74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea
TEL: +82-31-645-6300 FAX: +82-31-645-6401

FCC DTS REPORT

FCC Certification

Applicant Name:
LG Electronics MobileComm U.S.A., Inc.

Address:
1000 Sylvan Avenue, Englewood Cliffs NJ 07632

Date of Issue:
September 22, 2015
Test Site/Location:
HCT CO., LTD., 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea
Report No.: HCT-R-1509-F019-1
HCT FRN: 0005866421

FCC ID	**: ZNFH960**
APPLICANT	**: LG Electronics MobileComm U.S.A., Inc.**

FCC Model(s):	LG-H960
Additional Model(s):	LGH960, H960, LG-H960P, LGH960P, H960P, LG-H960AR, LGH960AR, H960AR, LG-H960YK, LGH960YK, H960YK
EUT Type:	Cellular/PCS GSM/WCDMA/LTE Phone with WLAN, Bluetooth and NFC
Max. RF Output Power:	Wi-Fi 802.11b (24.55 dBm) / Wi-Fi 802.11g (25.16 dBm) / Wi-Fi 802.11n_20MHz BW (25.17 dBm)/ Wi-Fi 802.11ac_20MHz BW (24.52 dBm)
Frequency Range:	2412 MHz - 2462 MHz (2.4 GHz Band)
Modulation type:	CCK/DSSS/OFDM
FCC Classification:	Digital Transmission System(DTS)
FCC Rule Part(s):	Part 15.247

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

Report prepared by
: Kyung Soo Kang
Test Engineer of RF Team

Approved by
: Sang Jun Lee
Manager of RF Team

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-R-1509-F019	September 08, 2015	- First Approval Report
HCT-R-1509-F019-1	September 22, 2015	- Revised the peak output power of 802.11ac on page 4.

Table of Contents

1. GENERAL INFORMATION

Applicant:	LG Electronics MobileComm U.S.A., Inc
Address:	1000 Sylvan Avenue, Englewood Cliffs NJ 07632
FCC ID:	ZNFH960
EUT Type:	Cellular/PCS GSM/WCDMA/LTE Phone with WLAN, Bluetooth and NFC
Model name(s):	LG-H960
Additional Model(s):	LGH960, H960, LG-H960P, LGH960P, H960P, LG-H960AR, LGH960AR, H960AR,LG-H960YK, LGH960YK, H960YK
Date(s) of Tests:	August 12, 2015 ~ September 3, 2015
Place of Tests:	HCT Co., Ltd. 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea (IC Recognition No. : 5944A-3)

2. EUT DESCRIPTION

FCC Model Name	LG-H960	
Additional Model(s):	LGH960, H960, LG-H960P, LGH960P, H960P, LG-H960AR, LGH960AR, H960AR,LG-H960YK, LGH960YK, H960YK	
EUT Type	Cellular/PCS GSM/WCDMA/LTE Phone with WLAN, Bluetooth and NFC	
Power Supply	DC 3.85 V	
Battery Infomation	Model: BL-45B1F Type: Li-ion Battery(Standard)	
Frequency Range	TX: 2412 MHz ~ 2462 MHz RX: 2412 MHz ~ 2462 MHz	
Max. RF Output Power	Peak	Wi-Fi 802.11b(24.55 dBm) / Wi-Fi 802.11g (25.16 dBm) / Wi-Fi 802.11n_20MHz BW (25.17dBm)/ Wi-Fi 802.11ac_20MHz BW (24.52dBm)
	Average	Wi-Fi 802.11b(17.33 dBm) / Wi-Fi 802.11g (14.99 dBm) / Wi-Fi 802.11n_20MHz BW (14.59 dBm)/ Wi-Fi 802.11ac_20MHz BW (11.75dBm)
Modulation Type	DSSS/CCK(802.11b), OFDM(802.11g, 802.11n)	
Antenna Specification	Manufacturer: LS Mtron Co. Ltd. Antenna type: INTERNAL ANTENNA Peak Gain : -2.48 dBi	

3. TEST METHODOLOGY

FCC KDB 558074 D01 DTS Meas Guidance v03r03 dated June 09, 2015 entitled “Guidance for Performing Compliance Measurements on Digital Transmission Systems(DTS) and the measurement procedure described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013) Operating Under §15.247” were used in the measurement.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10. (Version :2013) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1GHz. Above 1GHz with 1.5m using absorbers between the EUT and receive antenna. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 8 of ANSI C63.10. (Version: 2013)

Conducted Antenna Terminal

See Section from 9.1 to 9.2.(KDB 558074)

3.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Channel low, mid and high with highest data rate (worst case) is chosen for full testing.

4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea. The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated July 07, 2015 (Registration Number: 90661)

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

6. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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."

* The antennas of this E.U.T are permanently attached.

*The E.U.T Complies with the requirement of §15.203

7. SUMMARY TEST OF RESULTS

Test Description	FCC Part Section(s)	Test Limit	Test Condition	Test Result
6 dB Bandwidth	§15.247(a)(2)	> 500 kHz	CONDUCTED	PASS
Conducted Maximum Peak Output Power	§15.247(b)(3)	< 1 Watt		PASS
Power Spectral Density	§15.247(e)	< 8 dBm / 3 kHz Band		PASS
Band Edge(Out of Band Emissions)	§15.247(d)	Conducted > 20 dBc		PASS
AC Power line Conducted Emissions	§15.207	cf. Section 8.7		PASS
Radiated Spurious Emissions	§15.205, 15.209	cf. Section 8.6.1	RADIATED	PASS
Radiated Restricted Band Edge	§15.247(d), 15.205, 15.209	cf. Section 8.6.2		PASS

8. TEST RESULT

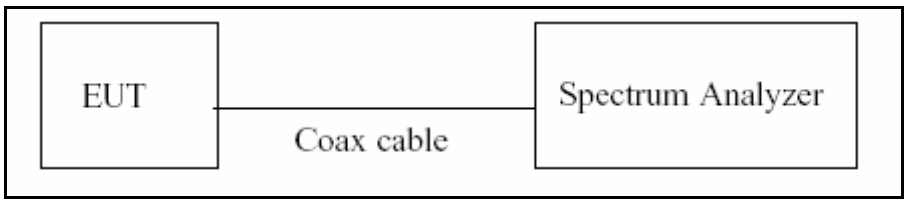
8.1 DUTY CYCLE

▣ TEST PROCEDURE

According to KDB 558074)6)b), issued 06/09/2015)

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value. Set VBW ≥ RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if T ≤ 16.7 microseconds.)

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer. We tested accroding to the zero-span measurement method, 6.0)b) in KDB 558074(issued 06/09/2015)

The largest availble value of RBW is 8 MHz and VBW is 50 MHz. The zero-span method of measuring duty cycle shall not be used if T ≤ 6.25 microseconds. (50/6.25 = 8)

The zero-span method was used because all measured T data are > 6.25 microseconds and both RBW and VBW are > 50/*T*.

1. RBW = 8 MHz (the largest availble value)
2. VBW = 8 MHz (≥ RBW)
3. SPAN = 0 Hz
4. Detector = Peak
5. Number of points in sweep > 100
6. Trace mode = Clear write
7. Measure T_{total} and T_{on}
8. Calculate Duty Cycle = T_{on}/ T_{total} and Duty Cycle Factor = 10*log(1/Duty Cycle)

▣ **Duty Cycle Factor**

Mode	Data Rate	T_{on} (ms)	T_{total} (ms)	Duty Cycle	Duty Cycle Factor (dB)
b	1 Mbps	1.000	1.000	1.00000000	0.000
	2 Mbps	4.300	4.320	0.99537037	0.020
	5.5 Mbps	1.627	1.642	0.99086480	0.040
	11 Mbps	0.861	0.876	0.98287671	0.075
g	6 Mbs	2.792	2.817	0.99112531	0.039
	9 Mbs	1.867	1.883	0.99150292	0.037
	12 Mbs	1.408	1.425	0.98807018	0.052
	18 Mbs	0.941	0.966	0.97412008	0.114
	24 Mbs	0.716	0.741	0.96626181	0.149
	36 Mbs	0.483	0.508	0.95078740	0.219
	48 Mbs	0.369	0.393	0.93893130	0.274
	54 Mbs	0.327	0.351	0.93162393	0.308
n_ 20MHz BW	6.5 Mbs	5.120	5.140	0.99610895	0.017
	13 Mbs	2.580	2.600	0.99230769	0.034
	19.5 Mbs	1.730	1.750	0.98857143	0.050
	26 Mbs	1.300	1.330	0.97744361	0.099
	39 Mbs	0.880	0.910	0.96703297	0.146
	52 Mbs	0.672	0.696	0.96551724	0.152
	58.5 Mbs	0.606	0.627	0.96650718	0.148
	65 Mbs	0.543	0.567	0.95767196	0.188
ac_ 20MHz BW	6.5 Mbs	5.115	5.145	0.99416910	0.025
	13 Mbs	7.785	7.850	0.99171975	0.036
	19.5 Mbs	5.250	5.280	0.99431818	0.025
	26 Mbs	1.305	1.335	0.97752809	0.099
	39 Mbs	2.700	2.730	0.98901099	0.048
	52 Mbs	1.365	1.395	0.97849462	0.094
	58.5 Mbs	0.606	0.630	0.96190476	0.169
	65 Mbs	0.552	0.576	0.95833333	0.185
	78 Mbs	0.465	0.489	0.95092025	0.219

Note : Duty Cycle Factor = 10*log(1/Duty Cycle). where, Duty Cycle = T_{on} / T_{total}

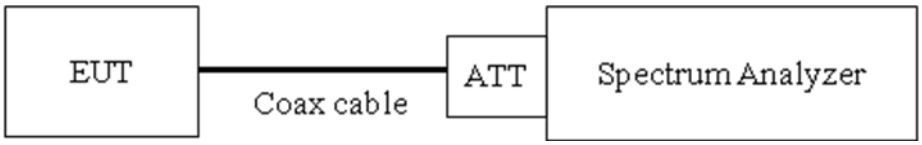
8.2 6dB BANDWIDTH

Test Requirements and limit, §15.247(a)(2)

The bandwidth at 6dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequencies.

The minimum permissible 6dB bandwidth is 500 kHz.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer.

The Spectrum Analyzer is set to (Procedure 8.1 in KDB 558074, issued 06/09/2015)

RBW = 100 kHz

VBW ≥ 3 x RBW

Detector = Peak

Trace mode = max hold

Sweep = auto couple

Allow the trace to stabilize

Note : We tested 6 dB bandwidth using the automatic bandwidth measurement capability of a spectrum analyzer. X dB is set 6 dB.

▣ TEST RESULTS

Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	9.098	0.500	Pass
2437	6	9.102	0.500	Pass
2462	11	9.113	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	16.348	0.500	Pass
2437	6	16.344	0.500	Pass
2462	11	16.353	0.500	Pass

Conducted 6dB Bandwidth Measurements for 802.11n_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	17.335	0.500	Pass
2437	6	17.167	0.500	Pass
2462	11	17.582	0.500	Pass

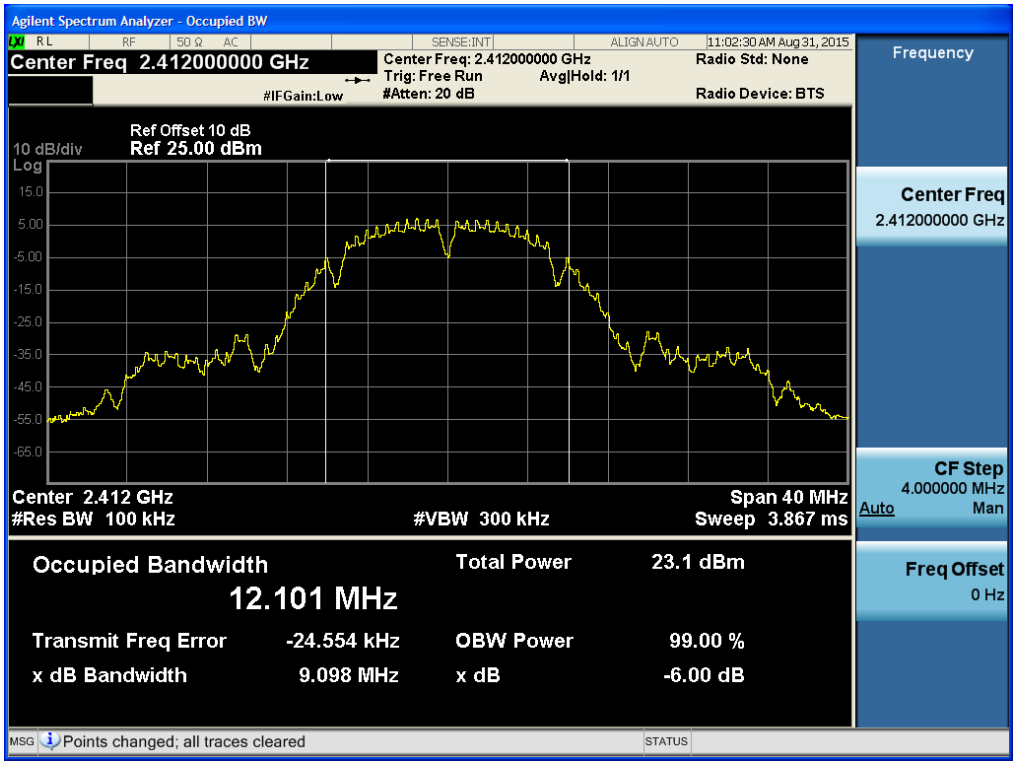
Conducted 6dB Bandwidth Measurements for 802.11ac_20 MHz BW

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	17.341	0.500	Pass
2437	6	17.222	0.500	Pass
2462	11	17.555	0.500	Pass

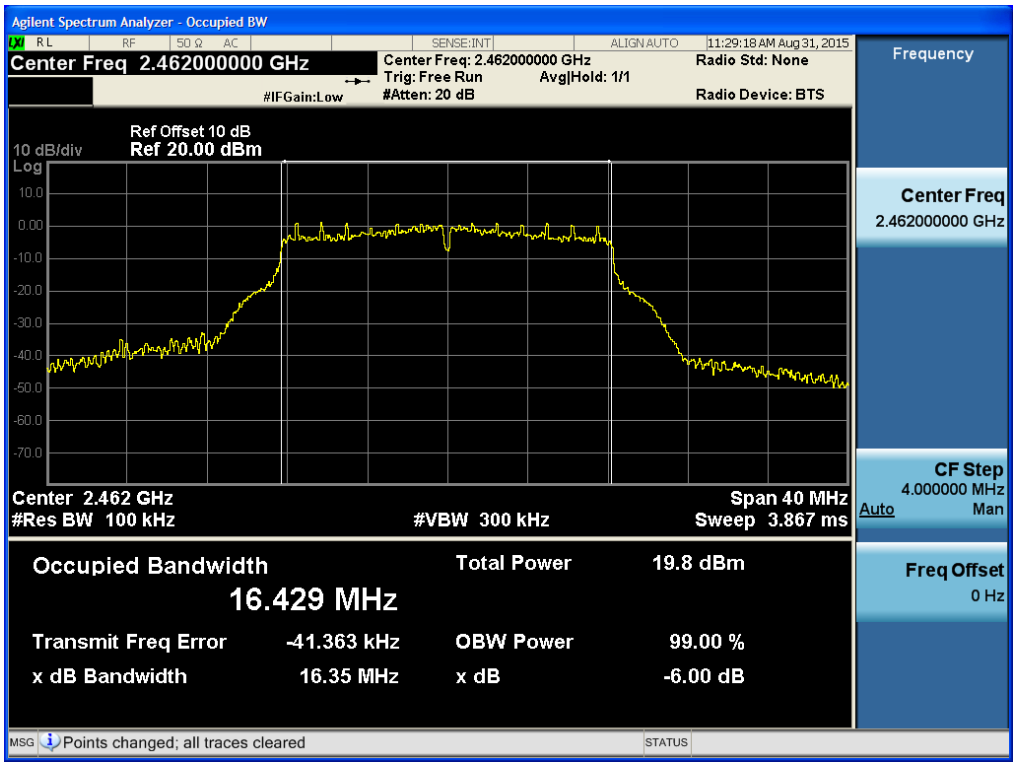
Note : In order to simplify the report, attached plots were only the most wide 6 dB BW channel.

▣ RESULT PLOTS

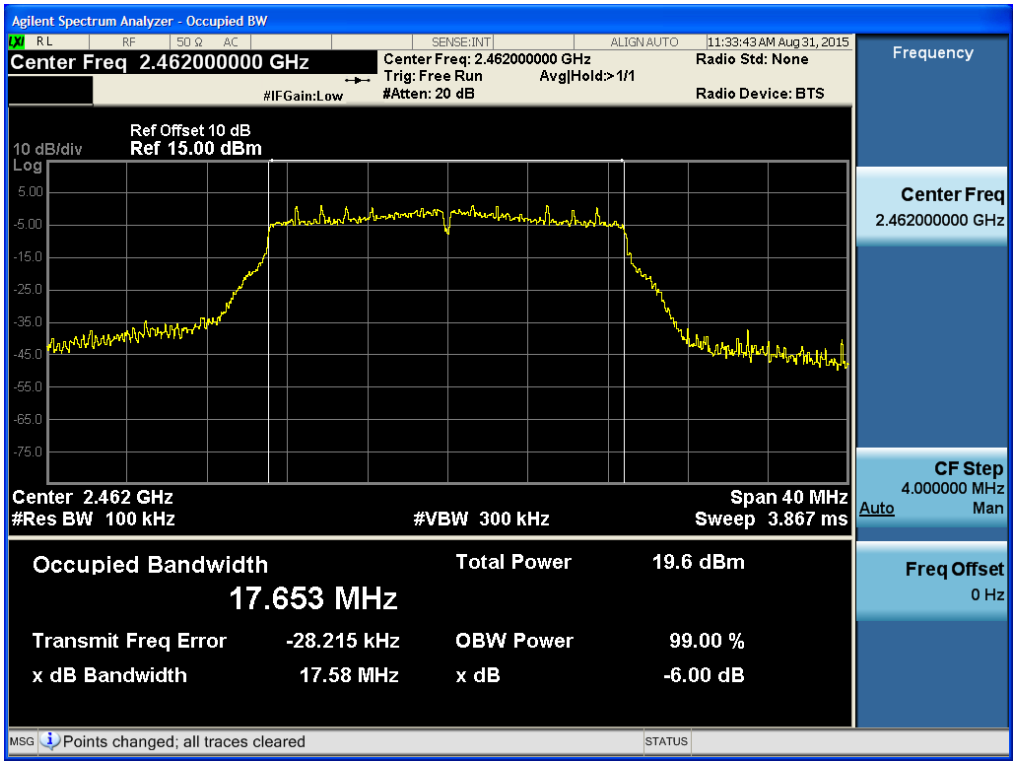
6dB Bandwidth plot (802.11b-CH 11)



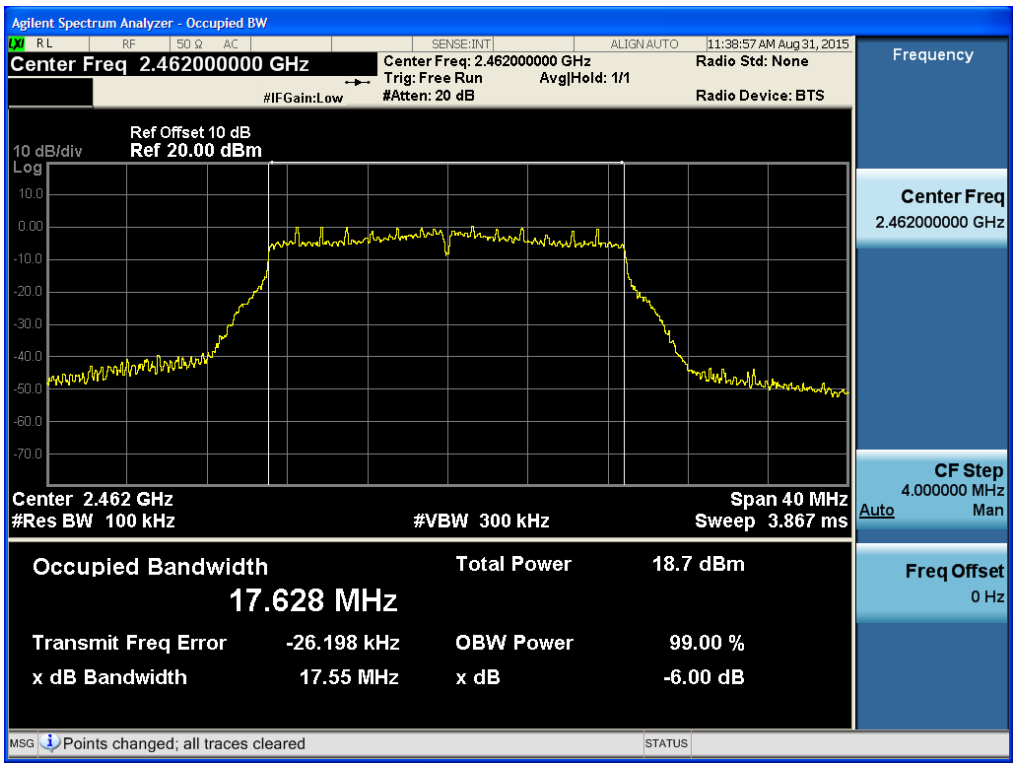
6dB Bandwidth plot (802.11g-CH 11)



6dB Bandwidth plot (802.11n_20 MHz BW-CH 11)



6dB Bandwidth plot (802.11ac_20 MHz BW-CH 11)



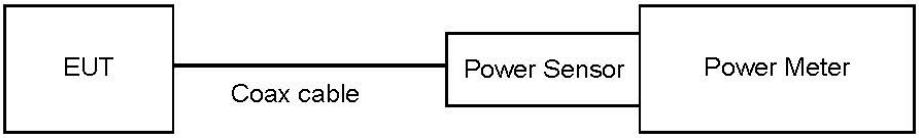
8.3 OUTPUT POWER (802.11b/g/n/ac)

Test Requirements and limit, §15.247(b)(3)

The transmitter output is connected to the input of an RF power sensor. Measurement is made using a broadband power meter capable of making peak and average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

The maximum permissible conducted output power is 1 Watt.

▣ TEST CONFIGURATION(20 MHz BW)



▣ TEST PROCEDURE(20 MHz BW)

- Peak Power (Procedure 9.1.2 in KDB 558074, issued 06/09/2015)
  1. Measure the peak power of the transmitter.
- Average Power (Procedure 9.2.3.1 in KDB 558074, issued 06/09/2015)
  1. Measure the duty cycle.
  2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
  3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Note :

1. We apply to the offset in the 2.4 GHz range that was rounded off to the closest tenth dB. So, 10.2 dB is offset for 2.4 GHz Band.
   Actual value of loss for the attenuator and cable combination is below table.

