

SUBMITTED MEASURED DATA AND METHOD OF MEASUREMENT

	MEASUREMENT	EXHIBIT	NUMBER OF PAGES
I	RF Power Output	7A	1
II	Audio Response	7B	2
III	Low Pass Filter Response	7C	2
IV	Modulation Limiting	7D	6
V	Occupied Bandwidth	7E	12
V1	Conducted Spurious Emissions	7F	4
VII	Radiated Spurious Emissions	7G	2
VIII	Frequency Stability		
	A. Temperature	7H	1
	B. Supply Voltage	7I	1
IX	Transient Frequency Behavior	7J	4

RF Power Output - Measured Data

The supply voltage to the transmitter was set to 7.5 volts DC. The RF output power was measured with the indicated voltage and current applied into the final RF amplifying device.

RF POWER OUTPUT 4 WATTS, FREQUENCY 450.050 MHz.

Measured RF Output Power : 4.03 WATTS
Measured DC Voltage : 7.19 VOLTS
Measured DC Current : 1.08 AMP
Measured DC Input Power : 7.765 WATTS

RF POWER OUTPUT 4 WATTS, FREQUENCY 481.050 MHz.

Measured RF Output Power : 4.04 WATTS
Measured DC Voltage : 7.17 VOLTS
Measured DC Current : 1.23 AMP
Measured DC Input Power : 8.82 WATTS

RF POWER OUTPUT 4 WATTS, FREQUENCY 511.950 MHz.

Measured RF Output Power : 4.03 WATTS
Measured DC Voltage : 7.15 VOLTS
Measured DC Current : 1.31 AMP
Measured DC Input Power : 9.38 WATTS

RF POWER OUTPUT 1 WATT, FREQUENCY 450.050 MHz.

Measured RF Output Power : 1.07 WATTS
Measured DC Voltage : 7.28 VOLTS
Measured DC Current : 0.70 AMP
Measured DC Input Power : 5.10 WATTS

RF POWER OUTPUT 1 WATT, FREQUENCY 481.050 MHz.

Measured RF Output Power : 1.11 WATTS
Measured DC Voltage : 7.26 VOLTS
Measured DC Current : 0.69 AMP
Measured DC Input Power : 5.01 WATTS

RF POWER OUTPUT 1 WATT, FREQUENCY 511.950 MHz.

Measured RF Output Power: 1.09 WATTS
Measured DC Voltage: 7.24 VOLTS
Measured DC Current: 0.76 AMP
Measured DC Input Power: 5.50 WATTS

MOTOROLA INC.**TRANSMITTER AUDIO RESPONSE CHARACTERISTIC
MODULATION LEVEL vs. AUDIO FREQUENCY**

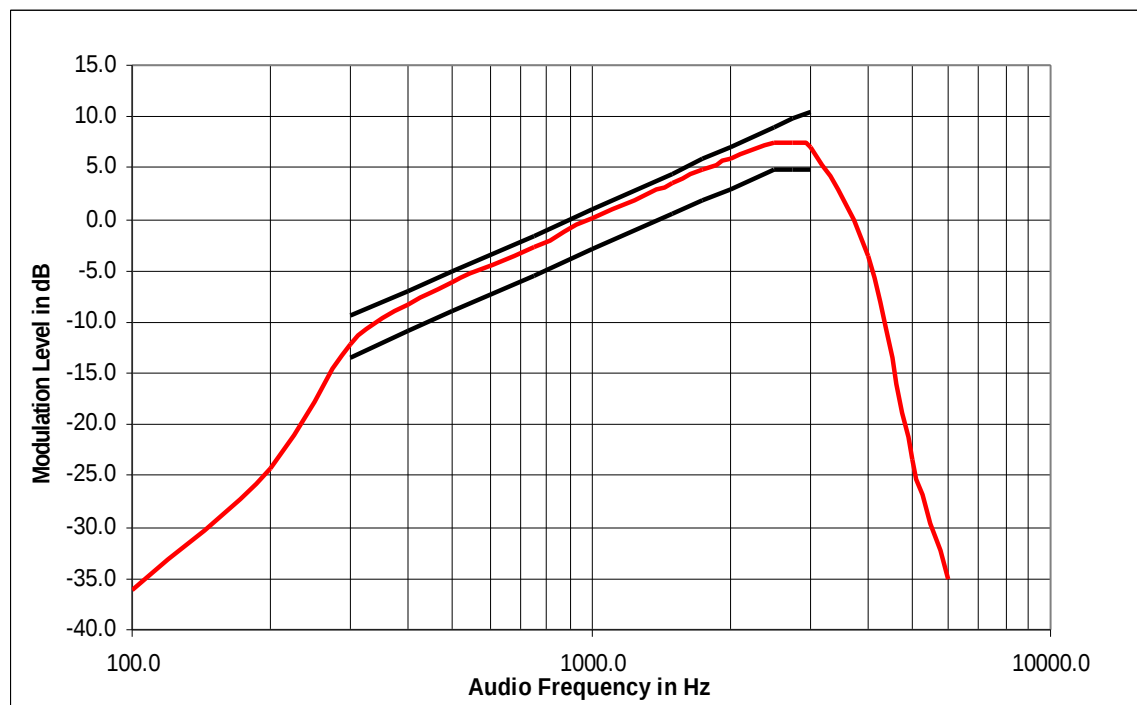
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency: 481.050MHz

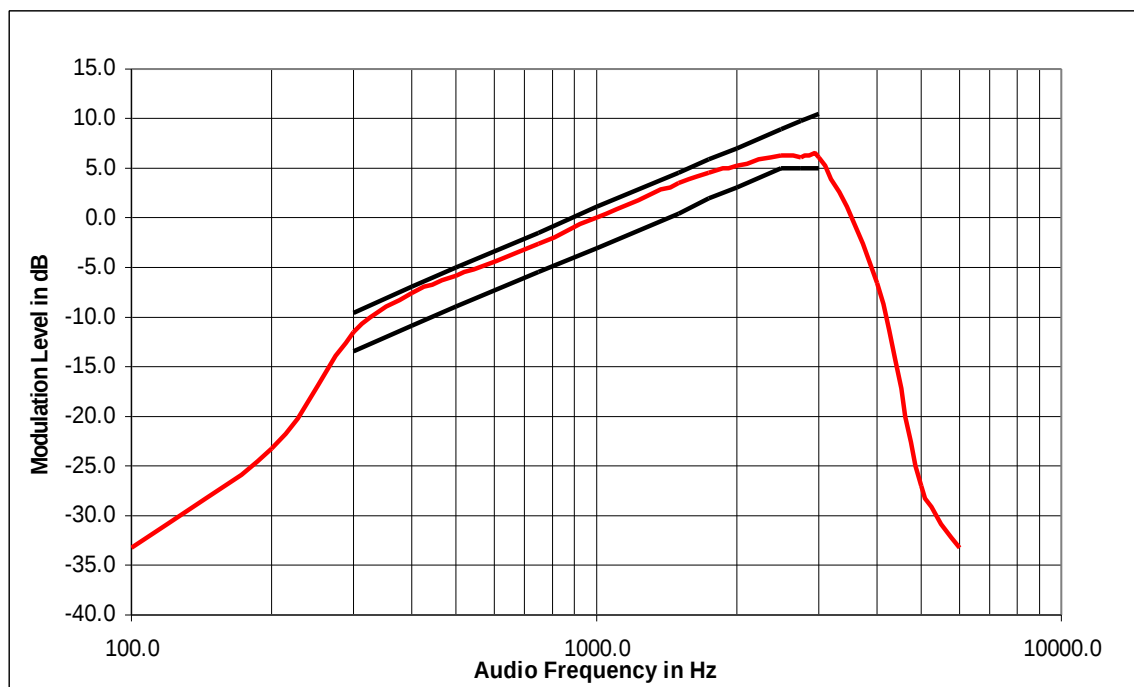
Channel Spacing: 25kHz



MOTOROLA INC.**TRANSMITTER AUDIO RESPONSE CHARACTERISTIC
MODULATION LEVEL vs. AUDIO FREQUENCY**

Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF OoiFrequency: 481.050MHz
Channel Spacing: 12.5kHz

MOTOROLA INC.
TRANSMITTER
POST - LIMITER ROLL OFF RESPONSE
FILTER OUTPUT vs. AUDIO FREQUENCY

=====

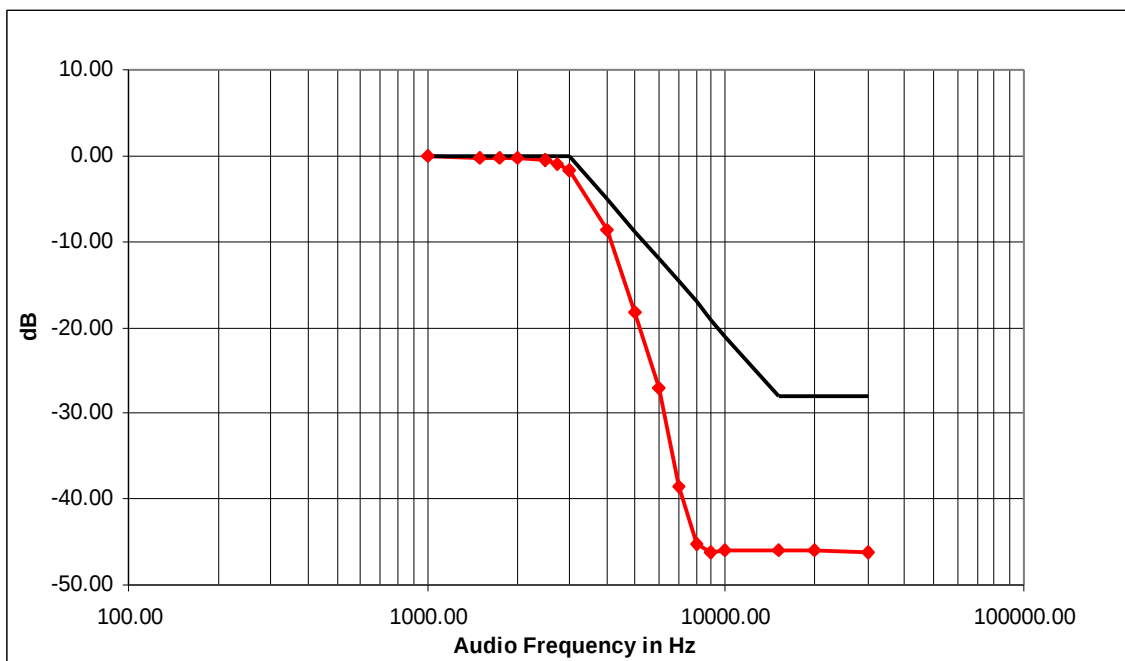
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency : 481.050MHz

Channel Spacing : 25kHz



MOTOROLA INC.

TRANSMITTER
POST - LIMITER ROLL OFF RESPONSE

FILTER OUTPUT vs. AUDIO FREQUENCY

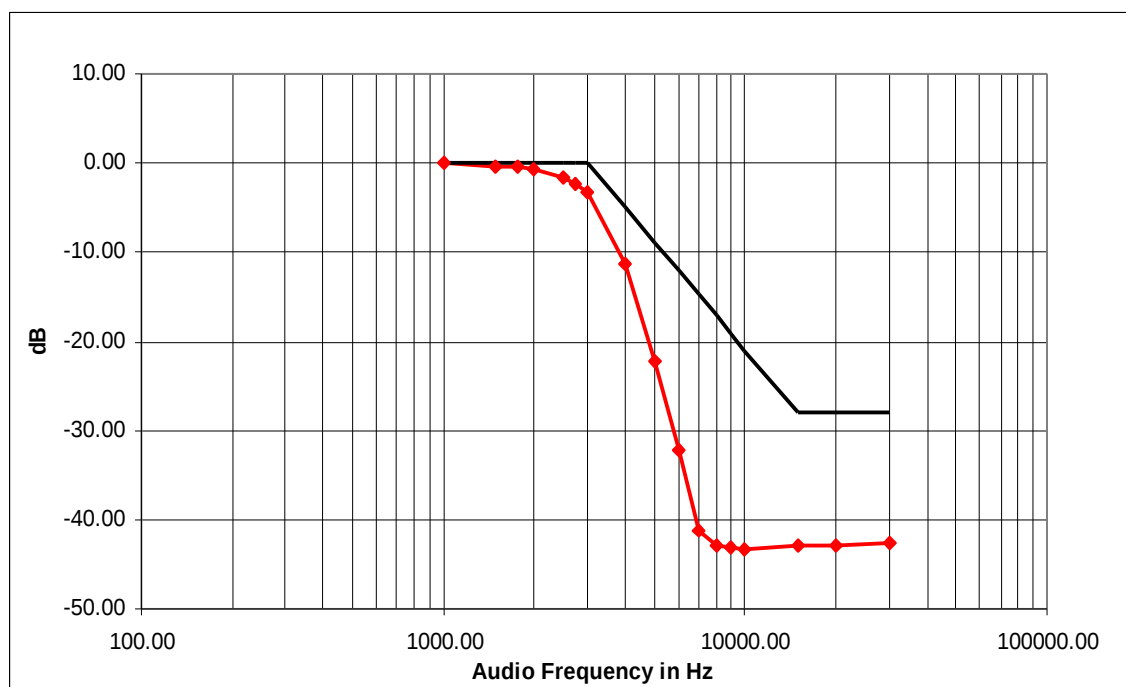
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency : 481.050MHz

Channel Spacing : 12.5kHz



MOTOROLA INC.

