FCC Part 15C
Measurement and Test Report

For

Shenzhen Anbash Technology Co., Ltd.

Area B,4/FL,Block G,Heng Chang Rong XingHui Technology Park,West Hua Ning Road,Da Lang Community, Bao'an District, Shenzhen, P.R.C

FCC ID: Z6BNC128PW

FCC Rule(s):	FCC Part 15C
Product Description:	COVERT Network Camera
Tested Model:	NC128PW
Report No.:	STR14078047I
Tested Date:	2014-07-04 to 2014-07-18
Issued Date:	2014-07-23
Tested By:	Jason Su / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

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TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Shenzhen Anbash Technology Co., Ltd
Address of applicant:	Area B,4/FL,Block G,Heng Chang Rong XingHui Technology Park,West Hua Ning Road, Da Lang Community, Bao'an District, Shenzhen, P.R.C
Manufacturer:	Shenzhen Anbash Technology Co., Ltd
Address of manufacturer:	Area B,4/FL,Block G,Heng Chang Rong XingHui Technology Park,West Hua Ning Road, Da Lang Community, Bao'an District, Shenzhen, P.R.C

General Description of EUT	
Product Name:	COVERT Network Camera
Trade Name:	Anbash
Model No.:	NC128PW
Adding Model(s):	NC128P, NC128W, NC129W, NC129P, NC129PW
Rated Voltage:	DC12V Adapter
Power Adapter Model:	NLB100120W1A
Note: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model NC128PW but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2472MHz for 802.11b/g/n(HT20) 2422-2462MHz for 802.11n(HT40)
RF Output Power:	7.18dBm(Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	13 for 802.11b/g/n(HT20); 9 for 802.11n(HT40)
Channel Separation:	5MHz
Type of Antenna:	SMA Reverse
Antenna Gain:	5.0dBi
Lowest Internal Frequency	32.768kHz

1.2 Test Standards

The following report is prepared on behalf of the Shenzhen Anbash Technology Co., 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 measurement guide KDB 558074 D01 V03r02 for digital transmission systems shall be performed also.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology 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 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology 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 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

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, 2442MHz, 2472MHz
TM2	802.11g	2412MHz, 2442MHz, 2472MHz
TM3	802.11n-HT20	2412MHz, 2442MHz, 2472MHz
TM4	802.11n-HT40	2422MHz, 2442MHz, 2462MHz

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
DC Cable	3.0	Unshielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	E10	LR-63C8R
Adapter	/	NLB100120W1A	/

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 2.1093	RF Exposure	Compliant
§ 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)	Radiated Emission	Compliant
§ 15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: not applicable

3. RF Exposure

3.1 Standard Applicable

According to § 1.1307 and § 2.1093, the portable transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF exposure, please see the RF Exposure Report.

4. Antenna Requirement

4.1 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.

4.2 Evaluation Information

This product has an unique antenna, fulfill the requirement of this section.

5. Power Spectral Density

5.1 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.

5.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

5.3 Test Procedure

According to the KDB 558074 D01 V03r02, the test method of power spectral density as below:

3

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 ≥ 3 kHz.
5. Set the VBW ≥ 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.

5.4 Environmental Conditions

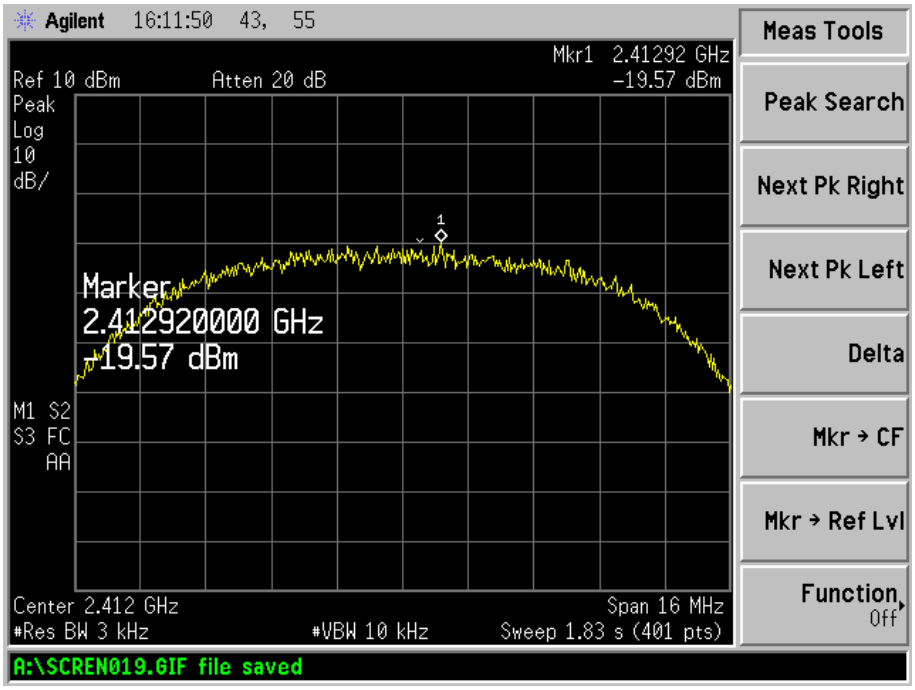
Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

5.5 Summary of Test Results/Plots

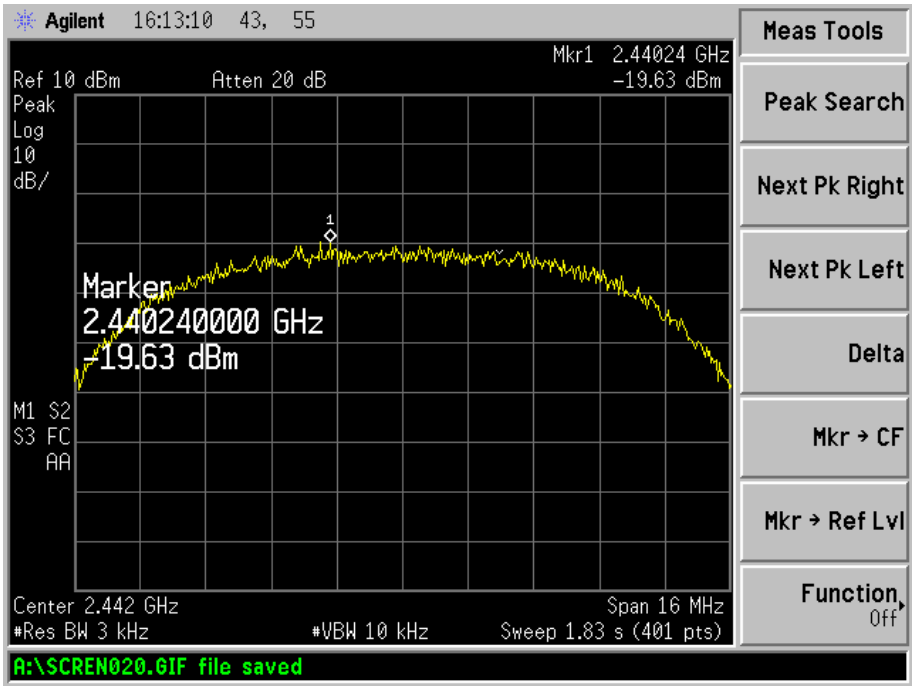
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-19.57	8
	2442	-19.63	8
	2472	-20.1	8
802.11g	2412	-22.87	8
	2442	-21.12	8
	2472	-23.24	8
802.11n HT20	2412	-22.95	8
	2442	-21.48	8
	2472	-23.22	8
802.11n HT40	2422	-24.99	8
	2442	-24.94	8
	2462	-25.74	8

Please refer to the following test plots:

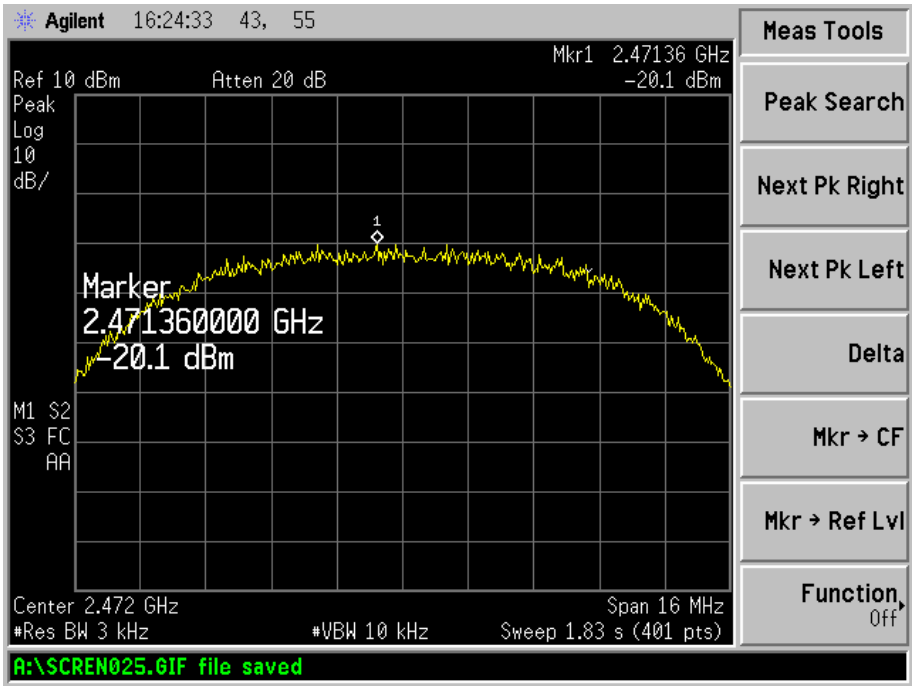
802.11b-Low Channel



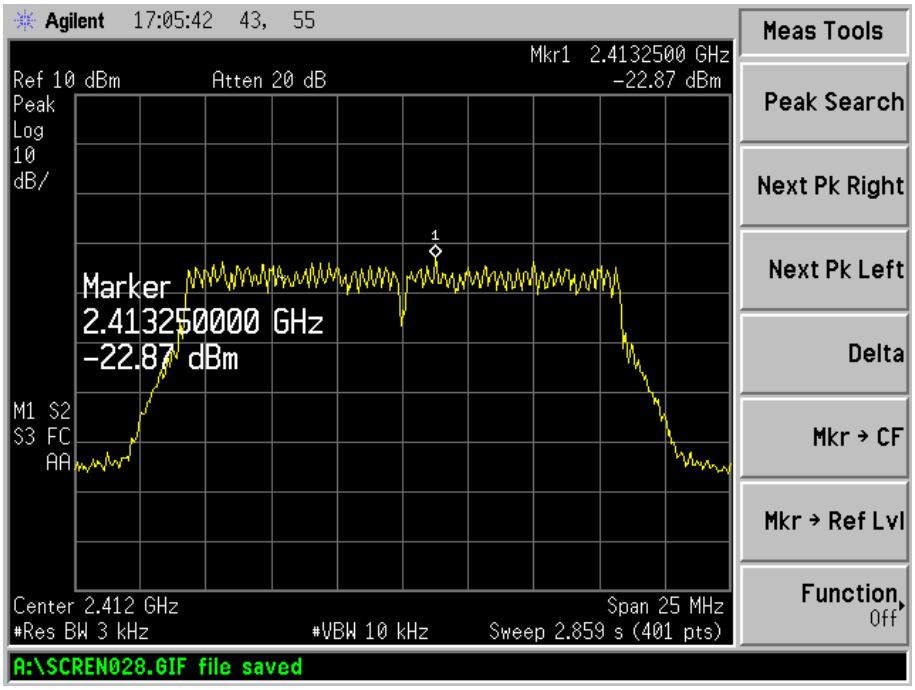
802.11b-Middle Channel



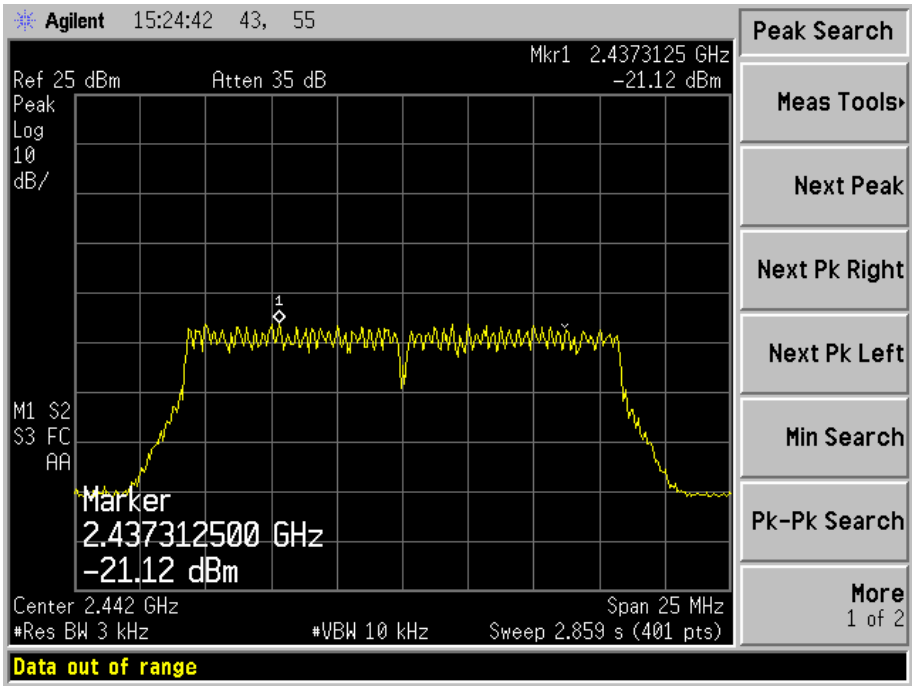
802.11b-High Channel



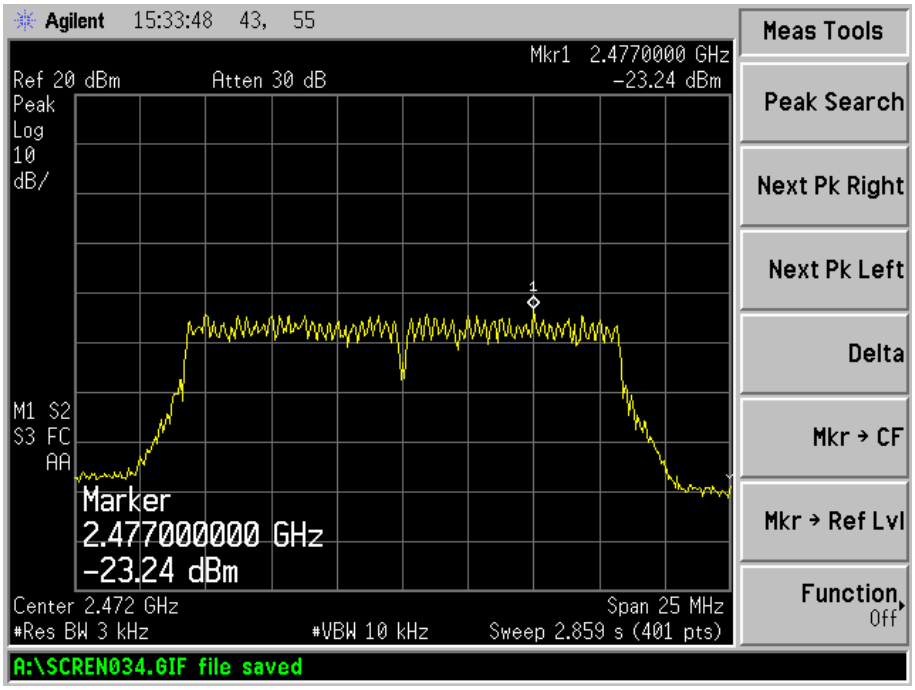
802.11g-Low Channel



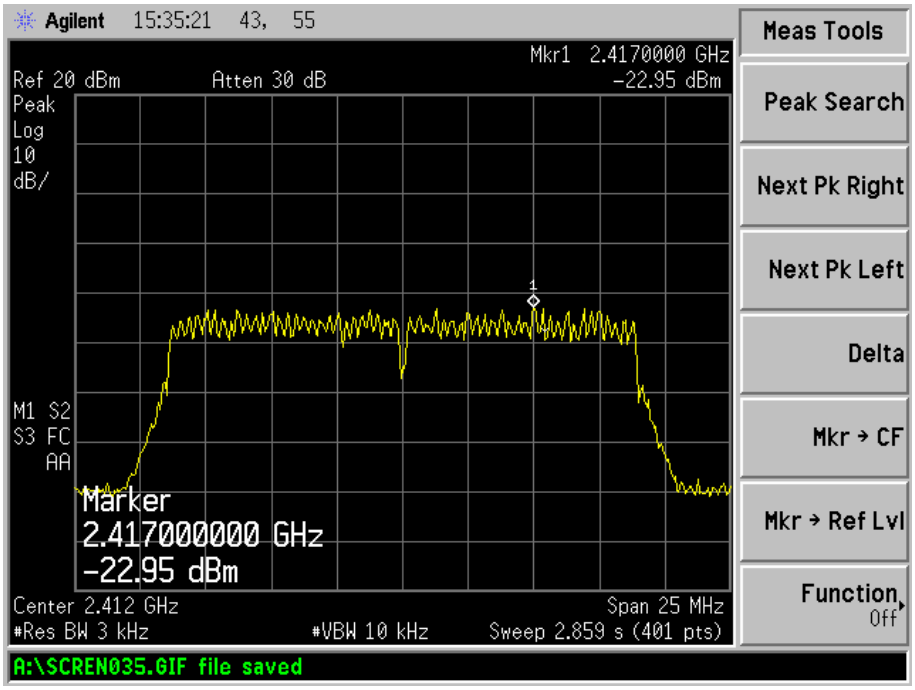
802.11g-Middle Channel



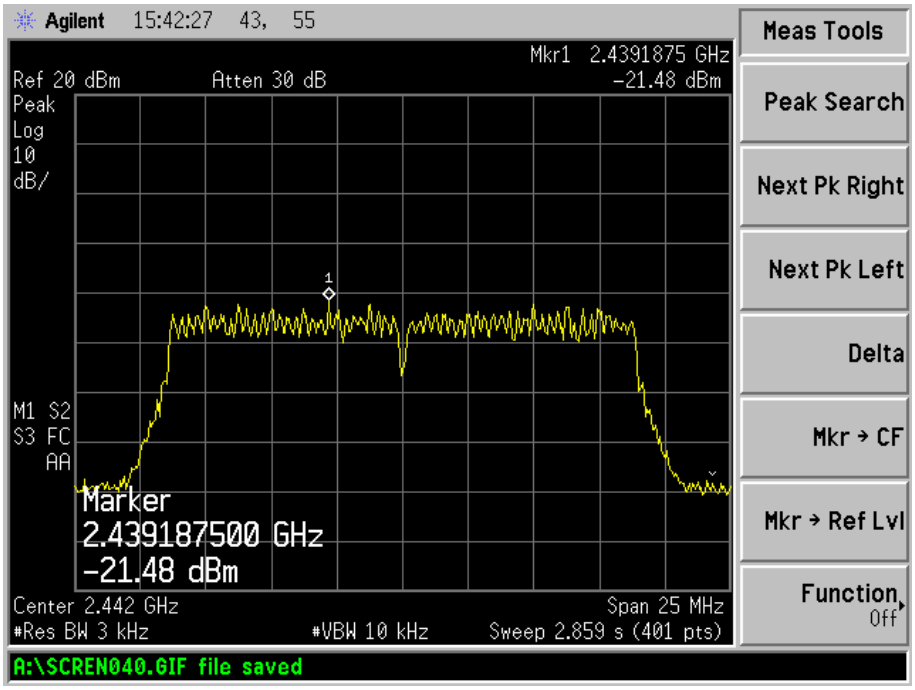
802.11g-High Channel



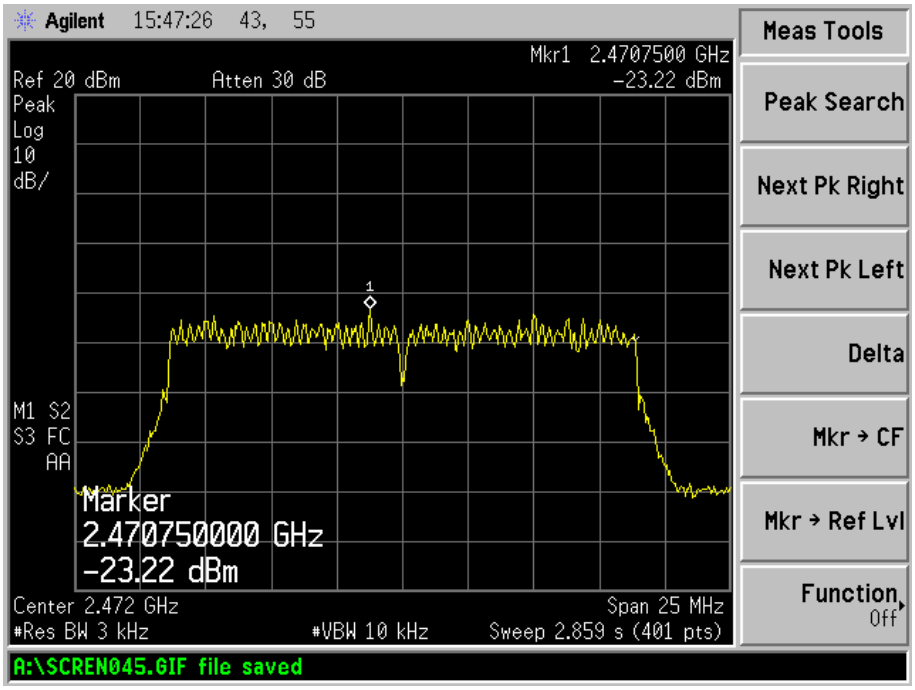
802.11n-HT20-Low Channel



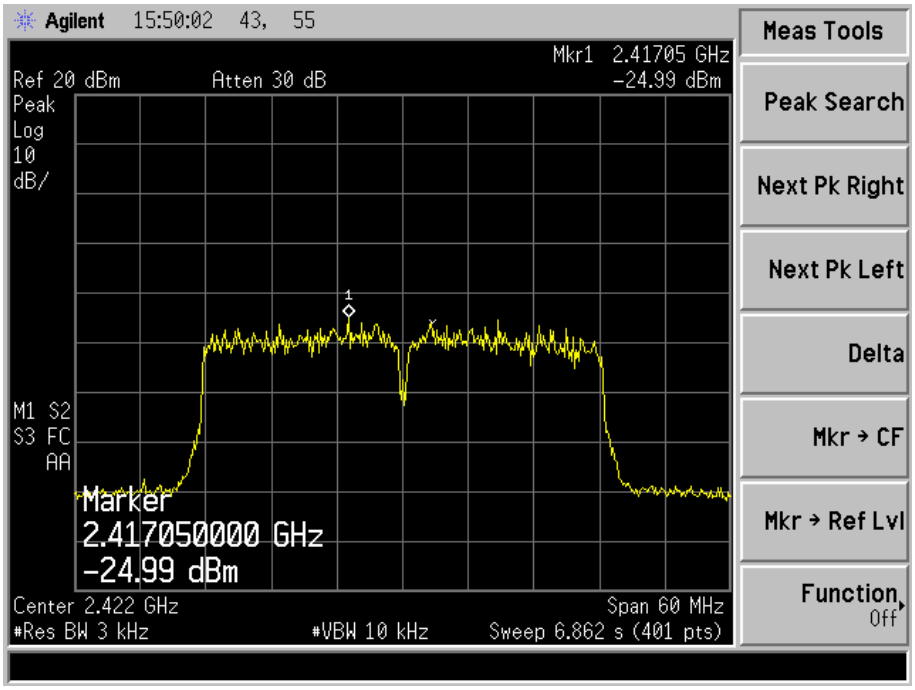
802.11n-HT20-Middle Channel



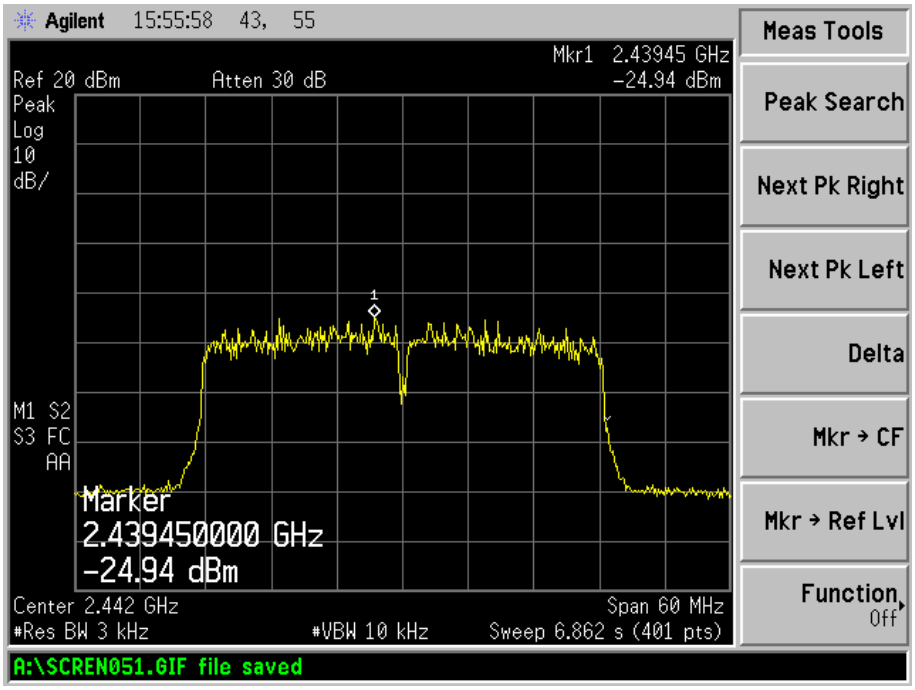
802.11n-HT20-High Channel



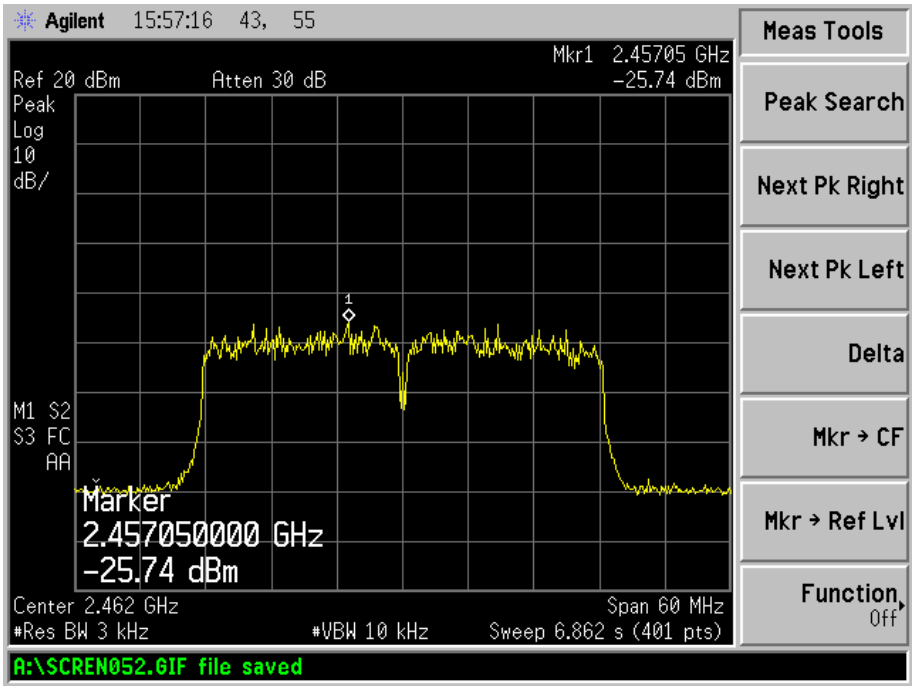
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



6. 6dB Bandwidth

6.1 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.

