



Test Report

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MOTOROLA

FCC ID: AZ489FT4851

RF POWER OUTPUT DATA

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

1Watt	467.9250 MHz
Measured Conducted RF output	1.212 Watts
Normal DC Voltage	4.80 Volts
Normal DC Current	760 ma
Primary Supply Voltage	4.8 Volts
RF Conducted output measured at 5.0 Volts	

2Watt	467.9250 MHz
Measured Conducted RF output	2.200 Watts
Normal DC Voltage	4.80 Volts
Normal DC Current	1.15 Amps
Primary Supply Voltage	4.8 Volts
RF Conducted output measured at 5.0 Volts	

EXHIBIT 6A



MOTOROLA

FCC ID: AZ489FT4851

AUDIO RESPONSE

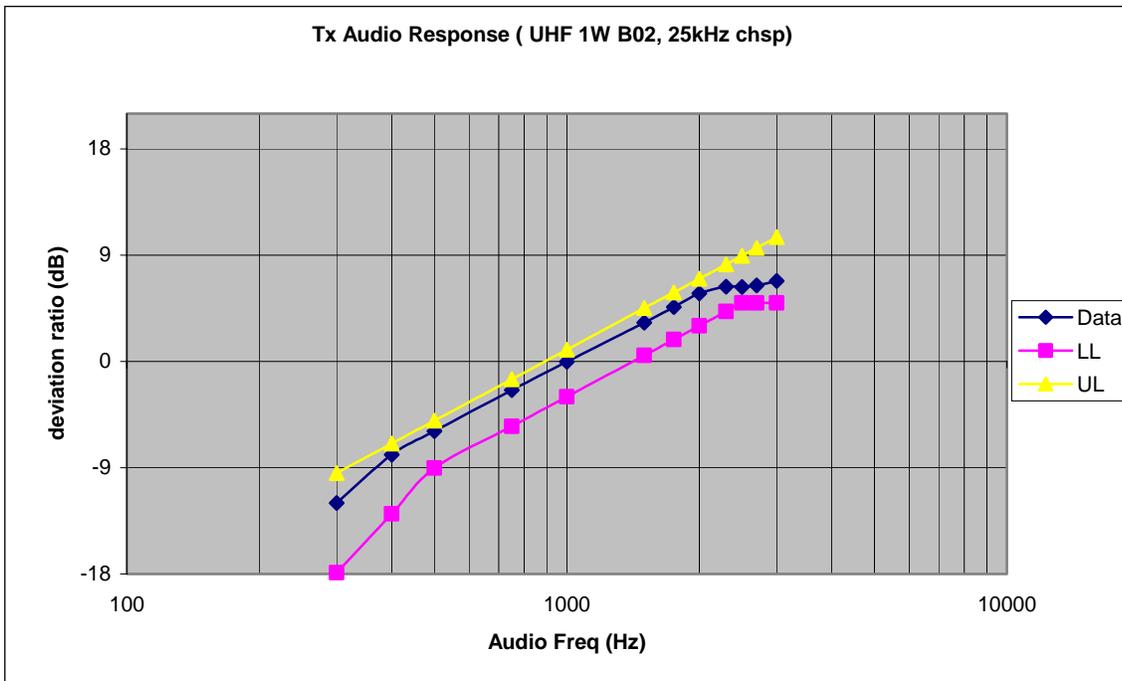
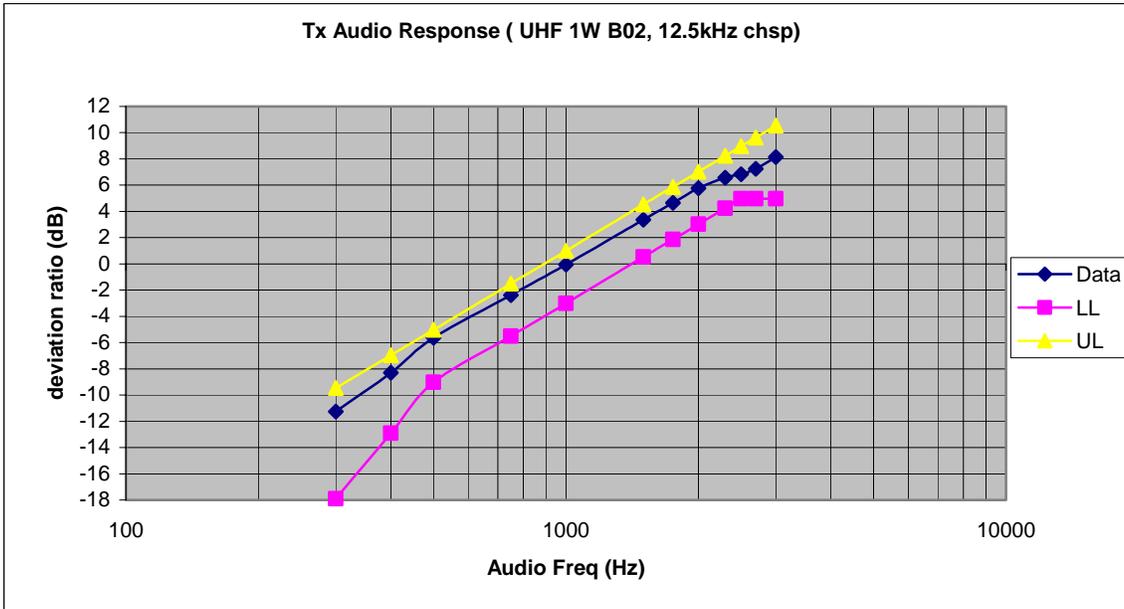
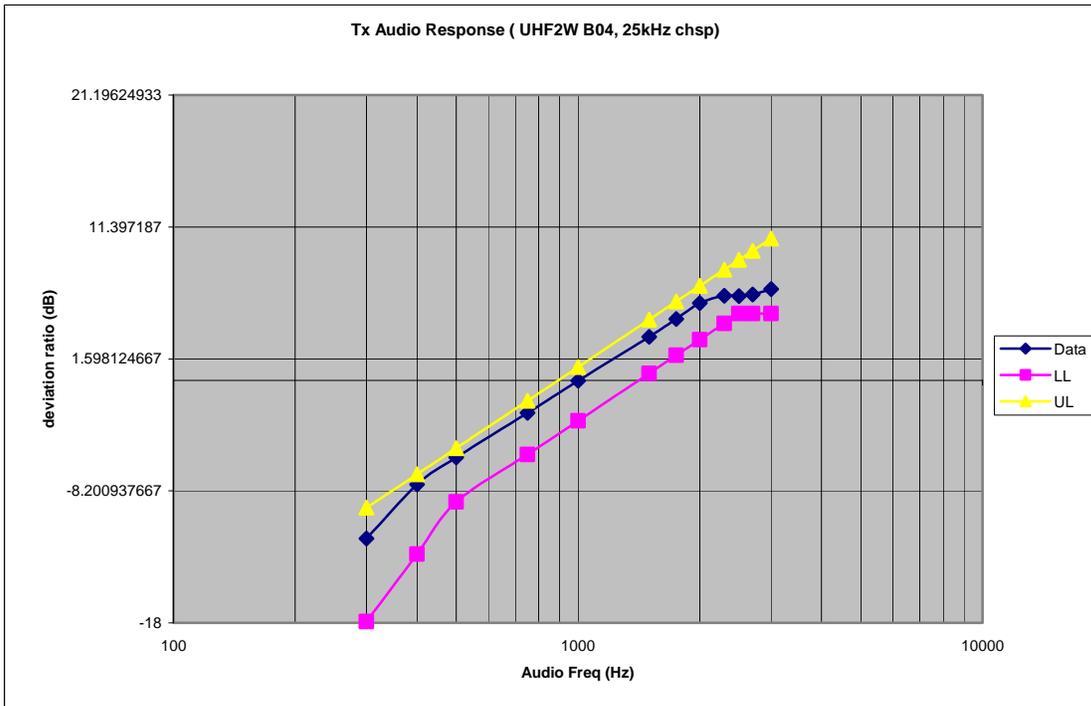
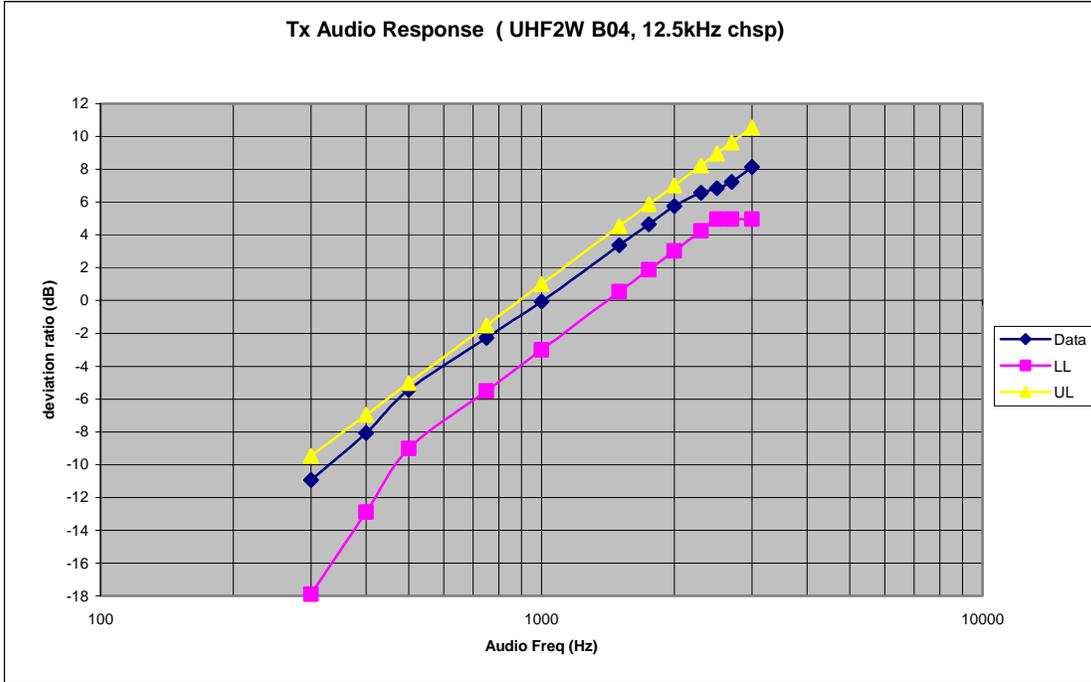


