FCC CFR47 PART 15 SUBPART C
CLASS II PERMISSIVE CHANGE
TEST REPORT

FOR

802.11 a/b/g COMBO ACCESS POINT

MODEL NUMBER: MOBILITY POINT 100

FCC ID: QZE100

REPORT NUMBER: 04U2526-2

ISSUE DATE: MAY 17, 2004

Prepared for
TRAPEZE NETWORKS INCORPORATED
5753 WEST LAS POSITAS BOLEVARD
PLEASANTON, CALIFORNIA 94588
U.S.A

Prepared by
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1. TEST RESULT CERTIFICATION

COMPANY NAME: TRAPEZE NETWORKS, INC.
5753 W. LAS POSITAS BLVD.
PLEASANTON, CA 94588, U.S.A

EUT DESCRIPTION: 802.11 a/b/g COMBO ACCESS POINT

MODEL: MOBILITY POINT 100

DATE TESTED: MARCH 15 – MAY 17, 2004

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15 SUBPART C	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Approved & Released For CCS By:

MIKE HECROTTE
ENGINEERING MANAGER
COMPLIANCE CERTIFICATION SERVICES

Tested By:

NEELESH RAJ
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

2. EUT DESCRIPTION/CLASS II CHANGE

The EUT is an 802.11a/b/g transceiver operating in the 2400-2483.5 MHz band.

The change is to add 3 different external antennas, with maximum gains of 6, 7, and 10 dBi.

The transmitter has a maximum peak conducted output power as follows for the 6 dBi Sector Panel Antenna:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	18.89	77.45
2412 - 2462	802.11g	17.49	56.10

The transmitter has a maximum peak conducted output power as follows for the 7 dBi Sector Panel Antenna:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	19.10	81.28
2412 - 2462	802.11g	17.49	56.10

The transmitter has a maximum peak conducted output power as follows for the 10 dBi Directional Panel Antenna:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	19.10	81.28
2412 - 2462	802.11g	17.49	56.10

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4/2001, FCC CFR 47 Part 2 and FCC CFR 47 Part 15.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

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LAB CODE:200065-0

No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government.

5. CALIBRATION AND UNCERTAINTY

5.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

5.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

5.3. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**Cal Due**
Spectrum Analyzer	Agilent	E4446A	MY43360112	1/13/2005
Spectrum Analyzer	Agilent	E4440A	US41421507	5/8/04
Peak / Average Power Sensor	Agilent	E9327A	US40440755	11/7/04
Peak Power Meter	Agilent	E4416A	GB41291160	11/7/04
Power Sensor, 100 kHz ~ 4.2 GHz	HP	8482A	2349A08568	7/15/04
Power Meter	HP	436A	2709A29209	7/15/04
EMI Test Receiver	R & S	ESHS 20	827129/006	7/17/04
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	8379443	10/13/04
Site A Line Stabilizer / Conditioner	Tripplite	LC-1800a	A0051681	CNR
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-2	2023	10/13/04
EMI Receiver, 9 kHz ~ 2.9 GHz	HP	8542E	3942A00286	11/21/04
RF Filter Section	HP	85420E	3705A00256	11/21/04
30MHz---- 2Ghz	Sunol Sciences	JB1 Antenna	A121003	12/22/04
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	2/4/05
Preamplifier, 1 ~ 26 GHz	Miteq	NSP10023988	646456	4/25/04
10dB Attenuator	Weinschel	56-10	k16148	N/A
2.4-2.5 GHz Reject filter	Micro-Tronics	BRM50702	1	N/A

6. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
2.4 GHz 6 dBi 180 DEGREE SECTOR PANEL ANTENNA	SUPERPASS	SPDG12H	N/A	N/A
2.4 GHz 7 dBi 120 DEGREE SECTOR PANEL ANTENNA	SUPERPASS	SPDG11T	N/A	N/A
2.4 GHz 10 dBi DIRECTIONAL PANEL ANTENNA	SUPERPASS	SPLG11	N/A	N/A
REMOTE LAPTOP	IBM	TYPE2656	AK-VPV81 03/02	DoC
POWER OVER ETHERNET	LUXUL	POE-1-PORT	N/A	N/A
AC ADAPTER	PHIHONG	PSA31U-480	N/A	N/A

I/O CABLES

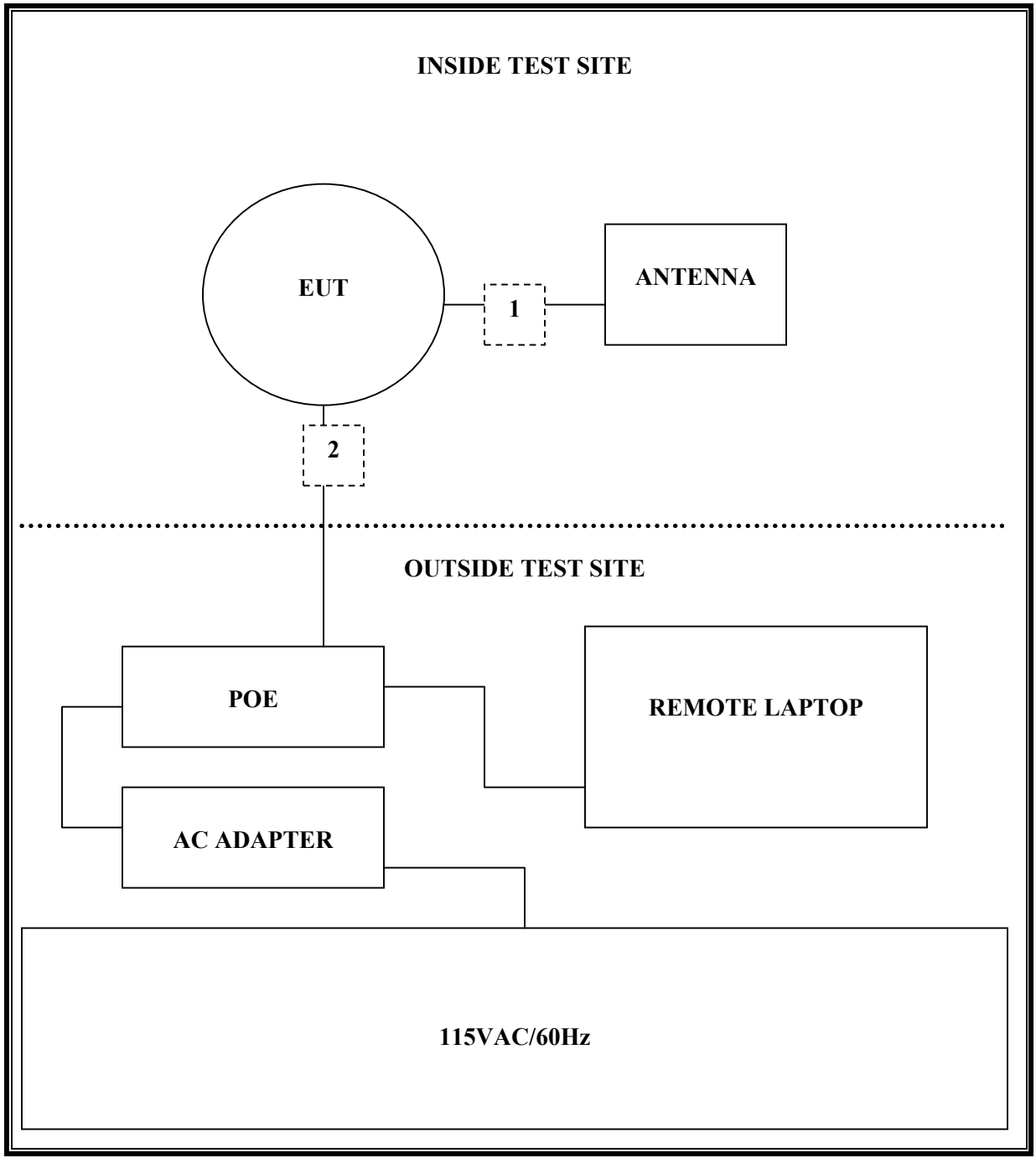
I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	RF	1	SMA	SHIELDED	0.31M	N/A
2	ETHERNET	2	RJ45	UNSHIELDED	30M	N/A

note: only one ethernet port can be used at a time

TEST SETUP

During the testing process the EUT was in continuous transmit mode. All three antennas were tested in there worst-case position "Y" (yielded highest output E.I.R.P).

SETUP DIAGRAM FOR TESTS



SETUP FOR AC LINE CONDUCTION

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
REMOTE LAPTOP	IBM	TYPE2656	AK-VPV81 03/02	DoC
POWER OVER ETHERNET	LUXUL	POE-1-PORT	N/A	N/A
AC ADAPTER	PHIHONG	PSA31U-480	N/A	N/A
2.4 GHz 10 dBi DIRECTIONAL PANEL ANTENNA	SUPERPASS	SPLG11	N/A	N/A

I/O CABLES

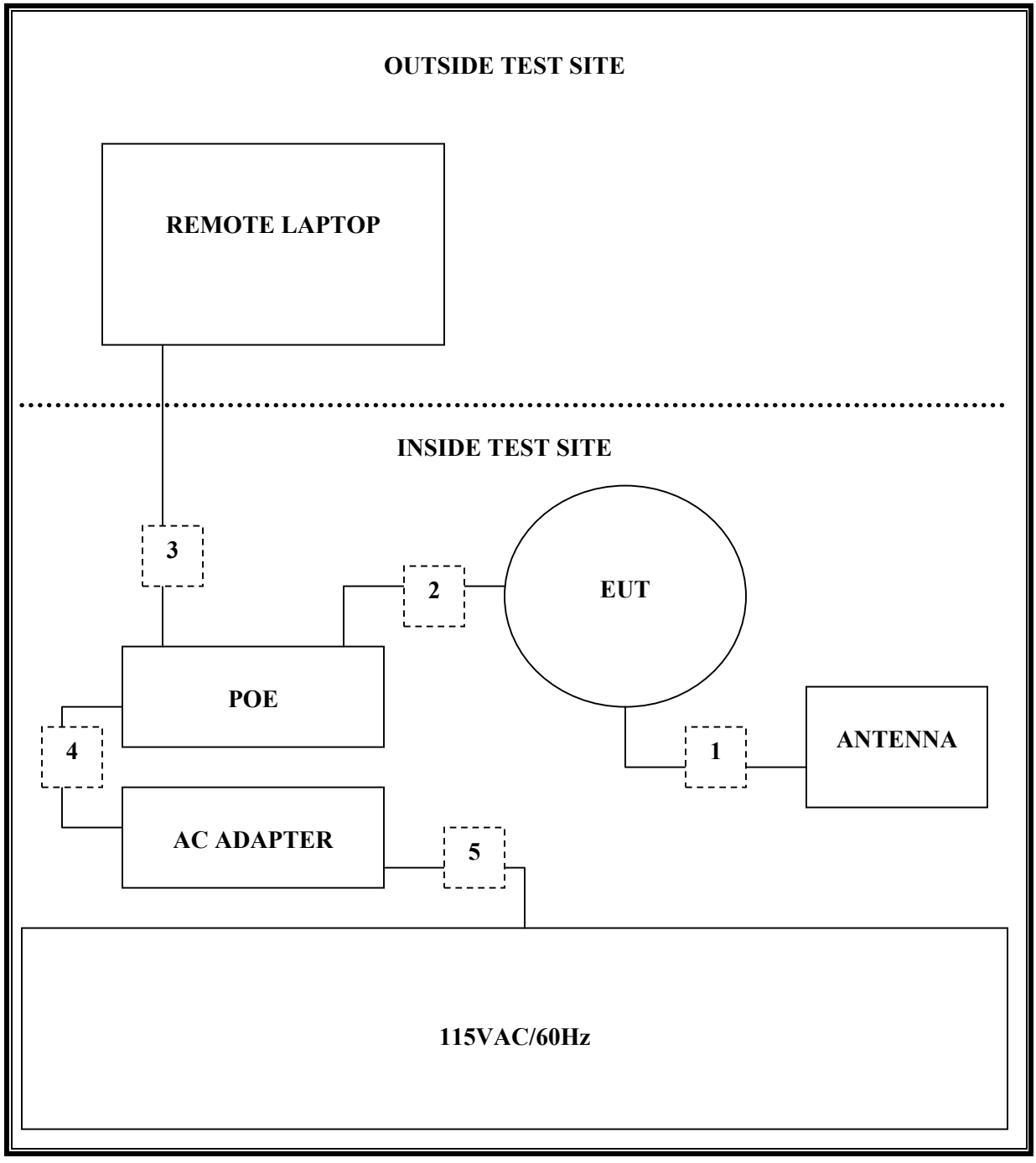
I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	RF	1	SMA	SHIELDED	0.31M	N/A
2	ETHERNET	2	RJ45	UNSHIELDED	3M	N/A
3	ETHERNET	1	RJ45	UNSHIELDED	30M	N/A
4	DC PWR	1	DC PWR	UNSHIELDED	1.86M	N/A
5	AC PWR	1	AC PWR	UNSHIELDED	1.86M	US (3 PRONG)

note: only one ethernet port can be used at a time

TEST SETUP

During the testing process the EUT was in continuous transmit mode. The 10dBi antenna was found to be worst case and all tests were done with this antenna.

SETUP DIAGRAM FOR AC LINE CONDUCTION



7. APPLICABLE LIMITS AND TEST RESULTS

7.1. 99% BANDWIDTH

LIMIT

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

No non-compliance noted:

802.11b Mode

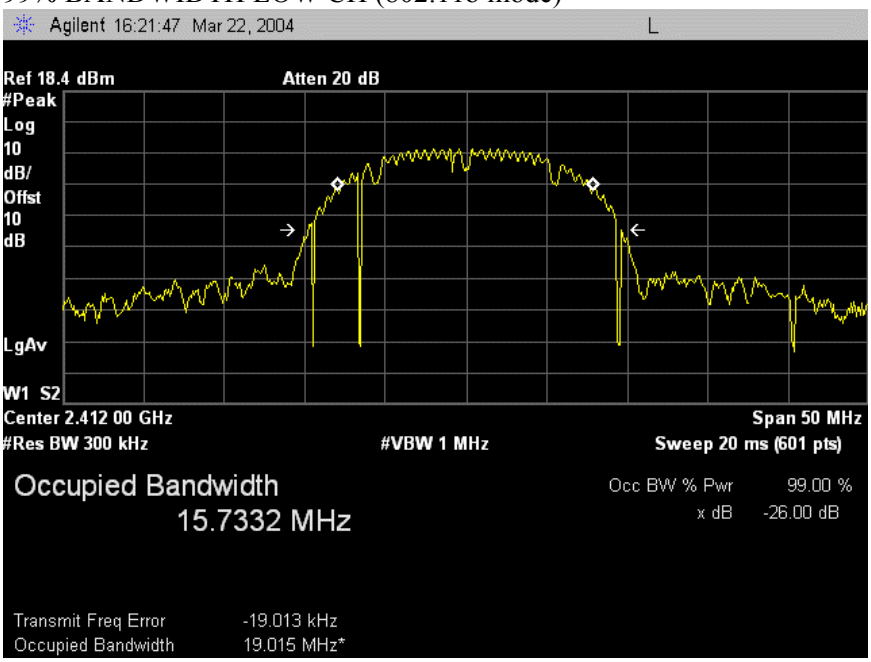
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	15.7332
Middle	2437	15.7243
High	2462	15.81

802.11g Mode

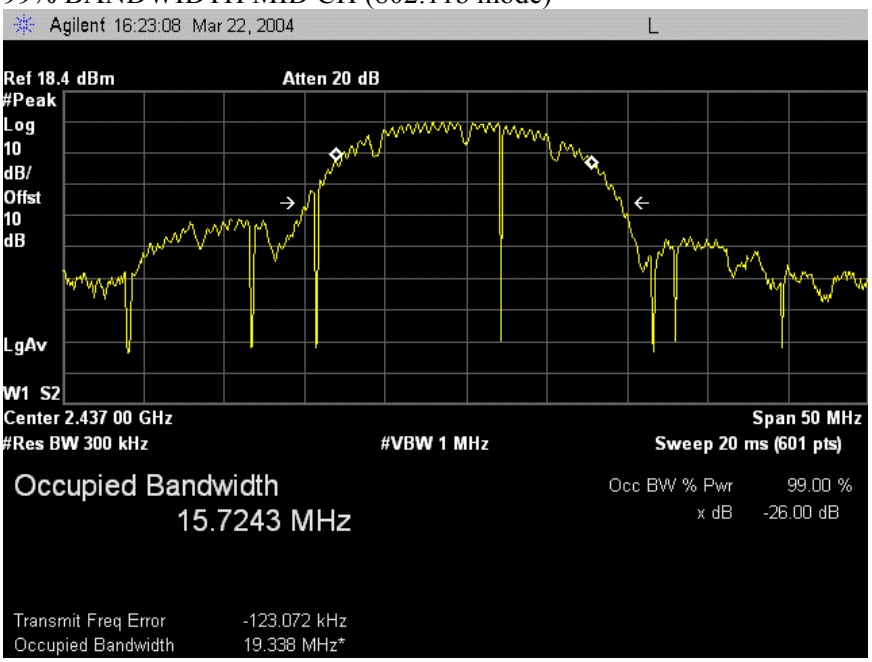
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.4584
Middle	2437	17.799
High	2462	17.5924

99% BANDWIDTH (802.11b MODE)

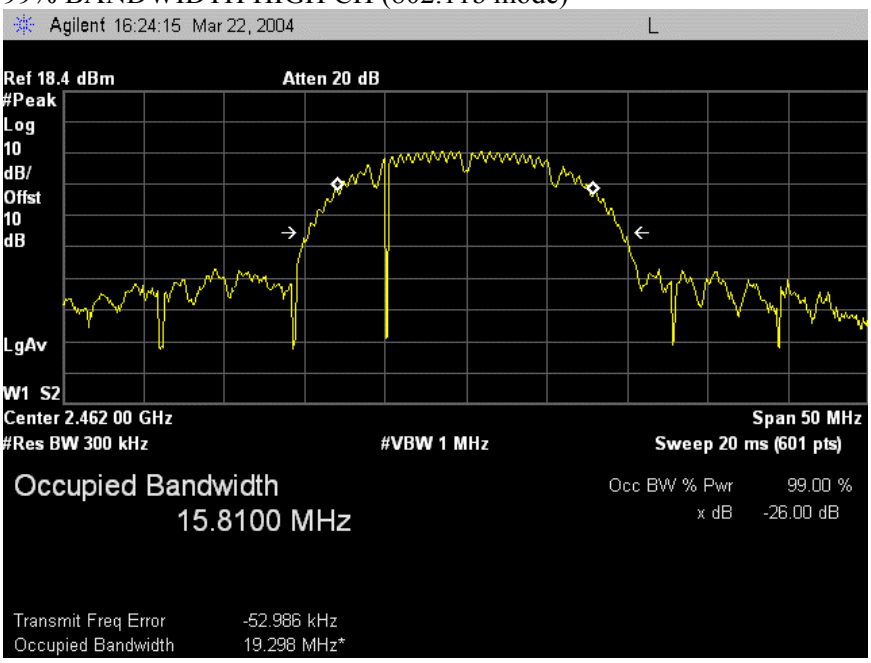
99% BANDWIDTH LOW CH (802.11b mode)



99% BANDWIDTH MID CH (802.11b mode)

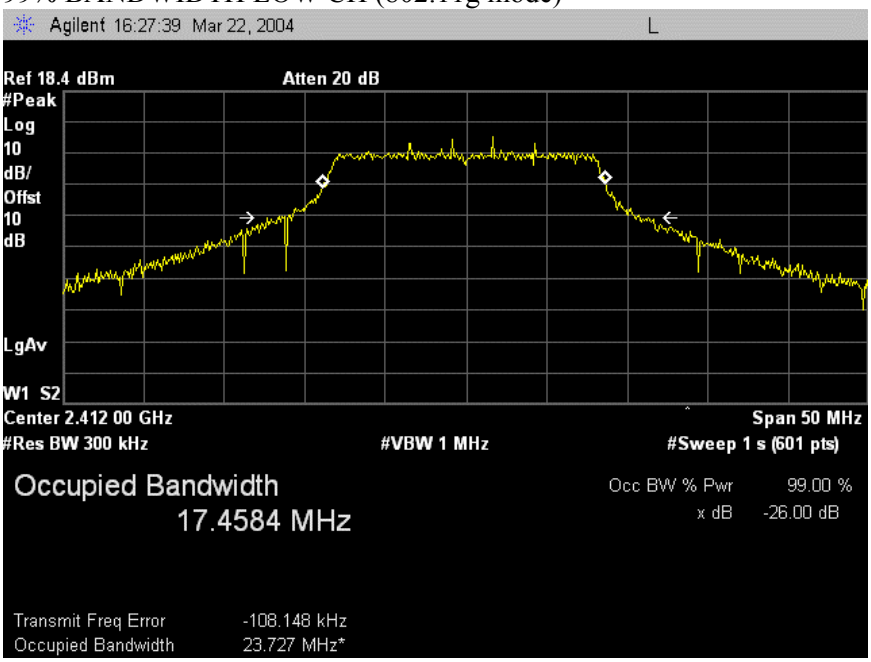


99% BANDWIDTH HIGH CH (802.11b mode)

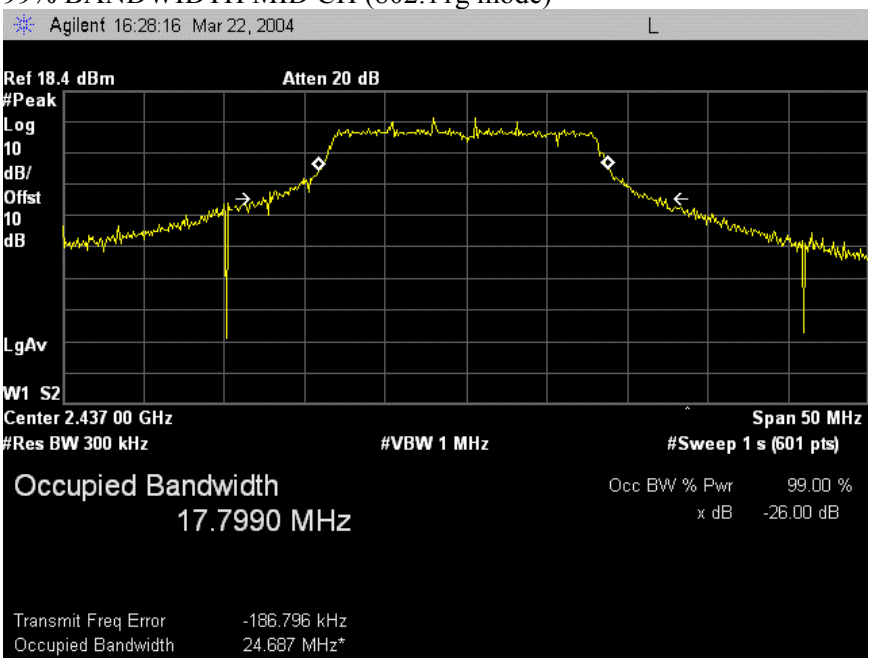


99% BANDWIDTH (802.11g MODE)

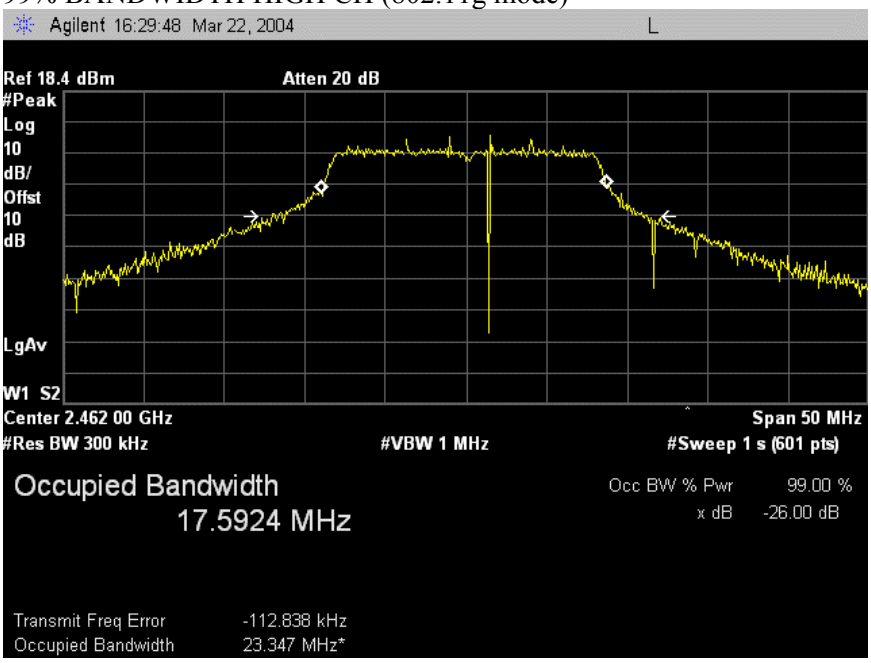
99% BANDWIDTH LOW CH (802.11g mode)



99% BANDWIDTH MID CH (802.11g mode)



99% BANDWIDTH HIGH CH (802.11g mode)



7.2. PEAK OUTPUT POWER

PEAK POWER LIMIT

§15.247 (b) The maximum peak output power of the intentional radiator shall not exceed the following:

§15.247 (b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz , and 5725-5850 MHz bands: 1 watt.

