



Engineering and Testing for EMC and Safety Compliance



Accredited under A2LA Testing Certificate # 2653.01

Class II Permissive Change Report

Model: M7200 Series OpenSky Mobile Radio

M/A-COM, Inc.
221 Jefferson Ridge Parkway
Lynchburg, VA 24501
Daryl Popowitch
Phone: (434) 455-9527

FCC ID: BV8M7200
IC: 3670A-M7200

August 7, 2008

Standards Referenced for this Report	
Part 2: 2007	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
Part 90: 2007	Private Land Mobile Radio Services
ANSI TIA-603-C-2004	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
ANSI/TIA/EIA – 102.CAAA; 2002	Digital C4FM/CQPSK Transceiver Measurement Methods
Industry Canada RSS-119 Issue 9 June 2007	Land Mobile and Fixed Radio Transmitters and Receivers Operating in the Frequency Range 27.41- 960 MHz

Report Prepared by Test Engineer: Daniel Baltzell

Document Number: 2008131

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360 Herndon Parkway, Suite 1400
Herndon, VA 20170
Tel: 703-689-0368 Fax: 703-689-2056
<http://www.rheintech.com>

Frequency Range (MHz)	Measured Output Power (W) Conducted	Frequency Tolerance (ppm)	Modulation	Mode	Emission Designator
806-824	14.3	1.5	P25 (digitized data)	Trunked/Conventional	8K4F1D
806-824	14.6	1.5	P25 (digitized voice)	Trunked/Conventional	8K4F1E
851-869	14.4	1.5	P25 (digitized data)	T/A	8K4F1D
851-869	14.3	1.5	P25 (digitized voice)	T/A	8K4F1E
806-824	14.2	1.5	OTP	NPSPAC Trunked	12K1F9W
851-869	14.2	1.5	OTP	NPSPAC Trunked	12K1F9W
806-824	14.4	1.5	OTP	SMR Trunked	12K8F9W
851-869	14.4	1.5	OTP	SMR Trunked	12K8F9W
806-809	15.2	1.5	Analog FM (NPSPAC)	Trunked/Conventional	14K0F3E
806-821	15.1	1.5	Analog FM (SMR)	Trunked/Conventional	16K0F3E
821-824	15.4	1.5	Analog FM (SMR)	Trunked/Conventional	16K0F3E
821-824	15.2	1.5	Analog FM (NPSPAC)	Trunked/Conventional	14K0F3E
851-854	14.8	1.5	Analog FM (NPSPAC)	T/A	14K0F3E
851-869	14.4	1.5	Analog FM (SMR)	T/A	16K0F3E
866-869	14.3	1.5	Analog FM (NPSPAC)	T/A	14K0F3E
806-809	14.4	1.5	2-level (digitized data)	NPSPAC Trunked/Conventional	11K9F1D
806-809	14.4	1.5	2-level (digitized voice)	NPSPAC Trunked/Conventional	11K9F1E
806-809	14.3	1.5	2-level (digitized data)	SMR Trunked/Conventional	14K2F1D
806-809	14.3	1.5	2-level (digitized voice)	SMR Trunked/Conventional	14K2F1E
809-824	14.2	1.5	2-level (digitized data)	SMR Trunked/Conventional	14K2F1D
809-824	14.2	1.5	2-level (digitized voice)	SMR Trunked/Conventional	14K2F1E
821-824	14.2	1.5	2-level (digitized data)	NPSPAC Trunked/Conventional	11K9F1D
821-824	14.2	1.5	2-level (digitized voice)	NPSPAC Trunked/Conventional	11K9F1E
851-854	15.2	1.5	2-level (digitized data)	NPSPAC T/A	11K9F1D
851-854	15.2	1.5	2-level (digitized voice)	NPSPAC T/A	11K9F1E
851-854	15.1	1.5	2-level (digitized data)	SMR T/A	14K2F1D
851-854	15.1	1.5	2-level (digitized voice)	SMR T/A	14K2F1E
854-866	15.1	1.5	2-level (digitized data)	SMR T/A	14K2F1D
854-866	15.1	1.5	2-level (digitized voice)	SMR T/A	14K2F1E
866-869	15.2	1.5	2-level (digitized data)	SMR T/A	14K2F1D
866-869	15.2	1.5	2-level (digitized voice)	SMR T/A	14K2F1E
866-869	15.4	1.5	2-level (digitized data)	NPSPAC T/A	11K9F1D
866-869	15.4	1.5	2-level (digitized voice)	NPSPAC T/A	11K9F1E

Frequency Range (MHz)	Measured Output Power (W) Conducted	Frequency Tolerance (ppb)	Modulation	Mode	Emission Designator
763-775, 793-805	14.0	400	P25 (digitized data)	T/A, Trunked/Conventional	8K4F1D
763-775, 793-805	14.0	400	P25 (digitized voice)	T/A, Trunked/Conventional	8K4F1E
763-775, 793-805	14.0	400	OTP	Trunked	12K1F9W
763-775, 793-805	15.0	400	Analog FM (12.5 kHz spaced)	T/A, Trunked/Conventional	11K0F3E

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1 General Information

The following Class 2 Permissive Change report is prepared on behalf of **M/A-COM, Inc.** in accordance with the Federal Communications Commission and Industry Canada Rules and Regulations. The Equipment Under Test (EUT) was the **M7200 Series OpenSky Mobile Radio; FCC ID: BV8M7200, IC: 3670A-M7200.** The test results reported in this document relate only to the item that was tested.