6.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

6.3 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) ≥ 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..

6.4 Environmental Conditions

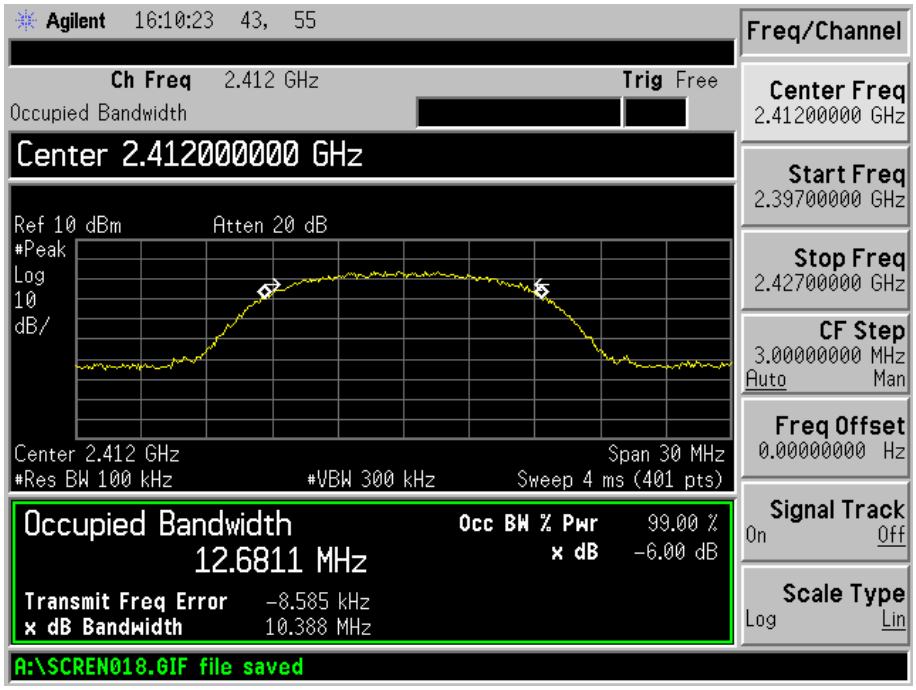
Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

6.5 Summary of Test Results/Plots

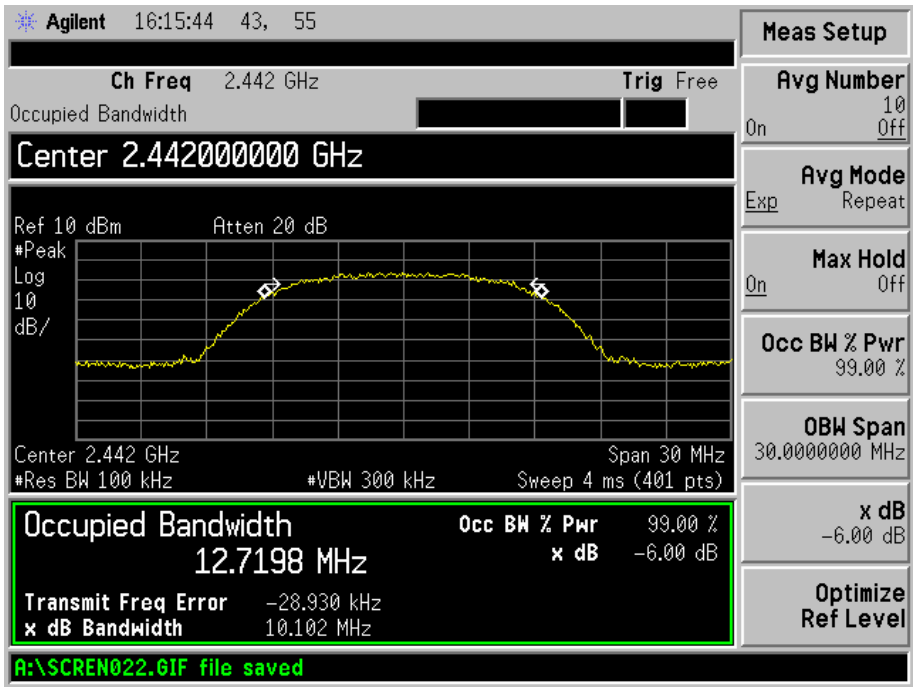
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	99% Bandwidth kHz	Limit kHz
802.11b	2412	10388	12681.1	500
	2442	10102	12719.8	500
	2472	10156	12646.3	500
802.11g	2412	16490	16401.2	500
	2442	16610	16878.5	500
	2472	16613	16837.5	500
802.11n-HT20	2412	17824	17798.1	500
	2442	17743	17621.7	500
	2472	17747	17625.1	500
802.11n-HT40	2422	35734	35954.0	500
	2442	35534	35800.0	500
	2462	35656	35794.4	500

Please refer to the following test plots:

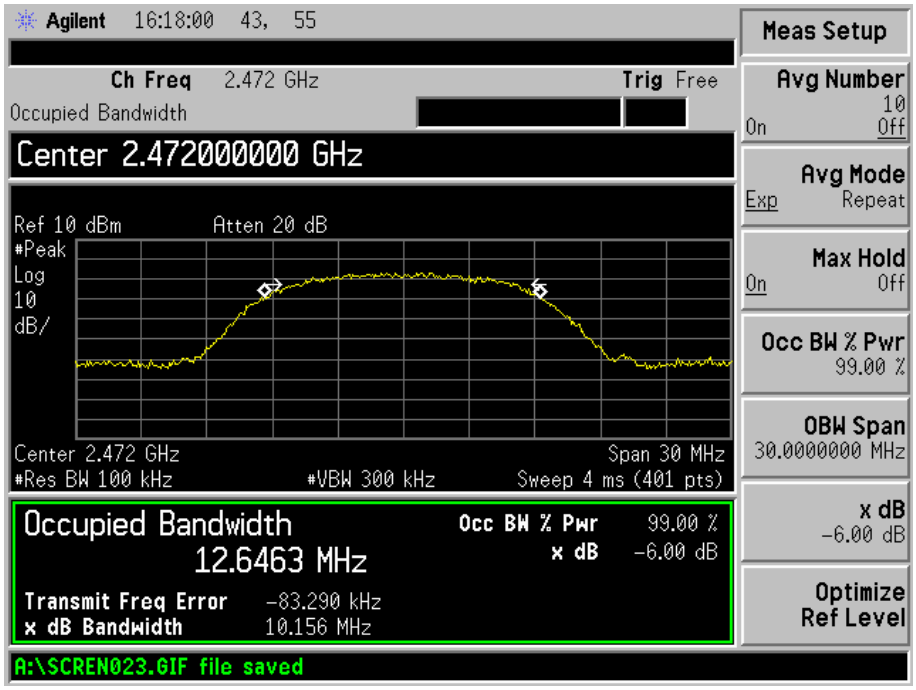
802.11b-Low Channel



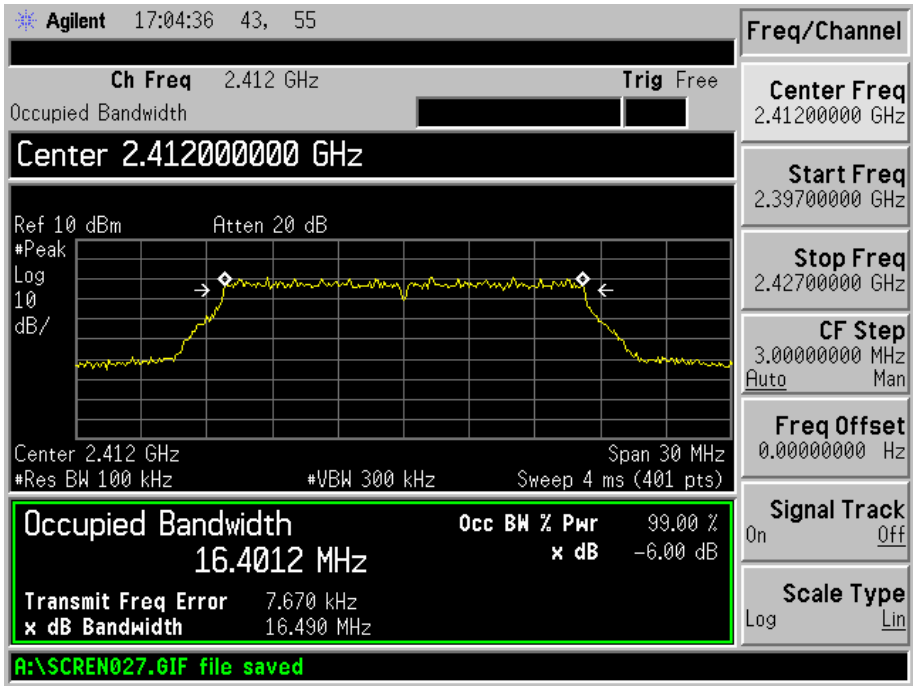
802.11b-Middle Channel



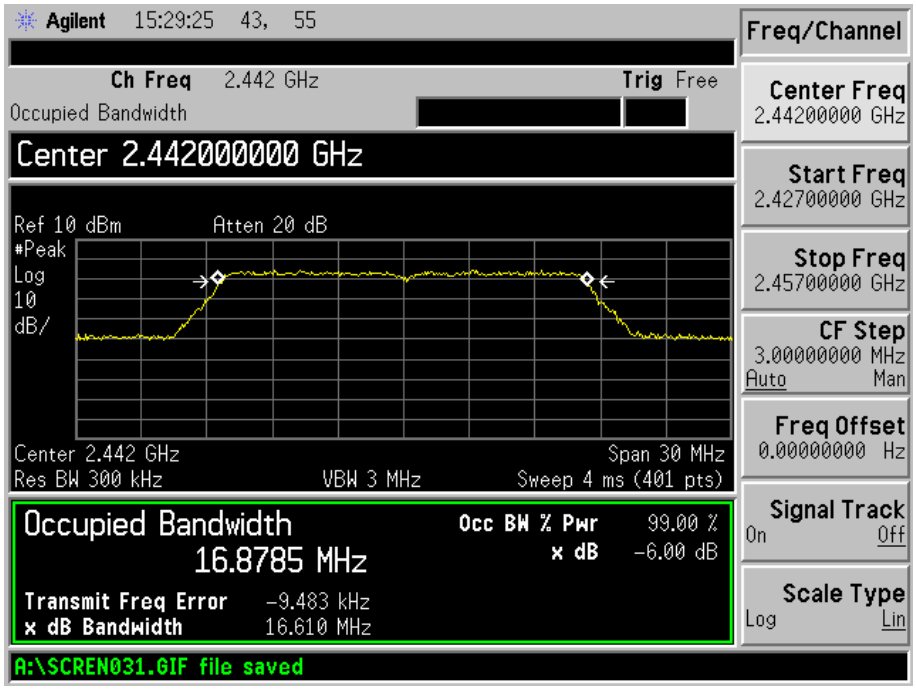
802.11b-High Channel



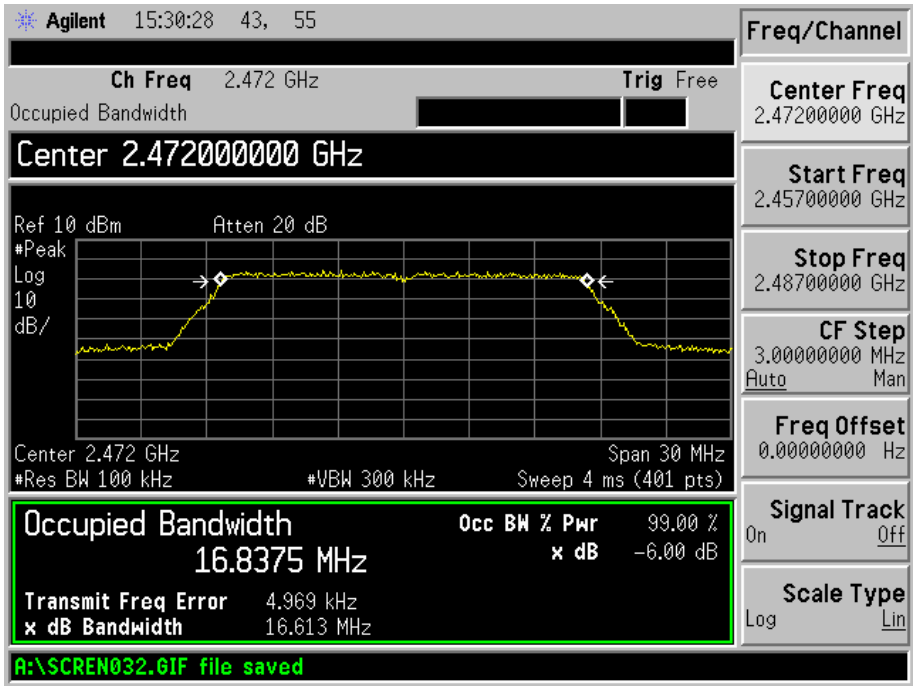
802.11g-Low Channel



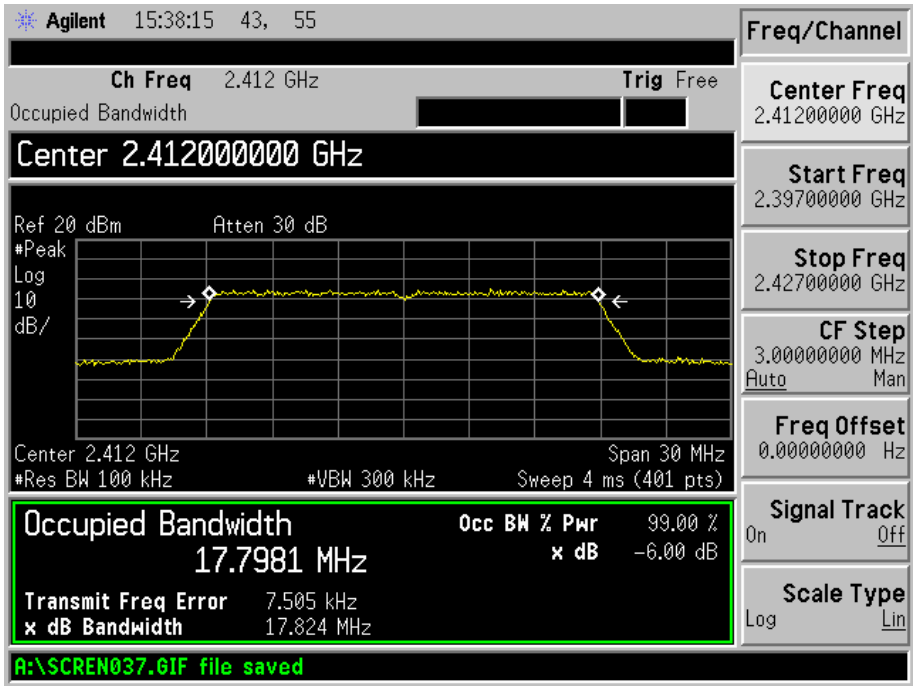
802.11g-Middle Channel



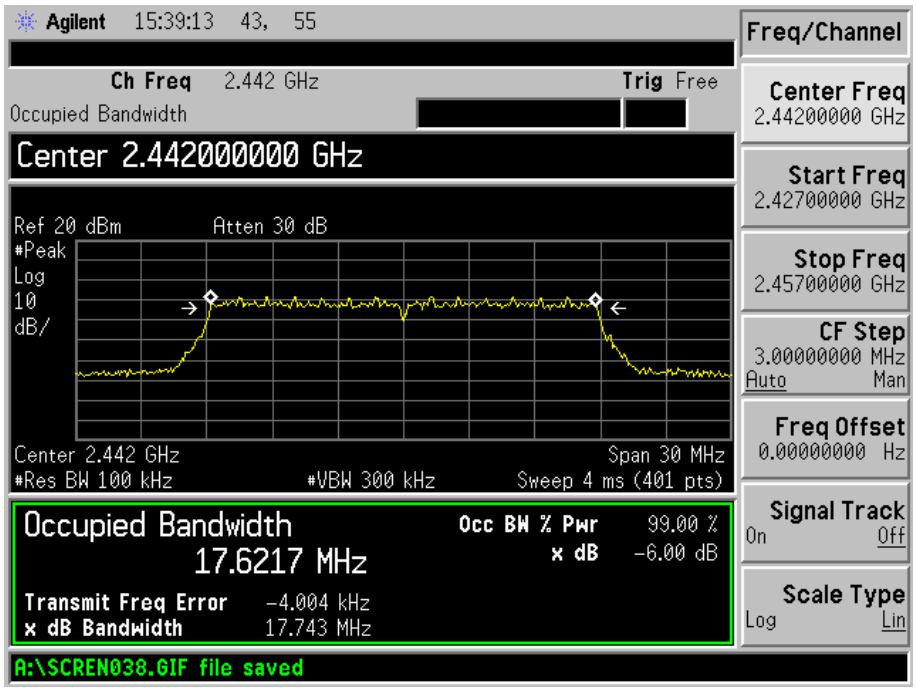
802.11g-High Channel



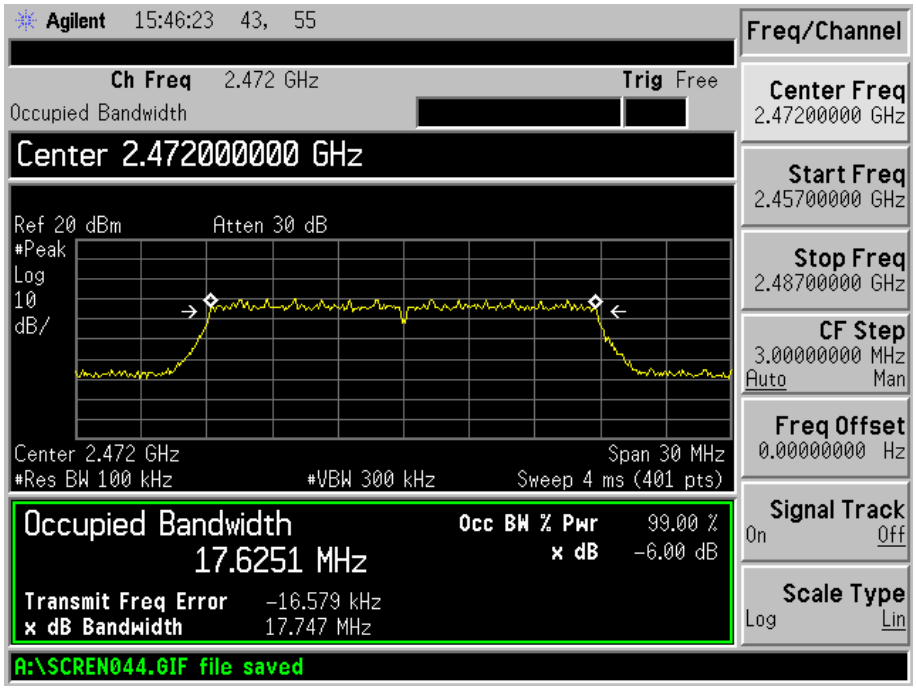
802.11n-HT20-Low Channel



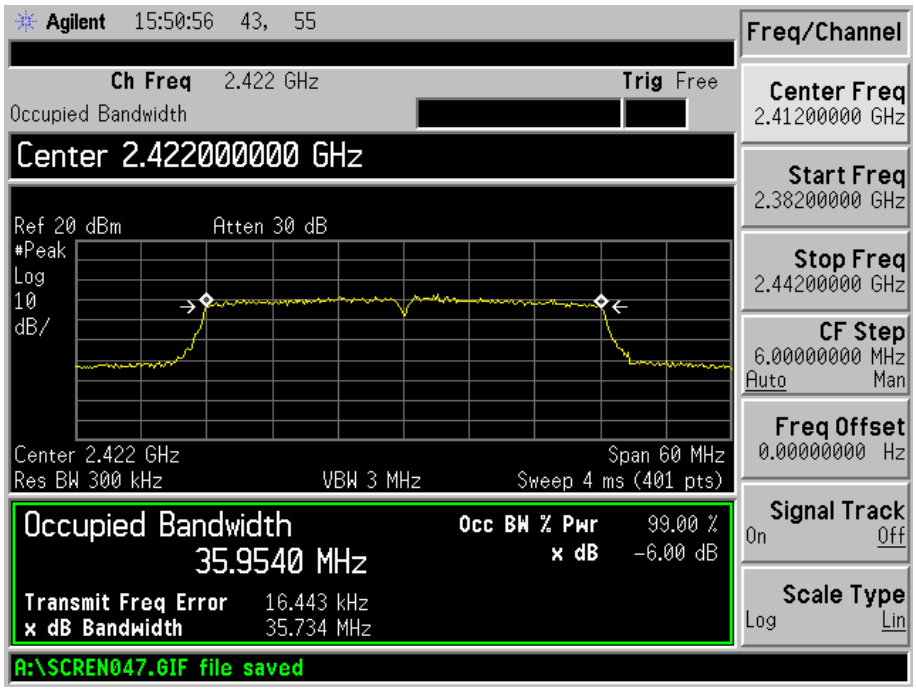
802.11n-HT20-Middle Channel



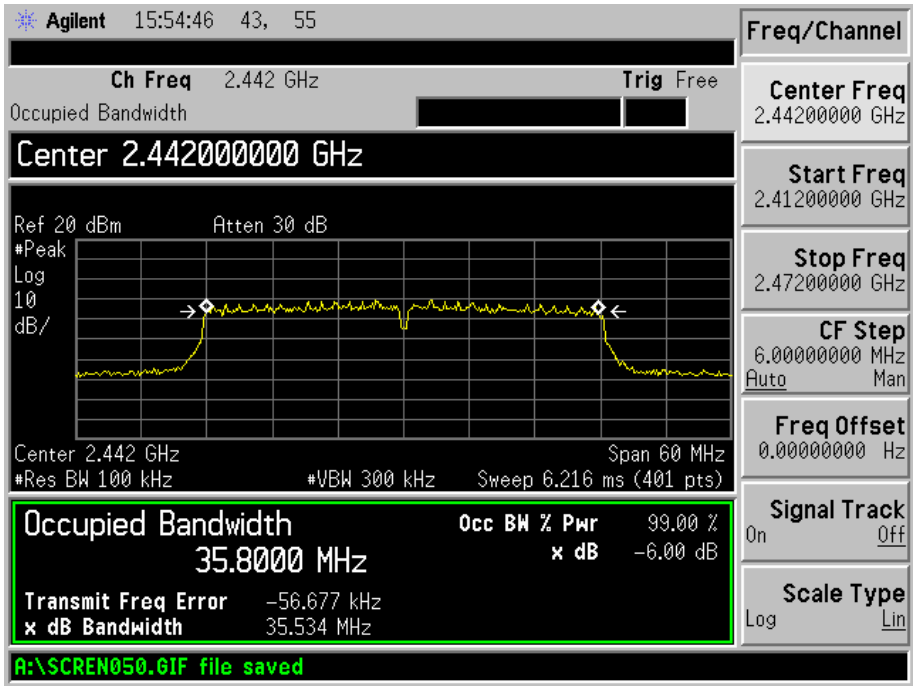
802.11n-HT20-High Channel



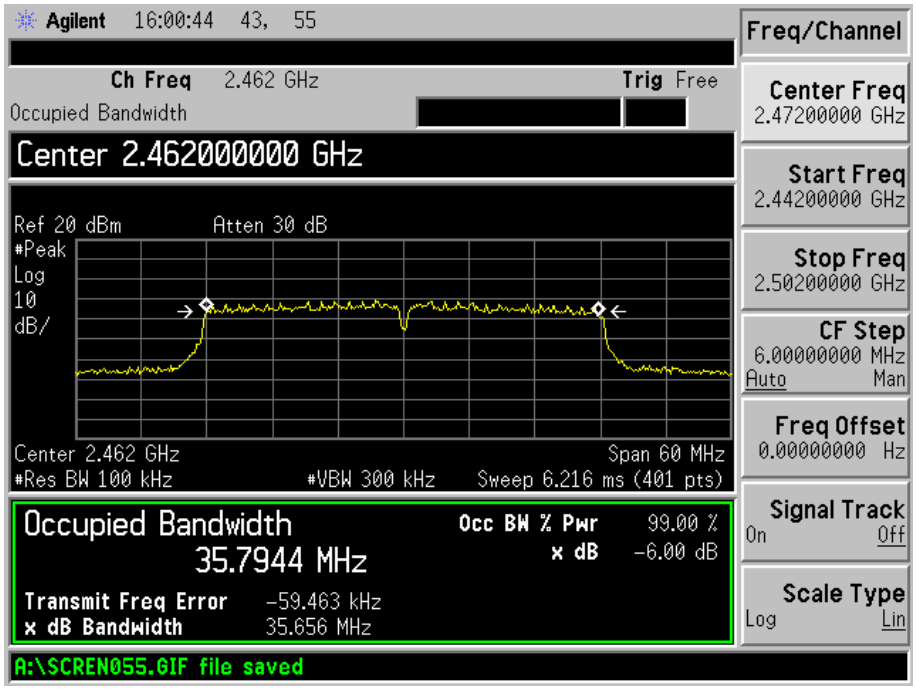
802.11n-HT40-Low Channel



802.11n-HT40-Middle Channel



802.11n-HT40-High Channel



7. RF Output Power

7.1 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.

7.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	Agilent	E4402B	US41192821	2014-05-28	2015-05-27
Attenuator	ATTEN	ATS100-4-20	/	2014-05-28	2015-05-27

7.3 Test Procedure

According to section 15.247(b)-power output of the KDB-558074 D01 V03r02, 8.1.2 Option 2 (channel integration method) this procedure should only be used when the maximum available RBW of the spectrum/signal analyzer is less than the DTS bandwidth.

1. Set the RBW = maximum available (at least 1 MHz).
2. Set the VBW = 3 x RBW or maximum available setting (must be ≥ RBW).
3. Set the span to fully encompass the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the spectrum analyzer's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some analyzers, this may require a manual override to ensure use of peak detector).

