# FCC Part 15C Measurement and Test Report

### For

# **Y-Cam Solutions Ltd**

Vision House, 3 Dee Road, Richmond, Surrey. UK

FCC ID: V4FYCHME61

FCC Rules: FCC Part 15C

Product Description: Network Camera

Tested Model: YCHME0x

**Report No.:** <u>STR12108182I-1</u>

Tested Date: <u>2012-10-22 to 2012-12-7</u>

**Issued Date:** <u>2012-12-10</u>

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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by SEM.Test Compliance Service Co., Ltd

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# 1. GENERAL INFORMATION

# 1.1 Product Description for Equipment Under Test (EUT)

**Client Information** 

Applicant: Y-Cam Solutions Ltd

Address of applicant: Vision House, 3 Dee Road, Richmond, Surrey. UK

Manufacturer: Y-Cam Solutions Ltd

Address of manufacturer: Vision House, 3 Dee Road, Richmond, Surrey. UK

General Description of EUT	
Product Name:	Network Camera
Trade Name:	Y-Cam
Model No.:	YCHME0x
Adding Model(s):	/
Rated Voltage:	12V
	•
Note: The test data is gathered from a	production sample, provided by the manufacturer.

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz
RF Output Power:	9.59dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels	11
Channel Separation:	5MHz
Type of Antenna:	Detachable Antenna
Antenna Gain:	2 dBi
Lowest Internal Frequency of EUT:	32.768kHz
Equipment Type (Adaptivity):	Adaptive Equipment

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#### 1.2 Test Standards

The following report is prepared on behalf of the Y-Cam Solutions Ltd in accordance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 of the Federal Communication Commissions rules.

**Maintenance of compliance** is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

# 1.3 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. The public notice KDB 558074 for digital transmission systems shall be performed also.

#### 1.4 Test Facility

#### • FCC – Registration No.: 994117

SEM.Test Compliance Services Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 994117.

#### • Industry Canada (IC) Registration No.: 7673A

The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

#### • CNAS Registration No.: L4062

Shenzhen SEM. Test Electronics Service Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, P.R.C (518101)

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# 1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11b	2412MHz, 2437MHz, 2462MHz
TM2	802.11g	2412MHz, 2437MHz, 2462MHz
TM3	802.11n-HT20	2412MHz, 2437MHz, 2462MHz

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
DC and RJ45 Cable	1.0	Unshielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Adapter	FUJIA	FKS308HSC-1201000N	/
PC	Samsung	R20	/

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# 2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item Resu	
§ 15.203; § 15.247(b)(4)(i)	Antenna Requirement	Compliant
§ 15.207(a)	Conducted Emission	Compliant
§ 15.247(e)	Power Spectral Density	Compliant
§ 15.247(a)(2)	6 dB Bandwidth	Compliant
§ 15.247(b)(3)	RF Output Power	Compliant
§ 15.209(a)(d)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: not applicable

# 3. Antenna Requirement

# 3.1 Standard Applicable

According to FCC Part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

#### 3.2 Evaluation Information

This product has a detachable and unique antenna, fulfill the requirement of this section.

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# 4. Power Spectral Density

# 4.1 Standard Applicable

According to 15.247(a)(1)(iii), For digitally modulated systems, the 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.

# 4.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2012-03-28	2013-03-27
Attenuator	ATTEN	ATS100-4-20	/	2012-03-28	2013-03-27

**Statement of Traceability:** All calibrations have been performed per the NVLAP requirements traceable to the NIST.

#### **4.3 Test Procedure**

According to the KDB 558074, the test method of power spectral density as below:

- 1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 2. Set analyzer center frequency to DTS channel center frequency.
- 3. Set the span to 1.5 times the DTS channel bandwidth.
- 4. Set the RBW  $\geq$  3 kHz.
- 5. Set the VBW  $\geq$  3 x RBW.
- 6. Detector = peak.
- 7. Sweep time = auto couple.
- 8. Trace mode = max hold.
- 9. Allow trace to fully stabilize.
- 10. Use the peak marker function to determine the maximum amplitude level.
- 11. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

#### 4.4 Environmental Conditions

Temperature:	22° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

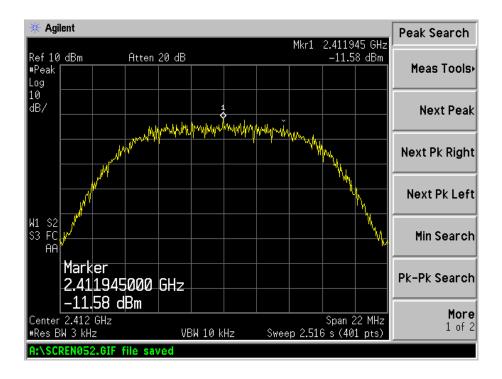
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# **4.5 Summary of Test Results/Plots**

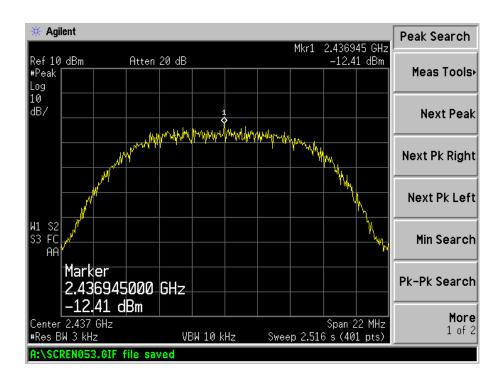
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
	2412	-11.58	8
802.11b	2437	-12.41	8
	2462	-14.20	8
	2412	-14.96	8
802.11g	2437	-15.98	8
	2462	-17.64	8
	2412	-14.23	8
802.11n HT20	2437	-15.82	8
	2462	-17.47	8

Please refer to the following test plots:

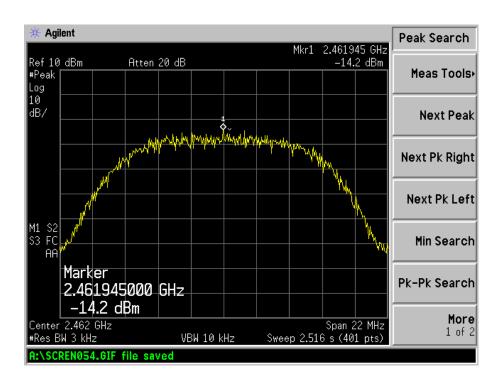
#### 802.11b-Low Channel



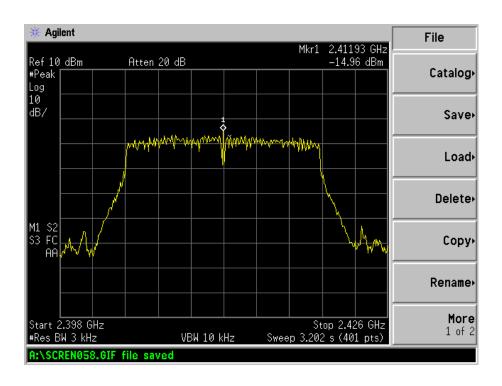
#### 802.11b-Middle Channel



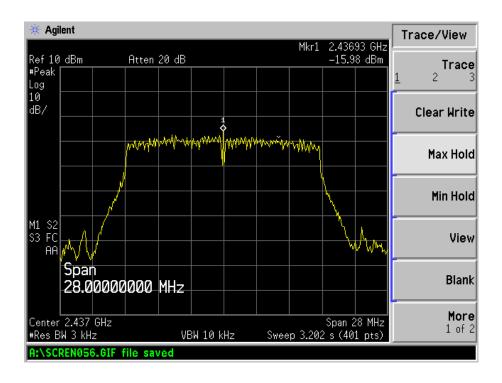
#### 802.11b-High Channel



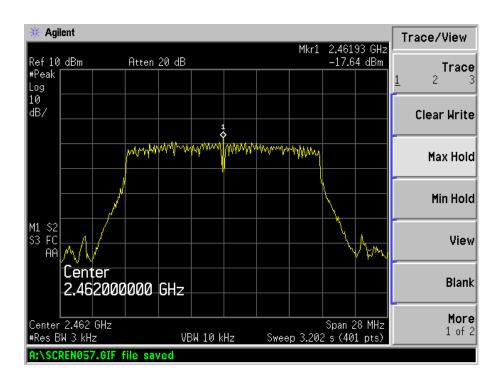
# 802.11g-Low Channel



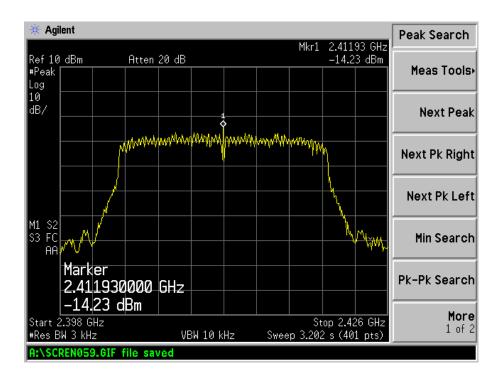
#### 802.11g-Middle Channel



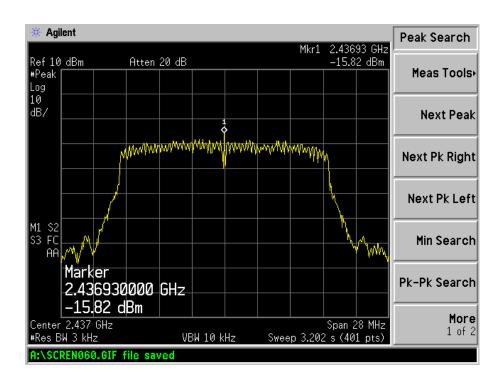
# 802.11g-High Channel



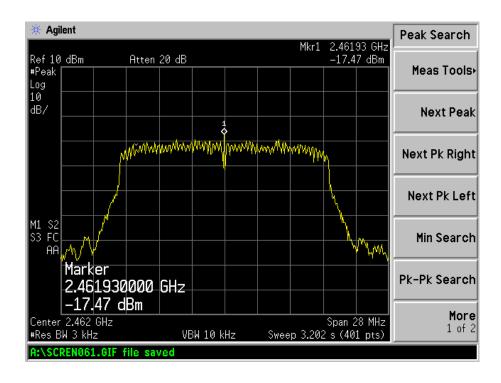
#### 802.11n-HT20-Low Channel



#### 802.11n-HT20-Middle Channel



# 802.11n-HT20-High Channel



#### 5. 6dB Bandwidth

# **5.1 Standard Applicable**

According to 15.247(a)(2). Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### **5.2 Test Equipment List and Details**

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2012-03-28	2013-03-27
Attenuator	ATTEN	ATS100-4-20	/	2012-03-28	2013-03-27

#### **5.3 Test Procedure**

- 1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 2. Set resolution bandwidth (RBW) = 1-5% or DTS BW, not to exceed 100 kHz.
- 3. Set the video bandwidth (VBW)  $\geq$  3 x RBW.
- 4. Detector = Peak.
- 5. Trace mode = max hold.
- 6. Sweep = auto couple.
- 7. Allow the trace to stabilize.
- 8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission..

