Engineering and Testing for EMC and Safety Compliance

TYPE CERTIFICATION REPORT

M/A-COM, Inc.
221 Jefferson Ridge Parkway
Lynchburg, VA 28061
Daryl Popowitch
Phone: (434) 455-9527
E-Mail: Popowitda@tycoelectronics.com

MODEL: EDACS D3100
800 MHz Data Modem
TR-0037

FCC ID: OWDTR-0037-E
IC: 36363B-0037

December 1, 2004

STANDARDS REFERENCED FOR THIS REPORT	
PART 2: 2003	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
PART 15: 2003	RADIO FREQUENCY DEVICES - §15.109: RADIATED EMISSIONS LIMITS
PART 22: 2003	PUBLIC MOBILE SERVICES
PART 74: 2003	EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES
PART 90: 2003	PRIVATE LAND PORTABLE RADIO SERVICES
ANSI C63.4-2003	AMERICAN NATIONAL STANDARD FOR METHODS OF MEASUREMENT OF RADIO NOISE EMISSIONS FROM LOW –VOLTAGE ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9 KHZ – 40 GHZ
ANSI/TIA/EIA603- 2002	LAND PORTABLE FM OR PM COMMUNICATIONS EQUIPMENT – MEASUREMENT AND PERFORMANCE STANDARDS
ANSI/TIA/EIA –102.CAAA; 2002	DIGITAL C4FM/CQPSK TRANSCEIVER MEASUREMENT METHODS
RSS-119; Issue 6; 2000	LAND PORTABLE AND FIXED RADIO TRANSMITTERS AND RECEIVERS 27.41 TO 960.0 MHZ
ICES-003: 1997	SPECTRUM MANAGEMENT; INTERFERENCE-CAUSING EQUIPMENT STANDARD – DIGITAL APPARATUS

Frequency Range	Maximum Measured Output Power (W) Conducted	Measured Frequency Tolerance (ppm)	Emission Designator
806-824 MHz	3.05	0.6	14K2F1D (2 level WB 9600)
806-824 MHz	3.05	0.6	13K4F1D (2 level NPSPAC 9600)

REPORT PREPARED BY TEST ENGINEER: DAN BIGGS

Document Number: 2004178/ QRTL04-278

TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF TABLES

TABLE OF PLOTS

TABLE OF APPENDICES

TABLE OF PHOTOGRAPHS

1 GENERAL INFORMATION

The following Type Certification 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 **EDACS D3100 800 MHz Mobile Data Modem; FCC ID: OWDTR-0037-E**. 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 FCC Rules and Regulations CFR 47, Industry Canada RSS-119, and ANSI C63.4 Methods of Measurement of Radio Noise Emissions, 2003. The instrumentation utilized for the measurements conforms to the ANSI C63.4 standard for EMI and Field Strength Instrumentation. 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 dated March 3, 1994, submitted to and approved by the Federal Communications Commission to perform AC line conducted and radiated emissions testing (ANSI C63.4 2003).

1.2 Related Submittal(s)/Grant(s)

N/A

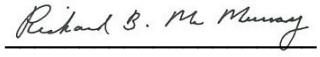
2 CONFORMANCE STATEMENT

STANDARDS REFERENCED FOR THIS REPORT	
PART 2: 2003	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
PART 15: 2003	RADIO FREQUENCY DEVICES - §15.109: RADIATED EMISSIONS LIMITS
PART 22: 2003	PUBLIC MOBILE SERVICES
PART 74: 2003	EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES
PART 90: 2003	PRIVATE LAND PORTABLE RADIO SERVICES
ANSI C63.4-2003	AMERICAN NATIONAL STANDARD FOR METHODS OF MEASUREMENT OF RADIO NOISE EMISSIONS FROM LOW –VOLTAGE ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE OF 9 KHZ – 40 GHZ
ANSI/TIA/EIA603- 2002	LAND PORTABLE FM OR PM COMMUNICATIONS EQUIPMENT – MEASUREMENT AND PERFORMANCE STANDARDS
ANSI/TIA/EIA –102.CAAA; 2002	DIGITAL C4FM/CQPSK TRANSCEIVER MEASUREMENT METHODS
RSS-119; Issue 6; 2000	LAND PORTABLE AND FIXED RADIO TRANSMITTERS AND RECEIVERS 27.41 TO 960.0 MHZ
ICES-003: 1997	SPECTRUM MANAGEMENT; INTERFERENCE-CAUSING EQUIPMENT STANDARD – DIGITAL APPARATUS

Frequency Range	Maximum Measured Output Power (W) Conducted	Measured Frequency Tolerance (ppm)	Emission Designator
806-824 MHz	3.05	0.6	14K2F1D (2 level WB 9600)
806-824 MHz	3.05	0.6	13K4F1D (2 level NPSPAC 9600)

We, the undersigned, hereby declare that the equipment tested and referenced in this report conforms to the identified standard(s) as described in this attached test record. No modifications were made to the equipment during testing in order to achieve compliance with these standards. The test results relate only to the item that was tested.

Furthermore, there was no deviation from, additions to or exclusions from the above standards for Certification methodology.

Signature:  Date: November 30, 2004

Typed/Printed Name: Rick McMurray Position: Vice President of Operations

Signature:  Date: November 30, 2004

Typed/Printed Name: Daniel Biggs Position: Test Engineer

3 TESTED SYSTEM DETAILS

The test sample was received on October 26, 2004. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test, as applicable.

