

FCC Part 15C Measurement and Test Report

For

Verykool USA Inc

3636 Nobel Drive, Suite 325 San Diego, CA 92122

FCC ID: WA6S758

FCC Rules:	<u>FCC Part 15C</u>	
Product Description:	<u>Android phone</u>	
Tested Model:	<u>S758</u>	
Report No.:	<u>STR12118097I-3</u>	
Tested Date:	<u>2012-11-08 to 2012-12-10</u>	
Issued Date:	<u>2012-12-11</u>	
Tested By:	<u>Seven Song / Engineer</u>	<i>Seven Song</i>
Reviewed By:	<u>Lahm Peng / EMC Manager</u>	<i>Lahm peng</i>
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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by SEM.Test Compliance Service Co., Ltd

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Verykool USA Inc
 Address of applicant: 3636 Nobel Drive, Suite 325 San Diego, CA 92122

Manufacturer: FUKDA TECHNOLOGY CO., LTD
 Address of manufacturer: East Unit, 4th Floor, No.2 Building, Zhenhua Laobing Industrial Park, No.44 Tiezai Road, Xixiang Town, Bao'an District, Shenzhen, China

General Description of EUT	
Product Name:	Android phone
Trade Name:	Verykool
Model No.:	S758
Rated Voltage:	DC 3.7V Li-ion Battery (Model:GS3)
Power Adapter Model:	TNC-L108C-CH (Input: AC 100-240V, Output: DC 5V 800mA)
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Support Standards:	802.11b/g/n
Frequency Range:	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
RF Output Power:	14.90 dBm (Conducted)
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Modulation:	CCK, BPSK, QPSK, 16QAM, 64QAM
Quantity of Channels:	11 for 802.11b/g/n-HT20, 7 for 802.11n-HT40
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	2.7 dBi
Lowest Internal Frequency of EUT:	32.768kHz
Device Category:	Portable Device

1.2 Test Standards

The following report is prepared on behalf of the VeryKool USA 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 C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. The public notice KDB 558074 D01 V02 (10/04/2012) and KDB 913591 for digital transmission systems shall be performed also.

1.4 Test Facility

- **FCC – Registration No.: 994117**

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

- **Industry Canada (IC) Registration No.: 7673A**

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

- **CNAS Registration No.: L4062**

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

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

Special Cable List and Details			
Cable Description	Length (m)	Shielded/ Unshielded	With / Without Ferrite
USB Cable	1.0	Shielded	Without Ferrite
Earphone Cable	1.2	Unshielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
/	/	/	/

2. SUMMARY OF TEST RESULTS

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

N/A: not applicable

3. RF Exposure

3.1 Standard Applicable

According to Part 15.247(i), 1.1307(b)(1), 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 complied with the requirement of the RF exposure, please see the SAR report.

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	2012-03-28	2013-03-27
Attenuator	ATTEN	ATS100-4-20	/	2012-03-28	2013-03-27

5.3 Test Procedure

According to the KDB 558074, the test method of option 1(section 9.1) of power spectral density as below:

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set analyzer center frequency to DTS channel center frequency.
3. Set the span to 1.5 times the DTS channel bandwidth.
4. Set the spectrum analyzer as RBW=3 kHz, VBW=10 kHz.
5. Detector = peak, Sweep time = auto, Trace mode = max hold, allow trace to fully stabilize.
6. Use the peak marker function to determine the maximum amplitude level.
7. Repeat above procedures until all frequency measured was complete.

5.4 Environmental Conditions

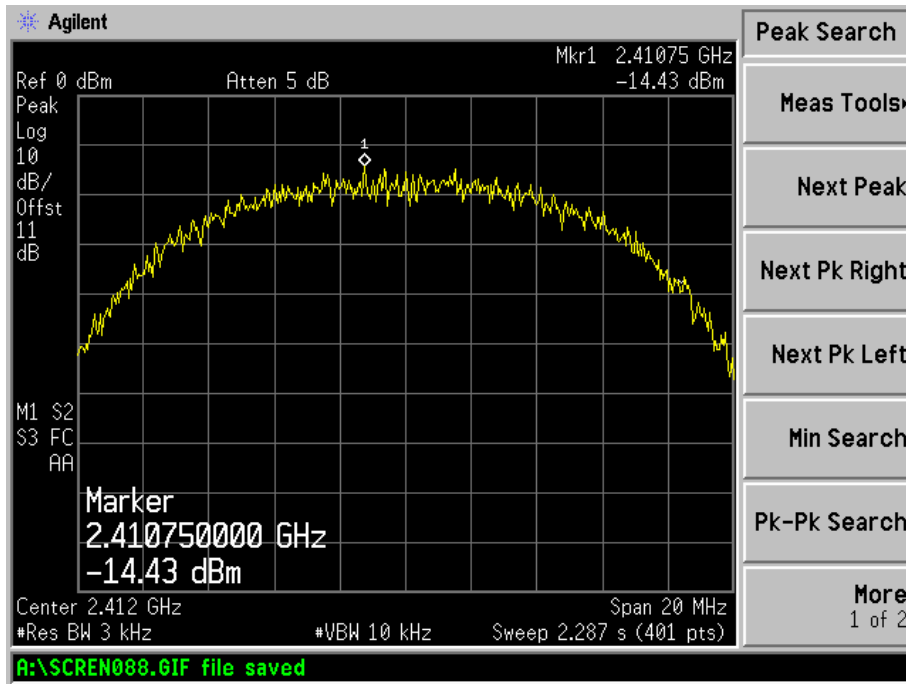
Temperature:	20° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

5.5 Summary of Test Results/Plots

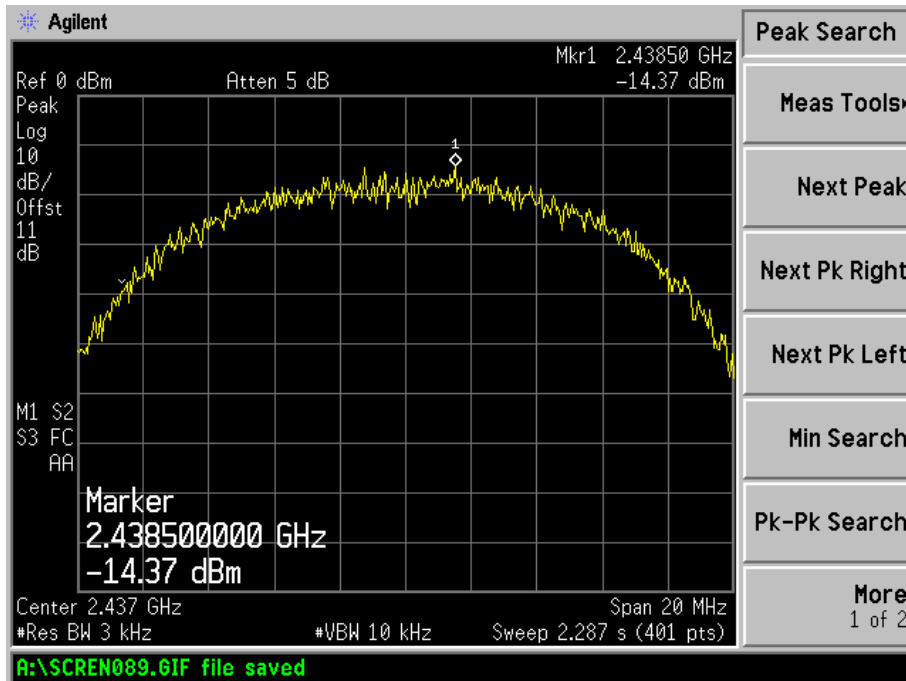
Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b	2412	-14.43	8
	2437	-14.37	8
	2462	-14.13	8
802.11g	2412	-21.72	8
	2437	-22.36	8
	2462	-21.29	8
802.11n HT20	2412	-21.48	8
	2437	-22.72	8
	2462	-21.86	8
802.11n HT40	2422	-26.15	8
	2437	-26.35	8
	2452	-24.74	8

Please refer to the following test plots:

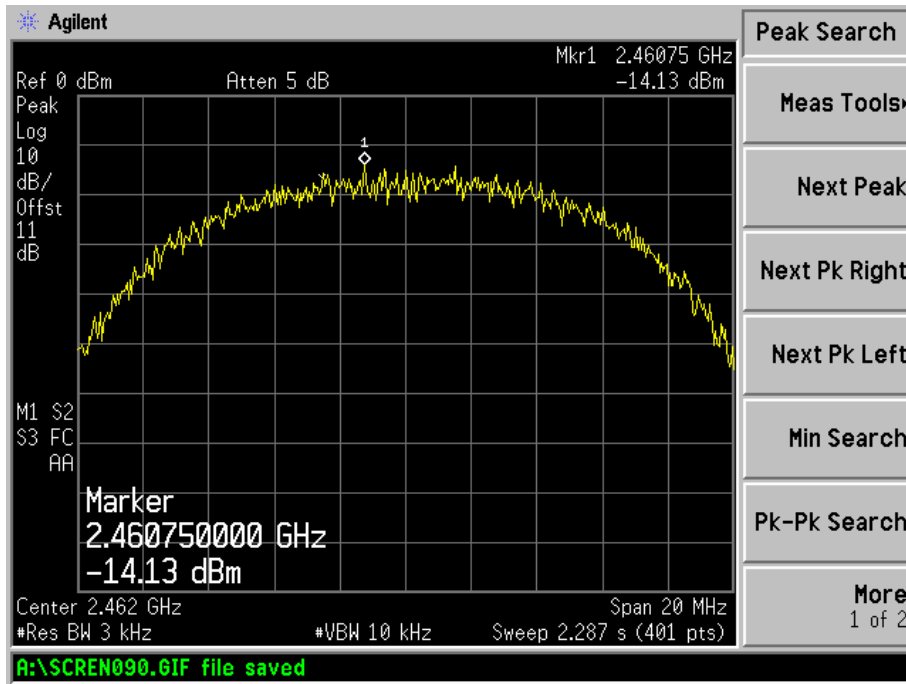
802.11b-Low Channel



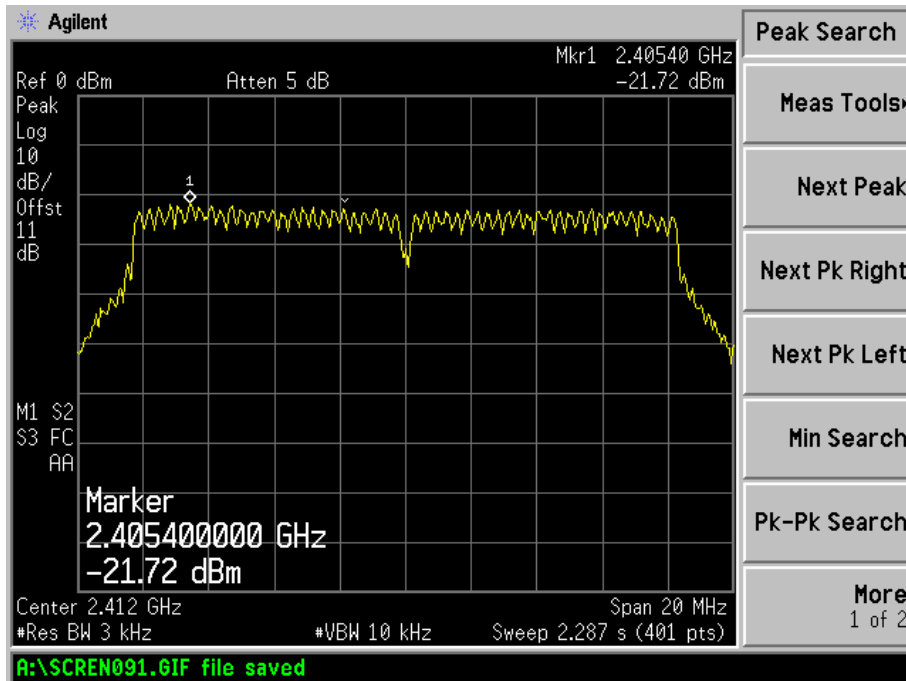
802.11b-Middle Channel



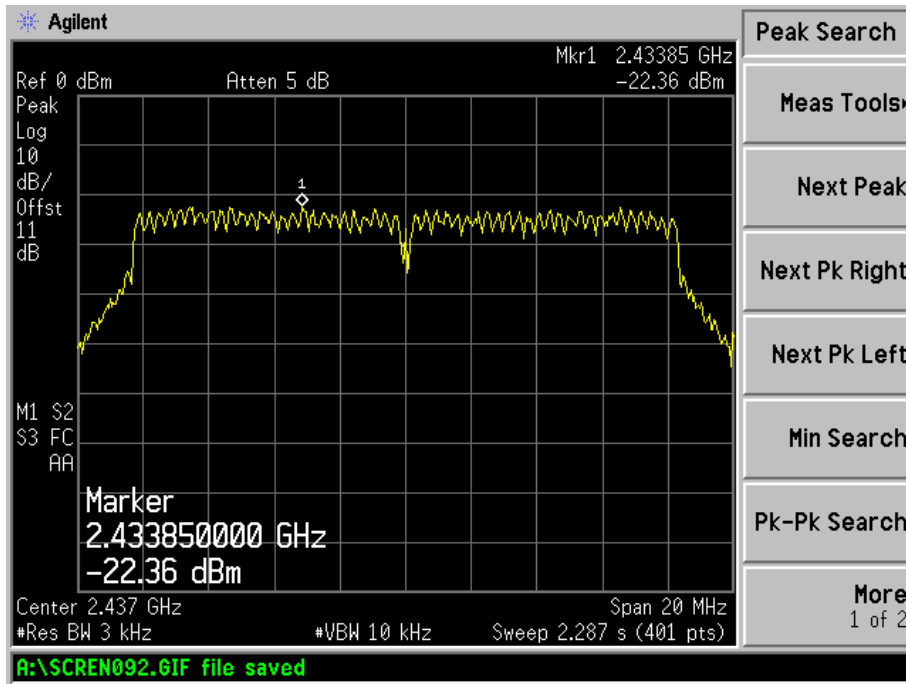
802.11b-High Channel



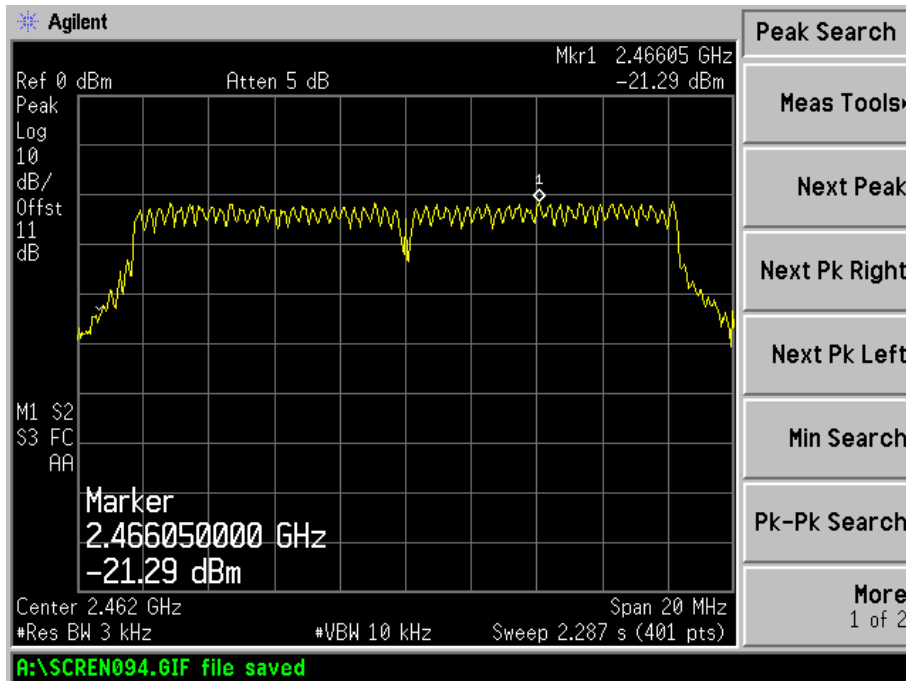
802.11g-Low Channel



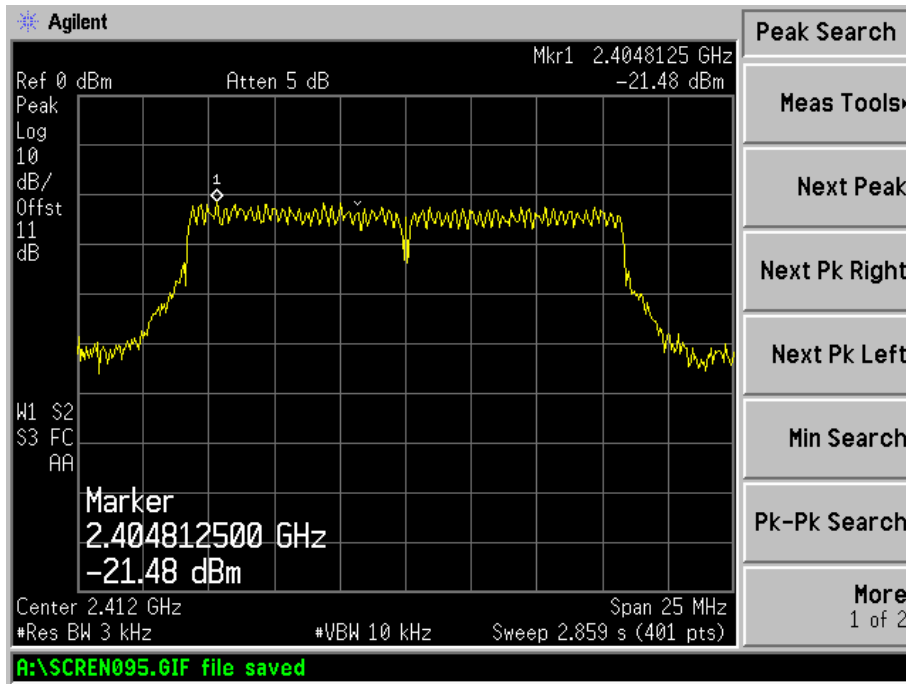
802.11g-Middle Channel



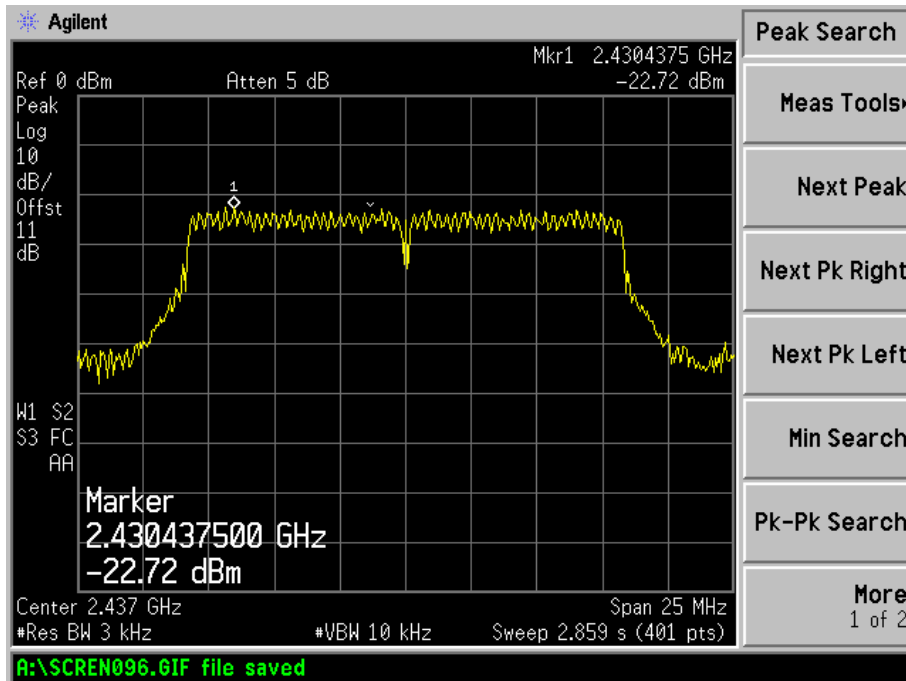
802.11g-High Channel



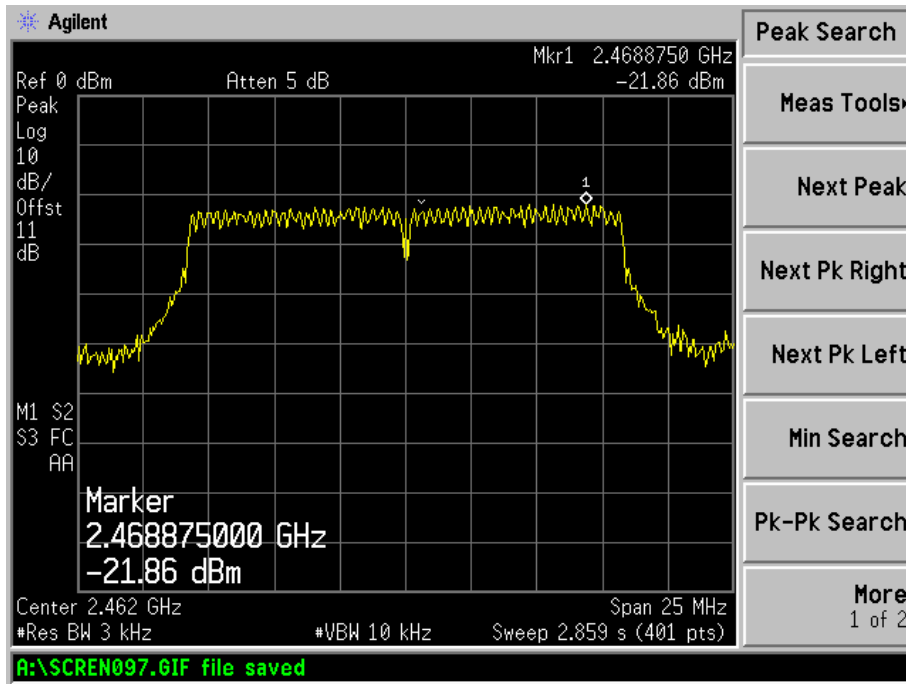
802.11n-HT20-Low Channel



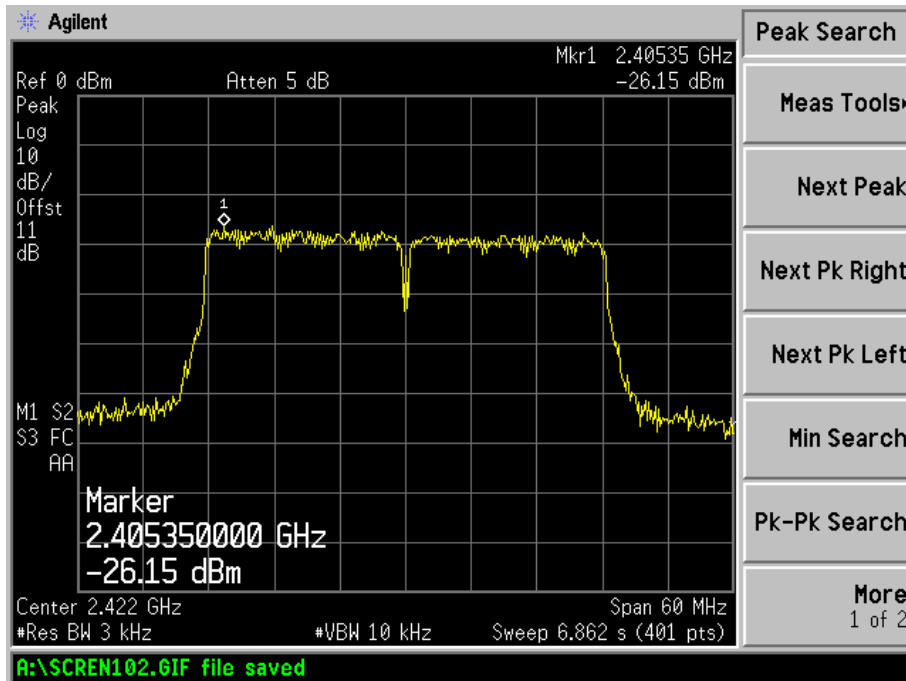
802.11n-HT20-Middle Channel



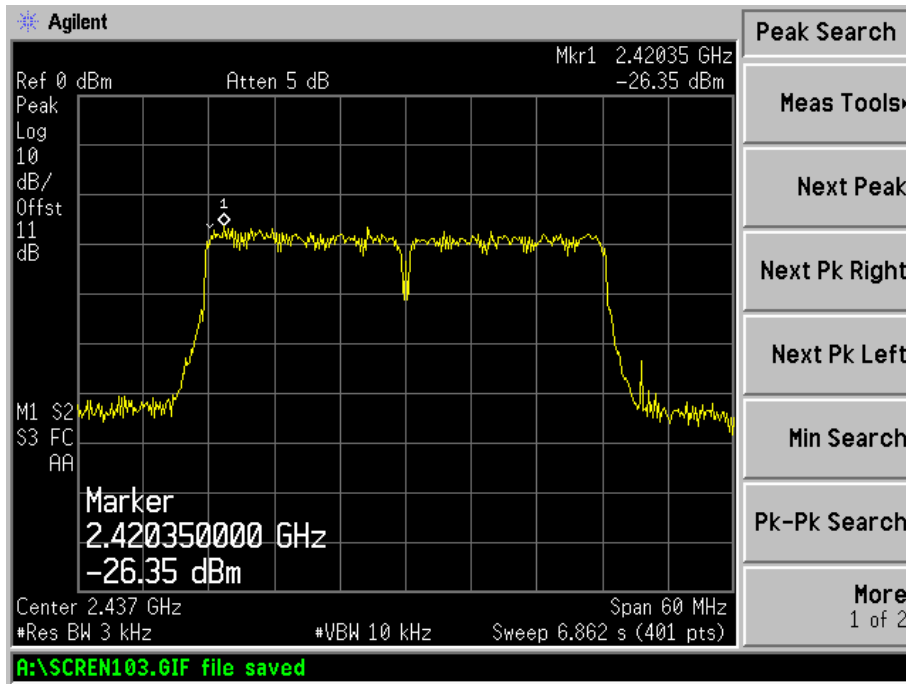
802.11n-HT20-High Channel



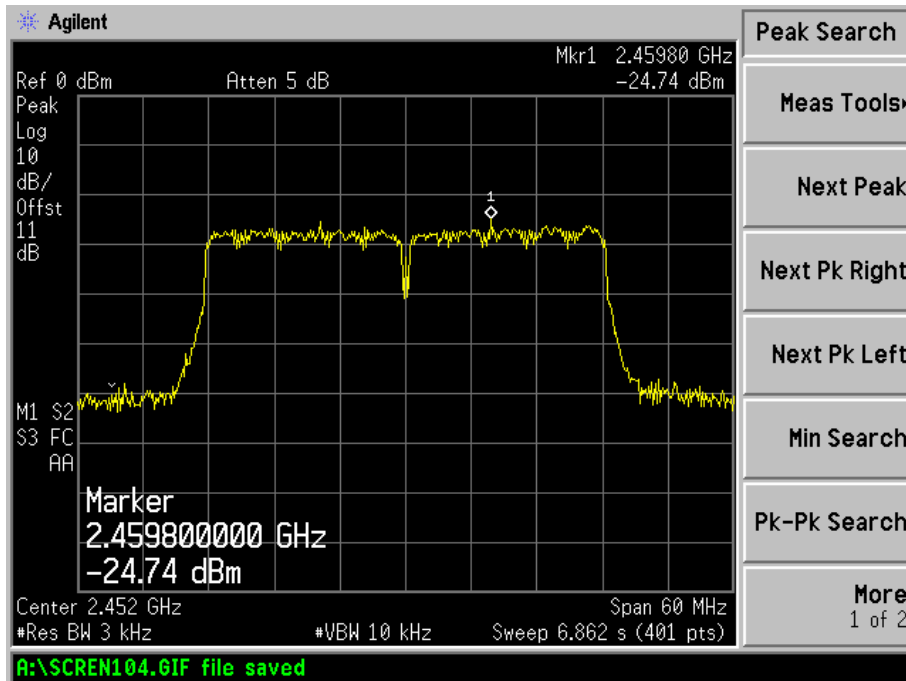
802.11n-HT40-Low Channel



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	2012-03-28	2013-03-27
Attenuator	ATTEN	ATS100-4-20	/	2012-03-28	2013-03-27

6.3 Test Procedure

According to the KDB 558074, the test method of option 1 (section 7.1) of emission bandwidth as below:

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set center frequency of spectrum analyzer = operating frequency.
3. Set the spectrum analyzer as RBW = 100kHz (1-5% of Bandwidth.), VBW >= 3 x RBW.
4. Set Detector = Peak, Trace mode = Max hold, Sweep time = Auto, allow the trace to stabilize.
5. 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

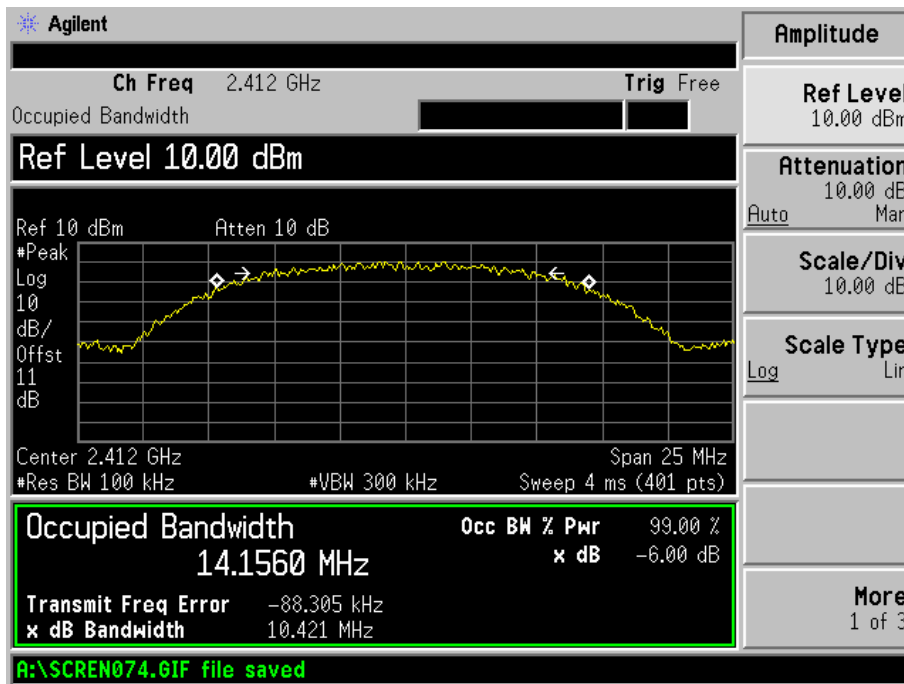
Temperature:	24° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

6.5 Summary of Test Results/Plots

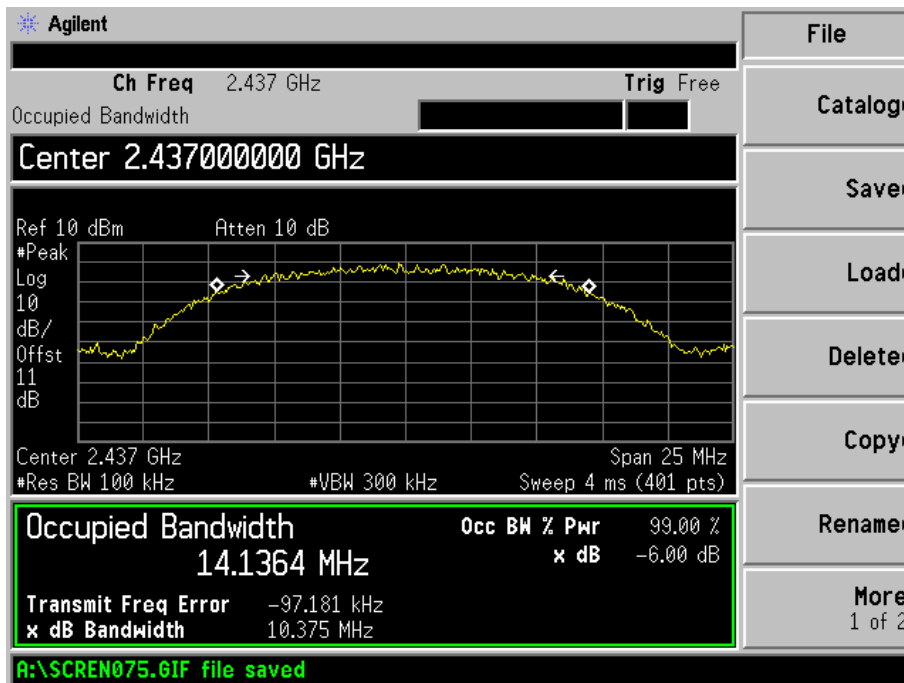
Test Mode	Test Channel MHz	6 dB Bandwidth kHz	Limit kHz
802.11b	2412	10421	500
	2437	10375	500
	2462	11068	500
802.11g	2412	16473	500
	2437	16581	500
	2462	16599	500
802.11n-HT20	2412	17781	500
	2437	17735	500
	2462	17831	500
802.11n-HT40	2422	36435	500
	2437	36474	500
	2452	36528	500

Please refer to the following test plots:

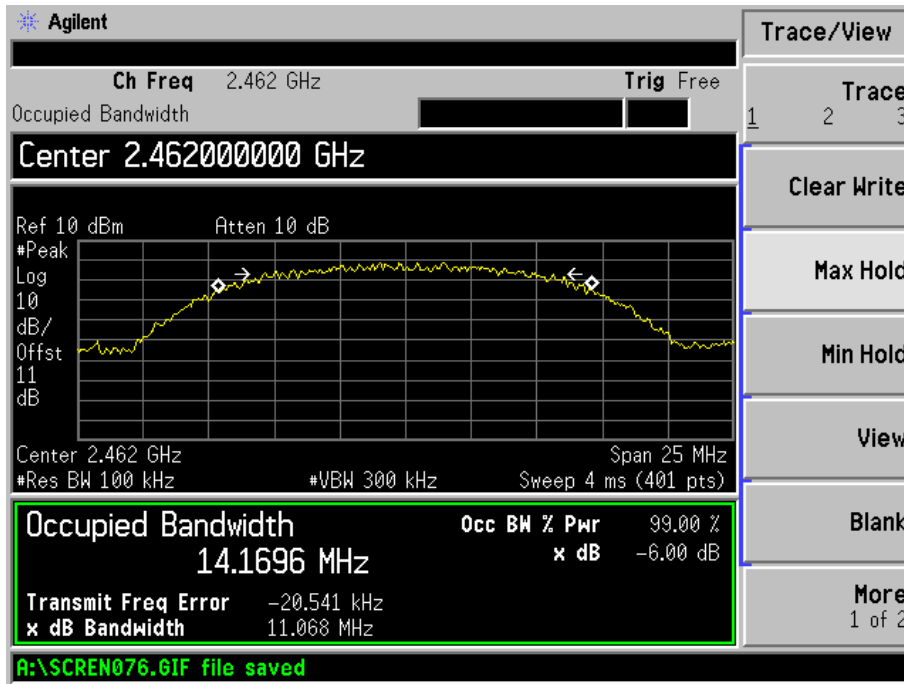
802.11b-Low Channel



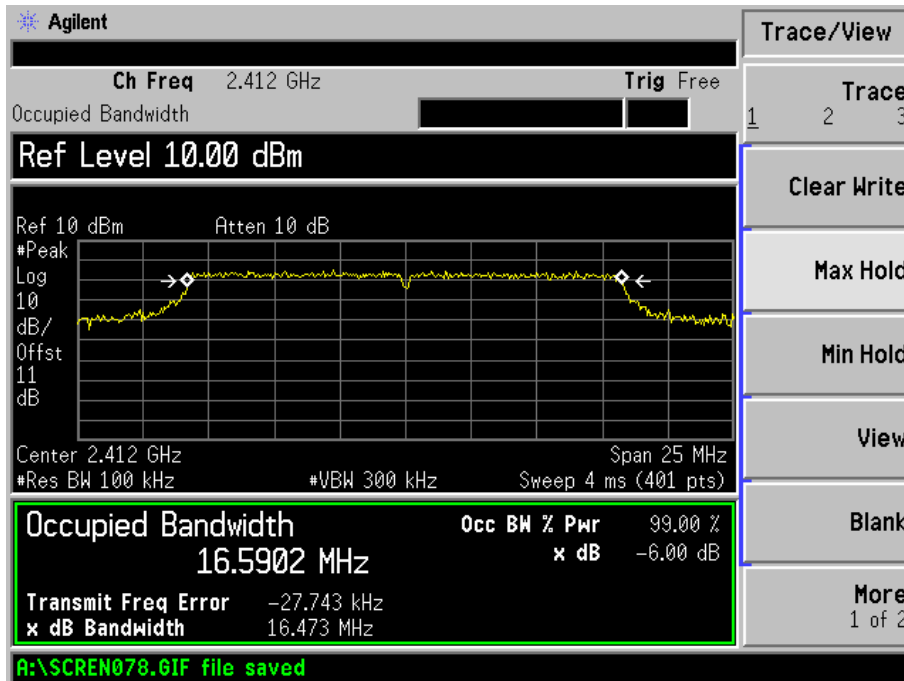
802.11b-Middle Channel



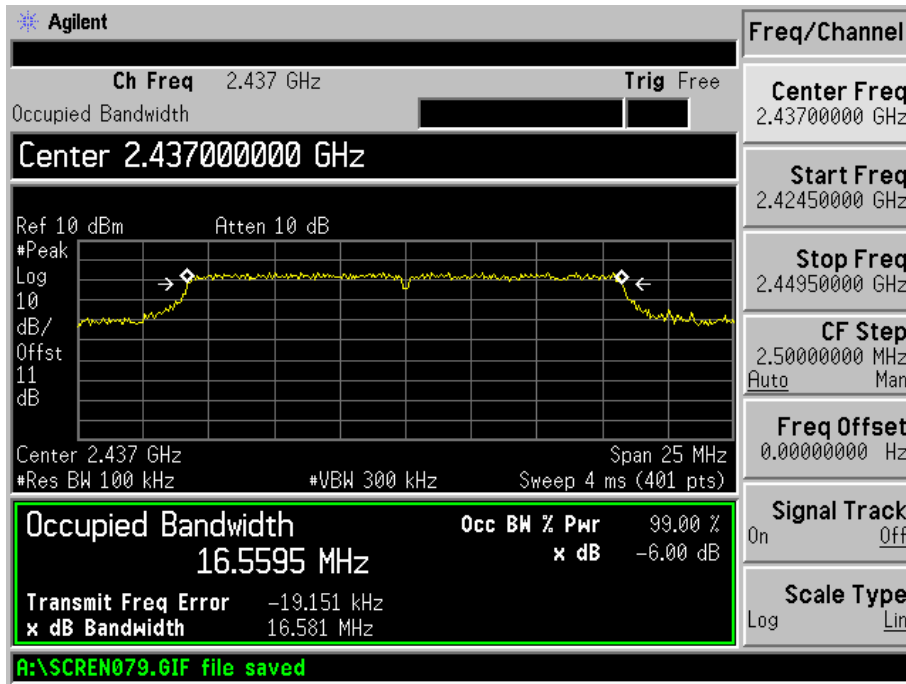
802.11b-High Channel



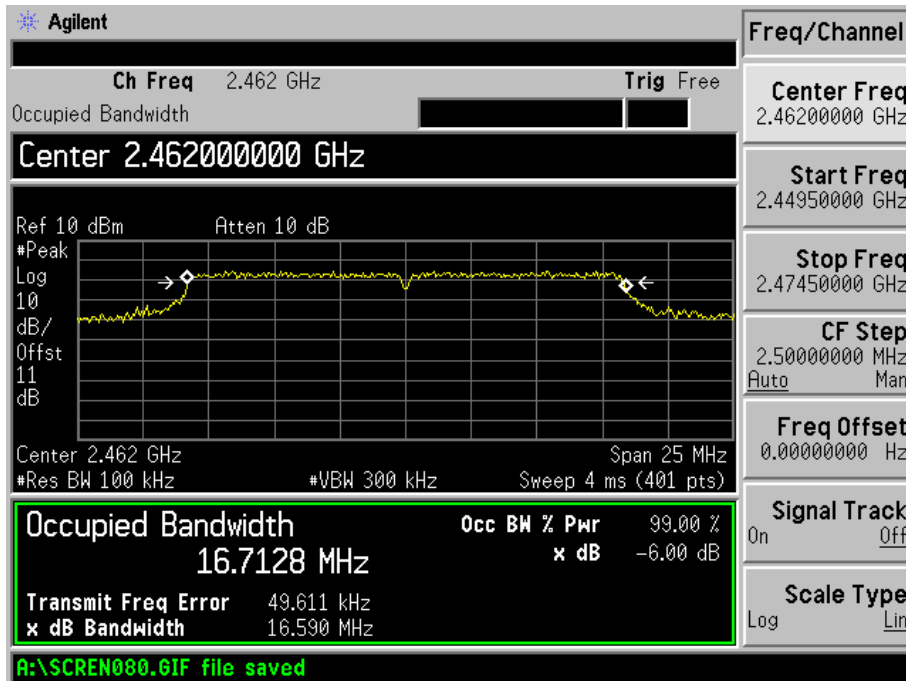
802.11g-Low Channel



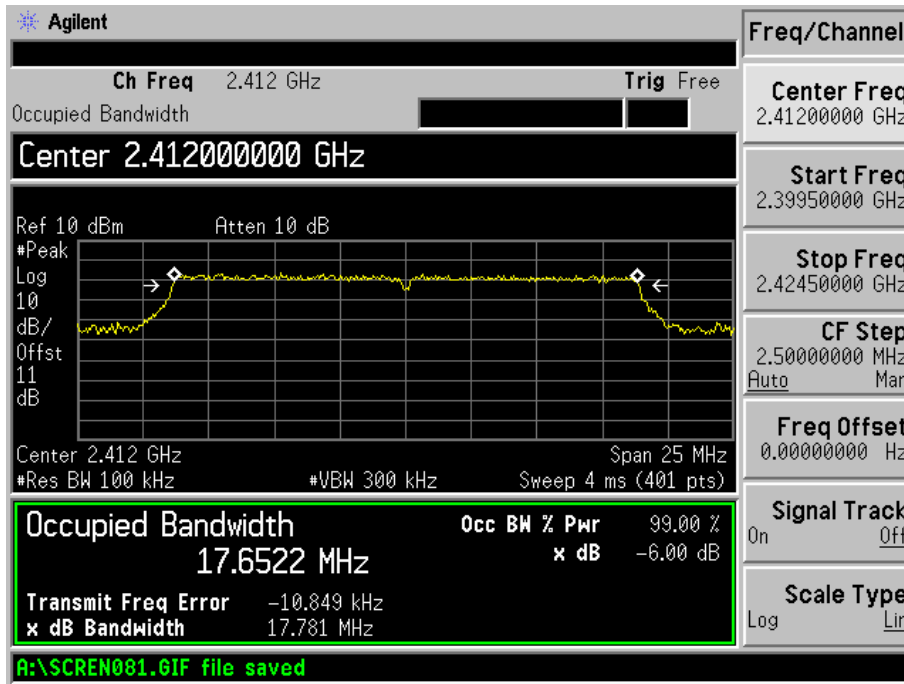
802.11g-Middle Channel



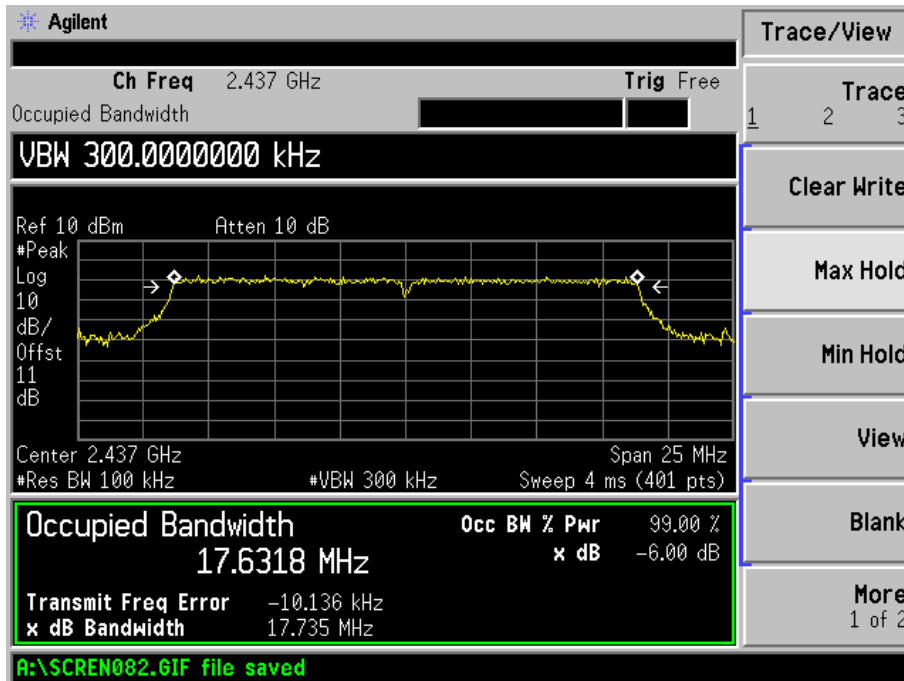
802.11g-High Channel



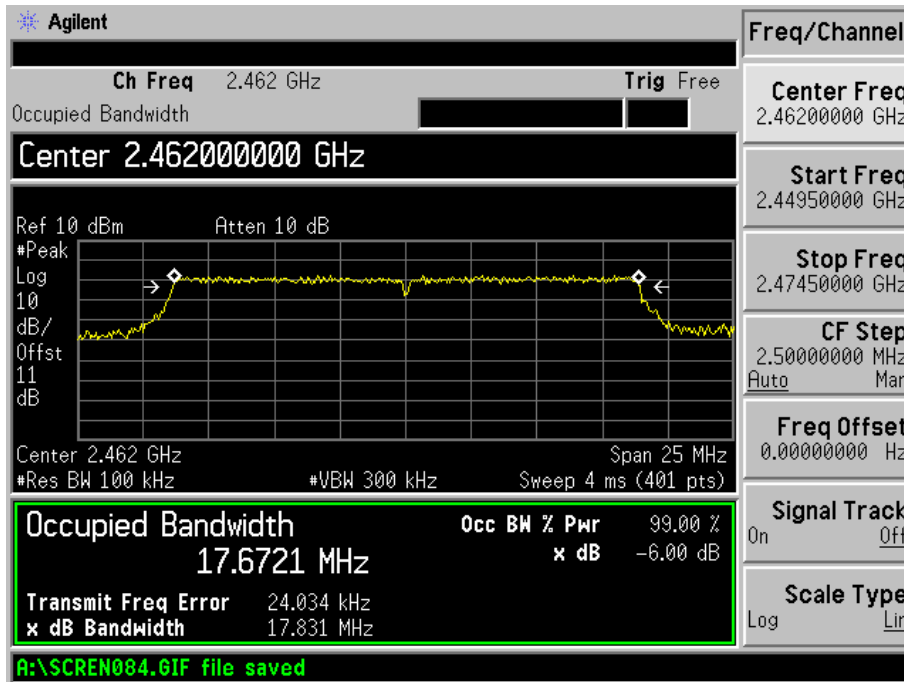
802.11n-HT20-Low Channel



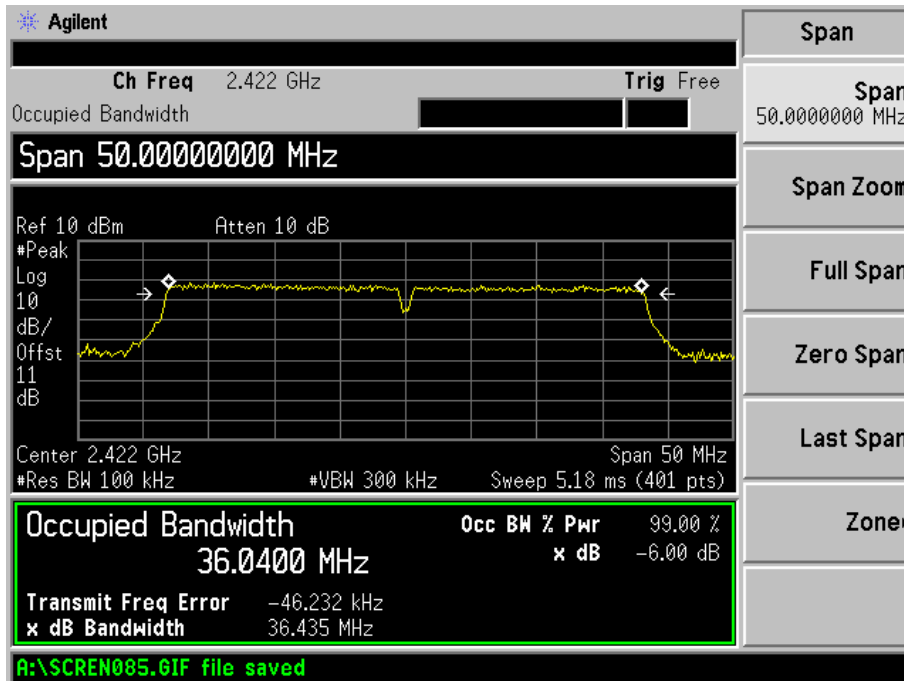
802.11n-HT20-Middle Channel



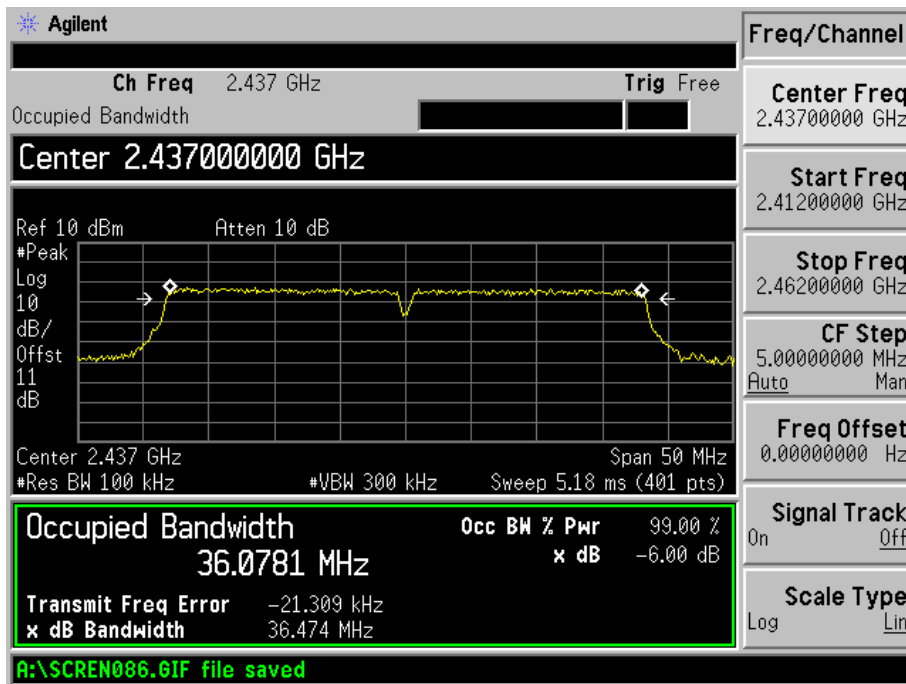
802.11n-HT20-High Channel



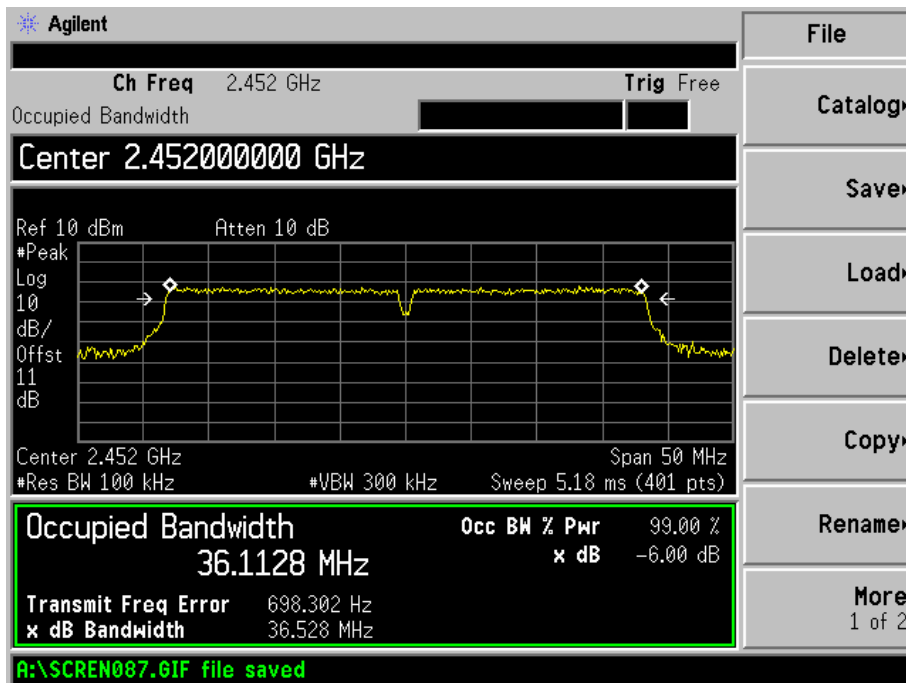
802.11n-HT40-Low Channel



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	2012-03-28	2013-03-27
Attenuator	ATTEN	ATS100-4-20	/	2012-03-28	2013-03-27

7.3 Test Procedure

According to the KDB 558074, the test method of option 2 (section 8.1.2) of maximum peak conducted output power as below:

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the RBW = 1 MHz.
3. Set the VBW = 3 MHz.
4. Set the span to fully encompass the DTS bandwidth.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the spectrum analyzer's band/channel power measurement function with 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

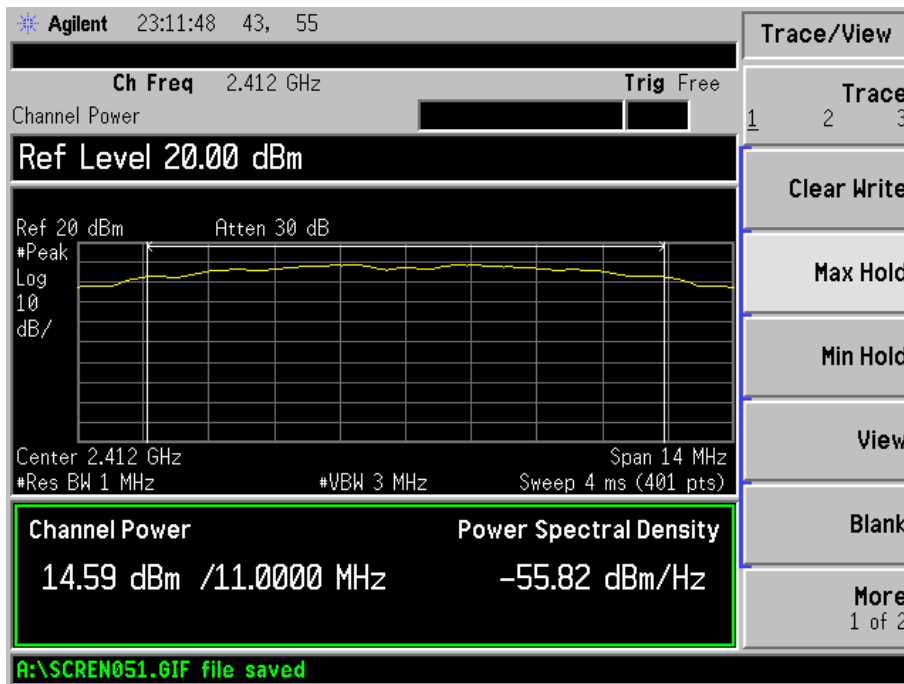
Temperature:	21° C
Relative Humidity:	55%
ATM Pressure:	1011 mbar

7.5 Summary of Test Results/Plots

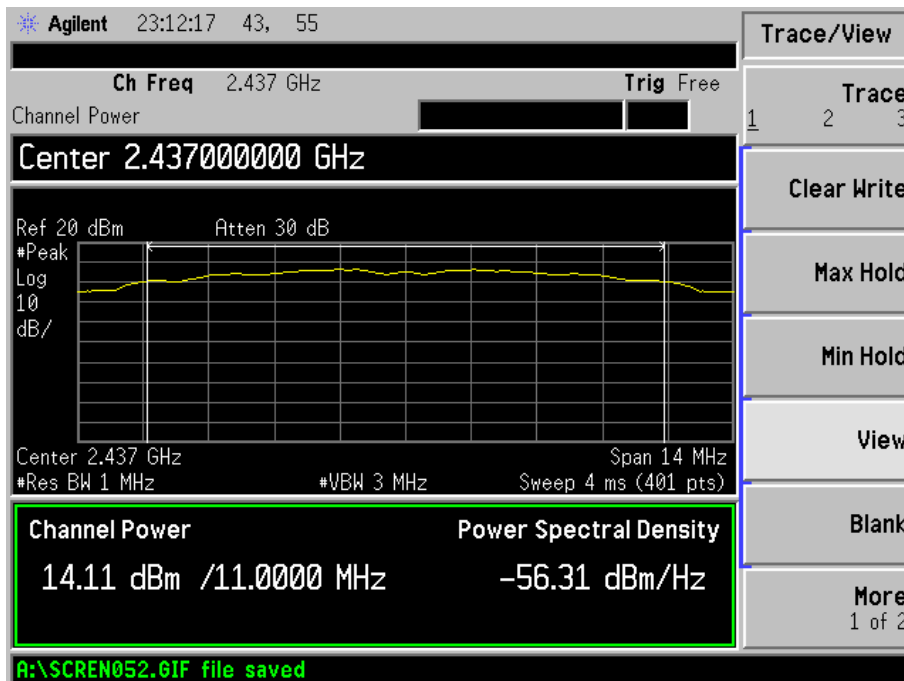
Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b_1Mbps	2412	14.59	28.7740	1000
	2437	14.11	25.7632	1000
	2462	14.74	29.7852	1000
802.11b_11Mbps	2412	14.38	27.4157	1000
	2437	14.90	30.9030	1000
	2462	14.88	30.7610	1000
802.11g_6Mbps	2412	12.95	19.7242	1000
	2437	12.41	17.4181	1000
	2462	12.03	15.9588	1000
802.11g_54Mbps	2412	12.94	19.6789	1000
	2437	13.23	21.0378	1000
	2462	12.43	17.4985	1000
802.11n HT20_MCS0	2412	12.19	16.5577	1000
	2437	12.96	19.7697	1000
	2462	12.56	18.0302	1000
802.11n HT20_MCS7	2412	13.51	22.4388	1000
	2437	13.20	20.8930	1000
	2462	13.16	20.7014	1000
802.11n HT40_MCS0	2422	11.20	13.1826	1000
	2437	11.16	13.0617	1000
	2452	11.09	12.8529	1000
802.11n HT40_MCS7	2422	11.20	13.1826	1000
	2437	11.30	13.4896	1000
	2452	11.40	13.8038	1000

Please refer to the following test plots:

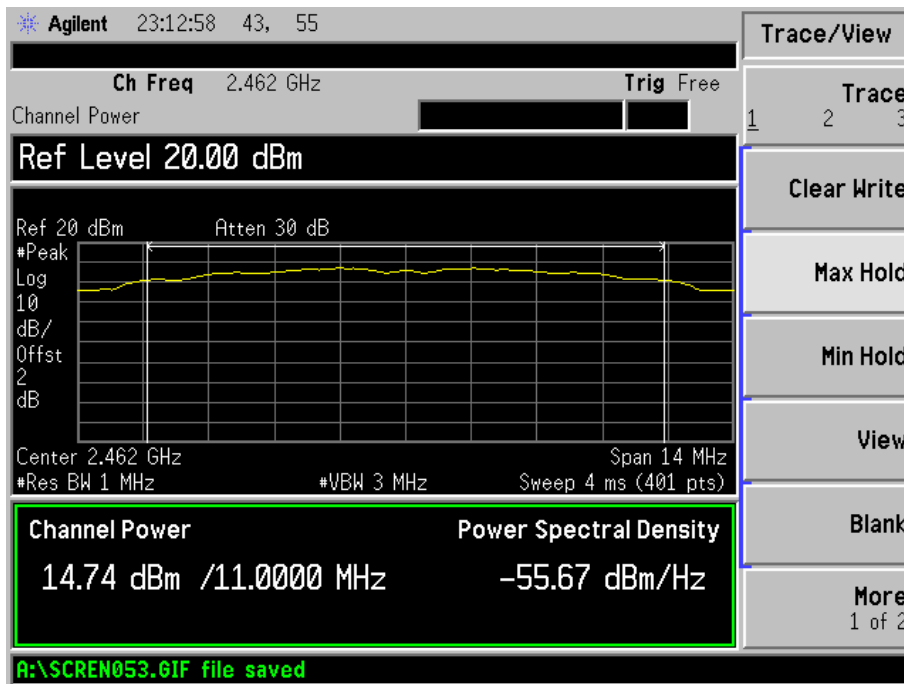
802.11b-1Mbps-Low Channel



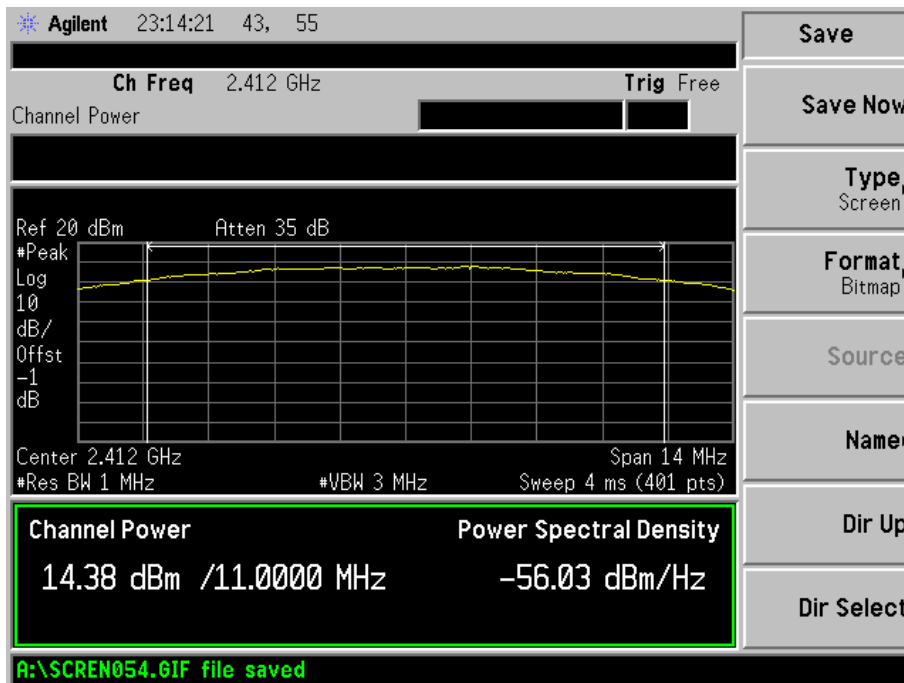
802.11b-1Mbps-Middle Channel



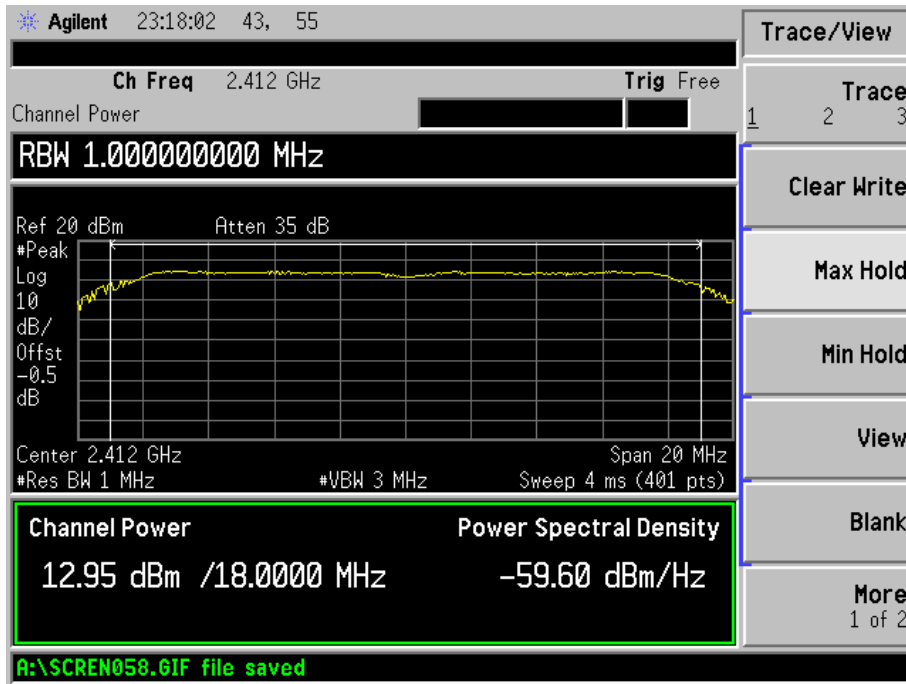
802.11b-1Mbps-High Channel



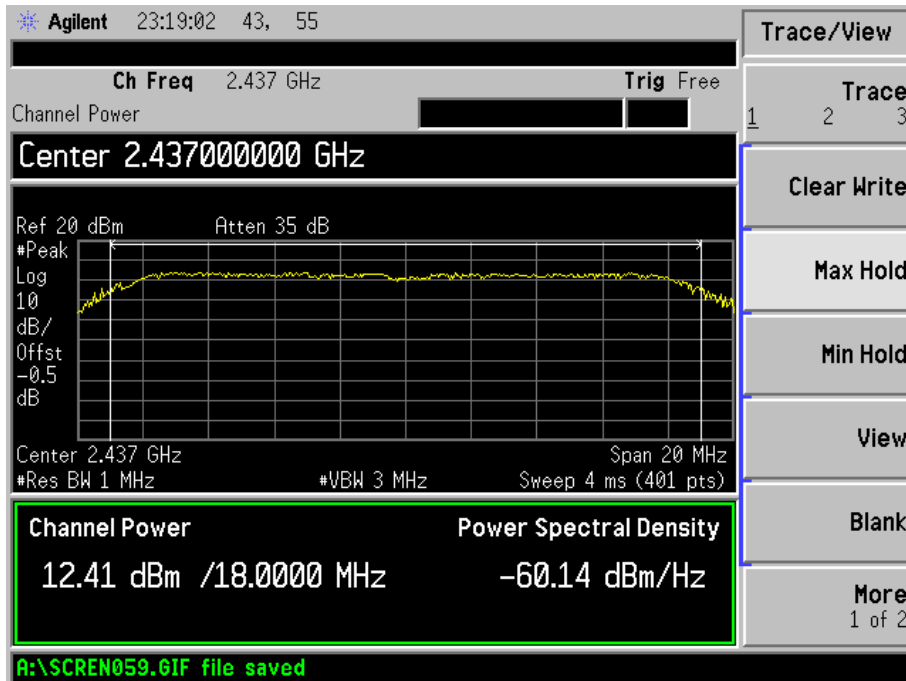
802.11b11Mbps-Low Channel



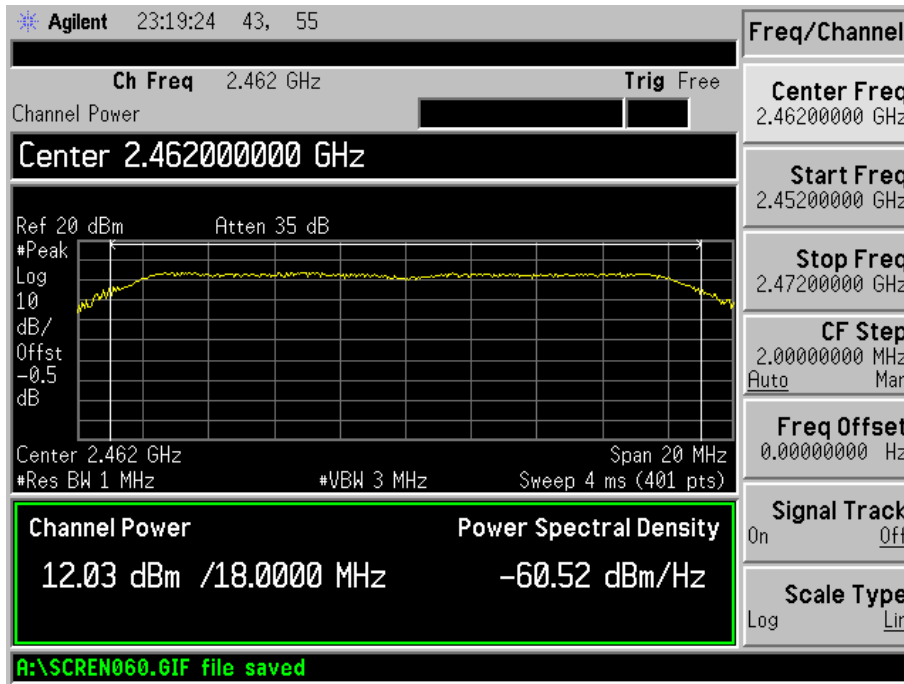
802.11g-6Mbps-Low Channel



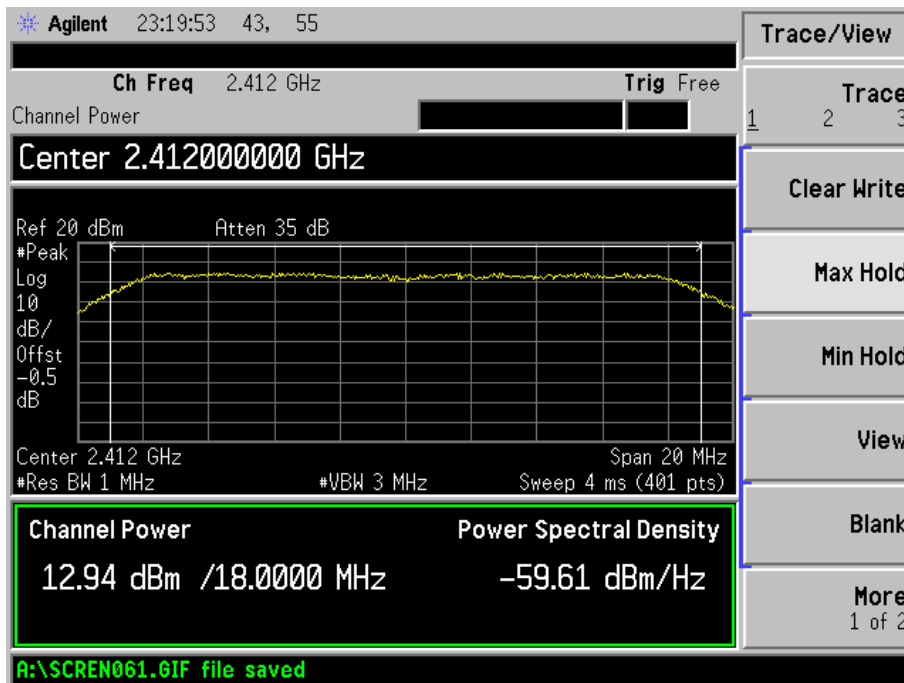
802.11g-6Mbps-Middle Channel



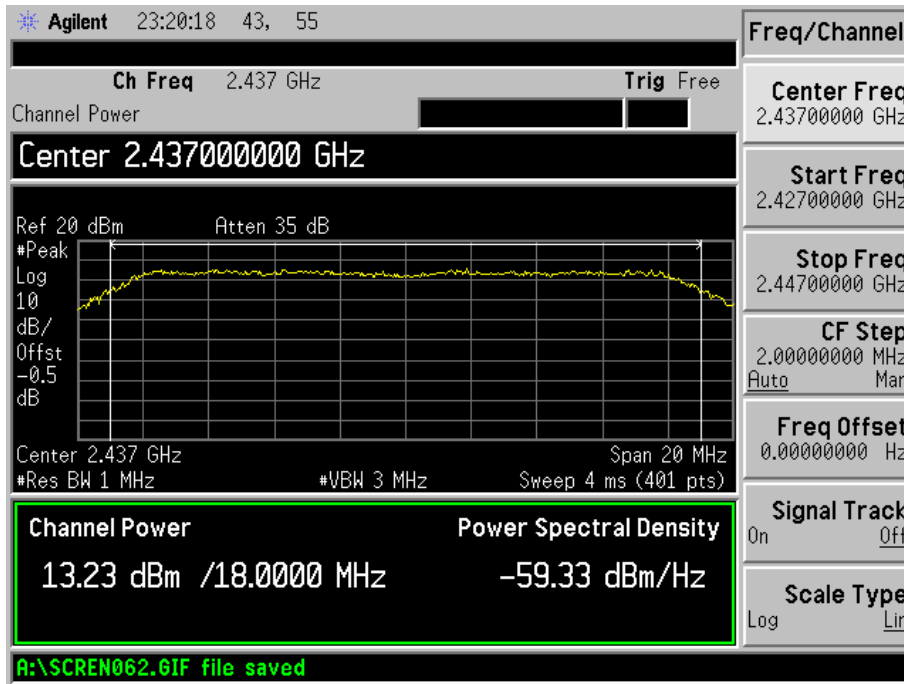
802.11 g-6Mbps-High Channel



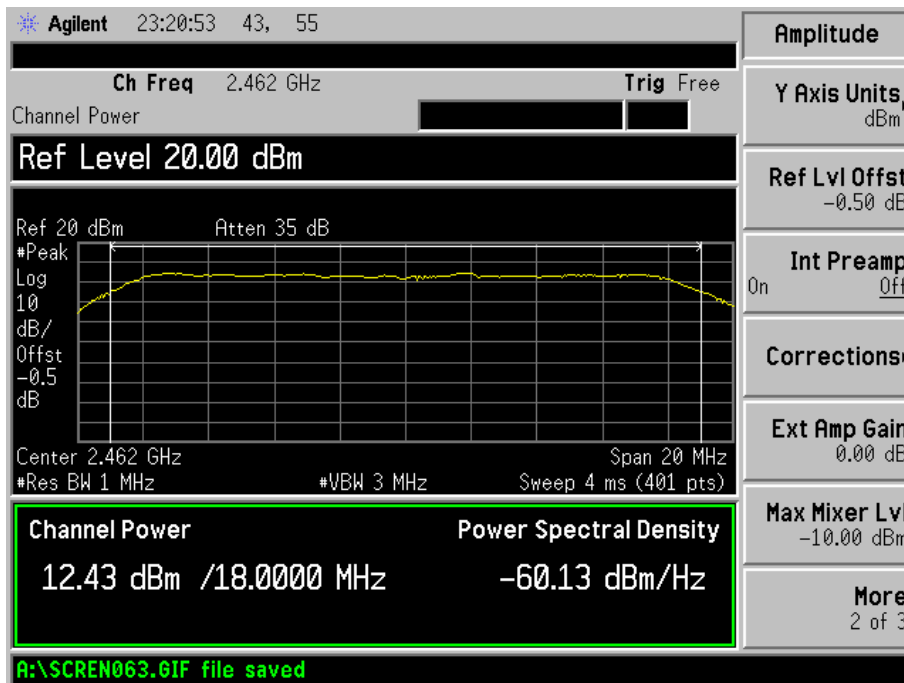
802.11g-54Mbps-Lows Channel



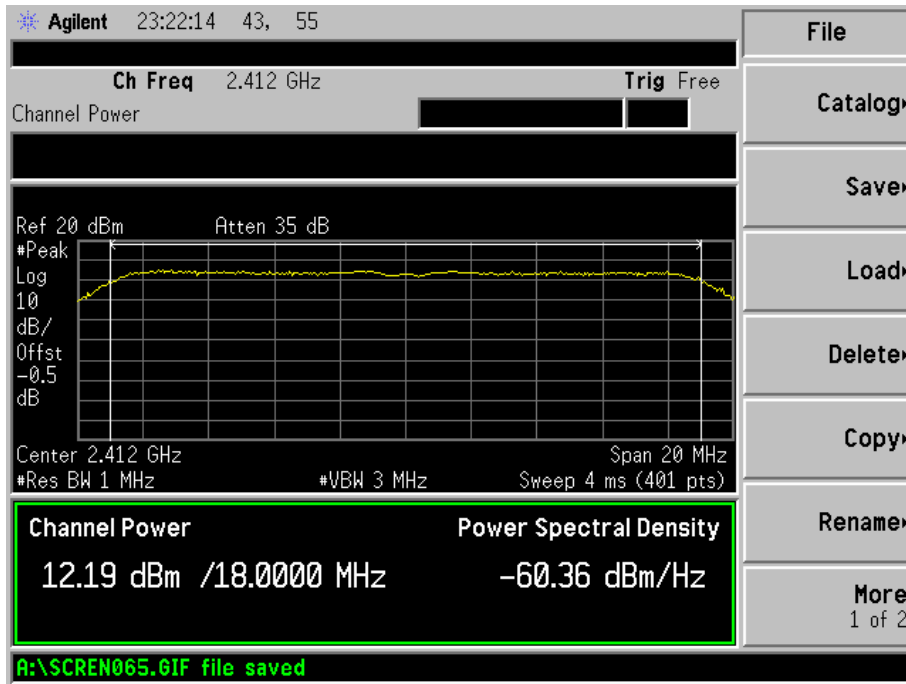
802.11g-54Mbps-Middle Channel



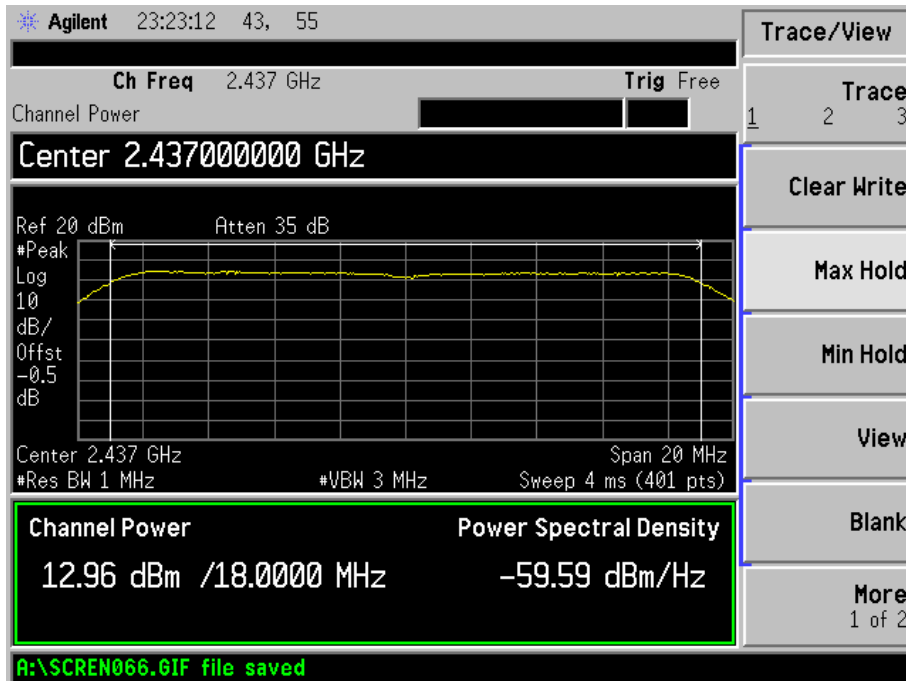
802.11g-54Mbps-High Channel



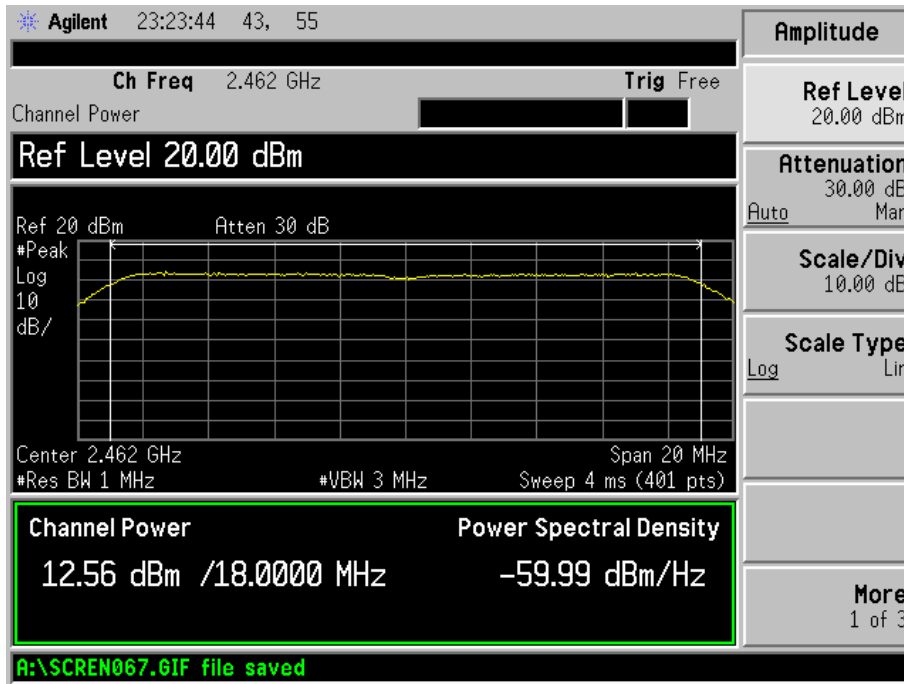
802.11n-HT20-MCS0-Low Channel



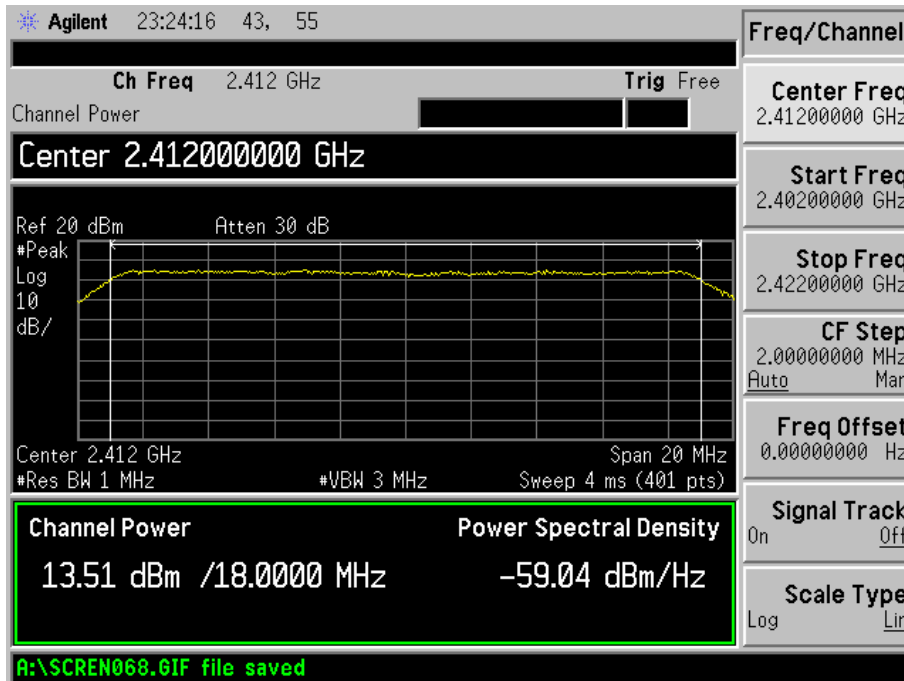
802.11n-HT20-MCS0-Middle Channel



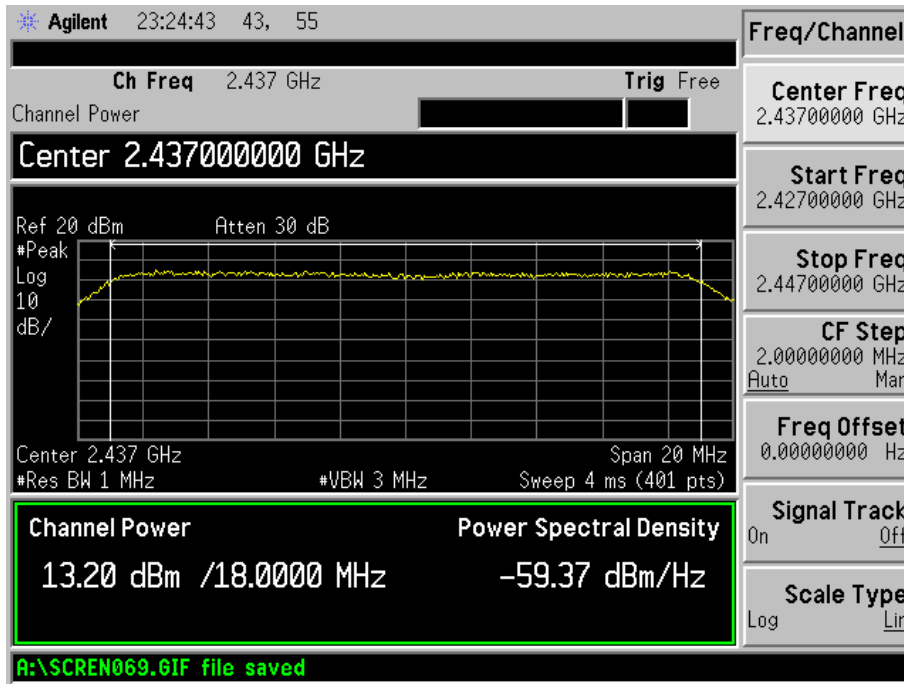
802.11n-HT20-MCS0-High Channel



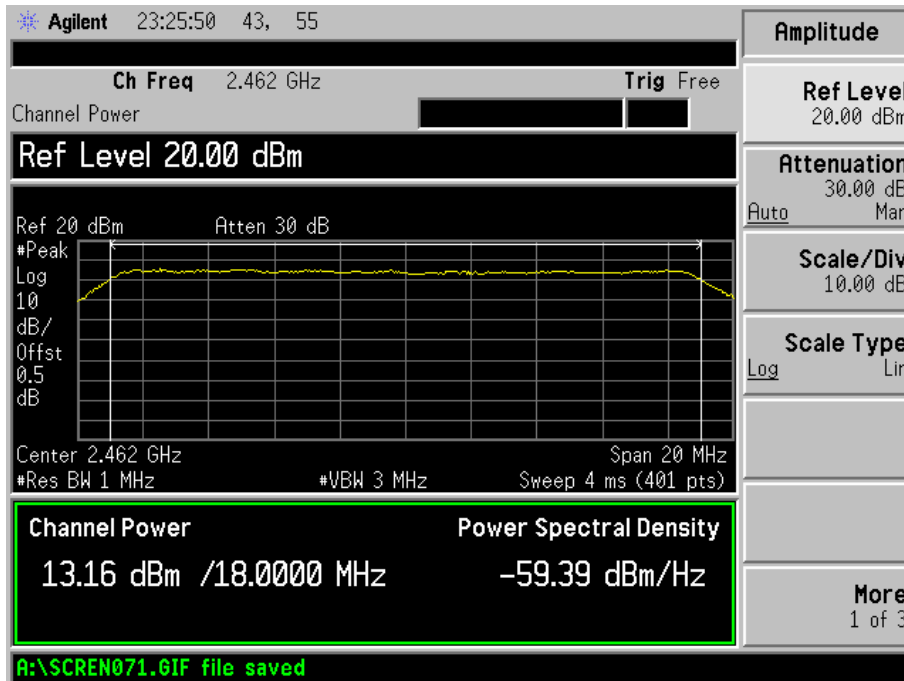
802.11n-HT20-MCS7-Low Channel



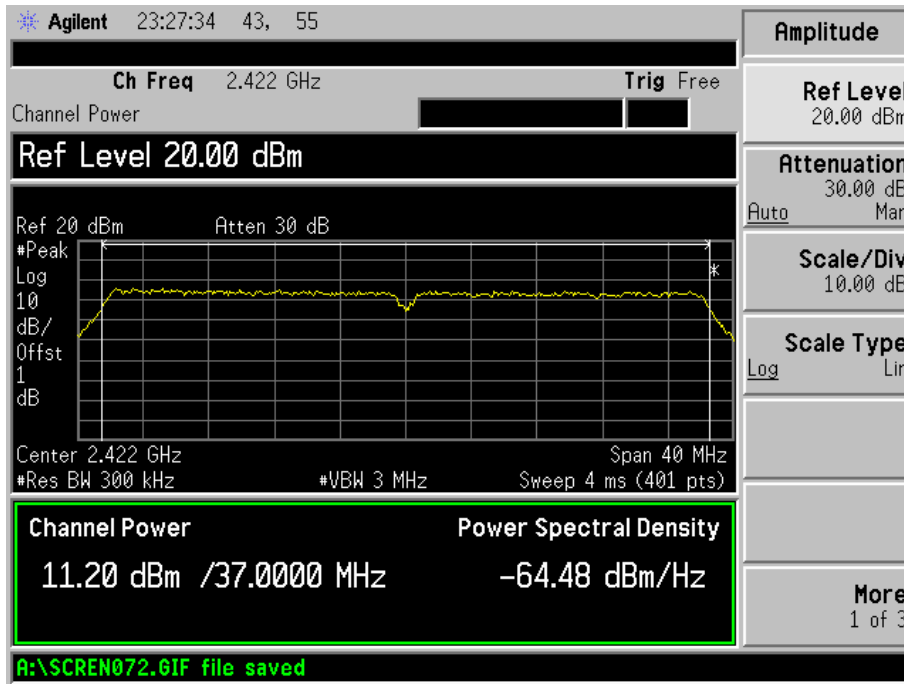
802.11n-HT20-MCS7-Middle Channel



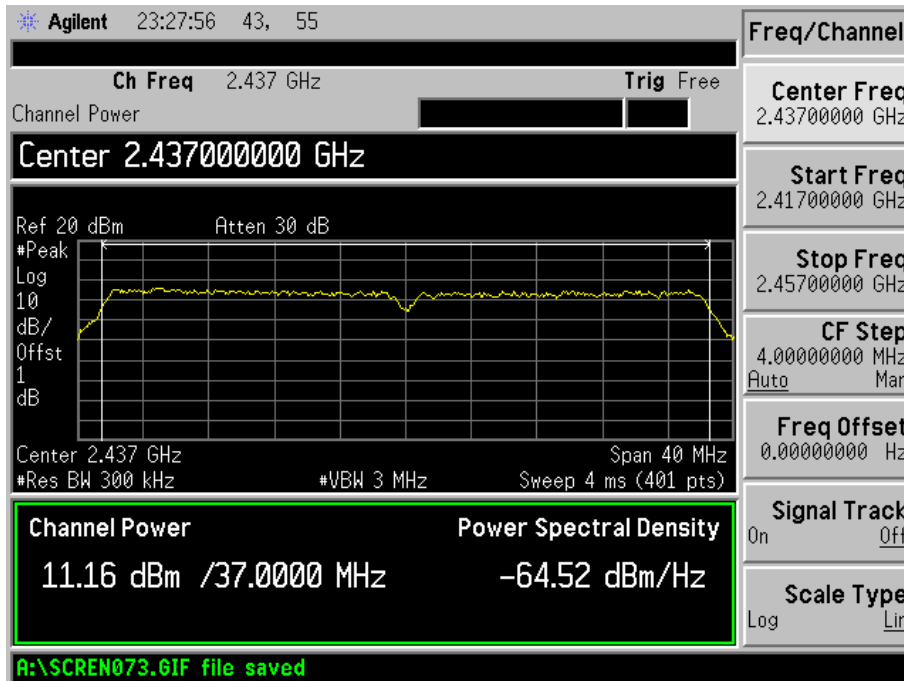
802.11n-HT20-MCS7-High Channel



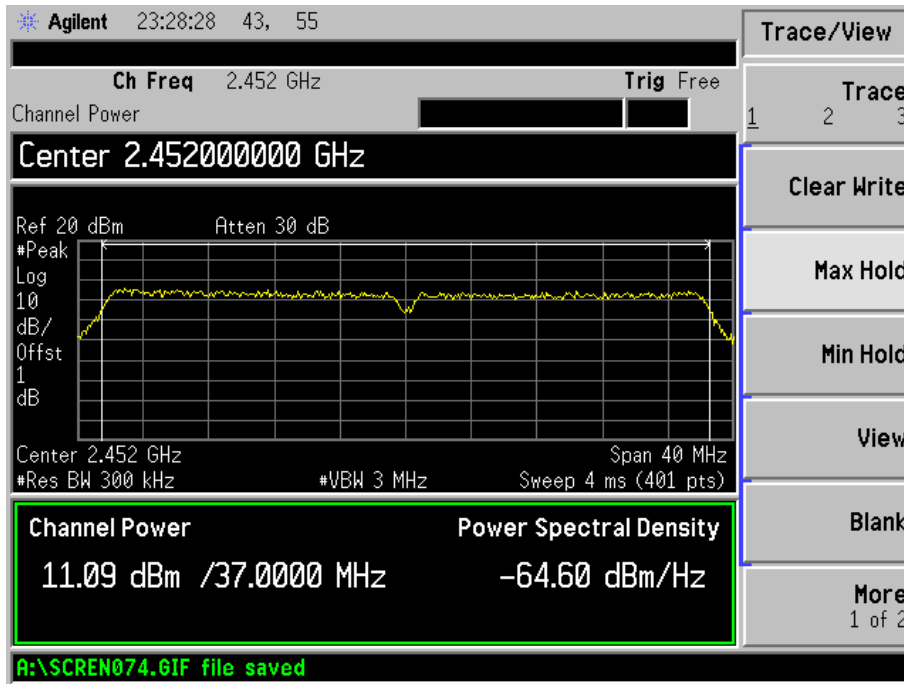
802.11n-HT40-MCS0-Low Channel



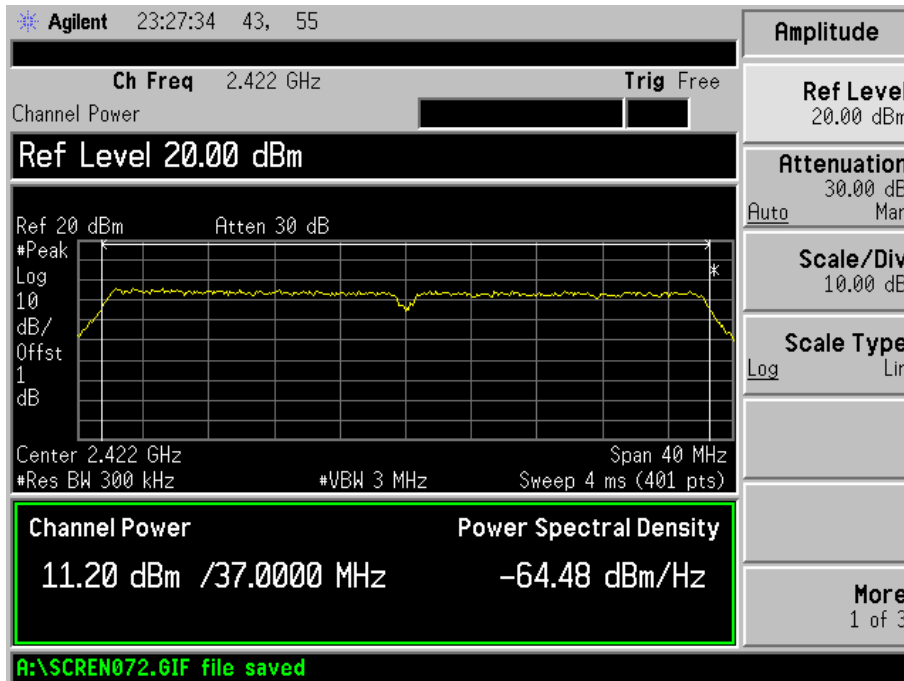
802.11n-HT40-MCS0-Middle Channel



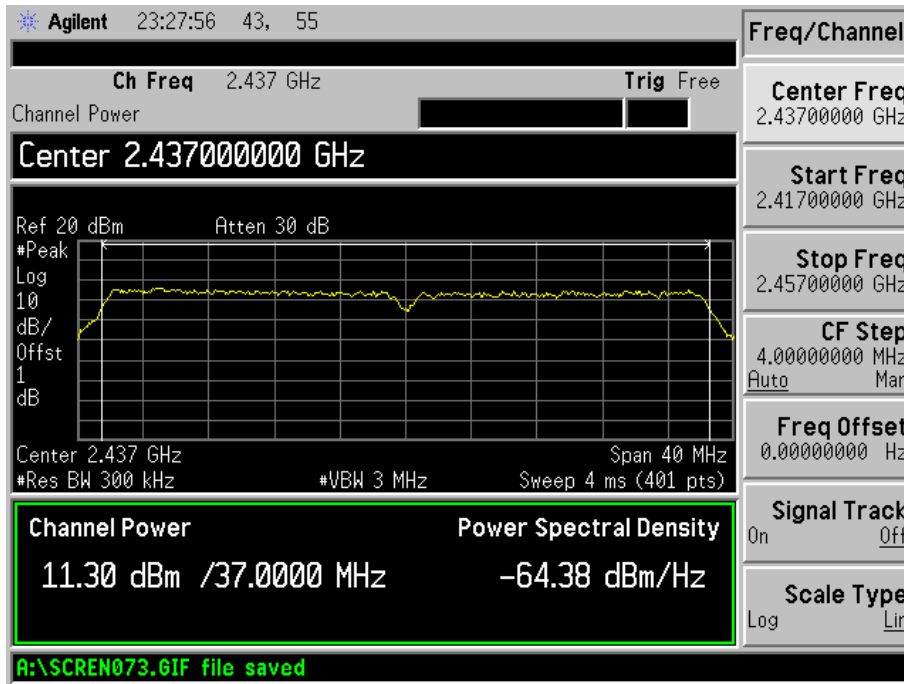
802.11n-HT40-MCS0-High Channel



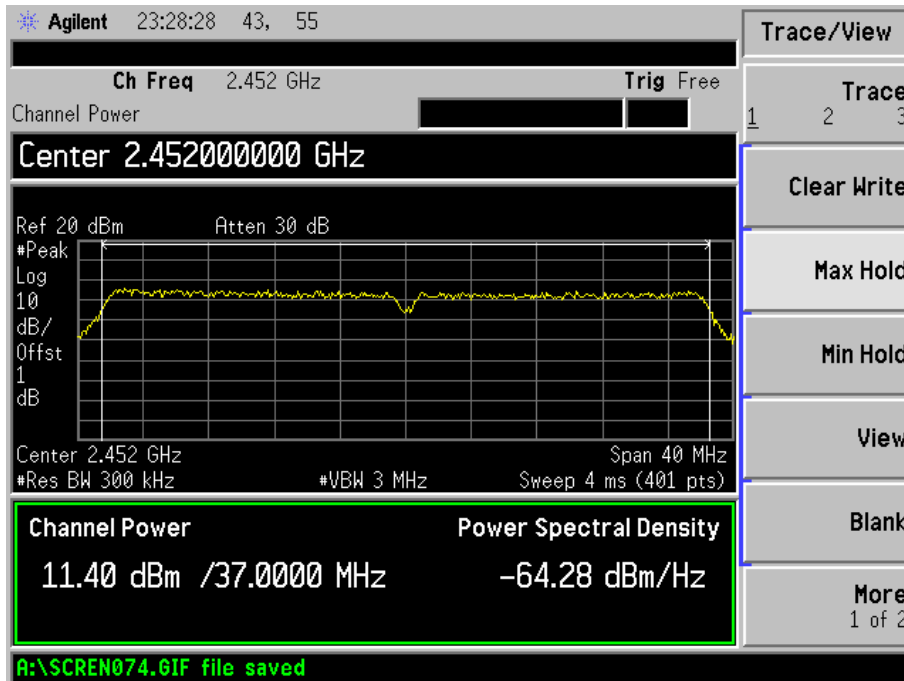
802.11n-HT40-MCS7-Low Channel



802.11n-HT40-MCS7-Middle Channel



802.11n-HT40-MCS7-High Channel



8. Field Strength of Spurious Emissions

8.1 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

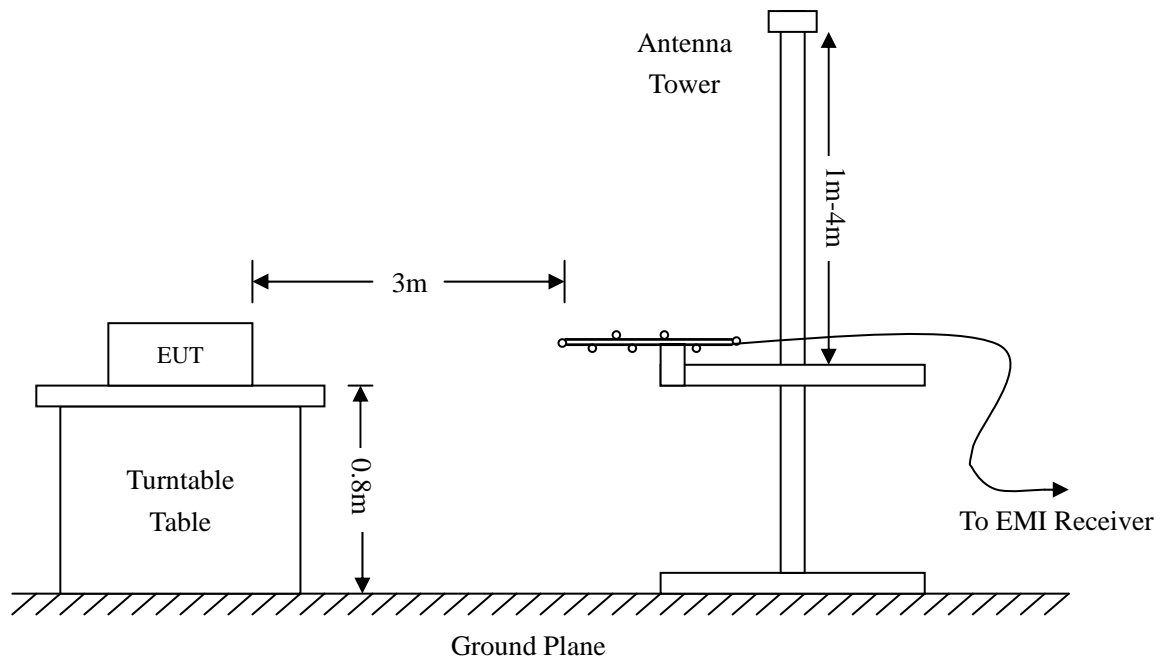
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	ETS	3117	00086197	2012-02-25	2013-02-24
Horn Antenna	ETS	3116B	00088203	2012-02-25	2013-02-24
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2012-02-25	2013-02-24

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.