§15.247 (b) (4) Except as shown in paragraphs (b)(3) (i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer and the analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth.

RESULTS

No non-compliance noted:

The Limit is 30 dBm for the 6 dBi Sector Panel Antenna.

802.11b Mode

Channel	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	14.88	30	-15.12
Middle	2437	18.89	30	-11.11
High	2462	13.73	30	-16.27

802.11g Mode

Channel	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	14.57	30	-15.43
Middle	2437	17.49	30	-12.51
High	2462	14.15	30	-15.85

The Limit is 29 dBm for the 7 dBi Sector Panel Antenna.

802.11b Mode

Channel	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	17.76	29	-11.24
Middle	2437	19.10	29	-9.90
High	2462	11.13	29	-17.87

802.11g Mode

Channel	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	14.57	29	-14.43
Middle	2437	17.49	29	-11.51
High	2462	16.29	29	-12.71

The Limit is 26 dBm for the 10 dBi Directional Panel Antenna.

802.11b Mode

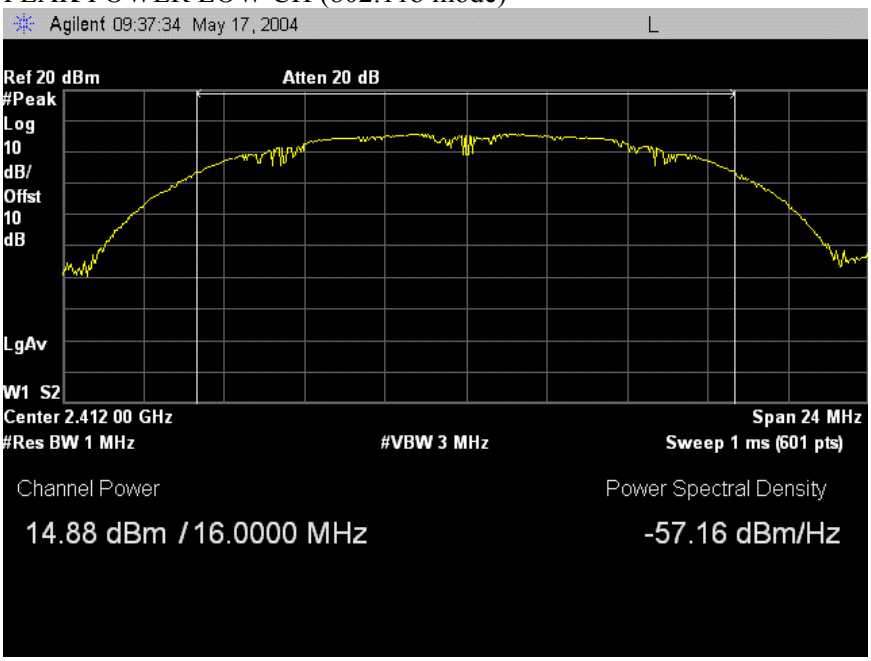
Channel	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	13.13	26	-12.87
Middle	2437	19.10	26	-6.90
High	2462	11.13	26	-14.87

802.11g Mode

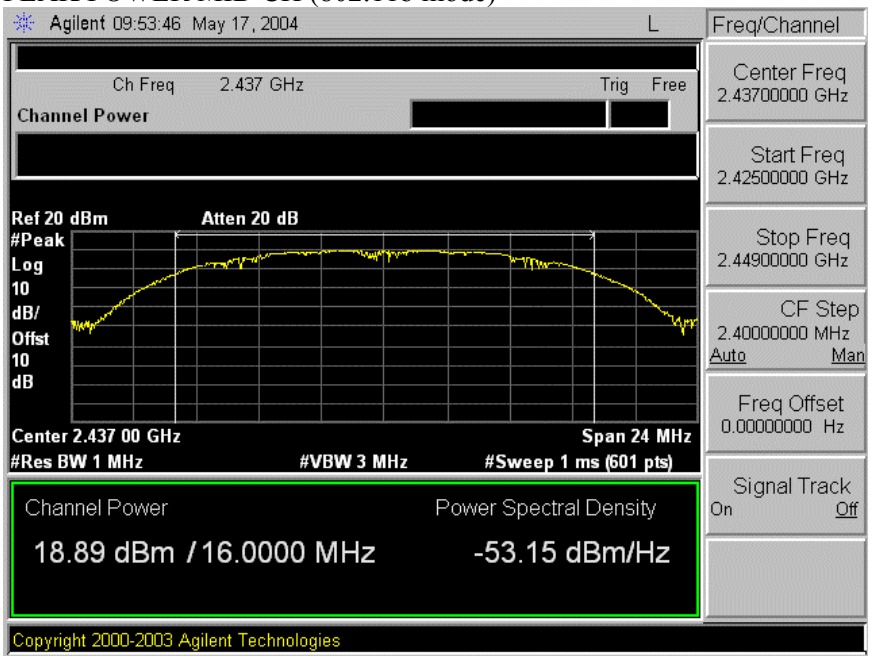
Channel	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	12.06	26	-13.94
Middle	2437	17.49	26	-8.51
High	2462	3.79	26	-22.21

OUTPUT POWER (6dBi SECTOR PANEL ANTENNA) ~802.11b MODE~

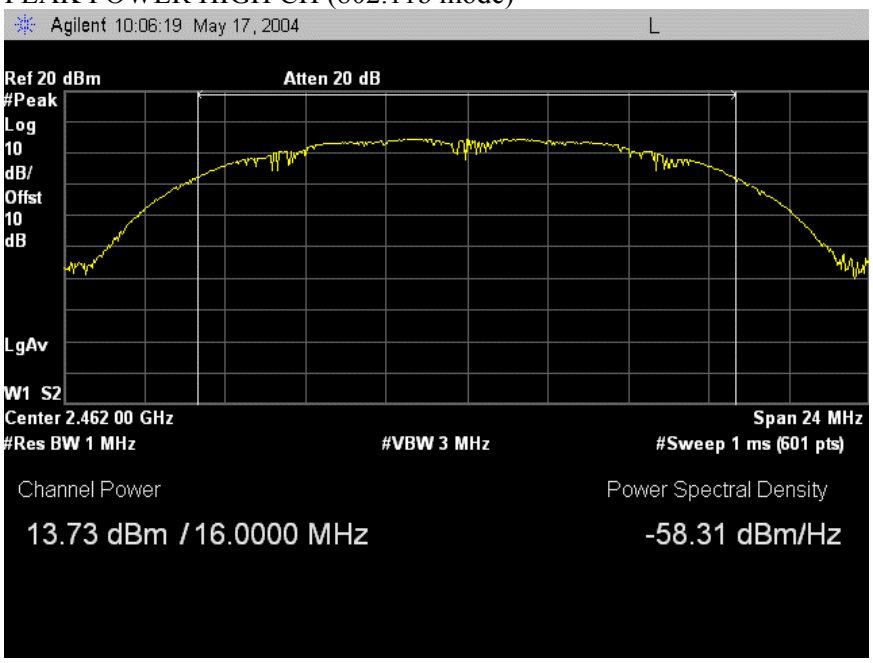
PEAK POWER LOW CH (802.11b mode)



PEAK POWER MID CH (802.11b mode)

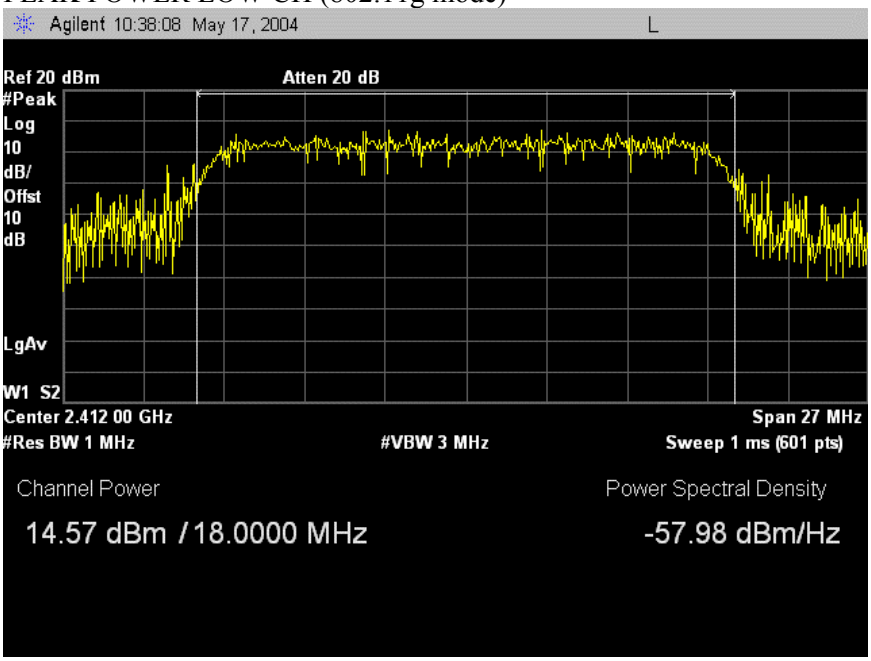


PEAK POWER HIGH CH (802.11b mode)

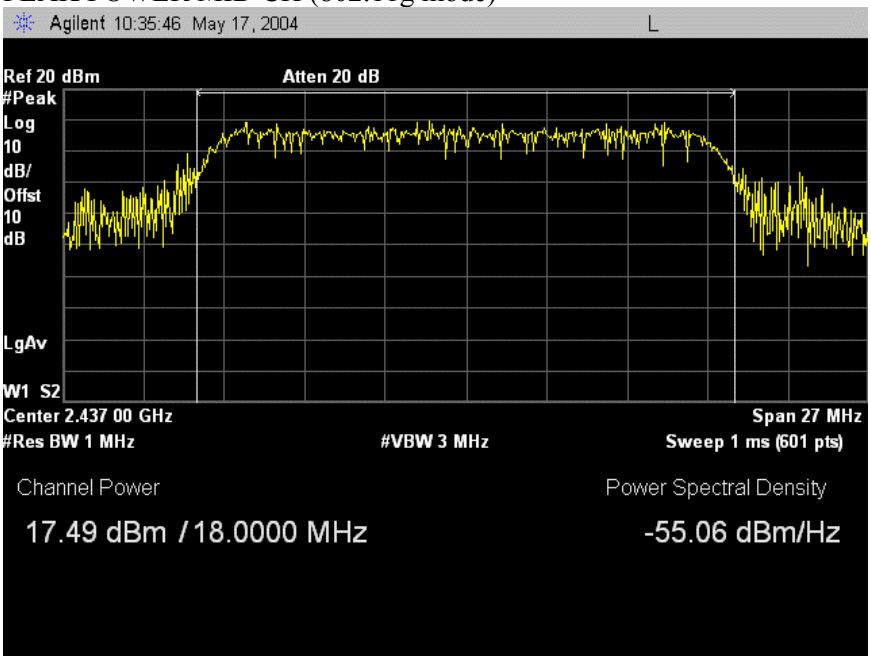


OUTPUT POWER (6dBi SECTOR PANEL ANTENNA) ~802.11g MODE~

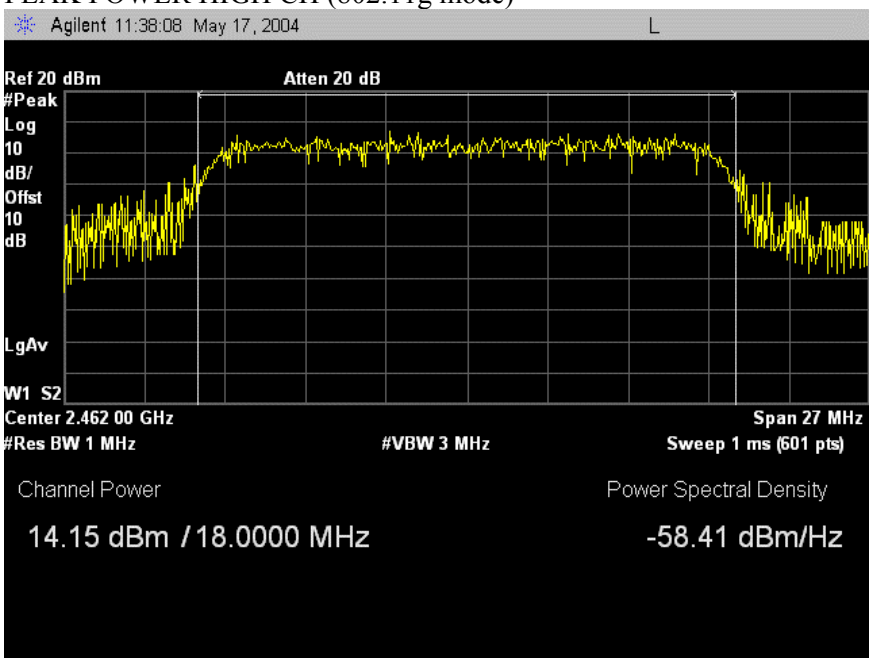
PEAK POWER LOW CH (802.11g mode)



PEAK POWER MID CH (802.11g mode)

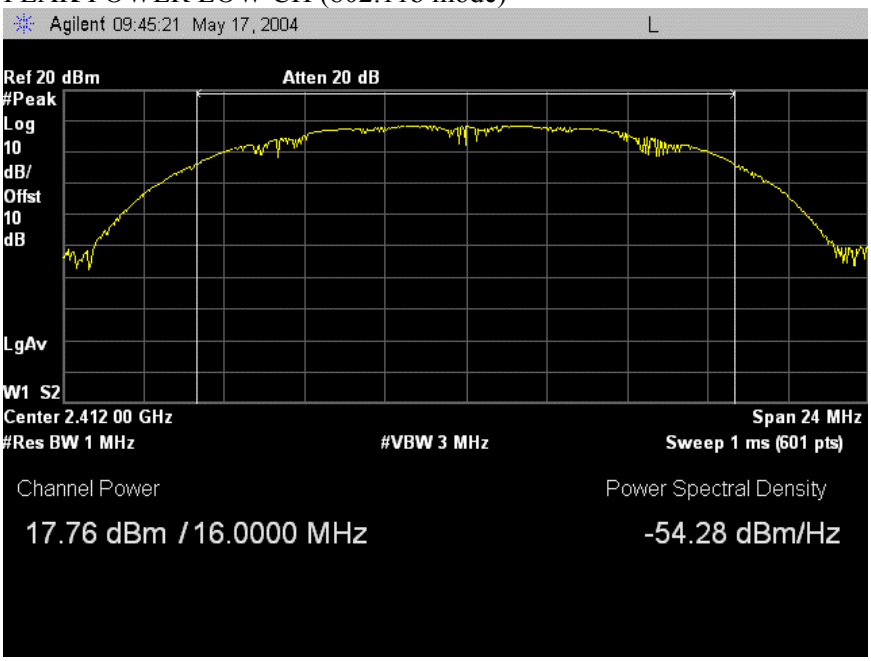


PEAK POWER HIGH CH (802.11g mode)

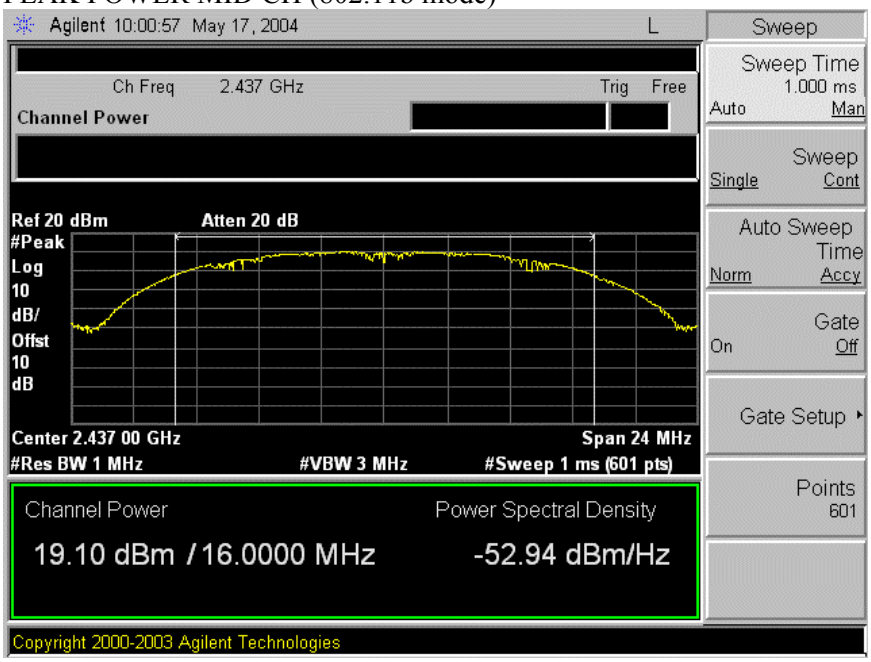


OUTPUT POWER (7dBi SECTOR PANEL ANTENNA) ~802.11b MODE~

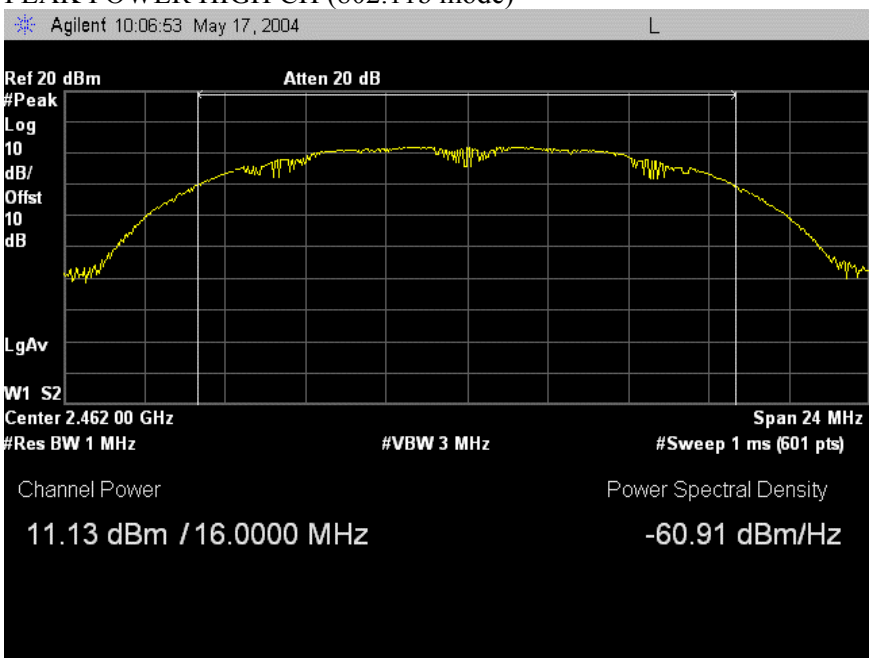
PEAK POWER LOW CH (802.11b mode)



PEAK POWER MID CH (802.11b mode)

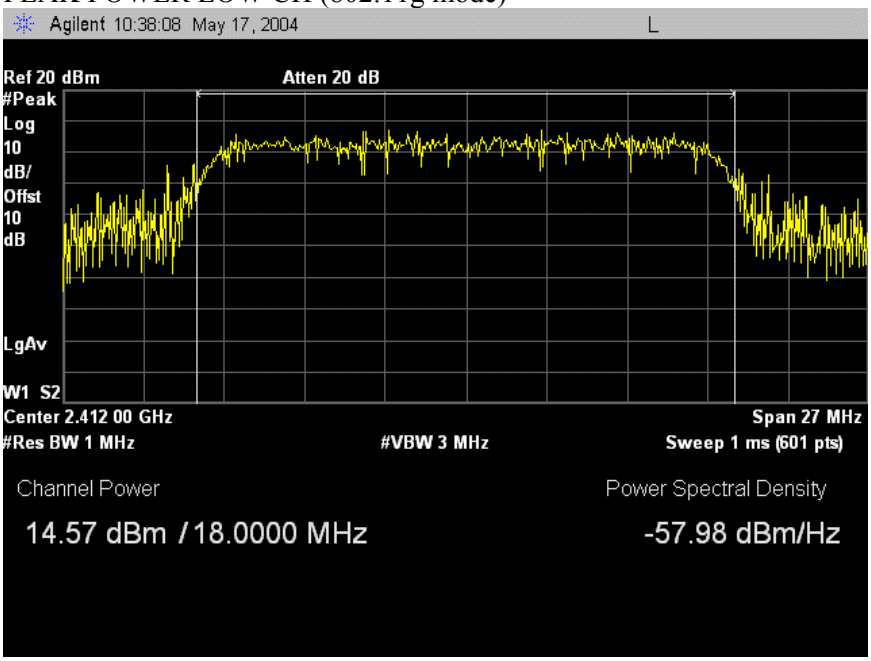


PEAK POWER HIGH CH (802.11b mode)

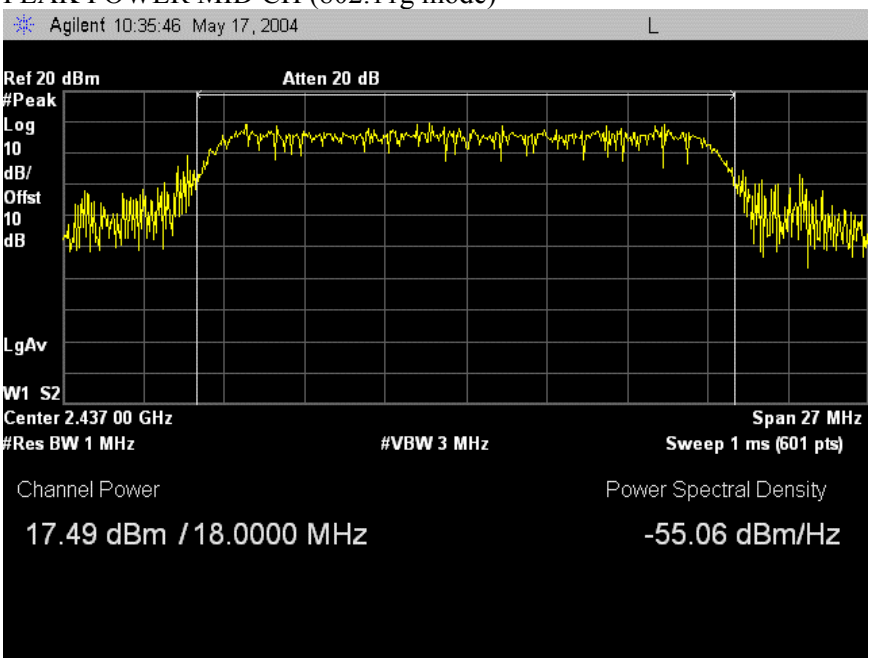


OUTPUT POWER (7dBi SECTOR PANEL ANTENNA) ~802.11g MODE~

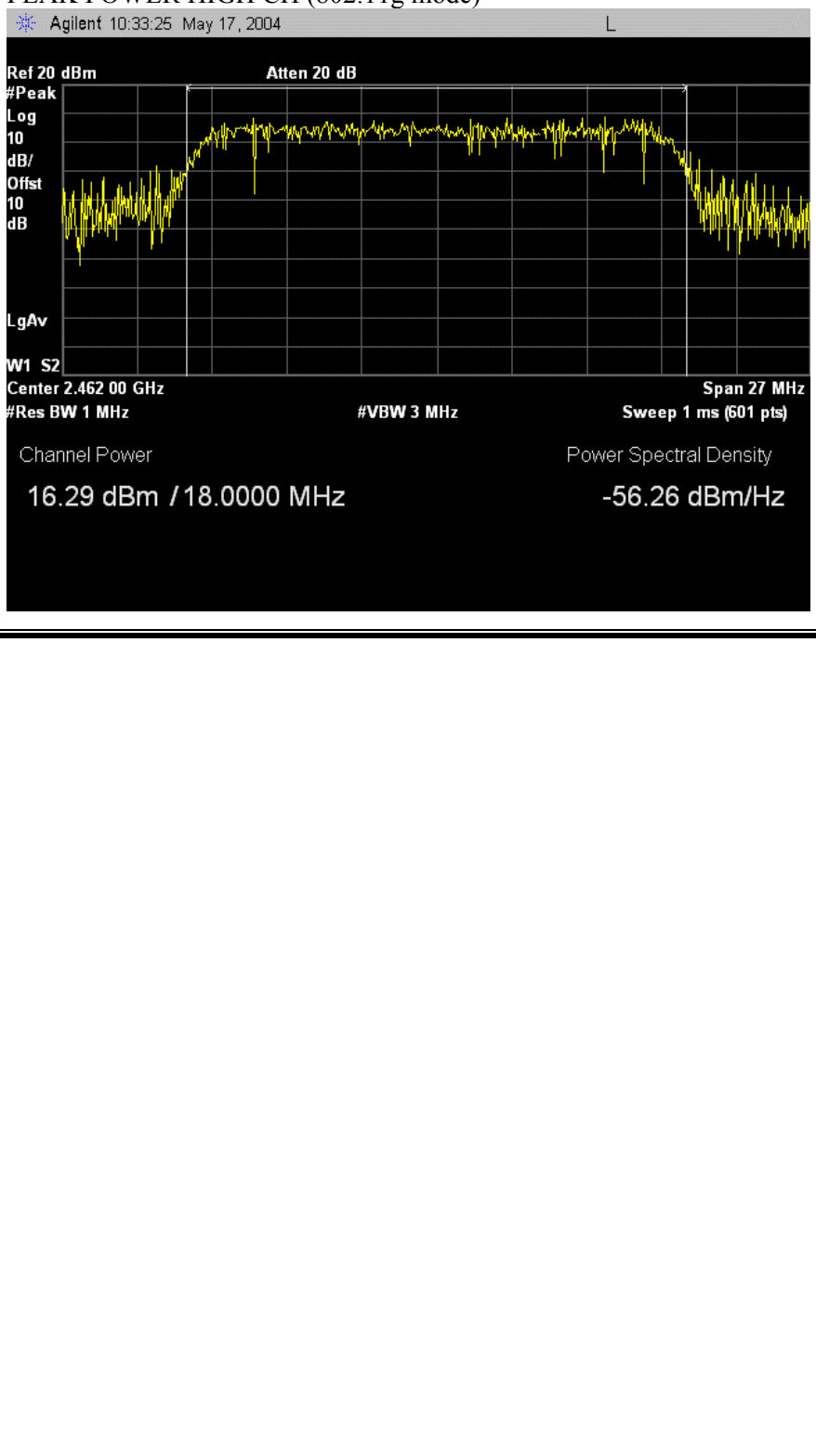
PEAK POWER LOW CH (802.11g mode)