EXHIBIT 6B-1

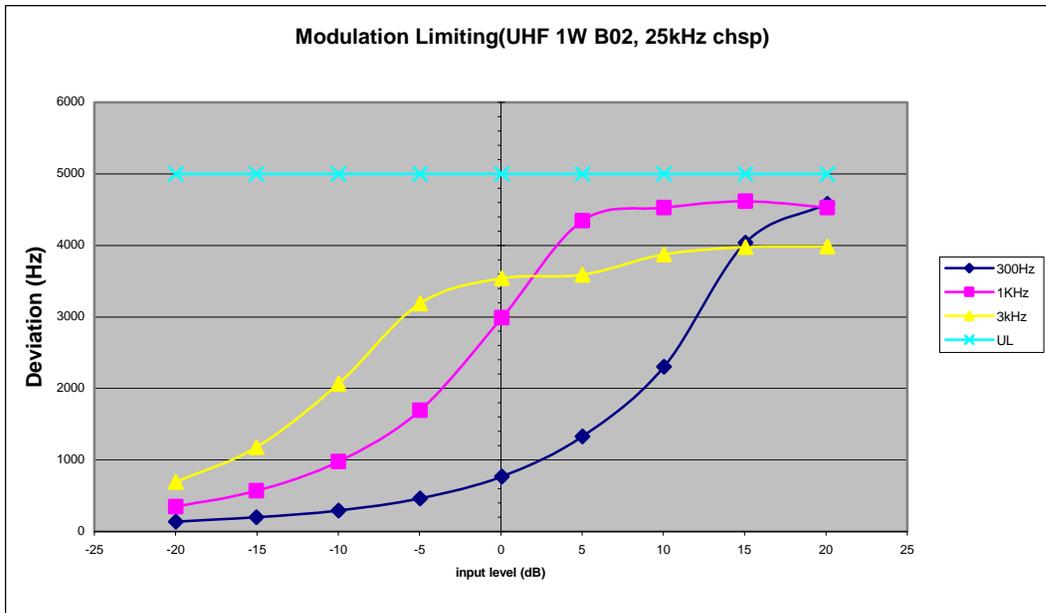
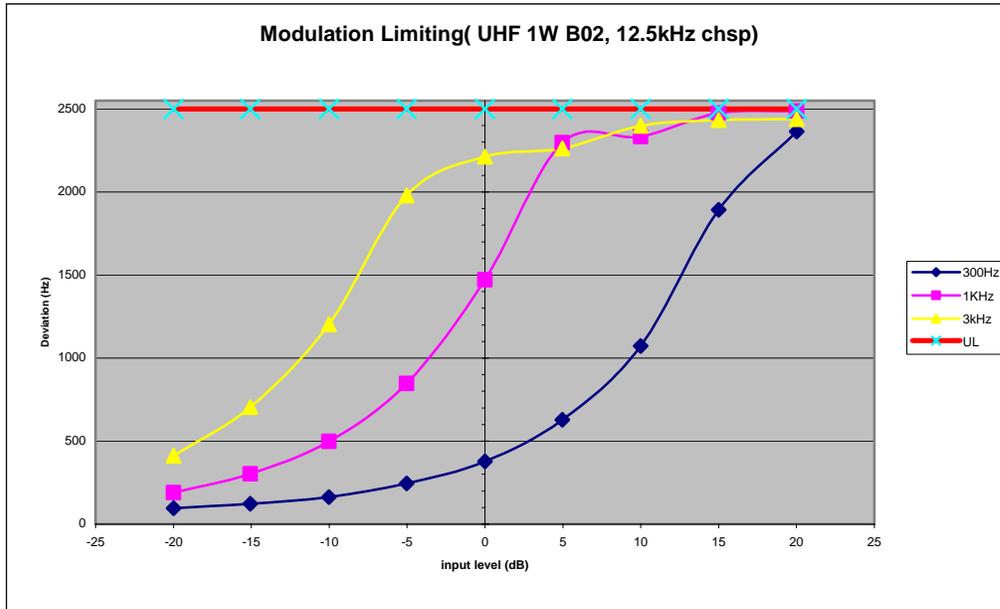


AUDIO RESPONSE



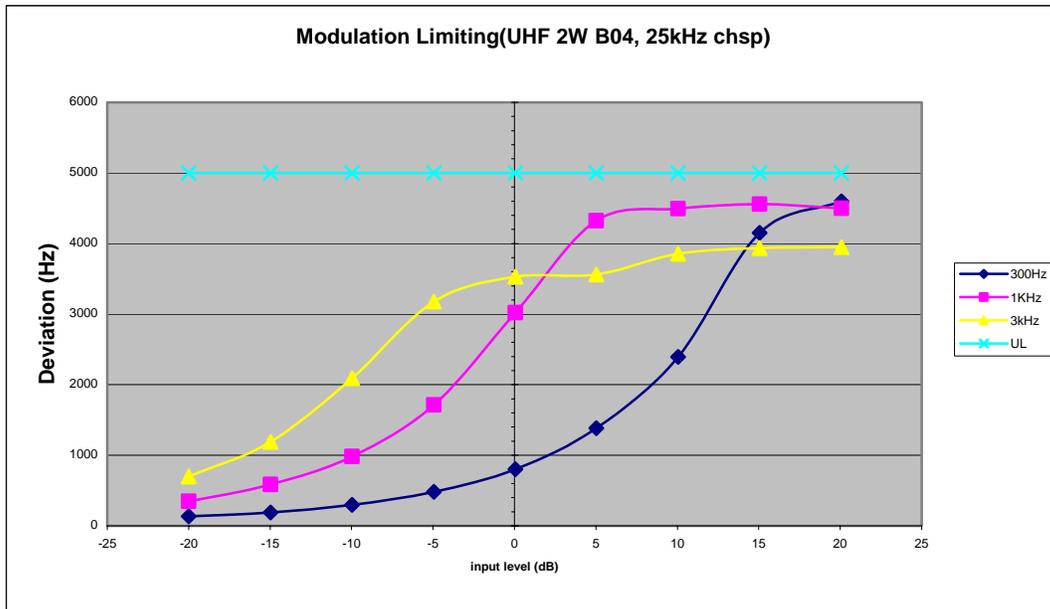
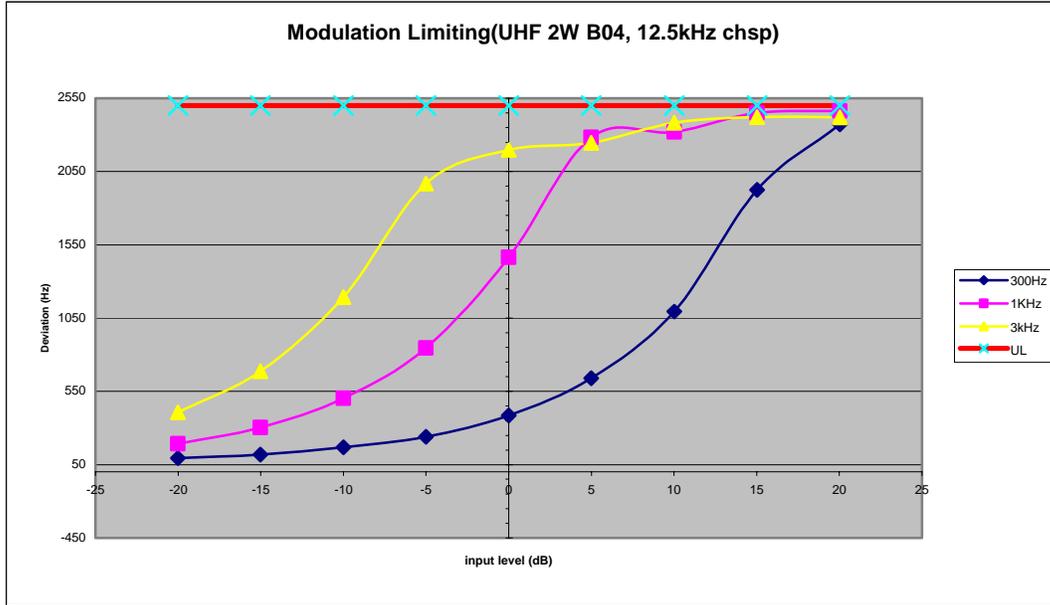


MODULATION LIMITING





MODULATION LIMITING





MOTOROLA

FCC ID: AZ489FT4851

OCCUPIED BANDWIDTH DATA

12.5KHz / 25KHz Channel Spacing

EXHIBIT 6D1

1Watt

2500 Hz Audio Modulation

Emission Type: 11K0F3E

Specification Mask D, 90.210 – 12.5 kHz

EXHIBIT 6D2

1Watt

2500 Hz Audio Modulation

Emission Type: 16K0F3E

Specification Mask B, 90.210 – 25 kHz

EXHIBIT 6D3

2.2Watts

2500 Hz Audio Modulation

Emission Type: 11K0F3E

Specification Mask D, 90.210 – 12.5 kHz

EXHIBIT 6D4

2.2Watts

2500 Hz Audio Modulation

Emission Type: 16K0F3E

Specification Mask B, 90.210 – 25 kHz

EXHIBIT 6D-5

1Watt

2500 Hz & 77Hz Tone "PL" Modulation

Emission Type: 11K0F3E

Specification Mask D, 90.210 – 12.5 kHz

EXHIBIT 6D-6

1Watt

2500 Hz & 77Hz Tone "PL" Modulation

Emission Type: 16K0F3E

Specification Mask B, 90.210 – 25 kHz

EXHIBIT 6D-7

2.2Watts

2500 Hz & 77Hz Tone "PL" Modulation

Emission Type: 11K0F3E

Specification Mask D, 90.210 – 12.5 kHz

EXHIBIT 6D-8

2.2Watts

2500 Hz & 77Hz Tone "PL" Modulation

Emission Type: 16K0F3E

Specification Mask B, 90.210 – 25 kHz



MOTOROLA

FCC ID: AZ489FT4851

CARSON'S RULE: **11K0F3E**

BW= 2(M+D)

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

BW=2 (5.5)

BW= 11K0

CARSON'S RULE: **16K0F3E**

BW= 2(M+D)

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

BW=2 (8)