All measurements contained in this application were conducted in accordance with the applicable FCC Rules and Regulations, and Industry Canada RSS-119. Calibration checks are performed regularly on the instruments, and all accessories including high pass filter, coaxial attenuator, preamplifier and cables.

1.1 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the parking lot of Rhein Tech Laboratories, Inc. 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170. This site has been fully described in a report submitted to and approved by the Federal Communications Commission to perform AC line conducted and radiated emissions testing.

1.2 Related Submittal(s)/Grant(s)

The purpose of this Class 2 Permissive Change is to document and demonstrate continued compliance of the M7200 700/800 MHz radio with the following revisions: an emissions designator was added (12K8F9W) and passive components were modified. These changes are detailed in the M/A-COM, Inc. document Appendix A.

The original FCC grant and IC certificates were issued October 4, 2005; permissive change grants were issued May 17, 2007, August 16, 2007, and September 14, 2007. On March 12, 2007, an original certification was recorded which segmented the 764-806 MHz October 04, 2005 original certification into 4 separate frequency ranges (764-767, 773-776, 794-797, and 803-806 MHz), which presently have been updated to meet the new rules as 763-775; and 793-805 MHz.

2 Tested System Details

The test sample was received on July 27, 2008. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test, as applicable. The device was programmed for multiple modes of operation and modulation types.

Table 2-1: Equipment Under Test (EUT)

Part	Manufacturer	Model	Serial Number	FCC ID	Cable	RTL Bar Code
Radio	M/A-COM, Inc.	M7200 Series Opensky Mobile Radio	A400740037D3	BV8M7200	9 m unshielded I/O (CAN)	18556
Control Head	M/A-COM, Inc.	CH721	CU232218-0004	N/A	3-0.3 m unshielded I/O; 1.7 m unshielded serial	18554
Microphone	M/A-COM, Inc.	MC101616-040	N/A	N/A	0.7 m coiled unshielded I/O	18557
Speaker	M/A-COM, Inc.	LS102824V10R1A	N/A	N/A	1.4 m unshielded I/O	18551
Power Supply	Astron Corp.	SS-25M	207120058	N/A	1.7 m unshielded	18553