#### **5.4 Environmental Conditions**

Temperature:	24° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

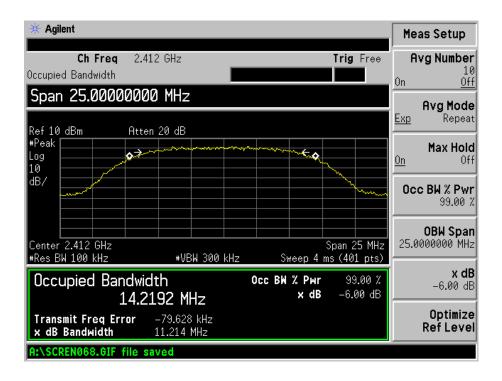
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# **5.5 Summary of Test Results/Plots**

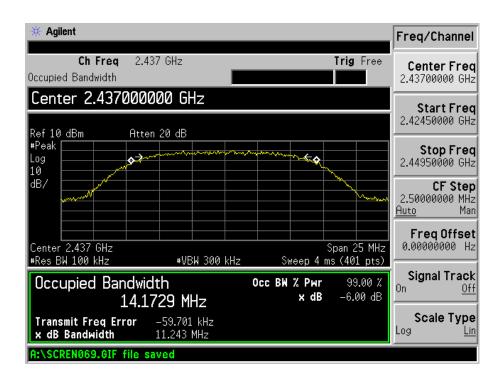
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	Limit kHz
	2412	11214	500
802.11b	2437	11243	500
	2462	11204	500
	2422	16475	500
802.11g	2437	16461	500
	2452	16458	500
	2412	17575	500
802.11n-HT20	2437	17553	500
	2462	17067	500

Please refer to the following test plots:

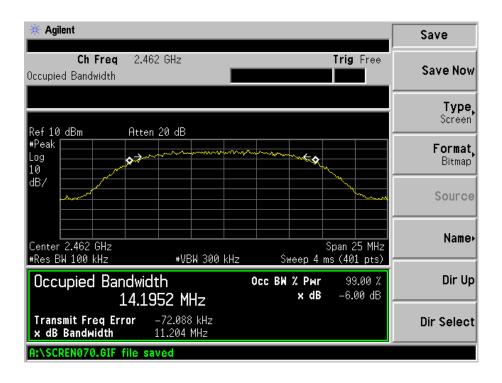
#### 802.11b-Low Channel



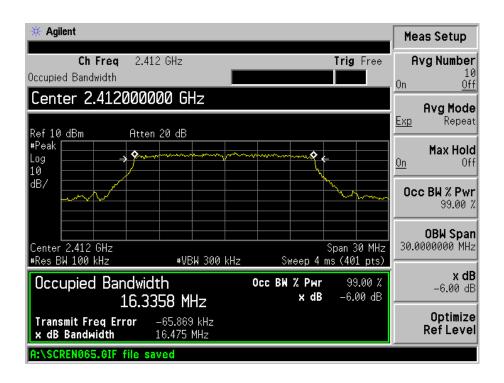
#### 802.11b-Middle Channel



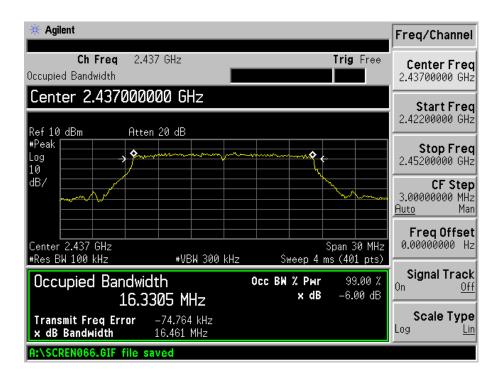
#### 802.11b-High Channel



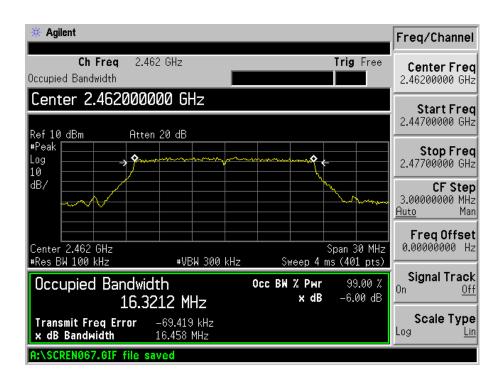
#### 802.11g-Low Channel



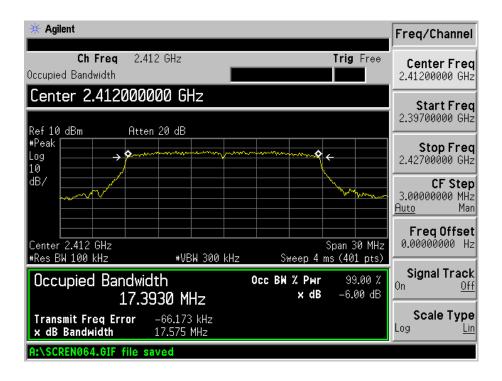
#### 802.11g-Middle Channel



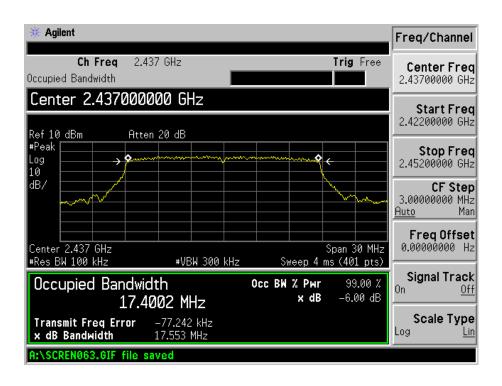
#### 802.11g-High Channel



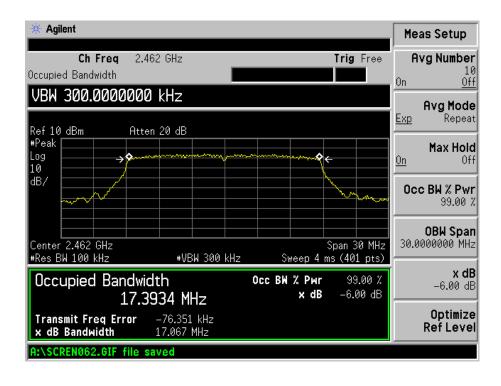
#### 802.11n-HT20-Low Channel



#### 802.11n-HT20-Middle Channel



#### 802.11n-HT20-High Channel



# 6. RF Output Power

# **6.1 Standard Applicable**

According to 15.247(b)(3). For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

### **6.2 Test Equipment List and Details**

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2012-03-28	2013-03-27
Attenuator	ATTEN	ATS100-4-20	/	2012-03-28	2013-03-27

**Statement of Traceability:** All calibrations have been performed per the NVLAP requirements traceable to the NIST.

#### **6.3 Test Procedure**

According to section 15.247(b)-power output of the KDB-558074 (2012),

- 1. Set the analyzer span to a minimum of 1.5 times the EBW.
- 2. Set the RBW = 1 MHz.
- 3. Set the VBW  $\geq$  3 MHz.
- 4. Ensure that the number of measurement points in the sweep  $\geq 2 \text{ x span/RBW}$ .
- 5. Sweep time = auto couple.
- 6. Detector = power averaging (RMS) or sample detector when RMS not available.
- 7. Employ trace averaging in power averaging (RMS) mode over a minimum of 100 traces.
- 8. Use the spectrum analyzer's band power measurement function with band limits set equal to the EBW band edges.

#### **6.4 Environmental Conditions**

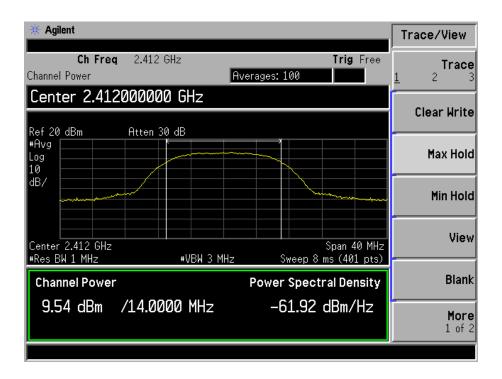
Temperature:	21° C
Relative Humidity:	55%
ATM Pressure:	1011 mbar

# **6.5 Summary of Test Results/Plots**

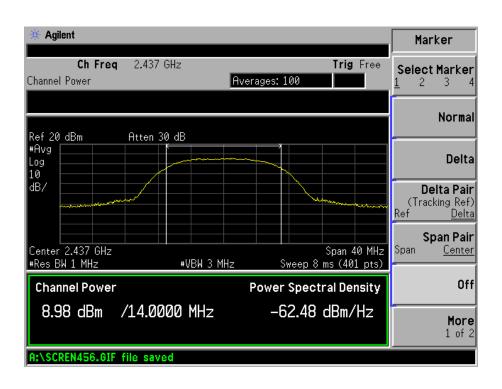
Test Mode	Frequency Reading		Output Power	Limit	
Test Wrode	MHz	dBm	mW	mW	
	2412	9.54	8.9950	1000	
802.11b _1Mbps	2437	8.98	7.9068	1000	
	2462	8.59	7.2277	1000	
	2412	9.59	9.0991	1000	
802.11b _11Mbps	2437	8.66	7.3451	1000	
	2462	8.18	6.5766	1000	
	2412	5.72	3.7325	1000	
802.11g_6Mbps	2437	5.29	3.3806	1000	
	2462	4.60	2.8840	1000	
	2412	5.77	3.7757	1000	
802.11g_54Mbps	2437	5.20	3.3113	1000	
	2462	4.43	2.7733	1000	
	2412	5.67	3.6898	1000	
802.11n HT20_MCS0	2437	5.03	3.1842	1000	
	2462	4.12	2.5823	1000	
	2412	5.57	3.6058	1000	
802.11n HT20_MCS7	2437	4.87	3.0690	1000	
	2462	4.23	2.6485	1000	

Please refer to the following test plots:

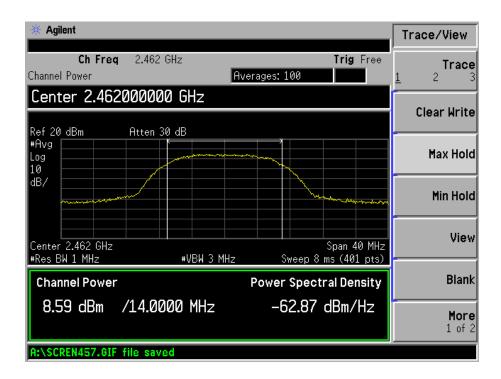
#### 802.11b-1Mbps-Low Channel



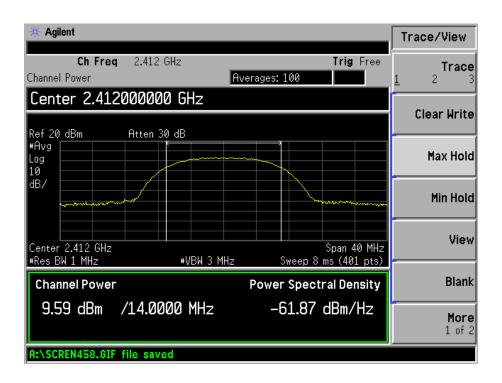
#### 802.11b-1Mbps-Middle Channel



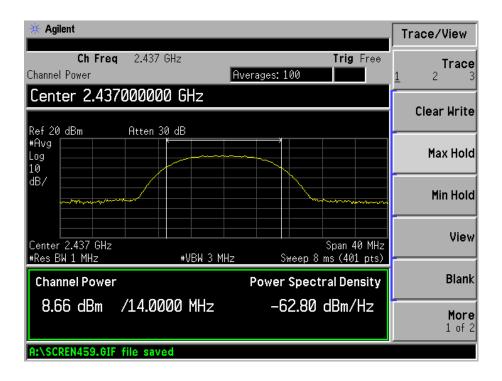
#### 802.11b-1Mpbs-High Channel



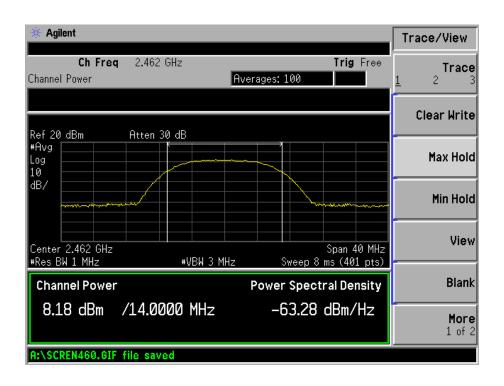
#### 802.11b-11Mbps-Low Channel



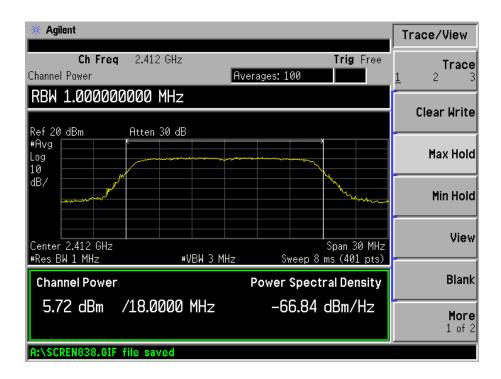
#### 802.11b-11Mbps-Middle Channel



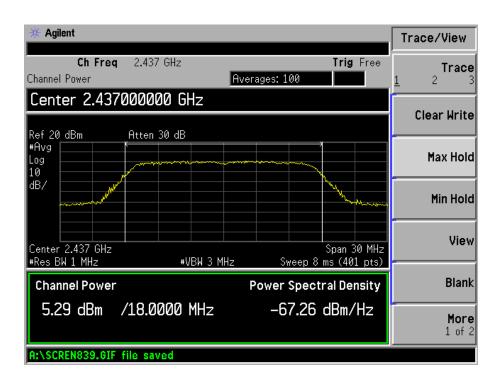
#### 802.11-11Mpbs-High Channel



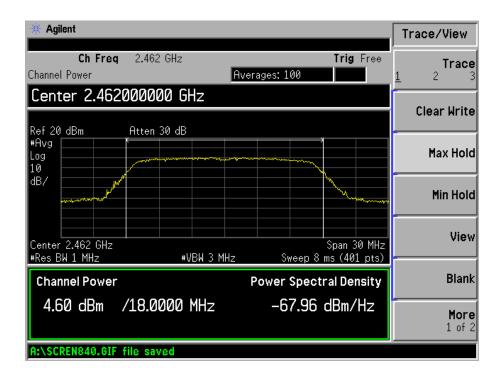
#### 802.11g-6Mbps-Low Channel



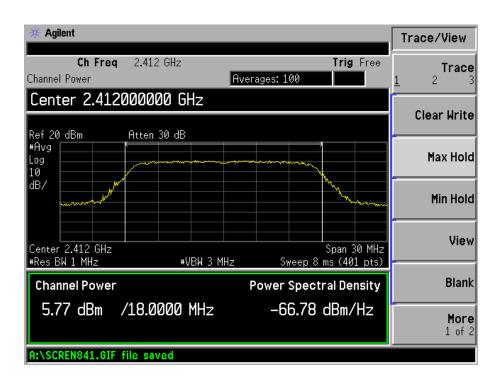
#### 802.11g-6Mbps-Middle Channel



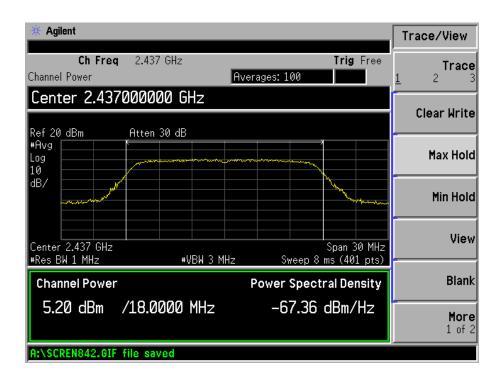
#### 802.11g-6Mpbs-High Channel



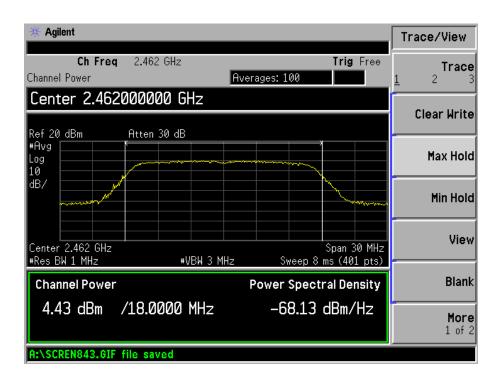
#### 802.11g-54Mbps-Low Channel



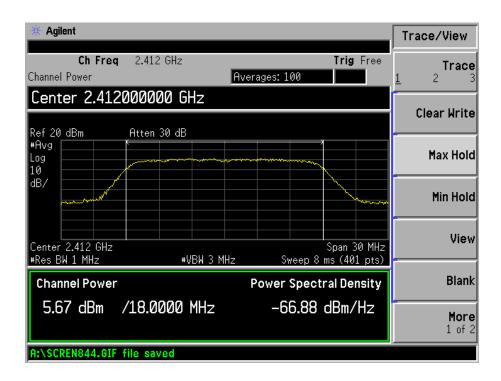
#### 802.11g-54Mbps-Middle Channel



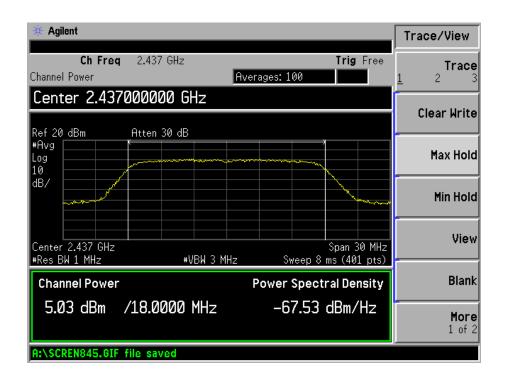
#### 802.11g-54Mpbs-High Channel



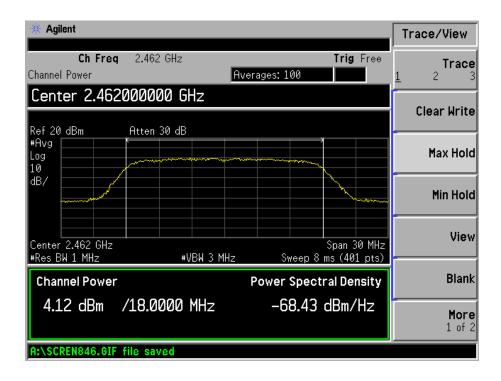
#### 802.11n-HT20-MCS0-Low Channel



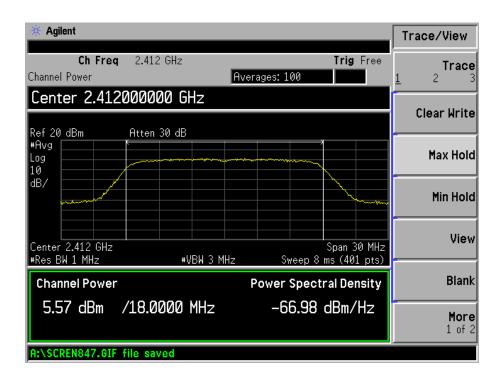
#### 802.11n-HT20-MCS0-Middle Channel



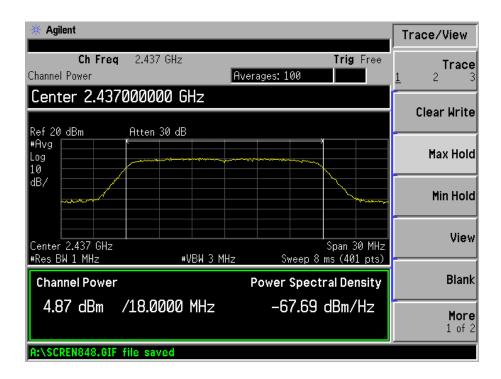
#### 802.11n-HT20-MCS0-High Channel



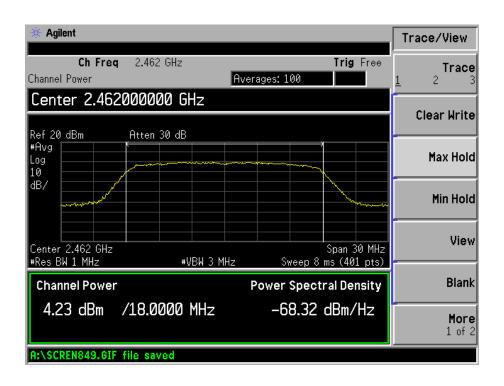
#### 802.11n-HT20-MCS7-Low Channel



#### 802.11n-HT20-MCS7-Middle Channel



#### 802.11n-HT20-MCS7-High Channel



# 7. Field Strength of Spurious Emissions

# 7.1 Measurement Uncertainty

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement is  $\pm 5.10$  dB.

#### 7.2 Standard Applicable

According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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).

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

#### 7.3 Test Equipment List and Details

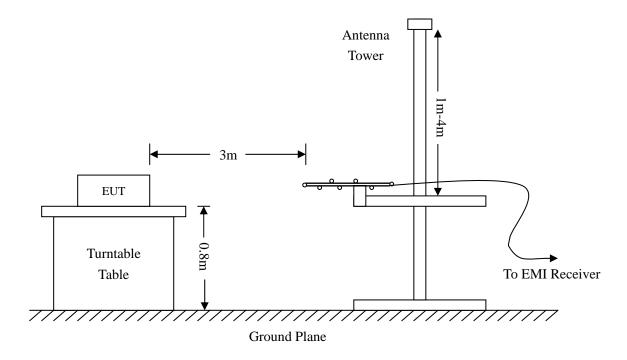
Description	ption Manufacturer		Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Spectrum Analyzer R&S		836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	Horn Antenna ETS		00086197	2012-02-25	2013-02-24
Horn Antenna	Horn Antenna ETS		00088203	2012-02-25	2013-02-24
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2012-02-25	2013-02-24

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#### **7.4 Test Procedure**

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.



