64	-52.50
1387.8750	-13	-20	*	*
1850.5000	-13	-20	-42.96	-38.66
2313.1250	-13	-20	-41.97	-38.41
2775.7500	-13	-20	-34.67	-32.97
3238.3750	-13	-20	-34.51	*
3701.0000	-13	-20	*	*
4163.6250	-13	-20	*	*
4626.2500	-13	-20	*	*



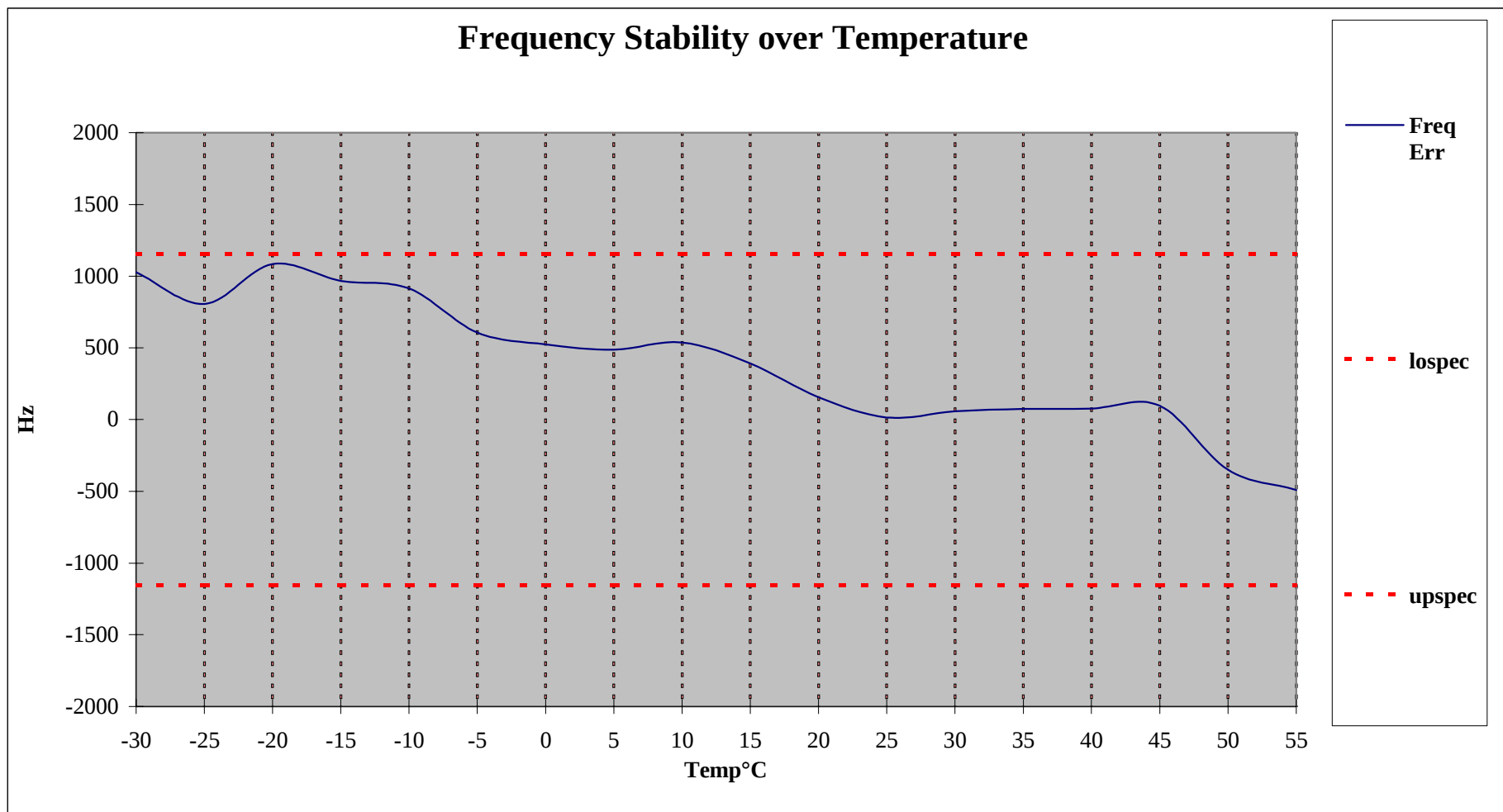
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.