PEAK POWER MID CH (802.11g mode)

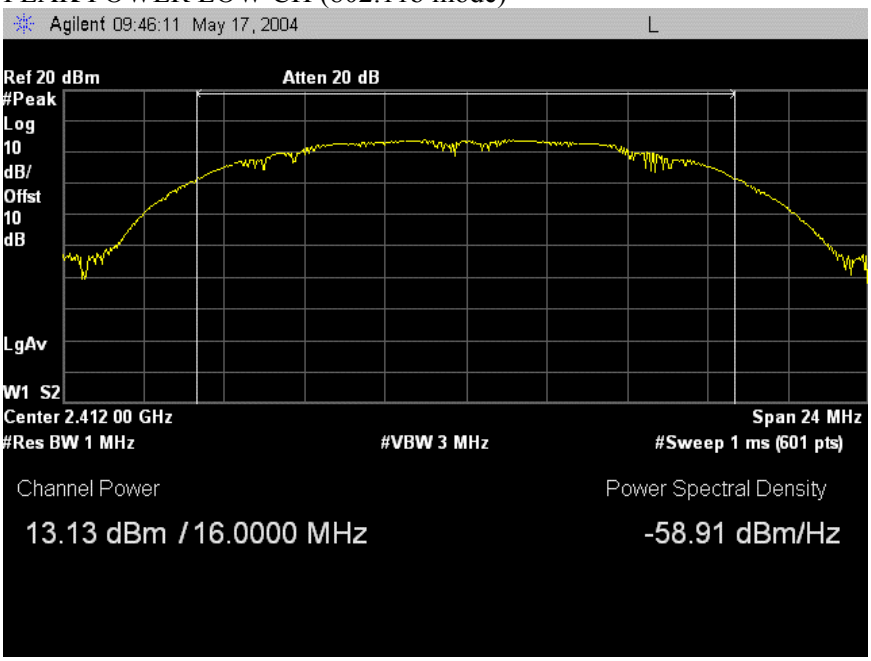


PEAK POWER HIGH CH (802.11g mode)

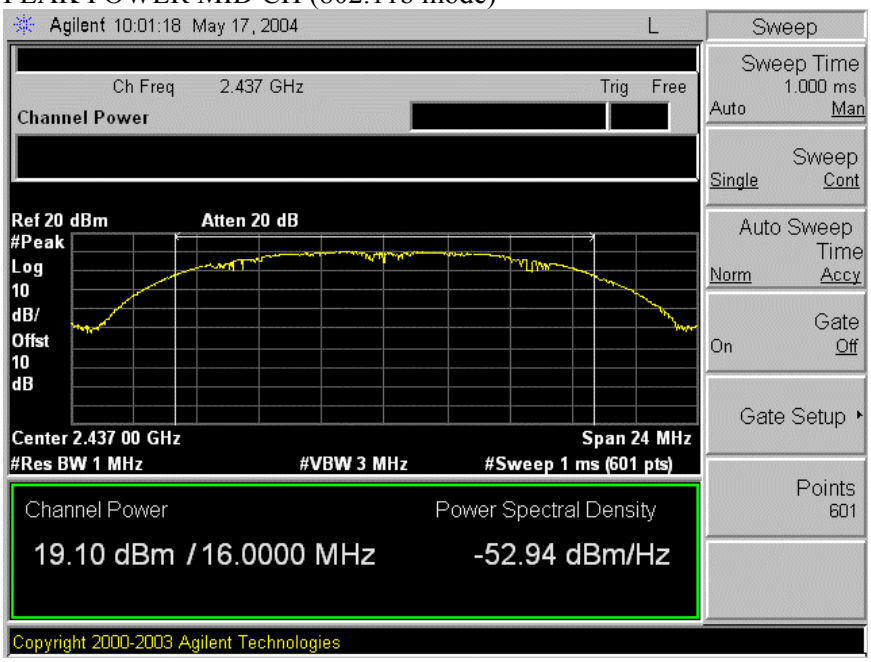


OUTPUT POWER (10dBi DIRECTIONAL PANEL ANTENNA) ~802.11b MODE~

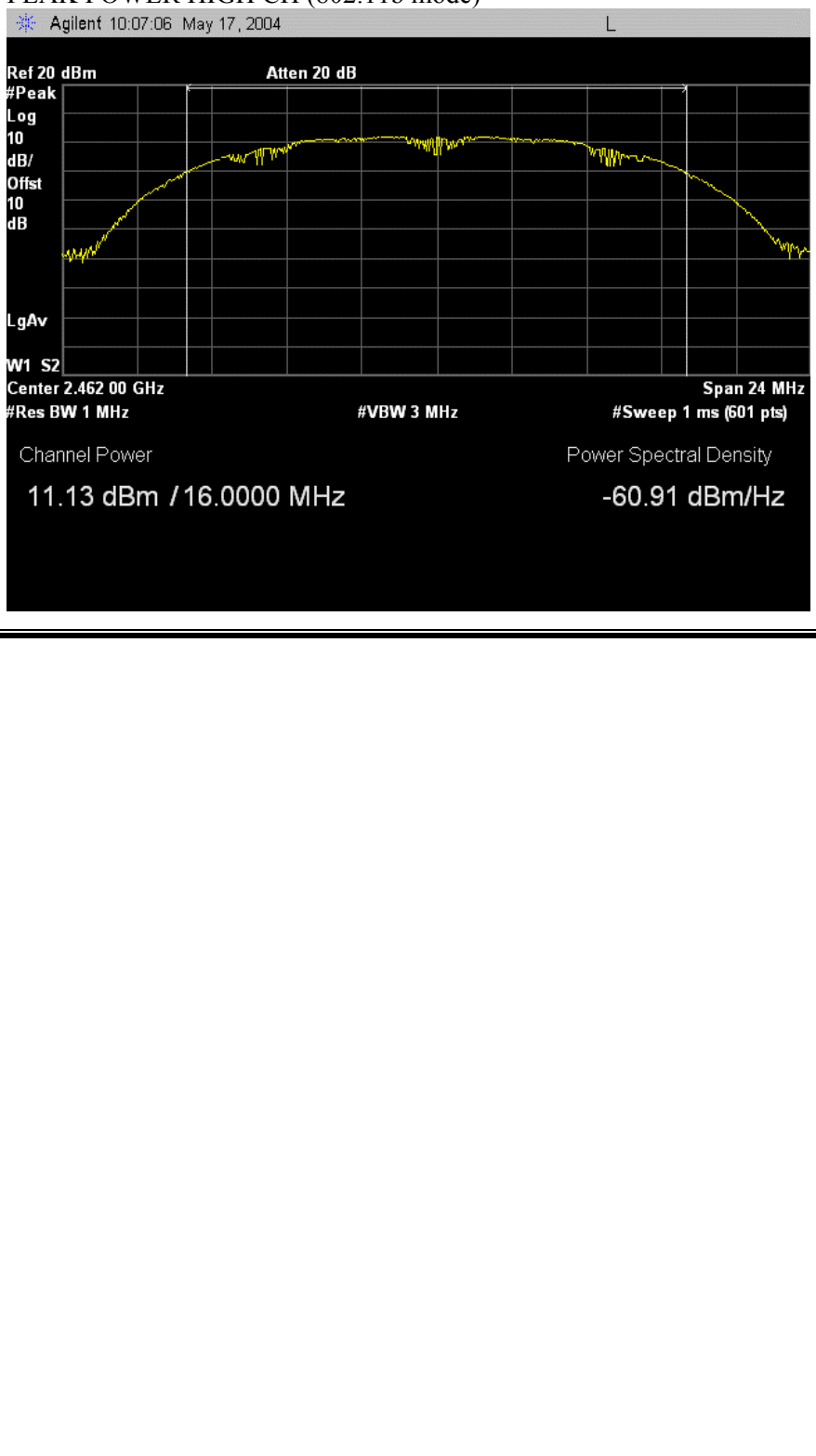
PEAK POWER LOW CH (802.11b mode)



PEAK POWER MID CH (802.11b mode)

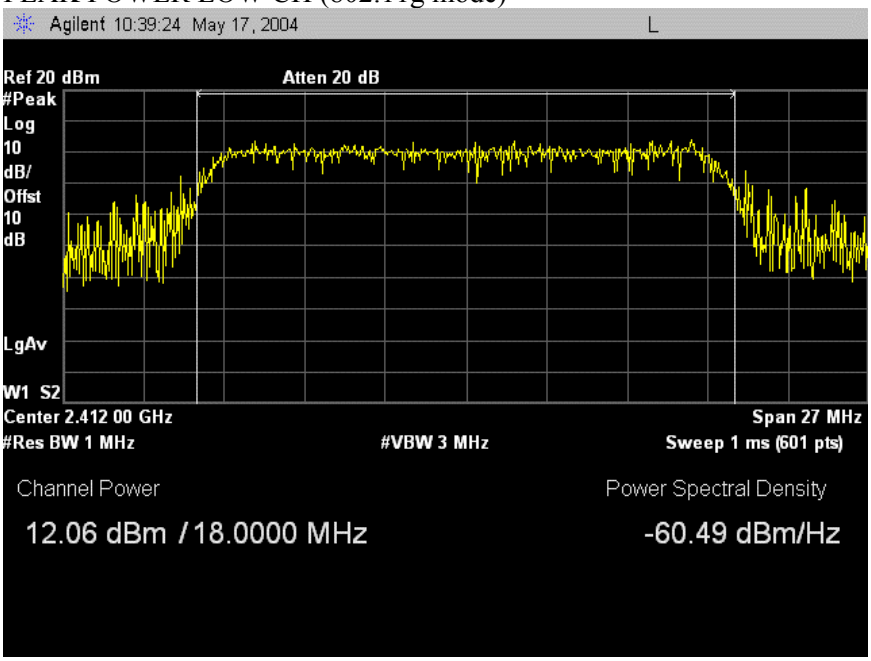


PEAK POWER HIGH CH (802.11b mode)

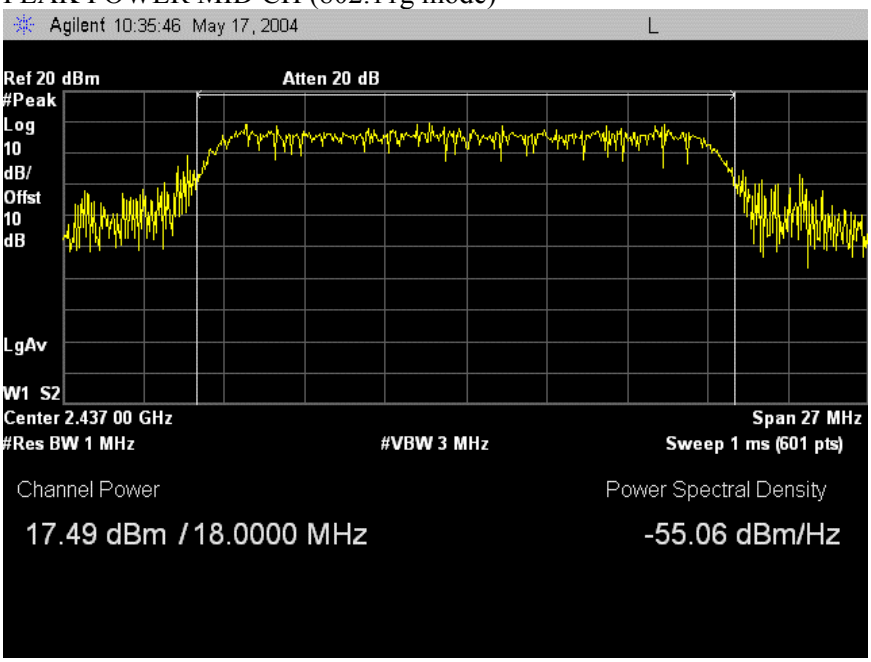


OUTPUT POWER (10dBi DIRECTIONAL PANEL ANTENNA) ~802.11g MODE~

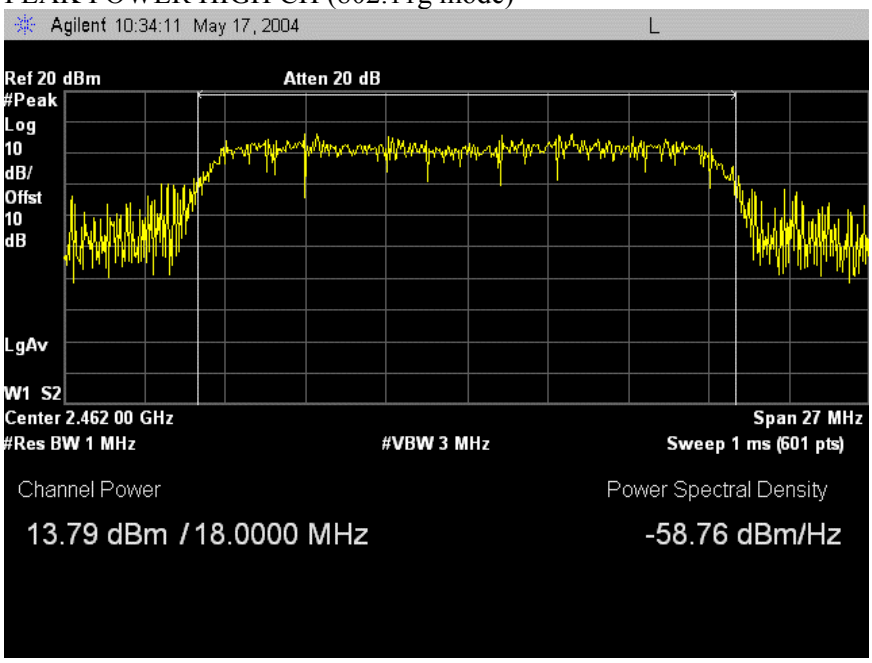
PEAK POWER LOW CH (802.11g mode)



PEAK POWER MID CH (802.11g mode)



PEAK POWER HIGH CH (802.11g mode)



7.3. MAXIMUM PERMISSIBLE EXPOSURE

LIMITS

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f^2)	6
30–300	61.4	0.163	1.0	6
300–1500	.....	.....	f/300	6
1500–100,000	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)—Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
30–300	27.5	0.073	0.2	30
300–1500	.....	.....	f/1500	30
1500–100,000	.....	.....	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

CALCULATIONS

Given

$E = \sqrt{(30 * P * G)} / d$

and

$S = E ^ 2 / 3770$

where

E = Field Strength in Volts/meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power Density in milliwatts/square centimeter

Combining equations and rearranging the terms to express the distance as a function of the remaining variables yields:

$d = \sqrt{((30 * P * G) / (3770 * S))}$

Changing to units of Power to mW and Distance to cm, using:

P (mW) = P (W) / 1000 and
d (cm) =100 * d (m)

yields

$d = 100 * \sqrt{((30 * (P / 1000) * G) / (3770 * S))}$
$d = 0.282 * \sqrt{(P * G / S)}$

where

d = distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power Density in mW/cm^2

Substituting the logarithmic form of power and gain using:

P (mW) = 10 ^ (P (dBm) / 10) and
G (numeric) = 10 ^ (G (dBi) / 10)

yields

$d = 0.282 * 10 ^ ((P + G) / 20) / \sqrt{S}$ Equation (1)

where

d = MPE distance in cm
P = Power in dBm
G = Antenna Gain in dBi
S = Power Density Limit in mW/cm^2

Equation (1) and the measured peak power is used to calculate the MPE distance.

LIMITS

From §1.1310 Table 1 (B), S = 1.0 mW/cm^2

RESULTS

No non-compliance noted:

6 dBi Sector Panel Antenna

Mode	Power Density Limit (mW/cm^2)	Output Power (dBm)	Antenna Gain (dBi)	MPE Distance (cm)
802.11b	1.0	18.89	6.00	4.95
802.11g	1.0	17.49	6.00	4.21

7 dBi Sector Panel Antenna

Mode	Power Density Limit (mW/cm^2)	Output Power (dBm)	Antenna Gain (dBi)	MPE Distance (cm)
802.11b	1.0	19.10	7.00	5.69
802.11g	1.0	17.49	7.00	4.73

10 dBi Directional Panel Antenna

Mode	Power Density Limit (mW/cm^2)	Output Power (dBm)	Antenna Gain (dBi)	MPE Distance (cm)
802.11b	1.0	19.10	10.00	8.04
802.11g	1.0	17.49	10.00	6.68

NOTE: For mobile or fixed location transmitters, the minimum separation distance is 20 cm, even if calculations indicate that the MPE distance would be less.

7.4. AVERAGE POWER

AVERAGE POWER LIMIT

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

No non-compliance noted:

The cable assembly insertion loss of 10 dB (10 dB pad) was entered as an offset in the power meter to allow for direct reading of power.

6 dBi Sector Panel Antenna

802.11b Mode

Channel	Frequency (MHz)	Average Power (dBm)
Low	2412	11.00
Middle	2437	15.92
High	2462	10.80

802.11g Mode

Channel	Frequency (MHz)	Average Power (dBm)
Low	2412	10.30
Middle	2437	14.00
High	2462	9.15

7 dBi Sector Panel Antenna

802.11b Mode

Channel	Frequency (MHz)	Average Power (dBm)
Low	2412	13.40
Middle	2437	16.45
High	2462	8.62

802.11g Mode

Channel	Frequency (MHz)	Average Power (dBm)
Low	2412	10.30
Middle	2437	14.00
High	2462	11.41

10 dBi Directional Panel Antenna

802.11b Mode

Channel	Frequency (MHz)	Average Power (dBm)
Low	2412	10.00
Middle	2437	16.45
High	2462	8.40

802.11g Mode

Channel	Frequency (MHz)	Average Power (dBm)
Low	2412	6.56
Middle	2437	14.00
High	2462	7.80

7.5. RADIATED EMISSIONS

7.5.1. TRANSMITTER RADIATED SPURIOUS EMISSIONS

LIMITS

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41			

[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2] Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

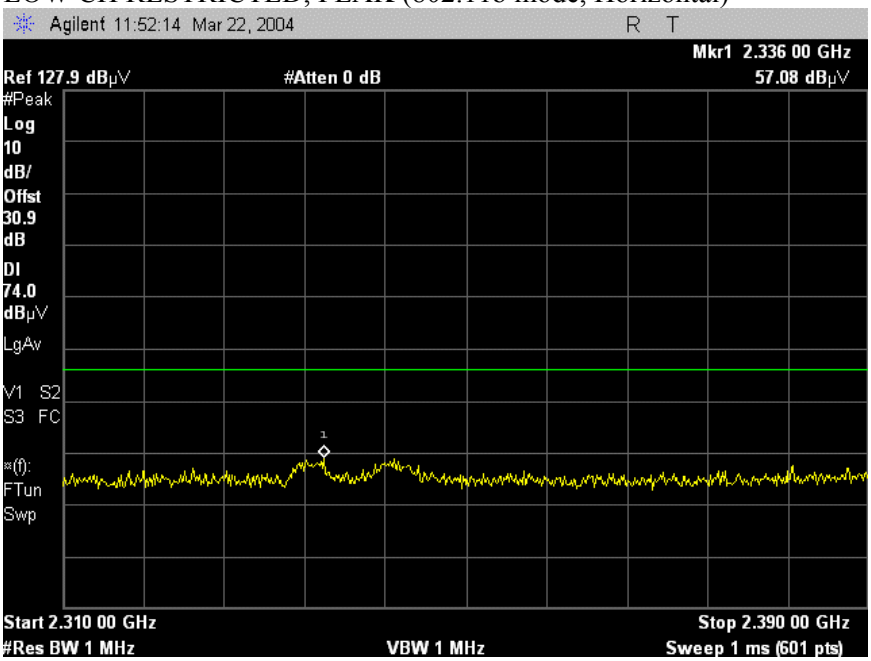
RESULTS

No non-compliance noted:

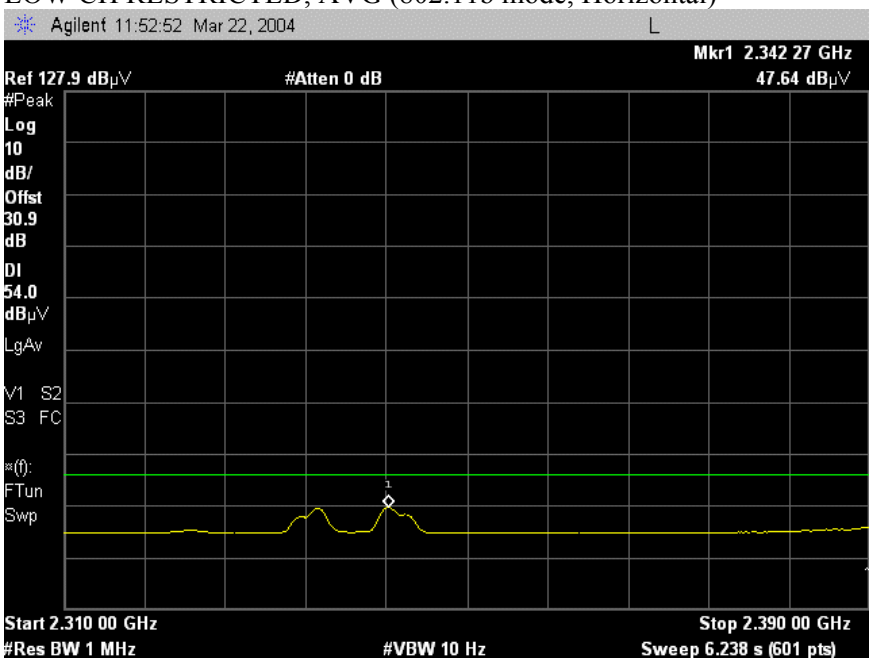
7.5.2. TRANSMITTER RADIATED EMISSIONS ABOVE 1 GHZ (6 dBi ANTENNA)

RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (802.11b mode, Horizontal)

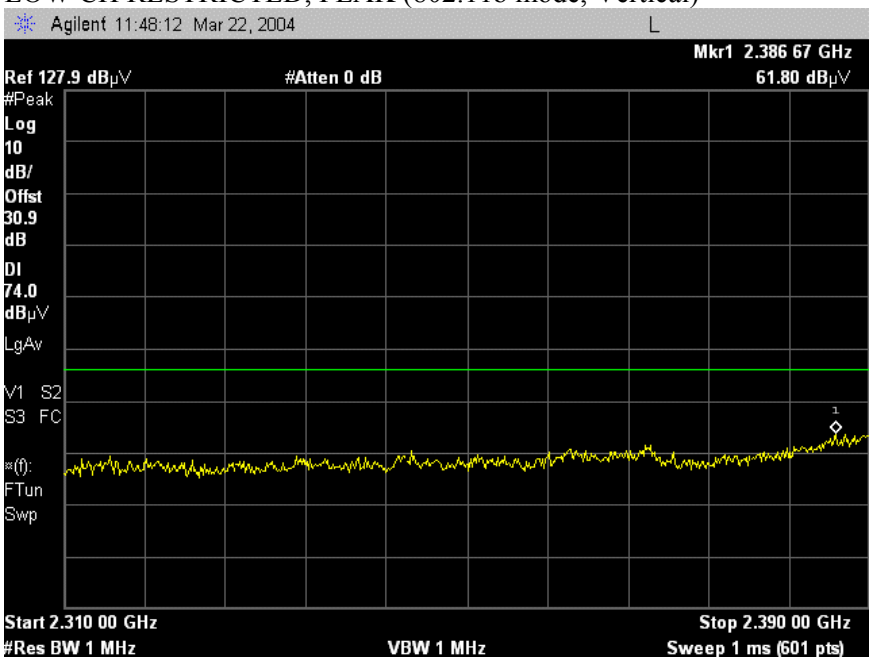


LOW CH RESTRICTED, AVG (802.11b mode, Horizontal)

