AVALAN WIRELESS SYSTEMS, INC. TEST REPORT

FOR THE

5.8GHZ WIRELESS ETHERNET BRIDGE MODULE, AW5800M

FCC PART 15 SUBPART B SECTIONS 15.107 AND 15.109 CLASS B,
FCC PART 15 SUBPART C SECTIONS 15.207, 15.209, 15.247 AND RSS-210

COMPLIANCE

DATE OF ISSUE: JULY 14, 2006

PREPARED FOR:

AvaLAN Wireless Systems, Inc.
2400 El Camino Real, #317
Mountain View, CA 94040

PREPARED BY:

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P.O. No.: AX 2004
W.O. No.: 85414

Date of test: June 29 - July 14, 2006

Report No.: FC06-042

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ADMINISTRATIVE INFORMATION

DATE OF TEST:	June 29 - July 14, 2006
DATE OF RECEIPT:	June 29, 2006
MANUFACTURER:	AvaLAN Wireless Systems, Inc. 2400 El Camino Real, #317 Mountain View, CA 94040
REPRESENTATIVE:	Mike Derby
TEST LOCATION:	CKC Laboratories, Inc. 1120 Fulton Place Fremont, CA 94539
TEST METHOD:	ANSI C63.4 (2003), RSS-210 and RSS-GEN
PURPOSE OF TEST:	To demonstrate the compliance of the 5.8GHz Wireless Ethernet Bridge Module, AW5800m with the requirements for FCC Part 15 Subpart B Sections 15.107 and 15.109 Class B, FCC Part 15 Subpart C Sections 15.207, 15.209, 15.247 and RSS-210 devices.

FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian Standard	Canadian Section	FCC Standard	FCC Section	Test Description
RSS GEN	7.1.4	47CFR	15.203	Antenna Connector Requirements
RSS GEN	7.2.1	47CFR	15.35(c)	Pulsed Operation
RSS GEN	7.2.2	47CFR	15.207	AC Mains Conducted Emissions Requirement
RSS 210	2.1	47CFR	15.215(c)	Frequency Stability Recommendation
RSS 210	2.2	47CFR	15.205	Restricted Bands of Operation
RSS 210	2.6	47CFR	15.209	General Radiated Emissions Requirement
RSS 210	A8.2(1)	47CFR	15.247(a)(2)	Minimum 6dB Bandwidth
RSS 210	A8.2(2)	47CFR	15.247(e)	Peak Power Spectral Density
RSS 210	A8.4(4)	47CFR	15.247(b)(3)	RF Power Output
RSS 210	A8.4(5)	47CFR	15.247(c)(1)	Directional Gain Requirements
RSS 210	A8.4(6)	47CFR	15.247(c)(2)	Beam Steering Antennas
RSS 210	A8.5	47CFR	15.247(d)	Spurious Emissions
	IC 5933		958979	Site File No.

Notes: Rule Sections for RSS 210 are taken from RSS 210 Issue 6

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Joyce Walker, Quality Assurance Administrative Manager

Amrinder Brar, Lab Manager

TEST PERSONNEL:

Christine Nicklas, Project Manager & Principal Consultant

Norberto Gamez Jr., EMC Test Technologist

Art Rice, EMC Test Engineer

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

FCC 15.31(m) Number Of Channels
This device was tested on three channels and operates on 58 channels.

FCC 15.33(a) Frequency Ranges Tested
15.107 Conducted Emissions: 150 kHz – 30 MHz
15.109 Radiated Emissions: 9 kHz – 1000 MHz
15.207 Conducted Emissions: 150 kHz – 30 MHz
15.209/15.247 Radiated Emissions: 9 kHz – 40 GHz

FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	40 GHz	1 MHz

FCC 15.203 Antenna Requirements
The antennas are detachable with an RPSMA Female connection on the UUT. This is considered a unique connection; therefore the EUT complies with Section 15.203 of the FCC rules.

FCC 15.205 Restricted Bands
The fundamental operating frequency lies outside the restricted bands and therefore complies with the requirements of Section 15.205 of the FCC rules. Any spurious emission coming from the EUT was investigated to determine if any portion lies inside the restricted band. If any portion of a spurious emissions signal was found to be within a restricted band, investigation was performed to ensure compliance with Section 15.209.

EUT Operating Frequency
The EUT was operating at 5.725-5.850 GHz

EQUIPMENT UNDER TEST

5.8GHz Wireless Ethernet Bridge Module

Manuf: AvaLAN Wireless Systems, Inc.
Model: AW5800m
Serial: 000012
FCC ID: R4N-AW5800m (pending)

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Panel Antenna

Manuf: ARC Wireless Solutions
Model: ANT-A-1723-01
Serial: 00540051116

Power Supply

Manuf: CUI Inc.
Model: DSA-0151A-06
Serial: NA

Power Supply 10 VDC, 1100mA

Manuf: CUI Stack
Model: 48-10-1100D
Serial: NA

REPORT OF MEASUREMENTS

The following tables report the six highest worst case levels recorded during the tests performed on the EUT. All readings taken are peak readings unless otherwise noted. The data sheets from which these tables were compiled are contained in Appendix C.

Table 1: FCC 15.107 Six Highest Conducted Emission Levels

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Lisn dB	HPF dB	Cable dB	Att dB	CORRECTED READING dBµV	SPEC LIMIT dBµV	MARGIN dB	NOTES
0.338345	33.5	0.3	0.1	0.1	9.7	43.8	49.2	-5.4	W
0.474331	30.9	0.3	0.0	0.1	9.7	41.0	46.4	-5.4	W
0.477240	30.7	0.3	0.0	0.1	9.7	40.8	46.4	-5.6	W
0.515054	30.9	0.3	0.0	0.1	9.7	41.0	46.0	-5.0	B
0.541234	29.0	0.3	0.0	0.1	9.7	39.1	46.0	-6.9	W
0.682310	28.0	0.3	0.0	0.2	9.7	38.2	46.0	-7.8	B

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart B Section 15.107 Class B

NOTES: B = Black Lead
W = White Lead

COMMENTS: Conducted Emissions 0.15-30 MHz. 23dBi Antenna. Receive Mode, set up per ANSI C63.4. NOTE: Changed to different model power supply. Power supply is not supplied by AvaLAN to the customer.

Table 2: FCC 15.109 Six Highest Radiated Emission Levels

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB	Amp dB	Cable dB		CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
49.985	53.4	8.5	-26.1	0.7		36.5	40.0	-3.5	VQ
199.984	50.6	8.6	-25.6	1.4		35.0	43.5	-8.5	V
399.988	46.9	15.5	-25.9	2.0		38.5	46.0	-7.5	H
399.995	50.0	15.5	-25.9	2.0		41.6	46.0	-4.4	VQ
437.489	44.4	16.5	-26.2	1.9		36.6	46.0	-9.4	H
925.003	36.8	23.0	-26.7	2.9		36.0	46.0	-10.0	V

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart B Section 15.109 Class B
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
Q = Quasi Peak Reading

COMMENTS: FCC 15.109 Class B. Radiated Emissions 30-1000MHz. 23dBi Antenna. Receive Mode, set up per ANSI C63.4.

Table 3: FC 15.207 Six Highest Conducted Emission Levels									
	METER	CORRECTION FACTORS				CORRECTED	SPEC		
FREQUENCY MHz	READING dBµV	Lisn dB	Cable dB	Att dB	HPF dB	READING dBµV	LIMIT dBµV	MARGIN dB	NOTES
0.632457	29.1	0.3	0.1	9.7	0.0	39.2	46.0	-6.8	B
0.714312	28.2	0.3	0.1	9.7	0.0	38.3	46.0	-7.7	B
0.717221	27.9	0.3	0.1	9.7	0.0	38.0	46.0	-8.0	B
0.805940	28.7	0.3	0.1	9.7	0.0	38.8	46.0	-7.2	B
0.809576	28.6	0.3	0.1	9.7	0.0	38.7	46.0	-7.3	B
0.813212	28.6	0.3	0.1	9.7	0.0	38.7	46.0	-7.3	B

Test Method: ANSI C63.4 (2003) NOTES: B = Black Lead
Spec Limit: FCC Part 15 Subpart C Section 15.207

COMMENTS: FCC 15.207. Conducted Emissions 0.15-30 MHz. 23dBi Antenna. HIGH Channel. High Channel with the 23dBi antenna produces the worst case emissions.

Table 4: 15.31(e)/15.247(b) Voltage Variations Emission Levels

FREQUENCY MHz	METER READING dBm	CORRECTION FACTORS Att dB	dB	Cable dB	VDC dB	CORRECTED READING dBm	SPEC LIMIT dBm	MARGIN dB	NOTES
5730.771	-16.1	30.5		2.8	12	17.1	30.0	-12.9	N-L
5730.873	-16.3	30.5		2.8	5	16.9	30.0	-13.1	N-L
5786.079	-16.5	30.5		2.8	5	16.8	30.0	-13.2	N-M
5789.053	-16.3	30.5		2.8	12	17.0	30.0	-13.0	N-M
5849.533	-15.3	30.5		2.8	5	18.0	30.0	-12.0	N-H
5849.743	-15.4	30.5		2.8	12	17.9	30.0	-12.1	N-H

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Sections 15.31(e)/15.247(b)
Test Distance: 3 Meters

NOTES: N = No Polarization
L = Low
M = Mid
H = High

COMMENTS: 15.31(e)/15.247(b) RF Power Output Antenna Conducted. Voltage Variations. Measured at the lowest voltage (5VDC) and the highest voltage (12VDC) the device can operate at. Measured the Peak Output power level for each channel. Voltage was set using a calibrated Digital Multimeter (DMM).

Table 5: FCC 15.247(b)(3) RF Power Output

FREQUENCY MHz	METER READING dBm	CORRECTION FACTORS Ant dB	Att dB	dB	dB	CORRECTED READING dBm	SPEC LIMIT dBm	MARGIN dB	NOTES
5728.126	-16.4	1.8	28.6			15.8	30.0	-14.2	N-L
5786.502	-15.9	1.8	28.7			16.4	30.0	-13.6	N-M
5846.712	-16.1	1.8	28.7			16.2	30.0	-13.8	N-H

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Sections 15.247(b)(3)
Test Distance: 3 Meters

NOTES:
N = No Polarization
V = Vertical Polarization
L = Low
M = Mid
H = High

COMMENTS: 15.247(b)(3) RF Power Output Antenna Conducted.

Table 6: FCC 15.247(d)/15.209 Six Highest Radiated Emission Levels: 9 kHz - 1 GHz

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB	Amp dB	Cable dB		CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
49.993	49.9	8.5	-26.1	0.7		33.0	40.0	-7.0	VQ-2
400.000	46.3	15.5	-25.9	2.0		37.9	46.0	-8.1	H-2
400.015	46.2	15.5	-25.9	2.0		37.8	46.0	-8.2	V-1
450.019	46.2	16.8	-26.7	1.9		38.2	46.0	-7.8	V-1
525.018	45.5	18.4	-27.0	2.2		39.1	46.0	-6.9	VQ-1
575.023	43.3	19.2	-27.1	2.3		37.7	46.0	-8.3	V-1

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Sections 15.247(d)/15.209
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
Q = Quasi Peak Reading
1 = 5 dBi Antenna
2 = 23 dBi Antenna

COMMENTS: See individual data sheets for test conditions.

Table 7: FCC 15.209 Six Highest Radiated Emission Levels 1-12.5 GHz

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB	DC dB	HPF dB	Cable dB	Amp dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
11194.820	46.4	39.2	-13.6	0.3	9.7	-28.1	53.9	54.0	-0.1	VA-1H
11195.950	46.4	39.2	-13.6	0.3	9.7	-28.1	53.9	54.0	-0.1	HA-1M
11196.670	46.3	39.2	-13.6	0.3	9.7	-28.1	53.8	54.0	-0.2	VA-1L
11455.350	46.1	39.6	-13.6	0.3	9.8	-28.3	53.9	54.0	-0.1	VA-1L
11455.580	46.1	39.6	-13.6	0.3	9.8	-28.3	53.9	54.0	-0.1	VA-2L
11457.580	46.1	39.6	-13.6	0.3	9.8	-28.3	53.9	54.0	-0.1	HA-2L

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Section 15.209
Test Distance: 3 Meters

NOTES:
H = Horizontal Polarization
V = Vertical Polarization
A = Average Reading
1 = 5 dBi Antenna
2 = 23 dBi Antenna
L = Low
M = Mid
H = High

COMMENTS: Spurious Emissions 15.209 1-12.5GHz. 5 dBi and 23 dBi Antennas tested. Measured against 15.209 limits for the Restricted Bands. This data sheet may contain frequencies that do not fall into the restricted band. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times.

Note: Duty Cycle Correction Factor: The total Period for a single pulse is 1.056ms. The single pulse "OFF" time is 0.8349ms. This gives the single pulse "ON" time of 0.2211ms. The total time the pulses are on versus blanked is greater than 100ms therefore the Duty Cycle is based on the Pulse Train only and does not take into account the Blanking time. This gives the Duty Cycle of On/Period or 0.2211/1.056 or 20.9%. The Duty Cycle Correction Factor is therefore 20Log(20.9) or -13.6dB. This Correction factor is used to calculate the average of a signal where necessary.

Table 8: FCC 15.247(d) Six Highest Radiated Emission Levels 1-12.5 GHz

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB	Amp dB	Cable dB	DC dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
5599.100	83.6	34.0	-27.5	6.4	-13.6	82.9	96.9	-14.0	HA-2
5607.600	58.4	34.0	-27.5	6.4	0.0	71.3	84.1	-12.8	V-1
5607.600	57.1	34.0	-27.5	6.4	0.0	70.0	84.1	-14.1	V-1
5609.100	72.3	34.0	-27.5	6.4	0.0	85.2	96.9	-11.7	H-2
5609.500	73.2	34.0	-27.5	6.4	0.0	86.1	96.9	-10.8	H-2
5610.000	74.0	34.0	-27.5	6.4	0.0	86.9	96.9	-10.0	H-2

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Section 15.247(d)
Test Distance: 3 Meters

NOTES:
H = Horizontal Polarization
V = Vertical Polarization
A = Average Reading
1 = 5 dBi Antenna
2 = 23 dBi Antenna

COMMENTS: See individual data sheets for test conditions.

Table 9: FCC 15.247(d)/15.209 Six Highest Radiated Emission Levels: 12.5-40 GHz

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS DC dB	Ant dB	WG dB	Cable dB	CORRECTED READING dBm	SPEC LIMIT dBm	MARGIN dB	NOTES
22910.770	49.0	-13.6	-8.7	3.6	14.1	44.4	54.0	-9.6	HA-2
22911.140	49.9	-13.6	-8.7	3.6	14.1	45.3	54.0	-8.7	VA-2
22915.250	52.8	-13.6	-8.7	3.6	14.1	48.2	54.0	-5.8	VA-1
23148.130	48.5	-13.6	-8.9	3.6	14.1	44.0	54.0	-10.0	VA-1
23389.980	49.8	-13.6	-8.9	3.8	14.3	45.5	54.0	-8.5	VA-1
28644.020	27.3	-0.0	2.5	3.9	14.7	48.4	54.0	-5.6	H-2

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Sections 15.247(d)/15.209
Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
V = Vertical Polarization
A = Average Reading
1 = 5 dBi Antenna
2 = 23 dBi Antenna

COMMENTS: See individual data sheets for test conditions.

Table 10: FCC 15.247(d) Six Highest Antenna Conducted Emission Levels: 9 kHz - 1 GHz

FREQUENCY MHz	METER READING dBm	CORRECTION FACTORS				CORRECTED READING dBm	SPEC LIMIT dBm	MARGIN dB	NOTES
			Amp dB	Cable dB	Dist dB				
11.800	-87.3			0.1		-87.2	-13.5	-73.7	N
12.160	-87.1			0.1		-87.0	-13.5	-73.5	N
13.600	-86.8			0.0		-86.8	-13.5	-73.3	N
14.500	-86.2			0.0		-86.2	-12.6	-73.6	N
15.950	-87.6			0.0		-87.6	-13.5	-74.1	N
16.490	-85.8			0.0		-85.8	-13.5	-72.3	N

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Section 15.247(d)

NOTES: N = No Polarization
V = Vertical Polarization

COMMENTS: 15.247(d) Spurious Emissions Antenna Conducted. Maximized Emissions measured with RBW=100 kHz, VBW=300 kHz from 100 kHz-1 GHz and RBW=10 kHz, VBW=300 kHz from 9-100 kHz. Readings from 10-1000 MHz are made using a 2.1 GHz Low Pass Filter. No signals found below 10 MHz.

Table 11: FCC 15.247(d) Six Highest Antenna Conducted Emission Levels: 1-40 GHz									
	METER	CORRECTION FACTORS				CORRECTED	SPEC		
FREQUENCY MHz	READING dBµV	Cable dB	DC dB	Att dB	HPF dB	READING dBµV/m	LIMIT dBµV/m	MARGIN dB	NOTES
5599.100	-38.1	1.8	-13.6	30.4	0.0	-19.5	-12.6	-6.9	NA-H
5601.100	-38.6	1.8	-13.6	30.4	0.0	-20.0	-13.5	-6.5	NA-M
5602.100	-38.4	1.8	-13.6	30.4	0.0	-19.8	-13.5	-6.3	NA-L
5612.100	-40.8	1.8	-13.6	30.4	0.0	-22.2	-13.5	-8.7	NA-<
5622.100	-42.3	1.8	-13.6	30.4	0.0	-23.7	-13.5	-10.2	NA-L
5624.100	-42.1	1.8	-13.6	30.4	0.0	-23.5	-13.5	-10.0	NA-M

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Section 15.247(d)

NOTES:
N = No Polarization
A = Average Reading
L = Low
M = Mid
H = High

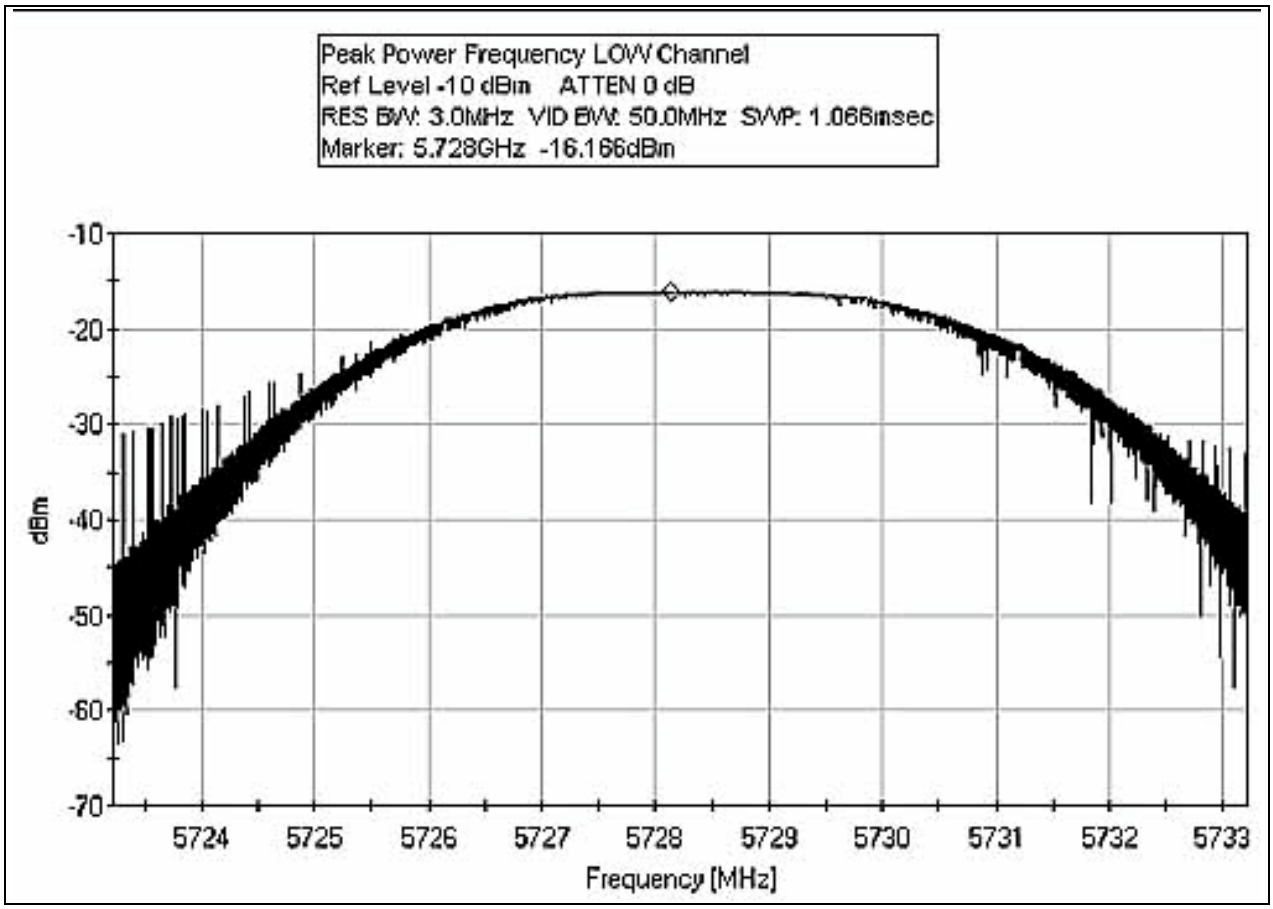
COMMENTS: See individual data sheets for test conditions.

Table 12: FCC 15.247(e) Peak Power Spectral Density									
	METER	CORRECTION FACTORS				CORRECTED	SPEC		
FREQUENCY MHz	READING dBm	Ant dB	Amp dB	Cable dB	Dist dB	READING dBm	LIMIT dBm	MARGIN dB	NOTES
5728.281	-30.9					-30.9	8.0	-38.9	N
5786.621	-29.8					-29.8	8.0	-37.8	N
5847.042	-31.0					-31.0	8.0	-39.0	N

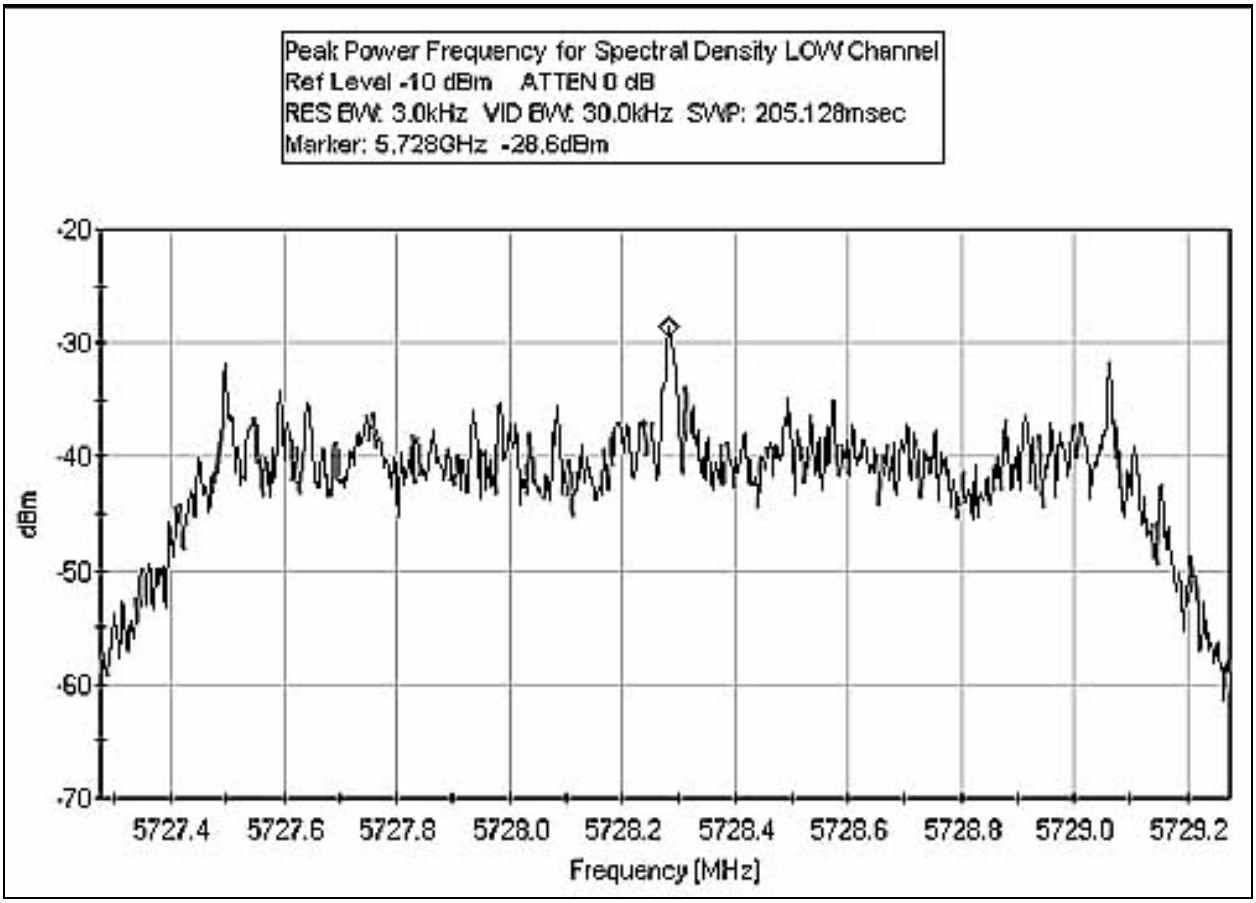
Test Method: ANSI C63.4 (2003) NOTES: N = No Polarization
Spec Limit: FCC Part 15 Subpart C Section 15.247(e)

COMMENTS: 15.247(e) Peak Power Spectral Density.