Band	Frequency(MHz)	Loss(dB)
2.4 GHz	2412	10.21
	2437	10.24
	2462	10.24

(Actual value of loss for the attenuator and cable combination)

▣ TEST RESULTS-Peak

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
2412	1	1 Mbps	24.43	30
		2 Mbps	24.44	30
		5.5 Mbps	24.39	30
		11 Mbps	24.38	30
2437	6	1 Mbps	24.55	30
		2 Mbps	24.55	30
		5.5 Mbps	24.54	30
		11 Mbps	24.54	30
2462	11	1 Mbps	24.31	30
		2 Mbps	24.31	30
		5.5 Mbps	24.14	30
		11 Mbps	24.18	30

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
2412	1	6 Mbps	24.39	30
		9 Mbps	24.31	30
		12 Mbps	24.29	30
		18 Mbps	24.37	30
		24 Mbps	24.74	30
		36 Mbps	24.35	30
		48 Mbps	24.34	30
		54 Mbps	24.29	30
2437	6	6 Mbps	25.16	30
		9 Mbps	25.12	30
		12 Mbps	24.86	30
		18 Mbps	24.70	30
		24 Mbps	24.58	30
		36 Mbps	24.61	30
		48 Mbps	24.51	30
		54 Mbps	24.53	30
2462	11	6 Mbps	24.38	30
		9 Mbps	24.22	30
		12 Mbps	24.20	30
		18 Mbps	24.12	30
		24 Mbps	24.26	30
		36 Mbps	24.10	30
		48 Mbps	24.13	30
		54 Mbps	24.20	30

Conducted Output Power Measurements (802.11n_20MHz BW Mode)

802.11n Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
2412	1	6.5 Mbps	24.60	30
		13 Mbps	24.30	30
		19.5 Mbps	24.39	30
		26 Mbps	24.40	30
		39 Mbps	24.35	30
		52 Mbps	24.59	30
		58.5 Mbps	24.31	30
		65 Mbps	24.30	30
2437	6	6.5 Mbps	25.14	30
		13 Mbps	24.78	30
		19.5 Mbps	25.08	30
		26 Mbps	25.06	30
		39 Mbps	24.89	30
		52 Mbps	25.17	30
		58.5 Mbps	24.61	30
		65 Mbps	24.49	30
2462	11	6.5 Mbps	24.44	30
		13 Mbps	24.18	30
		19.5 Mbps	24.17	30
		26 Mbps	24.28	30
		39 Mbps	24.18	30
		52 Mbps	24.13	30
		58.5 Mbps	24.29	30
		65 Mbps	24.06	30

Conducted Output Power Measurements (802.11ac_20MHz BW Mode)

802.11ac Mode		Rate	Measured	Limit
Frequency[MHz]	Channel No.	(Mbps)	Power(dBm)	(dBm)
2412	1	6.5 Mbps	24.36	30
		13 Mbps	24.30	30
		19.5 Mbps	24.30	30
		26 Mbps	24.35	30
		39 Mbps	24.28	30
		52 Mbps	24.26	30
		58.5 Mbps	24.33	30
		65 Mbps	24.30	30
		78 Mbps	24.30	30
2437	6	6.5 Mbps	24.46	30
		13 Mbps	24.52	30
		19.5 Mbps	24.50	30
		26 Mbps	24.46	30
		39 Mbps	24.45	30
		52 Mbps	24.52	30
		58.5 Mbps	24.48	30
		65 Mbps	24.47	30
		78 Mbps	24.47	30
2462	11	6.5 Mbps	24.26	30
		13 Mbps	24.07	30
		19.5 Mbps	24.16	30
		26 Mbps	24.33	30
		39 Mbps	24.17	30
		52 Mbps	24.12	30
		58.5 Mbps	24.25	30
		65 Mbps	24.03	30
		78 Mbps	24.15	30

▣ TEST RESULTS-Average

Conducted Output Power Measurements (802.11b Mode)

802.11b Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	1 Mbps	16.08	0.000	16.08	30
		2 Mbps	16.46	0.020	16.48	30
		5.5 Mbps	16.59	0.040	16.63	30
		11 Mbps	16.45	0.075	16.53	30
2437	6	1 Mbps	16.63	0.000	16.63	30
		2 Mbps	17.10	0.020	17.12	30
		5.5 Mbps	17.29	0.040	17.33	30
		11 Mbps	17.13	0.075	17.21	30
2462	11	1 Mbps	16.36	0.000	16.36	30
		2 Mbps	16.95	0.020	16.97	30
		5.5 Mbps	17.11	0.040	17.15	30
		11 Mbps	16.98	0.075	17.06	30

Conducted Output Power Measurements (802.11g Mode)

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6 Mbps	13.09	0.039	13.13	30
		9 Mbps	13.06	0.037	13.10	30
		12 Mbps	13.08	0.052	13.13	30
		18 Mbps	13.06	0.114	13.17	30
		24 Mbps	13.05	0.149	13.20	30
		36 Mbps	12.91	0.219	13.13	30
		48 Mbps	12.01	0.274	12.28	30
		54 Mbps	11.76	0.308	12.07	30
2437	6	6 Mbps	14.90	0.039	14.94	30
		9 Mbps	14.88	0.037	14.92	30
		12 Mbps	14.87	0.052	14.92	30
		18 Mbps	14.85	0.114	14.96	30
		24 Mbps	14.84	0.149	14.99	30
		36 Mbps	14.72	0.219	14.94	30
		48 Mbps	13.63	0.274	13.90	30
		54 Mbps	13.56	0.308	13.87	30
2462	11	6 Mbps	12.64	0.039	12.68	30
		9 Mbps	12.62	0.037	12.66	30
		12 Mbps	12.73	0.052	12.78	30
		18 Mbps	12.70	0.114	12.81	30
		24 Mbps	12.51	0.149	12.66	30
		36 Mbps	12.47	0.219	12.69	30
		48 Mbps	11.47	0.274	11.74	30
		54 Mbps	11.42	0.308	11.73	30

Conducted Output Power Measurements (802.11n_20MHz BW Mode)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6.5 Mbps	11.72	0.017	11.74	30
		13 Mbps	11.67	0.034	11.70	30
		19.5 Mbps	11.60	0.050	11.65	30
		26 Mbps	11.61	0.099	11.71	30
		39 Mbps	11.57	0.146	11.72	30
		52 Mbps	11.65	0.152	11.80	30
		58.5 Mbps	10.58	0.148	10.73	30
		65 Mbps	10.42	0.188	10.61	30
2437	6	6.5 Mbps	14.54	0.017	14.56	30
		13 Mbps	14.45	0.034	14.48	30
		19.5 Mbps	14.40	0.050	14.45	30
		26 Mbps	14.49	0.099	14.59	30
		39 Mbps	14.37	0.146	14.52	30
		52 Mbps	14.32	0.152	14.47	30
		58.5 Mbps	13.37	0.148	13.52	30
		65 Mbps	13.31	0.188	13.50	30
2462	11	6.5 Mbps	12.43	0.017	12.45	30
		13 Mbps	12.44	0.034	12.47	30
		19.5 Mbps	12.41	0.050	12.46	30
		26 Mbps	12.37	0.099	12.47	30
		39 Mbps	12.34	0.146	12.49	30
		52 Mbps	12.31	0.152	12.46	30
		58.5 Mbps	11.16	0.148	11.31	30
		65 Mbps	11.11	0.188	11.30	30

Conducted Output Power Measurements (802.11ac_20MHz BW Mode)

802.11ac Mode		Rate (Mbps)	Measured Power(dBm)	Duty Cycle Factor (dB)	Measured Power(dBm) + Duty Cycle Factor(dB)	Limit (dBm)
Frequency [MHz]	Channel No.					
2412	1	6.5 Mbps	10.65	0.025	10.68	30
		13 Mbps	10.63	0.036	10.67	30
		19.5 Mbps	10.46	0.025	10.48	30
		26 Mbps	10.58	0.099	10.68	30
		39 Mbps	10.57	0.048	10.62	30
		52 Mbps	10.53	0.094	10.62	30
		58.5 Mbps	10.55	0.169	10.72	30
		65 Mbps	10.57	0.185	10.75	30
		78 Mbps	10.50	0.219	10.72	30
2437	6	6.5 Mbps	11.51	0.025	11.54	30
		13 Mbps	11.53	0.036	11.57	30
		19.5 Mbps	11.51	0.025	11.53	30
		26 Mbps	11.42	0.099	11.52	30
		39 Mbps	11.51	0.048	11.56	30
		52 Mbps	11.29	0.094	11.38	30
		58.5 Mbps	11.45	0.169	11.62	30
		65 Mbps	11.42	0.185	11.60	30
		78 Mbps	11.53	0.219	11.75	30
2462	11	6.5 Mbps	11.41	0.025	11.44	30
		13 Mbps	11.39	0.036	11.43	30
		19.5 Mbps	11.38	0.025	11.40	30
		26 Mbps	11.39	0.099	11.49	30
		39 Mbps	11.22	0.048	11.27	30
		52 Mbps	11.14	0.094	11.23	30
		58.5 Mbps	11.12	0.169	11.29	30
		65 Mbps	11.14	0.185	11.32	30
		78 Mbps	11.26	0.219	11.48	30

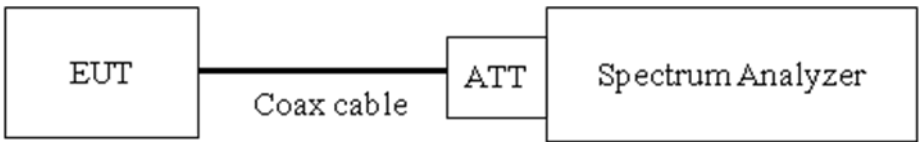
8.4 POWER SPECTRAL DENSITY (802.11b/g/n/ac)

Test Requirements and limit, §15.247(e)

The peak power spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

Minimum Standard – 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.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

We tested according to Procedure 10.2 in KDB 558074, issued 06/09/2015

The spectrum analyzer is set to :

Set analyzer center frequency to DTS channel center frequency.

Span = 1.5 times the DTS channel bandwidth.

RBW = 3 kHz ≤ RBW ≤ 100 kHz.

VBW ≥ 3 x RBW.

Sweep = auto couple

Detector = peak

Trace Mode = max hold

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

▣ Sample Calculation

PSD = Reading Value + ATT loss + Cable loss(1 ea)

Output Power = -5 dBm + 10 dB + 0.8 dB = 5.8 dBm

Note :

1. Spectrum reading values are not plot data. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the 2.4 GHz range that was rounded off to the closest tenth dB. So, 10.2 dB is offset for 2.4 GHz Band.

Actual value of loss for the attenuator and cable combination is below table.

Band	Frequency(MHz)	Loss(dB)
2.4 GHz	2412	10.21
	2437	10.24
	2462	10.24

(Actual value of loss for the attenuator and cable combination)

▣ TEST RESULTS

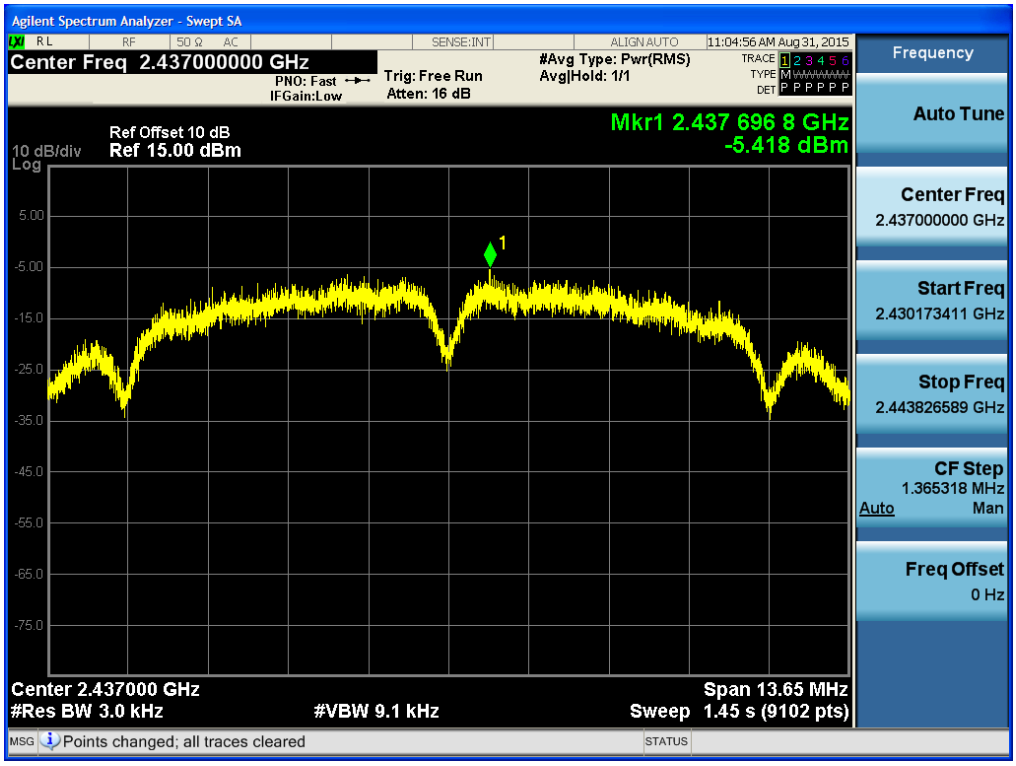
Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			PSD (dBm)	Limit (dBm)	Pass/Fail
2412	1	802.11b	-7.000	8	Pass
2437	6		-5.418	8	Pass
2462	11		-5.824	8	Pass
2412	1	802.11g	-10.371	8	Pass
2437	6		-9.203	8	Pass
2462	11		-10.706	8	Pass
2412	1	802.11n 20MHz BW	-11.843	8	Pass
2437	6		-9.388	8	Pass
2462	11		-11.395	8	Pass
2412	1	802.11ac 20MHz BW	-13.480	8	Pass
2437	6		-12.654	8	Pass
2462	11		-12.741	8	Pass

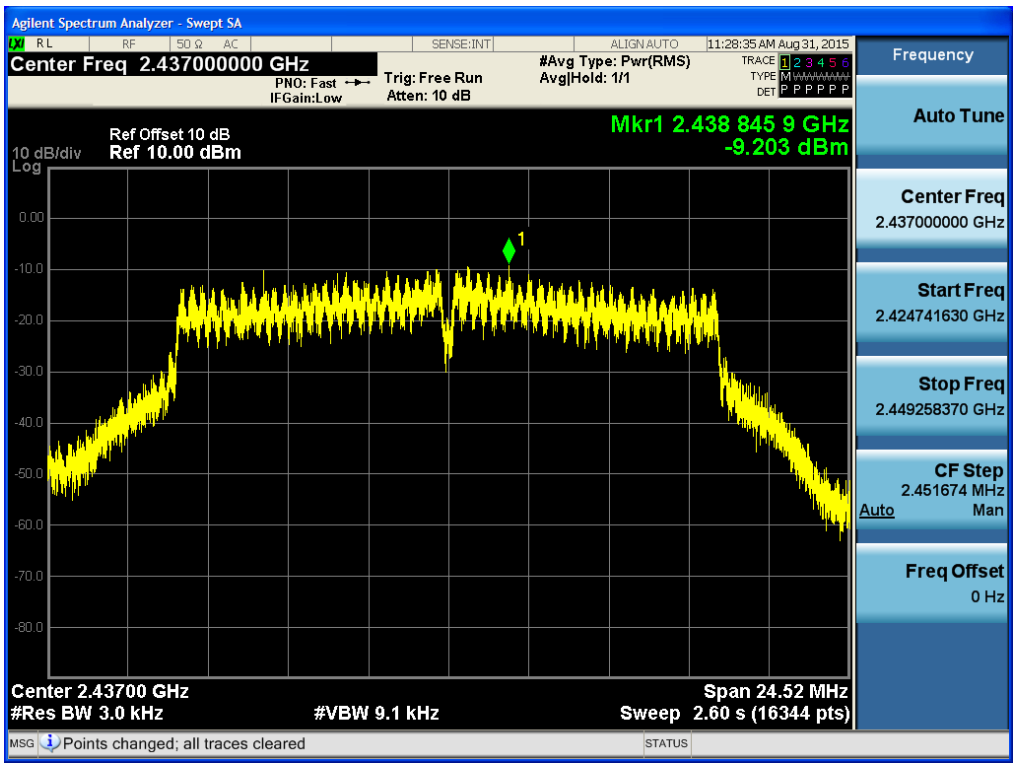
Note : In order to simplify the report, attached plots were only the highest PSD channel.

▣ RESULT PLOTS

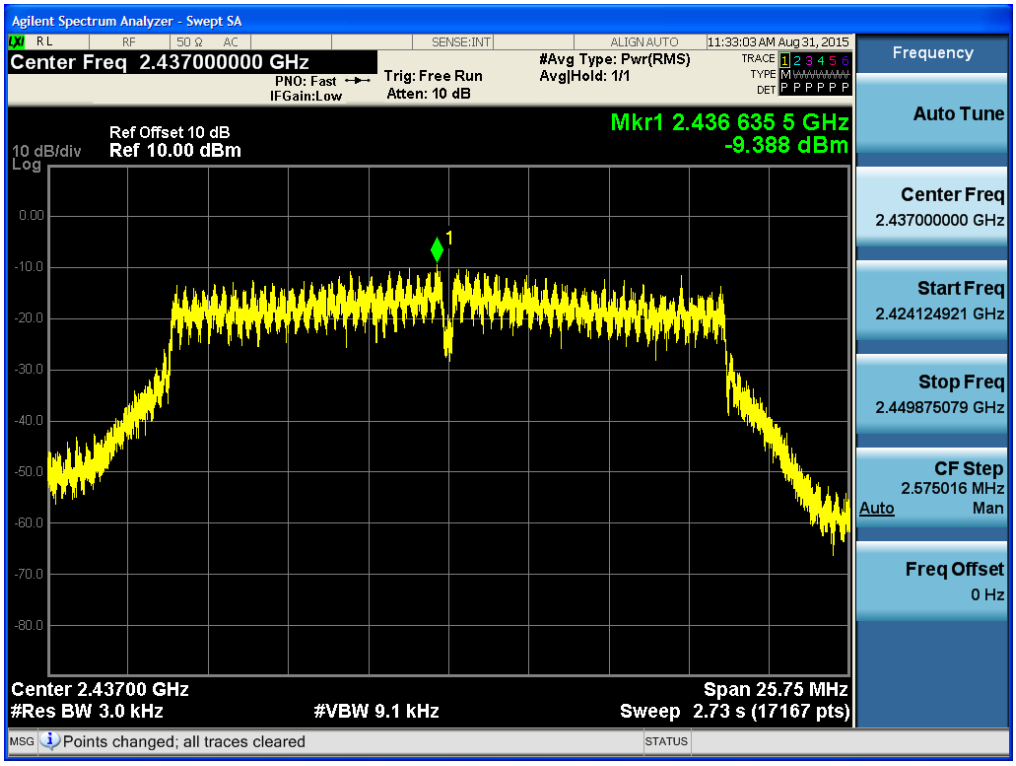
Power Spectral Density (802.11b-CH 6)



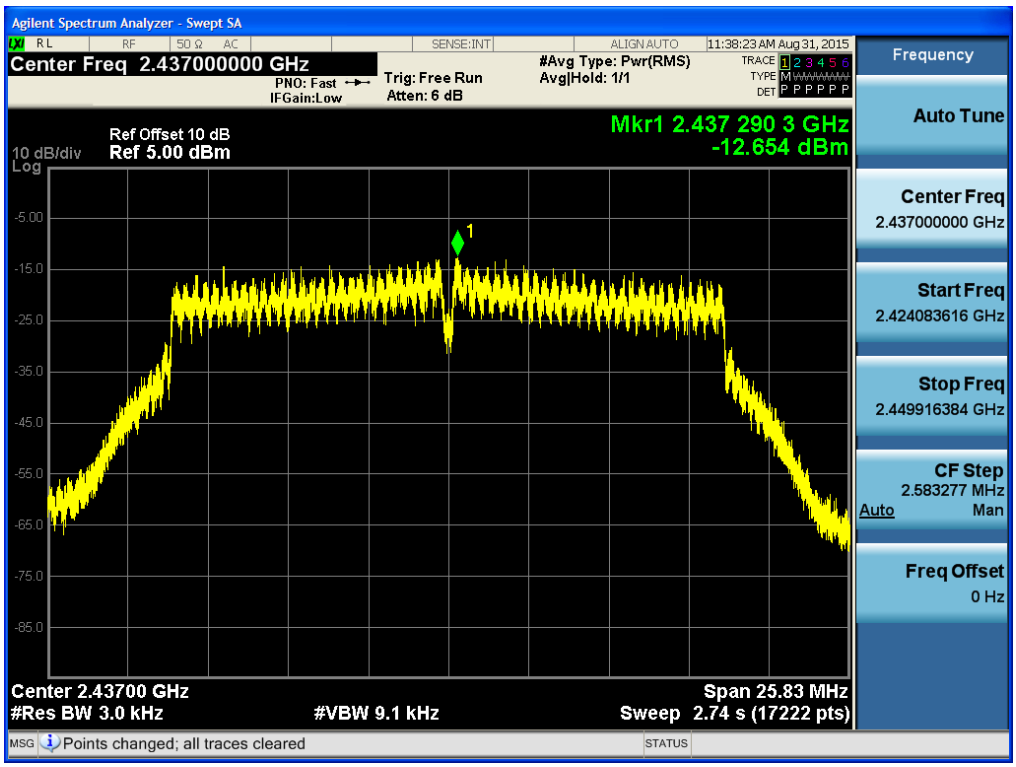
Power Spectral Density (802.11g-CH 6)



Power Spectral Density (802.11n_20MHz BW -CH 6)



Power Spectral Density (802.11ac_20MHz BW -CH 6)



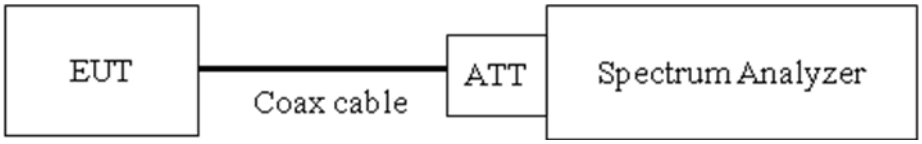
8.5 OUT OF BAND EMISSIONS AT THE BAND EDGE/ CONDUCTED SPURIOUS EMISSIONS

Test Requirements and limit, §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) (see § 15.205(c)).

Limit : 20 dBc

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. (Procedure 11.0 in KDB 558074, issued 06/09/2015)

RBW = 100 kHz

VBW ≥ 3 x RBW

Set span to encompass the spectrum to be examined

Detector = Peak

Trace Mode = max hold

Sweep time = auto couple

Ensure that the number of measurement points ≥ Span/RBW

Allow trace to fully stabilize.

Use peak marker function to determine the maximum amplitude level.

Measurements are made over the 30 MHz to 10th harmonic range with the transmitter set to the lowest, middle, and highest channels.

Note :

1. The band edge results in plot is already including the actual values of loss for the attenuator and cable combination.

2. Spectrum offset = Attenuator loss + Cable loss

3. We apply to the offset in the 2.4 GHz range that was rounded off to the closest tenth dB. So, 10.2 dB is offset for 2.4 GHz Band. Actual value of loss for the attenuator and cable combination is below table.

Band	Frequency(MHz)	Loss(dB)
2.4 GHz	2412	10.21
	2437	10.24
	2462	10.24

(Actual value of loss for the attenuator and cable combination)

4. In case of conducted spurious emissions test, please check factors blow table.

5. In order to simplify the report, attached plots were only the worst case channel.

▣ FACTORS FOR FREQUENCY

Freq(MHz)	Factor(dB)
30	9.95
100	10.01
200	10.03
300	10.04
400	10.05
500	10.04
600	10.03
700	10.09
800	10.10
900	10.08
1000	10.11
2000	10.25
2400*	10.19
2500*	10.26
3000	10.27
4000	10.22
5000	10.48
5700*	10.42
5800*	10.48
6000	10.48
7000	10.57
8000	10.45

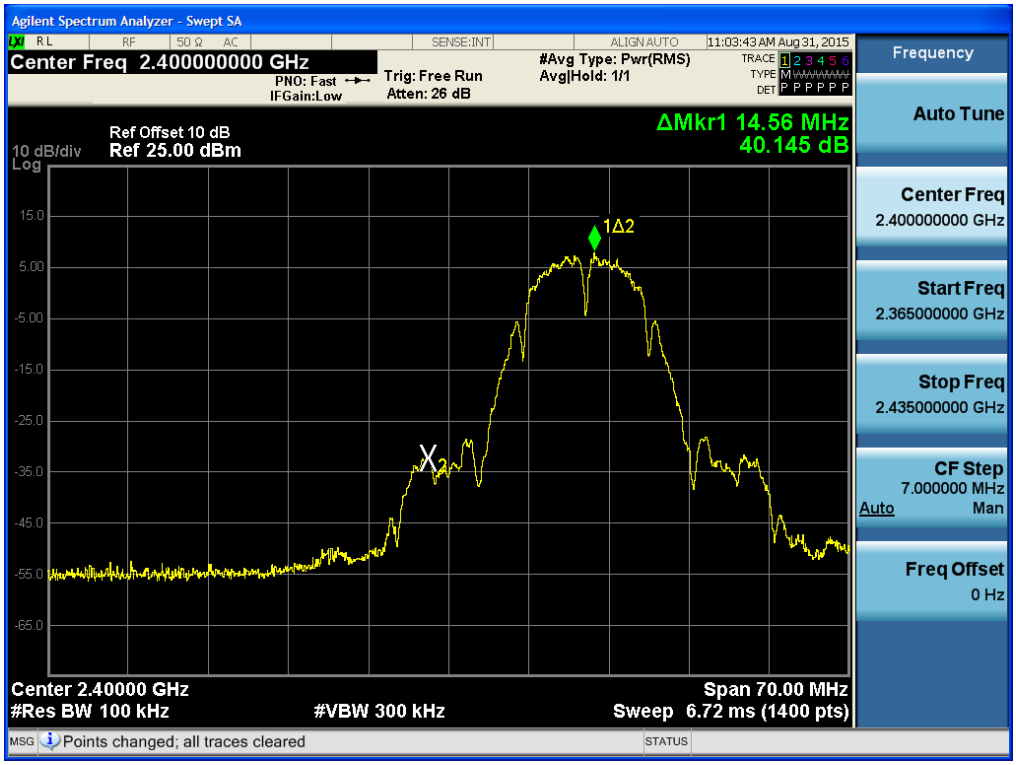
9000	10.50
10000	10.64
11000	10.69
12000	10.75
13000	10.92
14000	11.90
15000	11.00
16000	11.03
17000	10.93
18000	10.96
19000	10.85
20000	12.11
21000	11.17
22000	10.99
23000	11.12
24000	11.10
25000	11.42

Note : 1. '*' is fundamental frequency range.