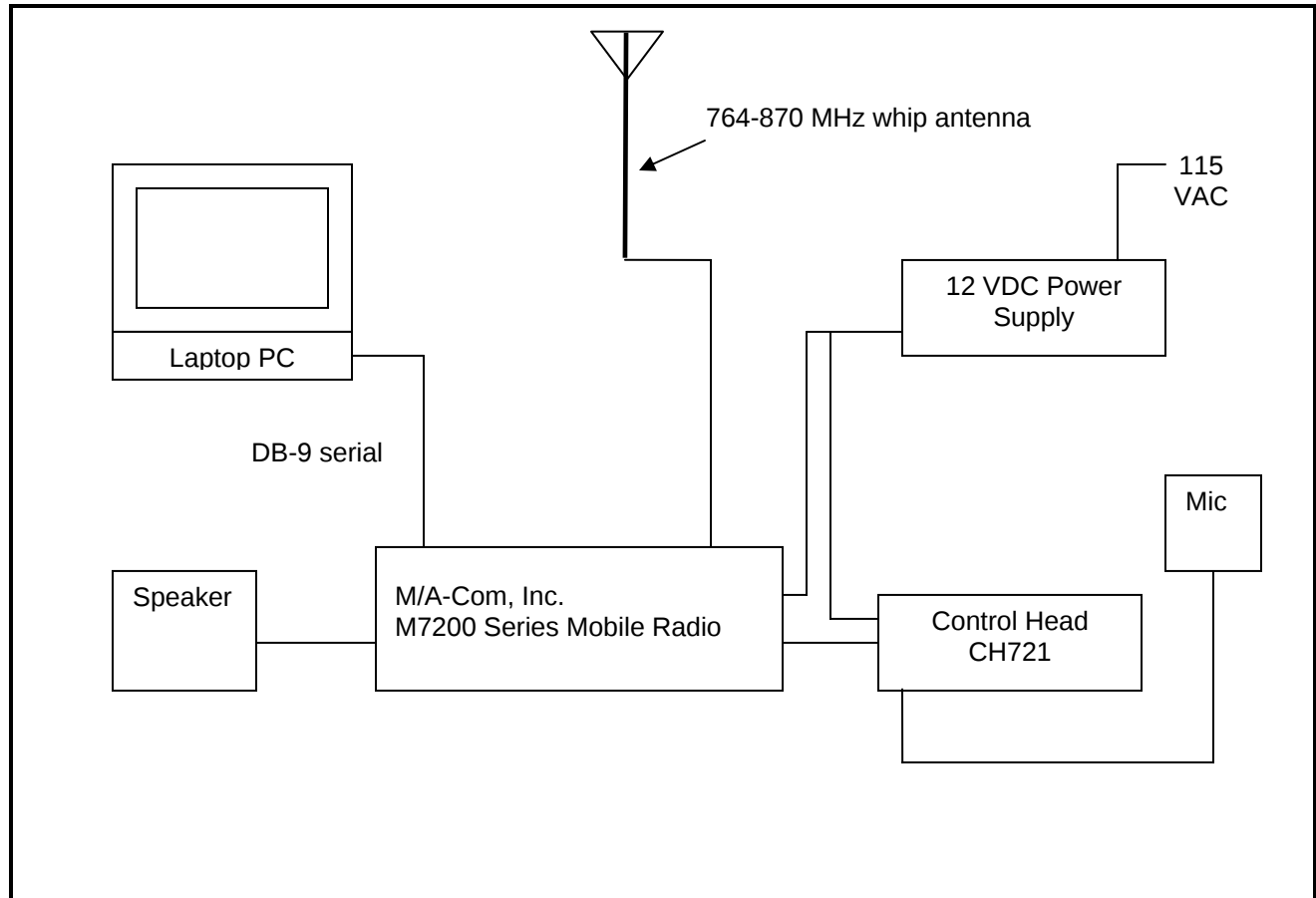


Figure 2-1: Configuration of Tested System

3 FCC Rules and Regulations Part 2 §2.1046(a): RF Power Output: Conducted; Part 90 §90.541(c): Transmitting Power Limits; RSS-119 §5.4: RF Power Output: Conducted

3.1 Test Procedure

ANSI/TIA/EIA-603-2002, section 2.2.1

The EUT was connected to a coaxial attenuator having a 50 Ω load impedance.

3.2 Test Data

Table 3-1: RF Power Output: Carrier Output Power

Frequency (MHz)	High Power (dBm)	High Power (W)
806.0125	41.56	14.3
806.0125	41.58	14.4
816.3625	41.58	14.4
823.9875	41.57	14.4
823.9875	41.58	14.4
794.0125	41.55	14.3
805.9875	41.57	14.3

* Measurement accuracy: +/- .02 dB (logarithmic mode)

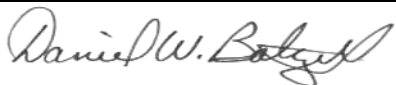
Table 3-2: RF Power Output (Rated Power)

Rated Power	
High Power (W)	Low Power (W)
15	1

Table 3-3: Test Equipment Used For Testing RF Power Output - Conducted

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901356	Agilent Technologies	E9323A	Power Sensor	31764-264	10/24/08
901184	Agilent Technologies	E4416A	EPM-P Power Meter, single channel	GB41050573	10/24/08
901396	MCE Weinschel	48-40-34	Attenuator, 40 dB, DC-18 GHz, 100 W	93453	1/13/09

Test Personnel:

Daniel Baltzell		July 29, 2008
Test Engineer	Signature	Date Of Test

4 FCC Rules and Regulations Part 2 §2.1051: Spurious Emissions at Antenna Terminals; Part 90 §90.543(b): Out of Band Emissions Limit; RSS-119 §5.8

4.1 Test Procedure

ANSI/TIA/EIA-603-2002, Section 2.2.13

The transmitter is terminated with a 50 Ω load and interfaced with a spectrum analyzer. Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 19,200 bps for OTP and 9,600 bps for P25 and EDACS modes. The following data are the only frequencies found with 20 dB of the limit, all others are below 20 dBc.

4.2 Test Data

Table 4-1: Conducted Antenna Spurious Radiation; OTP NP; 794.0125 MHz; High Power

Conducted Power = 41.55 dBm = 14.29W; Limit = 43 + 10 Log P = 54.55

Frequency (MHz)	Spectrum Analyzer Level (dBc)	Margin (dB)
1588.025	72.65	-18.1

Table 4-2: Conducted Antenna Spurious Radiation; OTP NP; 805.9875 MHz; High Power

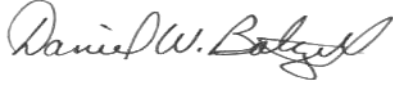
Conducted Power = 41.57 dBm = 14.35W; Limit = 43 + 10 Log P = 54.57

Frequency (MHz)	Spectrum Analyzer Level (dBc)	Margin (dB)
1611.975	72.97	-18.4

Table 4-3: Test Equipment Used For Testing Conducted Spurious Emissions

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901215	Hewlett Packard	8596EM	Spectrum Analyzer (9 kHz-12.8 GHz)	3826A00144	10/17/08
901307	Inmet	6N-10dB	Attenuator 10 dB	64671	1/11/09
900957	Weinschel Corporation	68-20-43	100W Attenuator 20 dB	LT394	1/13/09
900948	Weinschel Corporation	47-10-43	Attenuator DC-18 GHz 10dB 50W	BH1487	12/5/08
901128	Par Electronics	806-902 (25W)	UHF Notch Filter	N/A	2/1/09

Test Personnel:

Daniel Baltzell		July 30, 2008
Test Engineer	Signature	Date Of Test

5 FCC Rules and Regulations Part 90.543(a): Emission Limitations: ACP Requirements

Effective October 23, 2007, transmitters designed to operate in 769–775 MHz and 799–805 MHz frequency bands must meet the emission limitations in paragraphs (a) through (d) of this section. Transmitters operating in 763–768 MHz and 793–798 MHz bands must meet the emission limitations in (e) of this section.

5.1 Test Procedure

Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence – 19,200 bps for OTP and 9,600 bps for P25 modes.

