MX800 Base Station Test Information

Note: All tests follow TIA / EIA 603 Procedures

Measurements made by :

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or

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Equipment Measured:

MX800 base station model number MX800FFHNSZ2CD

Serial Number : 01096409

External Power Supply was used as the equipment has no internal power supply and operates on 13.6 VDC.

Transmitter Requirements: Test Frequency = 216.000MHz at CH-1
Test Frequency = 219.000MHz at CH-2
Test Frequency = 222.000MHz at CH-3

2.1046(a) Carrier Output Power: ***Results;*** = ***50.2W***

Output level is the same with Channel or DC voltage +/- 10% (corrected by ALC loop)

2.1055 (a) (1) **Frequency Stability vs Voltage Variation**

Frequency Error: = ***+6Hz***
(EIA <2.5ppm
(25—512MHz)

Standard Test Method: EIA 4.2.2.3 Voltage variation +-15%

The power supply voltage was varied from 85% to 115% of the nominal voltage of 13.8vDC as measured at the input to the MX800.

Ambient Temperature = +24ºC

Measurement Results
Limit, ppm = 2.5
Limit, Hz = 547

STV, %	Vdc	Change in Frequency, Hz	
85	**11.7**	**219000000**	**0**
100	**13.8**	**219000000**	**0**
115	**15.9**	**219000000**	**0**

2.1055 (b) (1) Standard Test Method: EIA 4.2.2.3 Temperature variation –30ºC to +60ºC

The MX800 was placed in a temperature chamber with the power supply voltage set at 13.8vDC as measured at the input to the MX800.
Measurement Results
Limit, ppm = 2.5
Limit, Hz = 547

STV, ºC	Channel Frequency(Hz)	Frequency Error	Freq Variation, Hz
-30	**219000000**	**300**	**+87**
-20	**219000000**	**287**	**+74**
-10	**219000000**	**300**	**+87**
0	**219000000**	**303**	**+90**
10	**219000000**	**280**	**+67**
20	**219000000**	**213**	**0**
30	**219000000**	**140**	**-73**
40	**219000000**	**54**	**-159**
50	**219000000**	**20**	**-193**
60	**219000000**	**44**	**-169**

2.1047 (a) Audio Frequency Response: **300Hz—3kHz**

(EIA) +1dB / -3dB from 6dB per Octave

300Hz : -12.7dB
500Hz : -6.2dB
600Hz : -4. 5dB
1200Hz : +1.7dB
1500Hz : +3.7dB
2000Hz : +6.4dB
3000Hz : +7.6dB

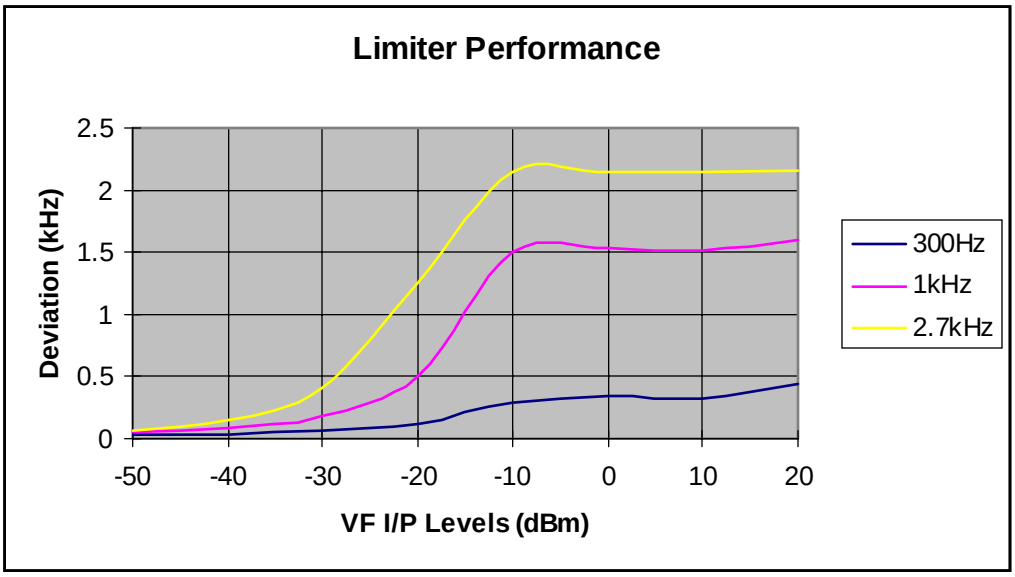
2.1047 (b) Maximum Frequency Deviation: = ***+/- 2.39KHz***

(**EIA** ±2.5KHz)