7.4 Environmental Conditions

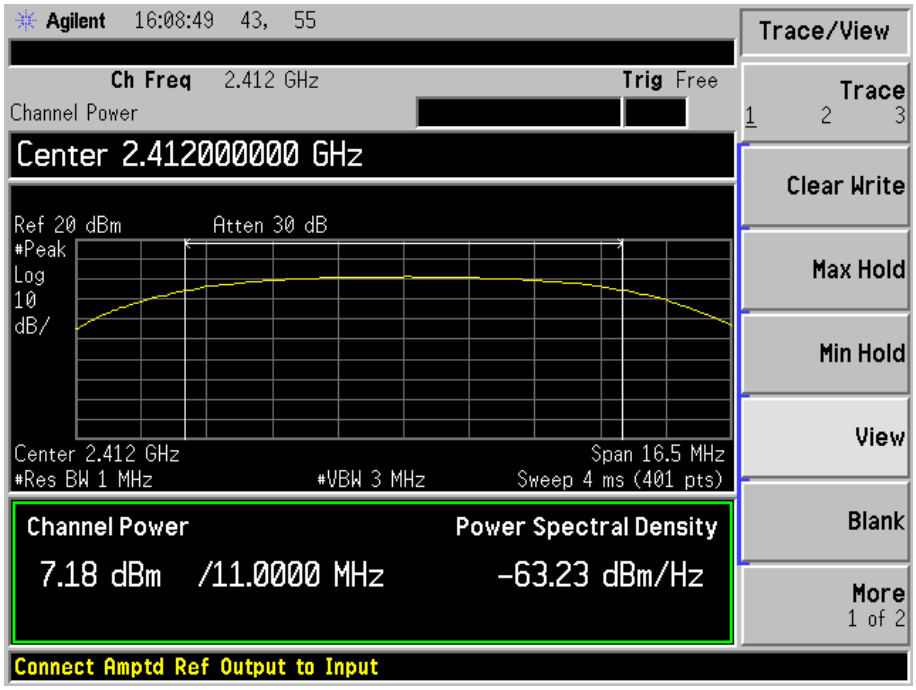
Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

7.5 Summary of Test Results/Plots

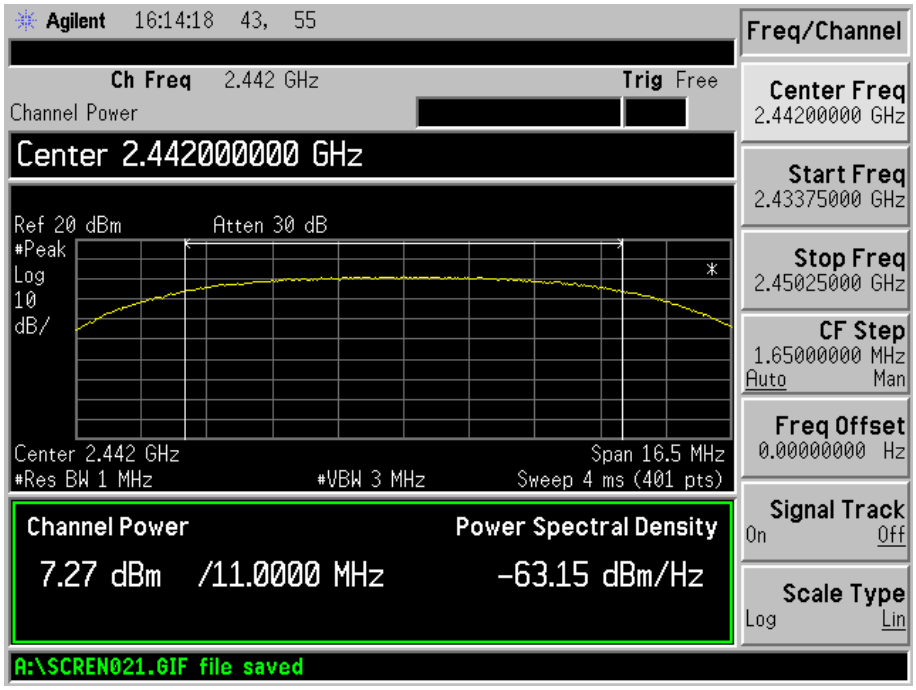
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b_11Mbps	2412	7.18	5.22	1000
	2442	7.27	5.33	1000
	2472	6.75	4.73	1000
802.11g_54Mbps	2412	6.52	4.49	1000
	2442	6.85	4.84	1000
	2472	6.39	4.36	1000
802.11n HT20_MCS7	2412	6.36	4.33	1000
	2442	6.75	4.73	1000
	2472	5.53	3.57	1000
802.11n HT40_MCS7	2422	6.77	4.75	1000
	2442	6.42	4.39	1000
	2462	6.32	4.29	1000

Please refer to the following test plots:

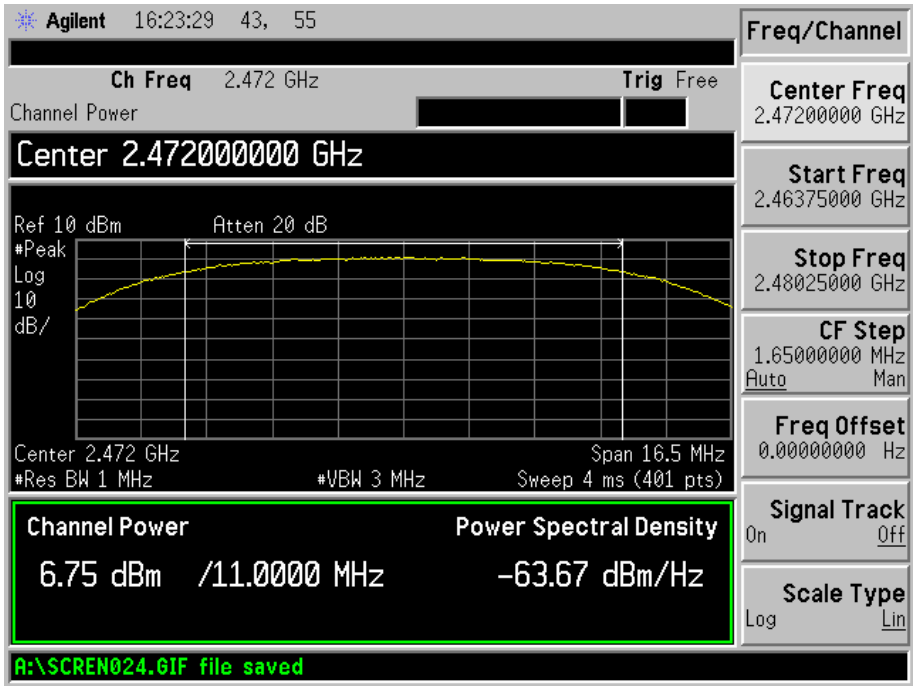
802.11b-1Mbps-Low Channel



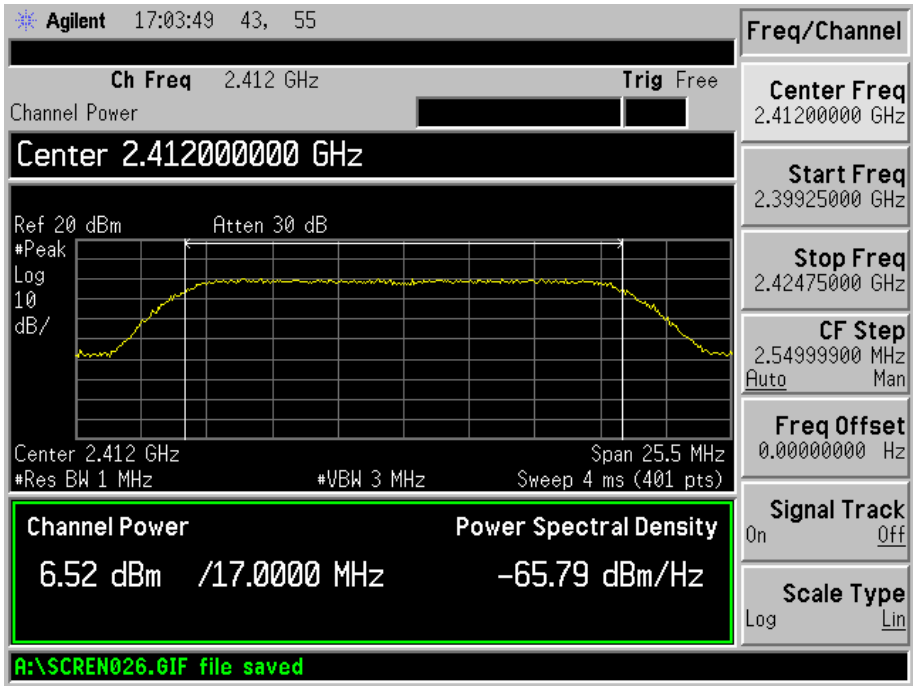
802.11b -1Mbps-Middle Channel



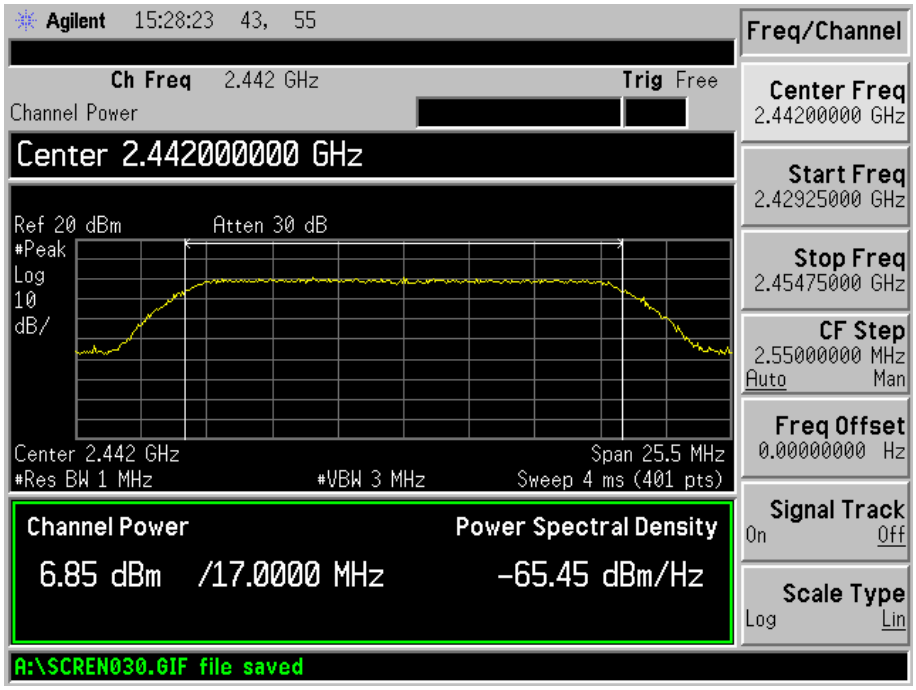
802.11b -1Mpbs-High Channel



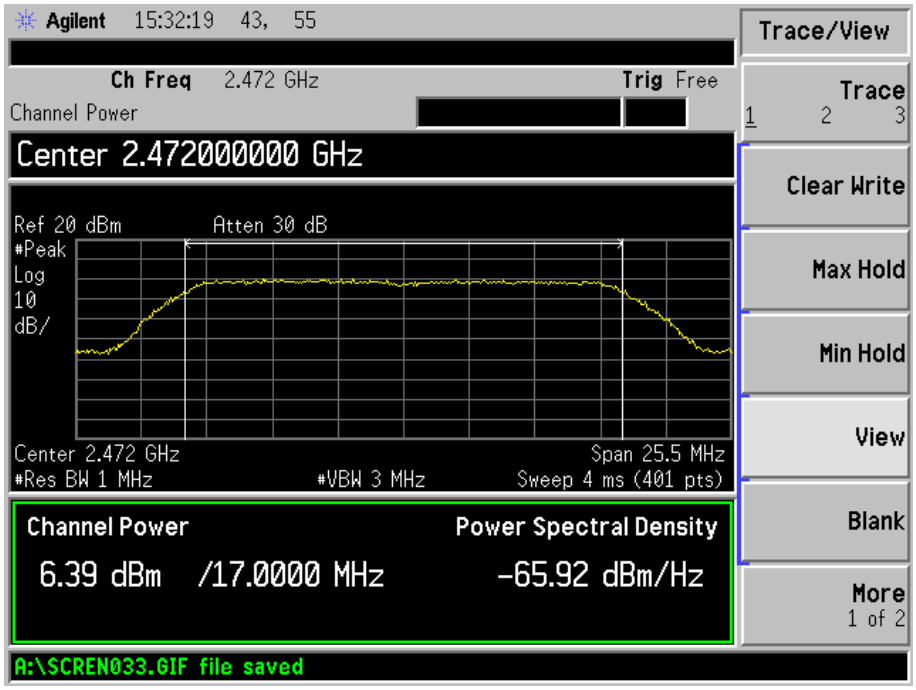
802.11g-54Mbps-Low Channel



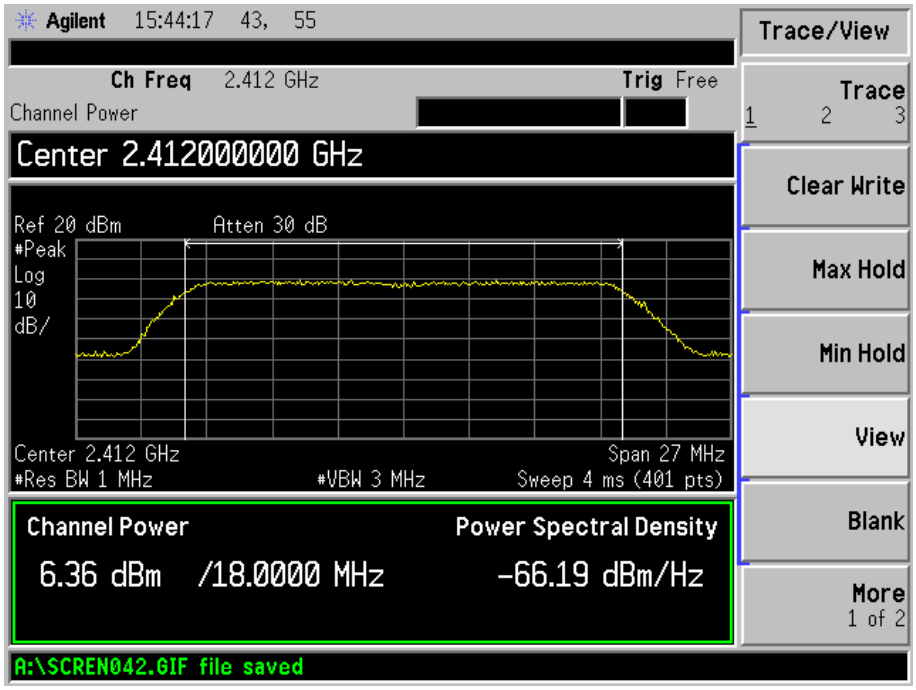
802.11g-54Mbps-Middle Channel



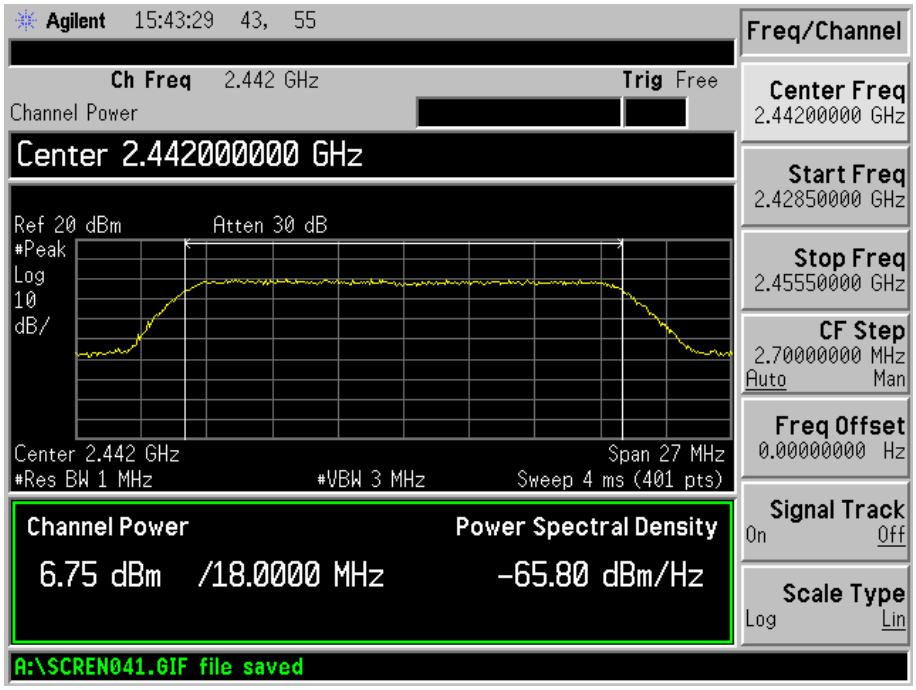
802.11g-54Mpbs-High Channel



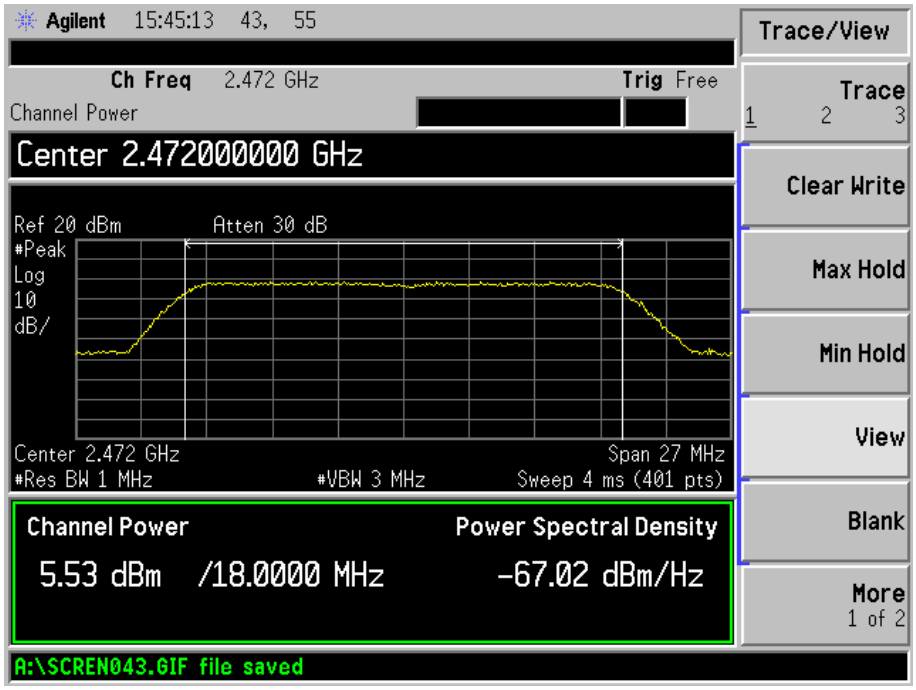
802.11n-HT20-MCS7-Low Channel



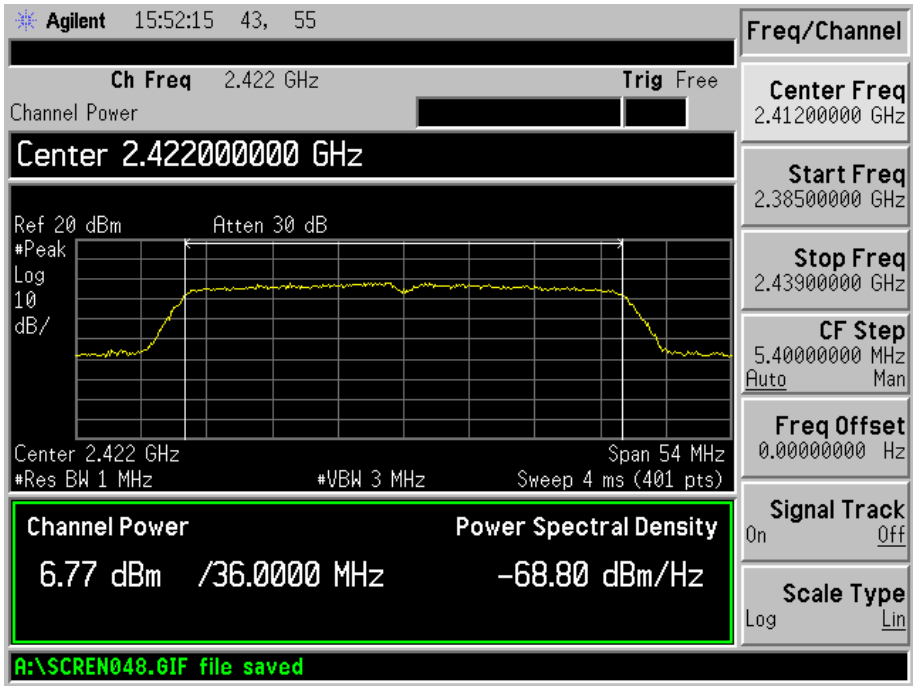
802.11n-HT20-MCS7-Middle Channel



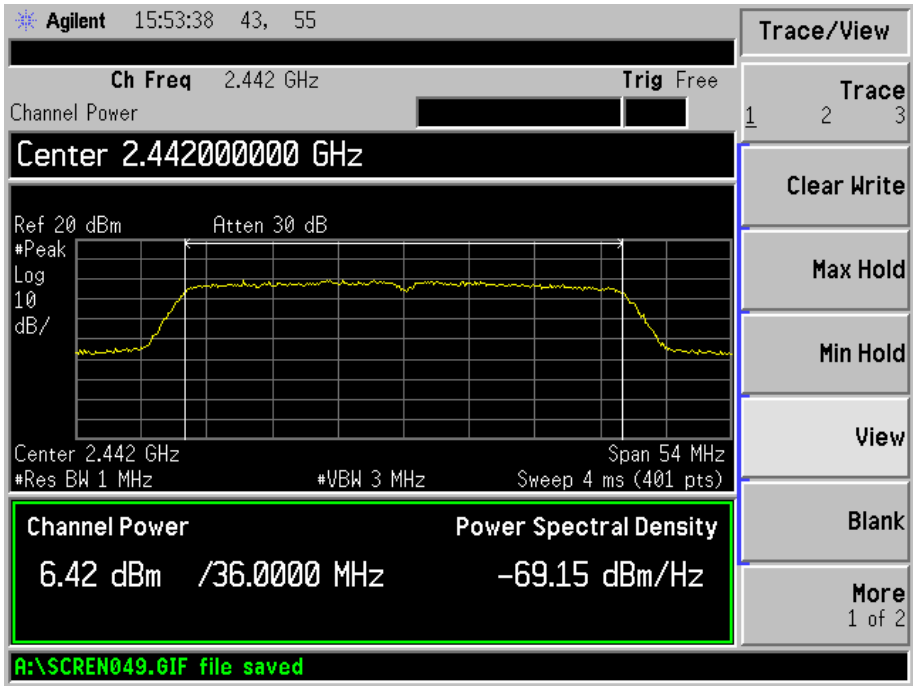
802.11n-HT20-MCS7-High Channel



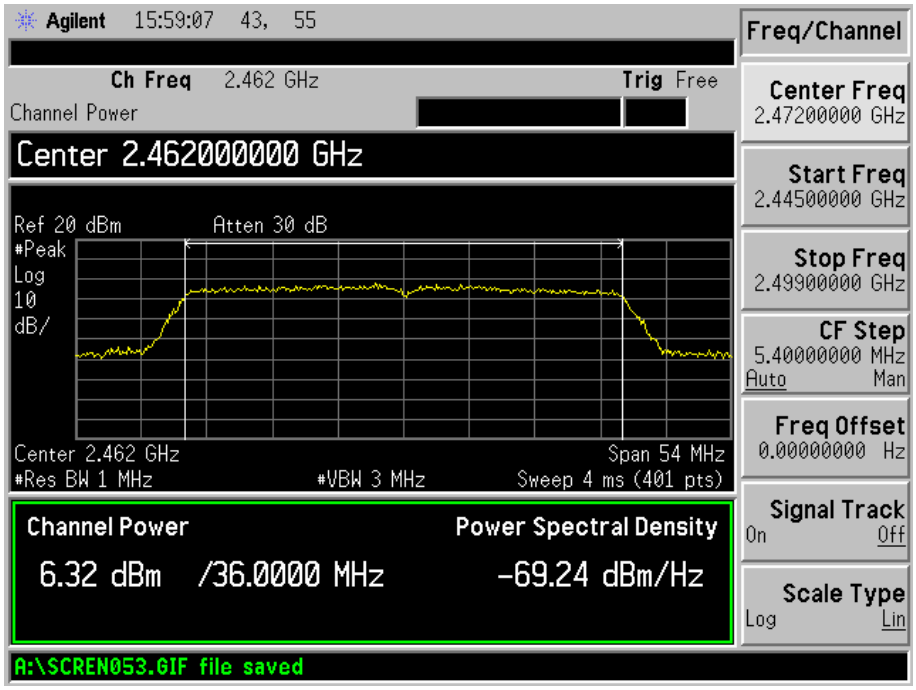
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS07-Middle Channel



802.11n-HT40-MCS7-High Channel



8. Field Strength of Spurious Emissions

8.1 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 ±5.10 dB.

8.2 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).

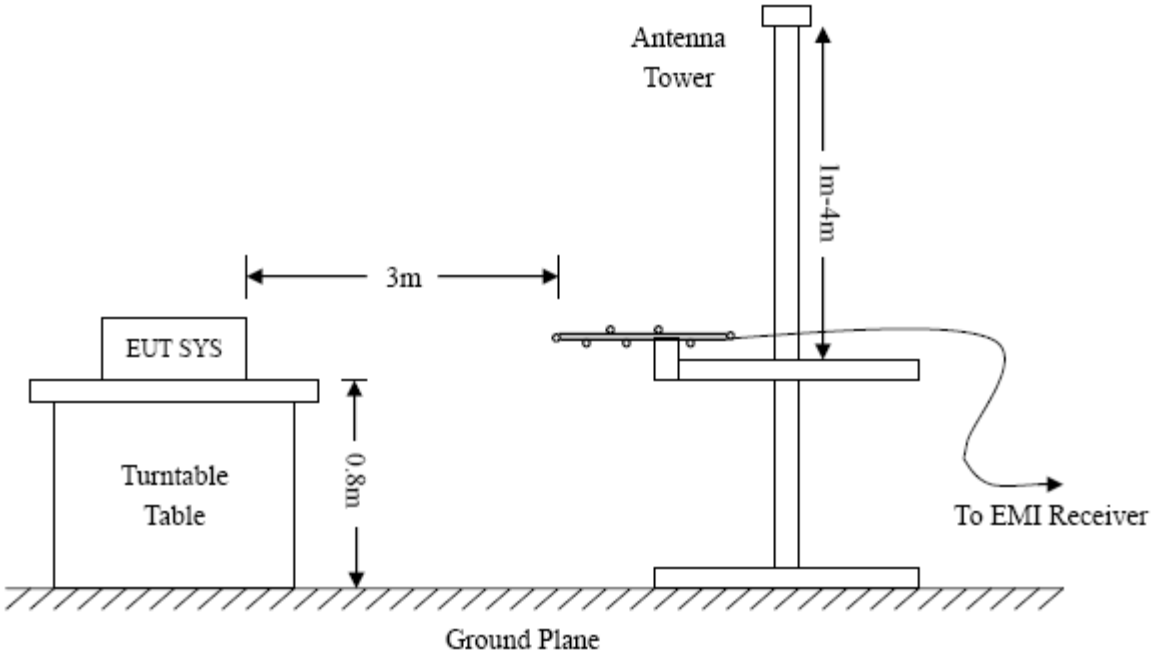
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

8.3 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23
Horn Antenna	ETS	3116B	00088203	2014-05-24	2015-05-23
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2014-05-24	2015-05-23

8.4 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.



Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

8.5 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:

Corr. Ampl. = Indicated Reading + Ant. Factor + Cable Loss – Ampl. Gain

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

Margin = Corr. Ampl. – FCC Part 15 Limit

8.6 Environmental Conditions

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

8.7 Summary of Test Results/Plots

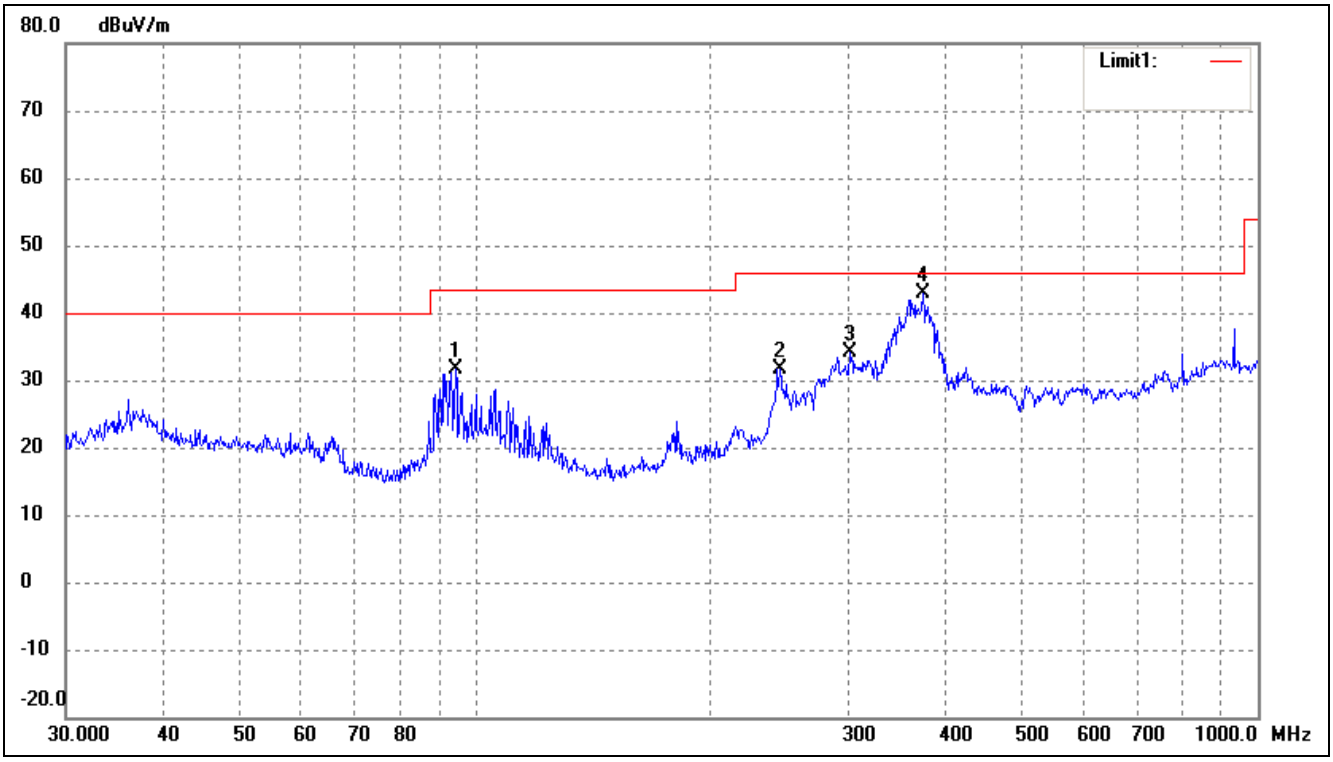
According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

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

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

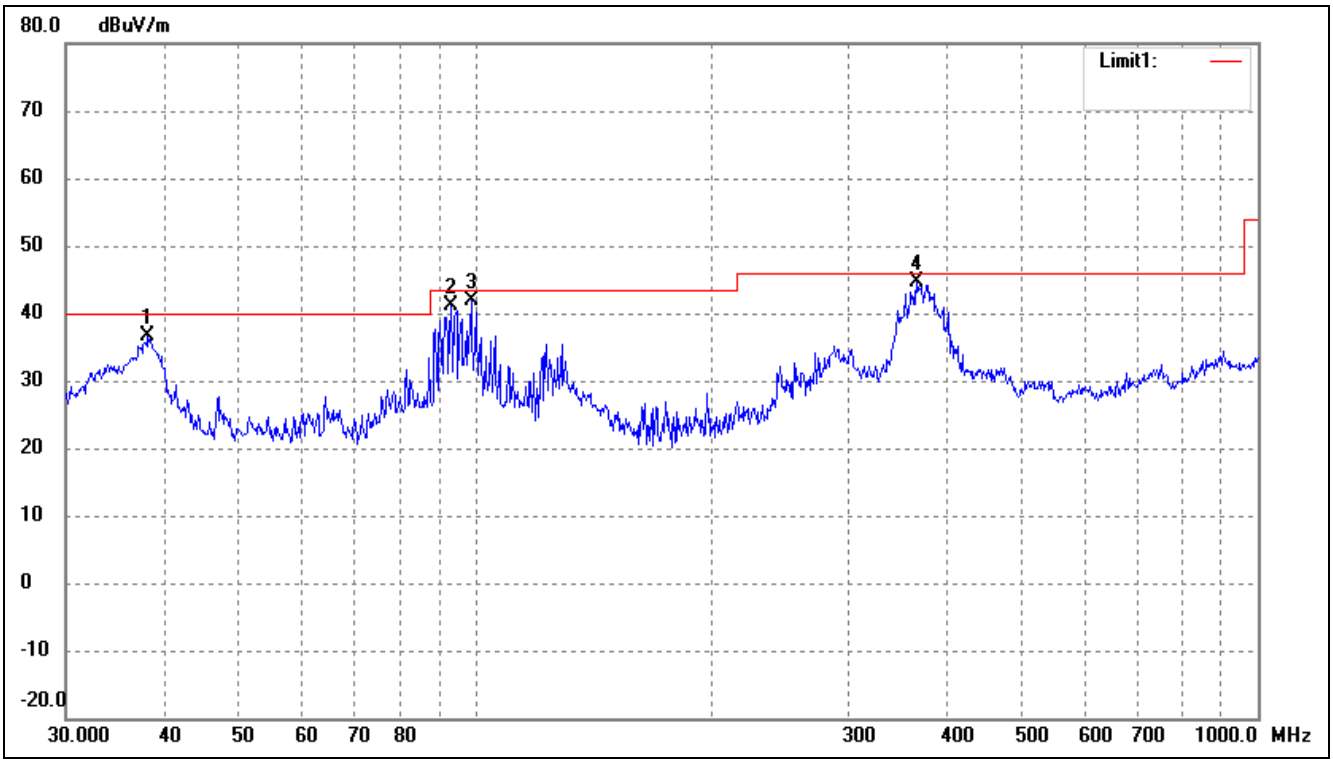
EUT: *COVERT Network Camer*
Tested Model: *NC128PW*
Operating Condition: *802.11b Transmitting Low Channel-2412MHz*
Comment: *Adapter:DC12V*

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	94.4284	26.80	4.73	31.53	43.50	-11.97	254	100	peak
2	245.0900	25.16	6.52	31.68	46.00	-14.32	113	100	peak
3	301.4224	24.84	9.18	34.02	46.00	-11.98	284	100	peak
4	373.3112	33.73	9.22	42.95	46.00	-3.05	360	100	peak

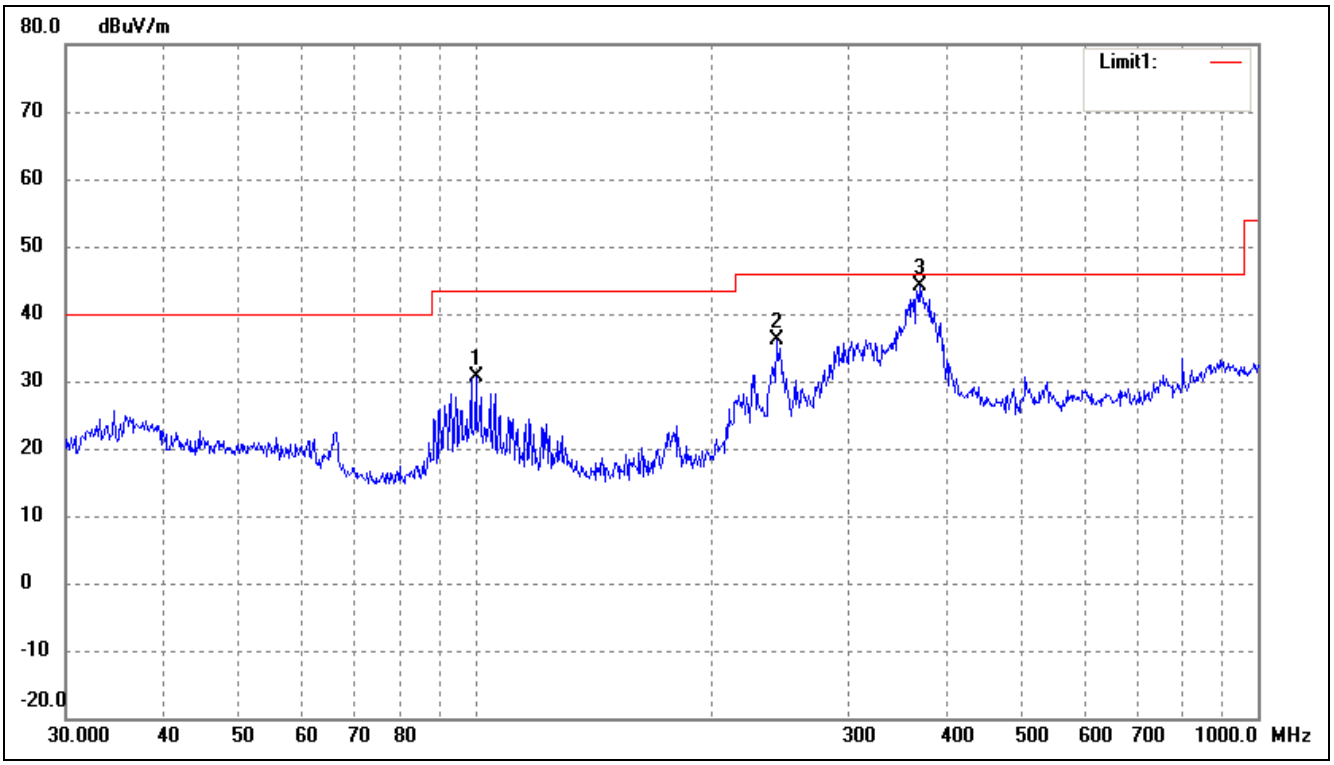
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	38.2120	27.68	8.94	36.62	40.00	-3.38	114	100	peak
2	93.1132	36.79	4.40	41.19	43.50	-2.31	270	100	peak
3	98.8325	36.10	5.84	41.94	43.50	-1.56	360	100	peak
4	366.8231	35.52	9.22	44.74	46.00	-1.26	116	100	peak

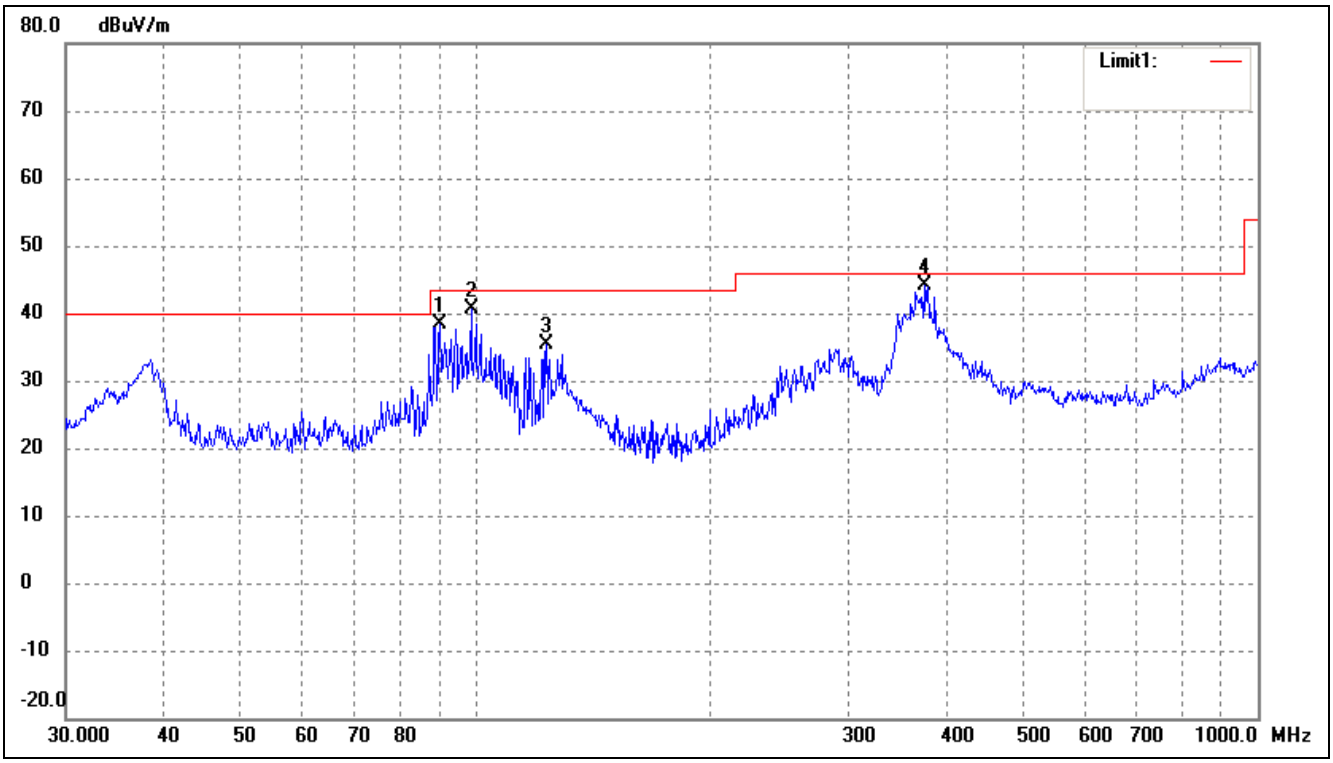
Operating Condition: *802.11b Transmitting Middle Channel-2442MHz*
Comment: *Adapter:DC12V*

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	100.2286	24.62	6.10	30.72	43.50	-12.78	178	100	peak
2	242.5253	29.78	6.43	36.21	46.00	-9.79	224	100	peak
3	369.4047	34.80	9.23	44.03	46.00	-1.97	160	100	peak

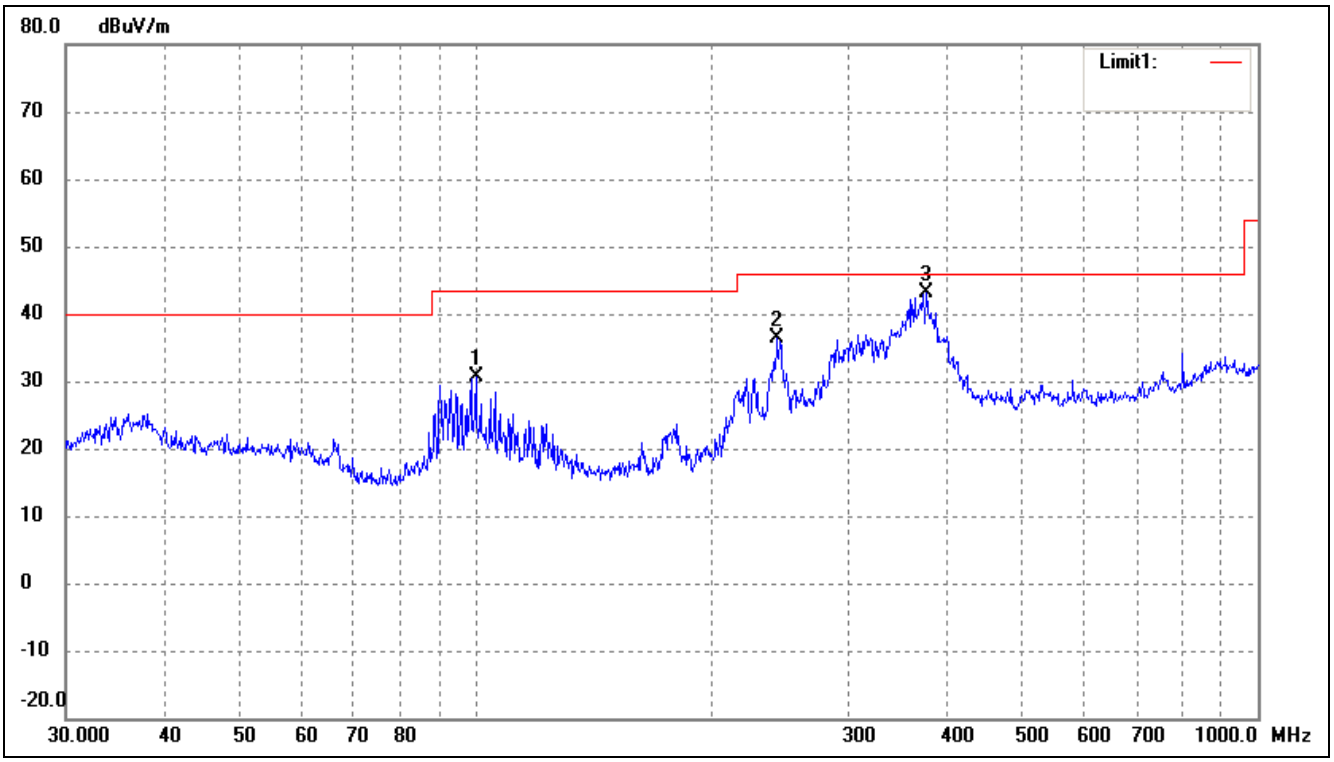
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	90.2205	34.70	3.68	38.38	43.50	-5.12	256	100	peak
2	98.8326	34.71	5.84	40.55	43.50	-2.95	31	100	peak
3	123.2655	31.51	3.76	35.27	43.50	-8.23	335	100	peak
4	374.6226	34.95	9.20	44.15	46.00	-1.85	201	100	peak

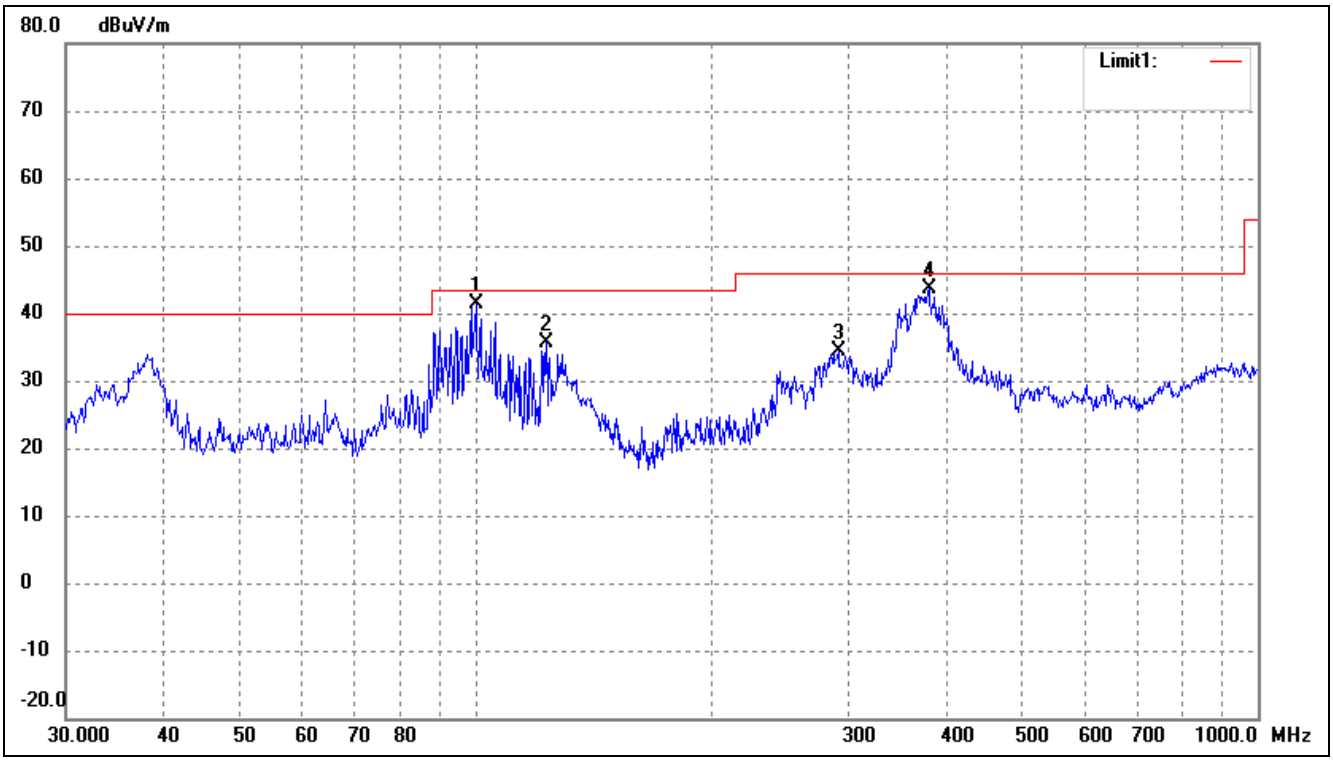
Operating Condition: *802.11b Transmitting High Channel-2472MHz*
Comment: *Adapter:DC12V*

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	100.2286	24.57	6.10	30.67	43.50	-12.83	176	100	peak
2	243.3772	29.89	6.45	36.34	46.00	-9.66	255	100	peak
3	377.2591	33.99	9.20	43.19	46.00	-2.81	360	100	peak

Test Specification: *Vertical*

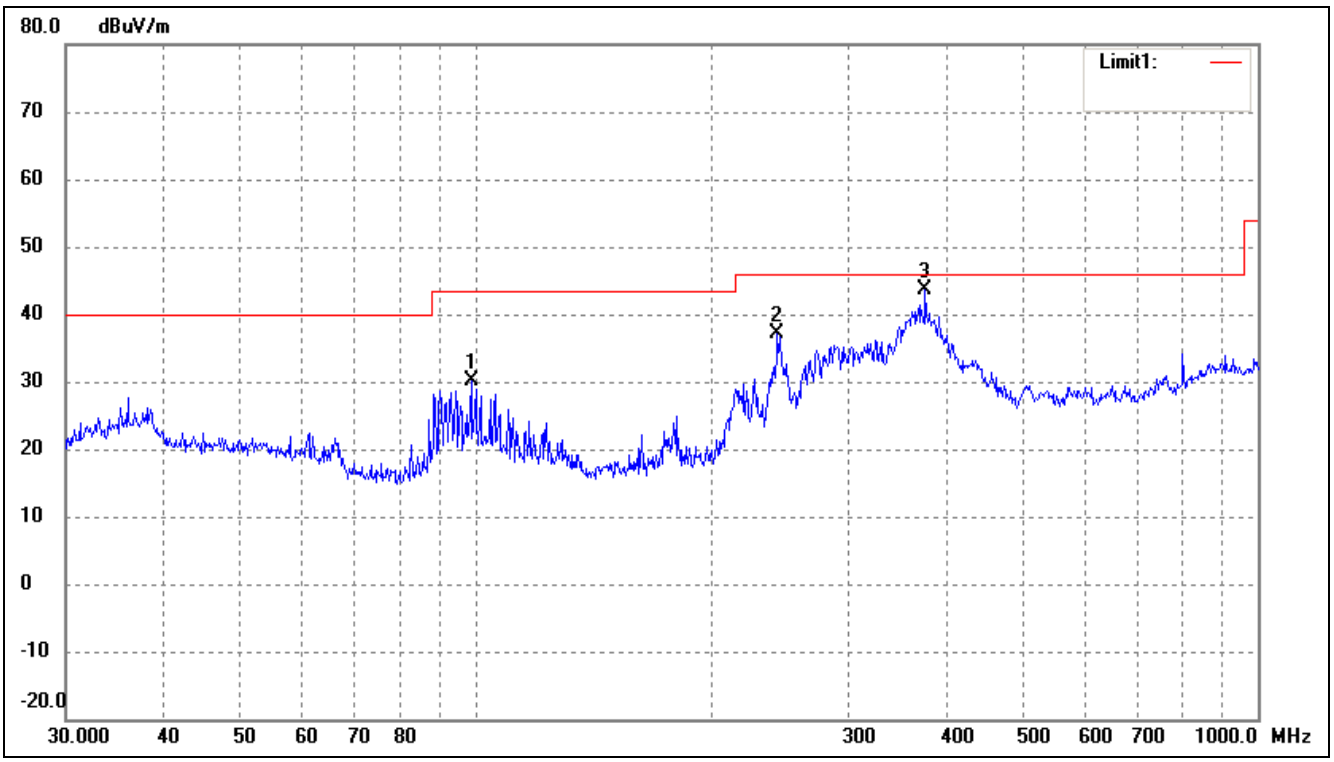


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	100.2286	35.36	6.10	41.46	43.50	-2.04	360	100	peak
2	123.2655	31.76	3.76	35.52	43.50	-7.98	225	100	peak
3	291.0360	25.63	8.83	34.46	46.00	-11.54	160	100	peak
4	379.9141	34.37	9.19	43.56	46.00	-2.44	310	100	peak