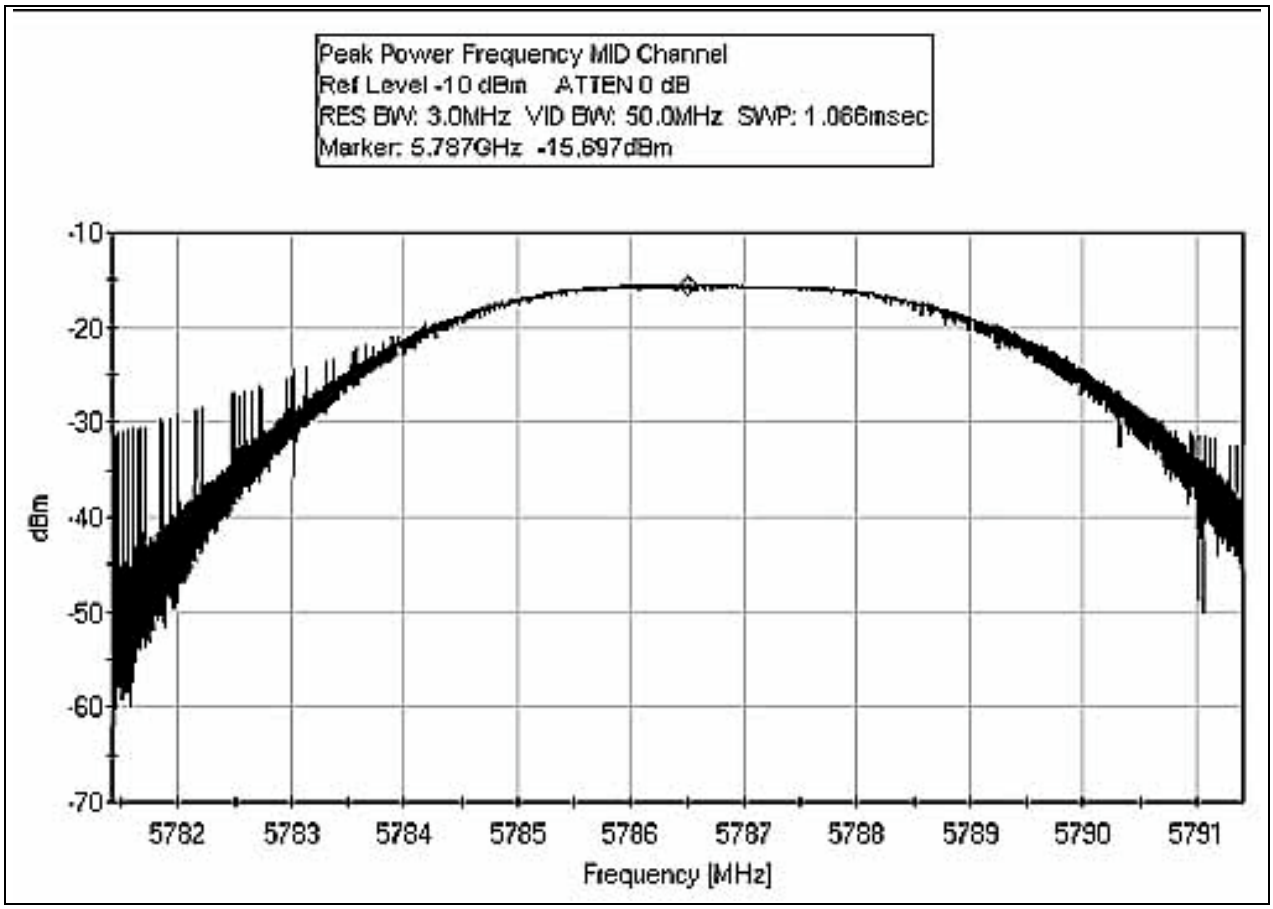
FCC 15.247(e) PEAK POWER LOW CHANNEL



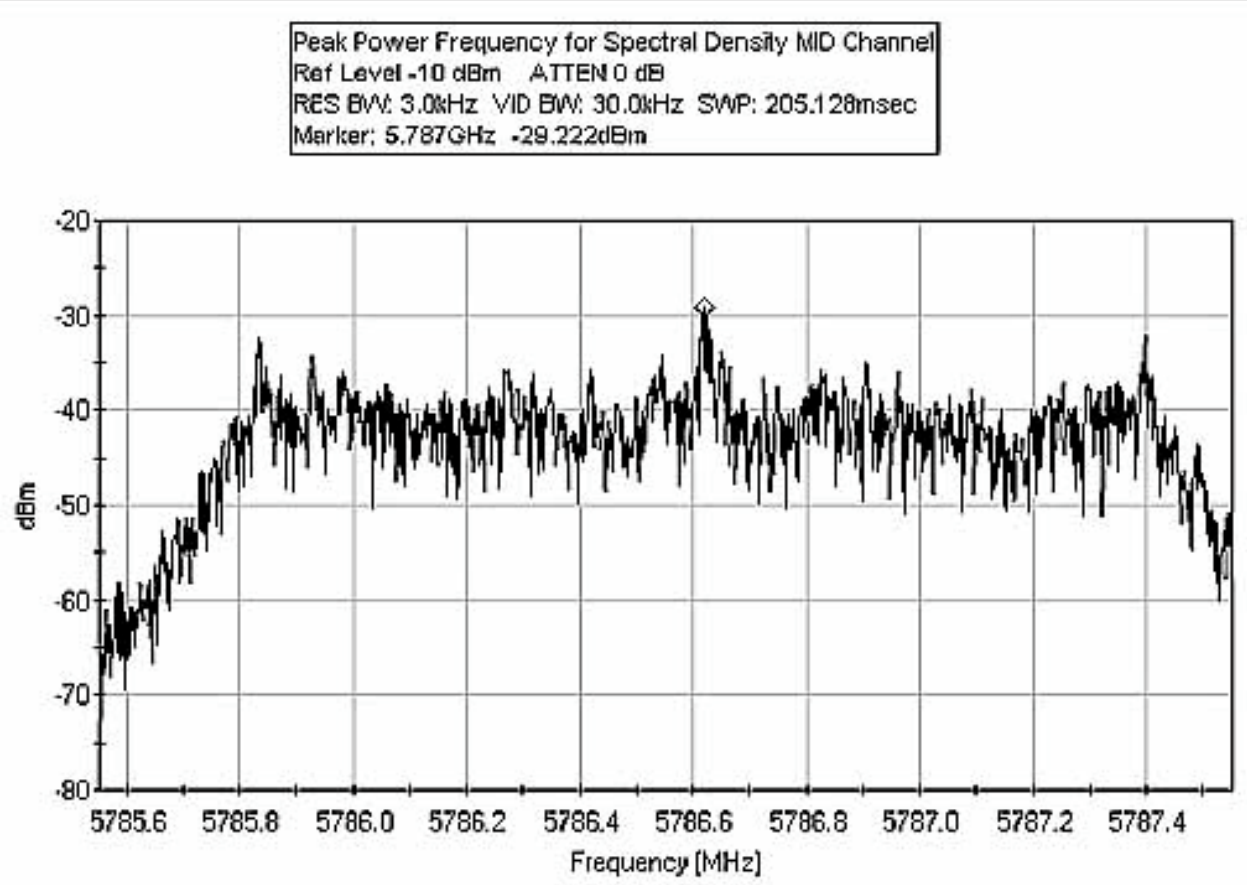
FCC 15.247(e) PEAK POWER FOR SPECTRAL DENSITY LOW CHANNEL



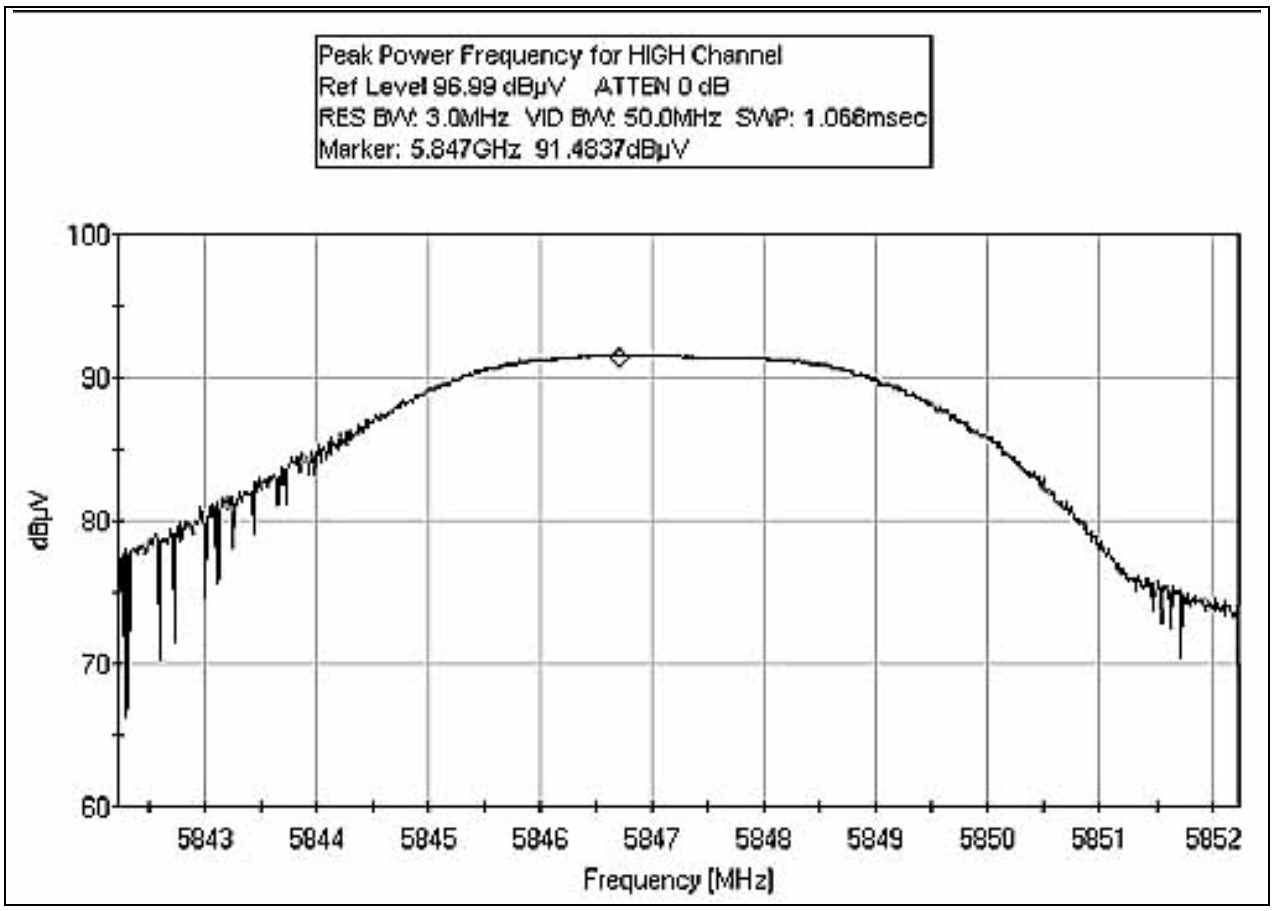
FCC 15.247(e) PEAK POWER MID CHANNEL



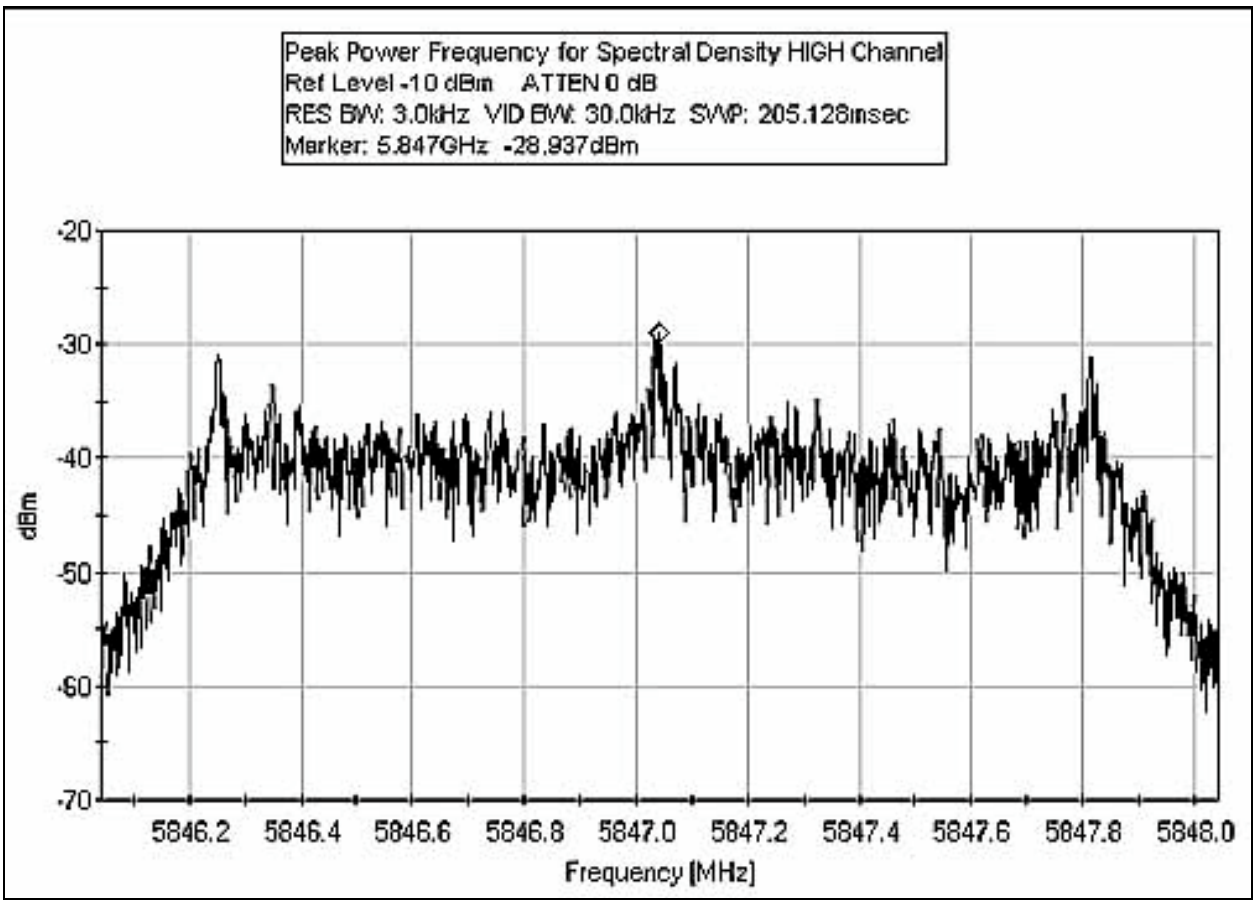
FCC 15.247(e) PEAK POWER FOR SPECTRAL DENSITY MID CHANNEL



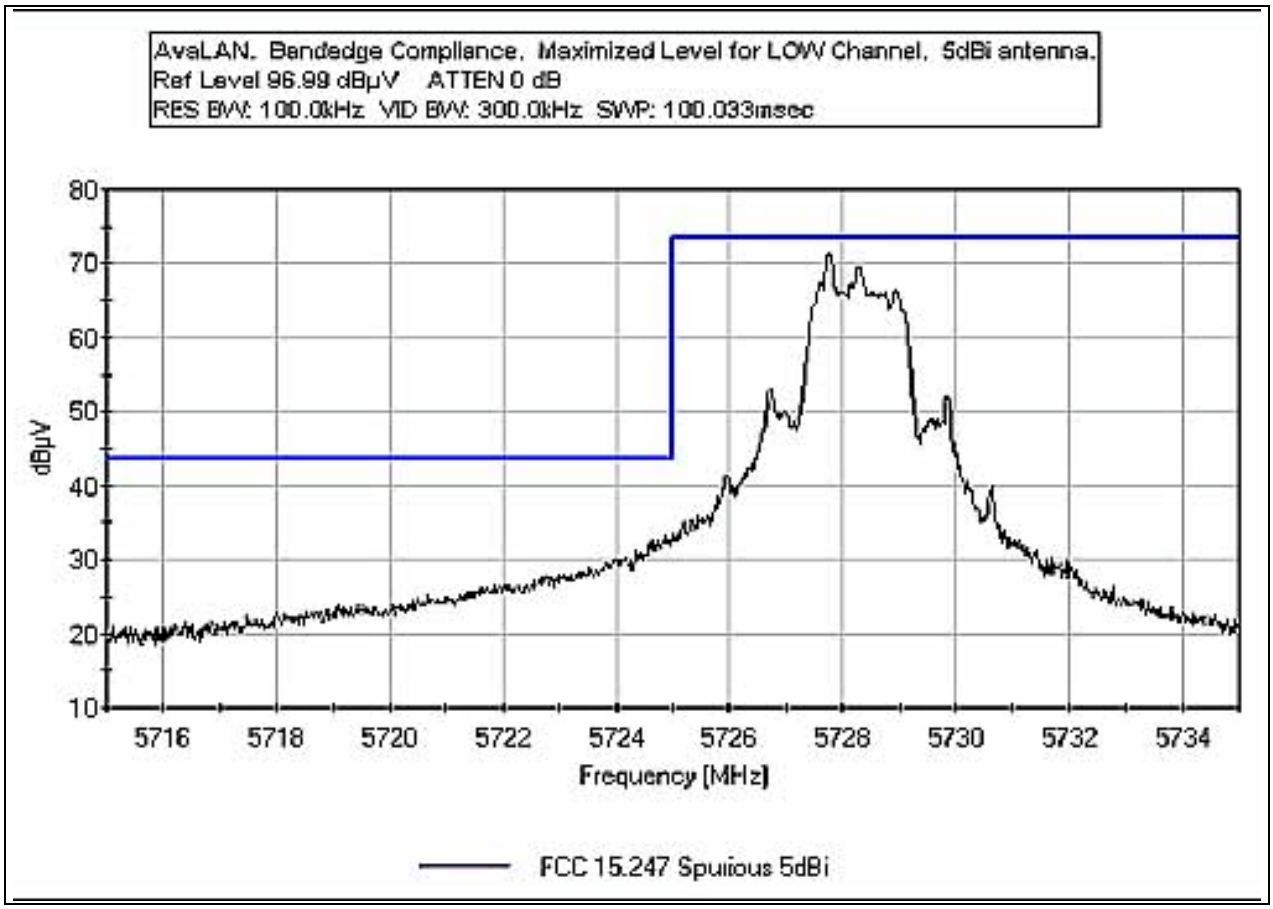
FCC 15.247(e) PEAK POWER HIGH CHANNEL



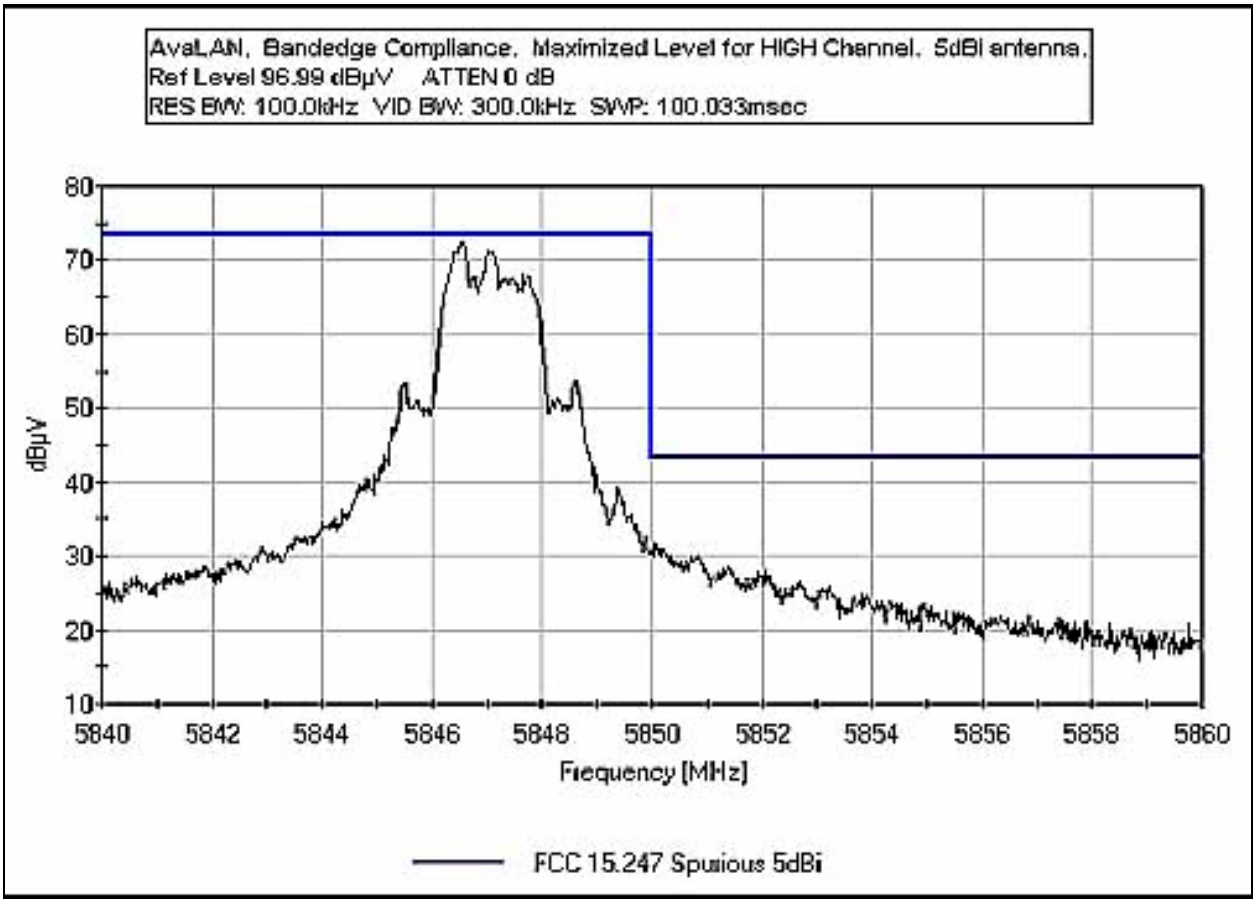
FCC 15.247(e) PEAK POWER FOR SPECTRAL DENSITY HIGH CHANNEL



