FCC Part 15C
Measurement and Test Report

For

DDC TRADING INC

400 Sunny Isles Blvd # 1506 Sunny Isles Beach, FL 33160,USA.

FCC ID: 2AGF3L5C

FCC Rule(s):	FCC Part 15C	
Product Description:	Mobile phone	
Tested Model:	L5c	
Report No.:	STR17108097I-2	
Tested Date:	2017-10-13 to 2017-10-26	
Issued Date:	2017-10-27	
Tested By:	Mike Shi / Engineer	Mike Shi
Reviewed By:	Silin Chen / EMC Manager	Silin chen
Approved & Authorized By:	Jandy So / PSQ Manager	Jandy So

Prepared By:

Shenzhen SEM.Test Technology Co., Ltd.
1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C.（518101）
Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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 Shenzhen SEM.Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	DDC TRADING INC
Address of applicant:	400 Sunny Isles Blvd # 1506 Sunny Isles Beach, FL 33160, USA.
Manufacturer:	DDC TRADING INC
Address of manufacturer:	400 Sunny Isles Blvd # 1506 Sunny Isles Beach, FL 33160, USA.

General Description of EUT:	
Product Name:	Mobile phone
Brand Name:	DDC
Model No.:	L5c
Adding Model:	/
Rated Voltage:	DC 3.8V Li-ion Battery
Battery Capacity:	2500mAh
Adapter Model:	Model: HJ-0501000B3-AR Input:AC100-240~50/60Hz,0.15A; Output:DC5V--1000mA
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 for 802.11b/g/n(HT20) 2422-2452MHz for 802.11n(HT40)
RF Output Power:	14.93dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11 for 802.11b/g/n(HT20), 7 for 802.11n(HT40)
Channel Separation:	5MHz
Type of Antenna:	Integral
Antenna Gain:	3.1dBi

1.2 Test Standards

The following report is prepared on behalf of the DDC TRADING INC 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 C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices, and ANSI C63.4-2014, 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 v04 for digital transmission systems shall be performed also.

1.4 Test Facility

FCC – Registration No.: 125990

Shenzhen SEM Test Technology Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commissions Declaration Of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

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.

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
TM4	802.11n-HT40	2422MHz, 2437MHz, 2452MHz
Note: All test modes (different data rate and different modulation) are performed, but only the worst case is recorded in this report.		

Accessories Equipment List and Details			
Description	**Manufacturer**	**Model No.**	**Serial Number**
/	/	/	/
Accessories Cable List and Details			
Cable Description	**Length (m)**	**Shielded/Unshielded**	**With Core/Without Core**
/	/	/	/
EUT Cable List and Details			
Cable Description	**Length (m)**	**Shielded/Unshielded**	**With Core/Without Core**
USB Cable	0.83	Unshielded	Without
Earphone Cable	1.00	Unshielded	Without

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	±0.42dB
Occupied Bandwidth	Conducted	±1.5%
Power Spectral Density	Conducted	±1.8dB
Conducted Spurious Emission	Conducted	±2.17dB
Conducted Emissions	Conducted	±2.88dB
Transmitter Spurious Emissions	Radiated	±5.1dB

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2017-06-12	2018-06-11
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2017-06-12	2018-06-11
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2017-06-12	2018-06-11
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2017-06-12	2018-06-11
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2017-06-12	2018-06-11
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2017-06-08	2018-06-07
SEMT-1042	Horn Antenna	ETS	3117	00086197	2017-06-08	2018-06-07
SEMT-1121	Horn Antenna	Schwarz beck	BBHA 9170	BBHA9170582	2017-06-08	2018-06-07
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2017-06-08	2018-06-07
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2017-06-12	2018-06-11
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2017-06-12	2018-06-11
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2017-06-12	2018-06-11
SEMT-1168	Pre-amplifier	Direction Systems Inc.	PAP-0126	14141-12838	2017-08-15	2018-08-14
SEMT-1169	Pre-amplifier	Direction Systems Inc.	PAP-2640	14145-14153	2017-08-15	2018-08-14
SEMT-1163	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2017-06-12	2018-06-11
SEMT-1170	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2017-03-09	2018-03-08

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
§15.205	Restricted Band of Operation	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 SAR 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 integral 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 Procedure

According to the KDB 558074 D01 v04, such specifications require that the same method as used to determine the conducted output power shall also be used to determine the power spectral density. The test method of power spectral density as below:

a) Set instrument center frequency to DTS channel center frequency.
b) Set span to at least 1.5 times the OBW.
c) Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz. .
d) Set VBW ≥3 x RBW.
e) Detector = power averaging (RMS) or sample detector (when RMS not available).
f) Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
g) Sweep time = auto couple.
h) Employ trace averaging (RMS) mode over a minimum of 100 traces.
i) Use the peak marker function to determine the maximum amplitude level.
j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span in order to meet the minimum measurement point requirement as the RBW is reduced).

5.3 Environmental Conditions

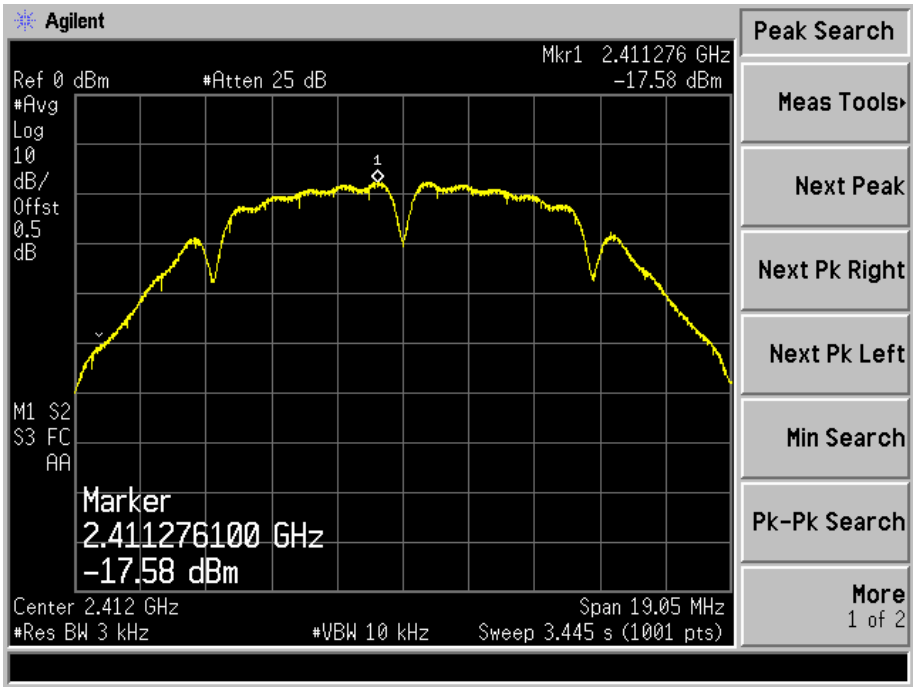
Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

5.4 Summary of Test Results/Plots

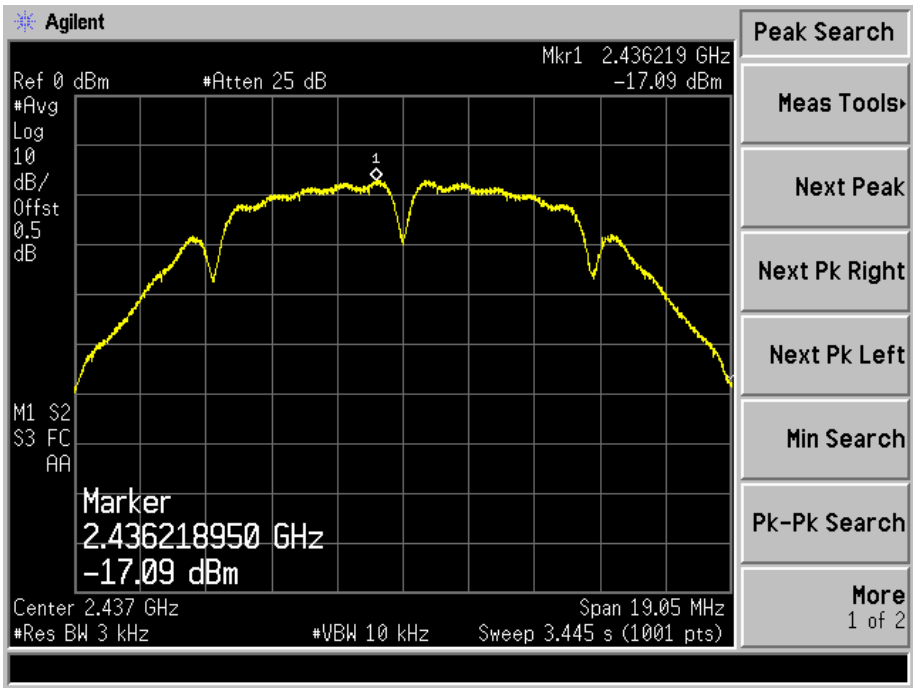
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-17.58	8
	2437	-17.09	8
	2462	-16.38	8
802.11g	2412	-20.53	8
	2437	-20.76	8
	2462	-20.89	8
802.11n HT20	2412	-20.91	8
	2437	-21.18	8
	2462	-21.14	8
802.11n HT40	2422	-24.73	8
	2437	-24.41	8
	2452	-24.53	8

Please refer to the following test plots:

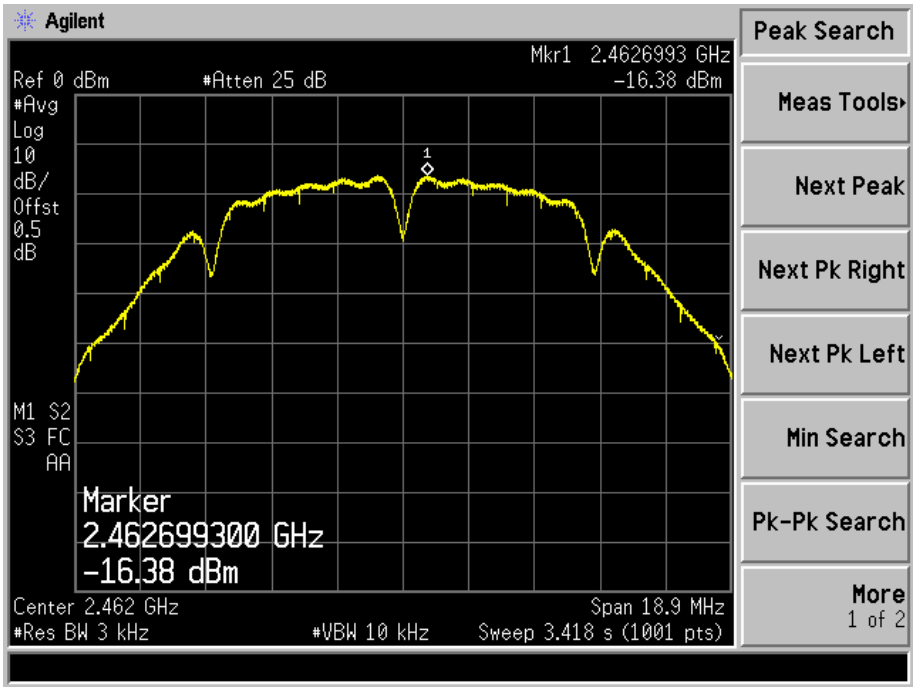
802.11b-Low Channel



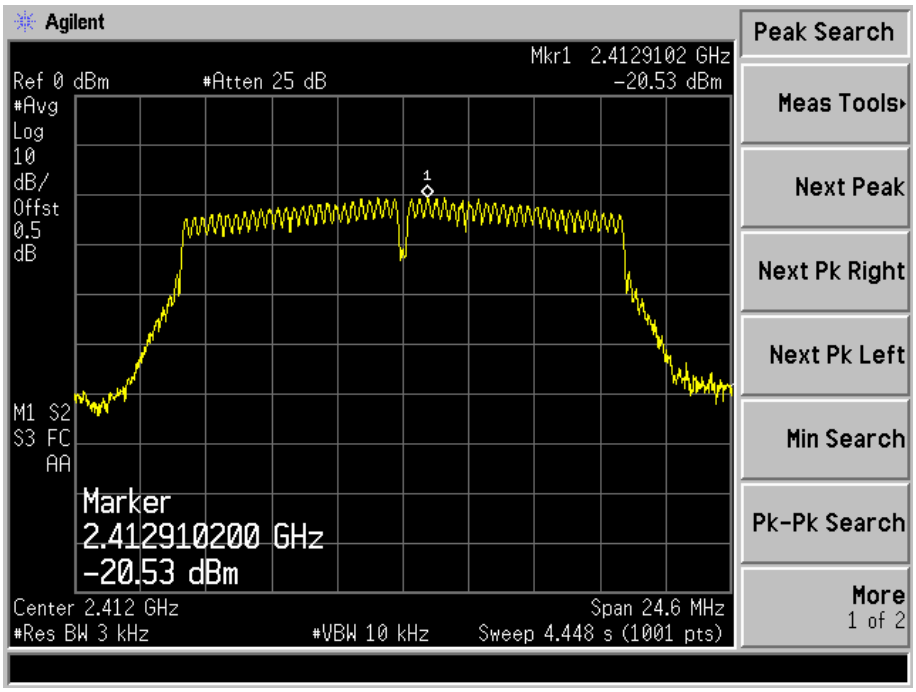
802.11b-Middle Channel



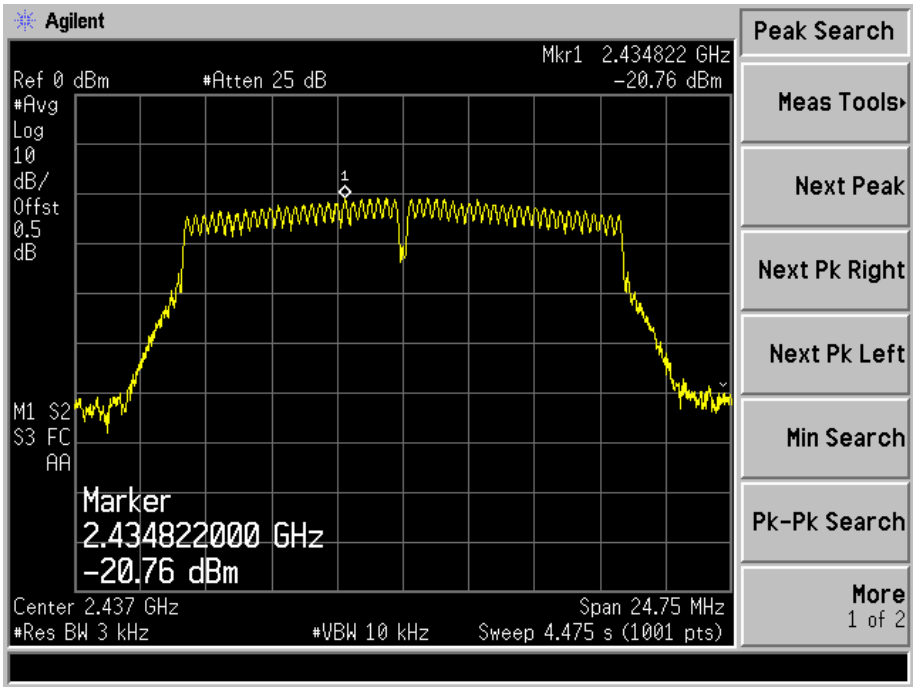
802.11b-High Channel



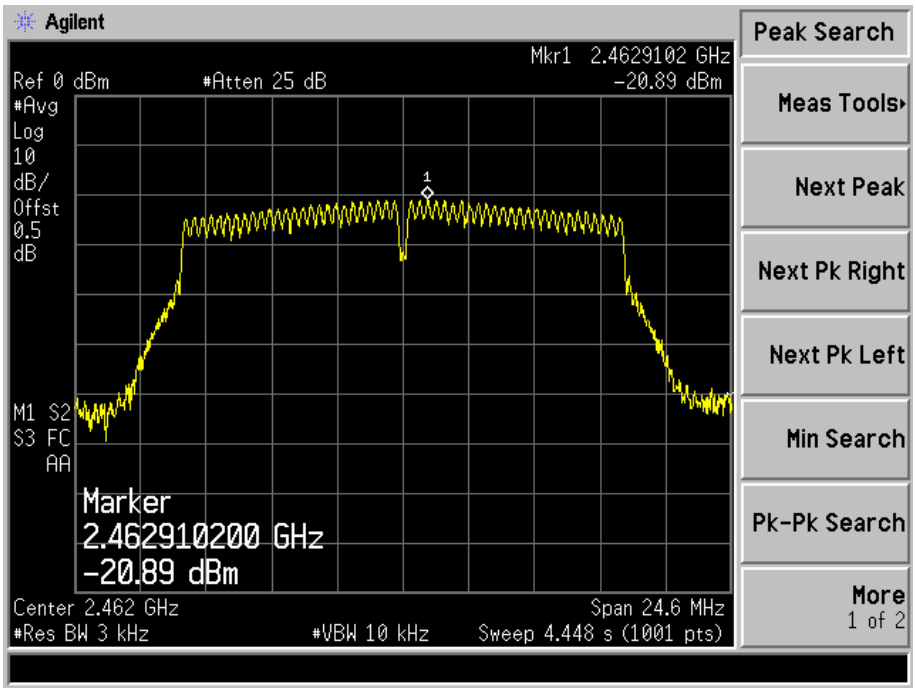
802.11g-Low Channel



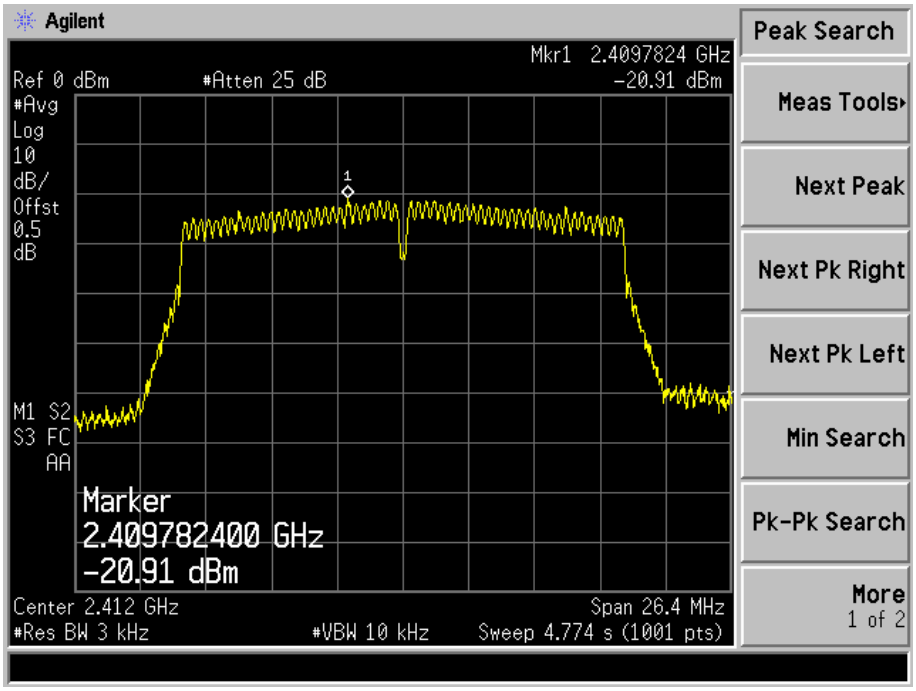
802.11g-Middle Channel



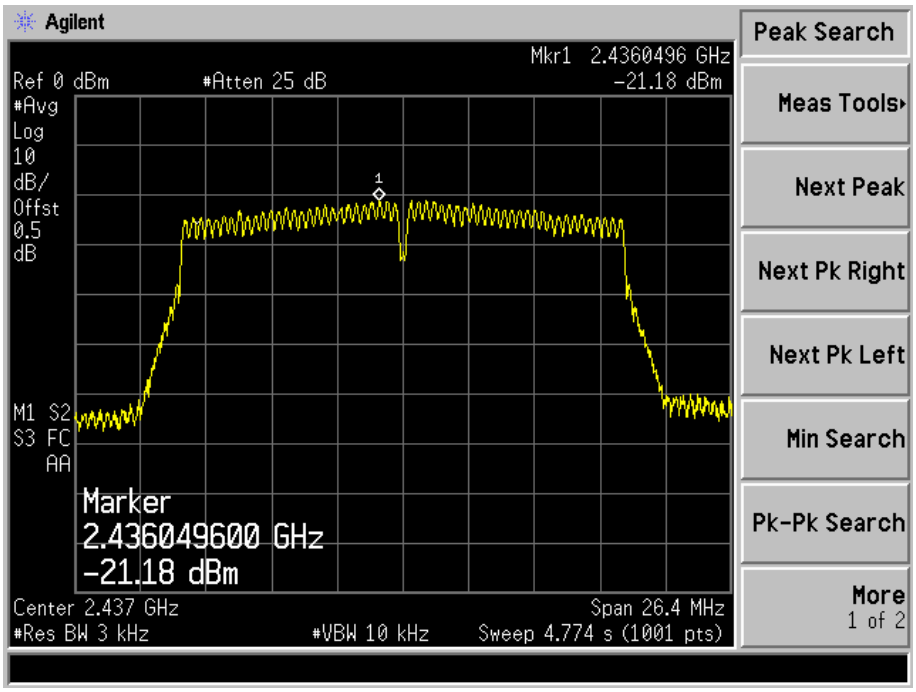
802.11g-High Channel



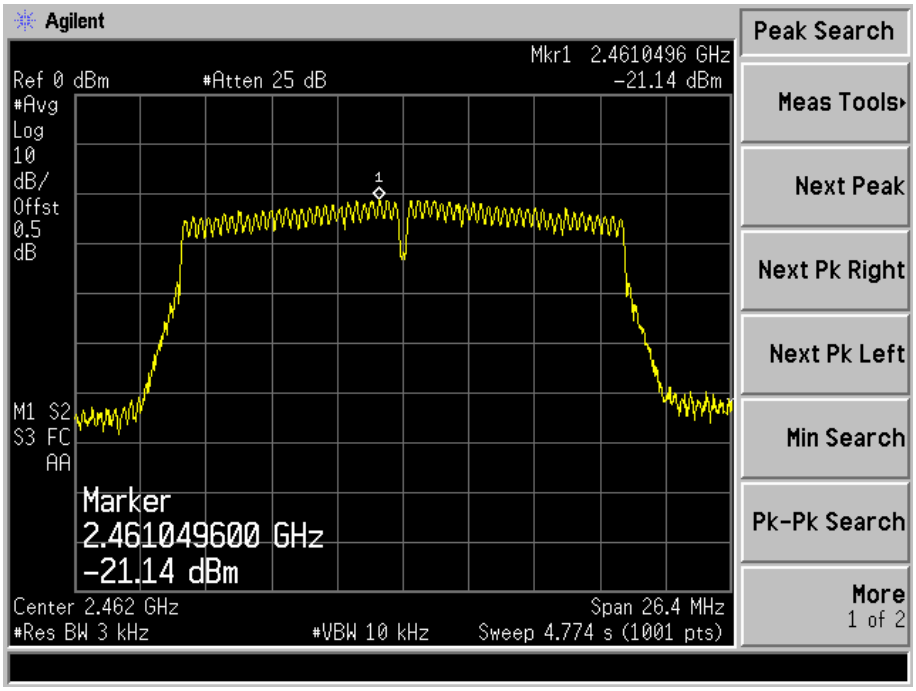
802.11n-HT20-Low Channel



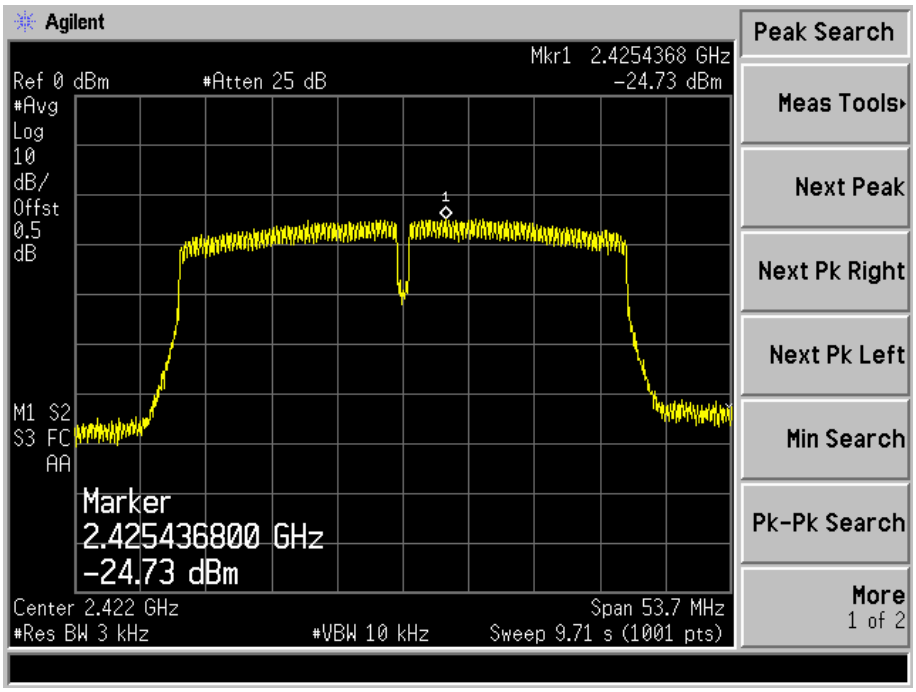
802.11n-HT20-Middle Channel



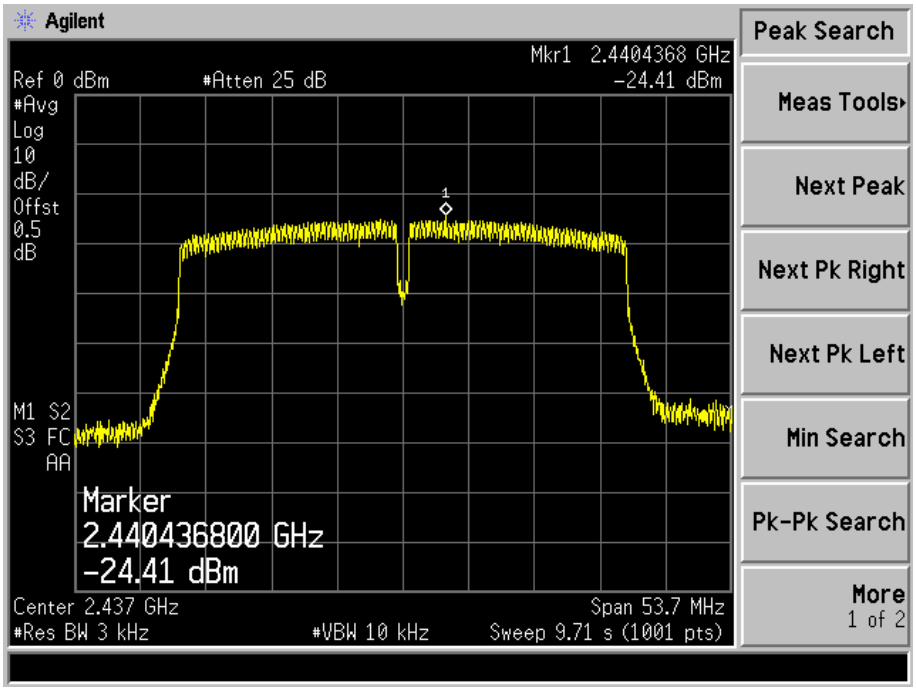
802.11n-HT20-High Channel



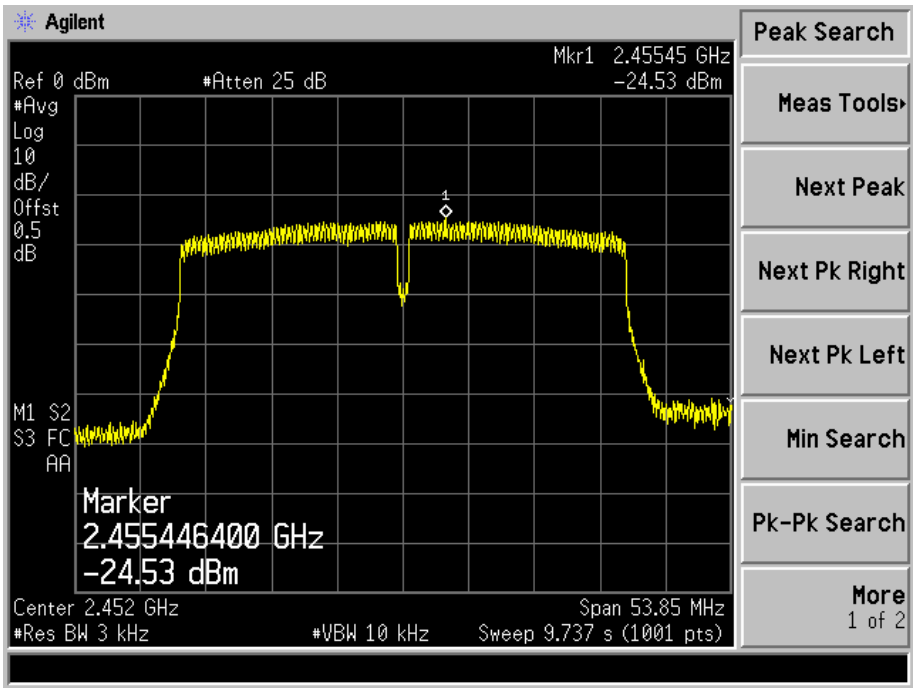
802.11n-HT40-Low Channel



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 Procedure

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ⩾ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3 Environmental Conditions