#### 7.5 Corrected Amplitude & Margin Calculation

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

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of  $-6dB\mu V$  means the emission is  $6dB\mu V$  below the maximum limit for Class B. The equation for margin calculation is as follows:

#### 7.6 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

# 7.7 Summary of Test Results/Plots

According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst margin of:

-2.96 dB at 361.7139MHz in the Horizontal polarization for 802.11b Middle Channel, 9kHz to 25 GHz, 3 Meters

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

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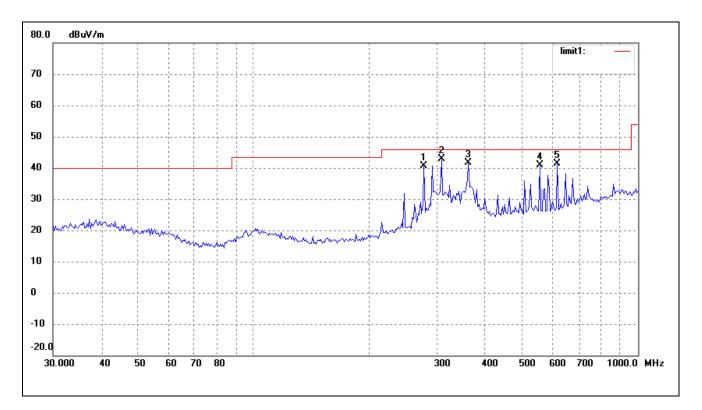
# Plot of Radiated Emissions Test Data (30MHz to 1GHz)

EUT: Network Camera
Tested Model: YCHME0x

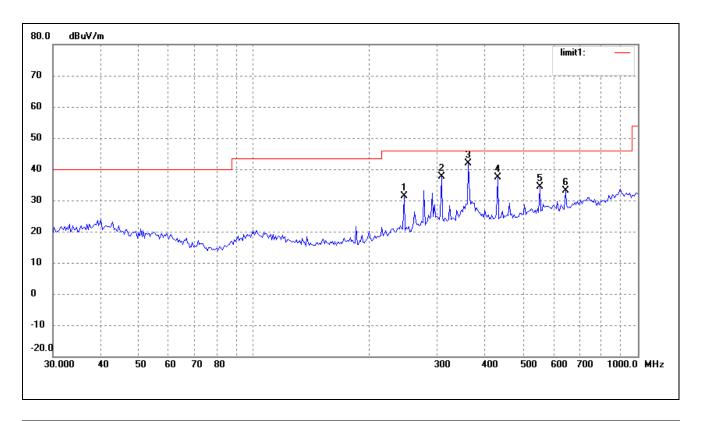
Operating Condition: 802.11b Transmitting Low Channel-2412MHz

Comment: DC 12V

Test Specification: Horizontal



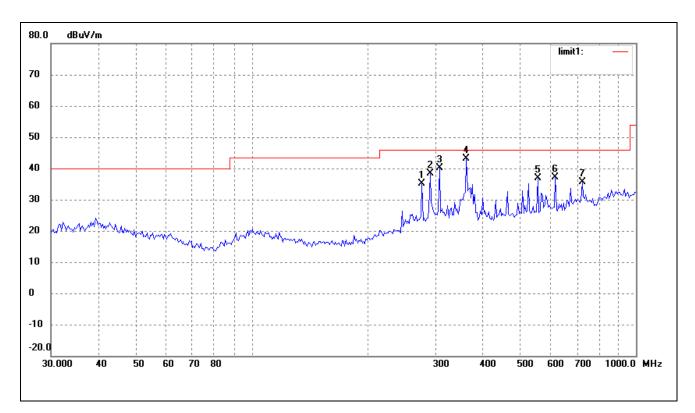
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	32.51	8.13	40.64	46.00	-5.36	360	100	peak
2	307.8313	33.68	9.20	42.88	46.00	-3.12	360	100	peak
3	361.7139	32.38	9.26	41.64	46.00	-4.36	360	100	peak
4	554.8254	29.43	11.42	40.85	46.00	-5.15	360	100	peak
5	616.3718	29.42	12.07	41.49	46.00	-4.51	360	100	peak



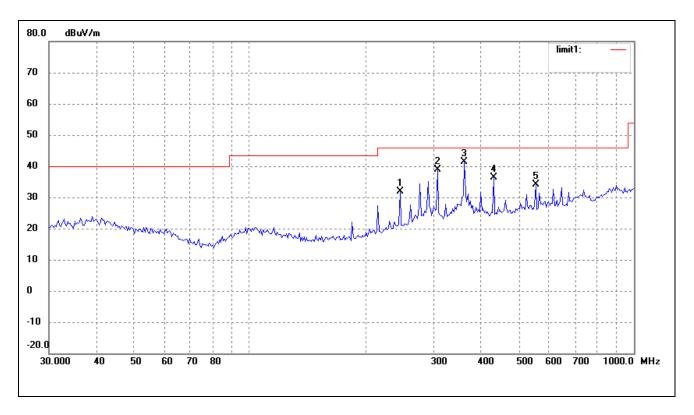
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	245.9509	24.98	6.47	31.45	46.00	-14.55	360	100	peak
2	307.8313	28.46	9.20	37.66	46.00	-8.34	360	100	peak
3	361.7139	32.68	9.26	41.94	46.00	-4.06	360	100	peak
4	431.0316	27.70	9.74	37.44	46.00	-8.56	360	100	peak
5	554.8254	22.97	11.42	34.39	46.00	-11.61	360	100	peak
6	647.3856	20.82	12.37	33.19	46.00	-12.81	360	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2437MHz

Comment: DC 12V



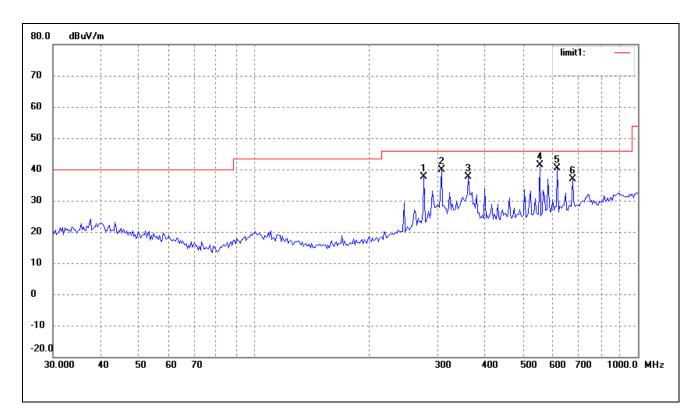
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	27.12	8.13	35.25	46.00	-10.75	360	100	peak
2	291.0360	29.56	8.79	38.35	46.00	-7.65	360	100	peak
3	307.8313	30.98	9.20	40.18	46.00	-5.82	360	100	peak
4	361.7139	33.78	9.26	43.04	46.00	-2.96	360	100	peak
5	554.8254	25.55	11.42	36.97	46.00	-9.03	360	100	peak
6	616.3718	25.18	12.07	37.25	46.00	-8.75	360	100	peak
7	724.2611	21.11	14.56	35.67	46.00	-10.33	360	100	peak



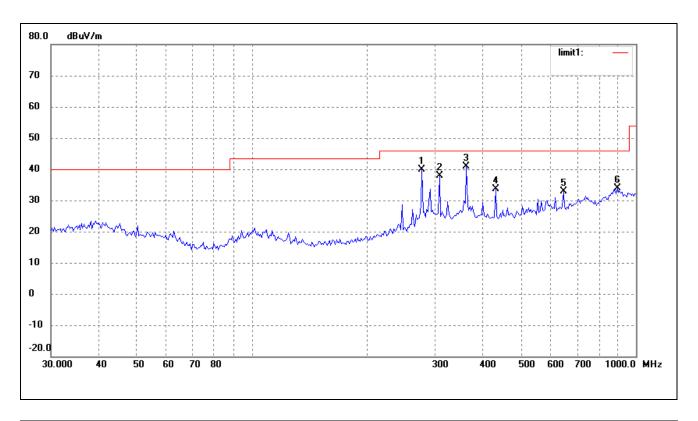
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	245.9509	25.47	6.47	31.94	46.00	-14.06	360	100	peak
2	307.8313	29.65	9.20	38.85	46.00	-7.15	360	100	peak
3	361.7139	32.07	9.26	41.33	46.00	-4.67	360	100	peak
4	431.0316	26.55	9.74	36.29	46.00	-9.71	360	100	peak
5	554.8254	22.62	11.42	34.04	46.00	-11.96	360	100	peak

Operating Condition: 802.11b Transmitting High Channel-2462MHz

Comment: DC 12V



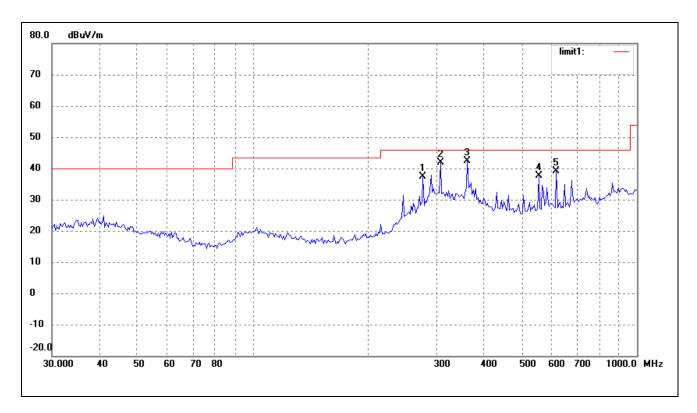
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	29.56	8.13	37.69	46.00	-8.31	360	100	peak
2	307.8313	30.76	9.20	39.96	46.00	-6.04	360	100	peak
3	361.7139	28.32	9.26	37.58	46.00	-8.42	360	100	peak
4	554.8254	29.92	11.42	41.34	46.00	-4.66	360	100	peak
5	616.3718	28.30	12.07	40.37	46.00	-5.63	360	100	peak
6	675.2080	23.93	12.90	36.83	46.00	-9.17	360	100	peak



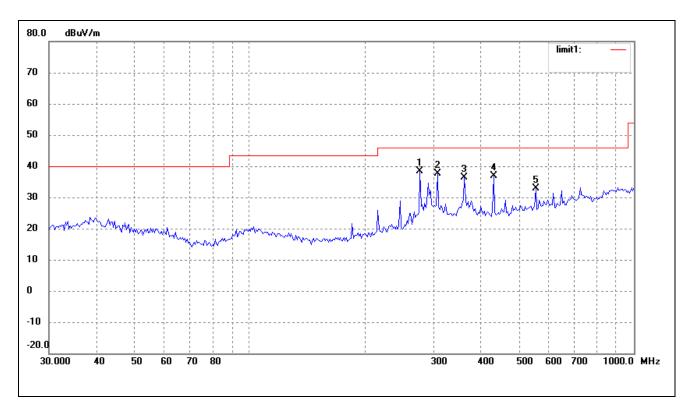
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	31.71	8.13	39.84	46.00	-6.16	360	100	peak
2	307.8313	28.72	9.20	37.92	46.00	-8.08	360	100	peak
3	361.7139	31.53	9.26	40.79	46.00	-5.21	360	100	peak
4	431.0316	23.82	9.74	33.56	46.00	-12.44	360	100	peak
5	647.3856	20.40	12.37	32.77	46.00	-13.23	360	100	peak
6	893.8567	17.08	16.75	33.83	46.00	-12.17	360	100	peak

Operating Condition: 802.11g Transmitting Low Channel-2412MHz

Comment: DC 12V



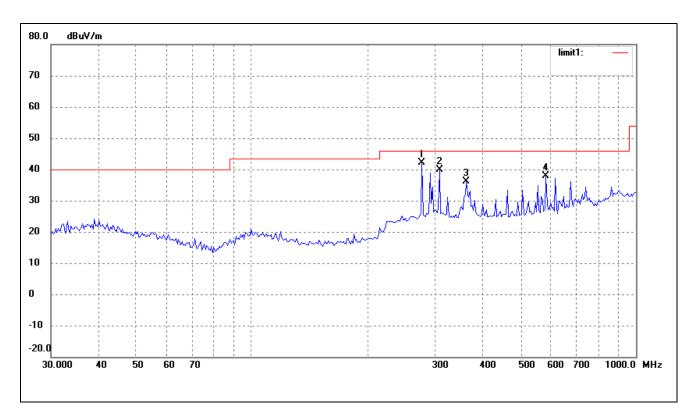
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	29.13	8.13	37.26	46.00	-8.74	360	100	peak
2	307.8313	32.63	9.20	41.83	46.00	-4.17	360	100	peak
3	361.7139	33.02	9.26	42.28	46.00	-3.72	360	100	peak
4	554.8254	26.22	11.42	37.64	46.00	-8.36	360	100	peak
5	616.3718	27.06	12.07	39.13	46.00	-6.87	360	100	peak