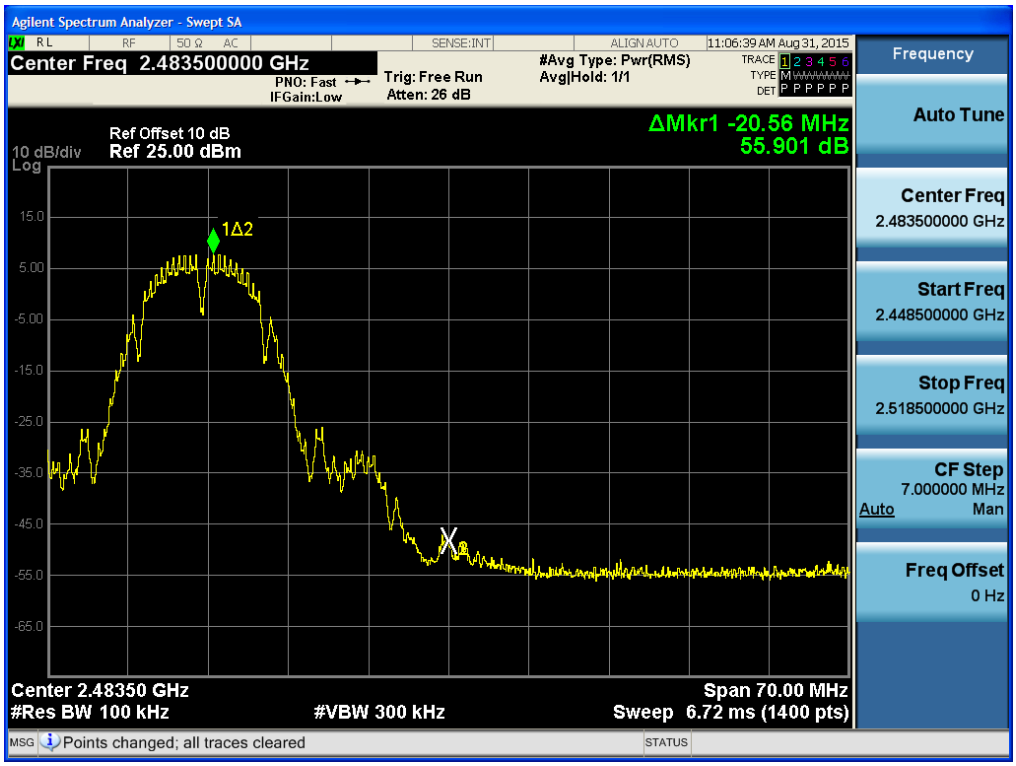
2. Factor = Cable loss + Attenuator loss

▣ RESULT PLOTS

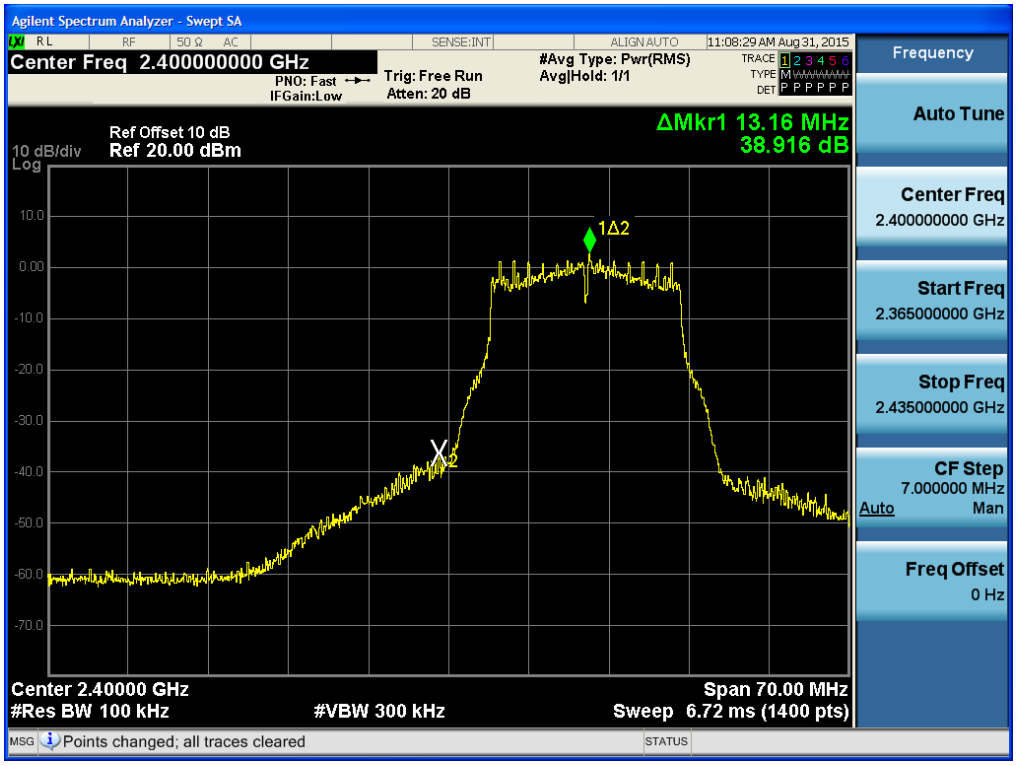
BandEdge (802.11b-CH1)



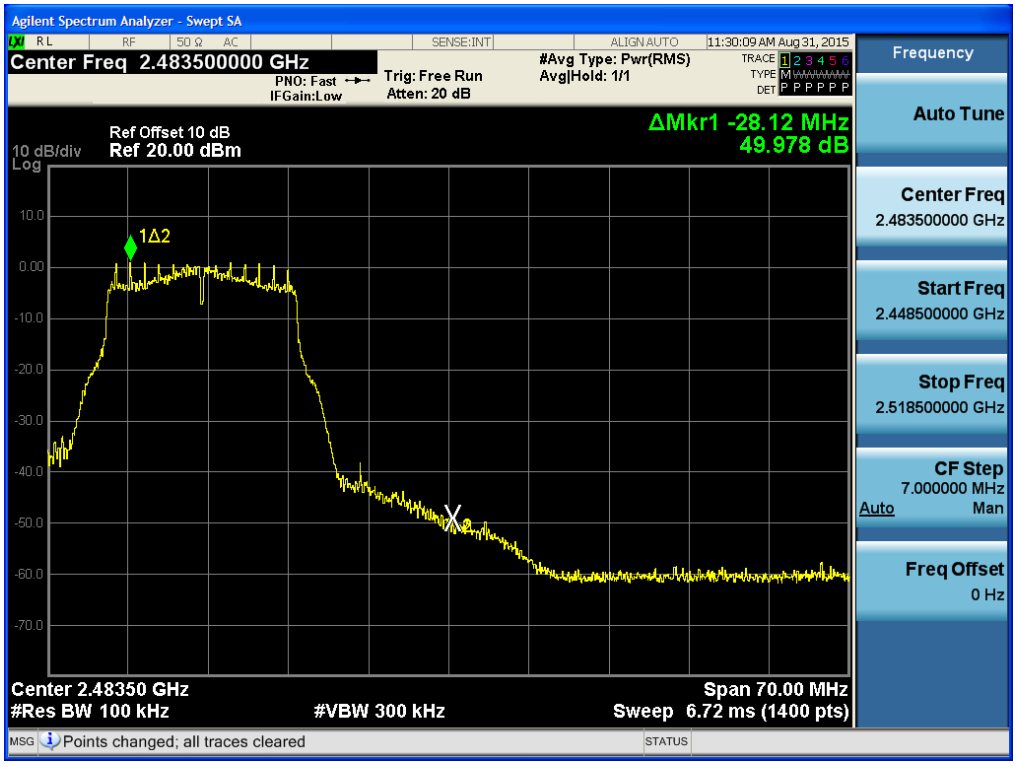
BandEdge (802.11b-CH11)



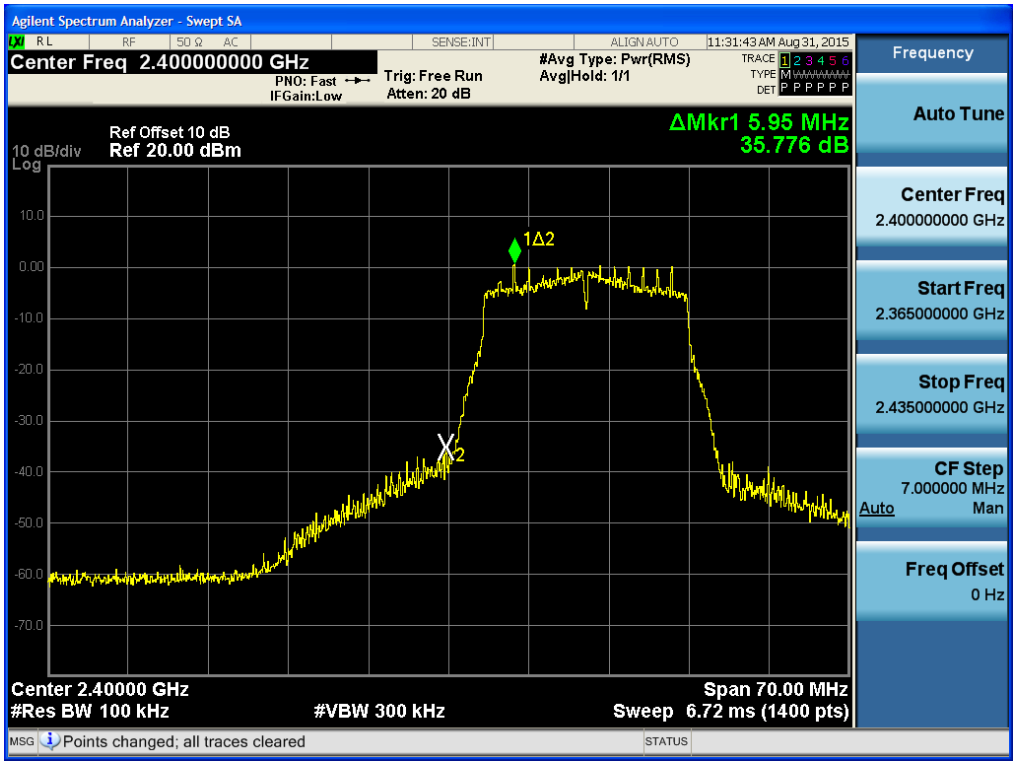
BandEdge (802.11g-CH1)



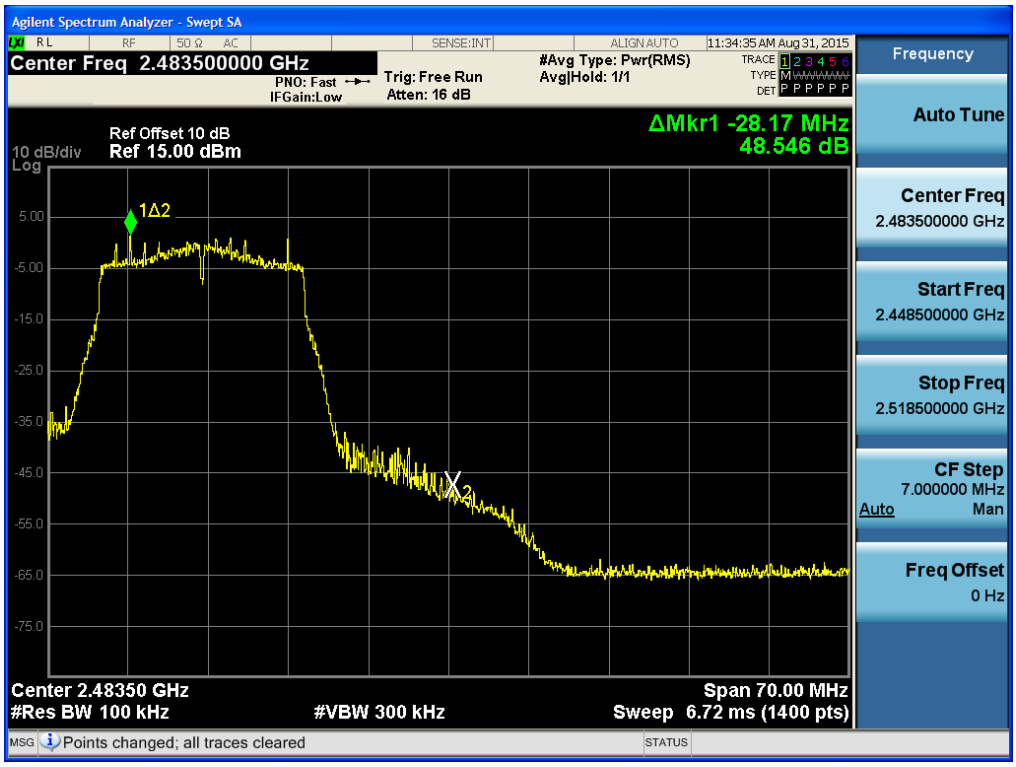
BandEdge (802.11g-CH11)



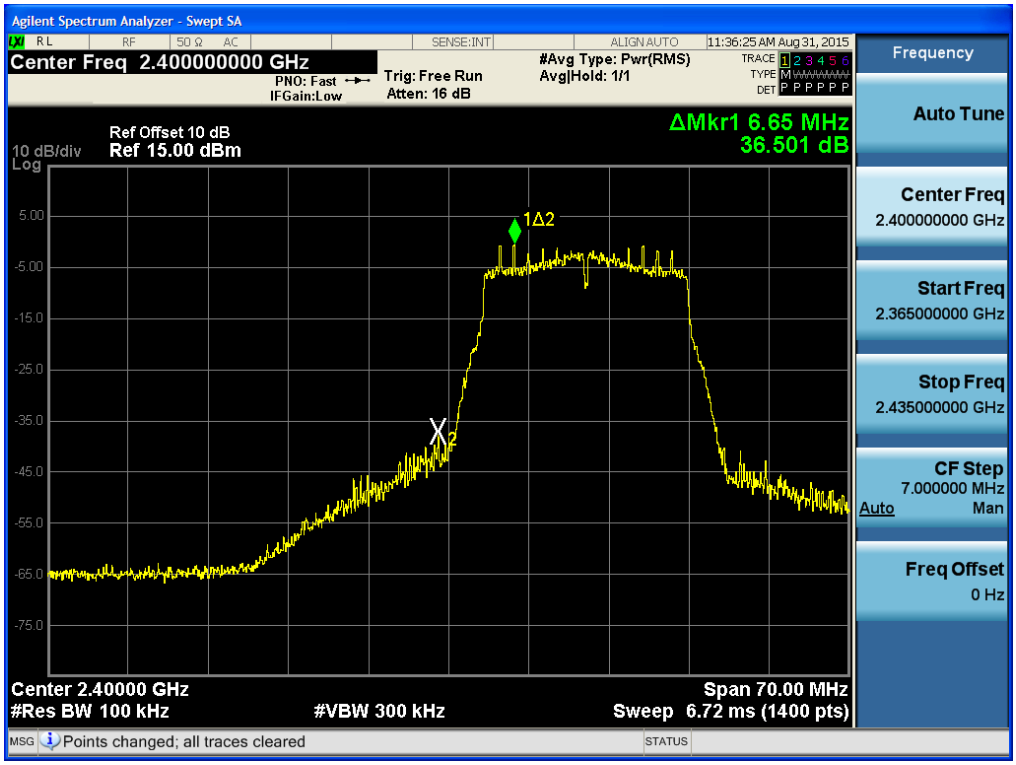
Band Edge (802.11n_20MHz-CH1)



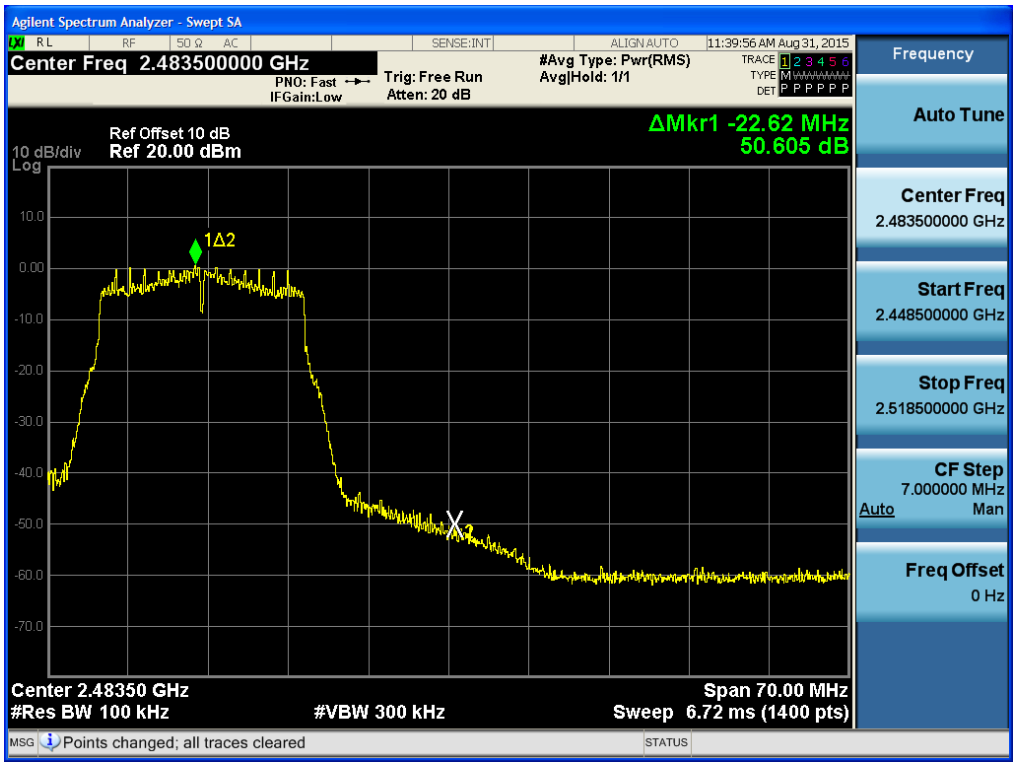
Band Edge (802.11n_20MHz-CH11)



Band Edge (802.11ac_20MHz-CH1)

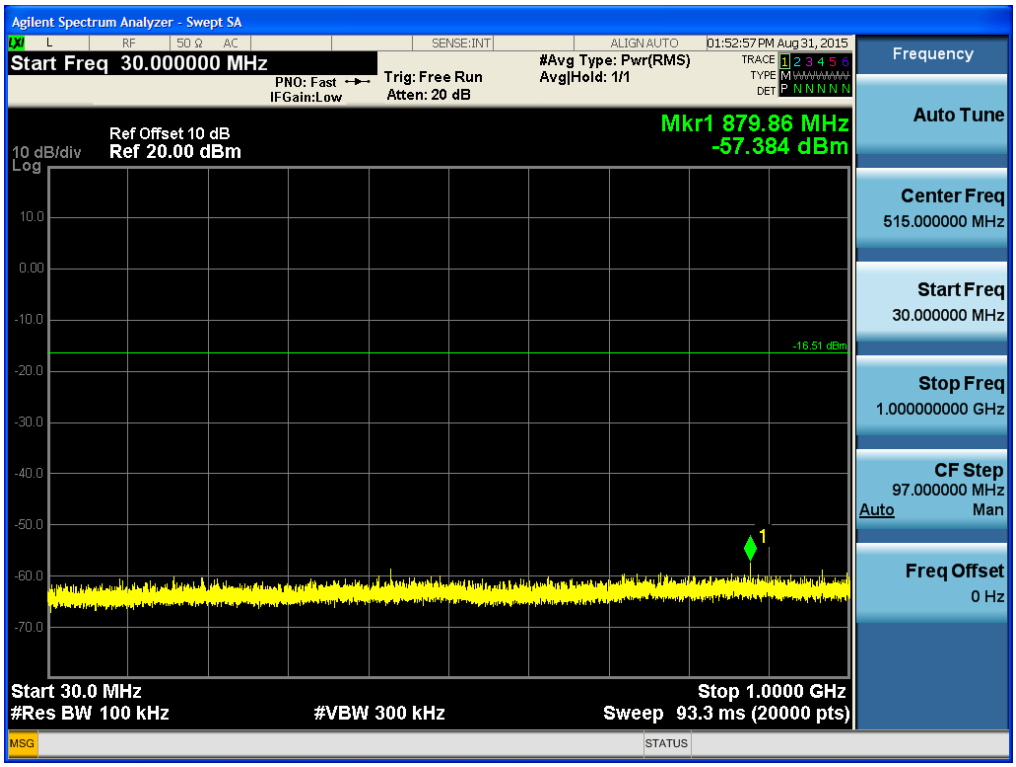


Band Edge (802.11ac_20MHz-CH11)



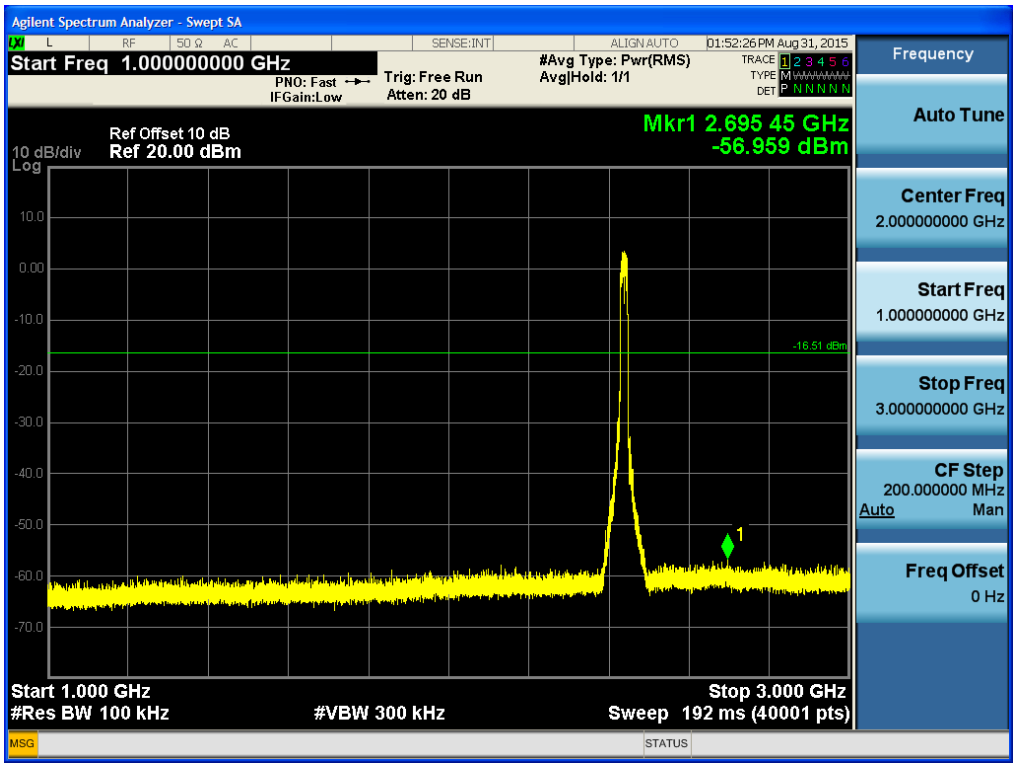
30 MHz ~ 1 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