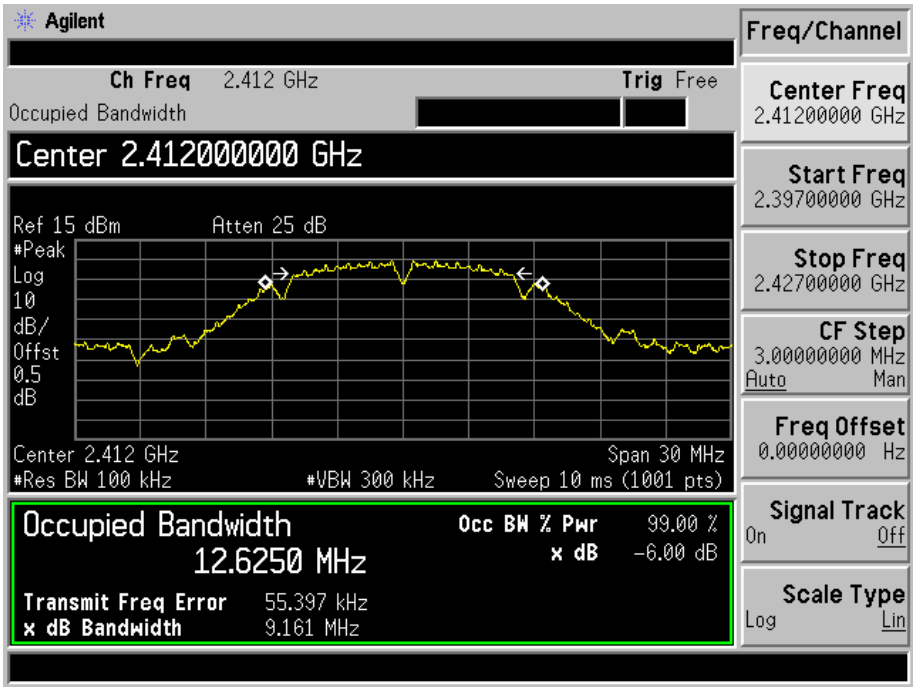
Temperature:	25° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

6.4 Summary of Test Results/Plots

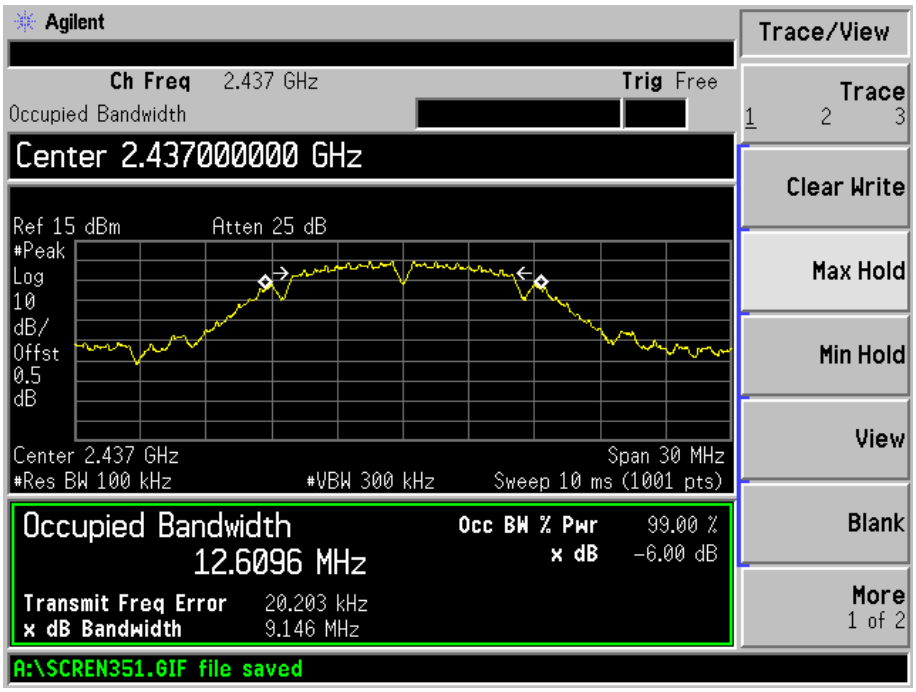
Test Mode	Test Channel MHz	6 dB Bandwidth MHz	99% Bandwidth MHz	Limit kHz
802.11b	2412	9.161	12.6250	≥500
	2437	9.146	12.6096	≥500
	2462	9.159	12.5957	≥500
802.11g	2412	16.350	16.3882	≥500
	2437	16.347	16.4153	≥500
	2462	16.359	16.3917	≥500
802.11n-HT20	2412	17.582	17.5448	≥500
	2437	17.601	17.5352	≥500
	2462	17.606	17.5338	≥500
802.11n-HT40	2422	36.153	35.7666	≥500
	2437	36.301	35.7862	≥500
	2452	36.164	35.8018	≥500

Please refer to the following test plots:

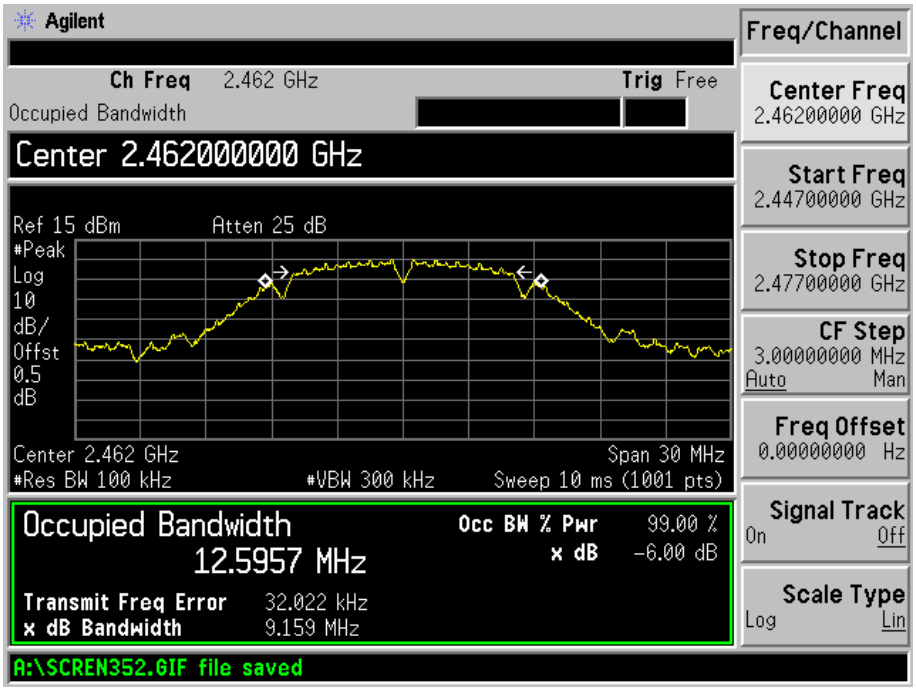
802.11b-Low Channel



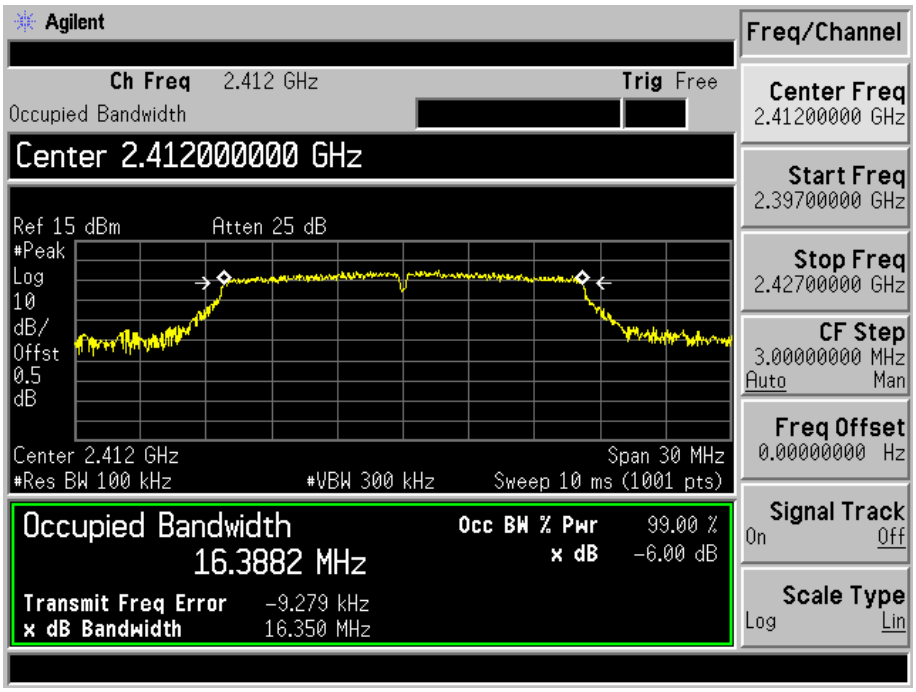
802.11b-Middle Channel



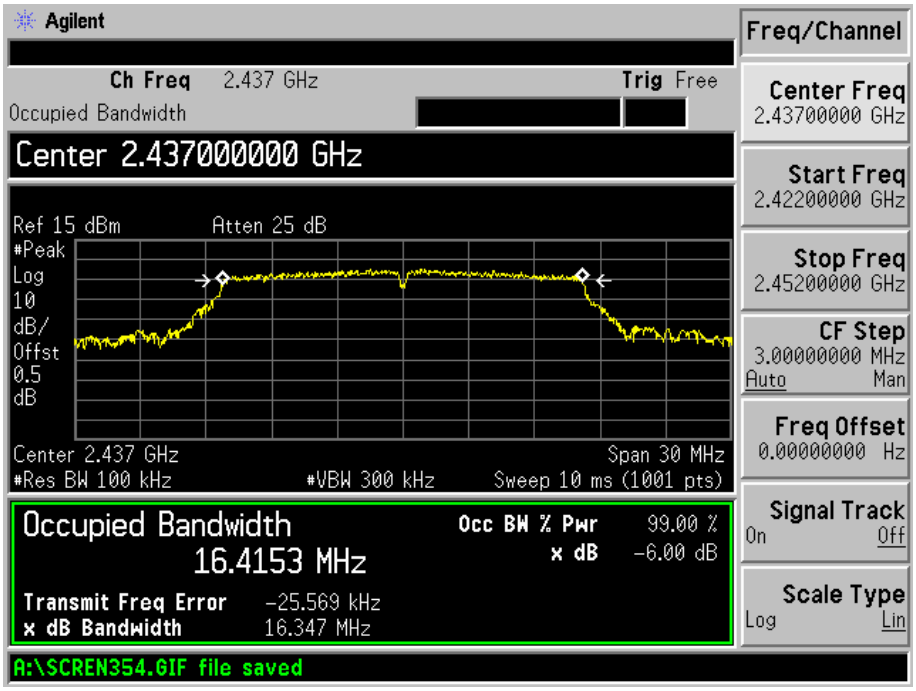
802.11b-High Channel



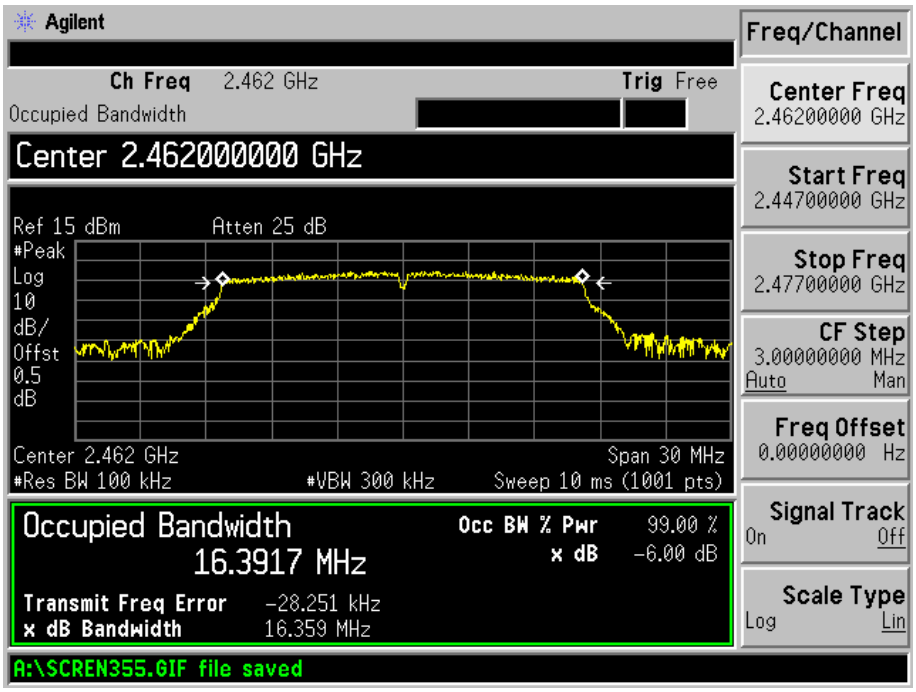
802.11g-Low Channel



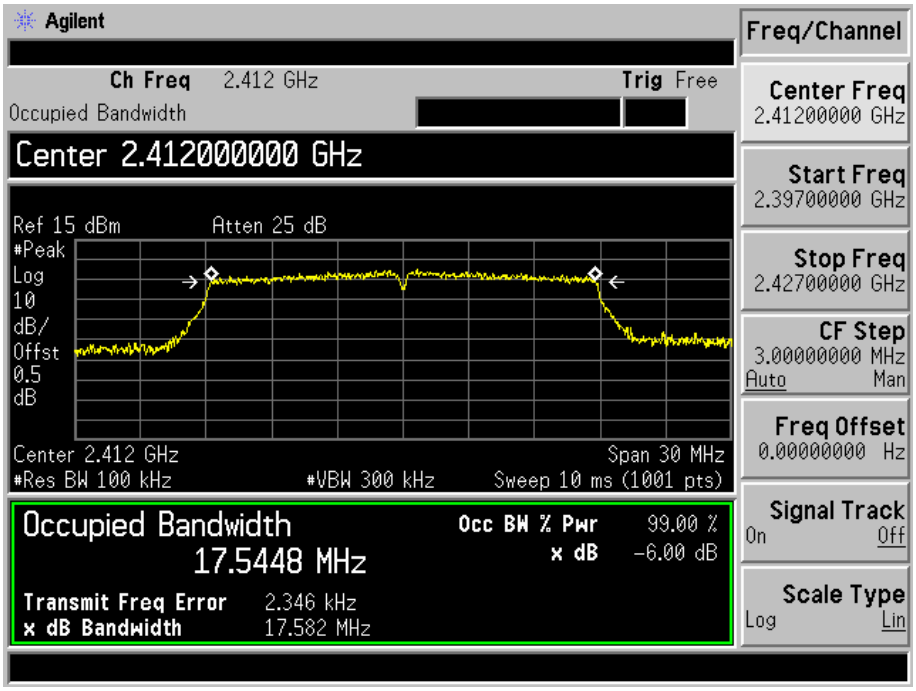
802.11g-Middle Channel



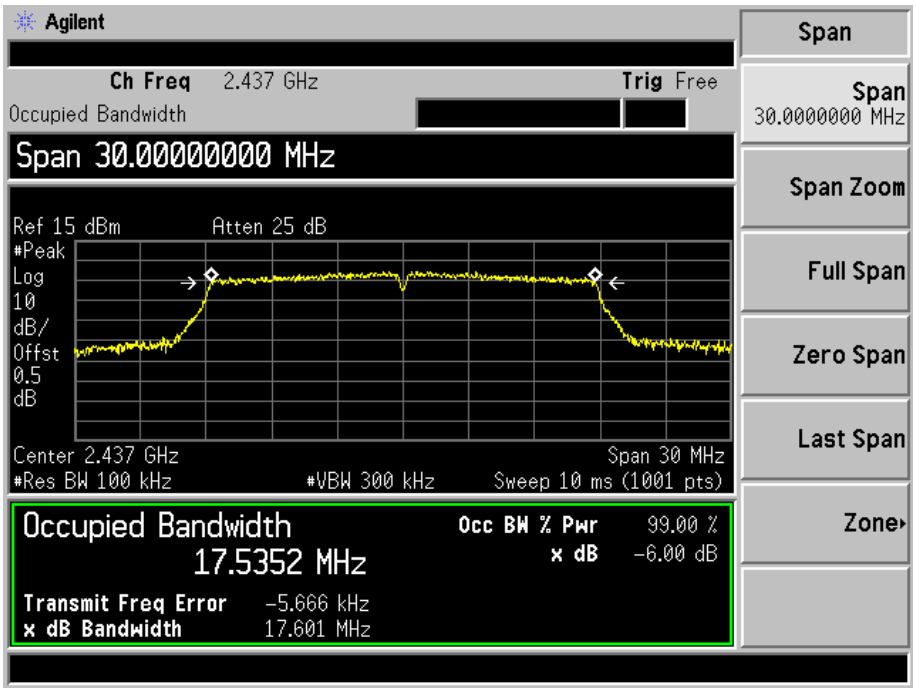
802.11g-High Channel



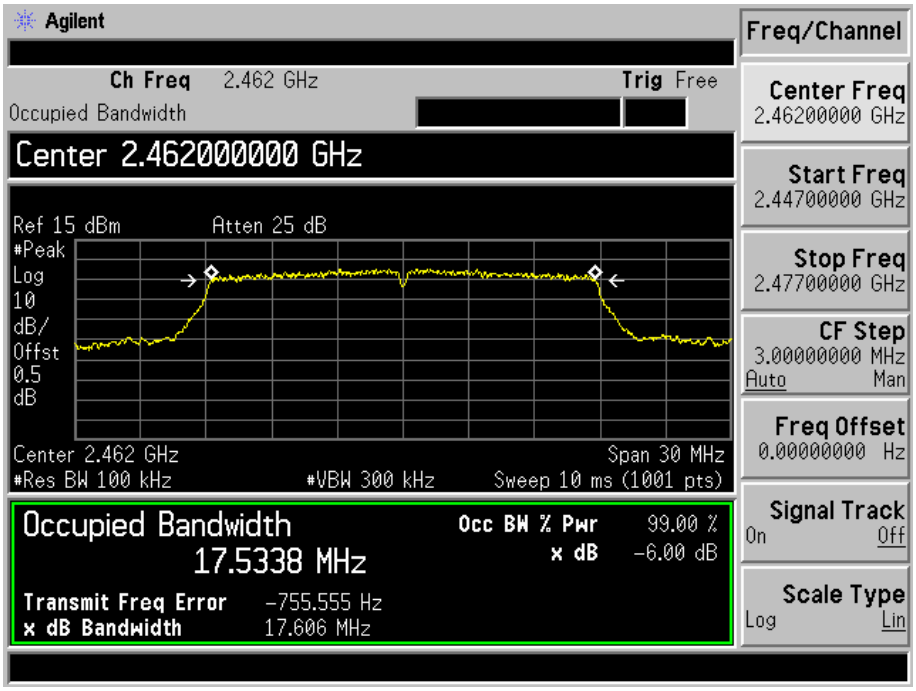
802.11n-HT20-Low Channel



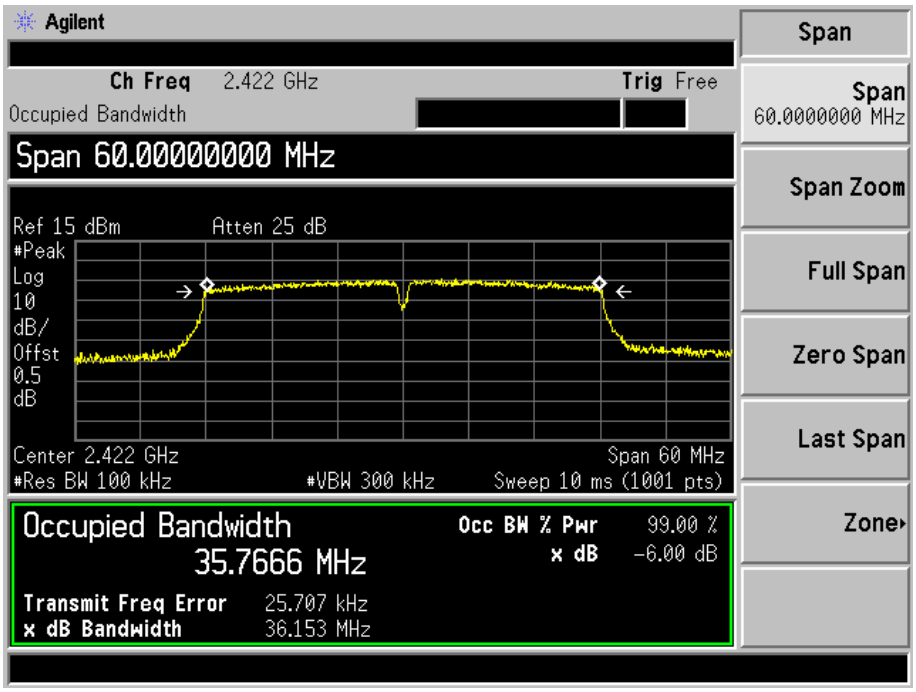
802.11n-HT20-Middle Channel



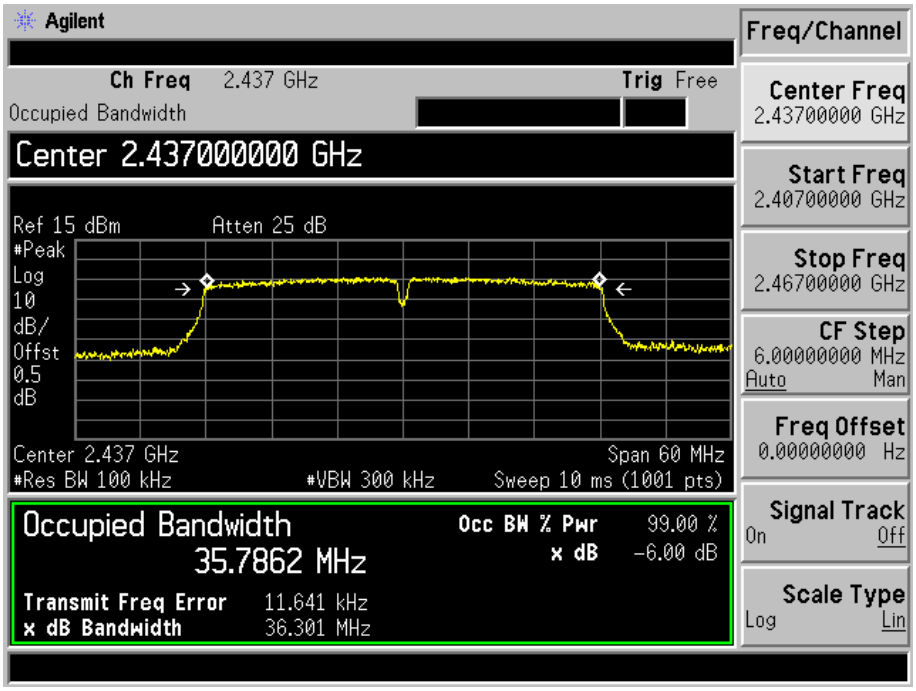
802.11n-HT20-High Channel



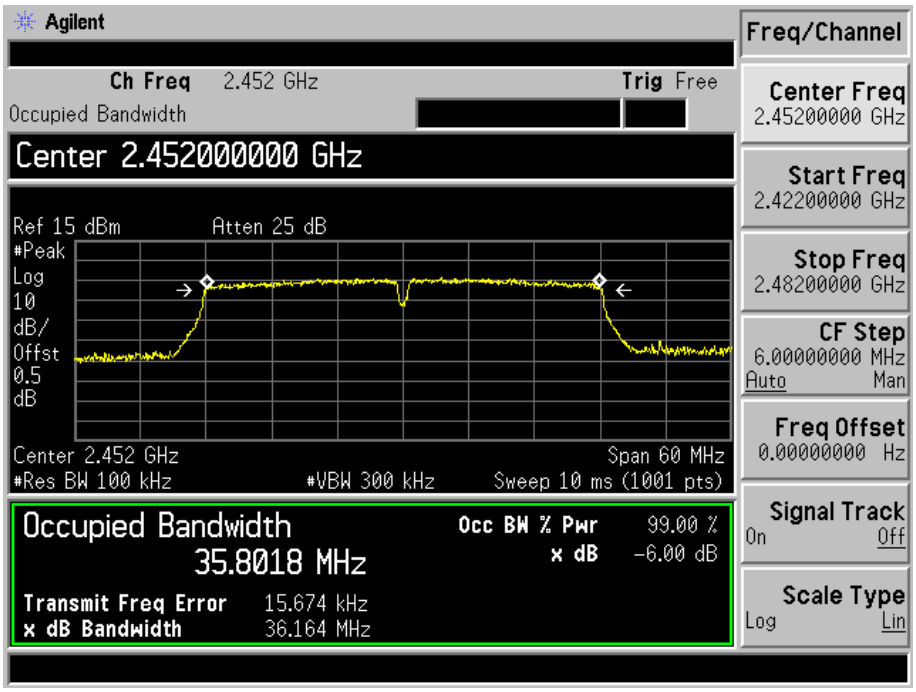
802.11n-HT40-Low Channel



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 Procedure

According to the KDB-558074 D01 v04, 9.2.2.2, when this option is exercised, the measured power is to be referenced to the OBW rather than the DTS bandwidth

a) Set span to at least 1.5 times the OBW.
b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
c) Set VBW ⩾ 3 x RBW.
d) Number of points in sweep ⩾ 2 × span / RBW. (This gives bin-to-bin spacing ⩽ RBW/2, so that narrowband signals are not lost between frequency bins.)
e) Sweep time = auto.
f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
g) If transmit duty cycle < 98 %, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ⩾ 98 %, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".
h) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
i) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