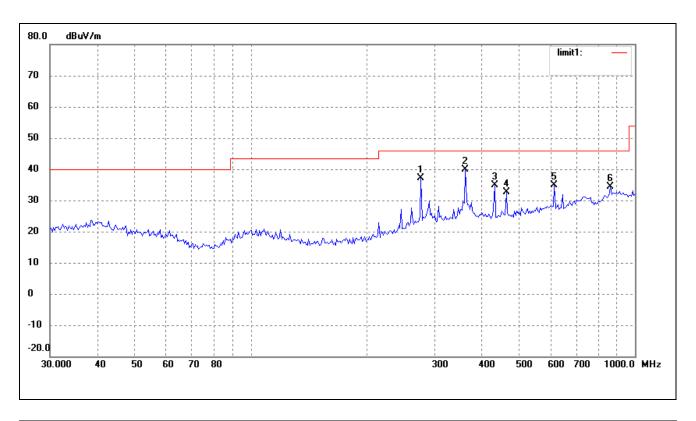
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	30.37	8.13	38.50	46.00	-7.50	360	100	peak
2	307.8313	28.34	9.20	37.54	46.00	-8.46	360	100	peak
3	361.7139	27.09	9.26	36.35	46.00	-9.65	360	100	peak
4	431.0316	27.13	9.74	36.87	46.00	-9.13	360	100	peak
5	554.8254	21.52	11.42	32.94	46.00	-13.06	360	100	peak

Operating Condition: 802.11g Transmitting Middle Channel-2437MHz

Comment: DC 12V



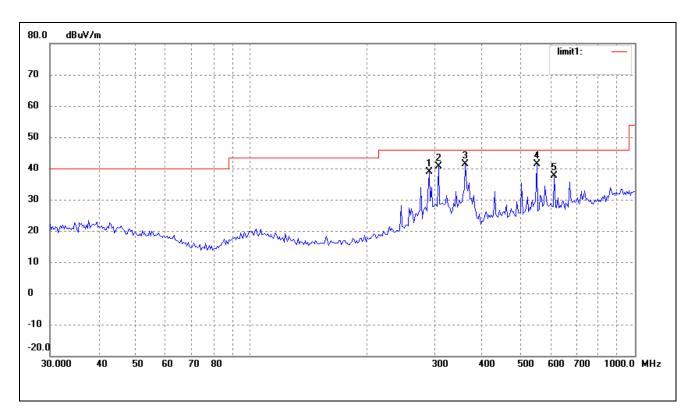
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	34.09	8.13	42.22	46.00	-3.78	360	100	peak
2	307.8313	30.69	9.20	39.89	46.00	-6.11	360	100	peak
3	361.7139	26.86	9.26	36.12	46.00	-9.88	360	100	peak
4	582.7425	25.26	12.60	37.86	46.00	-8.14	360	100	peak



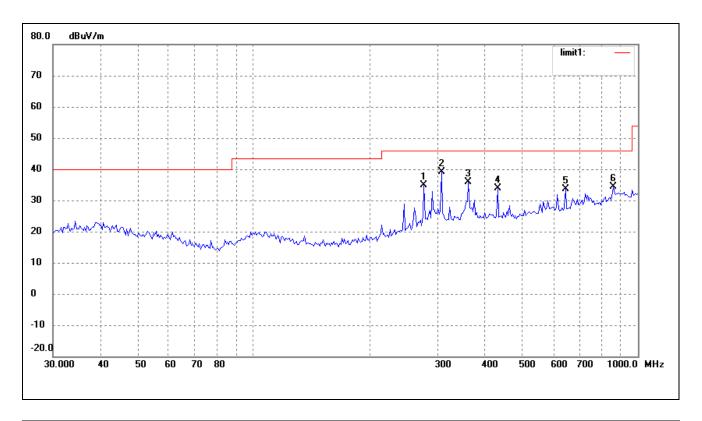
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	29.10	8.13	37.23	46.00	-8.77	360	100	peak
2	361.7139	30.60	9.26	39.86	46.00	-6.14	360	100	peak
3	431.0316	25.06	9.74	34.80	46.00	-11.20	360	100	peak
4	462.3455	22.05	10.49	32.54	46.00	-13.46	360	100	peak
5	616.3718	22.72	12.07	34.79	46.00	-11.21	360	100	peak
6	863.0562	17.98	16.30	34.28	46.00	-11.72	360	100	peak

Operating Condition: 802.11g Transmitting High Channel-2462MHz

Comment: DC 12V



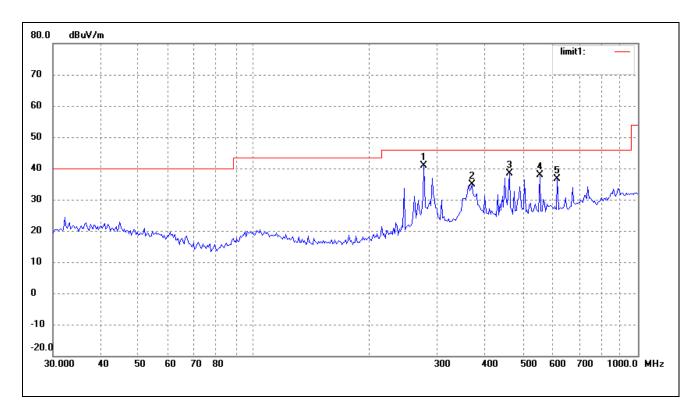
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	291.0360	30.10	8.79	38.89	46.00	-7.11	360	100	peak
2	307.8313	31.40	9.20	40.60	46.00	-5.40	360	100	peak
3	361.7139	32.16	9.26	41.42	46.00	-4.58	360	100	peak
4	554.8254	30.03	11.42	41.45	46.00	-4.55	360	100	peak
5	616.3718	25.50	12.07	37.57	46.00	-8.43	360	100	peak



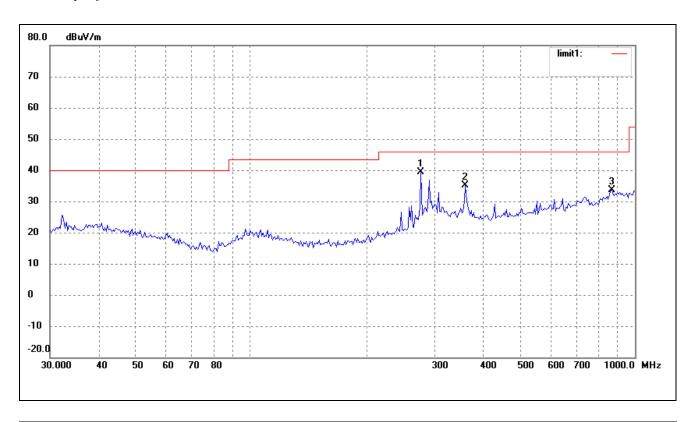
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	26.78	8.13	34.91	46.00	-11.09	360	100	peak
2	307.8313	29.96	9.20	39.16	46.00	-6.84	360	100	peak
3	361.7139	26.50	9.26	35.76	46.00	-10.24	360	100	peak
4	431.0316	24.13	9.74	33.87	46.00	-12.13	360	100	peak
5	647.3856	21.14	12.37	33.51	46.00	-12.49	360	100	peak
6	863.0562	18.16	16.30	34.46	46.00	-11.54	360	100	peak

Operating Condition: 802.11n-HT20 Transmitting Low Channel-2412MHz

Comment: DC 12V



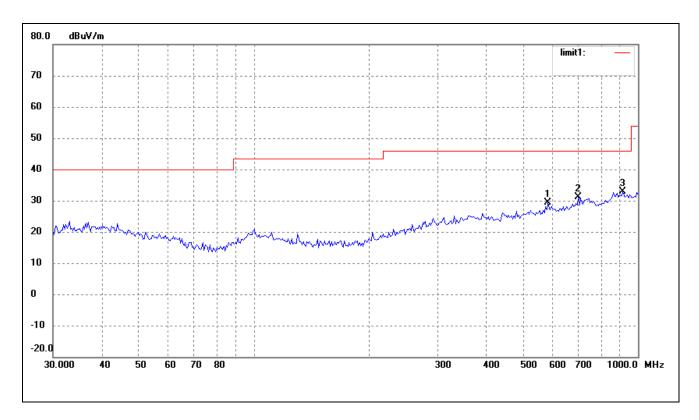
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	32.83	8.13	40.96	46.00	-5.04	360	100	peak
2	369.4047	25.60	9.25	34.85	46.00	-11.15	360	100	peak
3	462.3455	27.96	10.49	38.45	46.00	-7.55	360	100	peak
4	554.8254	26.49	11.42	37.91	46.00	-8.09	360	100	peak
5	616.3718	24.50	12.07	36.57	46.00	-9.43	360	100	peak



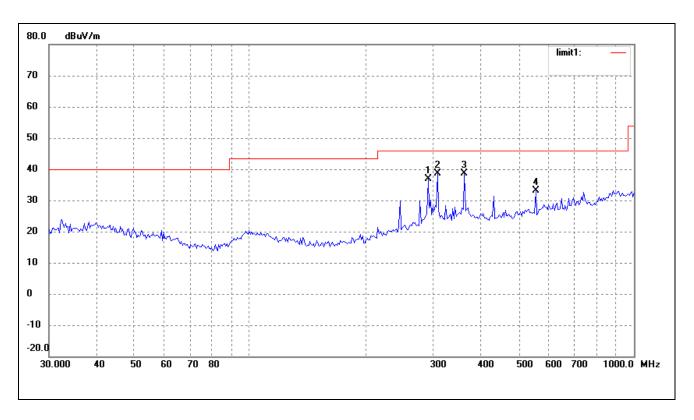
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	31.21	8.13	39.34	46.00	-6.66	360	100	peak
2	361.7139	25.80	9.26	35.06	46.00	-10.94	360	100	peak
3	869.1302	17.21	16.46	33.67	46.00	-12.33	360	100	peak

Operating Condition: 802.11n-HT20 Transmitting Middle Channel-2437MHz

Comment: DC 12V



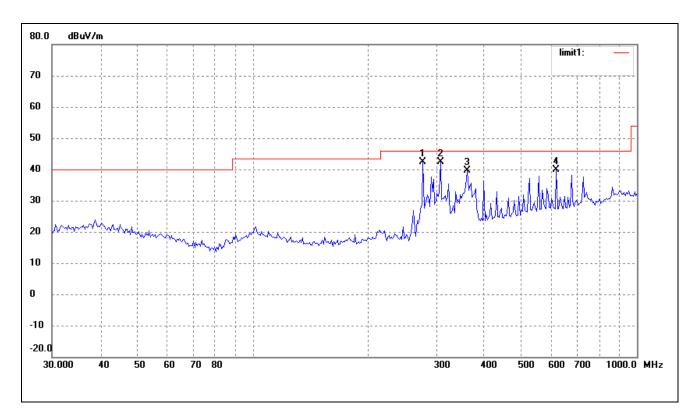
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	582.7425	16.84	12.60	29.44	46.00	-16.56	360	100	peak
2	699.3046	17.52	13.66	31.18	46.00	-14.82	360	100	peak
3	912.8620	16.35	16.51	32.86	46.00	-13.14	360	100	peak