BW= 16K0

EXHIBIT 6D



MOTOROLA

FCC ID: AZ489FT4851

1Watt UHF
12.5 kHz Channel spacing: Mask D

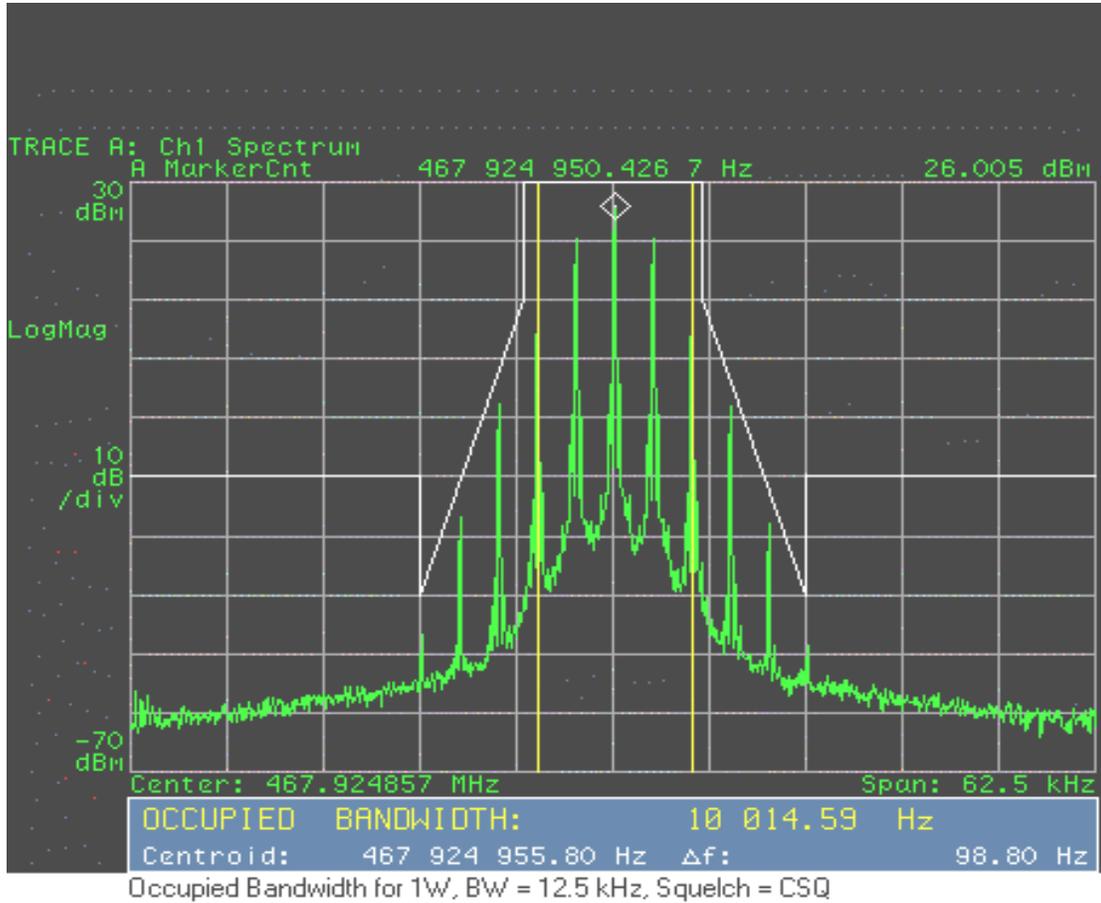


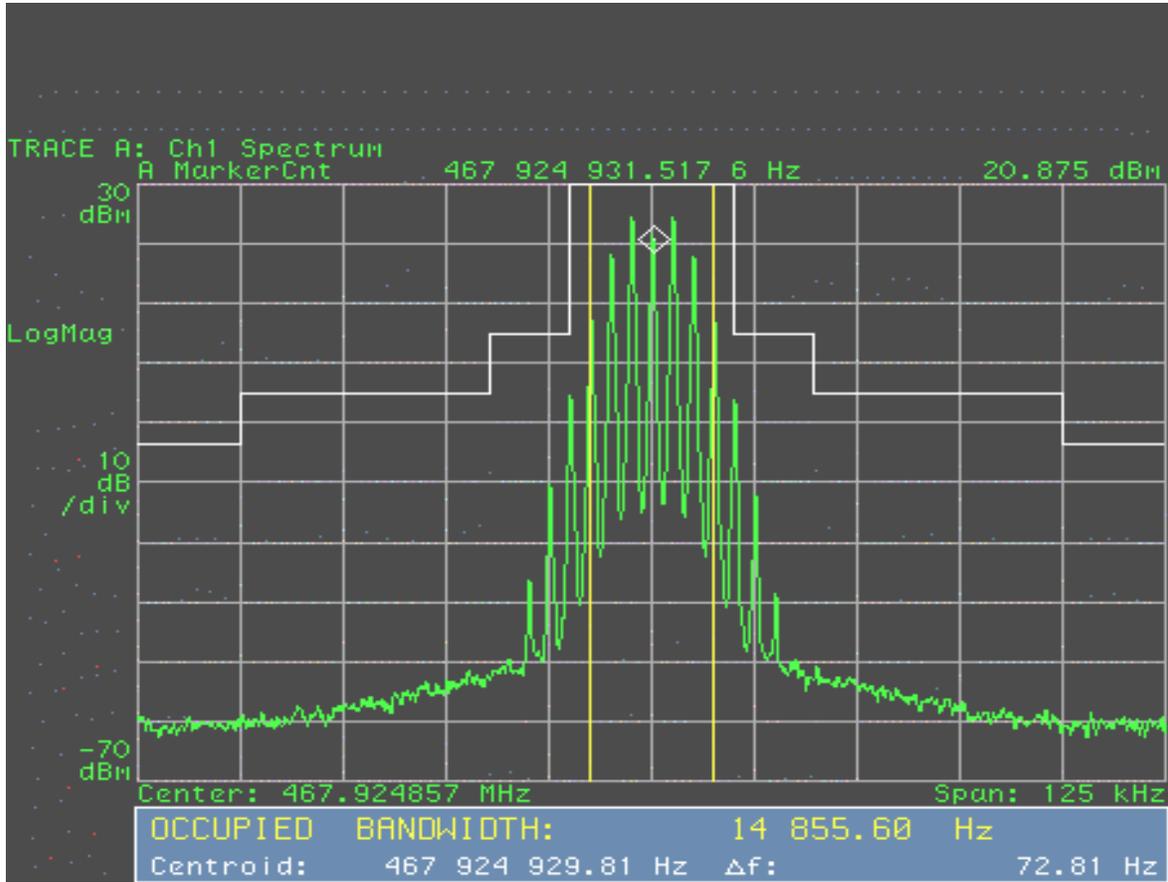
EXHIBIT6D-1



MOTOROLA

FCC ID: AZ489FT4851

1Watt UHF
25 kHz Channel spacing: Mask B



Occupied Bandwidth for 1W, B'W = 25 kHz, Squelch = CSQ

EXHIBIT6D-2



MOTOROLA

FCC ID: AZ489FT4851

2.2Watt UHF
12.5 kHz Channel spacing: Mask D

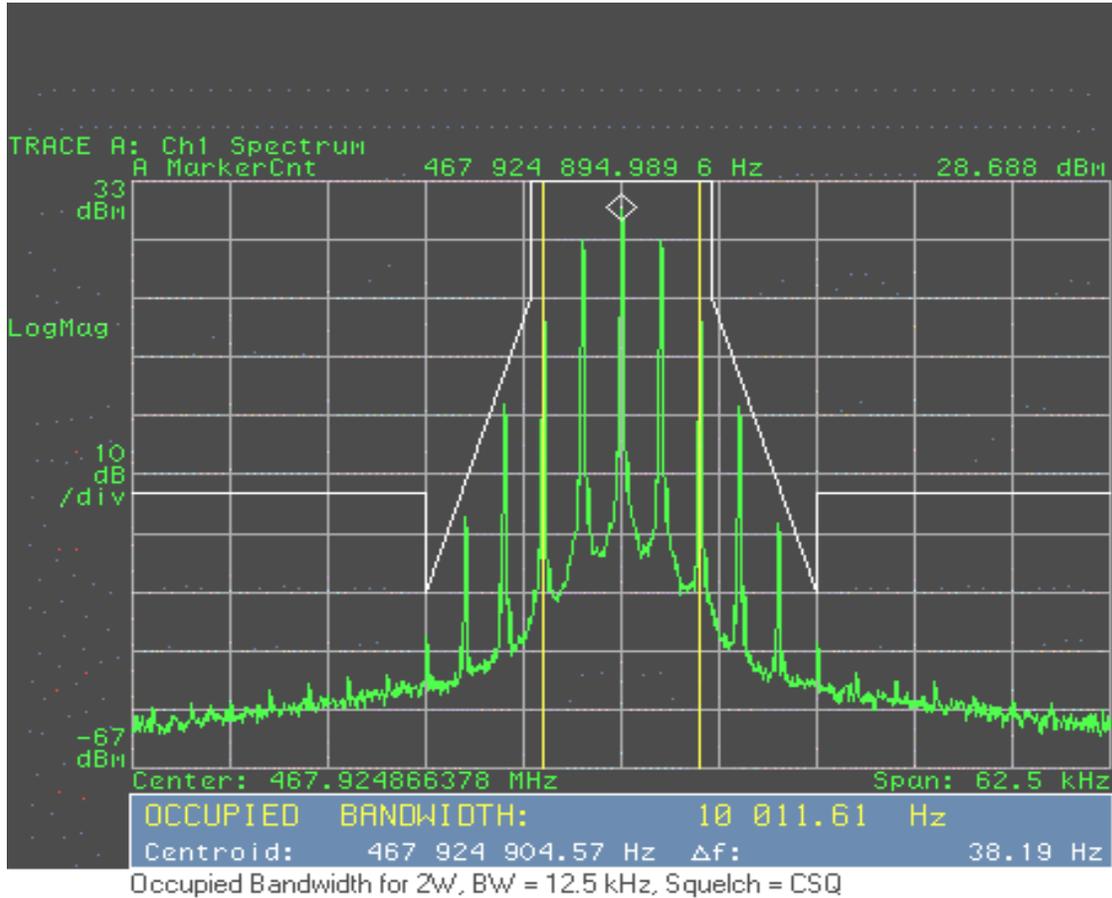


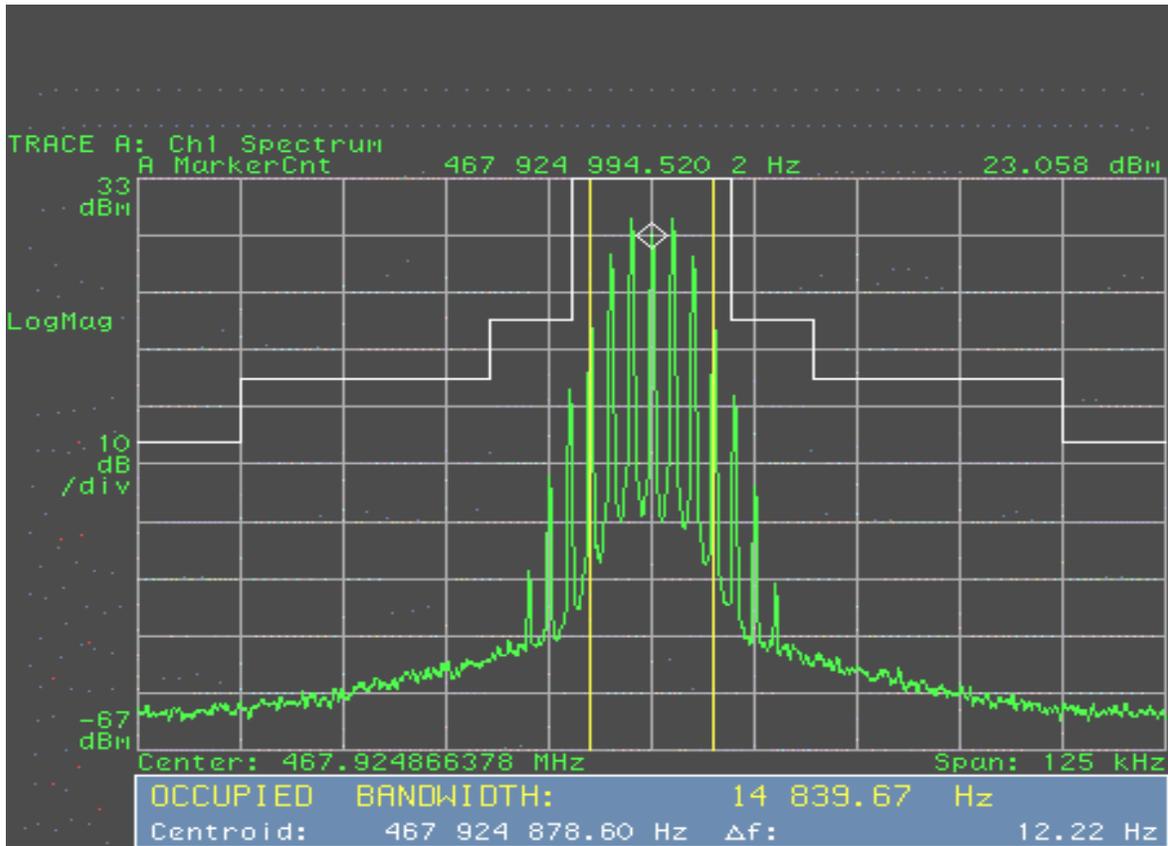
EXHIBIT 6D-3



MOTOROLA

FCC ID: AZ489FT4851

2.2Watt UHF
25 kHz Channel spacing: Mask B



Occupied Bandwidth for 2W, BW = 25 kHz, Squelch = CSQ

EXHIBIT 6D-4



MOTOROLA

FCC ID: AZ489FT4851

1Watt UHF