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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

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:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

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 margin of:

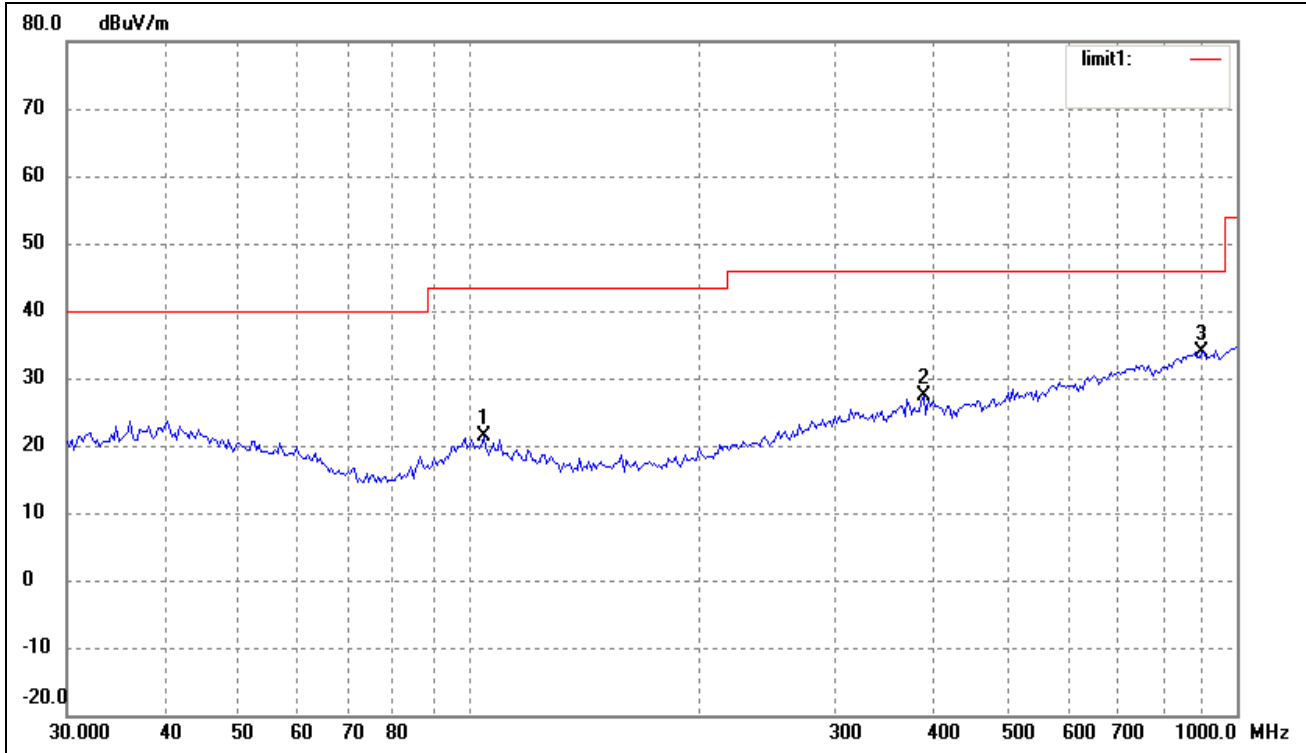
-2.15 dB at 36.2541 MHz in the Vertical polarization for 802.11n-HT40 Transmitting Middle Channel, 9kHz to 25 GHz, 3 Meters

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

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

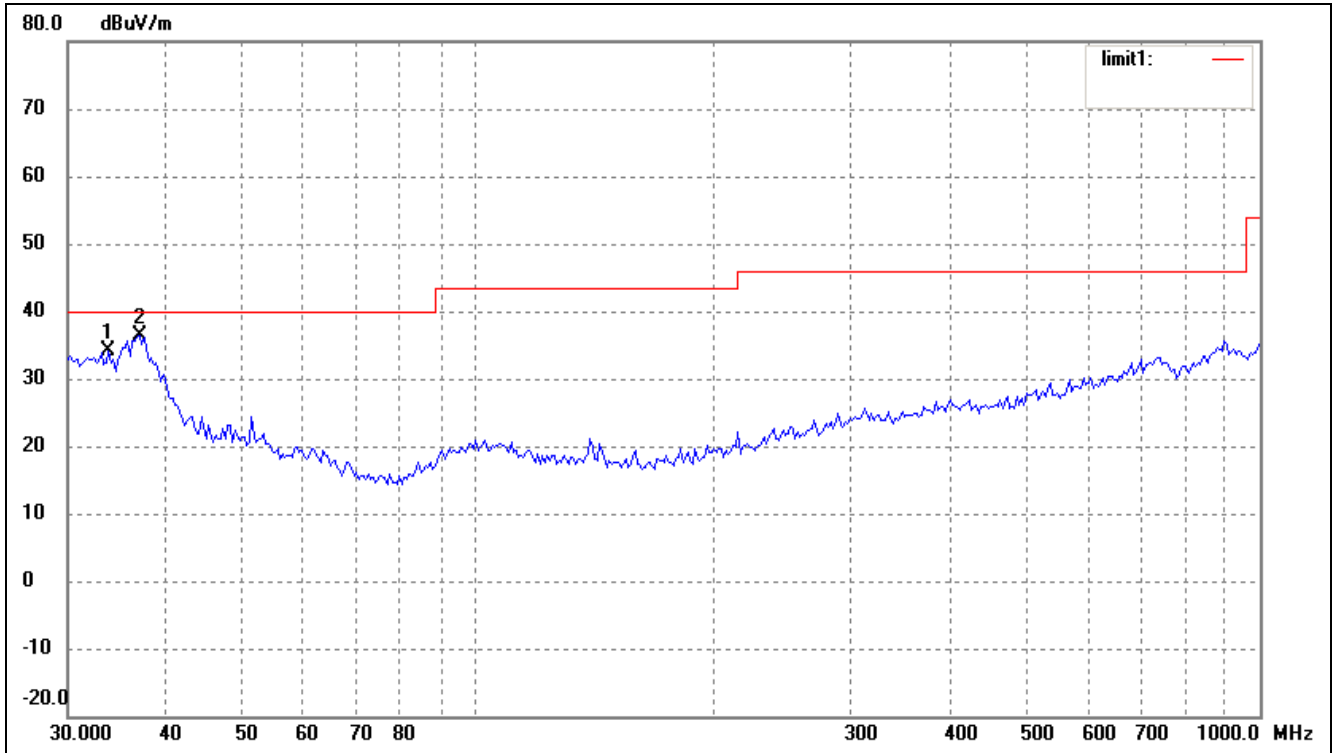
EUT: *Android phone*
 Tested Model: *S758*
 Operating Condition: *802.11b Transmitting Low Channel-2412MHz*
 Comment: *DC 3.7V li-ion Battery*

 Test Specification: *Horizontal*



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	104.5361	14.89	6.39	21.28	43.50	-22.22	250	100	peak
2	390.7226	16.20	11.12	27.32	46.00	-18.68	360	100	peak
3	900.1474	14.61	19.38	33.99	46.00	-12.01	113	100	peak

Test Specification: Vertical

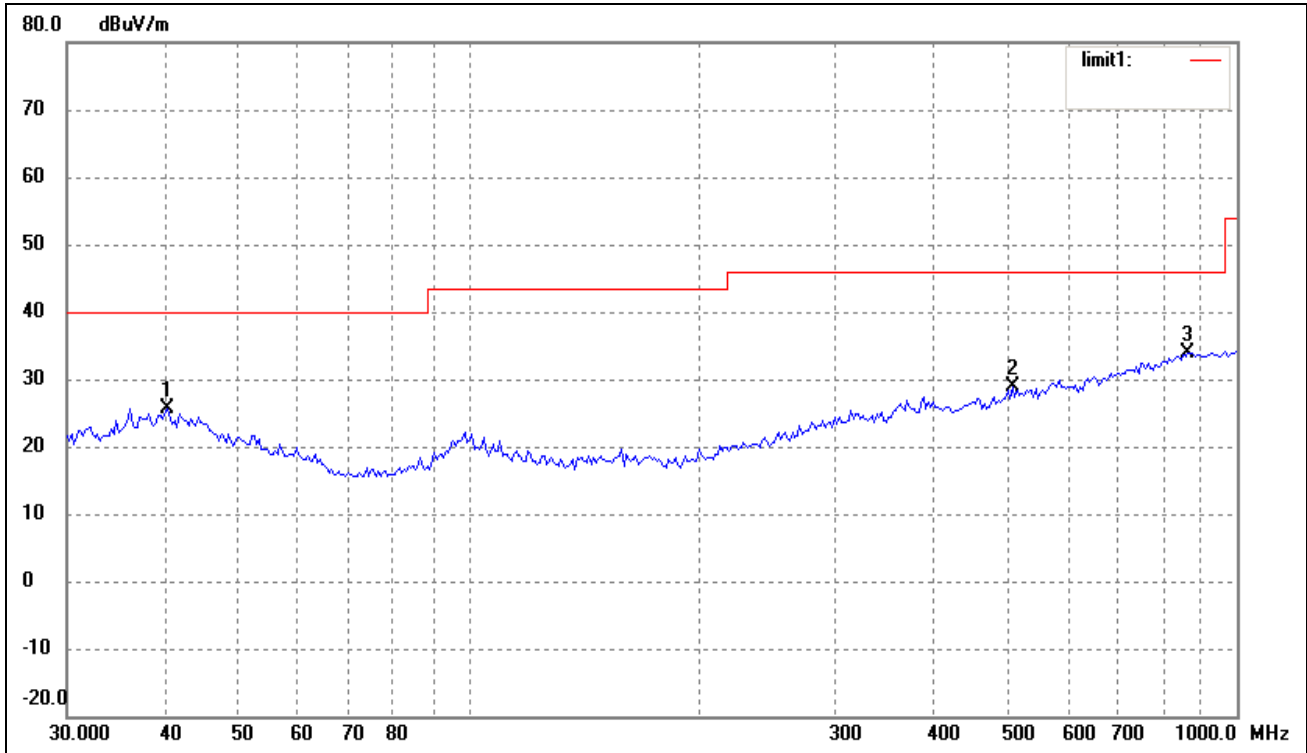


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.7986	25.55	8.68	34.23	40.00	-5.77	270	100	peak
2	37.0249	27.29	9.21	36.50	40.00	-3.50	360	100	peak

Operating Condition: 802.11b Transmitting Middle Channel-2437MHz

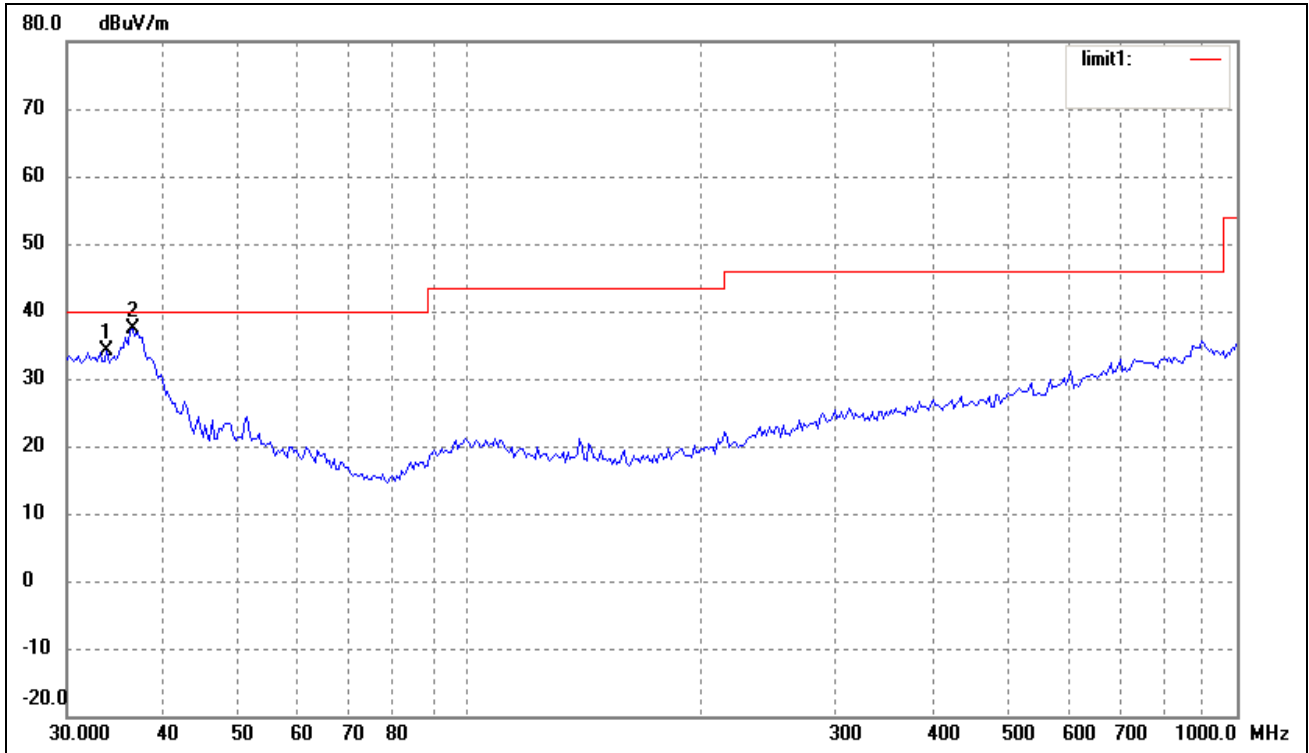
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	40.5591	16.18	9.51	25.69	40.00	-14.31	160	100	peak
2	510.0436	16.25	12.56	28.81	46.00	-17.19	290	100	peak
3	863.0562	15.71	18.27	33.98	46.00	-12.02	87	100	peak

Test Specification: Vertical

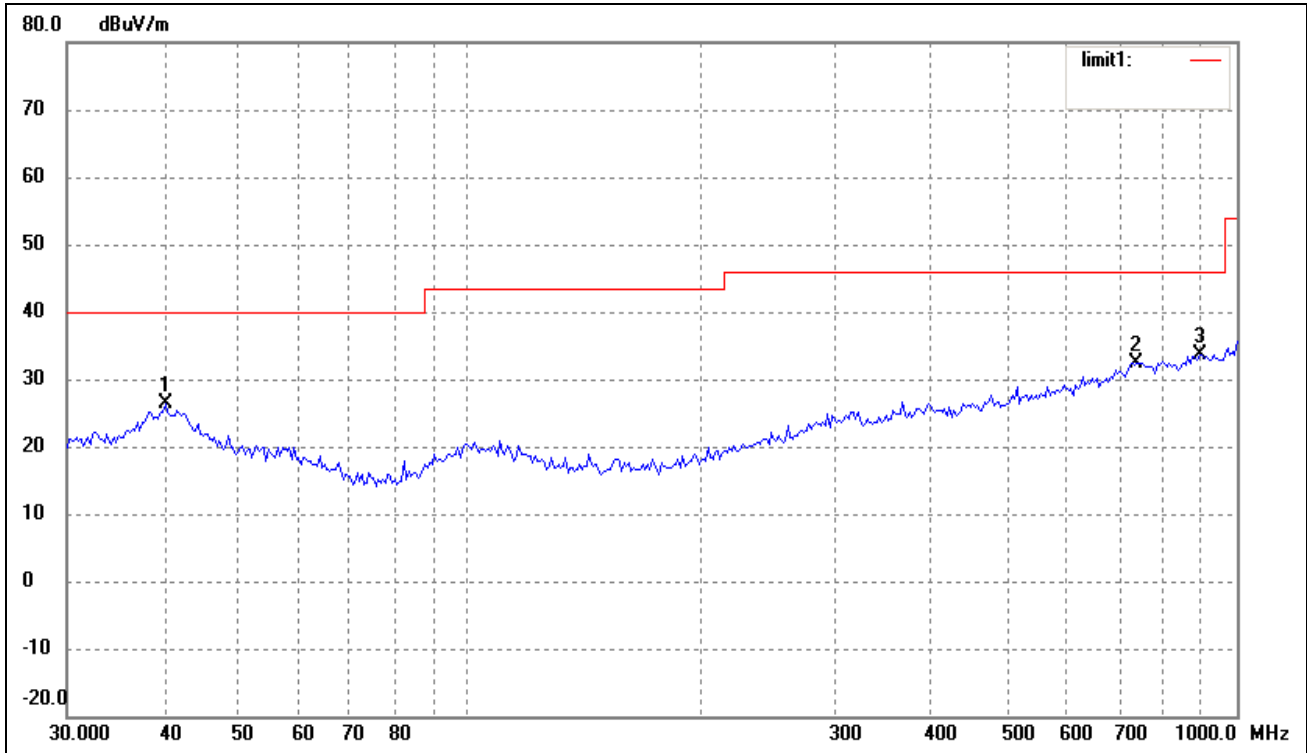


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.7986	25.55	8.68	34.23	40.00	-5.77	270	100	peak
2	36.5092	28.27	9.13	37.40	40.00	-2.60	360	100	peak

Operating Condition: 802.11b Transmitting High Channel-2462MHz

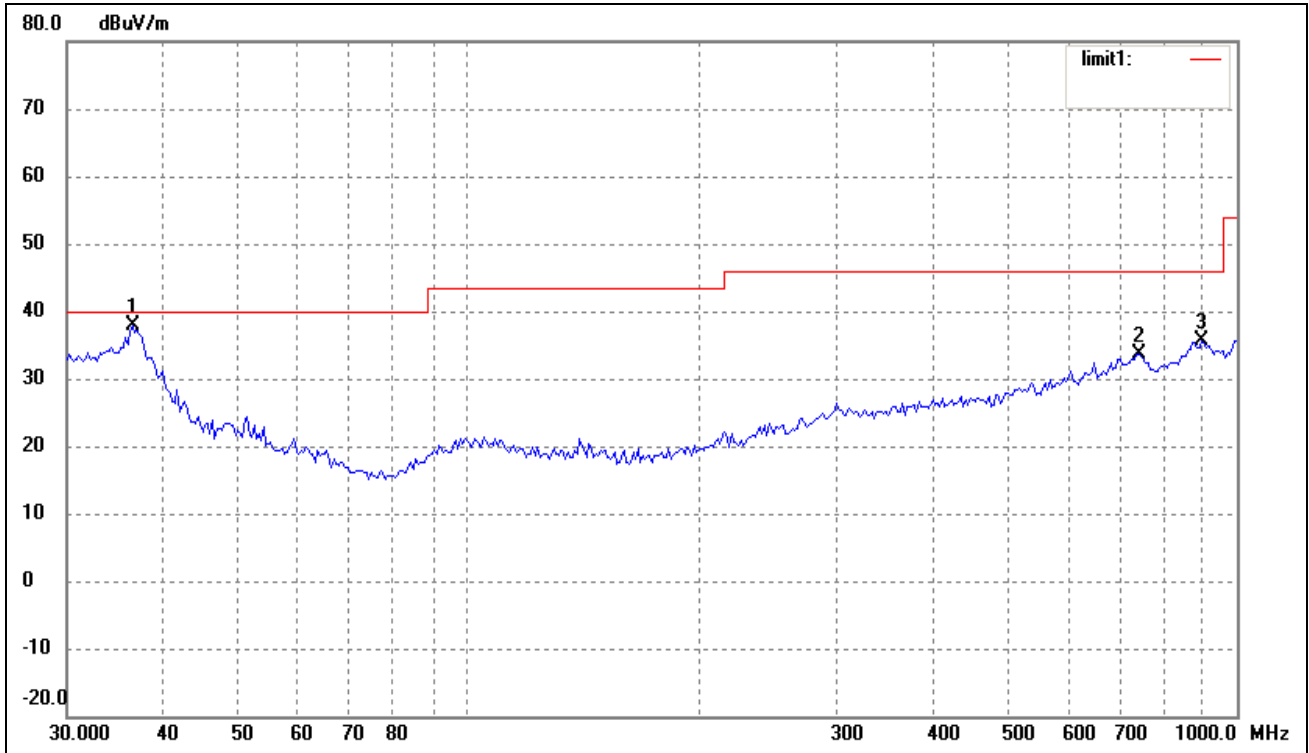
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	40.2757	16.66	9.60	26.26	40.00	-13.74	255	100	peak
2	739.6605	14.42	18.07	32.49	46.00	-13.51	360	100	peak
3	893.8567	14.30	19.27	33.57	46.00	-12.43	110	100	peak

Test Specification: Vertical

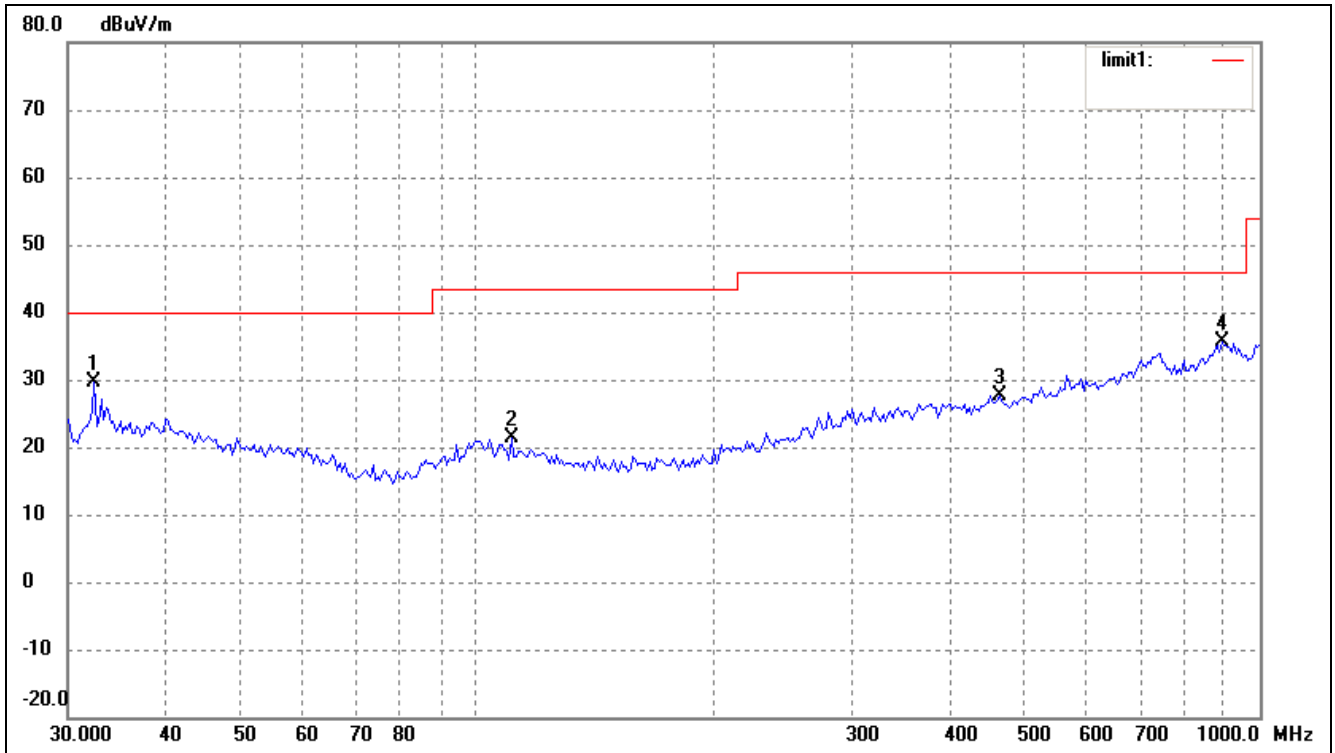


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	36.5092	28.64	9.13	37.77	40.00	-2.23	257	100	peak
2	744.8661	15.72	17.95	33.67	46.00	-12.33	34	100	peak
3	900.1474	16.29	19.38	35.67	46.00	-10.33	334	100	peak

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

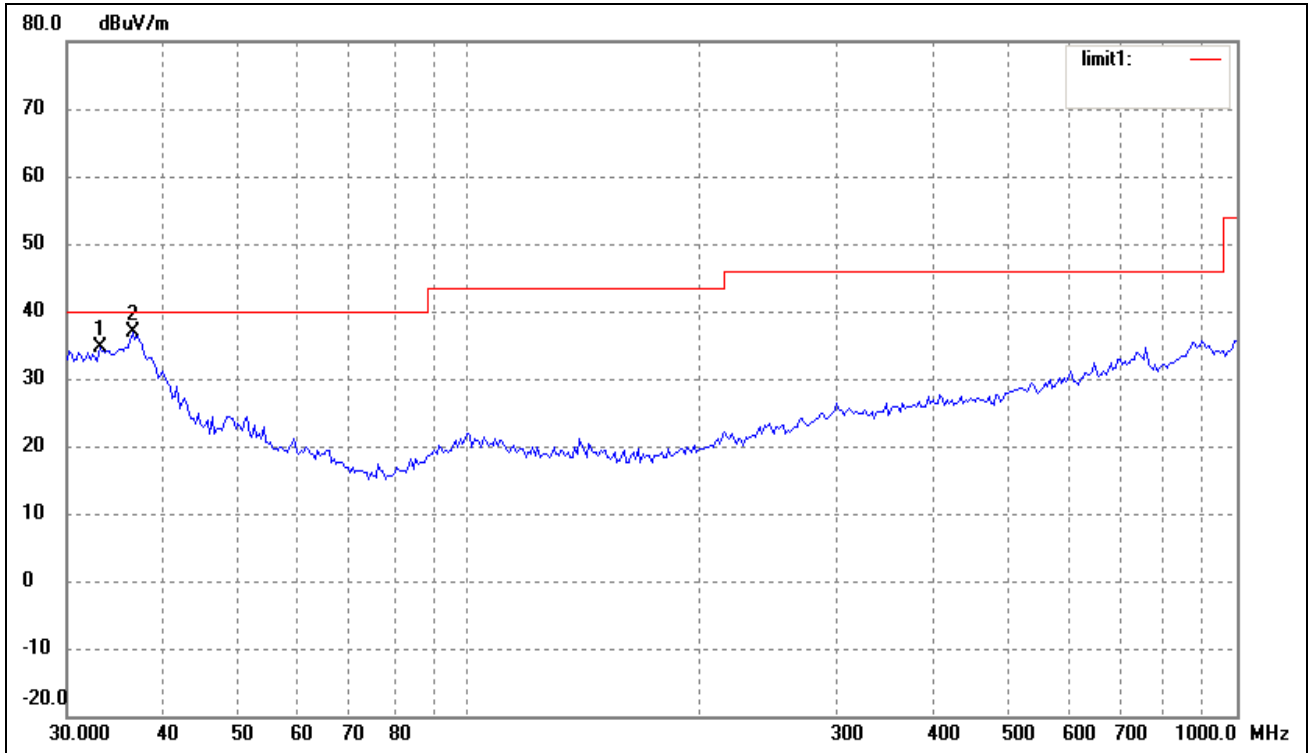
EUT: *Android phone*
 Tested Model: *S758*
 Operating Condition: *802.11g Transmitting Low Channel-2412MHz*
 Comment: *DC 3.7V li-ion Battery*

Test Specification: *Horizontal*



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.4059	21.23	8.44	29.67	40.00	-10.33	174	100	peak
2	110.5687	15.56	5.80	21.36	43.50	-22.14	160	100	peak
3	465.5994	16.02	11.69	27.71	46.00	-18.29	320	100	peak
4	893.8567	16.34	19.27	35.61	46.00	-10.39	360	100	peak

Test Specification: Vertical

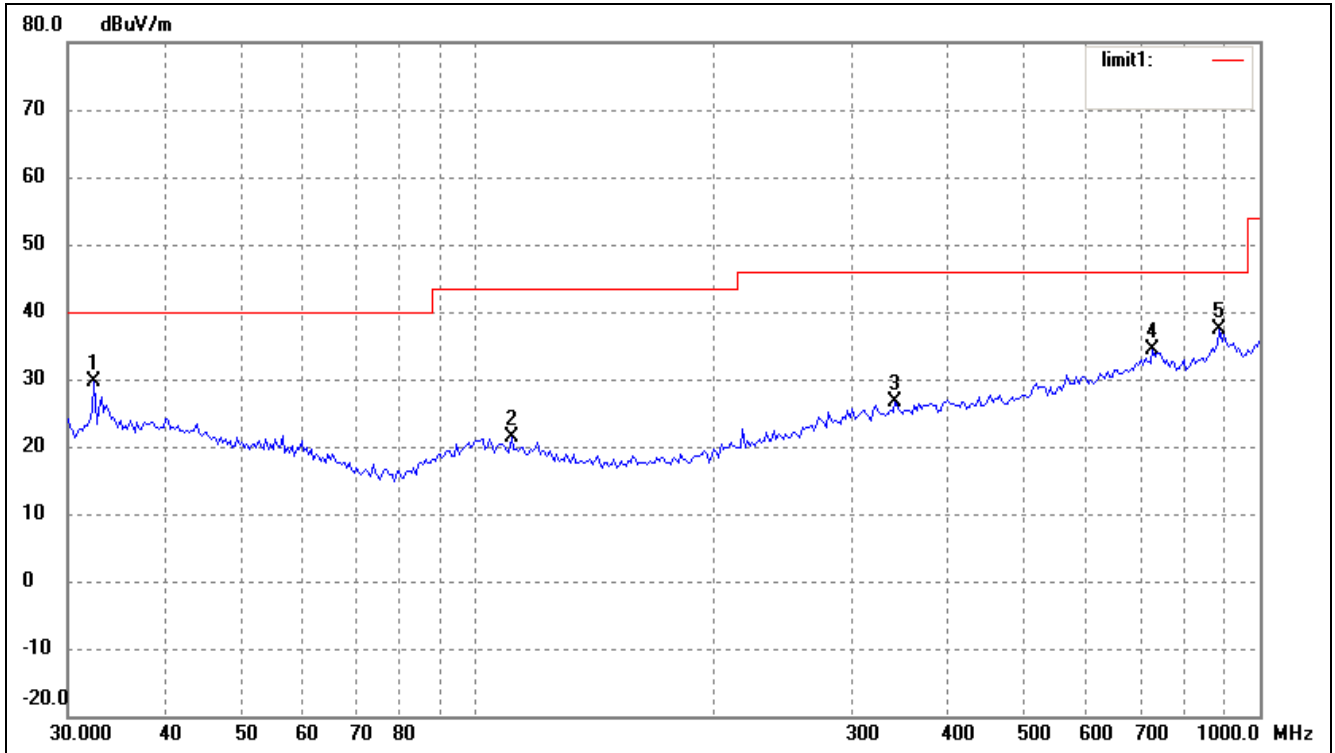


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.0950	26.11	8.56	34.67	40.00	-5.33	227	100	peak
2	36.5092	27.64	9.13	36.77	40.00	-3.23	164	100	peak

Operating Condition: 802.11g Transmitting Middle Channel-2437MHz

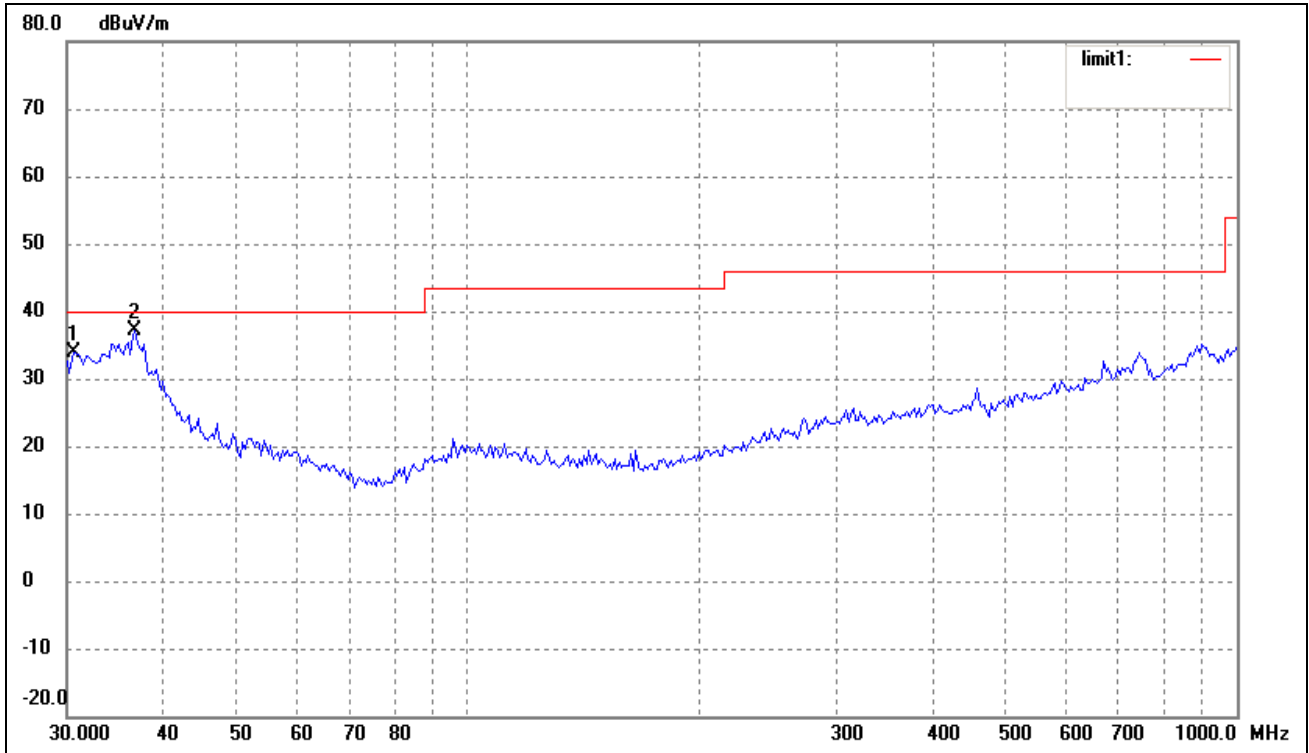
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.4059	21.23	8.44	29.67	40.00	-10.33	270	100	peak
2	110.5687	15.56	5.80	21.36	43.50	-22.14	164	100	peak
3	341.9787	16.40	10.16	26.56	46.00	-19.44	228	200	peak
4	729.3583	17.11	17.31	34.42	46.00	-11.58	130	200	peak
5	887.6099	18.21	19.15	37.36	46.00	-8.64	360	100	peak

Test Specification: Vertical

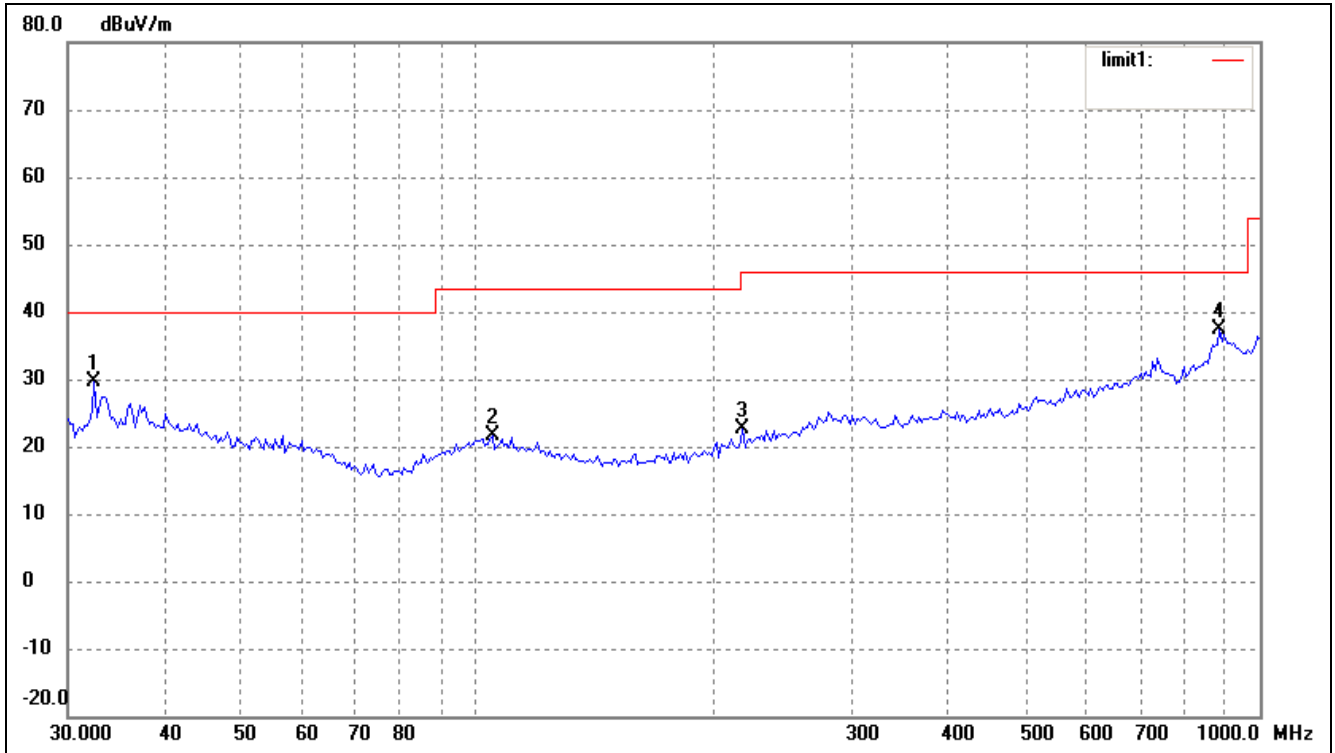


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	30.6379	25.62	8.15	33.77	40.00	-6.23	360	100	peak
2	36.7662	27.88	9.16	37.04	40.00	-2.96	255	100	peak