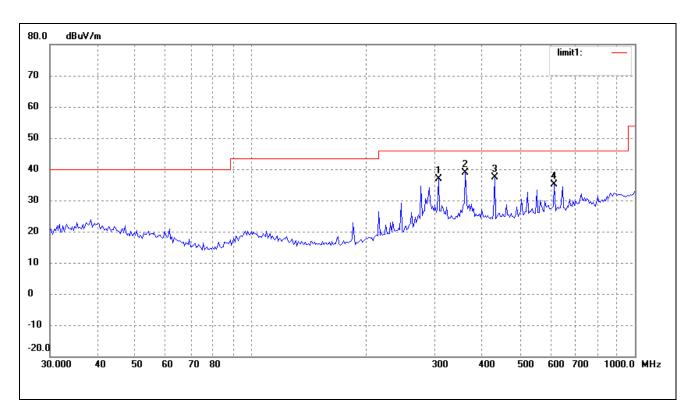
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	291.0360	28.06	8.79	36.85	46.00	-9.15	360	100	peak
2	307.8313	29.38	9.20	38.58	46.00	-7.42	360	100	peak
3	361.7139	29.35	9.26	38.61	46.00	-7.39	360	100	peak
4	554.8254	21.66	11.42	33.08	46.00	-12.92	360	100	peak

Operating Condition: 802.11n-HT20 Transmitting High Channel-2462MHz

Comment: DC 12V



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	277.0935	34.23	8.13	42.36	46.00	-3.64	360	100	peak
2	307.8313	33.11	9.20	42.31	46.00	-3.69	360	100	peak
3	361.7139	30.49	9.26	39.75	46.00	-6.25	360	100	peak
4	616.3718	27.90	12.07	39.97	46.00	-6.03	360	100	peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	307.8313	27.74	9.20	36.94	46.00	-9.06	360	100	peak
2	361.7139	29.67	9.26	38.93	46.00	-7.07	360	100	peak
3	431.0316	27.74	9.74	37.48	46.00	-8.52	360	100	peak
4	616.3718	23.01	12.07	35.08	46.00	-10.92	360	100	peak

## Spurious Emissions Above 1GHz

Test Mode: 802.11b

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
			Low Chann	el-2412MHz			
4821.757	49.88	-3.88	46.00	74.00	-28.00	Н	PK
4821.757	36.62	-3.88	32.74	54.00	-21.26	Н	AV
7236.000	47.06	1.14	48.20	74.00	-25.80	Н	PK
7245.810	34.61	1.18	35.79	54.00	-18.21	Н	AV
4821.757	49.65	-3.88	45.77	74.00	-28.23	V	PK
4821.757	37.04	-3.88	33.16	54.00	-20.84	V	AV
7236.000	46.51	1.14	47.65	74.00	-26.35	V	PK
7245.810	34.65	1.18	35.83	54.00	-18.17	V	AV
			Middle Chan	nel-2437MHz			
4871.103	51.07	-3.75	47.32	74.00	-26.68	Н	PK
4871.103	37.26	-3.75	33.51	54.00	-20.49	Н	AV
7311.000	47.15	1.47	48.62	74.00	-25.38	Н	PK
7319.964	34.89	1.50	36.39	54.00	-17.61	Н	AV
4871.103	62.18	-3.75	58.43	74.00	-15.57	V	PK
4871.103	45.05	-3.75	41.30	54.00	-12.70	V	AV
7311.000	46.34	1.47	47.81	74.00	-26.19	V	PK
7319.964	35.37	1.50	36.87	54.00	-17.13	V	AV
			High Chann	el-2462MHz			
4920.955	55.35	-3.61	51.74	74.00	-22.26	Н	PK
4920.955	40.17	-3.61	36.56	54.00	-17.44	Н	AV
7386.000	46.51	1.79	48.30	74.00	-25.70	Н	PK
7394.878	35.03	1.84	36.87	54.00	-17.13	Н	AV
4920.955	57.46	-3.61	53.85	74.00	-20.15	V	PK
4920.955	41.56	-3.61	37.95	54.00	-16.05	V	AV
7386.000	46.51	1.79	48.30	74.00	-25.70	V	PK
7394.878	35.19	1.84	37.03	54.00	-16.97	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
			Low Chann	el-2412MHz			
4821.757	49.65	-3.88	45.77	74.00	-28.23	Н	PK
4821.757	36.71	-3.88	32.83	54.00	-21.17	Н	AV
7236.000	46.56	1.14	47.70	74.00	-26.30	Н	PK
7245.810	34.95	1.18	36.13	54.00	-17.87	Н	AV
4821.757	62.61	-3.88	58.73	74.00	-15.27	V	PK
4821.757	47.75	-3.88	43.87	54.00	-10.13	V	AV
7245.810	51.80	1.18	52.98	74.00	-21.02	V	PK
7245.810	36.91	1.18	38.09	54.00	-15.91	V	AV
			Middle Chan	nel-2437MHz			
4874.000	46.59	-3.74	42.85	74.00	-31.15	Н	PK
4920.955	35.67	-3.61	32.06	54.00	-21.94	Н	AV
7311.000	46.93	1.47	48.40	74.00	-25.60	Н	PK
7319.964	35.23	1.50	36.73	54.00	-17.27	Н	AV
4871.103	63.70	-3.75	59.95	74.00	-14.05	V	PK
4871.103	47.97	-3.75	44.22	54.00	-9.78	V	AV
7319.964	52.28	1.50	53.78	74.00	-20.22	V	PK
7319.964	37.47	1.50	38.97	54.00	-15.03	V	AV
			High Chann	el-2462MHz			
4924.000	47.51	-3.59	43.92	74.00	-30.08	Н	PK
4971.316	35.89	-3.45	32.44	54.00	-21.56	Н	AV
7386.000	47.30	1.79	49.09	74.00	-24.91	Н	PK
7394.878	35.42	1.84	37.26	54.00	-16.74	Н	AV
4920.955	62.78	-3.61	59.17	74.00	-14.83	V	PK
4920.955	47.22	-3.61	43.61	54.00	-10.39	V	AV
7394.878	48.52	1.84	50.36	74.00	-23.64	V	PK
7394.878	36.82	1.84	38.66	54.00	-15.34	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
			Low Chann	el-2412MHz			
4821.757	51.70	-3.88	47.82	74.00	-26.18	Н	PK
4821.757	39.80	-3.88	35.92	54.00	-18.08	Н	AV
7245.810	46.68	1.18	47.86	74.00	-26.14	Н	PK
7245.810	34.71	1.18	35.89	54.00	-18.11	Н	AV
4821.757	55.58	-3.88	51.70	74.00	-22.30	V	PK
4821.757	40.82	-3.88	36.94	54.00	-17.06	V	AV
7508.688	47.65	2.29	49.94	74.00	-24.06	V	PK
7547.013	35.19	2.23	37.42	54.00	-16.58	V	AV
			Middle Chan	nel-2437MHz			
4871.103	53.18	-3.75	49.43	74.00	-24.57	Н	PK
4871.103	40.42	-3.75	36.67	54.00	-17.33	Н	AV
7311.000	47.09	1.47	48.56	74.00	-25.44	Н	PK
7319.964	34.90	1.50	36.40	54.00	-17.60	Н	AV
4871.103	62.76	-3.75	59.01	74.00	-14.99	V	PK
4871.103	47.60	-3.75	43.85	54.00	-10.15	V	AV
7319.964	50.20	1.50	51.70	74.00	-22.30	V	PK
7357.326	35.20	1.67	36.87	54.00	-17.13	V	AV
			High Chann	el-2462MHz			
4920.955	57.79	-3.61	54.18	74.00	-19.82	Н	PK
4920.955	40.24	-3.61	36.63	54.00	-17.37	Н	AV
7386.000	47.70	1.79	49.49	74.00	-24.51	Н	PK
7394.878	35.89	1.84	37.73	54.00	-16.27	Н	AV
4920.955	63.25	-3.61	59.64	74.00	-14.36	V	PK
4920.955	47.38	-3.61	43.77	54.00	-10.23	V	AV
7394.878	53.56	1.84	55.40	74.00	-18.60	V	PK
7394.878	38.29	1.84	40.13	54.00	-13.87	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above  $5^{th}$  Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured. The measurements greater than 20dB below the limit from 9kHz to 30MHz..

#### 8. Out of Band Emissions

## 8.1 Standard Applicable

According to §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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).

#### 8.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	ETS	3117	00086197	2012-02-25	2013-02-24

#### 8.3 Test Procedure

According to the KDB 558074, the band-edge radiated test method as follows:

Set span = wide enough to capture the peak level of the emission operating on the channel closest to the bandedge, as well as any modulation products which fall outside of the authorized band of operation (2310MHz to 2420MHz for low bandedge, 2460MHz to 2500MHz for the high bandedge)

RBW = 1MHz, VBW = 1MHz for peak value measured

RBW = 1MHz, VBW = 10Hz for average value measured

Sweep = auto; Detector function = peak/average; Trace = max hold

All the trace to stabilize, set the marker on the emission at the bandedge, or on the highest modulation porduct outside of the band, if this level is greater than that at the bandedge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. Those emission must comply with the 15.209 limit for fall in the restricted bands listed in section 15.205.

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### **8.4 Environmental Conditions**

Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

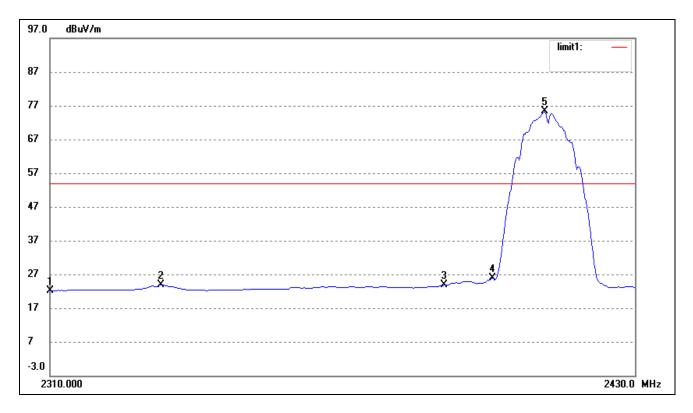
# **8.5 Summary of Test Results/Plots**

Test Mode	Test Frequency MHz	Limit dBuV / dBc	Result
	2390.00	<54 dBuV	Pass
802.11b	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
802.11g	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
802.11n-HT20	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
802.11n-HT40	2400.00	>20 dBc	Pass
	2483.50	<54 dBuV	Pass

The edge emissions are below the FCC 15.209 Limits or complies with the 15.247(d) requirements.

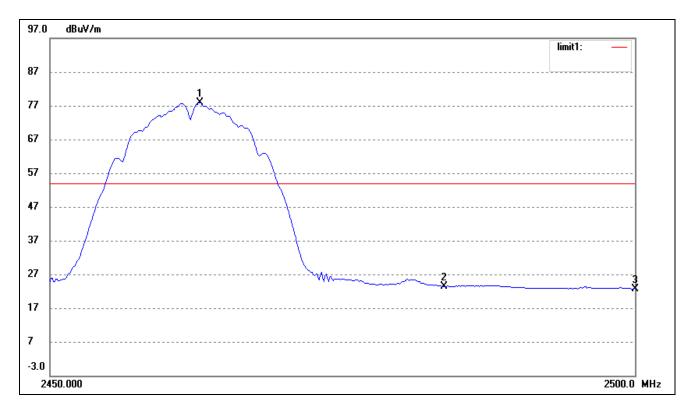
Please refer to the test plots as below.

