FCC PART 15.247

EMI MEASUREMENT AND TEST REPORT

For

Video54 Technologies, Inc

883 North Shoreline Blvd, Suite A-100
CA, USA 94043

FCC ID: S9GMF2900

This Report Concerns:	Equipment Type:
☒ Original Report	Media Access Point, 802.11b/g

Test Engineer:	Snell Leong
Report No.:	R0505121
Report Date:	2005-05-26
Reviewed By:	Richard Lee
Prepared By:	Bay Area Compliance Laboratory Corporation (BACL) 230 Commercial Street Sunnyvale, CA 94085 Tel: (408) 732-9162 Fax: (408) 732 9164

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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Video54 Technologies, Inc's* product, FCC ID: *S9GMF2900,* Model: *MF2900* or the "EUT" as referred to this report is a Media Access Point, 802.11b/g which measures approximately 140mmL x 120mmW x 70mmH. The EUT operates at the frequency range of 2412– 2462MHz, with maximum output power of 0.125W (20.97dBm).

** The test data gathered are from typical production sample, serial number: WN82153FB000454 provided by the manufacturer.*

Objective

This type approval report is prepared on behalf of *Video54 Technologies, Inc* in accordance with Part 2, Subpart J, Part 15, Subparts A , B and C of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for Output Power, Antenna Requirements, 6 dB Bandwidth, power spectral density, 100 kHz Bandwidth of Band Edges Measurement, Spurious Emission, Conducted and Spurious Radiated Emission.

Related Submittal(s)/Grant(s)

No Related Submittals.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Open Area Test site used by BACL to collect radiated and conducted emission measurement data is located in the back parking lot of the building at 230 Commercial Street, Sunnyvale, California, USA.

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-1298 and R-1234. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200167-0). The current scope of accreditations can be found at http://ts.nist.gov/ts/htdocs/210/214/scopes/2001670.htm

SYSTEM TEST CONFIGURATION

Justification

The host system was configured for testing according to ANSI C63.4-2003.

The EUT was tested in the normal (native) operating mode to represent *worst*-case results during the final qualification test.

EUT Exercise Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the system components. The test software, provided by the customer, is started the Windows terminal program under the Windows 98/2000/ME/XP operating system.

Once loaded, set the Tx channel to low, mid and high for testing.

Special Accessories

As shown in following test block diagram, all interface cables used for compliance testing are shielded.

Schematics / Block Diagram

Please refer to Appendix A.

Equipment Modifications

No modifications were made to the EUT.

Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
IBM	Laptop PC	2662	N/A	N/A

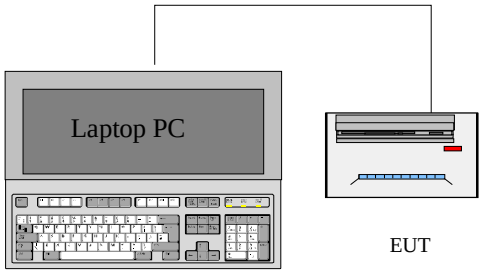
Power Supply Information

Manufacturer	Description	Model	Serial Number	FCC ID
Unifive	AD-DC Adaptor	US300520	501-0145002	None

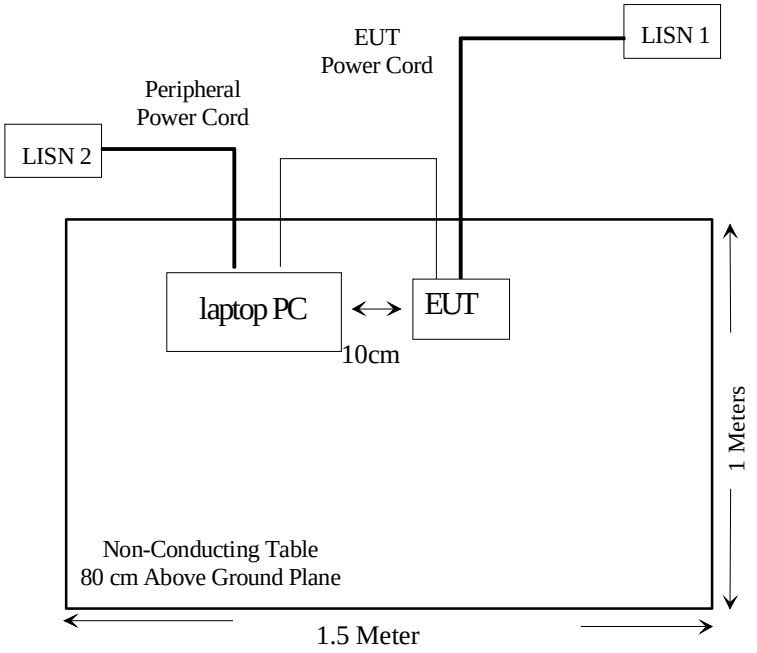
Interface Ports and Cabling

Cable Description	Length (M)	From	To
Ethernet Cable	2.0	Ethernet port / EUT	Ethernet Port / PC

Configuration of Test System



Test Setup Block Diagram



SUMMARY OF TEST RESULTS

Results reported relate only to the product tested.

FCC RULES	DESCRIPTION OF TEST	RESULT
§2.1091	RF Exposure	Pass
§15.203	Antenna Requirement	Pass
§15.205	Restricted Band	Pass
§ 15.207 (a)	Conducted Emissions	Pass
§2.1051	Spurious Emission at Antenna Port	Pass
§15.209 (a)	Radiated Emission	Pass*
§15.247 (a)(2)	6 dB Bandwidth	Pass
§15.247 (b)(3)	Maximum Peak Output Power	Pass
§ 15.247 (d)	100 kHz Bandwidth of Frequency Band Edge	Pass
§15.247 (e)	Peak Power Spectral Density	Pass

*: Test data are within the measurement uncertainty.

§1.1307(b)(1) & §2.1091 - RF EXPOSURE

According to §15.247(b)(5) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

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

MPE Prediction

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$S = PG/4\pi R^2$

Where: S = power density
P = power input to antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal: 20.97 (dBm)
Maximum peak output power at antenna input terminal: 125.03 (mW)
Prediction distance: 20 (cm)
Predication frequency: 2400 (MHz)
Antenna Gain (typical): 3.3 (dBi)
antenna gain: 2.14 (numeric)
Power density at predication frequency at 20 cm: 0.053(mW/cm^2)

MPE limit for uncontrolled exposure at prediction frequency: 1.0 (mW/cm^2)

Test Result

The EUT is a mobile device. The power density level at 20 cm is 0.053 mW/cm^2, which is below the uncontrolled exposure limit of 1.0mW/cm^2 at 2400 MHz.

§15.203 - ANTENNA REQUIREMENT

Standard Applicable

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to § 15.247 (b) (4), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The antenna for this device is an integral antenna with gain of 3.3dBi.

§15.207(a) - CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at BACL is ±2.4 dB.

EUT Setup

The measurement was performed in the shield room, using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Subpart B limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

Spectrum Analyzer Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30Mhz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Rohde & Schwarz	LISN	ESH2-Z5	871884/039	2004-08-16
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2004-09-15
Fluke	Calibrated Voltmeter	189	18485-38	2004-07-18

* **Statement of Traceability:** BACL attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

During the conducted emission test, the power cord of the host system was connected to the auxiliary outlet of the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of each modes tested to ensure EUT is compliant with all installation combination.

All data was recorded in the peak detection mode. Quasi-peak readings were only performed when an emission was found to be marginal (within -4 dBμV of specification limits). Quasi-peak readings are distinguished with a "**Qp**".

Summary of Test Results

According to the recorded data in following table, the EUT complies with the FCC Conducted margin for a Class B device, with the *worst* margin reading of:

-3.8 dB at 24.900 MHz in the Neutral mode

Environmental Conditions

Temperature:	22° C
Relative Humidity:	59%
ATM Pressure:	1023 mbar

The testing was performed by Snell Leong on 2005-05-23.

Conducted Emissions Test Data

LINE CONDUCTED EMISSIONS				FCC PART 15 CLASS B	
Frequency MHz	Amplitude dBμV	Detector Qp/Ave/Peak	Phase Line/Neutral	Limit dBμV	Margin dB
24.900	46.2	Ave	Neutral	50.00	-3.8
1.430	41.6	Ave	Neutral	46.00	-4.4
0.615	39.3	Ave	Neutral	46.00	-6.7
1.430	48.6	QP	Neutral	56.00	-7.4
0.615	48.2	QP	Neutral	56.00	-7.8
0.205	44.5	Ave	Neutral	53.41	-8.9
0.210	54.2	QP	Line	63.21	-9.0
0.210	43.2	Ave	Line	53.21	-10.0
1.480	36.0	Ave	Line	46.00	-10.0
0.205	52.9	QP	Neutral	63.41	-10.5
24.900	48.7	QP	Neutral	60.00	-11.3
1.480	43.0	QP	Line	56.00	-13.0
26.000	37.0	Ave	Line	50.00	-13.0
26.000	45.7	QP	Line	60.00	-14.3
0.320	45.0	QP	Line	59.71	-14.7
0.320	33.9	Ave	Line	49.71	-15.8

Plot of Conducted Emissions Test Data

Plot(s) of Conducted Emissions Test Data is presented hereinafter as reference.

Bay Area Compliance Laboratory Corp 23. May 05 08:54

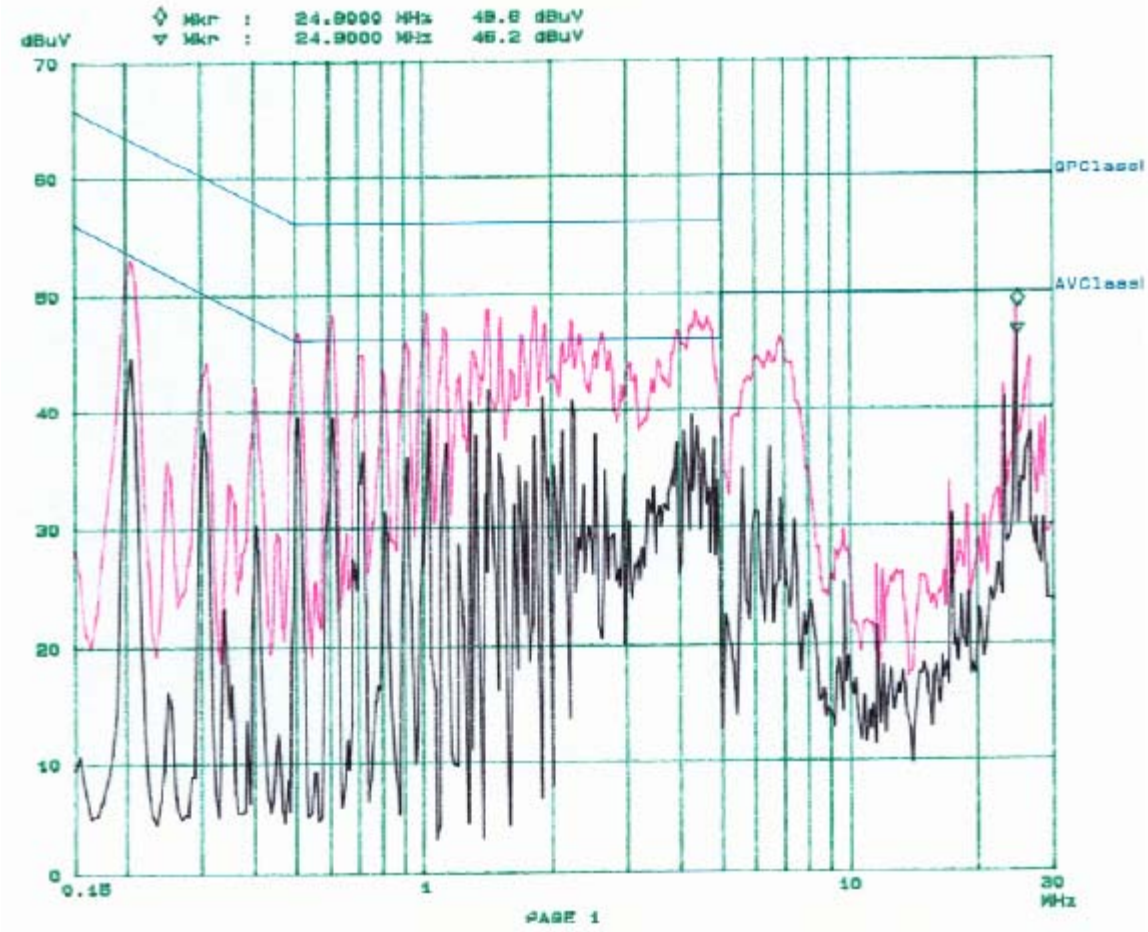
Class B

23/May/05
Snell

EUT: 2.4GHz AP
Manuf: Video54
Op Cond: Normal
Operator: SNELL
Comment: N
120VAC

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	1M	5k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF



Bay Area Compliance Laboratory Corp 23. May 05 09:31

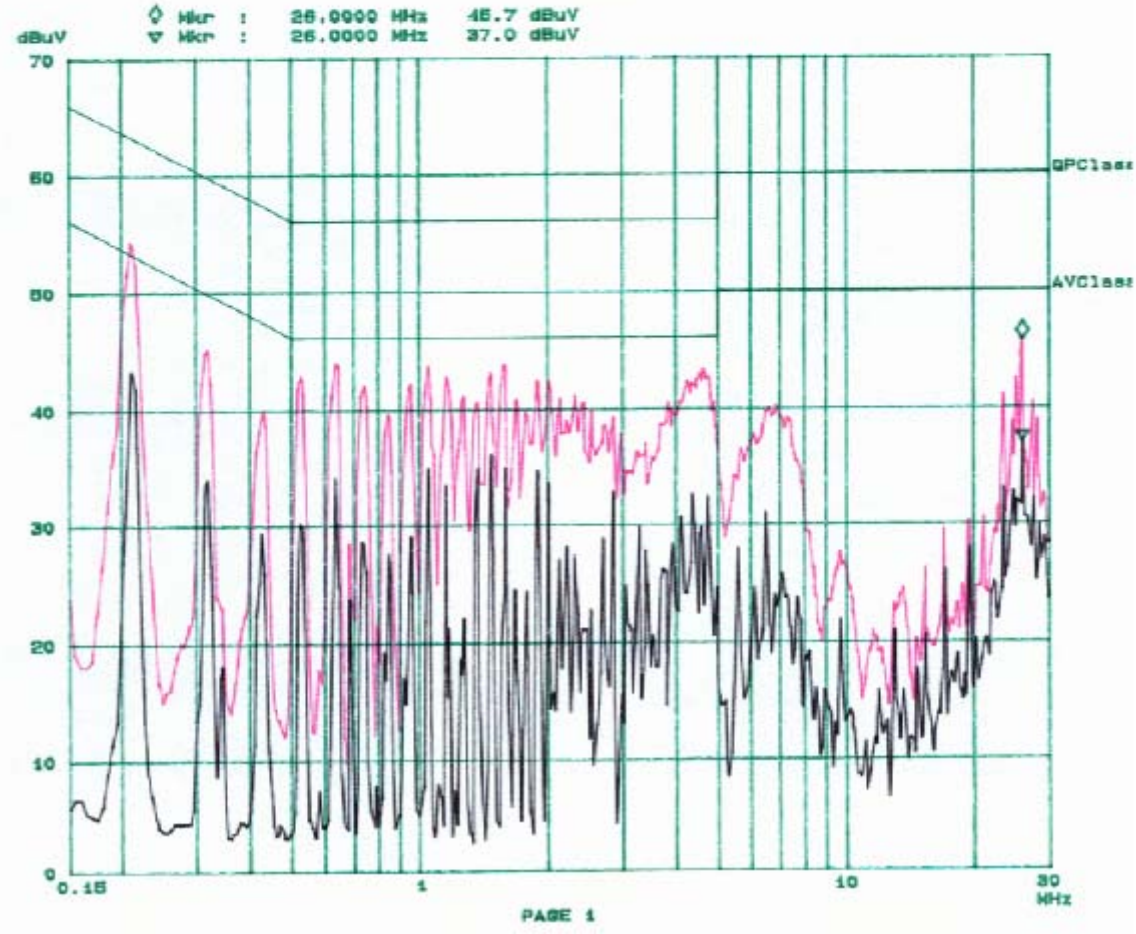
Class B

23/May/05
Snell

EUT: 2.4GHz AP
Manuf: VIdeo54
Op Cond: Normal
Operator: SNELL
Comment: L
120VAC

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	PreAMP
150k	1M	5k	9k	QP+AV	20ms	15dBLN	OFF
1M	5M	10k	9k	QP+AV	1ms	15dBLN	OFF
5M	30M	100k	9k	QP+AV	1ms	15dBLN	OFF



§2.1051 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Standard Applicable

Requirements: CFR 47, § 2.1051.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1057.

Measurement Procedure

The RF output of the EUT was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10^{th} harmonic.

Equipment Lists

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	11/10/2004

*** Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Measurement Result

Please refer to following pages for plots of spurious emission.

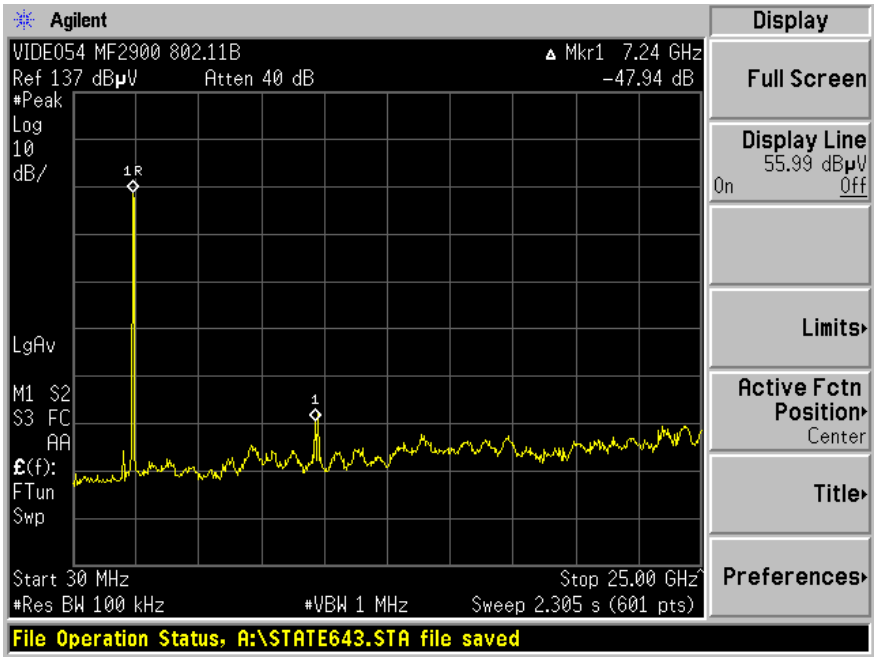
Environmental Conditions

Temperature:	22° C
Relative Humidity:	59%
ATM Pressure:	1023 mbar

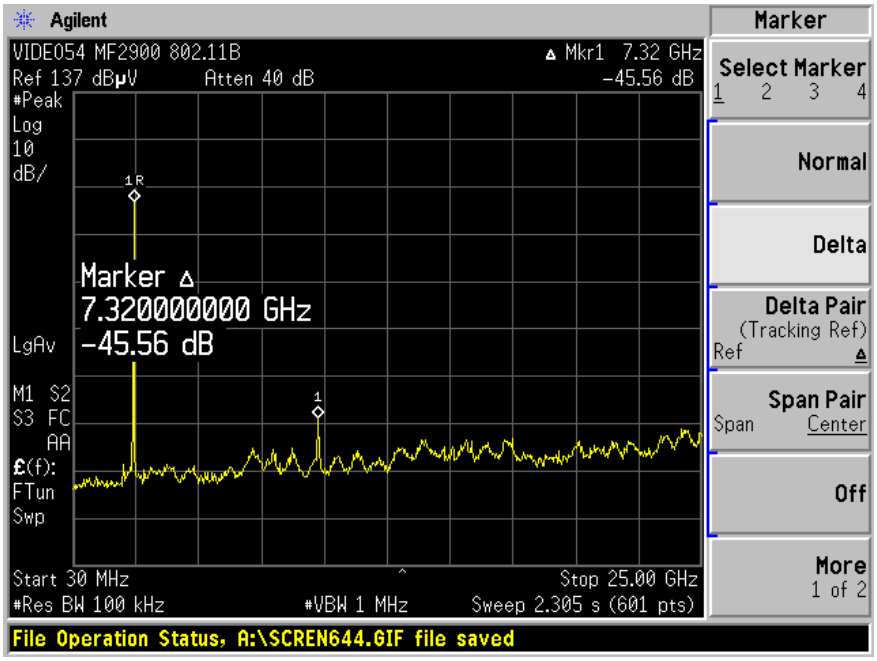
The testing was performed by Snell Leong on 2005-05-23.