7.3 Environmental Conditions

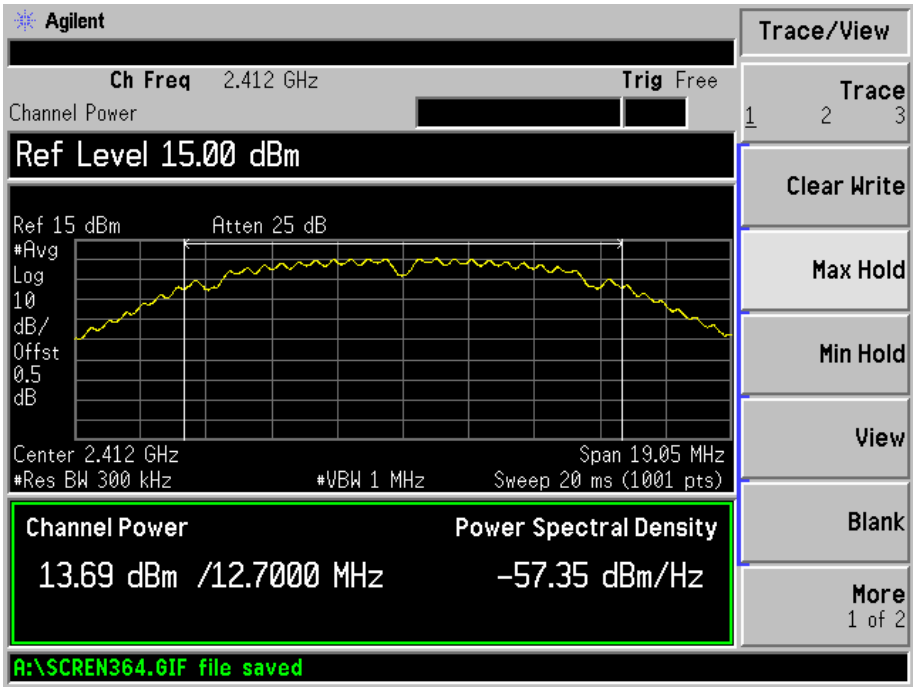
Temperature:	26° C
Relative Humidity:	57%
ATM Pressure:	1011 mbar

7.4 Summary of Test Results/Plots

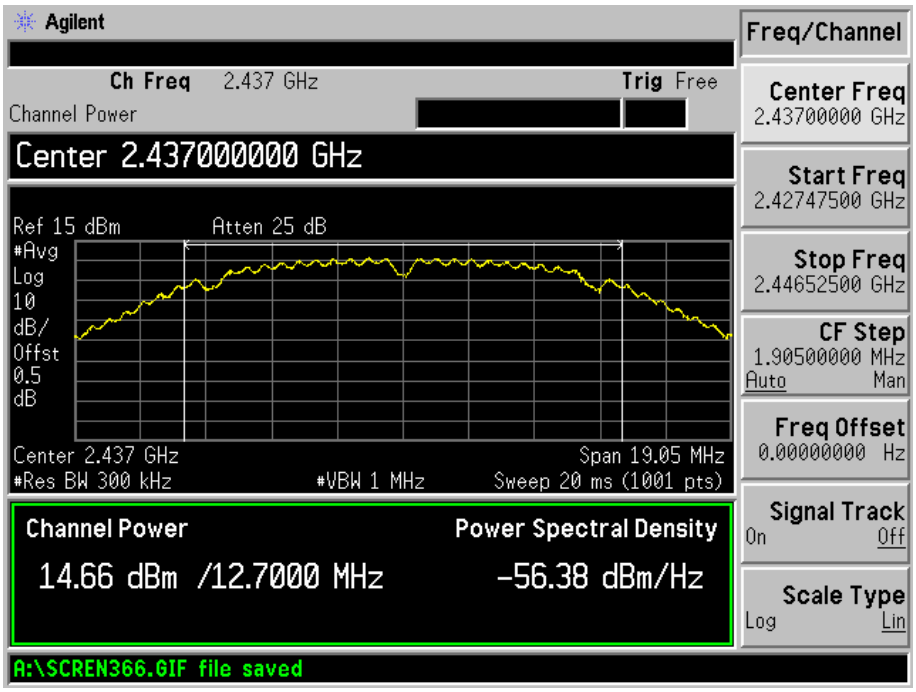
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b _ 11Mbps	2412	13.69	23.39	1000
	2437	14.66	29.24	1000
	2462	14.93	31.12	1000
802.11g_54Mbps	2412	12.72	18.71	1000
	2437	13.01	20.00	1000
	2462	12.54	17.95	1000
802.11n HT20_MCS7	2412	11.89	15.45	1000
	2437	11.89	15.45	1000
	2462	12.68	18.54	1000
802.11n HT40_MCS7	2422	11.29	13.46	1000
	2437	10.97	12.50	1000
	2452	11.17	13.09	1000

Please refer to the following test plots:

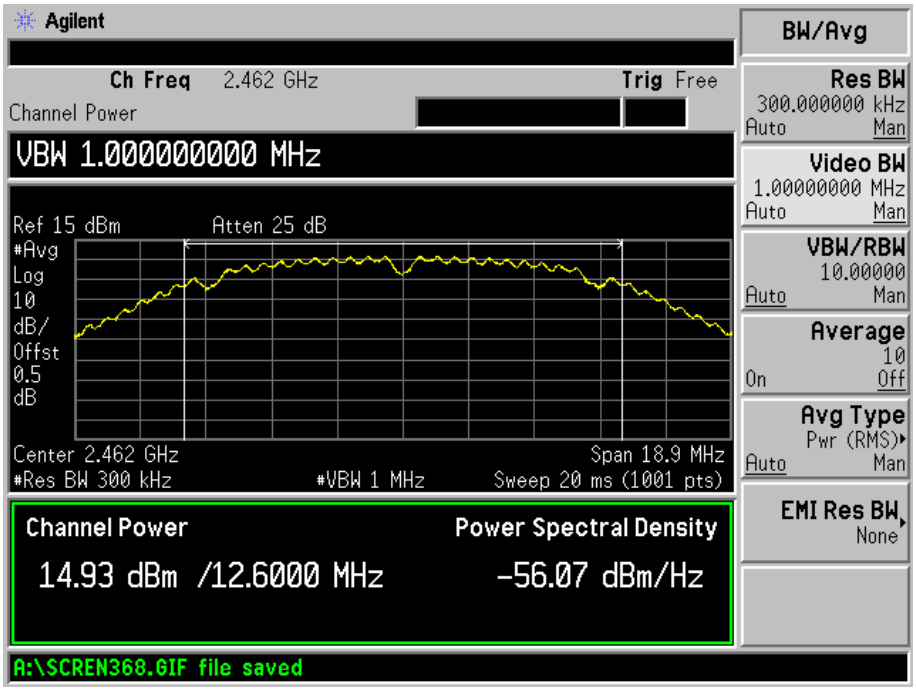
802.11b-11Mbps-Low Channel



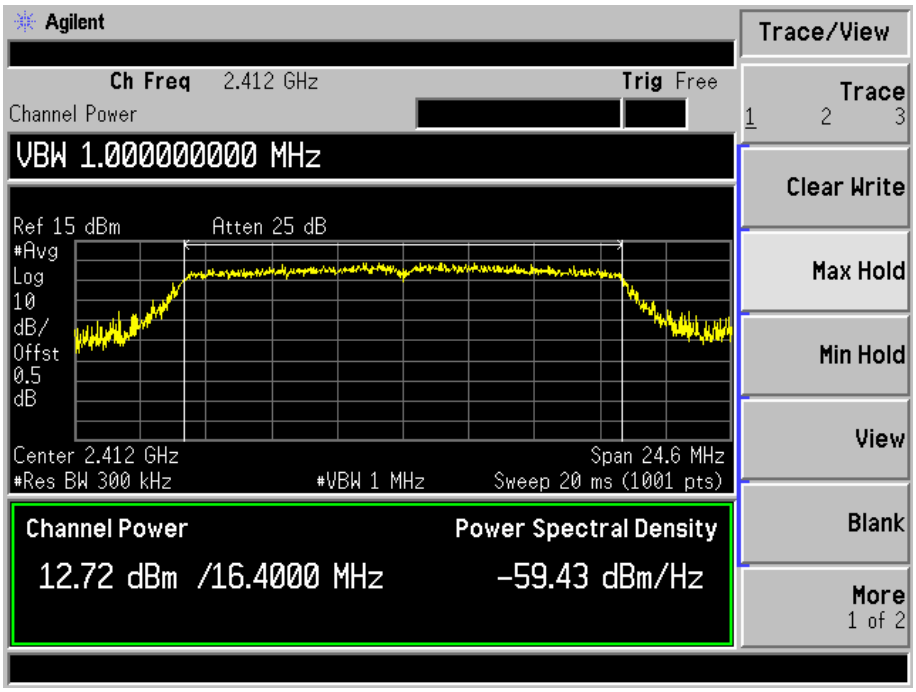
802.11b -11Mbps-Middle Channel



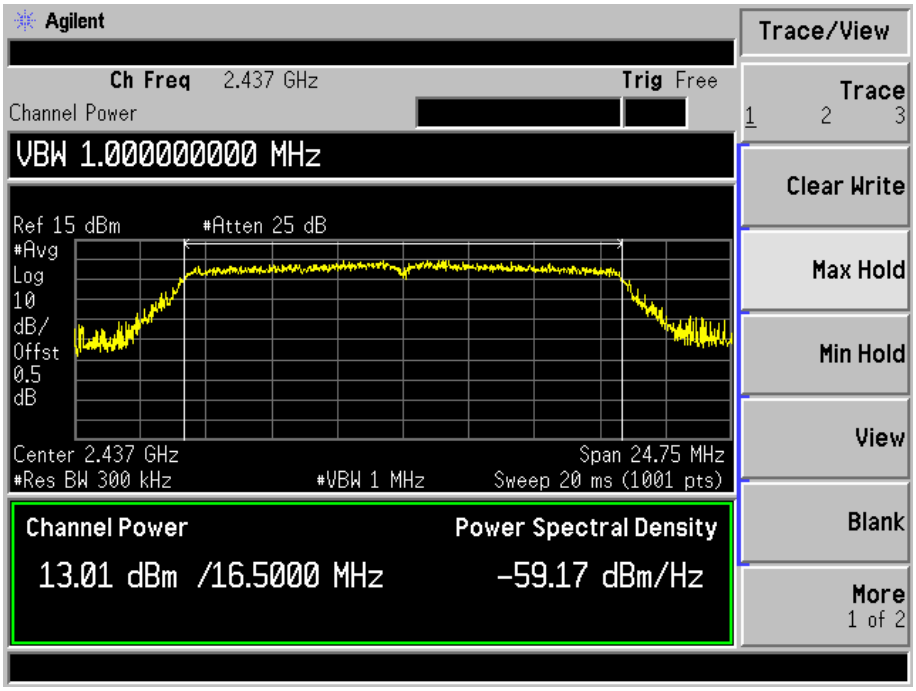
802.11b -11Mpbs-High Channel



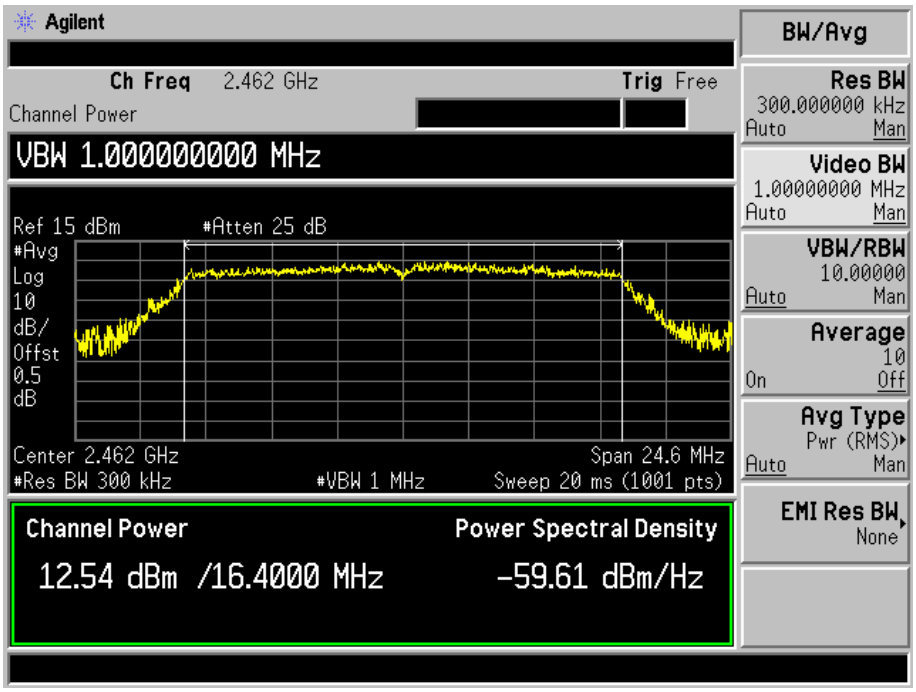
802.11g-54Mbps-Low Channel



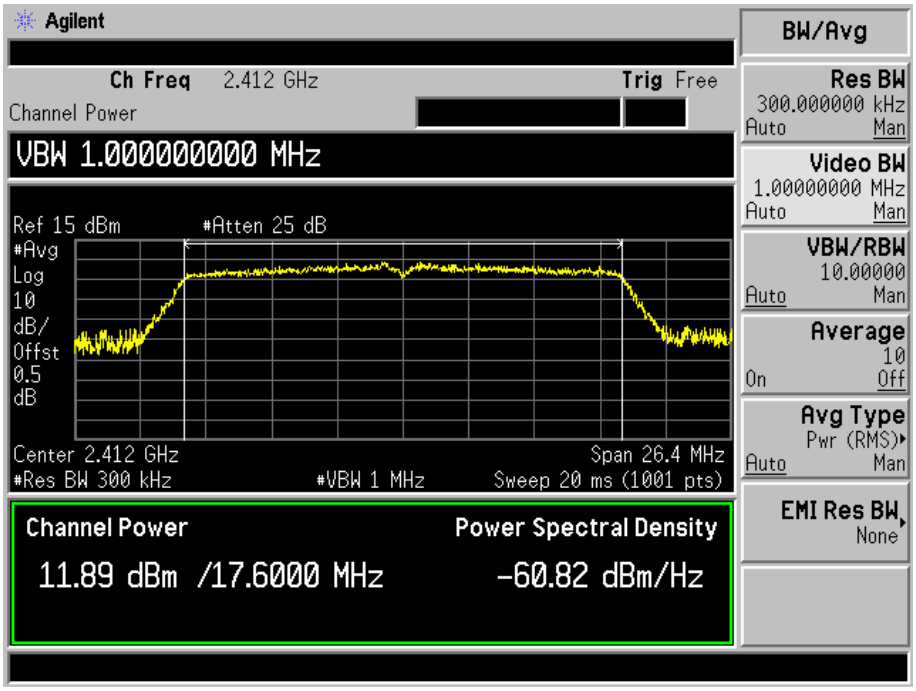
802.11g-54Mbps-Middle Channel



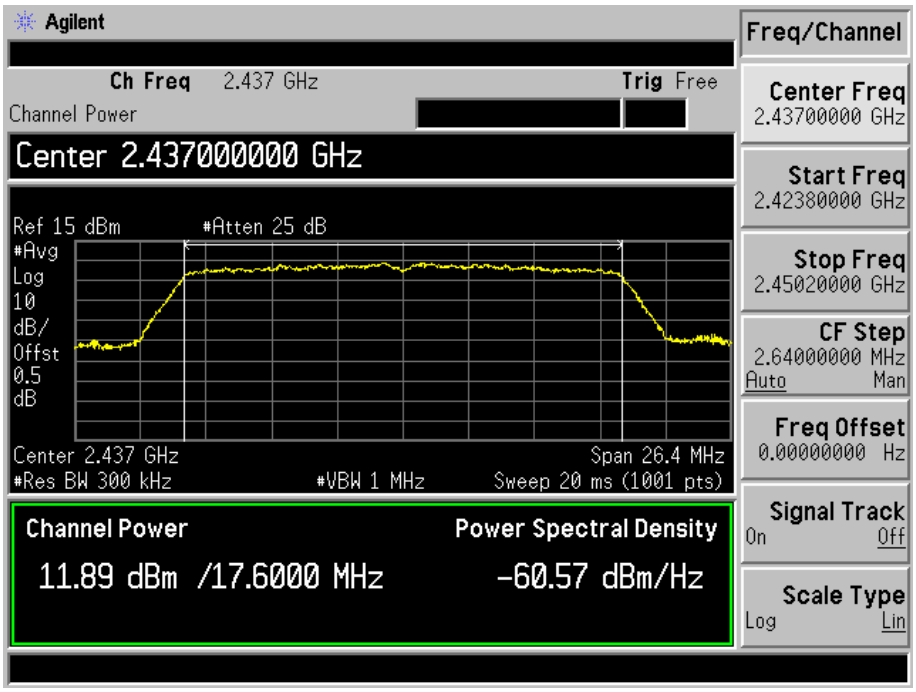
802.11g-54Mpbs-High Channel



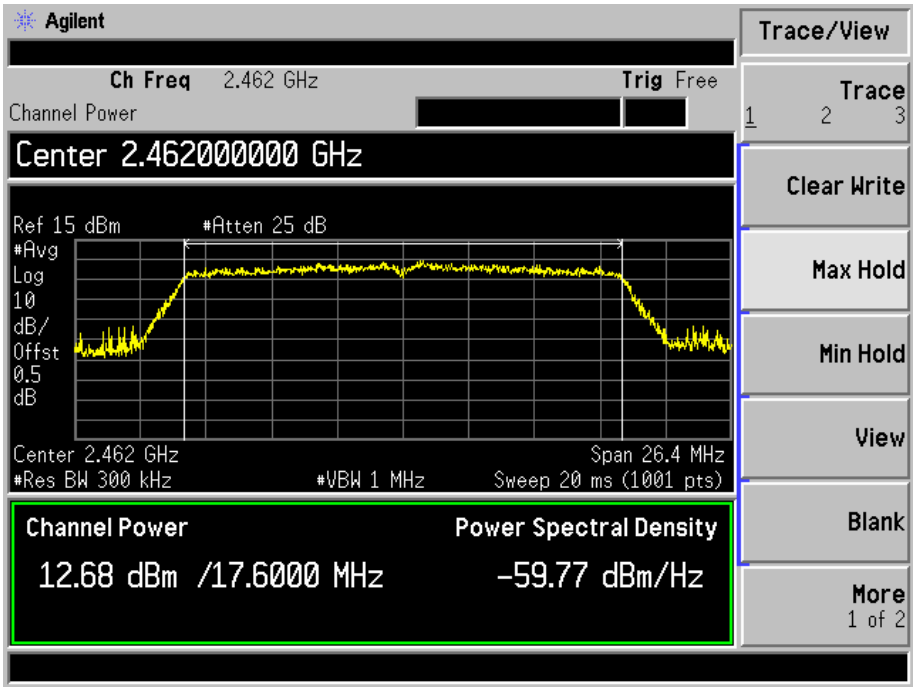
802.11n-HT20-MCS7-Low Channel



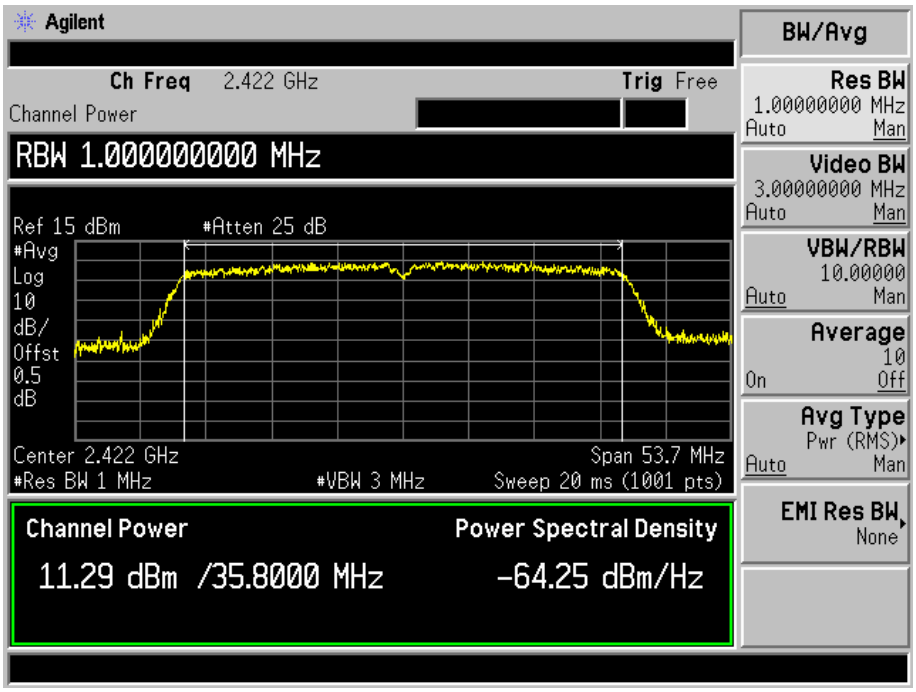
802.11n-HT20-MCS7-Middle Channel



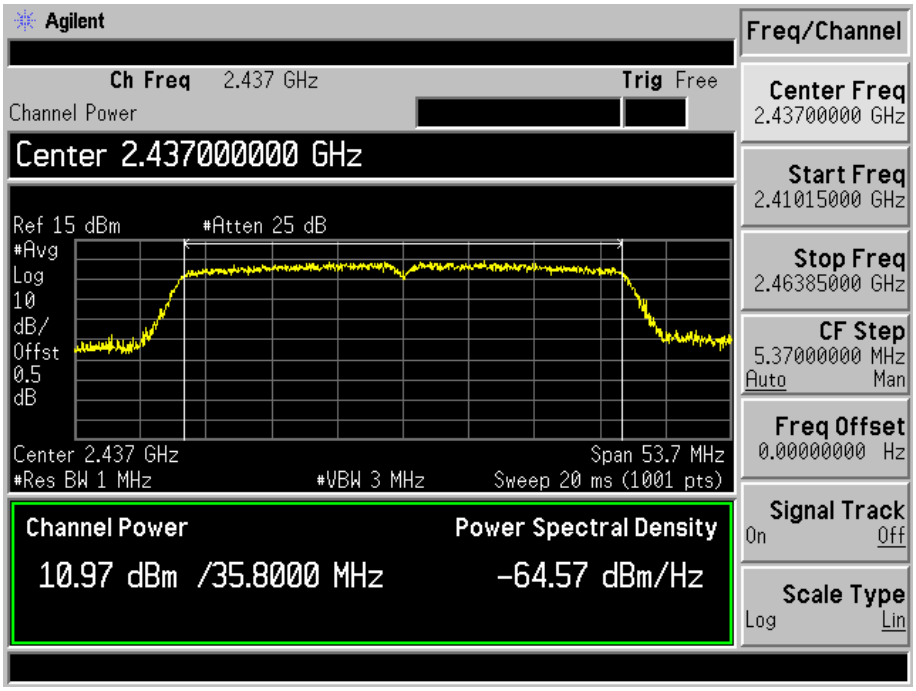
802.11n-HT20-MCS7-High Channel



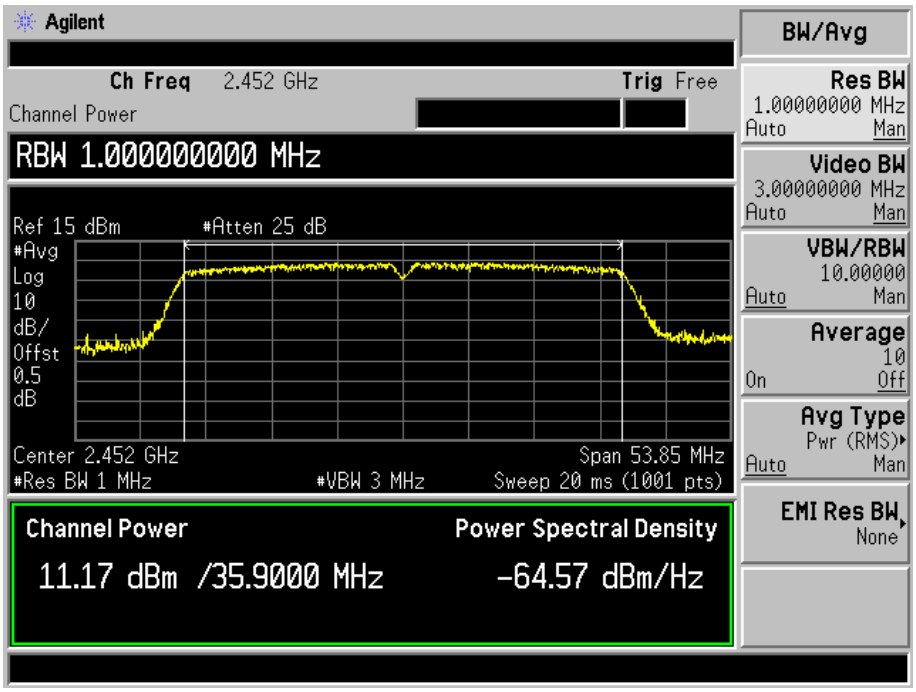
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS7-Middle Channel



802.11n-HT40-MCS7-High Channel



8. Field Strength of Spurious Emissions

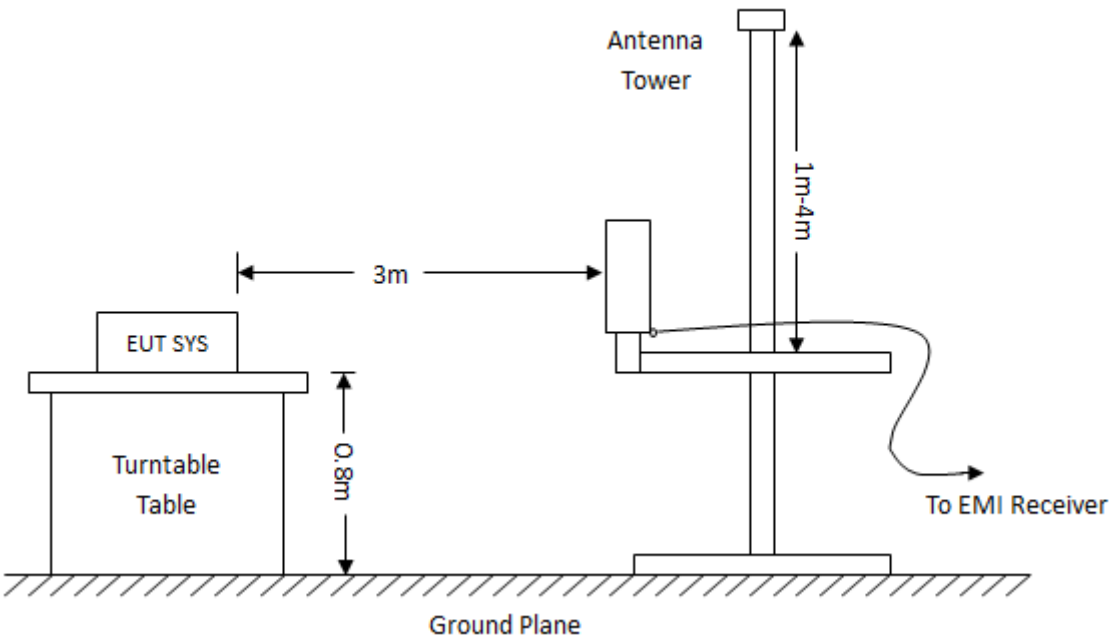
8.1 Standard Applicable

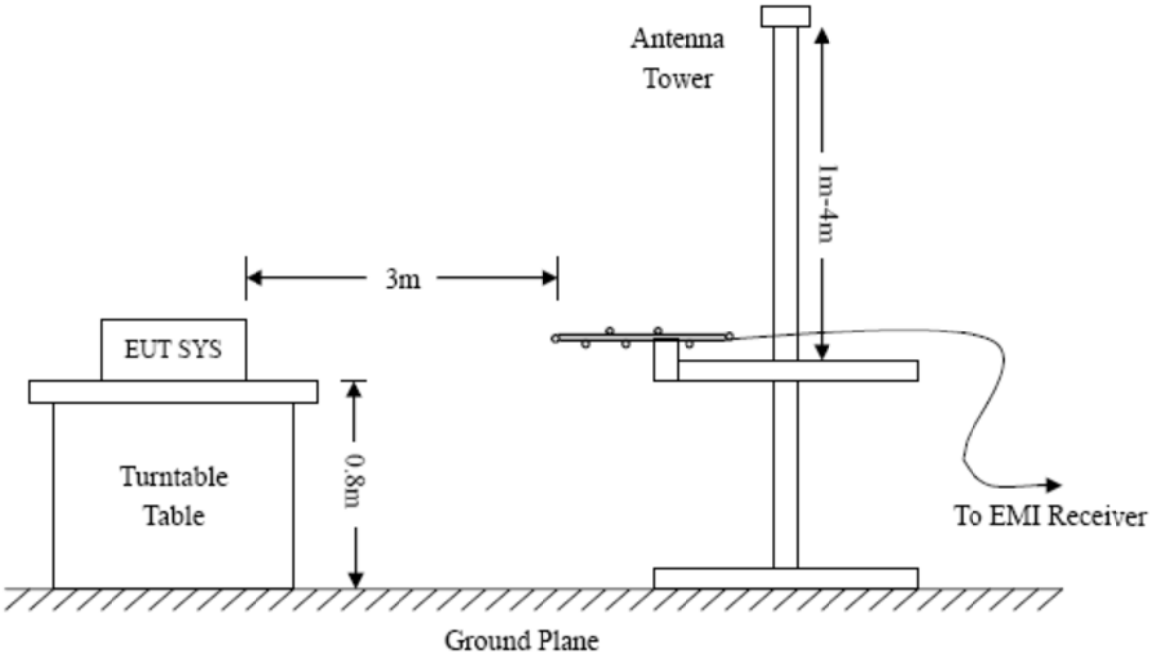
According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within 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).