Operating Condition: 802.11g Transmitting High Channel-2462MHz

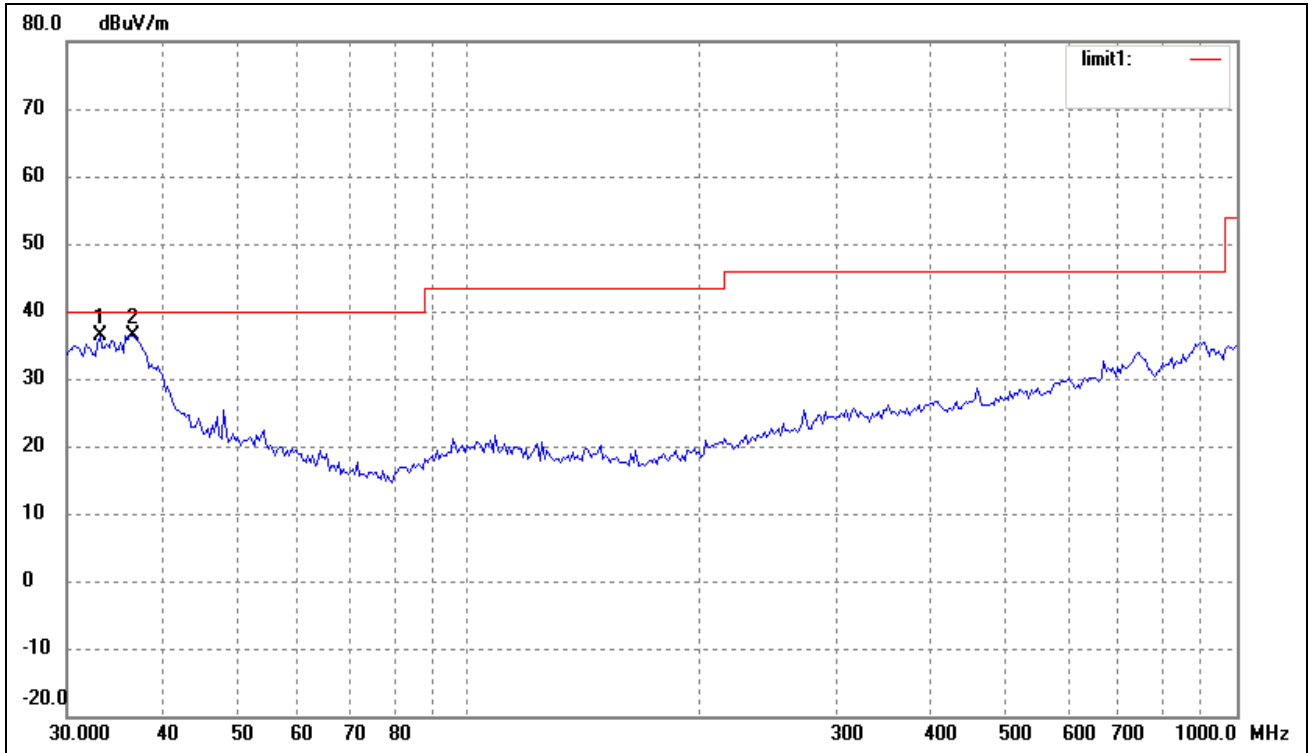
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.4059	21.23	8.44	29.67	40.00	-10.33	270	100	peak
2	104.5361	15.27	6.39	21.66	43.50	-21.84	51	200	peak
3	218.3085	16.82	5.81	22.63	46.00	-23.37	360	200	peak
4	887.6099	18.21	19.15	37.36	46.00	-8.64	360	100	peak

Test Specification: Vertical

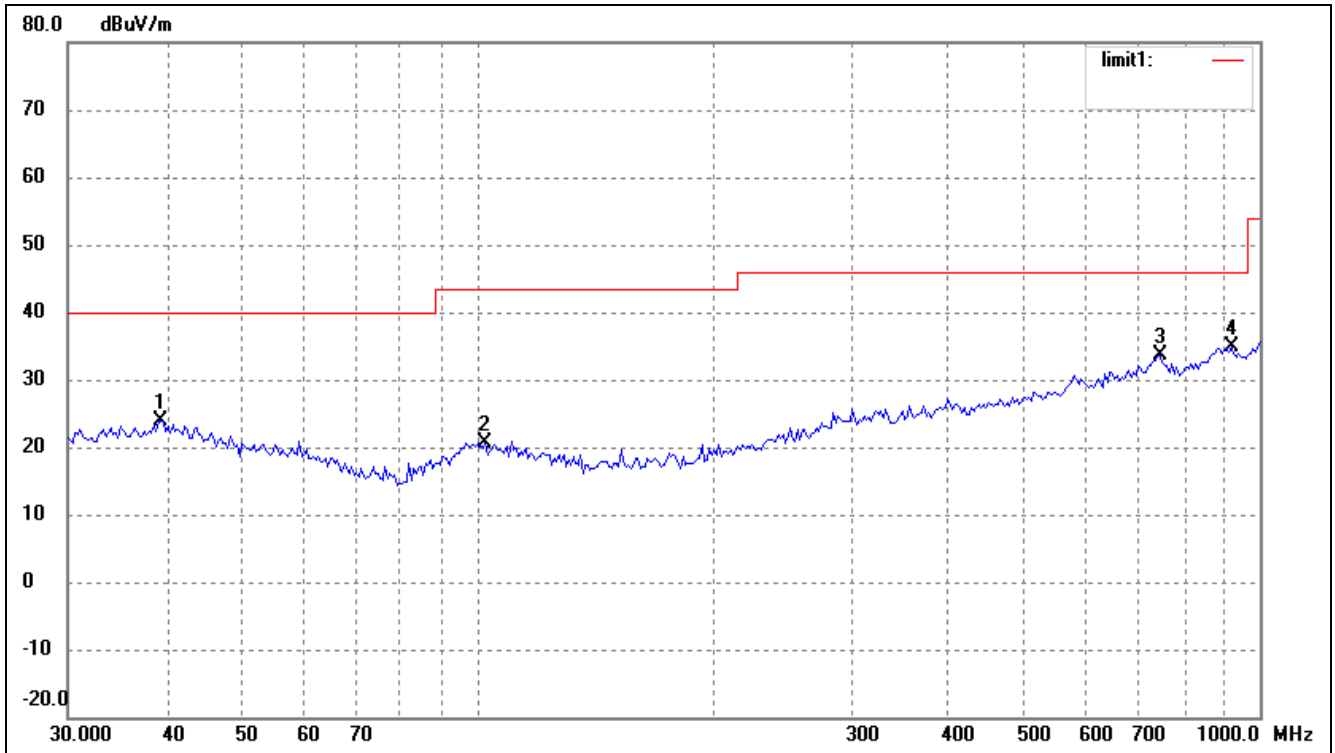


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.0950	27.92	8.56	36.48	40.00	-3.52	225	100	peak
2	36.5092	27.34	9.13	36.47	40.00	-3.53	67	100	peak

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

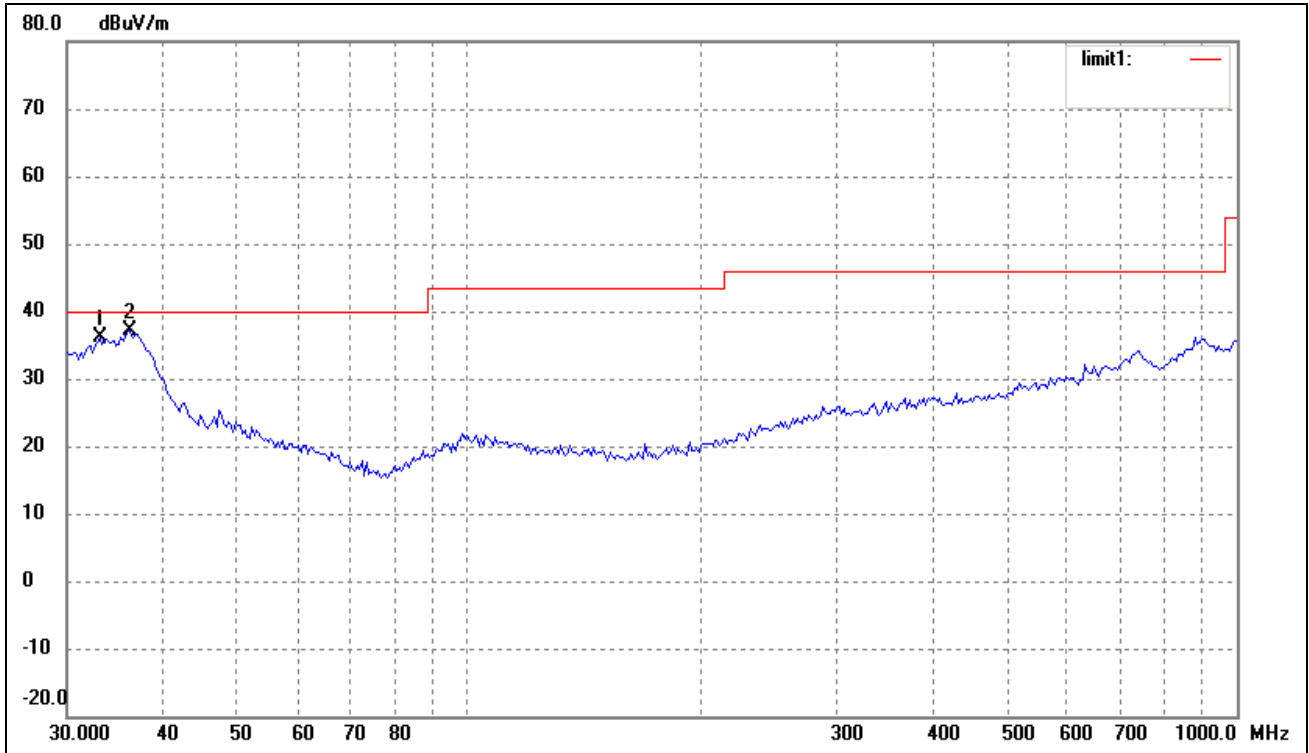
EUT: *Android phone*
 Tested Model: *S758*
 Operating Condition: *802.11n-HT20 Transmitting Low Channel-2412MHz*
 Comment: *DC 3.7V li-ion Battery*

Test Specification: *Horizontal*



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.4372	14.37	9.60	23.97	40.00	-16.03	260	100	peak
2	102.3597	14.14	6.61	20.75	43.50	-22.75	131	200	peak
3	744.8661	15.61	17.95	33.56	46.00	-12.44	285	200	peak
4	919.2866	16.27	18.70	34.97	46.00	-11.03	224	100	peak

Test Specification: Vertical

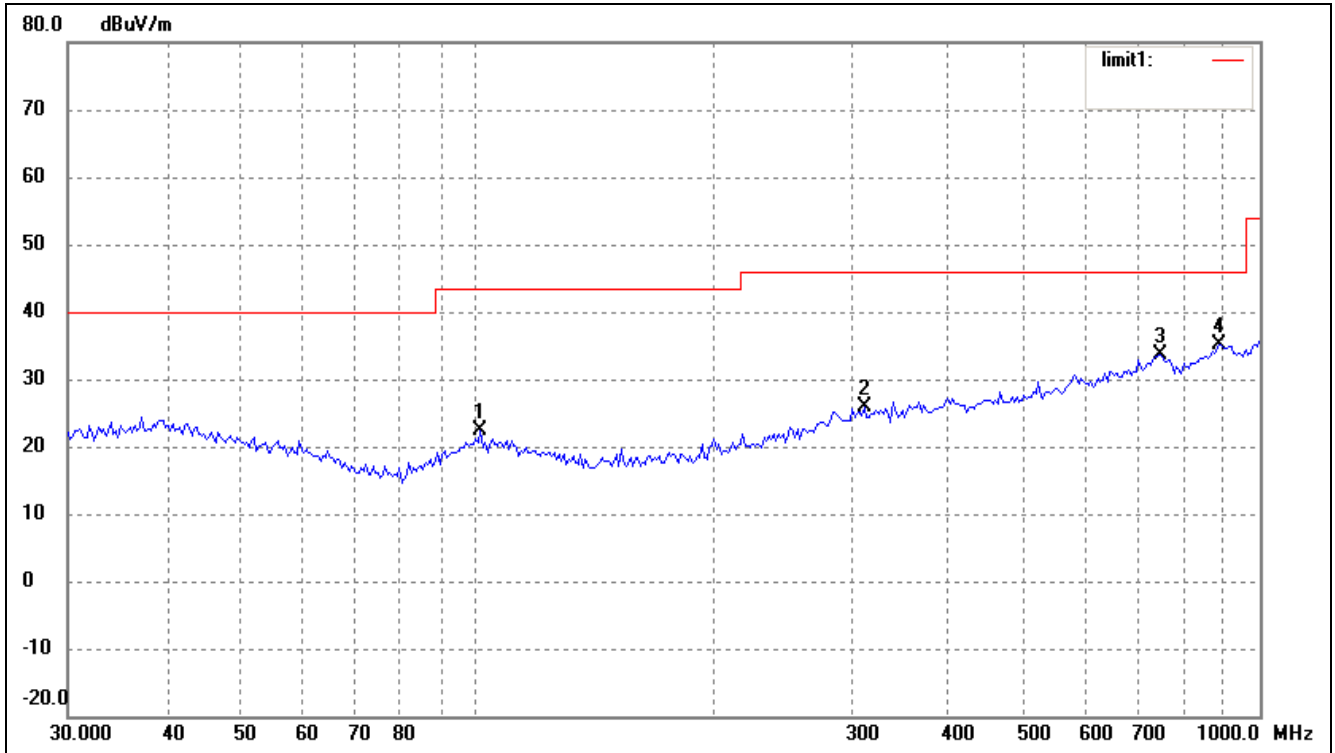


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.0950	27.51	8.56	36.07	40.00	-3.93	310	100	peak
2	36.2541	28.03	9.09	37.12	40.00	-2.88	229	100	peak

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

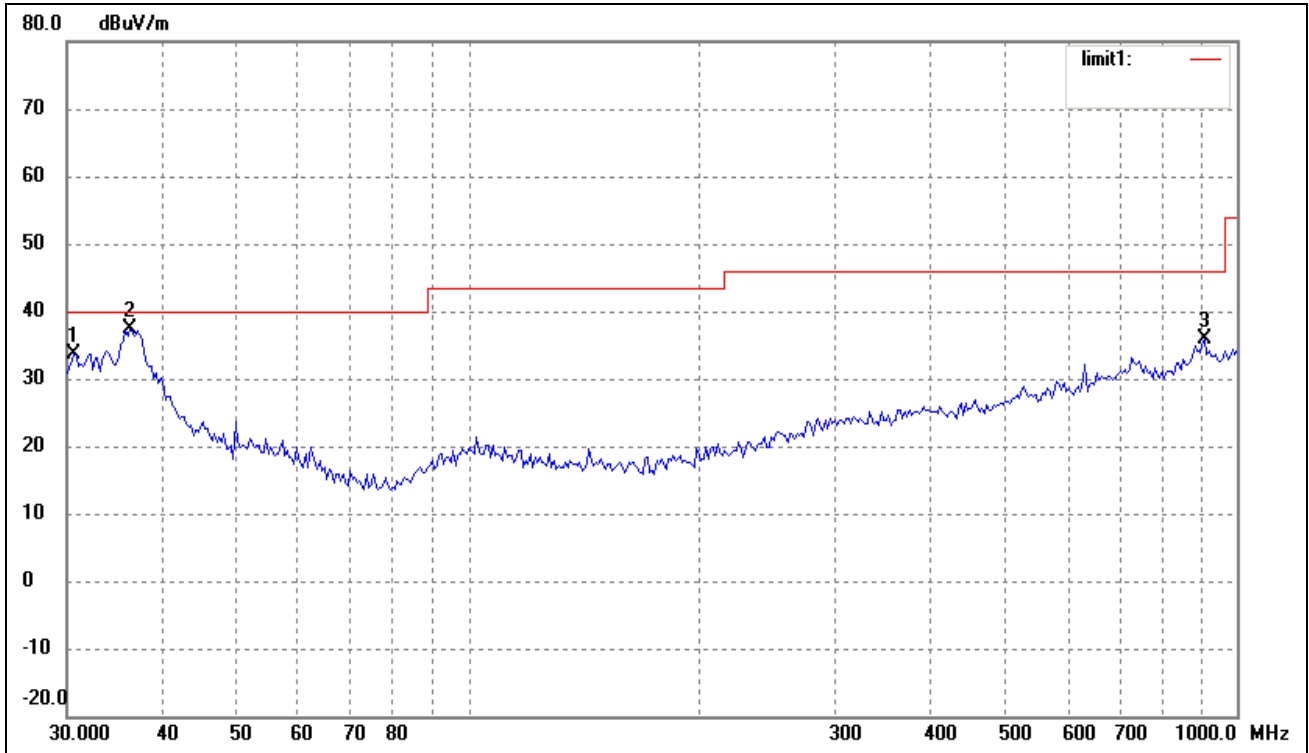
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	100.9340	15.68	6.75	22.43	43.50	-21.07	274	100	peak
2	312.1794	15.59	10.36	25.95	46.00	-20.05	116	100	peak
3	744.8661	15.61	17.95	33.56	46.00	-12.44	82	100	peak
4	887.6099	15.93	19.15	35.08	46.00	-10.92	134	100	peak

Test Specification: Vertical

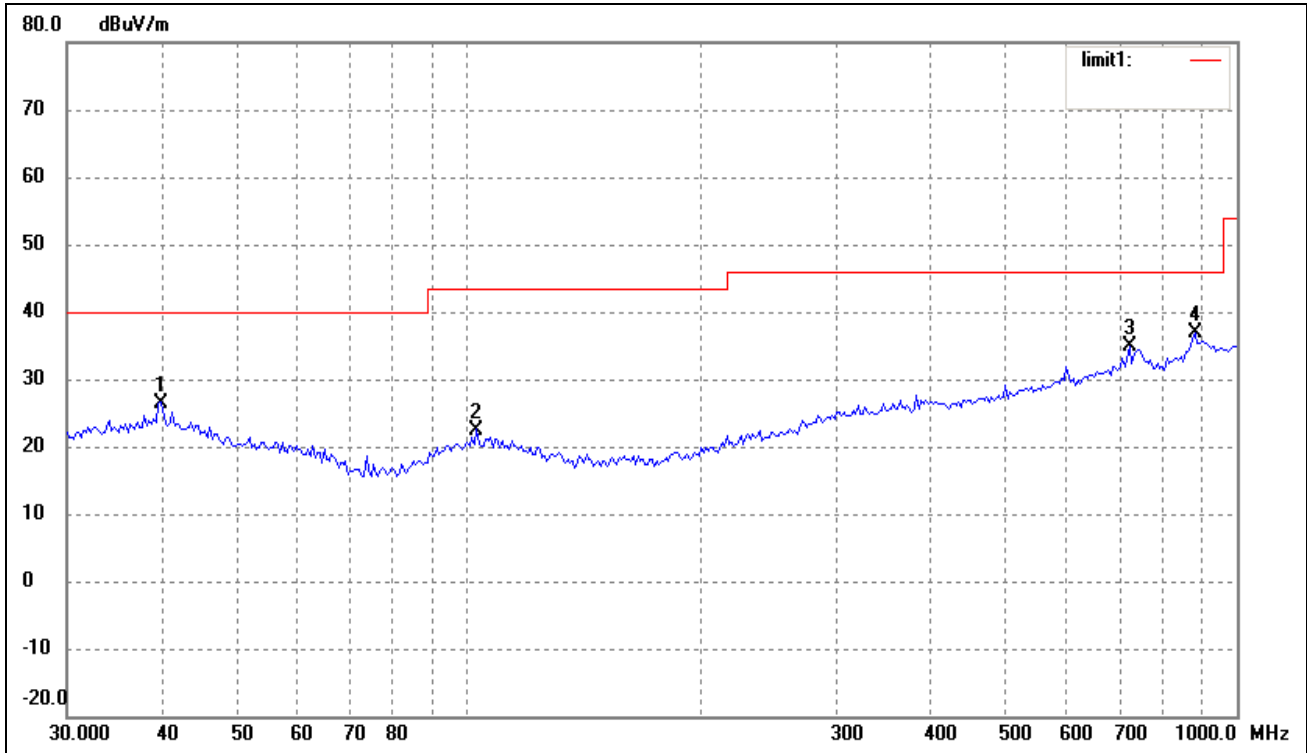


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	30.6379	25.56	8.15	33.71	40.00	-6.29	136	100	peak
2	36.2541	28.18	9.09	37.27	40.00	-2.73	90	100	peak
3	906.4824	16.79	19.15	35.94	46.00	-10.06	360	100	peak

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

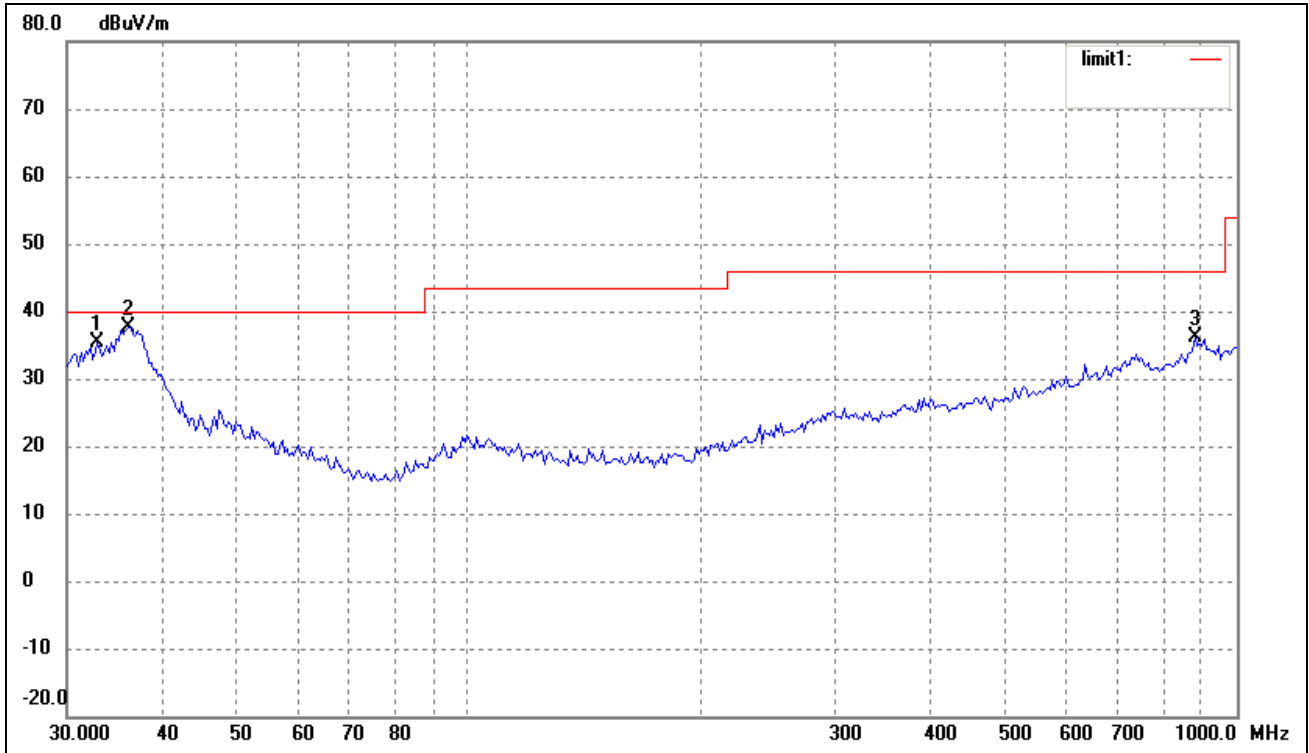
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.7147	16.86	9.64	26.50	40.00	-13.50	360	100	peak
2	102.3597	15.89	6.61	22.50	43.50	-21.00	112	100	peak
3	724.2611	18.01	16.93	34.94	46.00	-11.06	180	200	peak
4	881.4067	17.84	19.03	36.87	46.00	-9.13	270	200	peak

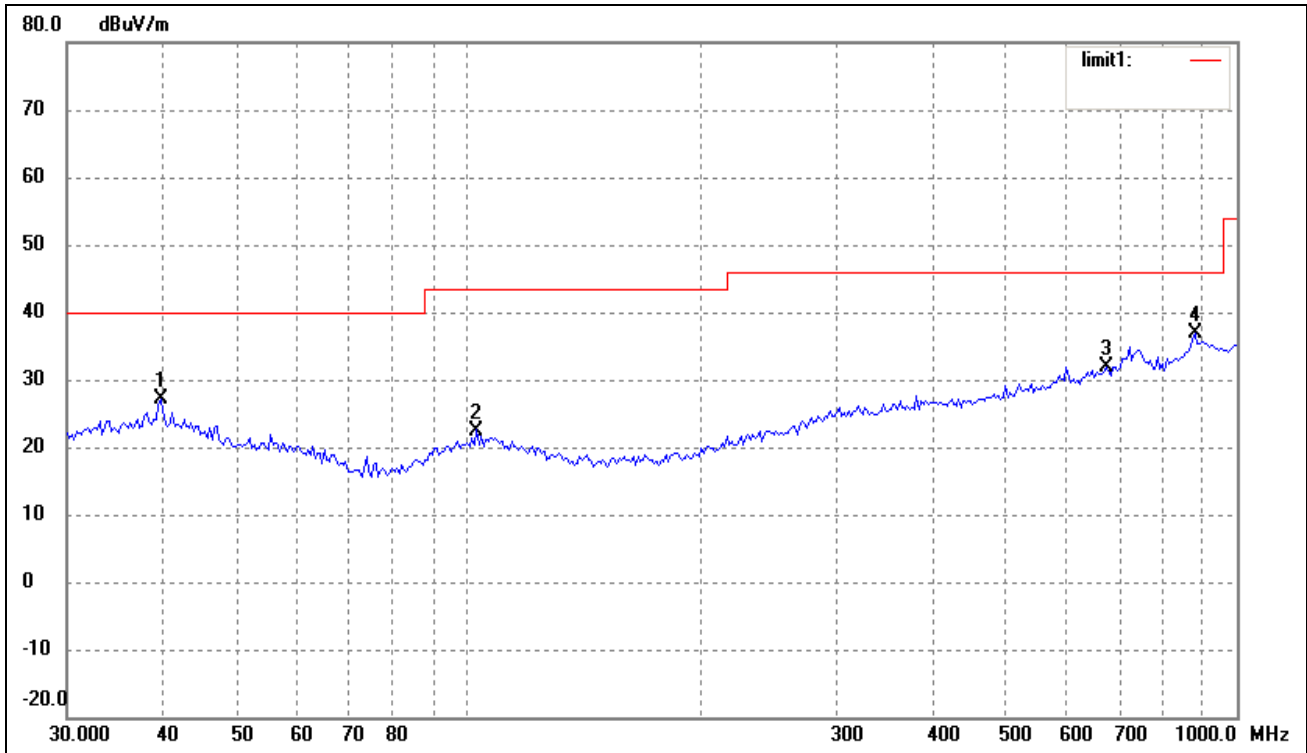
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.8637	26.91	8.52	35.43	40.00	-4.57	116	100	peak
2	36.0007	28.69	9.04	37.73	40.00	-2.27	360	100	peak
3	881.4067	17.10	19.03	36.13	46.00	-9.87	228	100	peak

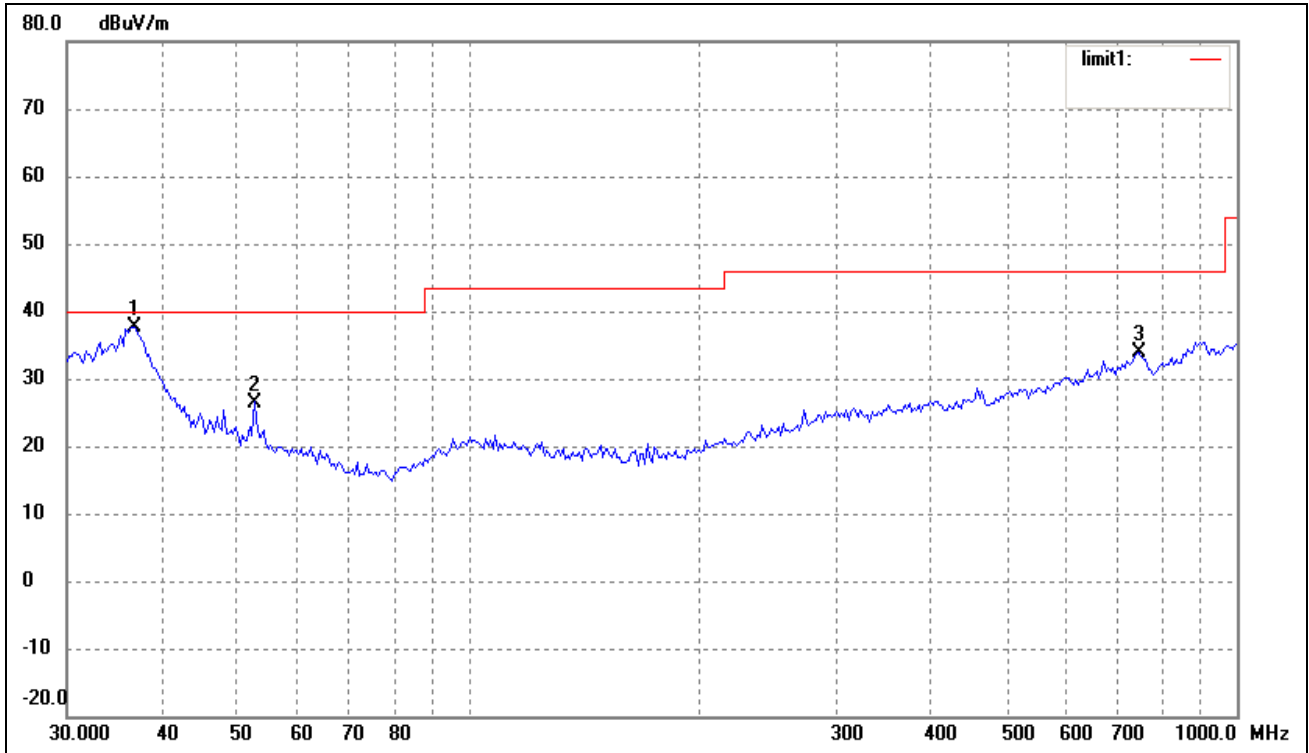
Plot of Radiated Emissions Test Data (30MHz to 1GHz)

EUT: *Android phone*
 Tested Model: *S758*
 Operating Condition: *802.11n-HT40 Transmitting Low Channel-2422MHz*
 Comment: *DC 3.7V li-ion Battery*
 Test Specification: *Horizontal*



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.7147	17.39	9.64	27.03	40.00	-12.97	267	100	peak
2	102.3597	15.89	6.61	22.50	43.50	-21.00	114	200	peak
3	675.2080	16.60	15.36	31.96	46.00	-14.04	35	200	peak
4	881.4067	17.84	19.03	36.87	46.00	-9.13	81	100	peak

Test Specification: Vertical

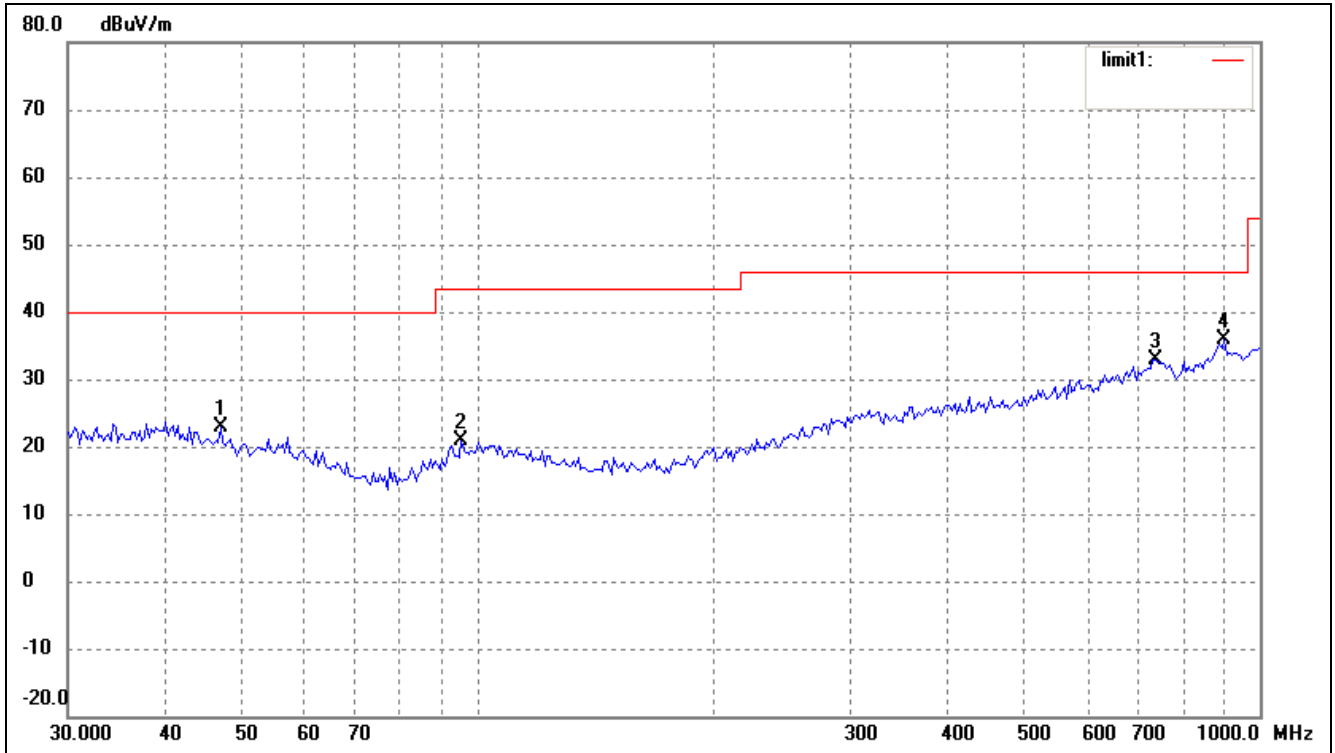


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	36.7662	28.37	9.16	37.53	40.00	-2.47	347	100	peak
2	52.5753	20.12	6.38	26.50	40.00	-13.50	270	100	peak
3	744.8661	15.93	17.95	33.88	46.00	-12.12	90	100	peak