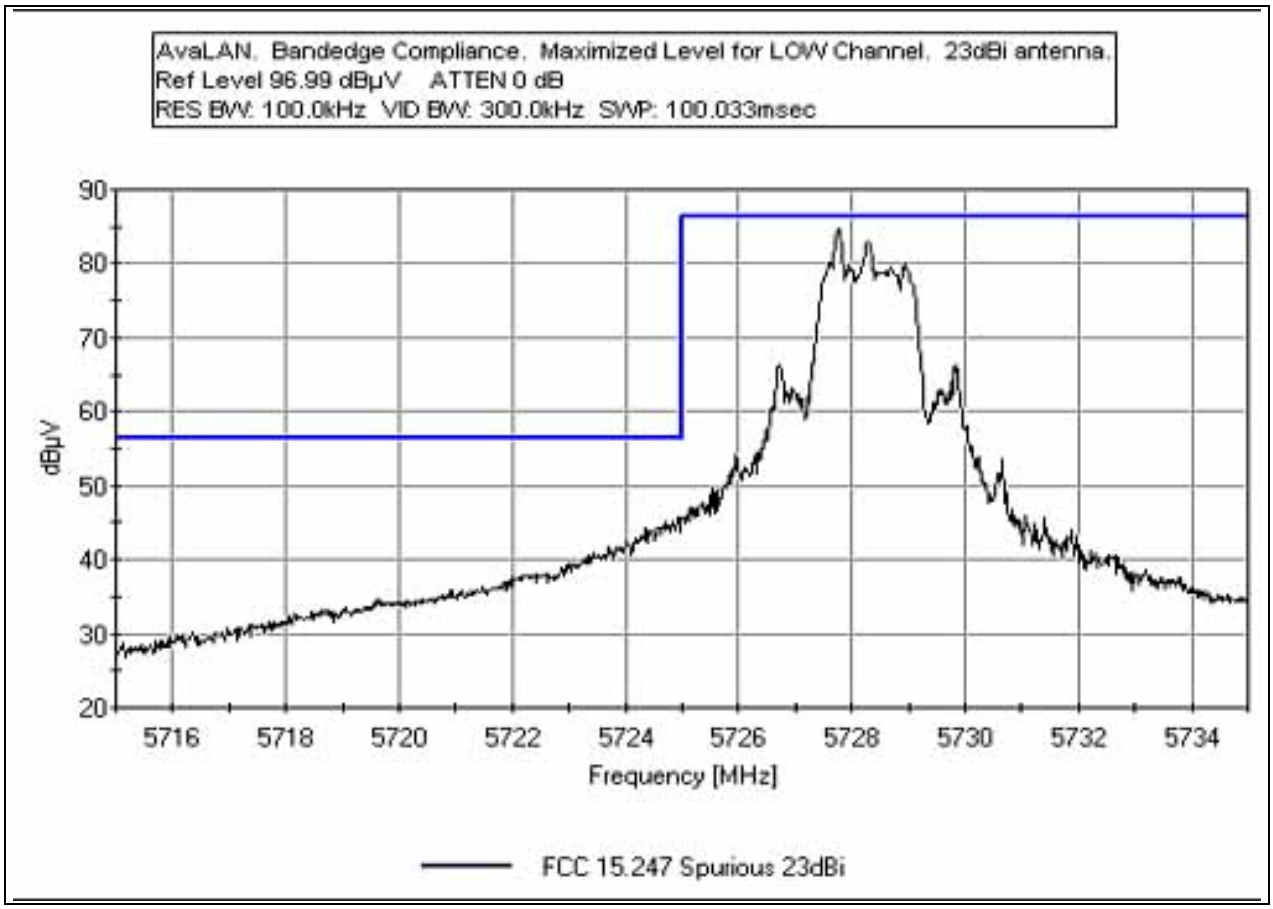
BANDEDGE LOW CHANNEL 5dBi ANTENNA



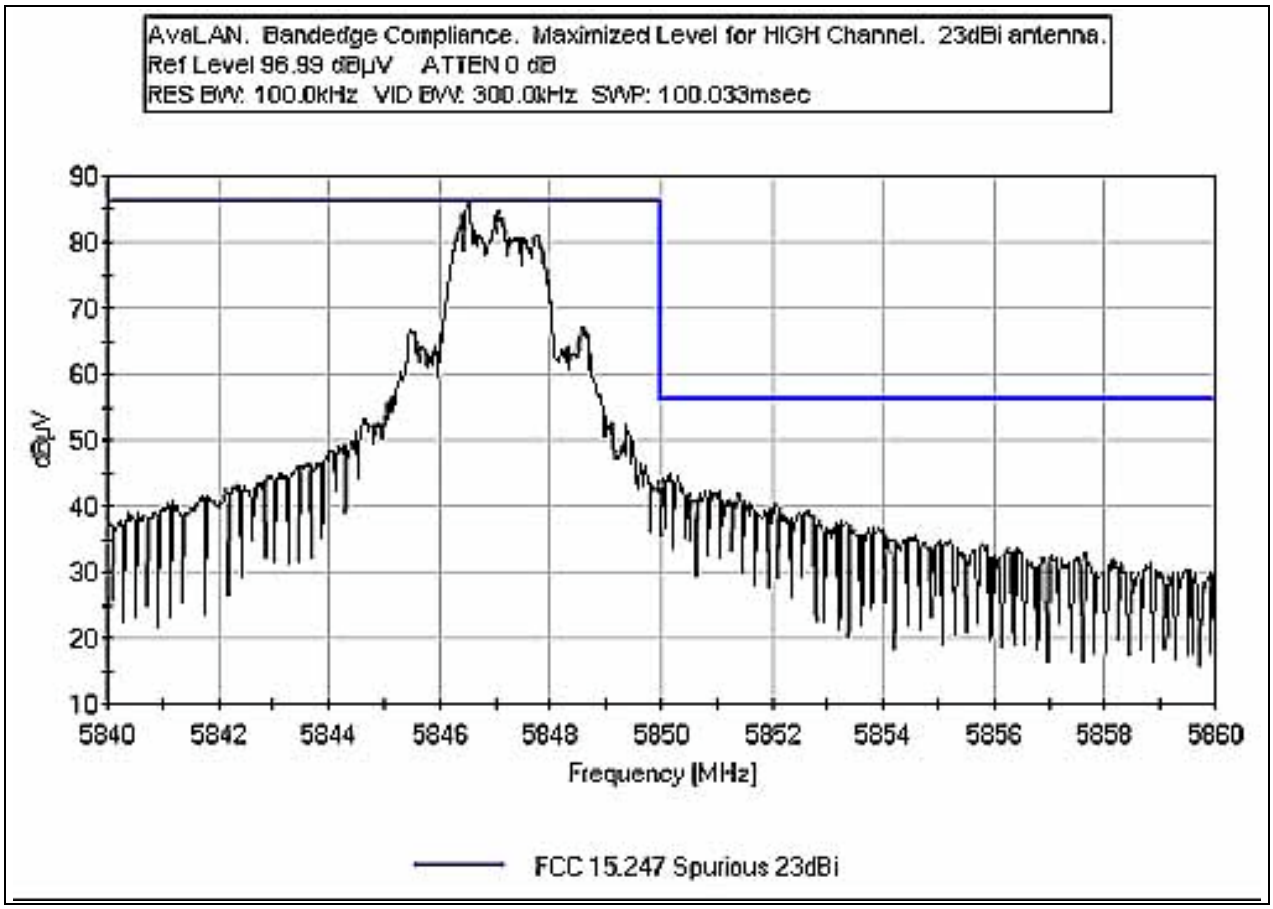
BANDEDGE HIGH CHANNEL 5dBi ANTENNA



BANDEDGE LOW CHANNEL 23dBi ANTENNA

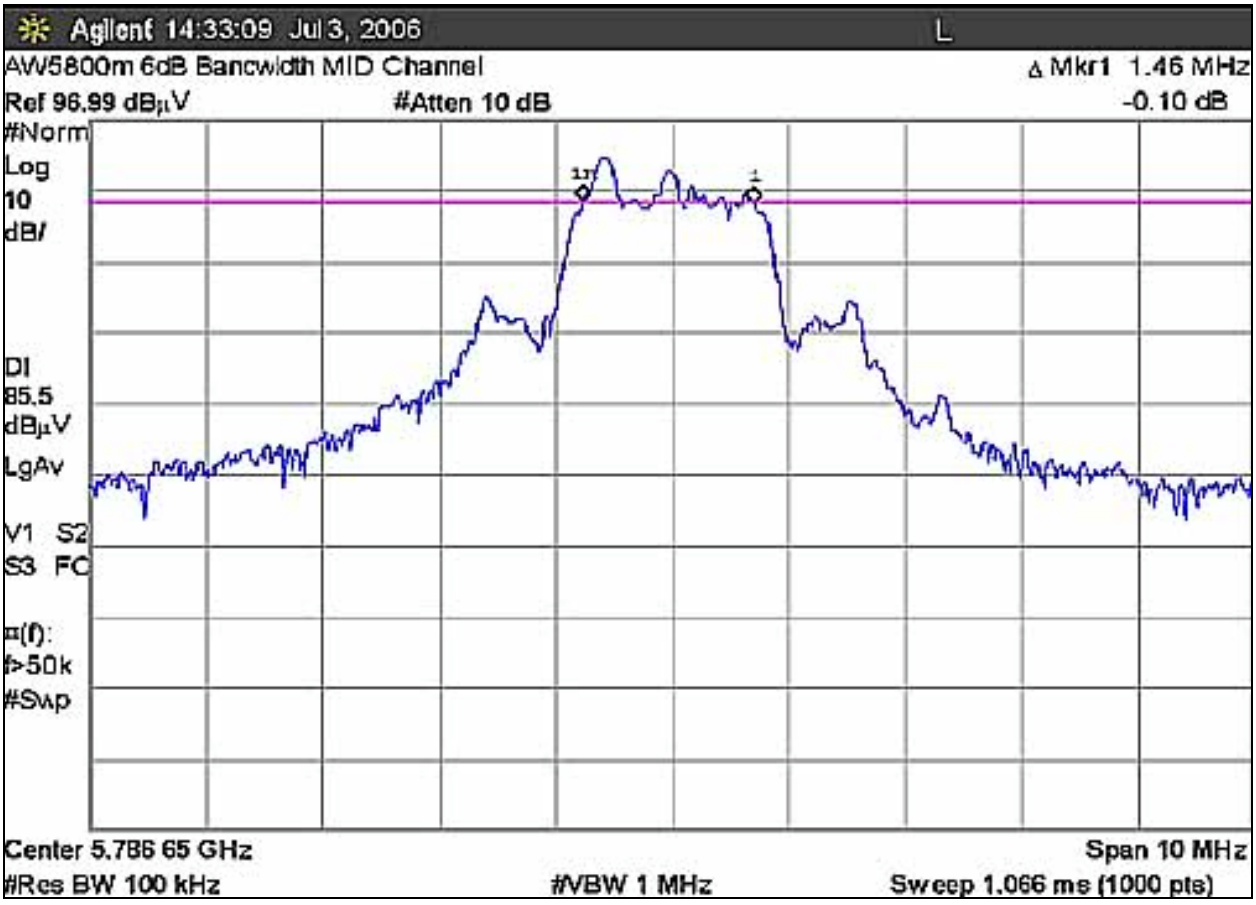


BANDEDGE HIGH CHANNEL 23dBi ANTENNA



6 dB BANDWIDTH LOW CHANNEL

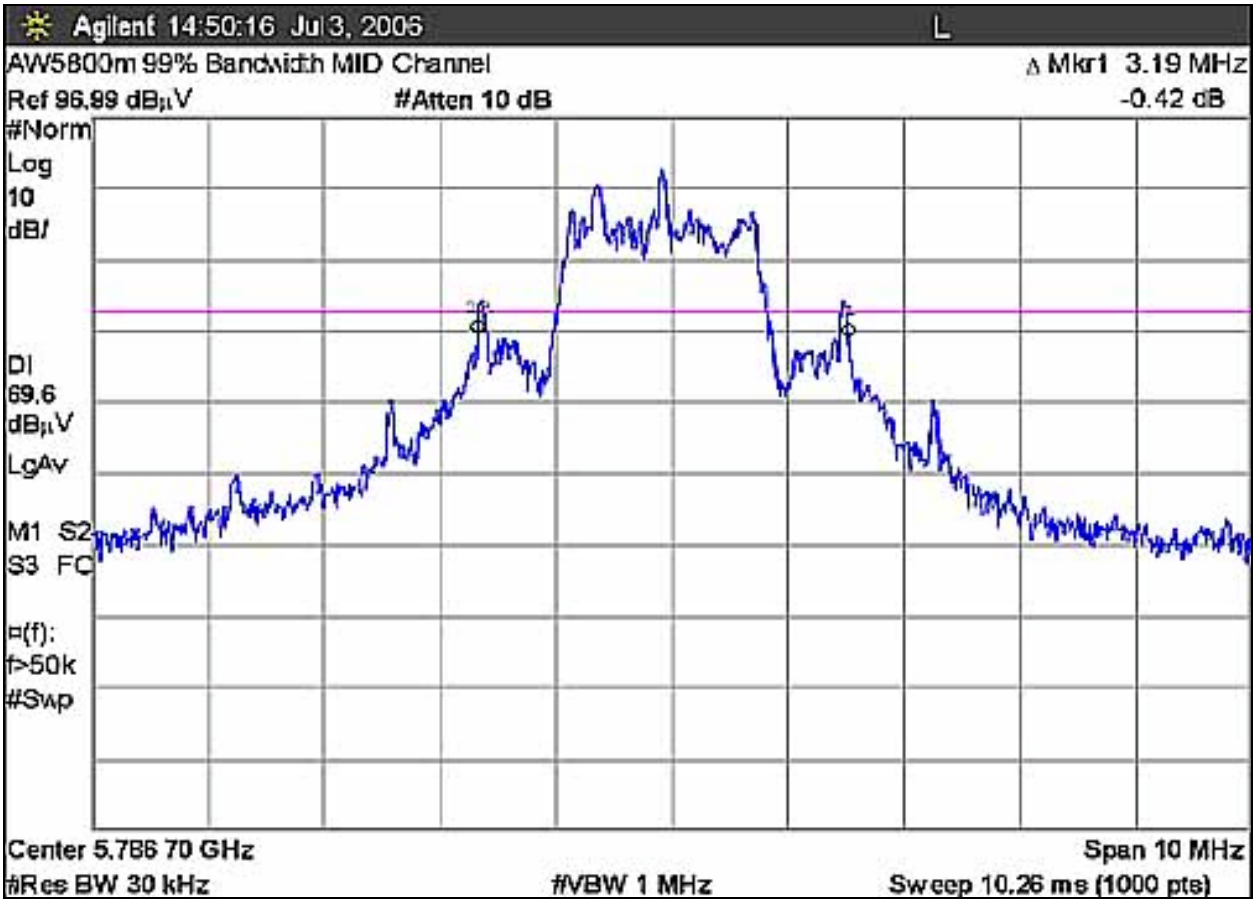
6 dB BANDWIDTH MID CHANNEL



6 dB BANDWIDTH HIGH CHANNEL

RSS-210 99% BANDWIDTH LOW CHANNEL

RSS-210 99% BANDWIDTH MID CHANNEL



RSS-210 99% BANDWIDTH HIGH CHANNEL

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available I/O ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. I/O cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The radiated and conducted emissions data of the EUT was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

TABLE A: SAMPLE CALCULATIONS

	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect both the radiated and conducted emissions data for the EUT. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. For radiated measurements from 30 to 1000 MHz, the biconilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. Conducted emissions tests required the use of the FCC type LISNs.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dBµV, and a vertical scale of 10 dB per division.

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

EUT TESTING

Mains Conducted Emissions

During conducted emissions testing, the EUT was located on a wooden table measuring approximately 80 cm high, 1 meter deep, and 1.5 meters in length. One wall of the room where the EUT was located has a minimum 2 meter by 2 meter conductive plane. The EUT was mounted on the wooden table 40 cm away from the conductive plane, and 80 cm from any other conductive surface.

The vertical metal plane used for conducted emissions was grounded to the earth. Power to the EUT was provided through a LISN. The LISN was grounded to the ground plane. All other objects were kept a minimum of 80 cm away from the EUT during the conducted test.

The LISNs used were 50 µH-/+50 ohms. A 30 to 50 second sweep time was used for automated measurements in the frequency bands of 150 kHz to 500 kHz, and 500 kHz to 30 MHz. All readings within 20 dB of the limit were recorded, and those within 6 dB of the limit were examined with additional measurements using a slower sweep time.

Antenna Conducted Emissions

For measuring the signal strength on the RF output port of the EUT, the spectrum analyzer was connected directly to the EUT. The sweep time of the analyzer was adjusted so that the spectrum analyzer readings were always in a calibrated range. All readings within 20 dB of the limit were recorded.

Radiated Emissions

The EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters.

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog antenna located about 1.5 meter above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The biconilog antenna was changed to the horizontal polarity and the above steps were repeated. For frequencies exceeding 1000 MHz, the horn antenna was used. Care was taken to ensure that no frequencies were missed within the FM and TV bands.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable and raising and lowering the antenna from one to four meters as needed. The test engineer maximized the readings with respect to the table rotation, antenna height and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor.

APPENDIX A

TEST SETUP PHOTOGRAPHS

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS

Mains Conducted Emissions - Front View 15.107 & 15.207

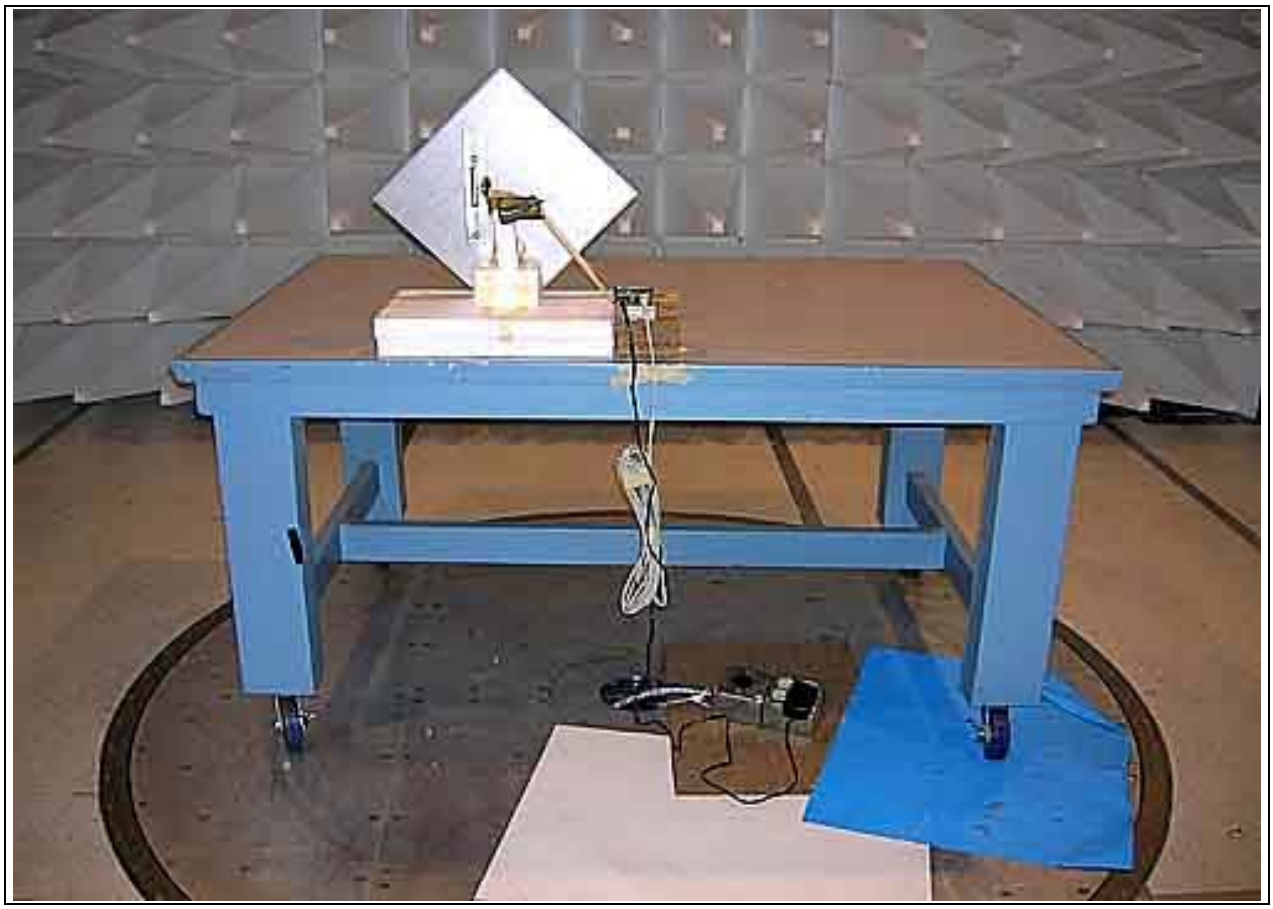
PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS

Mains Conducted Emissions - Side View 15.107 & 15.207

PHOTOGRAPH SHOWING RADIATED EMISSIONS

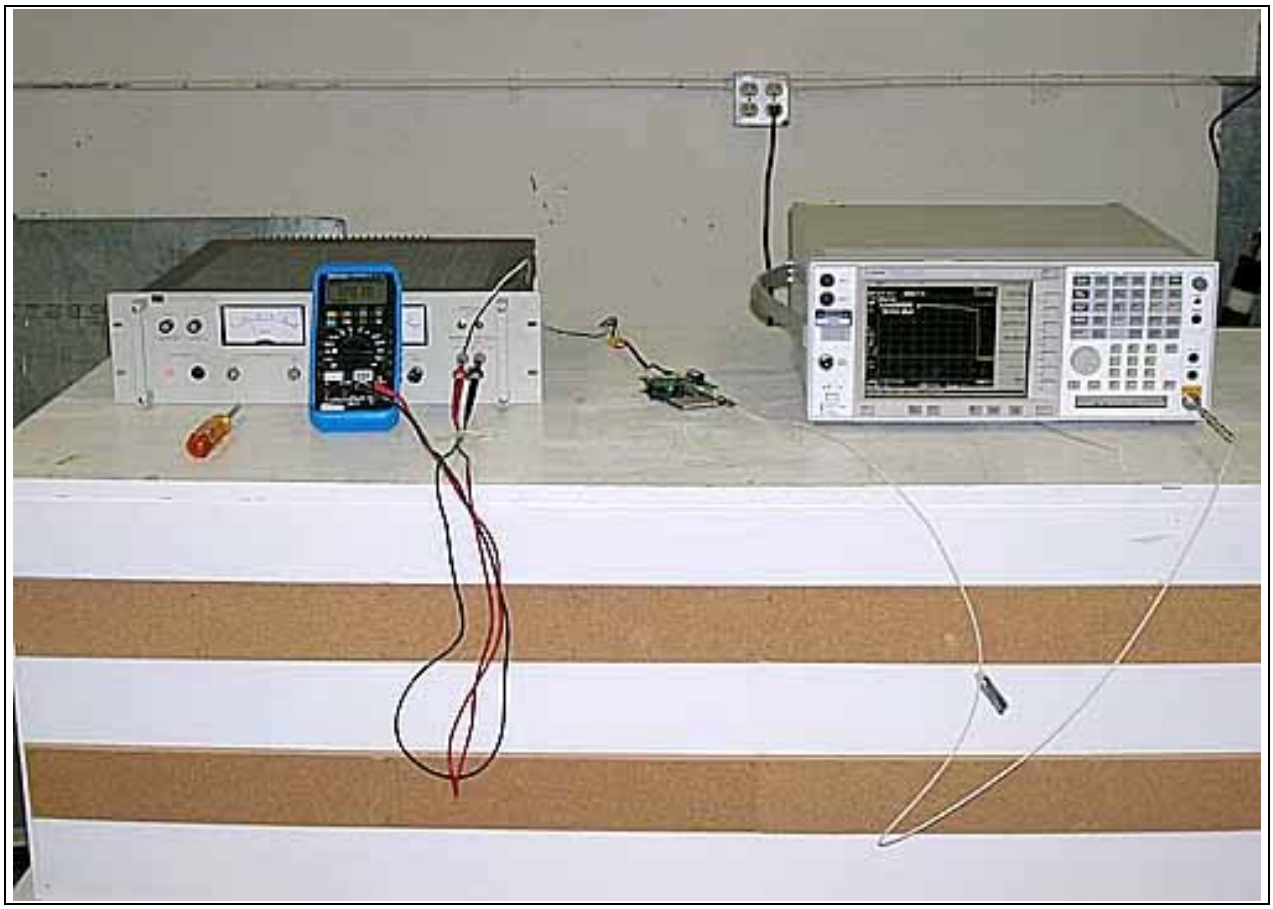
Radiated Emissions - Front View Receiver Panel Antenna 15.109

PHOTOGRAPH SHOWING RADIATED EMISSIONS



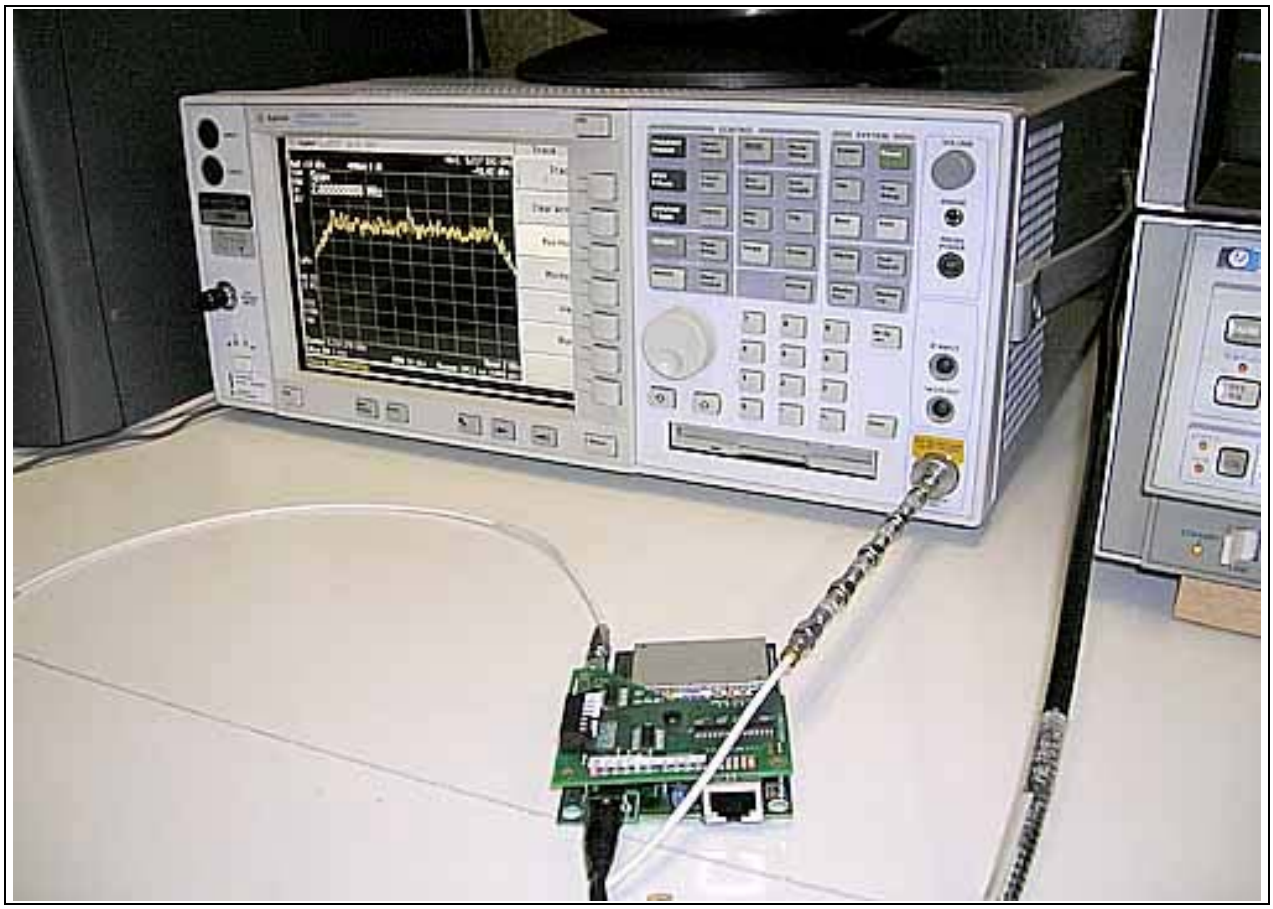
Radiated Emissions - Back View Receiver Panel Antenna 15.109

PHOTOGRAPH SHOWING VOLTAGE VARIATIONS



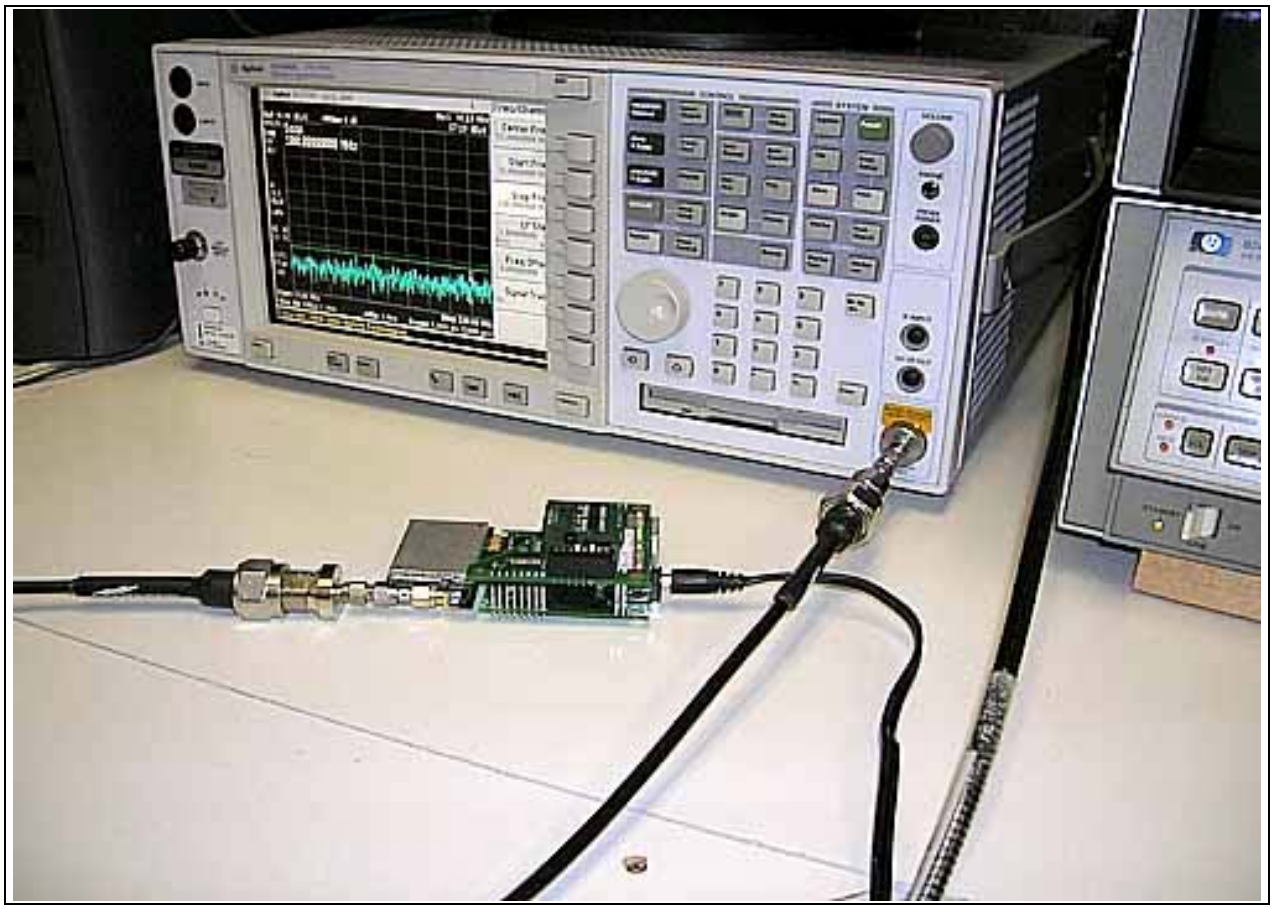
Voltage Variations 15.31(e)/15.247(b)

RF POWER AND PEAK POWER SPECTRAL DENSITY



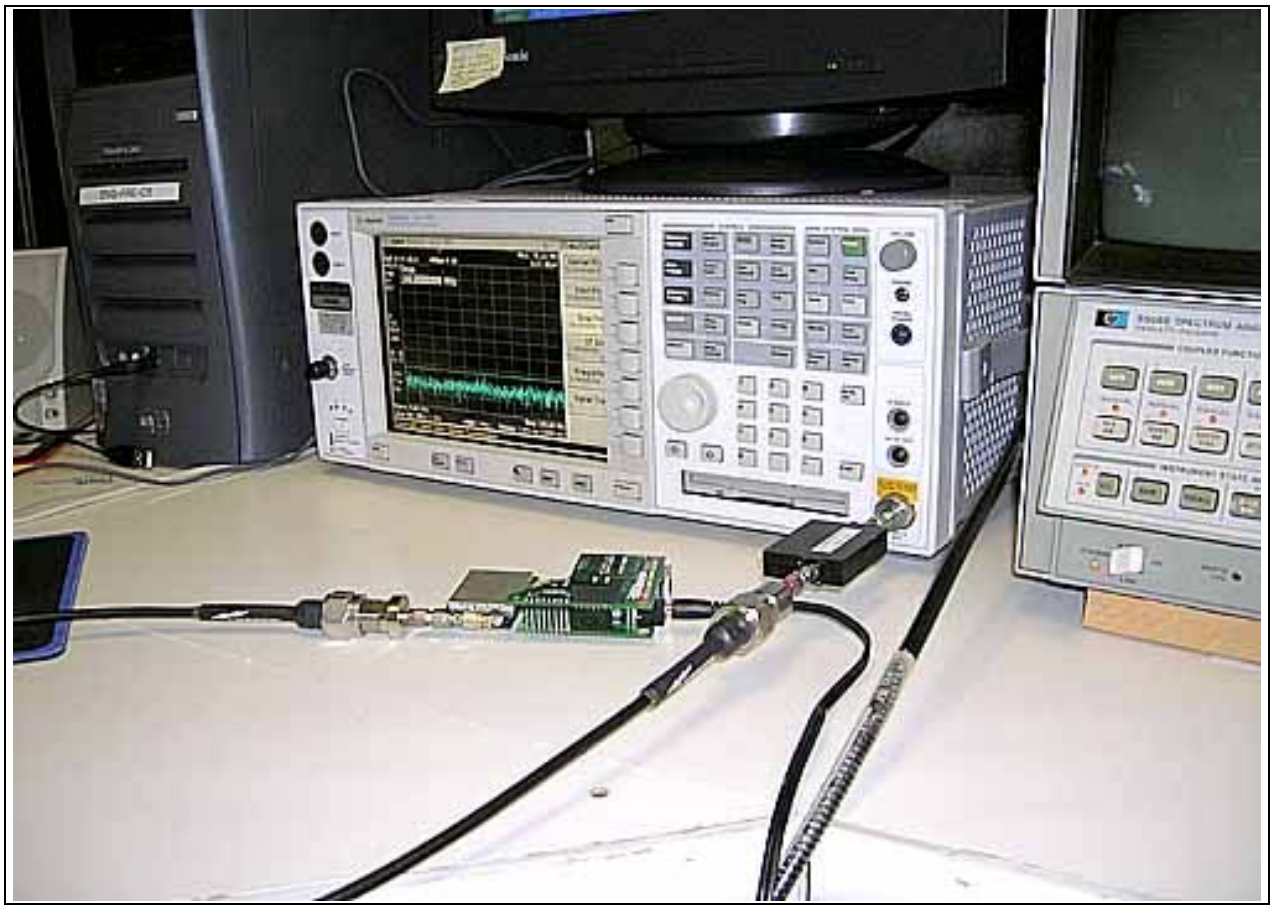
RF Power (15.247(b)(3)) and Peak Power Spectral Density (15.247(e))