802.11b

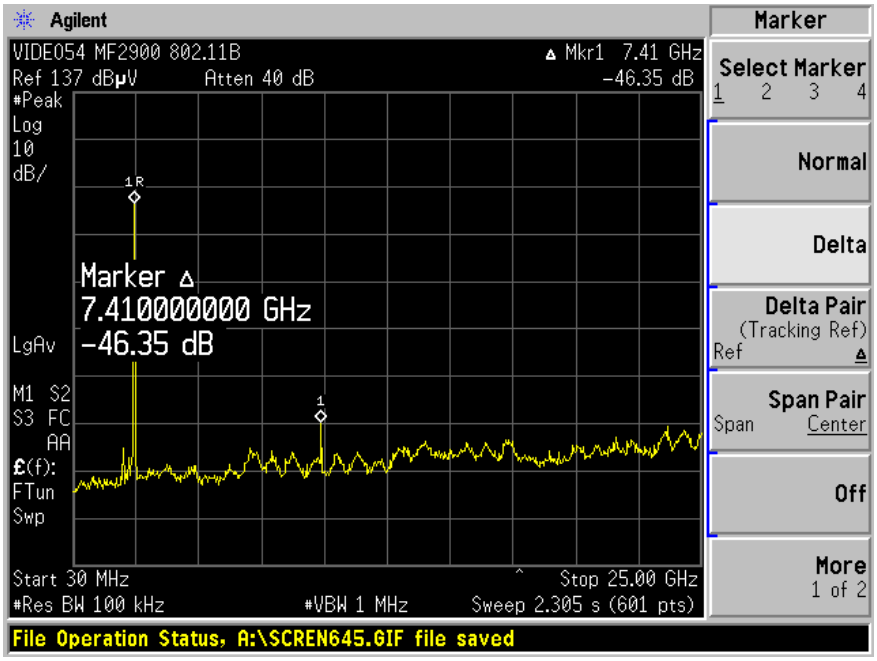
Low Channel



Mid Channel

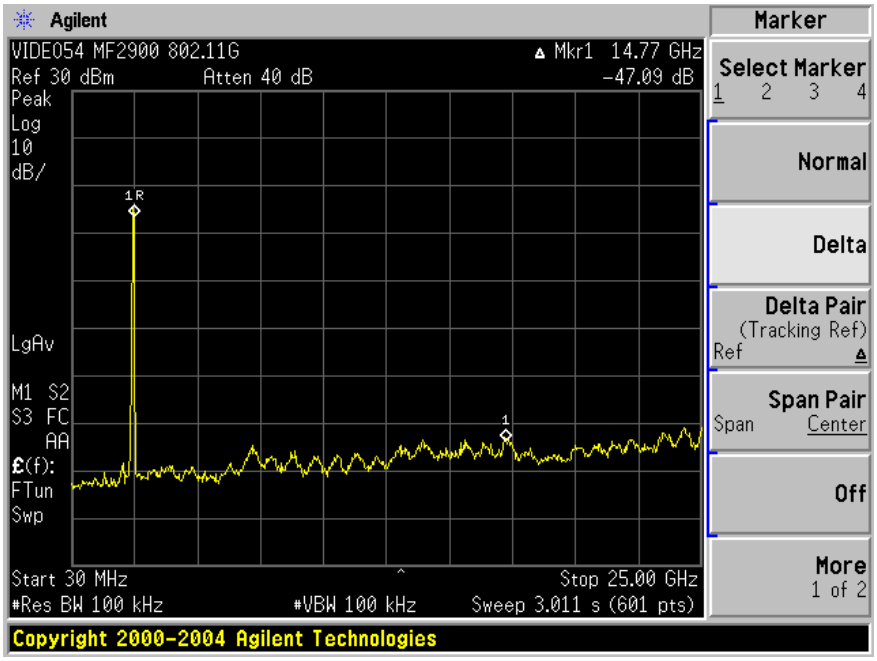


High Channel

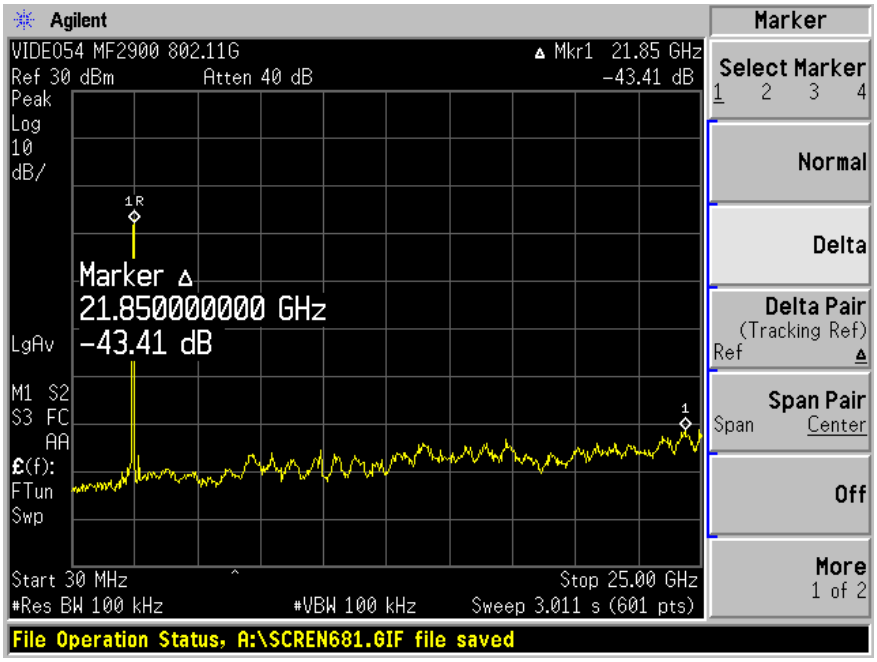


802.11g

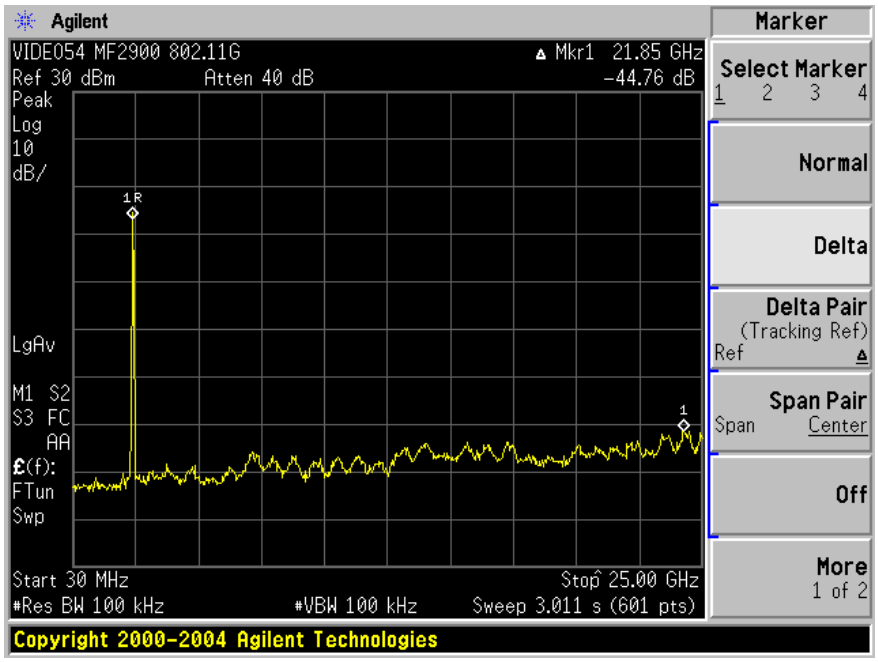
Low Channel



Mid Channel



High Channel



§15.205 & §15.209 - SPURIOUS RADIATED EMISSION

Measurement Uncertainty

All measurements involve certain levels of uncertainties. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at BACL is ±4.0 dB.

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

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

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

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

According to §15.209, the device shall meet radiated emission general requirements.

Except for Class A device, the filed strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (Microvolts/meter)	(dBμV/meter)
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

EUT Setup

The radiated emission tests were performed in the open area 3-meter test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209 limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

The EUT was connected to the power adapter which is connected with 120Vac/60Hz power source.

Spectrum Analyzer Setup

According to FCC Rules, 47 CFR, Section 15.33, the frequency was investigated from 30 to 25000 MHz.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Range	***RBW***	***Video B/W***
Below 30MHz	10kHz	10kHz
30 – 1000MHz	100kHz	100kHz
Above 1000MHz	1MHz	1MHz

For Average measurement: RBW = 1MHz, VBW = 10Hz (above 1000MHz)

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
EMCO	Antenna, Biconical	3110B	9603-2315	12/14/2004
HP	Amplifier, Pre (.1 ~1300MHz)	8447D	2944A10198	8/20/2004
Agilent	Analyzer, Spectrum	E4446A	US44300386	11/10/2004
EMCO	Antenna, Log-Periodic	3148	4-1155	12/14/2004
HP	Pre, Amplifier (1 ~ 26.5 GHz)	8449B	3147A00400	03/14/2005
Wisewave	Antenna, Horn, Std	ARH-2823-02	10555-02	12/13/2004

* **Statement of Traceability:** BACL attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

For the radiated emissions test, the EUT, and all support equipment power cords was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings performed only when an emission was found to be marginal (within -4 dBμV of specification limits), and are distinguished with a "**Qp**" in the data table.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. - FCC 15.209 Limit

Environmental Conditions

Temperature:	22° C
Relative Humidity:	59%
ATM Pressure:	1023 mbar

The testing was performed by Snell Leong on 2005-05-23.

Summary of Test Results

According to the data hereinafter, the EUT test data are within the measurement uncertainty ±4.0 dB, and had the worst margin of:

802.11b:

-5.0 dB at **7236.00 MHz** in the **Vertical** polarization, Low Channel

-1.7 dB at **7326.00 MHz** in the **Vertical** polarization, Middle Channel

-0.6 dB at **7386.00 MHz** in the **Vertical** polarization, High Channel

-7.0 dB at **276.00 MHz** in the **Horizontal** polarization, Unintentional Emission

802.11g:

-3.7 dB at **7236.00 MHz** in the **Vertical** polarization, Low Channel

-1.5 dB at **7326.00 MHz** in the **Vertical** polarization, Middle Channel

-1.5 dB at **7386.00 MHz** in the **Vertical** polarization, High Channel

-7.0 dB at **276.00 MHz** in the **Horizontal** polarization, Unintentional Emission

Radiated Emission Test Result for 802.11b

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 SUBPART C	
Frequency MHz	Ampl. dBμV/m	Comments	Angle Degree	Height Meter	Polar H/ V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Low Channel, 1-25GHz											
7236.0000	42.6	Ave	180	2.0	v	36.7	4.3	34.7	49.0	54	-5.0
7236.0000	36.7	Ave	90	2.0	h	36.7	4.3	34.7	43.1	54	-10.9
4824.0000	41.2	Ave	270	2.4	v	32.5	3.1	34.8	42.0	54	-12.0
4824.0000	39.5	Ave	180	2.3	h	32.5	3.1	34.8	40.3	54	-13.7
4824.0000	56.0	Peak	180	2.3	h	32.5	3.1	34.8	56.8	74	-17.3
7236.0000	49.2	Peak	90	2.0	v	36.7	4.3	34.7	55.6	74	-18.4
4824.0000	54.1	Peak	270	2.4	v	32.5	3.1	34.8	54.9	74	-19.1
7236.0000	46.4	Peak	180	2.0	h	36.7	4.3	34.7	52.7	74	-21.3
Middle Channel, 1-25GHz											
7326.0000	46.0	Ave	270	2.4	v	36.7	4.3	34.7	52.3	54	-1.7
4884.0000	44.8	Ave	180	2.2	h	32.5	3.1	34.8	45.6	54	-8.4
7326.0000	39.0	Ave	180	2.1	h	36.7	4.3	34.7	45.3	54	-8.7
4884.0000	63.0	Peak	180	2.2	h	32.5	3.1	34.8	63.8	74	-10.2
4884.0000	41.9	Ave	270	2.4	v	32.5	3.1	34.8	42.7	54	-11.4
4884.0000	59.9	Peak	270	2.4	v	32.5	3.1	34.8	60.7	74	-13.3
7326.0000	50.0	Peak	270	2.4	v	36.7	4.3	34.7	56.4	74	-17.6
7326.0000	48.9	Peak	180	2.3	h	36.7	4.3	34.7	55.2	74	-18.8
High Channel, 1-25GHz											
7386.0000	47.0	Ave	270	2.4	v	36.7	4.3	34.7	53.4	54	-0.6
7386.0000	40.2	Ave	90	2.1	h	36.7	4.3	34.7	46.5	54	-7.5
4924.0000	42.8	Ave	90	2.1	h	32.5	3.1	34.8	43.6	54	-10.4
4924.0000	41.4	Ave	270	2.4	v	32.5	3.1	34.8	42.2	54	-11.8
4924.0000	59.9	Peak	90	2.1	h	32.5	3.1	34.8	60.7	74	-13.3
7386.0000	53.0	Peak	270	2.4	v	36.7	4.3	34.7	59.3	74	-14.7
4924.0000	57.6	Peak	270	2.4	v	32.5	3.1	34.8	58.4	74	-15.6
7386.0000	46.2	Peak	90	2.1	h	36.7	4.3	34.7	52.6	74	-21.4

30MHz – 1GHz

Indicated			Table	Antenna		Correction Factor			FCC 15 Subpart B	
Frequency	Ampl.	Direction	Height	Polar	Antenna	Cable Loss	Amp.	Corr. Ampl.	Limit	Margin
MHz	dBμV/m	Degree	Meter	H/V	dB	dB	dB	dBμV/m	dBμV/m	dB
276.00	49.5	280	2.8	H	13.4	3.5	27.4	39.0	46	-7.0
920.00	36.7	240	3.1	H	22.1	6.9	27.3	38.4	46	-7.6
920.00	34.9	330	3.0	V	22.1	6.9	27.3	36.6	46	-9.4
276.00	46.8	250	1.0	V	13.4	3.5	27.4	36.3	46	-9.7
460.00	42.9	240	3.1	H	17.2	4.7	28.5	36.3	46	-9.7
184.00	45.3	330	1.2	V	11.6	2.8	27.8	31.9	43.5	-11.6
250.00	46.2	270	3.2	H	11.9	3.4	27.4	34.1	46	-11.9
250.00	45.9	75	1.8	V	11.9	3.4	27.4	33.8	46	-12.2
368.00	40.2	240	3.1	H	14.8	4.1	27.8	31.3	46	-14.7
184.00	41.2	270	2.1	H	11.6	2.8	27.8	27.8	43.5	-15.8
460.00	36.8	270	1.0	V	17.2	4.7	28.5	30.2	46	-15.8
350.00	38.7	280	2.8	H	14.5	4.2	27.7	29.7	46	-16.3
368.00	36.0	270	1.0	V	14.8	4.1	27.8	27.1	46	-19.0
350.00	33.0	250	1.0	V	14.5	4.2	27.7	24.0	46	-22.0