CARRIER SQUELCH
AUDIO INPUT LEVEL vs. DEVIATION

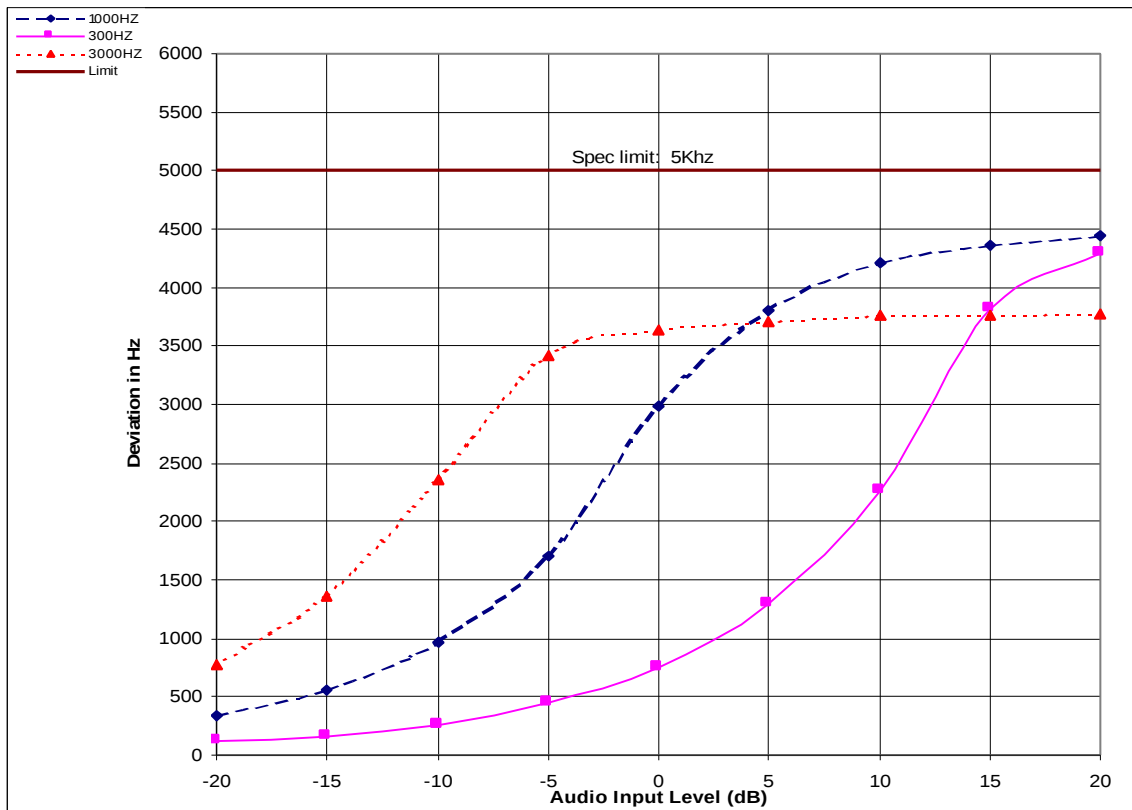
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency : 481.050MHz

Channel Spacing : 25kHz



MOTOROLA INC.

TONE WITH "PL"
AUDIO INPUT LEVEL vs. DEVIATION

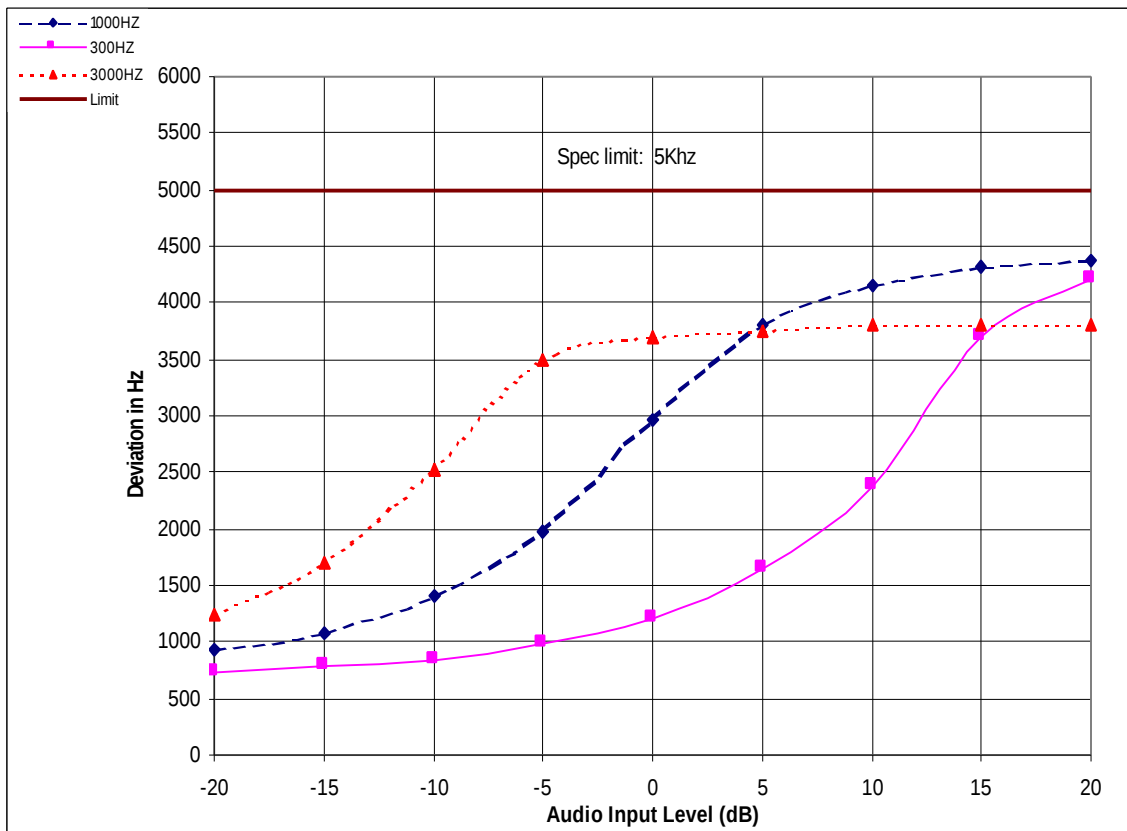
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency : 481.050MHz

Channel Spacing : 25kHz



MOTOROLA INC.

TONE WITH "DPL"
AUDIO INPUT LEVEL vs. DEVIATION

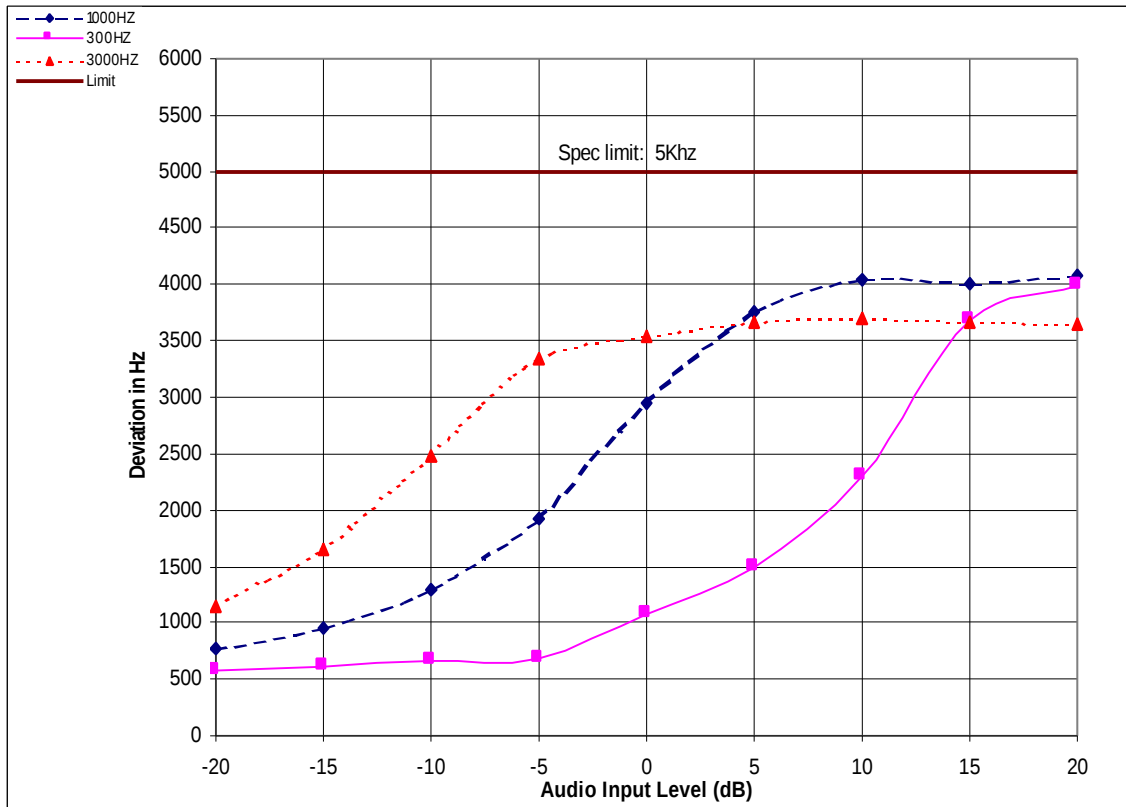
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency : 481.050MHz

Channel Spacing : 25kHz

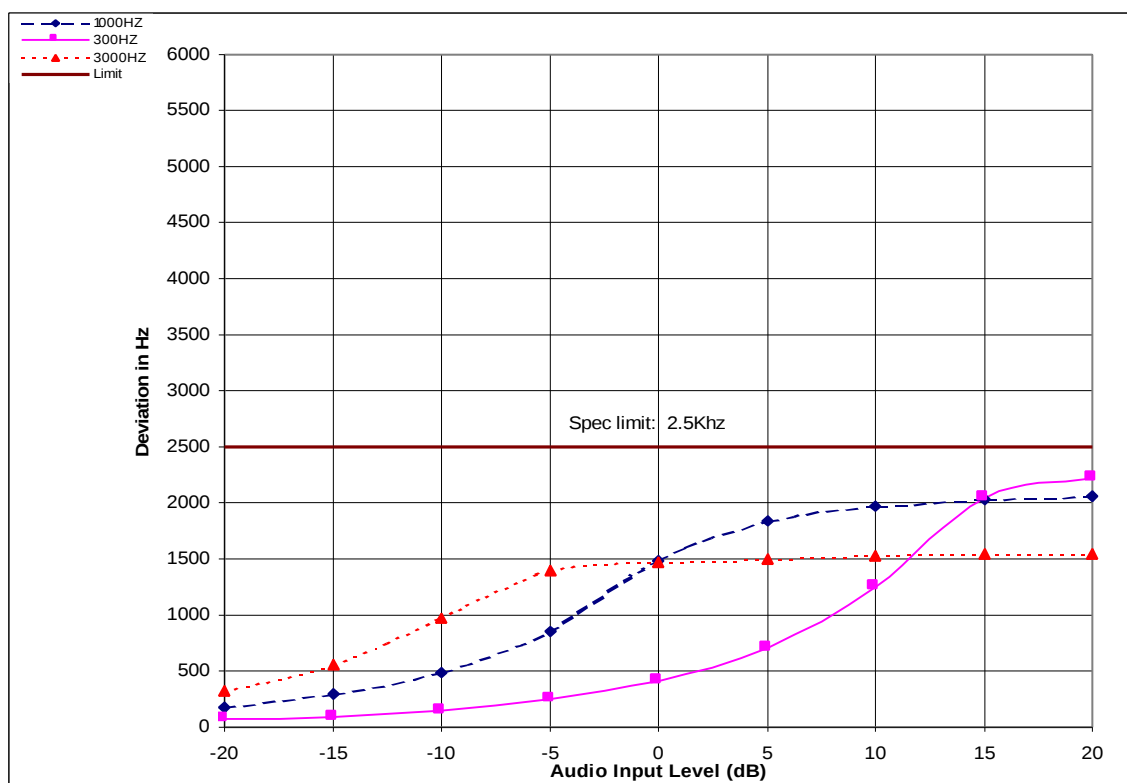


MOTOROLA INC.