Operating Condition: 802.11n-HT40 Transmitting Middle Channel-2437MHz

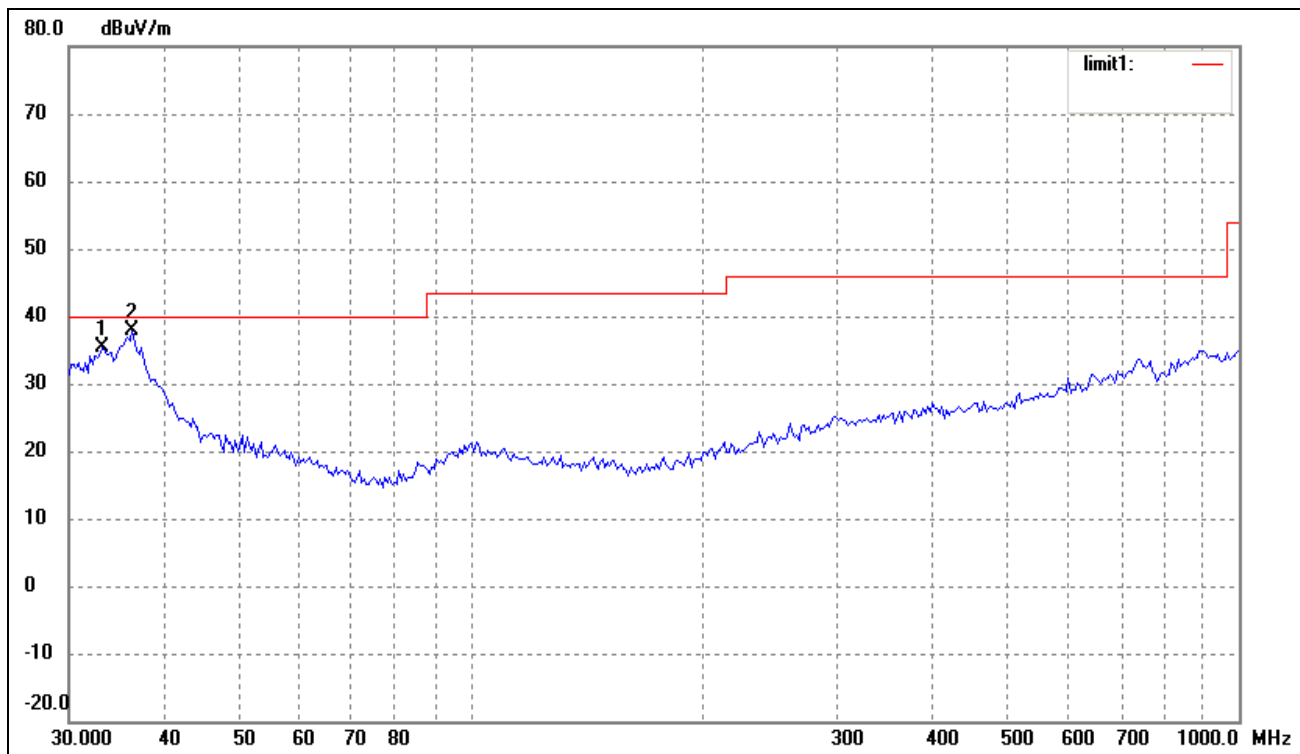
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	46.9948	15.43	7.54	22.97	40.00	-17.03	251	100	peak
2	95.4270	15.15	5.71	20.86	43.50	-22.64	167	100	peak
3	734.4913	15.18	17.68	32.86	46.00	-13.14	44	100	peak
4	900.1474	16.39	19.38	35.77	46.00	-10.23	130	100	peak

Test Specification: Vertical

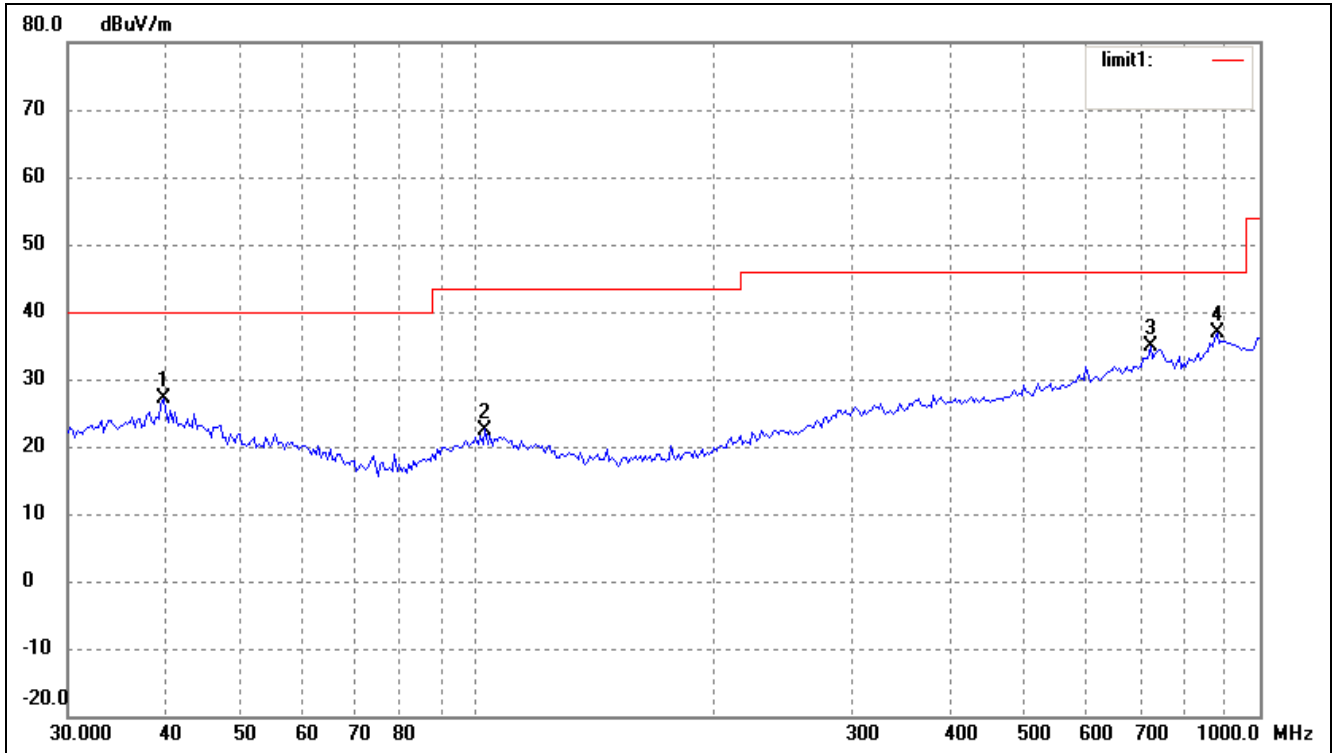


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.0950	26.70	8.56	35.26	40.00	-4.74	360	100	peak
2	36.2541	28.76	9.09	37.85	40.00	-2.15	245	100	peak

Operating Condition: 802.11n-HT40 Transmitting High Channel-2452MHz

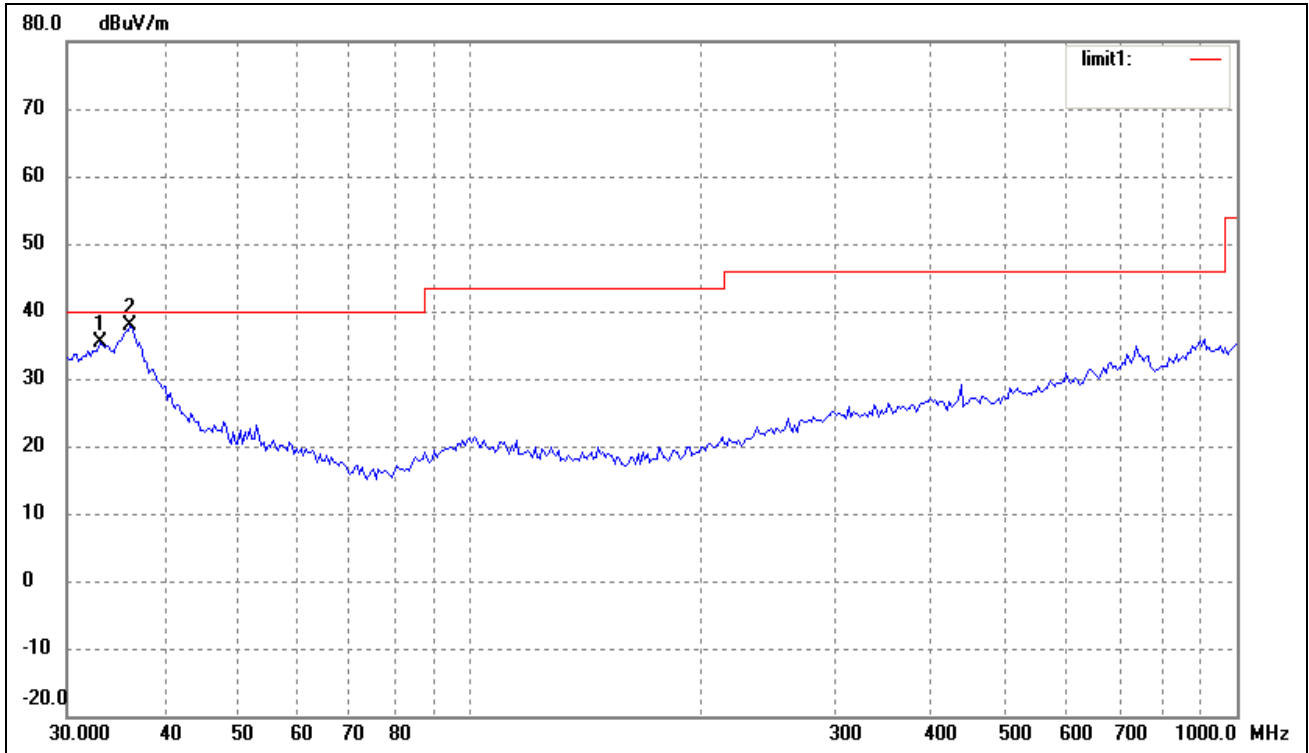
Comment: DC 3.7V li-ion Battery

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.7147	17.39	9.64	27.03	40.00	-12.97	360	100	peak
2	102.3597	15.89	6.61	22.50	43.50	-21.00	287	100	peak
3	724.2611	18.01	16.93	34.94	46.00	-11.06	168	100	peak
4	881.4067	17.84	19.03	36.87	46.00	-9.13	122	100	peak

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.0953	26.69	8.56	35.25	40.00	-4.75	78	100	peak
2	36.2545	28.72	9.09	37.81	40.00	-2.19	136	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	59.60	-3.87	55.73	74.00	-18.27	H	PK
4824.000	43.35	-3.87	39.48	54.00	-14.52	H	AV
7236.000	51.83	1.10	52.93	74.00	-21.07	H	PK
7236.000	39.49	1.10	40.59	54.00	-13.41	H	AV
4824.000	67.17	-3.86	63.31	74.00	-10.69	V	PK
4824.000	50.43	-3.86	46.57	54.00	-7.43	V	AV
7236.000	50.34	1.10	51.44	74.00	-22.56	V	PK
7236.000	39.40	1.10	40.50	54.00	-13.50	V	AV
Middle Channel-2437MHz							
4874.000	58.04	-3.74	54.30	74.00	-19.70	H	PK
4874.000	42.99	-3.74	39.25	54.00	-14.75	H	AV
7311.000	48.86	1.47	50.33	74.00	-23.67	H	PK
7311.000	40.07	1.47	41.54	54.00	-12.46	H	AV
4874.000	64.07	-3.74	60.33	74.00	-13.67	V	PK
4874.000	47.38	-3.74	43.64	54.00	-10.36	V	AV
7311.000	48.78	1.47	50.25	74.00	-23.75	V	PK
7311.000	39.78	1.47	41.25	54.00	-12.75	V	AV
High Channel-2462MHz							
4924.000	55.13	-3.59	51.54	74.00	-22.46	H	PK
4924.000	40.76	-3.59	37.17	54.00	-16.83	H	AV
7386.000	48.64	1.79	50.43	74.00	-23.57	H	PK
7386.000	38.41	1.79	40.20	54.00	-13.80	H	AV
4924.000	62.33	-3.59	58.74	74.00	-15.26	V	PK
4924.000	48.09	-3.59	44.50	54.00	-9.50	V	AV
7386.000	47.88	1.79	49.67	74.00	-24.33	V	PK
7386.000	38.56	1.79	40.35	54.00	-13.65	V	AV

Test Mode: 802.11g

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	60.21	-3.86	56.35	74.00	-17.65	H	PK
4824.000	44.09	-3.86	40.23	54.00	-13.77	H	AV
7236.000	52.40	1.10	53.50	74.00	-20.50	H	PK
7236.000	40.12	1.10	41.22	54.00	-12.78	H	AV
4824.000	68.06	-3.86	64.20	74.00	-9.80	V	PK
4824.000	51.11	-3.86	47.25	54.00	-6.75	V	AV
7236.000	49.10	1.10	50.20	74.00	-23.80	V	PK
7236.000	38.54	1.10	39.64	54.00	-14.36	V	AV
Middle Channel-2437MHz							
4874.000	61.42	-3.74	57.68	74.00	-16.32	H	PK
4874.000	45.32	-3.74	41.58	54.00	-12.42	H	AV
7311.000	52.53	1.47	54.00	74.00	-20.00	H	PK
7311.000	38.88	1.47	40.35	54.00	-13.65	H	AV
4874.000	65.94	-3.74	62.20	74.00	-11.80	V	PK
4874.000	51.26	-3.74	47.52	54.00	-6.48	V	AV
7311.000	49.65	1.47	51.12	74.00	-22.88	V	PK
7311.000	38.90	1.47	40.37	54.00	-13.63	V	AV
High Channel-2462MHz							
4924.000	59.26	-3.59	55.67	74.00	-18.33	H	PK
4924.000	46.95	-3.59	43.36	54.00	-10.64	H	AV
7386.000	53.46	1.79	55.25	74.00	-18.75	H	PK
7386.000	39.41	1.79	41.20	54.00	-12.80	H	AV
4924.000	63.94	-3.59	60.35	74.00	-13.65	V	PK
4924.000	50.15	-3.59	46.56	54.00	-7.44	V	AV
7386.000	48.99	1.79	50.78	74.00	-23.22	V	PK
7386.000	39.46	1.79	41.25	54.00	-12.75	V	AV

Test Mode: 802.11n-HT20

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	59.53	-3.86	55.67	74.00	-18.33	H	PK
4824.000	47.22	-3.86	43.36	54.00	-10.64	H	AV
7236.000	54.15	1.10	55.25	74.00	-18.75	H	PK
7236.000	40.10	1.10	41.20	54.00	-12.80	H	AV
4824.000	64.21	-3.86	60.35	74.00	-13.65	V	PK
4824.000	50.42	-3.86	46.56	54.00	-7.44	V	AV
7236.000	49.68	1.10	50.78	74.00	-23.22	V	PK
7236.000	40.15	1.10	41.25	54.00	-12.75	V	AV
Middle Channel-2437MHz							
4874.000	60.05	-3.74	56.31	74.00	-17.69	H	PK
4874.000	45.87	-3.74	42.13	54.00	-11.87	H	AV
7311.000	53.05	1.47	54.52	74.00	-19.48	H	PK
7311.000	41.03	1.47	42.50	54.00	-11.50	H	AV
4874.000	65.74	-3.74	62.00	74.00	-12.00	V	PK
4874.000	51.46	-3.74	47.72	54.00	-6.28	V	AV
7311.000	51.83	1.47	53.30	74.00	-20.70	V	PK
7311.000	38.81	1.47	40.28	54.00	-13.72	V	AV
High Channel-2462MHz							
4924.000	61.09	-3.59	57.50	74.00	-16.50	H	PK
4924.000	46.79	-3.59	43.20	54.00	-10.80	H	AV
7386.000	53.99	1.79	55.78	74.00	-18.22	H	PK
7386.000	39.52	1.79	41.31	54.00	-12.69	H	AV
4924.000	67.09	-3.59	63.50	74.00	-10.50	V	PK
4924.000	52.23	-3.59	48.64	54.00	-5.36	V	AV
7386.000	52.46	1.79	54.25	74.00	-19.75	V	PK
7386.000	39.46	1.79	41.25	54.00	-12.75	V	AV

Test Mode: 802.11n-HT40

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2422MHz							
4844.000	60.15	-3.90	56.25	74.00	-17.75	H	PK
4824.000	46.10	-3.90	42.20	54.00	-11.80	H	AV
7266.000	53.24	1.06	54.30	74.00	-19.70	H	PK
7266.000	39.26	1.06	40.32	54.00	-13.68	H	AV
4844.000	64.10	-3.90	60.20	74.00	-13.80	V	PK
4824.000	50.64	-3.90	46.74	54.00	-7.26	V	AV
7266.000	52.14	1.06	53.20	74.00	-20.80	V	PK
7266.000	39.54	1.06	40.60	54.00	-13.40	V	AV
Middle Channel-2437MHz							
4874.000	59.41	-3.74	55.67	74.00	-18.33	H	PK
4874.000	47.26	-3.74	43.52	54.00	-10.48	H	AV
7311.000	52.09	1.47	53.56	74.00	-20.44	H	PK
7311.000	39.73	1.47	41.20	54.00	-12.80	H	AV
4874.000	63.74	-3.74	60.00	74.00	-14.00	V	PK
4874.000	48.99	-3.74	45.25	54.00	-8.75	V	AV
7311.000	49.84	1.47	51.31	74.00	-22.69	V	PK
7311.000	39.33	1.47	40.80	54.00	-13.20	V	AV
High Channel-2452MHz							
4904.000	58.03	-3.63	54.40	74.00	-19.60	H	PK
4904.000	45.93	-3.63	42.30	54.00	-11.70	H	AV
7356.000	52.88	1.62	54.50	74.00	-19.50	H	PK
7356.000	40.98	1.62	42.60	54.00	-11.40	H	AV
4904.000	64.85	-3.63	61.22	74.00	-12.78	V	PK
4904.000	48.25	-3.63	44.62	54.00	-9.38	V	AV
7356.000	50.68	1.62	52.30	74.00	-21.70	V	PK
7356.000	40.10	1.62	41.72	54.00	-12.28	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 5th 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	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	ETS	3117	00086197	2012-02-25	2013-02-24

9.3 Test Procedure

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

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

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

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

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

All the trace to stabilize, set the marker on the emission at the bandedge, or on the highest modulation 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

9.4 Environmental Conditions

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

9.5 Summary of Test Results/Plots

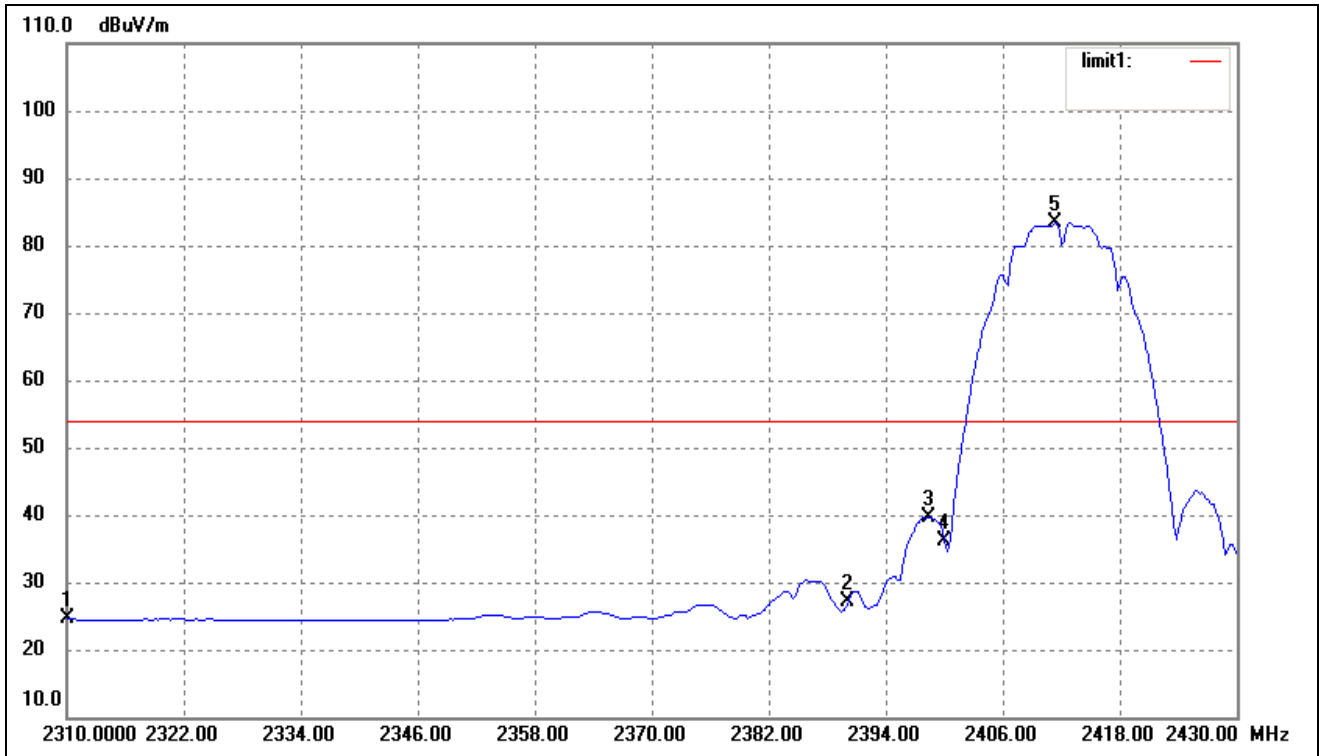
Test Mode	Test Frequency MHz	Limit dBuV / dBc	Result
802.11b	2310.00	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
	2400.00	>20dBc	Pass
	2483.50	<54 dBuV	Pass
802.11g	2310.00	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
	2400.00	>20dBc	Pass
	2483.50	<54 dBuV	Pass
802.11n-HT20	2310.00	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
	2400.00	>20dBc	Pass
	2483.50	<54 dBuV	Pass
802.11n-HT40	2310.00	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
	2396.94	<54 dBuV	Pass
	2400.00	>20dBc	Pass
	2483.50	<54 dBuV	Pass

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

Please refer to the test plots as below.

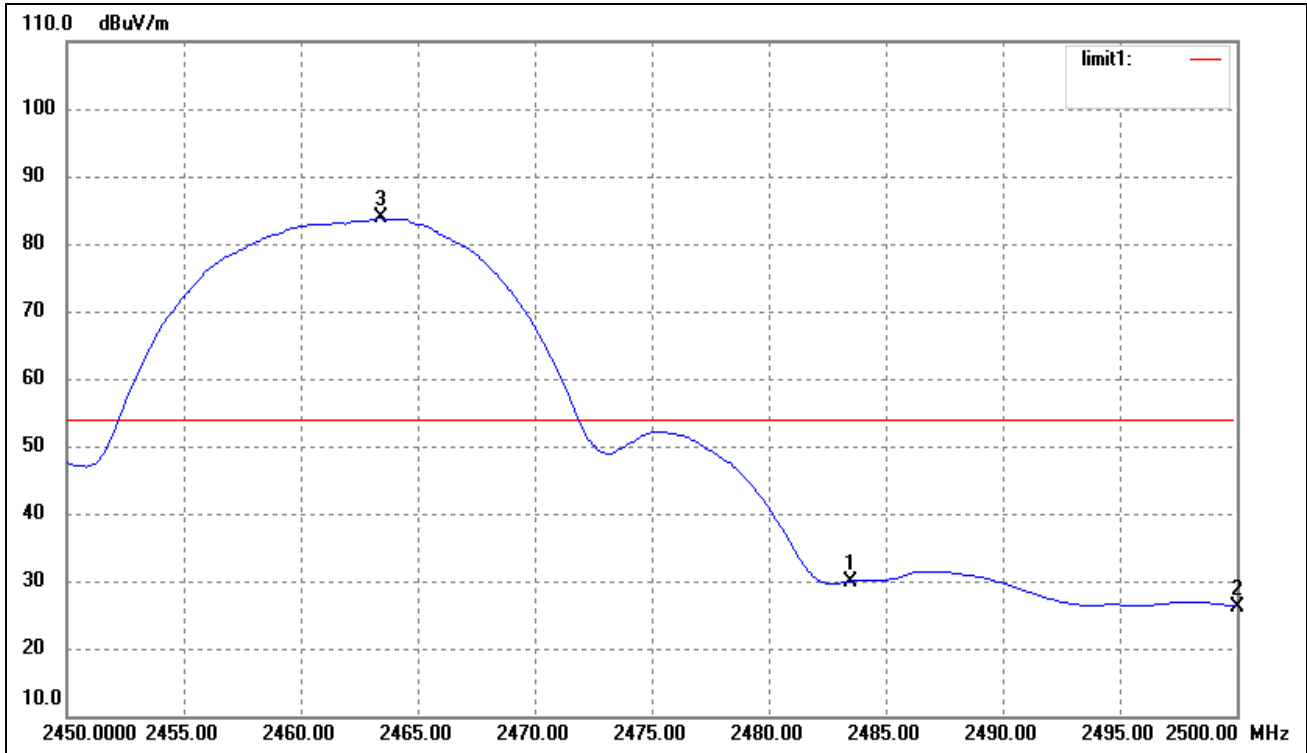
Bandedge (Radiated)

802.11b-Lowest Bandedge



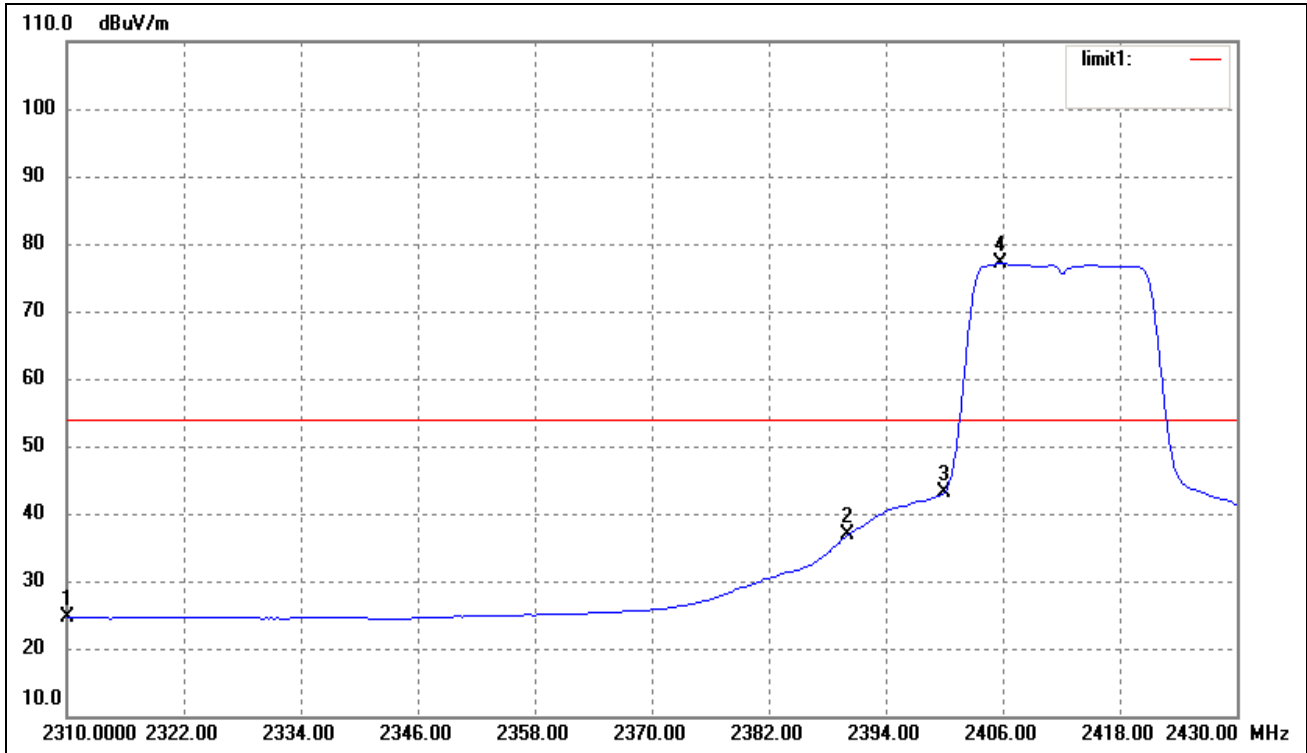
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	36.25	-11.72	24.53	54.00	-29.47	Average Detector
	2310.000	48.24	-11.72	36.52	74.00	-37.48	Peak Detector
2	2390.000	38.96	-11.75	27.21	54.00	-26.79	Average Detector
	2390.000	49.50	-11.75	37.75	74.00	-36.25	Peak Detector
3	2398.320	51.34	-11.75	39.59	Delta = 43.72 dBc		Average Detector
4	2400.000	47.98	-11.75	36.23	Delta = 47.08 dBc		Average Detector
5	2411.280	95.06	-11.75	83.31	/	/	Average Detector

802.11b-Highest Bandedge



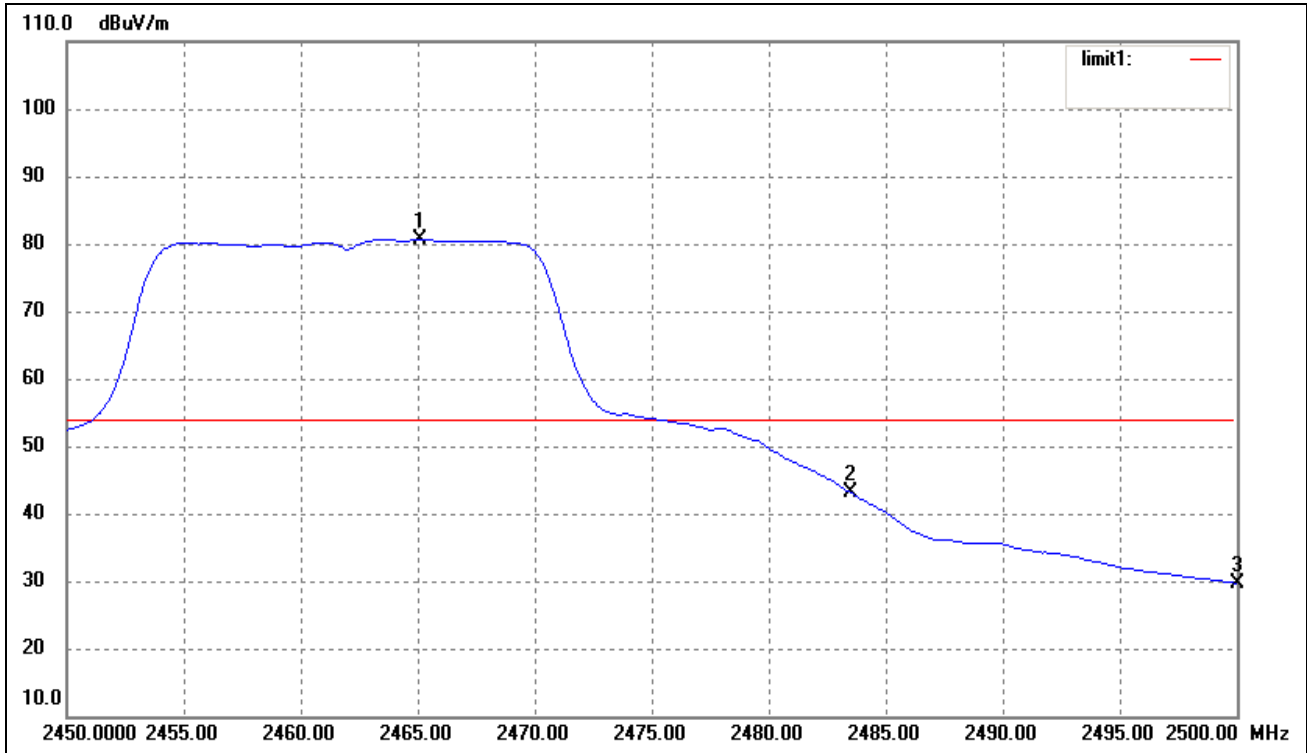
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	Delta = 55.79		27.99	54.00	-26.01	Average Detector
	2483.500			32.95	74.00	-41.05	Peak Detector
2	2500.000	38.03	-11.78	26.25	54.00	-27.75	Average Detector
	2500.000	46.01	-11.78	34.23	74.00	-39.77	Peak Detector
3	2463.400	95.55	-11.77	83.78	/	/	Average Detector
	2463.400	100.51	-11.77	88.74	/	/	Peak Detector