FUND = Fundamental
AVG = average

Radiated Emission Test Result for 802.11g

INDICATED			TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15 SUBPART C	
Frequency MHz	Ampl. dBμV/m	Comments	Angle Degree	Height Meter	Polar H/V	Antenna dB	Cable dB	Amp. dB	Corr. Ampl. dBμV/m	Limit dBμV/m	Margin dB
Low Channel, 1-25GHz											
7236.0000	43.9	Ave	180	2.0	v	36.7	4.3	34.7	50.3	54	-3.7
7236.0000	37.8	Ave	90	2.0	h	36.7	4.3	34.7	44.2	54	-9.8
4824.0000	42.4	Ave	270	2.4	v	32.5	3.1	34.8	43.2	54	-10.8
4824.0000	40.7	Ave	180	2.3	h	32.5	3.1	34.8	41.5	54	-12.5
4824.0000	57.6	Peak	180	2.3	h	32.5	3.1	34.8	58.4	74	-15.6
7236.0000	50.7	Peak	90	2.0	v	36.7	4.3	34.7	57.1	74	-16.9
4824.0000	55.8	Peak	270	2.4	v	32.5	3.1	34.8	56.6	74	-17.4
7236.0000	47.8	Peak	180	2.0	h	36.7	4.3	34.7	54.1	74	-19.9
Middle Channel, 1-25GHz											
7326.0000	46.2	Ave	270	2.4	v	36.7	4.3	34.7	52.5	54	-1.5
4884.0000	45.7	Ave	180	2.2	h	32.5	3.1	34.8	46.5	54	-7.5
7326.0000	39.7	Ave	180	2.1	h	36.7	4.3	34.7	46.1	54	-7.9
4884.0000	64.2	Peak	180	2.2	h	32.5	3.1	34.8	65.0	74	-9.0
4884.0000	42.7	Ave	270	2.4	v	32.5	3.1	34.8	43.5	54	-10.5
4884.0000	61.1	Peak	270	2.4	v	32.5	3.1	34.8	61.9	74	-12.1
7326.0000	51.0	Peak	270	2.4	v	36.7	4.3	34.7	57.4	74	-16.6
7326.0000	49.9	Peak	180	2.3	h	36.7	4.3	34.7	56.2	74	-17.8
High Channel, 1-25GHz											
7386.0000	46.2	Ave	270	2.4	v	36.7	4.3	34.7	52.5	54	-1.5
7386.0000	41.0	Ave	90	2.1	h	36.7	4.3	34.7	47.3	54	-6.7
4924.0000	43.7	Ave	90	2.1	h	32.5	3.1	34.8	44.5	54	-9.5
4924.0000	42.3	Ave	270	2.4	v	32.5	3.1	34.8	43.1	54	-10.9
4924.0000	61.1	Peak	90	2.1	h	32.5	3.1	34.8	61.9	74	-12.1
7386.0000	54.0	Peak	270	2.4	v	36.7	4.3	34.7	60.4	74	-13.6
4924.0000	58.8	Peak	270	2.4	v	32.5	3.1	34.8	59.6	74	-14.4
7386.0000	47.1	Peak	90	2.1	h	36.7	4.3	34.7	53.5	74	-20.5

30MHz – 1GHz

Indicated			Table	Antenna		Correction Factor			FCC 15 Subpart B	
Frequency	Ampl.	Direction	Height	Polar	Antenna	Cable Loss	Amp.	Corr. Ampl.	Limit	Margin
MHz	dBμV/m	Degree	Meter	H/V	dB	dB	dB	dBμV/m	dBμV/m	dB
276.00	49.0	280	2.8	H	13.4	3.5	27.4	39.0	46	-7.0
920.00	36.3	240	3.1	H	22.1	6.9	27.3	38.4	46	-7.6
920.00	34.5	330	3.0	V	22.1	6.9	27.3	36.6	46	-9.4
276.00	46.3	250	1.0	V	13.4	3.5	27.4	36.3	46	-9.7
460.00	42.5	240	3.1	H	17.2	4.7	28.5	36.3	46	-9.7
184.00	44.9	330	1.2	V	11.6	2.8	27.8	31.9	43.5	-11.6
250.00	45.8	270	3.2	H	11.9	3.4	27.4	34.1	46	-11.9
250.00	45.4	75	1.8	V	11.9	3.4	27.4	33.8	46	-12.2
368.00	39.8	240	3.1	H	14.8	4.1	27.8	31.3	46	-14.7
184.00	40.7	270	2.1	H	11.6	2.8	27.8	27.8	43.5	-15.8
460.00	36.5	270	1.0	V	17.2	4.7	28.5	30.2	46	-15.8
350.00	38.4	280	2.8	H	14.5	4.2	27.7	29.7	46	-16.3
368.00	35.6	270	1.0	V	14.8	4.1	27.8	27.1	46	-19.0
350.00	32.7	250	1.0	V	14.5	4.2	27.7	24.0	46	-22.0

FUND = Fundamental
AVG = average

§15.247(a)(2) – 6 dB BANDWIDTH

Standard Applicable

According to §15.247(a)(2), for digital modulation techniques, the minimum 6dB bandwidth shall be at least 500 kHz.

Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth. (6 dB bandwidth for DTS)
4. Repeat above procedures until all frequencies measured were complete.

Equipment Lists

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	11/10/2004

*** Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Measurement Result

Environmental Conditions

Temperature:	22° C
Relative Humidity:	59%
ATM Pressure:	1023 mbar

The testing was performed by Snell Leong on 2005-05-23.

Test Result

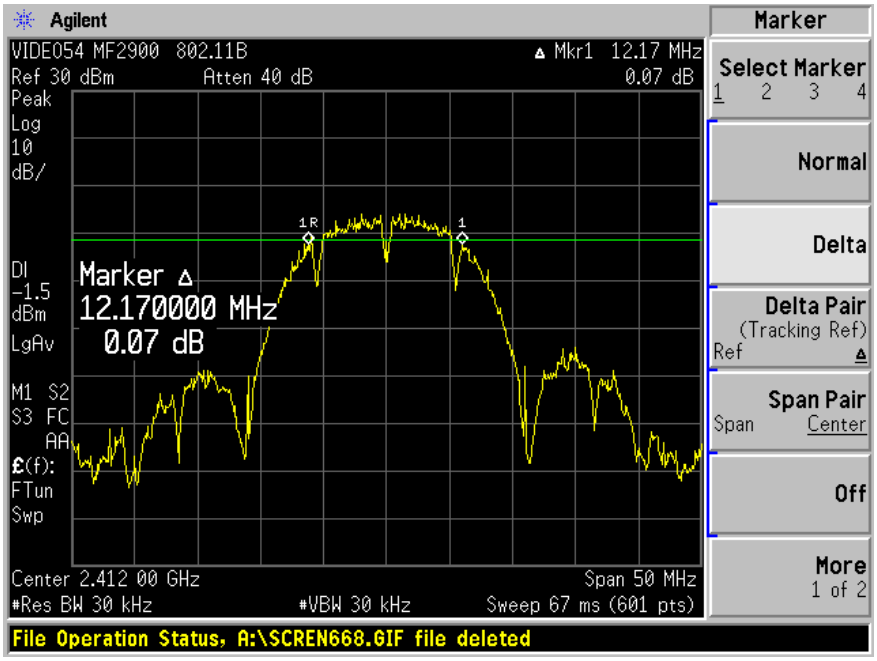
802.11b

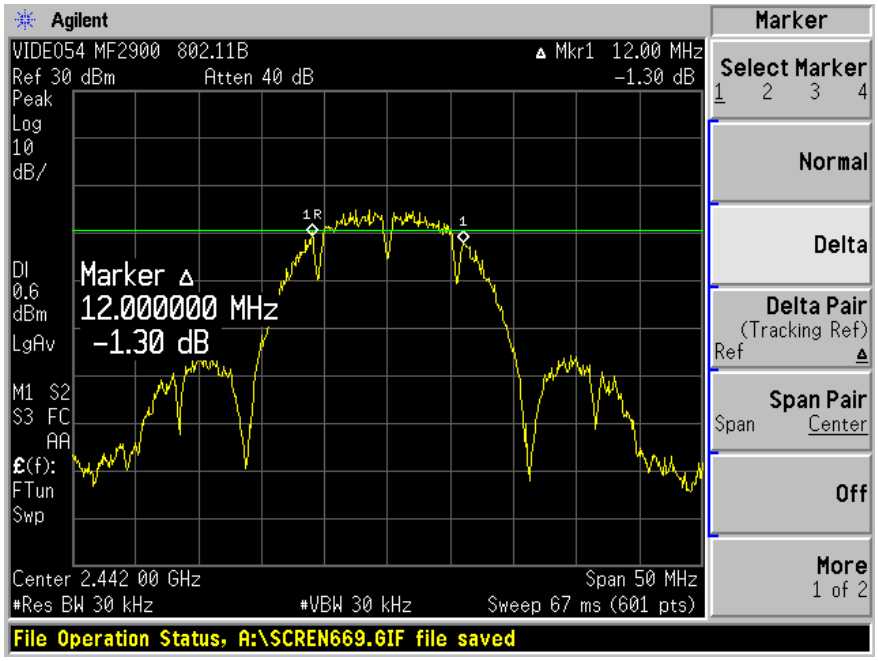
Channel	Frequency (MHz)	Measured (MHz)	Standard (kHz)	Result
Low	2412	12.17	≥ 500	Pass
Mid	2442	12.00	≥ 500	Pass
High	2462	12.33	≥ 500	Pass

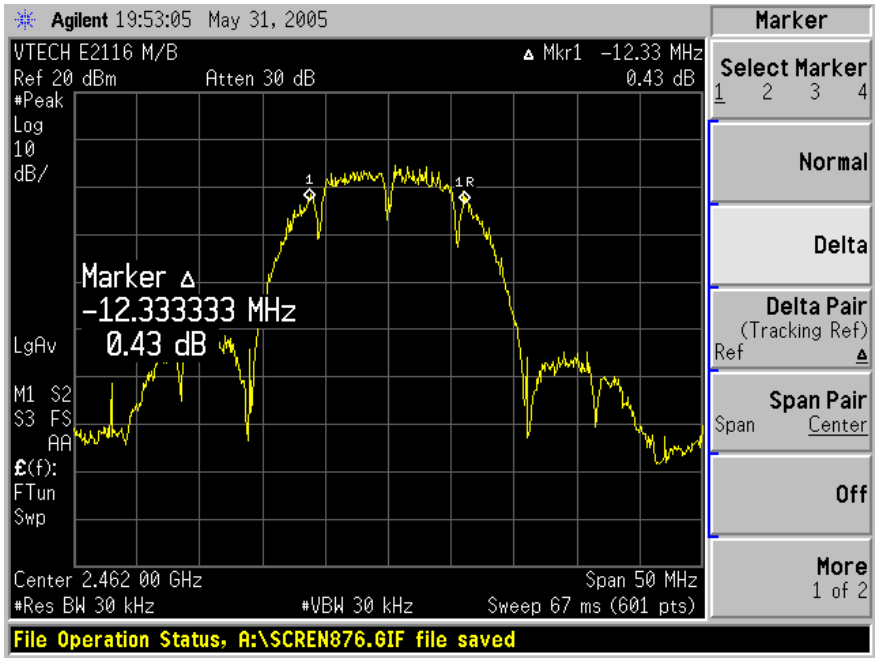
802.11g

Channel	Frequency (MHz)	Measured (MHz)	Standard (kHz)	Result
Low	2412	16.67	≥ 500	Pass
Mid	2442	16.67	≥ 500	Pass
High	2462	16.42	≥ 500	Pass