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

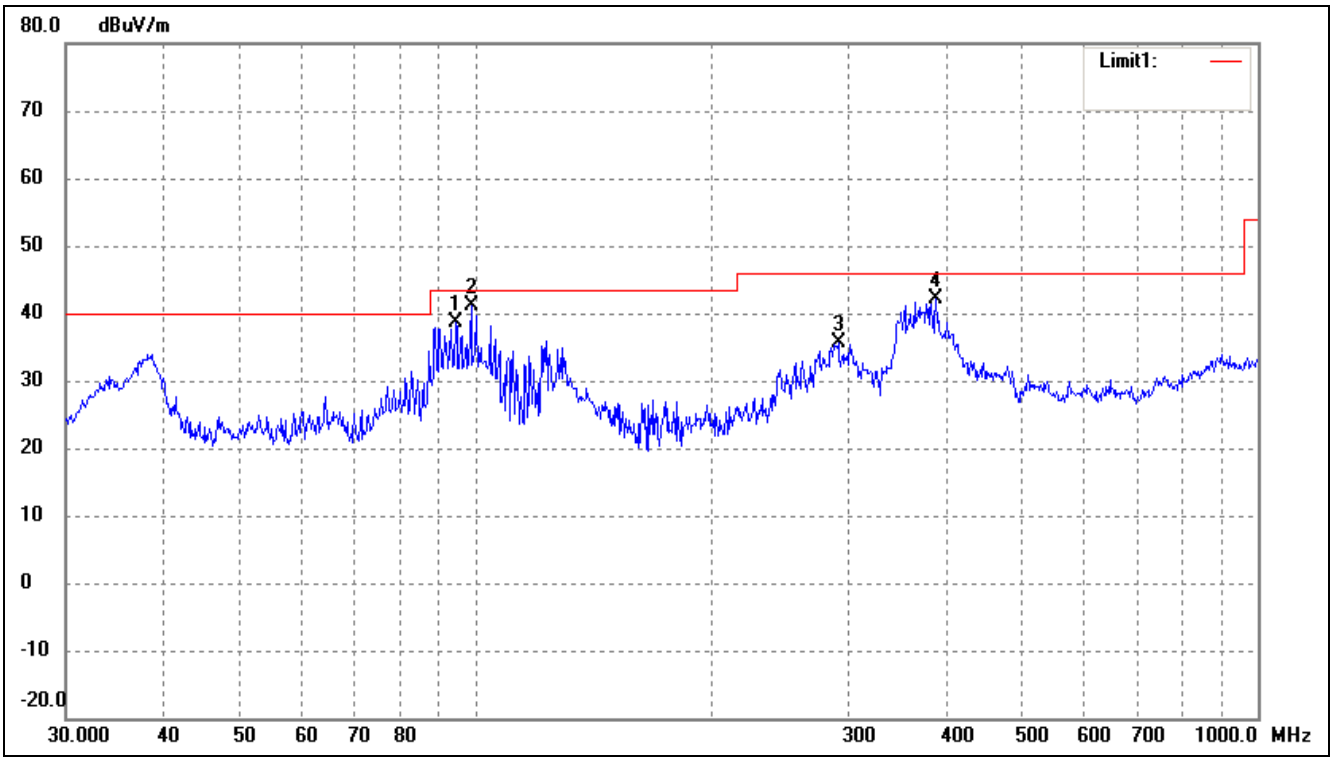
EUT: *COVERT Network Camer*
Tested Model: *NC128PW*
Operating Condition: *802.11g Transmitting Low Channel-2412MHz*
Comment: *Adapter:DC12V*

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	98.8326	24.21	5.84	30.05	43.50	-13.45	174	100	peak
2	243.3772	30.74	6.45	37.19	46.00	-8.81	160	100	peak
3	375.9385	34.35	9.20	43.55	46.00	-2.45	320	100	peak

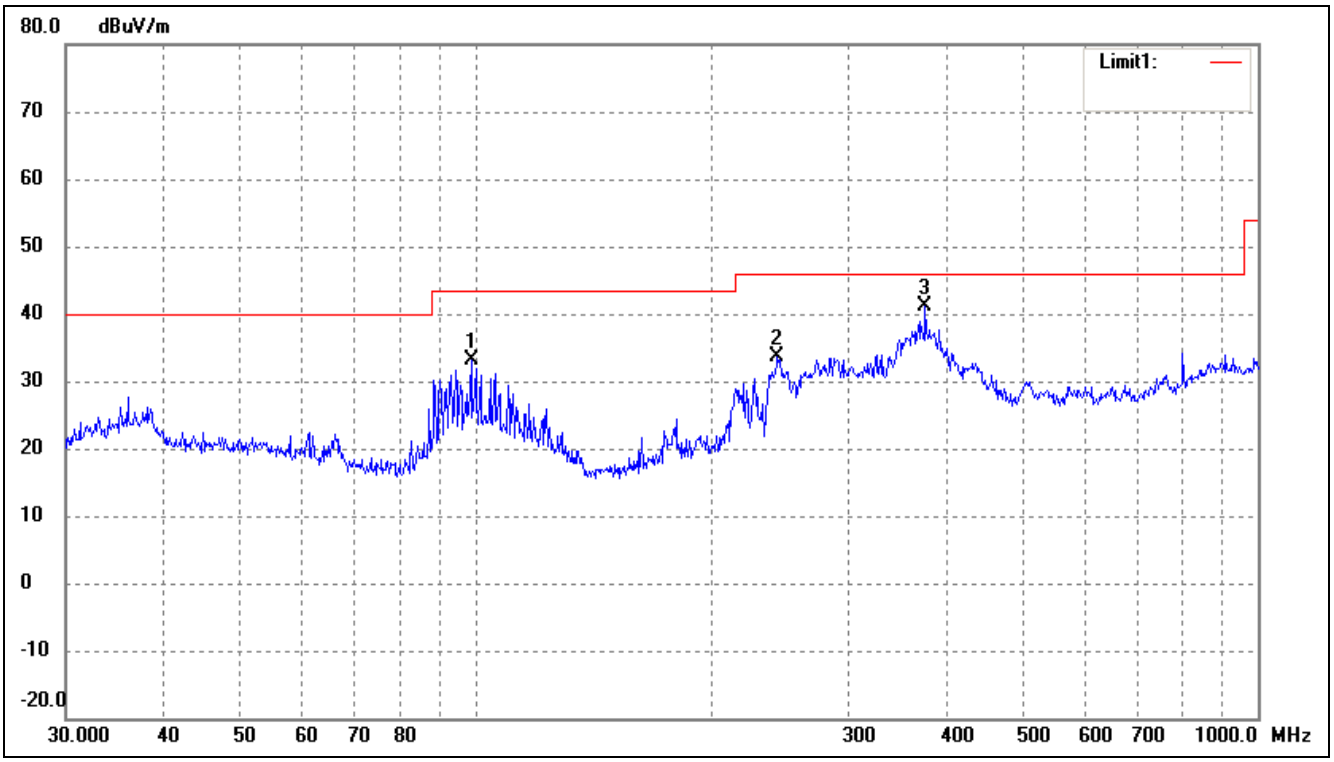
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	94.4284	33.97	4.73	38.70	43.50	-4.80	177	100	peak
2	98.8326	35.24	5.84	41.08	43.50	-2.42	90	100	peak
3	291.0360	26.87	8.83	35.70	46.00	-10.30	336	100	peak
4	387.9920	32.51	9.57	42.08	46.00	-3.92	360	100	peak

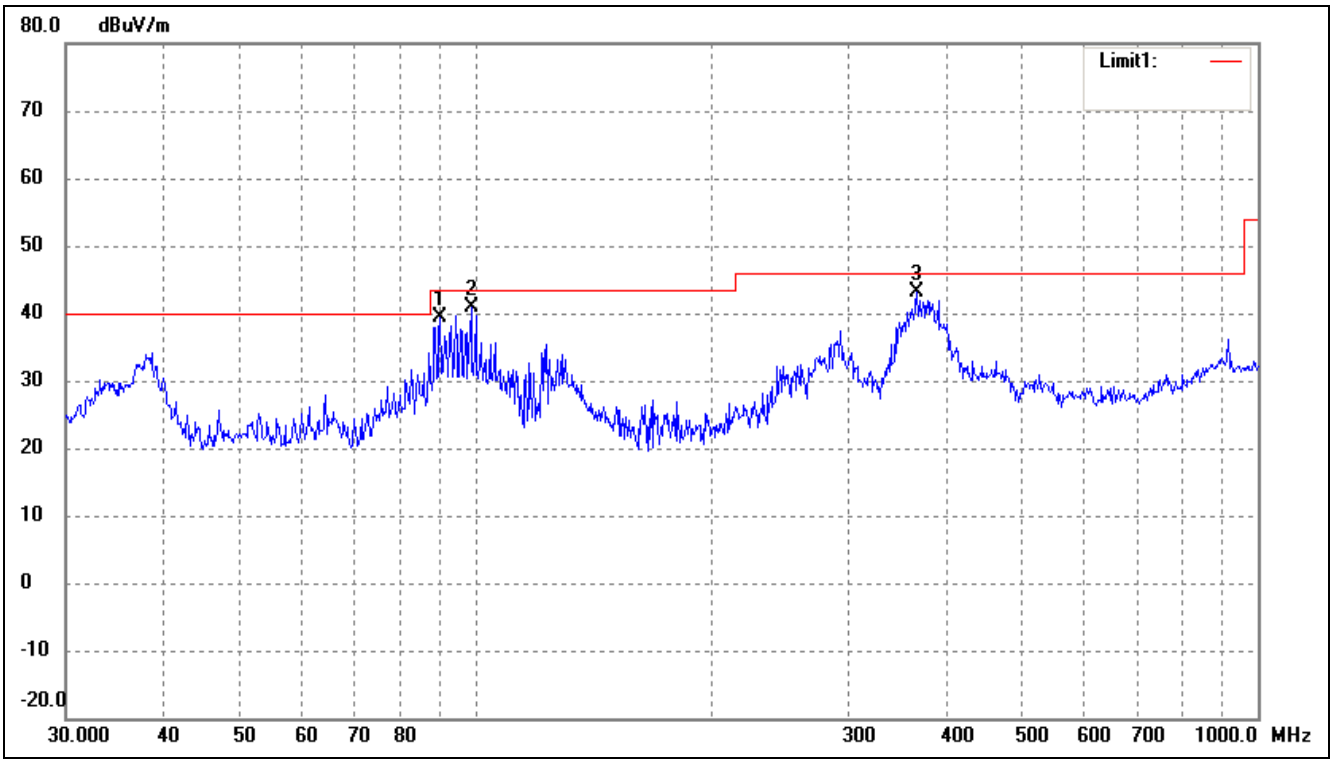
Operating Condition: *802.11g Transmitting Middle Channel-2442MHz z*
Comment: *Adapter:DC12V*

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	98.8325	27.21	5.84	33.05	43.50	-10.45	270	100	peak
2	243.3771	27.24	6.45	33.69	46.00	-12.31	164	100	peak
3	375.9384	31.85	9.20	41.05	46.00	-4.95	228	200	peak

Test Specification: *Vertical*



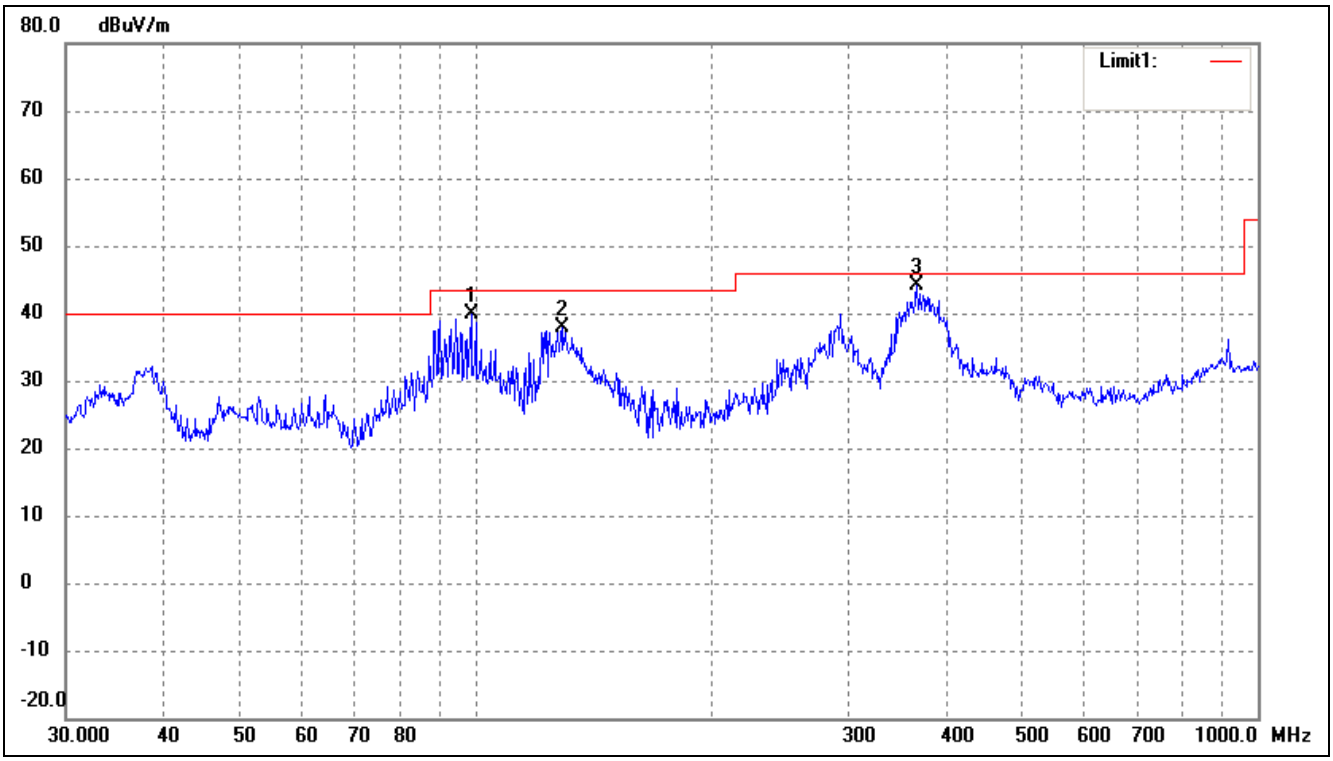
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	90.2205	35.59	3.68	39.27	43.50	-4.23	360	100	peak
2	98.8326	35.01	5.84	40.85	43.50	-2.65	255	100	peak
3	366.8231	33.94	9.22	43.16	46.00	-2.84	270	100	peak

Operating Condition: *802.11g Transmitting High Channel-2472MHz*
Comment: *Adapter:DC12V*

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	98.8325	29.71	5.84	35.55	43.50	-7.95	270	100	peak
2	243.3771	29.24	6.45	35.69	46.00	-10.31	51	200	peak
3	375.9384	33.85	9.20	43.05	46.00	-2.95	360	200	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	98.8325	34.01	5.84	39.85	43.50	-3.65	360	100	peak
2	129.0146	34.50	3.29	37.79	43.50	-5.71	180	100	peak
3	366.8231	34.94	9.22	44.16	46.00	-1.84	225	100	peak

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

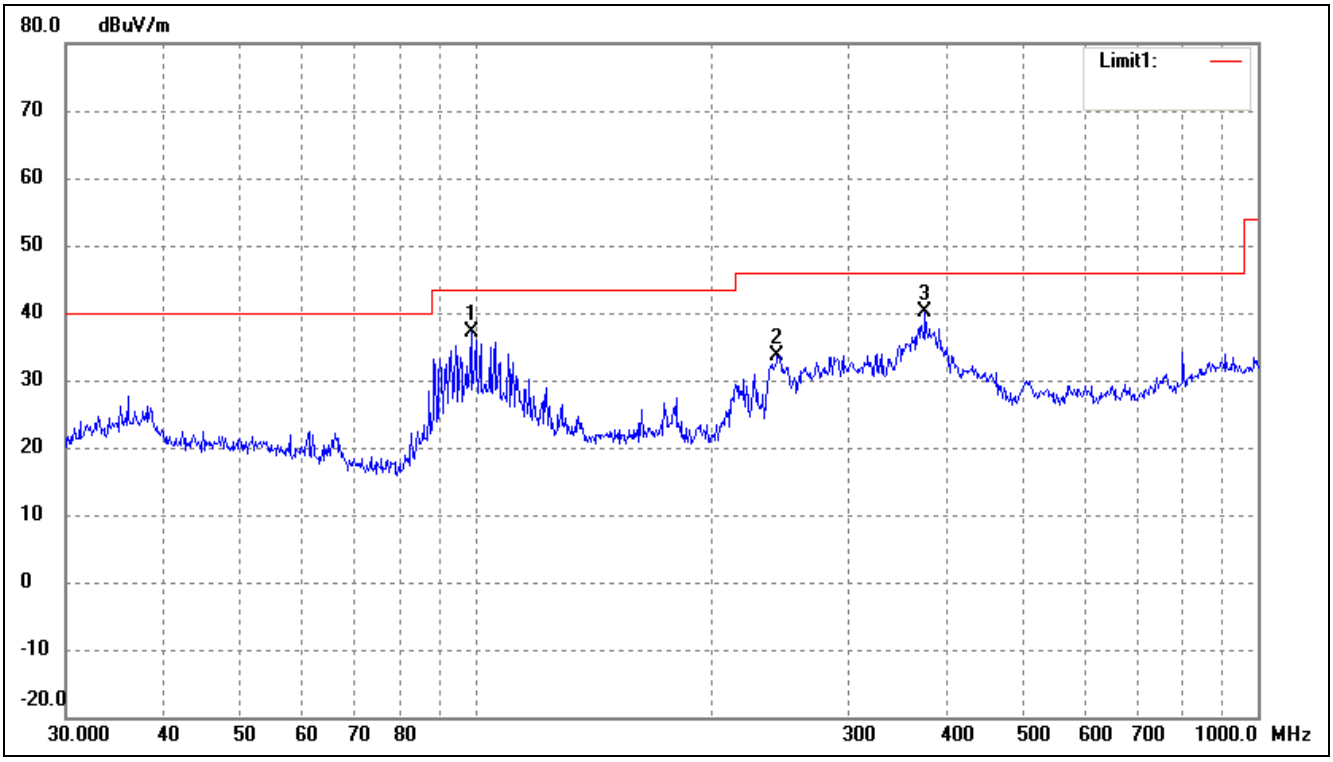
EUT: *COVERT Network Camer*

Tested Model: *NC128PW*

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

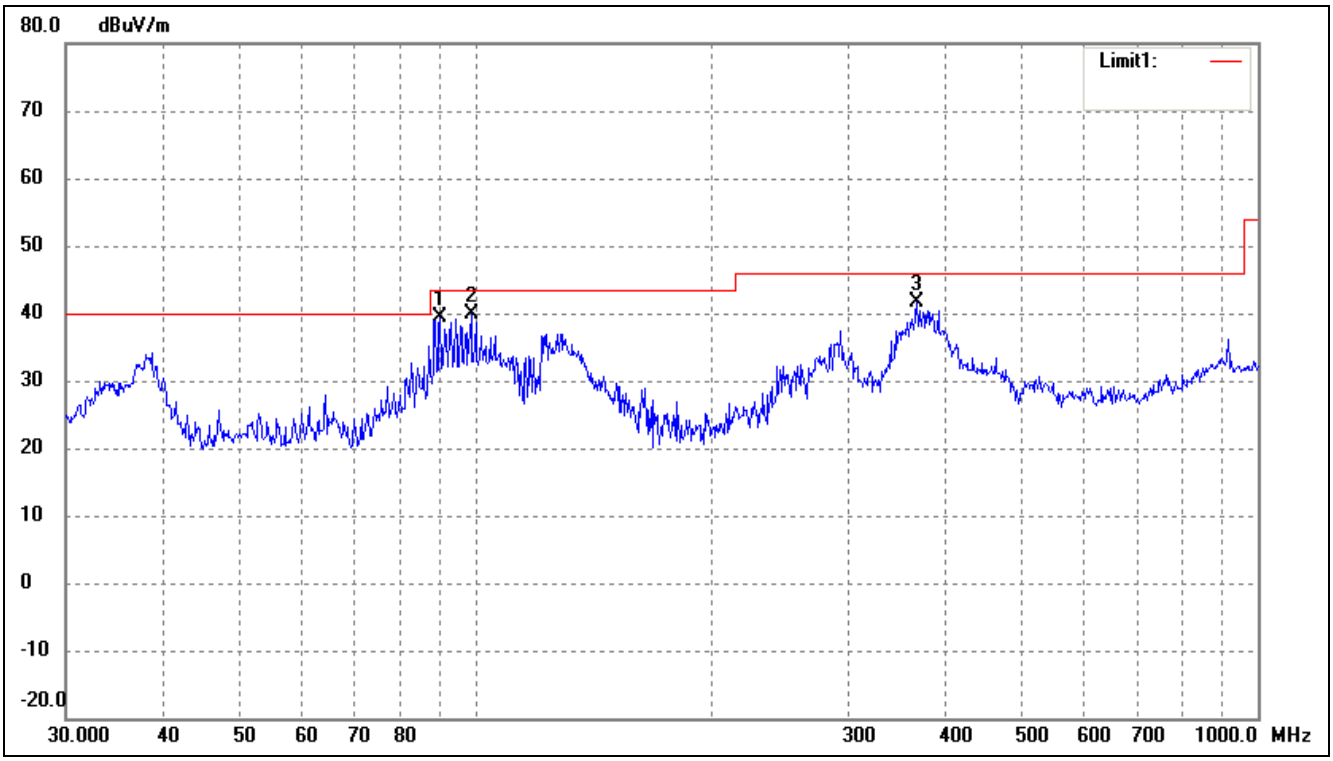
Comment: *Adapter:DC12V*

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	98.8324	31.21	5.84	37.05	43.50	-6.45	260	100	peak
2	243.3771	27.24	6.45	33.69	46.00	-12.31	131	200	peak
3	375.9384	30.85	9.20	40.05	46.00	-5.95	285	200	peak

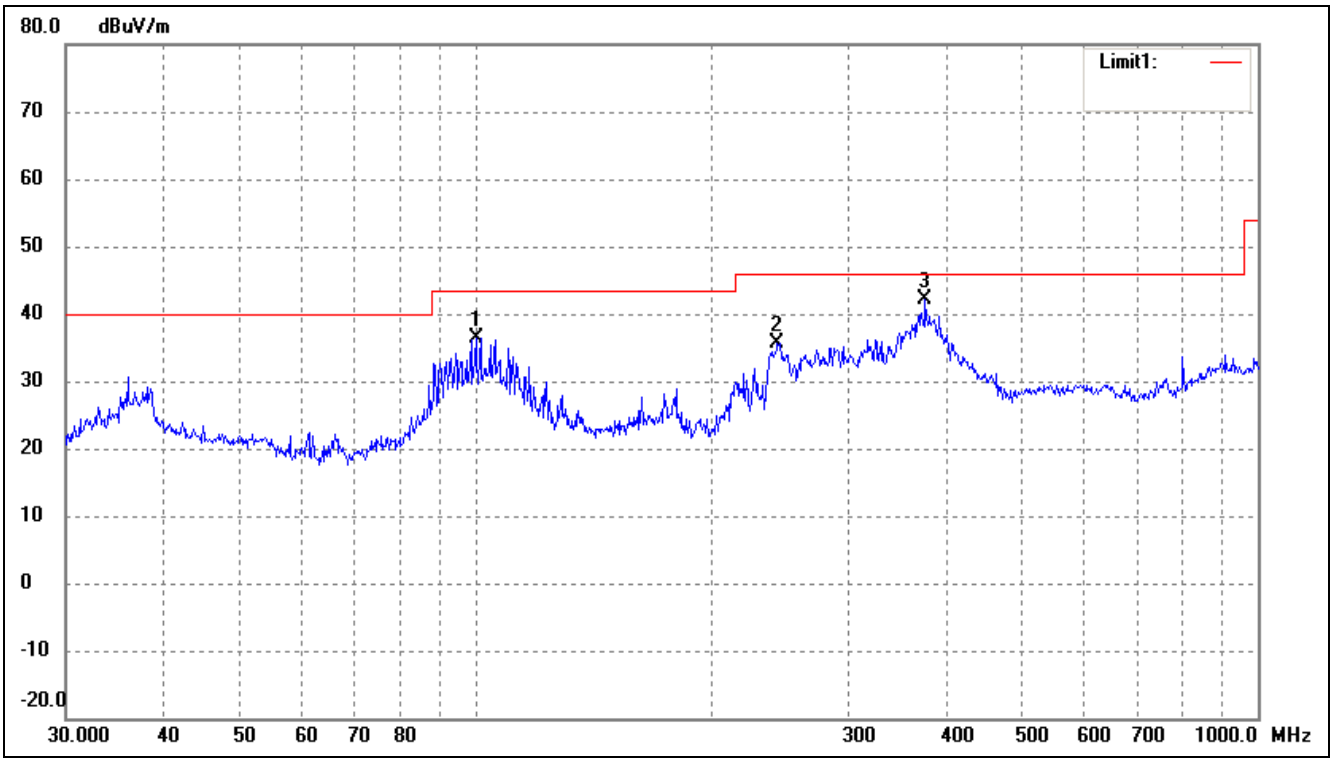
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	90.2205	35.59	3.68	39.27	43.50	-4.23	155	100	peak
2	98.8325	34.01	5.84	39.85	43.50	-3.65	197	100	peak
3	366.8231	32.44	9.22	41.66	46.00	-4.34	310	100	peak

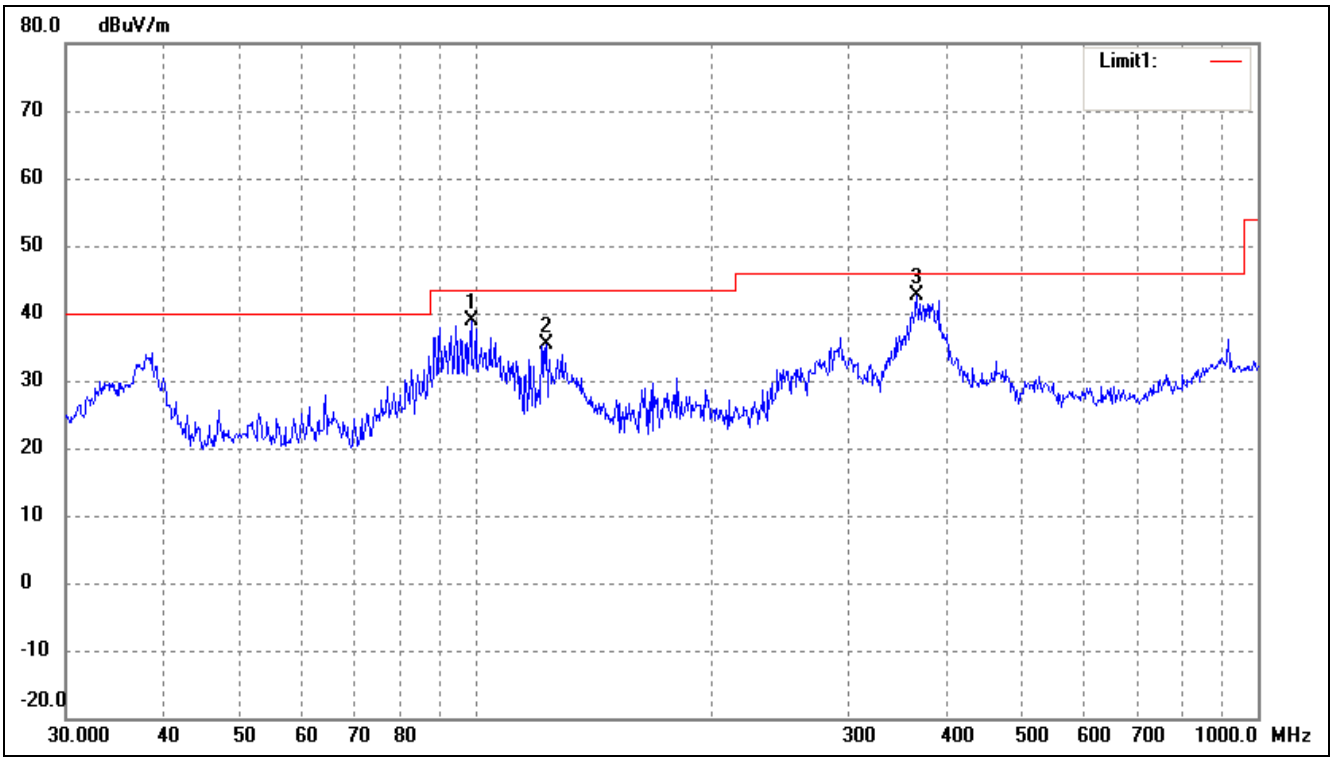
Operating Condition: *802.11n-HT20 Transmitting Middle Channel-2442MHz*
Comment: *Adapter:DC12V*