802.11g-Lowest Bandedge



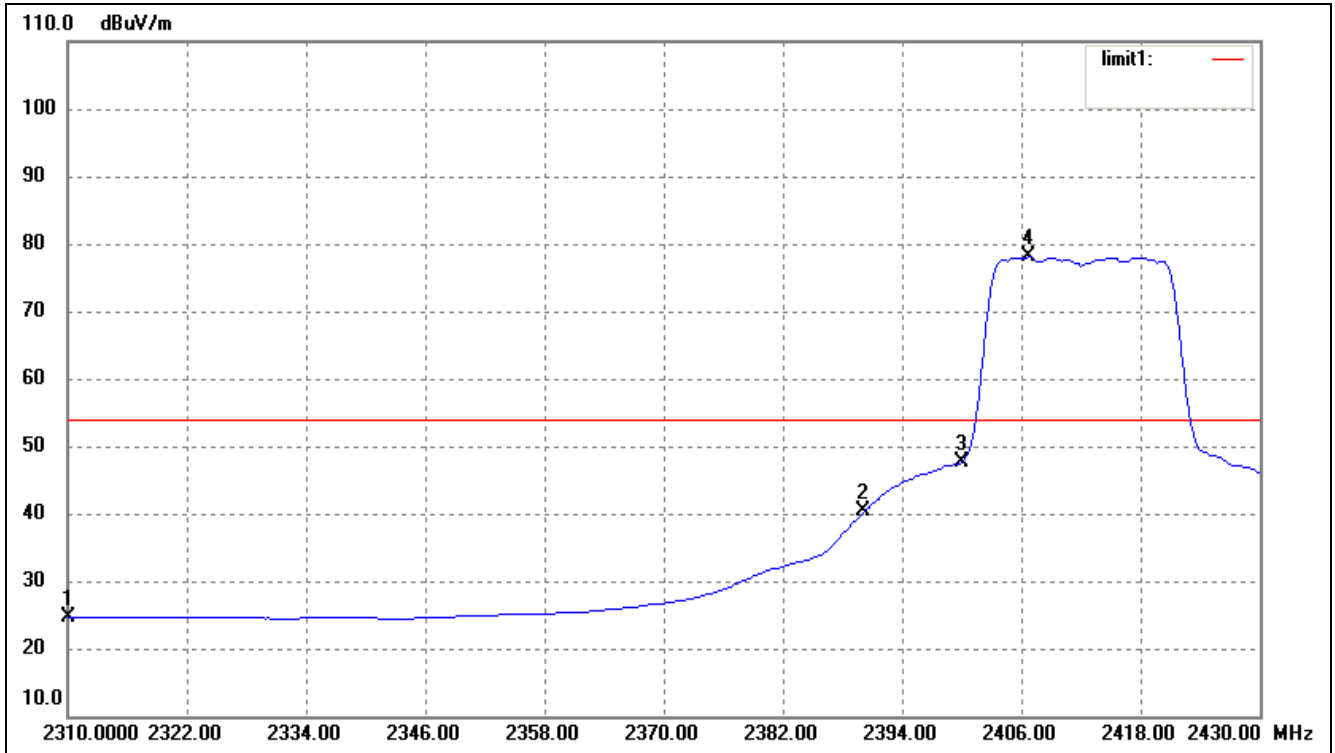
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	36.38	-11.72	24.66	54.00	-29.34	Average Detector
	2310.000	44.26	-11.72	32.54	74.00	-41.46	Peak Detector
2	2390.000	48.63	-11.75	36.88	54.00	-17.12	Average Detector
	2390.000	60.45	-11.75	48.70	74.00	-25.30	Peak Detector
3	2400.000	54.98	-11.75	43.23	Delta = 33.85 dBc		Average Detector
4	2405.760	88.83	-11.75	77.08	/	/	Average Detector

802.11g-Highest Bandedge



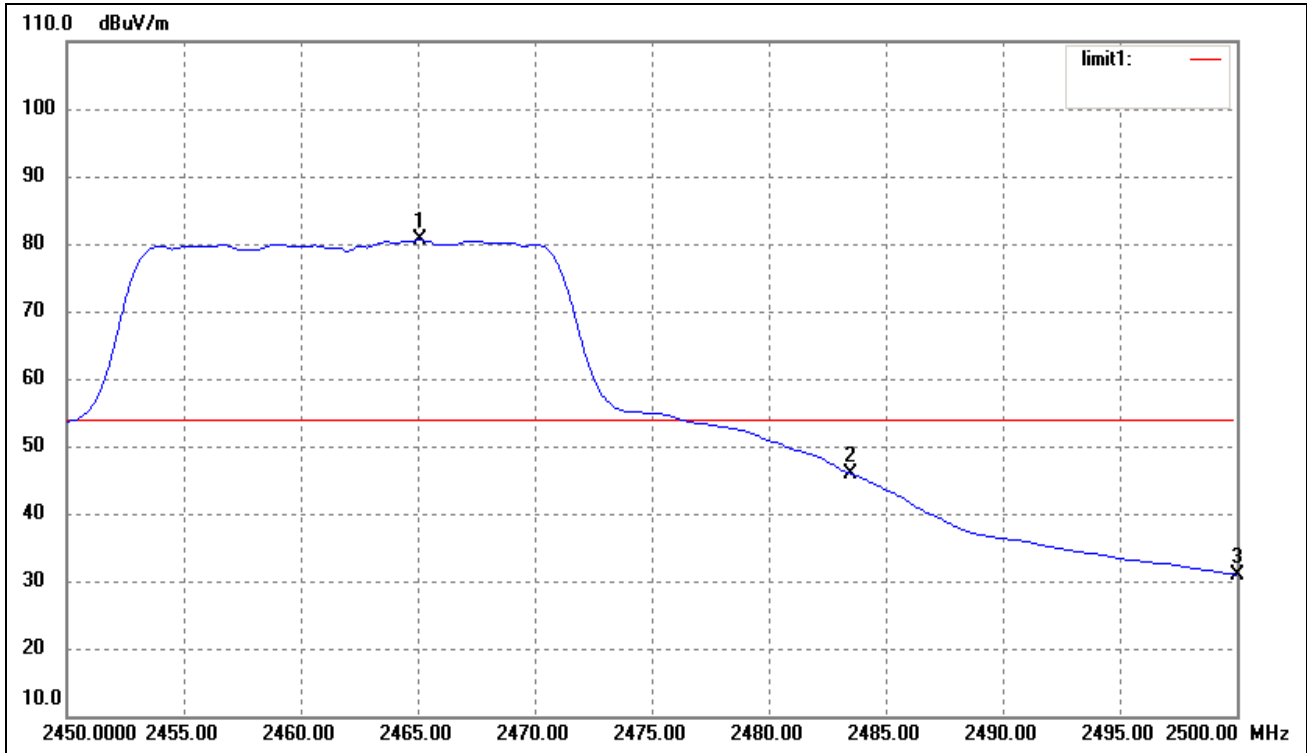
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2465.100	92.42	-11.77	80.65	/	/	Average Detector
	2465.100	100.33	-11.77	88.56	/	/	Peak Detector
2	2483.500	Delta=40.60		40.05	54.00	-13.95	Average Detector
	2483.500	Delta=40.60		47.96	74.00	-26.04	Peak Detector
3	2500.000	41.46	-11.78	29.68	54.00	-24.32	Average Detector
	2500.000	49.63	-11.78	37.85	74.00	-36.15	Peak Detector

802.11n-HT20-Lowest Bandedge



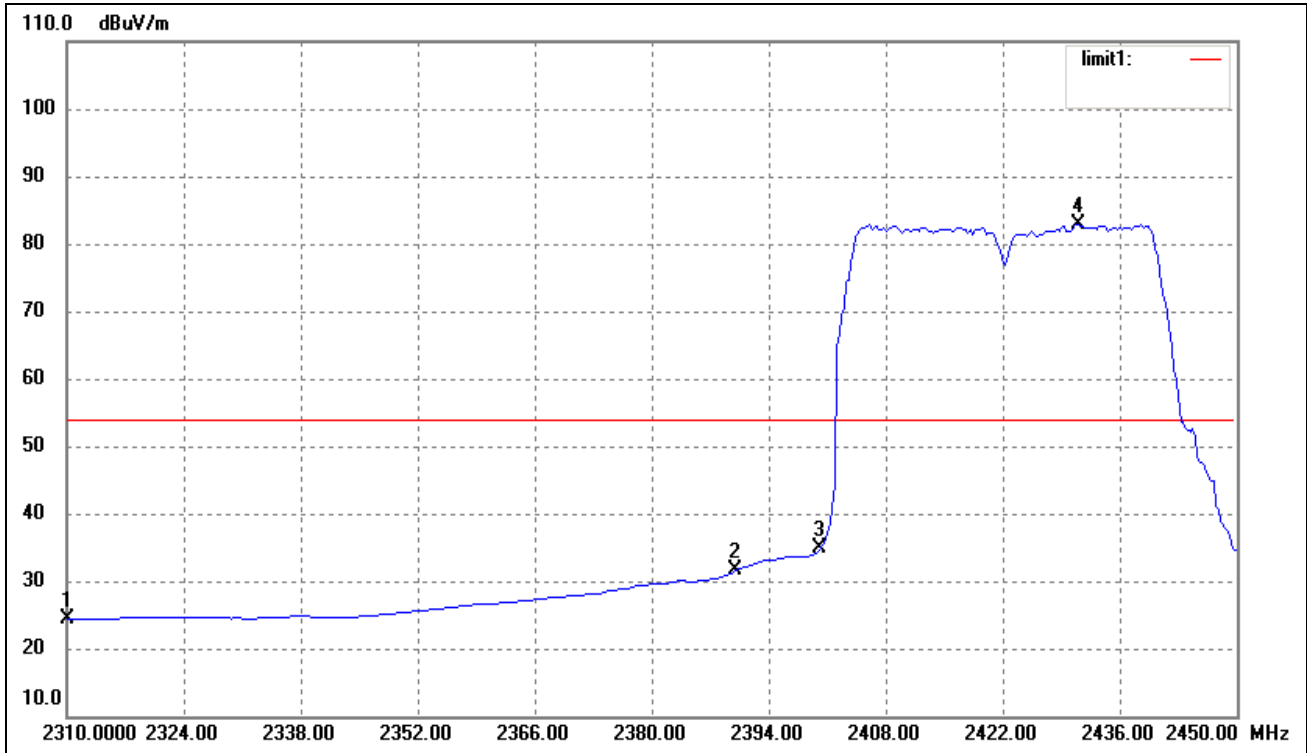
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	36.33	-11.72	24.61	54.00	-29.39	Average Detector
	2310.000	45.24	-11.72	33.52	74.00	-40.48	Peak Detector
2	2390.000	52.08	-11.75	40.33	54.00	-13.67	Average Detector
	2390.000	61.40	-11.75	49.65	74.00	-24.35	Peak Detector
3	2400.000	59.43	-11.75	47.68	Delta = 30.34 dBc		Average Detector
4	2406.720	89.77	-11.75	78.02	/	/	Average Detector

802.11 n-HT20-Highest Bandedge



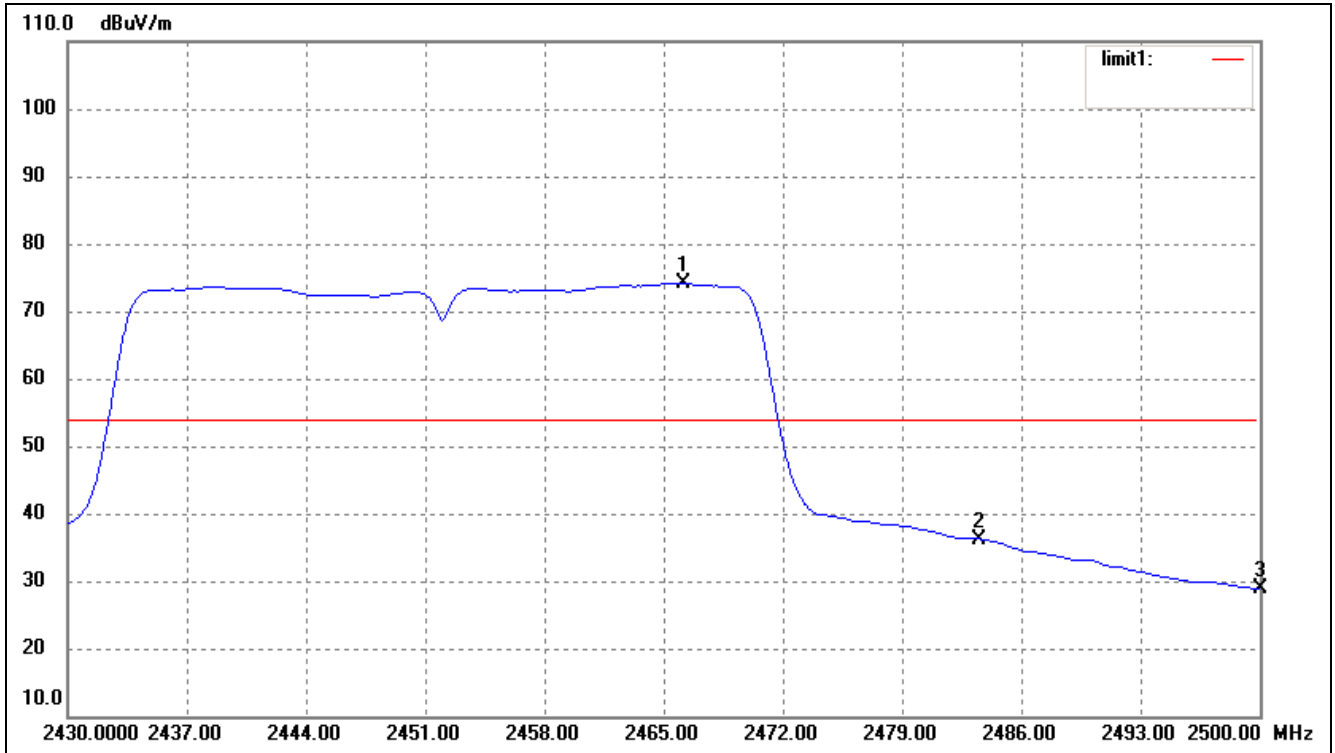
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2465.100	92.28	-11.77	80.51	/	/	Average Detector
	2465.100	101.42	-11.77	89.65	/	/	Peak Detector
2	2483.500	Delta=39.6		40.91	54.00	-13.09	Average Detector
	2483.500	Delta=39.6		50.05	74.00	-23.95	Peak Detector
3	2500.000	42.72	-11.78	30.94	54.00	-23.06	Average Detector
	2500.000	50.45	-11.78	38.67	74.00	-35.33	Peak Detector

802.11n-HT40-Lowest Bandedge



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	36.09	-11.72	24.37	54.00	-29.63	Average Detector
	2310.000	46.26	-11.72	34.54	74.00	-39.46	Peak Detector
2	2390.000	43.37	-11.75	31.62	54.00	-22.38	Average Detector
	2390.000	56.98	-11.75	45.23	74.00	-28.77	Peak Detector
3	2400.000	46.53	-11.75	34.78	Delta = 48.16 dBc		Average Detector
4	2430.960	94.69	-11.75	82.94	/	/	Average Detector

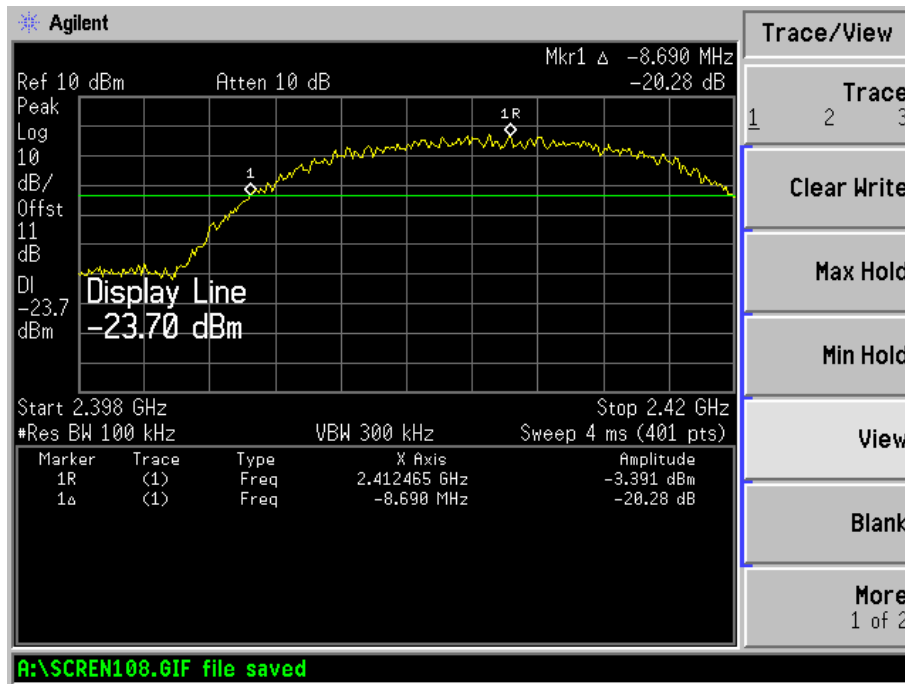
802.11n-HT40-Highest Bandedge



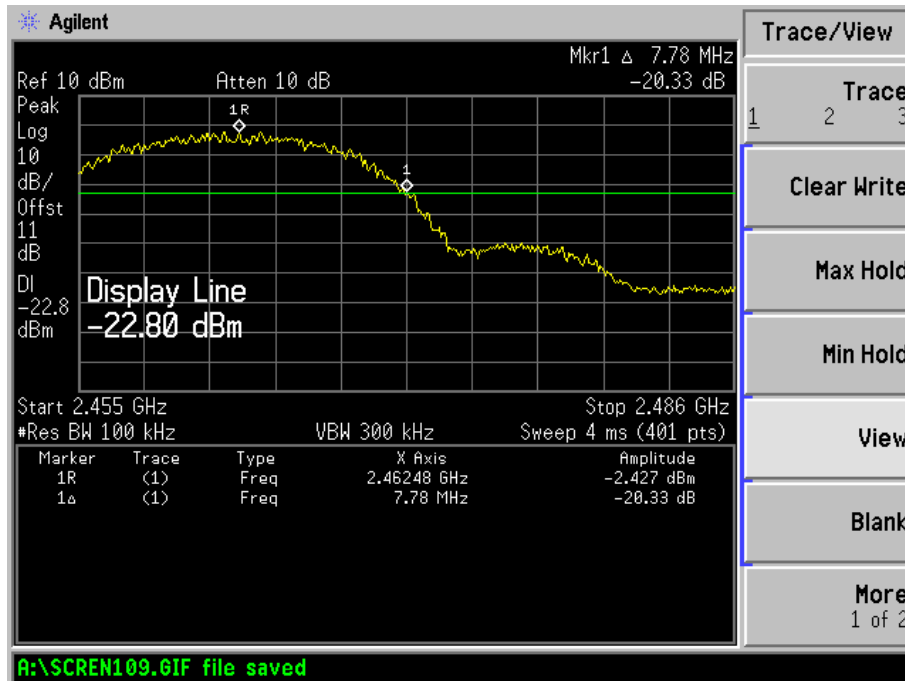
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2466.120	85.82	-11.77	74.05	/	/	Average Detector
	2465.100	98.31	-11.77	86.54	/	/	Peak Detector
2	2483.500	Delta=40.83		33.22	54.00	-20.78	Average Detector
	2483.500	Delta=40.83		45.71	74.00	-28.29	Peak Detector
3	2500.000	40.56	-11.78	28.78	54.00	-25.22	Average Detector
	2500.000	52.01	-11.78	40.23	74.00	-33.77	Peak Detector

Bandedge (Conducted)