For a mobile transmitter designed to operate with a 12.5 kHz channel bandwidth, the ACP shall be in accordance with the values in the following table:

Offset from Center Frequency (kHz)	Measurement Bandwidth (kHz)	Maximum ACP Relative (dBc)
(+/-)9.375	6.25	-40
(+/-)15.625	6.25	-60
(+/-)21.875	6.25	-60
(+/-)37.5	25	-60
(+/-)62.5	25	-65
(+/-)87.5	25	-65
(+/-)150	100	-65
(+/-)250	100	-65
(+/-)350	100	-65
>400 kHz to 12 MHz	30(s)	-75
12 MHz to paired receive band	30(s)	-75
In the paired receive band	30(s)	-100

For a mobile transmitter designed to operate with a 25 kHz channel bandwidth, the ACP shall be in accordance with the values in the following table:

Offset from Center Frequency (kHz)	Measurement Bandwidth (kHz)	Maximum ACP Relative (dBc)
(+/-)15.625	6.25	-40
(+/-)21.875	6.25	-60
(+/-)37.5	25	-60
(+/-)62.5	25	-65
(+/-)87.5	25	-65
(+/-)150	100	-65
(+/-)250	100	-65
(+/-)350	100	-65
>400 kHz to 12 MHz	30(s)	-75
12 MHz to paired receive band	30(s)	-75
In the paired receive band	30(s)	-100

FCC Rules and Regulations Part 90 §90.543(b)

Setting Reference Level - Part 90 §90.543(b)(1): Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth to the channel size. Set the frequency offset of the measurement to zero and adjust the center frequency of the spectrum analyzer to give the power level in the measurement bandwidth. Record this power as the reference power level.

Measuring the power level at the frequency offset <600 kHz - Part 90 §90.543(b)(2): Using a spectrum analyzer capable of ACP measurements, set the measurement bandwidth as shown in table. Measure ACP in dBm. These measurements were made at maximum power. Calculate the coupled power by subtracting the measurements made in this step from the reference power level. The absolute ACCP values must be less than the values given in the table for each condition.

Measuring the power level at the frequency offset >600 kHz - Part 90 §90.543(b)(3): Set the spectrum analyzer to 30 kHz resolution bandwidth, 1 MHz video bandwidth and sample detection mode. Sweep +/-6 MHz from the carrier frequency. Set the reference level to the RMS value of the transmitter power and note the power. The response at frequencies >600 kHz must be less than the values listed in the table.

5.2 Test Data

Table 5-1: WB – 794.0125 MHz - 25 kHz Channel Spacing

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP Low Offset (dBc)	Max ACP High Offset (dBc)
(+/-)9.375	6.25	-40	61.8	67.9
(+/-)15.625	6.25	-60	77.7	75.9
(+/-)21.875	6.25	-60	86.1	86.0
(+/-)37.5	25	-60	86.1	86.1
(+/-)62.5	25	-65	96.1	96.1
(+/-)87.5	25	-65	96.1	96.1
(+/-)150	100	-65	102.5	99.3
(+/-)250	100	-65	112.3	112.4
(+/-)350	100	-65	115.4	115.2
>400 to 12 MHz	30(s)	-75	91.4	92.7

Offset from Center Frequency (kHz)	Measurement BW (kHz)	Max ACP (dBc)	Max ACP (dBc)
12 MHz to receive band	30(s)	-75	102.07
In receive band	30(s)	-100	101.83

Table 5-2: Test Equipment Used For Testing ACP Requirements

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
900824	Hewlett Packard	8591E	RF Spectrum Analyzer (9 KHz - 1.8 GHz)	3710A06135	2/4/09

Test Personnel:

Daniel Baltzell		August 4, 2008
Test Engineer	Signature	Date Of Test

6 FCC Rules and Regulations Part 2 §2.1053(a): Field Strength of Spurious Radiation; Part 90 §90.543(b): Out of Band Emissions Limit; RSS-119 §5.8

6.1 Test Procedure

ANSI/TIA/EIA-603-2002, section 2.2.12

Analog Modulation: The transmitter is terminated with a 50 Ω load and is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that required to produce 50% of the rated system deviation at 1,000 Hz.

Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 19,200 bps for OTP and 9,600 bps for P25 and EDACS modes.

The spurious emissions levels were measured, and the device under test was replaced by a substitution antenna connected to a signal generator. The signal generator level was then corrected by subtracting the cable loss from the substitution antenna to the signal generator, and the gain of the antenna was further corrected to a half wave dipole.

6.2 Test Data

The worst case emissions test data are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

Table 6-1: Field Strength of Spurious Radiation; OTP Narrowband; 794.0125 MHz; High Power; Vertical Polarity

Conducted Power = 41.55 dBm = 14.291W; Limit = 43 + 10 Log P = 54.55

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1588.025	85.4	-30.1	6.2	5.2	72.7	-18.1
2382.038	55.2	-37.9	7.8	6.9	80.4	-25.8
3176.050	55.0	-35.6	8.5	7.0	78.7	-24.1
3970.063	46.8	-40.9	9.1	7.4	84.2	-29.6
4764.075	41.3	-45.4	9.6	8.8	87.8	-33.2
5558.088	57.3	-28.7	9.8	8.3	71.8	-17.2
6352.100	29.7	-50.0	10.2	9.4	92.4	-37.8
7146.113	43.7	-28.6	10.1	9.4	70.9	-16.3
7940.125	30.2	-51.4	10.2	8.9	94.3	-18.1

*This insertion loss corresponds to the cable connecting the RF Signal Generator to the $\frac{1}{2}$ wave dipole antenna.