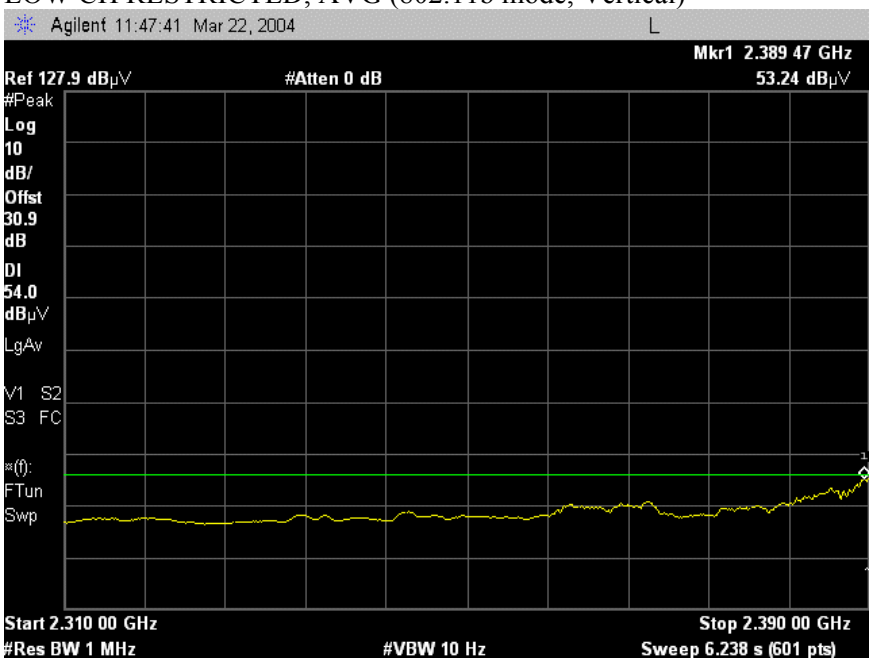


RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (802.11b mode, Vertical)

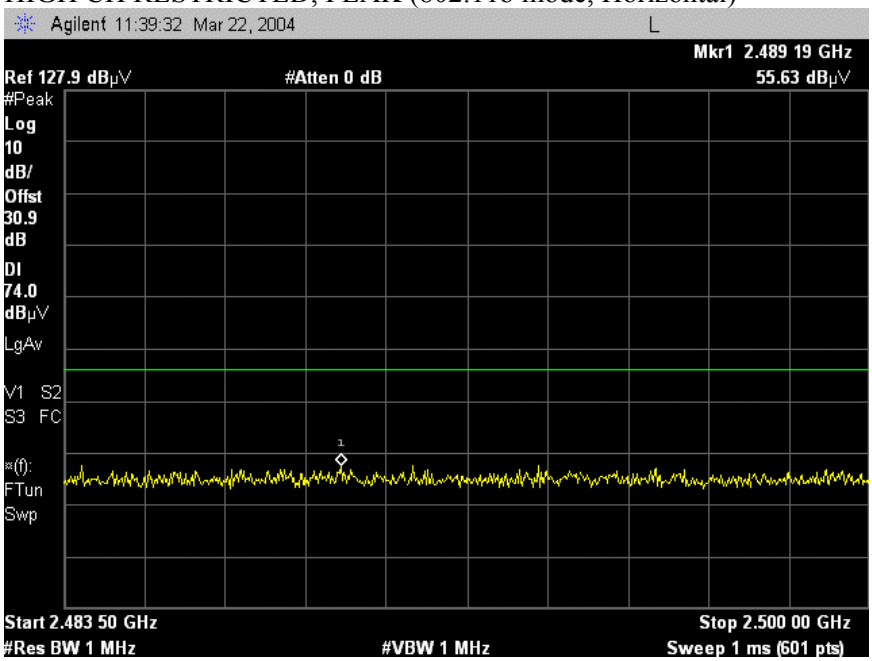


LOW CH RESTRICTED, AVG (802.11b mode, Vertical)

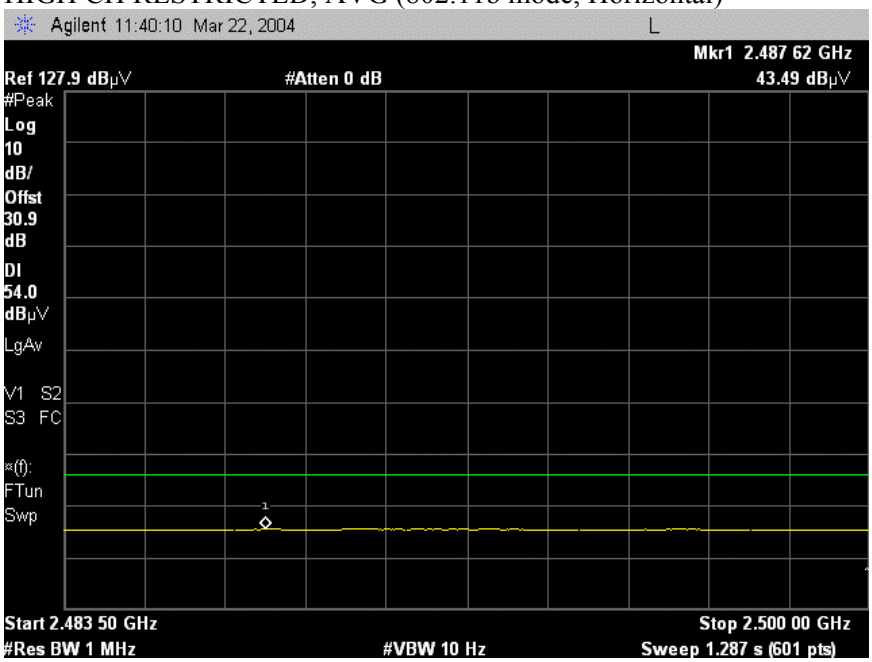


RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (802.11b mode, Horizontal)

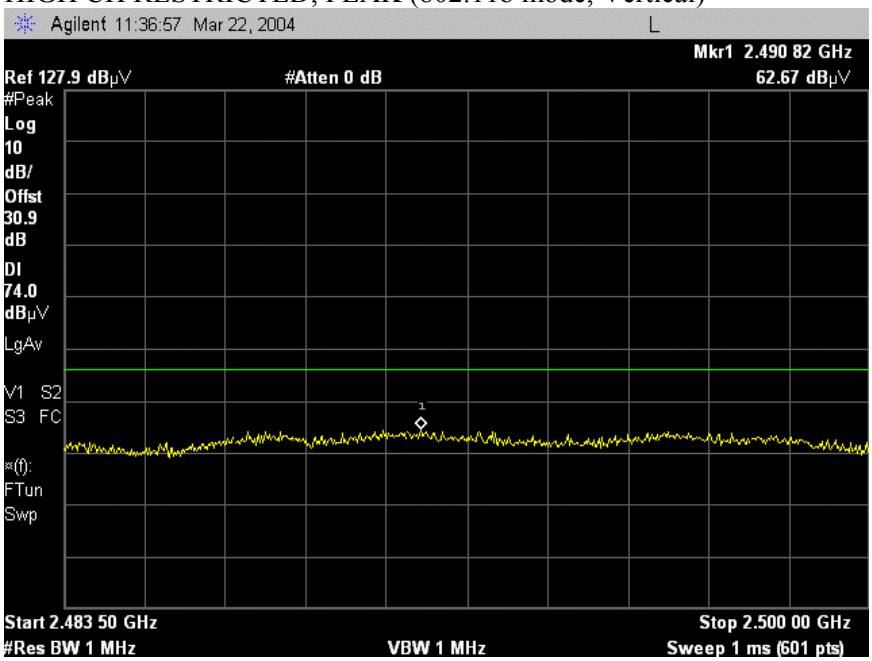


HIGH CH RESTRICTED, AVG (802.11b mode, Horizontal)

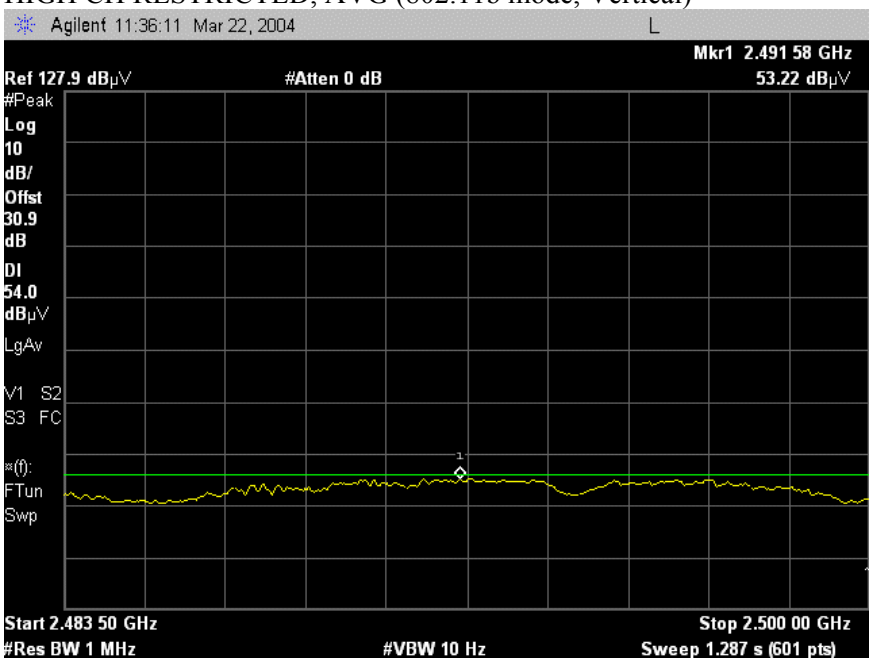


RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (802.11b mode, Vertical)



HIGH CH RESTRICTED, AVG (802.11b mode, Vertical)



HARMONICS AND SPURIOUS EMISSIONS (b MODE)

03/22/04 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
Project #: 04U2526
Company: TRAPEZE NETWORKS
EUT Descrip.: MOBILITY POINT
EUT M/N: MP-262
Test Target: FCC
Mode Oper: TX (B MODE)

Test Equipment:

EMCO Horn 1-18GHz	Spectrum Analyzer	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz
T73; S/N: 6717 @3m		T63 Miteq 646456		

Hi Frequency Cables: (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) (12 ft)

Limit: FCC 15.205

Peak Measurements: 1 MHz Resolution Bandwidth, 1MHz Video Bandwidth

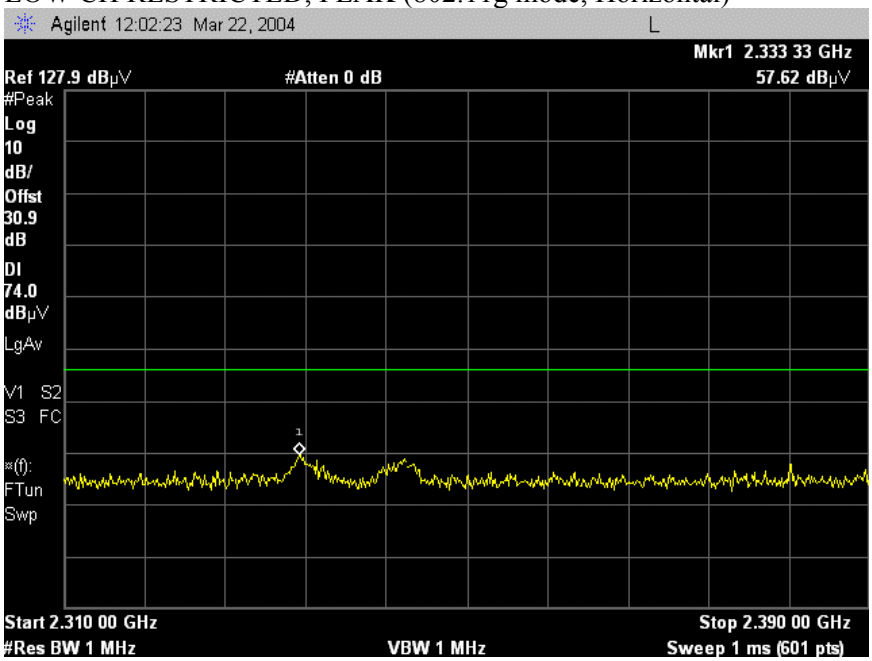
Average Measurements: 1 MHz Resolution Bandwidth, 10Hz Video Bandwidth

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
LOW CHANNEL HARMONICS															
4.824	9.8	45.3	36.1	33.4	3.0	-35.3	0.0	1.0	47.3	38.2	74.0	54.0	-26.7	-15.8	V
12.060	9.8	42.4	29.1	39.2	5.3	-34.9	0.0	1.0	52.9	39.6	74.0	54.0	-21.1	-14.4	V
4.824	9.8	44.9	30.9	33.4	3.0	-35.3	0.0	1.0	46.9	32.9	74.0	54.0	-27.1	-21.1	H
12.060	9.8	42.0	29.7	39.2	5.3	-34.9	0.0	1.0	52.5	40.2	74.0	54.0	-21.5	-13.8	H
MIDDLE CHANNEL HARMONICS 15															
4.874	9.8	54.6	51.1	33.4	3.0	-35.3	0.0	1.0	56.7	53.2	74.0	54.0	-17.3	-0.8	V
7.311	9.8	51.8	45.8	35.8	3.8	-34.6	0.0	1.0	57.9	51.8	74.0	54.0	-16.1	-2.2	V
12.185	9.8	39.8	28.7	39.2	5.3	-35.1	0.0	1.0	50.2	39.1	74.0	54.0	-23.8	-14.9	V
4.874	9.8	49.7	44.3	33.4	3.0	-35.3	0.0	1.0	51.8	46.4	74.0	54.0	-22.2	-7.6	H
7.311	9.8	46.8	38.3	35.8	3.8	-34.6	0.0	1.0	52.8	44.4	74.0	54.0	-21.2	-9.6	H
12.185	9.8	41.0	30.0	39.2	5.3	-35.1	0.0	1.0	51.4	40.4	74.0	54.0	-22.6	-13.6	H
HIGH CHANNEL HARMONICS															
4.924	9.8	48.2	42.0	33.5	3.0	-35.3	0.0	1.0	50.4	44.2	74.0	54.0	-23.6	-9.8	V
7.386	9.8	45.2	31.9	36.0	3.9	-34.5	0.0	1.0	51.4	38.1	74.0	54.0	-22.6	-15.9	V
12.310	9.8	41.4	29.3	39.2	5.3	-35.3	0.0	1.0	51.6	39.5	74.0	54.0	-22.4	-14.5	V
4.924	9.8	42.7	30.6	33.5	3.0	-35.3	0.0	1.0	44.9	32.8	74.0	54.0	-29.1	-21.2	H
7.386	9.8	42.2	31.7	36.0	3.9	-34.5	0.0	1.0	48.4	37.9	74.0	54.0	-25.6	-16.1	H
12.310	9.8	41.4	29.8	39.2	5.3	-35.3	0.0	1.0	51.6	40.0	74.0	54.0	-22.4	-14.0	H
NO OTHER SPURIOUS EMISSIONS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR -20dB TO THE LIMIT IN THE RESTRICTED BANDS															

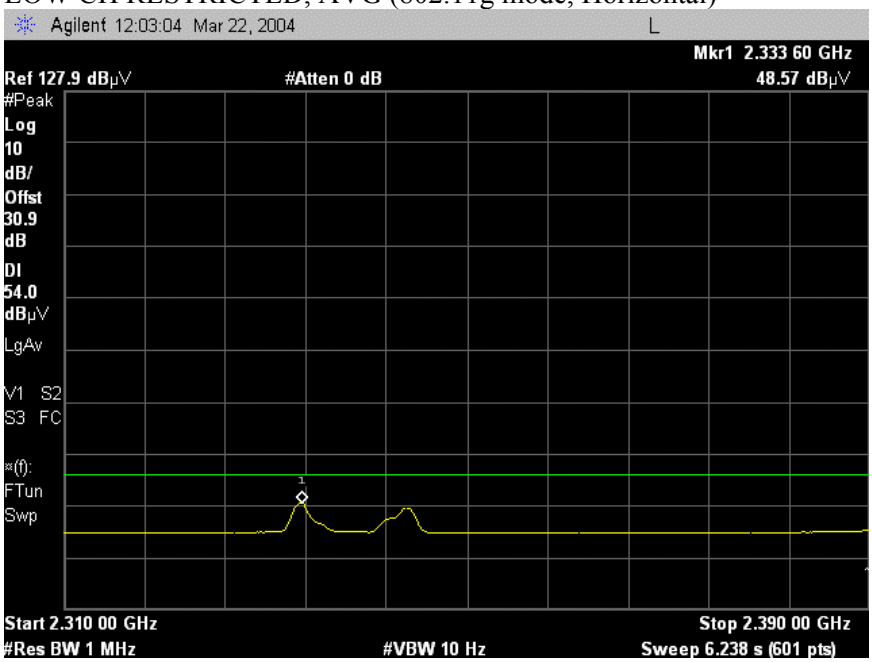
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (802.11g mode, Horizontal)

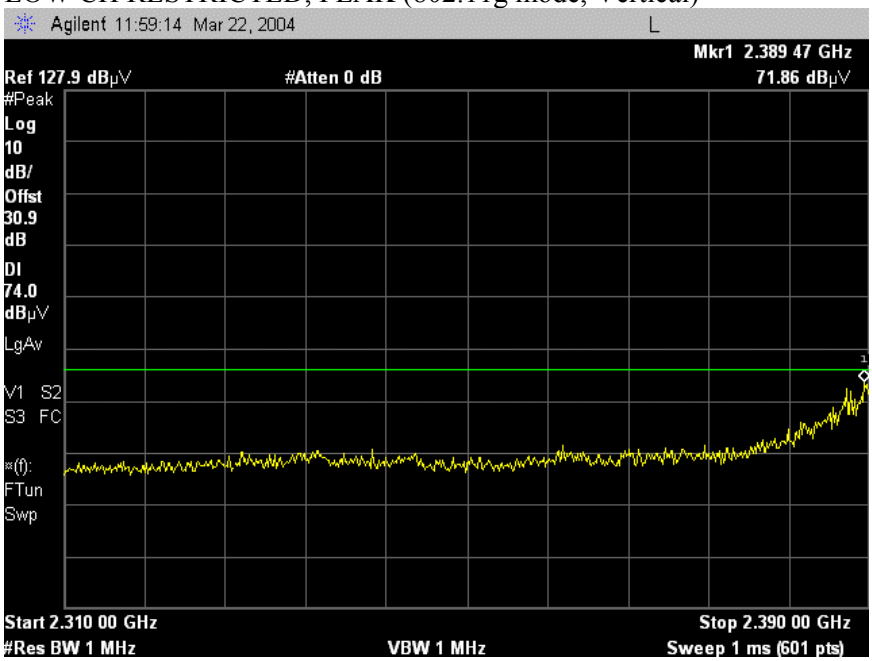


LOW CH RESTRICTED, AVG (802.11g mode, Horizontal)

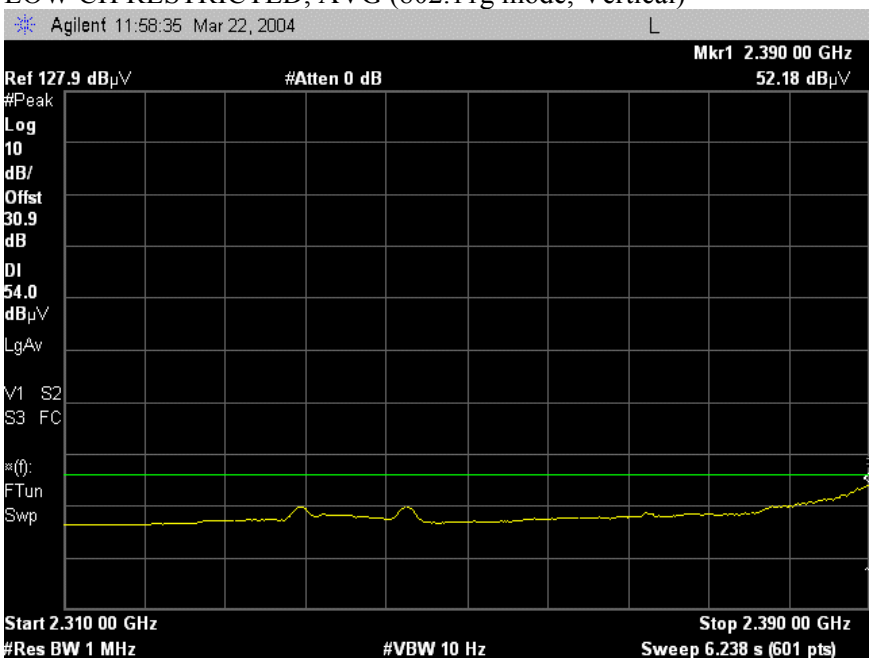


RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (802.11g mode, Vertical)

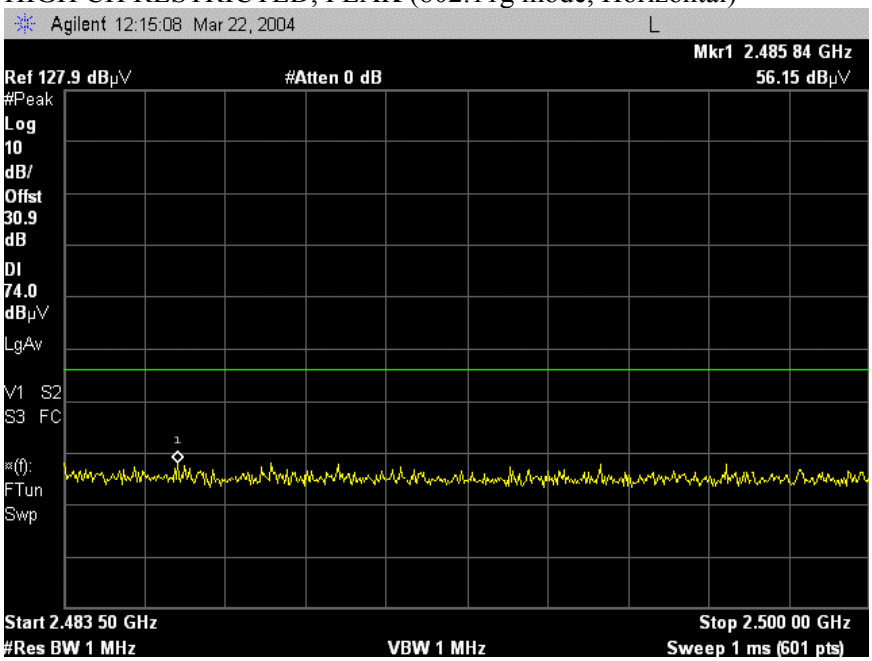


LOW CH RESTRICTED, AVG (802.11g mode, Vertical)

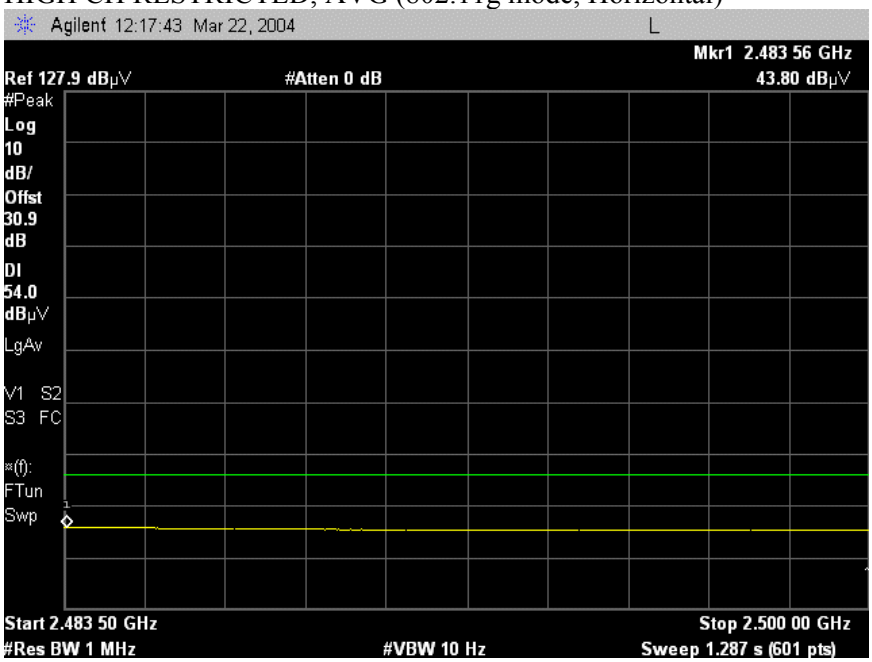


RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (802.11g mode, Horizontal)