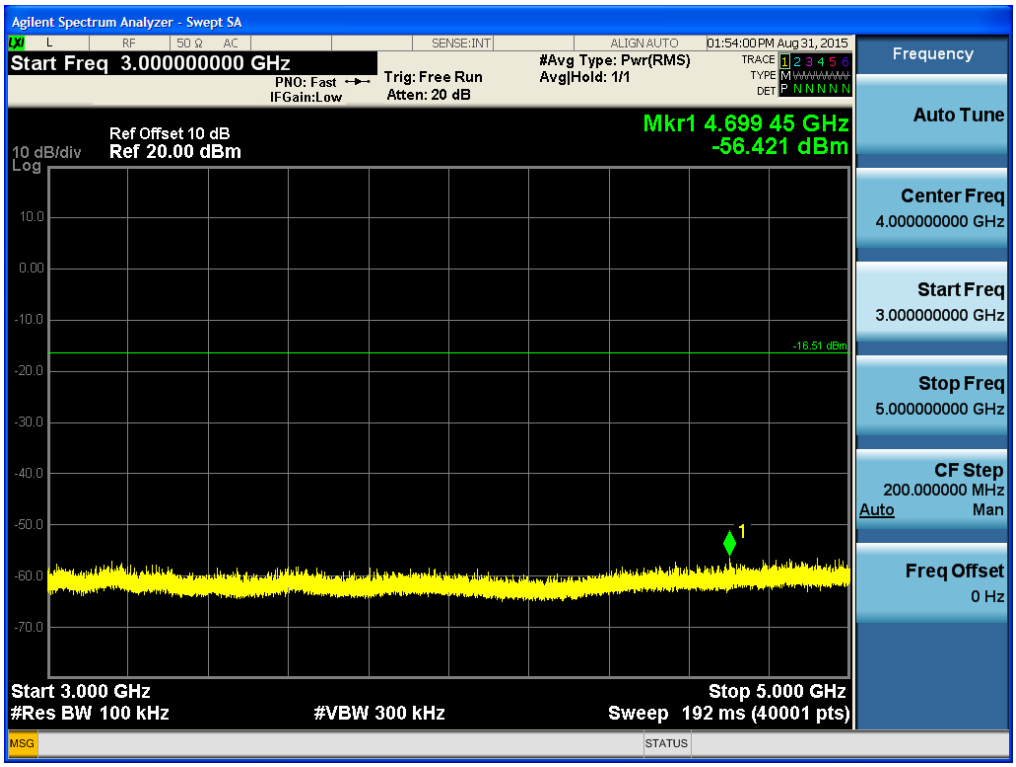
1 GHz ~ 3 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



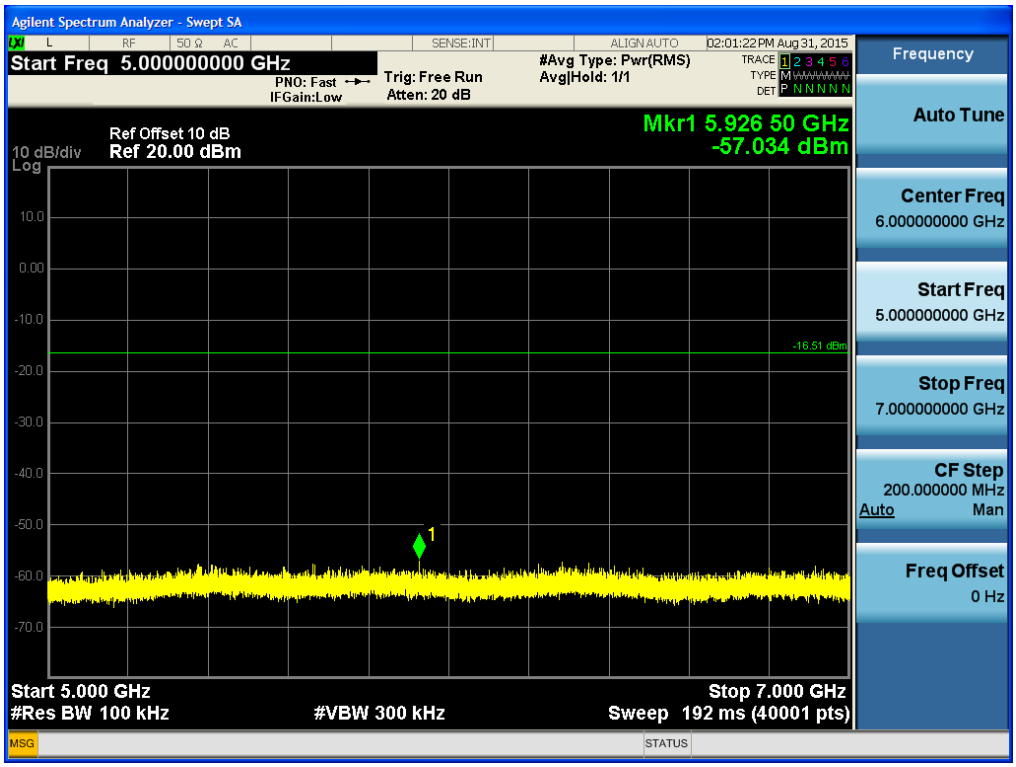
3 GHz ~ 5 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



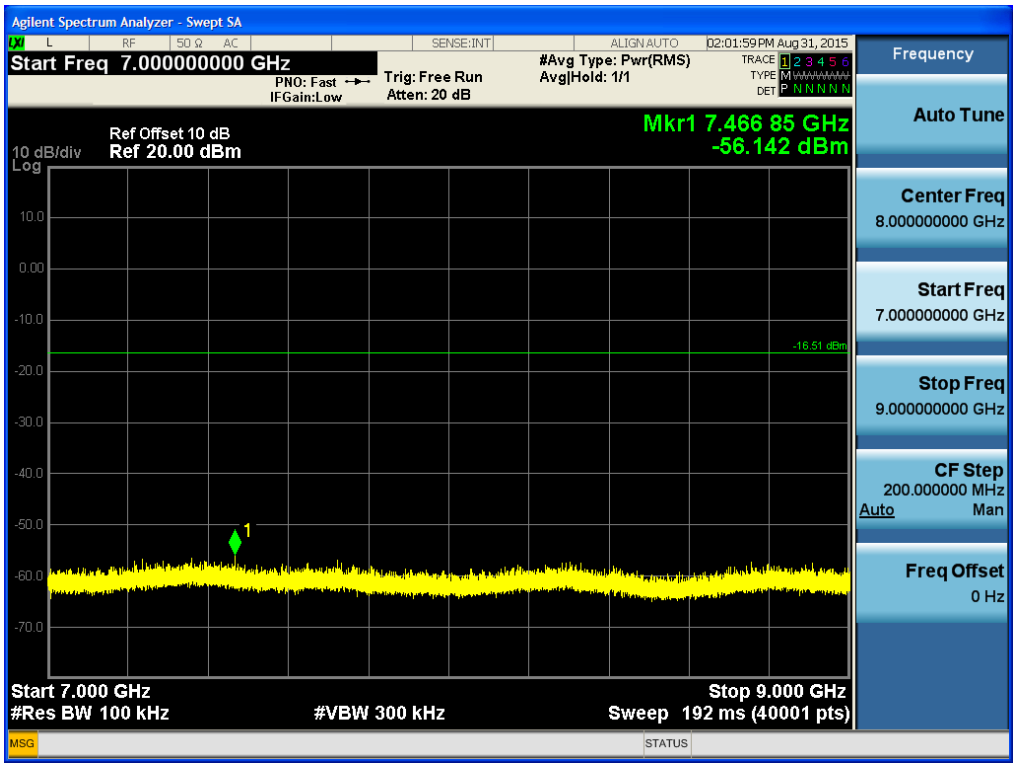
5 GHz ~ 7 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



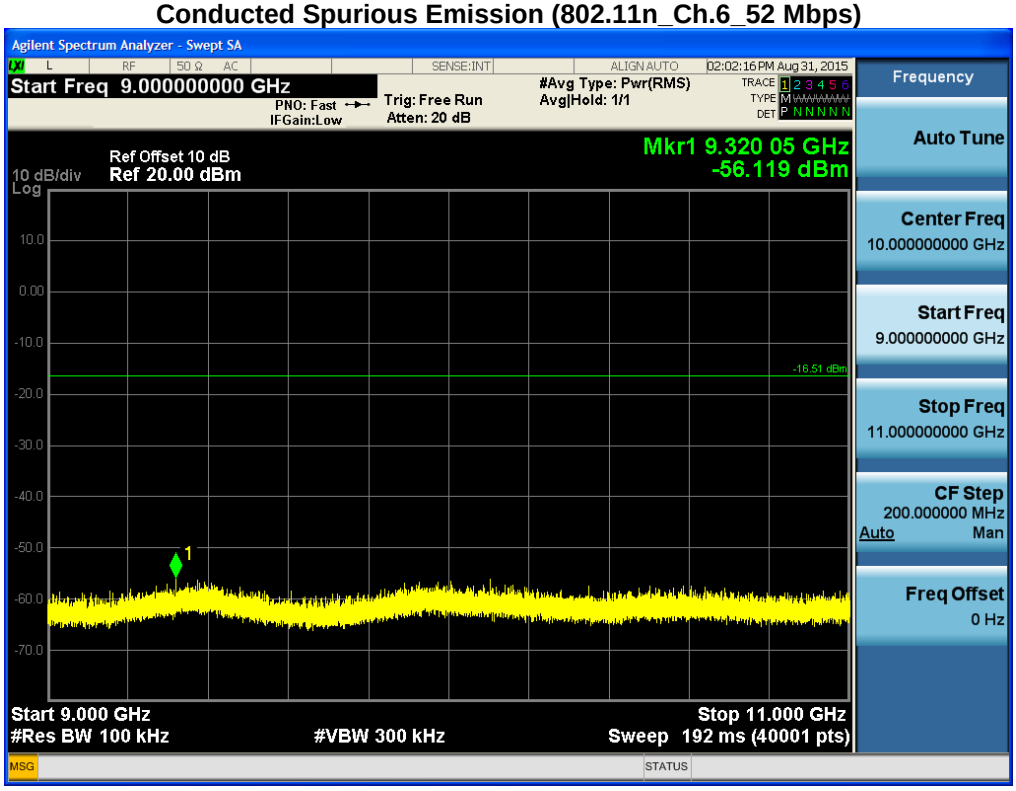
7 GHz ~ 9 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



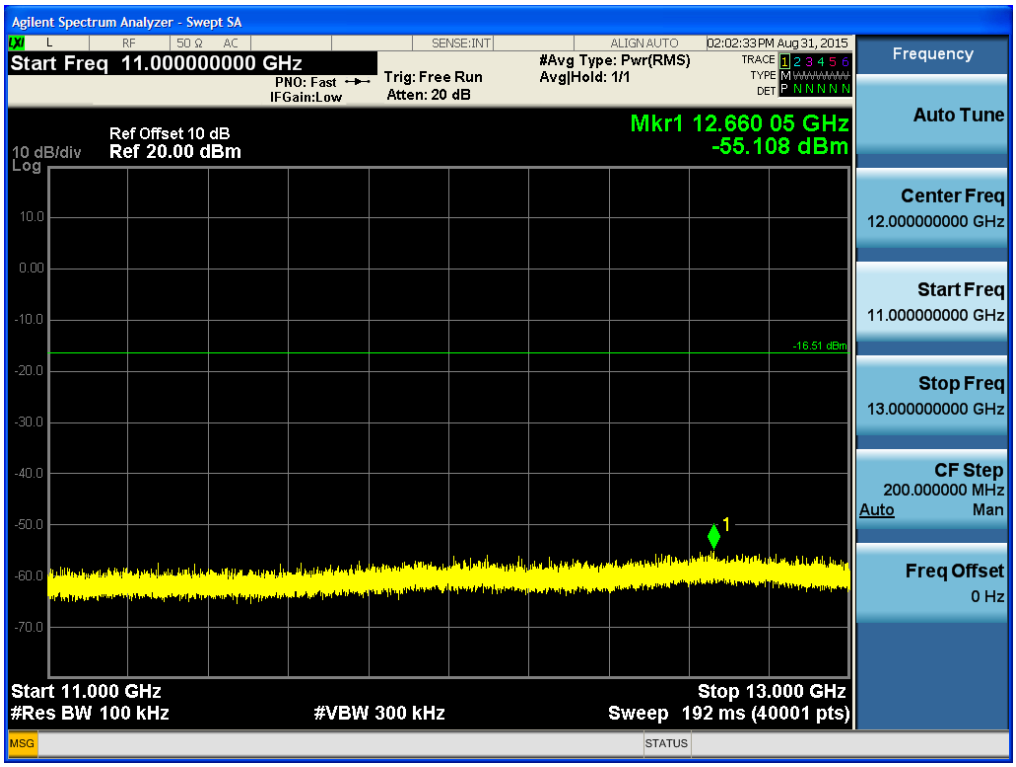
9 GHz ~ 11 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



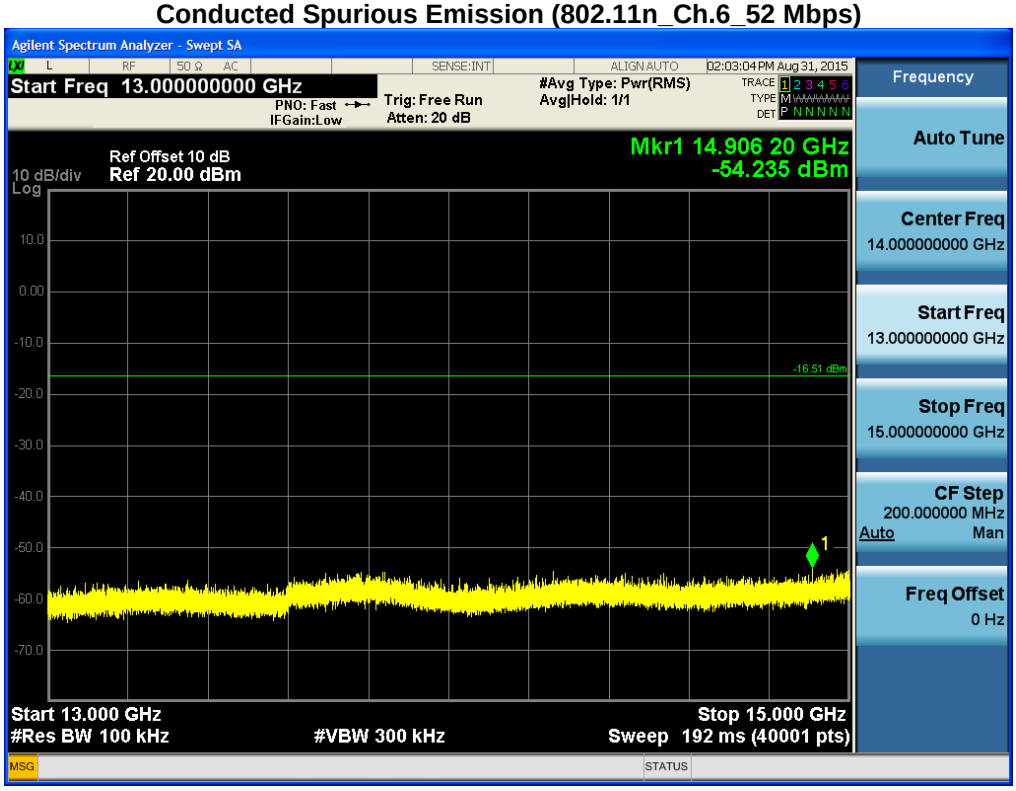
11 GHz ~ 13 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



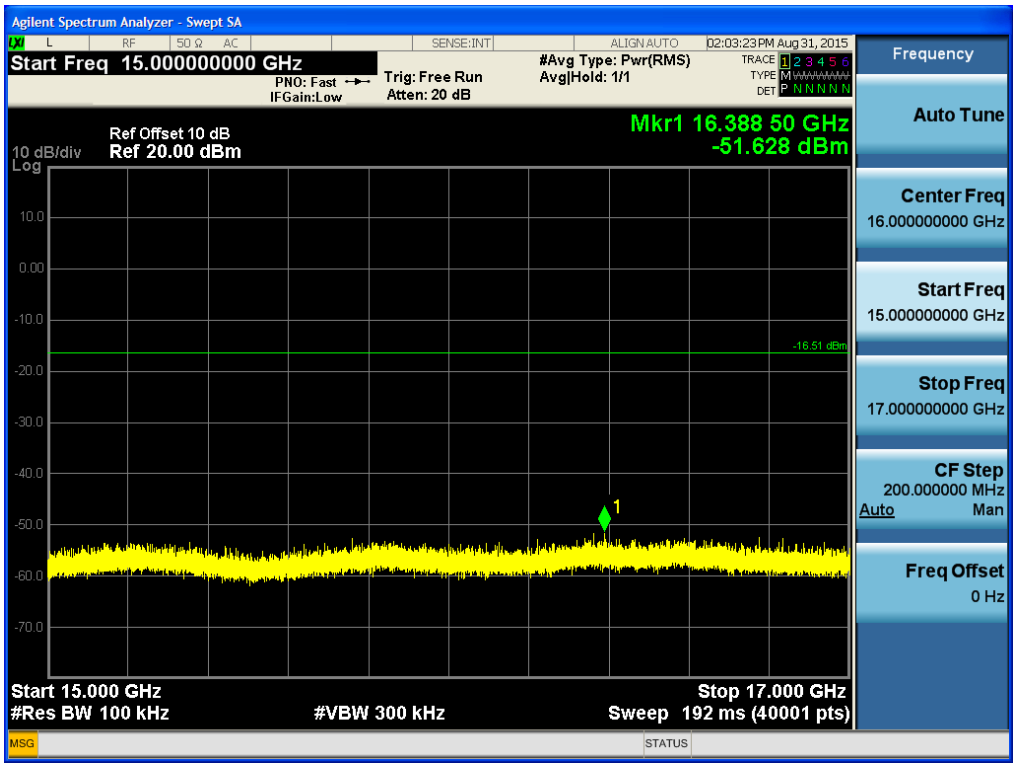
13 GHz ~ 15 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



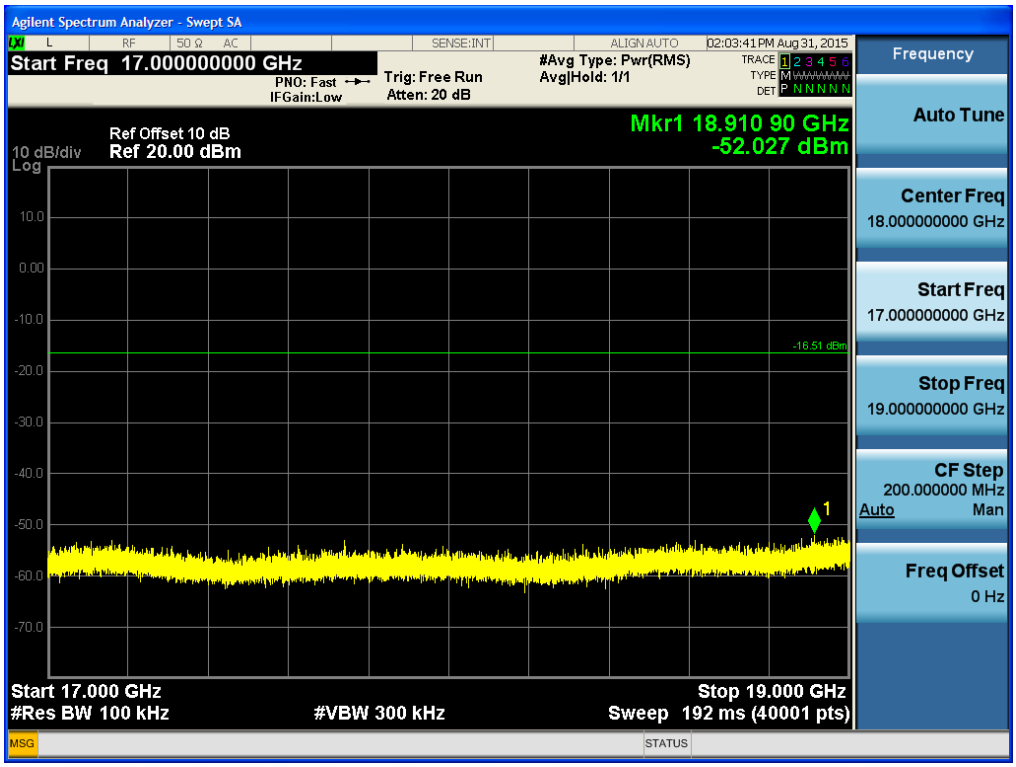
15 GHz ~ 17 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



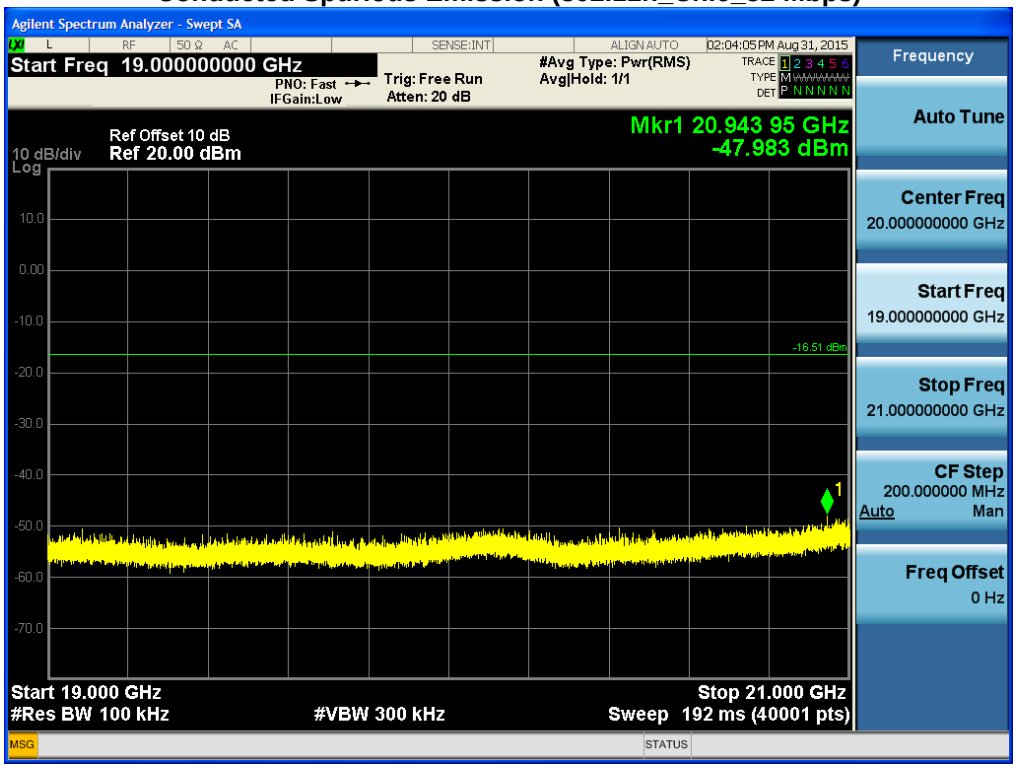
17 GHz ~ 19 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



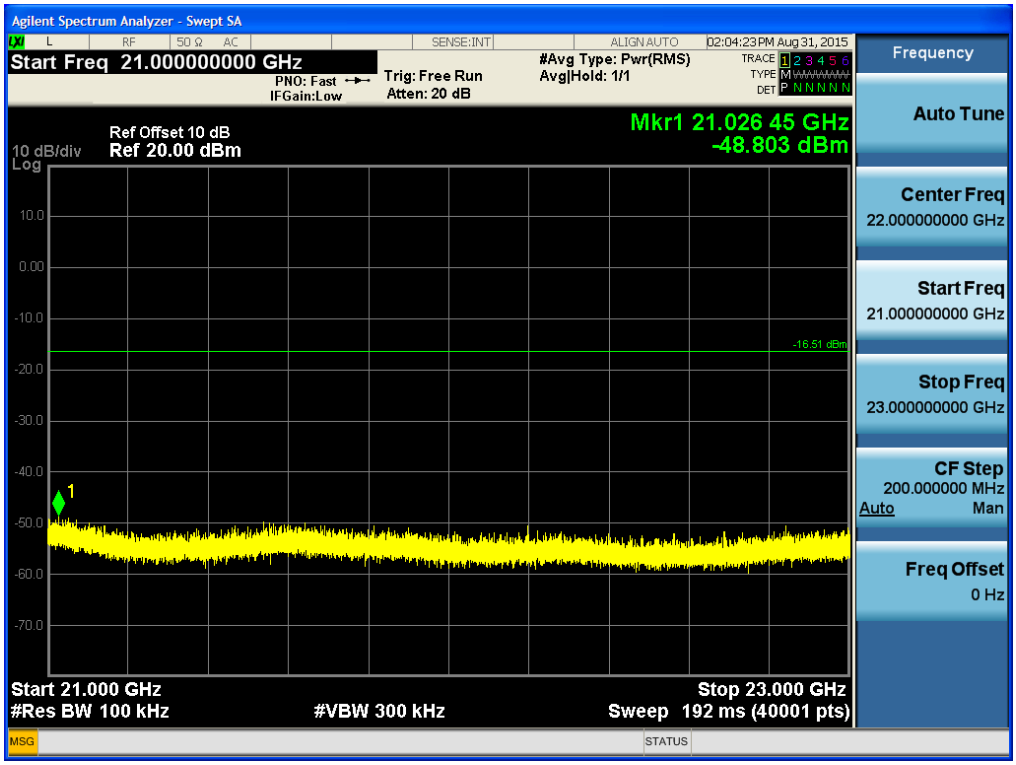
19 GHz ~ 21 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