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	100.2286	30.37	6.10	36.47	43.50	-7.03	274	100	peak
2	243.3771	29.24	6.45	35.69	46.00	-10.31	116	100	peak
3	375.9384	32.85	9.20	42.05	46.00	-3.95	82	100	peak

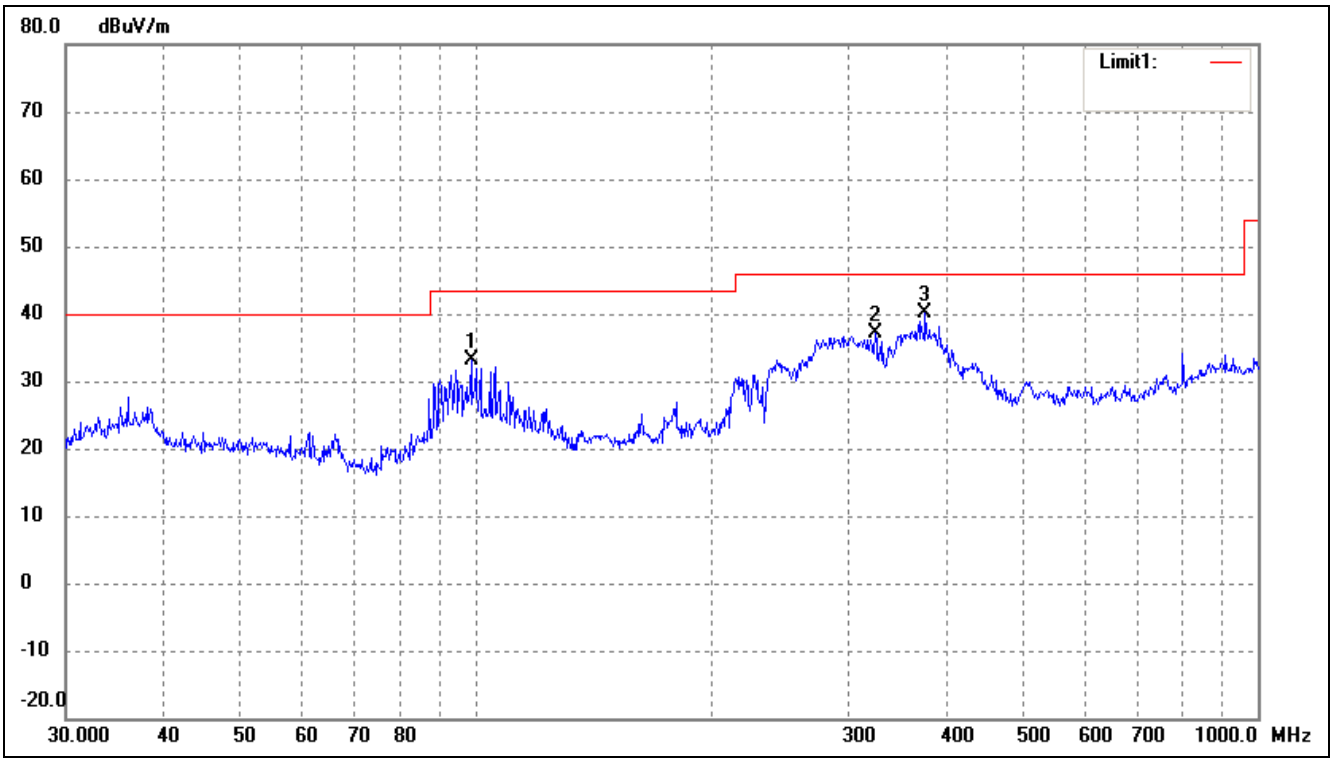
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	98.8325	33.01	5.84	38.85	43.50	-4.65	264	100	peak
2	123.2655	31.56	3.76	35.32	43.50	-8.18	110	100	peak
3	366.8231	33.44	9.22	42.66	46.00	-3.34	136	100	peak

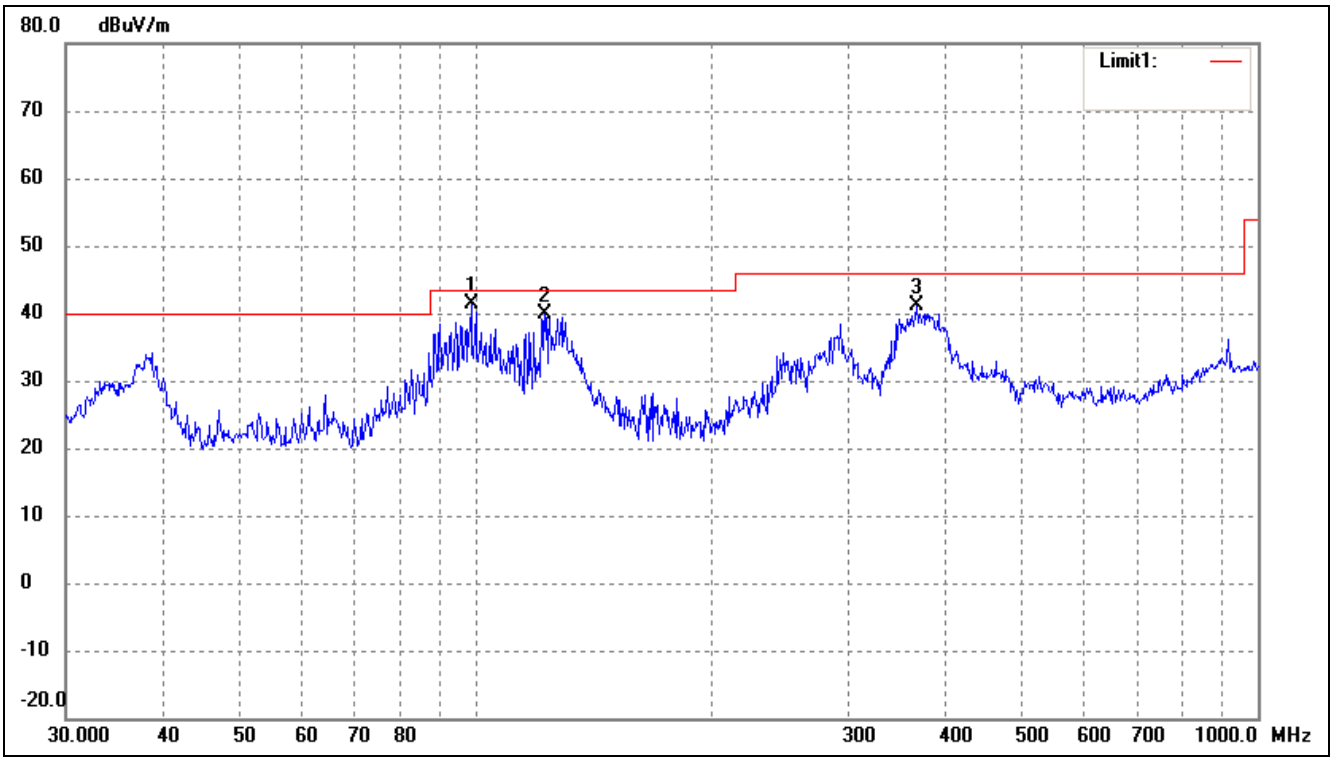
Operating Condition: *802.11n-HT20 Transmitting High Channel-2472MHz*
Comment: *Adapter:DC12V*

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	98.8324	27.21	5.84	33.05	43.50	-10.45	360	100	peak
2	324.4560	28.02	9.16	37.18	46.00	-8.82	112	100	peak
3	375.9384	30.85	9.20	40.05	46.00	-5.95	180	200	peak

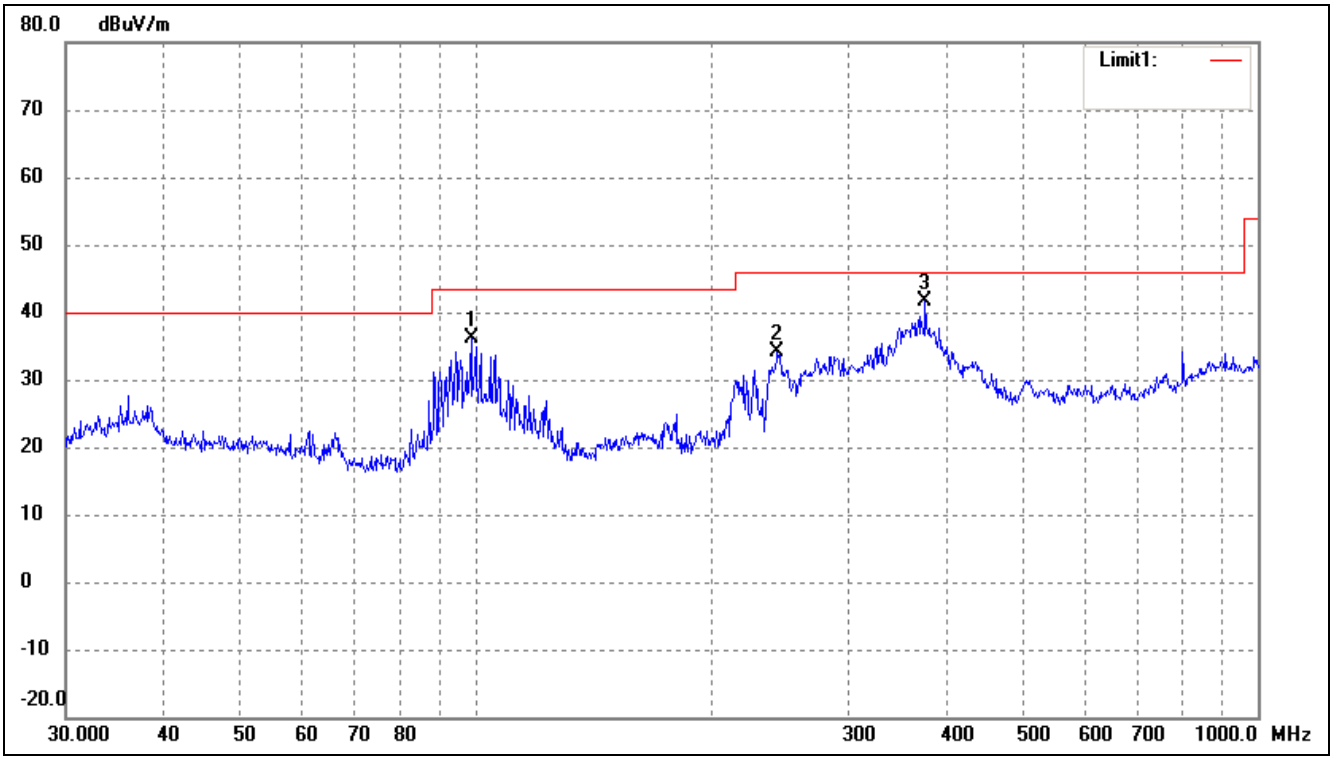
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	98.8325	35.51	5.84	41.35	43.50	-2.15	267	100	peak
2	122.8340	36.07	3.80	39.87	43.50	-3.63	116	100	peak
3	366.8231	31.94	9.22	41.16	46.00	-4.84	360	100	peak

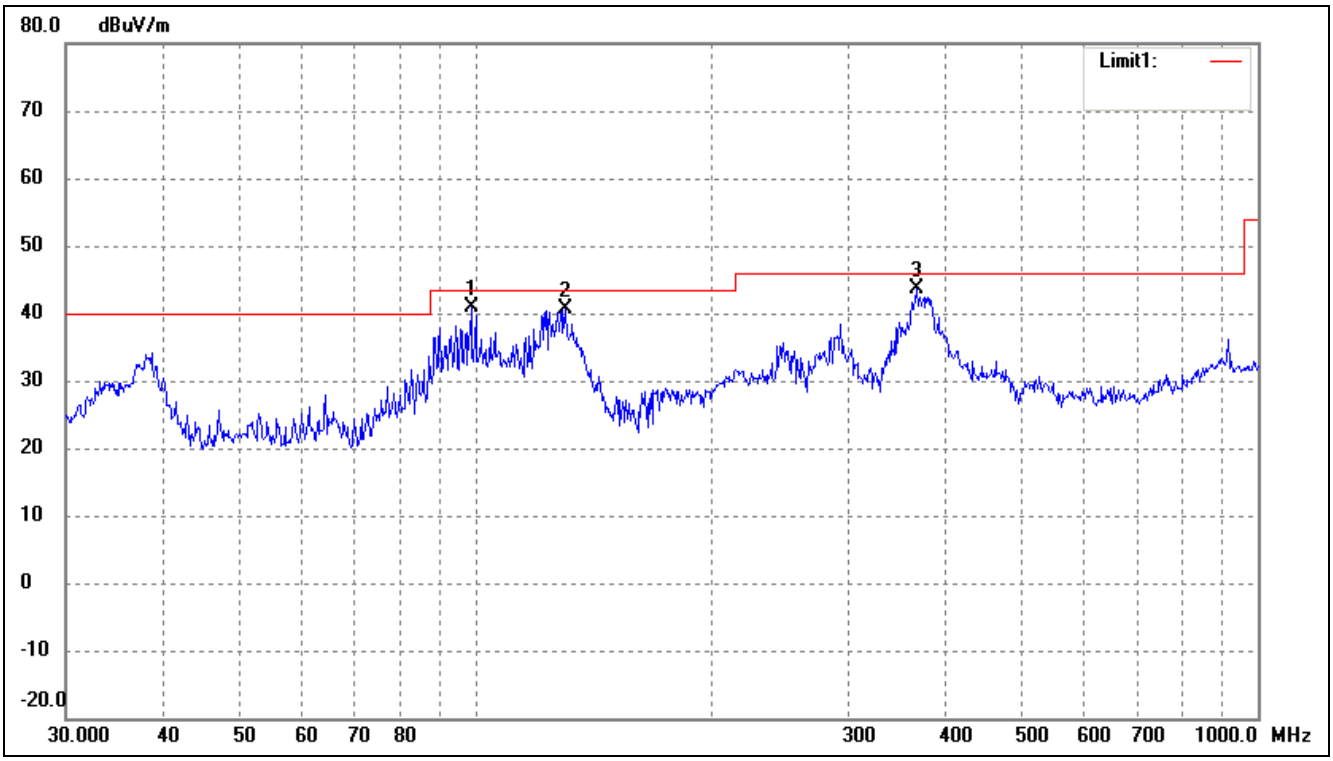
EUT: *COVERT Network Camer*
Tested Model: *NC128PW*
Operating Condition: *802.11n-HT40 Transmitting Low Channel-2422MHz*
Comment: *Adapter:DC12V*

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	98.8324	30.21	5.84	36.05	43.50	-7.45	267	100	peak
2	243.3771	27.74	6.45	34.19	46.00	-11.81	114	200	peak
3	375.9384	32.35	9.20	41.55	46.00	-4.45	35	200	peak

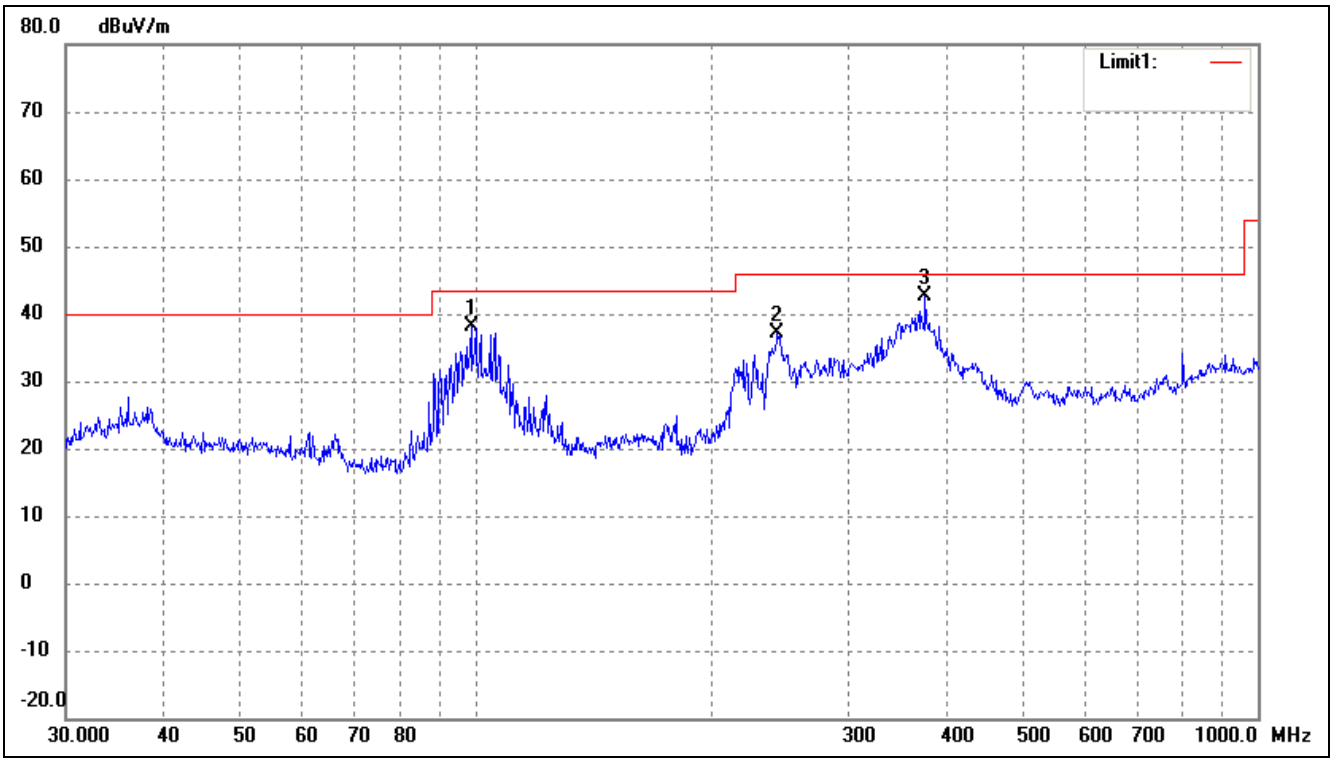
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	98.8325	35.01	5.84	40.85	43.50	-2.65	158	100	peak
2	130.3788	37.54	3.18	40.72	43.50	-2.78	258	100	peak
3	366.8231	34.44	9.22	43.66	46.00	-2.34	347	100	peak

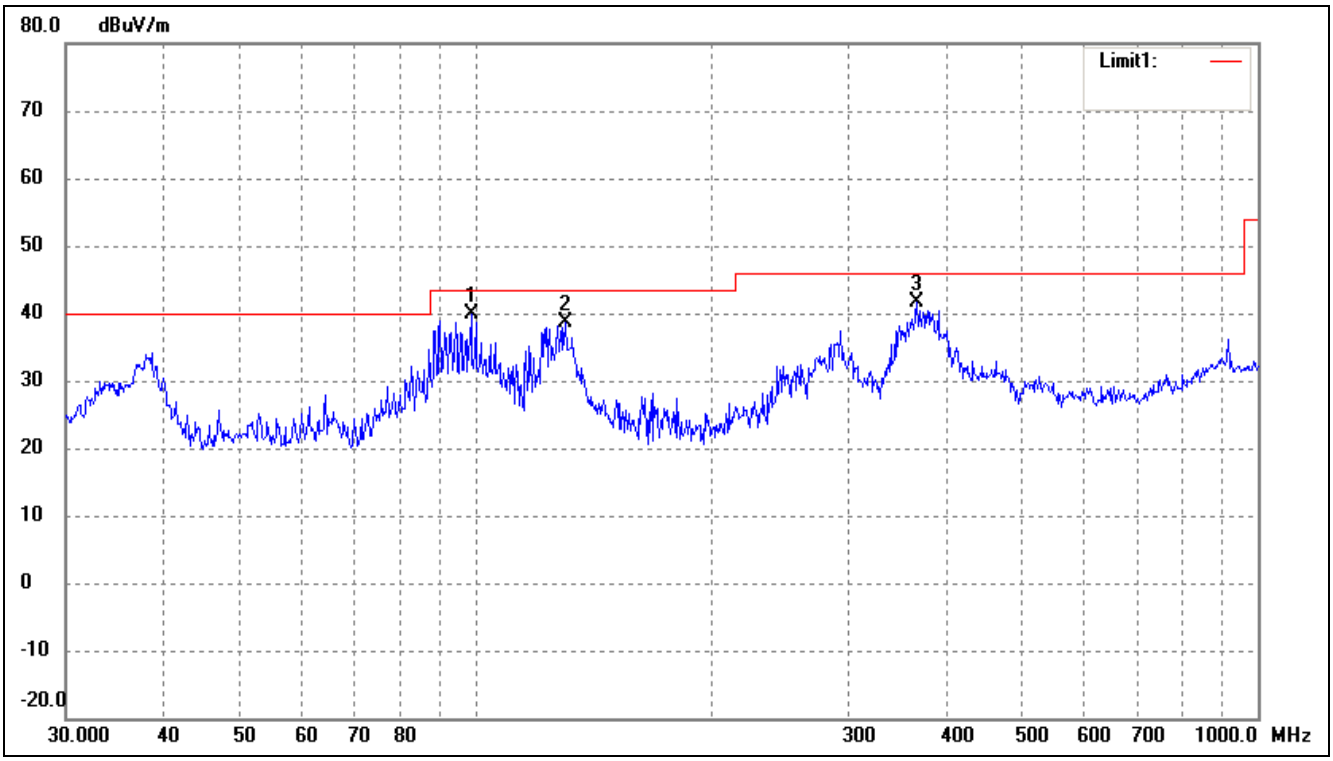
Operating Condition: *802.11n-HT40 Transmitting Middle Channel-2442MHz*
Comment: *Adapter:DC12V*

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	98.8324	32.21	5.84	38.05	43.50	-5.45	251	100	peak
2	243.3771	30.74	6.45	37.19	46.00	-8.81	167	100	peak
3	375.9384	33.35	9.20	42.55	46.00	-3.45	44	100	peak

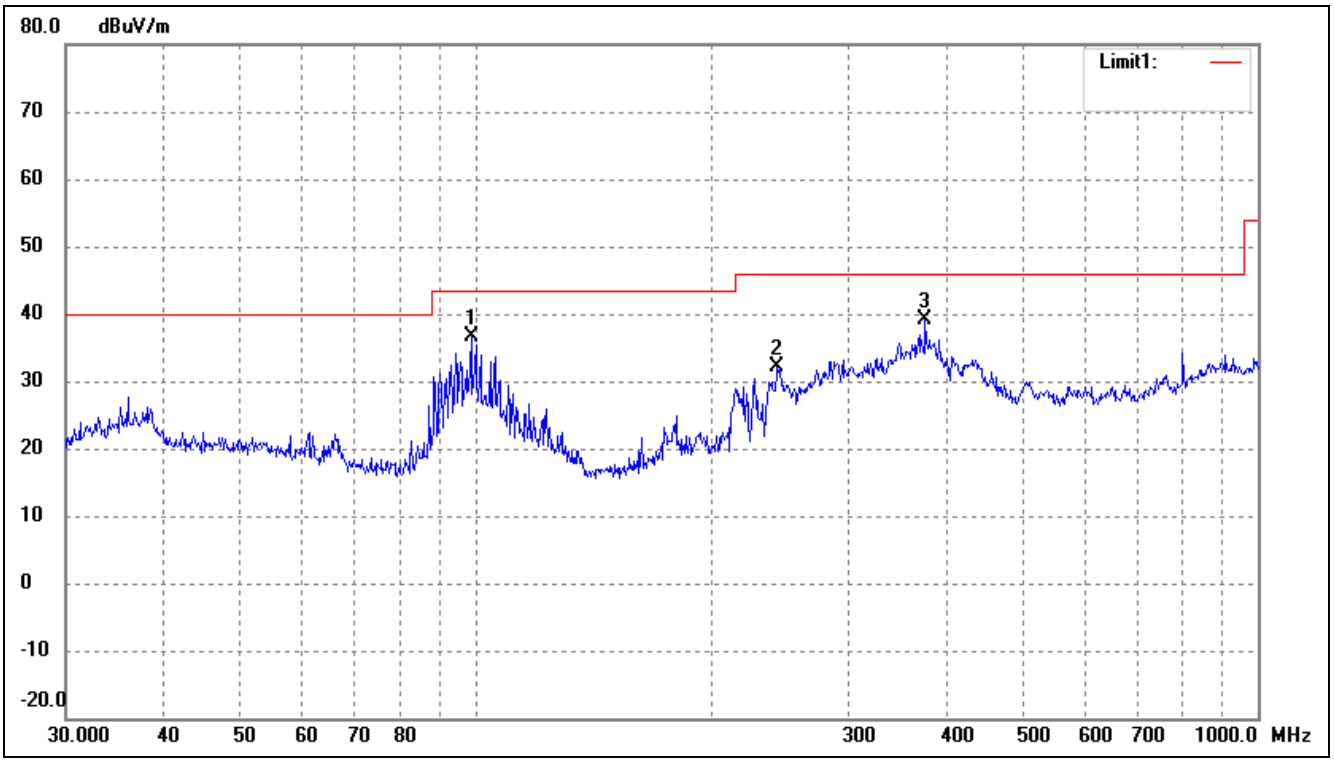
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	98.8325	34.01	5.84	39.85	43.50	-3.65	47	100	peak
2	130.3788	35.54	3.18	38.72	43.50	-4.78	264	100	peak
3	366.8231	32.44	9.22	41.66	46.00	-4.34	225	100	peak