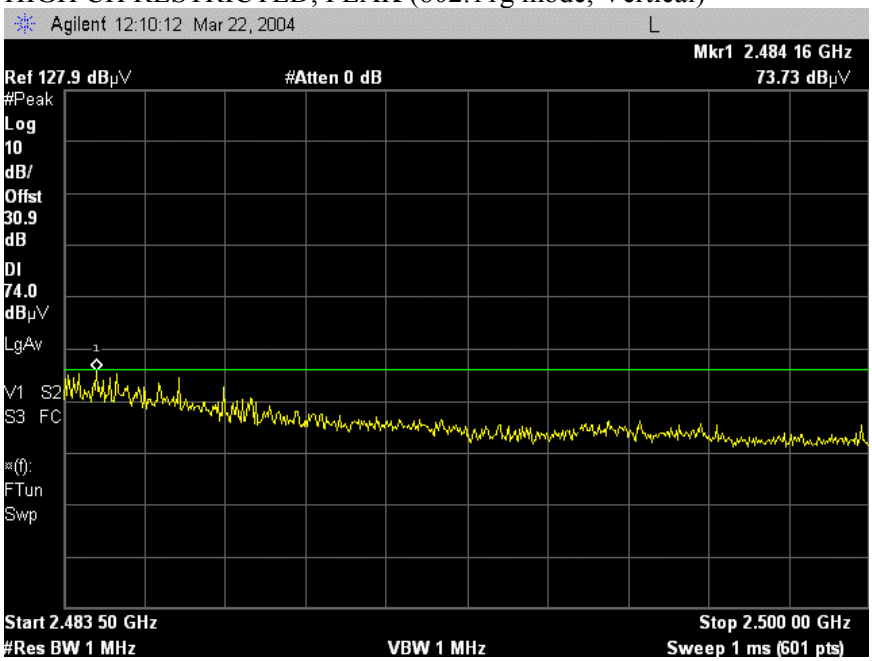


HIGH CH RESTRICTED, AVG (802.11g mode, Horizontal)

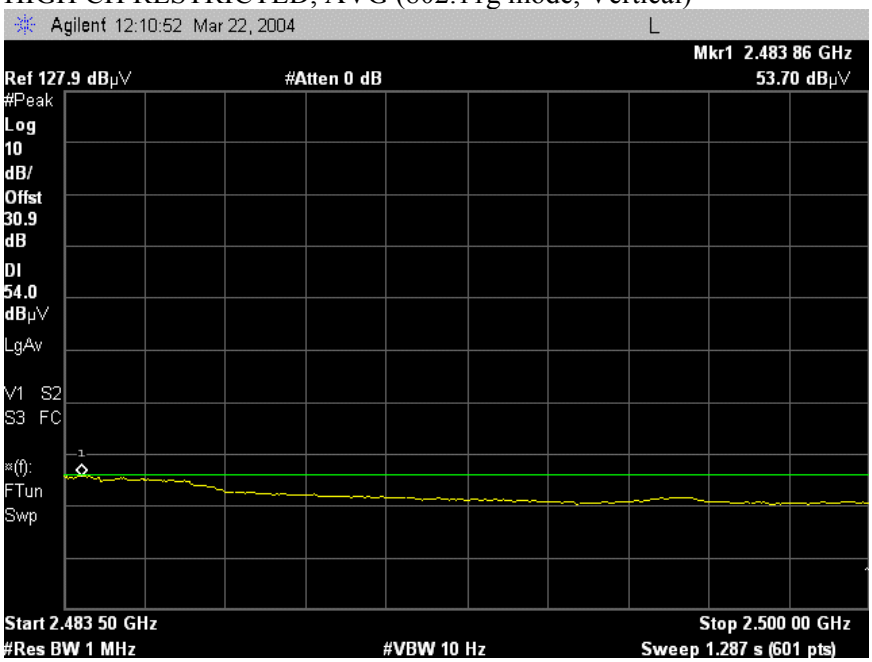


RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (802.11g mode, Vertical)



HIGH CH RESTRICTED, AVG (802.11g mode, Vertical)



HARMONICS AND SPURIOUS EMISSIONS (g MODE)

03/22/04 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
Project #: 04U2526
Company: TRAPEZE NETWORKS
EUT Descrip.: MOBILITY POINT
EUT M/N: MP-262
Test Target: FCC
Mode Oper: TX (G MODE)

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
Spectrum Analyzer:
Pre-amplifer 1-26GHz: T63 Miteq 646456
Pre-amplifer 26-40GHz:
Horn > 18GHz:

Hi Frequency Cables: (2 ft) (2 ~ 3 ft) (4 ~ 6 ft) (12 ft)

Limit: FCC 15.205

Peak Measurements: 1 MHz Resolution Bandwidth, 1MHz Video Bandwidth
Average Measurements: 1 MHz Resolution Bandwidth, 10Hz Video Bandwidth

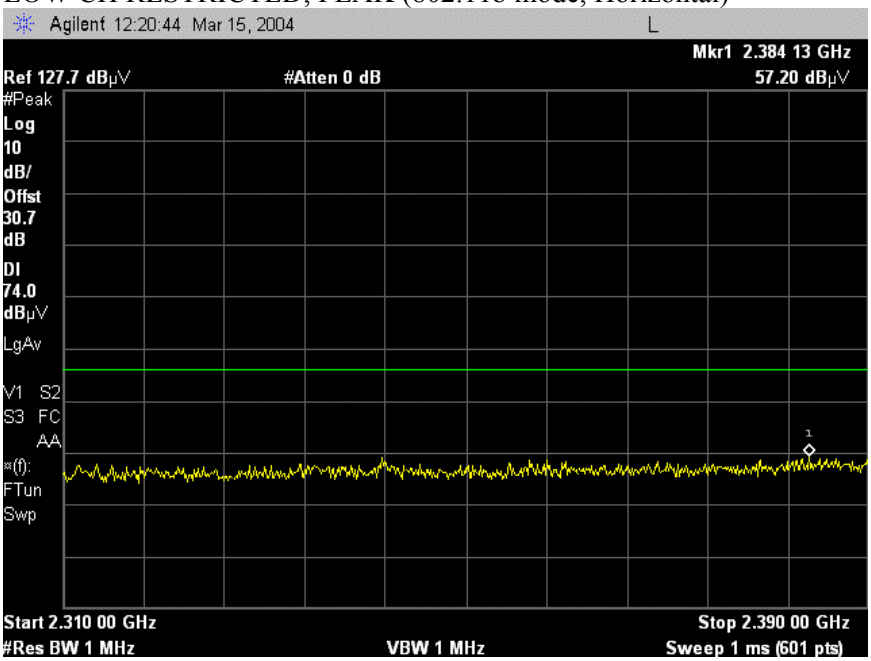
f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
LOW CHANNEL HARMONICS															
4.824	9.8	53.7	31.8	33.4	3.0	-35.3	0.0	1.0	55.7	33.8	74.0	54.0	-18.3	-20.2	V
12.060	9.8	37.8	29.1	39.2	5.3	-34.9	0.0	1.0	48.3	39.6	74.0	54.0	-25.7	-14.4	V
4.824	9.8	46.9	30.7	33.4	3.0	-35.3	0.0	1.0	48.9	32.7	74.0	54.0	-25.1	-21.3	H
12.060	9.8	40.0	29.8	39.2	5.3	-34.9	0.0	1.0	50.5	40.3	74.0	54.0	-23.5	-13.7	H
MIDDLE CHANNEL HARMONICS															
4.874	9.8	58.9	34.9	33.4	3.0	-35.3	0.0	1.0	61.0	37.0	74.0	54.0	-13.0	-17.0	V
7.311	9.8	51.1	33.8	35.8	3.8	-34.6	0.0	1.0	57.2	39.8	74.0	54.0	-16.8	-14.2	V
12.185	9.8	39.3	28.7	39.2	5.3	-35.1	0.0	1.0	49.6	39.0	74.0	54.0	-24.4	-15.0	V
4.874	9.8	52.0	32.5	33.4	3.0	-35.3	0.0	1.0	54.1	34.6	74.0	54.0	-19.9	-19.4	H
7.311	9.8	43.3	30.5	35.8	3.8	-34.6	0.0	1.0	49.3	36.6	74.0	54.0	-24.7	-17.4	H
12.185	9.8	40.0	29.7	39.2	5.3	-35.1	0.0	1.0	50.4	40.1	74.0	54.0	-23.6	-13.9	H
HIGH CHANNEL HARMONICS															
4.924	9.8	54.6	32.1	33.5	3.0	-35.3	0.0	1.0	56.7	34.3	74.0	54.0	-17.3	-19.7	V
7.386	9.8	40.1	30.5	36.0	3.9	-34.5	0.0	1.0	46.4	36.7	74.0	54.0	-27.6	-17.3	V
12.310	9.8	40.0	29.6	39.2	5.3	-35.3	0.0	1.0	50.2	39.8	74.0	54.0	-23.8	-14.2	V
4.924	9.8	42.3	30.0	33.5	3.0	-35.3	0.0	1.0	44.5	32.2	74.0	54.0	-29.5	-21.8	H
7.386	9.8	41.1	30.7	36.0	3.9	-34.5	0.0	1.0	47.4	36.9	74.0	54.0	-26.6	-17.1	H
12.310	9.8	41.2	29.3	39.2	5.3	-35.3	0.0	1.0	51.4	39.5	74.0	54.0	-22.6	-14.5	H
NO OTHER SPURIOUS EMISSIONS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR -20dB TO THE LIMIT IN THE RESTRICTED BANDS															

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

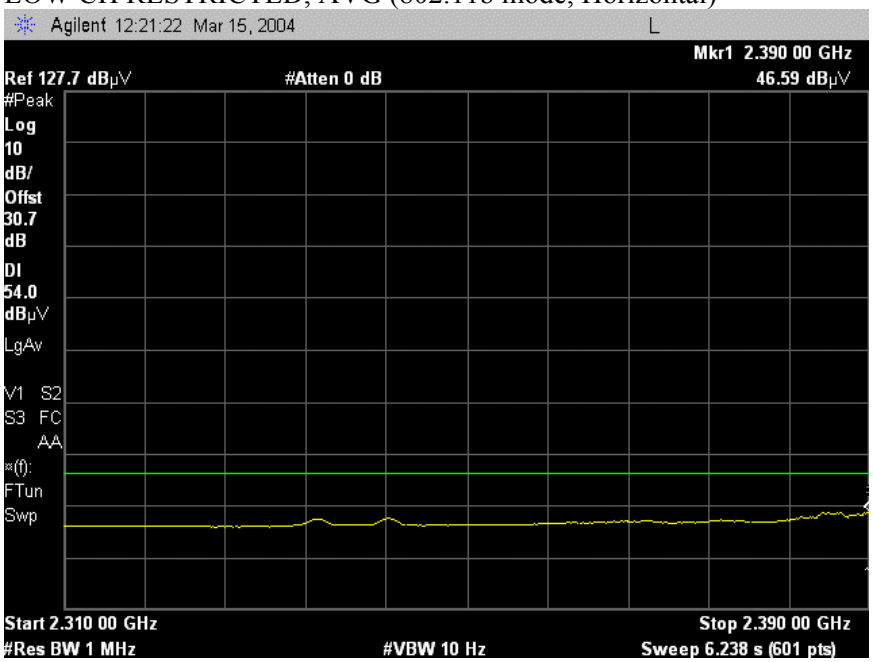
7.5.3. TRANSMITTER RADIATED EMISSIONS ABOVE 1 GHZ (7 dBi ANTENNA)

RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (802.11b mode, Horizontal)

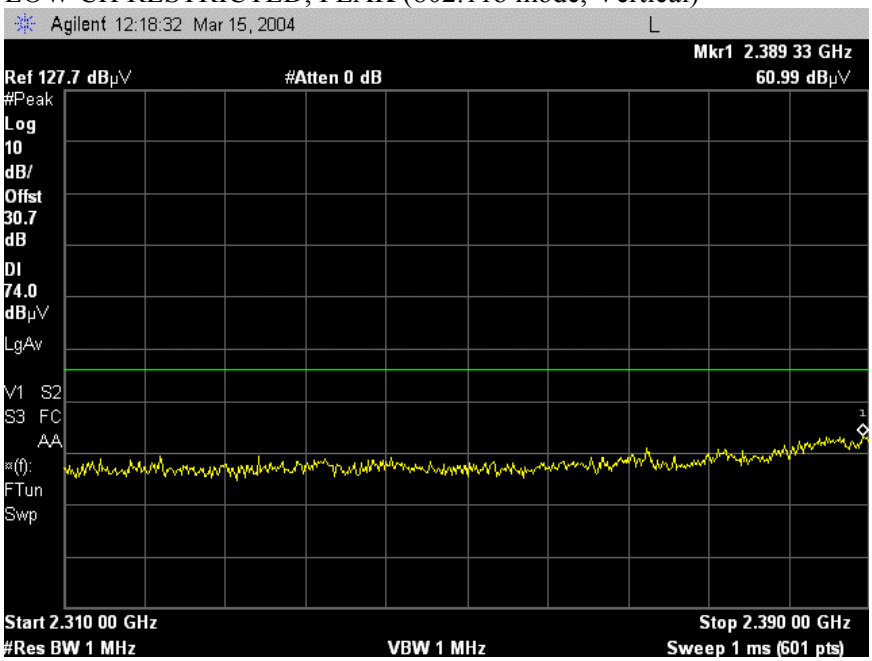


LOW CH RESTRICTED, AVG (802.11b mode, Horizontal)

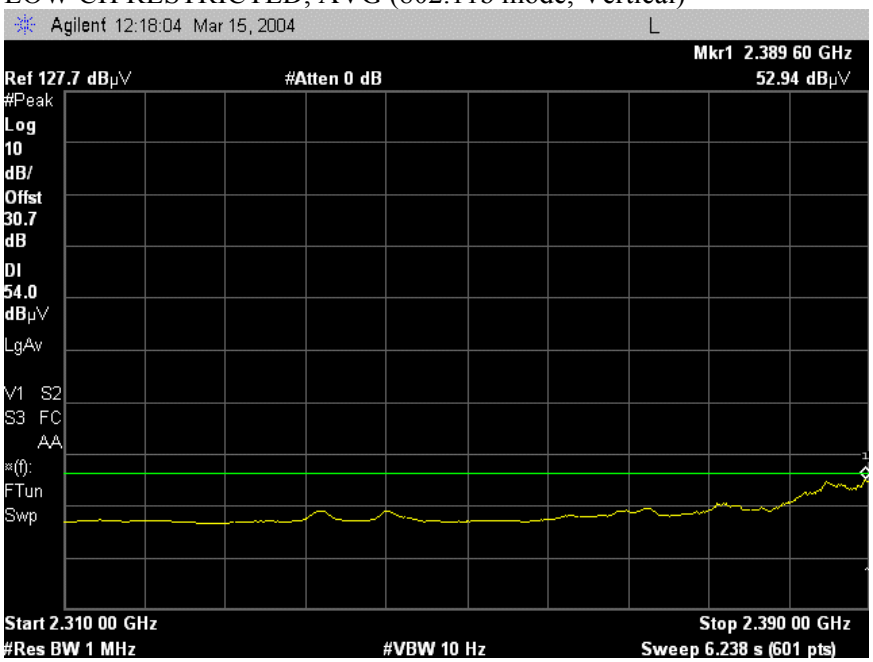


RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (802.11b mode, Vertical)

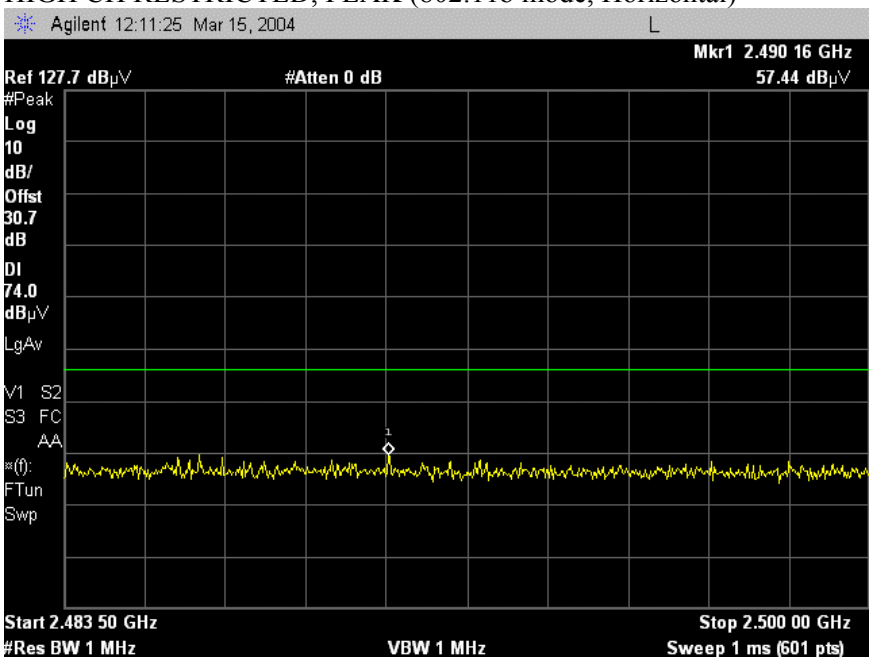


LOW CH RESTRICTED, AVG (802.11b mode, Vertical)

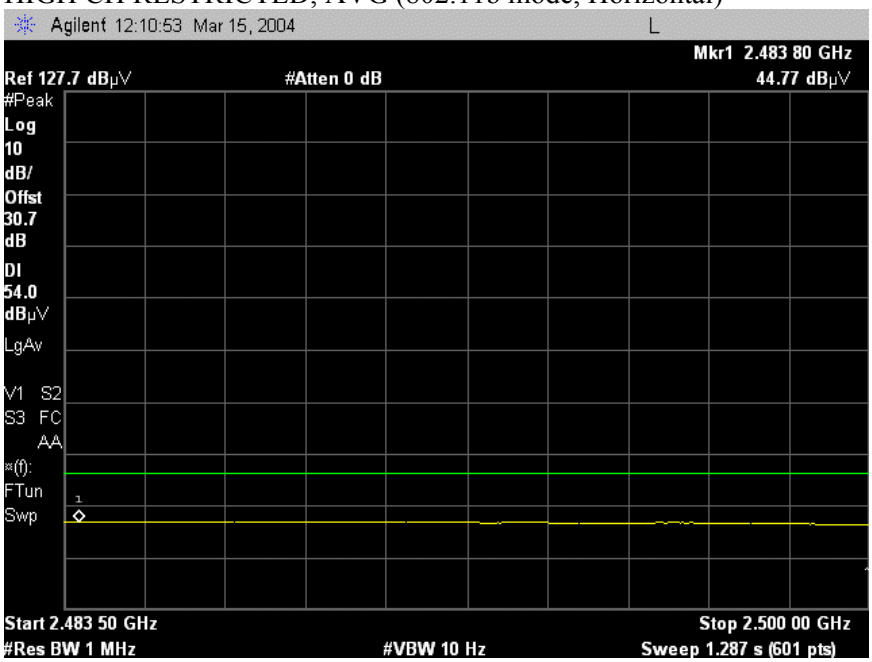


RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (802.11b mode, Horizontal)

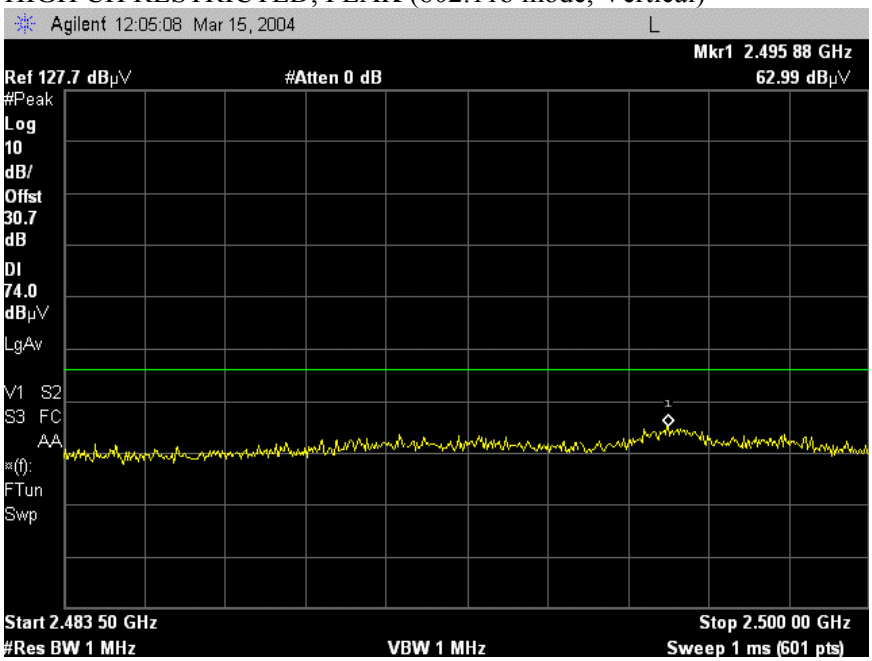


HIGH CH RESTRICTED, AVG (802.11b mode, Horizontal)

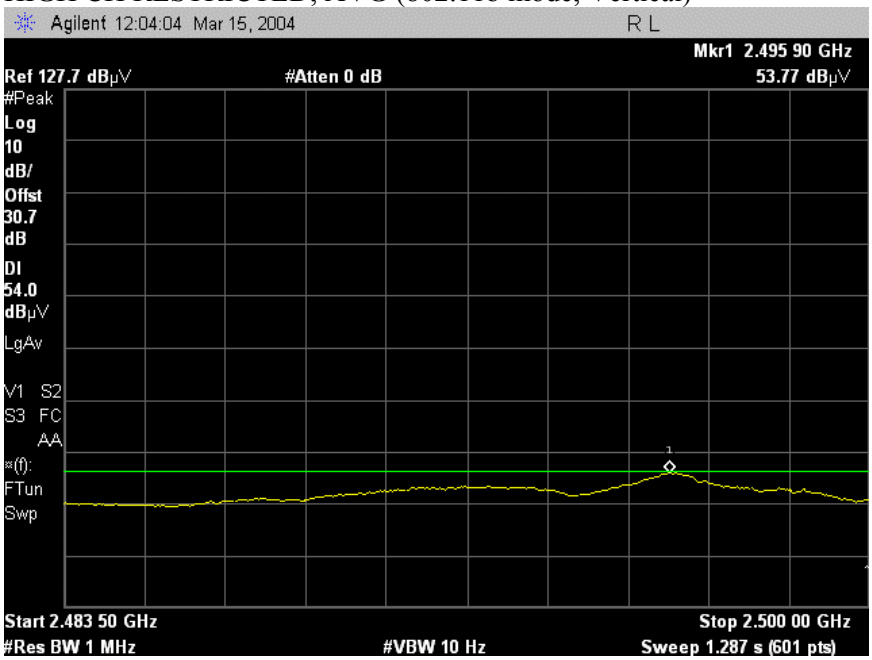


RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (802.11b mode, Vertical)



HIGH CH RESTRICTED, AVG (802.11b mode, Vertical)



HARMONICS AND SPURIOUS EMISSIONS (b MODE)

03/22/04 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
Project #: 04U2526
Company: TRAPEZE NETWORKS
EUT Descrip.: MOBILITY POINT
EUT M/N: MP-262
Test Target: FCC
Mode Oper: TX (B MODE)

Test Equipment:

EMCO Horn 1-18GHz	Spectrum Analyzer	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz
T73; S/N: 6717 @3m		T63 Miteq 646456		

Hi Frequency Cables: ☑ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)

Limit: FCC 15.205

Peak Measurements:
1 MHz Resolution Bandwidth
1MHz Video Bandwidth

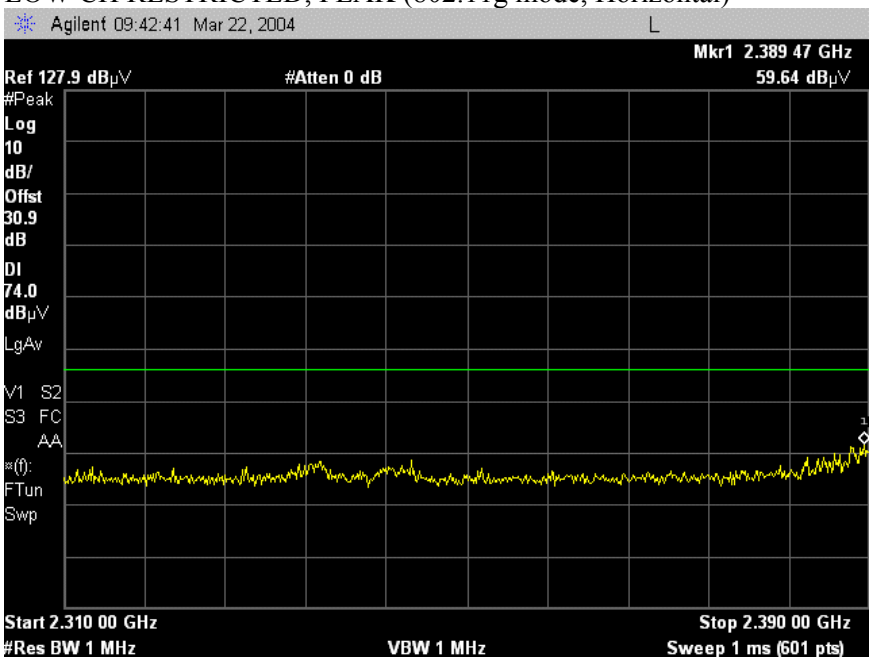
Average Measurements:
1 MHz Resolution Bandwidth
10Hz Video Bandwidth

