

MX800 Base Station Test Information

Note: All tests follow TIA / EIA 603 Procedures

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Measurements made by :

R. McAllan at the R&D Laboratory at
Spectra Engineering PTY LTD
9 Trade Road
Malaga, Western Australia
Australia

or

Walter C Simciak at ADRad Communications
5481 Sand Lake Drive
Melbourne, Florida 32934

Radiated Measurements at
Control Design And Testing, Inc
6010 Red Fox Drive
Spotsylvania, VA 22553

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 = +24°C

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 -30°C to +60°C

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, °C	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 ± 2.5 KHz)

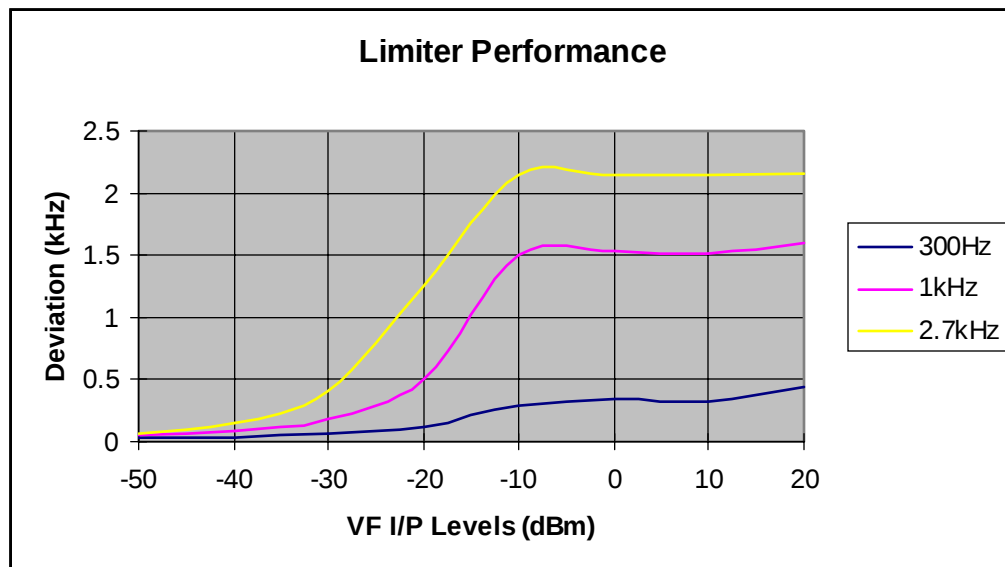
Standard: EIA 4.2.3.2 Deviation shall not exceed rated system deviation