TABLE 3-1: EQUIPMENT UNDER TEST (EUT)

Part	Manufacturer	Model	PN/SN	FCC ID	RTL Bar Code
800 MHz Data Modem	M/A-COM, Inc.	D3100	9961470	OWDTR-0037-E	16216
Control Head	M/A-COM, Inc.	Orion	KRY1011632/12	N/A	16220
Interface box	M/A-COM, Inc.	N/A	N/A	N/A	16218
Mobile microphone	M/A-COM, Inc.	N/A	MC101616V1	N/A	16217
Antenna	M/A-COM, Inc.	¼ wave monopole	AN102800V1	N/A	16219
Antenna	M/A-COM, Inc.	Yagi	AN103358V1	N/A	16214

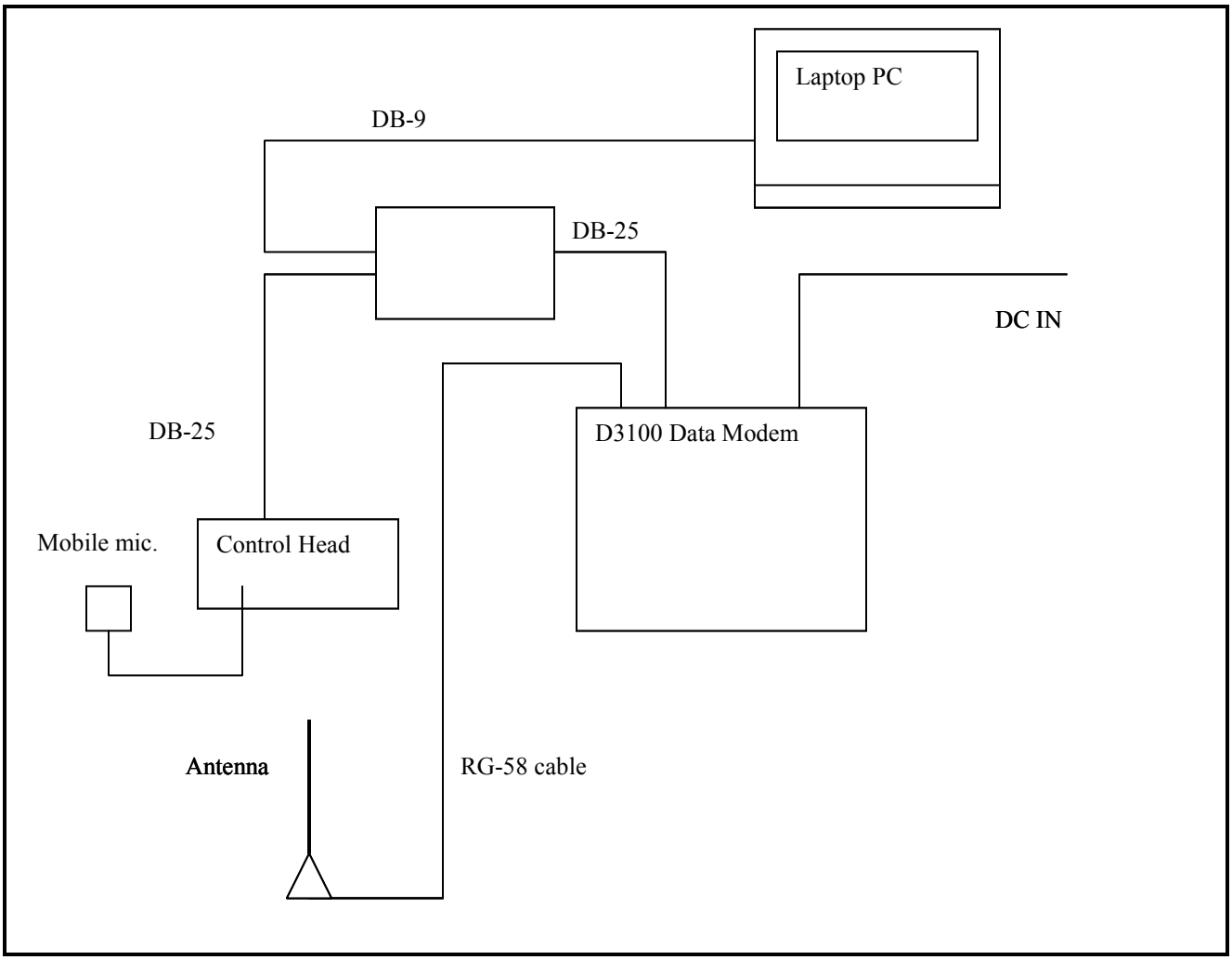


FIGURE 3-1: CONFIGURATION OF TESTED SYSTEM

4 FCC RULES AND REGULATIONS PART 2 §2.1033(C)(8) VOLTAGES AND CURRENTS THROUGH THE FINAL AMPLIFYING STAGE

Nominal DC Voltage: 6.5 VDC
Current: 1.3 AMPS

5 FCC RULES AND REGULATIONS PART 2 §2.1046 (A): RF POWER OUTPUT: CONDUCTED; RSS-119 §6.2: OUTPUT POWER TEST

5.1 Test Procedure

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

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

5.2 Test Data

The following channels (in MHz) were tested: 806.0, 816.0, 820.9875, 821.0, and 824.0.

TABLE 5-1: RF POWER OUTPUT (HIGH POWER): CARRIER OUTPUT POWER (UNMODULATED)

Channel	Frequency (MHz)	RF Power Measured (Watt)*
1	806.0	3.03
2	816.0	3.05
3	820.9875	3.02
4	821.0	3.01
5	824.0	3.02

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

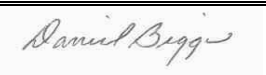
TABLE 5-2: RF POWER OUTPUT (RATED POWER)

Rated Power (W)
3

TABLE 5-3: TEST EQUIPMENT USED FOR TESTING RF POWER OUTPUT - CONDUCTED

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901184/901186	Agilent	E4416A/E9323A	Power Meter / Sensor	GB41050573/US420.52510380	08/02/05

TEST PERSONNEL:

DANIEL BIGGS		NOVEMBER 17, 2004
TEST TECHNICIAN/ENGINEER	SIGNATURE	DATE OF TEST

6 FCC RULES AND REGULATIONS PART 2 §2.1051: SPURIOUS EMISSIONS AT ANTENNA TERMINALS; RSS-119 §6.3: UNWANTED EMISSIONS

6.1 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.