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP



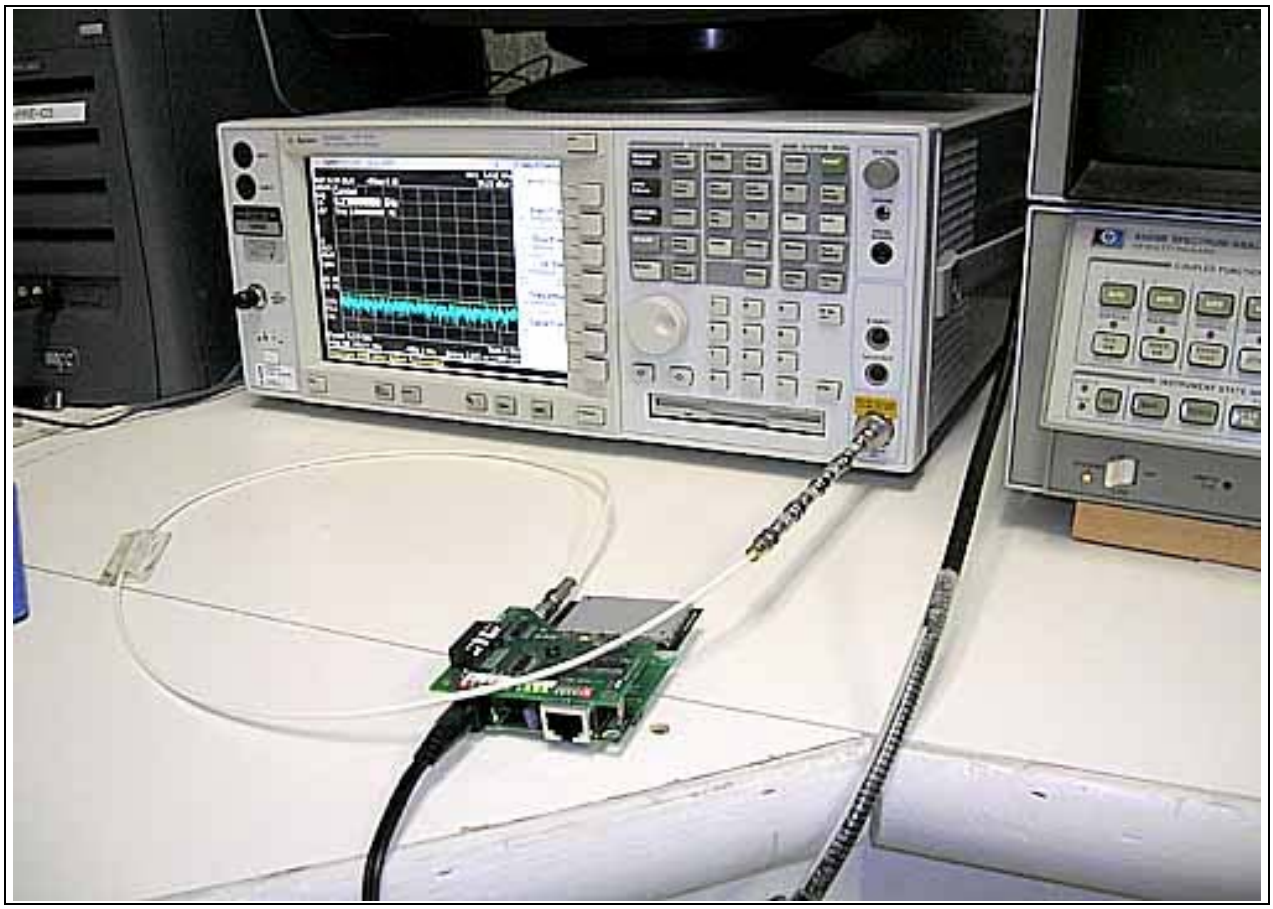
15.247(d) 9 kHz - 10 MHz

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP



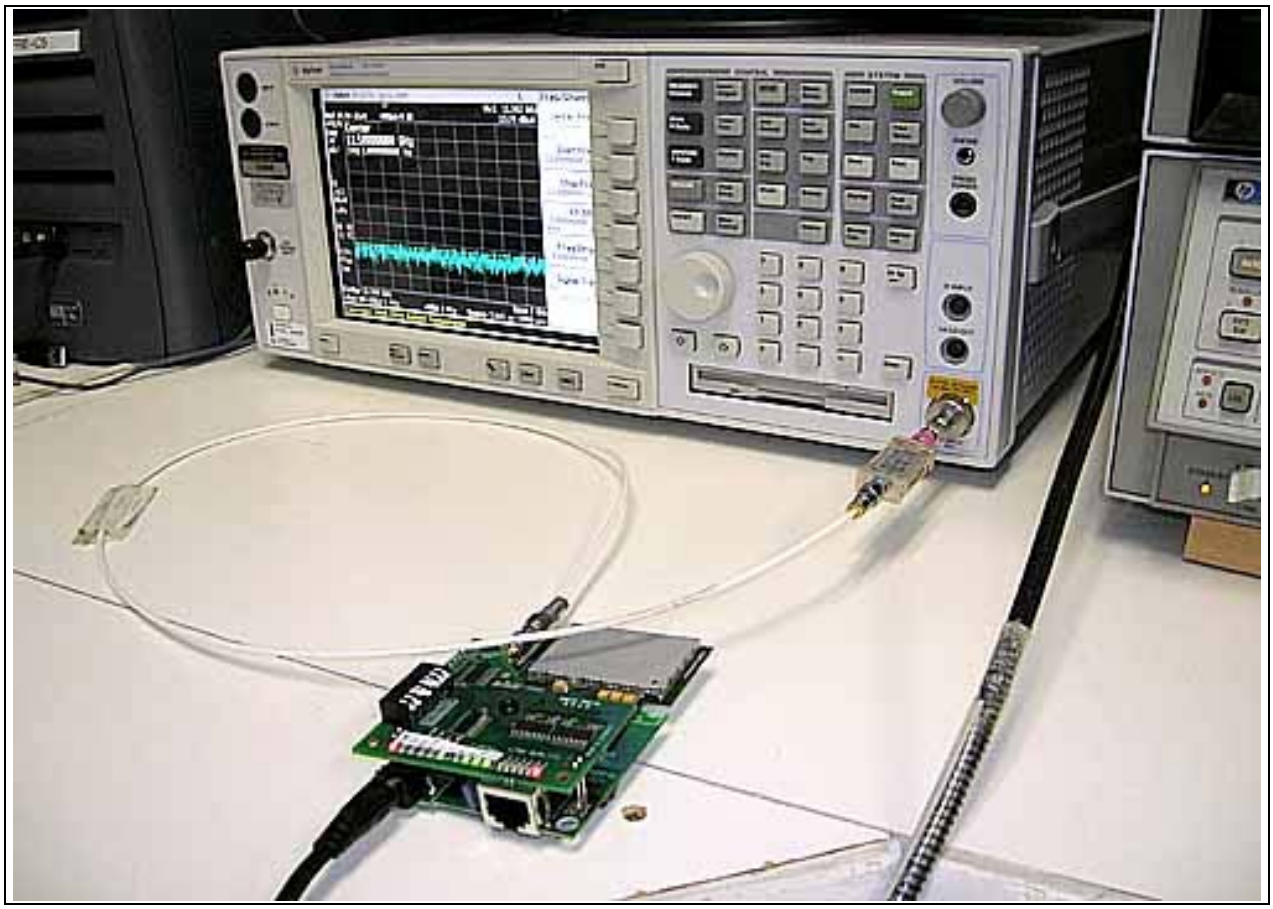
15.247(d) 10-1000 MHz

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP



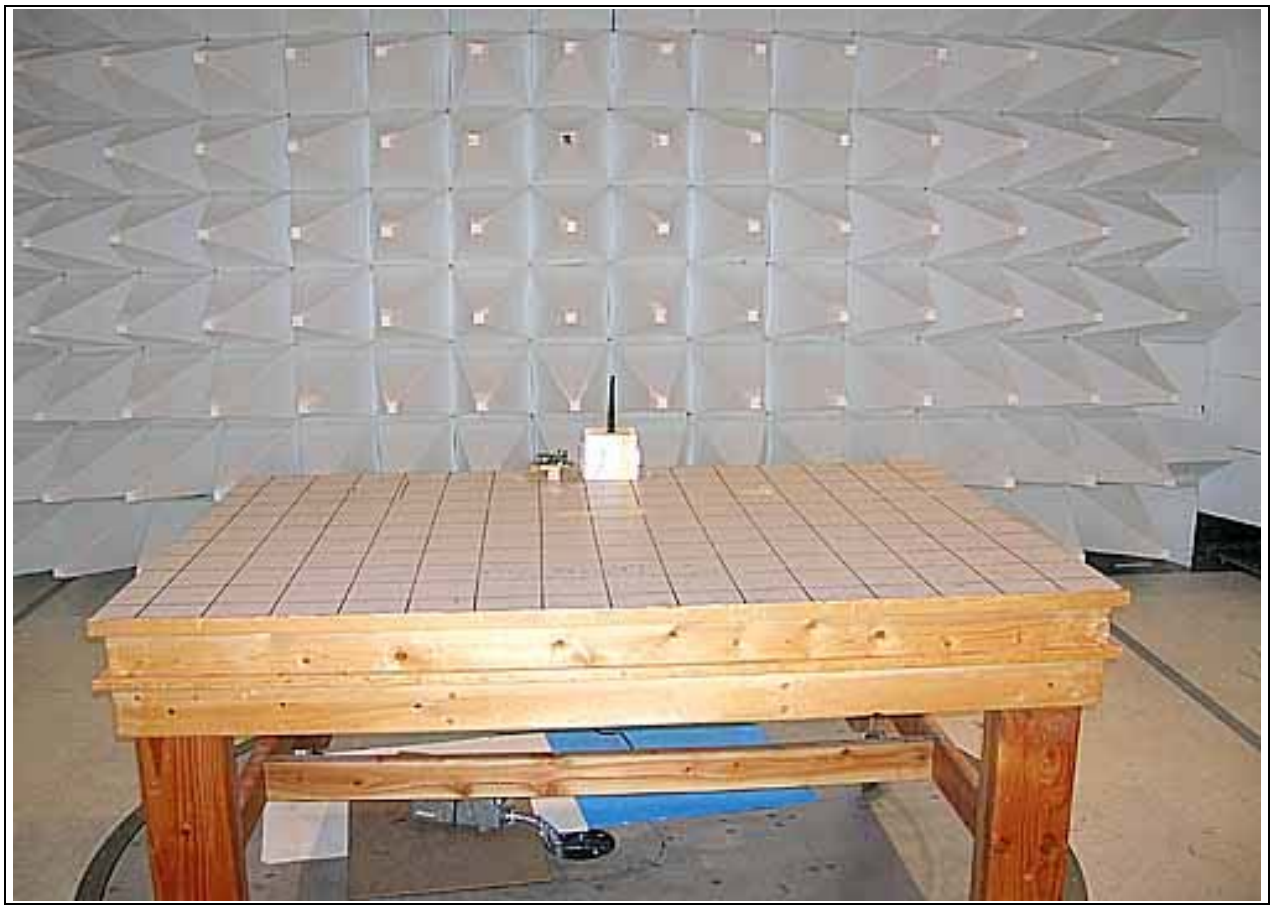
15.247(d) 1-8.5 GHz

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP



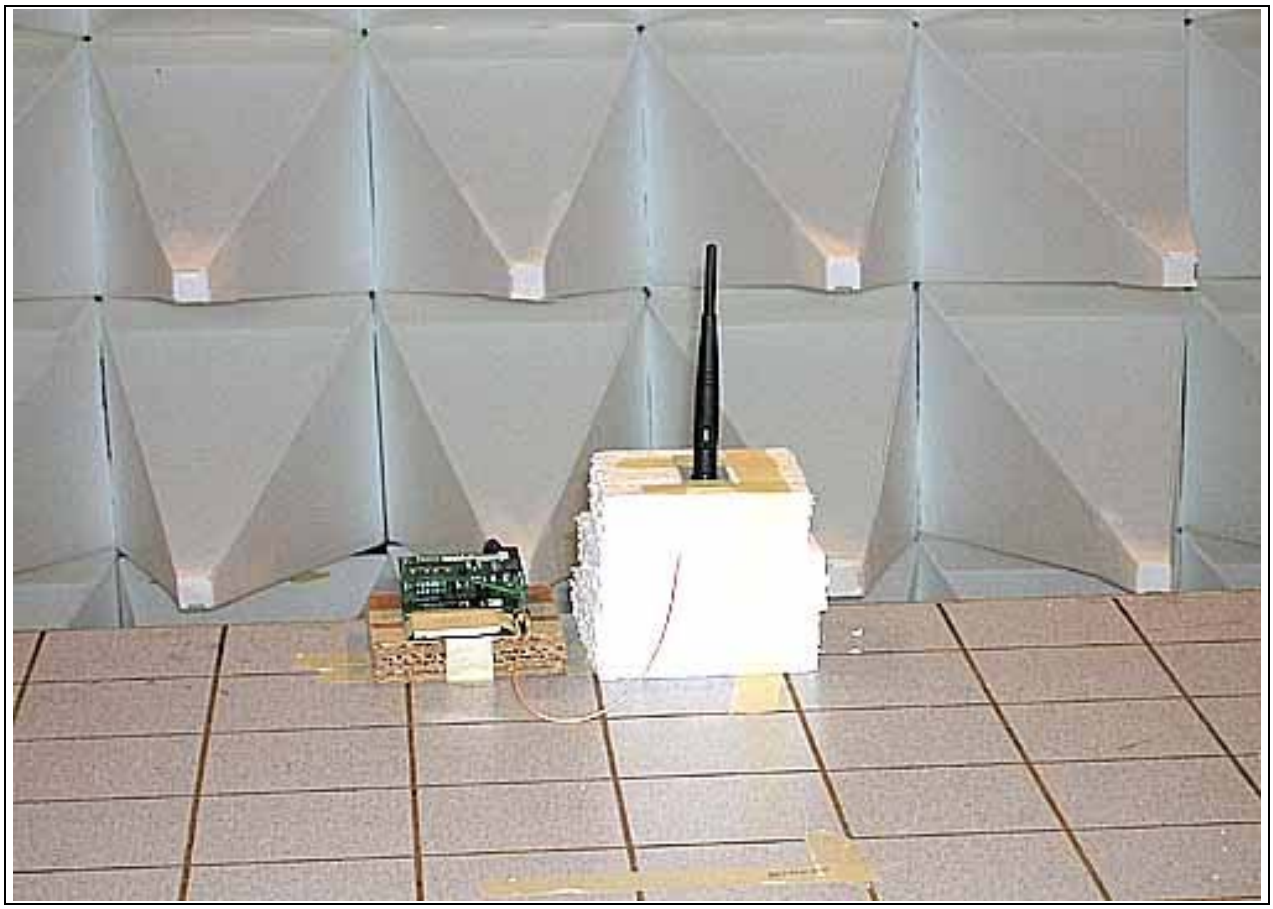
15.247(d) 8.5-40 GHz

PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS



15.247(d) 5dBi Antenna Front

PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS

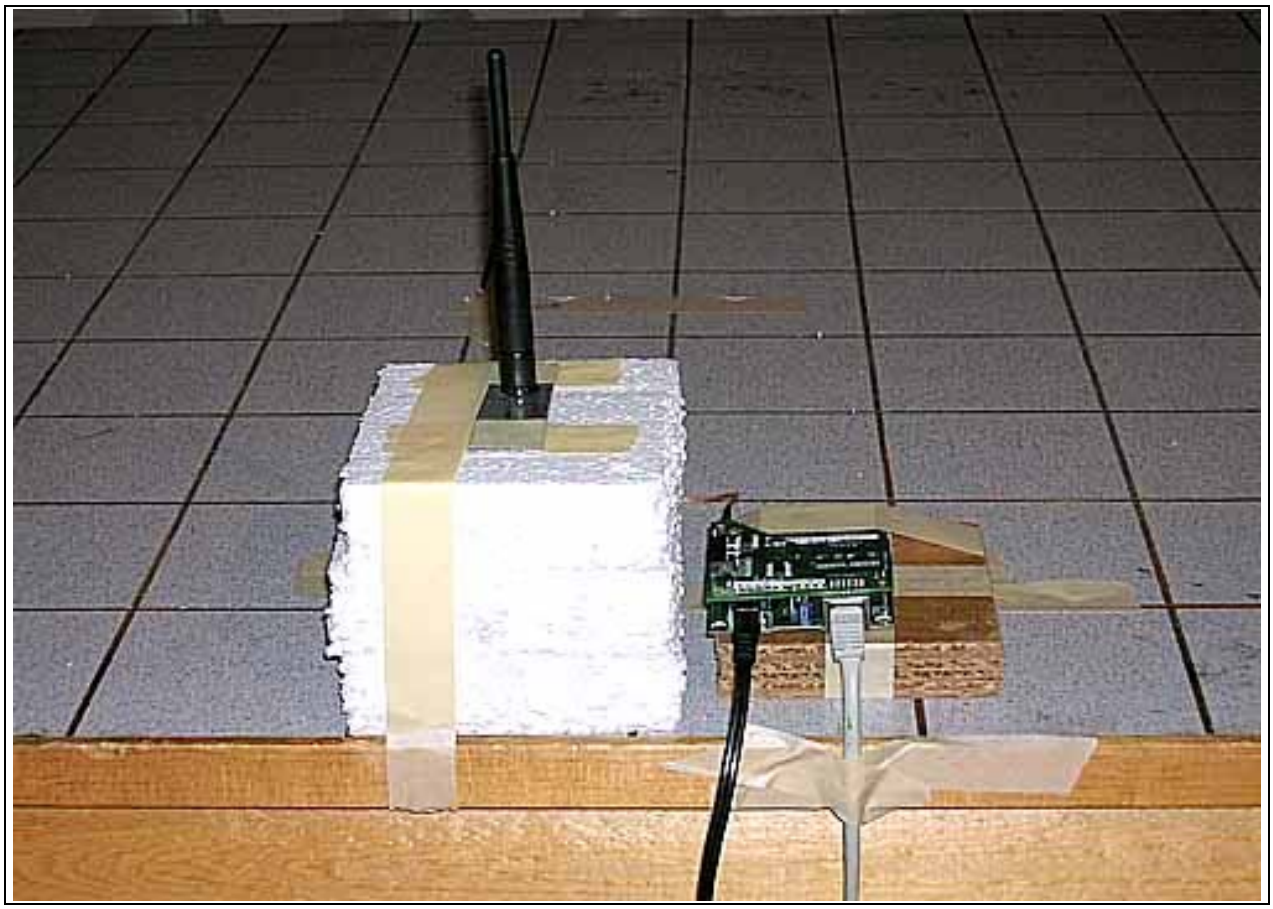


15.247(d) 5dBi Antenna Front Close-up

PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS

15.247(d) 5dBi Antenna Back

PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS



15.247(d) 5dBi Antenna Back Close-up

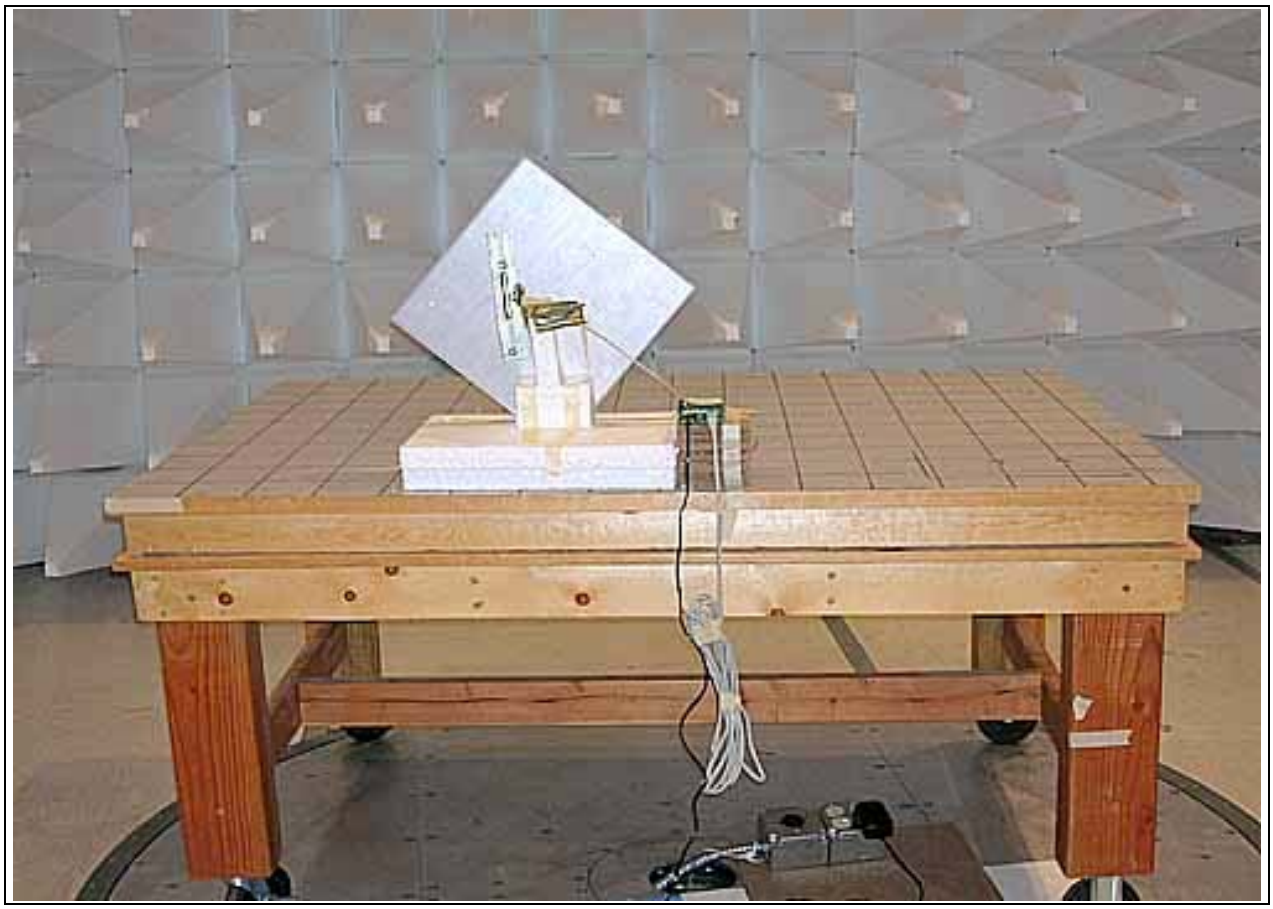
PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS

15.247(d) 23dBi Antenna Front

PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS

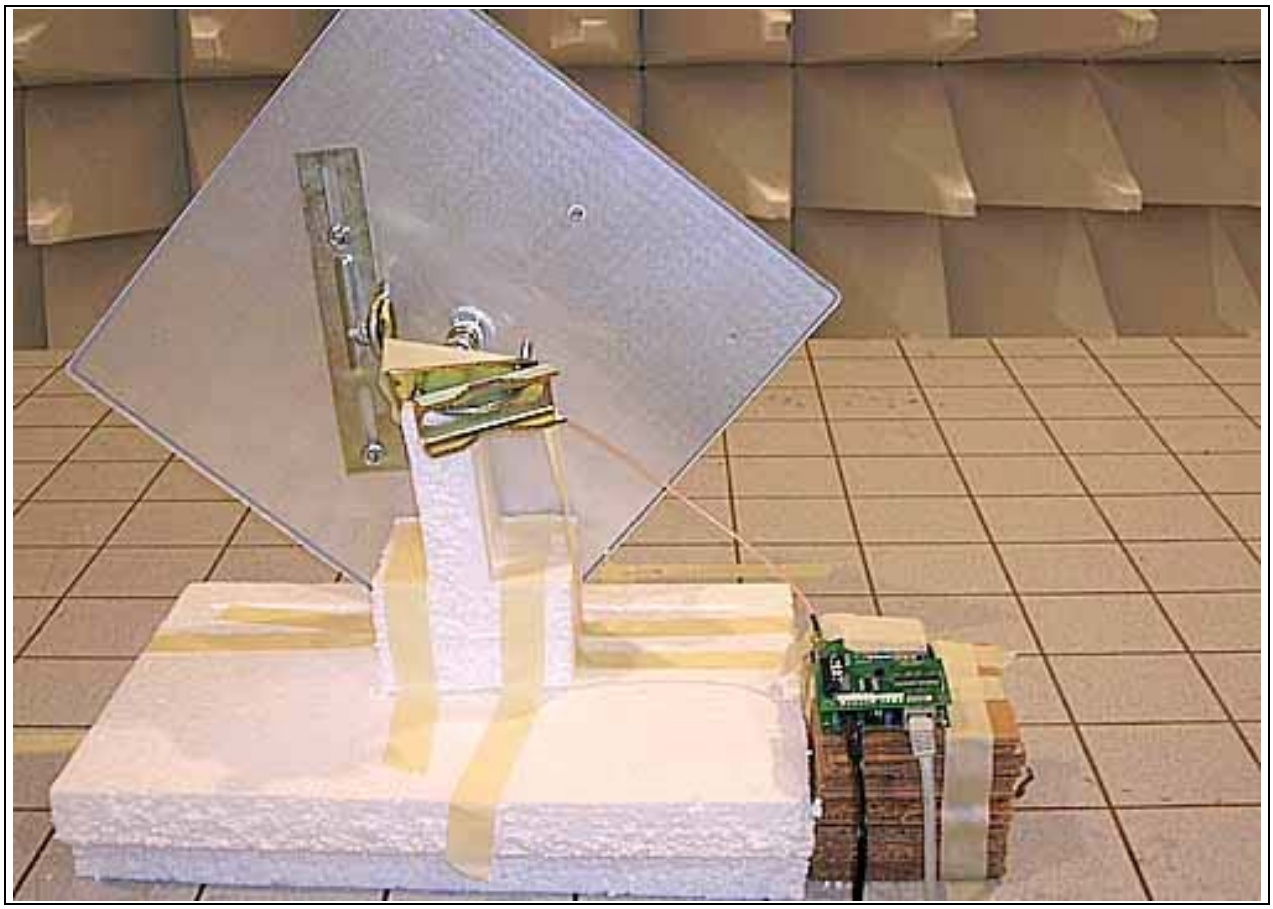
15.247(d) 23dBi Antenna Front Close-up

PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS



15.247(d) 23dBi Antenna Back

PHOTOGRAPH SHOWING SPURIOUS OATS EMISSIONS



15.247(d) 23dBi Antenna Back Close-up

APPENDIX B

TEST EQUIPMENT LIST

FCC 15.107

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA-Display 8568B	2542A12169	11/28/2005	11/28/2007	02662
SA-RF Section 8568B	2601A02492	11/28/2005	11/28/2007	02663
QP Adapter	2043A00188	10/23/2004	10/23/2006	1508
10dB Attenuator	none	10/20/2005	10/20/2007	P02223
CABLE	82' RG8	08/24/2005	08/24/2007	05012
TTE High Pass Filter	H4120	04/20/2005	04/20/2007	05258
LISN	9408-1006	05/23/2005	05/23/2007	00493

FCC 15.109

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA-Display 8568B	2542A12169	11/28/2005	11/28/2007	02662
SA-RF Section 8568B	2601A02492	11/28/2005	11/28/2007	02663
Cable	None	06/21/2005	06/21/2007	P05296
Cable	None	06/21/2005	06/21/2007	P05299
Cable	None	06/21/2005	06/21/2007	P05300
HP8447F opt H64 preamp	2944A03850	03/05/2005	03/05/2007	00501
QP Adapter	2043A00188	10/23/2004	10/23/2006	1508
Bilog Antenna	2630	01/24/2005	01/24/2007	00852

FCC 15.207

Function	S/N	Calibration Date	Cal Due Date	Asset #
10dB Attenuator	none	10/20/2005	10/20/2007	P02223
TTE High Pass Filter	H4120	04/20/2005	04/20/2007	05258
LISN	9408-1006	05/23/2005	05/23/2007	00493
Cable	none	03/01/2006	03/01/2008	PO0875
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668

FCC 15.31(e)/15.247(b)

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
6dB HF Attenuator	P7612	03/01/2006	03/01/2008	P05413
6dB HF Attenuator	P0519	03/01/2006	03/01/2008	P05412
10dB HF Attenuator	P7186	03/01/2006	03/01/2008	P05411
10dB HF Attenuator	P7169	03/01/2006	03/01/2008	P05410
Cable, HF	n/a	08/09/2005	08/09/2007	P02717
Tektronix DMM914	141024	09/12/2007	09/12/2007	02132
HP P.S 6267B	2712A-10825	NCR	NCR	02498

NCR = No Cal Required

15.247(d)/15.209 9 kHz-1000 MHz:

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA-Display 8568B	2542A12169	11/28/2005	11/28/2007	02662
SA-RF Section 8568B	2601A02492	11/28/2005	11/28/2007	02663
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
HP8447F opt H64 preamp	2944A03850	03/05/2005	03/05/2007	00501
Chase Bilog CBL6111C	2630	01/24/2005	01/24/2007	00852
Antenna-Mag Loop-6502	2078	05/13/2005	05/13/2007	00432
Cable	None	06/21/2005	06/21/2007	P05296
Cable	None	06/21/2005	06/21/2007	P05299
Cable	None	06/21/2005	06/21/2007	P05300

FCC 15.247(d)/15.209 1-12.5 GHz, Bandedge and Bandwidth

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
8.2GHz High Pass Filter	3643A00026	03/08/2006	03/08/2008	01417
Preamp, Agilent 83051A	00323	02/27/2006	02/27/2008	02810
Cable, 6'	n/a	06/07/2006	06/07/2008	P04241
HF-Cable FSJ1P-50A-4A		02/20/2006	02/20/2008	P05138
Antenna, Horn 1-18 GHz	1064	03/08/2005	03/08/2007	02061

FCC 15.247(d)/15.209 12.5-40GHz

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
HF-Cable-72" Pasternack	None	07/12/2005	07/12/2007	P05317
Cable, HF	n/a	07/12/2005	07/12/2007	P05314
Preamp Miteq 26-40 GHz		09/30/2005	09/30/2007	02695
Active Horn 18-26GHz	1087835	10/25/2005	10/25/2007	02694
Active Horn 12-18GHz	1088714	09/22/2005	09/22/2007	02693
26.5-40GHz WaveGuide	n/a	12/20/2005	12/20/2007	P00930
18-26.5GHz WaveGuide	n/a	12/20/2005	12/20/2007	P00929
12.4-18GHz WaveGuide	n/a	12/19/2005	12/19/2007	P00928
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
Preamp, Agilent 83051A	00323	02/27/2006	02/27/2008	02810

FCC 15.247(d) Antenna Conducted 9 kHz – 1000 MHz

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
Cable	none	01/03/2005	01/03/2007	01188
2.1GHz Low Pass Filter	11SL10-2000/U6000-O/O	03/07/2006	03/07/2008	02748

FCC 15.247(d) Antenna Conducted 1-40 GHz

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
6dB HF Attenuator	P7612	03/01/2006	03/01/2008	P05413
6dB HF Attenuator	P0519	03/01/2006	03/01/2008	P05412
10dB HF Attenuator	P7186	03/01/2006	03/01/2008	P05411
10dB HF Attenuator	P7169	03/01/2006	03/01/2008	P05410
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
8.2GHz High Pass Filter	3643A00026	03/08/2006	03/08/2008	01417

FCC 15.247(e)

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
6dB HF Attenuator	P7612	03/01/2006	03/01/2008	P05413
6dB HF Attenuator	P0519	03/01/2006	03/01/2008	P05412
10dB HF Attenuator	P7186	03/01/2006	03/01/2008	P05411
10dB HF Attenuator	P7169	03/01/2006	03/01/2008	P05410

APPENDIX C
MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**AvaLAN Wireless Systems, Inc.**		
Specification:	**FCC 15.107 B COND [AVE]**		
Work Order #:	**85414**	Date:	7/13/2006
Test Type:	**Conducted Emissions**	Time:	16:43:10
Equipment:	**5.8GHz Wireless Ethernet Bridge Module**	Sequence#:	115
Manufacturer:	AvaLAN Wireless Systems, Inc.	Tested By:	Art Rice
Model:	AW5800m		120V 60Hz
S/N:	000012		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply 10VDC, 1100mA	CUI Stack	48-10-1100D	none
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

Conducted Emissions 0.15-30 MHz. 23dBi Antenna Receive Mode, set up per ANSI C63.4. NOTE: Changed to different model power supply. Power supply is not supplied by AvaLAN to the customer.