EXHIBIT 6F-2



MOTOROLA

FCC ID: AZ489FT4850



Radio resets at 2.75 Volts

EXHIBIT 6G-1



MOTOROLA

FCC ID: AZ489FT4850

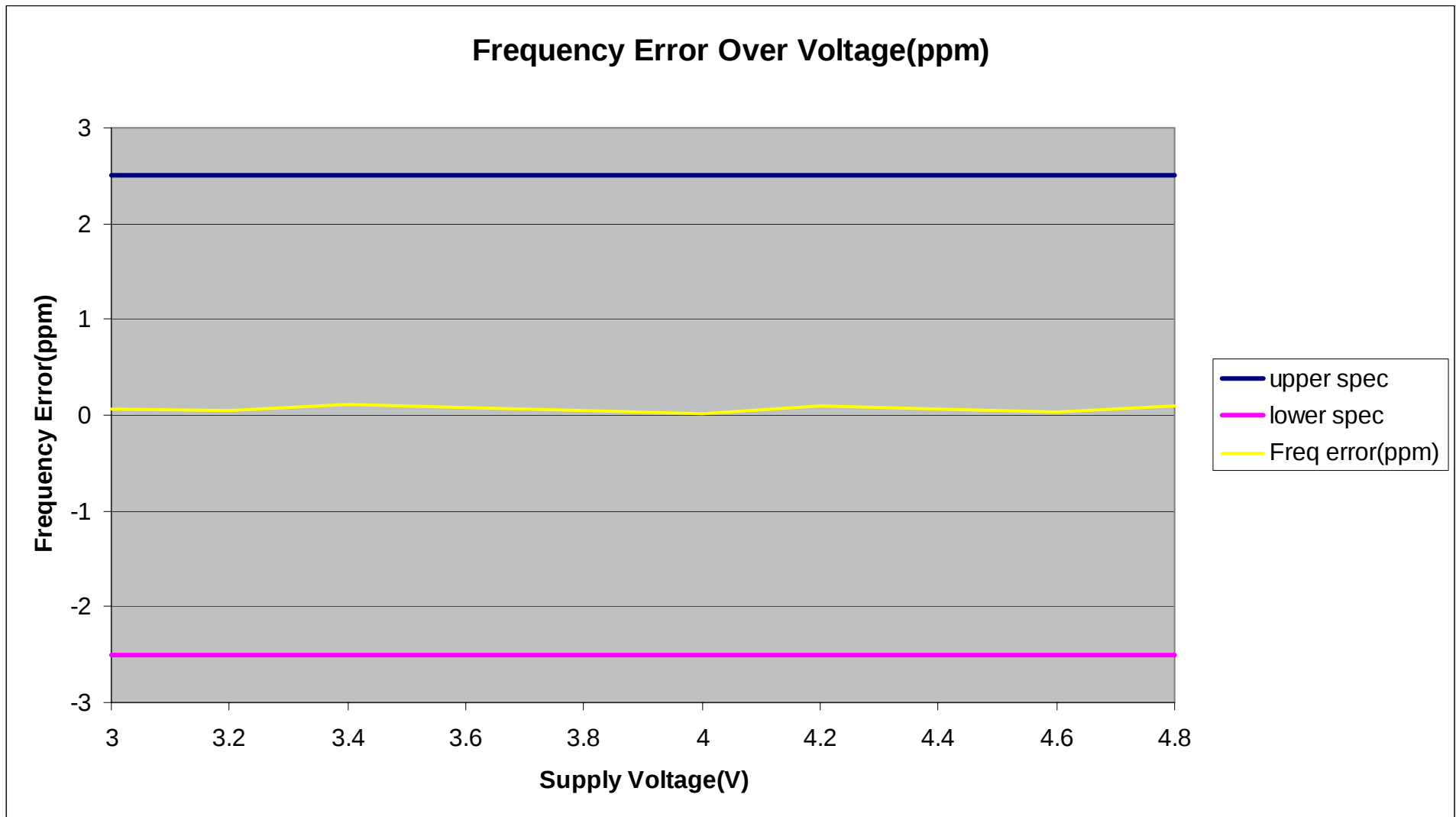


EXHIBIT 6G-2