Table 6-2: Field Strength of Spurious Radiation; OTP Narrowband; 794.0125 MHz; High Power; Horizontal Polarity

Conducted Power = 41.55 dBm = 14.291W; Limit = 43 + 10 Log P = 54.55

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1588.025	95.2	-22.6	6.2	5.2	65.2	-10.6
2382.038	58.3	-35.0	7.8	6.9	77.5	-22.9
3176.050	57.8	-32.8	8.5	7.0	75.9	-21.3
3970.063	47.9	-39.7	9.1	7.4	83.0	-28.4
4764.075	39.0	-47.6	9.6	8.8	90.0	-35.4
5558.088	56.4	-29.4	9.8	8.3	72.5	-17.9
6352.100	30.2	-49.4	10.2	9.4	91.8	-37.2
7146.113	43.9	-28.4	10.1	9.4	70.7	-16.1
7940.125	30.8	-50.8	10.2	8.9	93.7	-39.1

*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

Table 6-3: Field Strength of Spurious Radiation; OTP Wideband; 816.3625 MHz; High Power; Vertical Polarity

Conducted Power = 41.58 dBm = 14.39 W; Limit = 43 + 10 Log P = 54.58 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1632.725	85.8	-32.0	6.4	5.3	74.7	-20.1
2449.088	48.1	-44.6	7.8	7.0	87.0	-32.4
3265.450	64.3	-28.1	8.6	7.5	70.8	-16.2
4081.813	42.0	-44.7	9.2	7.5	88.0	-33.4
4898.175	41.7	-44.4	9.6	8.4	87.2	-32.6
5714.538	46.9	-40.6	9.9	8.5	83.6	-29.0
6530.900	45.0	-28.4	10.2	9.3	70.9	-16.3
7347.263	30.1	-57.4	10.3	8.9	100.4	-45.8
8163.625	29.2	-57.8	10.5	9.0	100.9	-46.3

*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

Table 6-4: Field Strength of Spurious Radiation; OTP Wideband; 816.3625 MHz; High Power; Horizontal Polarity

Conducted Power = 41.58 dBm = 14.39 W; Limit = 43 + 10 Log P = 54.58 dBc

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1632.725	88.2	-27.1	6.4	5.3	69.8	-15.2
2449.088	53.4	-39.5	7.8	7.0	81.9	-27.3
3265.450	69.2	-22.9	8.6	7.5	65.6	-11.0
4081.813	42.7	-44.1	9.2	7.5	87.4	-32.8
4898.175	37.6	-48.5	9.6	8.4	91.3	-36.7
5714.538	43.2	-44.5	9.9	8.5	87.5	-32.9
6530.900	44.4	-29.0	10.2	9.3	71.5	-16.9
7347.263	28.5	-59.0	10.3	8.9	102.0	-47.4
8163.625	28.4	-58.6	10.5	9.0	101.7	-47.1

*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

Table 6-5: Test Equipment Used For Testing Field Strength of Spurious Radiation

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901053	Schaffner-Chase	CBL6112	Antenna (25 MHz–2 GHz)	2648	12/20/08
900772	EMCO	3161-02	Horn Antenna (2-4 GHz)	9804-1044	6/14/10
900321	EMCO	3161-03	Horn Antenna (4.0-8.2 GHz)	9508-1020	6/14/10
901365	MITEQ	JS4-00102600-41-5P	Amplifier, 0.1-26 GHz, 30dB gain	N/A	10/8/08
901215	Hewlett Packard	8596EM	Spectrum Analyzer (9 kHz-12.8 GHz)	3826A00144	10/17/08
901424	Insulated Wire Inc.	KPS-1503-360-KPS	RF cable 36"	NA	10/5/08
901425	Insulated Wire, Inc.	KPS-1503-2400-KPS	RF cable, 20'	NA	10/5/08
901426	Insulated Wire Inc.	KPS-1503-3600-KPS	RF cable, 30'	NA	10/5/08
900928	Hewlett Packard	83752A	Synthesized Sweeper, 0.01 to 20 GHz	3610A00866	12/7/08
901158	Compliance Design, Inc.	Roberts Dipole Antenna	Adjustable Elements Dipole 25-1000MHz Antennas	00401	2/4/09

Test Personnel:

Daniel Baltzell		July 30, 2008
Test Engineer	Signature	Date Of Test

7 FCC Rules and Regulations Part 2 §2.1049(c)(1): Occupied Bandwidth; Part 90 §90.543(d): Authorized Bandwidth; RSS-119 §5.8