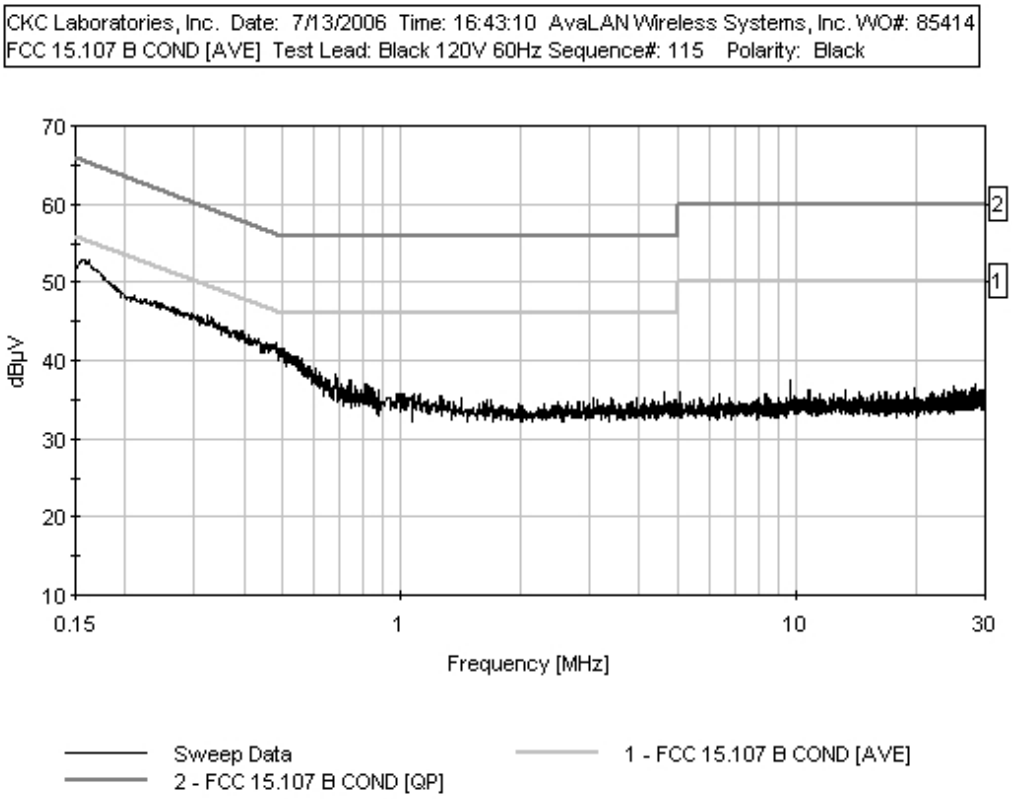
Transducer Legend:

T1=LISN - AN00493 - Black - ELC "OUT"	T2=TTE HP Filter P05258
T3=Cable 82' RG8 PN 05012	T4=ANP02223 10dB Attenuator

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq Hz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	515.054k	30.9	+0.3	+0.0	+0.1	+9.7	+0.0	41.0	46.0	-5.0	Black
2	682.310k	28.0	+0.3	+0.0	+0.2	+9.7	+0.0	38.2	46.0	-7.8	Black
3	641.587k	27.7	+0.3	+0.0	+0.1	+9.7	+0.0	37.8	46.0	-8.2	Black
4	742.668k	27.2	+0.3	+0.0	+0.2	+9.7	+0.0	37.4	46.0	-8.6	Black
5	739.032k	27.0	+0.3	+0.0	+0.2	+9.7	+0.0	37.2	46.0	-8.8	Black
6	813.934k	26.8	+0.3	+0.0	+0.2	+9.7	+0.0	37.0	46.0	-9.0	Black
7	728.124k	26.6	+0.3	+0.0	+0.2	+9.7	+0.0	36.8	46.0	-9.2	Black
8	830.659k	26.6	+0.3	+0.0	+0.2	+9.7	+0.0	36.8	46.0	-9.2	Black
9	823.387k	26.4	+0.3	+0.0	+0.2	+9.7	+0.0	36.6	46.0	-9.4	Black
10	716.489k	26.3	+0.3	+0.0	+0.2	+9.7	+0.0	36.5	46.0	-9.5	Black

11	847.385k	26.3	+0.3	+0.0	+0.2	+9.7	+0.0	36.5	46.0	-9.5	Black
12	836.477k	26.2	+0.3	+0.0	+0.2	+9.7	+0.0	36.4	46.0	-9.6	Black
13	843.022k	26.1	+0.3	+0.0	+0.2	+9.7	+0.0	36.3	46.0	-9.7	Black
14	4.632M	25.4	+0.4	+0.1	+0.3	+9.8	+0.0	36.0	46.0	-10.0	Black
15	876.473k	25.7	+0.3	+0.0	+0.1	+9.7	+0.0	35.8	46.0	-10.2	Black
16	1.022M	25.4	+0.3	+0.0	+0.2	+9.8	+0.0	35.7	46.0	-10.3	Black
17	1.073M	25.3	+0.3	+0.0	+0.2	+9.8	+0.0	35.6	46.0	-10.4	Black
18	1.115M	25.3	+0.3	+0.0	+0.2	+9.8	+0.0	35.6	46.0	-10.4	Black
19	1.256M	25.1	+0.3	+0.0	+0.2	+9.8	+0.0	35.4	46.0	-10.6	Black
20	3.403M	24.8	+0.4	+0.1	+0.3	+9.7	+0.0	35.3	46.0	-10.7	Black
21	3.067M	24.7	+0.4	+0.1	+0.3	+9.7	+0.0	35.2	46.0	-10.8	Black
22	3.952M	24.6	+0.3	+0.1	+0.3	+9.8	+0.0	35.1	46.0	-10.9	Black
23	4.109M	24.6	+0.3	+0.1	+0.3	+9.8	+0.0	35.1	46.0	-10.9	Black
24	3.135M	24.5	+0.4	+0.1	+0.3	+9.7	+0.0	35.0	46.0	-11.0	Black
25	4.301M	24.5	+0.3	+0.1	+0.3	+9.8	+0.0	35.0	46.0	-11.0	Black
26	4.875M	24.4	+0.4	+0.1	+0.3	+9.8	+0.0	35.0	46.0	-11.0	Black
27	4.977M	24.4	+0.4	+0.1	+0.3	+9.8	+0.0	35.0	46.0	-11.0	Black
28	4.760M	24.2	+0.4	+0.1	+0.3	+9.8	+0.0	34.8	46.0	-11.2	Black
29	4.377M	24.2	+0.3	+0.1	+0.3	+9.8	+0.0	34.7	46.0	-11.3	Black
30	162.000k	15.0	+0.4	+3.0	+0.1	+9.8	+0.0	28.3	55.4	-27.1	Black
Ave											
^	161.635k	39.5	+0.4	+3.0	+0.1	+9.8	+0.0	52.8	55.4	-2.6	Black


CKC Laboratories, Inc. Date: 7/13/2006 Time: 16:43:10 AvaLAN Wireless Systems, Inc. WO#: 85414
FCC 15.107 B COND [AVE] Test Lead: Black 120V 60Hz Sequence#: 115 Polarity: Black
70
60
50
40
30
20
10
dBµV
0.15
1
10
30
Frequency [MHz]
2
1
Sweep Data
2 - FCC 15.107 B COND [QP]
1 - FCC 15.107 B COND [AVE]

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.107 B COND [AVE]**
Work Order #: **85414** Date: 7/13/2006
Test Type: **Conducted Emissions** Time: 16:37:35
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 114
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: Art Rice
Model: AW5800m 120V 60Hz
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply 10VDC, 1100mA	CUI Stack	48-10-1100D	none
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

Conducted Emissions 0.15-30 MHz. 23dBi Antenna Receive Mode, set up per ANSI C63.4. NOTE: Changed to different model power supply. Power supply is not supplied by AvaLAN to the customer.

Transducer Legend:

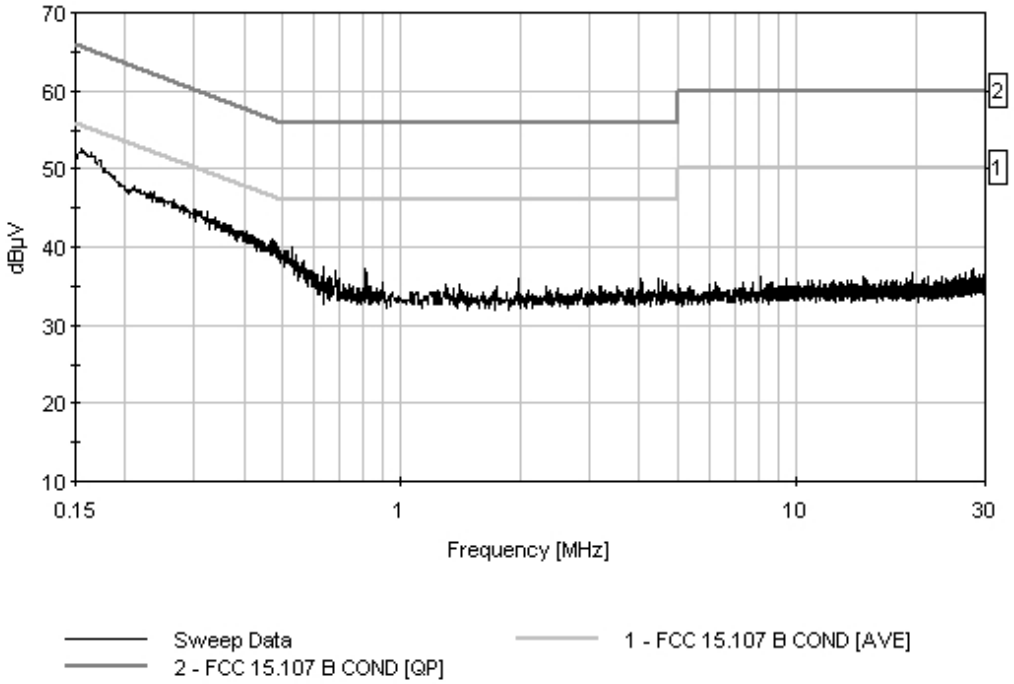
T1=LISN - AN00493 - White - ELC "OUT"	T2=TTE HP Filter P05258
T3=Cable 82' RG8 PN 05012	T4=ANP02223 10dB Attenuator

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq Hz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	338.345k	33.5	+0.3	+0.1	+0.1	+9.8	+0.0	43.8	49.2	-5.4	White
2	474.331k	30.9	+0.3	+0.0	+0.1	+9.7	+0.0	41.0	46.4	-5.4	White
3	477.240k	30.7	+0.3	+0.0	+0.1	+9.7	+0.0	40.8	46.4	-5.6	White
4	541.234k	29.0	+0.3	+0.0	+0.1	+9.7	+0.0	39.1	46.0	-6.9	White
5	567.413k	28.1	+0.3	+0.0	+0.1	+9.7	+0.0	38.2	46.0	-7.8	White
6	634.315k	27.5	+0.3	+0.0	+0.1	+9.7	+0.0	37.6	46.0	-8.4	White
7	813.206k	27.1	+0.3	+0.0	+0.2	+9.7	+0.0	37.3	46.0	-8.7	White
8	579.048k	27.0	+0.3	+0.0	+0.1	+9.7	+0.0	37.1	46.0	-8.9	White
9	585.593k	26.9	+0.3	+0.0	+0.1	+9.7	+0.0	37.0	46.0	-9.0	White
10	678.674k	26.7	+0.3	+0.0	+0.2	+9.7	+0.0	36.9	46.0	-9.1	White

11	601.591k	26.6	+0.3	+0.0	+0.1	+9.7	+0.0	36.7	46.0	-9.3	White
12	659.767k	26.0	+0.3	+0.0	+0.2	+9.7	+0.0	36.2	46.0	-9.8	White
13	649.586k	25.8	+0.3	+0.0	+0.2	+9.7	+0.0	36.0	46.0	-10.0	White
14	697.582k	25.8	+0.3	+0.0	+0.2	+9.7	+0.0	36.0	46.0	-10.0	White
15	4.037M	25.4	+0.4	+0.1	+0.3	+9.8	+0.0	36.0	46.0	-10.0	White
16	664.858k	25.7	+0.3	+0.0	+0.2	+9.7	+0.0	35.9	46.0	-10.1	White
17	1.987M	25.7	+0.3	+0.1	+0.1	+9.7	+0.0	35.9	46.0	-10.1	White
18	4.479M	25.3	+0.4	+0.1	+0.3	+9.8	+0.0	35.9	46.0	-10.1	White
19	4.586M	25.2	+0.4	+0.1	+0.3	+9.8	+0.0	35.8	46.0	-10.2	White
20	657.586k	25.5	+0.3	+0.0	+0.2	+9.7	+0.0	35.7	46.0	-10.3	White
21	902.518k	25.4	+0.3	+0.0	+0.1	+9.7	+0.0	35.5	46.0	-10.5	White
22	4.683M	24.8	+0.4	+0.1	+0.3	+9.8	+0.0	35.4	46.0	-10.6	White
23	1.302M	24.9	+0.3	+0.0	+0.2	+9.8	+0.0	35.2	46.0	-10.8	White
24	828.478k	24.8	+0.3	+0.0	+0.2	+9.7	+0.0	35.0	46.0	-11.0	White
25	832.841k	24.8	+0.3	+0.0	+0.2	+9.7	+0.0	35.0	46.0	-11.0	White
26	1.740M	24.8	+0.3	+0.1	+0.1	+9.7	+0.0	35.0	46.0	-11.0	White
27	3.514M	24.4	+0.4	+0.1	+0.3	+9.8	+0.0	35.0	46.0	-11.0	White
28	3.186M	24.4	+0.4	+0.1	+0.3	+9.7	+0.0	34.9	46.0	-11.1	White
29	4.011M	24.3	+0.4	+0.1	+0.3	+9.8	+0.0	34.9	46.0	-11.1	White
30	156.000k Ave	15.8	+0.4	+3.5	+0.1	+9.8	+0.0	29.6	55.7	-26.1	White
^	155.818k	38.7	+0.4	+3.5	+0.1	+9.8	+0.0	52.5	55.7	-3.2	White

CKC Laboratories, Inc. Date: 7/13/2006 Time: 16:37:35 AvaLAN Wireless Systems, Inc. WO#: 85414
FCC 15.107 B COND [AVE] Test Lead: White 120V 60Hz Sequence#: 114 Polarity: White



Test Location:	CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170		
Customer:	**AvaLAN Wireless Systems, Inc.**		
Specification:	**FCC 15.109 Class B Radiated**		
Work Order #:	**85414**	Date:	7/13/2006
Test Type:	**Maximized Emissions**	Time:	11:10:42
Equipment:	**5.8GHz Wireless Ethernet Bridge Module**	Sequence#:	110
Manufacturer:	AvaLAN Wireless Systems, Inc.	Tested By:	Art Rice
Model:	AW5800m		
S/N:	000012		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

FCC 15.109 Class B Radiated Emissions 30-1000MHz. 23dBi Antenna Receive Mode, set up per ANSI C63.4.

Transducer Legend:

T1=0852-Bi-Log Antenna	T2=Cable P05296 25' RG214 N-N
T3=Cable P05299 2' RG214 N-N	T4=Cable P05300 12' RG214 N-N
T5=Amp Cal.HP-8447F OPT H64- AN 00501	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	49.985M	53.4	+8.5	+0.4	+0.1	+0.2	+0.0	36.5	40.0	-3.5	Vert
	QP		-26.1				55				104
^	49.981M	53.6	+8.5	+0.4	+0.1	+0.2	+0.0	36.7	40.0	-3.3	Vert
			-26.1				55				104
3	399.995M	50.0	+15.5	+1.1	+0.2	+0.7	+0.0	41.6	46.0	-4.4	Vert
	QP		-25.9				188				99
^	399.991M	50.1	+15.5	+1.1	+0.2	+0.7	+0.0	41.7	46.0	-4.3	Vert
			-25.9				188				99
5	399.988M	46.9	+15.5	+1.1	+0.2	+0.7	+0.0	38.5	46.0	-7.5	Horiz
			-25.9				108				203
6	199.984M	50.6	+8.6	+0.8	+0.1	+0.5	+0.0	35.0	43.5	-8.5	Vert
			-25.6				311				99
7	437.489M	44.4	+16.5	+1.1	+0.2	+0.6	+0.0	36.6	46.0	-9.4	Horiz
			-26.2				262				161
8	925.003M	36.8	+23.0	+1.8	+0.2	+0.9	+0.0	36.0	46.0	-10.0	Vert
			-26.7				207				137
9	675.004M	40.0	+19.9	+1.5	+0.2	+0.8	+0.0	35.3	46.0	-10.7	Vert
			-27.1				318				165
10	724.995M	38.5	+20.8	+1.5	+0.2	+0.7	+0.0	34.6	46.0	-11.4	Vert
			-27.1				103				153
11	299.994M	44.8	+13.0	+1.0	+0.1	+0.6	+0.0	34.2	46.0	-11.8	Vert
			-25.3				139				162

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**AvaLAN Wireless Systems, Inc.**		
Specification:	**FCC 15.207 COND [AVE]**		
Work Order #:	**85414**	Date:	7/14/2006
Test Type:	**Conducted Emissions**	Time:	11:51:17
Equipment:	**5.8GHz Wireless Ethernet Bridge Module**	Sequence#:	119
Manufacturer:	AvaLAN Wireless Systems, Inc.	Tested By:	C. Nicklas
Model:	AW5800m		120V 60Hz
S/N:	000012		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply 10VDC, 1100mA	CUI Stack	48-10-1100D	none
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

FCC 15.207 Conducted Emissions 0.15-30 MHz 23dBi Antenna. HIGH Channel. High Channel with the 23dBi antenna produces the worst case emissions.

Transducer Legend:

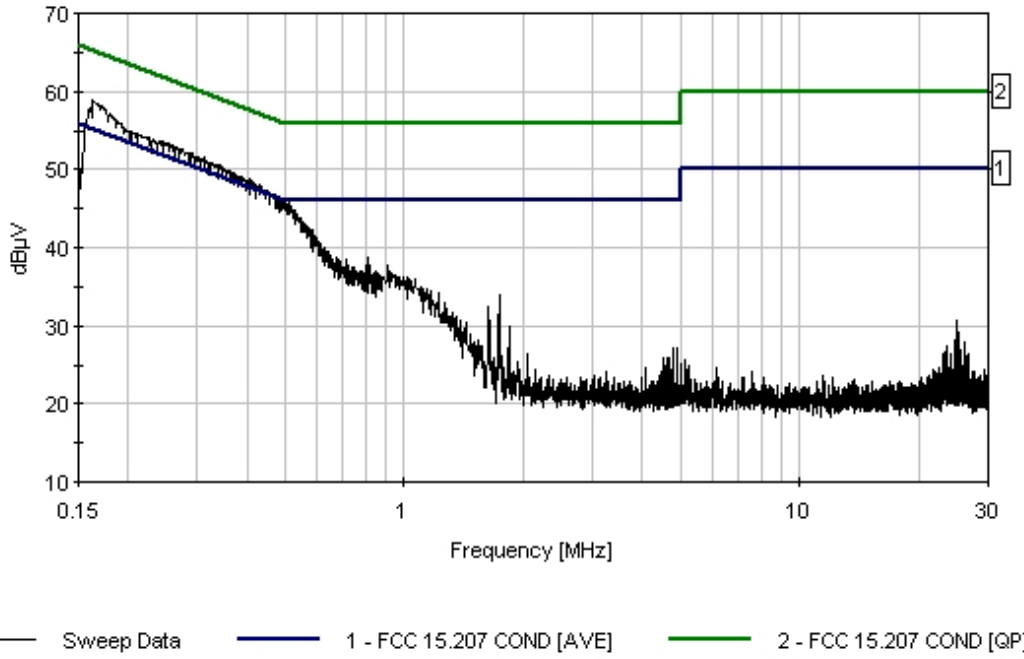
T1=LISN - AN00493 - Black - ELC "OUT"	T2=TTE HP Filter P05258
T3=ANP02223 10dB Attenuator	T4=Cable P00875, 15' RG214/U

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq Hz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	632.457k	29.1	+0.3	+0.0	+9.7	+0.1	+0.0	39.2	46.0	-6.8	Black
2	805.940k	28.7	+0.3	+0.0	+9.7	+0.1	+0.0	38.8	46.0	-7.2	Black
3	809.576k	28.6	+0.3	+0.0	+9.7	+0.1	+0.0	38.7	46.0	-7.3	Black
4	813.212k	28.6	+0.3	+0.0	+9.7	+0.1	+0.0	38.7	46.0	-7.3	Black
5	714.312k	28.2	+0.3	+0.0	+9.7	+0.1	+0.0	38.3	46.0	-7.7	Black
6	717.221k	27.9	+0.3	+0.0	+9.7	+0.1	+0.0	38.0	46.0	-8.0	Black
7	719.402k	27.6	+0.3	+0.0	+9.7	+0.1	+0.0	37.7	46.0	-8.3	Black
8	911.227k	27.7	+0.3	+0.0	+9.7	+0.0	+0.0	37.7	46.0	-8.3	Black
9	739.764k	27.4	+0.3	+0.0	+9.7	+0.1	+0.0	37.5	46.0	-8.5	Black
10	743.400k	27.4	+0.3	+0.0	+9.7	+0.1	+0.0	37.5	46.0	-8.5	Black

11	750.672k	27.4	+0.3	+0.0	+9.7	+0.1	+0.0	37.5	46.0	-8.5	Black
12	821.211k	26.9	+0.3	+0.0	+9.7	+0.1	+0.0	37.0	46.0	-9.0	Black
13	843.027k	26.8	+0.3	+0.0	+9.7	+0.1	+0.0	36.9	46.0	-9.1	Black
14	852.481k	26.7	+0.3	+0.0	+9.7	+0.0	+0.0	36.7	46.0	-9.3	Black
15	827.029k	26.4	+0.3	+0.0	+9.7	+0.1	+0.0	36.5	46.0	-9.5	Black
16	1.741M	23.7	+0.3	+0.1	+9.7	+0.1	+0.0	33.9	46.0	-12.1	Black
17	1.634M	22.3	+0.3	+0.1	+9.7	+0.1	+0.0	32.5	46.0	-13.5	Black
18	1.349M	21.1	+0.3	+0.0	+9.8	+0.0	+0.0	31.2	46.0	-14.8	Black
19	1.392M	20.6	+0.3	+0.0	+9.8	+0.0	+0.0	30.7	46.0	-15.3	Black
20	1.430M	20.2	+0.3	+0.1	+9.7	+0.1	+0.0	30.4	46.0	-15.6	Black
21	1.843M	19.6	+0.3	+0.1	+9.7	+0.1	+0.0	29.8	46.0	-16.2	Black
22	518.909k Ave	6.9	+0.3	+0.0	+9.7	+0.1	+0.0	17.0	46.0	-29.0	Black
^	518.909k	34.6	+0.3	+0.0	+9.7	+0.1	+0.0	44.7	46.0	-1.3	Black
24	422.514k Ave	7.9	+0.3	+0.0	+9.7	+0.1	+0.0	18.0	47.4	-29.4	Black
^	422.514k	37.9	+0.3	+0.0	+9.7	+0.1	+0.0	48.0	47.4	+0.6	Black
26	162.477k Ave	12.4	+0.4	+2.9	+9.8	+0.0	+0.0	25.5	55.3	-29.8	Black
^	162.477k	45.6	+0.4	+2.9	+9.8	+0.0	+0.0	58.7	55.3	+3.4	Black
28	316.968k Ave	9.1	+0.3	+0.2	+9.8	+0.1	+0.0	19.5	49.8	-30.3	Black
^	316.968k	40.3	+0.3	+0.2	+9.8	+0.1	+0.0	50.7	49.8	+0.9	Black
30	235.052k Ave	10.5	+0.4	+0.2	+9.8	+0.0	+0.0	20.9	52.3	-31.4	Black
^	235.052k	42.8	+0.4	+0.2	+9.8	+0.0	+0.0	53.2	52.3	+0.9	Black

CKC Laboratories, Inc. Date: 7/14/2006 Time: 11:51:17 AvaLAN Wireless Systems, Inc. WO#: 85414
FCC 15.207 COND [AVE] Test Lead: Black 120V 60Hz Sequence#: 119 Polarity: Black
23dBi HIGH



Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.207 COND [AVE]**
Work Order #: **85414** Date: 7/14/2006
Test Type: **Conducted Emissions** Time: 12:00:29
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 122
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m 120V 60Hz
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply 10VDC, 1100mA	CUI Stack	48-10-1100D	none
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

FCC 15.207 Conducted Emissions 0.15-30 MHz 23dBi Antenna. HIGH Channel. High Channel with the 23dBi antenna produces the worst case emissions.