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
LOW CHANNEL HARMONICS															
4.824	9.8	48.4	41.0	33.4	3.0	-35.3	0.0	1.0	50.4	43.0	74.0	54.0	-23.6	-11.0	V
12.060	9.8	37.9	29.9	39.2	5.3	-34.9	0.0	1.0	48.4	40.4	74.0	54.0	-25.6	-13.6	V
4.824	9.8	45.2	37.7	33.4	3.0	-35.3	0.0	1.0	47.2	39.7	74.0	54.0	-26.8	-14.3	H
12.060	9.8	37.6	29.8	39.2	5.3	-34.9	0.0	1.0	48.1	40.3	74.0	54.0	-25.9	-13.7	H
MIDDLE CHANNEL HARMONICS															
4.874	9.8	59.3	51.3	33.4	3.0	-35.3	0.0	1.0	61.3	53.4	74.0	54.0	-12.7	-0.6	V
7.311	9.8	50.5	44.4	35.8	3.8	-34.6	0.0	1.0	56.6	50.5	74.0	54.0	-17.4	-3.5	V
12.185	9.8	40.8	29.3	39.2	5.3	-35.1	0.0	1.0	51.2	39.7	74.0	54.0	-22.8	-14.3	V
4.874	9.8	52.2	44.3	33.4	3.0	-35.3	0.0	1.0	54.3	46.4	74.0	54.0	-19.7	-7.6	H
7.311	9.8	43.4	34.1	35.8	3.8	-34.6	0.0	1.0	49.5	40.2	74.0	54.0	-24.5	-13.8	H
12.185	9.8	37.6	29.0	39.2	5.3	-35.1	0.0	1.0	48.0	39.4	74.0	54.0	-26.0	-14.6	H
HIGH CHANNEL HARMONIC															
NO HARMONICS FROM THE HIGH CHANNEL WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR															
NO OTHER SPURIOUS EMISSIONS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR -20dB TO THE LIMIT IN THE RESTRICTED BANDS															

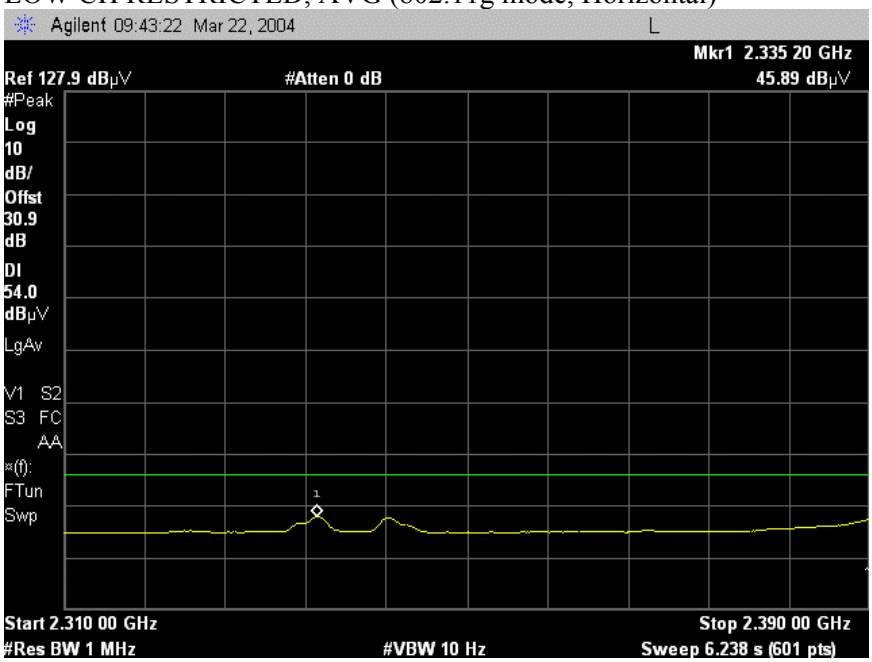
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (802.11g mode, Horizontal)

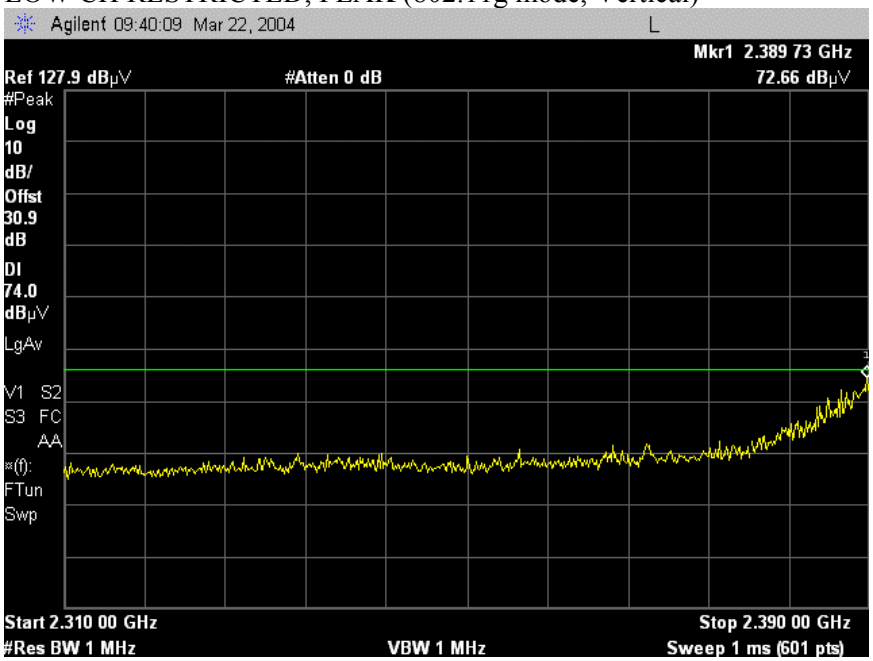


LOW CH RESTRICTED, AVG (802.11g mode, Horizontal)

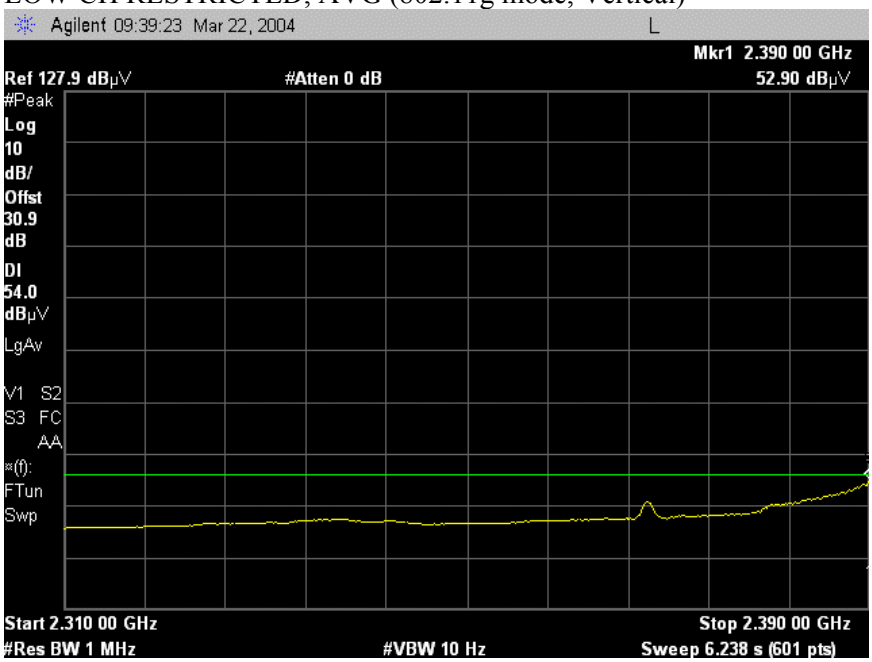


RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (802.11g mode, Vertical)

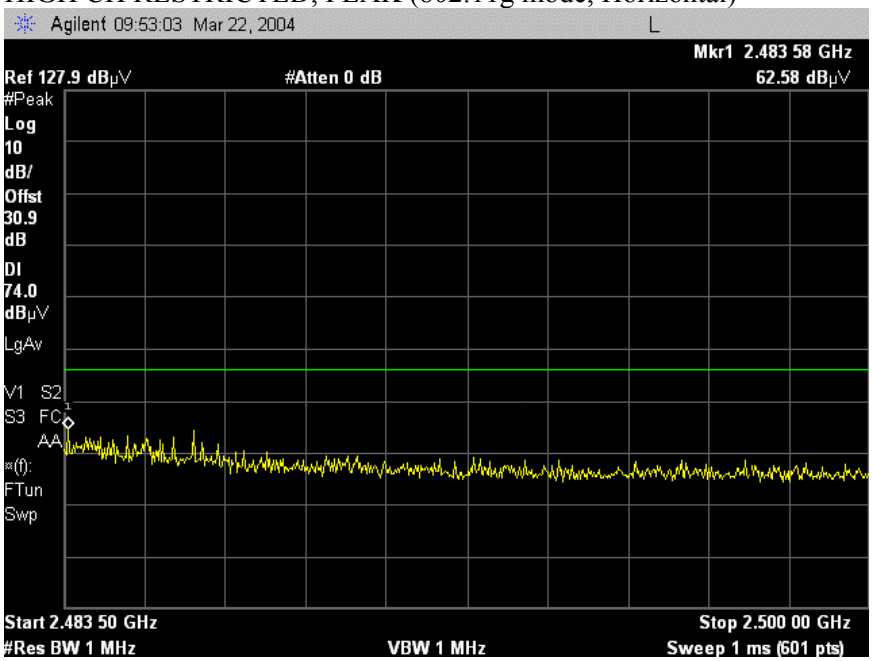


LOW CH RESTRICTED, AVG (802.11g mode, Vertical)

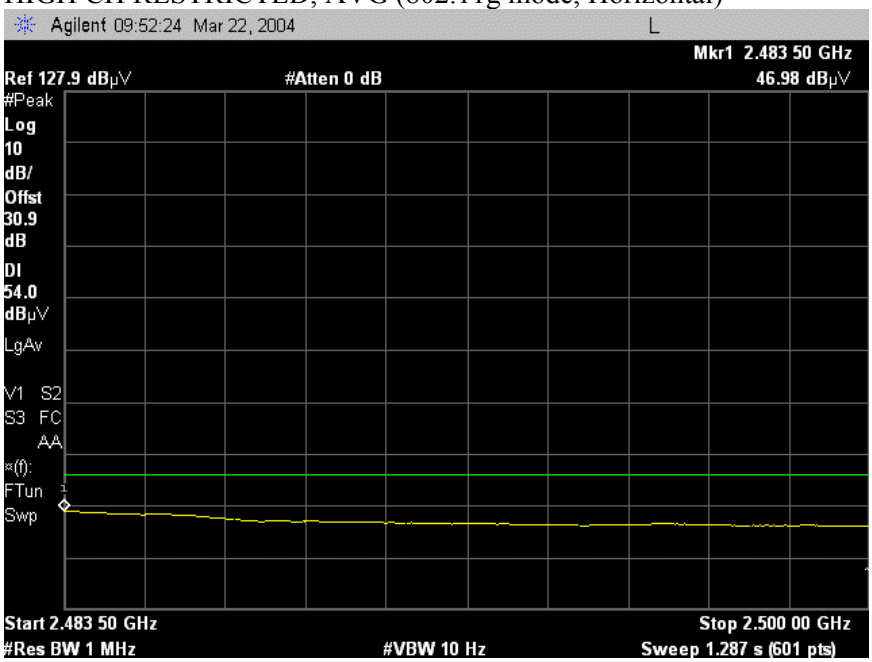


RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (802.11g mode, Horizontal)

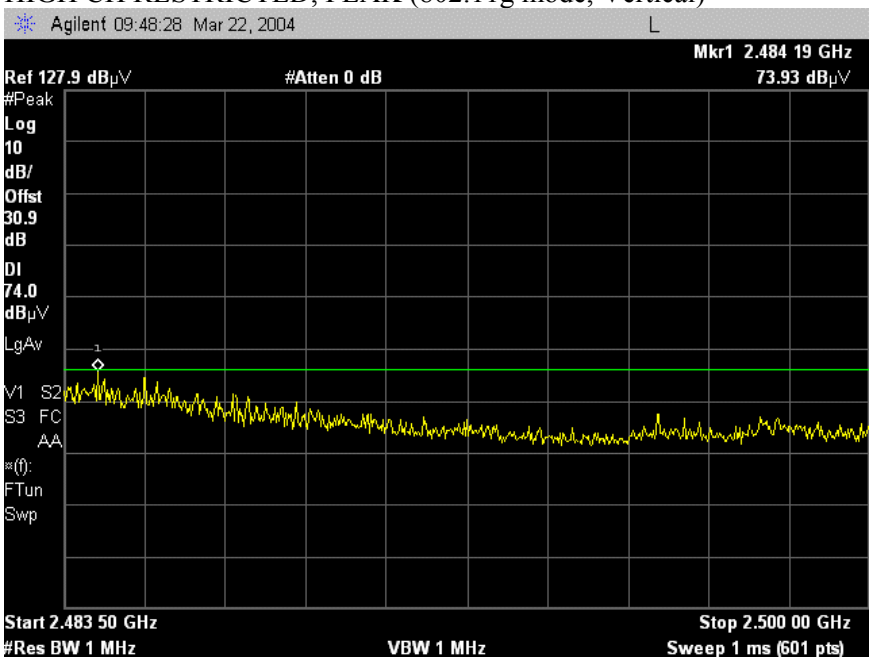


HIGH CH RESTRICTED, AVG (802.11g mode, Horizontal)

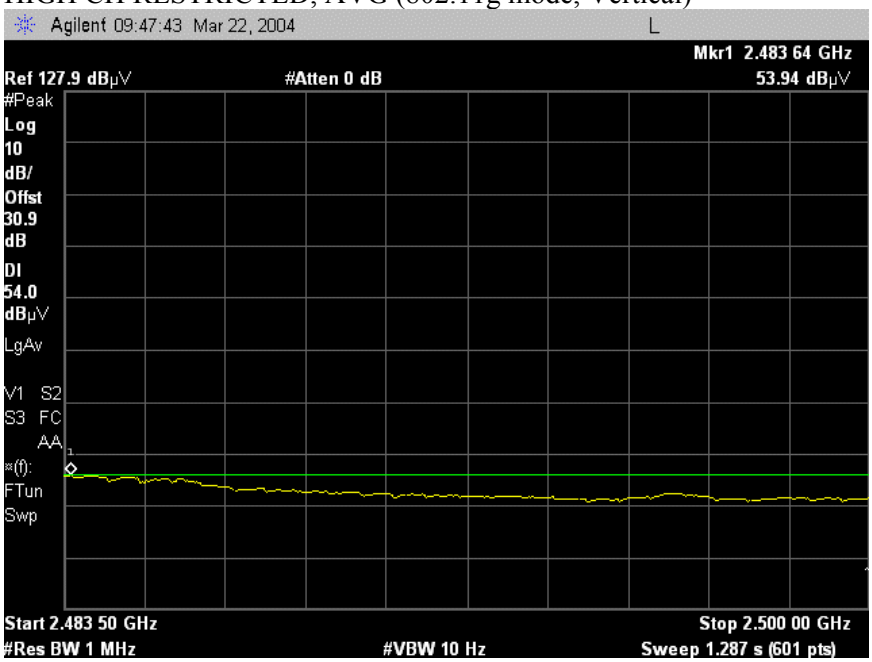


RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (802.11g mode, Vertical)



HIGH CH RESTRICTED, AVG (802.11g mode, Vertical)



HARMONICS AND SPURIOUS EMISSIONS (g MODE)

03/22/04 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
Project #: 04U2526
Company: TRAPEZE NETWORKS
EUT Descrip.: MOBILITY POINT
EUT M/N: MP-262
Test Target: FCC
Mode Oper: TX (G MODE)

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @1m
Spectrum Analyzer:
Pre-amplifer 1-26GHz: T63 Miteq 646456
Pre-amplifer 26-40GHz:
Horn > 18GHz:

Hi Frequency Cables: (2 ft) (2 ~ 3 ft) (4 ~ 6 ft) (12 ft)

Limit: FCC 15.205

Peak Measurements: 1 MHz Resolution Bandwidth, 1MHz Video Bandwidth
Average Measurements: 1 MHz Resolution Bandwidth, 10Hz Video Bandwidth

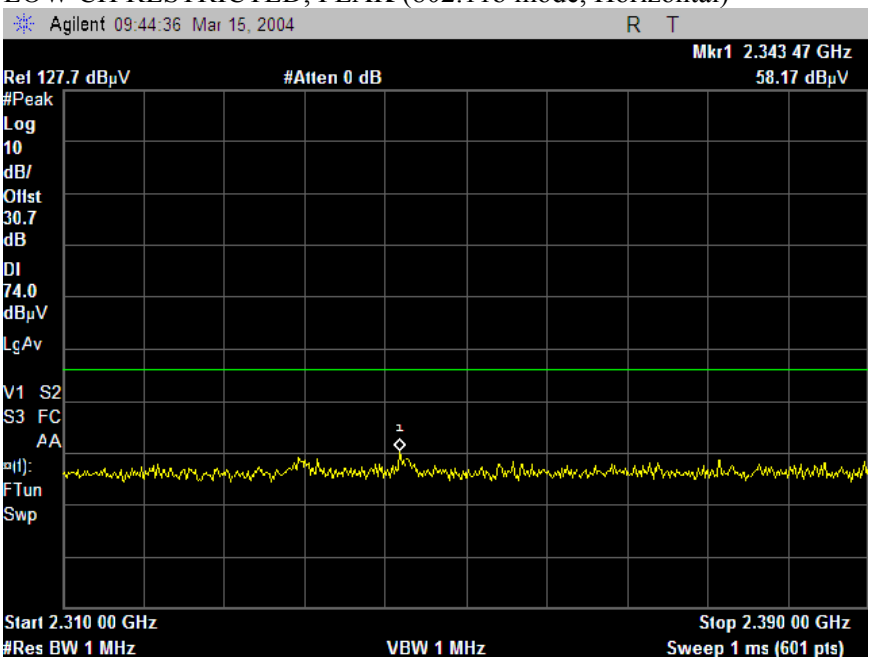
f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
LOW CHANNEL HARMONICS															
4.824	9.8	47.2	33.7	33.9	3.0	-35.3	0.0	1.0	49.8	36.3	74.0	54.0	-24.2	-17.7	V
12.060	9.8	38.8	30.0	39.4	5.3	-34.9	0.0	1.0	49.5	40.8	74.0	54.0	-24.5	-13.2	V
4.824	9.8	44.2	31.0	33.9	3.0	-35.3	0.0	1.0	46.8	33.6	74.0	54.0	-27.2	-20.4	H
12.060	9.8	37.7	30.1	39.4	5.3	-34.9	0.0	1.0	48.5	40.9	74.0	54.0	-25.5	-13.1	H
MIDDLE CHANNEL HARMONICS															
4.874	9.8	57.0	32.8	33.9	3.0	-35.3	0.0	1.0	59.6	35.4	74.0	54.0	-14.4	-18.6	V
7.311	9.8	48.3	35.2	36.8	3.8	-34.6	0.0	1.0	55.3	42.2	74.0	54.0	-18.7	-11.8	V
12.185	9.8	39.7	29.9	39.5	5.3	-35.1	0.0	1.0	50.4	40.6	74.0	54.0	-23.6	-13.4	V
4.874	9.8	54.4	32.2	33.9	3.0	-35.3	0.0	1.0	57.0	34.8	74.0	54.0	-17.0	-19.2	H
7.311	9.8	47.2	31.3	36.8	3.8	-34.6	0.0	1.0	54.3	38.3	74.0	54.0	-19.7	-15.7	H
12.185	9.8	39.8	30.2	39.5	5.3	-35.1	0.0	1.0	50.5	40.9	74.0	54.0	-23.5	-13.1	H
HIGH CHANNEL HARMONIC															
NO HARMONICS FROM THE HIGH CHANNEL WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR															
NO OTHER SPURIOUS EMISSIONS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR -20dB TO THE LIMIT IN THE RESTRICTED BANDS															

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

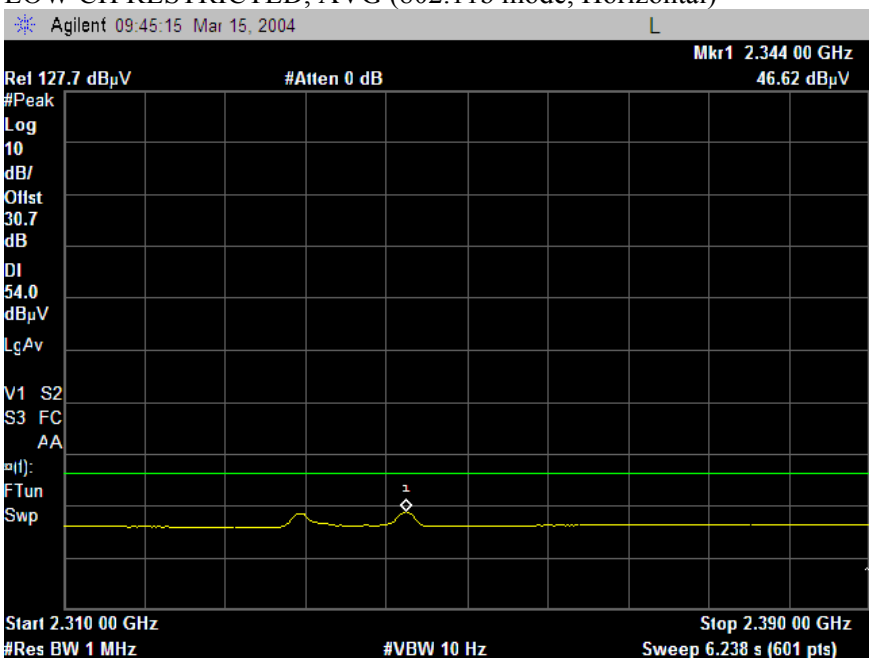
7.5.4. TRANSMITTER RADIATED EMISSIONS ABOVE 1 GHZ (10 dBi ANTENNA)

RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (802.11b mode, Horizontal)

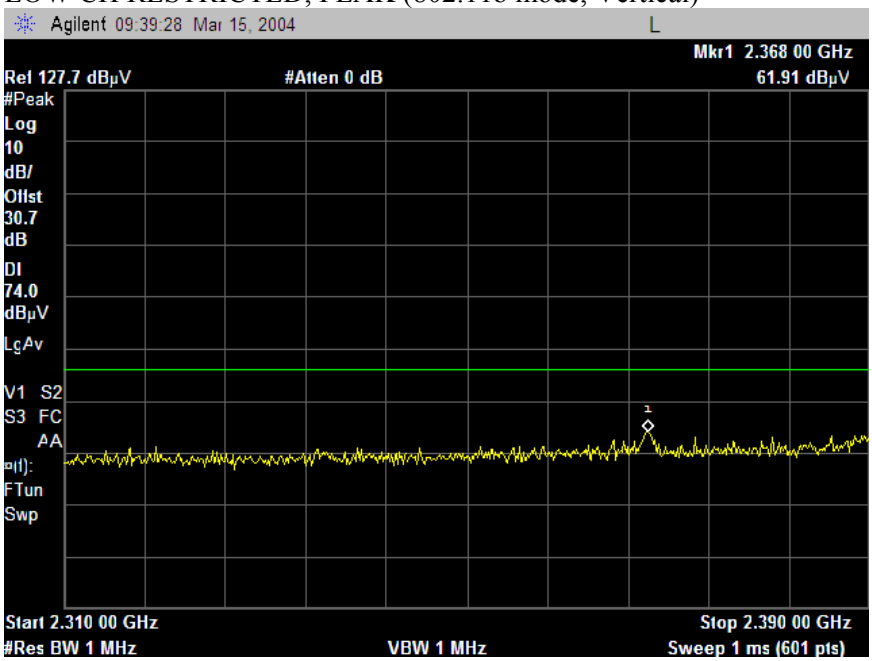


LOW CH RESTRICTED, AVG (802.11b mode, Horizontal)