12.5 kHz Channel spacing: Mask D
77Hz Tone "PL" Modulation

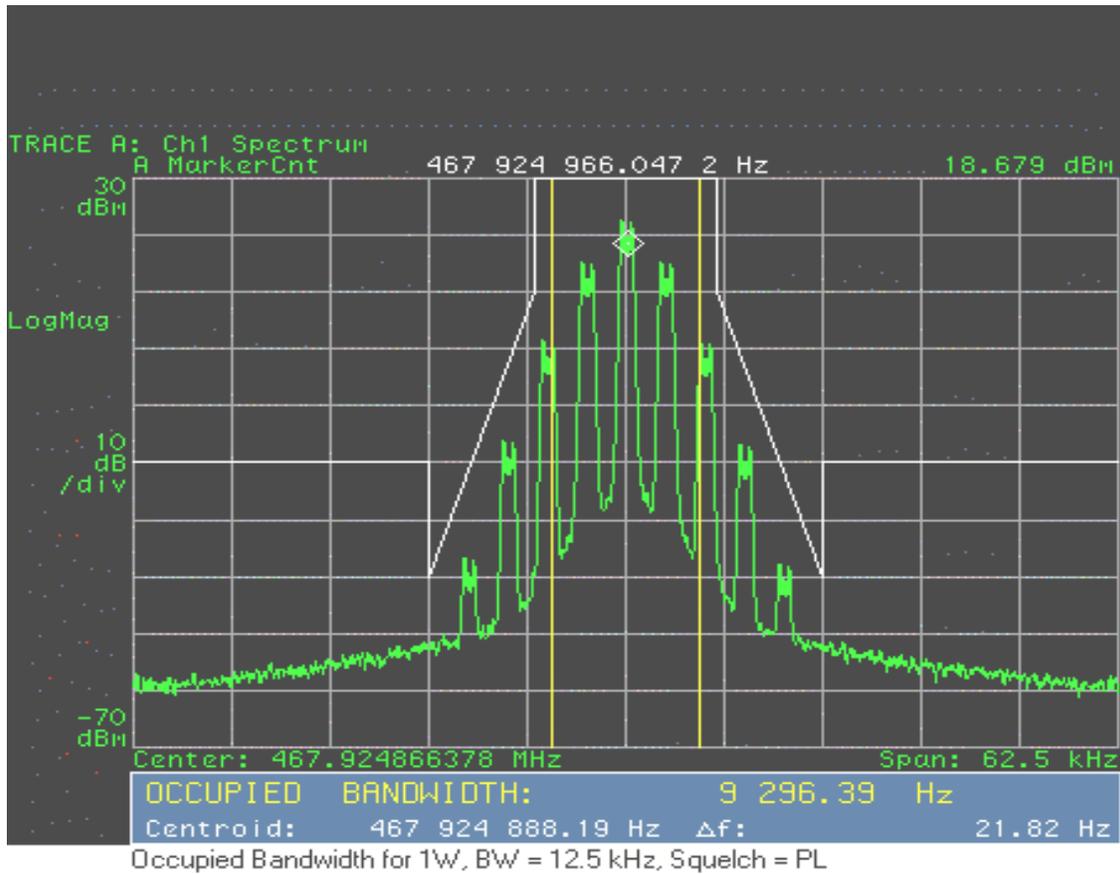


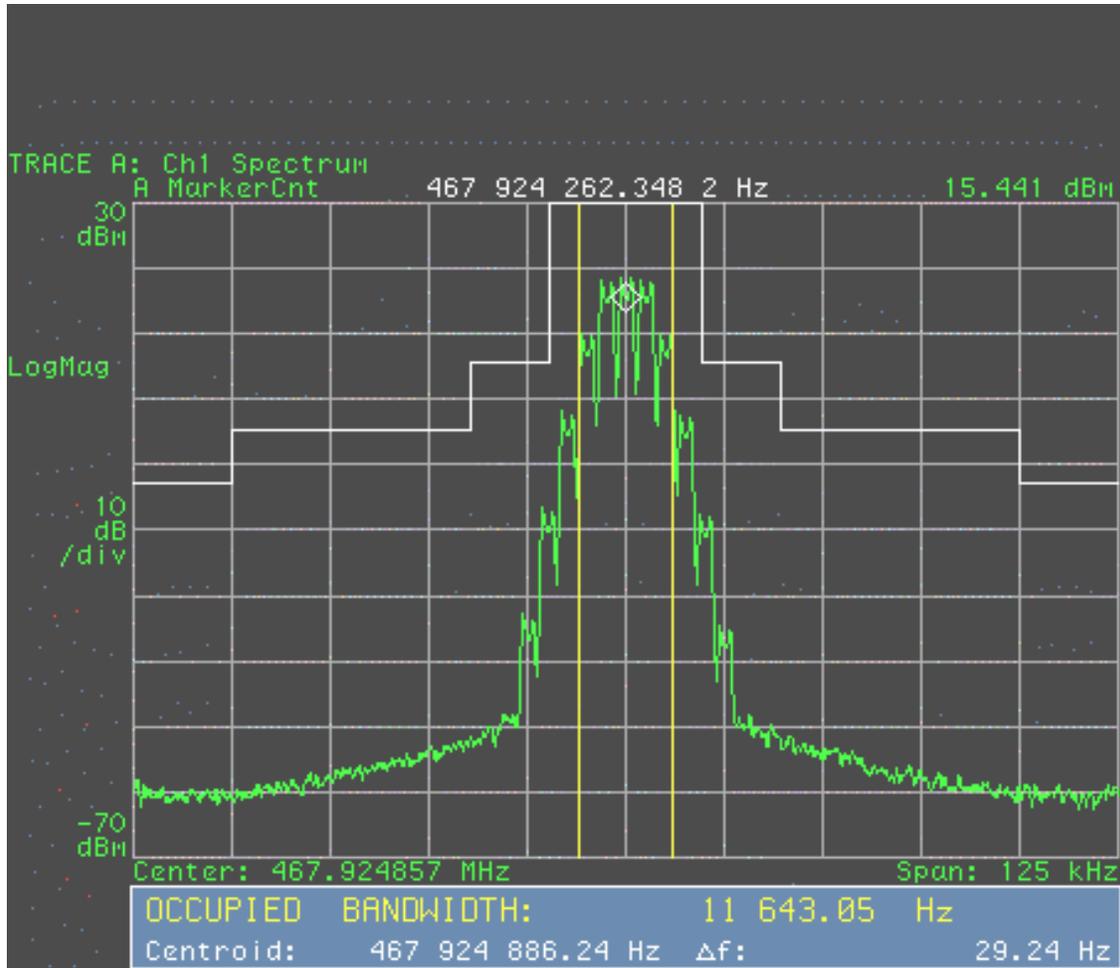
EXHIBIT 6D-5



MOTOROLA

FCC ID: AZ489FT4851

1Watt UHF
25 kHz Channel spacing: Mask B
77Hz Tone "PL" Modulation



Occupied Bandwidth for 1W, BW = 25 kHz, Squelch = PL

EXHIBIT 6D-6



MOTOROLA

FCC ID: AZ489FT4851

2.2Watt UHF
12.5 kHz Channel spacing: Mask D
77Hz Tone "PL" Modulation

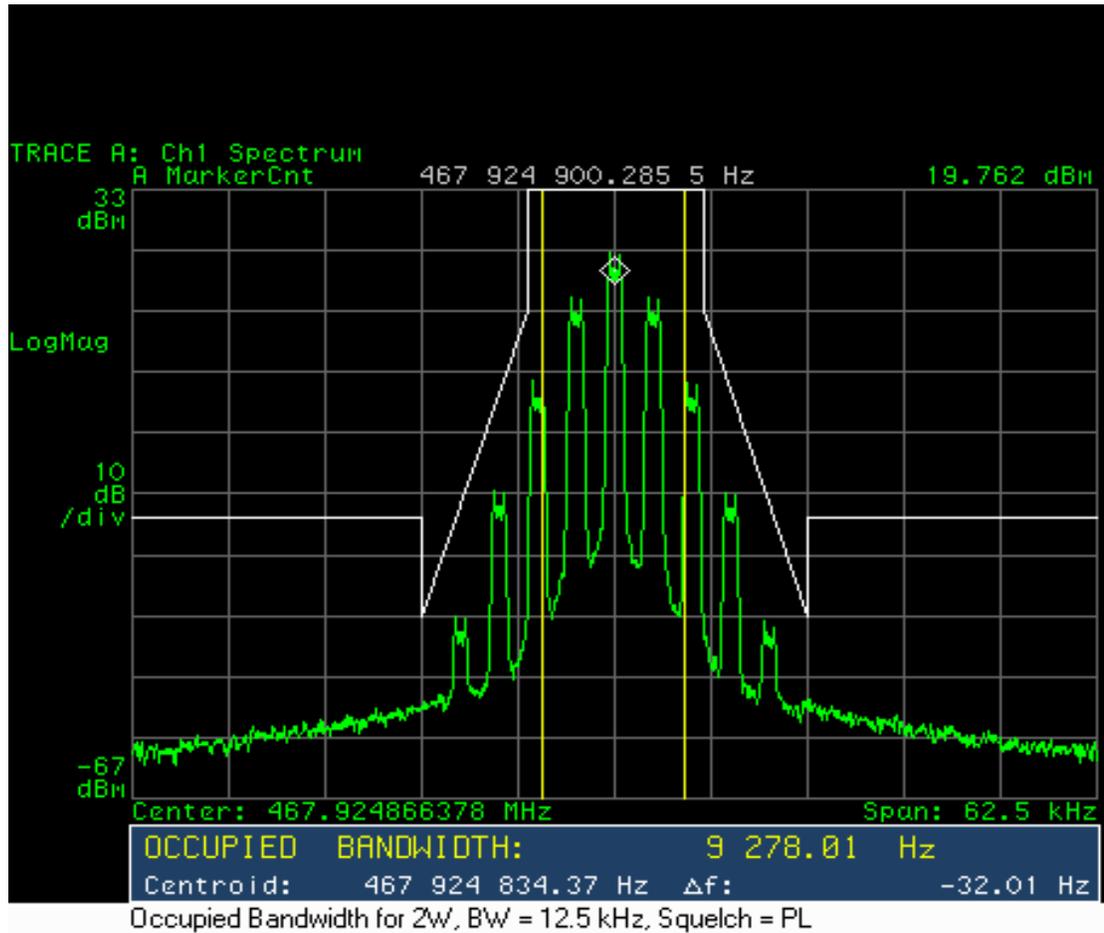


EXHIBIT 6D-7



MOTOROLA

FCC ID: AZ489FT4851

2.2Watt UHF
25 kHz Channel spacing: Mask B
77Hz Tone "PL" Modulation

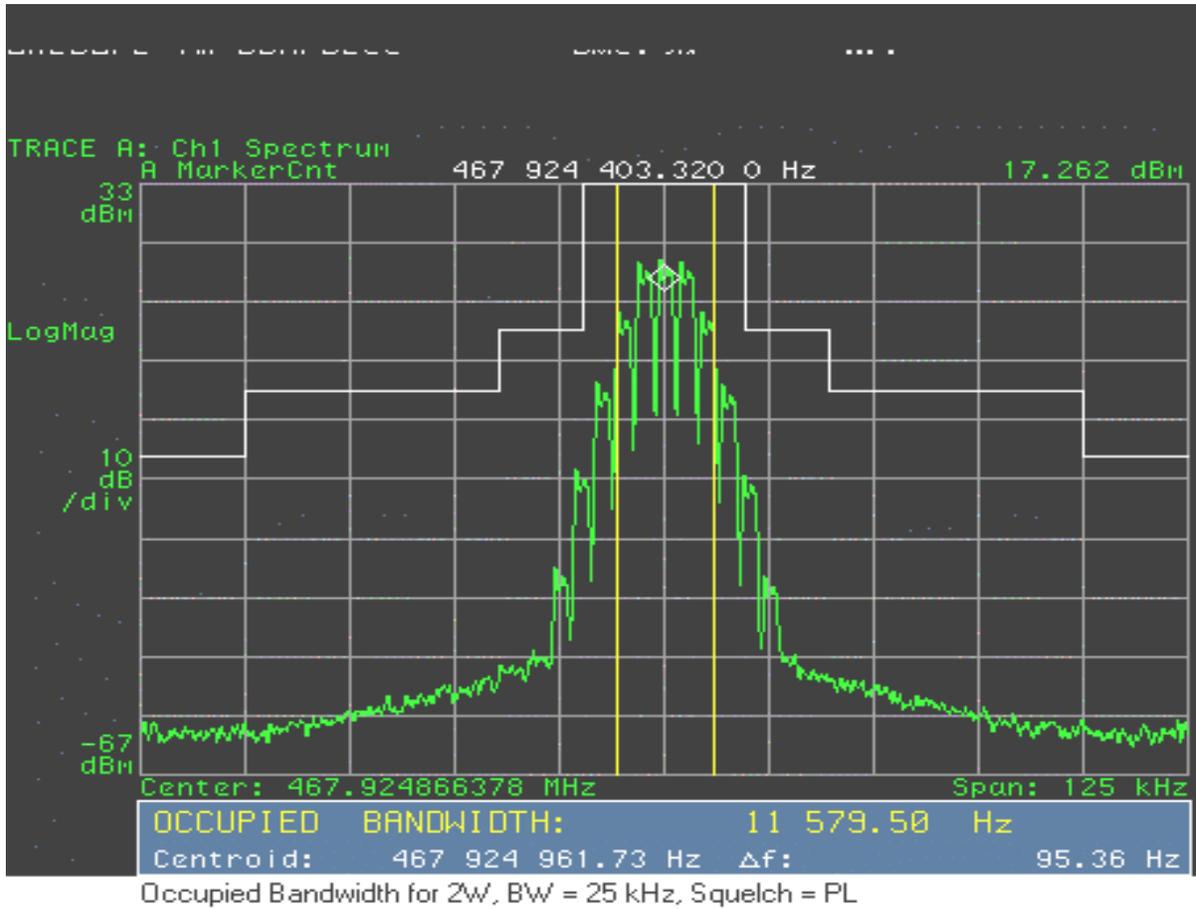


EXHIBIT6D-8



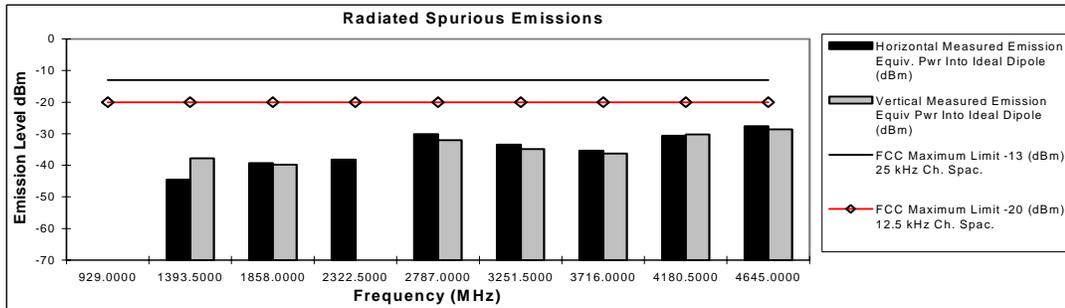
Motorola Inc.