Transducer Legend:

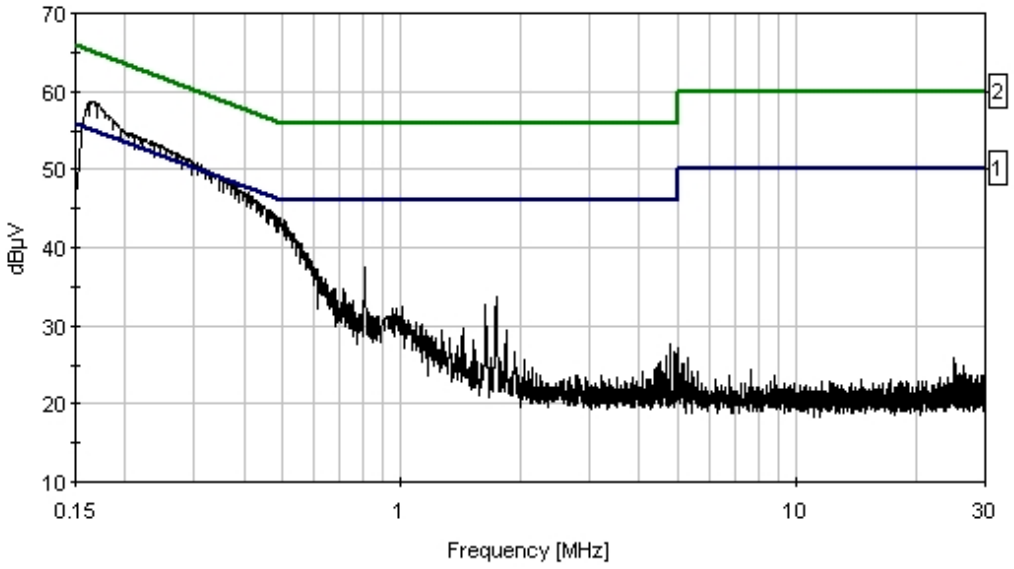
T1=LISN - AN00493 - White - ELC "OUT"	T2=TTE HP Filter P05258
T3=ANP02223 10dB Attenuator	T4=Cable P00875, 15' RG214/U

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq Hz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	810.303k	27.3	+0.3	+0.0	+9.7	+0.1	+0.0	37.4	46.0	-8.6	White
2	612.503k	27.1	+0.3	+0.0	+9.7	+0.1	+0.0	37.2	46.0	-8.8	White
3	807.394k	27.0	+0.3	+0.0	+9.7	+0.1	+0.0	37.1	46.0	-8.9	White
4	616.866k	26.5	+0.3	+0.0	+9.7	+0.1	+0.0	36.6	46.0	-9.4	White
5	620.911k	26.3	+0.3	+0.0	+9.7	+0.1	+0.0	36.4	46.0	-9.6	White
6	624.866k	26.0	+0.3	+0.0	+9.7	+0.1	+0.0	36.1	46.0	-9.9	White
7	651.045k	25.1	+0.3	+0.0	+9.7	+0.1	+0.0	35.2	46.0	-10.8	White
8	677.952k	24.7	+0.3	+0.0	+9.7	+0.1	+0.0	34.8	46.0	-11.2	White
9	716.494k	24.7	+0.3	+0.0	+9.7	+0.1	+0.0	34.8	46.0	-11.2	White
10	679.406k	24.6	+0.3	+0.0	+9.7	+0.1	+0.0	34.7	46.0	-11.3	White

11	675.770k	24.5	+0.3	+0.0	+9.7	+0.1	+0.0	34.6	46.0	-11.4	White
12	681.588k	24.3	+0.3	+0.0	+9.7	+0.1	+0.0	34.4	46.0	-11.6	White
13	713.585k	24.3	+0.3	+0.0	+9.7	+0.1	+0.0	34.4	46.0	-11.6	White
14	720.857k	24.1	+0.3	+0.0	+9.7	+0.1	+0.0	34.2	46.0	-11.8	White
15	1.736M	23.6	+0.3	+0.1	+9.7	+0.1	+0.0	33.8	46.0	-12.2	White
16	683.769k	23.1	+0.3	+0.0	+9.7	+0.1	+0.0	33.2	46.0	-12.8	White
17	752.127k	23.0	+0.3	+0.0	+9.7	+0.1	+0.0	33.1	46.0	-12.9	White
18	741.946k	22.8	+0.3	+0.0	+9.7	+0.1	+0.0	32.9	46.0	-13.1	White
19	730.310k	22.7	+0.3	+0.0	+9.7	+0.1	+0.0	32.8	46.0	-13.2	White
20	747.763k	22.6	+0.3	+0.0	+9.7	+0.1	+0.0	32.7	46.0	-13.3	White
21	1.634M	22.4	+0.3	+0.1	+9.7	+0.1	+0.0	32.6	46.0	-13.4	White
22	440.949k Ave	6.7	+0.3	+0.0	+9.7	+0.1	+0.0	16.8	47.0	-30.2	White
^	440.949k	35.6	+0.3	+0.0	+9.7	+0.1	+0.0	45.7	47.0	-1.3	White
24	165.788k Ave	12.2	+0.4	+2.6	+9.8	+0.0	+0.0	25.0	55.2	-30.2	White
^	165.788k	45.8	+0.4	+2.6	+9.8	+0.0	+0.0	58.6	55.2	+3.4	White
26	528.698k Ave	5.6	+0.3	+0.0	+9.7	+0.1	+0.0	15.7	46.0	-30.3	White
^	528.698k	31.7	+0.3	+0.0	+9.7	+0.1	+0.0	41.8	46.0	-4.2	White
28	332.221k Ave	8.3	+0.3	+0.2	+9.8	+0.1	+0.0	18.7	49.4	-30.7	White
^	332.221k	39.2	+0.3	+0.2	+9.8	+0.1	+0.0	49.6	49.4	+0.2	White
30	272.947k Ave	9.3	+0.4	+0.3	+9.8	+0.1	+0.0	19.9	51.0	-31.1	White
^	272.947k	41.3	+0.4	+0.3	+9.8	+0.1	+0.0	51.9	51.0	+0.9	White

CKC Laboratories, Inc. Date: 7/14/2006 Time: 12:00:29 AvaLAN Wireless Systems, Inc. WO#: 85414
FCC 15.207 COND [AVE] Test Lead: White 120V 60Hz Sequence#: 122 Polarity: White
23dBi HIGH



Sweep Data — 1 - FCC 15.207 COND [AVE] — 2 - FCC 15.207 COND [QP]

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**AvaLAN Wireless Systems, Inc.**		
Specification:	**FCC 15.31(e)/15.247(b) RF Power**		
Work Order #:	**85414**	Date:	7/6/2006
Test Type:	**Maximized Emissions**	Time:	12:26:09
Equipment:	**5.8GHz Wireless Ethernet Bridge Module**	Sequence#:	89
Manufacturer:	AvaLAN Wireless Systems, Inc.	Tested By:	C. Nicklas
Model:	AW5800m		
S/N:	000012		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	

Test Conditions / Notes:

15.31(e)/15.247(b) RF Power Output Antenna Conducted. Voltage Variations. Measured at the lowest voltage (5VDC) and the highest voltage (12VDC) the device can operate at. Measured the Peak Output power level for each channel. Voltage was set using a calibrated Digital Multimeter (DMM).

Transducer Legend:

T1=PAD ANP05410 10dB	T2=PAD ANP05411 10dB
T3=PAD ANP05412 6dB	T4=PAD ANP05413 6dB
T5=Cable AN271740 GHz	

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	Hz	dBm	dB	dB	dB	dB	Table	dBm	dBm	dB	Ant
1	5849.533M	-15.3	+9.6 +2.8	+9.3	+5.8	+5.8	+0.0	18.0	30.0 5VDC HIGH	-12.0	None
2	5849.743M	-15.4	+9.6 +2.8	+9.3	+5.8	+5.8	+0.0	17.9	30.0 12VDC HIGH	-12.1	None
3	5730.771M	-16.1	+9.6 +2.8	+9.3	+5.7	+5.8	+0.0	17.1	30.0 12VDC LOW	-12.9	None
4	5789.053M	-16.3	+9.6 +2.8	+9.3	+5.8	+5.8	+0.0	17.0	30.0 12VDC MID	-13.0	None
5	5730.873M	-16.3	+9.6 +2.8	+9.3	+5.7	+5.8	+0.0	16.9	30.0 5VDC LOW	-13.1	None
6	5786.079M	-16.5	+9.6 +2.8	+9.3	+5.8	+5.8	+0.0	16.8	30.0 5VDC MID	-13.2	None

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(b)(3) RF Power**
Work Order #: **85414** Date: 7/6/2006
Test Type: **Maximized Emissions** Time: 12:26:09
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 28
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	

Test Conditions / Notes:

15.247(b)(3) RF Power Output Antenna Conducted.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=PAD ANP05410 10dB
T3=PAD ANP05411 10dB	T4=PAD ANP05412 6dB
T5=PAD ANP05413 6dB	

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	Hz	dBm	dB	dB	dB	dB	Table	dBm	dBm	dB	Ant
1	5786.502M	-15.9	+1.8 +5.8	+9.6	+9.3	+5.8	+0.0 -12	16.4	30.0 MID	-13.6	None 100
2	5846.712M	-16.1	+1.8 +5.8	+9.6	+9.3	+5.8	+0.0 -12	16.2	30.0 HIGH	-13.8	None 100
3	5728.126M	-16.4	+1.8 +5.8	+9.6	+9.3	+5.7	+0.0 -12	15.8	30.0 LOW	-14.2	None 100

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(d)/15.209 9 kHz-1000 MHz**
Work Order #: **85414** Date: 7/8/2006
Test Type: **Maximized Emissions** Time: 09:51:22
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 44
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

Spurious Emissions Maximized 15.247(d) 9 kHz-1000 MHz. 23dBi Antenna. Tested against 15.209 limits which are tighter than the worst case limit developed from the fundamental peak in 100 kHz RBW. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times. This data represents the worst case emissions from LOW, MID and HIGH channels. Measurements from 9 kHz-30 MHz were made using a Mag Loop antenna. Measurements from 30-1000 MHz were made using a Bilog antenna

Transducer Legend:

T1=0852-Bi-Log Antenna	T2=Amp Cal.HP-8447F OPT H64- AN 00501
T3=Cable P05299 2' RG214 N-N	T4=Cable P05300 12' RG214 N-N
T5=Cable P05296 25' RG214 N-N	T6=Mag Loop A/N 00432, S/N 2078

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	49.993M	49.9	+8.5	-26.1	+0.1	+0.2	+0.0	33.0	40.0	-7.0	Vert
	QP		+0.4				54				99
^	49.993M	53.3	+0.0	+0.0	+0.0	+0.2	+0.0	36.4	40.0	-3.6	Vert
			+0.4				54				99
3	400.000M	46.3	+15.5	-25.9	+0.2	+0.7	+0.0	37.9	46.0	-8.1	Horiz
			+1.1				301				99
4	136.640k	46.3	+0.0	+0.0	+0.0	+0.1	+0.0	55.9	64.9	-9.0	Paral
			+0.0	+9.5			370				399
5	271.800k	40.2	+0.0	+0.0	+0.0	+0.1	+0.0	49.3	58.9	-9.6	Paral
			+0.0	+9.0							100
6	300.002M	47.0	+13.0	-25.3	+0.1	+0.6	+0.0	36.4	46.0	-9.6	Horiz
			+1.0				258				99
7	135.690k	45.4	+0.0	+0.0	+0.0	+0.1	+0.0	55.0	64.9	-9.9	Perpe
			+0.0	+9.5			275				100

8	300.000M	46.5	+13.0 +1.0	-25.3	+0.1	+0.6	+0.0 258	35.9	46.0	-10.1	Vert 99
9	150.000M	46.1	+10.7 +0.7	-25.7	+0.1	+0.4	+0.0 73	32.3	43.5	-11.2	Vert 99
10	130.500k	43.6	+0.0 +0.0	+0.0 +9.7	+0.0	+0.1	+0.0 370	53.4	65.3	-11.9	Paral 399
11	130.500k	42.5	+0.0 +0.0	+0.0 +9.7	+0.0	+0.1	+0.0 275	52.3	65.3	-13.0	Perpe 100
12	49.991M	42.1	+8.5 +0.4	-26.1	+0.1	+0.2	+0.0 130	25.2	40.0	-14.8	Horiz 218

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(d)/15.209 9 kHz-1000 MHz**
Work Order #: **85414** Date: 7/8/2006
Test Type: **Maximized Emissions** Time: 12:02:50
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 57
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
5dBi Antenna	Multiple	5dBi Antenna	

Test Conditions / Notes:

Spurious Emissions Maximized 15.247(d) 9 kHz-100 0MHz. 5dBi Antenna. Tested against 15.209 limits which are tighter than the worst case limit developed from the fundamental peak in 100 kHz RBW. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times. This data represents the worst case emissions from LOW, MID and HIGH channels. Measurements from 9 kHz-30 MHz were made using a Mag Loop antenna. Measurements from 30-1000 MHz were made using a Bilog antenna

Transducer Legend:

T1=0852-Bi-Log Antenna	T2=Amp Cal.HP-8447F OPT H64- AN 00501
T3=Cable P05299 2' RG214 N-N	T4=Cable P05300 12' RG214 N-N
T5=Cable P05296 25' RG214 N-N	T6=Mag Loop A/N 00432, S/N 2078
T7=Duty Cycle AVE Factor	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	525.018M	45.5	+18.4	-27.0	+0.2	+0.7	+0.0	39.1	46.0	-6.9	Vert
	QP		+1.3	+0.0	+0.0		84				100
^	525.018M	46.0	+18.4	-27.0	+0.2	+0.7	+0.0	39.6	46.0	-6.4	Vert
			+1.3	+0.0	+0.0		84				100
3	450.019M	46.2	+16.8	-26.7	+0.2	+0.6	+0.0	38.2	46.0	-7.8	Vert
			+1.1	+0.0	+0.0		89				99
4	400.015M	46.2	+15.5	-25.9	+0.2	+0.7	+0.0	37.8	46.0	-8.2	Vert
			+1.1	+0.0	+0.0		93				150
5	575.023M	43.3	+19.2	-27.1	+0.2	+0.7	+0.0	37.7	46.0	-8.3	Vert
			+1.4	+0.0	+0.0		244				99
6	137.760k	46.5	+0.0	+0.0	+0.0	+0.1	+0.0	56.1	64.8	-8.7	Paral
			+0.0	+9.5			174				398

7	133.770k	45.7	+0.0	+0.0	+0.0	+0.1	+0.0	55.4	65.1	-9.7	Paral
			+0.0	+9.6			174				398
8	300.013M	46.0	+13.0	-25.3	+0.1	+0.6	+0.0	35.4	46.0	-10.6	Horiz
			+1.0	+0.0	+0.0		249				99
9	138.360k	44.7	+0.0	+0.0	+0.0	+0.1	+0.0	54.2	64.8	-10.6	Perpe
			+0.0	+9.4	+0.0		309				398
10	200.011M	48.0	+8.6	-25.6	+0.1	+0.5	+0.0	32.4	43.5	-11.1	Horiz
			+0.8	+0.0	+0.0		144				169
11	133.710k	42.4	+0.0	+0.0	+0.0	+0.1	+0.0	52.1	65.1	-13.0	Perpe
			+0.0	+9.6	+0.0		309				398
12	270.710k	47.3	+0.0	+0.0	+0.0	+0.1	+0.0	42.8	59.0	-16.2	Perpe
	Ave		+0.0	+9.0	-13.6		255				398
^	270.710k	47.3	+0.0	+0.0	+0.0	+0.1	+0.0	56.4	59.0	-2.6	Perpe
			+0.0	+9.0			255				398
14	275.670k	45.0	+0.0	+0.0	+0.0	+0.1	+0.0	40.5	58.8	-18.3	Paral
	Ave		+0.0	+9.0	-13.6						398
^	275.670k	45.0	+0.0	+0.0	+0.0	+0.1	+0.0	54.1	58.8	-4.7	Paral
			+0.0	+9.0							398

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.209 1-12.5 GHz**
Work Order #: **85414** Date: 7/6/2006
Test Type: **Maximized Emissions** Time: 16:31:50
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 30
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

Spurious Emissions 1-12.5 GHz. 23dBi Antenna. Measured against 15.209 limits for the Restricted Bands. This data sheet may contain frequencies that do not fall into the restricted band. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=Duty Cycle AVE Factor
T3=HPF 8.2 GHz High Pass	T4=ANP04241 HF-Heliax Cable
T5=P05138 HF Cable 25ft	T6=Horn Antenna AN02061 sn1064 (Fremont)
T7=AMP AN02810 50GHz	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	11457.580M	46.1	+2.8	-13.6	+0.3	+1.5	+0.0	53.9	54.0	-0.1	Horiz
	Ave		+5.5	+39.6	-28.3		198		LOW		158
^	11457.580M	46.1	+2.8	+0.0	+0.3	+1.5	+0.0	67.5	54.0	+13.5	Horiz
			+5.5	+39.6	-28.3		198		LOW		158
3	11455.580M	46.1	+2.8	-13.6	+0.3	+1.5	+0.0	53.9	54.0	-0.1	Vert
	Ave		+5.5	+39.6	-28.3		160		LOW		168
^	11455.580M	46.1	+2.8	+0.0	+0.3	+1.5	+0.0	67.5	54.0	+13.5	Vert
			+5.5	+39.6	-28.3		160		LOW		168
5	3856.780M	43.1	+1.5	+0.0	+0.0	+1.0	+0.0	53.7	54.0	-0.3	Vert
			+4.0	+31.6	-27.5				MID		126
6	11574.170M	44.0	+2.8	-13.6	+0.3	+1.4	+0.0	51.5	54.0	-2.5	Vert
	Ave		+5.5	+39.5	-28.4		192		MID		171
^	11574.170M	44.0	+2.8	+0.0	+0.3	+1.4	+0.0	65.1	54.0	+11.1	Vert
			+5.5	+39.5	-28.4		192		MID		171

8	11574.320M	43.1	+2.8	-13.6	+0.3	+1.4	+0.0	50.6	54.0	-3.4	Horiz
	Ave		+5.5	+39.5	-28.4		202		MID		168
^	11574.320M	43.1	+2.8	+0.0	+0.3	+1.4	+0.0	64.2	54.0	+10.2	Horiz
			+5.5	+39.5	-28.4		202		MID		168
10	11693.010M	41.0	+2.8	-13.6	+0.3	+1.6	+0.0	48.4	54.0	-5.6	Vert
	Ave		+5.6	+39.2	-28.5		186		HIGH		173
^	11693.010M	41.0	+2.8	+0.0	+0.3	+1.6	+0.0	62.0	54.0	+8.0	Vert
			+5.6	+39.2	-28.5		186		HIGH		173
12	11693.070M	40.3	+2.8	-13.6	+0.3	+1.6	+0.0	47.7	54.0	-6.3	Horiz
	Ave		+5.6	+39.2	-28.5		197		HIGH		183
^	11693.070M	40.3	+2.8	+0.0	+0.3	+1.6	+0.0	61.3	54.0	+7.3	Horiz
			+5.6	+39.2	-28.5		197		HIGH		183
14	3897.280M	44.9	+1.5	-13.6	+0.0	+1.1	+0.0	42.2	54.0	-11.8	Horiz
	Ave		+4.2	+31.7	-27.6		118		HIGH		127
^	3897.280M	44.9	+1.5	+0.0	+0.0	+1.1	+0.0	55.8	54.0	+1.8	Horiz
			+4.2	+31.7	-27.6		118		HIGH		127
16	3857.040M	44.7	+1.5	-13.6	+0.0	+1.0	+0.0	41.7	54.0	-12.3	Horiz
	Ave		+4.0	+31.6	-27.5		296		MID		126
^	3857.040M	44.7	+1.5	+0.0	+0.0	+1.0	+0.0	55.3	54.0	+1.3	Horiz
			+4.0	+31.6	-27.5		296		MID		126
18	3818.181M	44.0	+1.5	-13.6	+0.0	+1.0	+0.0	40.7	54.0	-13.3	Horiz
	Ave		+3.8	+31.5	-27.5		119		LOW		139
^	3818.181M	44.0	+1.5	+0.0	+0.0	+1.0	+0.0	54.3	54.0	+0.3	Horiz
			+3.8	+31.5	-27.5		119		LOW		139
20	3896.960M	43.1	+1.5	-13.6	+0.0	+1.1	+0.0	40.4	54.0	-13.6	Vert
	Ave		+4.2	+31.7	-27.6		353		HIGH		123
^	3896.960M	43.1	+1.5	+0.0	+0.0	+1.1	+0.0	54.0	54.0	+0.0	Vert
			+4.2	+31.7	-27.6		353		HIGH		123
22	3856.780M	43.1	+1.5	-13.6	+0.0	+1.0	+0.0	40.1	54.0	-13.9	Vert
			+4.0	+31.6	-27.5				MID		126
23	3818.334M	42.5	+1.5	-13.6	+0.0	+1.0	+0.0	39.2	54.0	-14.8	Vert
	Ave		+3.8	+31.5	-27.5				LOW		136
^	3818.334M	42.5	+1.5	+0.0	+0.0	+1.0	+0.0	52.8	54.0	-1.2	Vert
			+3.8	+31.5	-27.5		369		LOW		136

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.209 1-12.5 GHz**
Work Order #: **85414** Date: 7/8/2006
Test Type: **Maximized Emissions** Time: 15:19:43
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 64
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
5dBi Antenna	Multiple	5dBi Antenna	

Test Conditions / Notes:

Spurious Emissions 1-12.5GHz. 5dBi Antenna Measured against 15.209 limits for the Restricted Bands. This data sheet may contain frequencies that do not fall into the restricted band. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=Duty Cycle AVE Factor
T3=HPF 8.2 GHz High Pass	T4=ANP04241 HF-Heliax Cable
T5=P05138 HF Cable 25ft	T6=Horn Antenna AN02061 sn1064 (Fremont)
T7=AMP AN02810 50GHz	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7						
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	11455.350M	46.1	+2.8	-13.6	+0.3	+1.5	+0.0	53.9	54.0	-0.1	Vert
	Ave		+5.5	+39.6	-28.3		13		LOW		99
^	11455.350M	46.1	+2.8	+0.0	+0.3	+1.5	+0.0	67.5	54.0	+13.5	Vert
			+5.5	+39.6	-28.3		13		LOW		99
3	11195.950M	46.4	+2.7	-13.6	+0.3	+1.7	+0.0	53.9	54.0	-0.1	Horiz
	Ave		+5.3	+39.2	-28.1		241		MID		154
^	11195.950M	46.5	+2.7	+0.0	+0.3	+1.7	+0.0	67.6	54.0	+13.6	Horiz
			+5.3	+39.2	-28.1		241		MID		154
5	11194.820M	46.4	+2.7	-13.6	+0.3	+1.7	+0.0	53.9	54.0	-0.1	Vert
	Ave		+5.3	+39.2	-28.1		160		HIGH		199
^	11194.820M	46.4	+2.7	+0.0	+0.3	+1.7	+0.0	67.5	54.0	+13.5	Vert
			+5.3	+39.2	-28.1		160		HIGH		199

7	11196.670M	46.3	+2.7	-13.6	+0.3	+1.7	+0.0	53.8	54.0	-0.2	Vert
	Ave		+5.3	+39.2	-28.1		202		LOW		219
	^ 11196.670M	46.3	+2.7	+0.0	+0.3	+1.7	+0.0	67.4	54.0	+13.4	Vert
			+5.3	+39.2	-28.1		202		LOW		219
9	11194.680M	46.3	+2.7	-13.6	+0.3	+1.7	+0.0	53.8	54.0	-0.2	Horiz
	Ave		+5.3	+39.2	-28.1		250		HIGH		149
	^ 11194.680M	46.3	+2.7	+0.0	+0.3	+1.7	+0.0	67.4	54.0	+13.4	Horiz
			+5.3	+39.2	-28.1		250		HIGH		149
11	11455.710M	45.9	+2.8	-13.6	+0.3	+1.5	+0.0	53.7	54.0	-0.3	Horiz
	Ave		+5.5	+39.6	-28.3		269		LOW		128
	^ 11455.710M	45.9	+2.8	+0.0	+0.3	+1.5	+0.0	67.3	54.0	+13.3	Horiz
			+5.5	+39.6	-28.3		269		LOW		128
13	11196.770M	45.9	+2.7	-13.6	+0.3	+1.7	+0.0	53.4	54.0	-0.6	Horiz
	Ave		+5.3	+39.2	-28.1		238		LOW		131
	^ 11196.770M	45.9	+2.7	+0.0	+0.3	+1.7	+0.0	67.0	54.0	+13.0	Horiz
			+5.3	+39.2	-28.1		238		LOW		131
15	11196.260M	45.8	+2.7	-13.6	+0.3	+1.7	+0.0	53.3	54.0	-0.7	Vert
	Ave		+5.3	+39.2	-28.1		200		MID		226
	^ 11196.260M	45.8	+2.7	+0.0	+0.3	+1.7	+0.0	66.9	54.0	+12.9	Vert
			+5.3	+39.2	-28.1		200		MID		226
17	11574.490M	42.2	+2.8	-13.6	+0.3	+1.4	+0.0	49.7	54.0	-4.3	Horiz
	Ave		+5.5	+39.5	-28.4		202		MID		140
	^ 11574.490M	42.2	+2.8	+0.0	+0.3	+1.4	+0.0	63.3	54.0	+9.3	Horiz
			+5.5	+39.5	-28.4		202		MID		140
19	11574.980M	42.1	+2.8	-13.6	+0.3	+1.4	+0.0	49.6	54.0	-4.4	Vert
	Ave		+5.5	+39.5	-28.4		348		MID		230
	^ 11574.980M	42.1	+2.8	+0.0	+0.3	+1.4	+0.0	63.2	54.0	+9.2	Vert
			+5.5	+39.5	-28.4		348		MID		230
21	11697.260M	40.7	+2.8	-13.6	+0.3	+1.6	+0.0	48.1	54.0	-5.9	Vert
	Ave		+5.6	+39.2	-28.5		13				99
	^ 11697.260M	40.7	+2.8	+0.0	+0.3	+1.6	+0.0	61.7	54.0	+7.7	Vert
			+5.6	+39.2	-28.5				HIGH		254
23	11694.740M	40.6	+2.8	-13.6	+0.3	+1.6	+0.0	48.0	54.0	-6.0	Horiz
	Ave		+5.6	+39.2	-28.5		13				99
	^ 11694.740M	40.6	+2.8	+0.0	+0.3	+1.6	+0.0	61.6	54.0	+7.6	Horiz
			+5.6	+39.2	-28.5		-10		HIGH		99
25	3897.480M	42.0	+1.5	-13.6	+0.0	+1.1	+0.0	39.3	54.0	-14.7	Horiz
	Ave		+4.2	+31.7	-27.6		315		HIGH		180
	^ 3897.480M	42.0	+1.5	+0.0	+0.0	+1.1	+0.0	52.9	54.0	-1.1	Horiz
			+4.2	+31.7	-27.6		315		HIGH		180
27	3897.260M	41.3	+1.5	-13.6	+0.0	+1.1	+0.0	38.6	54.0	-15.4	Vert
	Ave		+4.2	+31.7	-27.6		-7		HIGH		175
	^ 3897.260M	41.3	+1.5	+0.0	+0.0	+1.1	+0.0	52.2	54.0	-1.8	Vert
			+4.2	+31.7	-27.6		-7		HIGH		175
29	3856.916M	41.3	+1.5	-13.6	+0.0	+1.0	+0.0	38.3	54.0	-15.7	Horiz
	Ave		+4.0	+31.6	-27.5		226		MID		189
	^ 3856.916M	41.3	+1.5	+0.0	+0.0	+1.0	+0.0	51.9	54.0	-2.1	Horiz
			+4.0	+31.6	-27.5		226		MID		189

31	3818.168M	41.5	+1.5	-13.6	+0.0	+1.0	+0.0	38.2	54.0	-15.8	Horiz
	Ave		+3.8	+31.5	-27.5		50		LOW		147
^	3818.168M	41.5	+1.5	+0.0	+0.0	+1.0	+0.0	51.8	54.0	-2.2	Horiz
			+3.8	+31.5	-27.5		50		LOW		147
33	3857.007M	39.5	+1.5	-13.6	+0.0	+1.0	+0.0	36.5	54.0	-17.5	Vert
	Ave		+4.0	+31.6	-27.5				MID		174
^	3857.007M	39.5	+1.5	+0.0	+0.0	+1.0	+0.0	50.1	54.0	-3.9	Vert
			+4.0	+31.6	-27.5				MID		174
35	3818.093M	38.9	+1.5	-13.6	+0.0	+1.0	+0.0	35.6	54.0	-18.4	Vert
	Ave		+3.8	+31.5	-27.5		16		LOW		159
^	3818.093M	38.9	+1.5	+0.0	+0.0	+1.0	+0.0	49.2	54.0	-4.8	Vert
			+3.8	+31.5	-27.5		16		LOW		159

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(d) 1-12.5GHz 23dBi**
Work Order #: **85414** Date: 7/6/2006
Test Type: **Maximized Emissions** Time: 16:53:54
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 31
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

Spurious Emissions 15.247(d) 1-12.5GHz. 23dBi Antenna. Measured against 15.247 limits for frequencies not within the Restricted Band. All measurements made with RBW=100kHz. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=Duty Cycle AVE Factor
T3=ANP04241 HF-Heliax Cable	T4=P05138 HF Cable 25ft
T5=Horn Antenna AN02061 sn1064 (Fremont)	T6=AMP AN02810 50GHz