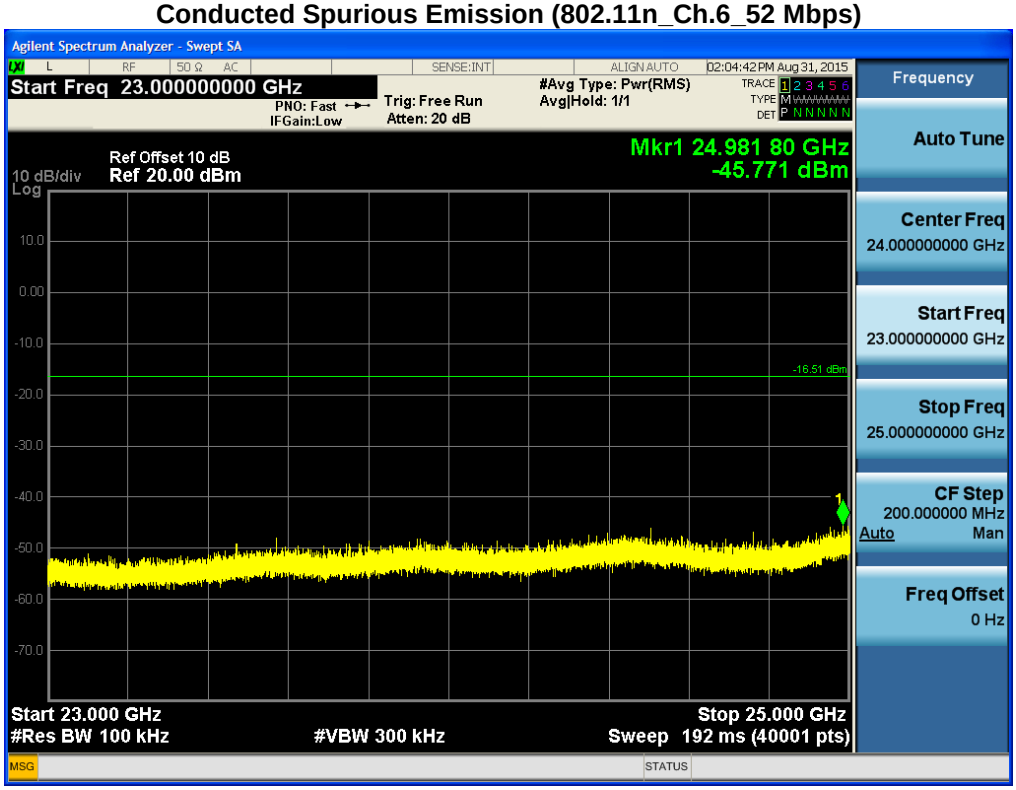
21 GHz ~ 23 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



23 GHz ~ 25 GHz

Conducted Spurious Emission (802.11n_Ch.6_52 Mbps)



8.6 RADIATED MEASUREMENT.

8.6.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209

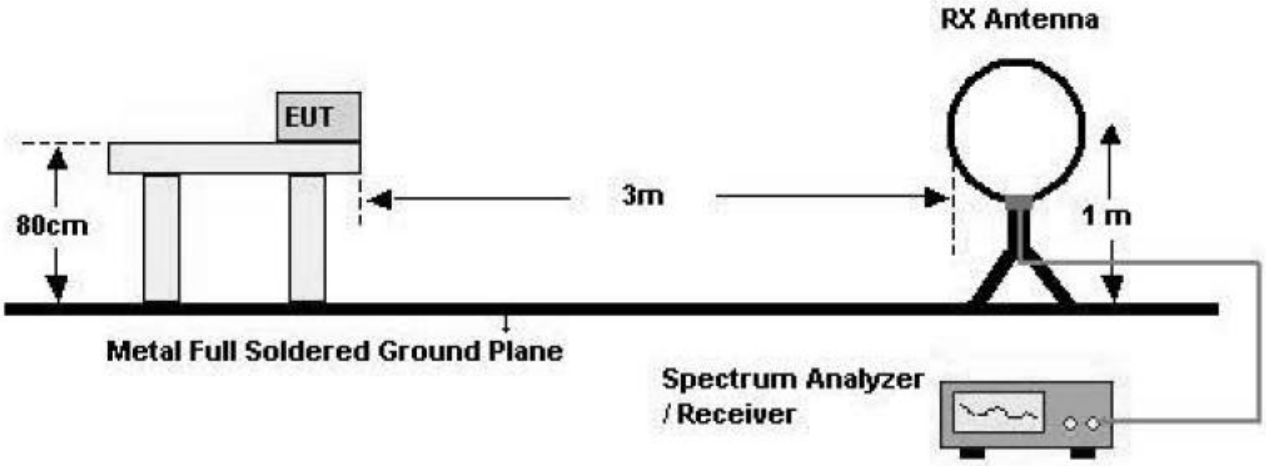
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Mode

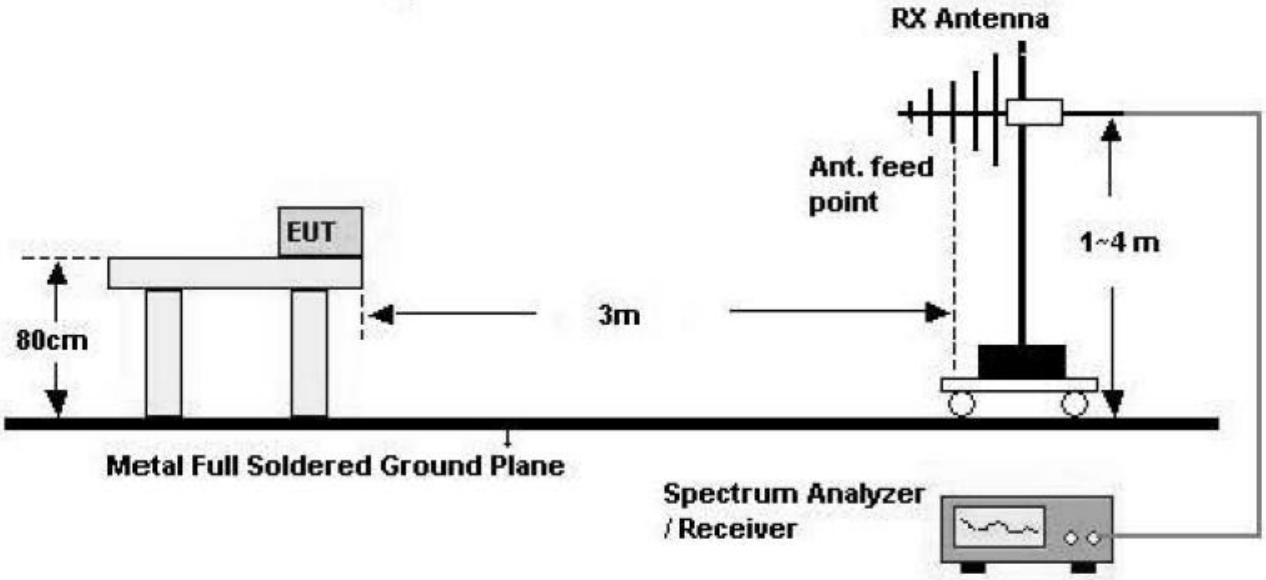
- Standalone with normal cover
- Standalone with wireless charging cover
- With wireless charging pad(WCD-110)
- With wireless charging pad(CT 06801)

Test Configuration

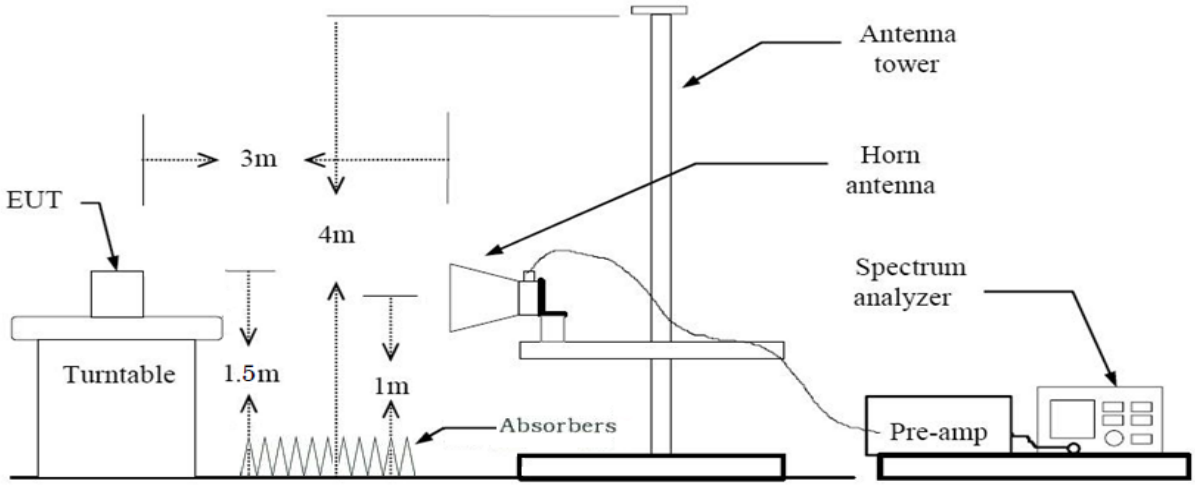
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE USED

Method 12.1 in KDB 558074, issued 06/09/2015

Spectrum Setting

- Peak

Peak emission levels are measured by setting the instrument as follows:

RBW = cf. Table 1.

VBW ≥ 3 x RBW.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweeps to continue until the trace stabilizes.

(Note that the required measurement time may be longer for low duty cycle applications).

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

- Average (duty cycle ≥ 98%)

Set RBW = 1 MHz

Set VBW ≥ 3 x RBW

Detector = RMS

Averaging type = power (*i.e.*, RMS).

Sweep time = auto.

Trace mode = average (at least 100 traces).

- Average (duty cycle < 98%, duty cycle variations are less than ±2%)

Set RBW = 1 MHz

Set VBW ≥ 3 x RBW

Detector = RMS.

Averaging type = power (*i.e.*, RMS).

Sweep time = auto.

Trace mode = average (at least 100 traces).

A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle.

- Average (duty cycle < 98%, duty cycle variations exceed ±2%)

Set RBW = 1 MHz

Set VBW ≥ 1/T.(at least 100 times less than the resolution bandwidth, but no less than 10 Hz.)

Select spectrum analyzer linear display mode.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Note :

1. We are performed the RSE and radiated band edge using standard radiated method.
2. The duty cycle factor for 802.11 b/g/n/ac

Mode	Worst Data rate (Mbps)	T_{on} (ms)	T_{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)	VBW(1/T) (Hz)
b	1	1.000	1.000	100.00	0.000	1000
g	6	2.792	2.817	99.54	0.039	358
n_20MHz	6.5	5.120	5.140	99.61	0.017	195
ac_20MHz	6.5	5.115	5.145	99.42	0.025	196

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dBuV) + Distance extrapolation factor
5. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Standalone with normal cover

Above 1 GHz

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.33	-1.98	V	46.35	73.98	27.63	PK
4824	36.25	-1.98	V	34.27	53.98	19.71	AV
7236	46.42	7.60	V	54.02	73.98	19.96	PK
7236	34.20	7.60	V	41.80	53.98	12.18	AV
4824	48.41	-1.98	H	46.43	73.98	27.55	PK
4824	36.31	-1.98	H	34.33	53.98	19.65	AV
7236	46.98	7.60	H	54.58	73.98	19.40	PK
7236	34.51	7.60	H	42.11	53.98	11.87	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.30	-1.98	V	46.32	73.98	27.66	PK
4824	36.24	-1.98	V	34.26	53.98	19.72	AV
7236	46.39	7.60	V	53.99	73.98	19.99	PK
7236	34.18	7.60	V	41.78	53.98	12.20	AV
4824	48.32	-1.98	H	46.34	73.98	27.64	PK
4824	36.30	-1.98	H	34.32	53.98	19.66	AV
7236	46.43	7.60	H	54.03	73.98	19.95	PK
7236	34.23	7.60	H	41.83	53.98	12.15	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.29	-1.98	V	46.31	73.98	27.67	PK
4824	36.24	-1.98	V	34.26	53.98	19.72	AV
7236	46.37	7.60	V	53.97	73.98	20.01	PK
7236	34.22	7.60	V	41.82	53.98	12.16	AV
4824	48.28	-1.98	H	46.30	73.98	27.68	PK
4824	36.28	-1.98	H	34.30	53.98	19.68	AV
7236	46.42	7.60	H	54.02	73.98	19.96	PK
7236	34.26	7.60	H	41.86	53.98	12.12	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.30	-1.98	V	46.32	73.98	27.66	PK
4824	36.24	-1.98	V	34.26	53.98	19.72	AV
7236	46.39	7.60	V	53.99	73.98	19.99	PK
7236	34.17	7.60	V	41.77	53.98	12.21	AV
4824	48.26	-1.98	H	46.28	73.98	27.70	PK
4824	36.31	-1.98	H	34.33	53.98	19.65	AV
7236	46.41	7.60	H	54.01	73.98	19.97	PK
7236	34.23	7.60	H	41.83	53.98	12.15	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	49.00	-1.92	V	47.08	73.98	26.90	PK
4874	37.44	-1.92	V	35.52	53.98	18.46	AV
7311	46.20	7.38	V	53.58	73.98	20.40	PK
7311	34.12	7.38	V	41.50	53.98	12.48	AV
4874	49.14	-1.92	H	47.22	73.98	26.76	PK
4874	37.48	-1.92	H	35.56	53.98	18.42	AV
7311	46.32	7.38	H	53.70	73.98	20.28	PK
7311	34.16	7.38	H	41.54	53.98	12.44	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.97	-1.92	V	47.05	73.98	26.93	PK
4874	37.42	-1.92	V	35.50	53.98	18.48	AV
7311	46.16	7.38	V	53.54	73.98	20.44	PK
7311	34.11	7.38	V	41.49	53.98	12.49	AV
4874	49.11	-1.92	H	47.19	73.98	26.79	PK
4874	37.46	-1.92	H	35.54	53.98	18.44	AV
7311	46.29	7.38	H	53.67	73.98	20.31	PK
7311	34.16	7.38	H	41.54	53.98	12.44	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.88	-1.92	V	46.96	73.98	27.02	PK
4874	37.41	-1.92	V	35.49	53.98	18.49	AV
7311	46.20	7.38	V	53.58	73.98	20.40	PK
7311	34.11	7.38	V	41.49	53.98	12.49	AV
4874	49.08	-1.92	H	47.16	73.98	26.82	PK
4874	37.45	-1.92	H	35.53	53.98	18.45	AV
7311	46.26	7.38	H	53.64	73.98	20.34	PK
7311	34.17	7.38	H	41.55	53.98	12.43	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.90	-1.92	V	46.98	73.98	27.00	PK
4874	37.44	-1.92	V	35.52	53.98	18.46	AV
7311	46.22	7.38	V	53.60	73.98	20.38	PK
7311	34.10	7.38	V	41.48	53.98	12.50	AV
4874	49.05	-1.92	H	47.13	73.98	26.85	PK
4874	37.47	-1.92	H	35.55	53.98	18.43	AV
7311	46.32	7.38	H	53.70	73.98	20.28	PK
7311	34.16	7.38	H	41.54	53.98	12.44	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.23	-1.93	V	46.30	73.98	27.68	PK
4924	36.51	-1.93	V	34.58	53.98	19.40	AV
7386	45.18	7.28	V	52.46	73.98	21.52	PK
7386	33.24	7.28	V	40.52	53.98	13.46	AV
4924	48.36	-1.93	H	46.43	73.98	27.55	PK
4924	36.56	-1.93	H	34.63	53.98	19.35	AV
7386	45.23	7.28	H	52.51	73.98	21.47	PK
7386	33.29	7.28	H	40.57	53.98	13.41	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.18	-1.93	V	46.25	73.98	27.73	PK
4924	36.49	-1.93	V	34.56	53.98	19.42	AV
7386	45.13	7.28	V	52.41	73.98	21.57	PK
7386	33.22	7.28	V	40.50	53.98	13.48	AV
4924	48.32	-1.93	H	46.39	73.98	27.59	PK
4924	36.54	-1.93	H	34.61	53.98	19.37	AV
7386	45.21	7.28	H	52.49	73.98	21.49	PK
7386	33.26	7.28	H	40.54	53.98	13.44	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.20	-1.93	V	46.27	73.98	27.71	PK
4924	36.50	-1.93	V	34.57	53.98	19.41	AV
7386	45.15	7.28	V	52.43	73.98	21.55	PK
7386	33.23	7.28	V	40.51	53.98	13.47	AV
4924	48.31	-1.93	H	46.38	73.98	27.60	PK
4924	36.57	-1.93	H	34.64	53.98	19.34	AV
7386	45.23	7.28	H	52.51	73.98	21.47	PK
7386	33.28	7.28	H	40.56	53.98	13.42	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

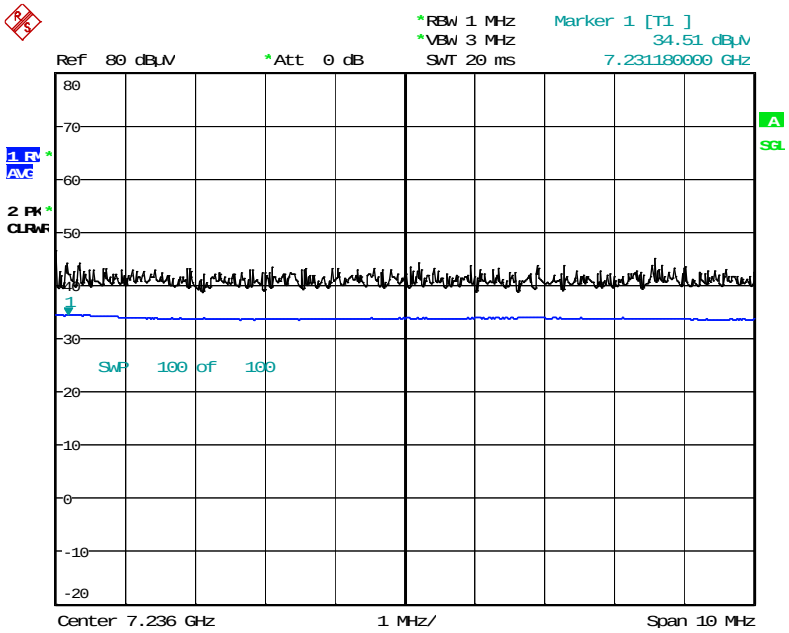
Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.19	-1.93	V	46.26	73.98	27.72	PK
4924	36.49	-1.93	V	34.56	53.98	19.42	AV
7386	45.16	7.28	V	52.44	73.98	21.54	PK
7386	33.22	7.28	V	40.50	53.98	13.48	AV
4924	48.30	-1.93	H	46.37	73.98	27.61	PK
4924	36.55	-1.93	H	34.62	53.98	19.36	AV
7386	45.21	7.28	H	52.49	73.98	21.49	PK
7386	33.28	7.28	H	40.56	53.98	13.42	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

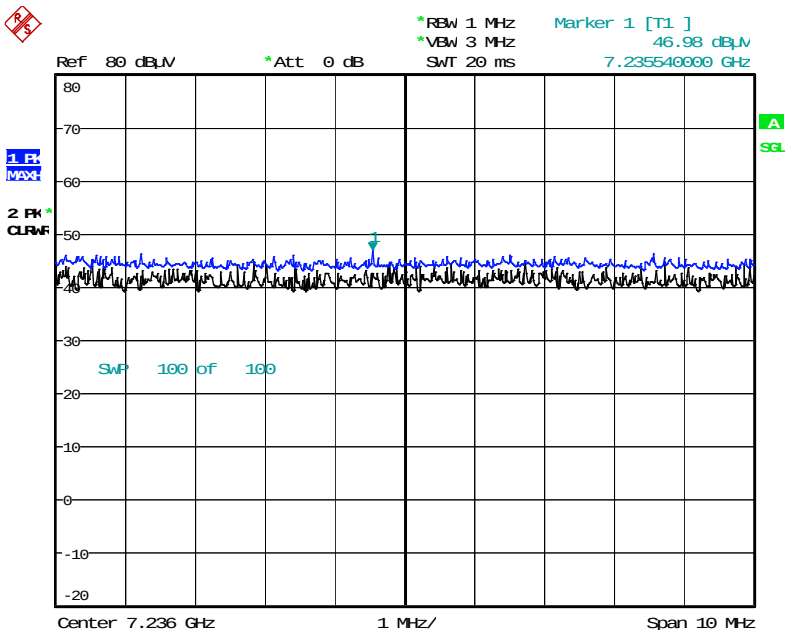
▣ RESULT PLOTS

Radiated Spurious Emissions plot – Average Reading (802.11b, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:11:43

Radiated Spurious Emissions plot – Peak Reading (802.11b, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:13:56

Note : Only the worst case plots for Radiated Spurious Emissions.