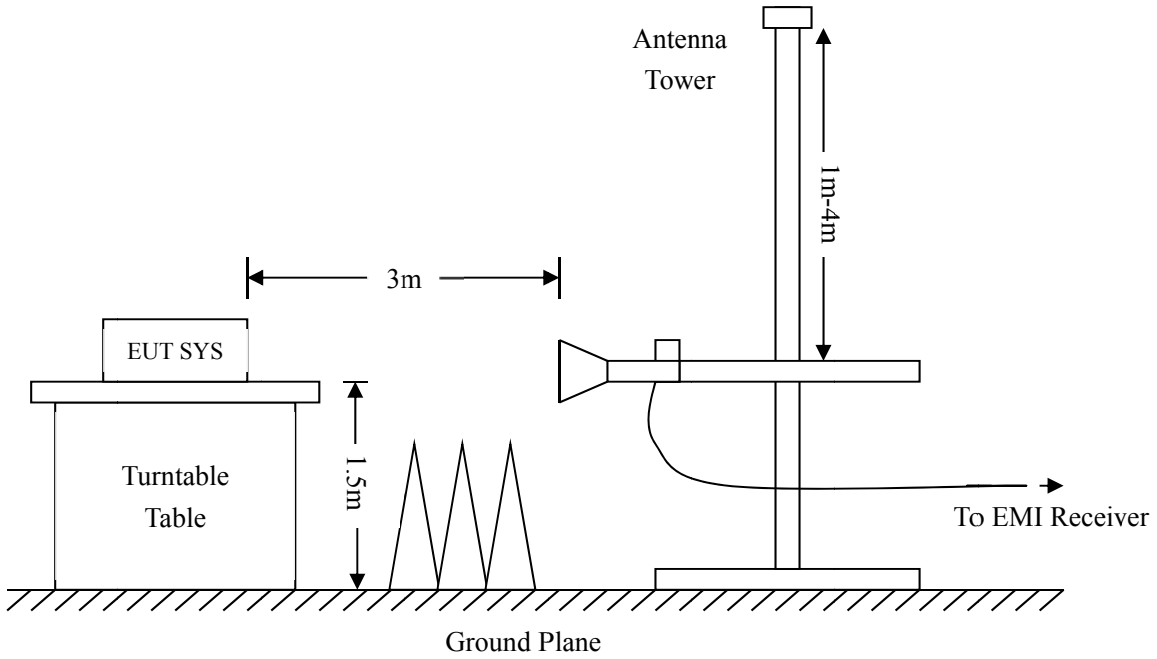
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

8.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 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=360KHz	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

8.3 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. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15 Limit

8.4 Environmental Conditions

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

8.5 Summary of Test Results/Plots

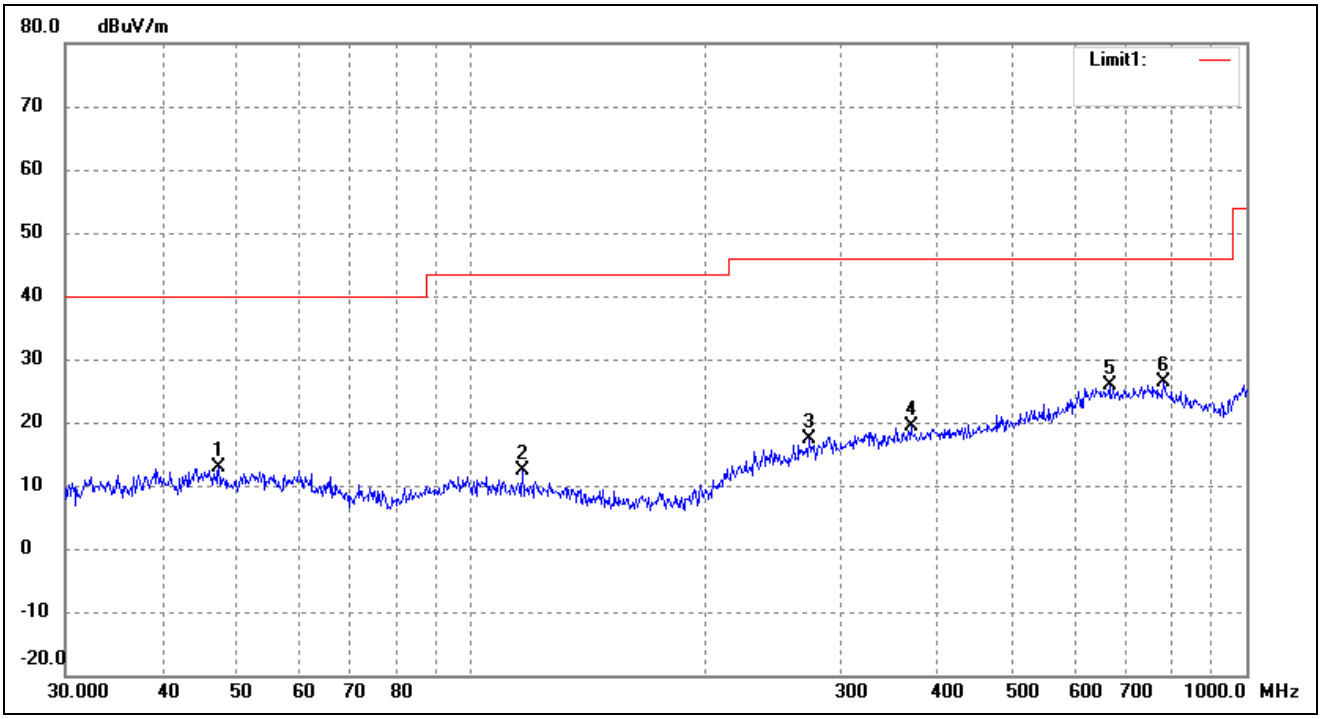
According to the data below, the FCC Part 15.205, 15.209 and 15.247 standards, and had the worst cases:

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)

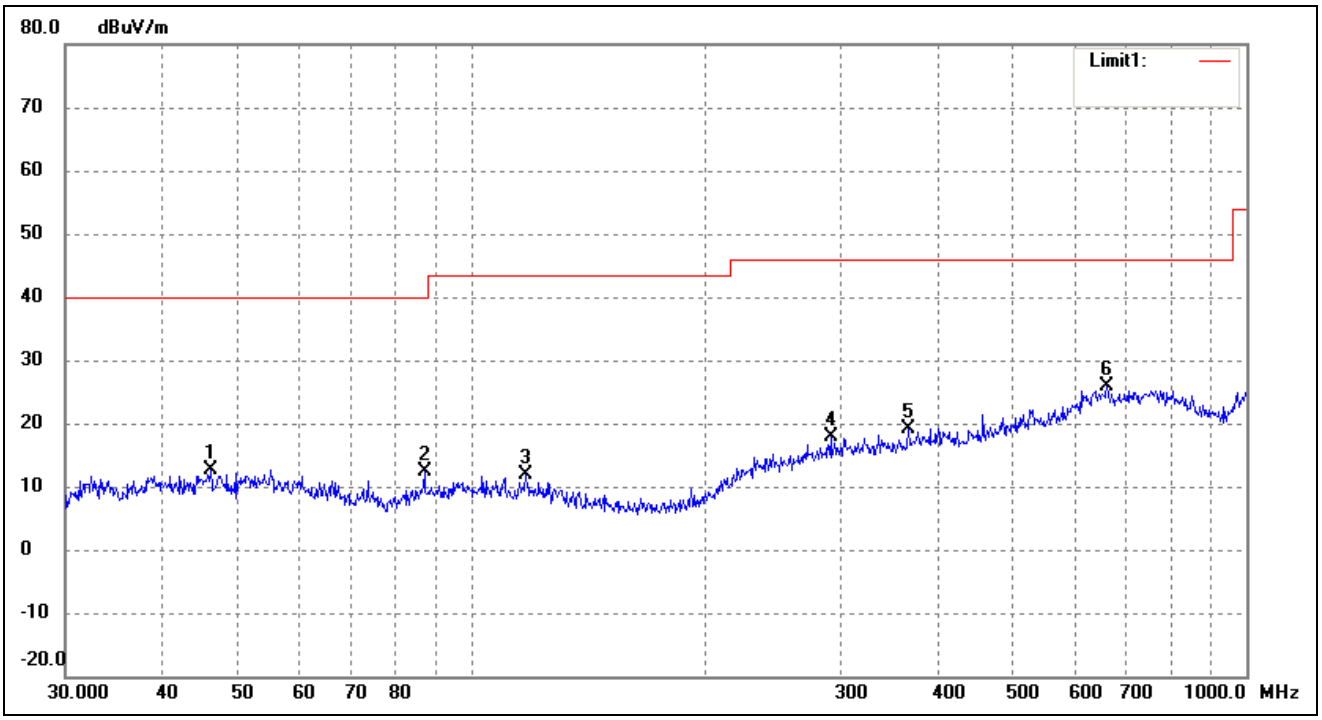
EUT: *Mobile phone*
Tested Model: *L5c*
Operating Condition: *802.11b Transmitting*
Comment: *DC 3.8V*

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	47.3255	29.30	-16.52	12.78	40.00	-27.22	224	100	peak
2	116.5401	29.01	-16.66	12.35	43.50	-31.15	100	100	peak
3	273.2341	28.26	-10.85	17.41	46.00	-28.59	127	100	peak
4	369.4047	28.20	-8.89	19.31	46.00	-26.69	90	100	peak
5	665.8035	27.13	-1.17	25.96	46.00	-20.04	215	100	peak
6	782.3453	28.27	-1.89	26.38	46.00	-19.62	152	100	peak

Test Specification: *Vertical*

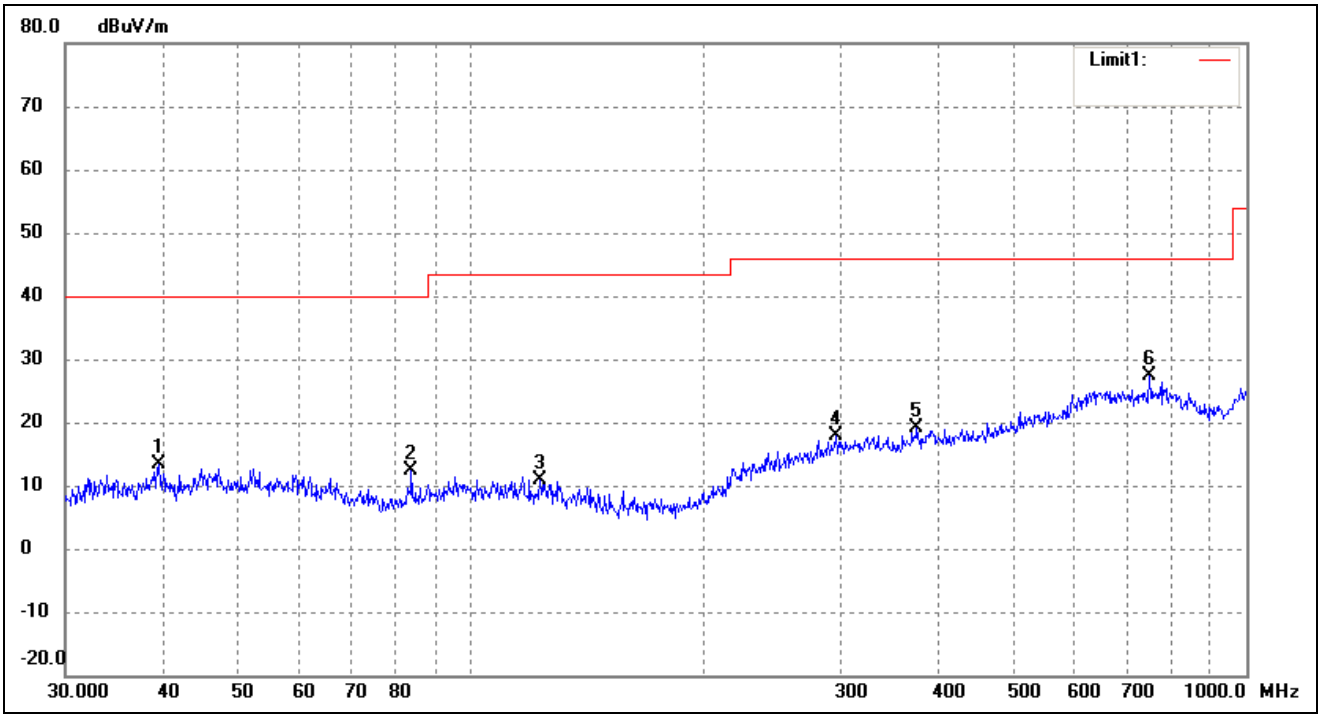


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	46.1780	29.13	-16.49	12.64	40.00	-27.36	241	100	peak
2	87.1117	31.06	-18.59	12.47	40.00	-27.53	90	100	peak
3	117.7725	28.51	-16.66	11.85	43.50	-31.65	264	100	peak
4	291.0360	27.87	-9.92	17.95	46.00	-28.05	93	100	peak
5	366.8231	28.13	-8.91	19.22	46.00	-26.78	317	100	peak
6	661.1505	27.41	-1.44	25.97	46.00	-20.03	299	100	peak

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

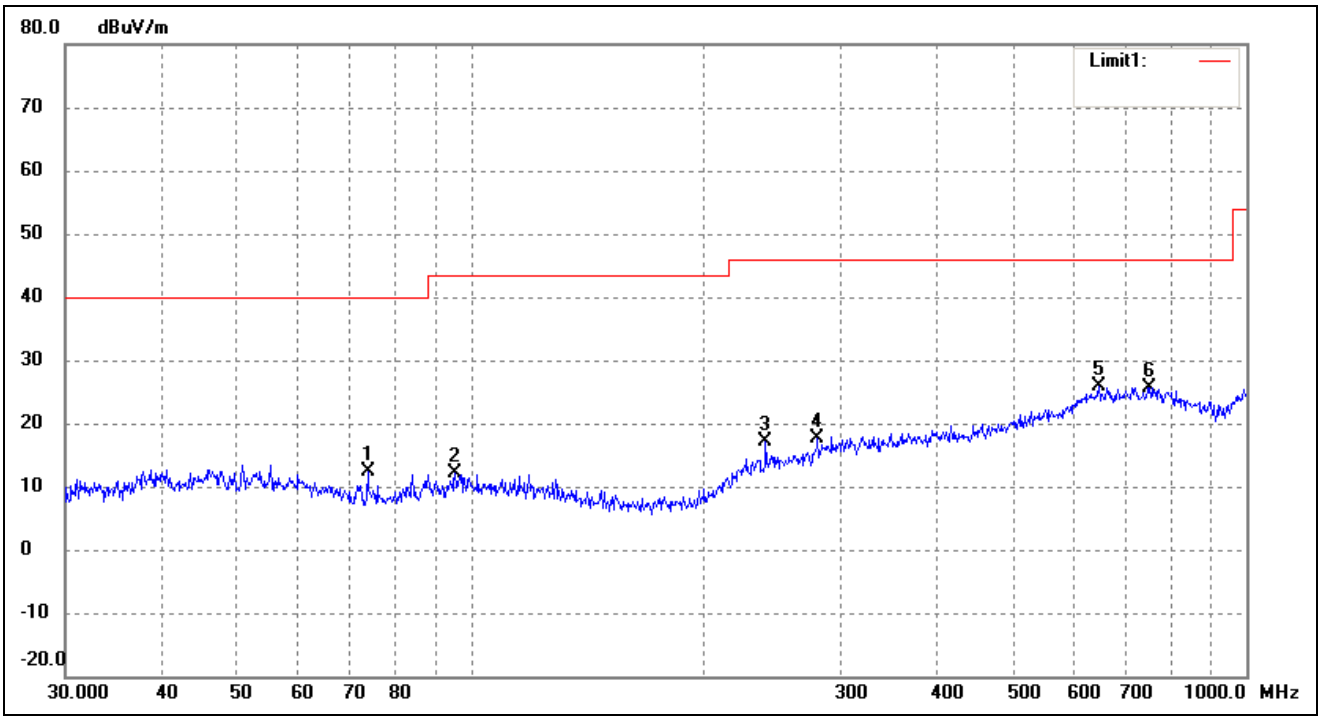
EUT: *Mobile phone*
Tested Model: *L5c*
Operating Condition: *802.11g Transmitting*
Comment: *DC 3.8V*

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	39.5757	29.87	-16.59	13.28	40.00	-26.72	303	100	peak
2	83.8156	31.61	-19.16	12.45	40.00	-27.55	283	100	peak
3	122.8340	27.73	-16.90	10.83	43.50	-32.67	90	100	peak
4	296.1836	27.60	-9.72	17.88	46.00	-28.12	96	100	peak
5	375.9385	28.04	-8.88	19.16	46.00	-26.84	158	100	peak
6	750.1083	27.70	-0.23	27.47	46.00	-18.53	342	100	peak

Test Specification: *Vertical*

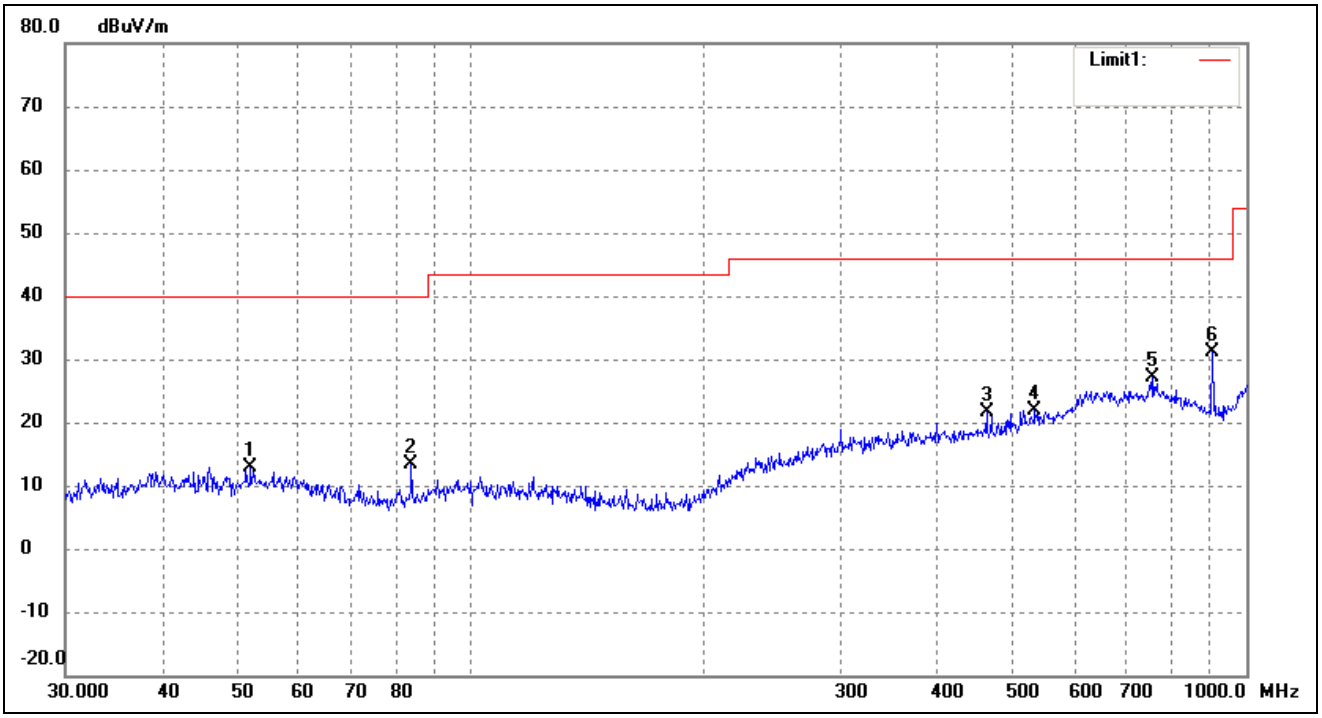


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	73.6170	31.56	-19.13	12.43	40.00	-27.57	189	100	peak
2	95.4270	29.32	-17.23	12.09	43.50	-31.41	110	100	peak
3	239.9874	29.72	-12.54	17.18	46.00	-28.82	85	100	peak
4	280.0238	27.92	-10.36	17.56	46.00	-28.44	124	100	peak
5	645.1195	27.14	-1.15	25.99	46.00	-20.01	351	100	peak
6	750.1083	25.89	-0.23	25.66	46.00	-20.34	342	100	peak

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

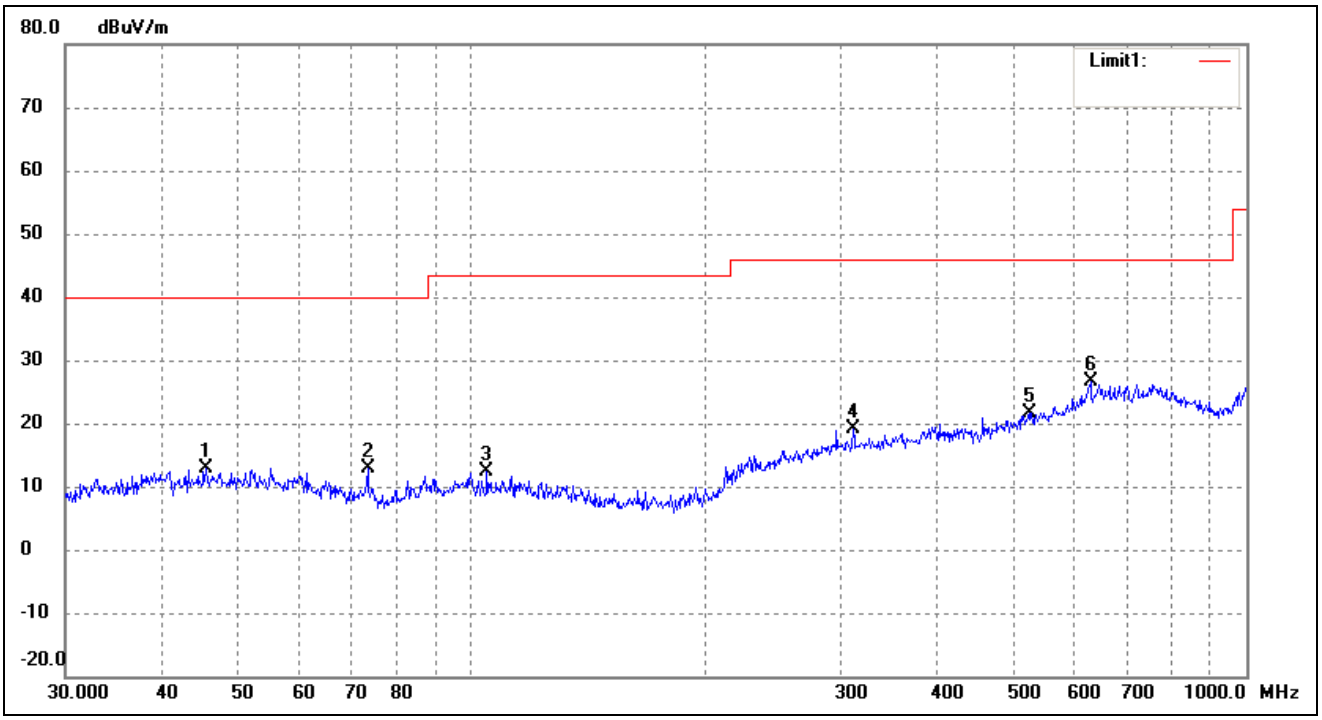
EUT: *Mobile phone*
Tested Model: *L5c*
Operating Condition: *802.11n-HT20 Transmitting*
Comment: *DC 3.8V*