Digital Modulation: Modulated to its maximum extent using a pseudo random data sequence – 9600 bps.

6.2 Test Data

Frequency range of measurement per Part 2.1057: 9 kHz to 10 x Fc

Limits: (43+10xLOG P(W))

The following channels (in MHz) were investigated: 806.0, 816.0, 820.9875, 821.0 and 824.0. The worse case (unwanted emissions) channels are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

TABLE 6-1: CONDUCTED SPURIOUS EMISSIONS CHANNEL 1 – 806.0 MHZ

(806.0 MHz); 25 kHz channel spacing; Conducted Power = 3.03 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1612	86.26	47.81	-38.45
2418	78.39	47.81	-30.58
3224	85.80	47.81	-37.99
4030	81.49	47.81	-33.68
4836	75.47	47.81	-27.66
5642	80.30	47.81	-32.49
6448	84.25	47.81	-36.44
7254	94.62	47.81	-46.81
8060	97.27	47.81	-49.46

TABLE 6-2: CONDUCTED SPURIOUS EMISSIONS CHANNEL 2 – 816.0 MHZ

(816.0 MHz); 25 kHz channel spacing; Conducted Power = 3.05 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1632	90.37	47.84	-42.53
2448	74.49	47.84	-26.65
3264	89.03	47.84	-41.19
4080	85.66	47.84	-37.82
4896	78.55	47.84	-30.71
5712	78.24	47.84	-30.40
6528	87.99	47.84	-40.15
7344	93.00	47.84	-45.16
8160	95.48	47.84	-47.64

TABLE 6-3: CONDUCTED SPURIOUS EMISSIONS CHANNEL 3 – 820.9875 MHZ

(820.9875 MHz); 25 kHz channel spacing; Conducted Power = 3.02 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1641.975	90.04	47.80	-42.24
2462.963	72.69	47.80	-24.89
3283.95	86.67	47.80	-38.87
4104.938	83.46	47.80	-35.66
4925.925	79.11	47.80	-31.31
5746.913	79.79	47.80	-31.99
6567.9	89.79	47.80	-41.99
7388.888	89.77	47.80	-41.97
8209.875	87.76	47.80	-39.96

TABLE 6-4: CONDUCTED SPURIOUS EMISSIONS CHANNEL 4 – 821.0 MHZ

(821.0 MHz); 12.5 kHz channel spacing; Conducted Power = 3.01 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1642	90.31	47.79	-42.51
2463	71.22	47.79	-23.42
3284	87.18	47.79	-39.38
4105	80.40	47.79	-32.60
4926	77.48	47.79	-29.68
5747	79.35	47.79	-31.55
6568	90.42	47.79	-42.62
7389	89.28	47.79	-41.48
8210	86.92	47.79	-39.12

TABLE 6-5: CONDUCTED SPURIOUS EMISSIONS CHANNEL 5 – 824.0 MHZ

(824.0 MHz); 12.5 kHz channel spacing; Conducted Power = 3.02 W

Frequency (MHz)	Level (dBc)	Limit (dBc)	Margin(dB)
1648	88.70	47.80	-40.90
2472	71.91	47.80	-24.11
3296	84.84	47.80	-37.04
4120	80.23	47.80	-32.43
4944	75.79	47.80	-27.99
5768	78.83	47.80	-31.03
6592	88.83	47.80	-41.03
7416	90.63	47.80	-42.83
8240	86.63	47.80	-38.83

TABLE 6-6: TEST EQUIPMENT USED FOR TESTING CONDUCTED SPURIOUS EMISSIONS

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901215	Hewlett Packard	8596EM	EMC Analyzer (9 kHz-12.8 GHz)	3826A00144	09/08/05
901057	Hewlett Packard	3336B	Synthesizer/Level Generator	2514A02585	09/08/05
901054	Hewlett Packard	HP 3586B	Selective Level Meter	1928A01892	09/08/05

TEST PERSONNEL:

DANIEL BIGGS		NOVEMBER 18, 2004
TEST TECHNICIAN/ENGINEER	SIGNATURE	DATE OF TEST

7 FCC RULES AND REGULATIONS PART 2 §2.1053 (A): FIELD STRENGTH OF SPURIOUS RADIATION; RSS-119 §6.3: UNWANTED EMISSIONS

7.1 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.

Digital Modulation: Modulated to its maximum extent using a pseudo random data sequence – 9600-bps.

The spurious emissions levels were measured and the device under test was replaced by a substitution antenna connected to a signal generator. This 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.

7.2 Test Data

7.2.1 CFR 47 PART 90.210 REQUIREMENTS

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 7-1: FIELD STRENGTH OF SPURIOUS RADIATION CHANNEL 2 – 816.0 MHZ

Limit = 43 + 10 Log P = 47.84 dBc
Conducted Power = 34.85 dBm = 3.05 W

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1632	39.70	-57.4	1.6	4.90	89.0	-41.1
2448	39.50	-44.3	2.3	6.80	74.6	-26.8
3264	33.30	-58.1	2.2	7.50	87.7	-39.8
4080	30.00	-59.0	2.5	7.30	89.1	-41.2
4896	30.20	-54.9	3.0	7.80	84.9	-37.1
5712	28.10	-54.5	3.1	8.40	84.0	-36.2
6528	31.70	-54.7	3.3	8.90	83.9	-36.1
7344	31.80	-51.2	3.0	8.70	80.4	-32.5
8160	29.50	-51.7	3.4	7.60	82.4	-34.5