Occupied Bandwidth - Compliance with the emission masks

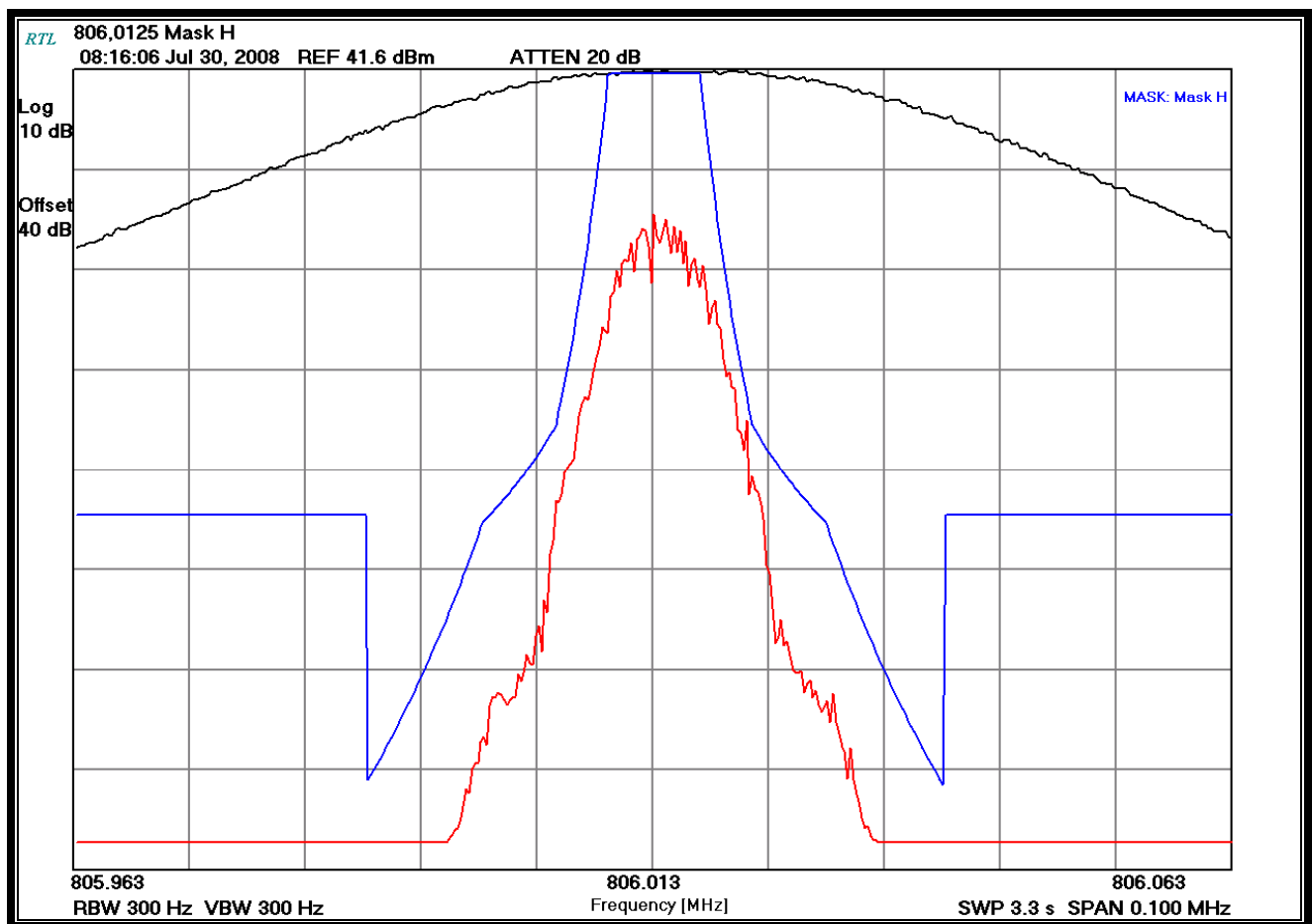
7.1 Test Procedure

ANSI/TIA/EIA-603-2002, section 2.2.11 and TIA/EIA-102.CAAA-2002 section 2.2.5

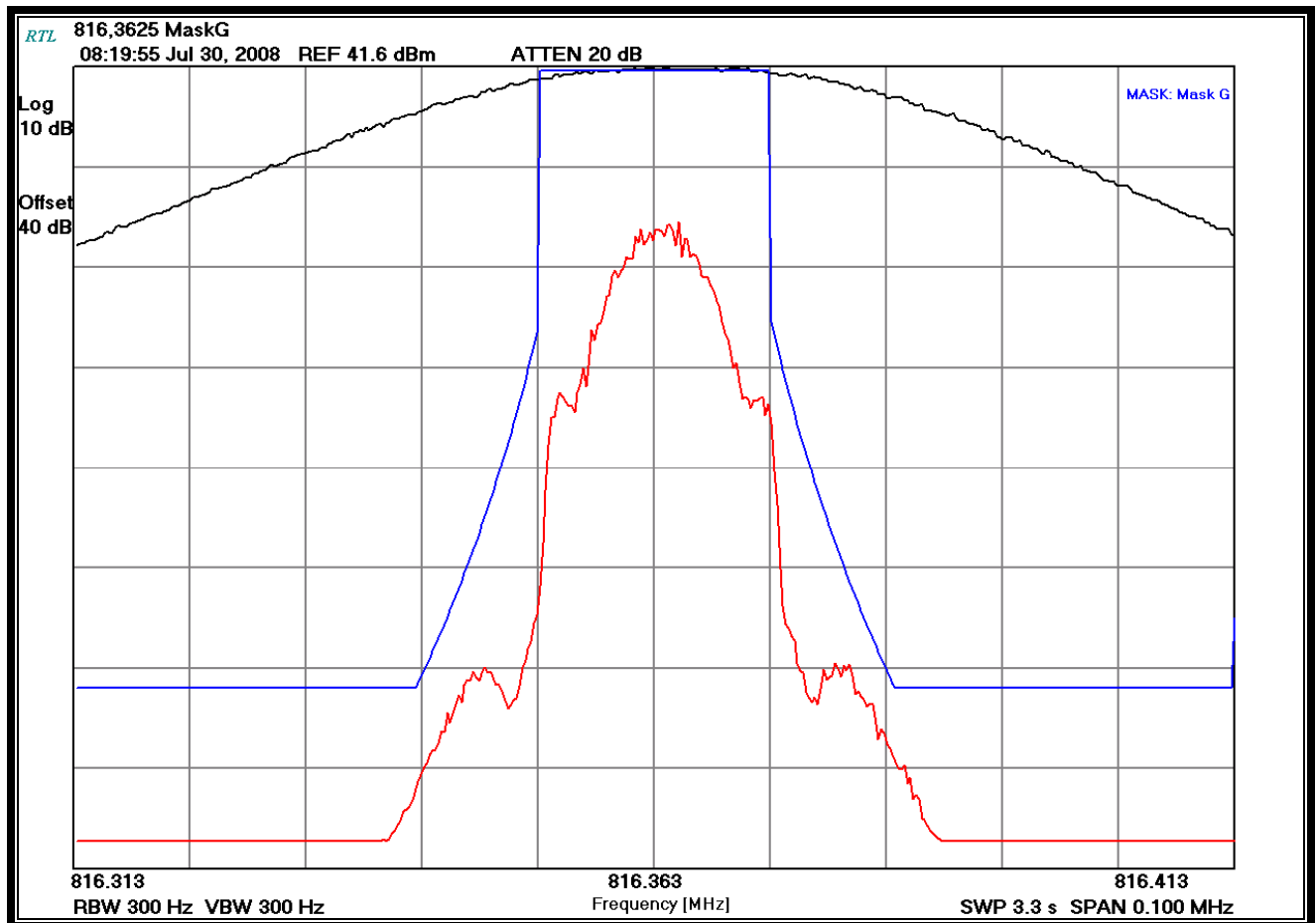
Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 19,200 bps for OTP mode, and 9600 bps for P25 and EDACS modes.