## 802.11b-Lowest Bandedge



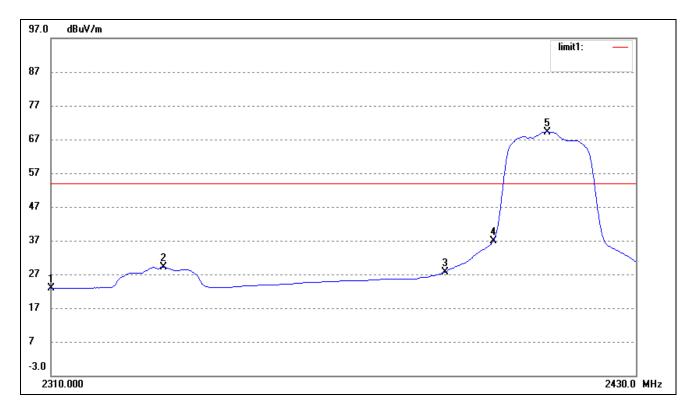
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.93	-11.72	22.21	54.00	-31.79	Average Detector
	2310.000	46.74	-11.72	35.02	74.00	-38.98	Peak Detector
2	2332.335	35.62	-11.73	23.89	54.00	-30.11	Average Detector
	2332.335	49.62	-11.73	38.89	74.00	-36.11	Average Detector
3	2390.000	35.53	-11.75	23.78	54.00	-30.22	Peak Detector
	2390.000	50.94	-11.75	39.19	74.00	-34.81	Peak Detector
4	2400.000	41.90	-11.75	30.15	/	/	Average Detector
5	2411.122	87.06	-11.75	75.31	/	/	Average Detector

## 802.11b-Highest Bandedge



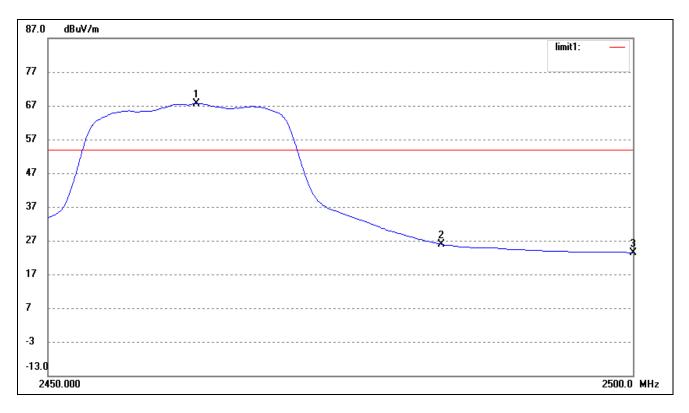
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.704	89.74	-11.78	77.96	/	/	Average Detector
	2462.704	97.36	-11.78	90.07	/	/	Peak Detector
2	2483.500	Delta =53	71 dDo	23.86	54.00	-30.14	Average Detector
	2483.500	Della =53	0.74 UDC	36.33	74.00	-37.67	Peak Detector
3	2500.000	35.02	-11.78	23.24	54.00	-30.76	Average Detector
	2500.000	47.50	-11.78	35.72	74.00	-38.28	Peak Detector

## 802.11g-Lowest Bandedge



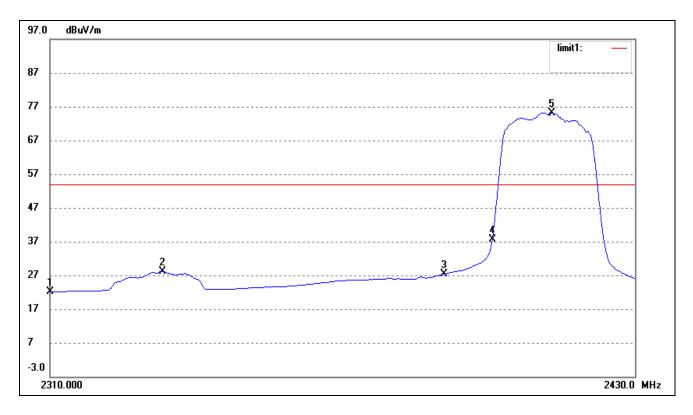
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	34.55	-11.72	22.83	54.00	-31.17	Average Detector
	2310.000	48.79	-11.72	37.07	74.00	-36.93	Peak Detector
2	2332.571	40.99	-11.73	29.26	54.00	-24.74	Average Detector
	2332.571	52.99	-11.73	41.26	74.00	-33.74	Peak Detector
3	2390.000	39.45	-11.75	27.70	54.00	-26.30	Average Detector
	2390.000	59.28	-11.75	47.53	74.00	-26.47	Peak Detector
4	2400.000	48.64	-11.75	36.89	/	/	Average Detector
5	2413.920	88.77	-11.76	77.01	/	/	Average Detector

## 802.11g-Highest Bandedge



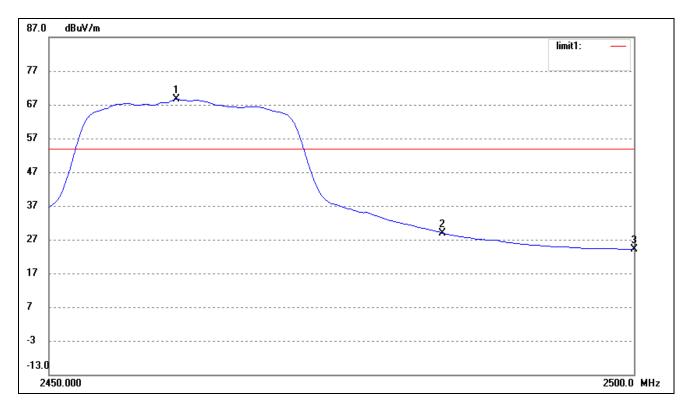
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.604	79.46	-11.78	67.68	/	/	Average Detector
	2462.604	97.36	-11.78	90.07	/	/	Peak Detector
2	2483.500	Dolto 40	Delta =42.80 dBc		54.00	-29.14	Average Detector
	2483.500	Della =42	2.00 000	47.27	74.00	-26.73	Peak Detector
3	2500.000	35.22	-11.78	23.44	54.00	-30.76	Average Detector
	2500.000	48.48	-11.78	36.70	74.00	-38.28	Peak Detector

## 802.11n-HT20-Lowest Bandedge



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.96	-11.72	22.24	54.00	-31.76	Average Detector
	2310.000	47.86	-11.72	36.14	74.00	-37.86	Peak Detector
2	2332.571	40.17	-11.73	28.44	54.00	-25.56	Average Detector
	2332.571	53.01	-11.73	41.28	74.00	-32.72	Peak Detector
3	2390.000	39.33	-11.75	27.58	54.00	-26.42	Average Detector
	2390.000	53.96	-11.75	42.21	74.00	-31.79	Peak Detector
4	2400.000	49.98	-11.75	38.23	/	/	Average Detector
5	2412.588	86.95	-11.76	75.19	/	/	Average Detector

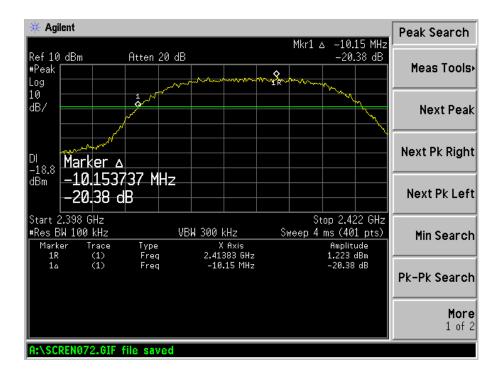
## 802.11n-HT20-Highest Bandedge



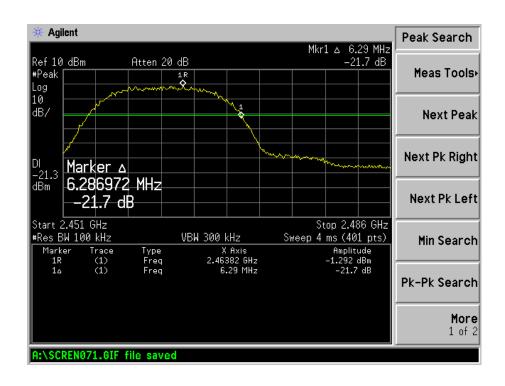
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2460.814	80.31	-11.77	68.54	/	/	Average Detector
	2462.604	97.36	-11.78	90.07	/	/	Peak Detector
2	2483.500	Dolto -40	Delta =40.71 dBc		54.00	-26.17	Average Detector
	2483.500	Della =40	7.7 T UDC	49.36	74.00	-24.64	Peak Detector
3	2500.000	35.87	-11.78	24.09	54.00	-29.91	Average Detector
	2500.000	48.41	-11.78	36.63	74.00	-37.37	Peak Detector