CARRIER SQUELCH
AUDIO INPUT LEVEL vs. DEVIATION

Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF OoiFrequency : 481.050MHz
Channel Spacing : 12.5kHz

MOTOROLA INC.

TONE WITH "PL"
AUDIO INPUT LEVEL vs. DEVIATION

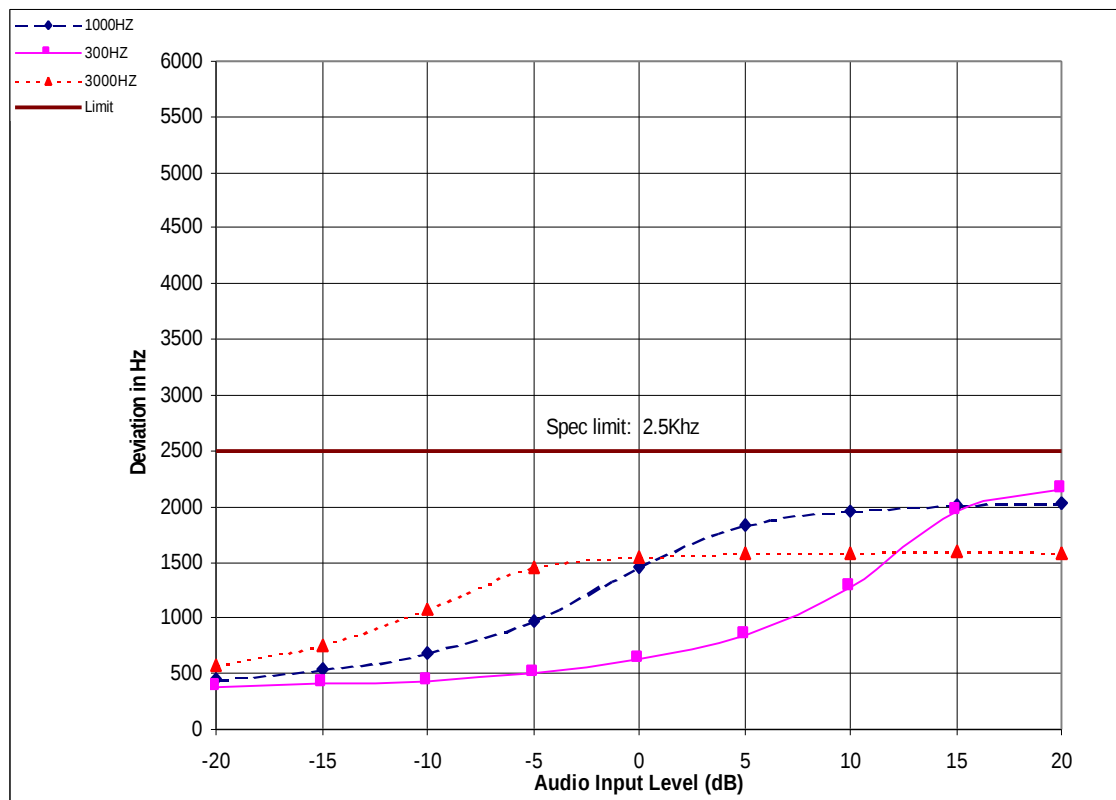
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency : 481.050MHz

Channel Spacing : 12.5kHz



MOTOROLA INC.

TONE WITH "DPL"
AUDIO INPUT LEVEL vs. DEVIATION

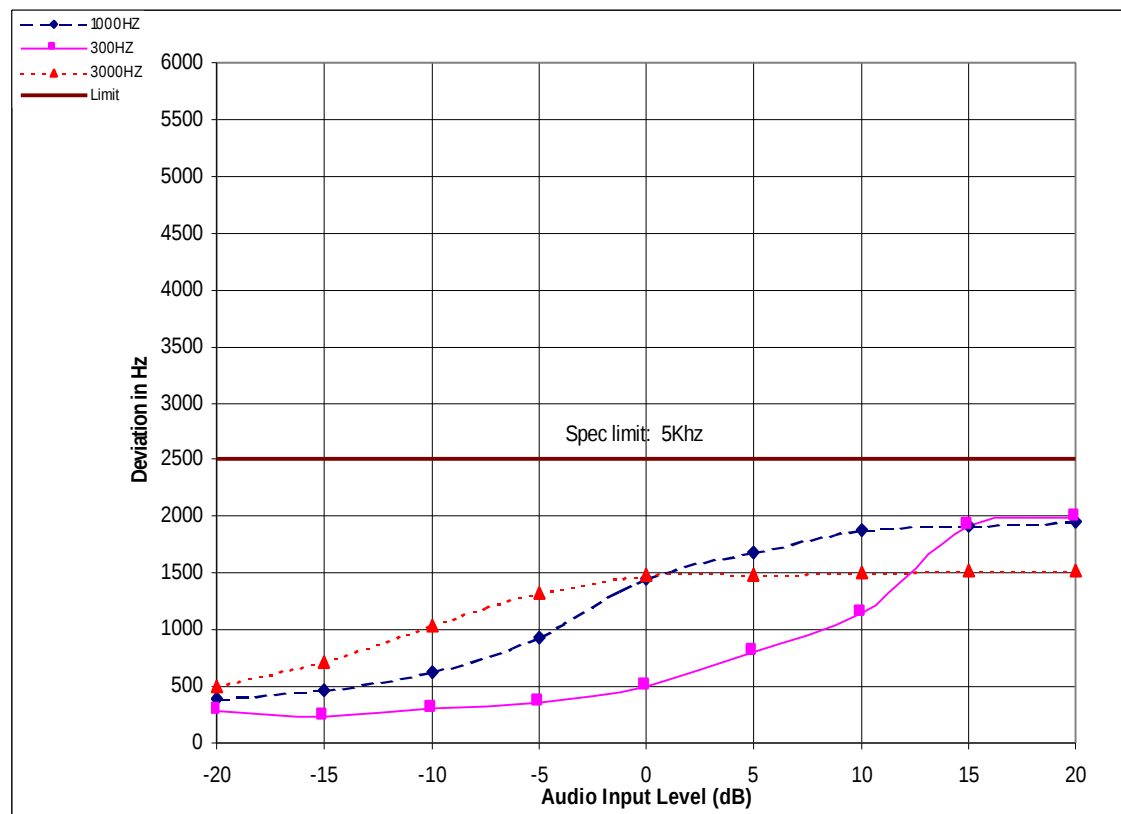
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Frequency : 481.050MHz

Channel Spacing : 12.5kHz



MOTOROLA INC.
OCCUPIED BANDWIDTH
(2500 HZ AUDIO MODULATION ONLY)

=====

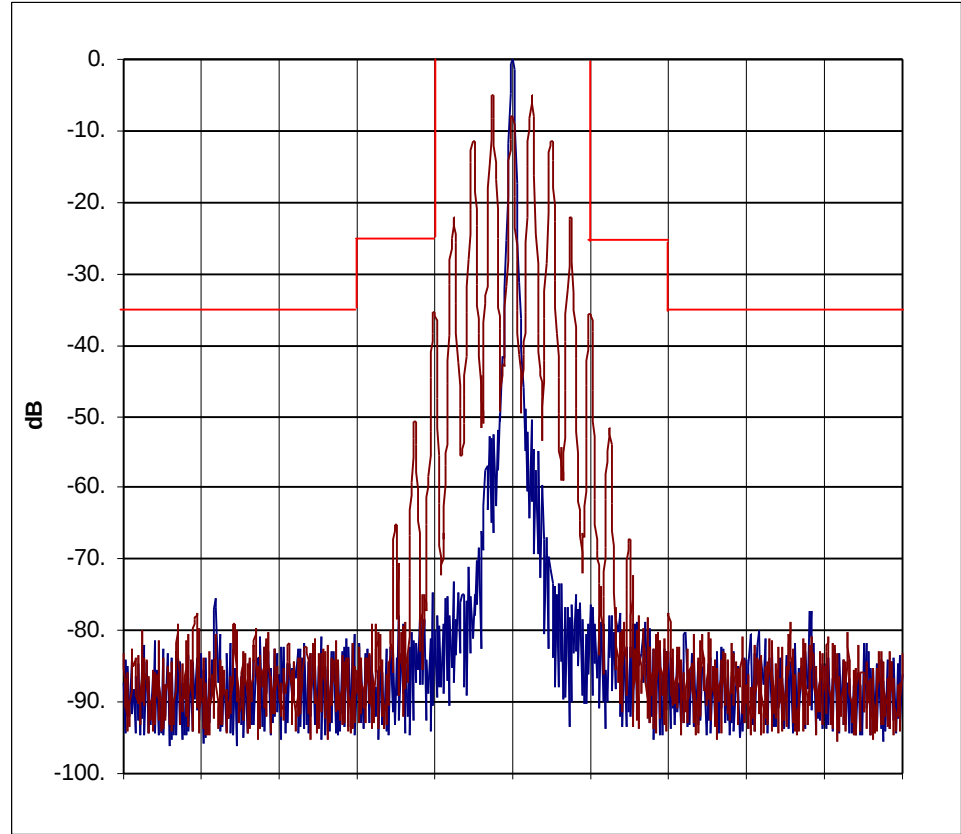
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

25kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask B

MOTOROLA INC.

OCCUPIED BANDWIDTH
(2500 HZ AUDIO & PL TONE MODULATION)

=====

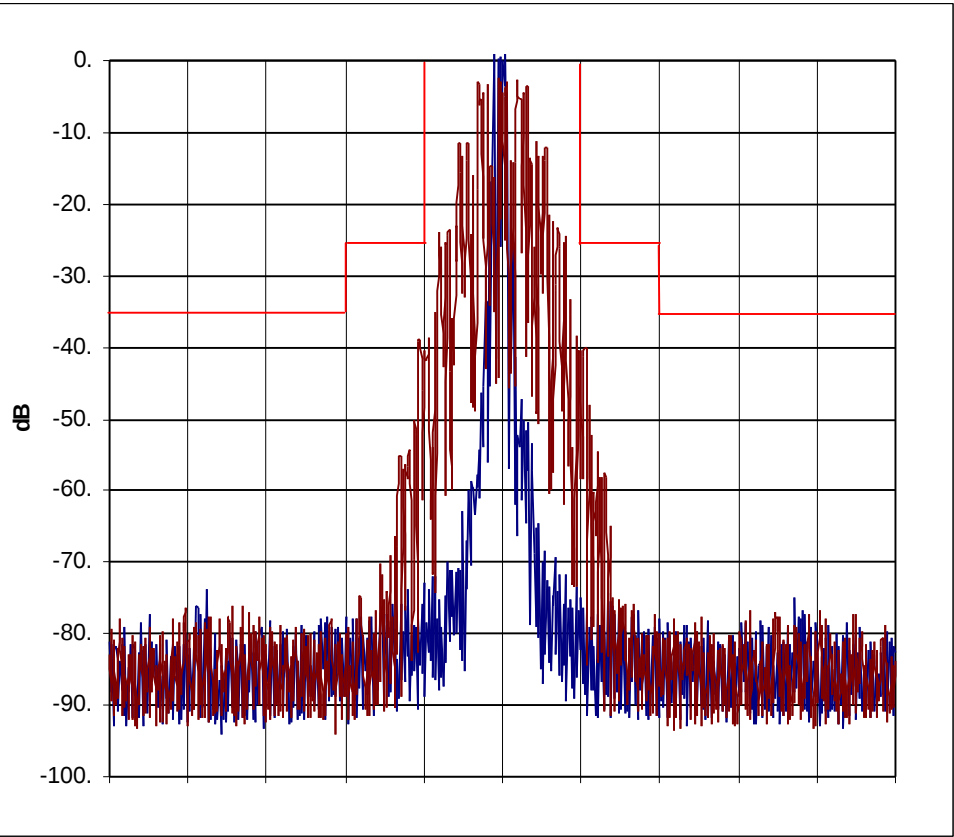
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi.

25kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask B

MOTOROLA INC.