FCC ID:AZ489FT4851

Transmitter Radiated Spurious Emissions:

464.5 MHz 1 Watts Channel Spacing 12.5kHz | S/N 567AAB0010

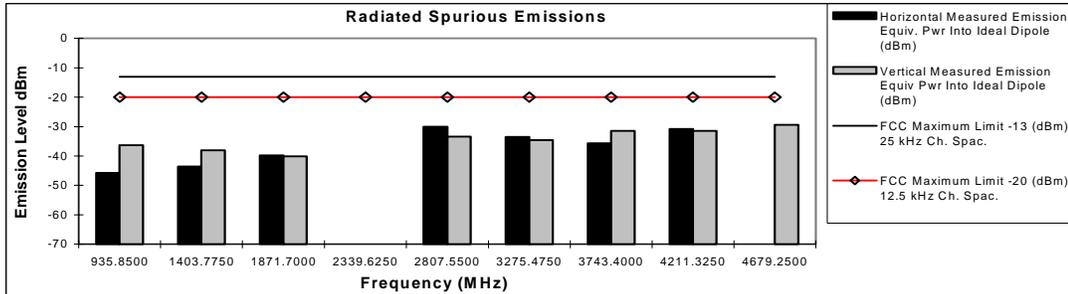
Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
929.0000	-13	-20	*	*
1393.5000	-13	-20	-44.57	-37.78
1858.0000	-13	-20	-39.33	-39.77
2322.5000	-13	-20	-38.25	*
2787.0000	-13	-20	-30.07	-32.03
3251.5000	-13	-20	-33.42	-34.78
3716.0000	-13	-20	-35.31	-36.23
4180.5000	-13	-20	-30.58	-30.22
4645.0000	-13	-20	-27.56	-28.63



Transmitter Radiated Spurious Emissions:

467.925 MHz 1 Watts Channel Spacing 12.5kHz | S/N 567AAB0010

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)
935.8500	-13	-20	-45.71	-36.36
1403.7750	-13	-20	-43.61	-38.09
1871.7000	-13	-20	-39.78	-40.09
2339.6250	-13	-20	*	*
2807.5500	-13	-20	-30.00	-33.40
3275.4750	-13	-20	-33.51	-34.62
3743.4000	-13	-20	-35.72	-31.54
4211.3250	-13	-20	-30.81	-31.41
4679.2500	-13	-20		-29.46



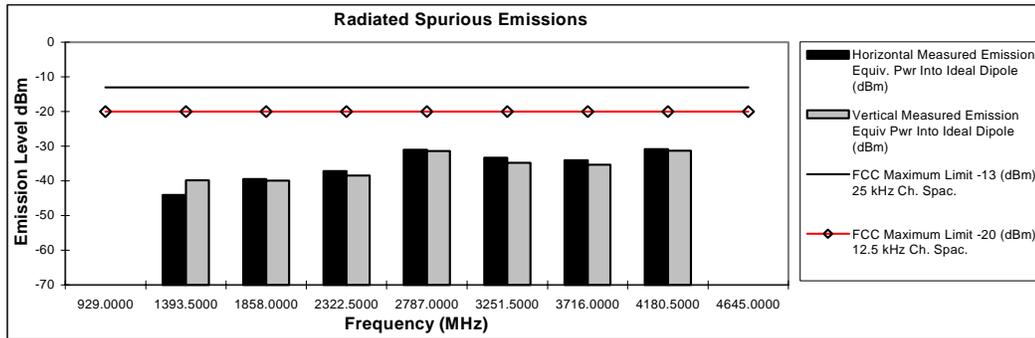
* Indicates the spurious emission was less than -70dBm or could not be detected due to noise limitations or ambients.



Transmitter Radiated Spurious Emissions:

464.5 MHz 1 Watts Channel Spacing 25kHz | S/N 567AAB0010

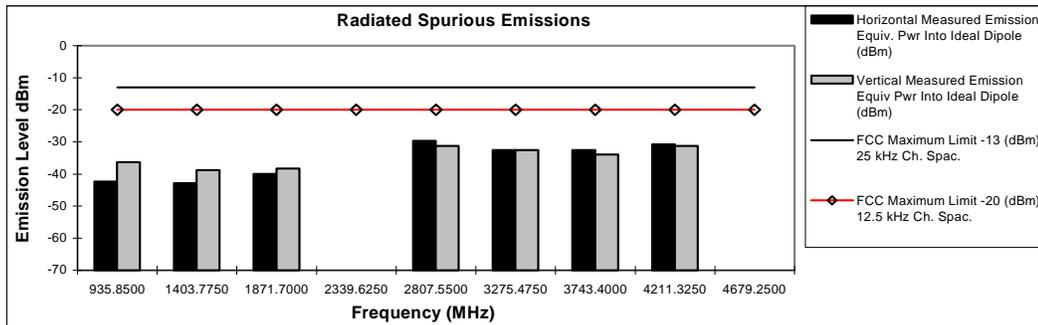
Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
929.0000	-13	-20	*	*
1393.5000	-13	-20	-44.07	-39.84
1858.0000	-13	-20	-39.45	-39.92
2322.5000	-13	-20	-37.18	-38.46
2787.0000	-13	-20	-30.98	-31.31
3251.5000	-13	-20	-33.29	-34.85
3716.0000	-13	-20	-33.98	-35.35
4180.5000	-13	-20	-30.79	-31.29
4645.0000	-13	-20	*	*



Transmitter Radiated Spurious Emissions:

467.925 MHz 1 Watts Channel Spacing 25kHz | S/N 567AAB0010

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)
935.8500	-13	-20	-42.32	-36.27
1403.7750	-13	-20	-42.86	-38.75
1871.7000	-13	-20	-39.98	-38.25
2339.6250	-13	-20	*	*
2807.5500	-13	-20	-29.65	-31.21
3275.4750	-13	-20	-32.52	-32.54
3743.4000	-13	-20	-32.55	-33.90
4211.3250	-13	-20	-30.78	-31.24
4679.2500	-13	-20	*	*



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



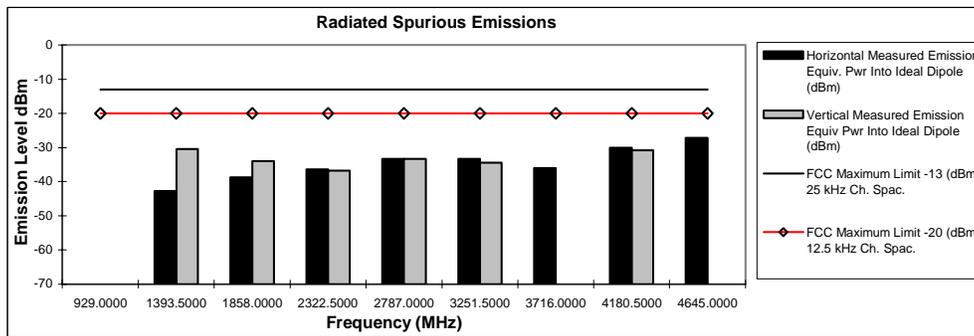
Motorola Inc.

FCC ID:AZ489FT4851

Transmitter Radiated Spurious Emissions: Consumer Business Radio

464.5 MHz 2 Watts Channel Spacing 12.5kHz | S/N 567AAB0010

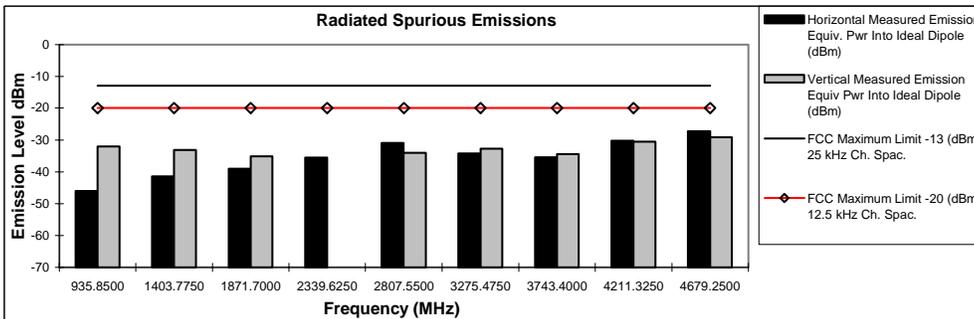
Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
929.0000	-13	-20	*	*
1393.5000	-13	-20	-42.77	-30.51
1858.0000	-13	-20	-38.73	-33.97
2322.5000	-13	-20	-36.40	-36.76
2787.0000	-13	-20	-33.40	-33.40
3251.5000	-13	-20	-33.30	-34.50
3716.0000	-13	-20	-36.02	*
4180.5000	-13	-20	-30.08	-30.81
4645.0000	-13	-20	-27.16	*



Transmitter Radiated Spurious Emissions: Consumer Business Radio

467.925 MHz 2 Watts Channel Spacing 12.5kHz | S/N 567AAB0010

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)
935.8500	-13	-20	-45.96	-32.04
1403.7750	-13	-20	-41.33	-33.06
1871.7000	-13	-20	-38.96	-35.13
2339.6250	-13	-20	-35.58	*
2807.5500	-13	-20	-30.93	-33.99
3275.4750	-13	-20	-34.17	-32.71
3743.4000	-13	-20	-35.36	-34.40
4211.3250	-13	-20	-30.23	-30.50
4679.2500	-13	-20	-27.17	-29.09



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



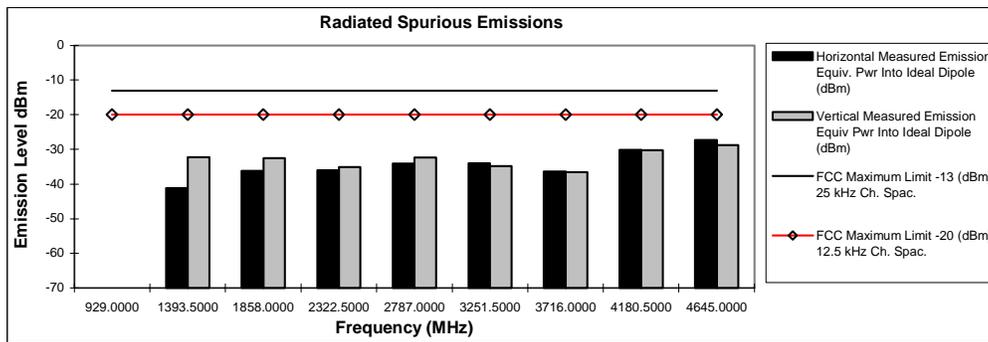
Motorola Inc.