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

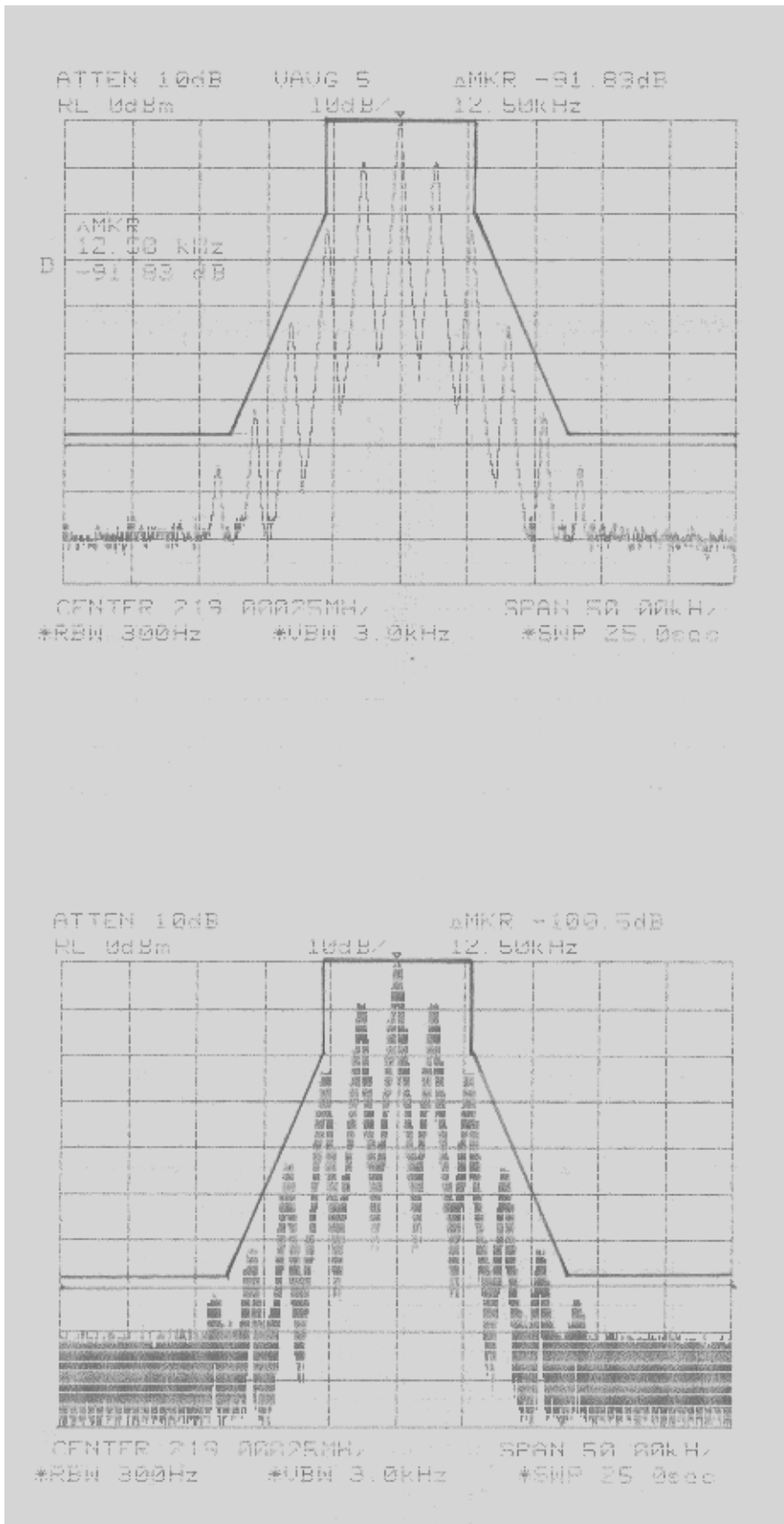
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85dB