OCCUPIED BANDWIDTH
(2500 HZ AUDIO & DPL TONE MODULATION)

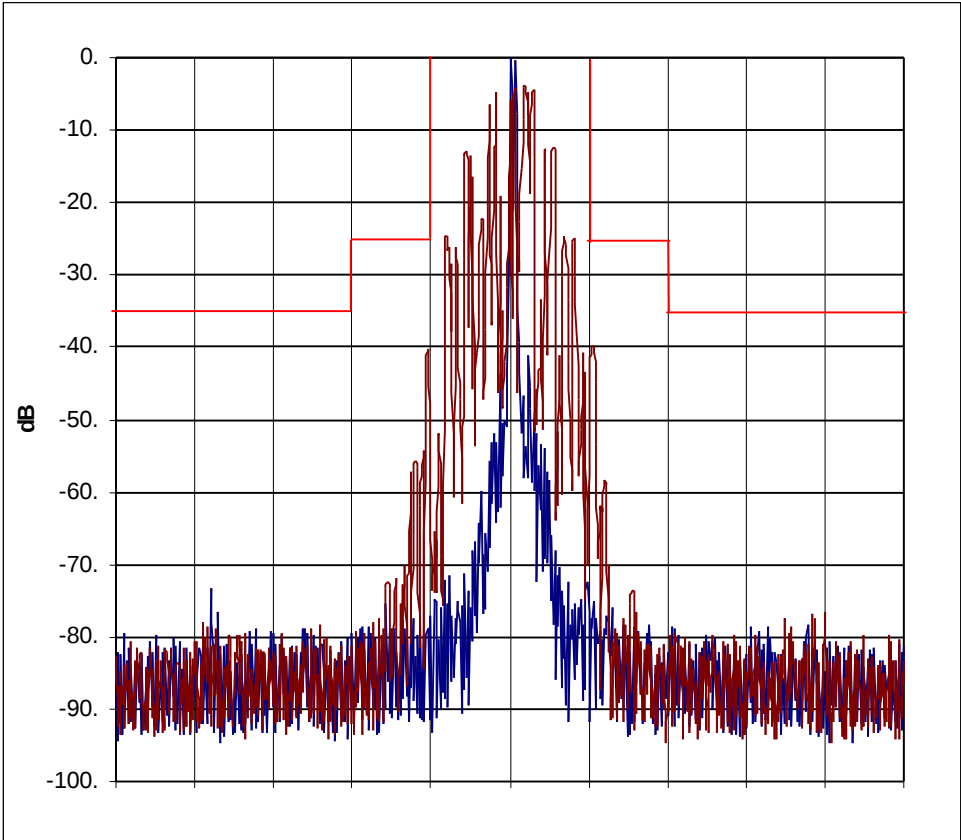
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

25kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask B

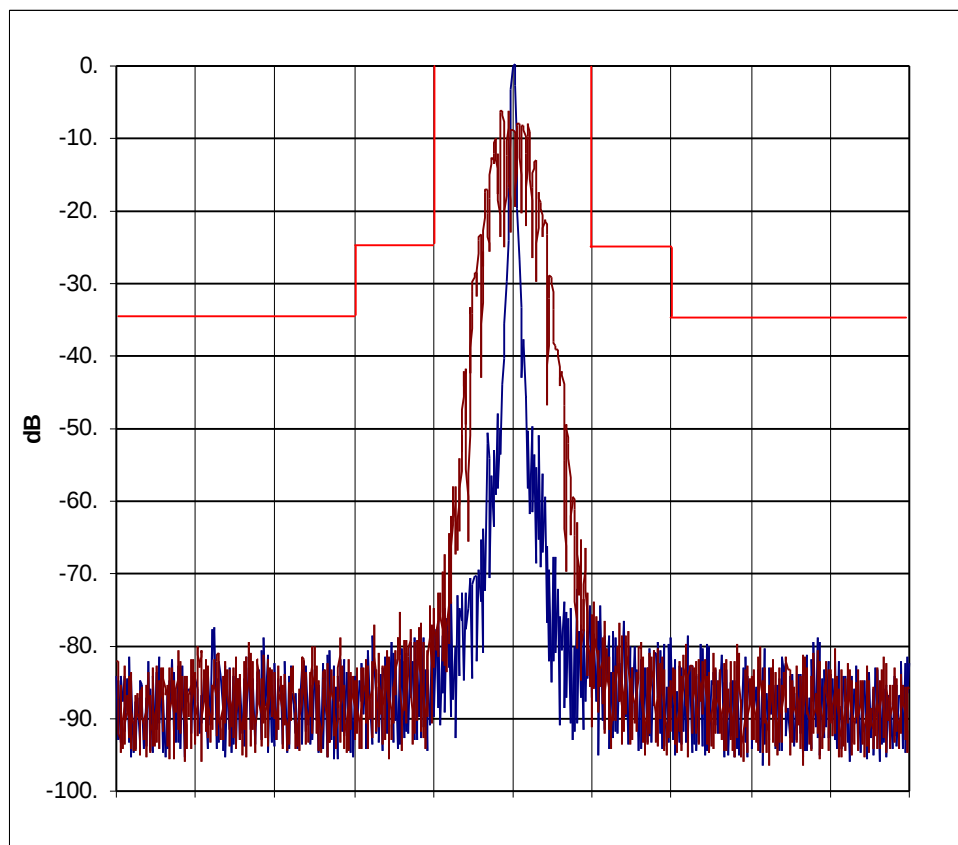
MOTOROLA INC.**OCCUPIED BANDWIDTH
(DTMF MODULATION ONLY)**

Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

25kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask B

MOTOROLA INC.

OCCUPIED BANDWIDTH
(DTMF MODULATION & PL TONE MODULATION)

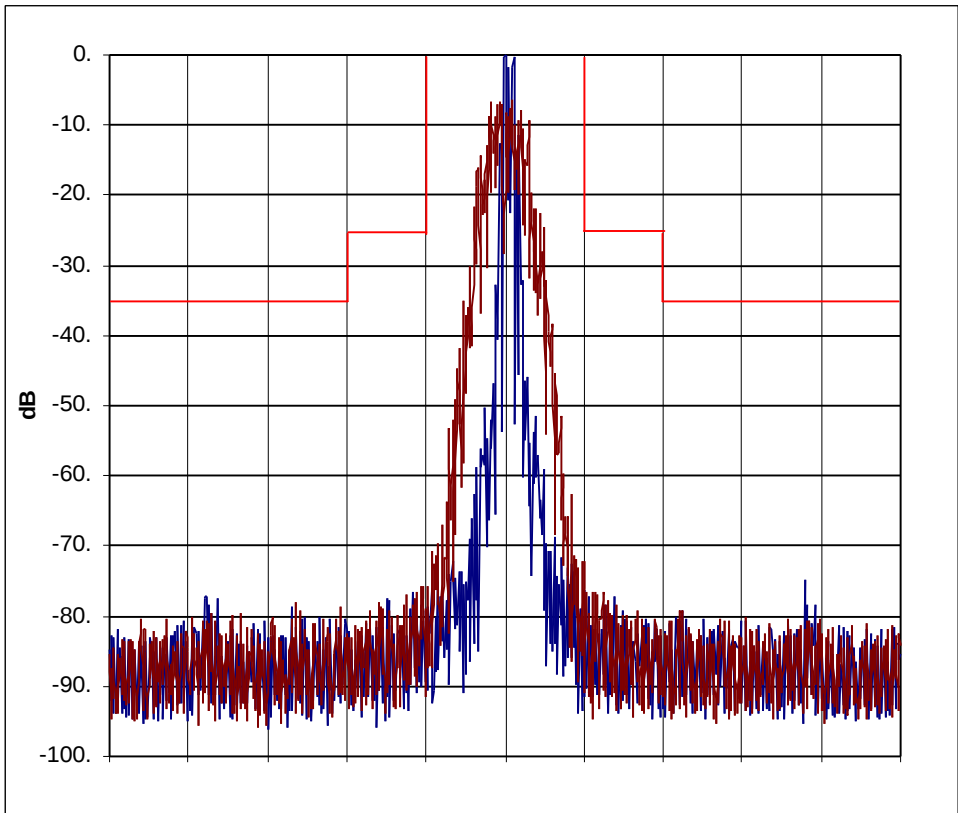
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

25kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask B

MOTOROLA INC.

OCCUPIED BANDWIDTH
(DTMF MODULATION & DPL TONE MODULATION)

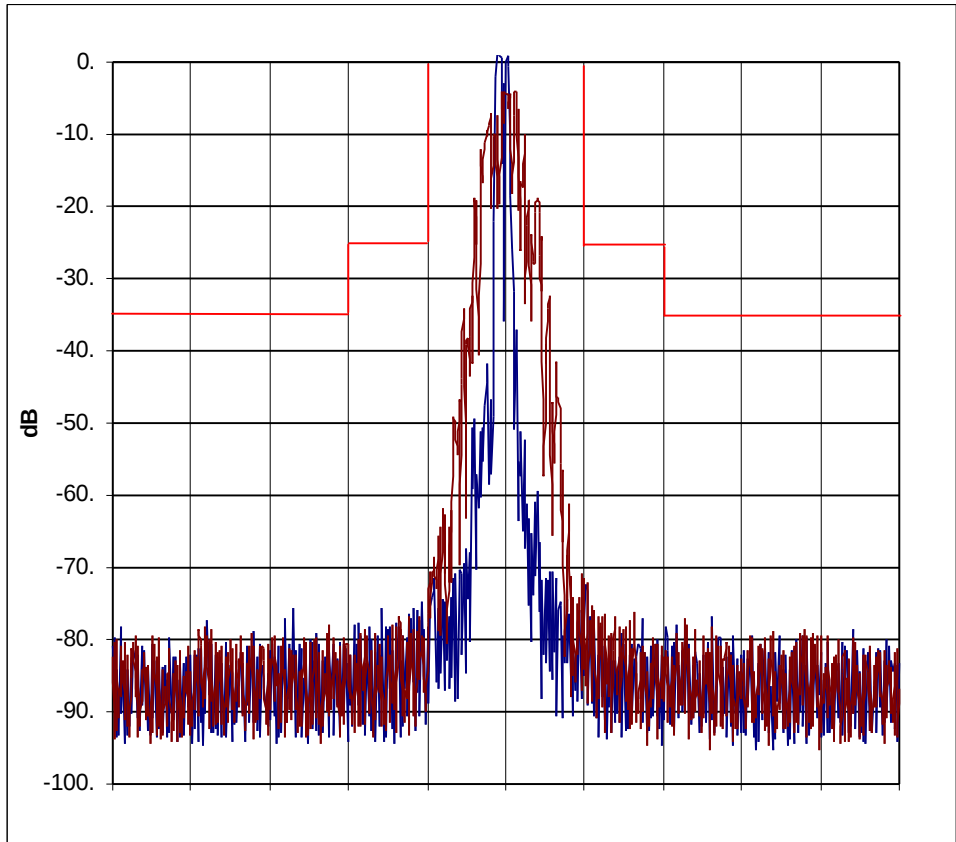
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

25kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask B

MOTOROLA INC.
OCCUPIED BANDWIDTH
(2500 HZ AUDIO MODULATION ONLY)

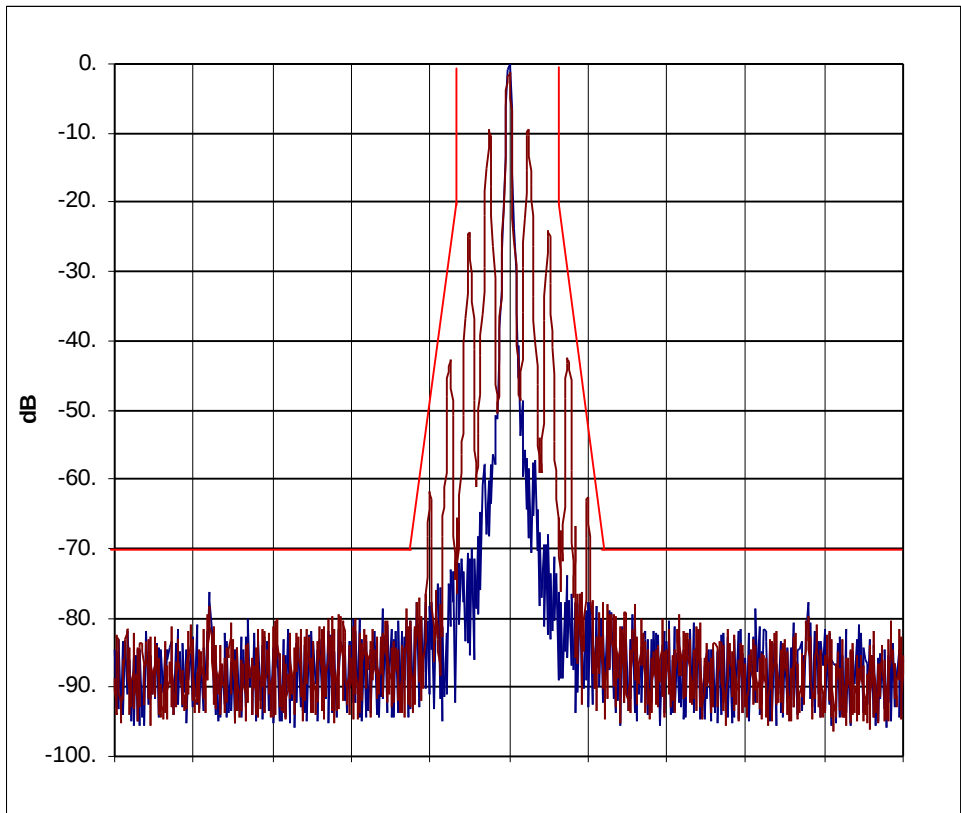
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

12.5kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask D

MOTOROLA INC.