FCC ID:AZ489FT4851

Transmitter Radiated Spurious Emissions:

464.5 MHz 2 Watts Channel Spacing 25kHz | S/N 567AAB0010

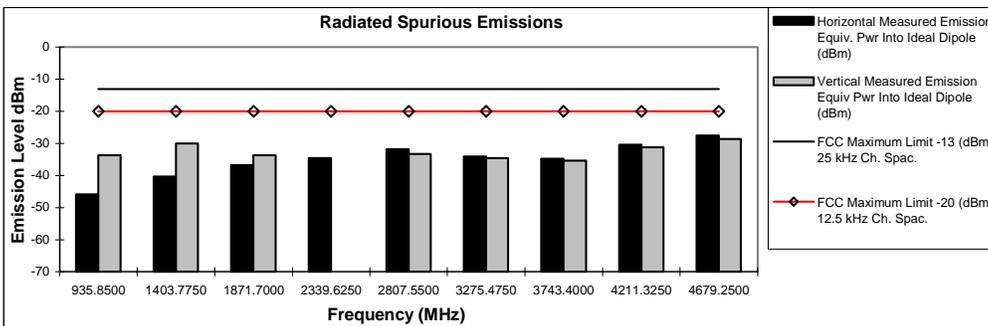
Frequency (MHz)	FCC Maximum Limit -13 (dBm) 25 kHz Ch. Spac.	FCC Maximum Limit -20 (dBm) 12.5 kHz Ch. Spac.	Horizontal Measured Emission Equiv. Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into Ideal Dipole (dBm)
929.0000	-13	-20	*	*
1393.5000	-13	-20	-41.17	-32.26
1858.0000	-13	-20	-36.20	-32.45
2322.5000	-13	-20	-36.07	-35.11
2787.0000	-13	-20	-34.12	-32.35
3251.5000	-13	-20	-33.99	-34.75
3716.0000	-13	-20	-36.41	-36.53
4180.5000	-13	-20	-30.11	-30.26
4645.0000	-13	-20	-27.33	-28.78



Transmitter Radiated Spurious Emissions:

467.925 MHz 2 Watts Channel Spacing 25kHz | S/N 567AAB0010

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)
935.8500	-13	-20	-45.88	-33.70
1403.7750	-13	-20	-40.37	-29.95
1871.7000	-13	-20	-36.78	-33.61
2339.6250	-13	-20	-34.58	*
2807.5500	-13	-20	-31.81	-33.24
3275.4750	-13	-20	-34.01	-34.60
3743.4000	-13	-20	-34.79	-35.43
4211.3250	-13	-20	-30.39	-31.17
4679.2500	-13	-20	-27.45	-28.58



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



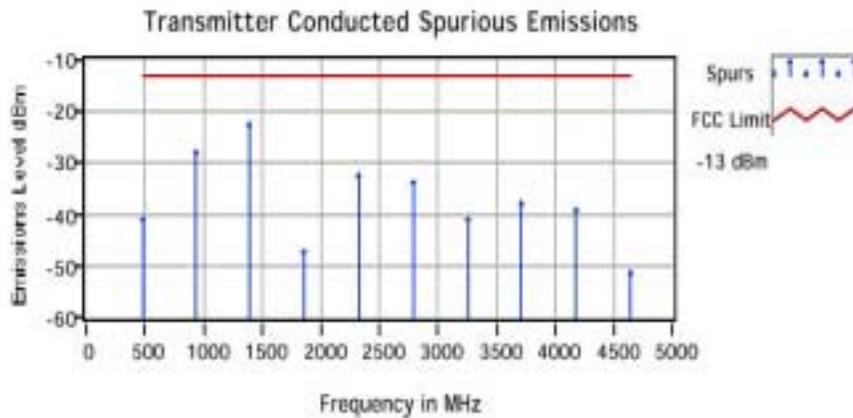
Low Power 12.5 kHz Bandwidth

Transmitter Conducted Spurious Emissions FCC ID: AZ489FT4851

464.50000 MHz

Power 1.0W

Spur Frequency	FCC Limit	Measured Value (dBm)
475.80000	-13.0	-41.3
928.70000	-13.0	-28.0
1393.00000	-13.0	-22.5
1856.00000	-13.0	-47.2
2321.00000	-13.0	-32.6
2784.00000	-13.0	-33.7
3250.00000	-13.0	-40.9
3714.00000	-13.0	-37.8
4180.00000	-13.0	-39.3
4644.00000	-13.0	-51.5





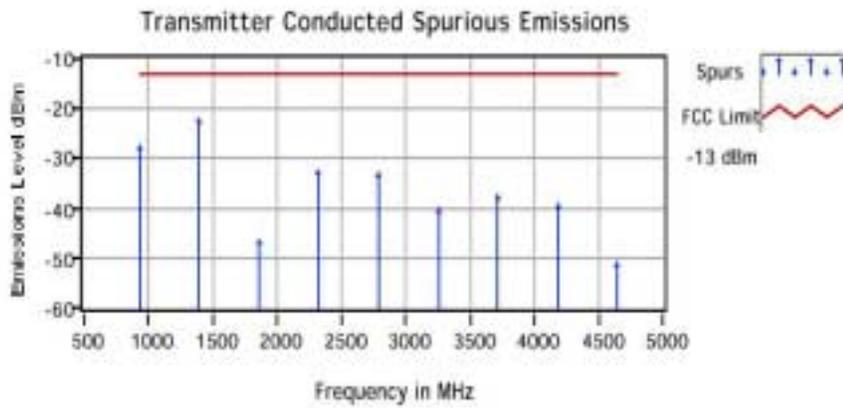
Low Power 25 kHz Bandwidth

Transmitter Conducted Spurious Emissions FCC ID: AZ489FT4851

464.50000 MHz

Power 1.0W

Spur Frequency	FCC Limit	Measured Value (dBm)
928.70000	-13.0	-27.9
1393.00000	-13.0	-22.4
1858.00000	-13.0	-47.0
2321.00000	-13.0	-32.9
2784.00000	-13.0	-33.4
3252.00000	-13.0	-40.7
3714.00000	-13.0	-37.8
4180.00000	-13.0	-39.9
4644.00000	-13.0	-51.5





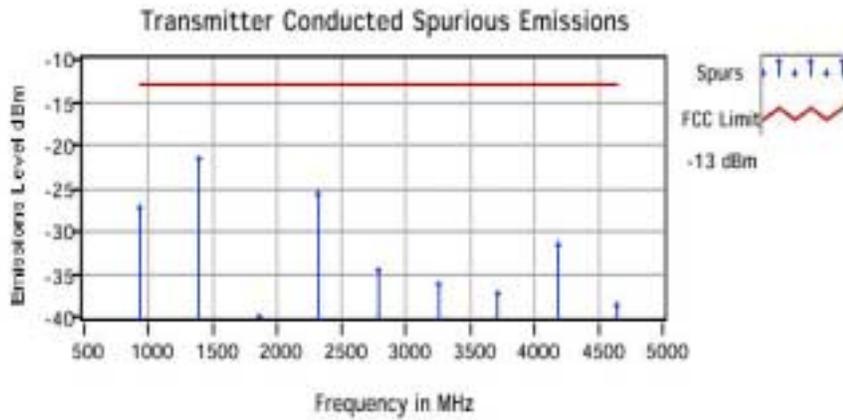
High Power 12.5 kHz Bandwidth

Transmitter Conducted Spurious Emissions FCC ID: AZ489FT4851

464.50000 MHz

Power 2.0W

Spur Frequency	FCC Limit	Measured Value (dBm)
928.90000	-13.0	-27.2
1393.00000	-13.0	-21.6
1856.00000	-13.0	-39.9
2321.00000	-13.0	-25.7
2784.00000	-13.0	-34.6
3251.00000	-13.0	-36.3
3714.00000	-13.0	-37.2
4180.00000	-13.0	-31.6
4644.00000	-13.0	-38.6





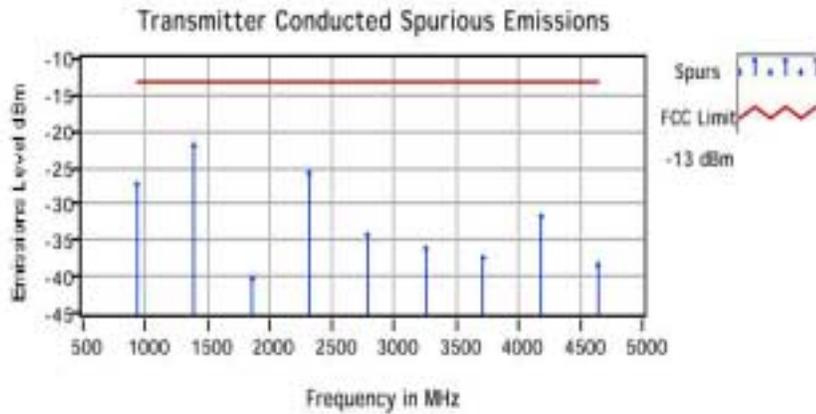
High Power 25 kHz Bandwidth

Transmitter Conducted Spurious Emissions FCC ID: AZ489FT4851

464.50000 MHz

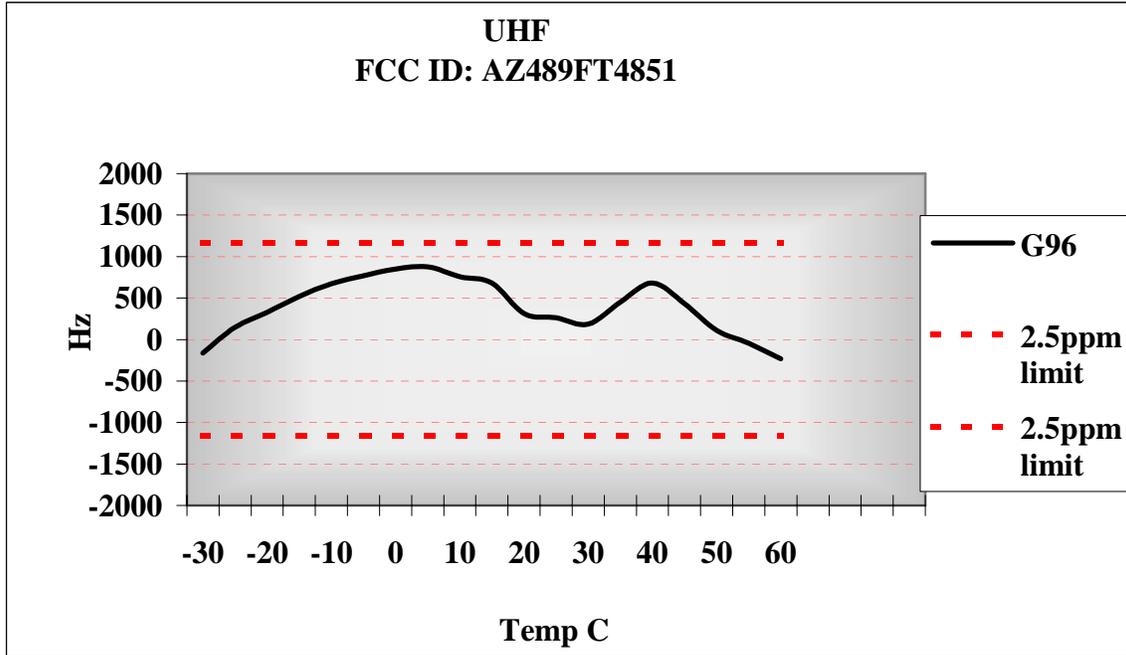
Power 2.0W

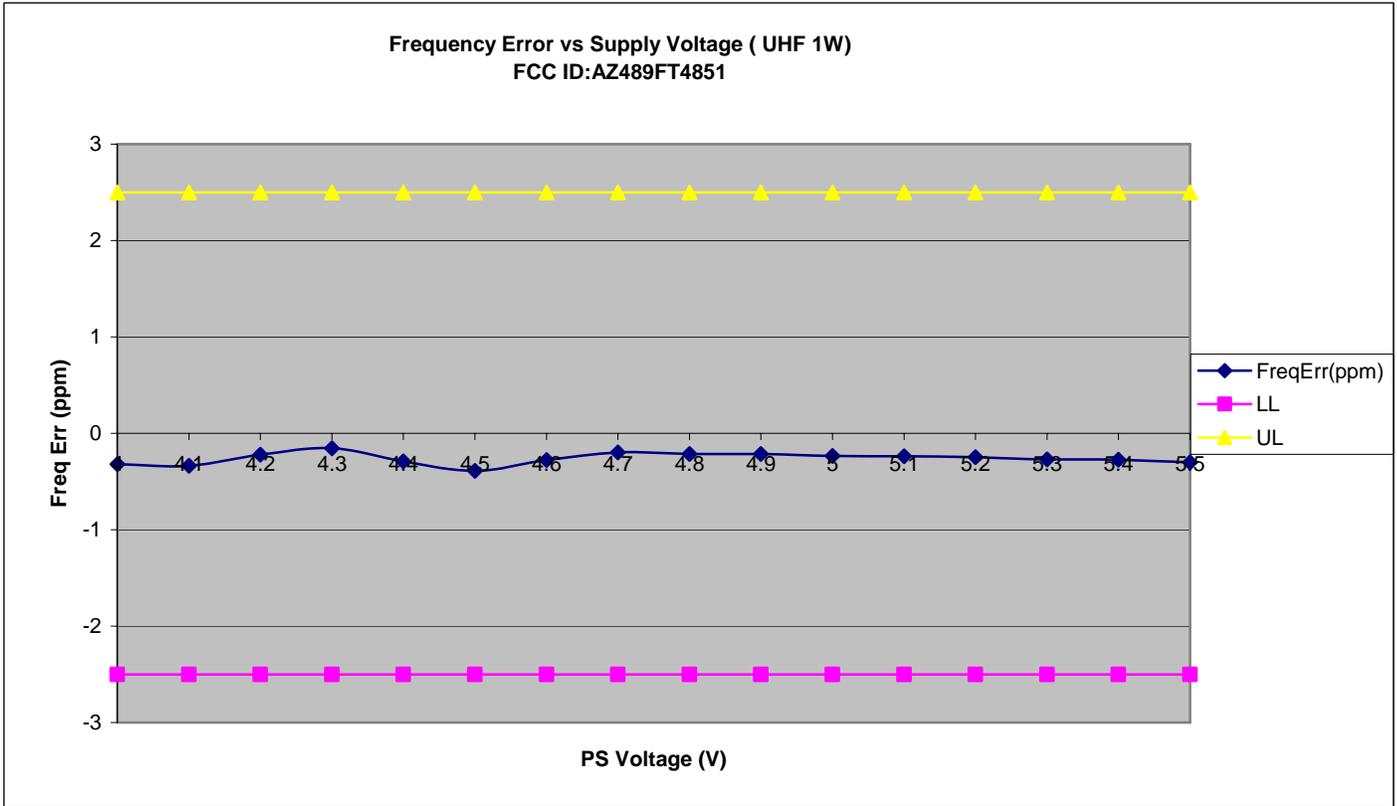
Spur Frequency	FCC Limit	Measured Value (dBm)
928.70000	-13.0	-27.2
1393.00000	-13.0	-21.9
1856.00000	-13.0	-40.4
2321.00000	-13.0	-25.9
2784.00000	-13.0	-34.3
3251.00000	-13.0	-36.2
3714.00000	-13.0	-37.5
4180.00000	-13.0	-31.6
4644.00000	-13.0	-38.5