50kHz < fd Att.= > 80dB

=

80dB



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

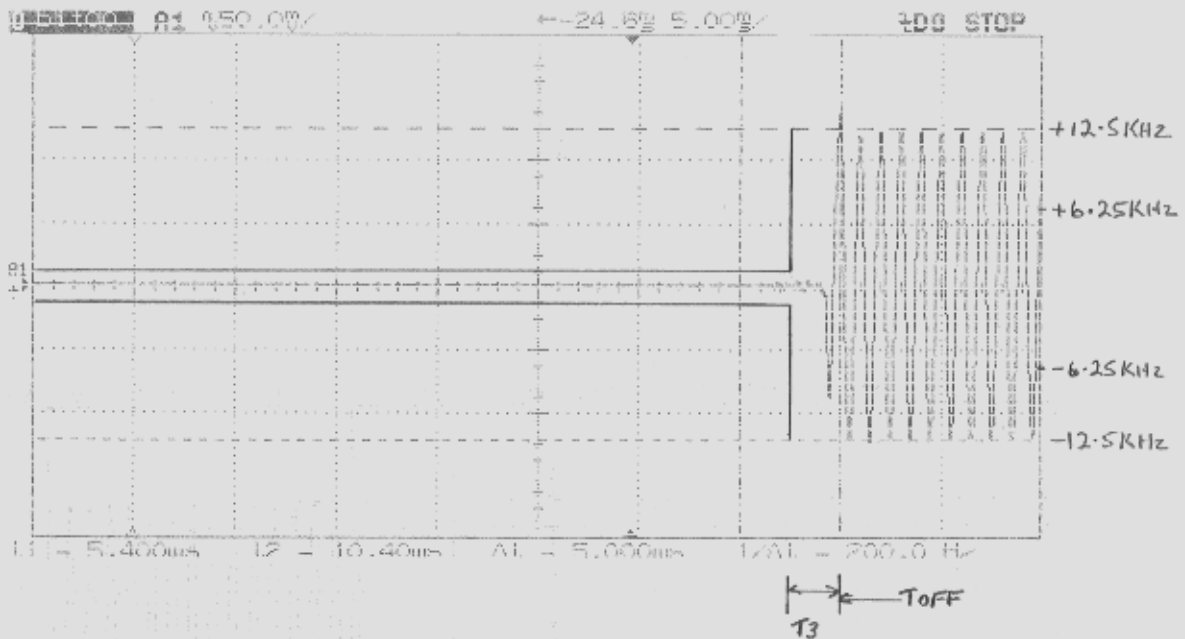
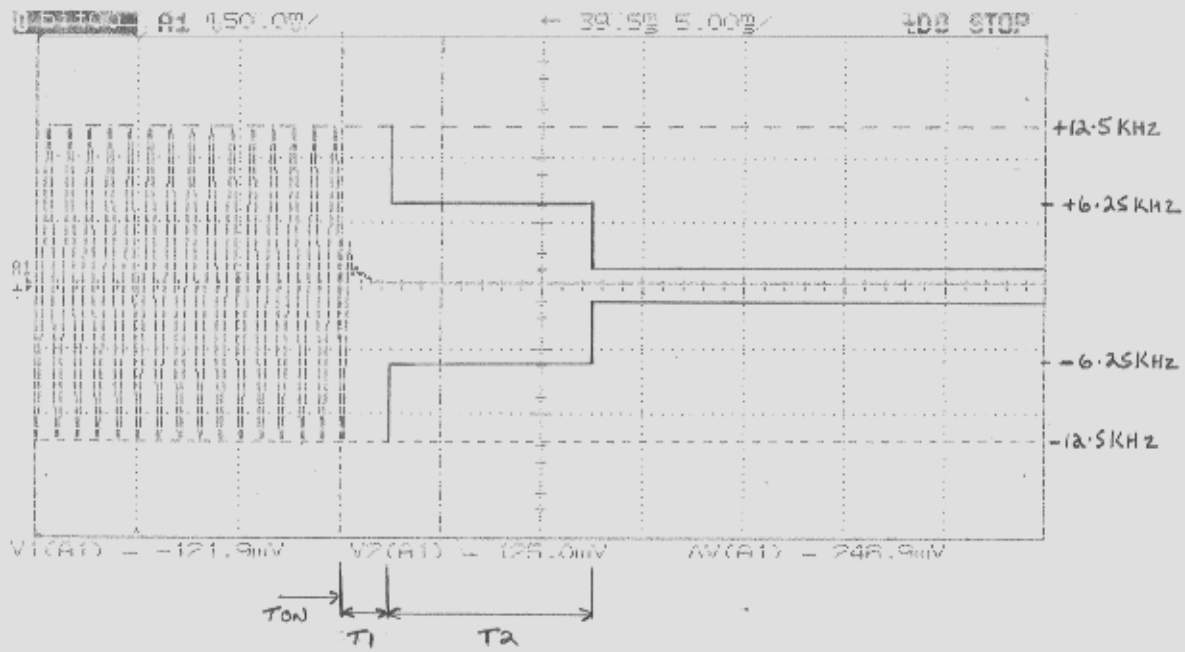
At Ch-1 = Less than -43 dBm(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)
 At Ch-1 = Less than -43 dBm(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)
 At Ch-2 = Less than -43 dBm(Measurement of : RF Carrier 2nd Harmonic up to 10th Harmonic)
 At Ch-2 = Less than -43 dBm(Measurement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

- 15 Conducted Spurious Radiation: (< -57dBm)
(EIA < -87dBW = -57dBm)

Results;
-100dBm