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

TABLE 7-2: FIELD STRENGTH OF SPURIOUS RADIATION CHANNEL 5 – 824 MHZ

Limit = 43 + 10 Log P = 47.80 dBc
Conducted Power = 34.80 dBm = 3.02 W

Frequency (MHz)	Spectrum Analyzer Level (dBuV)	Signal Generator Level (dBm)	Cable Loss* (dB)	Antenna Gain (dBd)	Corrected Signal Generator Level (dBc)	Margin (dB)
1648	38.60	-61.3	1.5	4.90	92.7	-44.9
2472	42.50	-38.0	2.1	6.80	68.1	-20.3
3296	35.50	-54.6	2.3	7.50	84.2	-36.4
4120	29.30	-59.2	2.7	7.40	89.3	-41.5
4944	28.30	-57.9	3.2	7.70	88.2	-40.4
5768	30.40	-52.6	3.4	8.40	82.4	-34.6
6592	31.70	-51.5	3.2	8.80	80.7	-32.9
7416	31.10	-49.0	3.5	8.80	78.5	-30.7
8240	29.80	-48.7	4.0	7.80	79.7	-31.9

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

TABLE 7-3: 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	09/20/05
900932	Hewlett Packard	8449B OPT H02	Preamplifier (1 - 26.5 GHz)	3008A00505	N/A
901020	Hewlett Packard	8564E	Portable Spectrum Analyzer (9 kHz - 40 GHz)	3943A01719	08/11/05
900917	Hewlett Packard	8648C	Synthesized Signal Generator (9 kHz - 3200 MHz)	3537A01741	07/06/05
900928	Hewlett Packard	HP 83752A	Synthesized Sweeper (.01 - 20 GHz)	3610A00866	09/05/05

TEST PERSONNEL:

DANIEL BIGGS		NOVEMBER 29, 2004
TEST TECHNICIAN/ENGINEER	SIGNATURE	DATE OF TEST

8 FCC RULES AND REGULATIONS PART 2 §2.1049 (C) (1): OCCUPIED BANDWIDTH; RSS-119 §6.4: EMISSIONS MASKS

OCCUPIED BANDWIDTH - COMPLIANCE WITH THE EMISSION MASKS

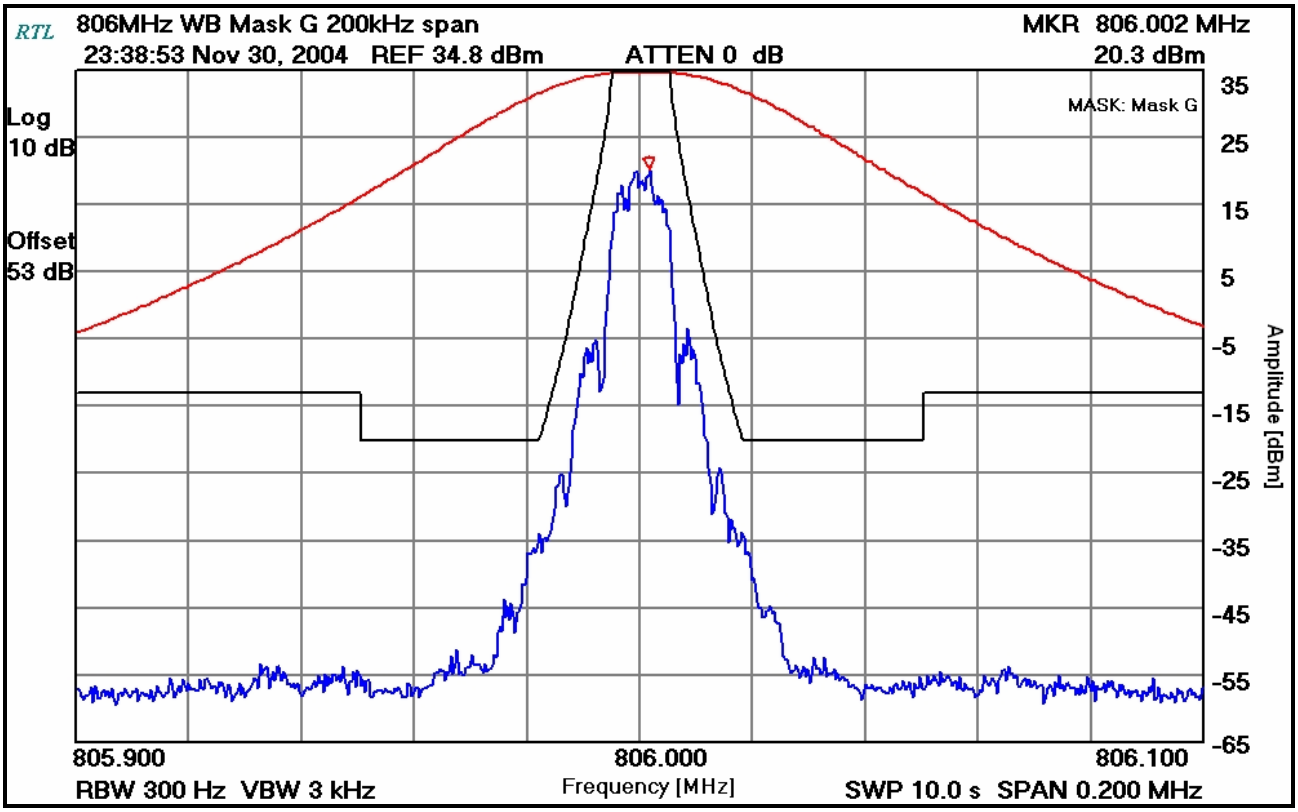
8.1 Test Procedure

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

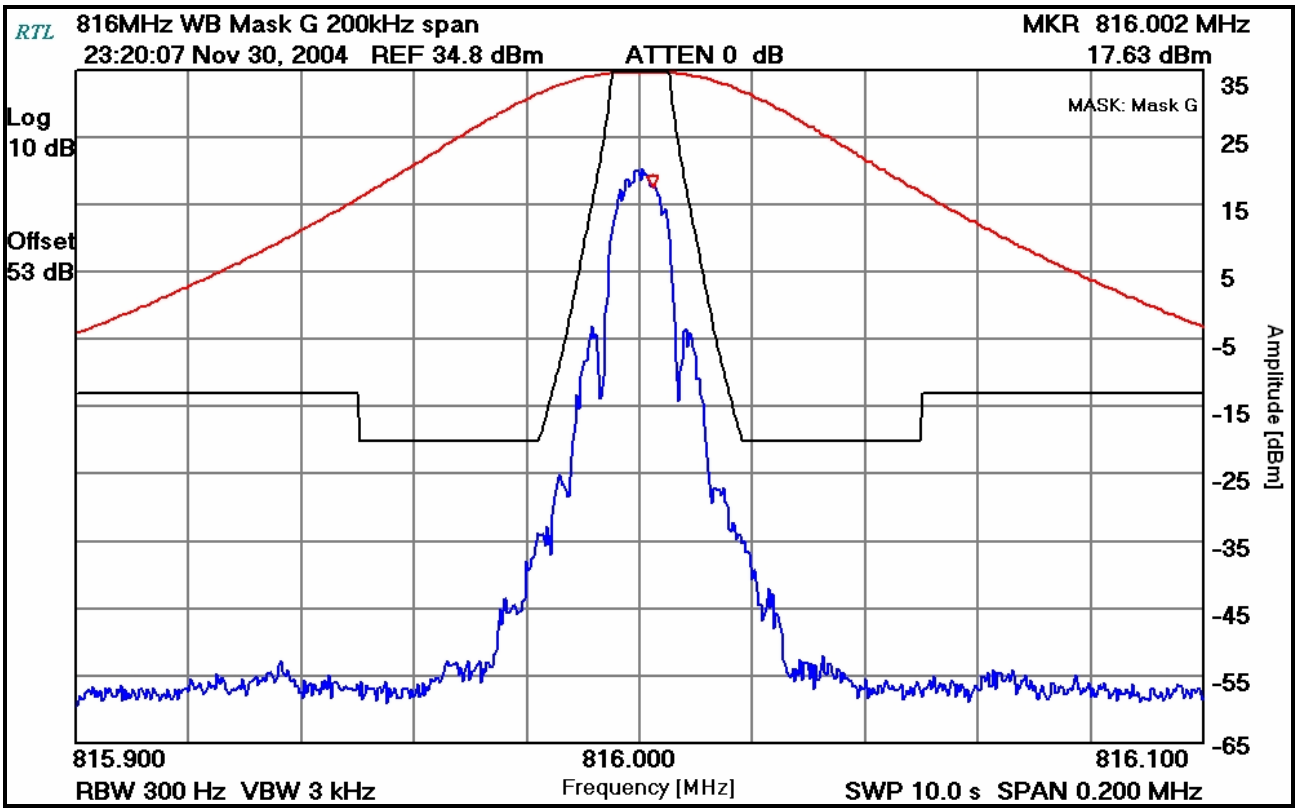
Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 9600-bps.

8.2 Test Data

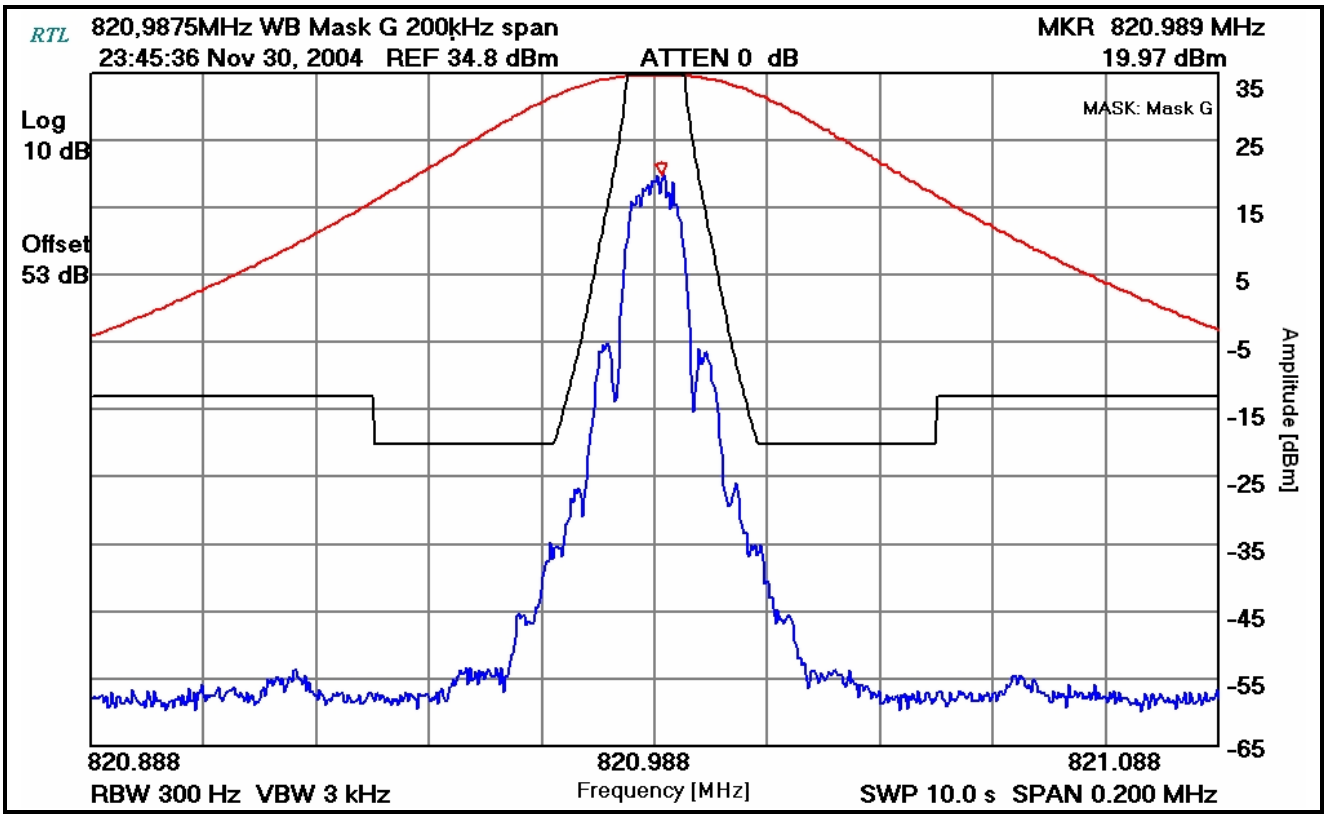
PLOT 8-1: OCCUPIED BANDWIDTH – 806.0 MHZ; 2-LEVEL FSK; WIDE BAND; 9600; (MASK G)