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	52.0251	29.39	-16.50	12.89	40.00	-27.11	64	100	peak
2	83.8156	32.66	-19.16	13.50	40.00	-26.50	179	100	peak
3	462.3455	28.34	-6.72	21.62	46.00	-24.38	149	100	peak
4	533.8321	27.21	-5.21	22.00	46.00	-24.00	105	100	peak
5	758.0408	27.66	-0.53	27.13	46.00	-18.87	213	100	peak
6	903.3094	34.30	-3.23	31.07	46.00	-14.93	308	100	peak

Test Specification: *Vertical*

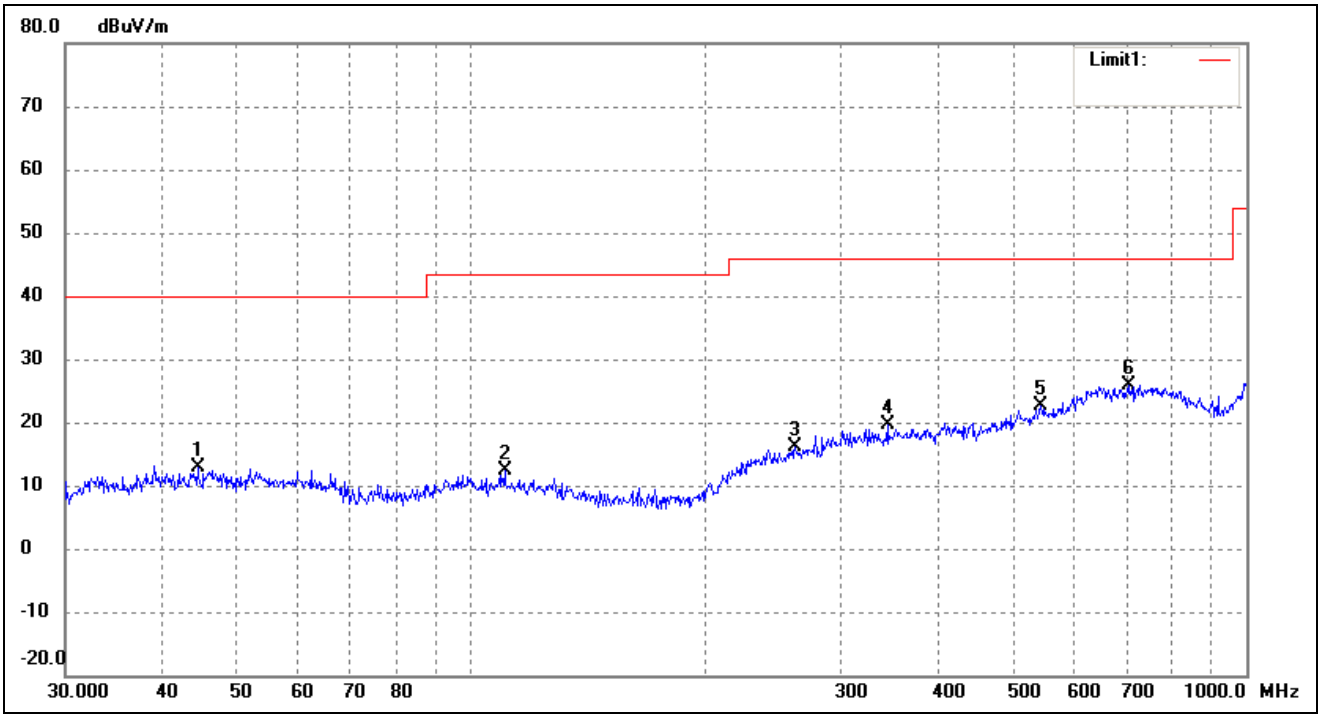


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	45.5348	29.45	-16.49	12.96	40.00	-27.04	276	100	peak
2	73.6170	32.07	-19.13	12.94	40.00	-27.06	99	100	peak
3	104.9033	28.97	-16.61	12.36	43.50	-31.14	242	100	peak
4	311.0867	28.47	-9.45	19.02	46.00	-26.98	98	100	peak
5	524.5541	26.89	-5.20	21.69	46.00	-24.31	301	100	peak
6	629.4772	28.05	-1.36	26.69	46.00	-19.31	316	100	peak

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

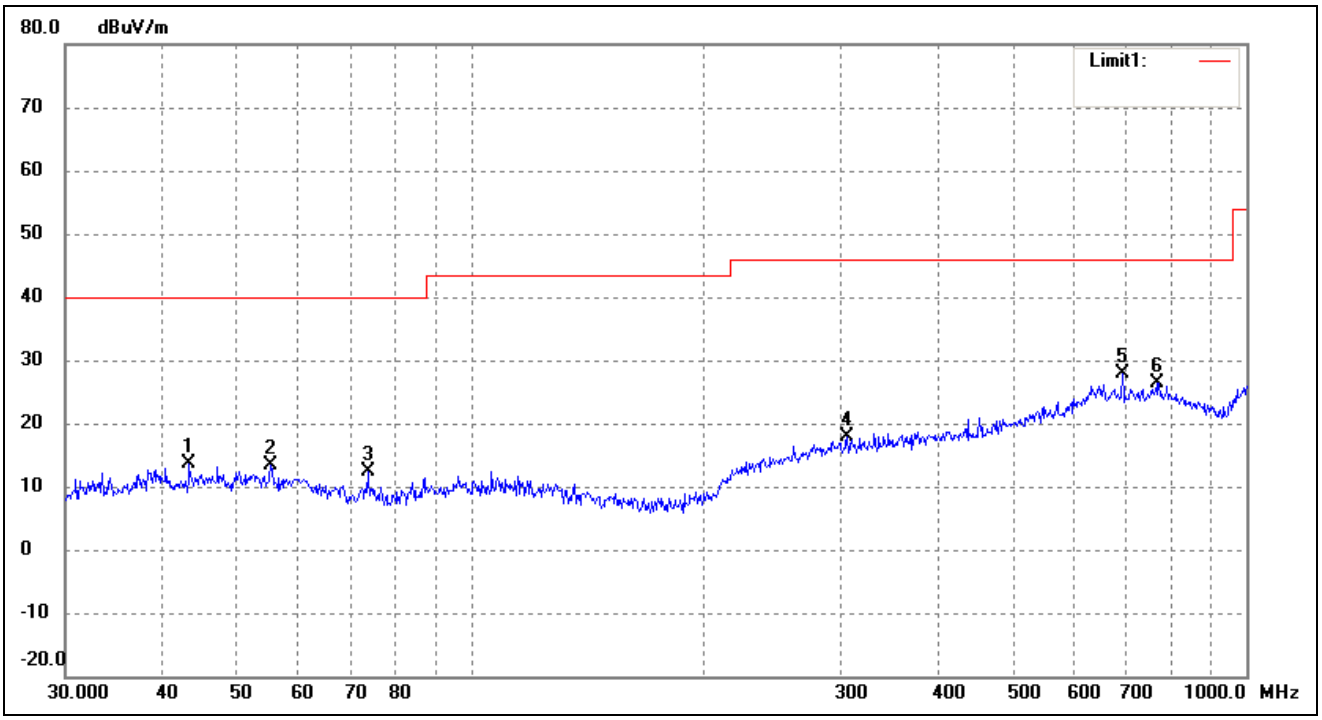
EUT: *Mobile phone*
Tested Model: *L5c*
Operating Condition: *802.11n-HT40 Transmitting*
Comment: *DC 3.8V*

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	44.4308	29.26	-16.48	12.78	40.00	-27.22	328	100	peak
2	110.5687	28.92	-16.62	12.30	43.50	-31.20	92	100	peak
3	261.9753	27.80	-11.64	16.16	46.00	-29.84	321	100	peak
4	344.3855	29.19	-9.50	19.69	46.00	-26.31	100	100	peak
5	543.2742	27.80	-5.18	22.62	46.00	-23.38	154	100	peak
6	706.6999	27.49	-1.59	25.90	46.00	-20.10	269	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	43.3534	30.03	-16.49	13.54	40.00	-26.46	249	100	peak
2	55.2207	29.85	-16.51	13.34	40.00	-26.66	314	100	peak
3	73.6170	31.53	-19.13	12.40	40.00	-27.60	94	100	peak
4	305.6800	27.40	-9.53	17.87	46.00	-28.13	153	100	peak
5	691.9867	29.01	-1.25	27.76	46.00	-18.24	72	100	peak
6	766.0572	27.23	-0.93	26.30	46.00	-19.70	245	100	peak

Spurious Emissions above 1GHz

Test Mode: 802.11b

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2412MHz							
4824.000	57.35	-3.87	53.48	74	-20.52	H	PK
4824.000	43.14	-3.87	39.27	54	-14.73	H	AV
7236.000	58.19	1.14	59.33	74	-14.67	H	PK
7236.000	43.21	1.19	44.40	54	-9.60	H	AV
4824.000	61.59	-3.86	57.73	74	-16.27	V	PK
4824.000	48.70	-3.86	44.84	54	-9.16	V	AV
7236.000	62.09	1.10	63.19	74	-10.81	V	PK
7236.000	43.35	1.10	44.45	54	-9.55	V	AV
Middle Channel-2437MHz							
4874.000	57.03	-3.74	53.29	74	-20.71	H	PK
4874.000	42.16	-3.74	38.42	54	-15.58	H	AV
7311.000	58.93	1.47	60.40	74	-13.60	H	PK
7311.000	43.44	1.47	44.91	54	-9.09	H	AV
4874.000	62.52	-3.74	58.78	74	-15.22	V	PK
4874.000	49.66	-3.74	45.92	54	-8.08	V	AV
7311.000	62.71	1.47	64.18	74	-9.82	V	PK
7311.000	42.95	1.47	44.42	54	-9.58	V	AV
High Channel-2462MHz							
4924.000	55.88	-3.59	52.29	74	-21.71	H	PK
4924.000	41.30	-3.59	37.71	54	-16.29	H	AV
7386.000	58.29	1.79	60.08	74	-13.92	H	PK
7386.000	41.87	1.79	43.66	54	-10.34	H	AV
4924.000	63.31	-3.59	59.72	74	-14.28	V	PK
4924.000	50.06	-3.59	46.47	54	-7.53	V	AV
7386.000	62.16	1.79	63.95	74	-10.05	V	PK
7386.000	43.41	1.79	45.20	54	-8.80	V	AV

Test Mode: 802.11g

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2412MHz							
4824.000	61.27	-3.87	57.4	74	-16.6	H	PK
4824.000	43.42	-3.87	39.55	54	-14.45	H	AV
7236.000	53.48	1.14	54.62	74	-19.38	H	PK
7236.000	39.86	1.19	41.05	54	-12.95	H	AV
4824.000	61.33	-3.86	57.47	74	-16.53	V	PK
4824.000	43.71	-3.86	39.85	54	-14.15	V	AV
7236.000	54.29	1.1	55.39	74	-18.61	V	PK
7236.000	40.35	1.1	41.45	54	-12.55	V	AV
Middle Channel-2437MHz							
4874.000	60.58	-3.74	56.84	74	-17.16	H	PK
4874.000	43.81	-3.74	40.07	54	-13.93	H	AV
7311.000	54.57	1.47	56.04	74	-17.96	H	PK
7311.000	39.13	1.47	40.6	54	-13.4	H	AV
4874.000	61.16	-3.74	57.42	74	-16.58	V	PK
4874.000	43.47	-3.74	39.73	54	-14.27	V	AV
7311.000	54.64	1.47	56.11	74	-17.89	V	PK
7311.000	39.03	1.47	40.5	54	-13.5	V	AV
High Channel-2462MHz							
4924.000	61.13	-3.59	57.54	74	-16.46	H	PK
4924.000	43.2	-3.59	39.61	54	-14.39	H	AV
7386.000	52.82	1.79	54.61	74	-19.39	H	PK
7386.000	38.27	1.79	40.06	54	-13.94	H	AV
4924.000	58.82	-3.59	55.23	74	-18.77	V	PK
4924.000	42.99	-3.59	39.4	54	-14.6	V	AV
7386.000	52.86	1.79	54.65	74	-19.35	V	PK
7386.000	39.8	1.79	41.59	54	-12.41	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	60.34	-3.87	56.47	74	-17.53	H	PK
4824.000	43.84	-3.87	39.97	54	-14.03	H	AV
7236.000	54.14	1.14	55.28	74	-18.72	H	PK
7236.000	40.8	1.19	41.99	54	-12.01	H	AV
4824.000	59.17	-3.86	55.31	74	-18.69	V	PK
4824.000	43.57	-3.86	39.71	54	-14.29	V	AV
7236.000	55.11	1.1	56.21	74	-17.79	V	PK
7236.000	38.02	1.1	39.12	54	-14.88	V	AV
Middle Channel-2437MHz							
4874.000	59.58	-3.74	55.84	74	-18.16	H	PK
4874.000	41.28	-3.74	37.54	54	-16.46	H	AV
7311.000	53.37	1.47	54.84	74	-19.16	H	PK
7311.000	38.65	1.47	40.12	54	-13.88	H	AV
4874.000	58.4	-3.74	54.66	74	-19.34	V	PK
4874.000	42.52	-3.74	38.78	54	-15.22	V	AV
7311.000	52.44	1.47	53.91	74	-20.09	V	PK
7311.000	38.1	1.47	39.57	54	-14.43	V	AV
High Channel-2462MHz							
4924.000	60.9	-3.59	57.31	74	-16.69	H	PK
4924.000	41.17	-3.59	37.58	54	-16.42	H	AV
7386.000	52.49	1.79	54.28	74	-19.72	H	PK
7386.000	40.05	1.79	41.84	54	-12.16	H	AV
4924.000	59.01	-3.59	55.42	74	-18.58	V	PK
4924.000	42.42	-3.59	38.83	54	-15.17	V	AV
7386.000	52.42	1.79	54.21	74	-19.79	V	PK
7386.000	38.44	1.79	40.23	54	-13.77	V	AV

Test Mode: 802.11n-HT40

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2422MHz							
4844.000	59.14	-3.9	55.24	74	-18.76	H	PK
4844.000	40.91	-3.9	37.01	54	-16.99	H	AV
7266.000	53.18	1.06	54.24	74	-19.76	H	PK
7266.000	40.28	1.06	41.34	54	-12.66	H	AV
4844.000	59.3	-3.9	55.4	74	-18.60	V	PK
4844.000	41.99	-3.9	38.09	54	-15.91	V	AV
7266.000	51.34	1.06	52.4	74	-21.60	V	PK
7266.000	39.82	1.06	40.88	54	-13.12	V	AV
Middle Channel-2437MHz							
4874.000	58.64	-3.74	54.9	74	-19.1	H	PK
4874.000	41.25	-3.74	37.51	54	-16.49	H	AV
7311.000	52.17	1.47	53.64	74	-20.36	H	PK
7311.000	39.72	1.47	41.19	54	-12.81	H	AV
4874.000	60.89	-3.74	57.15	74	-16.85	V	PK
4874.000	42.74	-3.74	39	54	-15	V	AV
7311.000	53.94	1.47	55.41	74	-18.59	V	PK
7311.000	38.14	1.47	39.61	54	-14.39	V	AV
High Channel-2452MHz							
4904.000	58.6	-3.63	54.97	74	-19.03	H	PK
4904.000	42.37	-3.63	38.74	54	-15.26	H	AV
7356.000	53.59	1.62	55.21	74	-18.79	H	PK
7356.000	38.34	1.62	39.96	54	-14.04	H	AV
4904.000	60.81	-3.63	57.18	74	-16.82	V	PK
4904.000	41.48	-3.63	37.85	54	-16.15	V	AV
7356.000	51.92	1.62	53.54	74	-20.46	V	PK
7356.000	38.63	1.62	40.25	54	-13.75	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

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 Procedure

According to the KDB 558074D01 v04, 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 v04, 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.

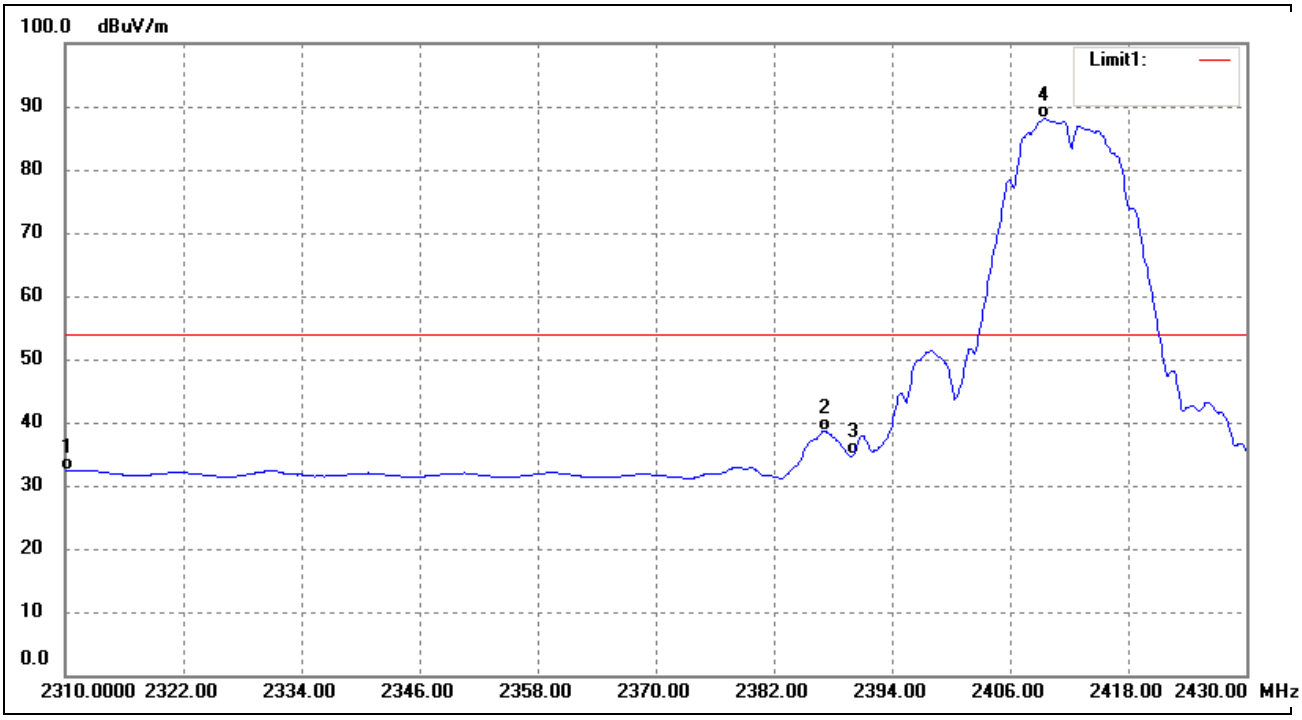
9.3 Environmental Conditions

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

9.4 Summary of Test Results/Plots

802.11b-Lowest Bandedge

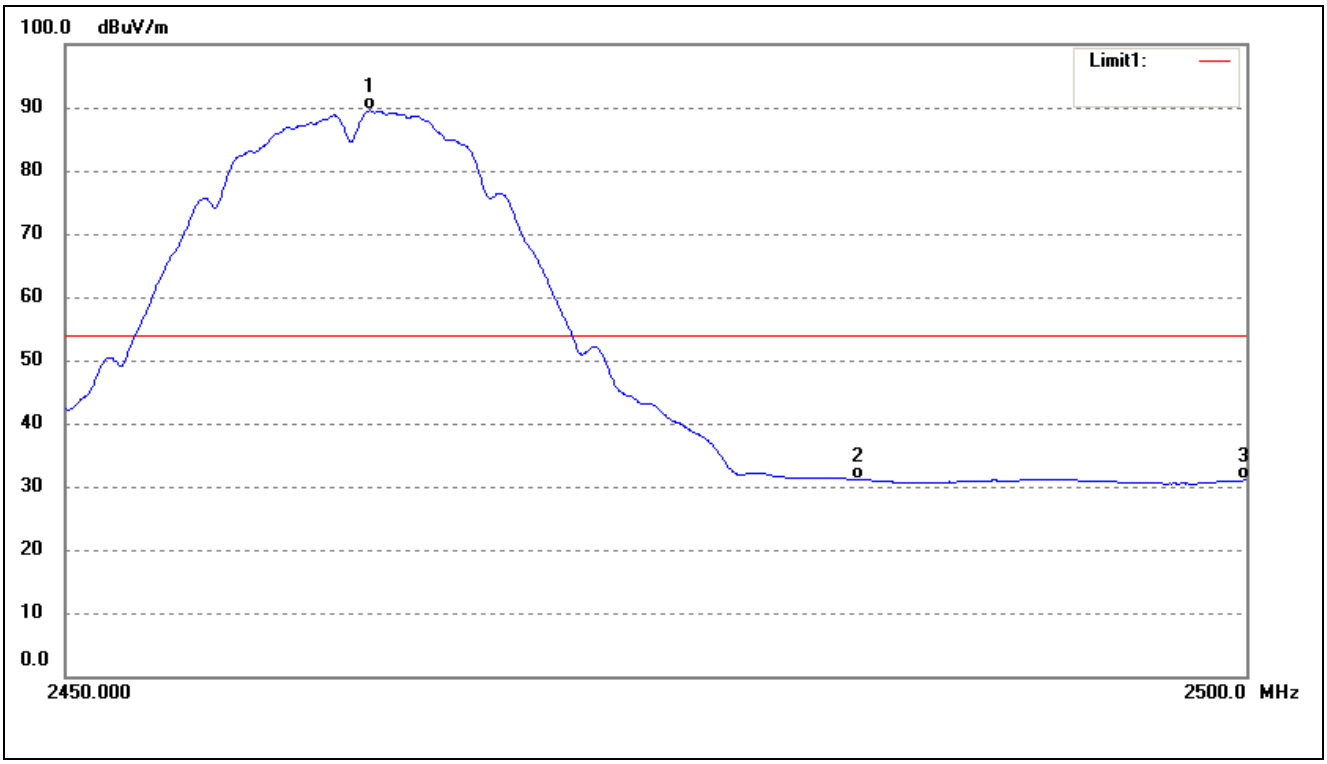
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.00	38.66	-6.38	32.28	54.00	-21.72	Average Detector
	2310.00	51.98	-6.38	45.60	70.00	-24.40	Peak Detector
2	2387.16	45.80	-7.23	38.57	54.00	-15.43	Average Detector
	2390.00	52.36	-7.26	45.10	70.00	-24.90	Peak Detector
3	2390.000	42.03	-7.26	34.77	Delta=53.36dBc		Average Detector
4	2409.480	95.54	-7.41	88.13			Average Detector

802.11b-Highest Bandedge

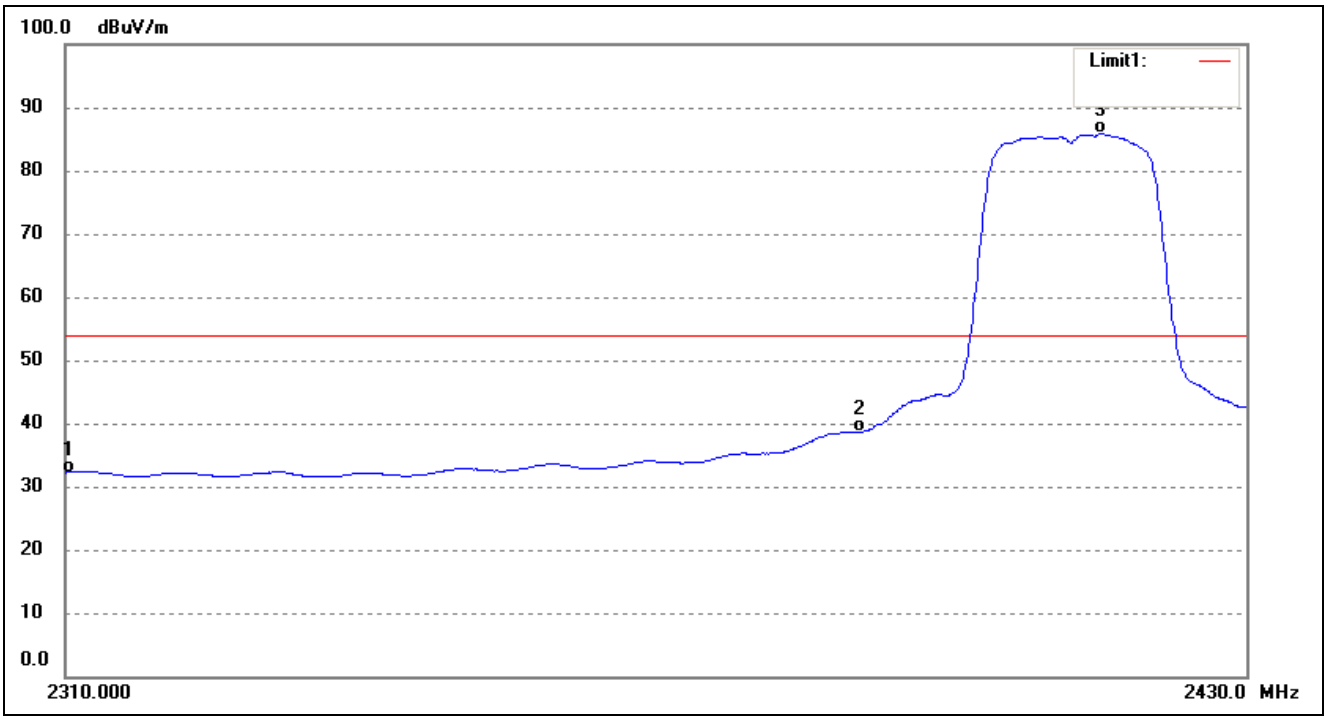
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.80	96.82	-7.31	89.51	/	/	Average Detector
	2463.35	101.65	-7.31	94.34	/	/	Peak Detector
2	2483.50	38.40	-7.28	31.12	54.00	-22.88	Average Detector
	2483.50	51.18	-7.28	43.90	74.00	-30.10	Peak Detector
3	2500.00	38.29	-7.25	31.04	54.00	-22.96	Average Detector
	2500.00	51.06	-7.25	43.81	74.00	-30.19	Peak Detector