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	5610.000M	74.0	+1.8 +34.0	+0.0 -27.5	+0.8	+3.8	+0.0 357	86.9	96.9 HIGH	-10.0	Horiz 99
2	5609.500M	73.2	+1.8 +34.0	+0.0 -27.5	+0.8	+3.8	+0.0 356	86.1	96.9 MID	-10.8	Horiz 99
3	5609.100M	72.3	+1.8 +34.0	+0.0 -27.5	+0.8	+3.8	+0.0	85.2	96.9 LOW	-11.7	Horiz 100
4	5599.100M Ave	83.6	+1.8 +34.0	-13.6 -27.5	+0.8	+3.8	+0.0 356	82.9	96.9 MID	-14.0	Horiz 99
^	5599.100M	83.6	+1.8 +34.0	+0.0 -27.5	+0.8	+3.8	+0.0 356	96.5	96.9 MID	-0.4	Horiz 99
6	5598.800M Ave	82.5	+1.8 +34.0	-13.6 -27.5	+0.8	+3.8	+0.0	81.8	96.9 LOW	-15.1	Horiz 100
^	5598.800M	82.5	+1.8 +34.0	+0.0 -27.5	+0.8	+3.8	+0.0	95.4	96.9 LOW	-1.5	Horiz 100

8	5724.800M	68.8	+1.8	+0.0	+0.8	+3.9	+0.0	81.8	96.9	-15.1	Horiz
			+34.0	-27.5					LOW		100
9	5624.000M	68.4	+1.8	+0.0	+0.8	+3.8	+0.0	81.3	96.9	-15.6	Horiz
			+34.0	-27.5			357		HIGH		99
10	5599.700M	81.5	+1.8	-13.6	+0.8	+3.8	+0.0	80.8	96.9	-16.1	Horiz
	Ave		+34.0	-27.5			357		HIGH		99
^	5599.700M	81.5	+1.8	+0.0	+0.8	+3.8	+0.0	94.4	96.9	-2.5	Horiz
			+34.0	-27.5			357		HIGH		99
12	5624.600M	67.7	+1.8	+0.0	+0.8	+3.8	+0.0	80.6	96.9	-16.3	Horiz
			+34.0	-27.5			356		MID		99
13	5624.800M	66.7	+1.8	+0.0	+0.8	+3.8	+0.0	79.6	96.9	-17.3	Horiz
			+34.0	-27.5					LOW		100
14	5620.100M	66.5	+1.8	+0.0	+0.8	+3.8	+0.0	79.4	96.9	-17.5	Horiz
			+34.0	-27.5			356		MID		99
15	5598.900M	66.0	+1.8	+0.0	+0.8	+3.8	+0.0	78.9	96.9	-18.0	Vert
			+34.0	-27.5			357		HIGH		99
16	5900.000M	65.1	+1.9	+0.0	+1.0	+3.9	+0.0	78.6	96.9	-18.3	Horiz
			+34.1	-27.4					LOW		99
17	5598.900M	65.2	+1.8	+0.0	+0.8	+3.8	+0.0	78.1	96.9	-18.8	Vert
			+34.0	-27.5			358		MID		99
18	5600.400M	63.5	+1.8	+0.0	+0.8	+3.8	+0.0	76.4	96.9	-20.5	Vert
			+34.0	-27.5			355		LOW		115
19	5580.600M	61.1	+1.8	+0.0	+0.8	+3.8	+0.0	74.0	96.9	-22.9	Horiz
			+34.0	-27.5			356		MID		99
20	5587.100M	60.1	+1.8	+0.0	+0.8	+3.8	+0.0	73.0	96.9	-23.9	Horiz
			+34.0	-27.5			357		HIGH		99
21	5578.300M	59.5	+1.8	+0.0	+0.8	+3.8	+0.0	72.3	96.9	-24.6	Horiz
			+33.9	-27.5					LOW		100
22	5553.400M	58.7	+1.8	+0.0	+0.8	+3.8	+0.0	71.5	96.9	-25.4	Horiz
			+33.9	-27.5					LOW		100
23	5609.600M	56.5	+1.8	+0.0	+0.8	+3.8	+0.0	69.4	96.9	-27.5	Vert
			+34.0	-27.5			357		HIGH		99
24	5858.400M	55.6	+1.8	+0.0	+0.9	+3.9	+0.0	68.9	96.9	-28.0	Horiz
			+34.1	-27.4			357		HIGH		99
25	5608.700M	55.3	+1.8	+0.0	+0.8	+3.8	+0.0	68.2	96.9	-28.7	Vert
			+34.0	-27.5			358		MID		99
26	5611.100M	53.5	+1.8	+0.0	+0.8	+3.8	+0.0	66.4	96.9	-30.5	Vert
			+34.0	-27.5			355		LOW		115
27	5573.700M	53.0	+1.8	+0.0	+0.8	+3.8	+0.0	65.8	96.9	-31.1	Horiz
			+33.9	-27.5			356		MID		99
28	5850.310M	51.7	+1.8	+0.0	+0.9	+3.9	+0.0	65.0	96.9	-31.9	Vert
			+34.1	-27.4			357		HIGH		99
29	5625.500M	51.8	+1.8	+0.0	+0.8	+3.8	+0.0	64.7	96.9	-32.2	Vert
			+34.0	-27.5			357		HIGH		99
30	5769.700M	81.2	+1.8	+0.0	+0.8	+3.9	+0.0	94.3	126.9	-32.6	Horiz
			+34.1	-27.5					LOW		99
31	5624.100M	50.5	+1.8	+0.0	+0.8	+3.8	+0.0	63.4	96.9	-33.5	Vert
			+34.0	-27.5			358		MID		99
32	5723.800M	49.7	+1.8	+0.0	+0.8	+3.9	+0.0	62.7	96.9	-34.2	Vert
			+34.0	-27.5			355		LOW		115

33	5620.300M	49.6	+1.8	+0.0	+0.8	+3.8	+0.0	62.5	96.9	-34.4	Vert
			+34.0	-27.5			358		MID		99
34	5626.400M	48.6	+1.8	+0.0	+0.8	+3.8	+0.0	61.5	96.9	-35.4	Vert
			+34.0	-27.5			355		LOW		115
35	5622.000M	47.3	+1.8	+0.0	+0.8	+3.8	+0.0	60.2	96.9	-36.7	Vert
			+34.0	-27.5			355		LOW		115
36	5739.500M	75.5	+1.8	+0.0	+0.8	+3.9	+0.0	88.5	126.9	-38.4	Horiz
			+34.0	-27.5					LOW		99
37	5588.400M	44.7	+1.8	+0.0	+0.8	+3.8	+0.0	57.6	96.9	-39.3	Vert
			+34.0	-27.5			357		HIGH		99
38	5579.800M	44.5	+1.8	+0.0	+0.8	+3.8	+0.0	57.3	96.9	-39.6	Vert
			+33.9	-27.5			358		MID		99
39	5327.800M	43.7	+1.8	+0.0	+1.0	+3.7	+0.0	56.1	96.9	-40.8	Horiz
			+33.5	-27.6			357		HIGH		99
40	5579.400M	41.3	+1.8	+0.0	+0.8	+3.8	+0.0	54.1	96.9	-42.8	Vert
			+33.9	-27.5			355		LOW		115
41	5776.100M	70.4	+1.8	+0.0	+0.8	+3.9	+0.0	83.5	126.9	-43.4	Horiz
			+34.1	-27.5					LOW		99
42	5372.600M	40.7	+1.8	+0.0	+0.9	+3.7	+0.0	53.1	96.9	-43.8	Horiz
			+33.6	-27.6			356		MID		99
43	5555.200M	39.3	+1.8	+0.0	+0.8	+3.8	+0.0	52.1	96.9	-44.8	Vert
			+33.9	-27.5			355		LOW		115
44	5767.800M	67.3	+1.8	+0.0	+0.8	+3.9	+0.0	80.4	126.9	-46.5	Horiz
			+34.1	-27.5			357		HIGH		99
45	5781.200M	64.8	+1.8	+0.0	+0.8	+3.9	+0.0	77.9	126.9	-49.0	Horiz
			+34.1	-27.5			356		MID		99
46	5813.500M	57.5	+1.8	+0.0	+0.8	+3.9	+0.0	70.6	126.9	-56.3	Horiz
			+34.1	-27.5					LOW		99
47	5797.400M	56.1	+1.8	+0.0	+0.8	+3.9	+0.0	69.2	126.9	-57.7	Horiz
			+34.1	-27.5			356		MID		99
48	5832.100M	54.6	+1.8	+0.0	+0.8	+3.9	+0.0	67.8	126.9	-59.1	Horiz
			+34.1	-27.4			357		HIGH		99
49	5768.800M	52.1	+1.8	+0.0	+0.8	+3.9	+0.0	65.2	126.9	-61.7	Vert
			+34.1	-27.5			357		HIGH		99
50	5732.640M	50.8	+1.8	+0.0	+0.8	+3.9	+0.0	63.8	126.9	-63.1	Vert
			+34.0	-27.5			355		LOW		115
51	5770.790M	49.4	+1.8	+0.0	+0.8	+3.9	+0.0	62.5	126.9	-64.4	Vert
			+34.1	-27.5			355		LOW		115
52	5840.100M	48.9	+1.8	+0.0	+0.9	+3.9	+0.0	62.2	126.9	-64.7	Vert
			+34.1	-27.4			357		HIGH		99
53	5793.680M	47.9	+1.8	+0.0	+0.8	+3.9	+0.0	61.0	126.9	-65.9	Vert
			+34.1	-27.5			358		MID		99
54	5777.100M	45.0	+1.8	+0.0	+0.8	+3.9	+0.0	58.1	126.9	-68.8	Vert
			+34.1	-27.5			358		MID		99
55	5773.560M	40.7	+1.8	+0.0	+0.8	+3.9	+0.0	53.8	126.9	-73.1	Vert
			+34.1	-27.5			355		LOW		115
56	5801.730M	39.3	+1.8	+0.0	+0.8	+3.9	+0.0	52.4	126.9	-74.5	Vert
			+34.1	-27.5			358		MID		99

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(d) 1-12.5GHz 5dBi**
Work Order #: **85414** Date: 7/8/2006
Test Type: **Maximized Emissions** Time: 14:33:20
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 65
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
5dBi Antenna	Multiple	5dBi Antenna	

Test Conditions / Notes:

Spurious Emissions 15.247(d) 1-12.5GHz. 5dBi Antenna. Measured against 15.247 limits for frequencies not within the Restricted Band. All measurements made with RBW=100kHz. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=Duty Cycle AVE Factor
T3=ANP04241 HF-Heliax Cable	T4=P05138 HF Cable 25ft
T5=Horn Antenna AN02061 sn1064 (Fremont)	T6=AMP AN02810 50GHz

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	5607.600M	58.4	+1.8	+0.0	+0.8	+3.8	+0.0	71.3	84.1	-12.8	Vert
			+34.0	-27.5			110		HIGH		144
2	5607.600M	57.1	+1.8	+0.0	+0.8	+3.8	+0.0	70.0	84.1	-14.1	Vert
			+34.0	-27.5			249		LOW		151
3	5608.000M	56.9	+1.8	+0.0	+0.8	+3.8	+0.0	69.8	84.1	-14.3	Vert
			+34.0	-27.5			248		MID		151
4	5597.700M	54.8	+1.8	+0.0	+0.8	+3.8	+0.0	67.7	84.1	-16.4	Horiz
			+34.0	-27.5			106		MID		148
5	5597.200M	68.3	+1.8	-13.6	+0.8	+3.8	+0.0	67.6	84.1	-16.5	Vert
	Ave		+34.0	-27.5			110		HIGH		144
^	5597.200M	68.3	+1.8	+0.0	+0.8	+3.8	+0.0	81.2	84.1	-2.9	Vert
			+34.0	-27.5			110		HIGH		144
7	5621.500M	53.6	+1.8	+0.0	+0.8	+3.8	+0.0	66.5	84.1	-17.6	Vert
			+34.0	-27.5			249		LOW		151
8	5621.600M	53.0	+1.8	+0.0	+0.8	+3.8	+0.0	65.9	84.1	-18.2	Vert
			+34.0	-27.5			110		HIGH		144

9	5597.700M	66.4	+1.8	-13.6	+0.8	+3.8	+0.0	65.7	84.1	-18.4	Vert
	Ave		+34.0	-27.5			248		MID		151
^	5597.700M	66.4	+1.8	+0.0	+0.8	+3.8	+0.0	79.3	84.1	-4.8	Vert
			+34.0	-27.5			248		MID		151
^	5597.700M	66.0	+1.8	+0.0	+0.8	+3.8	+0.0	78.9	84.1	-5.2	Vert
			+34.0	-27.5			249		LOW		151
12	5597.700M	66.0	+1.8	-13.6	+0.8	+3.8	+0.0	65.3	84.1	-18.8	Vert
	Ave		+34.0	-27.5			249		LOW		151
13	5621.200M	50.7	+1.8	+0.0	+0.8	+3.8	+0.0	63.6	84.1	-20.5	Vert
			+34.0	-27.5			248		MID		151
14	5597.600M	48.9	+1.8	+0.0	+0.8	+3.8	+0.0	61.8	84.1	-22.3	Horiz
			+34.0	-27.5			-4		HIGH		99
15	5598.160M	46.3	+1.8	+0.0	+0.8	+3.8	+0.0	59.2	84.1	-24.9	Horiz
			+34.0	-27.5			125		LOW		147
16	5588.100M	44.6	+1.8	+0.0	+0.8	+3.8	+0.0	57.5	84.1	-26.6	Vert
			+34.0	-27.5			110		HIGH		144
17	5607.500M	44.6	+1.8	+0.0	+0.8	+3.8	+0.0	57.5	84.1	-26.6	Horiz
			+34.0	-27.5			106		MID		148
18	5581.700M	44.3	+1.8	+0.0	+0.8	+3.8	+0.0	57.2	84.1	-26.9	Vert
			+34.0	-27.5			248		MID		151
19	5859.100M	43.6	+1.8	+0.0	+0.9	+3.9	+0.0	56.9	84.1	-27.2	Vert
			+34.1	-27.4			110		HIGH		144
20	5559.300M	43.8	+1.8	+0.0	+0.8	+3.8	+0.0	56.6	84.1	-27.5	Vert
			+33.9	-27.5			249		LOW		151
21	5579.500M	43.3	+1.8	+0.0	+0.8	+3.8	+0.0	56.1	84.1	-28.0	Vert
			+33.9	-27.5			249		LOW		151
22	5621.200M	39.5	+1.8	+0.0	+0.8	+3.8	+0.0	52.4	84.1	-31.7	Horiz
			+34.0	-27.5			106		MID		148
23	5621.400M	39.5	+1.8	+0.0	+0.8	+3.8	+0.0	52.4	84.1	-31.7	Horiz
			+34.0	-27.5			-4		HIGH		99
24	5608.310M	37.6	+1.8	+0.0	+0.8	+3.8	+0.0	50.5	84.1	-33.6	Horiz
			+34.0	-27.5			125		LOW		147
25	5607.900M	37.0	+1.8	+0.0	+0.8	+3.8	+0.0	49.9	84.1	-34.2	Horiz
			+34.0	-27.5			-4		HIGH		99
26	5899.000M	34.5	+1.8	+0.0	+1.0	+3.9	+0.0	47.9	84.1	-36.2	Vert
			+34.1	-27.4			249		LOW		151
27	5621.810M	34.9	+1.8	+0.0	+0.8	+3.8	+0.0	47.8	84.1	-36.3	Horiz
			+34.0	-27.5			125		LOW		147
28	5580.500M	34.1	+1.8	+0.0	+0.8	+3.8	+0.0	47.0	84.1	-37.1	Horiz
			+34.0	-27.5			106		MID		148
29	5702.900M	33.3	+1.8	+0.0	+0.8	+3.9	+0.0	46.3	84.1	-37.8	Vert
			+34.0	-27.5			249		LOW		151
30	5579.550M	31.6	+1.8	+0.0	+0.8	+3.8	+0.0	44.4	84.1	-39.7	Horiz
			+33.9	-27.5			125		LOW		147
31	5375.700M	31.0	+1.8	+0.0	+0.9	+3.7	+0.0	43.4	84.1	-40.7	Vert
			+33.6	-27.6			248		MID		151
32	5558.290M	30.3	+1.8	+0.0	+0.8	+3.8	+0.0	43.1	84.1	-41.0	Horiz
			+33.9	-27.5			125		LOW		147
33	5767.700M	54.5	+1.8	+0.0	+0.8	+3.9	+0.0	67.6	114.1	-46.5	Vert
			+34.1	-27.5			110		HIGH		144

34	5766.400M	54.4	+1.8	+0.0	+0.8	+3.9	+0.0	67.5	114.1	-46.6	Vert
			+34.1	-27.5			249		LOW		151
35	5765.300M	50.6	+1.8	+0.0	+0.8	+3.9	+0.0	63.7	114.1	-50.4	Vert
			+34.1	-27.5			248		MID		151
36	5837.600M	46.1	+1.8	+0.0	+0.9	+3.9	+0.0	59.4	114.1	-54.7	Vert
			+34.1	-27.4			110		HIGH		144
37	5766.460M	41.8	+1.8	+0.0	+0.8	+3.9	+0.0	54.9	114.1	-59.2	Horiz
			+34.1	-27.5			328		LOW		160
38	5745.200M	41.2	+1.8	+0.0	+0.8	+3.9	+0.0	54.3	114.1	-59.8	Vert
			+34.1	-27.5			248		MID		151
39	5767.400M	40.7	+1.8	+0.0	+0.8	+3.9	+0.0	53.8	114.1	-60.3	Horiz
			+34.1	-27.5			-4		HIGH		99
40	5765.800M	39.2	+1.8	+0.0	+0.8	+3.9	+0.0	52.3	114.1	-61.8	Horiz
			+34.1	-27.5			106		MID		148
41	5805.900M	31.0	+1.8	+0.0	+0.8	+3.9	+0.0	44.1	114.1	-70.0	Vert
			+34.1	-27.5			249		LOW		151
42	5744.600M	29.1	+1.8	+0.0	+0.8	+3.9	+0.0	42.2	114.1	-71.9	Horiz
			+34.1	-27.5			106		MID		148

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**AvaLAN Wireless Systems, Inc.**		
Specification:	**FCC 15.247(d)/15.209 12.5-40GHz**		
Work Order #:	**85414**	Date:	7/10/2006
Test Type:	**Maximized Emissions**	Time:	12:20:10
Equipment:	**5.8GHz Wireless Ethernet Bridge Module**	Sequence#:	84
Manufacturer:	AvaLAN Wireless Systems, Inc.	Tested By:	C. Nicklas
Model:	AW5800m		
S/N:	000012		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
Panel Antenna	ARC Wireless Solutions	ANT-A-1723-01	00540051116

Test Conditions / Notes:

Spurious Emissions 15.247(d) 12.5-40GHz. 23dBi Antenna. Measured against 15.209 limits for the Restricted Bands. This data sheet may contain frequencies that do not fall into the restricted band. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times. Only LOW Channel had the 6th harmonic.

Transducer Legend:

T1=Duty Cycle AVE Factor	T2=ANT 12-18GHz Active Horn
T3=ANT 18-26GHz Active Horn	T4=Horn AN02695 Miteq Active 26-40GHz
T5=12.4-18 WG F-C3 P00928	T6=18-26.5 WG F-C3
T7=26.5-40 WG F-C3	T8=Cable AN2715 40 GHz
T9=AMP AN02810 50GHz	T10=ANP05200 1-40GHz

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7	T4 T8	Dist	Corr	Spec	Margin	Polar
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	28644.020M	27.3	+0.0 +0.0	+0.0 +0.0	+0.0 +3.9	+2.5 +14.7	+0.0 119	48.4	54.0 LOW	-5.6	Horiz 100
2	22911.140M Ave	49.9	-13.6 +0.0	+0.0 +3.6	-8.7 +0.0	+0.0 +14.1	+0.0 118	45.3	54.0 LOW	-8.7	Vert 100
^	22911.140M	49.9	+0.0 +0.0	+0.0 +3.6	-8.7 +0.0	+0.0 +14.1	+0.0 118	58.9	54.0 LOW	+4.9	Vert 100

4	22910.770M	49.0	-13.6	+0.0	-8.7	+0.0	+0.0	44.4	54.0	-9.6	Horiz
	Ave		+0.0	+3.6	+0.0	+14.1	124		LOW		101
^	22910.770M	49.0	+0.0	+0.0	-8.7	+0.0	+0.0	58.0	54.0	+4.0	Horiz
			+0.0	+3.6	+0.0	+14.1	124		LOW		101
6	23148.210M	47.2	-13.6	+0.0	-8.8	+0.0	+0.0	42.7	54.0	-11.3	Horiz
	Ave		+0.0	+3.6	+0.0	+14.3	134		MID		101
^	23148.210M	47.2	+0.0	+0.0	-8.8	+0.0	+0.0	56.3	54.0	+2.3	Horiz
			+0.0	+3.6	+0.0	+14.3	134		MID		101
8	29232.450M	34.2	-13.6	+0.0	+0.0	+2.7	+0.0	42.1	54.0	-11.9	Vert
	Ave		+0.0	+0.0	+3.9	+14.9	119		HIGH		100
^	29232.450M	34.2	+0.0	+0.0	+0.0	+2.7	+0.0	55.7	54.0	+1.7	Vert
			+0.0	+0.0	+3.9	+14.9	119		HIGH		100
10	17183.190M	57.6	-13.6	-14.9	+0.0	+0.0	+0.0	41.9	54.0	-12.1	Horiz
	Ave		+0.9	+0.0	+0.0	+11.9	292		LOW		100
^	17183.190M	57.6	+0.0	-14.9	+0.0	+0.0	+0.0	55.5	54.0	+1.5	Horiz
			+0.9	+0.0	+0.0	+11.9	292		LOW		100
12	23385.810M	46.0	-13.6	+0.0	-8.9	+0.0	+0.0	41.7	54.0	-12.3	Vert
	Ave		+0.0	+3.8	+0.0	+14.4	123		HIGH		99
^	23385.810M	46.0	+0.0	+0.0	-8.9	+0.0	+0.0	55.3	54.0	+1.3	Vert
			+0.0	+3.8	+0.0	+14.4	123		HIGH		99
14	23144.360M	46.1	-13.6	+0.0	-8.8	+0.0	+0.0	41.6	54.0	-12.4	Vert
	Ave		+0.0	+3.6	+0.0	+14.3	123		MID		100
^	23144.360M	46.1	+0.0	+0.0	-8.8	+0.0	+0.0	55.2	54.0	+1.2	Vert
			+0.0	+3.6	+0.0	+14.3	123		MID		100
16	23386.270M	44.5	-13.6	+0.0	-8.9	+0.0	+0.0	40.2	54.0	-13.8	Horiz
	Ave		+0.0	+3.8	+0.0	+14.4	124		HIGH		99
^	23386.270M	44.5	+0.0	+0.0	-8.9	+0.0	+0.0	53.8	54.0	-0.2	Horiz
			+0.0	+3.8	+0.0	+14.4	124		HIGH		99
18	28935.560M	32.2	-13.6	+0.0	+0.0	+2.7	+0.0	39.9	54.0	-14.1	Vert
	Ave		+0.0	+0.0	+3.8	+14.8	119		MID		100
^	28935.560M	32.2	+0.0	+0.0	+0.0	+2.7	+0.0	53.5	54.0	-0.5	Vert
			+0.0	+0.0	+3.8	+14.8	119		MID		100

20	17539.460M	53.6	-13.6	-13.7	+0.0	+0.0	+0.0	39.6	54.0	-14.4	Horiz
	Ave		+1.2	+0.0	+0.0	+12.1	292		HIGH		99
^	17539.460M	53.4	+0.0	-13.7	+0.0	+0.0	+0.0	53.0	54.0	-1.0	Horiz
			+1.2	+0.0	+0.0	+12.1	292		HIGH		99
22	17183.010M	55.2	-13.6	-14.9	+0.0	+0.0	+0.0	39.5	54.0	-14.5	Vert
	Ave		+0.9	+0.0	+0.0	+11.9	125		LOW		99
^	17183.010M	55.2	+0.0	-14.9	+0.0	+0.0	+0.0	53.1	54.0	-0.9	Vert
			+0.9	+0.0	+0.0	+11.9	125		LOW		99
24	17358.430M	54.3	-13.6	-14.3	+0.0	+0.0	+0.0	39.3	54.0	-14.7	Horiz
	Ave		+0.9	+0.0	+0.0	+12.0	289		MID		99
^	17358.430M	54.3	+0.0	-14.3	+0.0	+0.0	+0.0	52.9	54.0	-1.1	Horiz
			+0.9	+0.0	+0.0	+12.0	289		MID		99
26	17539.550M	52.9	-13.6	-13.7	+0.0	+0.0	+0.0	38.9	54.0	-15.1	Vert
	Ave		+1.2	+0.0	+0.0	+12.1	124		HIGH		99
^	17539.550M	52.9	+0.0	-13.7	+0.0	+0.0	+0.0	52.5	54.0	-1.5	Vert
			+1.2	+0.0	+0.0	+12.1	124		HIGH		99
28	17361.270M	53.3	-13.6	-14.3	+0.0	+0.0	+0.0	38.3	54.0	-15.7	Vert
	Ave		+0.9	+0.0	+0.0	+12.0	73		MID		99
^	17361.270M	53.3	+0.0	-14.3	+0.0	+0.0	+0.0	51.9	54.0	-2.1	Vert
			+0.9	+0.0	+0.0	+12.0	73		MID		99
30	28643.750M	30.5	-13.6	+0.0	+0.0	+2.5	+0.0	38.0	54.0	-16.0	Vert
	Ave		+0.0	+0.0	+3.9	+14.7	119		LOW		100
^	28643.750M	30.5	+0.0	+0.0	+0.0	+2.5	+0.0	51.6	54.0	-2.4	Vert
			+0.0	+0.0	+3.9	+14.7	119		LOW		100
32	28935.600M	29.2	-13.6	+0.0	+0.0	+2.7	+0.0	36.9	54.0	-17.1	Horiz
	Ave		+0.0	+0.0	+3.8	+14.8	119		MID		100
^	28935.600M	29.2	+0.0	+0.0	+0.0	+2.7	+0.0	50.5	54.0	-3.5	Horiz
			+0.0	+0.0	+3.8	+14.8	119		MID		100

34	28644.020M	27.3	-13.6	+0.0	+0.0	+2.5	+0.0	34.8	54.0	-19.2	Horiz
			+0.0	+0.0	+3.9	+14.7	119		LOW		100
35	29232.230M	26.4	-13.6	+0.0	+0.0	+2.7	+0.0	34.3	54.0	-19.7	Horiz
	Ave		+0.0	+0.0	+3.9	+14.9	134		HIGH		100
^	29232.230M	26.4	+0.0	+0.0	+0.0	+2.7	+0.0	47.9	54.0	-6.1	Horiz
			+0.0	+0.0	+3.9	+14.9	134		HIGH		100
37	34366.420M	32.3	+0.0	+0.0	+0.0	+5.5	+0.0	33.1	54.0	-20.9	Horiz
			+0.0	+0.0	+4.7	+16.1	119		LOW		100
			-30.3	+4.8							

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(d)/15.209 12.5-40GHz**
Work Order #: **85414** Date: 7/10/2006
Test Type: **Maximized Emissions** Time: 12:55:20
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 85
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	
5dBi Antenna	Multiple	5dBi Antenna	

Test Conditions / Notes:

Spurious Emissions 15.247(d) 12.5-40 GHz. 5dBi Antenna. Measured against 15.209 limits for the Restricted Bands. This data sheet may contain frequencies that do not fall into the restricted band. EUT setup as close to back edge of the table as possible for the cable to reach the antenna. The antenna is orientated in its vertical polarization. Ethernet cable is connected and draped towards the floor off the back edge of the table as per ANSI C63.4. Ethernet port is sending random data out the ethernet cable at all times. No signals seen above 29 GHz.