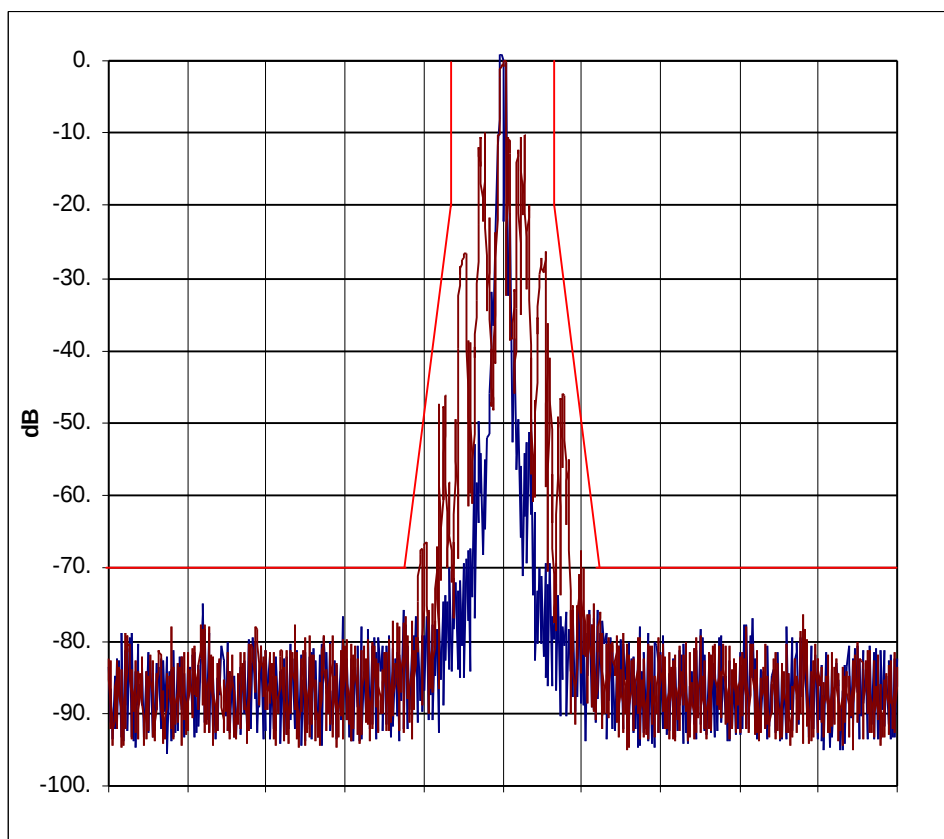
OCCUPIED BANDWIDTH
(2500 HZ AUDIO & PL TONE MODULATION)

Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

12.5kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask D

MOTOROLA INC.

OCCUPIED BANDWIDTH
(2500 HZ AUDIO & DPL TONE MODULATION)

=====

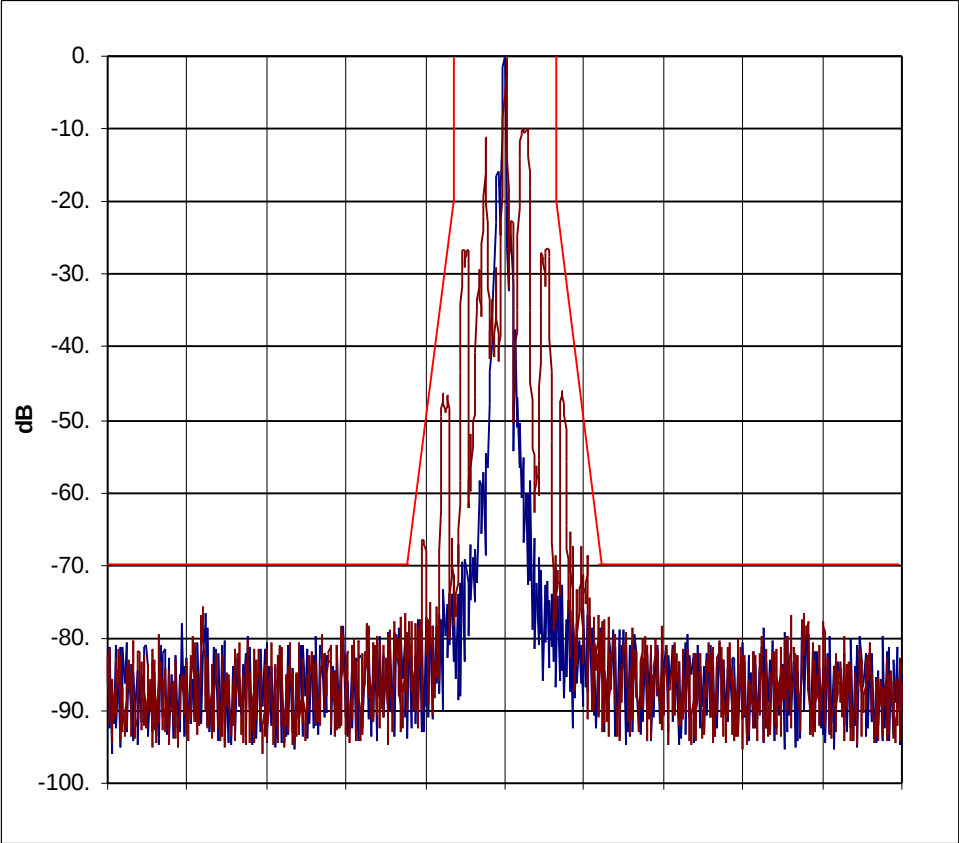
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

12.5kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask D

MOTOROLA INC.

OCCUPIED BANDWIDTH
(DTMF MODULATION ONLY)

=====

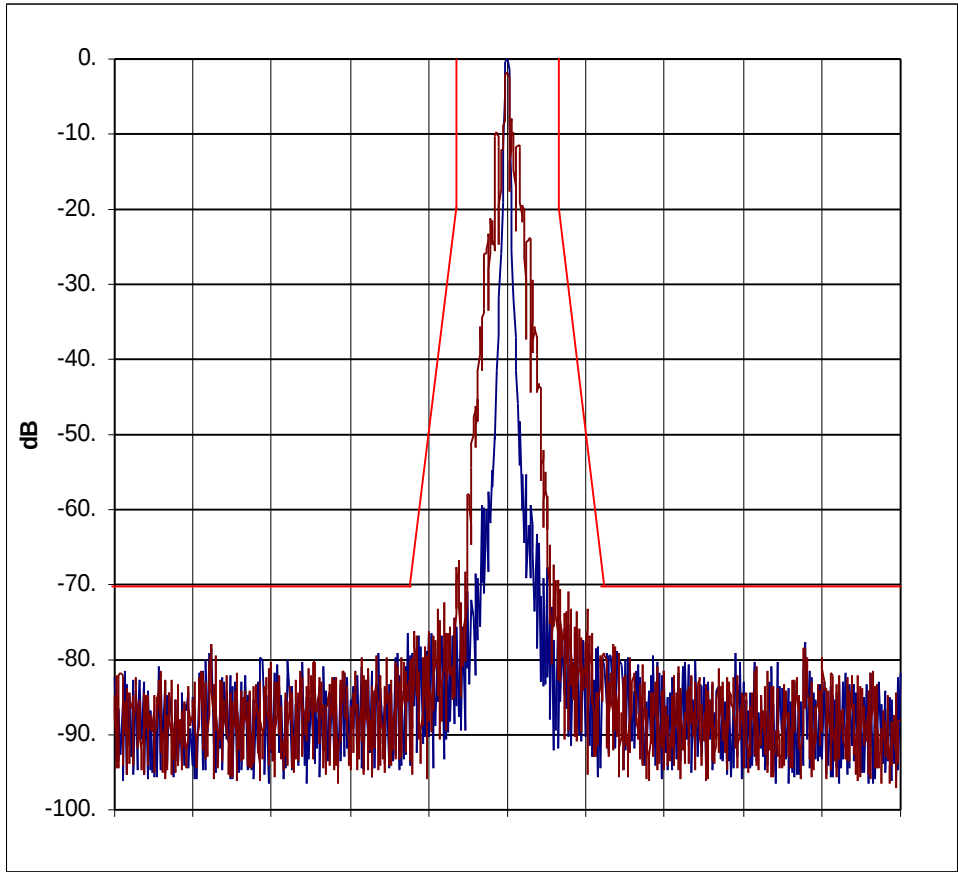
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

12.5kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask D

MOTOROLA INC.

OCCUPIED BANDWIDTH
(DTMF MODULATION & PL TONE MODULATION)

=====

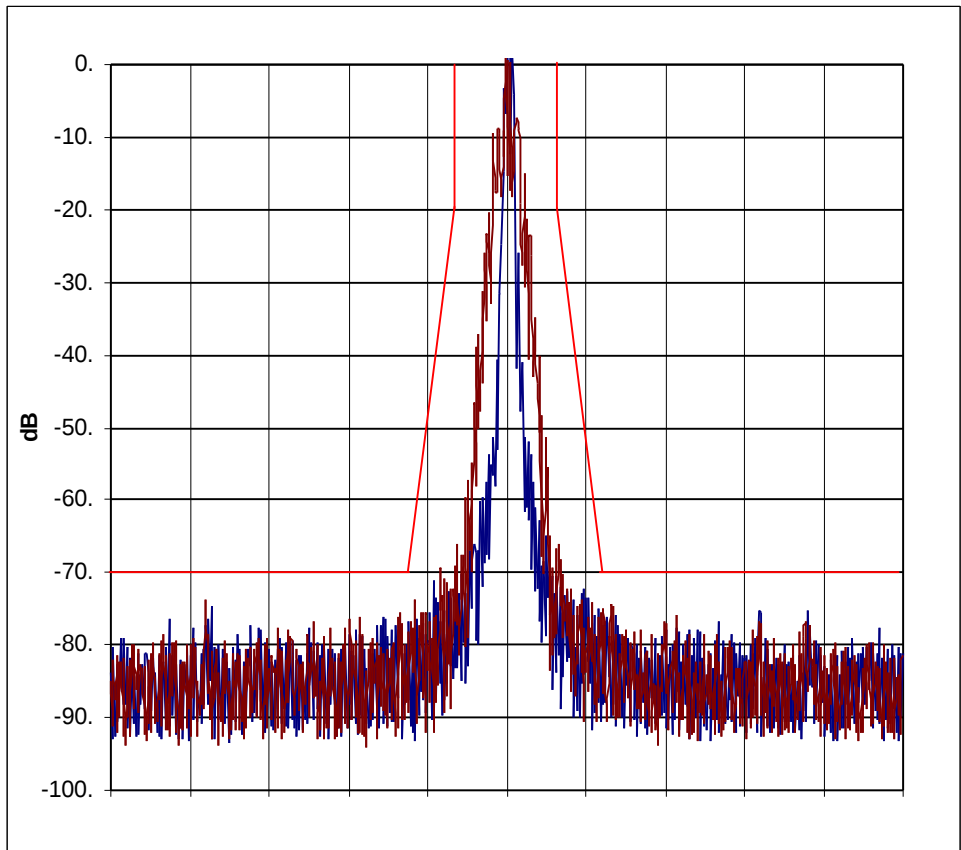
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