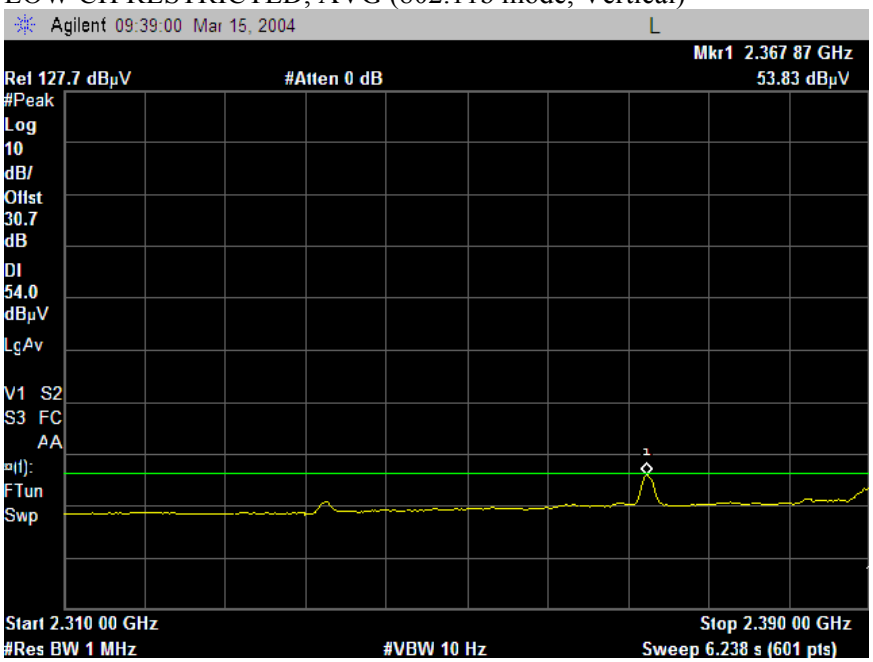


RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (802.11b mode, Vertical)

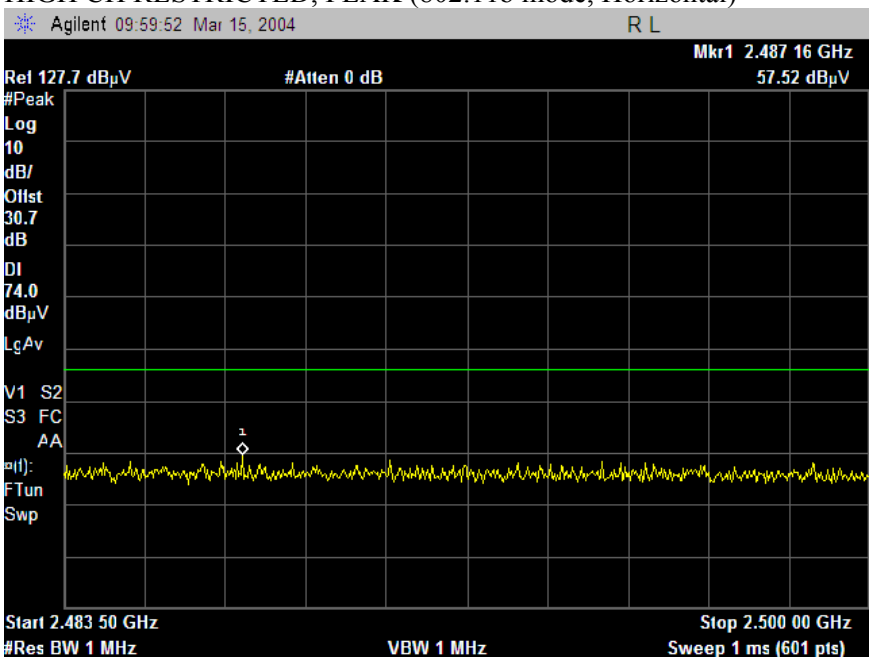


LOW CH RESTRICTED, AVG (802.11b mode, Vertical)

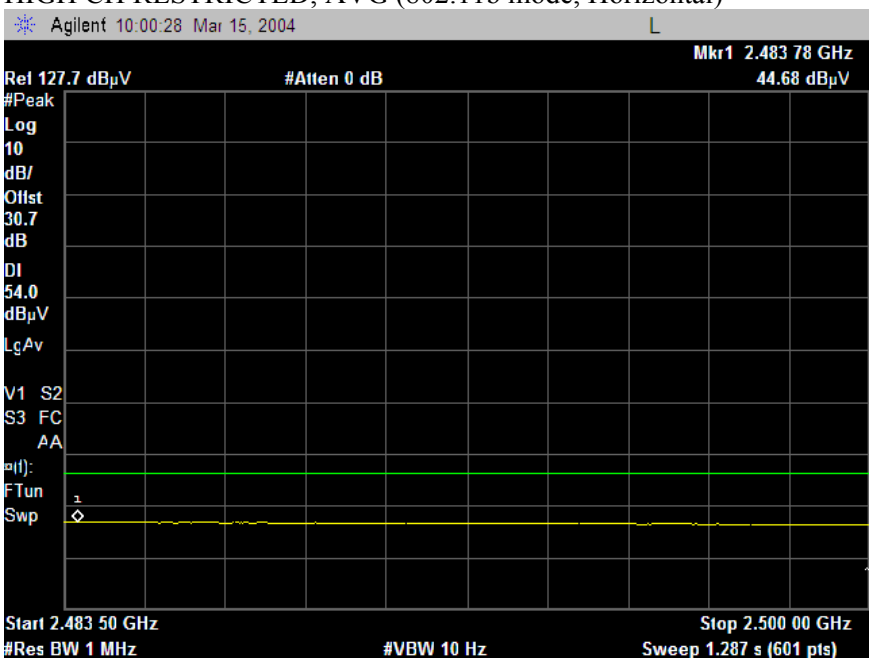


RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (802.11b mode, Horizontal)

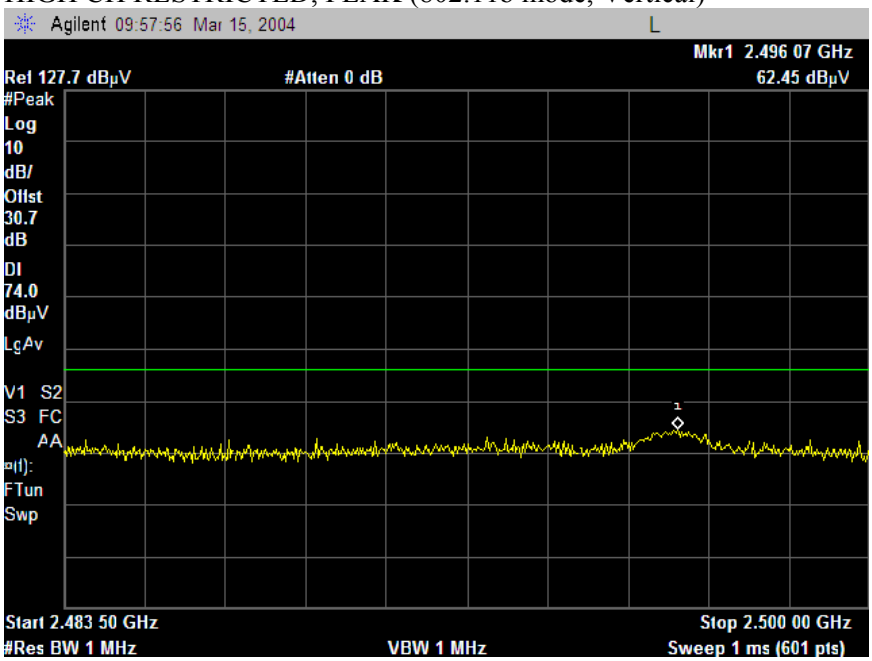


HIGH CH RESTRICTED, AVG (802.11b mode, Horizontal)

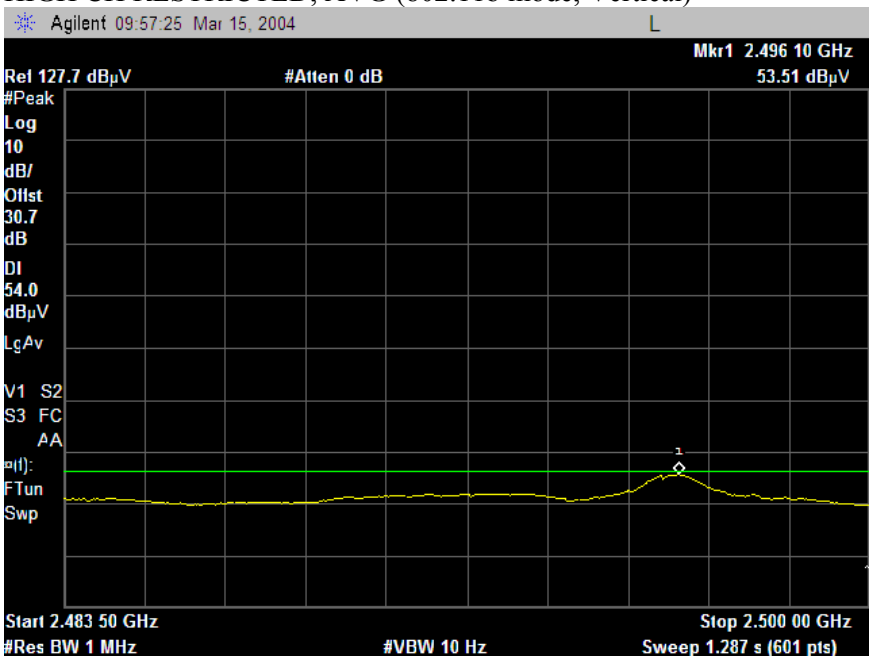


RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (802.11b mode, Vertical)



HIGH CH RESTRICTED, AVG (802.11b mode, Vertical)



HARMONICS AND SPURIOUS EMISSIONS (b MODE)

03/22/04 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
Project #: 04U2526
Company: TRAPEZE NETWORKS
EUT Descrip.: MOBILITY POINT
EUT M/N: MP-262
Test Target: FCC
Mode Oper: TX (B MODE)

Test Equipment:

EMCO Horn 1-18GHz	Spectrum Analyzer	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz
T73; S/N: 6717 @3m		T87 Miteq 924342		

Hi Frequency Cables: ☑ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)

Limit: FCC 15.205

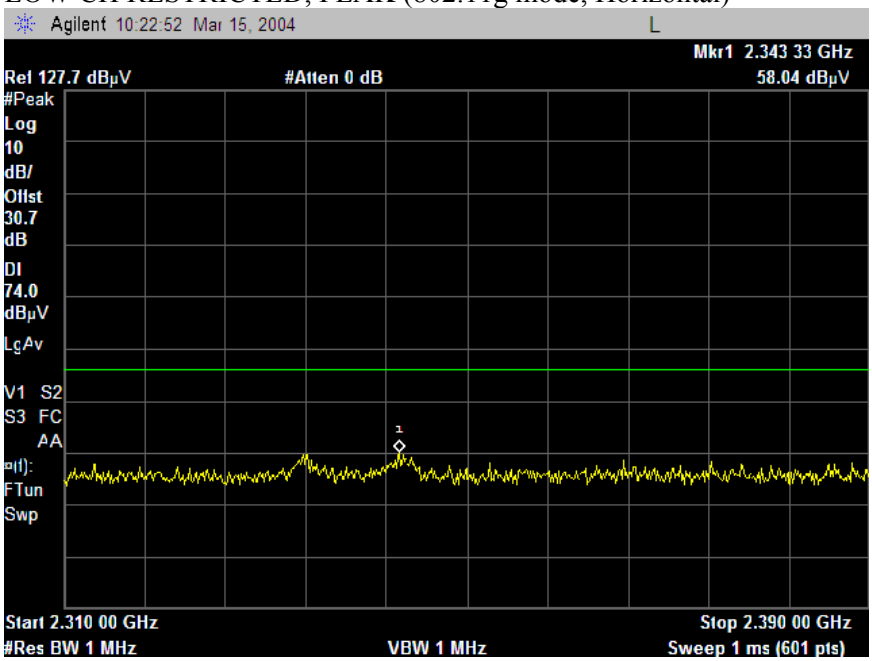
Peak Measurements: 1 MHz Resolution Bandwidth, 1MHz Video Bandwidth
Average Measurements: 1 MHz Resolution Bandwidth, 10Hz Video Bandwidth

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
					MIDDLE CHANNEL										
4.874	9.8	65.4	61.2	33.4	3.0	-44.7	0.0	1.0	58.1	53.9	74.0	54.0	-15.9	-0.1	V
7.311	9.8	58.8	51.7	35.8	3.8	-44.5	0.0	1.0	54.9	47.8	74.0	54.0	-19.1	-6.2	V
12.185	9.8	47.1	36.3	39.2	5.3	-42.4	0.0	1.0	50.2	39.4	74.0	54.0	-23.8	-14.6	V
4.874	9.8	62.6	54.7	33.4	3.0	-44.7	0.0	1.0	55.2	47.4	74.0	54.0	-18.8	-6.6	H
7.311	9.8	55.8	48.2	35.8	3.8	-44.5	0.0	1.0	51.9	44.4	74.0	54.0	-22.1	-9.6	H
12.185	9.8	47.3	36.0	39.2	5.3	-42.4	0.0	1.0	50.4	39.1	74.0	54.0	-23.6	-14.9	H
					LOW AND HIGH CHANNELS HARMONICS										
NO HARMONICS FROM THE LOW AND HIGH CHANNELS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR															
		NO OTHER SPURIOUS EMISSIONS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR -20dB TO THE LIMIT IN THE RESTRICTED BANDS													

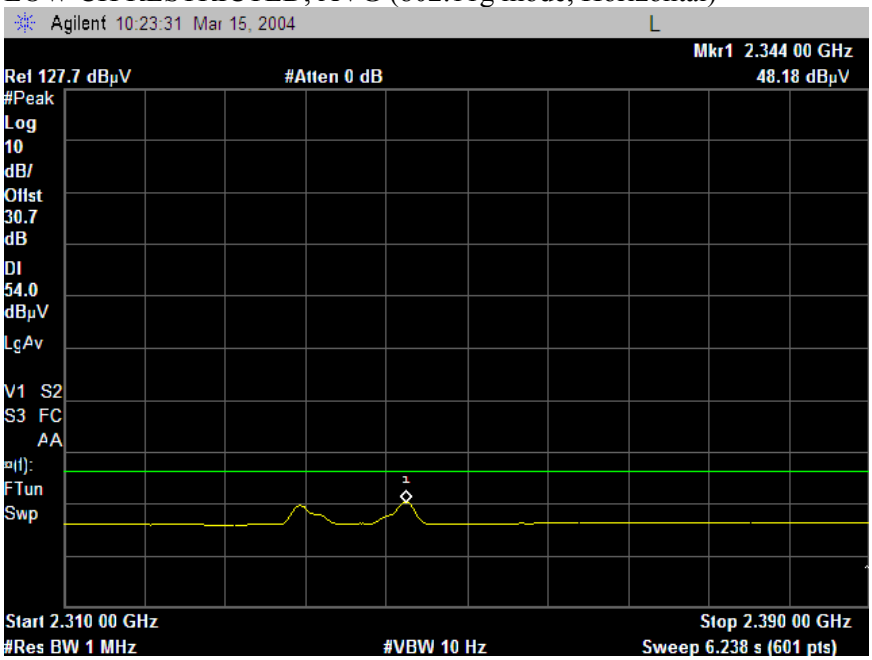
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (802.11g mode, Horizontal)

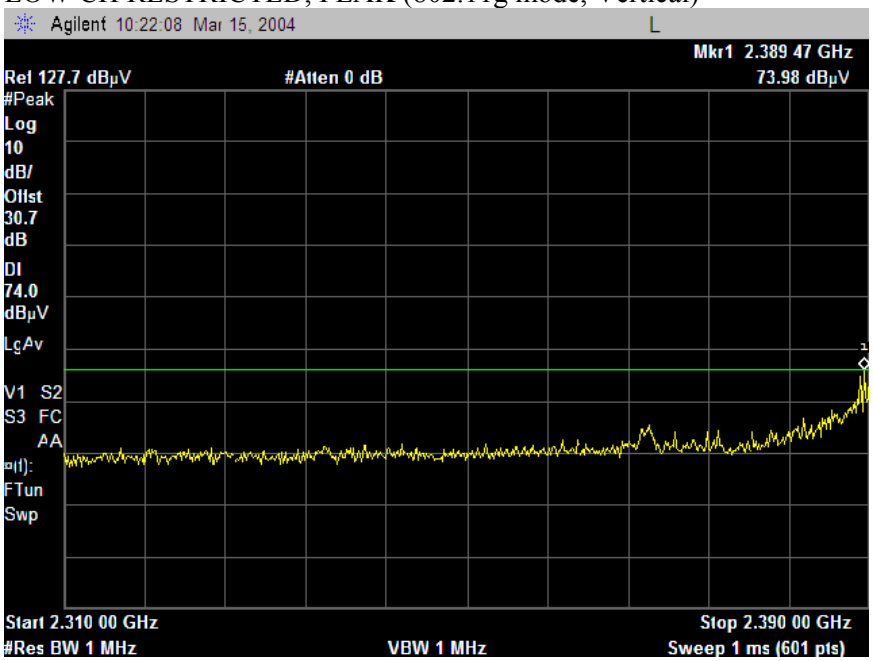


LOW CH RESTRICTED, AVG (802.11g mode, Horizontal)

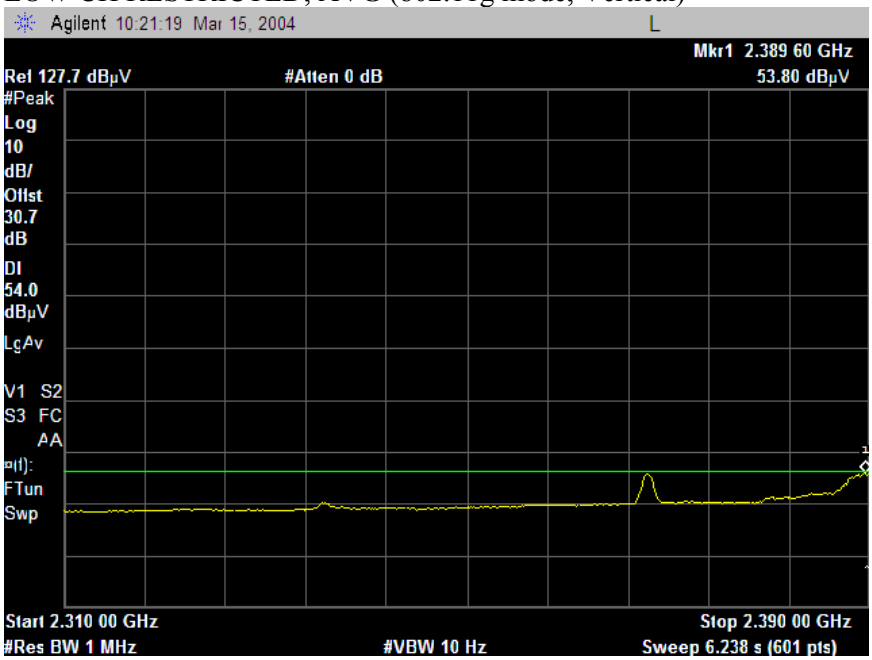


RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (802.11g mode, Vertical)

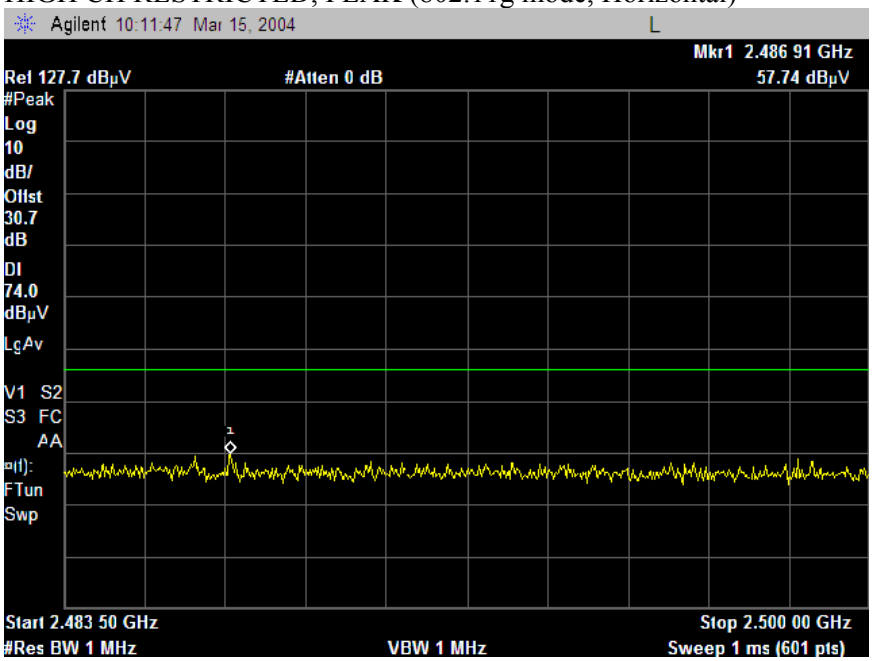


LOW CH RESTRICTED, AVG (802.11g mode, Vertical)

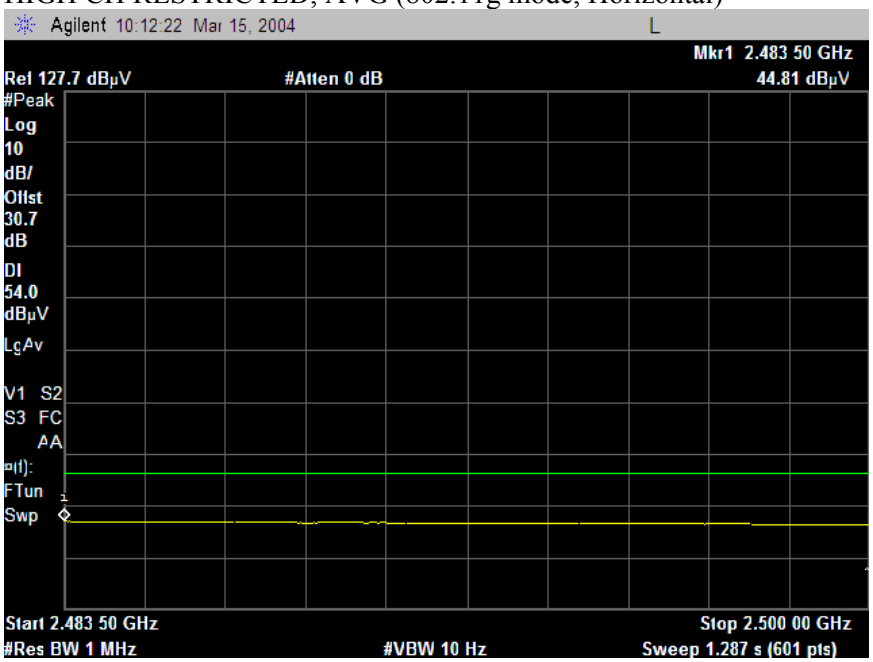


RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (802.11g mode, Horizontal)

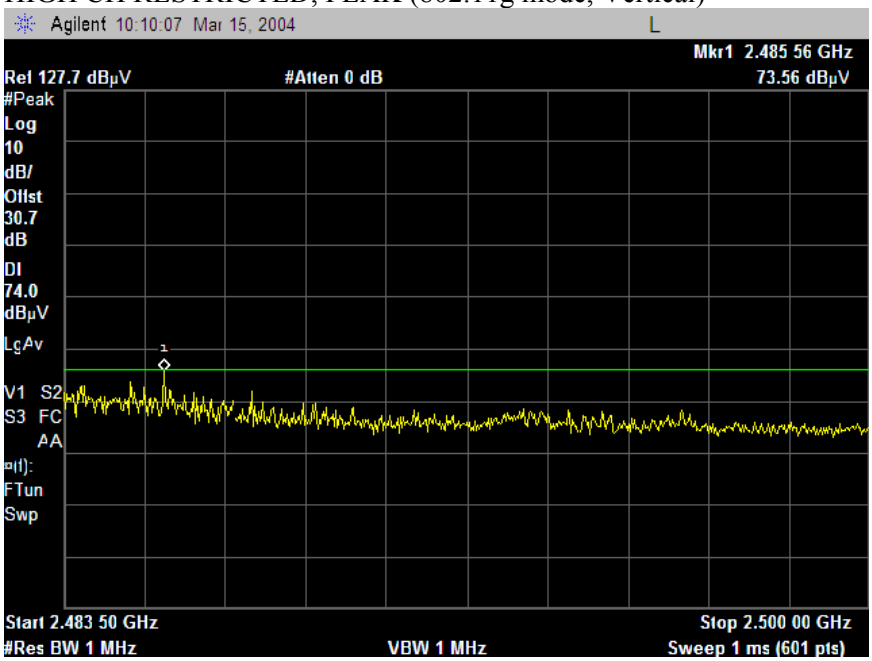


HIGH CH RESTRICTED, AVG (802.11g mode, Horizontal)