802.11g-Lowest Bandedge

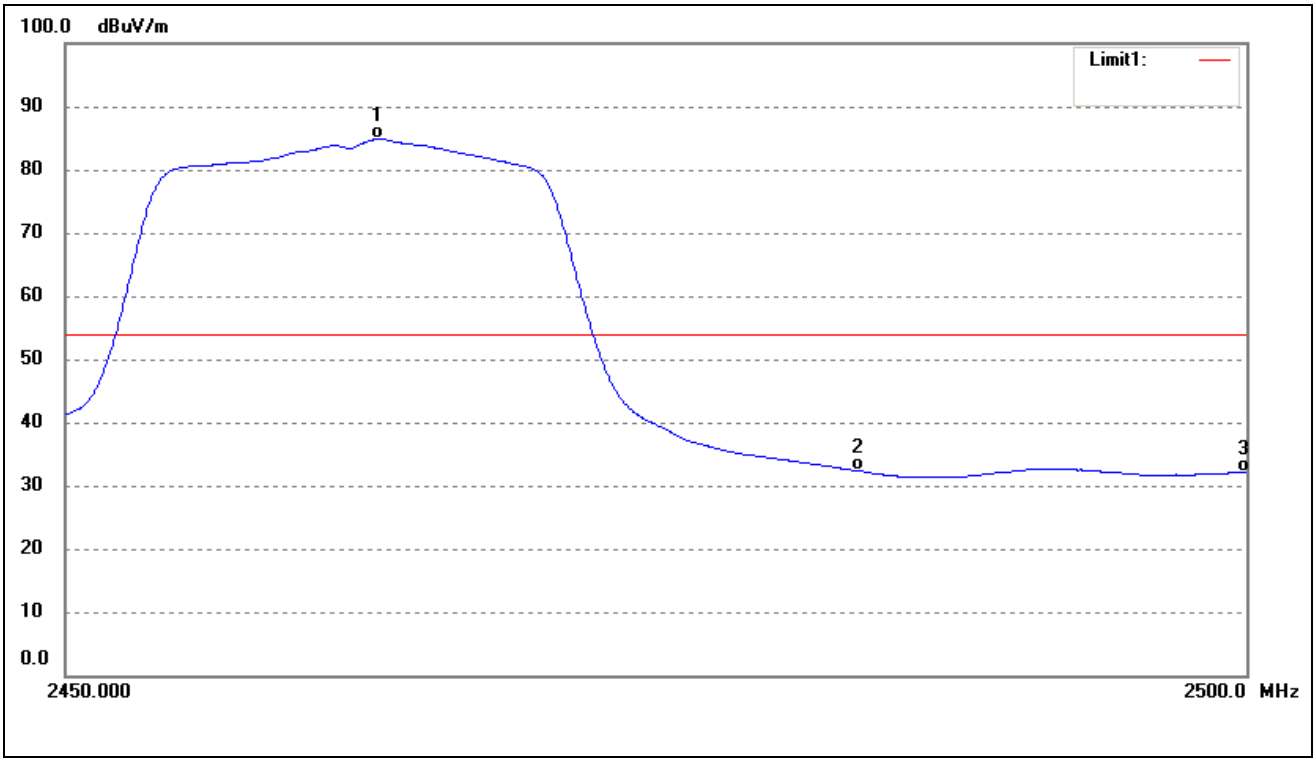
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.00	38.63	-6.38	32.25	54.00	-21.75	Average Detector
	2310.00	51.06	-6.38	44.68	74.00	-29.32	Peak Detector
2	2390.00	45.96	-7.26	38.70	54.00	-15.30	Average Detector
	2390.00	62.69	-7.26	55.43	74.00	-18.57	Peak Detector
3	2414.91	93.23	-7.40	85.83	/	/	Average Detector
	2413.32	104.08	-7.40	96.68	/	/	Peak Detector

802.11g-Highest Bandedge

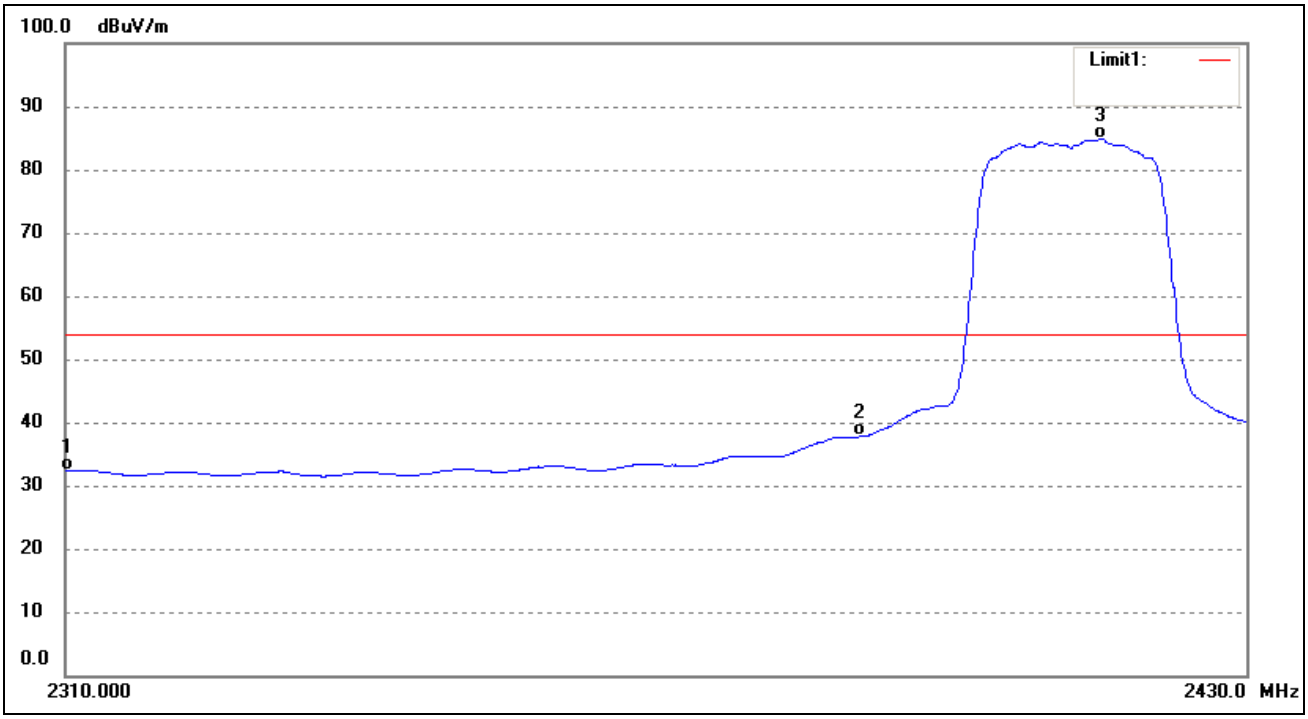
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.15	92.16	-7.31	84.85	/	/	Average Detector
	2463.60	103.03	-7.31	95.72	/	/	Peak Detector
2	2483.50	39.59	-7.28	32.31	54.00	-21.69	Average Detector
	2483.50	54.11	-7.28	46.83	74.00	-27.17	Peak Detector
3	2500.00	39.48	-7.25	32.23	54.00	-21.77	Average Detector
	2500.00	54.24	-7.25	46.99	74.00	-27.01	Peak Detector

802.11n-HT20-Lowest Bandedge

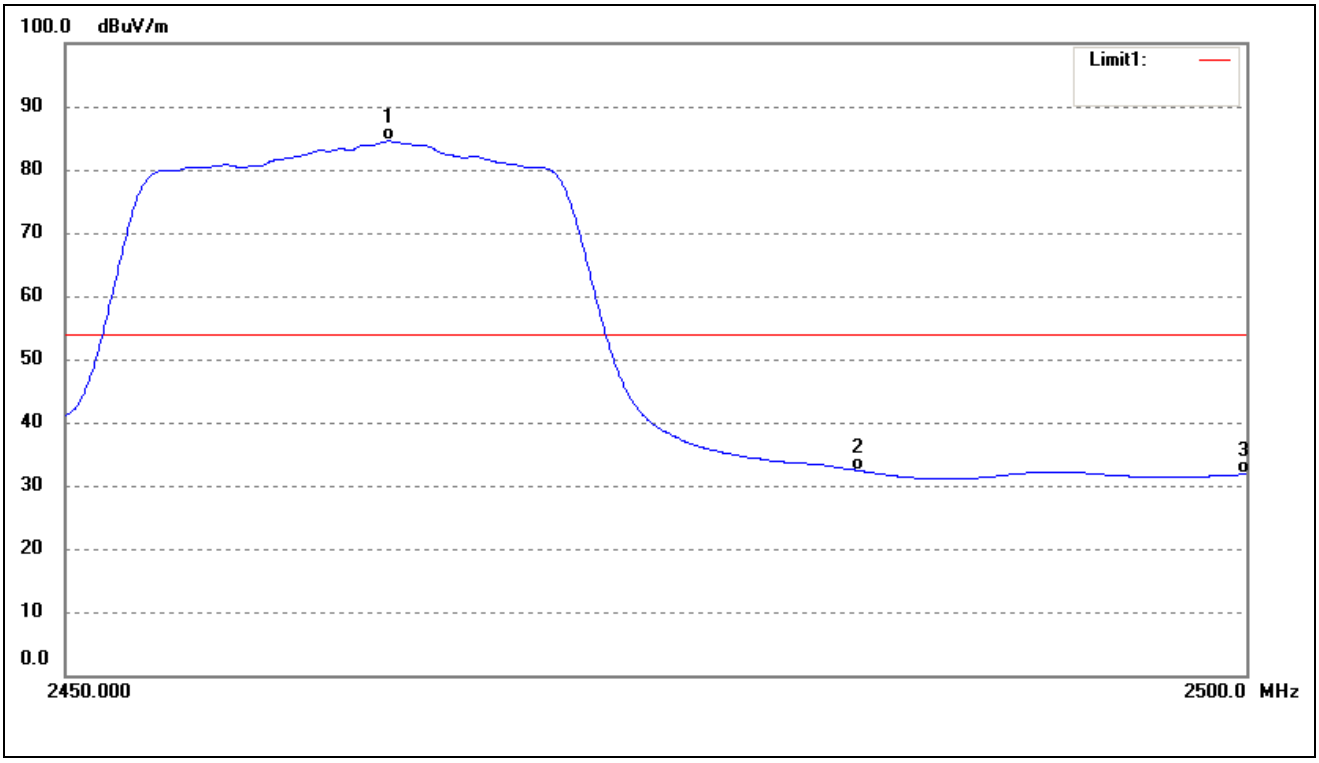
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.00	38.64	-6.38	32.26	54.00	-21.74	Average Detector
	2310.00	50.92	-6.38	44.54	74.00	-29.46	Peak Detector
2	2390.00	45.03	-7.26	37.77	54.00	-16.23	Average Detector
	2390.00	59.79	-7.26	52.53	74.00	-21.47	Peak Detector
3	2414.91	92.25	-7.40	84.85	/	/	Average Detector
	2415.03	103.23	-7.40	95.83	/	/	Peak Detector

802.11n-HT20-Highest Bandedge

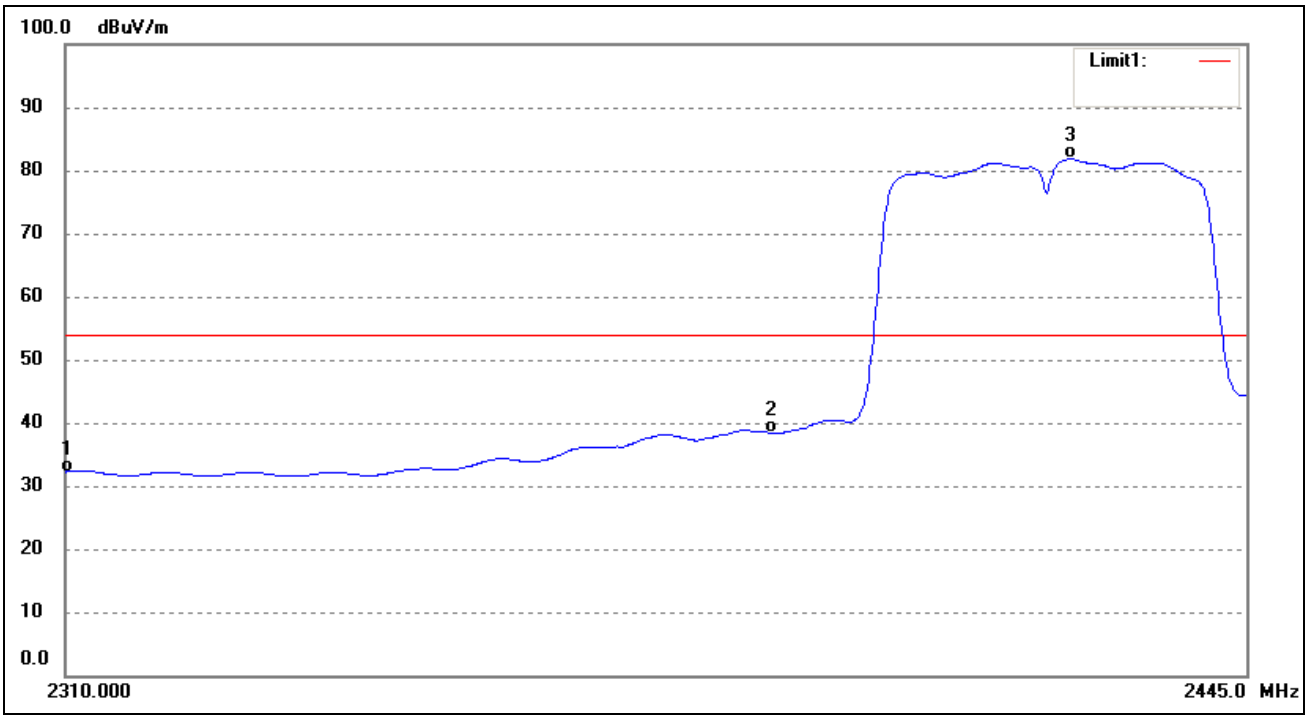
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2463.60	91.82	-7.31	84.51	/	/	Average Detector
	2463.80	102.55	-7.31	95.24	/	/	Peak Detector
2	2483.50	39.62	-7.28	32.34	54.00	-21.66	Average Detector
	2483.50	56.55	-7.28	49.27	74.00	-24.73	Peak Detector
3	2500.00	39.12	-7.25	31.87	54.00	-22.13	Average Detector
	2500.00	52.87	-7.25	45.62	74.00	-28.38	Peak Detector

802.11n-HT40-Lowest Bandedge

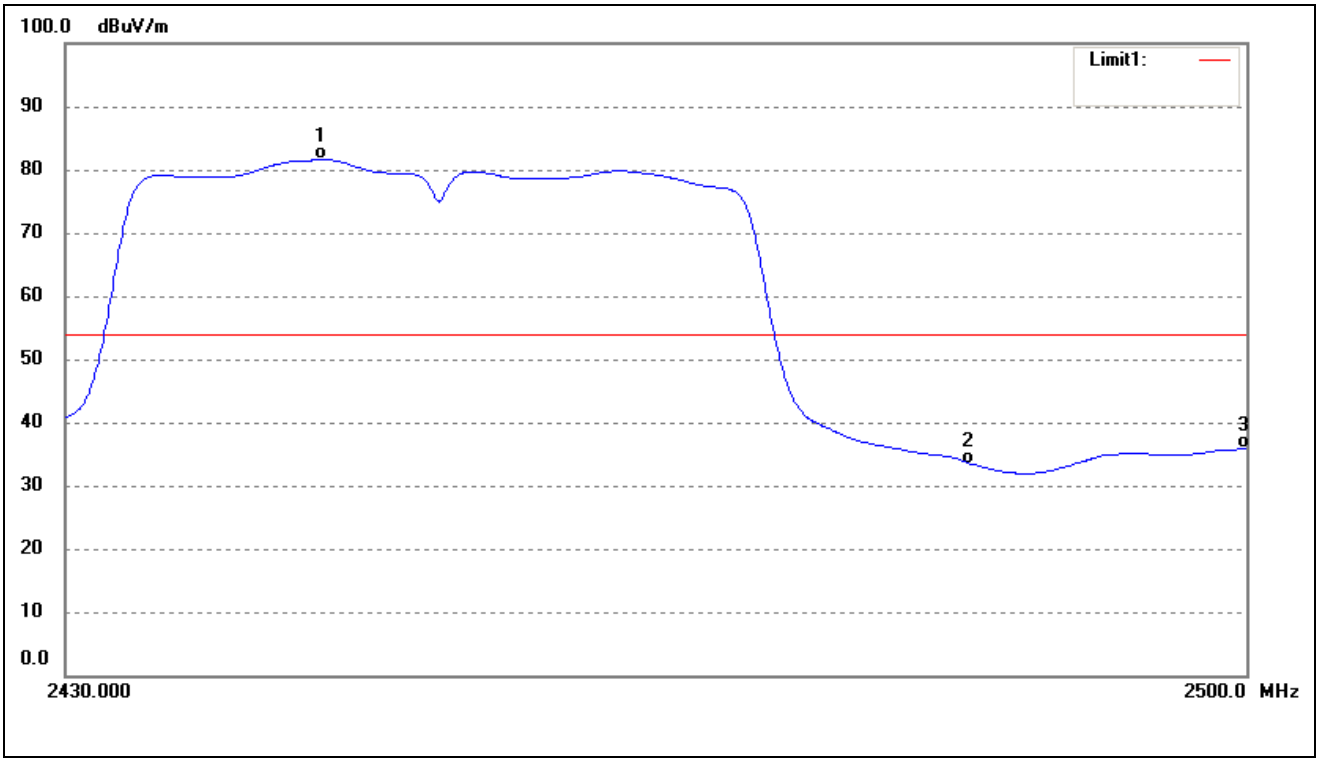
Vertical (Worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2310.00	38.62	-6.38	32.24	54.00	-21.76	Average Detector
	2310.00	50.53	-6.38	44.15	74.00	-29.85	Peak Detector
2	2390.00	45.69	-7.26	38.43	54.00	-15.57	Average Detector
	2390.00	66.15	-7.26	58.89	74.00	-15.11	Peak Detector
3	2424.40	89.22	-7.38	81.84	/	/	Average Detector
	2424.53	99.76	-7.38	92.38	/	/	Peak Detector

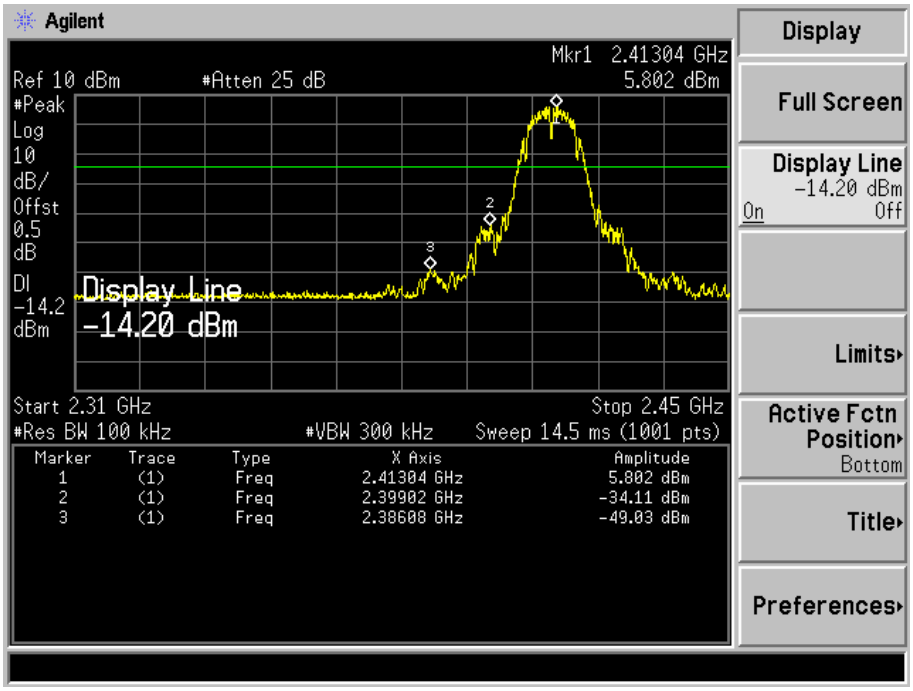
802.11n-HT40-Highest Bandedge

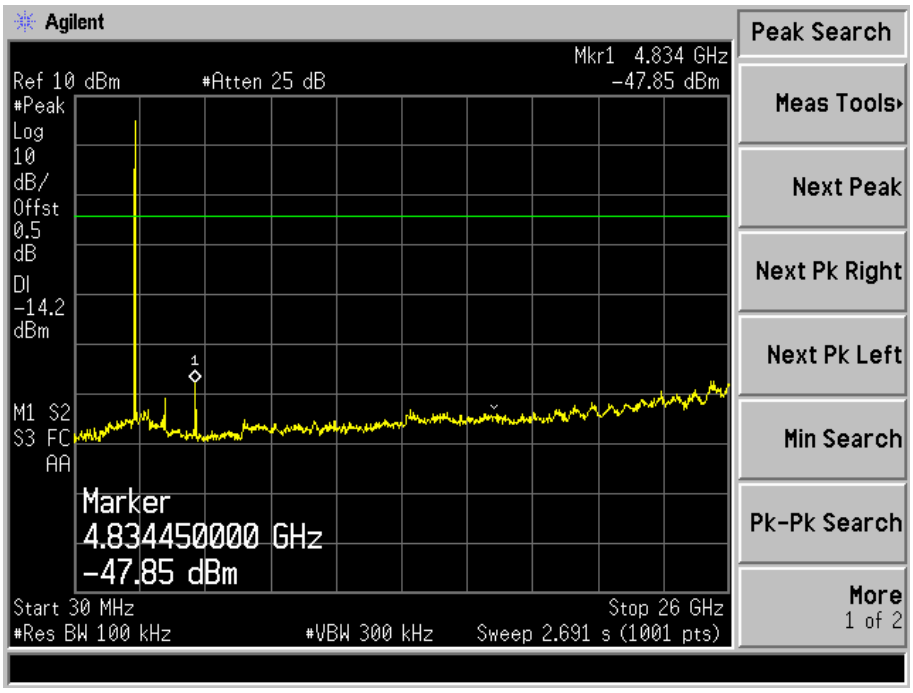
Vertical (Worst case)



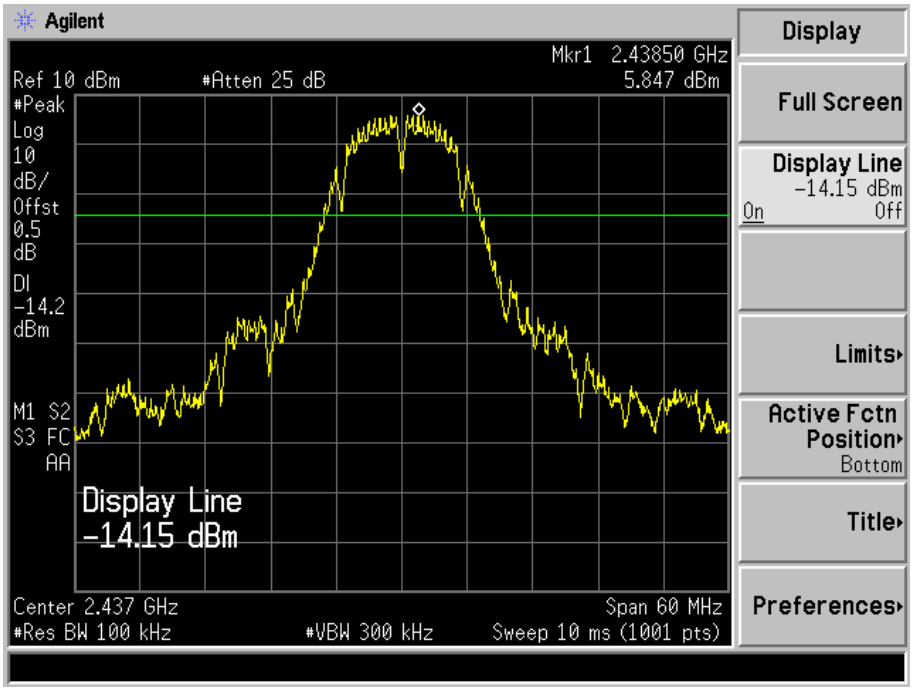
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	2445.02	88.98	-7.35	81.63	/	/	Average Detector
	2444.40	99.52	-7.35	92.17	/	/	Peak Detector
2	2483.50	40.73	-7.28	33.45	54.00	-20.55	Average Detector
	2483.50	59.40	-7.28	52.12	74.00	-21.88	Peak Detector
3	2500.00	43.22	-7.25	35.97	54.00	-18.03	Average Detector
	2500.00	62.60	-7.25	55.35	74.00	-18.65	Peak Detector

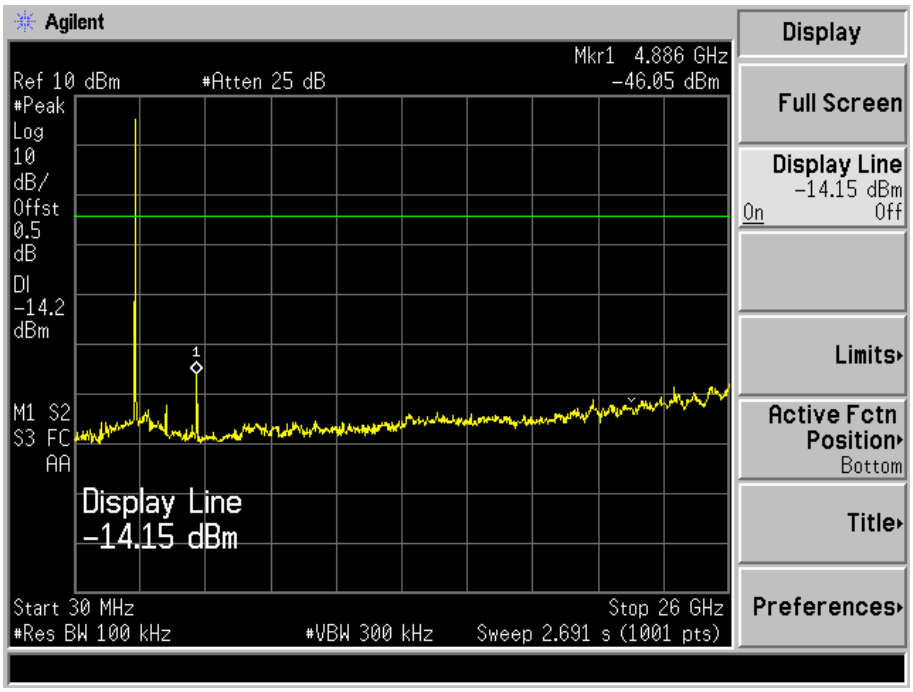
Spurious (Conducted)
802.11b-Lowest
Lowest