7.2 Test Data

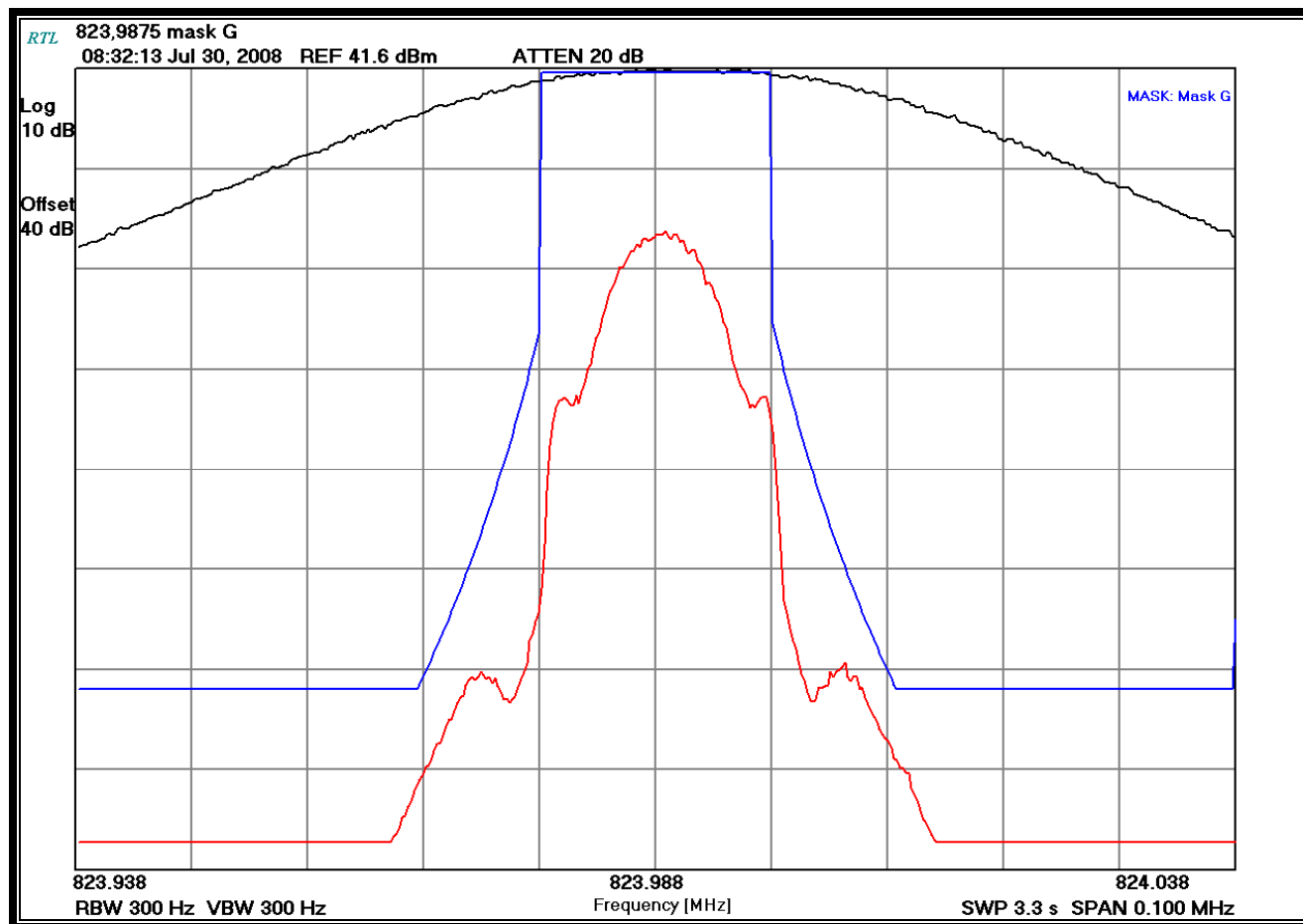
Plot 7-1: Occupied Bandwidth; 806.0125 MHz; OTP NP; High Power; Mask H