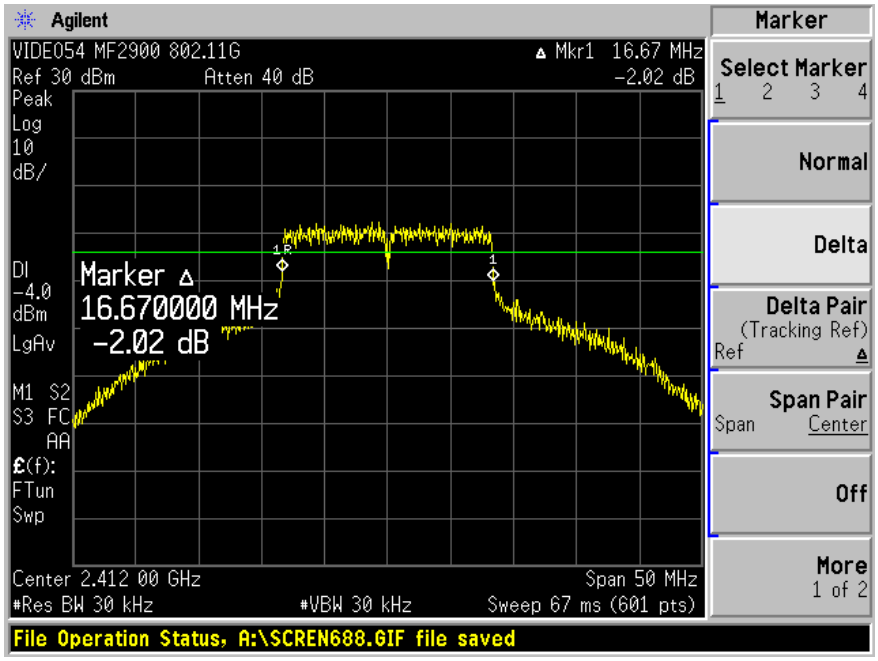
802.11b

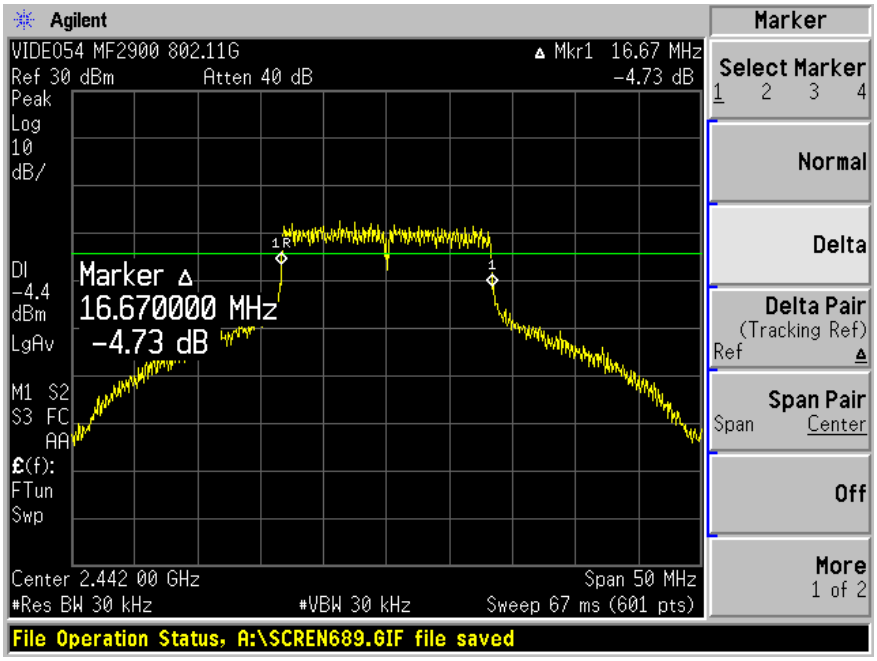

Agilent
VIDEO54 MF2900 802.11B
Ref 30 dBm
Atten 40 dB
Mkr1 12.17 MHz
0.07 dB
Peak
Log
10
dB/
Marker Δ
12.170000 MHz
0.07 dB
DI
-1.5
dBm
LgAv
M1 S2
S3 FC
AA
£(f):
FTun
Swp
Center 2.412 00 GHz
Span 50 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 67 ms (601 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, A:\SCREN668.GIF file deleted

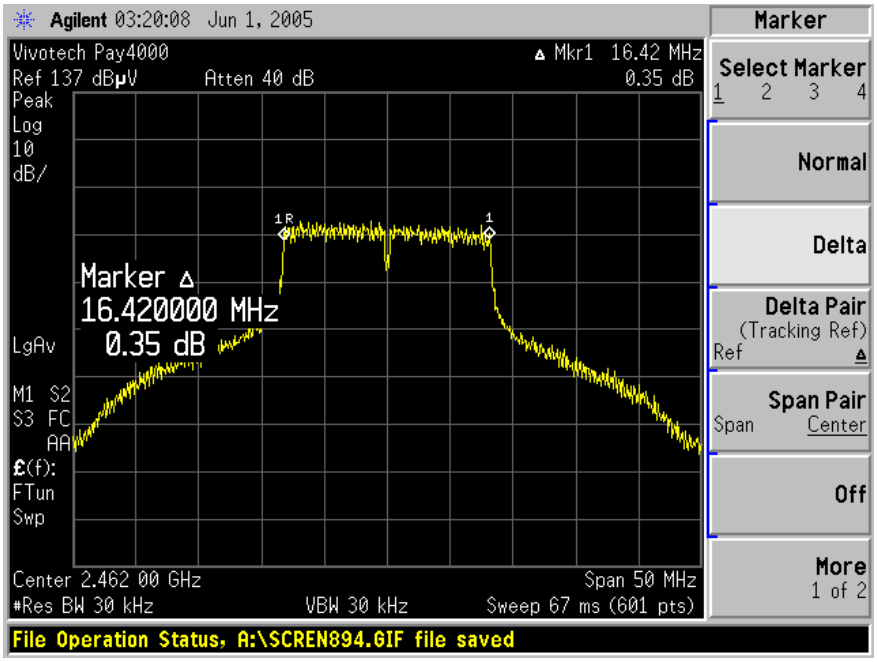

Agilent
VIDEO54 MF2900 802.11B
Ref 30 dBm
Atten 40 dB
Mkr1 12.00 MHz
-1.30 dB
Peak
Log
10
dB/
Marker Δ
12.000000 MHz
-1.30 dB
DI
0.6
dBm
LgAv
M1 S2
S3 FC
AA
£(f):
FTun
Swp
Center 2.442 00 GHz
Span 50 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 67 ms (601 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, A:\SCREN669.GIF file saved


Agilent 19:53:05 May 31, 2005
VTECH E2116 M/B
Ref 20 dBm
Atten 30 dB
Mkr1 -12.33 MHz
0.43 dB
#Peak
Log
10
dB/
Marker Δ
-12.333333 MHz
0.43 dB
LgAv
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 2.462 00 GHz
Span 50 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 67 ms (601 pts)
File Operation Status, A:\SCREN876.GIF file saved
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2

802.11g


Agilent
VIDE054 MF2900 802.11G
Ref 30 dBm
Atten 40 dB
Mkr1 16.67 MHz
-2.02 dB
Peak
Log
10
dB/
Marker Δ
16.670000 MHz
-2.02 dB
DI
-4.0
dBm
LgAv
M1 S2
S3 FC
AA
£(f):
FTun
Swp
Center 2.412 00 GHz
Span 50 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 67 ms (601 pts)
File Operation Status, A:\SCREN688.GIF file saved
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2


Agilent
VIDEO54 MF2900 802.11G
Ref 30 dBm
Atten 40 dB
Mkr1 16.67 MHz
-4.73 dB
Peak
Log
10
dB/
Marker Δ
16.670000 MHz
-4.73 dB
Center 2.442 00 GHz
Span 50 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 67 ms (601 pts)
File Operation Status, A:\SCREN689.GIF file saved
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2


Agilent 03:20:08 Jun 1, 2005
Vivotech Pay4000
Ref 137 dBμV
Atten 40 dB
Mkr1 16.42 MHz
0.35 dB
Peak
Log
10
dB/
Marker Δ
16.420000 MHz
0.35 dB
Center 2.462 00 GHz
Span 50 MHz
#Res BW 30 kHz
VBW 30 kHz
Sweep 67 ms (601 pts)
File Operation Status, A:\SCREN894.GIF file saved
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2

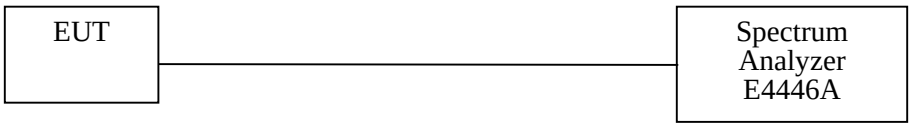
§15.247(b)(3) - PEAK OUTPUT POWER MEASUREMENT

Standard Applicable

According to §15.247(b) (3), for systems using digital modulation in 2400-2483.5 MHz: 1 Watt

Measurement Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to a spectrum analyzer.
3. Add a correction factor to the display.



Equipment Lists

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	11/10/2004

*** Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Measurement Result

Environmental Conditions

Temperature:	22° C
Relative Humidity:	59%
ATM Pressure:	1023 mbar

The testing was performed by Snell Leong on 2005-05-23.

Output Power

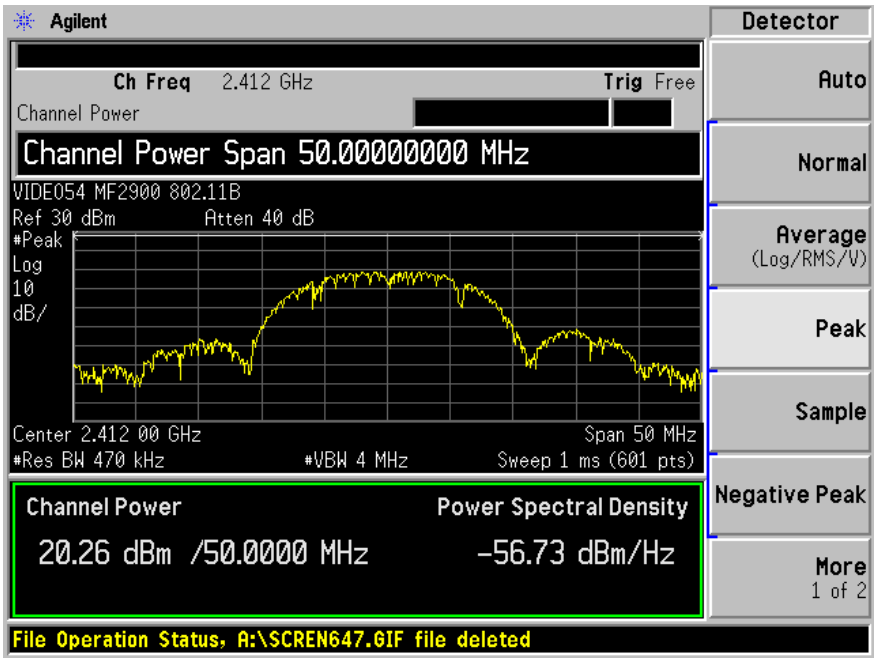
802.11b

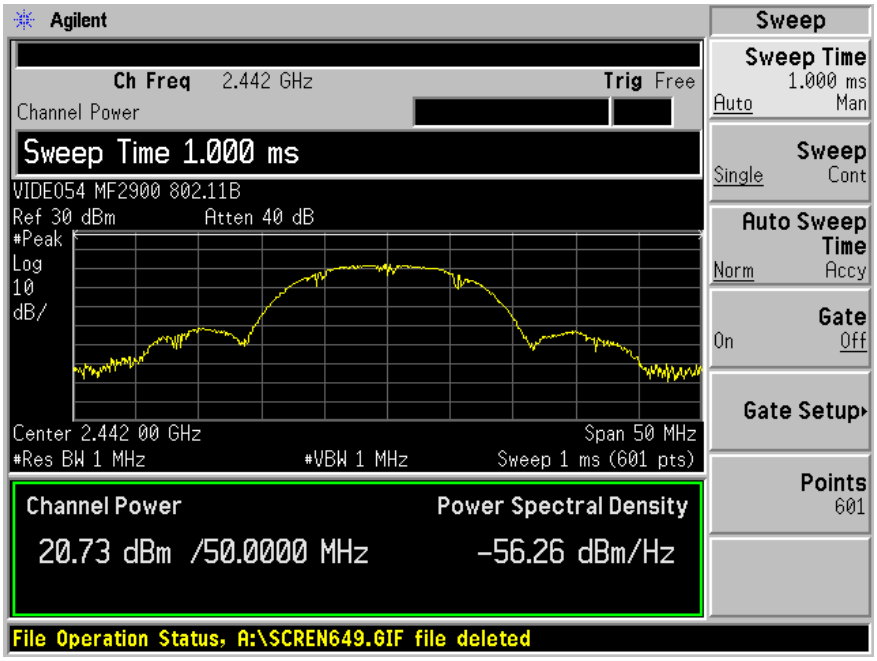
Channel	Frequency	Max Peak Output Power		Limit	Result
	MHz	(dBm)	(m Watt)	(m Watt)	
Low	2412	20.26	106.17	1000	pass
Mid	2442	20.73	118.30	1000	pass
High	2462	20.21	104.95	1000	pass