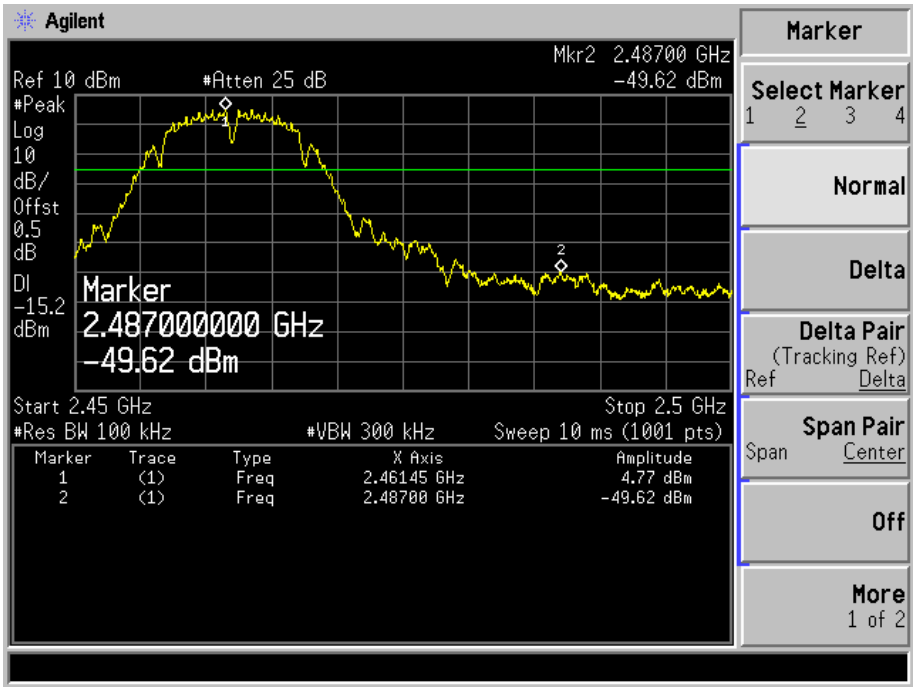


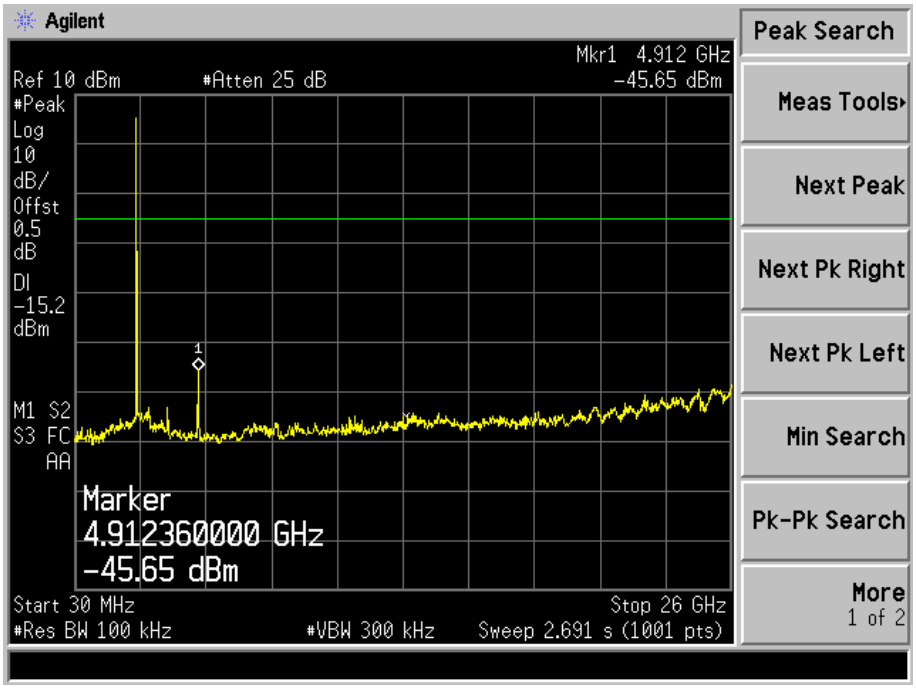
Middle


Agilent
Mkr1 2.43850 GHz
5.847 dBm
Ref 10 dBm
#Atten 25 dB
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-14.2
dBm
M1 S2
S3 FC
AA
Display Line
-14.15 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Display
Full Screen
Display Line
-14.15 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

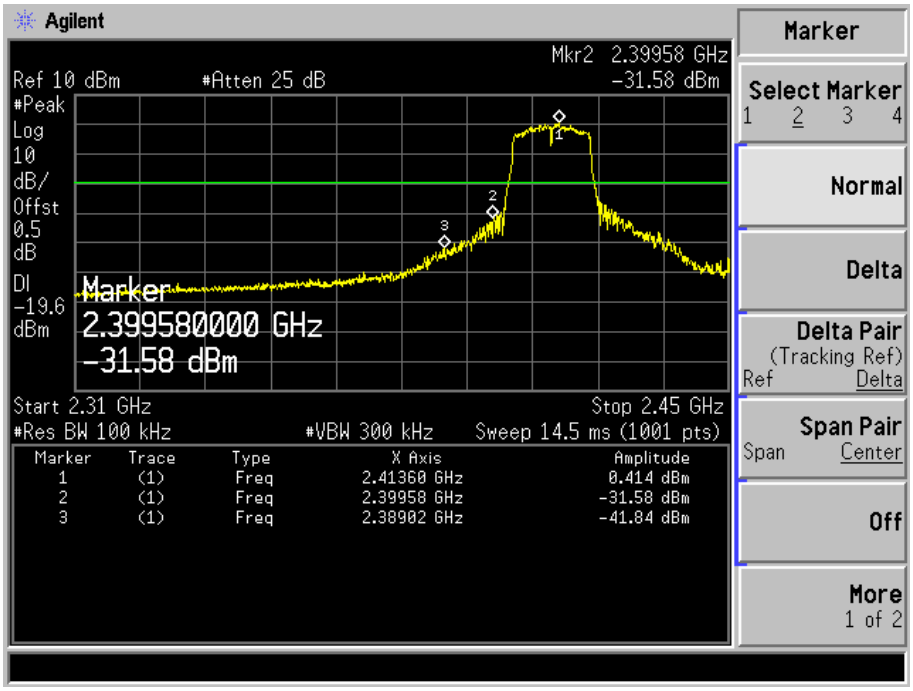

Agilent
Mkr1 4.886 GHz
-46.05 dBm
Ref 10 dBm
#Atten 25 dB
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-14.2
dBm
M1 S2
S3 FC
AA
Display Line
-14.15 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Display
Full Screen
Display Line
-14.15 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

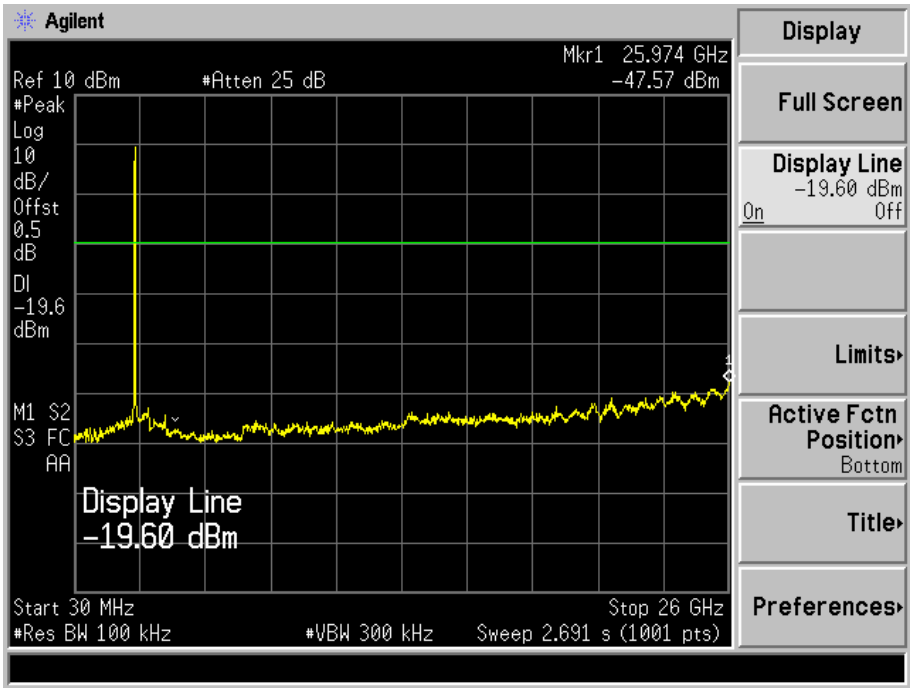
Highest


Agilent
Mkr2 2.48700 GHz
Ref 10 dBm
#Atten 25 dB
-49.62 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-15.2
dBm
Marker
2.487000000 GHz
-49.62 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46145 GHz 4.77 dBm
2 (1) Freq 2.48700 GHz -49.62 dBm
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

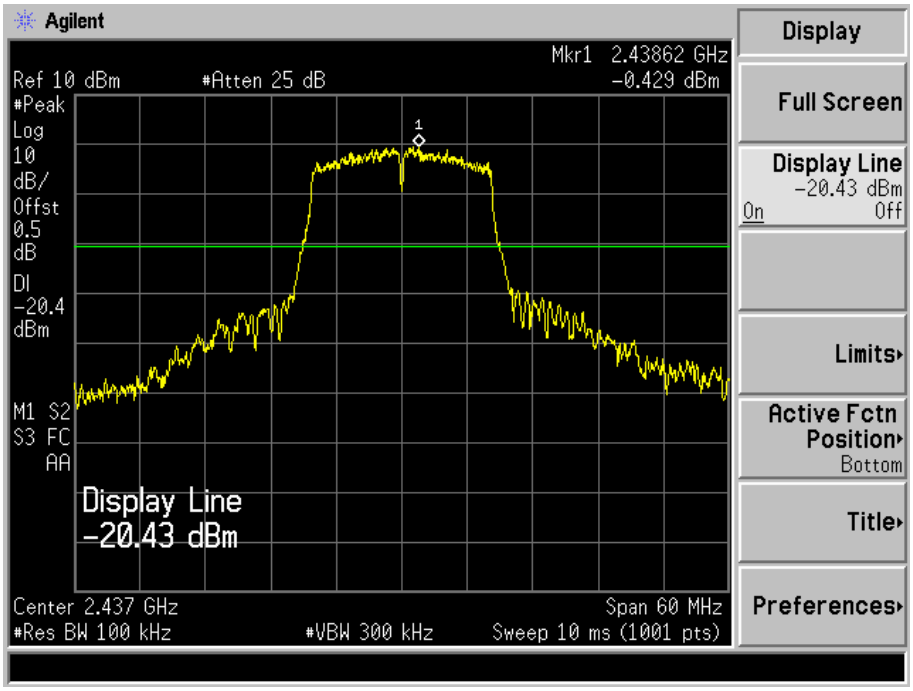

Agilent
Mkr1 4.912 GHz
Ref 10 dBm
#Atten 25 dB
-45.65 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-15.2
dBm
M1 S2
S3 FC
AA
Marker
4.912360000 GHz
-45.65 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

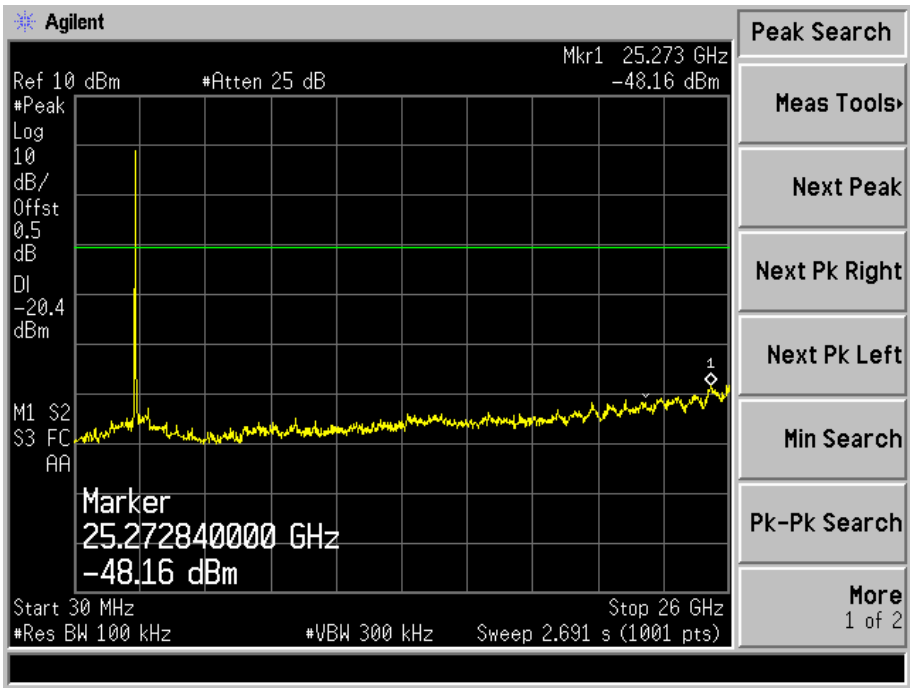
Spurious (Conducted)
802.11g-Lowest
Lowest



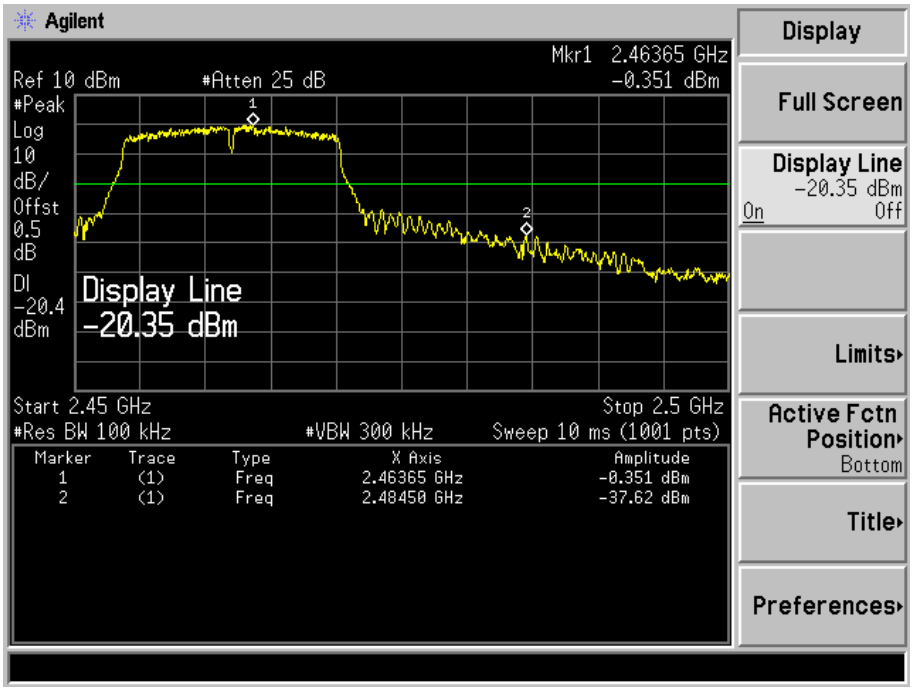


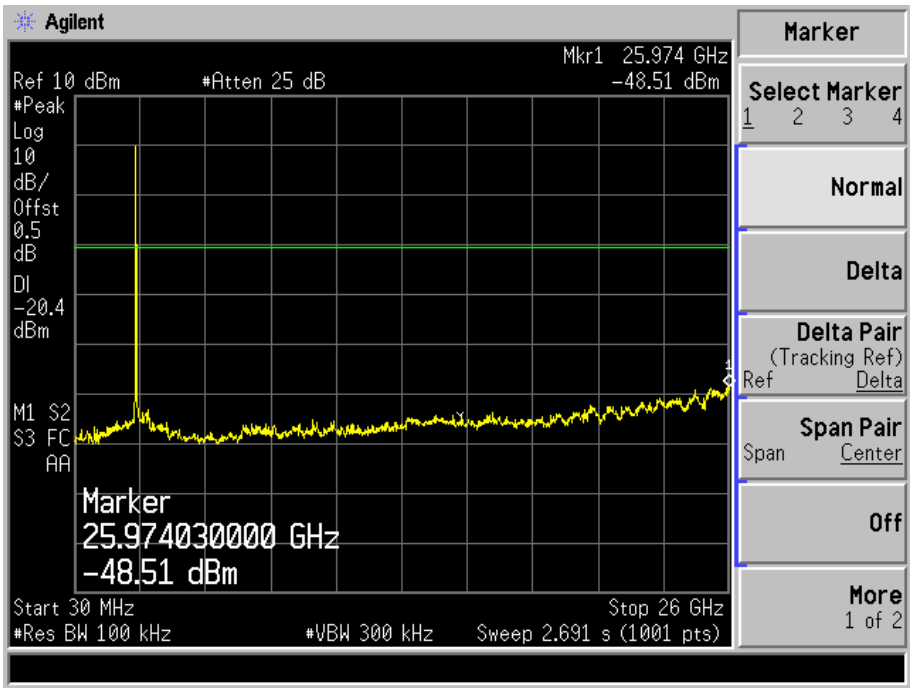
Middle


Agilent
Mkr1 2.43862 GHz
Ref 10 dBm
#Atten 25 dB
-0.429 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.4
dBm
M1 S2
S3 FC
AA
Display Line
-20.43 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Display
Full Screen
Display Line
-20.43 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

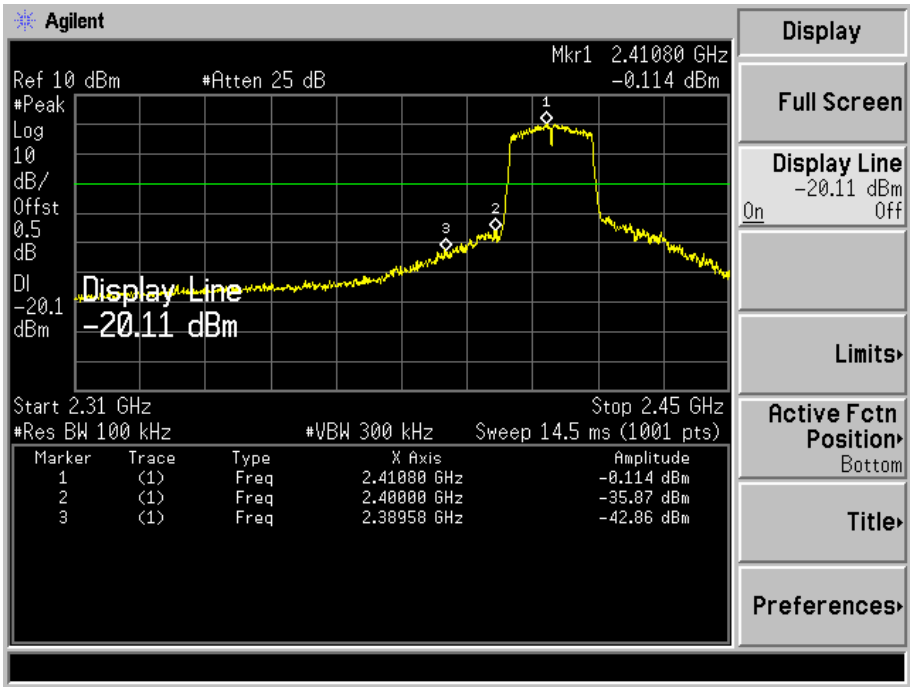

Agilent
Mkr1 25.273 GHz
Ref 10 dBm
#Atten 25 dB
-48.16 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.4
dBm
M1 S2
S3 FC
AA
Marker
25.272840000 GHz
-48.16 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

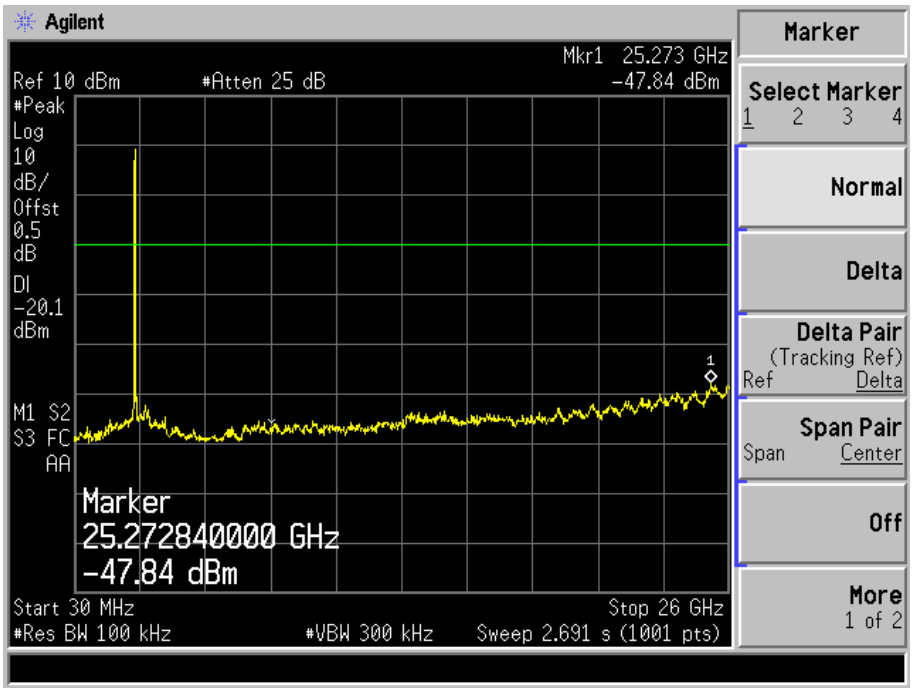
Highest


Agilent
Mkr1 2.46365 GHz
Ref 10 dBm
#Atten 25 dB
-0.351 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.4
dBm
Display Line
-20.35 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46365 GHz -0.351 dBm
2 (1) Freq 2.48450 GHz -37.62 dBm
Display
Full Screen
Display Line
-20.35 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

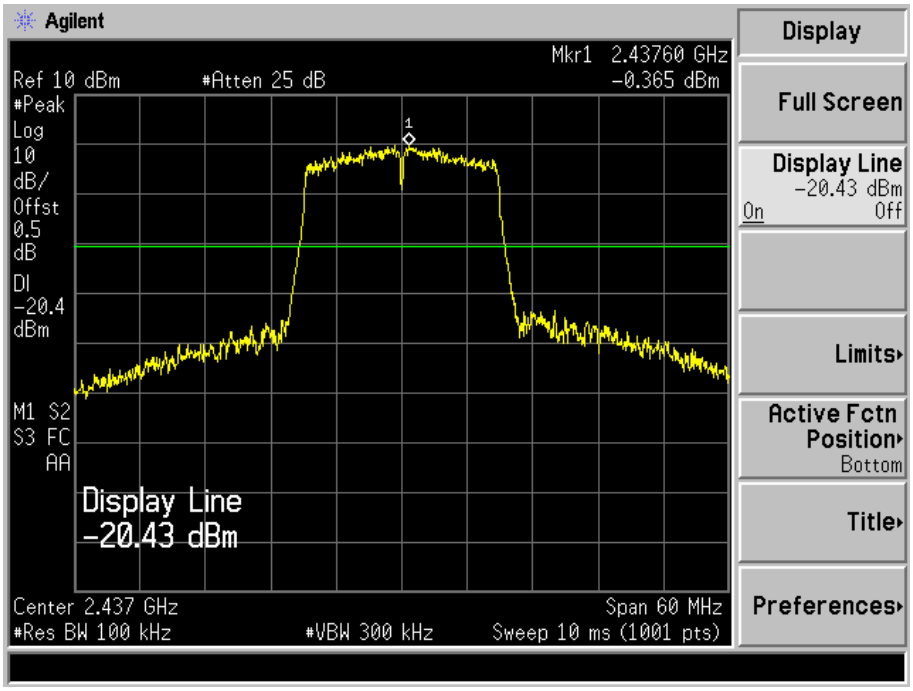

Agilent
Mkr1 25.974 GHz
Ref 10 dBm
#Atten 25 dB
-48.51 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.4
dBm
M1 S2
S3 FC
AA
Marker
25.974030000 GHz
-48.51 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Marker
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref Delta
Span Pair
Span Center
Off
More
1 of 2

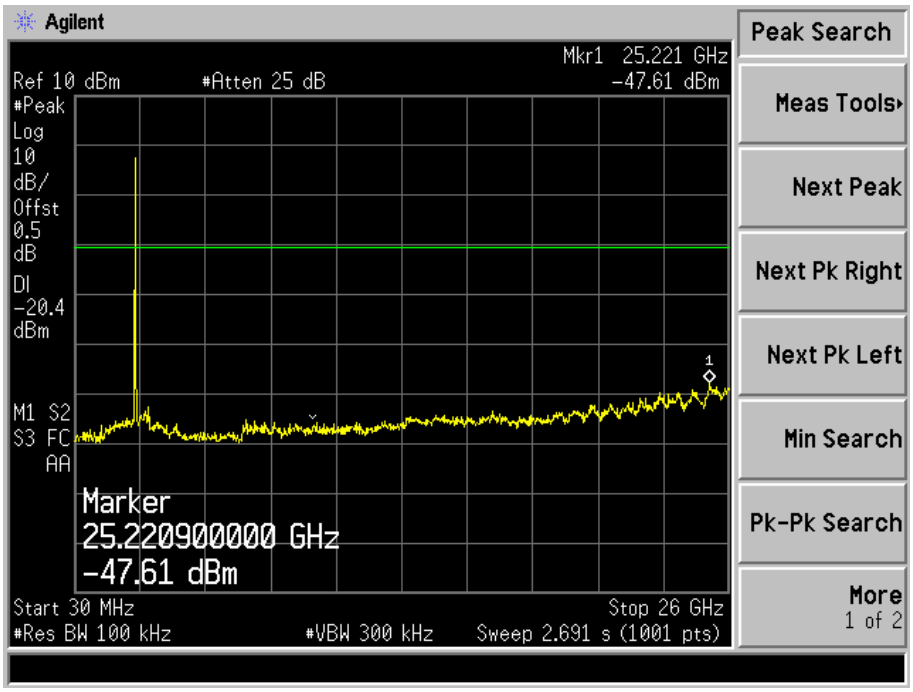
Spurious (Conducted)
802.11n-HT20-Lowest
Lowest