#### Bandedge (Conducted)

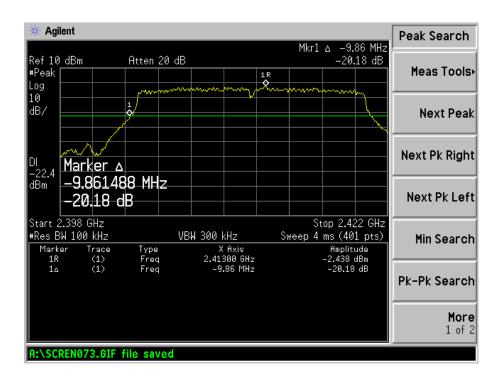
#### 802.11b-Lowest Bandedge



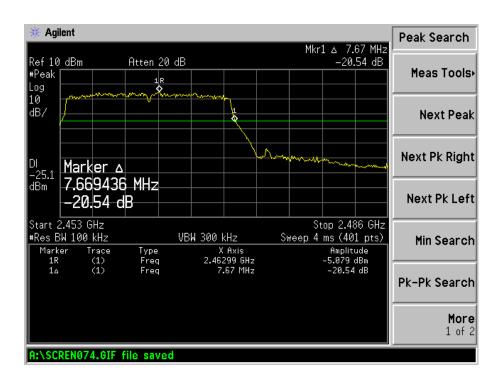
#### 802.11b-Highest Bandedge



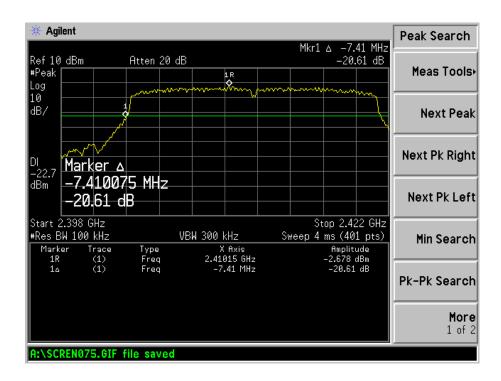
#### 802.11g-Lowest Bandedge



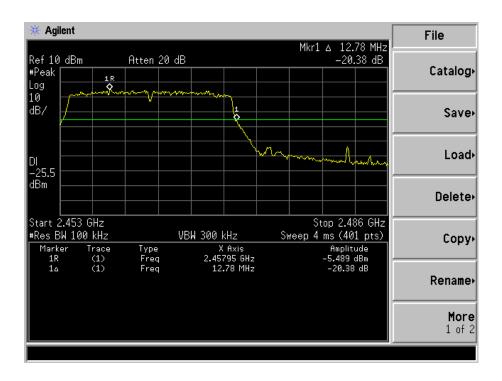
#### 802.11g-Highest Bandedge



#### 802.11n-HT20-Lowest Bandedge

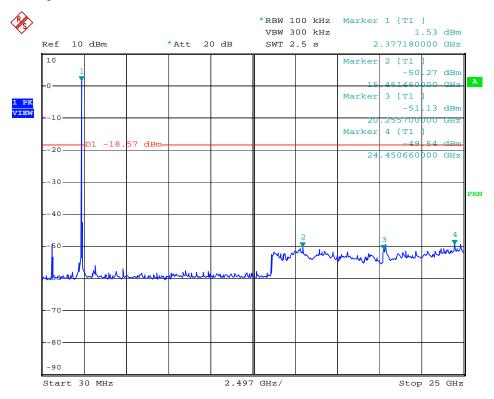


#### 802.11n-HT20-Highest Bandedge

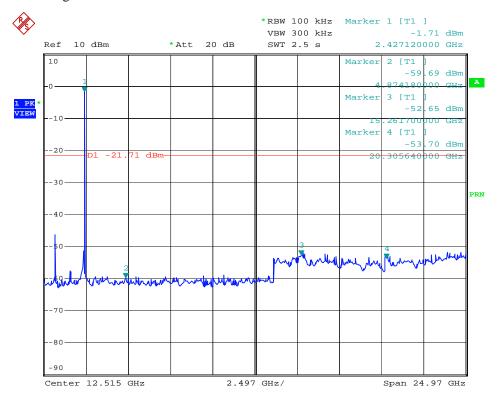


## **Conducted Spurious Emissions**

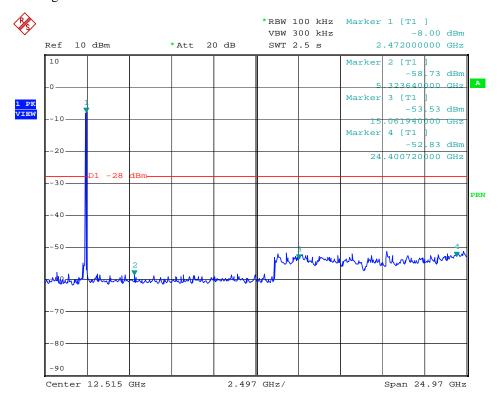
802.11b Low Bandedge



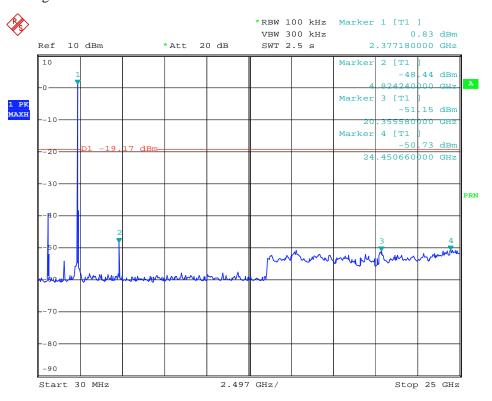
### 802.11b Middle Bandedge



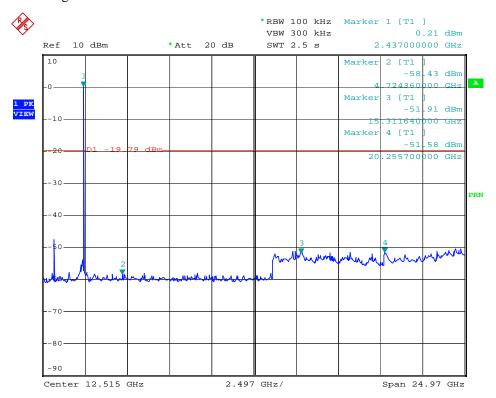
#### 802.11b High Bandedge



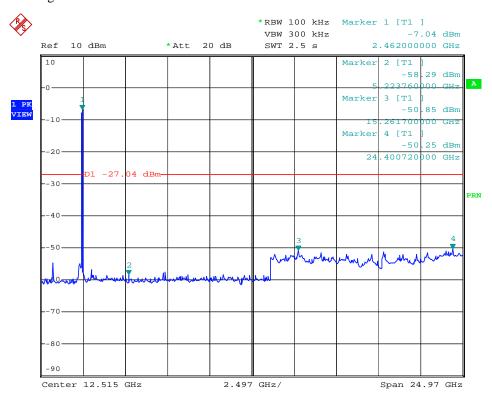
### 802.11g Low Bandedge



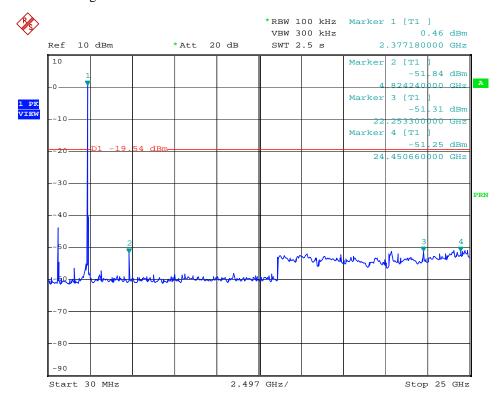
### 802.11g Middle Bandedge



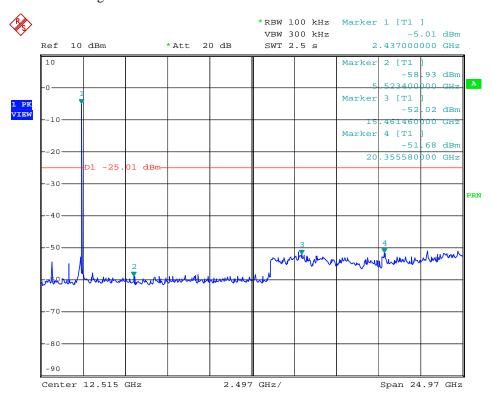
### 802.11g High Bandedge



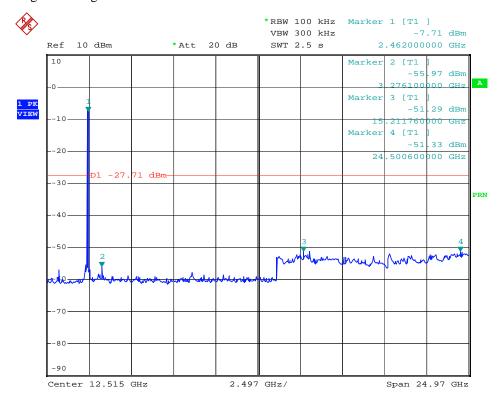
#### 802.11n-HT20 Low Bandedge



### 802.11n-HT20 Middle Bandedge



## 802.11n-HT20 High Bandedge



### 9. Conducted Emissions

### 9.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is  $\pm 2.88$  dB.

### 9.2 Test Equipment List and Details

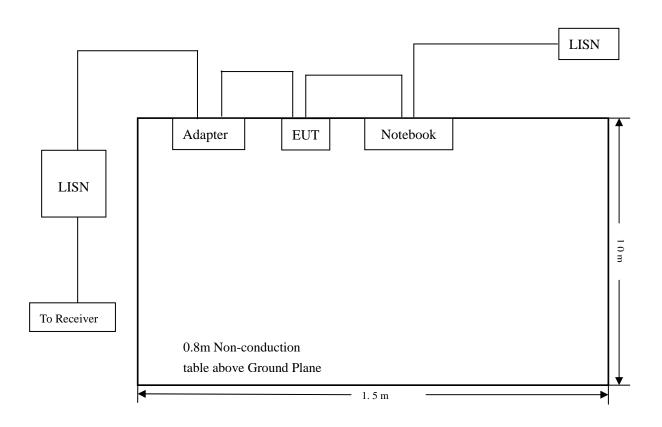
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2012-03-28	2013-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2012-03-28	2013-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2012-03-28	2013-03-27

#### 9.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.

## 9.4 Basic Test Setup Block Diagram



#### 9.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

## 9.6 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency	150 kHz
Stop Frequency	30 MHz
Sweep Speed	. Auto
IF Bandwidth	.10 kHz
Quasi-Peak Adapter Bandwidth	9 kHz
Quasi-Peak Adapter Mode	Normal

## 9.7 Summary of Test Results/Plots

According to the data in section 3.8, the EUT <u>complied with the FCC Part 15.207</u> Conducted margin for a Class B device, with the *worst* margin reading of:

-3.45 dB at 0.158 MHz in the Neutral mode, Ave detector, 0.15-30MHz

### 9.8 Conducted Emissions Test Data

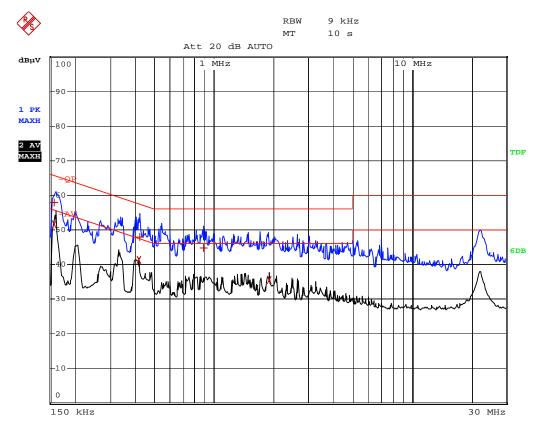
## **Plot of Conducted Emissions Test Data**

EUT: Network Camera

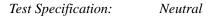
Tested Model: YCHMEOx
Operating Conditation: Transmitting

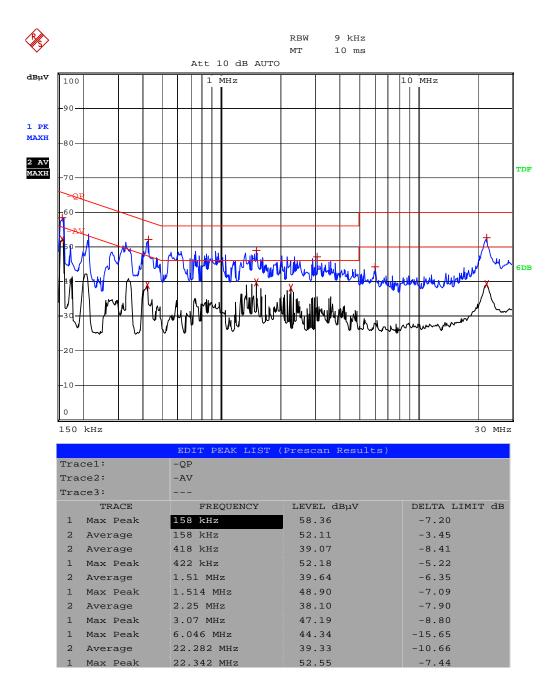
*Comment: AC 120V/60Hz, 12V DC* 

Test Specification: Line



EDIT PEAK LIST (Final Measurement Results)							
Tracel:	-QP						
Trace2:	-AV						
Trace3:							
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB				
1 Quasi Peak	158 kHz	57.90	-7.66				
2 Average	158 kHz	51.59	-3.97				
2 Average	414 kHz	41.29	-6.27				
1 Quasi Peak	418 kHz	47.90	-9.58				
1 Quasi Peak	890 kHz	44.69	-11.30				
2 Average	1.898 MHz	35.54	-10.45				





\*\*\*\*\* END OF REPORT \*\*\*\*\*