Plot 7-2: Occupied Bandwidth; 816.3625 MHz; OTP WB; High Power; Mask G



Plot 7-3: Occupied Bandwidth; 823.9875 MHz; OTP WB; High Power; Mask G



Plot 7-4: Occupied Bandwidth; 794.0125 MHz; OTP NP; High Power; Mask H

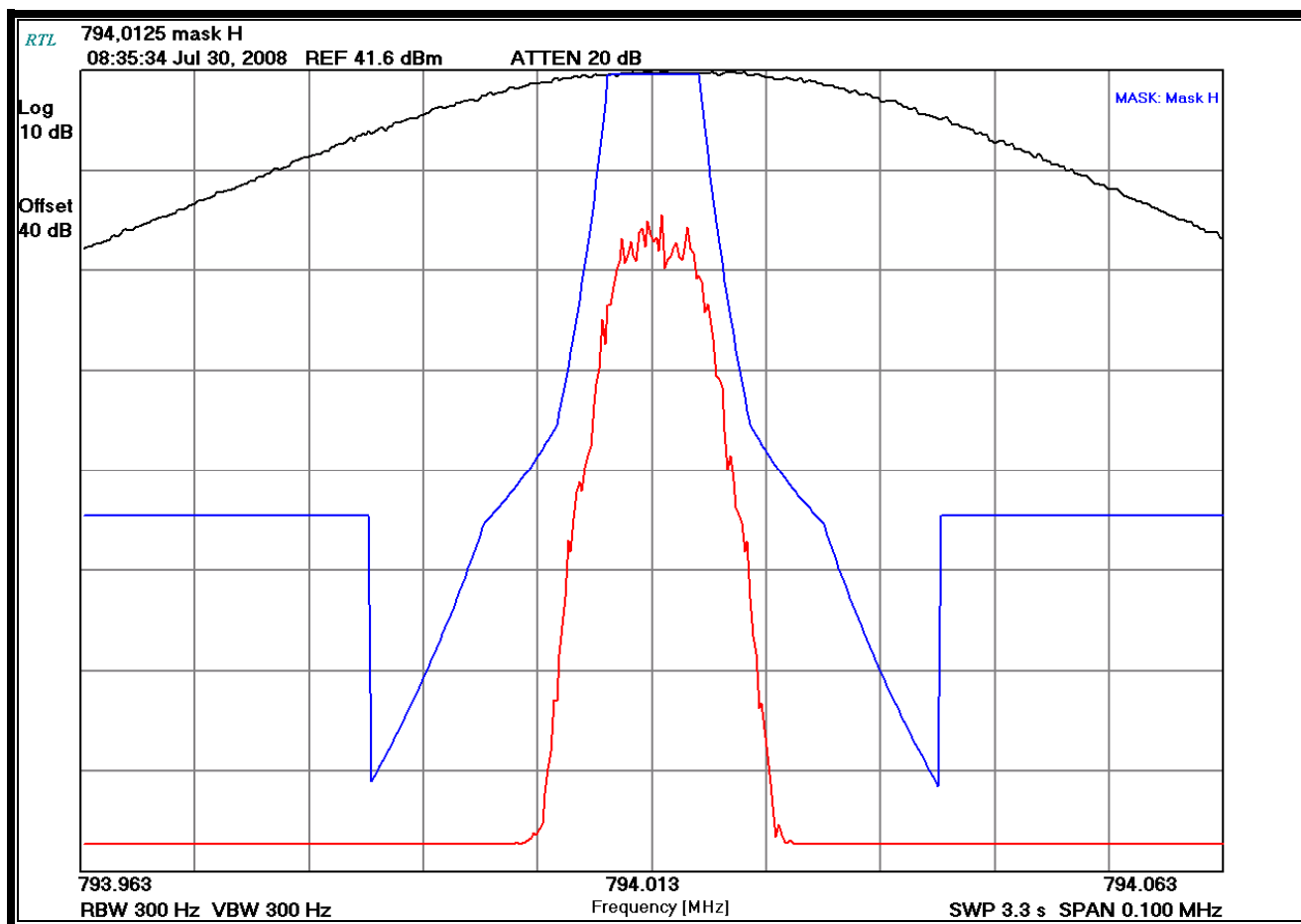
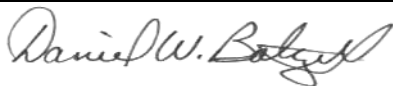


Table 7-1: Test Equipment Used For Testing Occupied Bandwidth

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901215	Hewlett Packard	8596EM	Spectrum Analyzer (9 kHz-12.8 GHz)	3826A00144	10/17/08
901307	Inmet	6N-10dB	Attenuator 10 dB	64671	1/11/09

Test Personnel:

Daniel Baltzell		July 30, 2008
Test Engineer	Signature	Date Of Test

8 FCC Rules and Regulations Part 2 §2.202: Added Necessary Bandwidth and Emission Bandwidth

806-809, 809-821, 821-824, 851-854, 854-866, 866-869 MHz SMR Trunked

Calculation:

Data rate in bps (R) = 19,200

Deviation of carrier (D) = 3900 Hz

Number of state in each symbol (S) = 4

K = 0.415

$B_n = [R/\log_2(4) + 2(D)(K)] = 12.8 \text{ kHz}$

Emission designator: 12K8F9W

9 Conclusion

The data in this measurement report shows that the **M/A-COM, Inc. Model M7200 Series OpenSky Mobile Radio; FCC ID: BV8M7200, IC: 3670A-M7200**, complies with all the applicable requirements of Parts 90 and 2 of the FCC Rules, and Industry Canada RSS-119, and meets the requirements of a Class 2 Permissive Change.