Standalone with wireless charging cover

Above 1 GHz

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.25	-1.98	V	46.27	73.98	27.71	PK
4824	36.22	-1.98	V	34.24	53.98	19.74	AV
7236	46.34	7.60	V	53.94	73.98	20.04	PK
7236	34.17	7.60	V	41.77	53.98	12.21	AV
4824	48.35	-1.98	H	46.37	73.98	27.61	PK
4824	36.28	-1.98	H	34.30	53.98	19.68	AV
7236	46.54	7.60	H	54.14	73.98	19.84	PK
7236	34.55	7.60	H	42.15	53.98	11.83	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.22	-1.98	V	46.24	73.98	27.74	PK
4824	36.21	-1.98	V	34.23	53.98	19.75	AV
7236	46.31	7.60	V	53.91	73.98	20.07	PK
7236	34.15	7.60	V	41.75	53.98	12.23	AV
4824	48.26	-1.98	H	46.28	73.98	27.70	PK
4824	36.27	-1.98	H	34.29	53.98	19.69	AV
7236	46.37	7.60	H	53.97	73.98	20.01	PK
7236	34.20	7.60	H	41.80	53.98	12.18	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.21	-1.98	V	46.23	73.98	27.75	PK
4824	36.21	-1.98	V	34.23	53.98	19.75	AV
7236	46.29	7.60	V	53.89	73.98	20.09	PK
7236	34.19	7.60	V	41.79	53.98	12.19	AV
4824	48.22	-1.98	H	46.24	73.98	27.74	PK
4824	36.25	-1.98	H	34.27	53.98	19.71	AV
7236	46.36	7.60	H	53.96	73.98	20.02	PK
7236	34.23	7.60	H	41.83	53.98	12.15	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.22	-1.98	V	46.24	73.98	27.74	PK
4824	36.21	-1.98	V	34.23	53.98	19.75	AV
7236	46.31	7.60	V	53.91	73.98	20.07	PK
7236	34.14	7.60	V	41.74	53.98	12.24	AV
4824	48.20	-1.98	H	46.22	73.98	27.76	PK
4824	36.28	-1.98	H	34.30	53.98	19.68	AV
7236	46.35	7.60	H	53.95	73.98	20.03	PK
7236	34.20	7.60	H	41.80	53.98	12.18	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.92	-1.92	V	47.00	73.98	26.98	PK
4874	37.41	-1.92	V	35.49	53.98	18.49	AV
7311	46.12	7.38	V	53.50	73.98	20.48	PK
7311	34.09	7.38	V	41.47	53.98	12.51	AV
4874	49.08	-1.92	H	47.16	73.98	26.82	PK
4874	37.45	-1.92	H	35.53	53.98	18.45	AV
7311	46.26	7.38	H	53.64	73.98	20.34	PK
7311	34.13	7.38	H	41.51	53.98	12.47	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.89	-1.92	V	46.97	73.98	27.01	PK
4874	37.39	-1.92	V	35.47	53.98	18.51	AV
7311	46.08	7.38	V	53.46	73.98	20.52	PK
7311	34.08	7.38	V	41.46	53.98	12.52	AV
4874	49.05	-1.92	H	47.13	73.98	26.85	PK
4874	37.43	-1.92	H	35.51	53.98	18.47	AV
7311	46.23	7.38	H	53.61	73.98	20.37	PK
7311	34.13	7.38	H	41.51	53.98	12.47	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.80	-1.92	V	46.88	73.98	27.10	PK
4874	37.38	-1.92	V	35.46	53.98	18.52	AV
7311	46.12	7.38	V	53.50	73.98	20.48	PK
7311	34.08	7.38	V	41.46	53.98	12.52	AV
4874	49.02	-1.92	H	47.10	73.98	26.88	PK
4874	37.42	-1.92	H	35.50	53.98	18.48	AV
7311	46.20	7.38	H	53.58	73.98	20.40	PK
7311	34.14	7.38	H	41.52	53.98	12.46	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.82	-1.92	V	46.90	73.98	27.08	PK
4874	37.41	-1.92	V	35.49	53.98	18.49	AV
7311	46.14	7.38	V	53.52	73.98	20.46	PK
7311	34.07	7.38	V	41.45	53.98	12.53	AV
4874	48.99	-1.92	H	47.07	73.98	26.91	PK
4874	37.44	-1.92	H	35.52	53.98	18.46	AV
7311	46.26	7.38	H	53.64	73.98	20.34	PK
7311	34.13	7.38	H	41.51	53.98	12.47	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.15	-1.93	V	46.22	73.98	27.76	PK
4924	36.48	-1.93	V	34.55	53.98	19.43	AV
7386	45.10	7.28	V	52.38	73.98	21.60	PK
7386	33.21	7.28	V	40.49	53.98	13.49	AV
4924	48.30	-1.93	H	46.37	73.98	27.61	PK
4924	36.53	-1.93	H	34.60	53.98	19.38	AV
7386	45.17	7.28	H	52.45	73.98	21.53	PK
7386	33.26	7.28	H	40.54	53.98	13.44	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.10	-1.93	V	46.17	73.98	27.81	PK
4924	36.46	-1.93	V	34.53	53.98	19.45	AV
7386	45.05	7.28	V	52.33	73.98	21.65	PK
7386	33.19	7.28	V	40.47	53.98	13.51	AV
4924	48.26	-1.93	H	46.33	73.98	27.65	PK
4924	36.51	-1.93	H	34.58	53.98	19.40	AV
7386	45.15	7.28	H	52.43	73.98	21.55	PK
7386	33.23	7.28	H	40.51	53.98	13.47	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.12	-1.93	V	46.19	73.98	27.79	PK
4924	36.47	-1.93	V	34.54	53.98	19.44	AV
7386	45.07	7.28	V	52.35	73.98	21.63	PK
7386	33.20	7.28	V	40.48	53.98	13.50	AV
4924	48.25	-1.93	H	46.32	73.98	27.66	PK
4924	36.54	-1.93	H	34.61	53.98	19.37	AV
7386	45.17	7.28	H	52.45	73.98	21.53	PK
7386	33.25	7.28	H	40.53	53.98	13.45	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

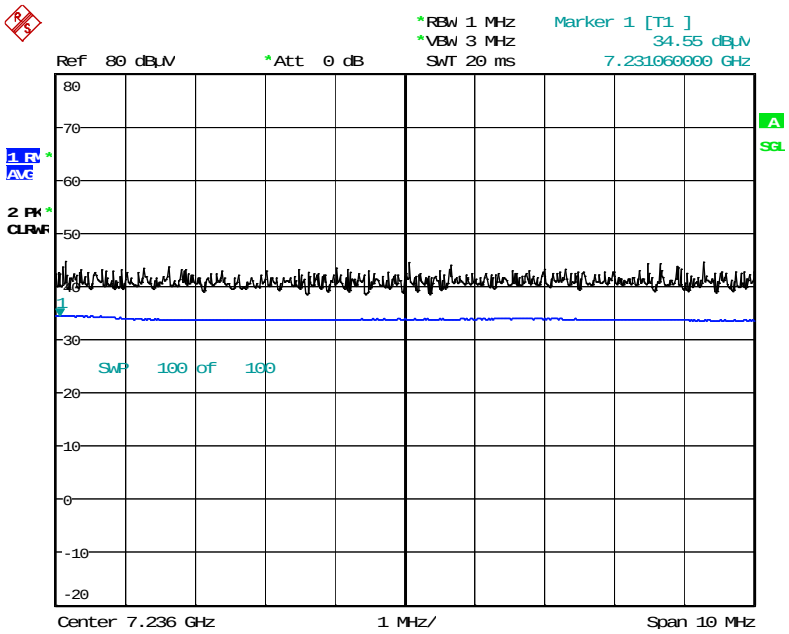
Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.11	-1.93	V	46.18	73.98	27.80	PK
4924	36.46	-1.93	V	34.53	53.98	19.45	AV
7386	45.08	7.28	V	52.36	73.98	21.62	PK
7386	33.19	7.28	V	40.47	53.98	13.51	AV
4924	48.24	-1.93	H	46.31	73.98	27.67	PK
4924	36.52	-1.93	H	34.59	53.98	19.39	AV
7386	45.15	7.28	H	52.43	73.98	21.55	PK
7386	33.25	7.28	H	40.53	53.98	13.45	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

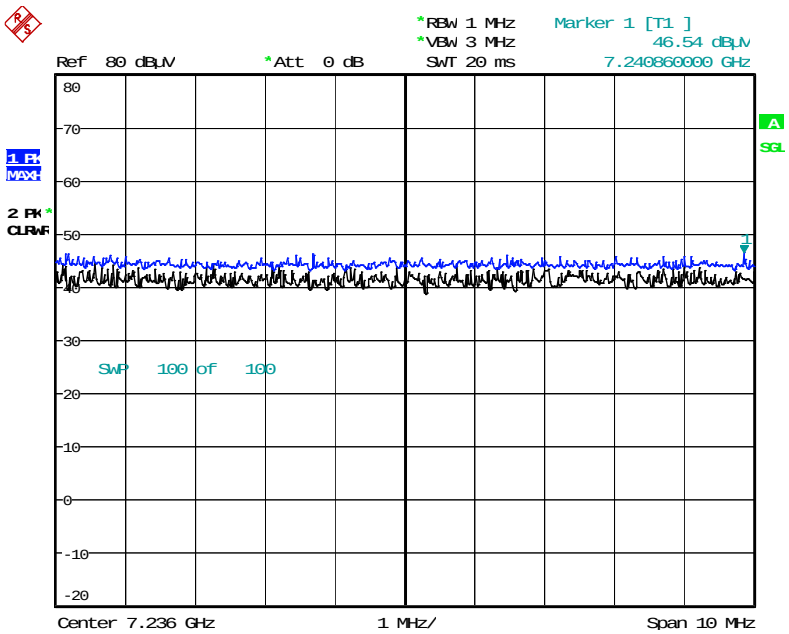
▣ RESULT PLOTS

Radiated Spurious Emissions plot – Average Reading (802.11b, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:12:04

Radiated Spurious Emissions plot – Peak Reading (802.11b, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:17:45

Note : Only the worst case plots for Radiated Spurious Emissions.

With wireless charging pad(WCD-110)

Above 1 GHz

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.26	-1.98	V	46.28	73.98	27.70	PK
4824	36.20	-1.98	V	34.22	53.98	19.76	AV
7236	46.35	7.60	V	53.95	73.98	20.03	PK
7236	34.15	7.60	V	41.75	53.98	12.23	AV
4824	48.34	-1.98	H	46.36	73.98	27.62	PK
4824	36.22	-1.98	H	34.24	53.98	19.74	AV
7236	46.79	7.60	H	54.39	73.98	19.59	PK
7236	34.65	7.60	H	42.25	53.98	11.73	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.23	-1.98	V	46.25	73.98	27.73	PK
4824	36.19	-1.98	V	34.21	53.98	19.77	AV
7236	46.32	7.60	V	53.92	73.98	20.06	PK
7236	34.13	7.60	V	41.73	53.98	12.25	AV
4824	48.25	-1.98	H	46.27	73.98	27.71	PK
4824	36.21	-1.98	H	34.23	53.98	19.75	AV
7236	46.36	7.60	H	53.96	73.98	20.02	PK
7236	34.14	7.60	H	41.74	53.98	12.24	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.22	-1.98	V	46.24	73.98	27.74	PK
4824	36.19	-1.98	V	34.21	53.98	19.77	AV
7236	46.30	7.60	V	53.90	73.98	20.08	PK
7236	34.17	7.60	V	41.77	53.98	12.21	AV
4824	48.21	-1.98	H	46.23	73.98	27.75	PK
4824	36.19	-1.98	H	34.21	53.98	19.77	AV
7236	46.35	7.60	H	53.95	73.98	20.03	PK
7236	34.17	7.60	H	41.77	53.98	12.21	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.23	-1.98	V	46.25	73.98	27.73	PK
4824	36.19	-1.98	V	34.21	53.98	19.77	AV
7236	46.32	7.60	V	53.92	73.98	20.06	PK
7236	34.12	7.60	V	41.72	53.98	12.26	AV
4824	48.19	-1.98	H	46.21	73.98	27.77	PK
4824	36.22	-1.98	H	34.24	53.98	19.74	AV
7236	46.34	7.60	H	53.94	73.98	20.04	PK
7236	34.14	7.60	H	41.74	53.98	12.24	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.93	-1.92	V	47.01	73.98	26.97	PK
4874	37.39	-1.92	V	35.47	53.98	18.51	AV
7311	46.13	7.38	V	53.51	73.98	20.47	PK
7311	34.07	7.38	V	41.45	53.98	12.53	AV
4874	49.07	-1.92	H	47.15	73.98	26.83	PK
4874	37.39	-1.92	H	35.47	53.98	18.51	AV
7311	46.25	7.38	H	53.63	73.98	20.35	PK
7311	34.07	7.38	H	41.45	53.98	12.53	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.90	-1.92	V	46.98	73.98	27.00	PK
4874	37.37	-1.92	V	35.45	53.98	18.53	AV
7311	46.09	7.38	V	53.47	73.98	20.51	PK
7311	34.06	7.38	V	41.44	53.98	12.54	AV
4874	49.04	-1.92	H	47.12	73.98	26.86	PK
4874	37.37	-1.92	H	35.45	53.98	18.53	AV
7311	46.22	7.38	H	53.60	73.98	20.38	PK
7311	34.07	7.38	H	41.45	53.98	12.53	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.81	-1.92	V	46.89	73.98	27.09	PK
4874	37.36	-1.92	V	35.44	53.98	18.54	AV
7311	46.13	7.38	V	53.51	73.98	20.47	PK
7311	34.06	7.38	V	41.44	53.98	12.54	AV
4874	49.01	-1.92	H	47.09	73.98	26.89	PK
4874	37.36	-1.92	H	35.44	53.98	18.54	AV
7311	46.19	7.38	H	53.57	73.98	20.41	PK
7311	34.08	7.38	H	41.46	53.98	12.52	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.83	-1.92	V	46.91	73.98	27.07	PK
4874	37.39	-1.92	V	35.47	53.98	18.51	AV
7311	46.15	7.38	V	53.53	73.98	20.45	PK
7311	34.05	7.38	V	41.43	53.98	12.55	AV
4874	48.98	-1.92	H	47.06	73.98	26.92	PK
4874	37.38	-1.92	H	35.46	53.98	18.52	AV
7311	46.25	7.38	H	53.63	73.98	20.35	PK
7311	34.07	7.38	H	41.45	53.98	12.53	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.16	-1.93	V	46.23	73.98	27.75	PK
4924	36.46	-1.93	V	34.53	53.98	19.45	AV
7386	45.11	7.28	V	52.39	73.98	21.59	PK
7386	33.19	7.28	V	40.47	53.98	13.51	AV
4924	48.29	-1.93	H	46.36	73.98	27.62	PK
4924	36.47	-1.93	H	34.54	53.98	19.44	AV
7386	45.16	7.28	H	52.44	73.98	21.54	PK
7386	33.20	7.28	H	40.48	53.98	13.50	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.11	-1.93	V	46.18	73.98	27.80	PK
4924	36.44	-1.93	V	34.51	53.98	19.47	AV
7386	45.06	7.28	V	52.34	73.98	21.64	PK
7386	33.17	7.28	V	40.45	53.98	13.53	AV
4924	48.25	-1.93	H	46.32	73.98	27.66	PK
4924	36.45	-1.93	H	34.52	53.98	19.46	AV
7386	45.14	7.28	H	52.42	73.98	21.56	PK
7386	33.17	7.28	H	40.45	53.98	13.53	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.13	-1.93	V	46.20	73.98	27.78	PK
4924	36.45	-1.93	V	34.52	53.98	19.46	AV
7386	45.08	7.28	V	52.36	73.98	21.62	PK
7386	33.18	7.28	V	40.46	53.98	13.52	AV
4924	48.24	-1.93	H	46.31	73.98	27.67	PK
4924	36.48	-1.93	H	34.55	53.98	19.43	AV
7386	45.16	7.28	H	52.44	73.98	21.54	PK
7386	33.19	7.28	H	40.47	53.98	13.51	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

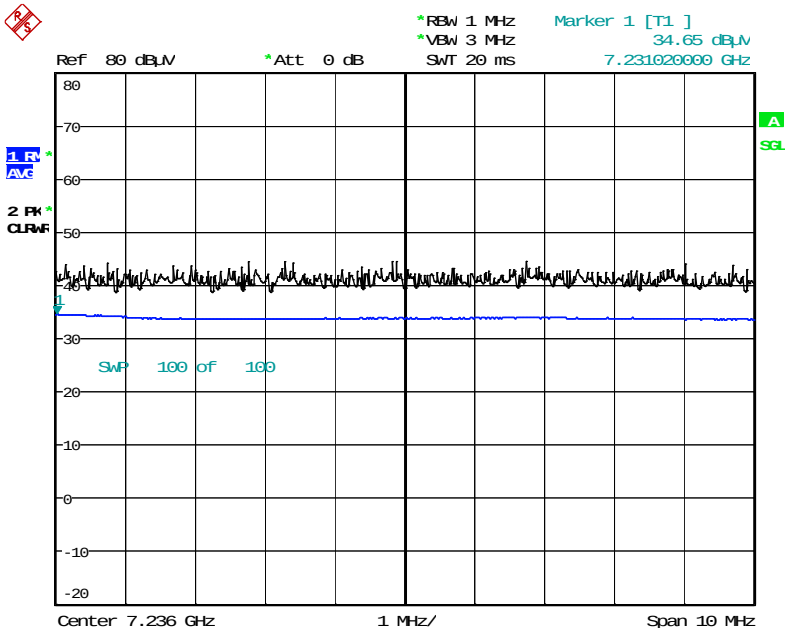
Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.12	-1.93	V	46.19	73.98	27.79	PK
4924	36.44	-1.93	V	34.51	53.98	19.47	AV
7386	45.09	7.28	V	52.37	73.98	21.61	PK
7386	33.17	7.28	V	40.45	53.98	13.53	AV
4924	48.23	-1.93	H	46.30	73.98	27.68	PK
4924	36.46	-1.93	H	34.53	53.98	19.45	AV
7386	45.14	7.28	H	52.42	73.98	21.56	PK
7386	33.19	7.28	H	40.47	53.98	13.51	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

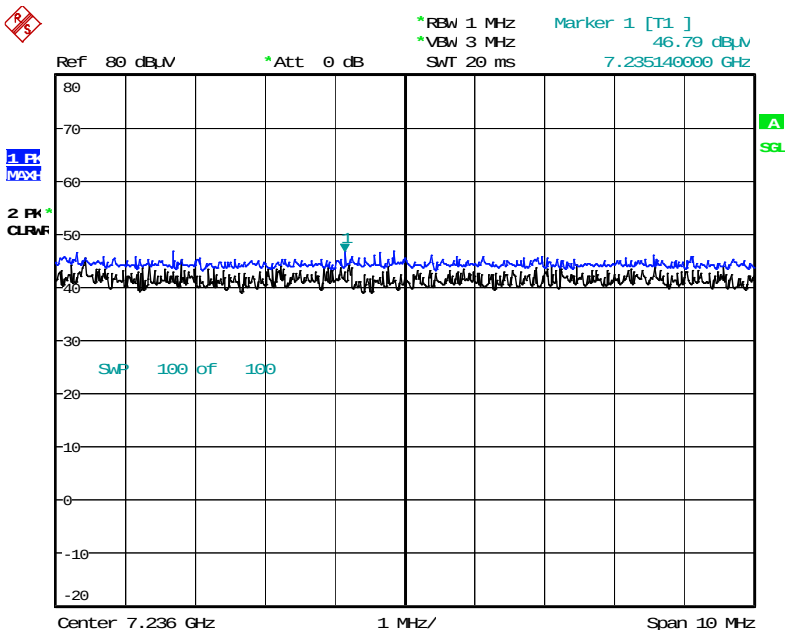
▣ RESULT PLOTS

Radiated Spurious Emissions plot – Average Reading (802.11b, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:12:26

Radiated Spurious Emissions plot – Peak Reading (802.11b, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:18:54

Note : Only the worst case plots for Radiated Spurious Emissions.

With wireless charging pad(CT 06801)

Above 1 GHz

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.16	-1.98	V	46.18	73.98	27.80	PK
4824	36.06	-1.98	V	34.08	53.98	19.90	AV
7236	46.25	7.60	V	53.85	73.98	20.13	PK
7236	34.01	7.60	V	41.61	53.98	12.37	AV
4824	48.28	-1.98	H	46.30	73.98	27.68	PK
4824	36.13	-1.98	H	34.15	53.98	19.83	AV
7236	46.37	7.60	H	53.97	73.98	20.01	PK
7236	34.44	7.60	H	42.04	53.98	11.94	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.13	-1.98	V	46.15	73.98	27.83	PK
4824	36.05	-1.98	V	34.07	53.98	19.91	AV
7236	46.22	7.60	V	53.82	73.98	20.16	PK
7236	33.99	7.60	V	41.59	53.98	12.39	AV
4824	48.19	-1.98	H	46.21	73.98	27.77	PK
4824	36.12	-1.98	H	34.14	53.98	19.84	AV
7236	46.30	7.60	H	53.90	73.98	20.08	PK
7236	34.05	7.60	H	41.65	53.98	12.33	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.12	-1.98	V	46.14	73.98	27.84	PK
4824	36.05	-1.98	V	34.07	53.98	19.91	AV
7236	46.20	7.60	V	53.80	73.98	20.18	PK
7236	34.03	7.60	V	41.63	53.98	12.35	AV
4824	48.15	-1.98	H	46.17	73.98	27.81	PK
4824	36.10	-1.98	H	34.12	53.98	19.86	AV
7236	46.29	7.60	H	53.89	73.98	20.09	PK
7236	34.08	7.60	H	41.68	53.98	12.30	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	48.13	-1.98	V	46.15	73.98	27.83	PK
4824	36.05	-1.98	V	34.07	53.98	19.91	AV
7236	46.22	7.60	V	53.82	73.98	20.16	PK
7236	33.98	7.60	V	41.58	53.98	12.40	AV
4824	48.13	-1.98	H	46.15	73.98	27.83	PK
4824	36.13	-1.98	H	34.15	53.98	19.83	AV
7236	46.28	7.60	H	53.88	73.98	20.10	PK
7236	34.05	7.60	H	41.65	53.98	12.33	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.83	-1.92	V	46.91	73.98	27.07	PK
4874	37.25	-1.92	V	35.33	53.98	18.65	AV
7311	46.03	7.38	V	53.41	73.98	20.57	PK
7311	33.93	7.38	V	41.31	53.98	12.67	AV
4874	49.01	-1.92	H	47.09	73.98	26.89	PK
4874	37.30	-1.92	H	35.38	53.98	18.60	AV
7311	46.19	7.38	H	53.57	73.98	20.41	PK
7311	33.98	7.38	H	41.36	53.98	12.62	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.80	-1.92	V	46.88	73.98	27.10	PK
4874	37.23	-1.92	V	35.31	53.98	18.67	AV
7311	45.99	7.38	V	53.37	73.98	20.61	PK
7311	33.92	7.38	V	41.30	53.98	12.68	AV
4874	48.98	-1.92	H	47.06	73.98	26.92	PK
4874	37.28	-1.92	H	35.36	53.98	18.62	AV
7311	46.16	7.38	H	53.54	73.98	20.44	PK
7311	33.98	7.38	H	41.36	53.98	12.62	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.71	-1.92	V	46.79	73.98	27.19	PK
4874	37.22	-1.92	V	35.30	53.98	18.68	AV
7311	46.03	7.38	V	53.41	73.98	20.57	PK
7311	33.92	7.38	V	41.30	53.98	12.68	AV
4874	48.95	-1.92	H	47.03	73.98	26.95	PK
4874	37.27	-1.92	H	35.35	53.98	18.63	AV
7311	46.13	7.38	H	53.51	73.98	20.47	PK
7311	33.99	7.38	H	41.37	53.98	12.61	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	48.73	-1.92	V	46.81	73.98	27.17	PK
4874	37.25	-1.92	V	35.33	53.98	18.65	AV
7311	46.05	7.38	V	53.43	73.98	20.55	PK
7311	33.91	7.38	V	41.29	53.98	12.69	AV
4874	48.92	-1.92	H	47.00	73.98	26.98	PK
4874	37.29	-1.92	H	35.37	53.98	18.61	AV
7311	46.19	7.38	H	53.57	73.98	20.41	PK
7311	33.98	7.38	H	41.36	53.98	12.62	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.06	-1.93	V	46.13	73.98	27.85	PK
4924	36.32	-1.93	V	34.39	53.98	19.59	AV
7386	45.01	7.28	V	52.29	73.98	21.69	PK
7386	33.05	7.28	V	40.33	53.98	13.65	AV
4924	48.23	-1.93	H	46.30	73.98	27.68	PK
4924	36.38	-1.93	H	34.45	53.98	19.53	AV
7386	45.10	7.28	H	52.38	73.98	21.60	PK
7386	33.11	7.28	H	40.39	53.98	13.59	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.01	-1.93	V	46.08	73.98	27.90	PK
4924	36.30	-1.93	V	34.37	53.98	19.61	AV
7386	44.96	7.28	V	52.24	73.98	21.74	PK
7386	33.03	7.28	V	40.31	53.98	13.67	AV
4924	48.19	-1.93	H	46.26	73.98	27.72	PK
4924	36.36	-1.93	H	34.43	53.98	19.55	AV
7386	45.08	7.28	H	52.36	73.98	21.62	PK
7386	33.08	7.28	H	40.36	53.98	13.62	AV

Operation Mode:	802.11 n
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.03	-1.93	V	46.10	73.98	27.88	PK
4924	36.31	-1.93	V	34.38	53.98	19.60	AV
7386	44.98	7.28	V	52.26	73.98	21.72	PK
7386	33.04	7.28	V	40.32	53.98	13.66	AV
4924	48.18	-1.93	H	46.25	73.98	27.73	PK
4924	36.39	-1.93	H	34.46	53.98	19.52	AV
7386	45.10	7.28	H	52.38	73.98	21.60	PK
7386	33.10	7.28	H	40.38	53.98	13.60	AV

Operation Mode:	802.11 ac
Transfer Rate:	6.5 Mbps
Operating Frequency	2462
Channel No.	11 Ch

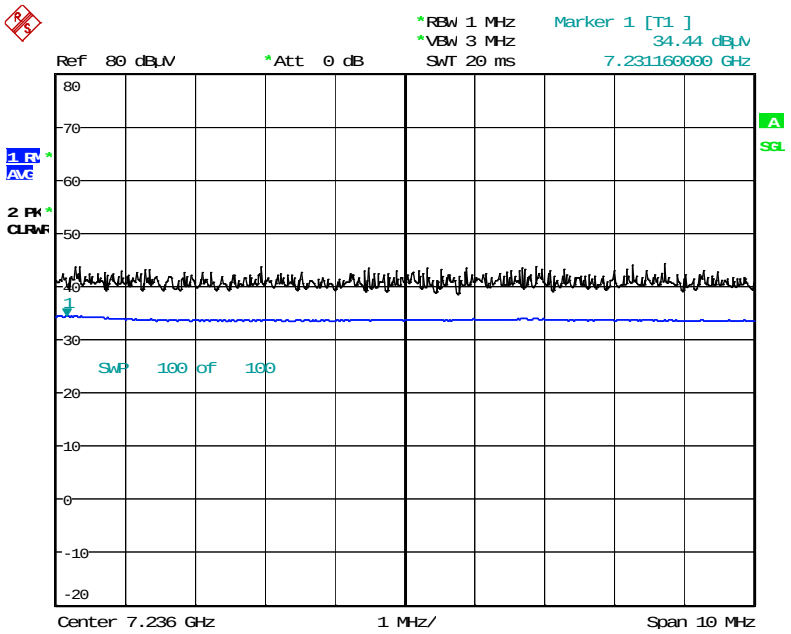
Frequency [MHz]	Reading dBuV	A.F.+CL-AMP G [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	48.02	-1.93	V	46.09	73.98	27.89	PK
4924	36.30	-1.93	V	34.37	53.98	19.61	AV
7386	44.99	7.28	V	52.27	73.98	21.71	PK
7386	33.03	7.28	V	40.31	53.98	13.67	AV
4924	48.17	-1.93	H	46.24	73.98	27.74	PK
4924	36.37	-1.93	H	34.44	53.98	19.54	AV
7386	45.08	7.28	H	52.36	73.98	21.62	PK
7386	33.10	7.28	H	40.38	53.98	13.60	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

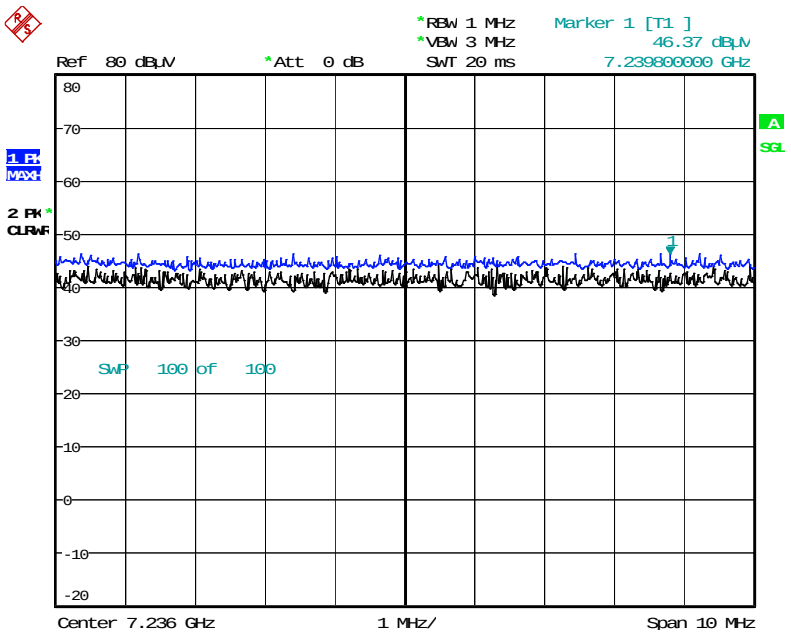
▣ RESULT PLOTS

Radiated Spurious Emissions plot – Average Reading (802.11b, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:12:51

Radiated Spurious Emissions plot – Peak Reading (802.11n, Ch.1 3rd Harmonic)



Date: 2.SEP.2015 07:19:45

Note : Only the worst case plots for Radiated Spurious Emissions.