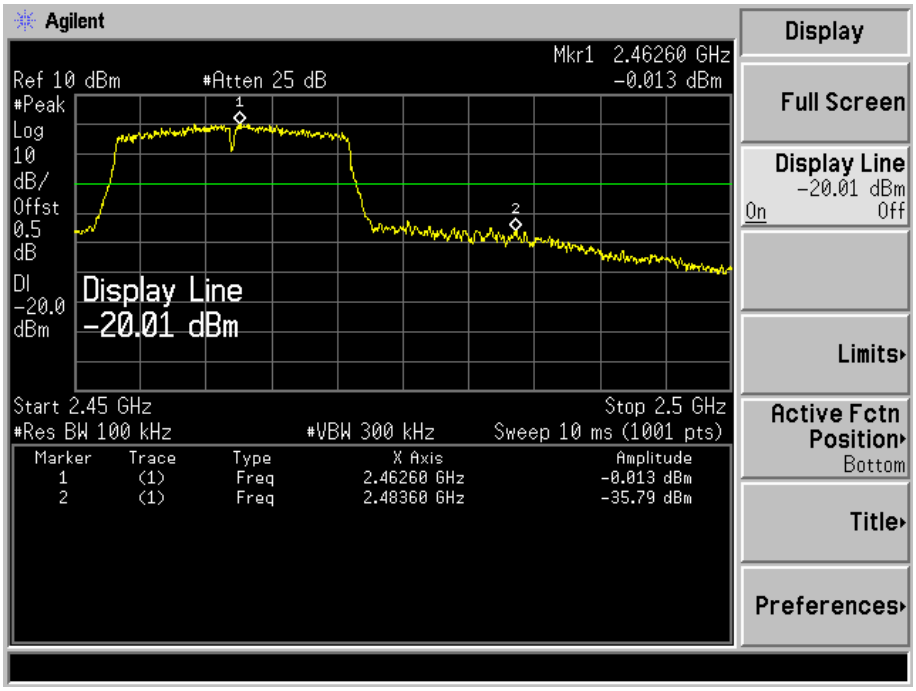


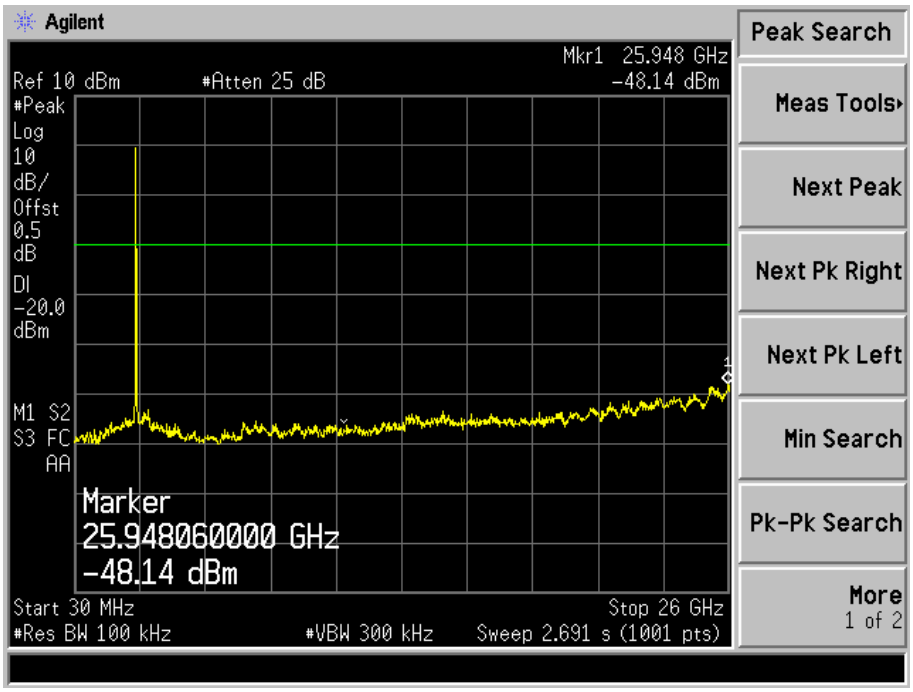
Middle


Agilent
Mkr1 2.43760 GHz
Ref 10 dBm
#Atten 25 dB
-0.365 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.4
dBm
M1 S2
S3 FC
AA
Display Line
-20.43 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Display
Full Screen
Display Line
-20.43 dBm
On
Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

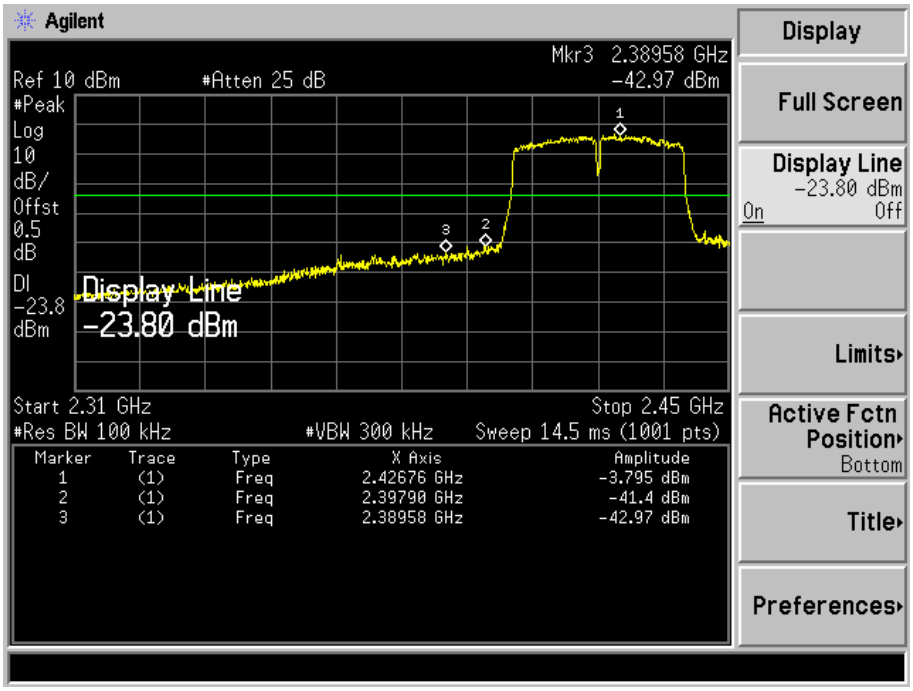

Agilent
Mkr1 25.221 GHz
Ref 10 dBm
#Atten 25 dB
-47.61 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.4
dBm
M1 S2
S3 FC
AA
Marker
25.220900000 GHz
-47.61 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

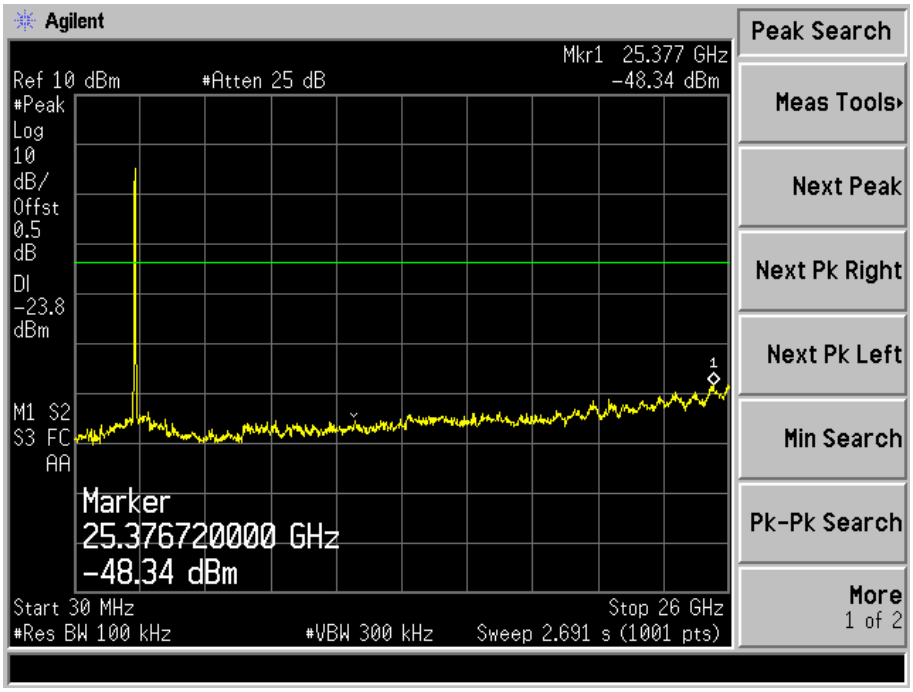
Highest


Agilent
Mkr1 2.46260 GHz
Ref 10 dBm
#Atten 25 dB
-0.013 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.0
dBm
Display Line
-20.01 dBm
Start 2.45 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.46260 GHz -0.013 dBm
2 (1) Freq 2.48360 GHz -35.79 dBm
Display
Full Screen
Display Line
-20.01 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

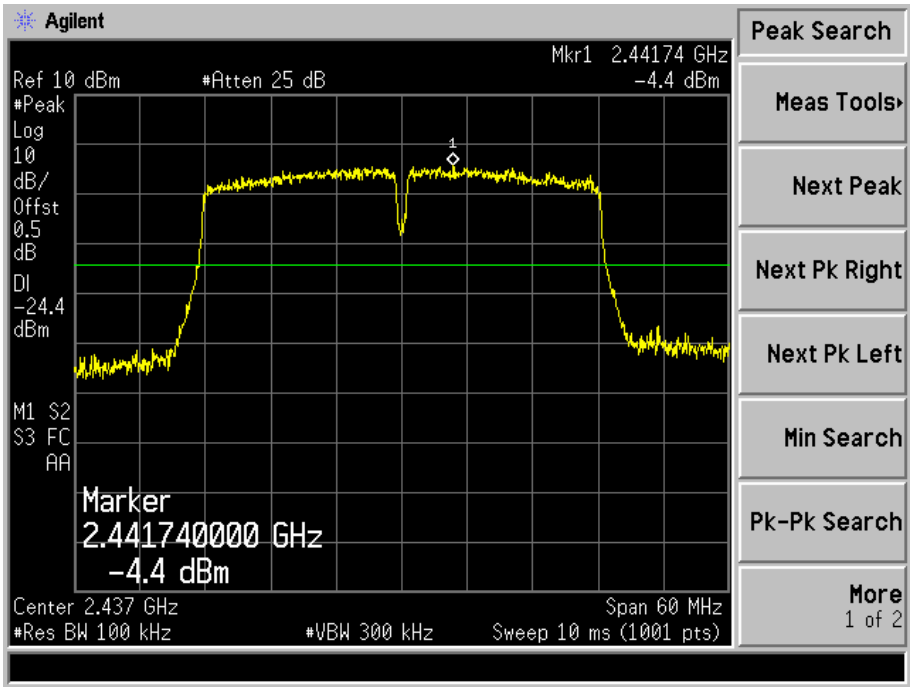

Agilent
Mkr1 25.948 GHz
Ref 10 dBm
#Atten 25 dB
-48.14 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-20.0
dBm
M1 S2
S3 FC
AA
Marker
25.948060000 GHz
-48.14 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

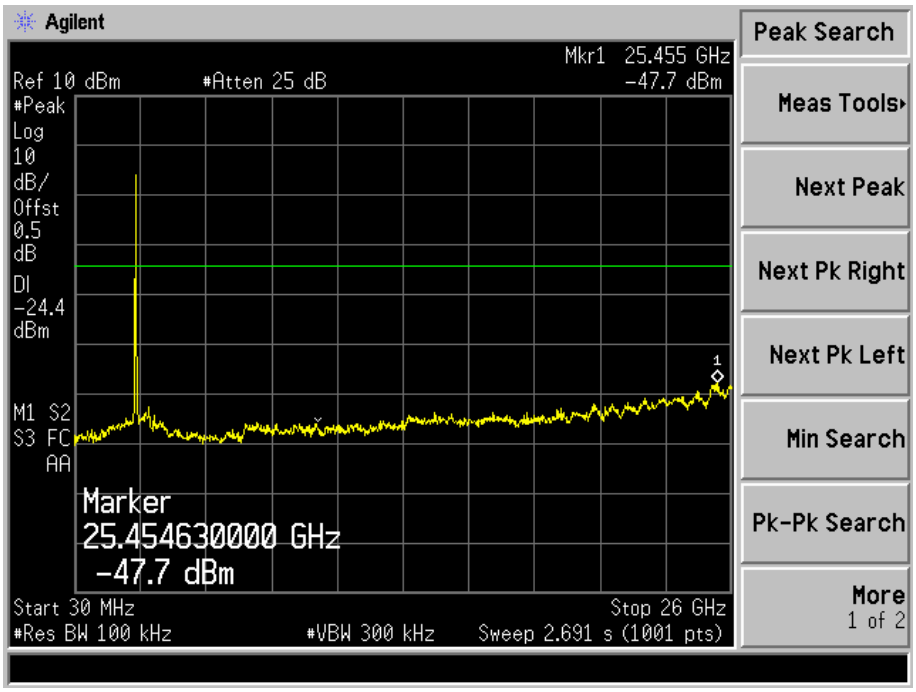
Spurious (Conducted)
802.11n-HT40-Lowest
Lowest



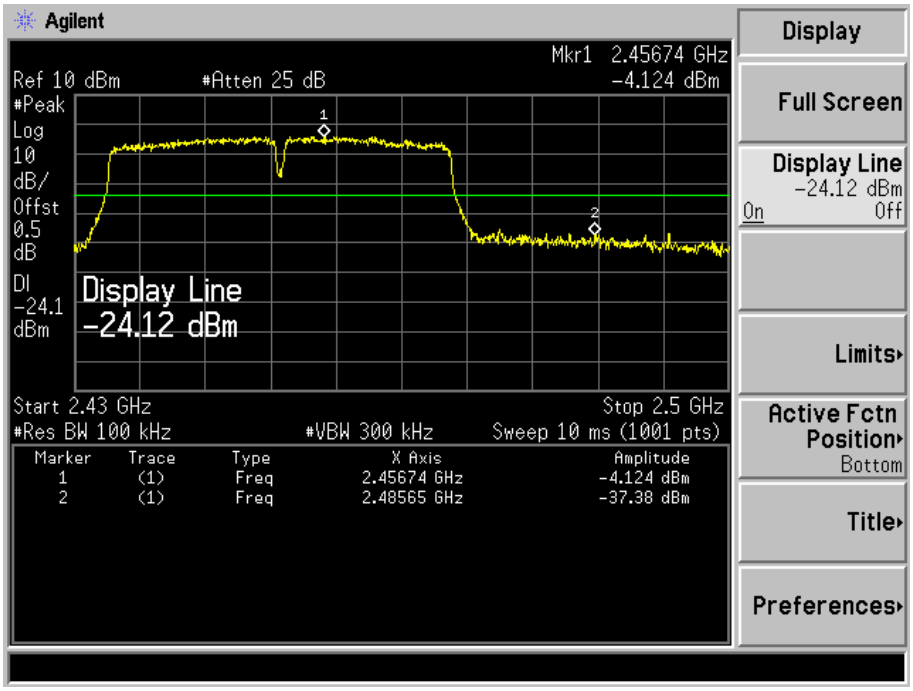


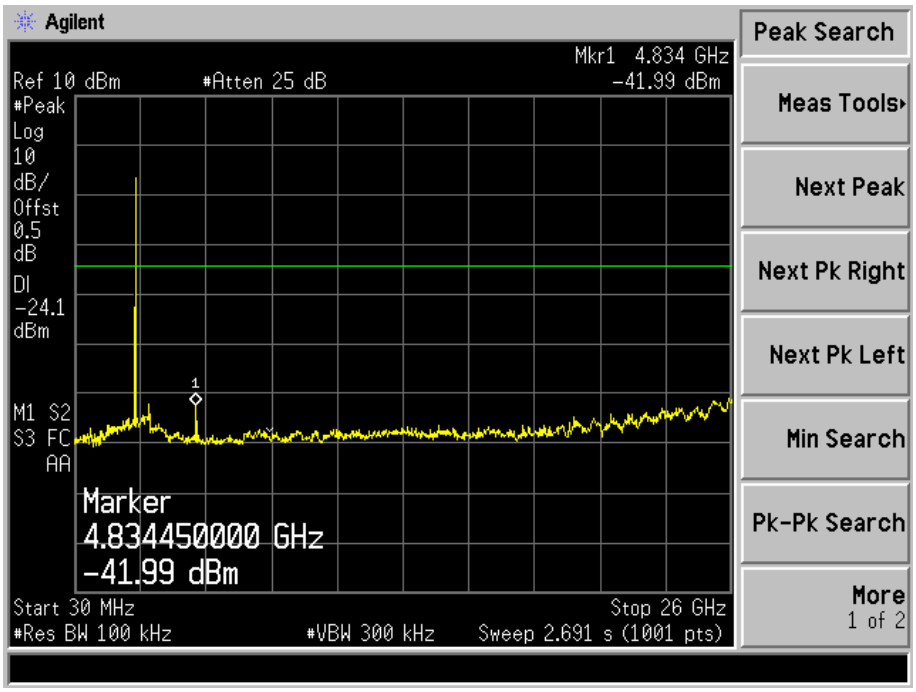
Middle


Agilent
Mkr1 2.44174 GHz
Ref 10 dBm
#Atten 25 dB
-4.4 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-24.4
dBm
M1 S2
S3 FC
AA
Marker
2.441740000 GHz
-4.4 dBm
Center 2.437 GHz
Span 60 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2


Agilent
Mkr1 25.455 GHz
Ref 10 dBm
#Atten 25 dB
-47.7 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-24.4
dBm
M1 S2
S3 FC
AA
Marker
25.454630000 GHz
-47.7 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

Highest


Agilent
Mkr1 2.45674 GHz
Ref 10 dBm
#Atten 25 dB
-4.124 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-24.1
dBm
Display Line
-24.12 dBm
Start 2.43 GHz
Stop 2.5 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 10 ms (1001 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 2.45674 GHz -4.124 dBm
2 (1) Freq 2.48565 GHz -37.38 dBm
Display
Full Screen
Display Line
-24.12 dBm
On Off
Limits
Active Fctn
Position
Bottom
Title
Preferences

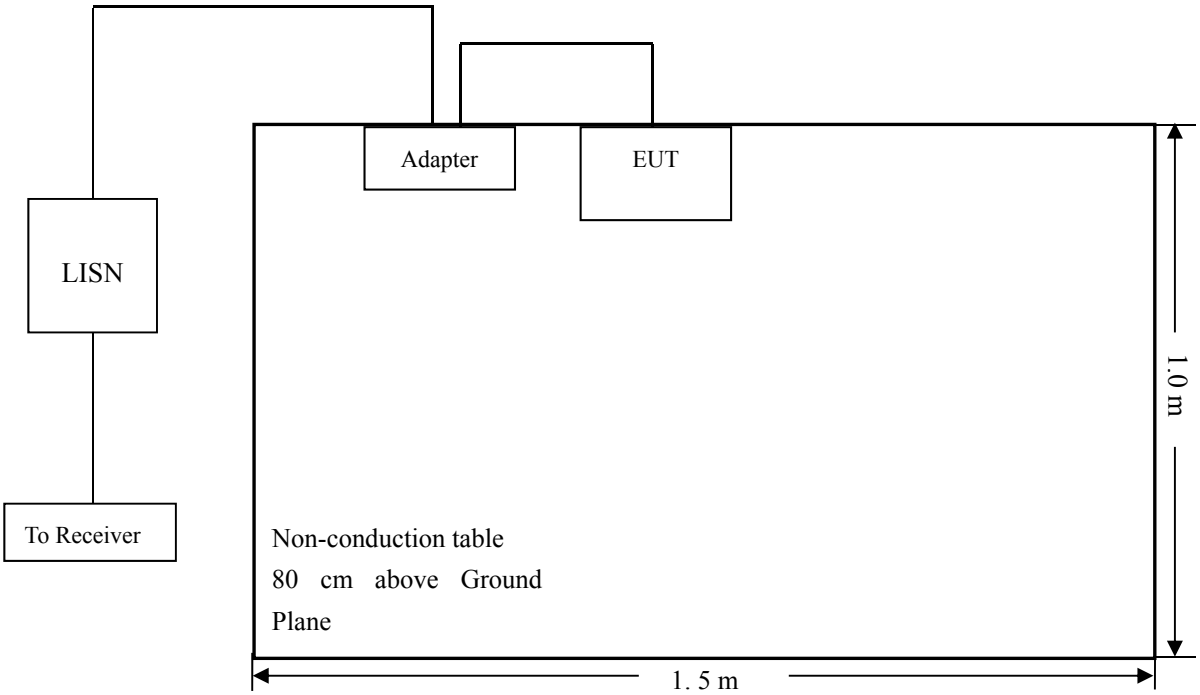

Agilent
Mkr1 4.834 GHz
Ref 10 dBm
#Atten 25 dB
-41.99 dBm
#Peak
Log
10
dB/
Offst
0.5
dB
Dl
-24.1
dBm
M1 S2
S3 FC
AA
Marker
4.834450000 GHz
-41.99 dBm
Start 30 MHz
Stop 26 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 2.691 s (1001 pts)
Peak Search
Meas Tools
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
More
1 of 2

10. Conducted Emissions

10.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 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.

10.2 Basic Test Setup Block Diagram



10.3 Environmental Conditions

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

10.4 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

10.5 Summary of Test Results/Plots

According to the data in section 10.6, the EUT complied with the FCC Part 15.207 Conducted margin for this device, with the *worst* margin reading of:

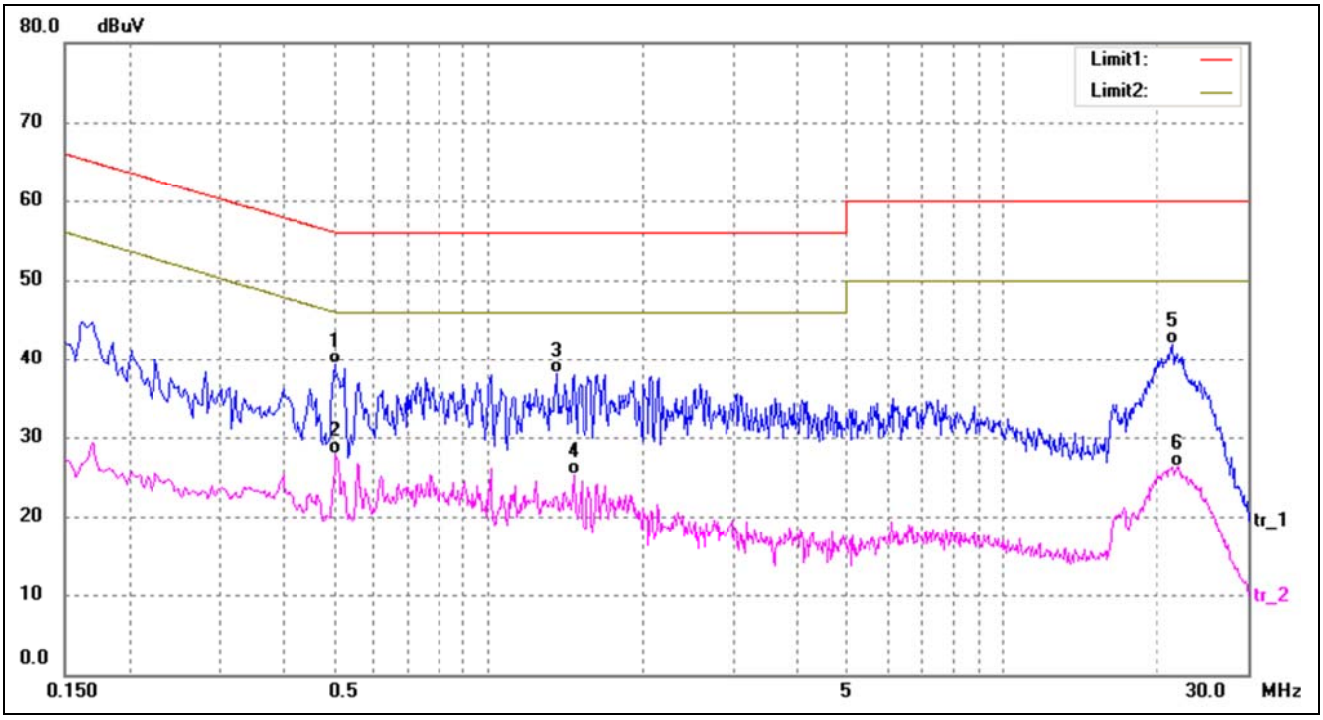
-16.70 dB at 0.5020 MHz in the **Neutral** mode**, QP** detector, **0.15-30MHz**

10.6 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

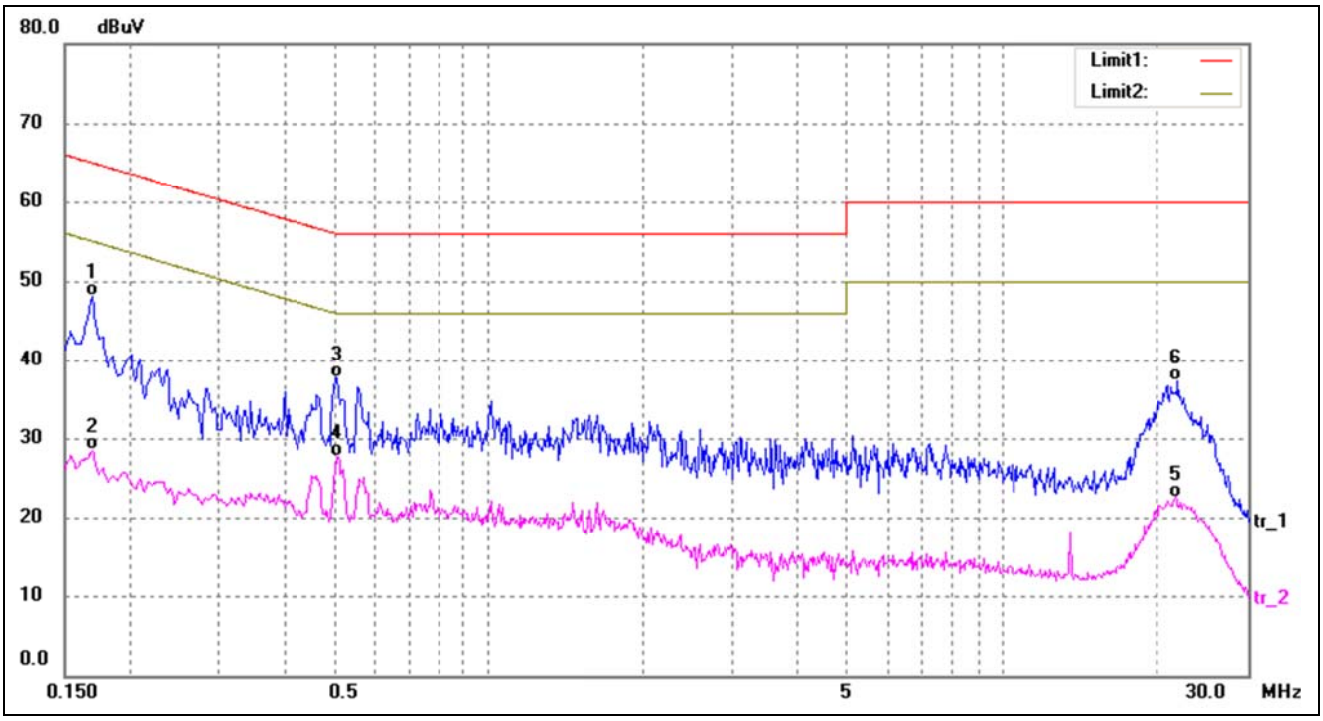
EUT: *Mobile phone*
Tested Model: *L5c*
Operating Condition: *Transmitting(Wi-Fi)*
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.5020	29.50	9.80	39.30	56.00	-16.70	QP
2	0.5060	18.16	9.80	27.96	46.00	-18.04	AVG
3	1.3540	28.31	9.75	38.06	56.00	-17.94	QP
4	1.4660	15.52	9.75	25.27	46.00	-20.73	AVG
5	21.5420	32.20	9.68	41.88	60.00	-18.12	QP
6	22.0780	16.68	9.68	26.36	50.00	-23.64	AVG

Test Specification: *Line*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1700	38.21	9.83	48.04	64.96	-16.92	QP
2	0.1700	18.73	9.83	28.56	54.96	-26.40	AVG
3	0.5020	27.93	9.80	37.73	56.00	-18.27	QP
4	0.5100	17.96	9.80	27.76	46.00	-18.24	AVG
5	21.7700	12.92	9.68	22.60	50.00	-27.40	AVG
6	22.0060	27.54	9.68	37.22	60.00	-22.78	QP

Note: Test for 120V/240V, the worst case is 120V, and the 240V data is not show.

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