12.5kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask D

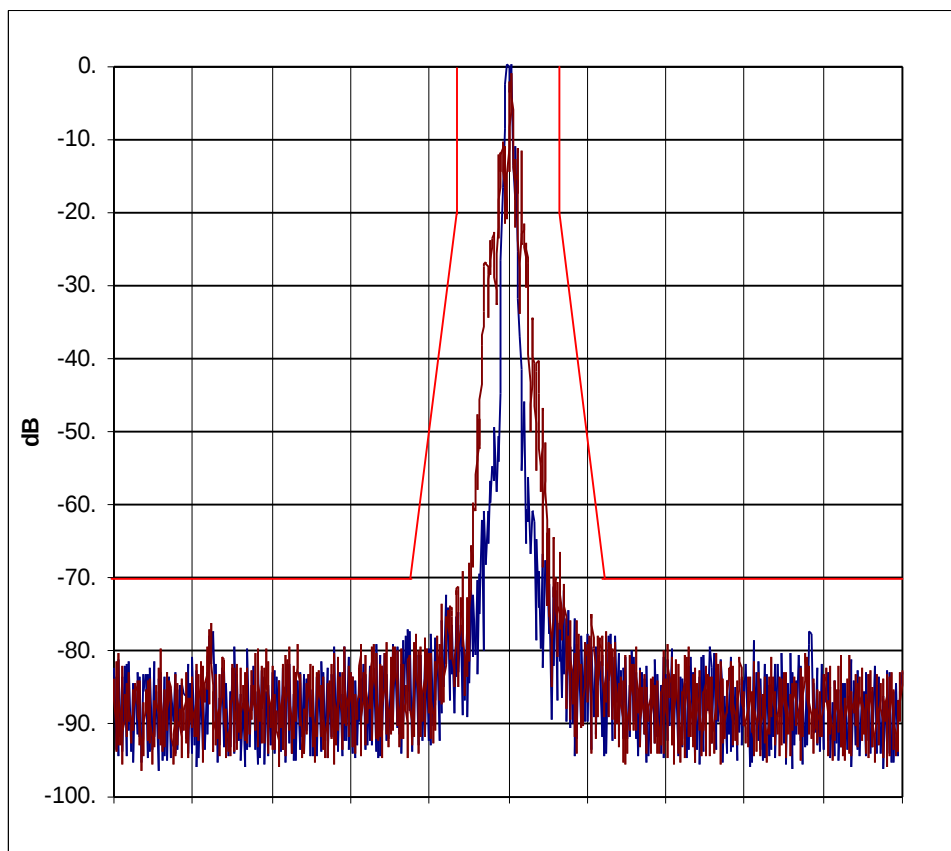
MOTOROLA INC.**OCCUPIED BANDWIDTH
(DTMF MODULATION & DPL TONE MODULATION)**

Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

12.5kHz Channel Spacing



CENTER FREQUENCY(MHz):	481.050
RESOLUTION BANDWIDTH(Hz):	300
VIDEO BANDWIDTH(kHz):	300
SPAN(kHz):	100
SWEEP TIME(SEC):	3
SCALE(dB/):	10
REF LEVEL(dBm)	0.6
ATTEN (dB)	30

Note: Emission Mask D

MOTOROLA INC.**TRANSMITTER SPURIOUS EMISSION CHARACTERISTIC
CONDUCTED SPURIOUS AND HARMONIC EMISSIONS**

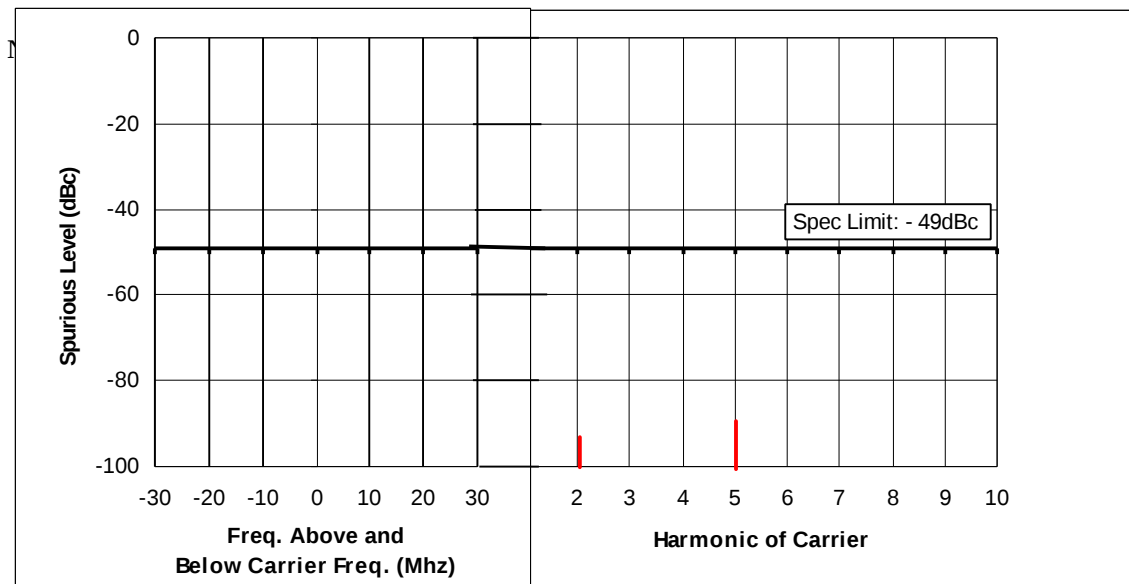
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Power Output : 4W at 481.050MHz.

Channel Spacing : 25kHz.



MOTOROLA INC.

TRANSMITTER SPURIOUS EMISSION CHARACTERISTIC
CONDUCTED SPURIOUS AND HARMONIC EMISSIONS

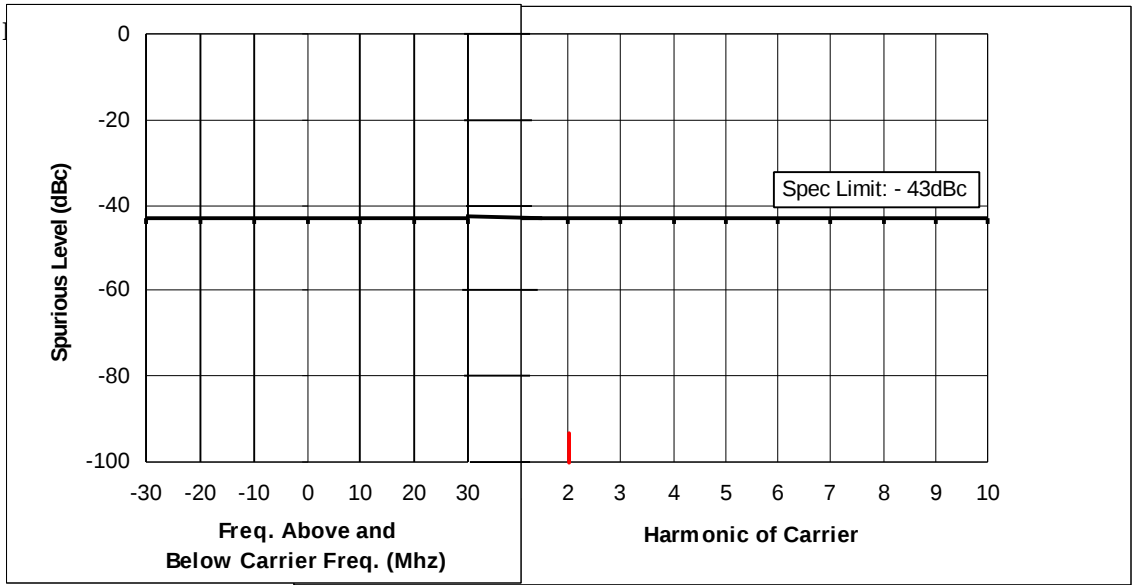
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

Power Output : 1W at 481.050MHz.
Channel Spacing : 25kHz.



MOTOROLA INC.

TRANSMITTER SPURIOUS EMISSION CHARACTERISTIC
CONDUCTED SPURIOUS AND HARMONIC EMISSIONS

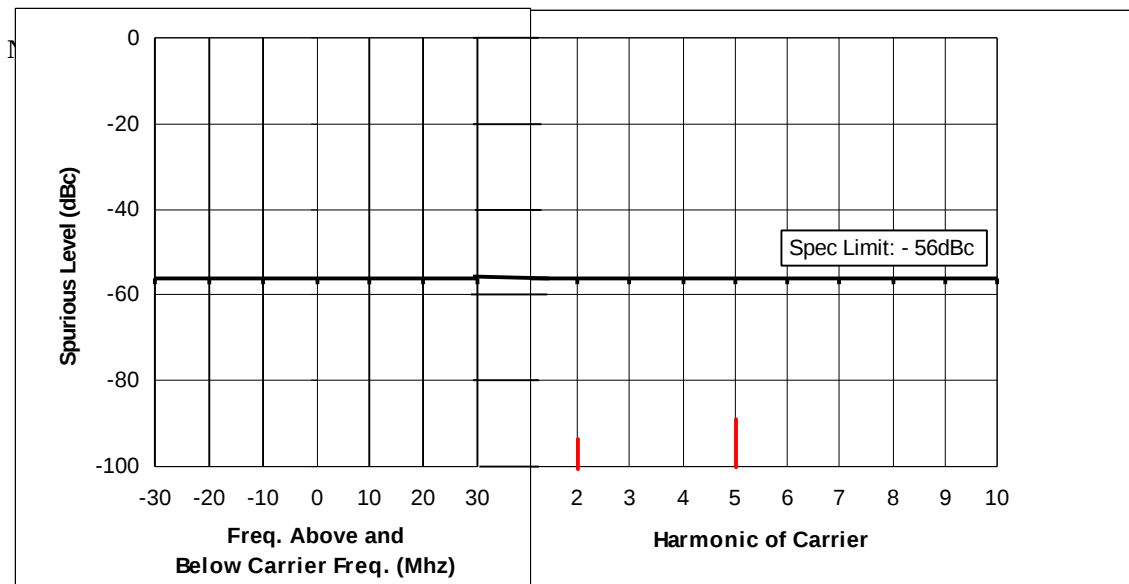
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

Power Output : 4W at 481.050MHz.

Channel Spacing : 12.5kHz.



MOTOROLA INC.

TRANSMITTER SPURIOUS EMISSION CHARACTERISTIC
CONDUCTED SPURIOUS AND HARMONIC EMISSIONS

Xmtr Type : AZ489FT4838

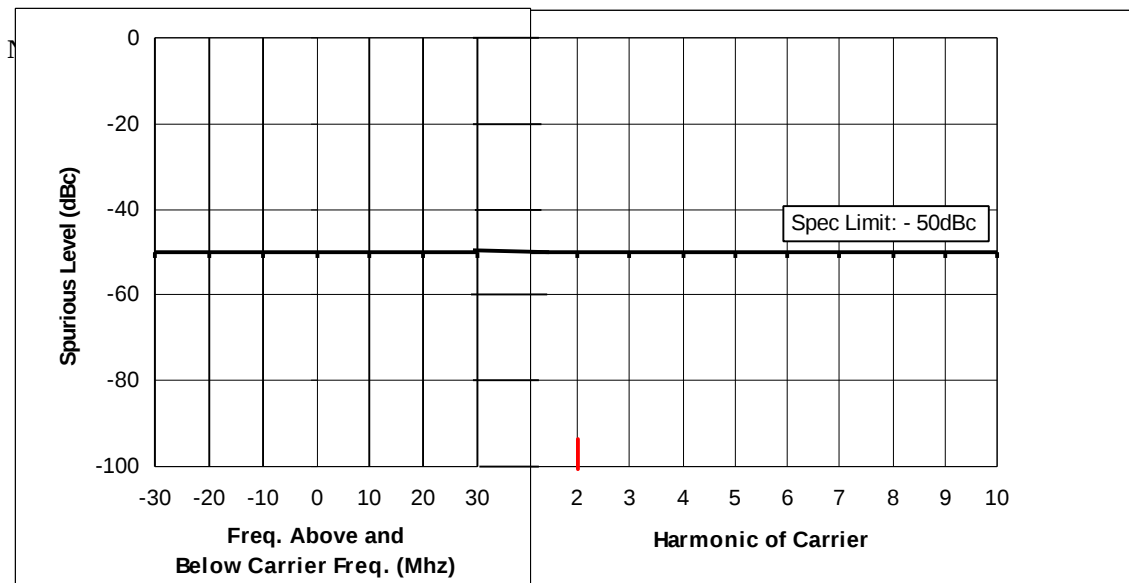
Log Page : ---

Date :

Signature : SF Ooi

Power Output : 1W at 481.050MHz.

Channel Spacing : 12.5kHz.



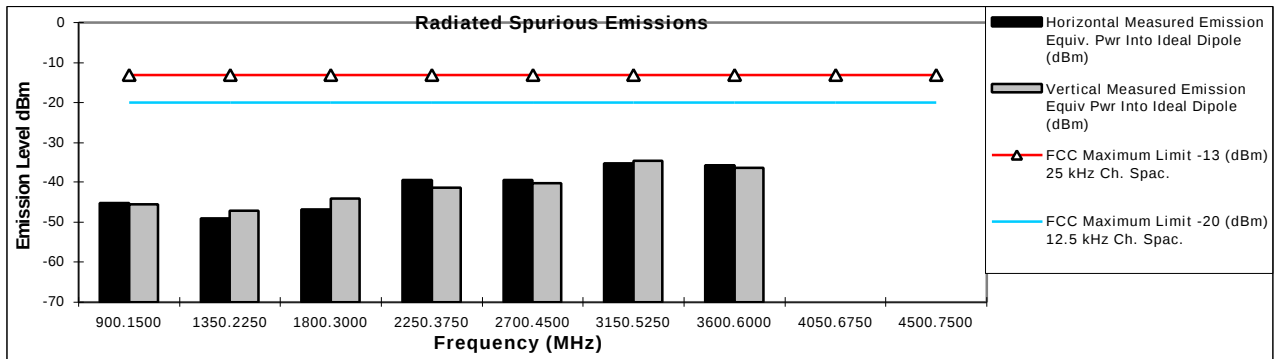
MOTOROLA INC.