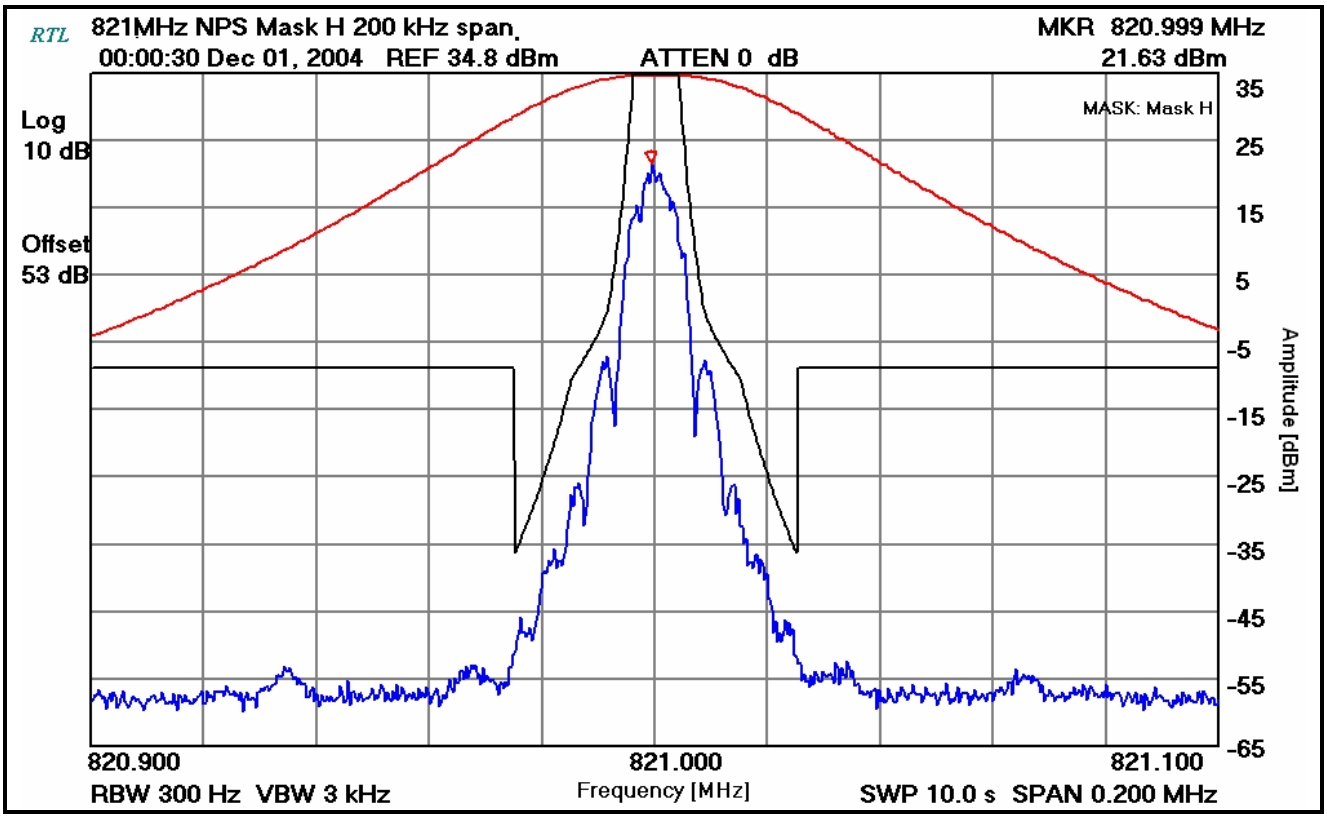
PLOT 8-2: OCCUPIED BANDWIDTH – 816.0 MHZ; 2-LEVEL FSK; WIDE BAND; 9600; (MASK G)



PLOT 8-3: OCCUPIED BANDWIDTH – 820.9875 MHZ; 2-LEVEL FSK; WIDE BAND; 9600; (MASK G)



PLOT 8-4: OCCUPIED BANDWIDTH – 821.0 MHZ; 2-LEVEL FSK; NPSPAC; 9600; (MASK H)



PLOT 8-5: OCCUPIED BANDWIDTH – 824.0 MHZ; 2-LEVEL FSK; NPSPAC; 9600; (MASK H)