Standard: EIA 4.2.3.2 Deviation shall not exceed rated system deviation

Measurement Results

Reference Deviation, kHz = 1.5kHz
Reference Frequency, Hz = 1000Hz
Reference I/p level, dBm = -10dBm



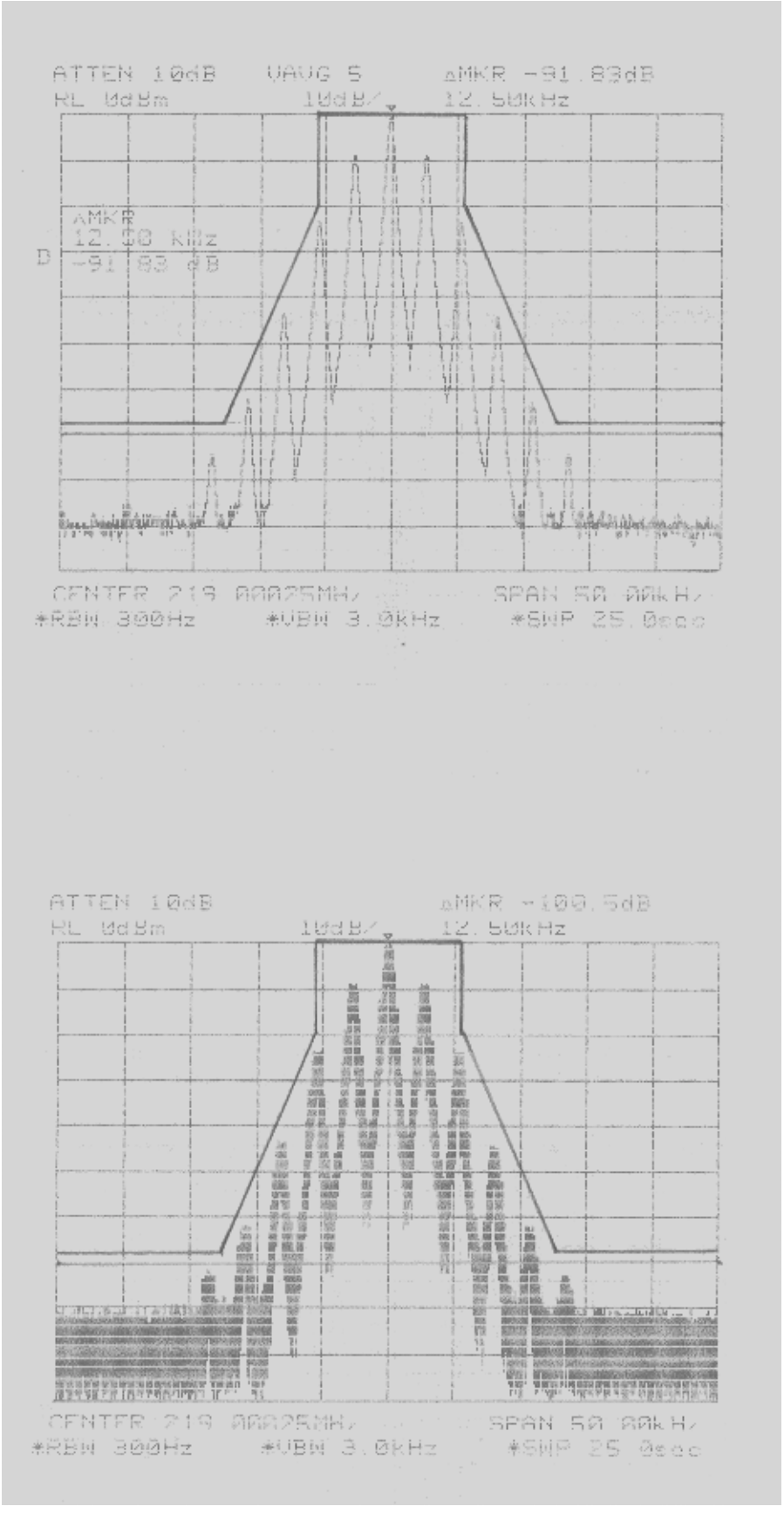
2.1047 (a) Audio Low Pass Response:

3KHz : = **-2.5dB**
6KHz : = **-11.6dB**
8KHz : = **-21.0dB**
10KHz : = **-30.5dB**
15KHz : = **-45.6dB**