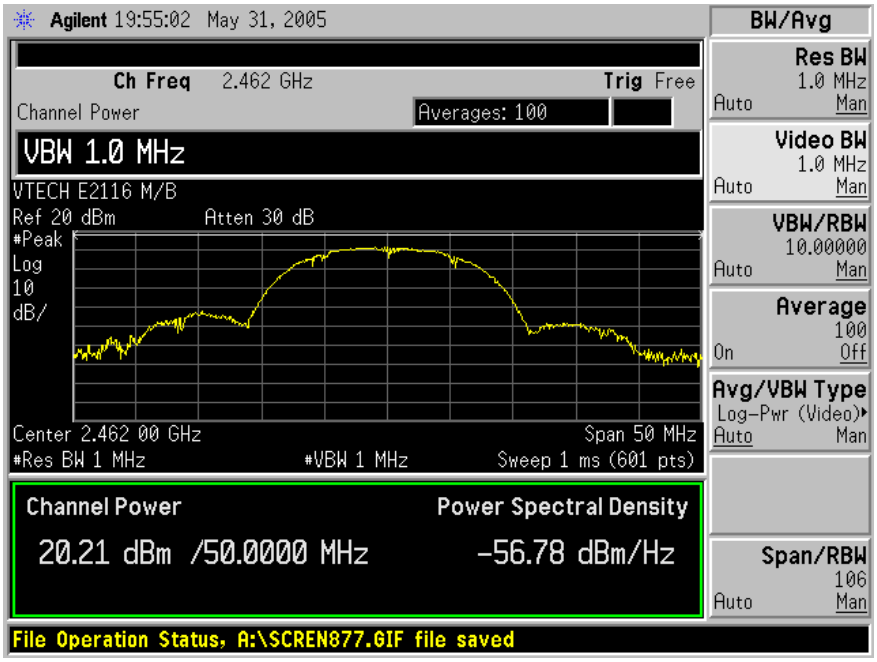
802.11g

Channel	Frequency	Max Peak Output Power		Limit	Result
	MHz	(dBm)	(m Watt)	(m Watt)	
Low	2412	20.97	125.03	1000	pass
Mid	2442	20.8	120.23	1000	pass
High	2462	21.01	126.18	1000	pass

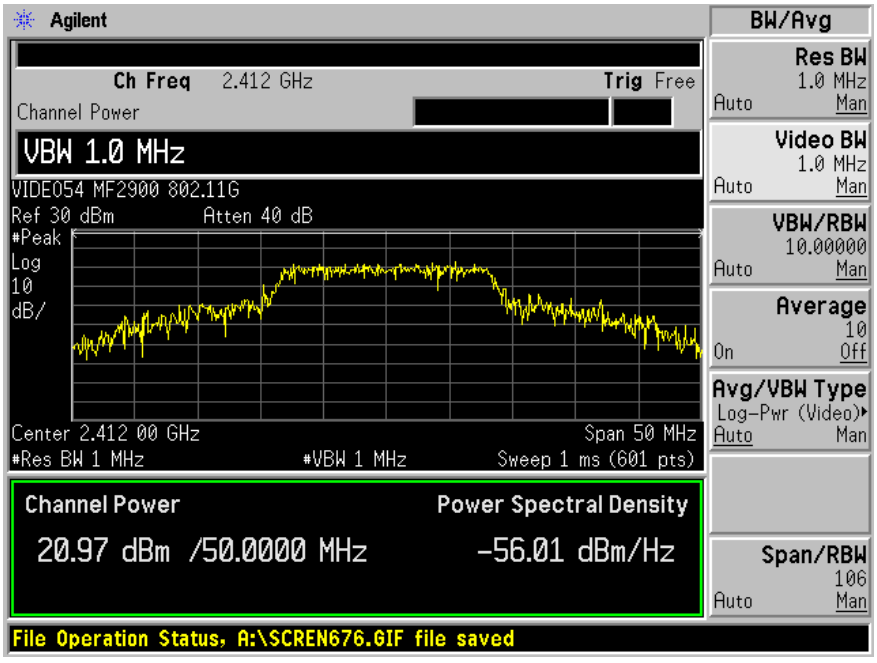
802.11b

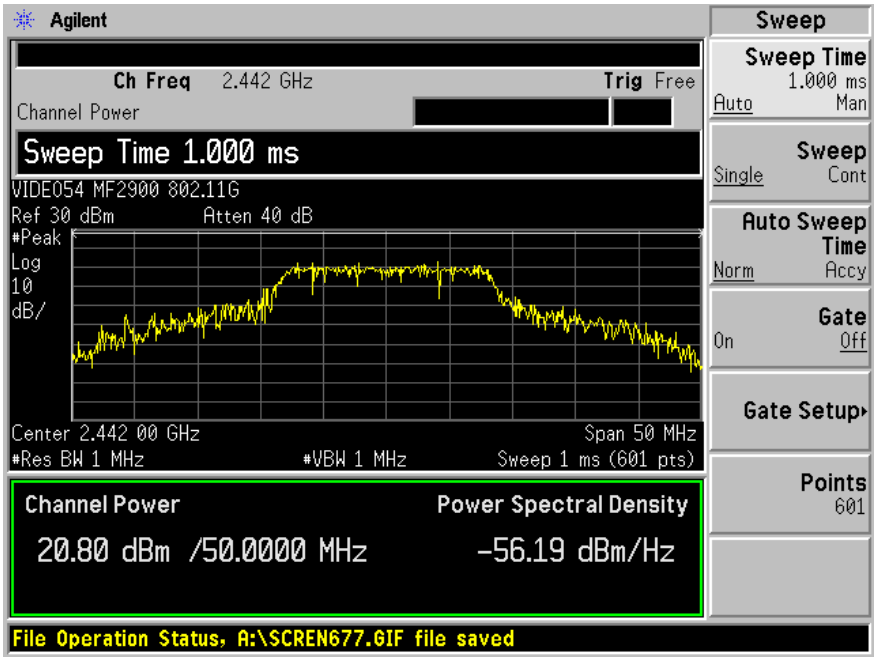

Agilent
Detector
Ch Freq 2.412 GHz
Trig Free
Channel Power
Channel Power Span 50.00000000 MHz
VIDEO54 MF2900 802.11B
Ref 30 dBm
Atten 40 dB
#Peak
Log
10
dB/
Center 2.412 00 GHz
Span 50 MHz
#Res BW 470 kHz
#VBW 4 MHz
Sweep 1 ms (601 pts)
Channel Power
20.26 dBm /50.0000 MHz
Power Spectral Density
-56.73 dBm/Hz
Auto
Normal
Average
(Log/RMS/V)
Peak
Sample
Negative Peak
More
1 of 2
File Operation Status, A:\SCREN647.GIF file deleted

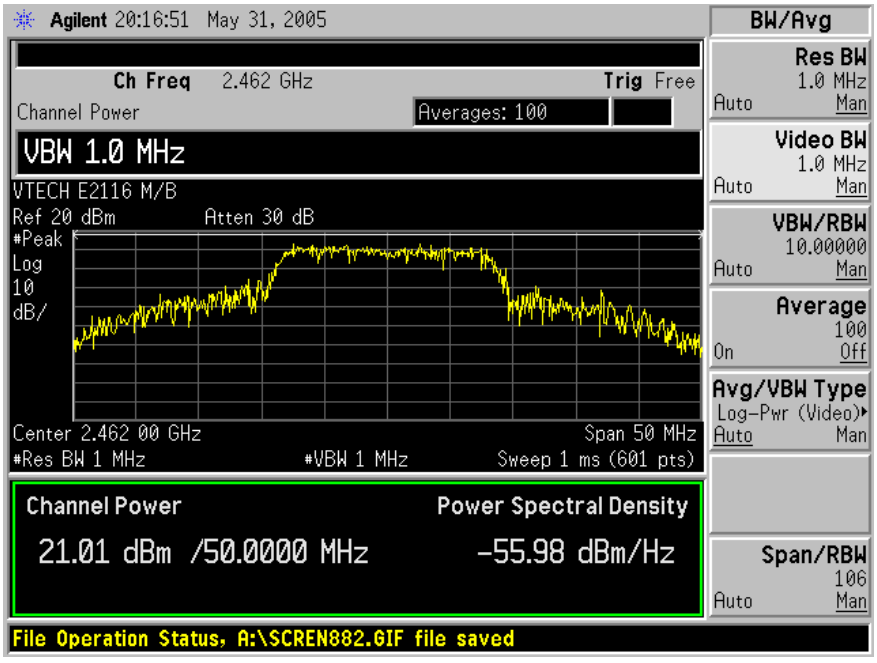

Agilent
Sweep
Ch Freq 2.442 GHz
Trig Free
Channel Power
Sweep Time 1.000 ms
VIDEO54 MF2900 802.11B
Ref 30 dBm
Atten 40 dB
#Peak
Log
10
dB/
Center 2.442 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Channel Power
20.73 dBm /50.0000 MHz
Power Spectral Density
-56.26 dBm/Hz
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Gate
On Off
Gate Setup
Points
601
File Operation Status, A:\SCREN649.GIF file deleted


Agilent 19:55:02 May 31, 2005
Ch Freq 2.462 GHz
Trig Free
Channel Power
Averages: 100
VBW 1.0 MHz
VTECH E2116 M/B
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Center 2.462 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Channel Power
20.21 dBm /50.0000 MHz
Power Spectral Density
-56.78 dBm/Hz
File Operation Status, A:\SCREN877.GIF file saved
BW/Avg
Res BW
1.0 MHz
Auto Man
Video BW
1.0 MHz
Auto Man
VBW/RBW
10.00000
Auto Man
Average
100
On Off
Avg/VBW Type
Log-Pwr (Video)
Auto Man
Span/RBW
106
Auto Man

802.11g


Agilent
Ch Freq 2.412 GHz
Trig Free
Channel Power
VBW 1.0 MHz
VIDE054 MF2900 802.11G
Ref 30 dBm
Atten 40 dB
#Peak
Log
10
dB/
Center 2.412 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Channel Power
20.97 dBm /50.0000 MHz
Power Spectral Density
-56.01 dBm/Hz
File Operation Status, A:\SCREN676.GIF file saved
BW/Avg
Res BW
1.0 MHz
Auto Man
Video BW
1.0 MHz
Auto Man
VBW/RBW
10.00000
Auto Man
Average
10
On Off
Avg/VBW Type
Log-Pwr (Video)
Auto Man
Span/RBW
106
Auto Man


Agilent
Sweep
Ch Freq 2.442 GHz
Trig Free
Channel Power
Sweep Time 1.000 ms
VIDEO54 MF2900 802.11G
Ref 30 dBm
Atten 40 dB
#Peak
Log
10
dB/
Center 2.442 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Channel Power
20.80 dBm /50.0000 MHz
Power Spectral Density
-56.19 dBm/Hz
Sweep Time
1.000 ms
Auto Man
Sweep
Single Cont
Auto Sweep Time
Norm Accy
Gate
On Off
Gate Setup
Points
601
File Operation Status, A:\SCREN677.GIF file saved


Agilent 20:16:51 May 31, 2005
BW/Avg
Ch Freq 2.462 GHz
Trig Free
Channel Power
Averages: 100
VBW 1.0 MHz
VTECH E2116 M/B
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Center 2.462 00 GHz
Span 50 MHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 1 ms (601 pts)
Channel Power
21.01 dBm /50.0000 MHz
Power Spectral Density
-55.98 dBm/Hz
Res BW
1.0 MHz
Auto Man
Video BW
1.0 MHz
Auto Man
VBW/RBW
10.00000
Auto Man
Average
100
On Off
Avg/VBW Type
Log-Pwr (Video)
Auto Man
Span/RBW
106
Auto Man
File Operation Status, A:\SCREN882.GIF file saved

§15.247(d) - 100 KHZ BANDWIDTH OF BAND EDGES

Standard Applicable

According to §15.247(d), in *any* 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) see §15.205(c)).

Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

Equipment Lists

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	11/10/2004

*** Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Measurement Result

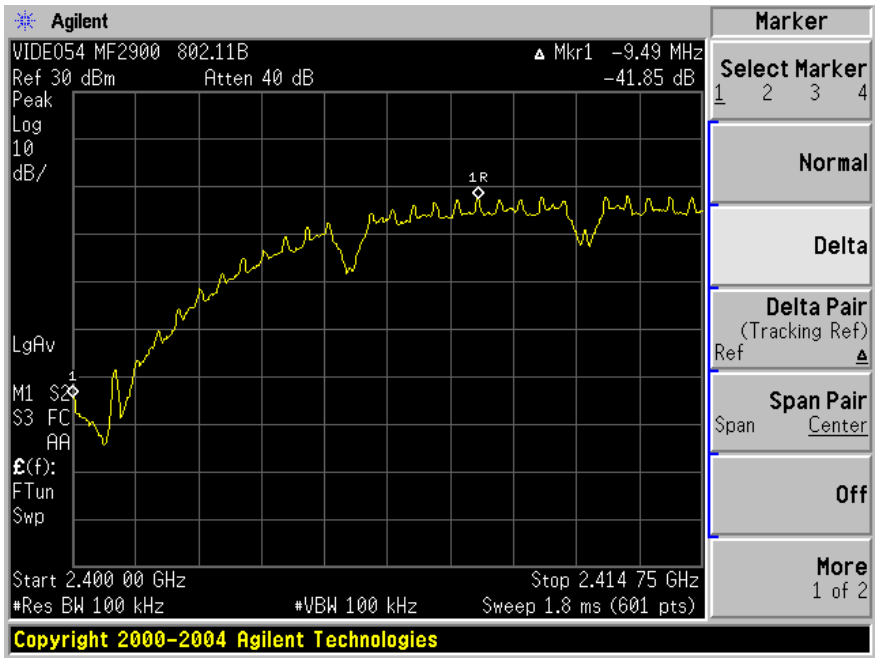
Environmental Conditions

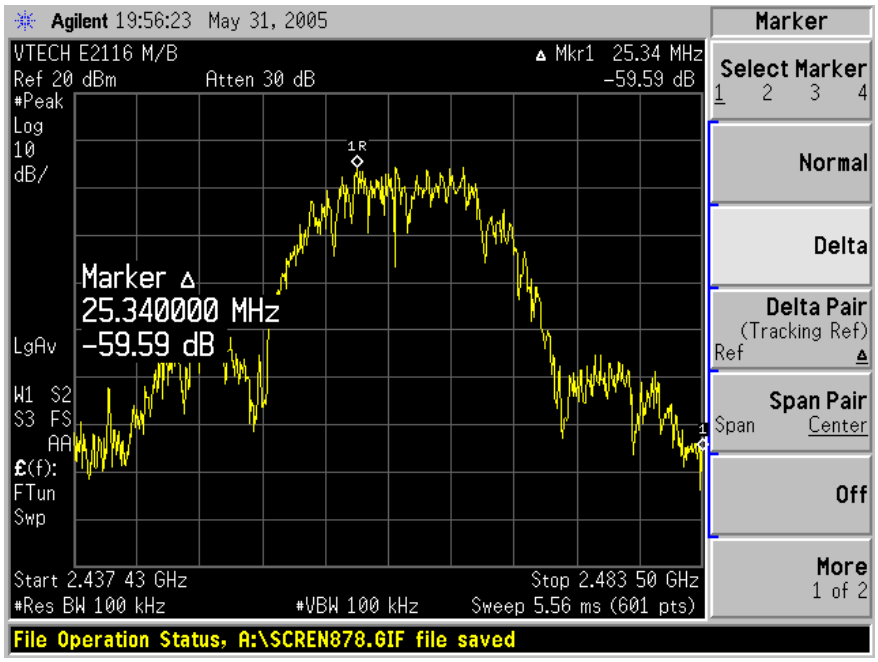
Temperature:	22° C
Relative Humidity:	59%
ATM Pressure:	1023 mbar

The testing was performed by Snell Leong on 2005-05-23.

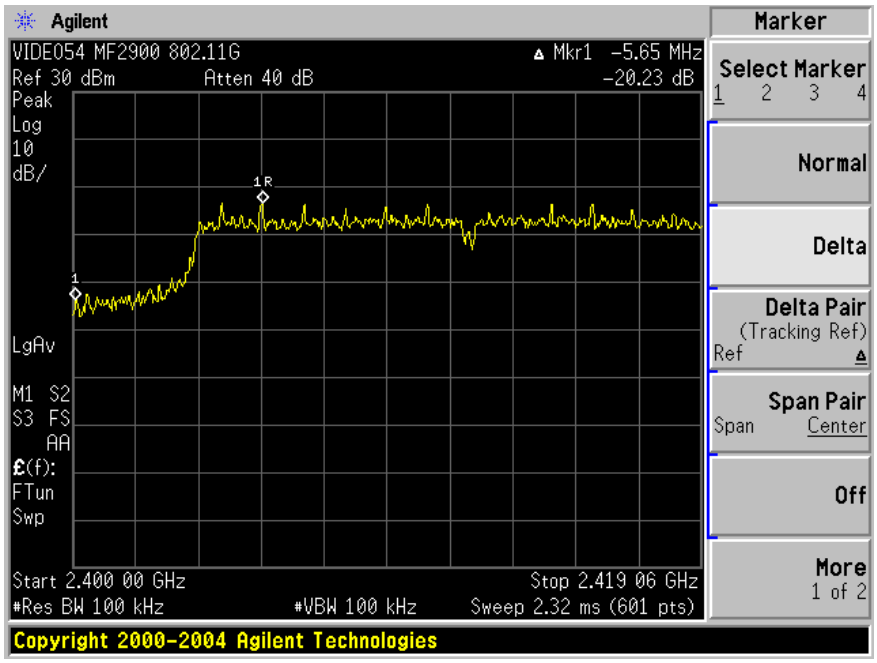
Please refer to following pages for plots of band edge.

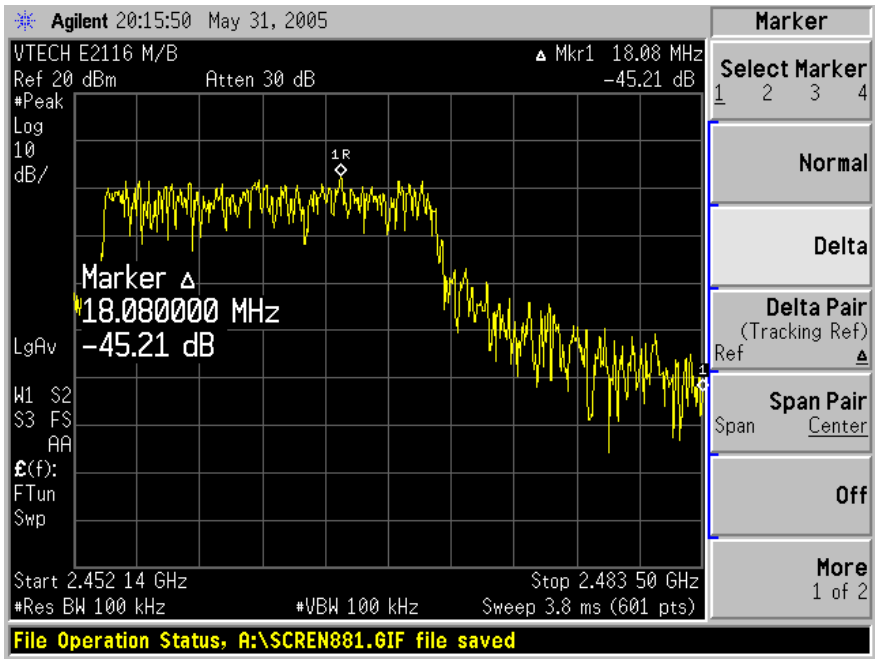
802.11b


Agilent
VIDE054 MF2900 802.11B
Ref 30 dBm
Atten 40 dB
Mkr1 -9.49 MHz
-41.85 dB
Peak
Log
10
dB/
1R
LgAv
M1 S2
S3 FC
AA
£(f):
FTun
Swp
Start 2.400 00 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 2.414 75 GHz
Sweep 1.8 ms (601 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2004 Agilent Technologies


Agilent 19:56:23 May 31, 2005
VTECH E2116 M/B
Ref 20 dBm
Atten 30 dB
Mkr1 25.34 MHz
-59.59 dB
#Peak
Log
10
dB/
1R
Marker Δ
25.340000 MHz
-59.59 dB
LgAv
W1 S2
S3 FS
AA
£(f):
FTun
Swp
Start 2.437 43 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 2.483 50 GHz
Sweep 5.56 ms (601 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, A:\SCREN878.GIF file saved

802.11g


Agilent
VIDE054 MF2900 802.11G
Ref 30 dBm
Atten 40 dB
Mkr1 -5.65 MHz
-20.23 dB
Peak
Log
10
dB/
1R
1
LgAv
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Start 2.400 00 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 2.419 06 GHz
Sweep 2.32 ms (601 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2004 Agilent Technologies


Agilent 20:15:50 May 31, 2005
VTECH E2116 M/B
Ref 20 dBm
Atten 30 dB
Mkr1 18.08 MHz
-45.21 dB
#Peak
Log
10
dB/
1R
Marker Δ
18.080000 MHz
-45.21 dB
LgAv
W1 S2
S3 FS
AA
£(f):
FTun
Swp
Start 2.452 14 GHz
#Res BW 100 kHz
#VBW 100 kHz
Stop 2.483 50 GHz
Sweep 3.8 ms (601 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, A:\SCREN881.GIF file saved

§15.247(e) - POWER SPECTRAL DENSITY

Standard Applicable

According to §15.247 (e), for direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Adjust the center frequency of SA on any frequency be measured and set SA to 1.5MHz span mode. And then, set RBW and VBW of spectrum analyzer to proper value. (DTS)
4. Repeat above procedures until all frequencies measured were complete.

Equipment Lists

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	11/10/2004

*** Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

Measurement Result

Environmental Conditions

Temperature:	22° C
Relative Humidity:	59%
ATM Pressure:	1023 mbar

The testing was performed by Snell Leong on 2005-05-23.

Test Result

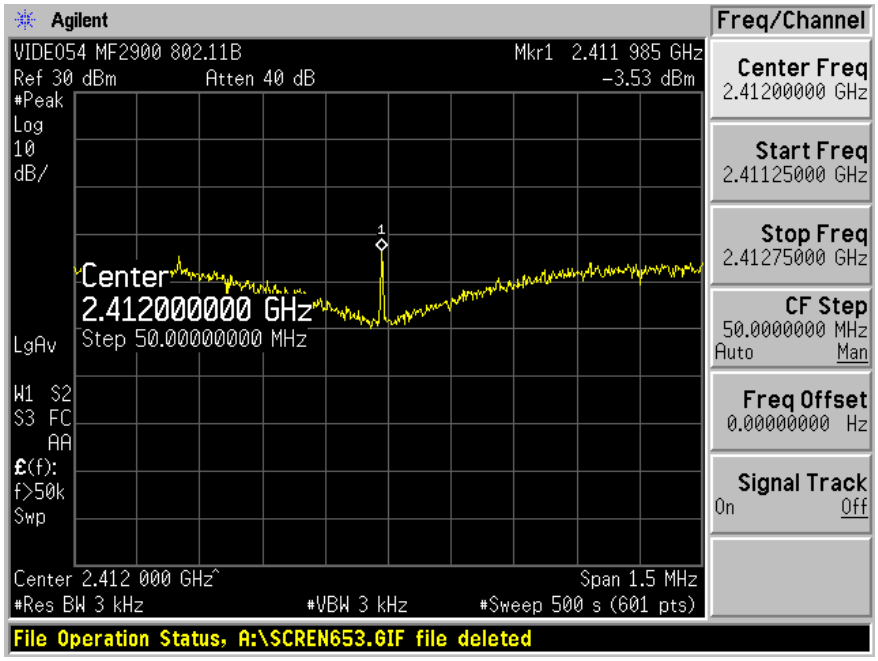
802.11b

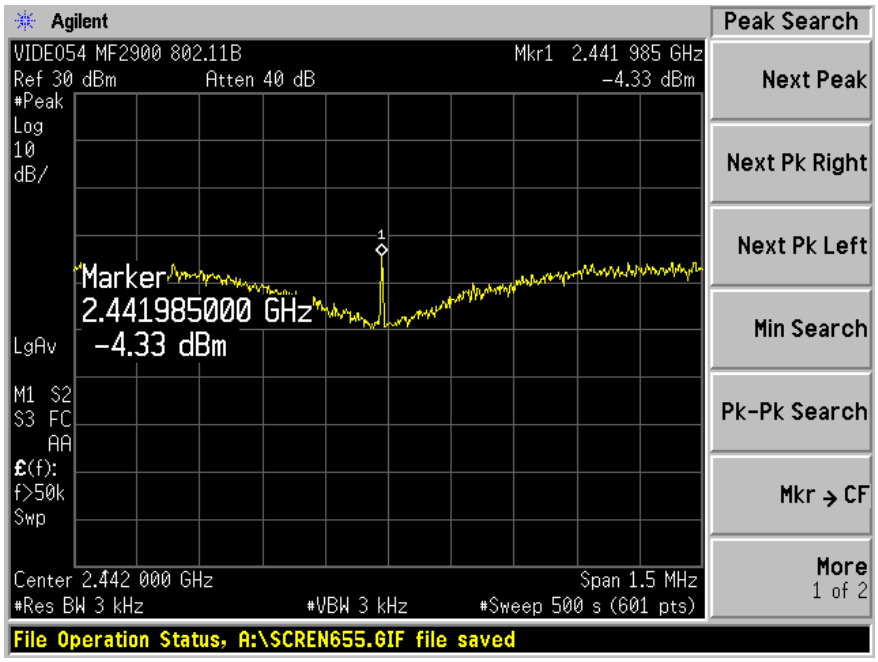
Channel	Frequency (MHz)	Peak Power Spectral Density (dBm)	Standard (dBm)	Result
Low	2412	-3.53	≤ 8	Pass
Mid	2442	-4.33	≤ 8	Pass
High	2462	-4.36	≤ 8	Pass