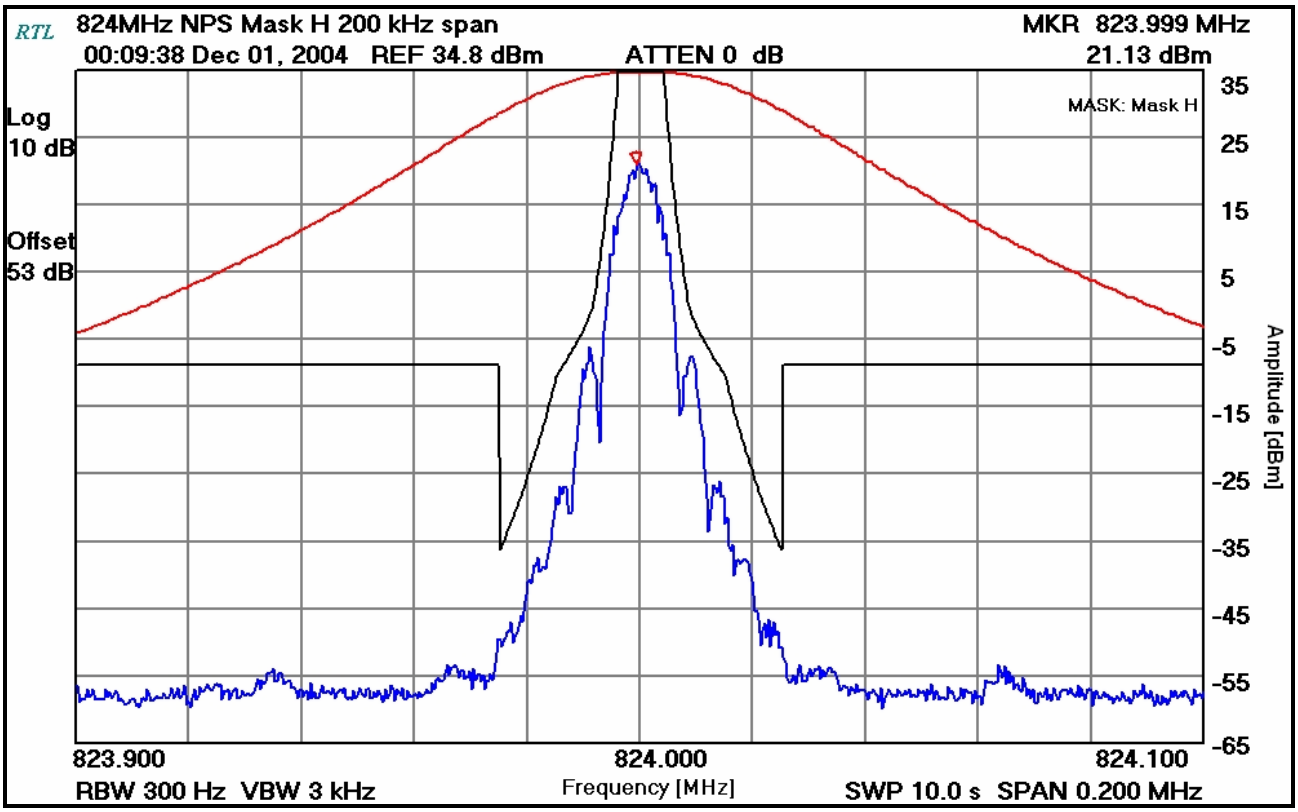


TABLE 8-1: TEST EQUIPMENT USED FOR TESTING OCCUPIED BANDWIDTH

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901215	Hewlett Packard	8596EM	EMC Analyzer (9 kHz-12.8 GHz)	3826A00144	09/08/05

TEST PERSONNEL:

DANIEL BIGGS	Daniel Biggs	DECEMBER 1, 2004
TEST TECHNICIAN/ENGINEER	SIGNATURE	DATE OF TEST

9 FCC RULES AND REGULATION PART 2 §2.1055: FREQUENCY STABILITY; RSS-119 §7: FREQUENCY STABILITY

9.1 Test Procedure

ANSI/TIA/EIA-603-2002, section 2.2.2

The carrier frequency stability is the ability of the transmitter to maintain an assigned carrier frequency.

The EUT was evaluated over the temperature range -30°C to +60°C.

The temperature was initially set to -30°C and a 2-hour period was observed for stabilization of the EUT. The frequency stability was measured within one minute after application of primary power to the transmitter. The temperature was raised at intervals of 10 degrees centigrade through the range. A ½ hour period was observed to stabilize the EUT at each measurement step and the frequency stability was measured within one minute after application of primary power to the transmitter. Additionally, the power supply voltage of the EUT was varied +/-15% nominal input voltage.

The worst-case test data are shown below in Table 9-1 and Table 9-3.

9.2 Test Data

9.2.1 FREQUENCY STABILITY/TEMPERATURE VARIATION

Limit is 2.5 ppm for a mobile device over 2 W from 806-821 MHz and 1.5 ppm for mobile device over 2 W from 821-824 MHz. Channel 5 (821.0 MHz) was tested at the 1.5 ppm limit. Worst-case deviation was found to be 0.6 ppm.