8.6.2 RADIATED RESTRICTED BAND EDGES

Test Requirements and limit, §15.247(d) §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

Standalone with normal cover

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	26.80	31.47	H	58.27	73.98	15.71	PK
2390.0	14.63	31.47	H	46.10	53.98	7.88	AV
2390.0	26.22	31.47	V	57.69	73.98	16.29	PK
2390.0	14.01	31.47	V	45.48	53.98	8.50	AV
2483.5	28.80	31.46	H	60.26	73.98	13.72	PK
2483.5	15.60	31.46	H	47.06	53.98	6.92	AV
2483.5	28.40	31.46	V	59.86	73.98	14.12	PK
2483.5	15.12	31.46	V	46.58	53.98	7.40	AV

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.36	31.47	H	56.83	73.98	17.15	PK
2390.0	13.83	31.47	H	45.30	53.98	8.68	AV
2390.0	25.24	31.47	V	56.71	73.98	17.27	PK
2390.0	13.76	31.47	V	45.23	53.98	8.75	AV
2483.5	25.78	31.46	H	57.24	73.98	16.74	PK
2483.5	16.05	31.46	H	47.51	53.98	6.47	AV
2483.5	25.45	31.46	V	56.91	73.98	17.07	PK
2483.5	15.67	31.46	V	47.13	53.98	6.85	AV

Operation Mode:	802.11n_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.70	31.47	H	57.17	73.98	16.81	PK
2390.0	13.84	31.47	H	45.31	53.98	8.67	AV
2390.0	24.98	31.47	V	56.45	73.98	17.53	PK
2390.0	13.79	31.47	V	45.26	53.98	8.72	AV
2483.5	35.52	31.46	H	66.98	73.98	7.00	PK
2483.5	16.52	31.46	H	47.98	53.98	6.00	AV
2483.5	34.54	31.46	V	66.00	73.98	7.98	PK
2483.5	15.97	31.46	V	47.43	53.98	6.55	AV

Operation Mode:	802.11ac_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

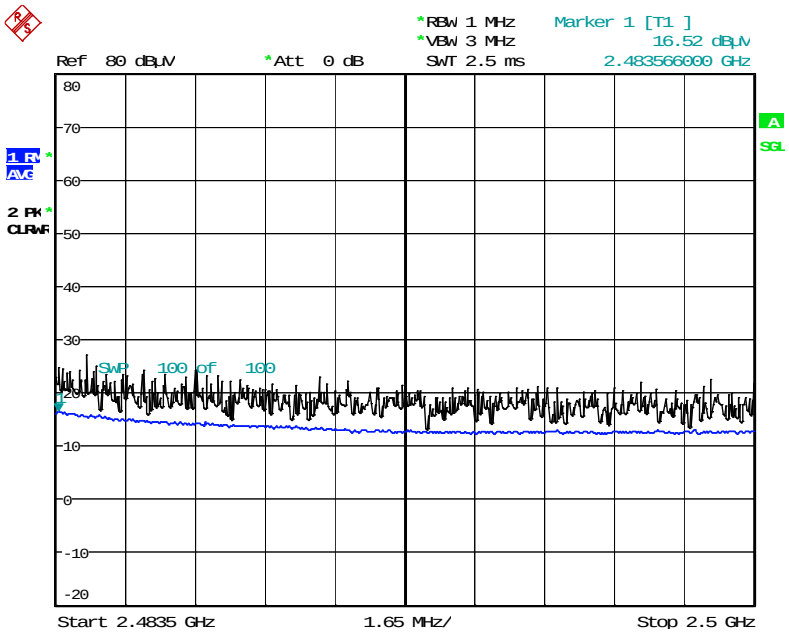
Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.60	31.47	H	57.07	73.98	16.91	PK
2390.0	13.70	31.47	H	45.17	53.98	8.81	AV
2390.0	25.43	31.47	V	56.90	73.98	17.08	PK
2390.0	13.64	31.47	V	45.11	53.98	8.87	AV
2483.5	28.90	31.46	H	60.36	73.98	13.62	PK
2483.5	15.40	31.46	H	46.86	53.98	7.12	AV
2483.5	28.64	31.46	V	60.10	73.98	13.88	PK
2483.5	14.96	31.46	V	46.42	53.98	7.56	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss
2. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

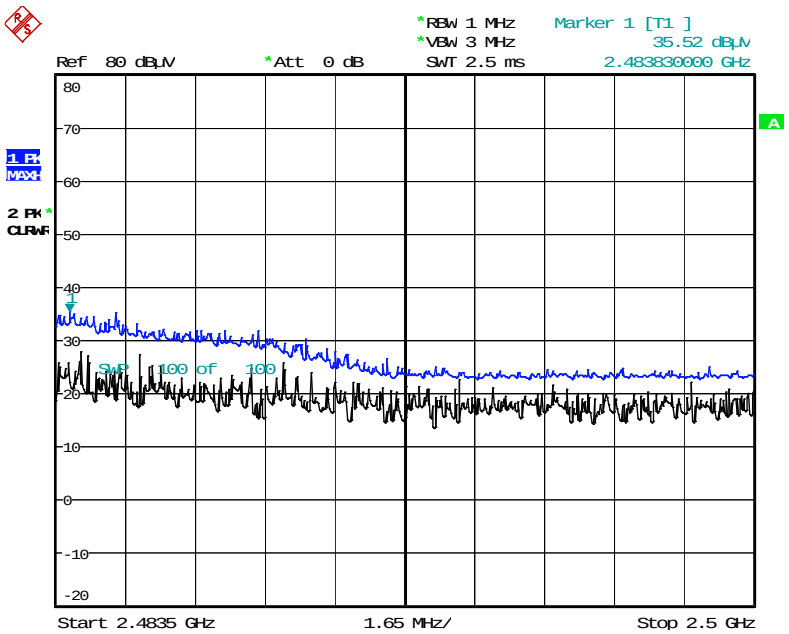
▣ RESULT PLOTS

Radiated Restricted Band Edges plot – Average Reading (802.11n, Ch.11)



Date: 2.SEP.2015 05:43:53

Radiated Restricted Band Edges plot – Peak Reading (802.11n, Ch.11)



Date: 2.SEP.2015 05:45:17

Note : Only the worst case plots for Radiated Restricted Band Edges.

Standalone with wireless charging cover

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	27.31	31.47	H	58.78	73.98	15.20	PK
2390.0	14.30	31.47	H	45.77	53.98	8.21	AV
2390.0	26.27	31.47	V	57.74	73.98	16.24	PK
2390.0	13.70	31.47	V	45.17	53.98	8.81	AV
2483.5	28.70	31.46	H	60.16	73.98	13.82	PK
2483.5	14.90	31.46	H	46.36	53.98	7.62	AV
2483.5	28.13	31.46	V	59.59	73.98	14.39	PK
2483.5	14.02	31.46	V	45.48	53.98	8.50	AV

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	26.45	31.47	H	57.92	73.98	16.06	PK
2390.0	13.90	31.47	H	45.37	53.98	8.61	AV
2390.0	26.11	31.47	V	57.58	73.98	16.40	PK
2390.0	13.60	31.47	V	45.07	53.98	8.91	AV
2483.5	26.34	31.46	H	57.80	73.98	16.18	PK
2483.5	15.47	31.46	H	46.93	53.98	7.05	AV
2483.5	25.32	31.46	V	56.78	73.98	17.20	PK
2483.5	14.21	31.46	V	45.67	53.98	8.31	AV

Operation Mode:	802.11n_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.38	31.47	H	56.85	73.98	17.13	PK
2390.0	13.90	31.47	H	45.37	53.98	8.61	AV
2390.0	25.63	31.47	V	57.10	73.98	16.88	PK
2390.0	13.66	31.47	V	45.13	53.98	8.85	AV
2483.5	32.10	31.46	H	63.56	73.98	10.42	PK
2483.5	15.10	31.46	H	46.56	53.98	7.42	AV
2483.5	30.21	31.46	V	61.67	73.98	12.31	PK
2483.5	14.04	31.46	V	45.50	53.98	8.48	AV

Operation Mode:	802.11ac_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

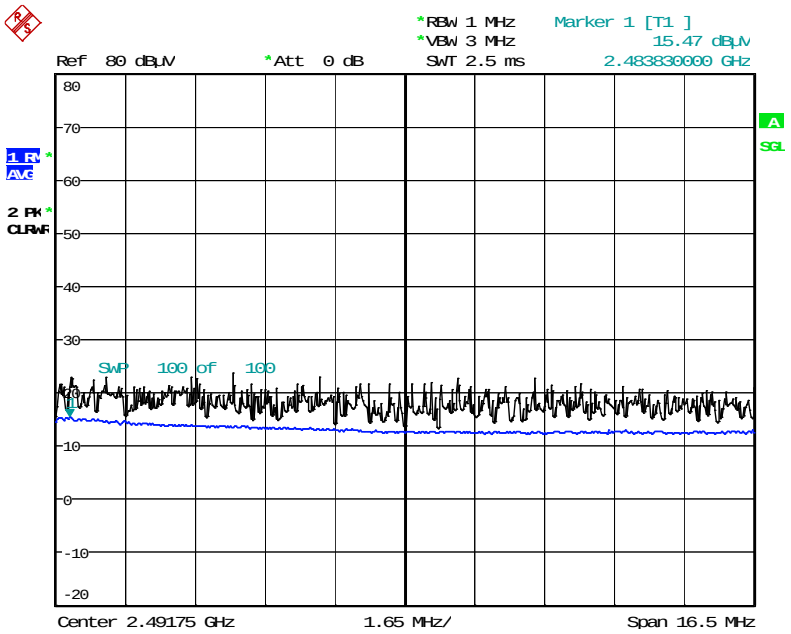
Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.77	31.47	H	57.24	73.98	16.74	PK
2390.0	13.70	31.47	H	45.17	53.98	8.81	AV
2390.0	25.61	31.47	V	57.08	73.98	16.90	PK
2390.0	13.68	31.47	V	45.15	53.98	8.83	AV
2483.5	30.19	31.46	H	61.65	73.98	12.33	PK
2483.5	14.50	31.46	H	45.96	53.98	8.02	AV
2483.5	28.97	31.46	V	60.43	73.98	13.55	PK
2483.5	13.78	31.46	V	45.24	53.98	8.74	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss
2. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

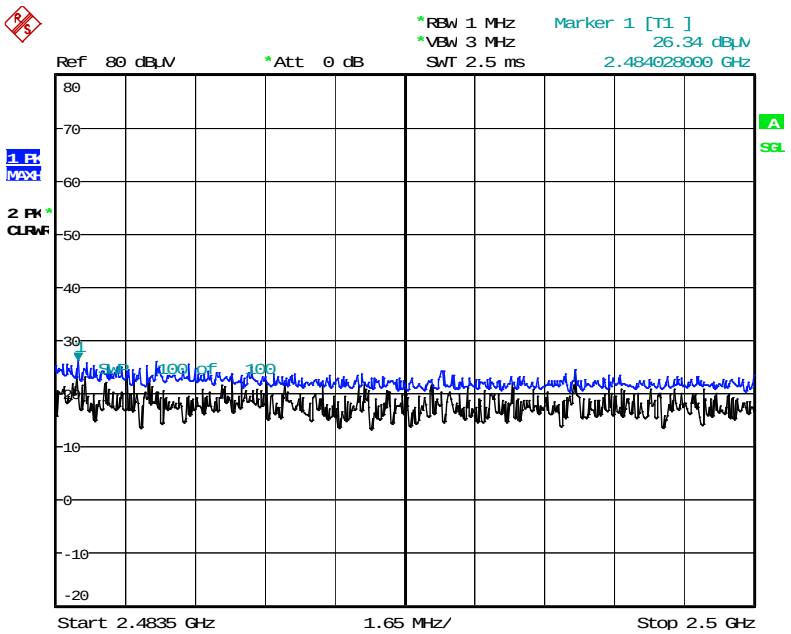
▣ RESULT PLOTS

Radiated Restricted Band Edges plot – Average Reading (802.11b, Ch.11)



Date: 2.SEP.2015 05:54:41

Radiated Restricted Band Edges plot – Peak Reading (802.11b, Ch.11)



Date: 2.SEP.2015 05:53:41

Note : Only the worst case plots for Radiated Restricted Band Edges.

With wireless charging pad(WCD-110)

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.13	31.47	H	56.60	73.98	17.38	PK
2390.0	13.70	31.47	H	45.17	53.98	8.81	AV
2390.0	24.41	31.47	V	55.88	73.98	18.10	PK
2390.0	13.20	31.47	V	44.67	53.98	9.31	AV
2483.5	28.95	31.46	H	60.41	73.98	13.57	PK
2483.5	14.60	31.46	H	46.06	53.98	7.92	AV
2483.5	24.82	31.46	V	56.28	73.98	17.70	PK
2483.5	13.10	31.46	V	44.56	53.98	9.42	AV

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	24.88	31.47	H	56.35	73.98	17.63	PK
2390.0	13.40	31.47	H	44.87	53.98	9.11	AV
2390.0	24.32	31.47	V	55.79	73.98	18.19	PK
2390.0	13.24	31.47	V	44.71	53.98	9.27	AV
2483.5	25.91	31.46	H	57.37	73.98	16.61	PK
2483.5	15.19	31.46	H	46.65	53.98	7.33	AV
2483.5	25.11	31.46	V	56.57	73.98	17.41	PK
2483.5	13.88	31.46	V	45.34	53.98	8.64	AV

Operation Mode:	802.11n_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	26.17	31.47	H	57.64	73.98	16.34	PK
2390.0	13.60	31.47	H	45.07	53.98	8.91	AV
2390.0	25.33	31.47	V	56.80	73.98	17.18	PK
2390.0	13.34	31.47	V	44.81	53.98	9.17	AV
2483.5	32.08	31.46	H	63.54	73.98	10.44	PK
2483.5	14.80	31.46	H	46.26	53.98	7.72	AV
2483.5	29.84	31.46	V	61.30	73.98	12.68	PK
2483.5	13.84	31.46	V	45.30	53.98	8.68	AV

Operation Mode:	802.11ac_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

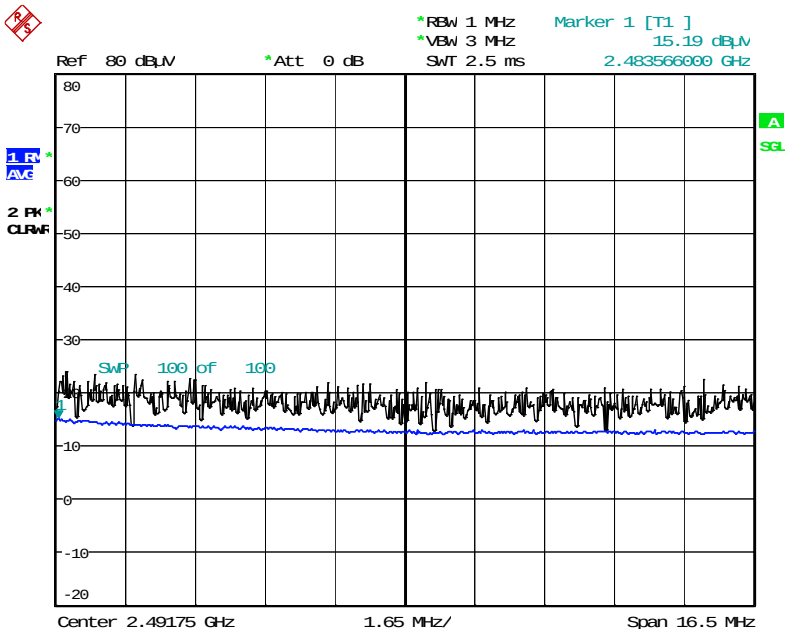
Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.61	31.47	H	57.08	73.98	16.90	PK
2390.0	13.30	31.47	H	44.77	53.98	9.21	AV
2390.0	25.21	31.47	V	56.68	73.98	17.30	PK
2390.0	13.20	31.47	V	44.67	53.98	9.31	AV
2483.5	27.01	31.46	H	58.47	73.98	15.51	PK
2483.5	14.10	31.46	H	45.56	53.98	8.42	AV
2483.5	24.53	31.46	V	55.99	73.98	17.99	PK
2483.5	13.10	31.46	V	44.56	53.98	9.42	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss
2. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

▣ RESULT PLOTS

Radiated Restricted Band Edges plot – Average Reading (802.11b, Ch.11)



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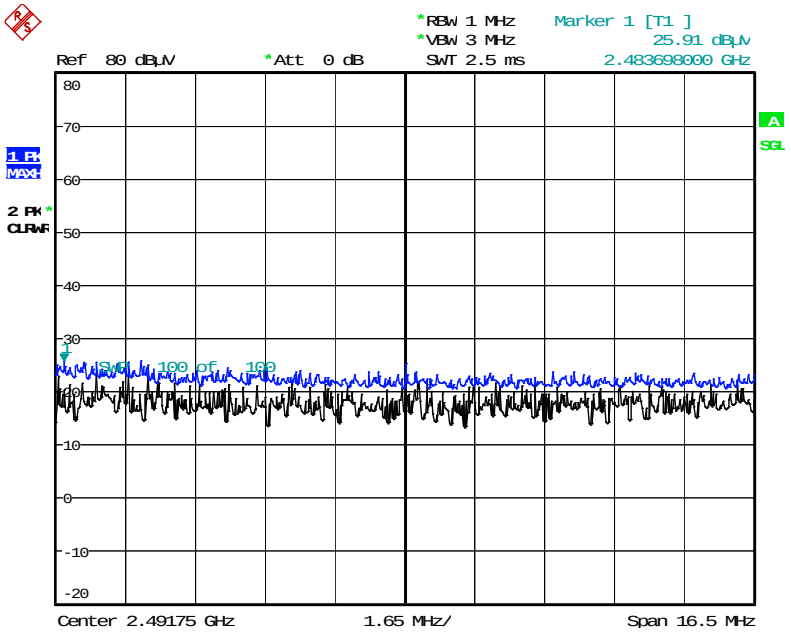
Radiated Restricted Band Edges plot – Peak Reading (802.11b, Ch.11)



Date: 2.SEP.2015 05:58:15

Note : Only the worst case plots for Radiated Restricted Band Edges.

With wireless charging pad(CT 06801)

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.15	31.47	H	56.62	73.98	17.36	PK
2390.0	13.67	31.47	H	45.14	53.98	8.84	AV
2390.0	25.54	31.47	V	57.01	73.98	16.97	PK
2390.0	13.82	31.47	V	45.29	53.98	8.69	AV
2483.5	24.40	31.46	H	55.86	73.98	18.12	PK
2483.5	13.25	31.46	H	44.71	53.98	9.27	AV
2483.5	24.66	31.46	V	56.12	73.98	17.86	PK
2483.5	13.30	31.46	V	44.76	53.98	9.22	AV

Operation Mode:	802.11b
Transfer Rate:	1 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	25.10	31.47	H	56.57	73.98	17.41	PK
2390.0	13.60	31.47	H	45.07	53.98	8.91	AV
2390.0	25.20	31.47	V	56.67	73.98	17.31	PK
2390.0	13.70	31.47	V	45.17	53.98	8.81	AV
2483.5	24.73	31.46	H	56.19	73.98	17.79	PK
2483.5	13.10	31.46	H	44.56	53.98	9.42	AV
2483.5	24.84	31.46	V	56.30	73.98	17.68	PK
2483.5	13.30	31.46	V	44.76	53.98	9.22	AV

Operation Mode:	802.11n_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	24.81	31.47	H	56.28	73.98	17.70	PK
2390.0	13.58	31.47	H	45.05	53.98	8.93	AV
2390.0	24.73	31.47	V	56.20	73.98	17.78	PK
2390.0	13.80	31.47	V	45.27	53.98	8.71	AV
2483.5	26.54	31.46	H	58.00	73.98	15.98	PK
2483.5	13.51	31.46	H	44.97	53.98	9.01	AV
2483.5	28.28	31.46	V	59.74	73.98	14.24	PK
2483.5	13.86	31.46	V	45.32	53.98	8.66	AV

Operation Mode:	802.11ac_20MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

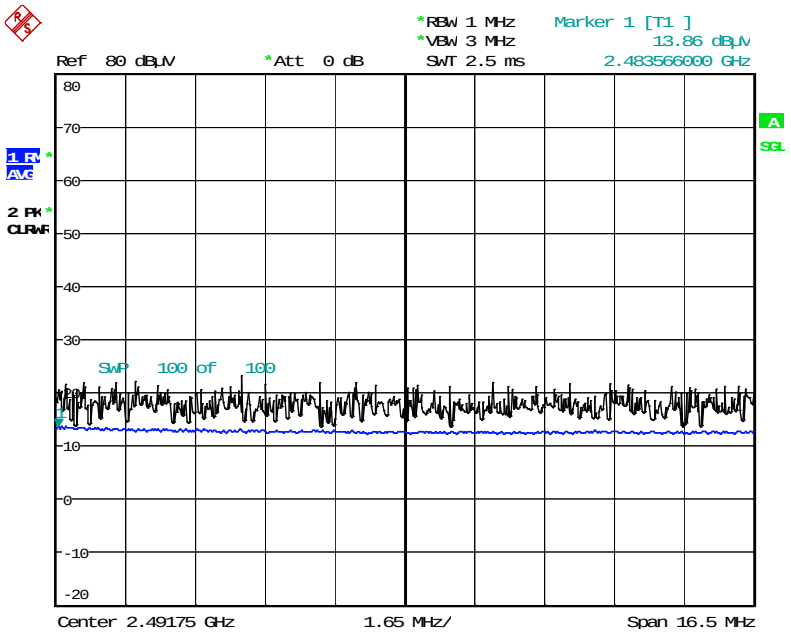
Frequency [MHz]	Reading dBuV	A.F.+CL [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	24.77	31.47	H	56.24	73.98	17.74	PK
2390.0	13.61	31.47	H	45.08	53.98	8.90	AV
2390.0	25.03	31.47	V	56.50	73.98	17.48	PK
2390.0	13.65	31.47	V	45.12	53.98	8.86	AV
2483.5	25.89	31.46	H	57.35	73.98	16.63	PK
2483.5	13.22	31.46	H	44.68	53.98	9.30	AV
2483.5	26.16	31.46	V	57.62	73.98	16.36	PK
2483.5	13.34	31.46	V	44.80	53.98	9.18	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss
2. We have done 802.11b/g/n/ac mode and all data rate. Worst data rate is the lowest data of each mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

▣ RESULT PLOTS

Radiated Restricted Band Edges plot – Average Reading (802.11n, Ch.11)



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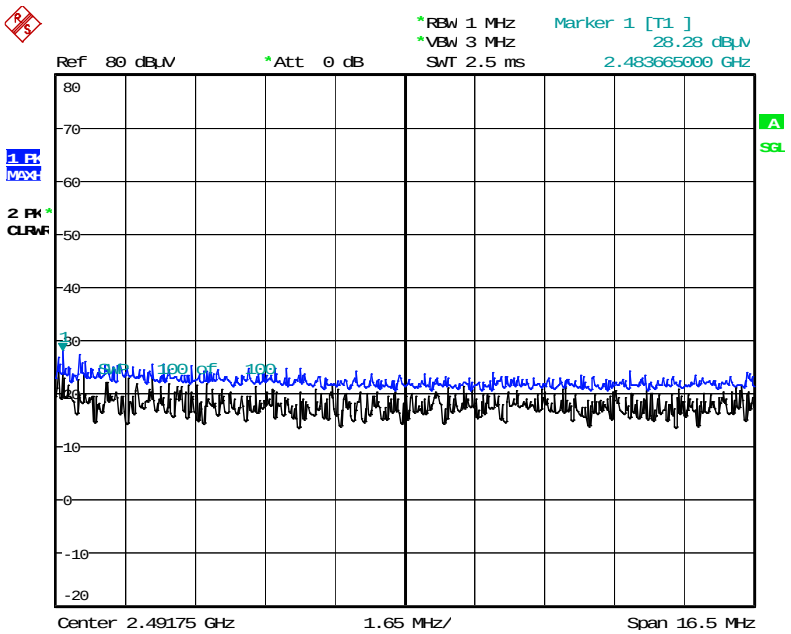
Radiated Restricted Band Edges plot – Peak Reading (802.11n, Ch.11)



Date: 2.SEP.2015 06:01:25

Note : Only the worst case plots for Radiated Restricted Band Edges.