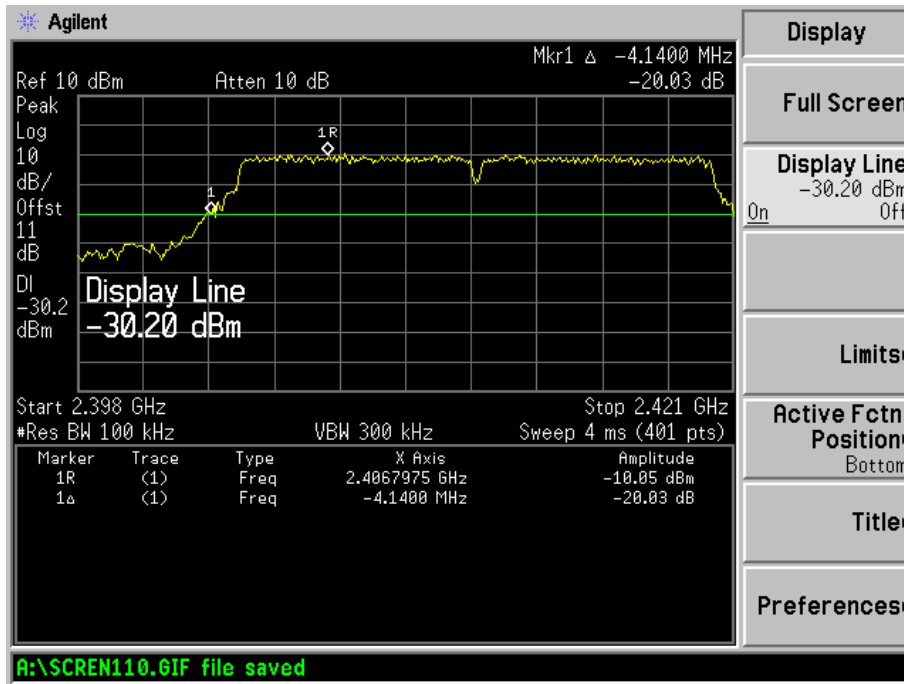
802.11b-Lowest Bandedge



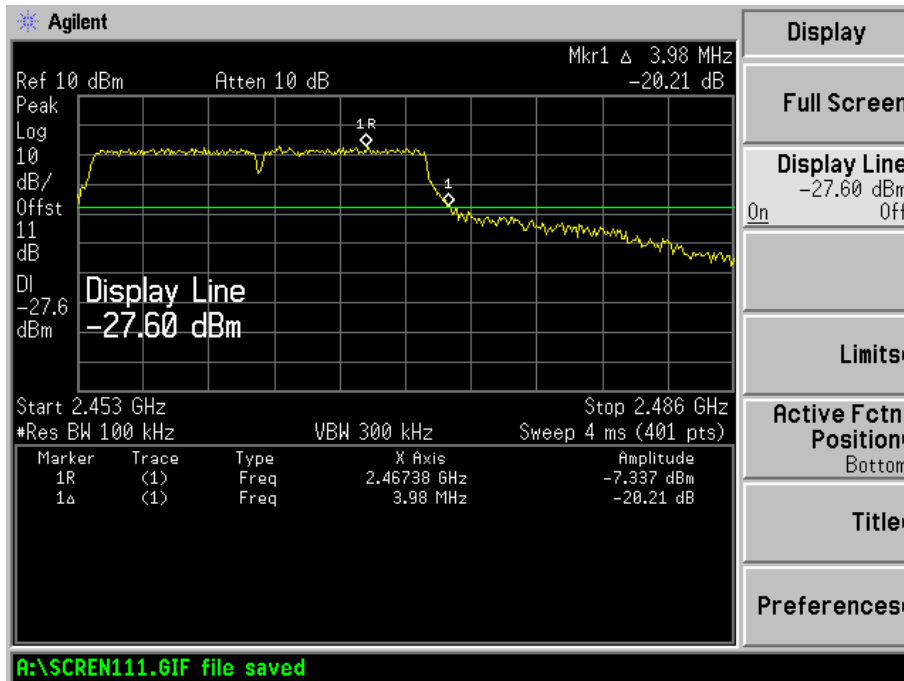
802.11b-Highest Bandedge



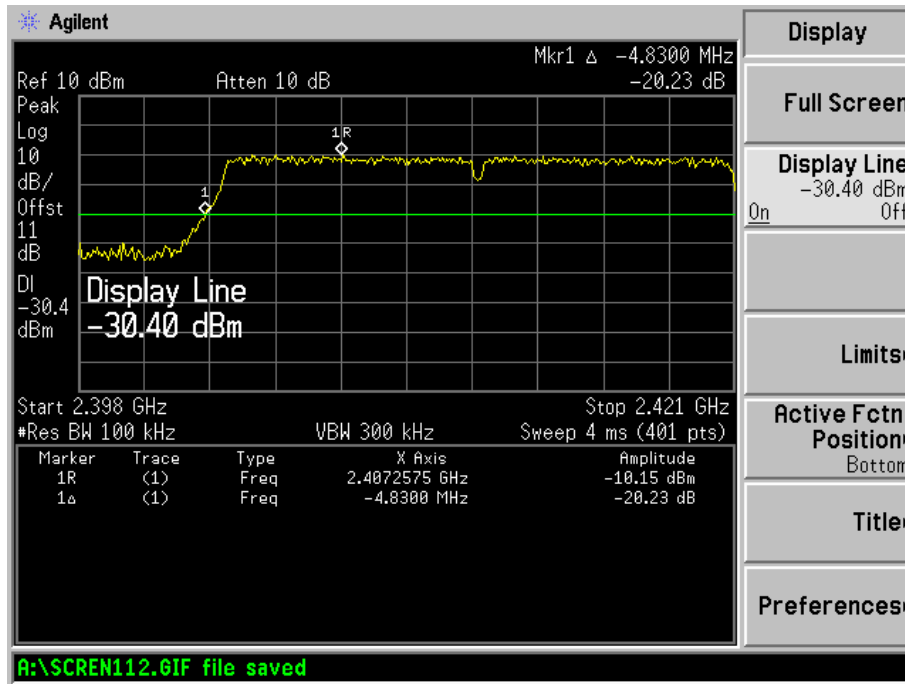
802.11g-Lowest Bandedge



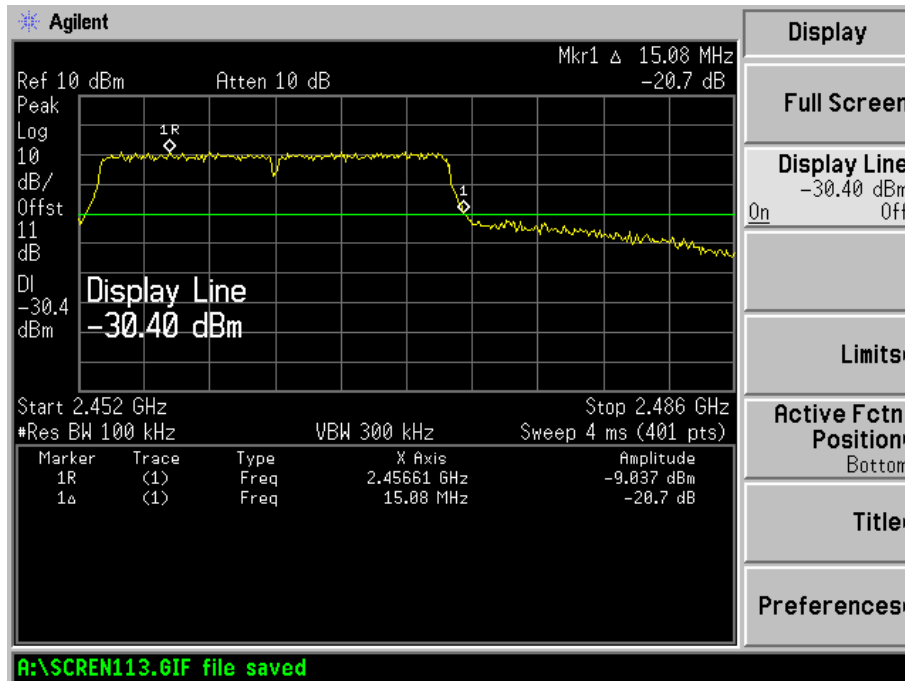
802.11g-Highest Bandedge



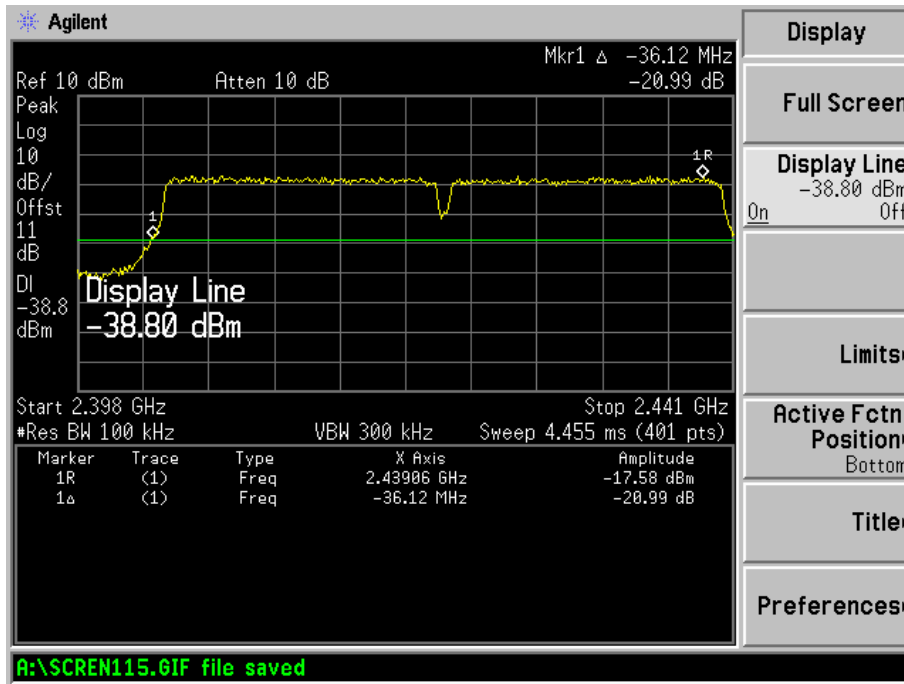
802.11n-HT20-Lowest Bandedge



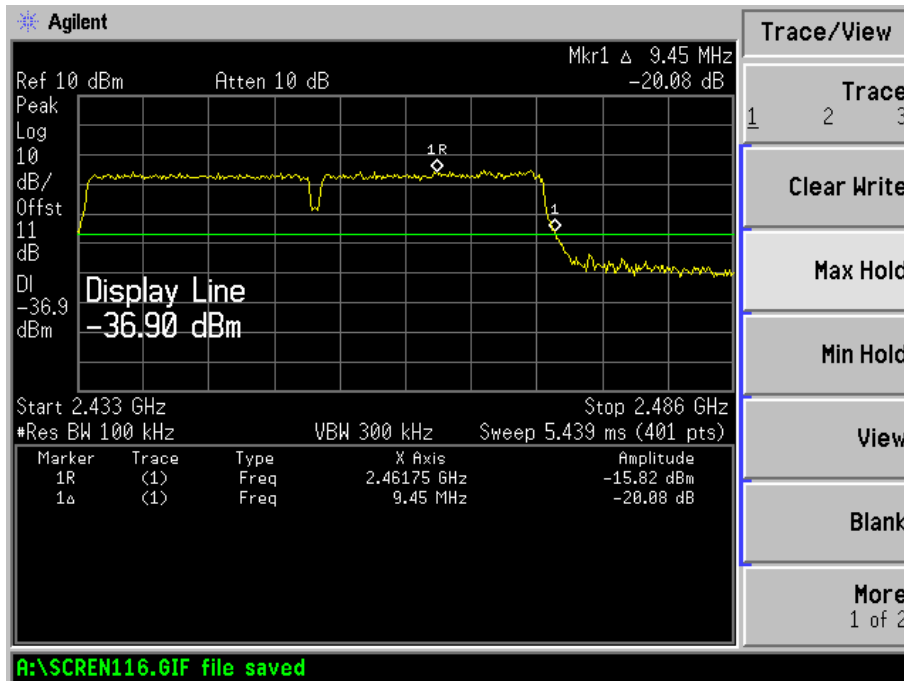
802.11n-HT20-Highest Bandedge



802.11n-HT40-Lowest Bandedge

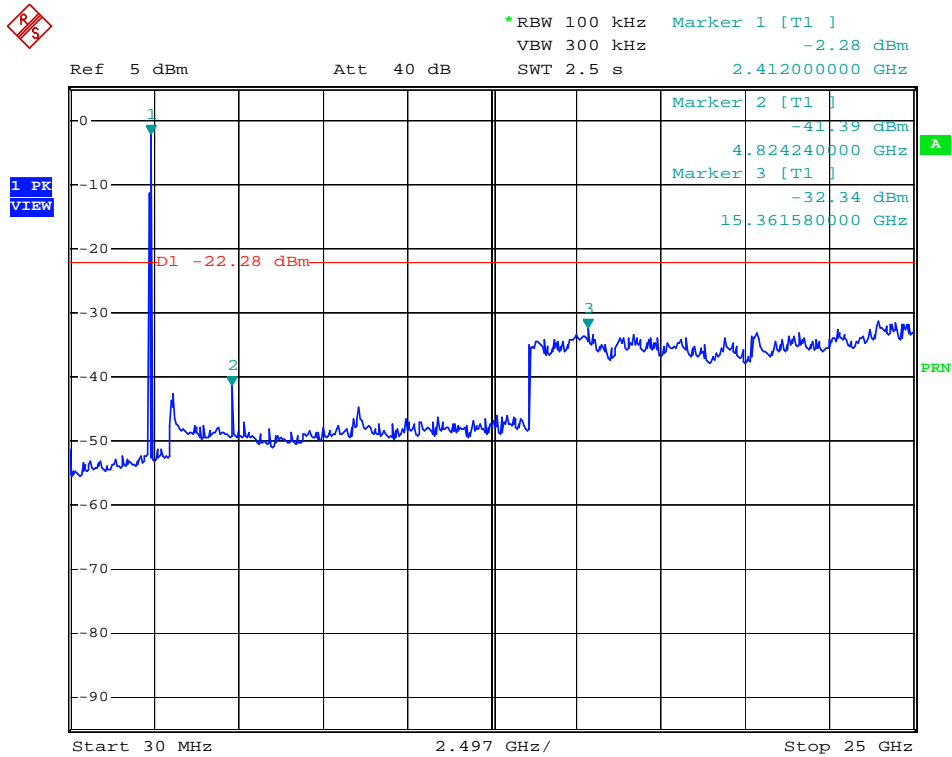


802.11n-HT40-Highest Bandedge

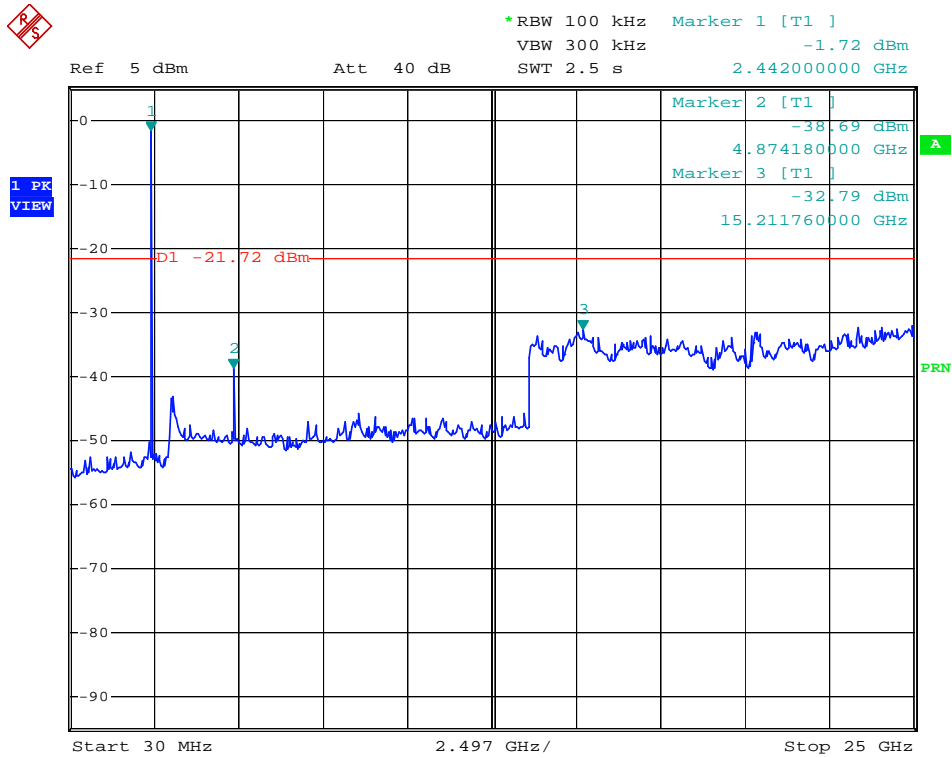


Conducted Spurious Emission

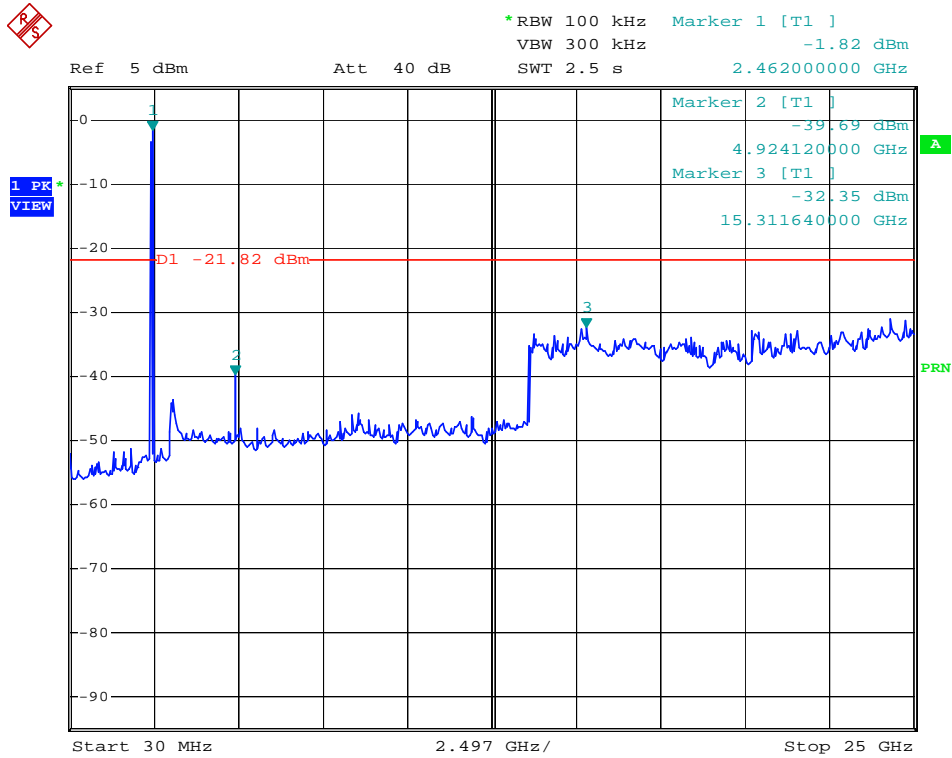
802.11b_Low Channel



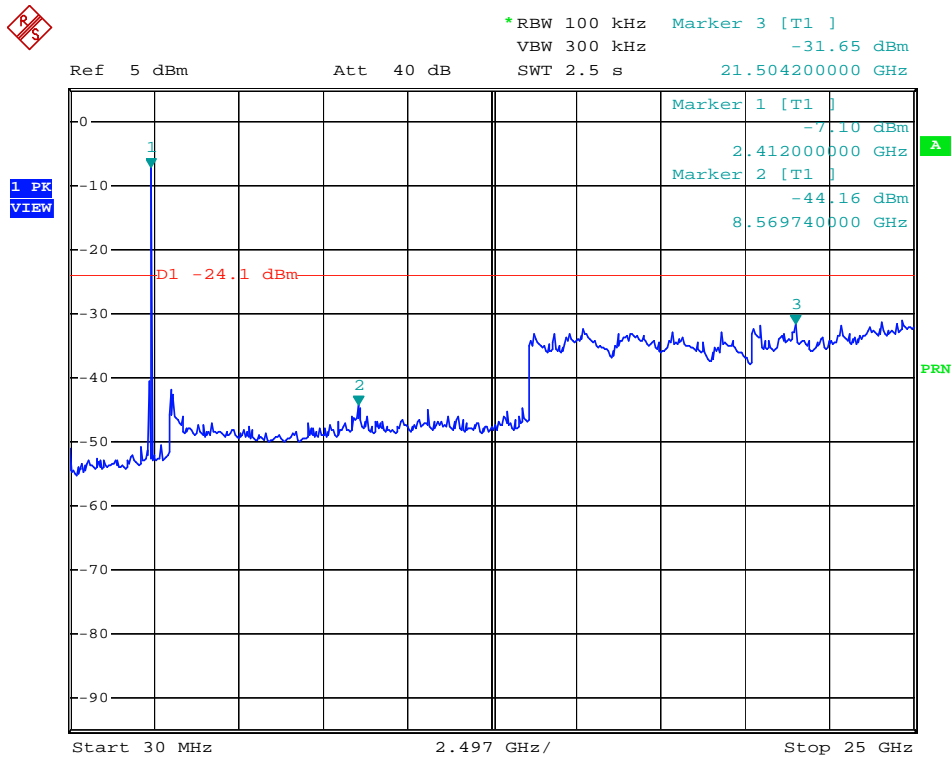
802.11b_Middle Channel



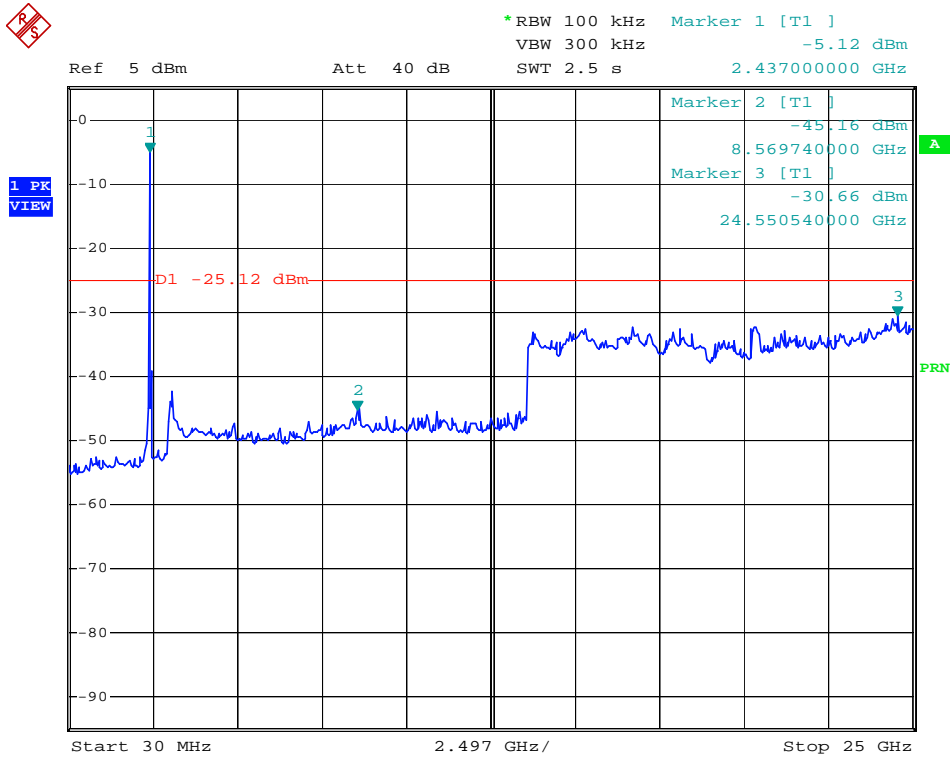
802.11b_High Channel



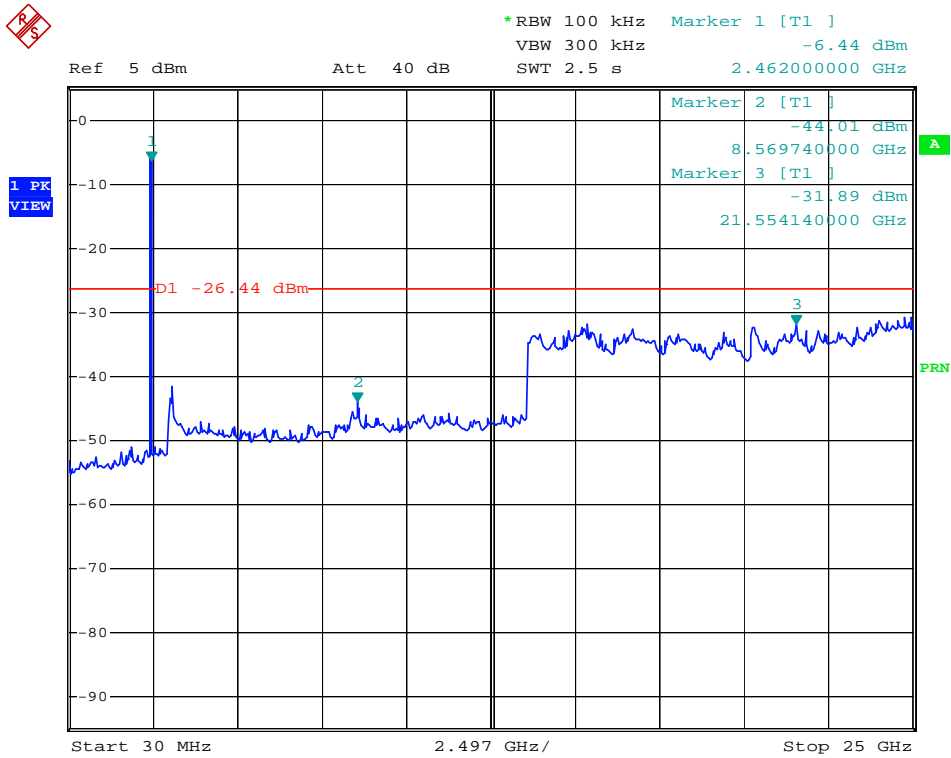
802.11g_Low Channel



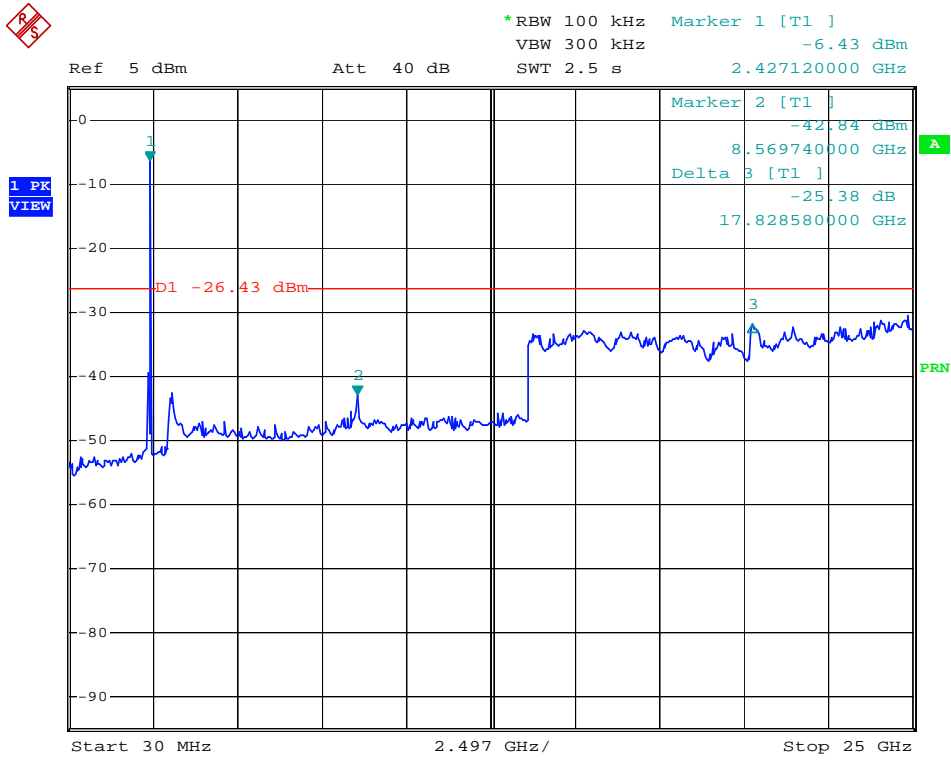
802.11g_Middle Channel



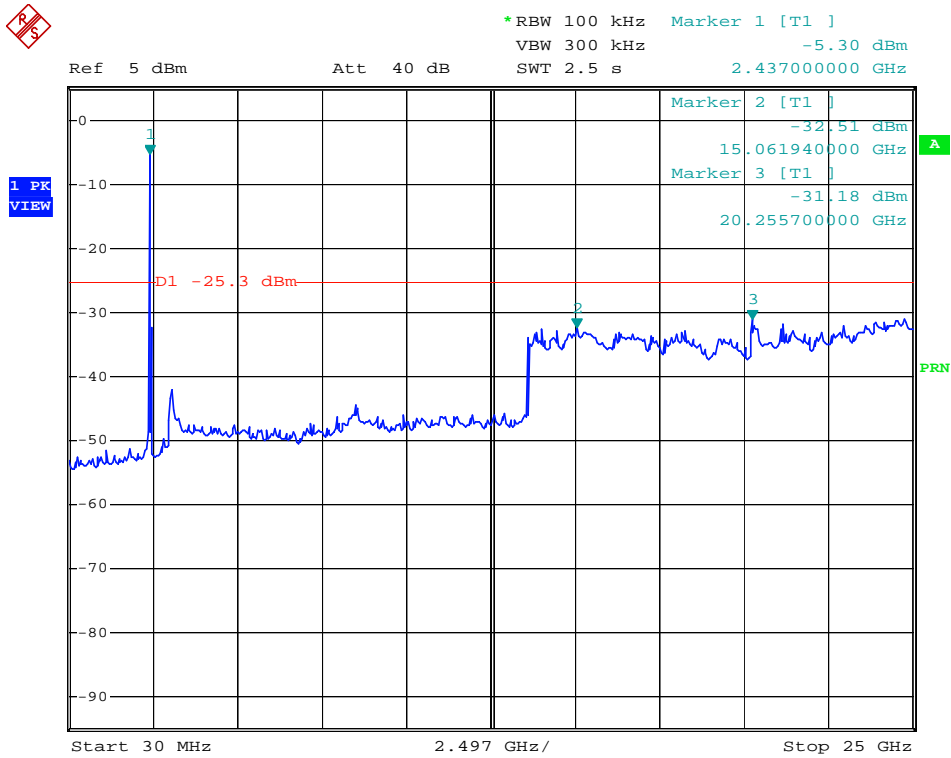
802.11g_High Channel



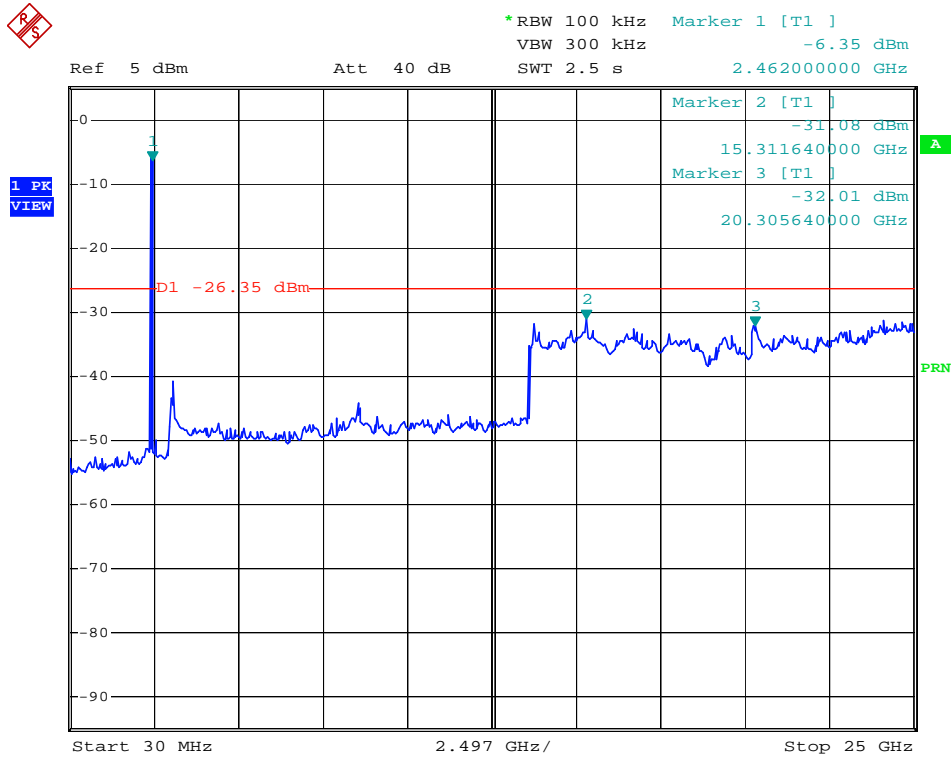
802.11n-HT20_Low Channel



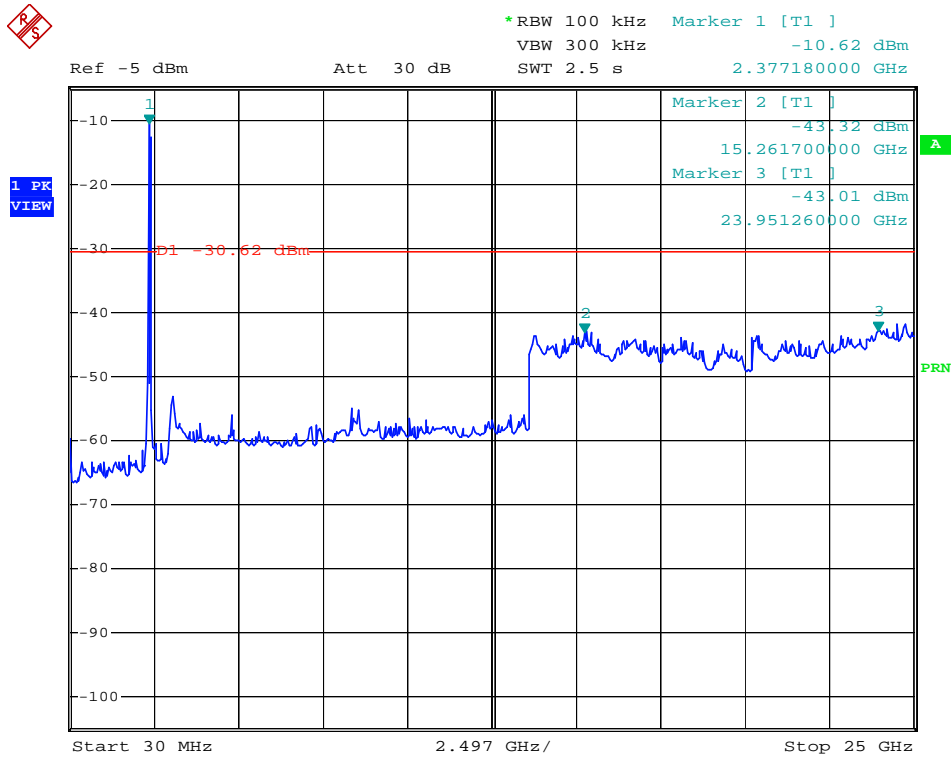
802.11n-HT20_Middle Channel



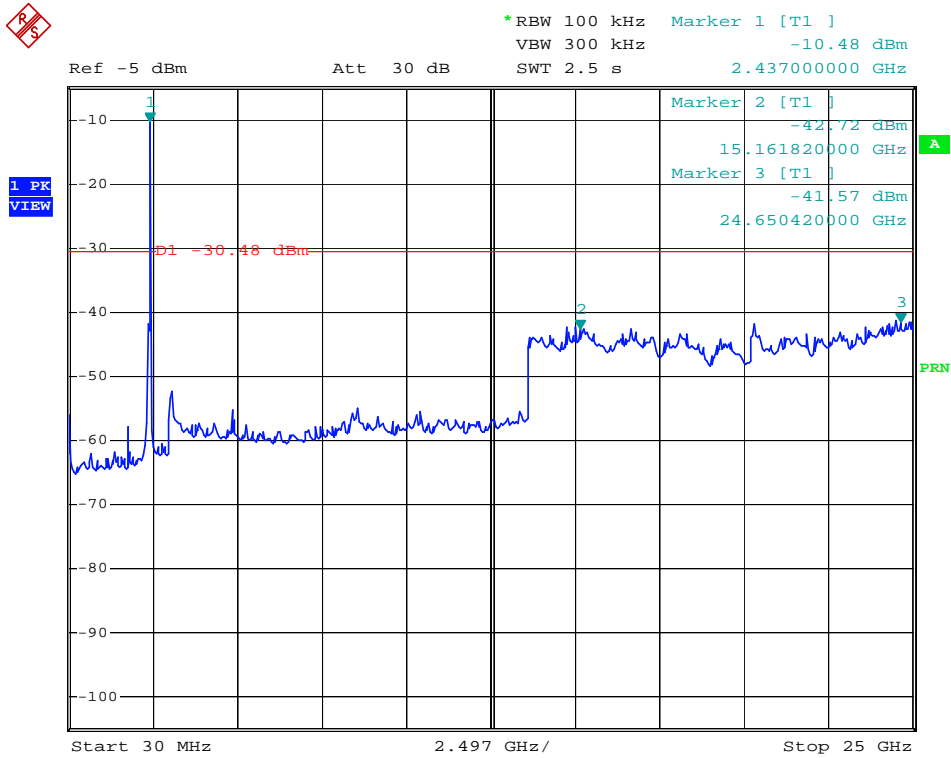
802.11n-HT20_High Channel



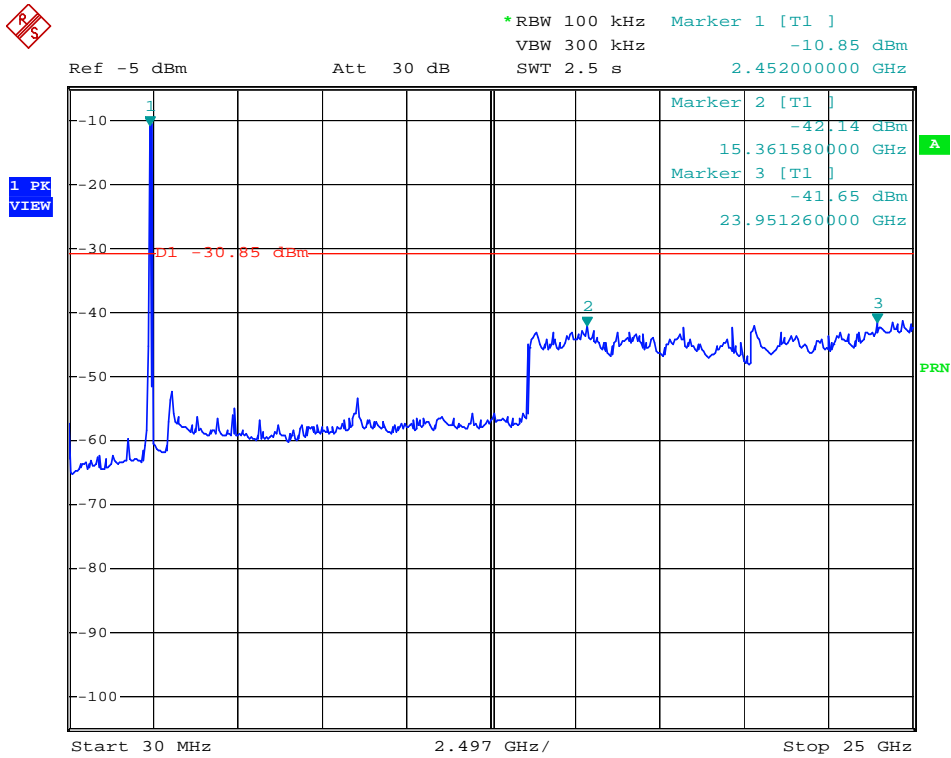
802.11n-HT40_Low Channel



802.11n-HT40_Middle Channel



802.11n-HT40_High Channel



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	2012-03-28	2013-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2012-03-28	2013-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2012-03-28	2013-03-27

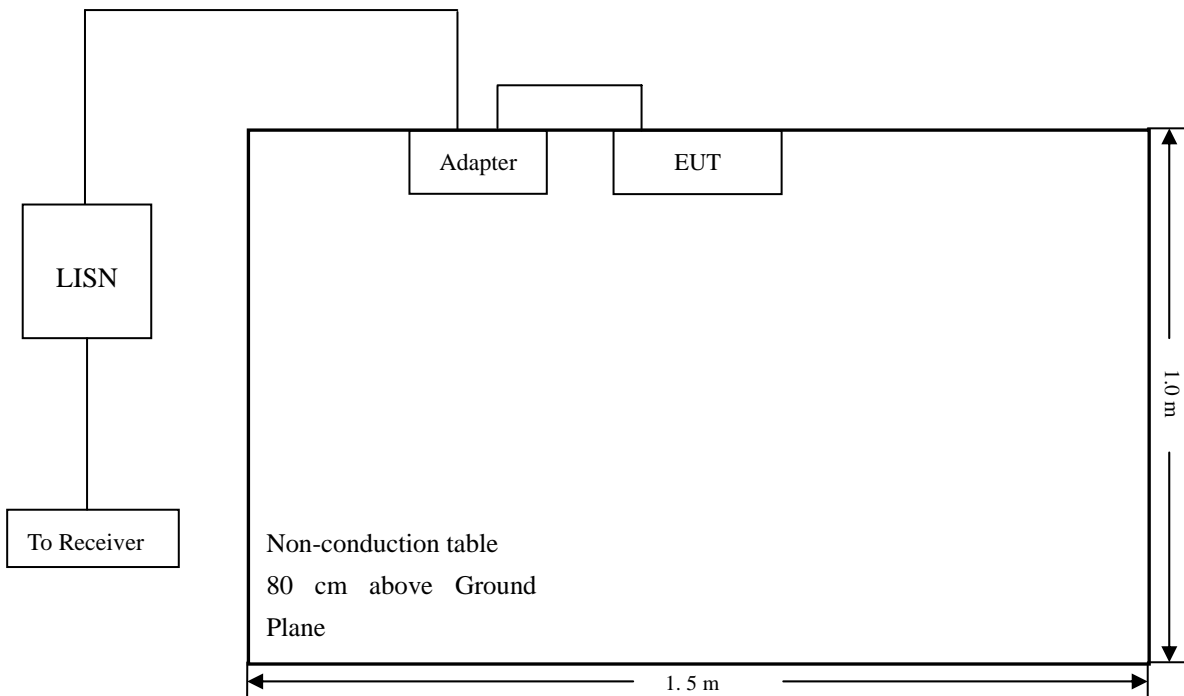
10.3 Test Procedure

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 3.8, the EUT complied with the FCC Part 15.207 Conducted margin for a Class B device, with the *worst* margin reading of:

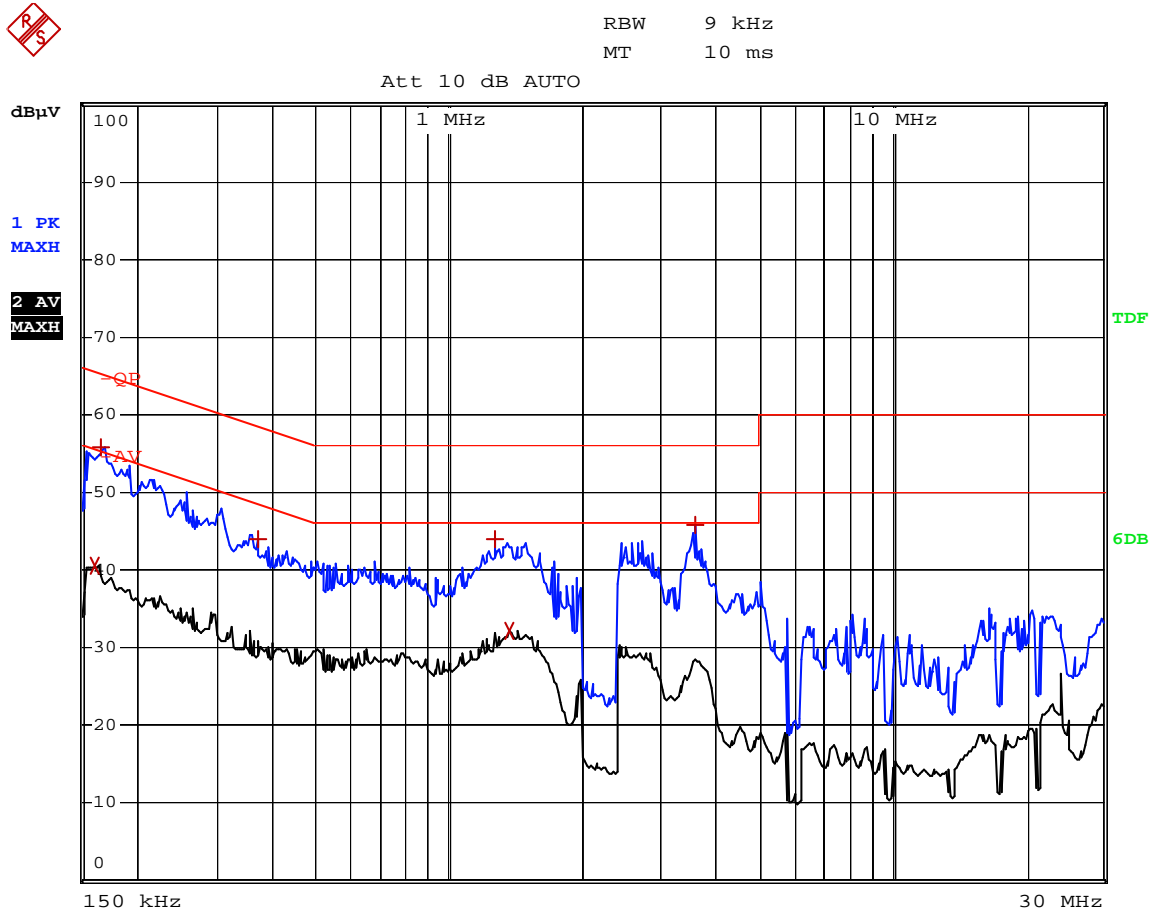
-6.75 dB at 2.194 MHz in the Line mode, Peak detector, 0.15-30MHz

10.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

EUT: *Android phone*
 Tested Model: *S758*
 Operating Condition: *Charging & Transmitting*
 Comment: *120V/60Hz, DC5V*

Test Specification: *Neutral*



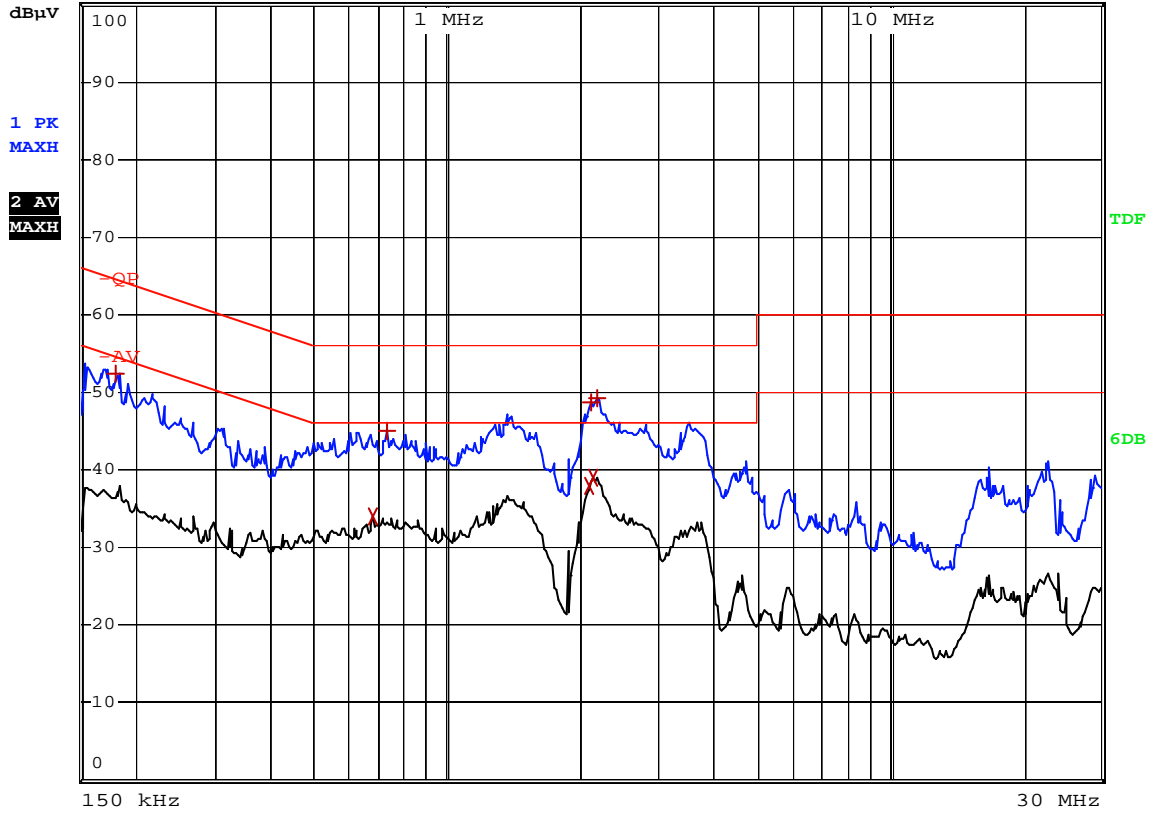
EDIT PEAK LIST (Prescan Results)			
Trace1:		-QP	
Trace2:		-AV	
Trace3:		---	
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	162 kHz	40.42	-14.93
1 Max Peak	166 kHz	55.78	-9.37
1 Max Peak	370 kHz	44.04	-14.45
1 Max Peak	1.266 MHz	43.94	-12.06
2 Average	1.366 MHz	32.27	-13.72
1 Max Peak	3.602 MHz	45.87	-10.12

Test Specification: Neutral



RBW 9 kHz
MT 10 ms

Att 10 dB AUTO



EDIT PEAK LIST (Prescan Results)				
Trace1:		-QP		
Trace2:		-AV		
Trace3:		---		
TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Max Peak	182 kHz	52.46	-11.92
2	Average	678 kHz	33.85	-12.14
1	Max Peak	730 kHz	44.91	-11.08
1	Max Peak	2.11 MHz	48.61	-7.38
2	Average	2.114 MHz	37.82	-8.17
2	Average	2.134 MHz	38.90	-7.09
1	Max Peak	2.194 MHz	49.24	-6.75

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