PLOT 9-1: TEMPERATURE FREQUENCY STABILITY

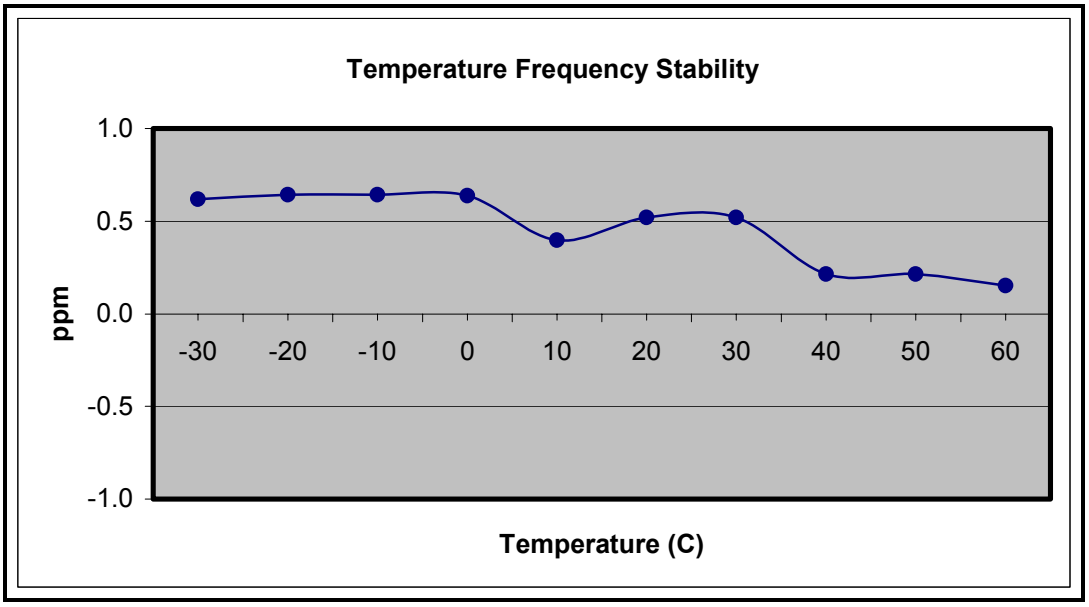


TABLE 9-1: TEMPERATURE FREQUENCY STABILITY CHANNEL 4, 821.0 MHZ

Temperature C	Measured Frequency (MHz)	ppm
-30	821.000505	0.6
-20	821.000525	0.6
-10	821.000525	0.6
0	821.000520	0.6
10	821.000325	0.4
20	821.000425	0.5
30	821.000425	0.5
40	821.000175	0.2
50	821.000175	0.2
60	821.000125	0.2

TABLE 9-2: TEST EQUIPMENT USED FOR TESTING FREQUENCY STABILITY/TEMPERATURE

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
900946	Tenney Engineering, Inc.	TH65	Temperature Chamber with Humidity	11380	02/03/05
901020	Hewlett Packard	8564E	Portable Spectrum Analyzer (9 kHz - 40 GHz)	3943A01719	08/11/05

TEST PERSONNEL:

DANIEL BIGGS		NOVEMBER 23, 2004
TEST TECHNICIAN/ENGINEER	SIGNATURE	DATE OF TEST

9.2.2 FREQUENCY STABILITY/VOLTAGE VARIATION

Worst-case variation is .4 ppm.

PLOT 9-2: VOLTAGE FREQUENCY STABILITY

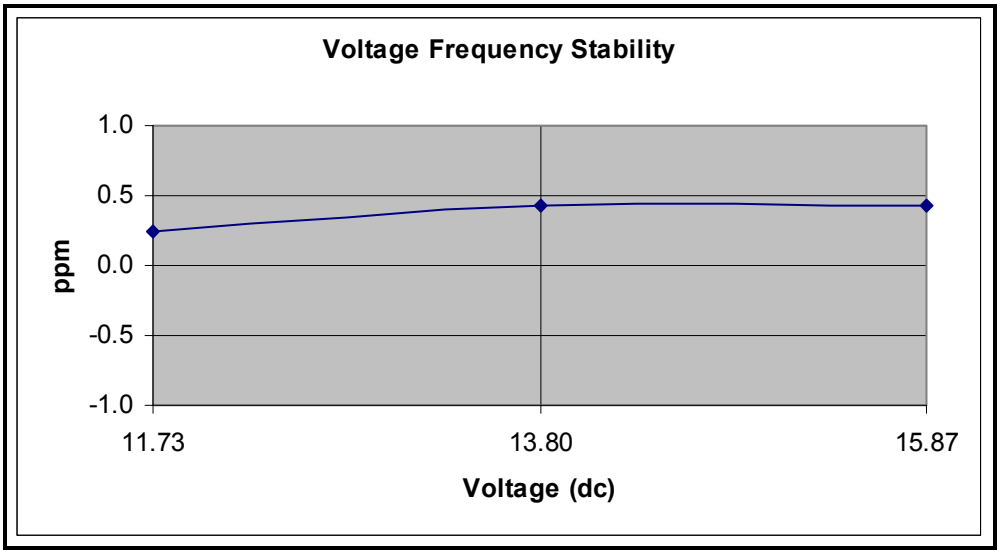


TABLE 9-3: FREQUENCY STABILITY/VOLTAGE VARIATION CHANNEL 4, 821.0 MHZ

Voltage (VDC)	Measured Frequency (MHz)	ppm
11.73	821.000200	0.2
13.8	821.000350	0.4
15.87	821.000350	0.4

TABLE 9-4: TEST EQUIPMENT USED FOR TESTING FREQUENCY STABILITY/VOLTAGE

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901020	Hewlett Packard	8564E	Portable Spectrum Analyzer (9 kHz - 40 GHz)	3943A01719	08/11/05

TEST PERSONNEL:

DANIEL BIGGS	Daniel Biggs	NOVEMBER 29, 2004
TEST TECHNICIAN/ENGINEER	SIGNATURE	DATE OF TEST

10 FCC RULES AND REGULATIONS PART 2 §2.202: NECESSARY BANDWIDTH AND EMISSION BANDWIDTH

Type of Emission: F1D

Necessary Bandwidth and Emission Bandwidth:

Digital voice and data (9600W) – 25 kHz channel spacing
Calculation:
Data rate in bps (R) = 9600
Peak deviation of carrier (D) = 3000
2D/R = 0.625
Bn = 3.86D + 0.27R = 3.86(3000) + 0.27(9600) = 14.172 kHz
Emission designator: 14K2F1D

Digital voice and data (9600W) – 12.5 kHz channel spacing
Calculation:
Data rate in bps (R) = 9600
Peak deviation of carrier (D) = 2800
2D/R = 0.583
Bn = 3.86D + 0.27R = 3.86(2800) + 0.27(9600) = 13.400 kHz
Emission designator: 13K4F1D

11 CONCLUSION

The data in this measurement report shows that the **M/A-COM, Inc**. Model **D3100 800 MHz Data Modem; FCC ID: OWDTR-0037-E,** complies with all the requirements of Parts 90, 74, 22, 15 and 2 of the FCC Rules, and Industry Canada RSS-119, Issue 6, 2000.