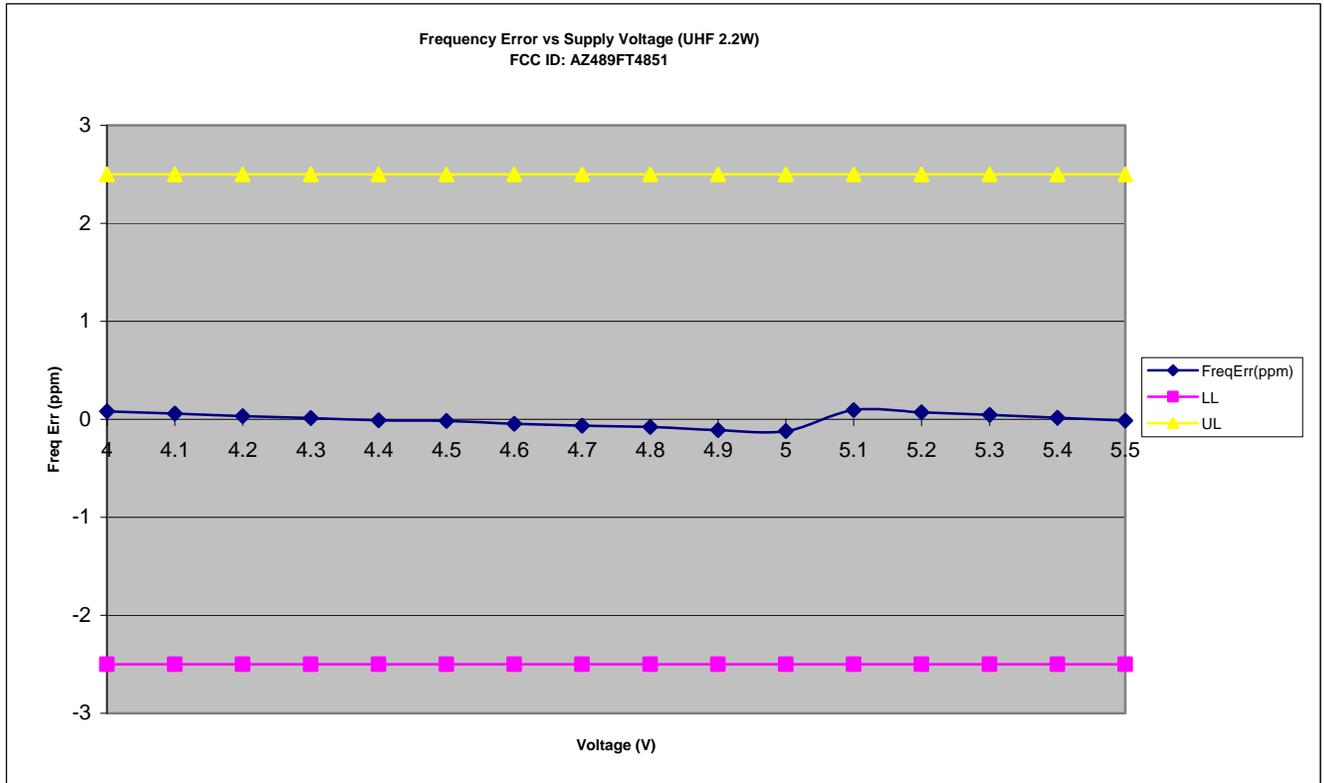


Frequency Stability over Temperature





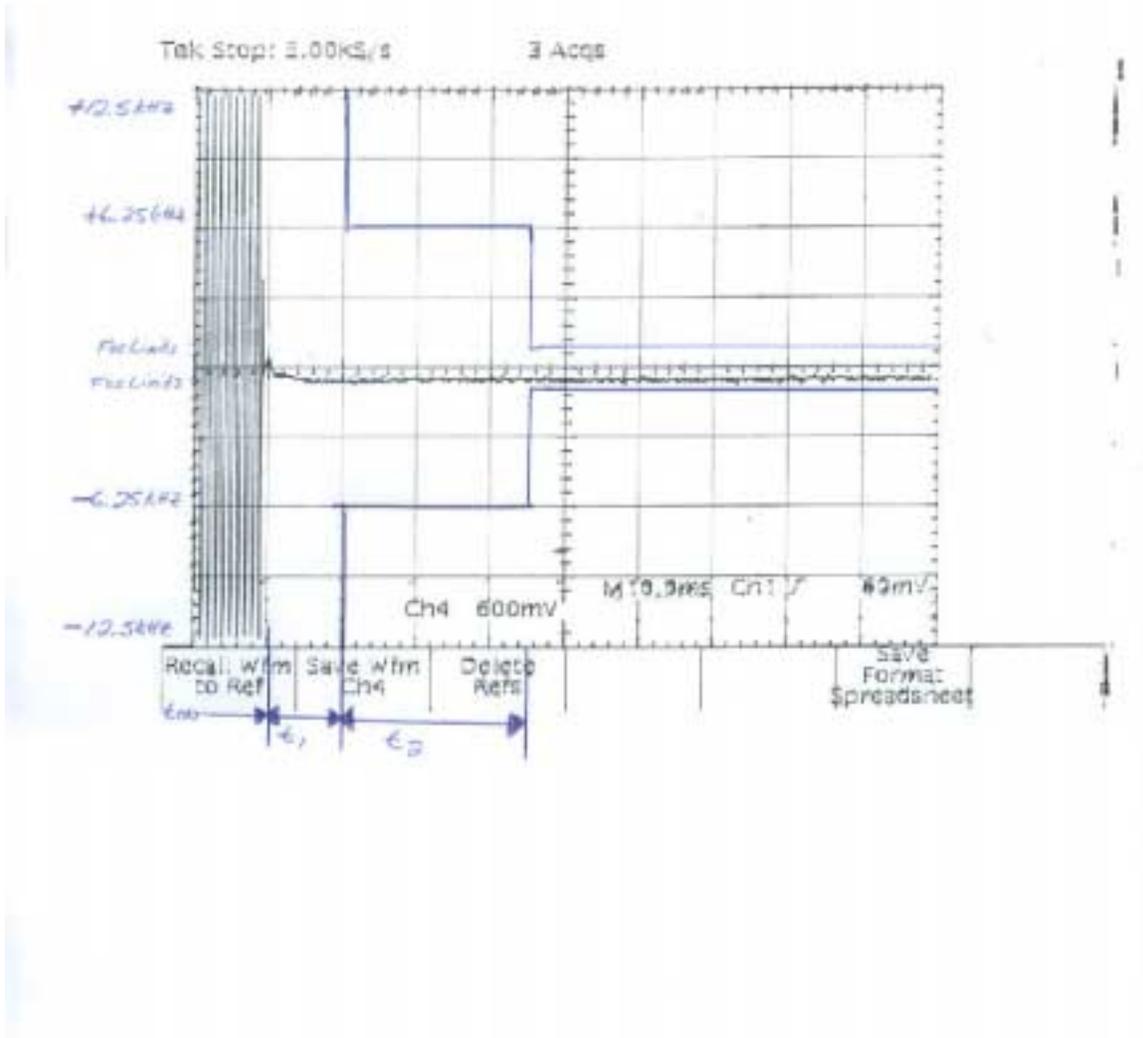
Radio resets at 2.7 Volts.



Radio resets at 2.7 Volts.



Transient Frequency Response TX on 1Watt 12.5 kHz





MOTOROLA

FCC ID: AZ489FT4851

Transient Frequency Response TX on 1 Watt 25 kHz

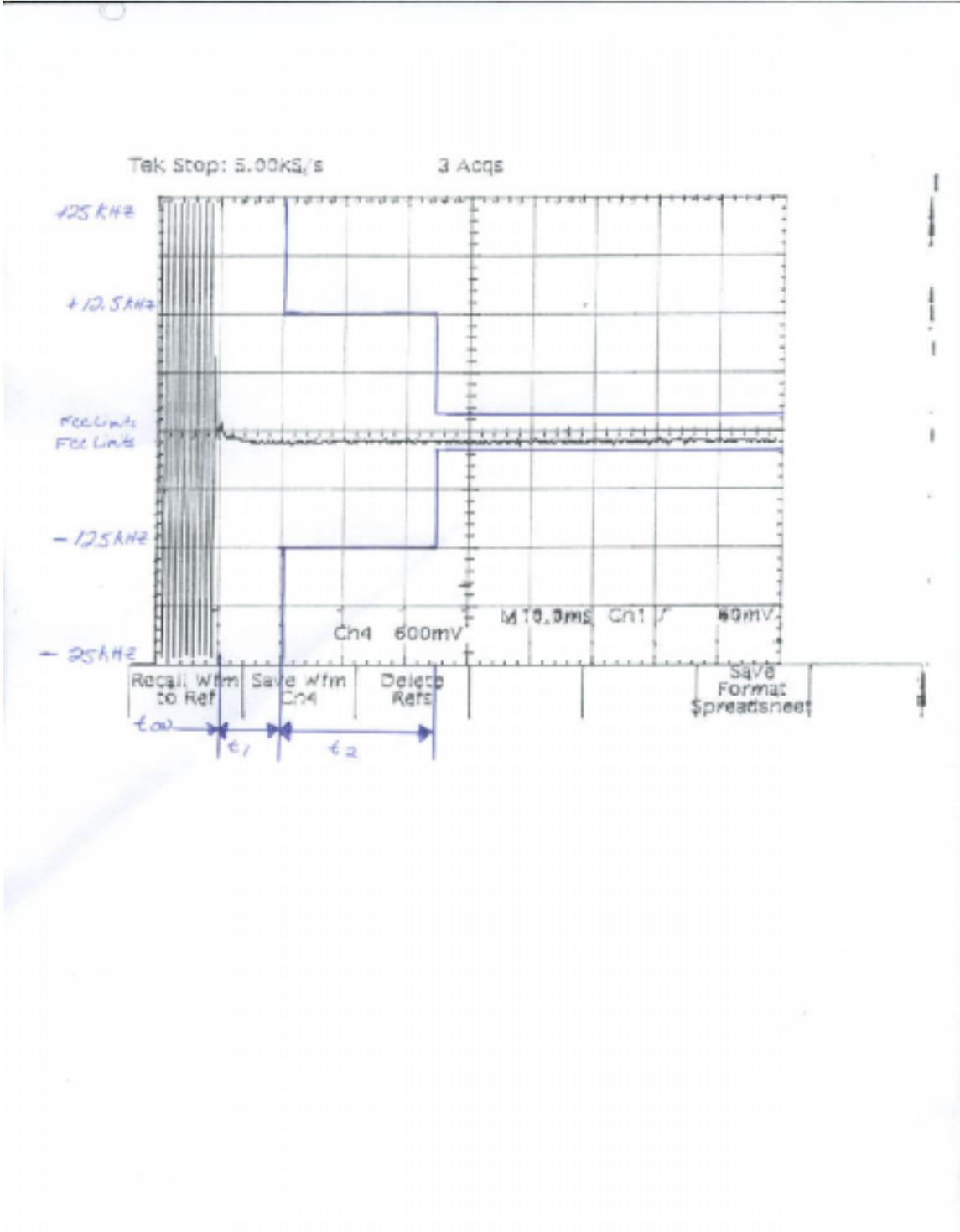
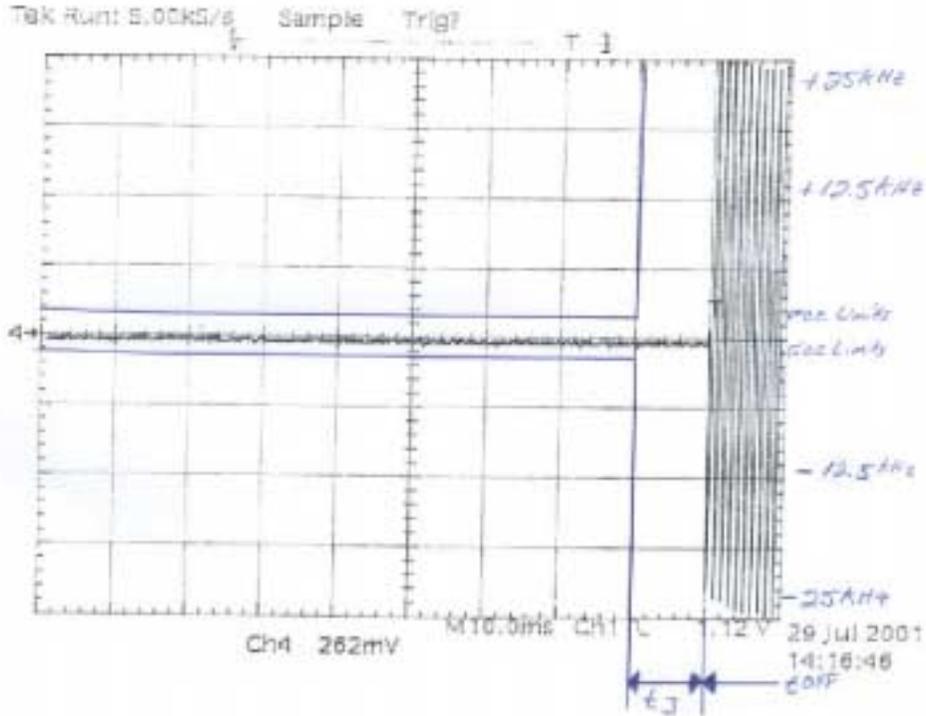