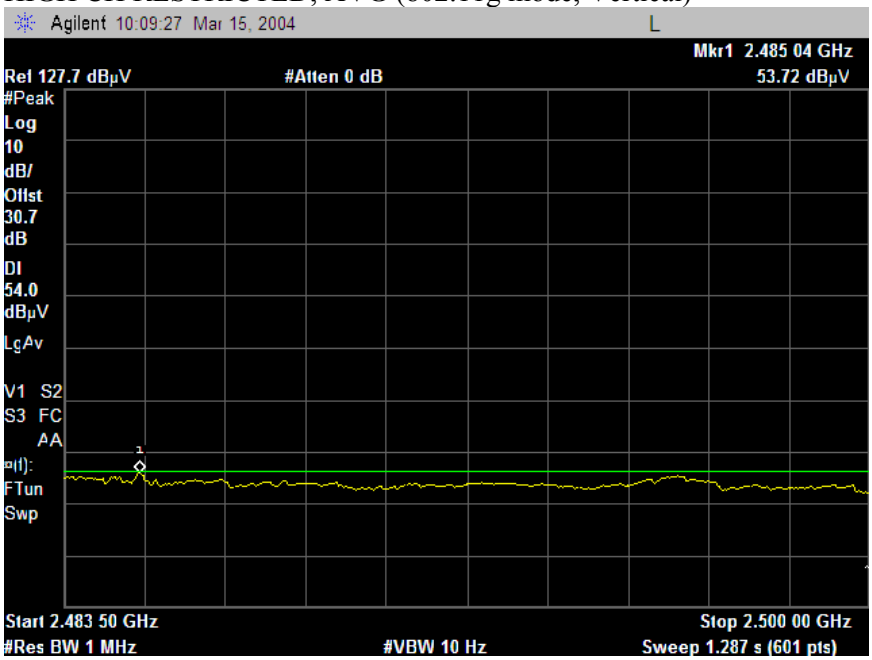


RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (802.11g mode, Vertical)



HIGH CH RESTRICTED, AVG (802.11g mode, Vertical)



HARMONICS AND SPURIOUS EMISSIONS (g MODE)

03/22/04 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: NEELESH RAJ
Project #: 04U2526
Company: TRAPEZE NETWORKS
EUT Descrip.: MOBILITY POINT
EUT M/N: MP-262
Test Target: FCC
Mode Oper: TX (G MODE)

Test Equipment:

EMCO Horn 1-18GHz	Spectrum Analyzer	Pre-amplifer 1-26GHz	Pre-amplifer 26-40GHz	Horn > 18GHz
T73; S/N: 6717 @1m	Agilent E4446A Analyzer	T87 Miteq 924342		

Hi Frequency Cables: ☑ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)

Limit: FCC 15.205

Peak Measurements: 1 MHz Resolution Bandwidth, 1MHz Video Bandwidth

Average Measurements: 1 MHz Resolution Bandwidth, 10Hz Video Bandwidth

f GHz	Dist feet	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	HPF	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes
	MIDDLE CHANNEL														
4.874	9.8	68.6	52.3	33.9	3.0	-44.7	0.0	1.0	61.8	45.5	74.0	54.0	-12.2	-8.5	V
7.311	9.8	59.2	43.8	36.8	3.8	-44.5	0.0	1.0	56.3	40.9	74.0	54.0	-17.7	-13.1	V
12.185	9.8	49.9	36.6	39.5	5.3	-42.4	0.0	1.0	53.4	40.1	74.0	54.0	-20.6	-13.9	V
4.874	9.8	55.1	39.9	33.9	3.0	-44.7	0.0	1.0	48.3	33.1	74.0	54.0	-25.7	-20.9	H
7.311	9.8	49.7	39.3	36.8	3.8	-44.5	0.0	1.0	46.8	36.4	74.0	54.0	-27.2	-17.6	H
12.185	9.8	47.4	36.7	39.5	5.3	-42.4	0.0	1.0	50.9	40.2	74.0	54.0	-23.1	-13.8	H
						LOW AND HIGH CHANNELS HARMONICS									
NO HARMONICS FROM THE LOW AND HIGH CHANNELS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR															
		NO OTHER SPURIOUS EMISSIONS WERE DETECTED ABOVE THE SYSTEM NOISE FLOOR -20dB TO THE LIMIT IN THE RESTRICTED BANDS													

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

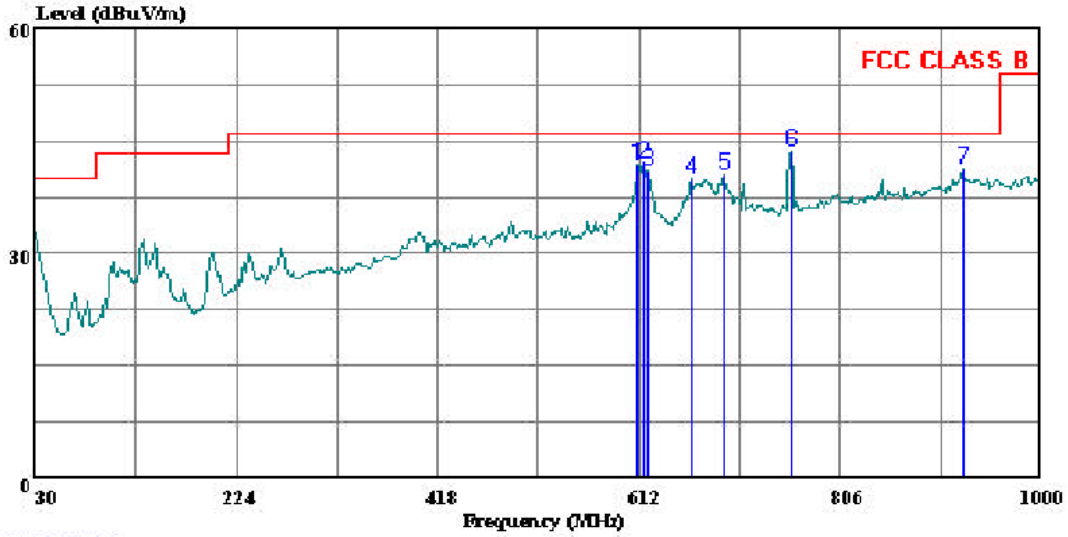
7.5.5. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT

COMPLIANCE Engineering Services, Inc.
561F Monterey Road
San Jose, CA 95131
Tel: (408) 463-0888
Fax: (408) 463-0885

Data#: 4 File#: RUN1.EMI Date: 03-23-2004 Time: 09:40:43



(Audix ATC)

Trace: 3 Ref Trace:

Condition: FCC CLASS B HORIZONTAL
Test Operator: : NEELESH RAJ
Project #: : 04U2526
Company: : TRAPEZE NETWORKS, INC.
EUT: : MOBILITY POINT
Model No: : 100/MP-262
Configuration: : EUT
Target of Test: : CLASS B
Mode of Operation: TX WORST CASE

HORIZONTAL DATA

Page: 1

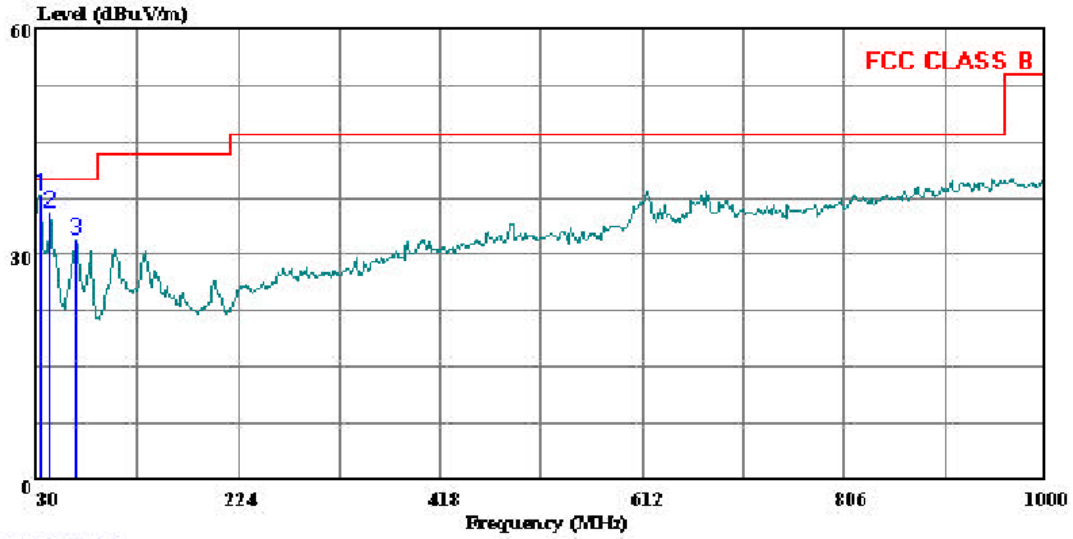
	Freq	Remark	Read Level	Factor	Level	Limit Line	Over Limit
	MHz		dBuV	dB	dBuV/m	dBuV/m	dB
1	611.030	Peak	19.89	22.03	41.92	46.00	-4.08
2	615.880	Peak	20.03	22.13	42.16	46.00	-3.84
3	620.730	Peak	18.93	22.15	41.08	46.00	-4.92
4	662.440	Peak	16.89	23.15	40.04	46.00	-5.96
5	693.480	Peak	16.99	23.45	40.44	46.00	-5.56
6	759.440	Peak	19.23	24.39	43.62	46.00	-2.38
7	924.340	Peak	14.45	26.74	41.19	46.00	-4.81

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL PLOT

561F Monterey Road
San Jose, CA 95131
Tel: (408) 463-0888
Fax: (408) 463-0885

Data#: 2 File#: RUN1.EMI Date: 03-23-2004 Time: 09:29:45



Trace: 1 Ref Trace:

Condition: FCC CLASS B VERTICAL
Test Operator: : NEELESH RAJ
Project #: : 04U2526
Company: : TRAPEZE NETWORKS, INC.
EUT: : MOBILITY POINT
Model No: : 100/MP-262
Configuration: : EUT
Target of Test: : CLASS B
Mode of Operation: TX WORST CASE

VERTICAL DATA

Page: 1

	Freq	Remark	Read Level	Factor	Level	Limit Line	Over Limit
	MHz		dBuV	dB	dBuV/m	dBuV/m	dB
1	33.880	Peak	17.25	20.70	37.95	40.00	-2.05
2	43.580	Peak	22.07	13.58	35.65	40.00	-4.35
3	67.830	Peak	22.72	9.35	32.07	40.00	-7.93

7.6. POWERLINE CONDUCTED EMISSIONS

LIMIT

§15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

The lower limit applies at the boundary between the frequency ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The resolution bandwidth is set to 9 kHz for both peak detection and quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

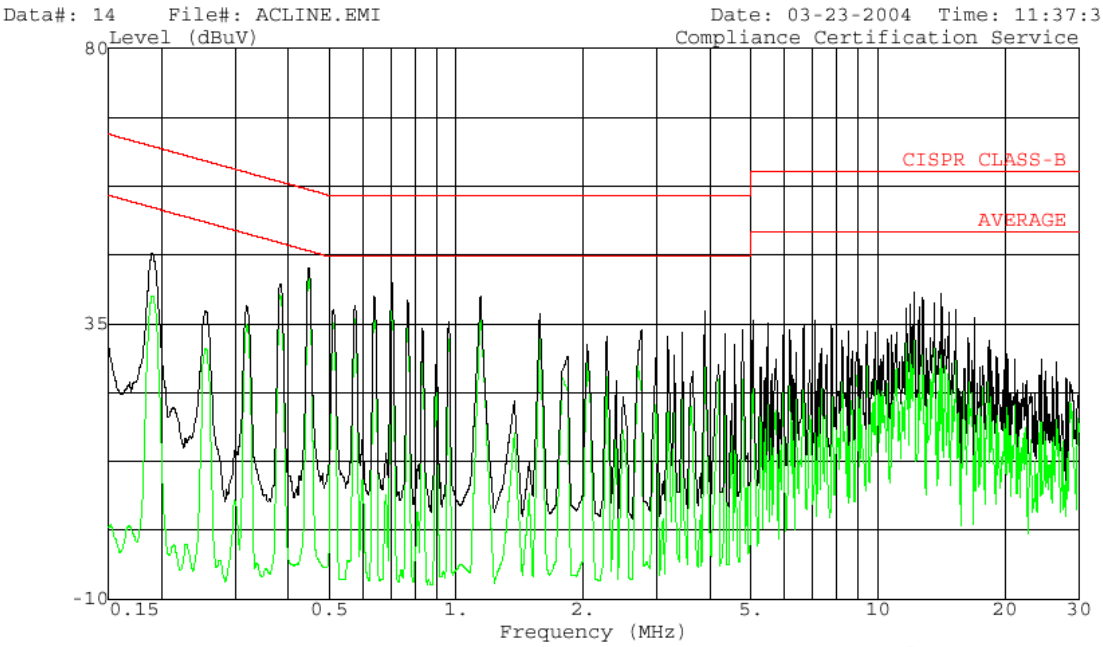
No non-compliance noted:

6 WORST EMISSIONS

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.45	44.08	--	42.43	0.00	57.51	47.51	-13.43	-5.08	L1
0.71	41.64	--	40.03	0.00	56.00	46.00	-14.36	-5.97	L1
1.14	39.56	--	37.69	0.00	56.00	46.00	-16.44	-8.31	L1
0.19	46.60	--	39.34	0.00	64.89	54.89	-18.29	-15.55	L2
0.45	43.72	--	41.99	0.00	57.51	47.51	-13.79	-5.52	L2
0.71	40.64	--	38.92	0.00	56.00	46.00	-15.36	-7.08	L2
6 Worst Data									

LINE 1 RESULTS

COMPLIANCE Engineering Service, Inc.
561F Monterey Road,
San Jose, CA 95037 USA
Tel: (408) 463-0885
Fax: (408) 463-0888

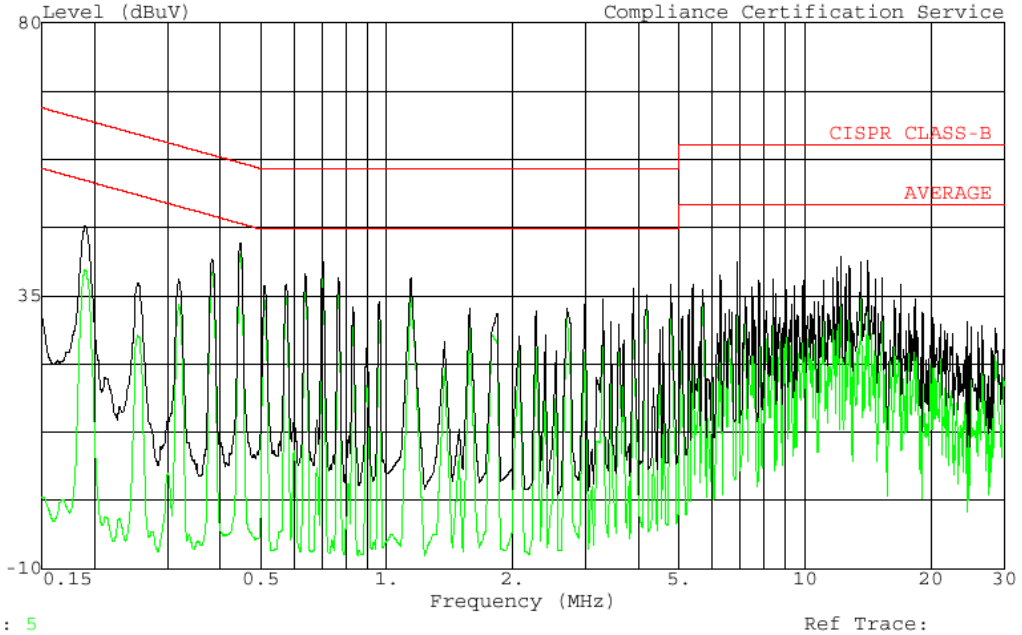


Trace: 12 Ref Trace:
Project # : 04u2526-1
Test Operator : NEELESH RAJ
Company : TRAPEZE NETWORKS
EUT : MOBILITY POINT
Model : 100/MP-262
Configuration : EUT
Mode of Operation: TX (WORST CASE)
Target of Test : CLASS B
Voltage : 115VAC/60Hz
: LINE 1 (PEAK; BLACK AVG;GREEN)

LINE 2 RESULTS

COMPLIANCE Engineering Service, Inc.
561F Monterey Road,
San Jose, CA 95037 USA
Tel: (408) 463-0885
Fax: (408) 463-0888

Data#: 7 File#: ACLINE.EMI Date: 03-23-2004 Time: 11:24:14

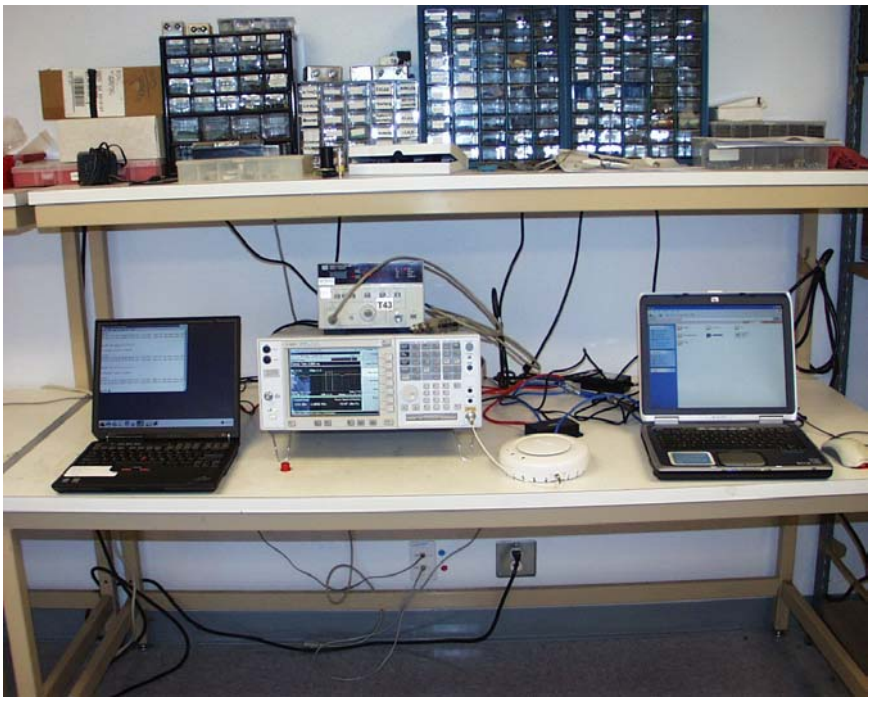


Trace: 5 Ref Trace:
Project # : 04u2526-1
Test Operator : NEELESH RAJ
Company : TRAPEZE NETWORKS
EUT : MOBILITY POINT
Model : 100/MP-262
Configuration : EUT
Mode of Operation: TX (WORST CASE)
Target of Test : CLASS B
Voltage : 115VAC/60Hz
: LINE 2 (PEAK; BLACK AVG;GREEN)

8. SETUP PHOTOS

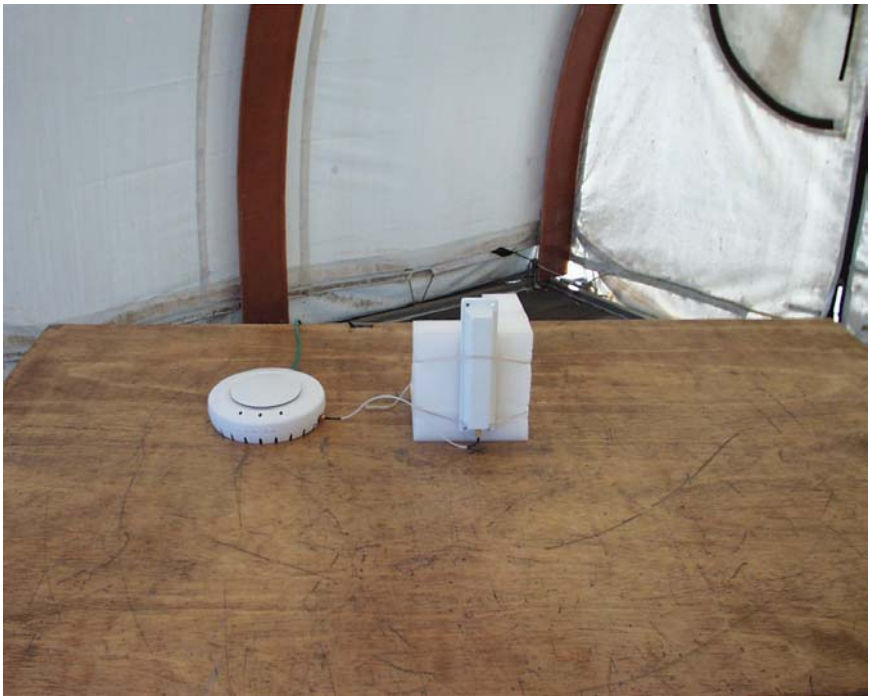
ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP

ANTENNA PORT CONDUCTED PHOTO

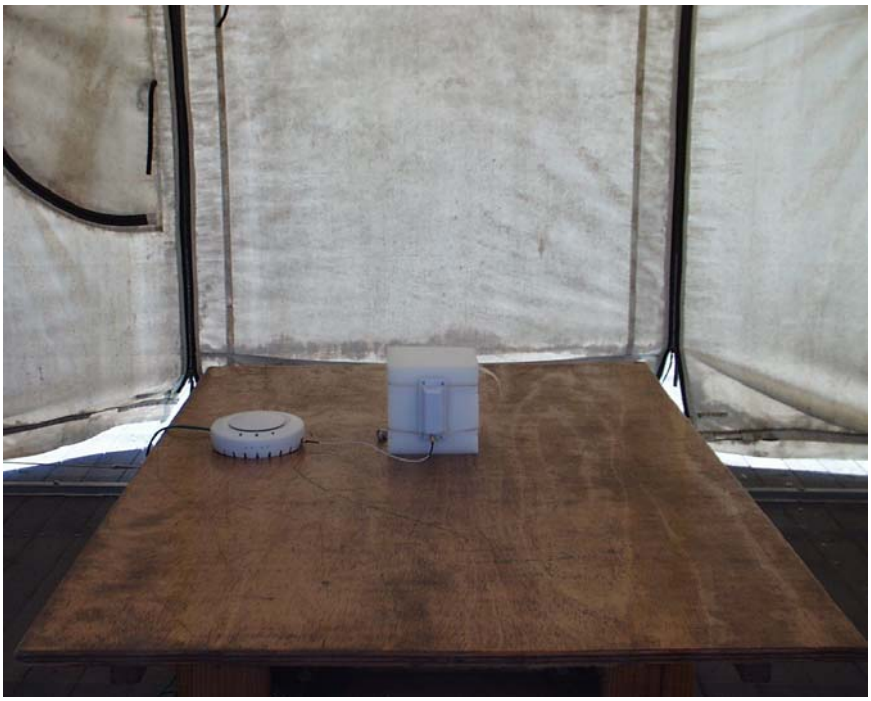


RADIATED RF MEASUREMENT SETUP

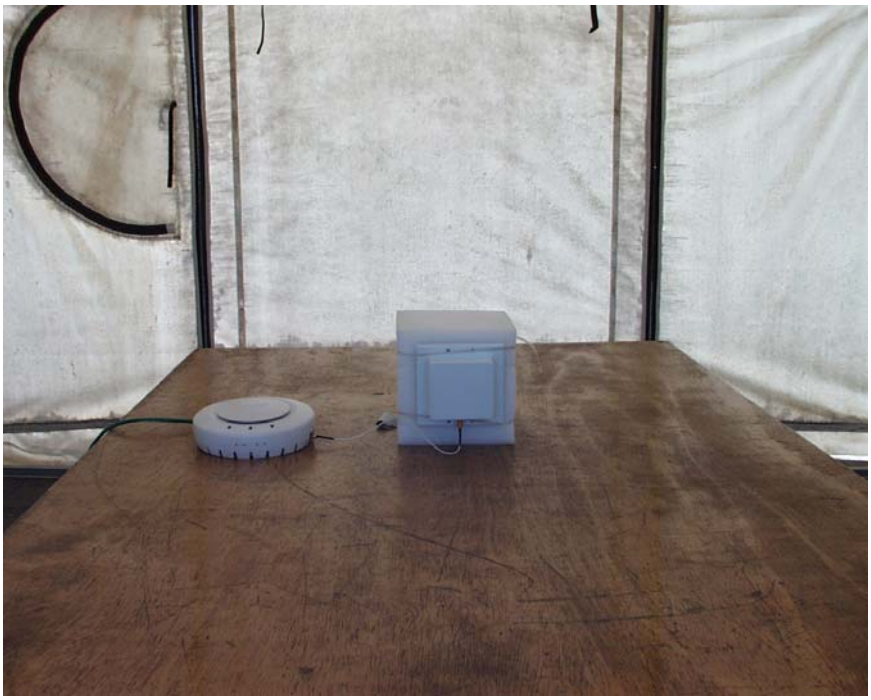
6 dBi Sector Panel Antenna



7 dBi Sector Panel Antenna



10 dBi Directional Panel Antenna



POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP

LINE CONDUCTED FRONT PHOTO

LINE CONDUCTED BACK PHOTO

END OF REPORT