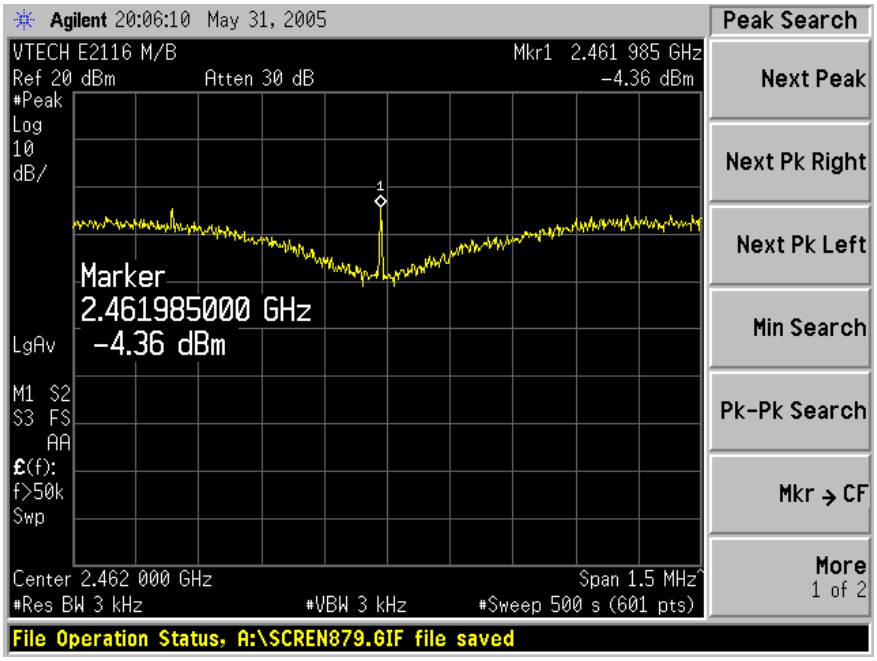
802.11g

Channel	Frequency (MHz)	Peak Power Spectral Density (dBm)	Standard (dBm)	Result
Low	2412	-3.05	≤ 8	Pass
Mid	2442	-3.25	≤ 8	Pass
High	2462	-3.10	≤ 8	Pass

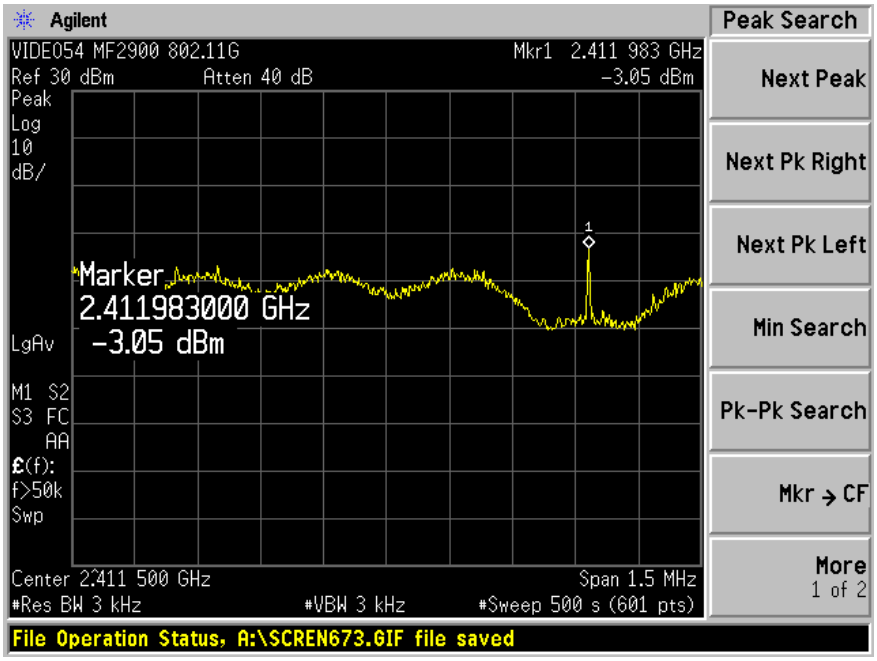
802.11b

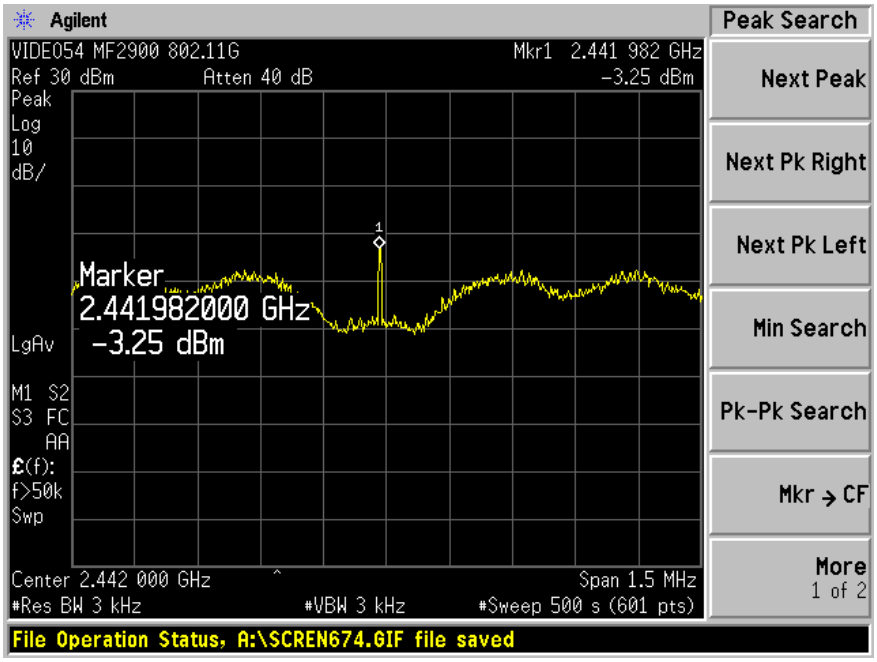

Agilent
VIDEO54 MF2900 802.11B
Mkr1 2.411 985 GHz
Ref 30 dBm
Atten 40 dB
-3.53 dBm
#Peak
Log
10
dB/
Center
2.412000000 GHz
Step 50.00000000 MHz
LgAv
W1 S2
S3 FC
AA
£(f):
f>50k
Swp
Center 2.412 000 GHz
Span 1.5 MHz
#Res BW 3 kHz
#VBW 3 kHz
#Sweep 500 s (601 pts)
File Operation Status, A:\SCREN653.GIF file deleted
Freq/Channel
Center Freq
2.41200000 GHz
Start Freq
2.41125000 GHz
Stop Freq
2.41275000 GHz
CF Step
50.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

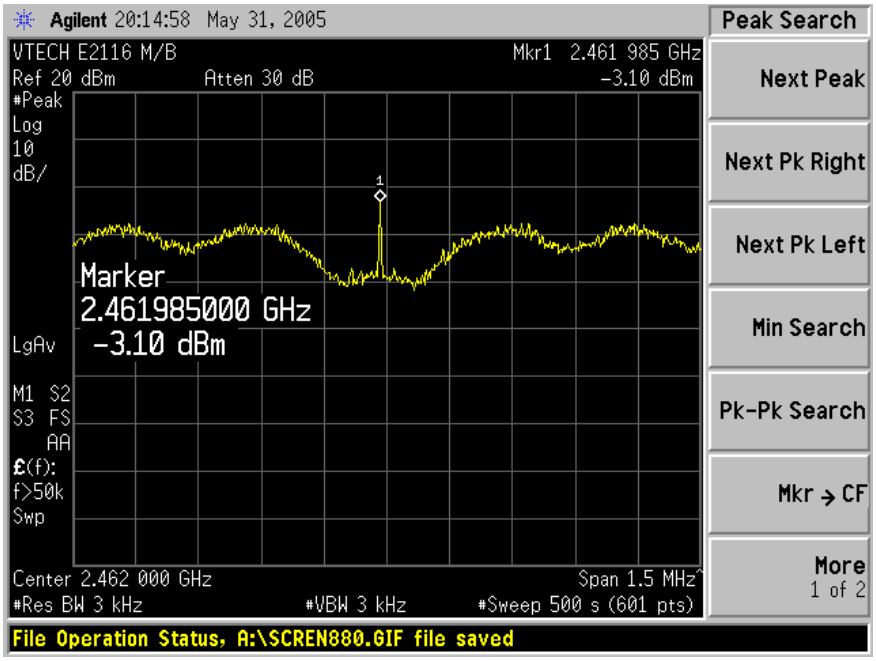

Agilent
VIDEO54 MF2900 802.11B
Mkr1 2.441 985 GHz
Ref 30 dBm
Atten 40 dB
-4.33 dBm
#Peak
Log
10
dB/
Marker
2.441985000 GHz
-4.33 dBm
LgAv
M1 S2
S3 FC
AA
£(f):
f>50k
Swp
Center 2.442 000 GHz
Span 1.5 MHz
#Res BW 3 kHz
#VBW 3 kHz
#Sweep 500 s (601 pts)
File Operation Status, A:\SCREN655.GIF file saved
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2


Agilent 20:06:10 May 31, 2005
Peak Search
VTECH E2116 M/B
Mkr1 2.461 985 GHz
Ref 20 dBm
Atten 30 dB
-4.36 dBm
#Peak
Log
10
dB/
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Marker
2.461985000 GHz
-4.36 dBm
LgAv
M1 S2
S3 FS
AA
£(f):
f>50k
Swp
Center 2.462 000 GHz
Span 1.5 MHz
#Res BW 3 kHz
#VBW 3 kHz
#Sweep 500 s (601 pts)
File Operation Status, A:\SCREN879.GIF file saved

802.11g


Agilent
Peak Search
VIDE054 MF2900 802.11G
Mkr1 2.411 983 GHz
Ref 30 dBm
Atten 40 dB
-3.05 dBm
Peak
Log
10
dB/
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
Marker
2.411983000 GHz
-3.05 dBm
LgAv
M1 S2
S3 FC
AA
£(f):
f>50k
Swp
Center 2.411 500 GHz
Span 1.5 MHz
#Res BW 3 kHz
#VBW 3 kHz
#Sweep 500 s (601 pts)
File Operation Status, A:\SCREN673.GIF file saved


Agilent
VIDEO54 MF2900 802.11G
Mkr1 2.441 982 GHz
Ref 30 dBm
Atten 40 dB
-3.25 dBm
Peak
Log
10
dB/
Marker
2.441982000 GHz
-3.25 dBm
LgAv
M1 S2
S3 FC
AA
£(f):
f>50k
Swp
Center 2.442 000 GHz
Span 1.5 MHz
#Res BW 3 kHz
#VBW 3 kHz
#Sweep 500 s (601 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN674.GIF file saved


Agilent 20:14:58 May 31, 2005
VTECH E2116 M/B
Mkr1 2.461 985 GHz
Ref 20 dBm
Atten 30 dB
-3.10 dBm
#Peak
Log
10
dB/
Marker
2.461985000 GHz
-3.10 dBm
LgAv
M1 S2
S3 FS
AA
£(f):
f>50k
Swp
Center 2.462 000 GHz
Span 1.5 MHz
#Res BW 3 kHz
#VBW 3 kHz
#Sweep 500 s (601 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN880.GIF file saved