EXHIBIT 6H-3

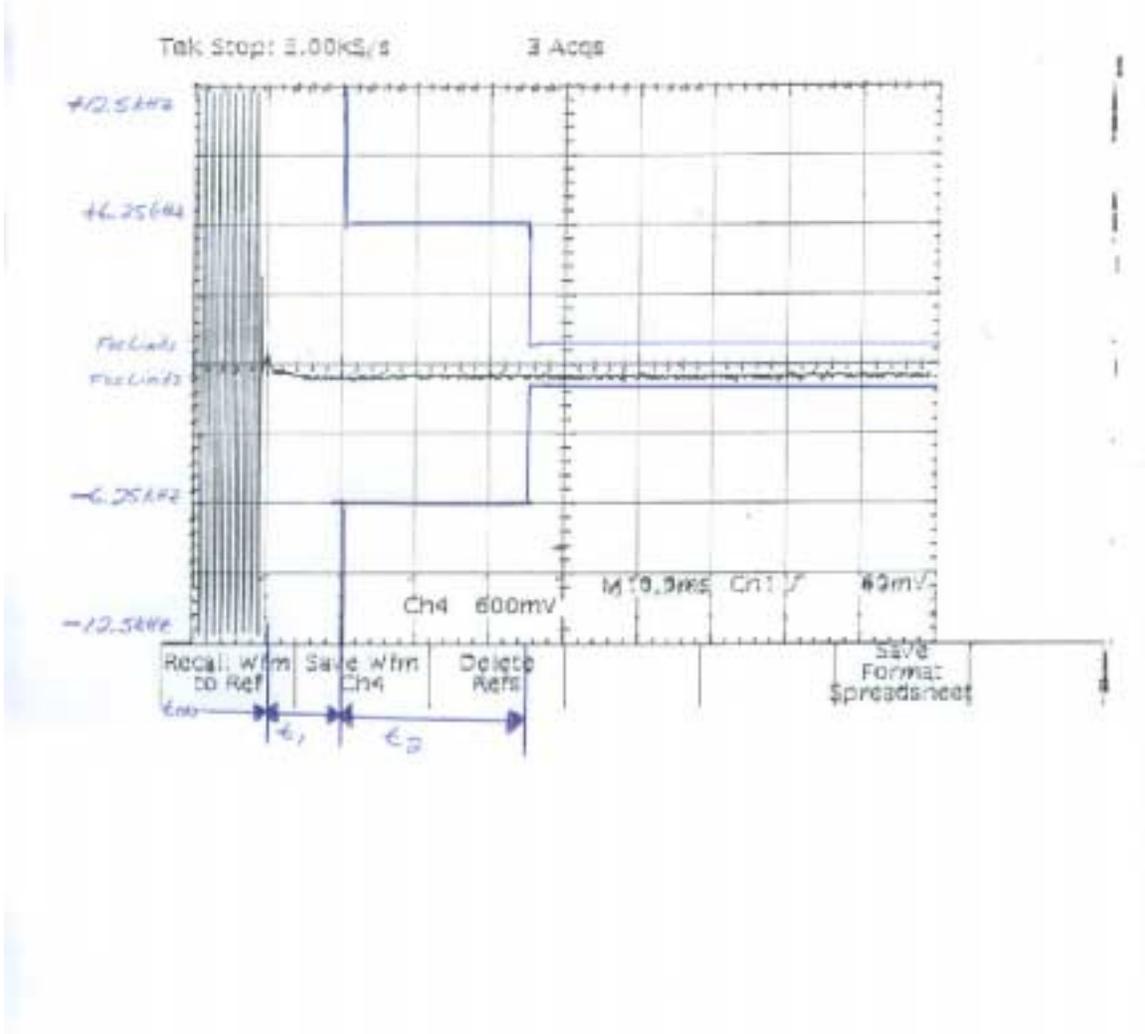


Transient Frequency Response TX off 1 Watt 25 kHz



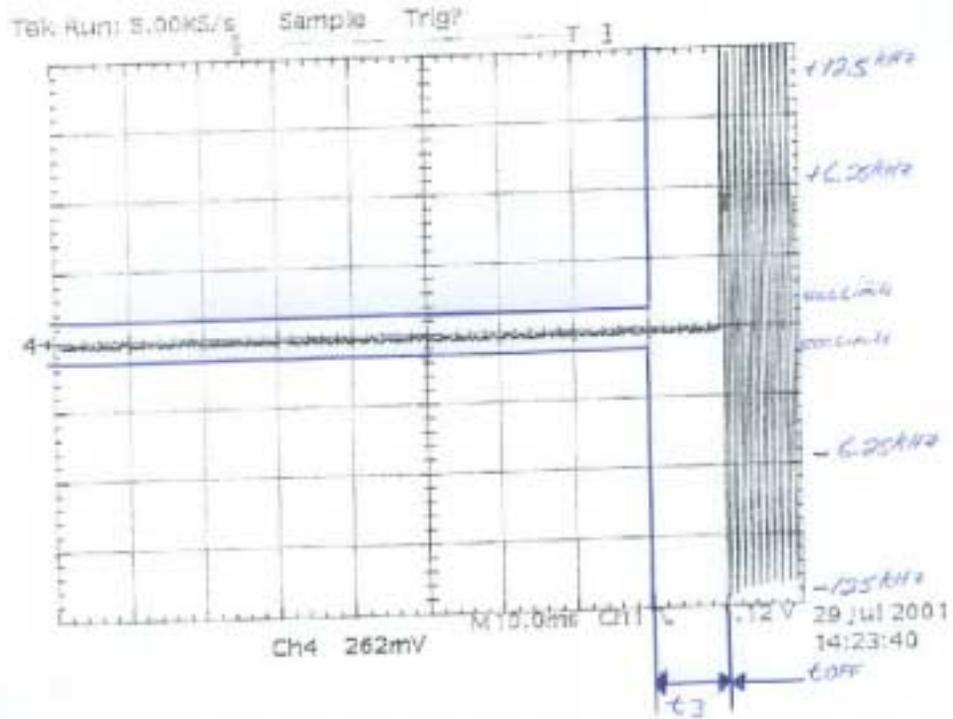


Transient Frequency Response TX on 2.2 Watt 12.5 kHz



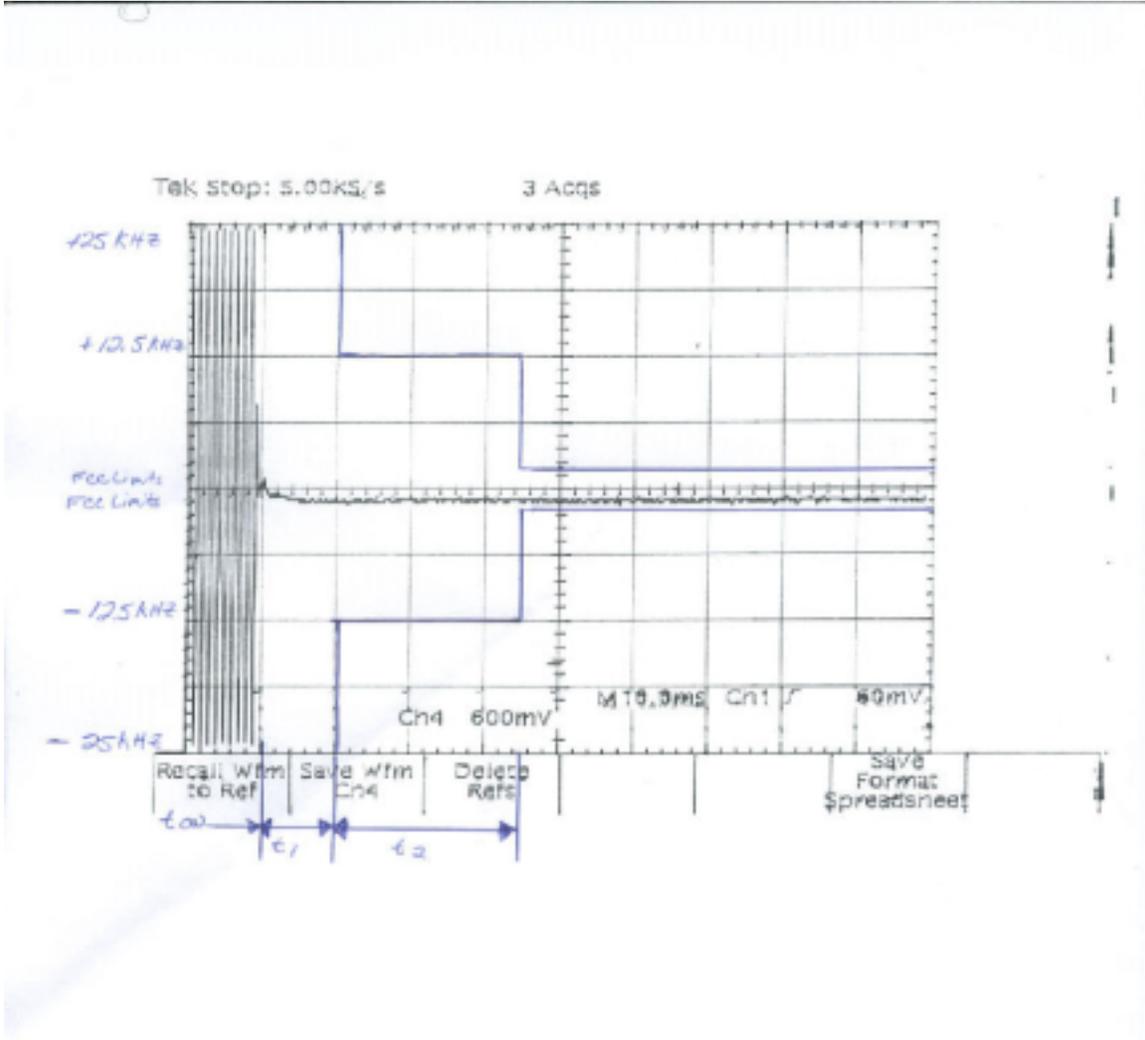


Transient Frequency Response TX off 2.2 Watt 12.5 kHz





Transient Frequency Response TX on 2.2 Watt 25 kHz





Transient Frequency Response TX off 2.2 Watt 25 kHz