2.202 (g) Sideband Spectrum: **10kHz < fd ≤ 20kHz Att.=25dB** = ***38.5dB***

20kHz < fd ≤ 50kHz Att.=35dB = ***85dB***

50kHz < fd Att.= > 80dB = ***80dB***

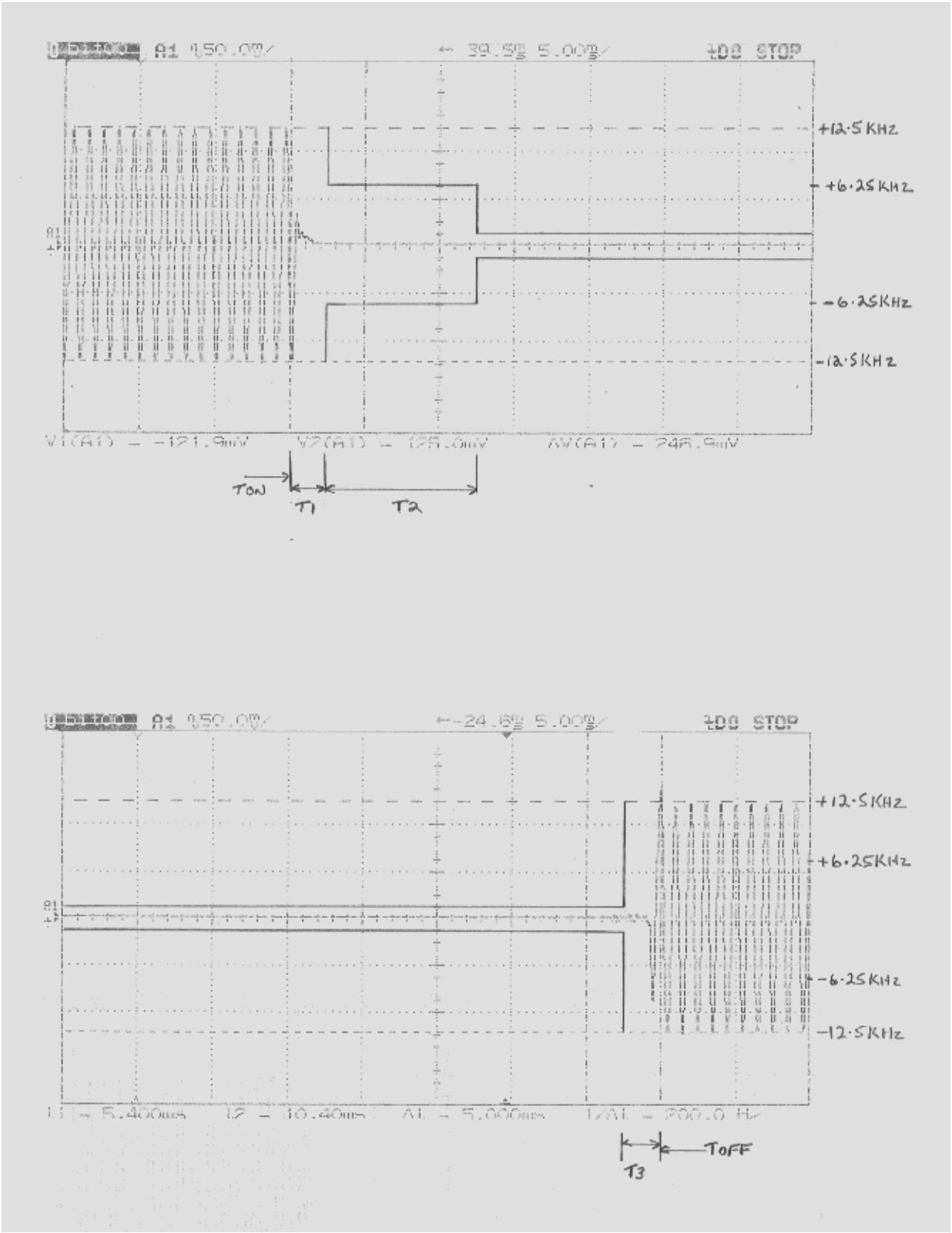


2.1051 Conducted Spurious Emissions: **< -13dBm = *-43dBm***

At Ch-1 = Less than *-43 dBm*(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)
At Ch-1 = Less than *-43 dBm*(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)
At Ch-2 = Less than *-43 dBm*(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)
At Ch-2= Less than *-43 dBm*(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)
At Ch-3 = Less than *-43 dBm*(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic
)At Ch-3= Less than *-43 dBm*(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)

90.214 Transient **Frequency Behavior of Transmitter**

t1 = 10ms	< ±12.5kHz	=	***Pass***
t2 = 25ms	< ±6.25kHz	=	***Pass***
t3 = 10ms	< ±12.5kHz	=	***Pass***



Receiver Tests: Test Frequency = 210.000MHz at CH-2

Results;

15 Conducted Spurious Radiation: (**< -57dBm**) ***-100dBm***

(EIA < -87dBW = -57dBm)