Transducer Legend:

T1=Duty Cycle AVE Factor	T2=ANT 12-18GHz Active Horn
T3=ANT 18-26GHz Active Horn	T4=Horn AN02695 Miteq Active 26-40GHz
T5=12.4-18 WG F-C3 P00928	T6=18-26.5 WG F-C3
T7=26.5-40 WG F-C3	T8=Cable AN2715 40 GHz

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	Hz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	22915.250M	52.8	-13.6	+0.0	-8.7	+0.0	+0.0	48.2	54.0	-5.8	Vert
	Ave		+0.0	+3.6	+0.0	+14.1	58		LOW		99
^	22915.250M	52.8	+0.0	+0.0	-8.7	+0.0	+0.0	61.8	54.0	+7.8	Vert
			+0.0	+3.6	+0.0	+14.1	58		LOW		99
3	23389.980M	49.8	-13.6	+0.0	-8.9	+0.0	+0.0	45.5	54.0	-8.5	Vert
	Ave		+0.0	+3.8	+0.0	+14.4	32		HIGH		100
^	23389.980M	49.8	+0.0	+0.0	-8.9	+0.0	+0.0	59.1	54.0	+5.1	Vert
			+0.0	+3.8	+0.0	+14.4	32		HIGH		100
5	23148.130M	48.5	-13.6	+0.0	-8.8	+0.0	+0.0	44.0	54.0	-10.0	Vert
	Ave		+0.0	+3.6	+0.0	+14.3	34		MID		99
^	23148.130M	48.5	+0.0	+0.0	-8.8	+0.0	+0.0	57.6	54.0	+3.6	Vert
			+0.0	+3.6	+0.0	+14.3	34		MID		99

7	22910.890M	47.3	-13.6	+0.0	-8.7	+0.0	+0.0	42.7	54.0	-11.3	Horiz
	Ave		+0.0	+3.6	+0.0	+14.1	34		LOW		99
^	22910.890M	47.3	+0.0	+0.0	-8.7	+0.0	+0.0	56.3	54.0	+2.3	Horiz
			+0.0	+3.6	+0.0	+14.1	34		LOW		99
9	23144.410M	46.3	-13.6	+0.0	-8.8	+0.0	+0.0	41.8	54.0	-12.2	Horiz
	Ave		+0.0	+3.6	+0.0	+14.3	28		MID		99
^	23144.410M	46.3	+0.0	+0.0	-8.8	+0.0	+0.0	55.4	54.0	+1.4	Horiz
			+0.0	+3.6	+0.0	+14.3	28		MID		99
11	23386.080M	46.0	-13.6	+0.0	+0.0	+0.0	+0.0	41.7	54.0	-12.3	Horiz
	Ave		+0.0	+0.0	+0.0	+14.4	37		HIGH		99
^	23386.080M	46.0	+0.0	+0.0	-8.9	+0.0	+0.0	55.3	54.0	+1.3	Horiz
			+0.0	+3.8	+0.0	+14.4	37		HIGH		99
13	17183.220M	55.5	-13.6	-14.9	+0.0	+0.0	+0.0	39.8	54.0	-14.2	Vert
	Ave		+0.9	+0.0	+0.0	+11.9	329		LOW		99
^	17183.220M	55.5	+0.0	-14.9	+0.0	+0.0	+0.0	53.4	54.0	-0.6	Vert
			+0.9	+0.0	+0.0	+11.9	329		LOW		99
15	17539.560M	53.6	-13.6	-13.7	+0.0	+0.0	+0.0	39.6	54.0	-14.4	Horiz
	Ave		+1.2	+0.0	+0.0	+12.1	312		HIGH		99
^	17539.560M	53.6	+0.0	-13.7	+0.0	+0.0	+0.0	53.2	54.0	-0.8	Horiz
			+1.2	+0.0	+0.0	+12.1	312		HIGH		99
17	17361.420M	53.4	+0.0	-14.3	+0.0	+0.0	+0.0	38.4	54.0	-15.6	Horiz
	Ave		+0.9	+0.0	+0.0	+12.0	317		MID		100
^	17361.420M	53.4	+0.0	-14.3	+0.0	+0.0	+0.0	52.0	54.0	-2.0	Horiz
			+0.9	+0.0	+0.0	+12.0	317		MID		100
19	17358.360M	52.8	-13.6	-14.3	+0.0	+0.0	+0.0	37.8	54.0	-16.2	Vert
	Ave		+0.9	+0.0	+0.0	+12.0	329		MID		99
^	17358.360M	52.8	+0.0	-14.3	+0.0	+0.0	+0.0	51.4	54.0	-2.6	Vert
			+0.9	+0.0	+0.0	+12.0	329		MID		99
21	29232.700M	29.8	-13.6	+0.0	+0.0	+2.7	+0.0	37.7	54.0	-16.3	Horiz
	Ave		+0.0	+0.0	+3.9	+14.9	337		HIGH		100
^	29232.700M	29.8	+0.0	+0.0	+0.0	+2.7	+0.0	51.3	54.0	-2.7	Horiz
			+0.0	+0.0	+3.9	+14.9	337		HIGH		100
23	17539.600M	50.2	-13.6	-13.7	+0.0	+0.0	+0.0	36.2	54.0	-17.8	Vert
	Ave		+1.2	+0.0	+0.0	+12.1	44		HIGH		100
^	17539.600M	50.2	+0.0	-13.7	+0.0	+0.0	+0.0	49.8	54.0	-4.2	Vert
			+1.2	+0.0	+0.0	+12.1	44		HIGH		100
25	17183.160M	51.0	-13.6	-14.9	+0.0	+0.0	+0.0	35.3	54.0	-18.7	Horiz
	Ave		+0.9	+0.0	+0.0	+11.9	255		LOW		99
^	17183.160M	51.0	+0.0	-14.9	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Horiz
			+0.9	+0.0	+0.0	+11.9	255		LOW		99
27	28638.680M	27.6	-13.6	+0.0	+0.0	+2.5	+0.0	35.1	54.0	-18.9	Vert
	Ave		+0.0	+0.0	+3.9	+14.7	312		LOW		100
^	28638.680M	27.6	+0.0	+0.0	+0.0	+2.5	+0.0	48.7	54.0	-5.3	Vert
			+0.0	+0.0	+3.9	+14.7	312		LOW		100
29	28638.960M	27.3	-13.6	+0.0	+0.0	+2.5	+0.0	34.8	54.0	-19.2	Horiz
	Ave		+0.0	+0.0	+3.9	+14.7	323		LOW		100
^	28638.960M	27.3	+0.0	+0.0	+0.0	+2.5	+0.0	48.4	54.0	-5.6	Horiz
			+0.0	+0.0	+3.9	+14.7	323		LOW		100

31	28935.500M	26.8	-13.6	+0.0	+0.0	+2.7	+0.0	34.5	54.0	-19.5	Horiz
	Ave		+0.0	+0.0	+3.8	+14.8	22		MID		100
^	28935.500M	26.8	+0.0	+0.0	+0.0	+2.7	+0.0	48.1	54.0	-5.9	Horiz
			+0.0	+0.0	+3.8	+14.8	22		MID		100
33	29232.590M	26.6	-13.6	+0.0	+0.0	+2.7	+0.0	34.5	54.0	-19.5	Vert
	Ave		+0.0	+0.0	+3.9	+14.9	288		HIGH		100
^	29232.590M	26.6	+0.0	+0.0	+0.0	+2.7	+0.0	48.1	54.0	-5.9	Vert
			+0.0	+0.0	+3.9	+14.9	288		HIGH		100
35	28930.590M	26.6	-13.6	+0.0	+0.0	+2.7	+0.0	34.3	54.0	-19.7	Vert
	Ave		+0.0	+0.0	+3.8	+14.8	309		MID		100
^	28930.590M	26.6	+0.0	+0.0	+0.0	+2.7	+0.0	47.9	54.0	-6.1	Vert
			+0.0	+0.0	+3.8	+14.8	309		MID		100

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**AvaLAN Wireless Systems, Inc.**		
Specification:	**FCC 15.247(d) Spurious Conducted**		
Work Order #:	**85414**	Date:	7/5/2006
Test Type:	**Radiated Scan**	Time:	16:46:51
Equipment:	**5.8GHz Wireless Ethernet Bridge Module**	Sequence#:	26
Manufacturer:	AvaLAN Wireless Systems, Inc.	Tested By:	C. Nicklas
Model:	AW5800m		
S/N:	000012		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012
Power Supply	CUI Inc.	DSA-0151A-06	

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

15.247(d) Spurious Emissions Antenna Conducted. Maximized Emissions measured with RBW=100 kHz, VBW=300 kHz from 100 kHz-1 GHz and RBW=10 kHz, VBW=300 kHz from 9-100 kHz. Readings from 9-1000 MHz are made using a 2.1 GHz Low Pass Filter. No signals found below 10 MHz.

Transducer Legend:

T1=Cable 01188

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq Hz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBm	Spec dBm	Margin dB	Polar Ant
1	16.490M	-85.8	+0.0				+0.0	-85.8	-13.5 LOW	-72.3	None
2	13.600M	-86.8	+0.0				+0.0	-86.8	-13.5 LOW	-73.3	None
3	12.160M	-87.1	+0.1				+0.0	-87.0	-13.5 MID	-73.5	None
4	14.500M	-86.2	+0.0				+0.0	-86.2	-12.6 HIGH	-73.6	None
5	11.800M	-87.3	+0.1				+0.0	-87.2	-13.5 LOW	-73.7	None
6	10.900M	-86.8	+0.1				+0.0	-86.7	-12.6 HIGH	-74.1	None
7	15.950M	-87.6	+0.0				+0.0	-87.6	-13.5 MID	-74.1	None
8	16.490M	-86.9	+0.0				+0.0	-86.9	-12.6 HIGH	-74.3	None
9	20.450M	-88.4	+0.1				+0.0	-88.3	-13.5 MID	-74.8	None
10	19.550M	-88.3	+0.1				+0.0	-88.2	-12.6 HIGH	-75.6	None
11	50.000M	-90.8	+0.2				+0.0	-90.6	-13.5 LOW	-77.1	None

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(d) Spurious Conducted**
Work Order #: **85414** Date: 7/5/2006
Test Type: **Radiated Scan** Time: 16:04:08
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 23
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	

Test Conditions / Notes:

15.247(d) Spurious Emissions Antenna Conducted LOW Channel. Maximized Emissions measured with RBW=1 MHz, VBW=3 MHz. Readings above 8.5 MHz are made using an 8.2 GHz High Pass Filter. Readings from 1-8.5 GHz are made with 32dB of external attenuation in place.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=Duty Cycle AVE Factor
T3=PAD ANP05410 10dB	T4=PAD ANP05411 10dB
T5=PAD ANP05412 6dB	T6=PAD ANP05413 6dB
T7=HPF 8.2 GHz High Pass	

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7						
	Hz	dBm	dB	dB	dB	dB	Table	dBm	dBm	dB	Ant
1	5602.100M	-38.4	+1.8	-13.6	+9.6	+9.3	+0.0	-19.8	-13.5	-6.3	None
	Ave		+5.7	+5.8	+0.0				LOW		
^	5602.100M	-38.4	+1.8	+0.0	+9.6	+9.3	+0.0	-6.2	-13.5	+7.3	None
			+5.7	+5.8	+0.0				LOW		
3	5622.100M	-42.3	+1.8	-13.6	+9.6	+9.3	+0.0	-23.7	-13.5	-10.2	None
	Ave		+5.7	+5.8	+0.0				LOW		
^	5622.100M	-42.3	+1.8	+0.0	+9.6	+9.3	+0.0	-10.1	-13.5	+3.4	None
			+5.7	+5.8	+0.0				LOW		
5	5771.300M	-44.6	+1.8	-13.6	+9.6	+9.3	+0.0	-25.9	-13.5	-12.4	None
	Ave		+5.8	+5.8	+0.0				LOW		
^	5771.300M	-44.6	+1.8	+0.0	+9.6	+9.3	+0.0	-12.3	-13.5	+1.2	None
			+5.8	+5.8	+0.0				LOW		
7	5896.400M	-58.2	+1.8	+0.0	+9.6	+9.3	+0.0	-25.9	-13.5	-12.4	None
			+5.8	+5.8	+0.0				LOW		
8	17183.200M	-34.5	+3.5	+0.0	+0.0	+0.0	+0.0	-30.3	-13.5	-16.8	None
			+0.0	+0.0	+0.7				LOW		

9	5584.100M	-49.3	+1.8	-13.6	+9.6	+9.3	+0.0	-30.7	-13.5	-17.2	None
	Ave		+5.7	+5.8	+0.0				LOW		
^	5584.100M	-49.3	+1.8	+0.0	+9.6	+9.3	+0.0	-17.1	-13.5	-3.6	None
			+5.7	+5.8	+0.0				LOW		
11	5562.100M	-50.3	+1.8	-13.6	+9.6	+9.3	+0.0	-31.7	-13.5	-18.2	None
	Ave		+5.7	+5.8	+0.0				LOW		
^	5562.100M	-50.3	+1.8	+0.0	+9.6	+9.3	+0.0	-18.1	-13.5	-4.6	None
			+5.7	+5.8	+0.0				LOW		
13	5814.300M	-67.9	+1.8	+0.0	+9.6	+9.3	+0.0	-35.6	-13.5	-22.1	None
			+5.8	+5.8	+0.0				LOW		
14	16830.300M	-42.5	+3.4	+0.0	+0.0	+0.0	+0.0	-38.4	-13.5	-24.9	None
			+0.0	+0.0	+0.7				LOW		
15	5438.400M	-70.6	+1.8	+0.0	+9.5	+9.3	+0.0	-38.5	-13.5	-25.0	None
			+5.7	+5.8	+0.0				LOW		
16	11240.200M	-43.5	+2.7	+0.0	+0.0	+0.0	+0.0	-40.5	-13.5	-27.0	None
			+0.0	+0.0	+0.3				LOW		
17	16860.400M	-46.6	+3.4	+0.0	+0.0	+0.0	+0.0	-42.5	-13.5	-29.0	None
			+0.0	+0.0	+0.7				LOW		
18	11220.200M	-46.9	+2.7	+0.0	+0.0	+0.0	+0.0	-43.9	-13.5	-30.4	None
			+0.0	+0.0	+0.3				LOW		
19	11286.300M	-47.3	+2.7	+0.0	+0.0	+0.0	+0.0	-44.3	-13.5	-30.8	None
			+0.0	+0.0	+0.3				LOW		
20	16877.400M	-48.7	+3.4	+0.0	+0.0	+0.0	+0.0	-44.7	-13.5	-31.2	None
			+0.0	+0.0	+0.6				LOW		
21	11457.000M	-47.8	+2.8	+0.0	+0.0	+0.0	+0.0	-44.7	-13.5	-31.2	None
			+0.0	+0.0	+0.0				LOW		
22	22915.400M	-50.0	+4.1	+0.0	+0.0	+0.0	+0.0	-45.9	-13.5	-32.4	None
			+0.0	+0.0	+0.0				LOW		
23	17014.000M	-51.4	+3.4	+0.0	+0.0	+0.0	+0.0	-47.4	-13.5	-33.9	None
			+0.0	+0.0	+0.6				LOW		
24	11156.200M	-52.8	+2.7	+0.0	+0.0	+0.0	+0.0	-49.8	-13.5	-36.3	None
			+0.0	+0.0	+0.3				LOW		
25	11116.100M	-52.9	+2.7	+0.0	+0.0	+0.0	+0.0	-49.9	-13.5	-36.4	None
			+0.0	+0.0	+0.3				LOW		
26	16733.200M	-57.4	+3.3	+0.0	+0.0	+0.0	+0.0	-53.4	-13.5	-39.9	None
			+0.0	+0.0	+0.7				LOW		
27	22744.200M	-59.3	+4.0	+0.0	+0.0	+0.0	+0.0	-55.3	-13.5	-41.8	None
			+0.0	+0.0	+0.0				LOW		
28	17357.400M	-60.7	+3.5	+0.0	+0.0	+0.0	+0.0	-56.5	-13.5	-43.0	None
			+0.0	+0.0	+0.7				LOW		
29	22573.100M	-61.7	+4.0	+0.0	+0.0	+0.0	+0.0	-57.7	-13.5	-44.2	None
			+0.0	+0.0	+0.0				LOW		
30	28644.100M	-66.7	+4.6	+0.0	+0.0	+0.0	+0.0	-62.1	-13.5	-48.6	None
			+0.0	+0.0	+0.0				LOW		
31	9375.400M	-78.6	+2.4	+0.0	+0.0	+0.0	+0.0	-75.7	-13.5	-62.2	None
			+0.0	+0.0	+0.5				LOW		

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(d) Spurious Conducted**
Work Order #: **85414** Date: 7/5/2006
Test Type: **Radiated Scan** Time: 15:57:51
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 24
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	

Test Conditions / Notes:

15.247(d) Spurious Emissions Antenna Conducted MID Channel. Maximized Emissions measured with RBW=1MHz, VBW=3MHz. Readings above 8.5 MHz are made using an 8.2 GHz High Pass Filter. Readings from 1-8.5GHz are made with 32dB of external attenuation in place.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=Duty Cycle AVE Factor
T3=PAD ANP05410 10dB	T4=PAD ANP05411 10dB
T5=PAD ANP05412 6dB	T6=PAD ANP05413 6dB
T7=HPF 8.2 GHz High Pass	

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7						
	Hz	dBm	dB	dB	dB	dB	Table	dBm	dBm	dB	Ant
1	5601.100M	-38.6	+1.8	-13.6	+9.6	+9.3	+0.0	-20.0	-13.5	-6.5	None
	Ave		+5.7	+5.8	+0.0				MID		
^	5601.100M	-38.6	+1.8	+0.0	+9.6	+9.3	+0.0	-6.4	-13.5	+7.1	None
			+5.7	+5.8	+0.0				MID		
3	5612.100M	-40.8	+1.8	-13.6	+9.6	+9.3	+0.0	-22.2	-13.5	-8.7	None
	Ave		+5.7	+5.8	+0.0				MID		
^	5612.100M	-40.8	+1.8	+0.0	+9.6	+9.3	+0.0	-8.6	-13.5	+4.9	None
			+5.7	+5.8	+0.0				MID		
5	5624.100M	-42.1	+1.8	-13.6	+9.6	+9.3	+0.0	-23.5	-13.5	-10.0	None
	Ave		+5.7	+5.8	+0.0				MID		
^	5624.100M	-42.1	+1.8	+0.0	+9.6	+9.3	+0.0	-9.9	-13.5	+3.6	None
			+5.7	+5.8	+0.0				MID		
7	5585.100M	-48.5	+1.8	-13.6	+9.6	+9.3	+0.0	-29.9	-13.5	-16.4	None
	Ave		+5.7	+5.8	+0.0				MID		
^	5585.100M	-48.5	+1.8	+0.0	+9.6	+9.3	+0.0	-16.3	-13.5	-2.8	None
			+5.7	+5.8	+0.0				MID		
9	17255.300M	-36.2	+3.5	+0.0	+0.0	+0.0	+0.0	-32.0	-13.5	-18.5	None
			+0.0	+0.0	+0.7				MID		

10	5380.400M	-65.1	+1.8 +5.7	+0.0 +5.8	+9.5 +0.0	+9.3	+0.0	-33.0	-13.5 MID	-19.5	None
11	16827.800M	-40.3	+3.4 +0.0	+0.0 +0.0	+0.0 +0.7	+0.0	+0.0	-36.2	-13.5 MID	-22.7	None
12	11219.200M	-41.0	+2.7 +0.0	+0.0 +0.0	+0.0 +0.3	+0.0	+0.0	-38.0	-13.5 MID	-24.5	None
13	11236.200M	-43.0	+2.7 +0.0	+0.0 +0.0	+0.0 +0.3	+0.0	+0.0	-40.0	-13.5 MID	-26.5	None
14	16855.400M	-44.4	+3.4 +0.0	+0.0 +0.0	+0.0 +0.7	+0.0	+0.0	-40.3	-13.5 MID	-26.8	None
15	16875.400M	-49.3	+3.4 +0.0	+0.0 +0.0	+0.0 +0.6	+0.0	+0.0	-45.3	-13.5 MID	-31.8	None
16	23007.000M	-50.3	+4.1 +0.0	+0.0 +0.0	+0.0 +0.0	+0.0	+0.0	-46.2	-13.5 MID	-32.7	None
17	11503.000M	-49.8	+2.8 +0.0	+0.0 +0.0	+0.0 +0.3	+0.0	+0.0	-46.7	-13.5 MID	-33.2	None
18	17065.100M	-52.1	+3.4 +0.0	+0.0 +0.0	+0.0 +0.6	+0.0	+0.0	-48.1	-13.5 MID	-34.6	None
19	22434.400M	-53.3	+4.0 +0.0	+0.0 +0.0	+0.0 +0.0	+0.0	+0.0	-49.3	-13.5 MID	-35.8	None
20	11312.300M	-53.6	+2.7 +0.0	+0.0 +0.0	+0.0 +0.3	+0.0	+0.0	-50.6	-13.5 MID	-37.1	None
21	11153.200M	-54.3	+2.7 +0.0	+0.0 +0.0	+0.0 +0.3	+0.0	+0.0	-51.3	-13.5 MID	-37.8	None
22	11137.100M	-56.6	+2.7 +0.0	+0.0 +0.0	+0.0 +0.3	+0.0	+0.0	-53.6	-13.5 MID	-40.1	None
23	16730.200M	-58.3	+3.3 +0.0	+0.0 +0.0	+0.0 +0.7	+0.0	+0.0	-54.3	-13.5 MID	-40.8	None
24	22817.300M	-59.9	+4.1 +0.0	+0.0 +0.0	+0.0 +0.0	+0.0	+0.0	-55.8	-13.5 MID	-42.3	None
25	17229.200M	-60.5	+3.5 +0.0	+0.0 +0.0	+0.0 +0.7	+0.0	+0.0	-56.3	-13.5 MID	-42.8	None
26	22628.100M	-66.0	+4.0 +0.0	+0.0 +0.0	+0.0 +0.0	+0.0	+0.0	-62.0	-13.5 MID	-48.5	None
27	22475.500M	-67.1	+4.0 +0.0	+0.0 +0.0	+0.0 +0.0	+0.0	+0.0	-63.1	-13.5 MID	-49.6	None
28	28758.300M	-68.4	+4.6 +0.0	+0.0 +0.0	+0.0 +0.0	+0.0	+0.0	-63.8	-13.5 MID	-50.3	None

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247 Spurious Conducted**
Work Order #: **85414** Date: 7/5/2006
Test Type: **Radiated Scan** Time: 16:43:26
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 25
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	

Test Conditions / Notes:

15.247(d) Spurious Emissions Antenna Conducted HIGH Channel. Maximized Emissions measured with RBW=1 MHz, VBW=3 MHz. Readings from 10-1000 MHz are made using a 2.1 GHz Low Pass Filter.

Transducer Legend:

T1=ANP05200 1-40GHz	T2=Duty Cycle AVE Factor
T3=PAD ANP05410 10dB	T4=PAD ANP05411 10dB
T5=PAD ANP05412 6dB	T6=PAD ANP05413 6dB
T7=HPF 8.2 GHz High Pass	T8=Filter 2GHz LP AN02748

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	Hz	dBm	dB	dB	dB	dB	Table	dBm	dBm	dB	Ant
1	5599.100M	-38.1	+1.8	-13.6	+9.6	+9.3	+0.0	-19.5	-12.6	-6.9	None
	Ave		+5.7	+5.8	+0.0	+0.0			HIGH		
^	5599.100M	-38.1	+1.8	+0.0	+9.6	+9.3	+0.0	-5.9	-12.6	+6.7	None
			+5.7	+5.8	+0.0				HIGH		
3	5623.100M	-41.5	+1.8	-13.6	+9.6	+9.3	+0.0	-22.9	-12.6	-10.3	None
	Ave		+5.7	+5.8	+0.0	+0.0			HIGH		
^	5623.100M	-41.5	+1.8	+0.0	+9.6	+9.3	+0.0	-9.3	-12.6	+3.3	None
			+5.7	+5.8	+0.0				HIGH		
5	5610.100M	-42.1	+1.8	-13.6	+9.6	+9.3	+0.0	-23.5	-12.6	-10.9	None
	Ave		+5.7	+5.8	+0.0	+0.0			HIGH		
^	5610.100M	-42.1	+1.8	+0.0	+9.6	+9.3	+0.0	-9.9	-12.6	+2.7	None
			+5.7	+5.8	+0.0				HIGH		
7	5772.300M	-48.2	+1.8	-13.6	+9.6	+9.3	+0.0	-29.5	-12.6	-16.9	None
	Ave		+5.8	+5.8	+0.0	+0.0			HIGH		
^	5772.300M	-48.2	+1.8	+0.0	+9.6	+9.3	+0.0	-15.9	-12.6	-3.3	None
			+5.8	+5.8	+0.0				HIGH		
9	17543.000M	-36.3	+3.6	+0.0	+0.0	+0.0	+0.0	-32.0	-12.6	-19.4	None
			+0.0	+0.0	+0.7				HIGH		

10	16821.300M	-40.6	+3.4	+0.0	+0.0	+0.0	+0.0	-36.5	-12.6	-23.9	None	
			+0.0	+0.0	+0.7				HIGH			
11	11217.200M	-40.7	+2.7	+0.0	+0.0	+0.0	+0.0	-37.7	-12.6	-25.1	None	
			+0.0	+0.0	+0.0				HIGH			
12	16852.400M	-42.3	+3.4	+0.0	+0.0	+0.0	+0.0	-38.2	-12.6	-25.6	None	
			+0.0	+0.0	+0.7				HIGH			
13	11235.200M	-42.9	+2.7	+0.0	+0.0	+0.0	+0.0	-39.9	-12.6	-27.3	None	
			+0.0	+0.0	+0.3				HIGH			
14	11695.200M	-44.6	+2.8	+0.0	+0.0	+0.0	+0.0	-41.5	-12.6	-28.9	None	
			+0.0	+0.0	+0.3				HIGH			
15	16873.400M	-48.5	+3.4	+0.0	+0.0	+0.0	+0.0	-44.4	-12.6	-31.8	None	
			+0.0	+0.0	+0.7				HIGH			
16	22428.400M	-54.0	+4.0	+0.0	+0.0	+0.0	+0.0	-50.0	-12.6	-37.4	None	
			+0.0	+0.0	+0.0				HIGH			
17	11170.200M	-53.6	+2.7	+0.0	+0.0	+0.0	+0.0	-50.6	-12.6	-38.0	None	
			+0.0	+0.0	+0.3				HIGH			
18	16753.300M	-58.2	+3.4	+0.0	+0.0	+0.0	+0.0	-54.1	-12.6	-41.5	None	
			+0.0	+0.0	+0.7				HIGH			
19	17560.100M	-58.8	+3.6	+0.0	+0.0	+0.0	+0.0	-54.5	-12.6	-41.9	None	
			+0.0	+0.0	+0.7				HIGH			
20	11259.300M	-57.7	+2.7	+0.0	+0.0	+0.0	+0.0	-54.7	-12.6	-42.1	None	
			+0.0	+0.0	+0.3				HIGH			
21	29237.200M	-60.4	+4.6	+0.0	+0.0	+0.0	+0.0	-55.8	-12.6	-43.2	None	
			+0.0	+0.0	+0.0				HIGH			
22	22467.500M	-60.3	+4.0	+0.0	+0.0	+0.0	+0.0	-56.3	-12.6	-43.7	None	
			+0.0	+0.0	+0.0				HIGH			
23	17492.500M	-65.4	+3.6	+0.0	+0.0	+0.0	+0.0	-61.1	-12.6	-48.5	None	
			+0.0	+0.0	+0.7				HIGH			
24	23386.400M	-65.6	+4.2	+0.0	+0.0	+0.0	+0.0	-61.4	-12.6	-48.8	None	
			+0.0	+0.0	+0.0				HIGH			
25	11720.200M	-64.8	+2.8	+0.0	+0.0	+0.0	+0.0	-61.7	-12.6	-49.1	None	
			+0.0	+0.0	+0.3				HIGH			
26	22365.400M	-66.5	+3.9	+0.0	+0.0	+0.0	+0.0	-62.6	-12.6	-50.0	None	
			+0.0	+0.0	+0.0				HIGH			
27	11534.000M	-70.5	+2.8	+0.0	+0.0	+0.0	+0.0	-67.4	-12.6	-54.8	None	
			+0.0	+0.0	+0.3				HIGH			

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **AvaLAN Wireless Systems, Inc.**
Specification: **FCC 15.247(e) Spectral Density**
Work Order #: **85414** Date: 7/6/2006
Test Type: **Maximized Emissions** Time: 12:33:06
Equipment: **5.8GHz Wireless Ethernet Bridge Module** Sequence#: 27
Manufacturer: AvaLAN Wireless Systems, Inc. Tested By: C. Nicklas
Model: AW5800m
S/N: 000012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
5.8GHz Wireless Ethernet Bridge Module*	AvaLAN Wireless Systems, Inc.	AW5800m	000012

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	CUI Inc.	DSA-0151A-06	

Test Conditions / Notes:

15.247(e) Peak Power Spectral Density.

Transducer Legend:

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBm	dB	dB	dB	dB	Dist Table	Corr dBm	Spec dBm	Margin dB	Polar Ant
1	5786.621M	-29.8					+0.0 -12	-29.8	8.0	-37.8	None 100
2	5728.281M	-30.9					+0.0 -12	-30.9	8.0	-38.9	None 100
3	5847.042M	-31.0					+0.0 -12	-31.0	8.0 HIGH	-39.0	None 100