TRANSMITTER SPURIOUS EMISSION CHARACTERISTIC
RADIATED SPURIOUS AND HARMONIC EMISSIONS

Transmitter Radiated Spurious Emissions: Karisma UHF B2

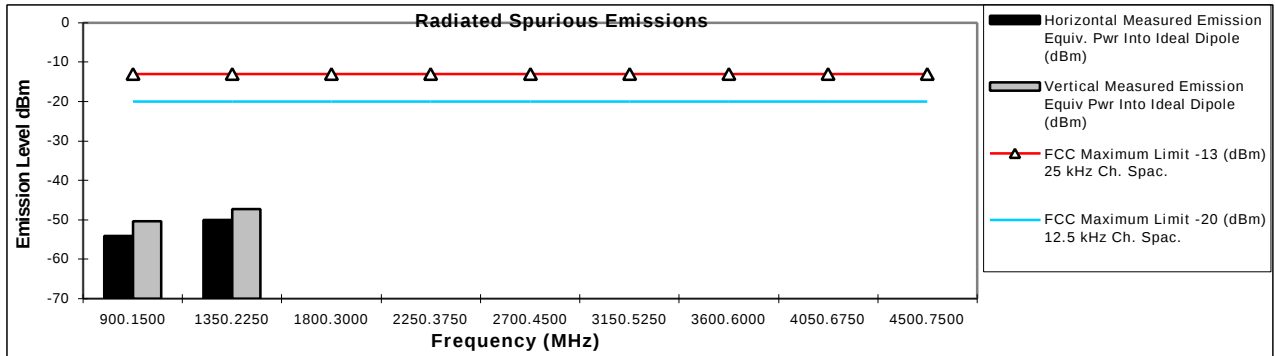
450.075 MHz - 4.0 W - 25 kHz CH. Spacing

Spur	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)
2X FUND	900.1500	-13	-20	-45.3	-45.6
3X FUND	1350.2250	-13	-20	-49.0	-47.0
4X FUND	1800.3000	-13	-20	-46.9	-44.1
5X FUND	2250.3750	-13	-20	-39.4	-41.4
6X FUND	2700.4500	-13	-20	-39.4	-40.3
7X FUND	3150.5250	-13	-20	-35.2	-34.6
8X FUND	3600.6000	-13	-20	-35.7	-36.3
9X FUND	4050.6750	-13	-20	*	*
10XFUND	4500.7500	-13	-20	*	*



450.075 MHz - 1.0 W - 25 kHz CH. Spacing

Spur	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)
2X FUND	900.1500	-13	-20	-54.0	-50.5
3X FUND	1350.2250	-13	-20	-50.1	-47.2
4X FUND	1800.3000	-13	-20	*	*
5X FUND	2250.3750	-13	-20	*	*
6X FUND	2700.4500	-13	-20	*	*
7X FUND	3150.5250	-13	-20	*	*
8X FUND	3600.6000	-13	-20	*	*
9X FUND	4050.6750	-13	-20	*	*
10XFUND	4500.7500	-13	-20	*	*



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

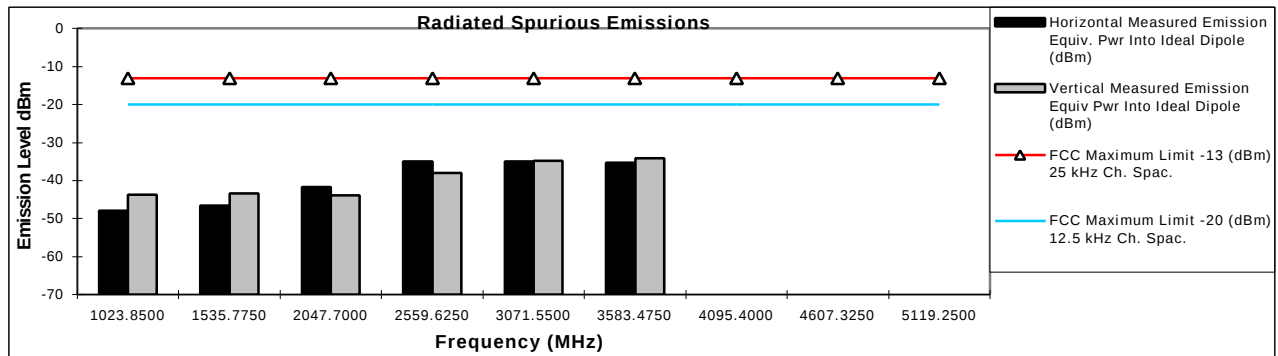
MOTOROLA INC.

TRANSMITTER SPURIOUS EMISSION CHARACTERISTIC
RADIATED SPURIOUS AND HARMONIC EMISSIONS

Transmitter Radiated Spurious Emissions: Karisma UHF B2

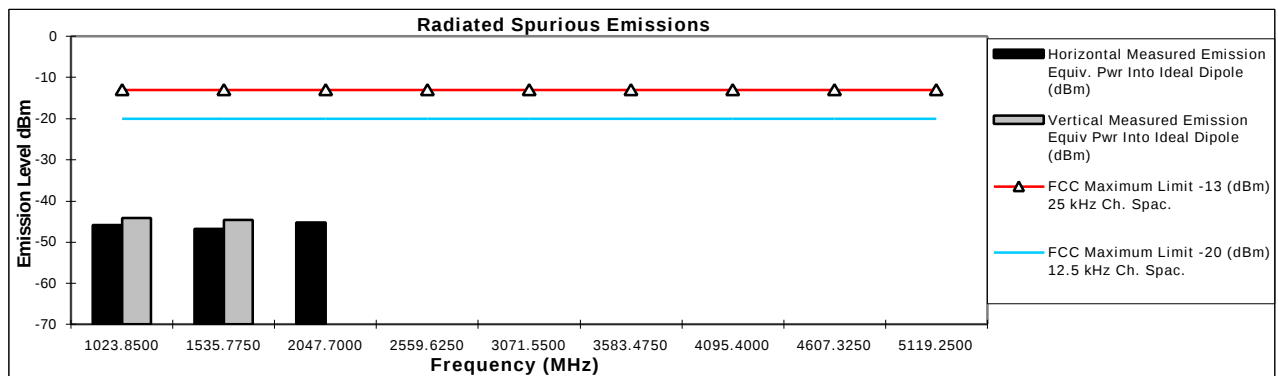
511.925 MHz - 4.0 W - 25 kHz CH. Spacing

Spur	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)
2X FUND	1023.8500	-13	-20	-47.8	-43.7
3X FUND	1535.7750	-13	-20	-46.5	-43.3
4X FUND	2047.7000	-13	-20	-41.7	-43.8
5X FUND	2559.6250	-13	-20	-35.0	-38.0
6X FUND	3071.5500	-13	-20	-34.9	-34.8
7X FUND	3583.4750	-13	-20	-35.3	-34.2
8X FUND	4095.4000	-13	-20	*	*
9X FUND	4607.3250	-13	-20	*	*
10XFUND	5119.2500	-13	-20	*	*



511.925 MHz - 1.0 W - 25 kHz CH. Spacing

Spur	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)
2X FUND	1023.8500	-13	-20	-45.9	-44.3
3X FUND	1535.7750	-13	-20	-46.8	-44.6
4X FUND	2047.7000	-13	-20	-45.3	*
5X FUND	2559.6250	-13	-20	*	*
6X FUND	3071.5500	-13	-20	*	*
7X FUND	3583.4750	-13	-20	*	*
8X FUND	4095.4000	-13	-20	*	*
9X FUND	4607.3250	-13	-20	*	*
10XFUND	5119.2500	-13	-20	*	*



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

MOTOROLA INC.

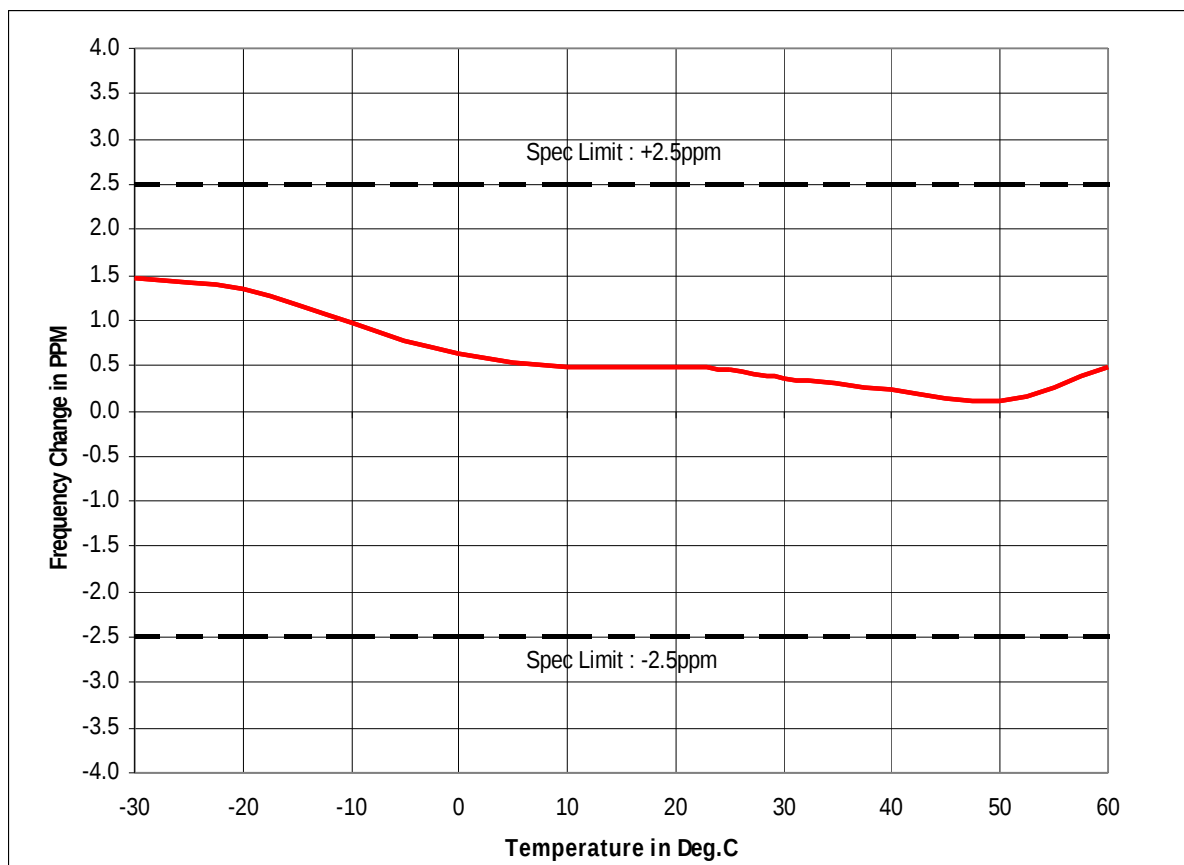
CRYSTAL OSCILLATOR STABILITY CHARACTERISTIC
FREQUENCY vs. TEMPERATURE

Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

FREQ : 481.050MHz.



MOTOROLA INC.