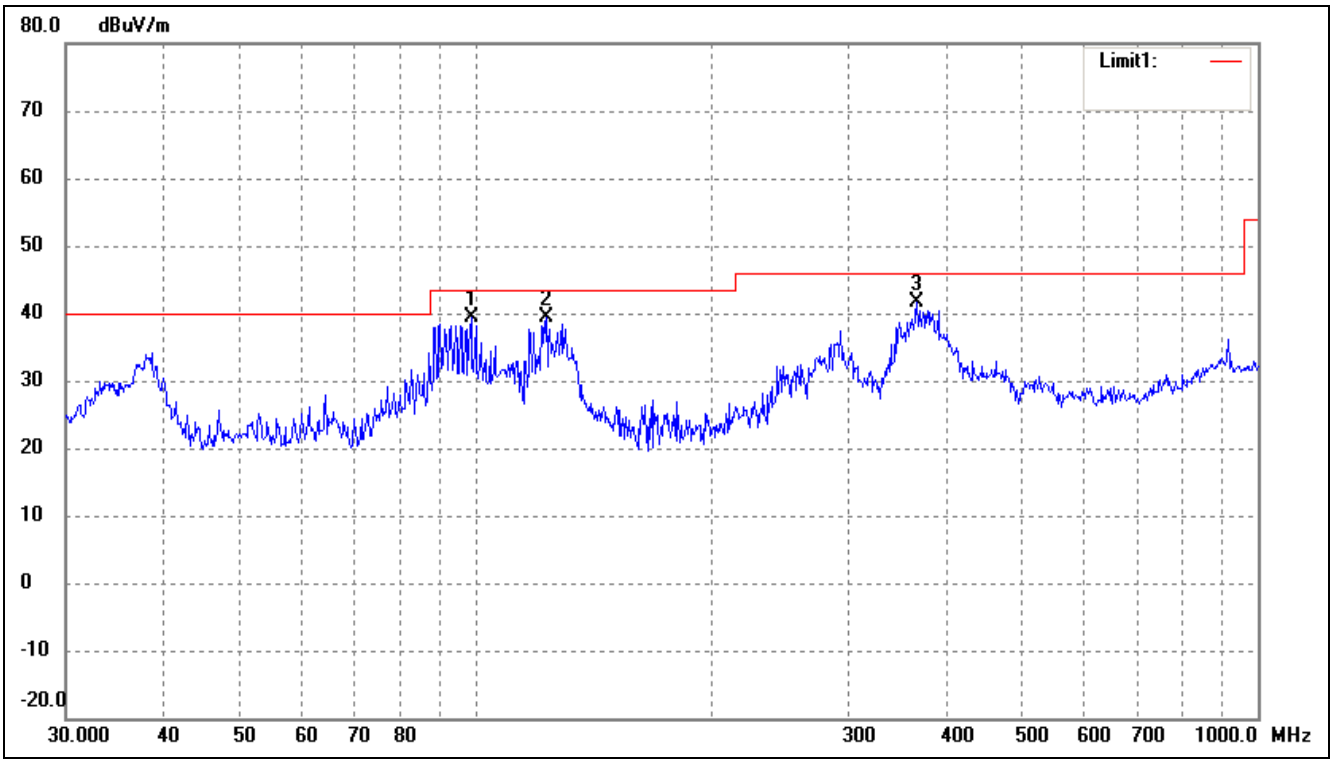
Operating Condition: *802.11n-HT40 Transmitting High Channel-2462MHz*
Comment: *Adapter:DC12V*

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	98.8324	30.71	5.84	36.55	43.50	-6.95	360	100	peak
2	243.3771	25.74	6.45	32.19	46.00	-13.81	287	100	peak
3	375.9384	29.85	9.20	39.05	46.00	-6.95	168	100	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	98.8325	33.51	5.84	39.35	43.50	-4.15	78	100	peak
2	123.2655	35.56	3.76	39.32	43.50	-4.18	136	100	peak
3	366.8231	32.44	9.22	41.66	46.00	-4.34	284	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 Channel-2412MHz							
4824.000	54.09	-3.87	50.22	74.00	-23.78	H	PK
4824.000	38.84	-3.87	34.97	54.00	-19.03	H	AV
7236.000	46.30	1.14	47.44	74.00	-26.56	H	PK
7236.000	34.98	1.19	36.17	54.00	-17.83	H	AV
4824.000	57.31	-3.86	53.45	74.00	-20.55	V	PK
4824.000	40.50	-3.86	36.64	54.00	-17.36	V	AV
7236.000	49.11	1.10	50.21	74.00	-23.79	V	PK
7236.000	37.44	1.10	38.54	54.00	-15.46	V	AV
Middle Channel-2442MHz							
4884.000	54.74	-3.74	51.00	74.00	-23.00	H	PK
4884.000	39.99	-3.74	36.25	54.00	-17.75	H	AV
7326.000	47.77	1.47	49.24	74.00	-24.76	H	PK
7326.000	33.10	1.47	34.57	54.00	-19.43	H	AV
4884.000	53.97	-3.74	50.23	74.00	-23.77	V	PK
4884.000	40.89	-3.74	37.15	54.00	-16.85	V	AV
7326.000	47.98	1.47	49.45	74.00	-24.55	V	PK
7326.000	34.08	1.47	35.55	54.00	-18.45	V	AV
High Channel-2472MHz							
4944.000	55.82	-3.59	52.23	74.00	-21.77	H	PK
4944.000	41.76	-3.59	38.17	54.00	-15.83	H	AV
7416.000	46.38	1.79	48.17	74.00	-25.83	H	PK
7416.000	34.83	1.79	36.62	54.00	-17.38	H	AV
4944.000	54.94	-3.59	51.35	74.00	-22.65	V	PK
4944.000	42.04	-3.59	38.45	54.00	-15.55	V	AV
7416.000	47.99	1.79	49.78	74.00	-24.22	V	PK
7416.000	35.18	1.79	36.97	54.00	-17.03	V	AV

Test Mode: 802.11g

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2412MHz							
4824.000	55.50	-3.86	51.64	74.00	-22.36	H	PK
4824.000	42.23	-3.86	38.37	54.00	-15.63	H	AV
7236.000	48.42	1.10	49.52	74.00	-24.48	H	PK
7236.000	34.40	1.10	35.50	54.00	-18.50	H	AV
4824.000	55.99	-3.86	52.13	74.00	-21.87	V	PK
4824.000	42.65	-3.86	38.79	54.00	-15.21	V	AV
7236.000	49.22	1.10	50.32	74.00	-23.68	V	PK
7236.000	35.54	1.10	36.64	54.00	-17.36	V	AV
Middle Channel-2442MHz							
4884.000	55.10	-3.74	51.36	74.00	-22.64	H	PK
4884.000	43.28	-3.74	39.54	54.00	-14.46	H	AV
7326.000	47.38	1.47	48.85	74.00	-25.15	H	PK
7326.000	35.27	1.47	36.74	54.00	-17.26	H	AV
4884.000	57.07	-3.74	53.33	74.00	-20.67	V	PK
4884.000	43.86	-3.74	40.12	54.00	-13.88	V	AV
7326.000	48.40	1.47	49.87	74.00	-24.13	V	PK
7326.000	35.33	1.47	36.80	54.00	-17.20	V	AV
High Channel-2472MHz							
4944.000	54.00	-3.59	50.41	74.00	-23.59	H	PK
4944.000	40.75	-3.59	37.16	54.00	-16.84	H	AV
7416.000	47.18	1.79	48.97	74.00	-25.03	H	PK
7416.000	34.73	1.79	36.52	54.00	-17.48	H	AV
4944.000	56.11	-3.59	52.52	74.00	-21.48	V	PK
4944.000	42.69	-3.59	39.10	54.00	-14.90	V	AV
7416.000	48.58	1.79	50.37	74.00	-23.63	V	PK
7416.000	35.95	1.79	37.74	54.00	-16.26	V	AV

Test Mode: 802.11n-HT20

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2412MHz							
4824.000	55.60	-3.86	51.74	74.00	-22.26	H	PK
4824.000	40.54	-3.86	36.68	54.00	-17.32	H	AV
7236.000	47.26	1.10	48.36	74.00	-25.64	H	PK
7236.000	34.44	1.10	35.54	54.00	-18.46	H	AV
4824.000	56.71	-3.86	52.85	74.00	-21.15	V	PK
4824.000	43.18	-3.86	39.32	54.00	-14.68	V	AV
7236.000	49.21	1.10	50.31	74.00	-23.69	V	PK
7236.000	35.77	1.10	36.87	54.00	-17.13	V	AV
Middle Channel-2442MHz							
4884.000	54.16	-3.74	50.42	74.00	-23.58	H	PK
4884.000	42.48	-3.74	38.74	54.00	-15.26	H	AV
7326.000	48.74	1.47	50.21	74.00	-23.79	H	PK
7326.000	33.10	1.47	34.57	54.00	-19.43	H	AV
4884.000	54.92	-3.74	51.18	74.00	-22.82	V	PK
4884.000	42.62	-3.74	38.88	54.00	-15.12	V	AV
7326.000	48.49	1.47	49.96	74.00	-24.04	V	PK
7326.000	35.20	1.47	36.67	54.00	-17.33	V	AV
High Channel-2472MHz							
4944.000	53.90	-3.59	50.31	74.00	-23.69	H	PK
4944.000	43.23	-3.59	39.64	54.00	-14.36	H	AV
7416.000	48.31	1.79	50.10	74.00	-23.90	H	PK
7416.000	36.10	1.79	37.89	54.00	-16.11	H	AV
4944.000	55.70	-3.59	52.11	74.00	-21.89	V	PK
4944.000	41.48	-3.59	37.89	54.00	-16.11	V	AV
7416.000	48.55	1.79	50.34	74.00	-23.66	V	PK
7416.000	35.36	1.79	37.15	54.00	-16.85	V	AV

Test Mode: 802.11n-HT40

Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2422MHz							
4844.000	53.25	-3.90	49.35	74.00	-24.65	H	PK
4824.000	38.25	-3.90	34.35	54.00	-19.65	H	AV
7266.000	46.48	1.06	47.54	74.00	-26.46	H	PK
7266.000	32.56	1.06	33.62	54.00	-20.38	H	AV
4844.000	54.22	-3.90	50.32	74.00	-23.68	V	PK
4824.000	39.42	-3.90	35.52	54.00	-18.48	V	AV
7266.000	48.81	1.06	49.87	74.00	-24.13	V	PK
7266.000	34.78	1.06	35.84	54.00	-18.16	V	AV
Middle Channel-2442MHz							
4884.000	52.53	-3.74	48.79	74.00	-25.21	H	PK
4884.000	37.88	-3.74	34.14	54.00	-19.86	H	AV
7326.000	44.88	1.47	46.35	74.00	-27.65	H	PK
7326.000	32.03	1.47	33.50	54.00	-20.50	H	AV
4884.000	53.74	-3.74	50.00	74.00	-24.00	V	PK
4884.000	39.95	-3.74	36.21	54.00	-17.79	V	AV
7326.000	45.78	1.47	47.25	74.00	-26.75	V	PK
7326.000	34.00	1.47	35.47	54.00	-18.53	V	AV
High Channel-2462MHz							
4924.000	52.65	-3.63	49.02	74.00	-24.98	H	PK
4924.000	39.37	-3.63	35.74	54.00	-18.26	H	AV
7386.000	45.63	1.62	47.25	74.00	-26.75	H	PK
7386.000	30.73	1.62	32.35	54.00	-21.65	H	AV
4924.000	54.84	-3.63	51.21	74.00	-22.79	V	PK
4924.000	40.83	-3.63	37.20	54.00	-16.80	V	AV
7386.000	48.18	1.62	49.80	74.00	-24.20	V	PK
7386.000	35.12	1.62	36.74	54.00	-17.26	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 3th 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.

9. Out of Band Emissions

9.1 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).

9.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23

9.3 Test Procedure

According to the KDB 558074D01 v03r02, 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 product 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. Note that the method of measurement KDB publication number: 913591 may be used for the radiated bandedge measurements.

According to the KDB 558074 D01 V03r02, the conducted spurious emissions test method as follows:

1. Set start frequency to DTS channel edge frequency.
2. Set stop frequency so as to encompass the spectrum to be examined.
3. Set RBW = 100 kHz.
4. Set VBW ≥ 300 kHz.
5. Detector = peak.
6. Trace Mode = max hold.
7. Sweep = auto couple.
8. Allow the trace to stabilize (this may take some time, depending on the extent of the span).
9. Use peak marker function to determine maximum amplitude of all unwanted emissions within any 100 kHz bandwidth.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in section 8.1. Report the three highest emissions relative to the limit.

9.4 Environmental Conditions

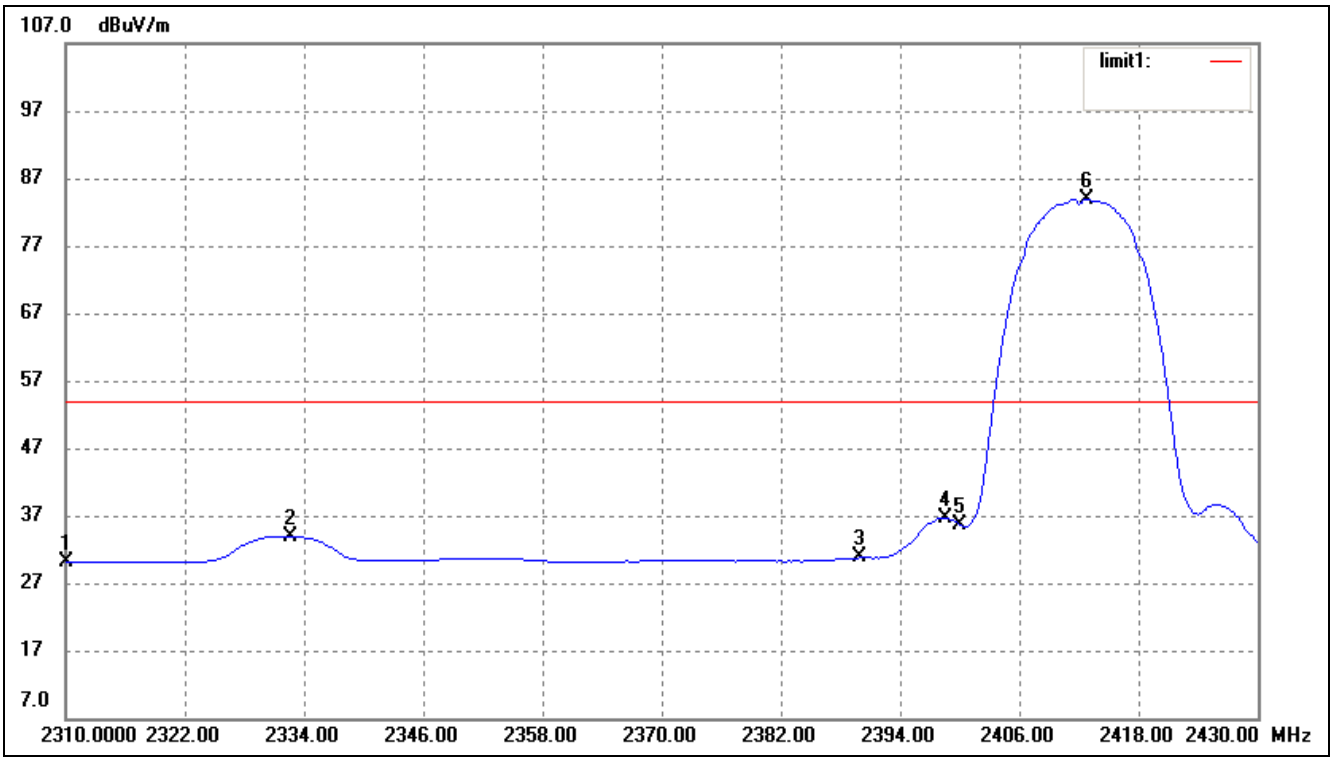
Temperature:	23°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

9.5 Summary of Test Results/Plots

Please refer to the test plots as below.

802.11b-Lowest Bandedge

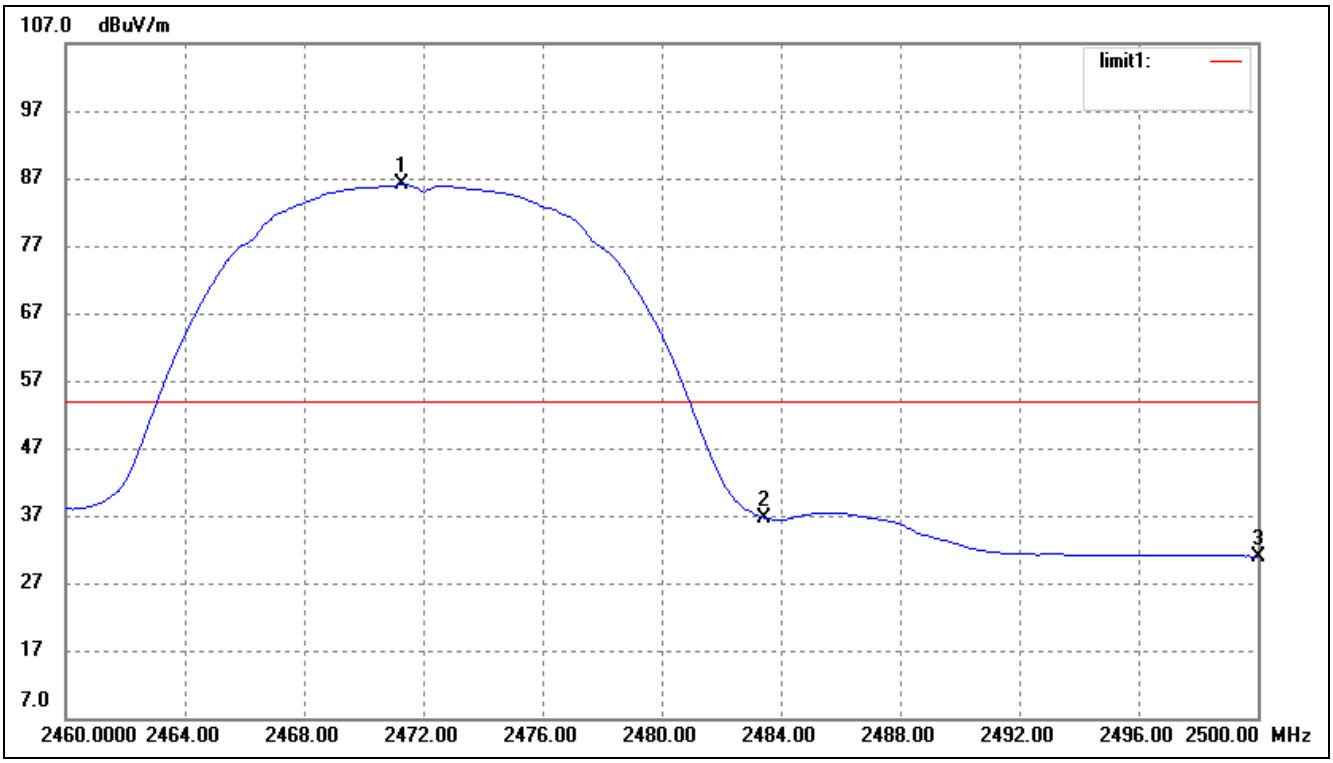
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	33.80	-3.69	30.11	54.00	-23.89	Average Detector
	2310.000	46.47	-3.69	42.78	74.00	-31.22	Peak Detector
2	2332.560	37.59	-3.64	33.95	54.00	-20.05	Peak Detector
3	2390.000	34.26	-3.49	30.77	54.00	-23.23	Average Detector
	2390.000	46.55	-3.49	43.06	74.00	-30.94	Peak Detector
4	2400.000	39.01	-3.46	35.55	Delta=58.73dBc		Average Detector
	2400.000	97.70	-3.42	94.28			Peak Detector

802.11b-Highest Bandedge

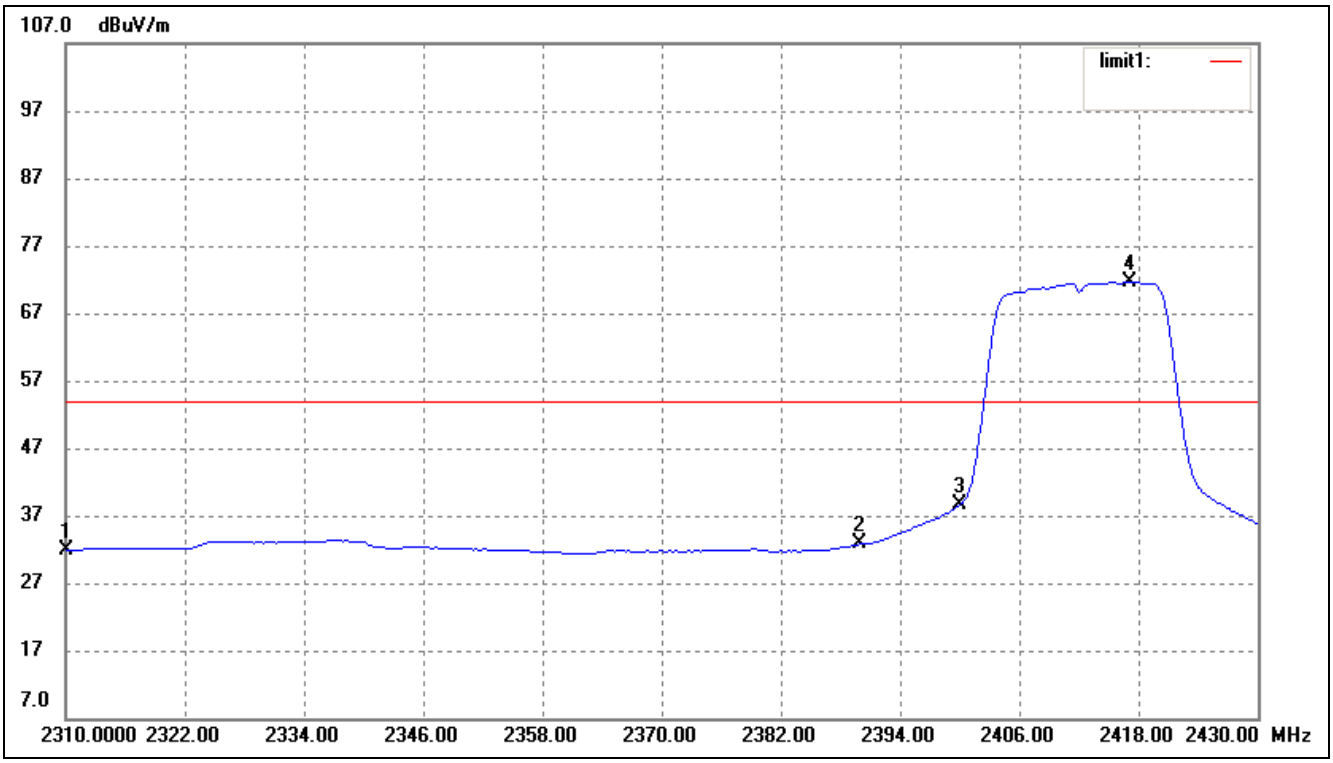
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2471.280	89.33	-3.27	86.06	/	/	Average Detector
	2470.720	100.28	-3.28	97.00	/	/	Peak Detector
2	2483.500	Delta = 50.37		35.69	54.00	-18.31	Average Detector
	2483.500			46.63	74.00	-27.37	Peak Detector
3	2500.000	34.14	-3.20	30.94	54.00	-23.06	Average Detector
	2500.000	48.48	-3.20	45.28	74.00	-28.72	Peak Detector

802.11g-Lowest Bandedge

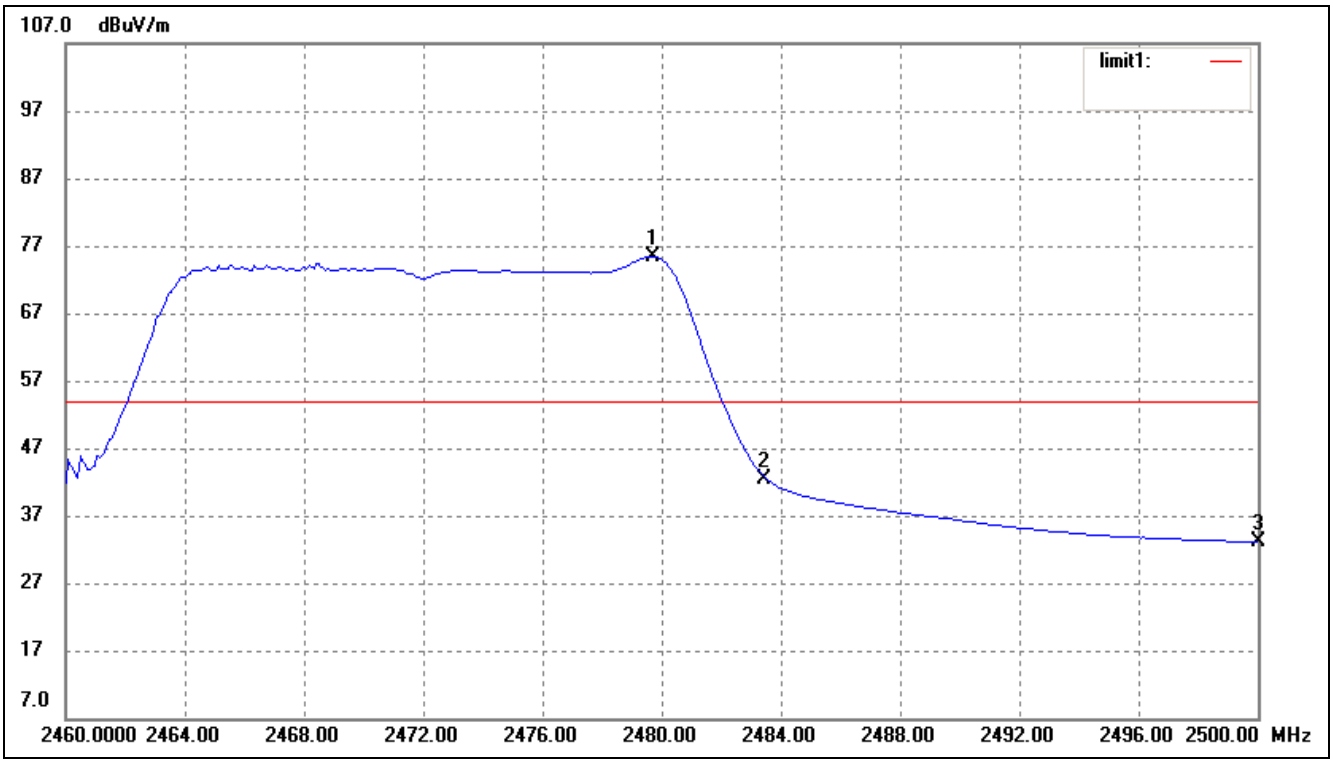
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	35.54	-3.69	31.85	54.00	-22.15	Average Detector
	2310.000	48.58	-3.69	44.89	74.00	-29.11	Peak Detector
2	2390.000	36.33	-3.49	32.84	54.00	-21.16	Average Detector
	2390.000	48.97	-3.49	45.48	74.00	-28.52	Peak Detector
3	2400.000	50.13	-3.51	46.62	Delta=20.59dBc		Average Detector
	2400.000	70.72	-3.51	67.21			Peak Detector