MOTOROLA

FCC ID: AZ489FT4850

T6400

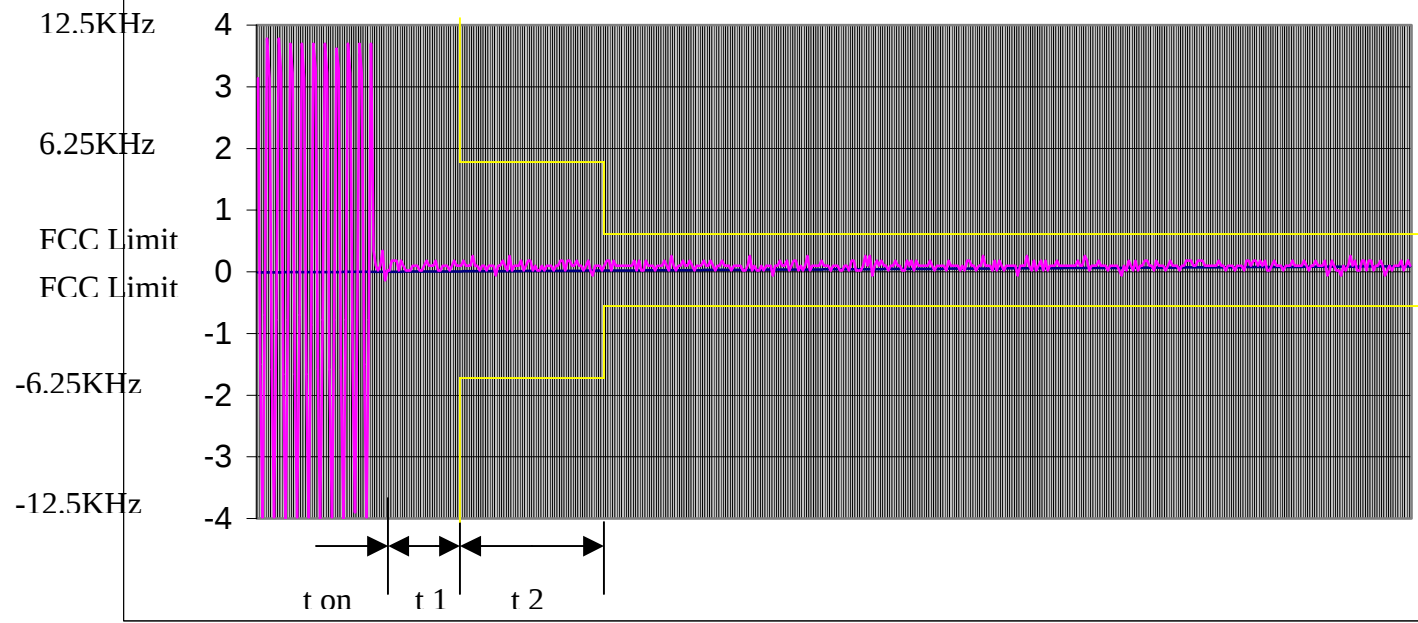


EXHIBIT 6H-1



MOTOROLA

FCC ID: AZ489FT4850

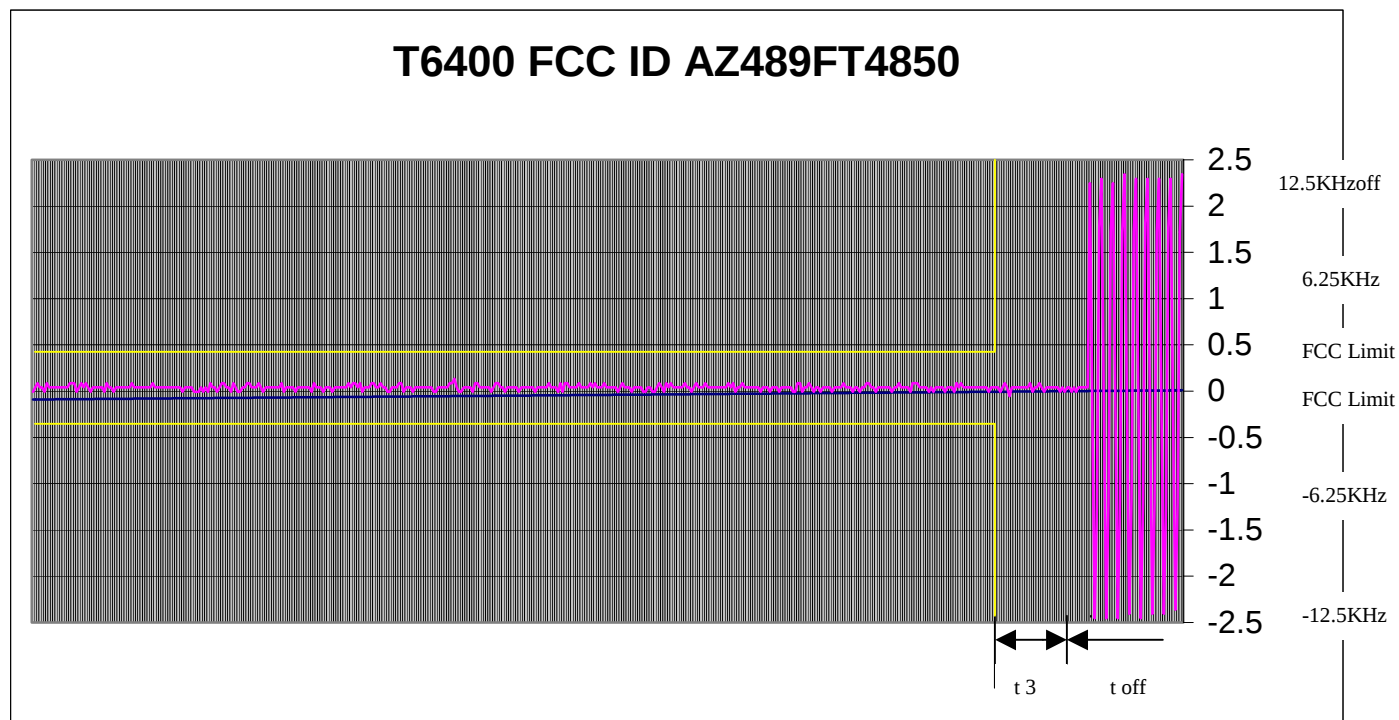


EXHIBIT 6H-2