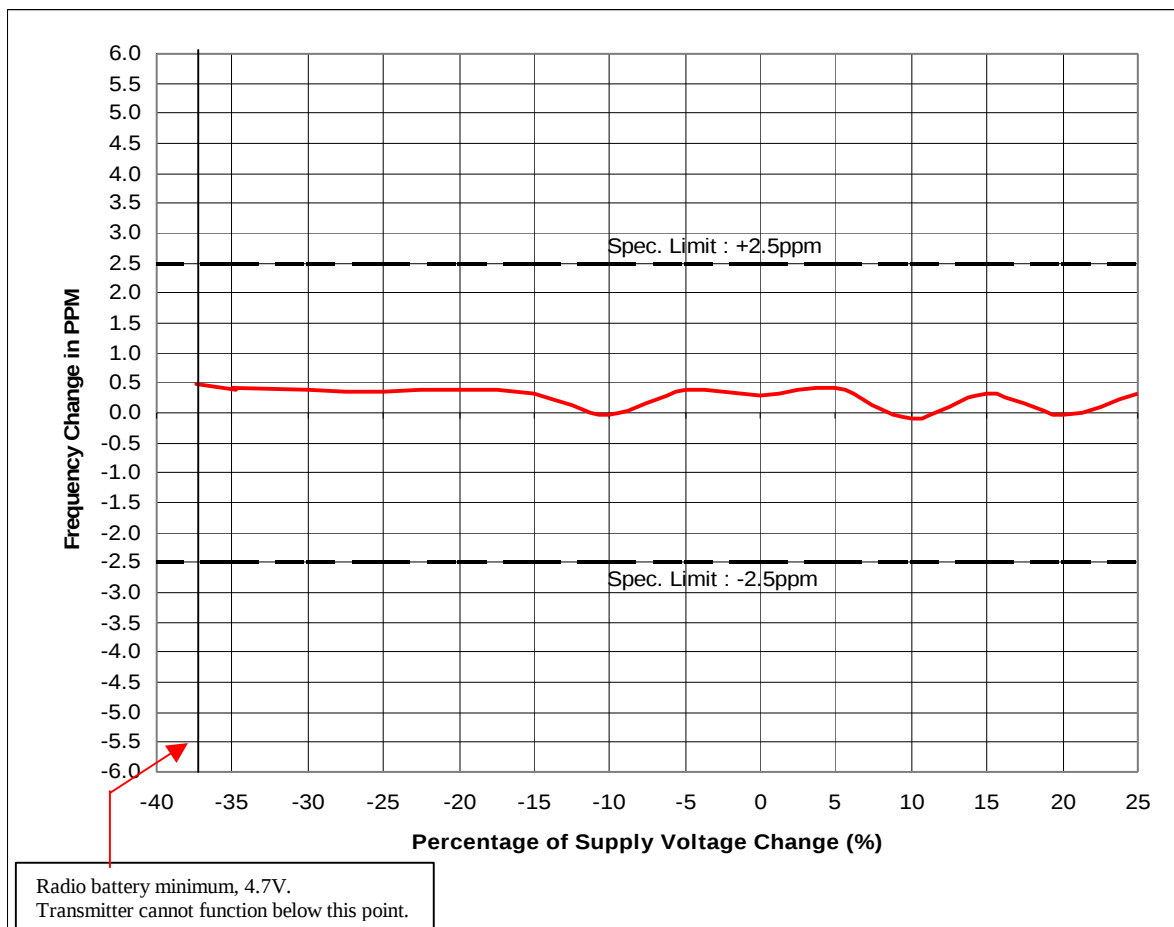
STABILITY CHARACTERISTIC
FREQUENCY vs. VOLTAGE

Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999Signature : SF Ooi

FREQ : 481.050MHz



MOTOROLA INC.

TRANSIENT FREQUENCY BEHAVIOR

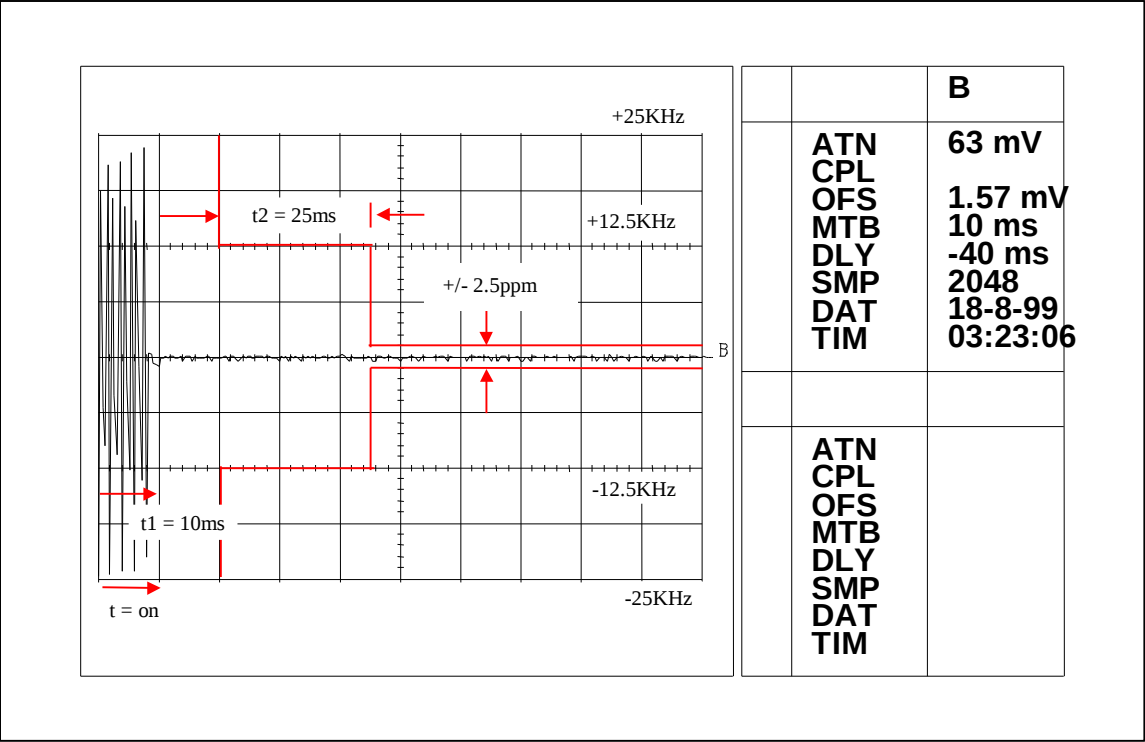
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

Power : 1W & 4.8W at 481.050MHz
Channel Spacing : 25kHz.
Switch - On Condition



MOTOROLA INC.

TRANSIENT FREQUENCY BEHAVIOR

=====

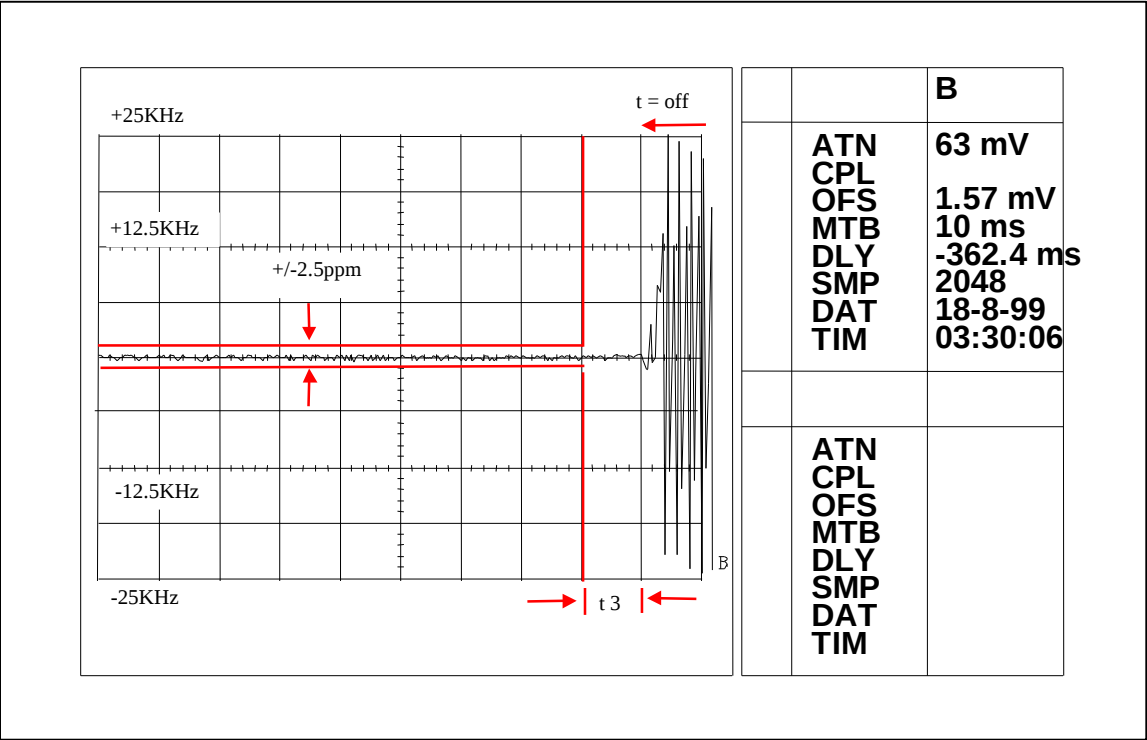
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

Power : 1W & 4.8W at 481.050MHz.
Channel Spacing : 25kHz.
Switch - Off Condition



MOTOROLA INC.

TRANSIENT FREQUENCY BEHAVIOR

=====

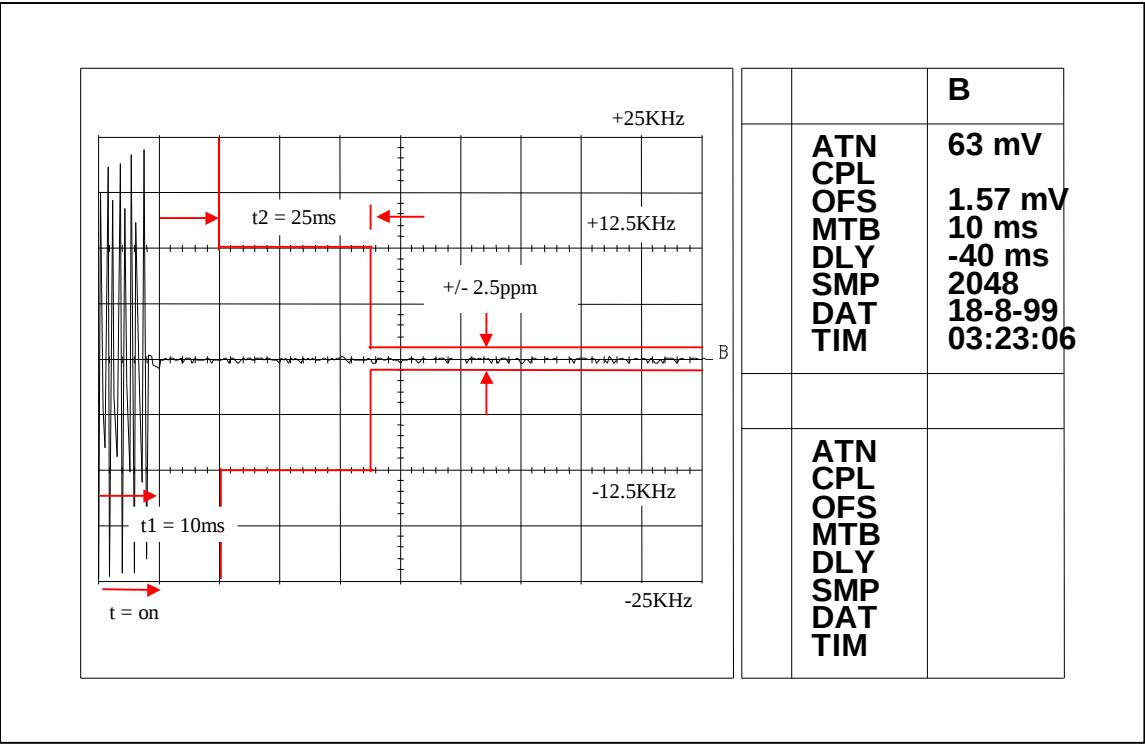
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

Power : 1W & 4.8W at 481.050MHz
Channel Spacing : 12.5kHz.
Switch - On Condition



MOTOROLA INC.

TRANSIENT FREQUENCY BEHAVIOR

=====

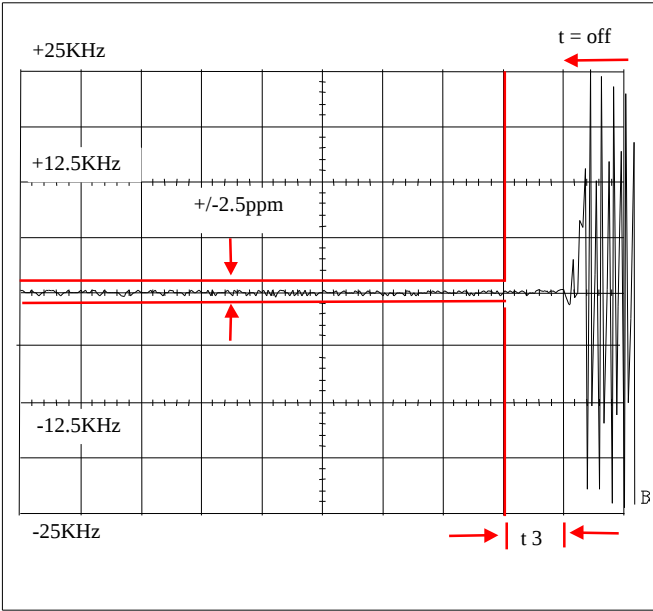
Xmtr Type : AZ489FT4838

Log Page : ---

Date : 19th August 1999

Signature : SF Ooi

Power : 1W & 4.8W at 481.050MHz.
Channel Spacing : 12.5kHz.
Switch - Off Condition



		B
	ATN CPL OFS MTB DLY SMP DAT TIM	63 mV 1.57 mV 10 ms -362.4 mV 2048 18-8-99 03:30:06
	ATN CPL OFS MTB DLY SMP DAT TIM	