802.11g-Highest Bandedge

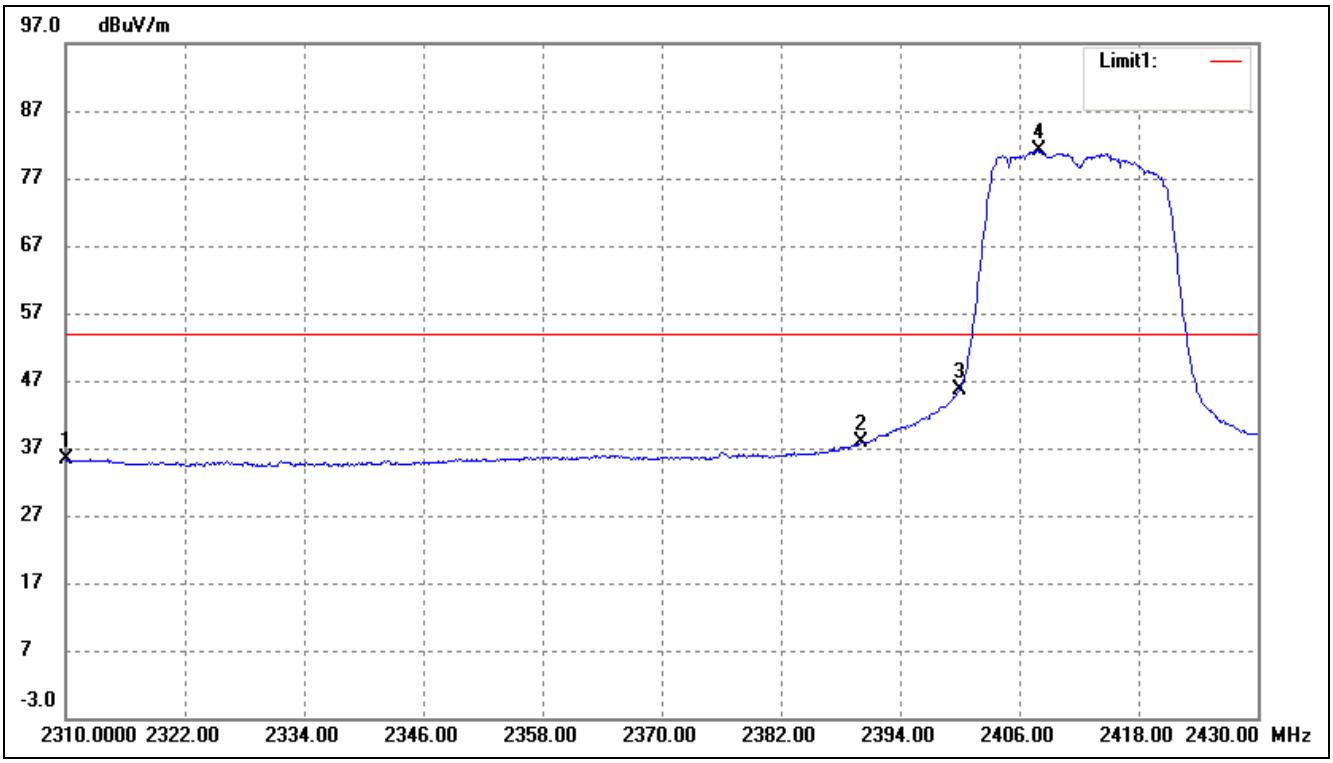
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2479.680	78.66	-3.25	75.41	/	/	Average Detector
	2479.400	99.79	-3.28	96.51	/	/	Peak Detector
2	2483.500	Delta = 39.57dBc		35.84	54.00	-18.16	Average Detector
	2483.500			51.37	74.00	-22.63	Peak Detector
3	2500.000	36.22	-3.20	33.02	54.00	-20.98	Average Detector
	2500.000	50.38	-3.20	47.18	74.00	-26.82	Peak Detector

802.11n-HT20-Lowest Bandedge

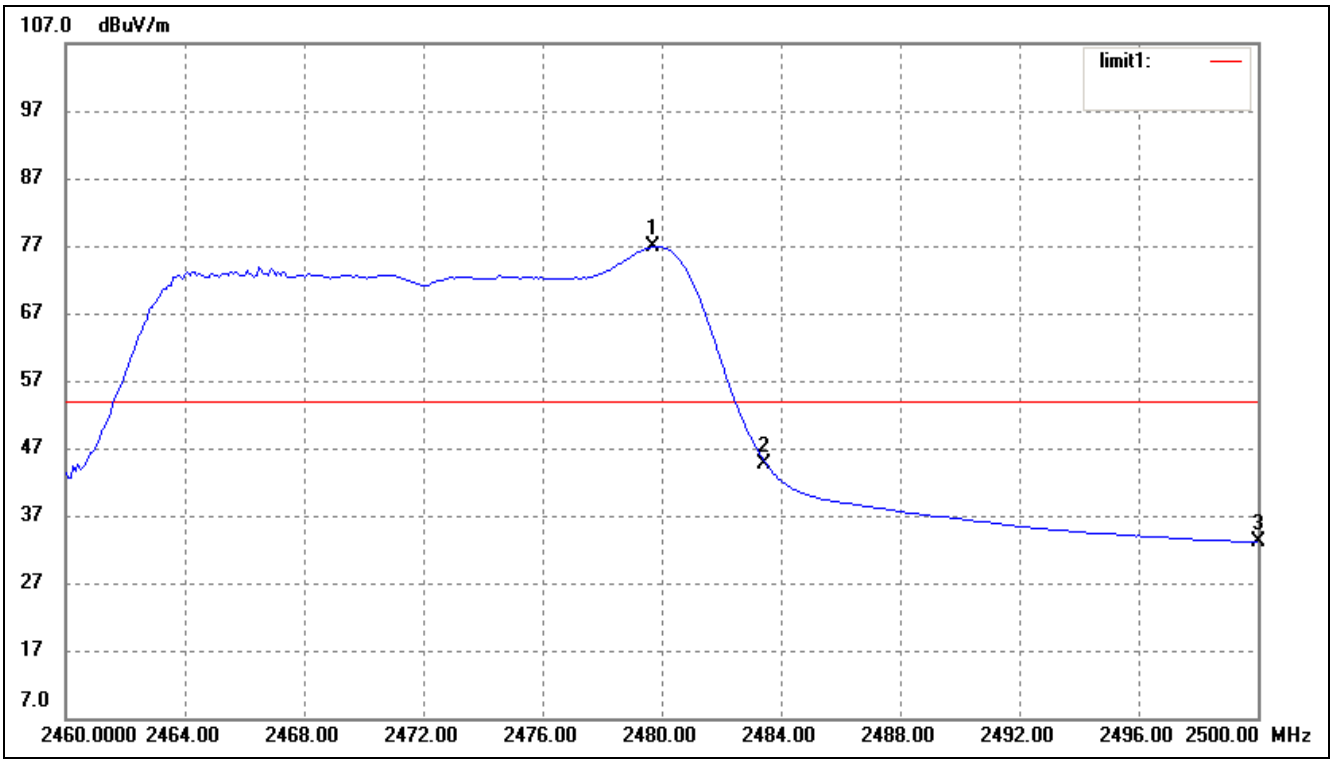
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	19.07	16.34	35.41	54.00	-18.59	Average Detector
	2310.000	30.69	16.34	47.03	74.00	-26.97	Peak Detector
2	2390.000	20.77	17.03	37.80	54.00	-16.20	Average Detector
	2390.000	42.99	17.03	60.02	74.00	-13.98	Peak Detector
3	2400.000	28.62	17.11	45.73	Delta=23.22dBc		Average Detector
	2400.000	51.84	17.11	68.95			Peak Detector

802.11n-HT20-Highest Bandedge

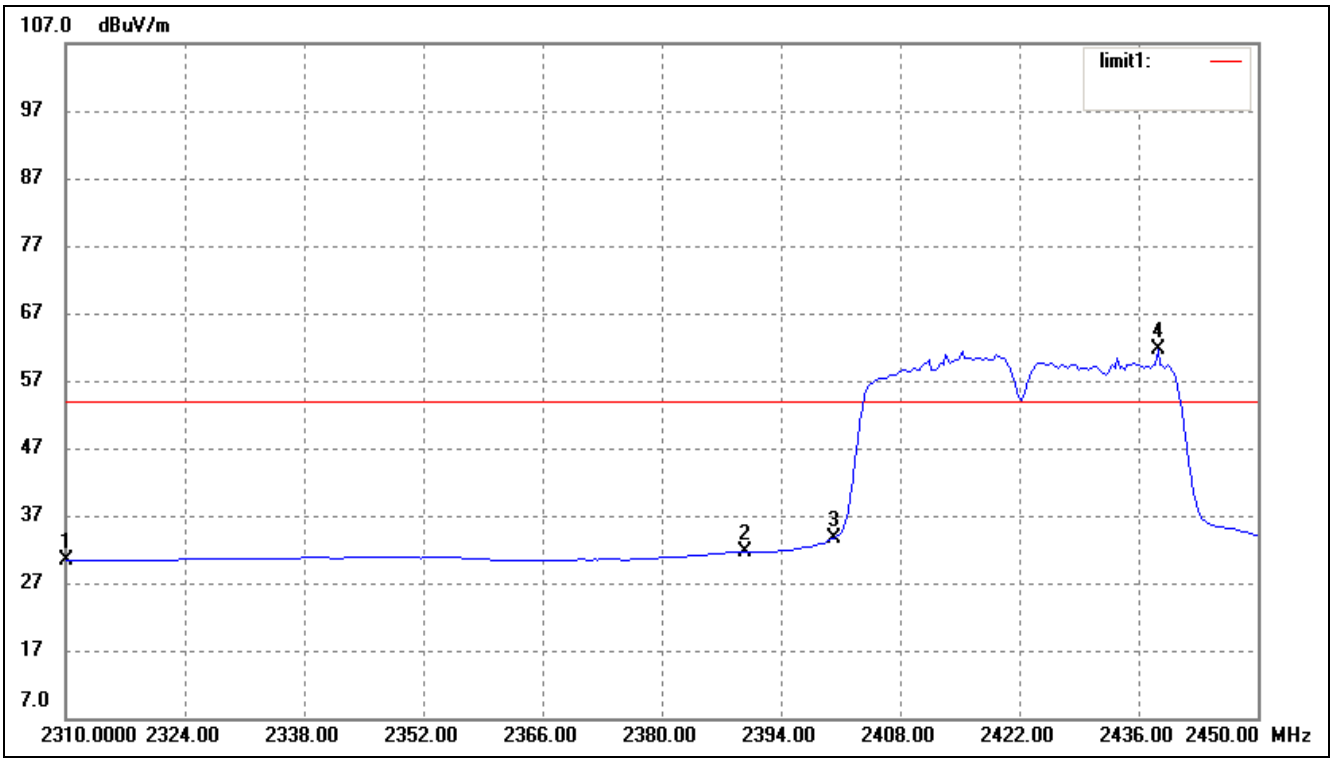
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2479.680	80.07	-3.25	76.82	/	/	Average Detector
	2464.960	100.20	-3.29	96.91	/	/	Peak Detector
2	2483.500	Delta = 43.18dBc		33.64	54.00	-20.36	Average Detector
	2483.500			53.73	74.00	-20.27	Peak Detector
3	2500.000	36.25	-3.20	33.05	54.00	-20.95	Average Detector
	2500.000	50.42	-3.20	47.22	74.00	-26.78	Peak Detector

802.11n-HT40-Lowest Bandedge

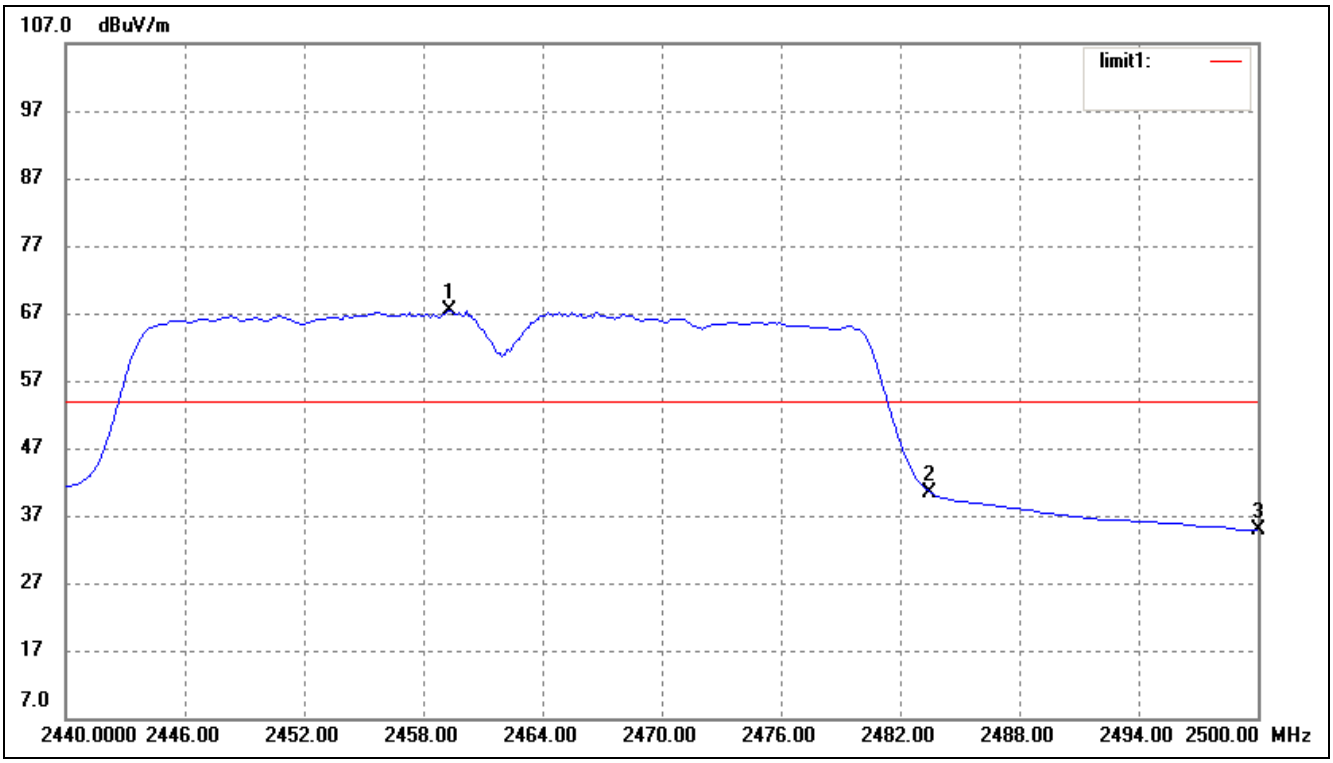
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.000	34.01	-3.69	30.32	54.00	-23.68	Average Detector
	2310.000	53.90	-3.69	50.21	74.00	-23.79	Peak Detector
2	2390.000	35.07	-3.49	31.58	54.00	-22.42	Average Detector
	2390.000	58.42	-3.49	54.93	74.00	-19.07	Peak Detector
3	2400.000	37.16	-3.46	33.70	Delta=26.25dBc		Average Detector
	2400.000	63.41	-3.46	59.95			Peak Detector

802.11n-HT40-Highest Bandedge

Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
3	2459.320	70.73	-3.31	67.42	/	/	Average Detector
	2459.680	98.73	-3.30	95.43	/	/	Peak Detector
1	2483.500	Delta = 40.40dBc		27.02	54.00	-26.98	Average Detector
	2483.500			55.03	74.00	-18.97	Peak Detector
2	2500.000	37.98	-3.20	34.78	54.00	-19.22	Average Detector
	2500.000	53.36	-3.20	50.16	74.00	-23.84	Peak Detector

10. Conducted Emissions

10.1 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 ± 2.88 dB.

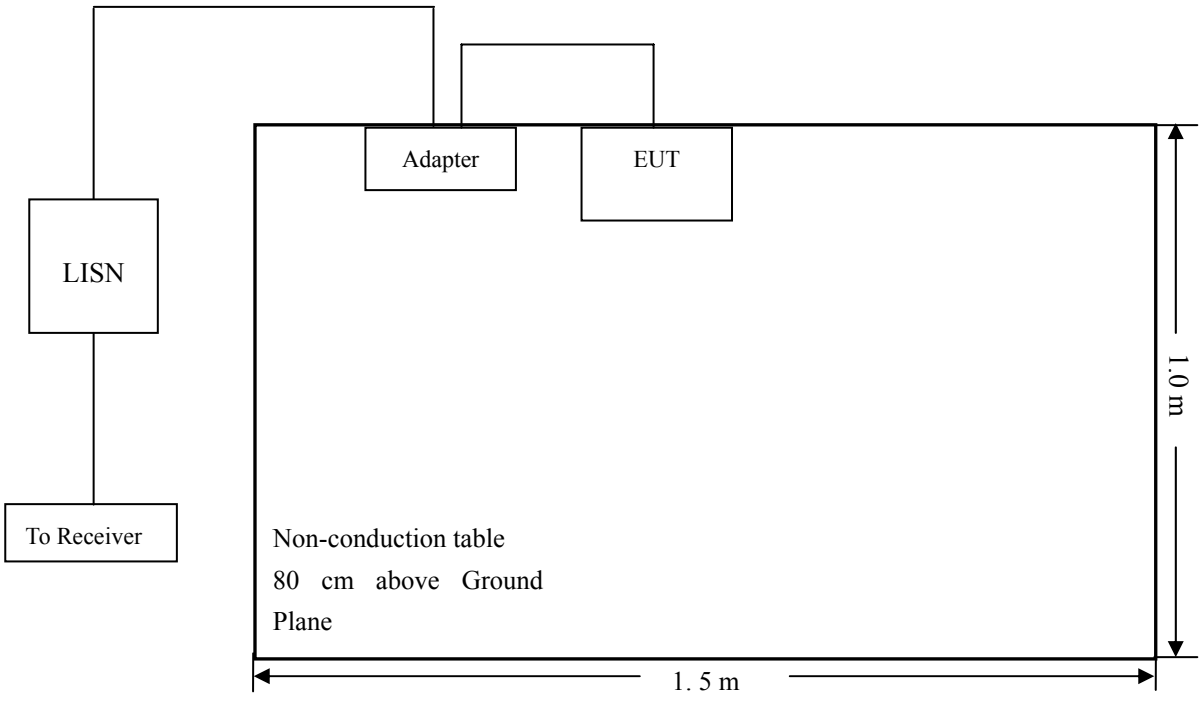
10.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2014-05-28	2015-05-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2014-05-28	2015-05-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2014-05-28	2015-05-27

10.3 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.

10.4 Basic Test Setup Block Diagram



10.5 Environmental Conditions

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

10.6 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

10.7 Summary of Test Results/Plots

According to the data in section 9.8, the EUT complied with the FCC Part 15.207 Conducted margin for a Class B device, with the *worst* margin reading of:

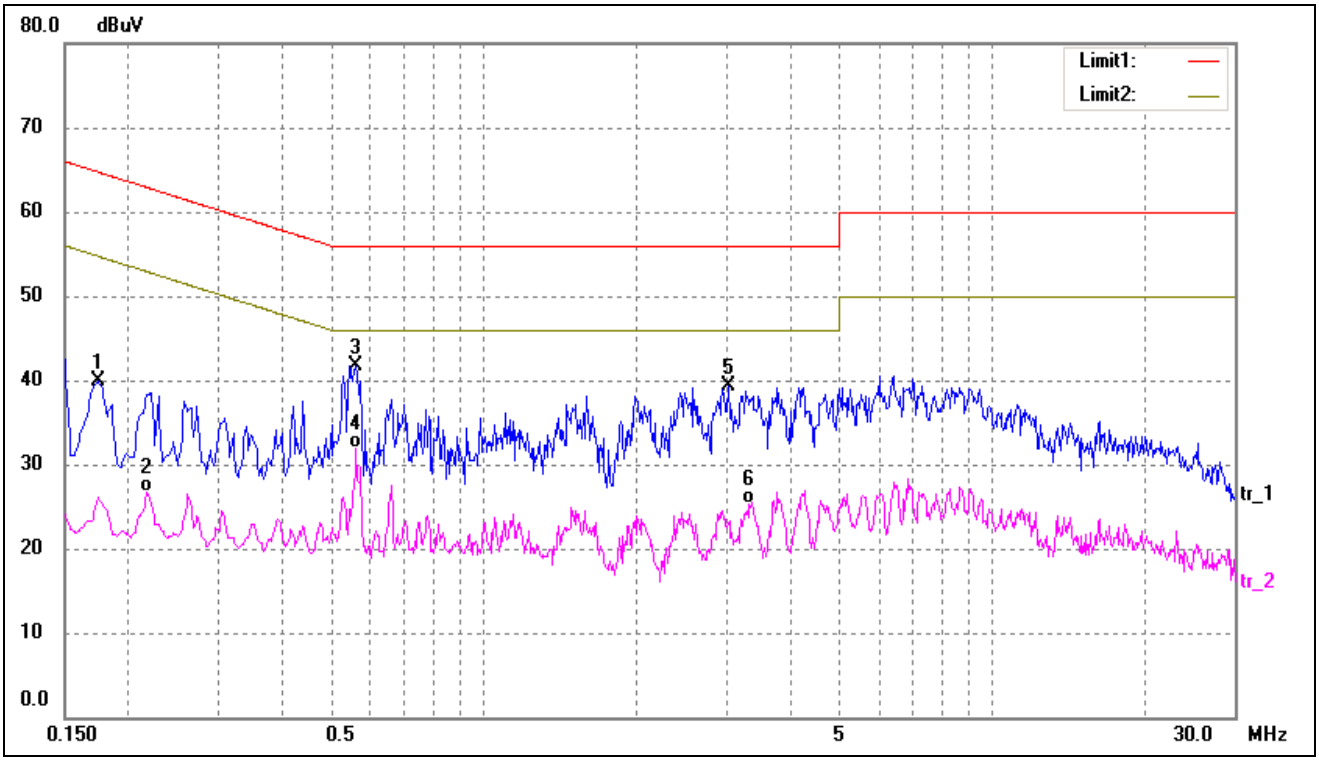
-14.13 dB at 0.5620 MHz in the **Neutra*l*** mode**, AVG** detector, **0.15-30MHz**

10.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

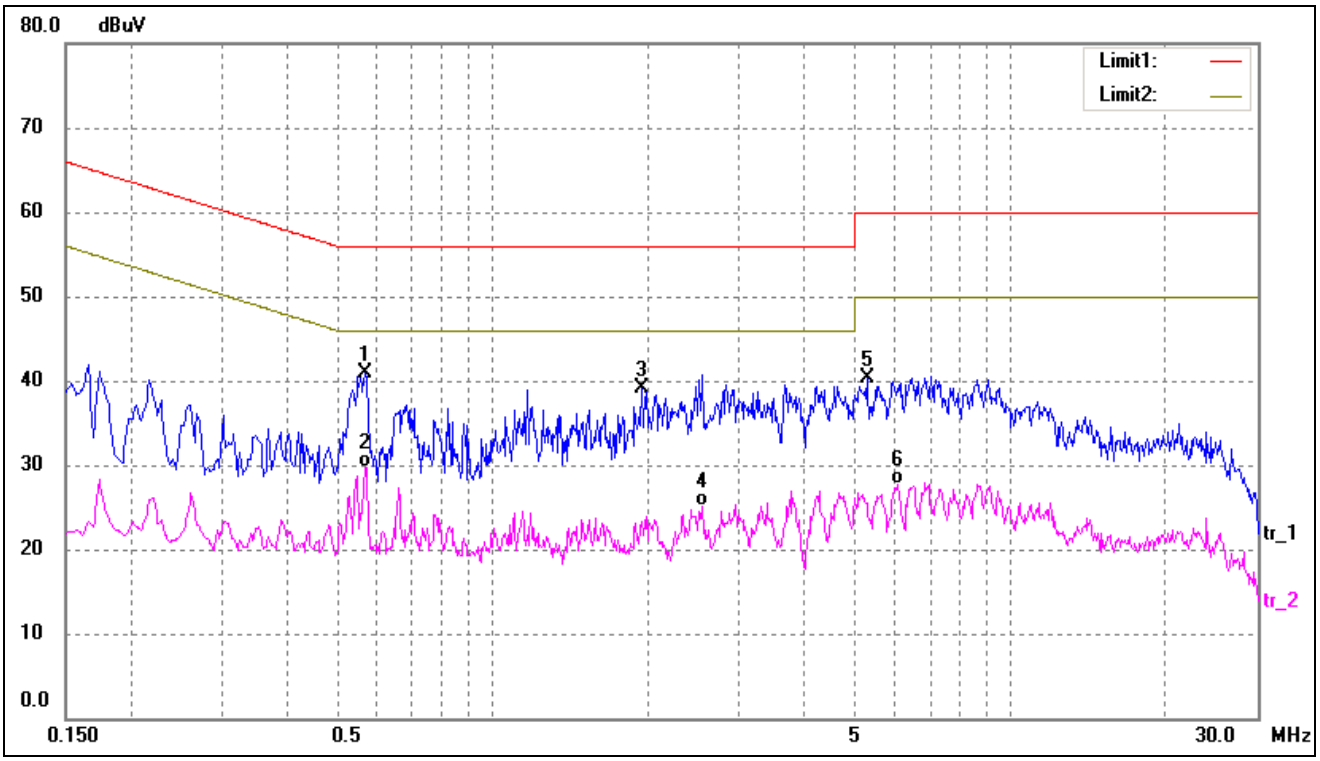
EUT: *COVERT Network Camera*
Tested Model: *NC128PW*
Operating Condition: *Transmitting(Wi-Fi)*
Comment: *Adapter:DC12V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1740	30.48	9.50	39.98	64.77	-24.79	peak
2	0.2180	17.17	9.50	26.67	52.89	-26.22	AVG
3	0.5620	32.17	9.56	41.73	56.00	-14.27	peak
4	0.5620	22.31	9.56	31.87	46.00	-14.13	AVG
5	3.0300	29.39	10.00	39.39	56.00	-16.61	peak
6	3.3420	15.30	10.00	25.30	46.00	-20.70	AVG

Test Specification: *Live*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.5700	31.32	9.57	40.89	56.00	-15.11	peak
2	0.5700	20.13	9.57	29.70	46.00	-16.30	AVG
3	1.9420	29.10	10.00	39.10	56.00	-16.90	peak
4	2.5420	15.08	10.00	25.08	46.00	-20.92	AVG
5	5.2780	30.30	10.00	40.30	60.00	-19.70	peak
6	6.0620	17.76	10.00	27.76	50.00	-22.24	AVG

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