8.7 POWERLINE CONDUCTED EMISSIONS

Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

Sample Calculation

Quasi-peak(Final Result) = Reading Value + Correction Factor

▣ RESULT PLOTS

Standalone with normal cover

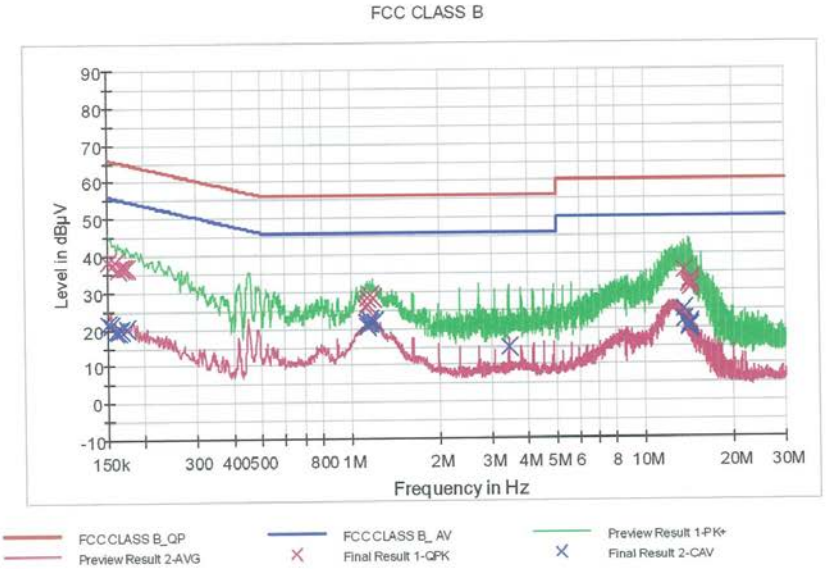
Conducted Emissions (Line 1)

EMI Auto Test(10) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	38.3	9.000	Off	N	9.6	27.7	66.0
0.158000	38.1	9.000	Off	N	9.6	27.5	65.6
0.162000	36.3	9.000	Off	N	9.6	29.1	65.4
0.166000	36.5	9.000	Off	N	9.6	28.7	65.2
0.170000	36.7	9.000	Off	N	9.6	28.3	65.0
0.174000	36.8	9.000	Off	N	9.6	28.0	64.8
1.126000	25.5	9.000	Off	N	9.7	30.5	56.0
1.132000	26.4	9.000	Off	N	9.7	29.6	56.0
1.136000	26.6	9.000	Off	N	9.7	29.4	56.0
1.140000	28.4	9.000	Off	N	9.7	27.6	56.0
1.164000	29.2	9.000	Off	N	9.7	26.8	56.0
1.188000	28.1	9.000	Off	N	9.7	27.9	56.0
13.606000	35.4	9.000	Off	N	10.1	24.6	60.0
14.116000	31.5	9.000	Off	N	10.1	28.5	60.0
14.132000	32.7	9.000	Off	N	10.1	27.3	60.0
14.150000	32.0	9.000	Off	N	10.1	28.0	60.0

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EMI Auto Test(10) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
14.178000	32.3	9.000	Off	N	10.1	27.7	60.0
14.236000	30.8	9.000	Off	N	10.1	29.2	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	21.4	9.000	Off	N	9.6	34.6	56.0
0.154000	21.0	9.000	Off	N	9.6	34.8	55.8
0.158000	19.2	9.000	Off	N	9.6	36.4	55.6
0.162000	19.3	9.000	Off	N	9.6	36.1	55.4
0.166000	19.8	9.000	Off	N	9.6	35.4	55.2
0.174000	20.2	9.000	Off	N	9.6	34.6	54.8
1.132000	20.7	9.000	Off	N	9.7	25.3	46.0
1.140000	21.7	9.000	Off	N	9.7	24.3	46.0
1.164000	22.4	9.000	Off	N	9.7	23.6	46.0
1.170000	21.5	9.000	Off	N	9.7	24.5	46.0
1.204000	21.8	9.000	Off	N	9.7	24.2	46.0
3.436000	14.9	9.000	Off	N	9.8	31.1	46.0
13.606000	22.0	9.000	Off	N	10.1	28.0	50.0
13.622000	24.9	9.000	Off	N	10.1	25.1	50.0
14.118000	20.0	9.000	Off	N	10.1	30.0	50.0
14.130000	20.2	9.000	Off	N	10.1	29.8	50.0
14.140000	21.2	9.000	Off	N	10.1	28.8	50.0
14.150000	20.1	9.000	Off	N	10.1	29.9	50.0

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Conducted Emissions (Line 2)

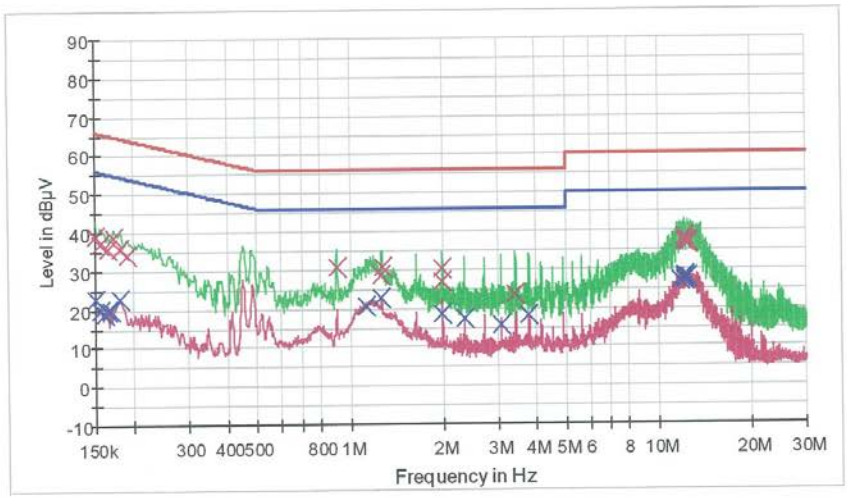
EMI Auto Test(10) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G
Operator Name:	KS KANG

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	39.0	9.000	Off	L1	9.6	27.0	66.0
0.156000	37.0	9.000	Off	L1	9.6	28.7	65.7
0.164000	35.9	9.000	Off	L1	9.6	29.4	65.3
0.172000	38.6	9.000	Off	L1	9.6	26.3	64.9
0.180000	35.6	9.000	Off	L1	9.6	28.9	64.5
0.190000	34.2	9.000	Off	L1	9.6	29.8	64.0
0.904000	30.9	9.000	Off	L1	9.7	25.1	56.0
1.262000	28.5	9.000	Off	L1	9.7	27.5	56.0
1.268000	30.9	9.000	Off	L1	9.7	25.1	56.0
1.986000	27.1	9.000	Off	L1	9.7	29.0	56.0
1.990000	30.5	9.000	Off	L1	9.7	25.5	56.0
3.432000	23.5	9.000	Off	L1	9.8	32.5	56.0
12.078000	38.0	9.000	Off	L1	10.0	22.0	60.0
12.086000	38.2	9.000	Off	L1	10.0	21.8	60.0
12.102000	37.2	9.000	Off	L1	10.0	22.8	60.0
12.126000	37.7	9.000	Off	L1	10.0	22.3	60.0

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EMI Auto Test(10) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
12.398000	36.9	9.000	Off	L1	10.0	23.1	60.0
12.434000	36.5	9.000	Off	L1	10.0	23.5	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	22.8	9.000	Off	L1	9.6	33.2	56.0
0.156000	19.8	9.000	Off	L1	9.6	35.9	55.7
0.160000	19.0	9.000	Off	L1	9.6	36.5	55.5
0.164000	19.8	9.000	Off	L1	9.6	35.5	55.3
0.168000	19.8	9.000	Off	L1	9.6	35.3	55.1
0.180000	22.9	9.000	Off	L1	9.6	31.6	54.5
1.130000	20.7	9.000	Off	L1	9.7	25.3	46.0
1.266000	22.6	9.000	Off	L1	9.7	23.4	46.0
1.990000	18.6	9.000	Off	L1	9.7	27.4	46.0
2.352000	17.2	9.000	Off	L1	9.7	28.8	46.0
3.078000	15.8	9.000	Off	L1	9.8	30.2	46.0
3.800000	18.1	9.000	Off	L1	9.8	27.9	46.0
11.774000	27.0	9.000	Off	L1	10.0	23.0	50.0
12.078000	27.1	9.000	Off	L1	10.0	22.9	50.0
12.086000	28.4	9.000	Off	L1	10.0	21.6	50.0
12.102000	27.5	9.000	Off	L1	10.0	22.5	50.0
12.126000	27.8	9.000	Off	L1	10.0	22.2	50.0
12.398000	28.0	9.000	Off	L1	10.0	22.0	50.0

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Standalone with wireless charging cover

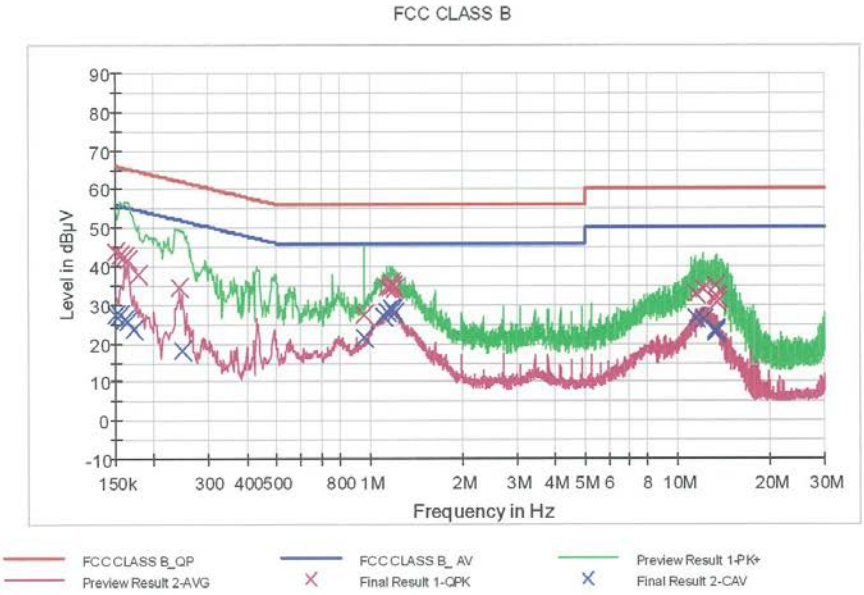
Conducted Emissions (Line 1)

WLAN 2.4G_N_ChargeCase 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G (WIRELESS CHARGE CASE)
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	43.7	9.000	Off	N	9.6	22.3	66.0
0.156000	42.7	9.000	Off	N	9.6	23.0	65.7
0.160000	42.5	9.000	Off	N	9.6	23.0	65.5
0.164000	41.7	9.000	Off	N	9.6	23.6	65.3
0.178000	37.8	9.000	Off	N	9.6	26.8	64.6
0.240000	34.4	9.000	Off	N	9.6	27.7	62.1
0.960000	27.5	9.000	Off	N	9.7	28.5	56.0
1.138000	34.7	9.000	Off	N	9.7	21.3	56.0
1.168000	34.5	9.000	Off	N	9.7	21.5	56.0
1.176000	35.8	9.000	Off	N	9.7	20.2	56.0
1.186000	35.1	9.000	Off	N	9.7	20.9	56.0
1.198000	34.1	9.000	Off	N	9.7	21.9	56.0
11.456000	33.1	9.000	Off	N	10.0	26.9	60.0
12.082000	34.3	9.000	Off	N	10.0	25.7	60.0
13.290000	32.4	9.000	Off	N	10.1	27.6	60.0
13.338000	35.2	9.000	Off	N	10.1	24.8	60.0

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WLAN 2.4G_N_ChargeCase 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
13.396000	30.9	9.000	Off	N	10.1	29.1	60.0
13.488000	31.9	9.000	Off	N	10.1	28.1	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	27.3	9.000	Off	N	9.6	28.7	56.0
0.156000	27.6	9.000	Off	N	9.6	28.1	55.7
0.160000	26.3	9.000	Off	N	9.6	29.2	55.5
0.164000	25.7	9.000	Off	N	9.6	29.7	55.3
0.172000	23.5	9.000	Off	N	9.6	31.4	54.9
0.246000	18.1	9.000	Off	N	9.6	33.8	51.9
0.960000	21.4	9.000	Off	N	9.7	24.6	46.0
1.114000	27.2	9.000	Off	N	9.7	18.8	46.0
1.138000	28.3	9.000	Off	N	9.7	17.7	46.0
1.176000	29.0	9.000	Off	N	9.7	17.0	46.0
1.192000	28.5	9.000	Off	N	9.7	17.5	46.0
1.208000	27.8	9.000	Off	N	9.7	18.2	46.0
11.456000	26.4	9.000	Off	N	10.0	23.6	50.0
12.082000	26.3	9.000	Off	N	10.0	23.7	50.0
13.278000	23.2	9.000	Off	N	10.1	26.8	50.0
13.290000	23.6	9.000	Off	N	10.1	26.4	50.0
13.318000	23.7	9.000	Off	N	10.1	26.3	50.0
13.338000	22.7	9.000	Off	N	10.1	27.3	50.0

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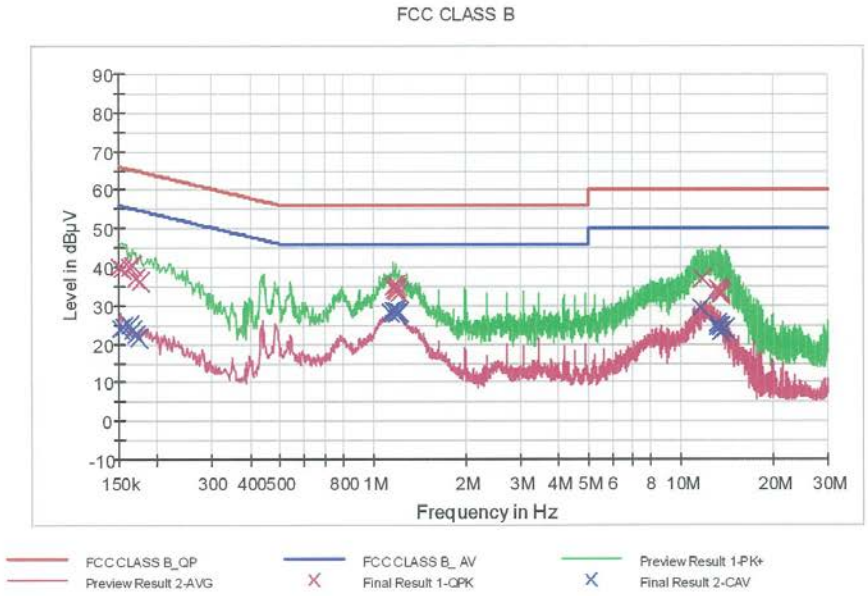
Conducted Emissions (Line 2)

EMI Auto Test(10) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G (WIRELESS CHARGE CASE)
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	40.1	9.000	Off	L1	9.6	25.9	66.0
0.154000	39.5	9.000	Off	L1	9.6	26.3	65.8
0.162000	40.1	9.000	Off	L1	9.6	25.3	65.4
0.166000	40.4	9.000	Off	L1	9.6	24.8	65.2
0.170000	37.3	9.000	Off	L1	9.6	27.8	65.0
0.176000	36.4	9.000	Off	L1	9.6	28.3	64.7
1.166000	34.8	9.000	Off	L1	9.7	21.2	56.0
1.172000	34.3	9.000	Off	L1	9.7	21.7	56.0
1.186000	34.5	9.000	Off	L1	9.7	21.5	56.0
1.190000	35.2	9.000	Off	L1	9.7	20.8	56.0
1.194000	33.6	9.000	Off	L1	9.7	22.4	56.0
1.216000	33.3	9.000	Off	L1	9.7	22.7	56.0
11.746000	37.1	9.000	Off	L1	10.0	22.9	60.0
13.080000	34.4	9.000	Off	L1	10.1	25.6	60.0
13.352000	34.3	9.000	Off	L1	10.1	25.7	60.0
13.364000	33.0	9.000	Off	L1	10.1	27.0	60.0

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EMI Auto Test(10) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
13.370000	33.9	9.000	Off	L1	10.1	26.1	60.0
13.412000	33.1	9.000	Off	L1	10.1	26.9	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.152000	23.8	9.000	Off	L1	9.6	32.1	55.9
0.156000	24.4	9.000	Off	L1	9.6	31.3	55.7
0.162000	25.0	9.000	Off	L1	9.6	30.4	55.4
0.166000	23.6	9.000	Off	L1	9.6	31.6	55.2
0.170000	22.2	9.000	Off	L1	9.6	32.8	55.0
0.174000	21.5	9.000	Off	L1	9.6	33.3	54.8
1.144000	28.2	9.000	Off	L1	9.7	17.8	46.0
1.166000	28.5	9.000	Off	L1	9.7	17.5	46.0
1.184000	28.4	9.000	Off	L1	9.7	17.6	46.0
1.190000	28.8	9.000	Off	L1	9.7	17.2	46.0
1.194000	28.0	9.000	Off	L1	9.7	18.0	46.0
1.216000	28.1	9.000	Off	L1	9.7	17.9	46.0
11.540000	29.6	9.000	Off	L1	10.0	20.4	50.0
13.080000	25.3	9.000	Off	L1	10.1	24.7	50.0
13.148000	24.6	9.000	Off	L1	10.1	25.4	50.0
13.366000	23.0	9.000	Off	L1	10.1	27.0	50.0
13.412000	24.3	9.000	Off	L1	10.1	25.7	50.0
13.942000	24.1	9.000	Off	L1	10.1	25.9	50.0

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With wireless charging pad(WCD-110)

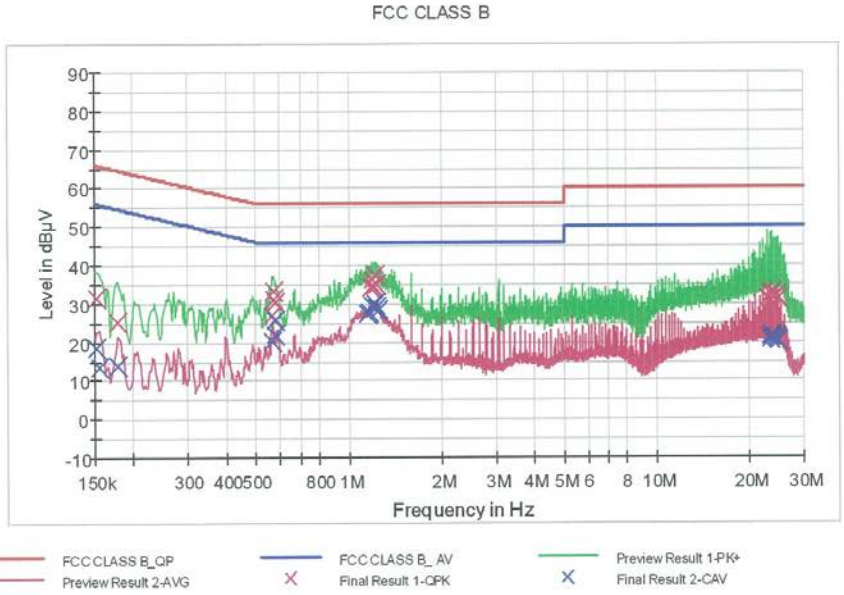
Conducted Emissions (Line 1)

EMI Auto Test(10) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G (WIRELESS CHARGE PAD_#1)
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.152000	31.5	9.000	Off	N	9.6	34.4	65.9
0.178000	25.2	9.000	Off	N	9.6	39.4	64.6
0.564000	27.0	9.000	Off	N	9.6	29.0	56.0
0.568000	31.2	9.000	Off	N	9.6	24.8	56.0
0.572000	33.1	9.000	Off	N	9.6	22.9	56.0
0.578000	30.4	9.000	Off	N	9.6	25.6	56.0
1.184000	33.9	9.000	Off	N	9.7	22.1	56.0
1.188000	36.3	9.000	Off	N	9.7	19.7	56.0
1.196000	34.7	9.000	Off	N	9.7	21.3	56.0
1.202000	34.7	9.000	Off	N	9.7	21.3	56.0
1.212000	37.6	9.000	Off	N	9.7	18.4	56.0
1.236000	35.0	9.000	Off	N	9.7	21.0	56.0
22.842000	31.2	9.000	Off	N	10.3	28.8	60.0
23.374000	32.6	9.000	Off	N	10.3	27.4	60.0
23.502000	30.7	9.000	Off	N	10.3	29.3	60.0
23.648000	32.8	9.000	Off	N	10.3	27.2	60.0

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EMI Auto Test(10) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
24.572000	32.1	9.000	Off	N	10.4	27.9	60.0
24.842000	31.2	9.000	Off	N	10.4	28.8	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.152000	18.4	9.000	Off	N	9.6	37.5	55.9
0.156000	13.5	9.000	Off	N	9.6	42.2	55.7
0.178000	13.9	9.000	Off	N	9.6	40.7	54.6
0.566000	20.2	9.000	Off	N	9.6	25.8	46.0
0.574000	25.6	9.000	Off	N	9.6	20.4	46.0
0.578000	22.0	9.000	Off	N	9.6	24.0	46.0
1.154000	27.4	9.000	Off	N	9.7	18.6	46.0
1.158000	27.9	9.000	Off	N	9.7	18.1	46.0
1.188000	29.4	9.000	Off	N	9.7	16.6	46.0
1.212000	29.7	9.000	Off	N	9.7	16.3	46.0
1.236000	29.1	9.000	Off	N	9.7	16.9	46.0
1.248000	28.1	9.000	Off	N	9.7	17.9	46.0
23.374000	21.5	9.000	Off	N	10.3	28.5	50.0
23.502000	20.7	9.000	Off	N	10.3	29.3	50.0
23.648000	21.6	9.000	Off	N	10.3	28.4	50.0
24.310000	21.0	9.000	Off	N	10.3	29.0	50.0
24.572000	20.7	9.000	Off	N	10.4	29.3	50.0
24.842000	20.2	9.000	Off	N	10.4	29.8	50.0

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Conducted Emissions (Line 2)

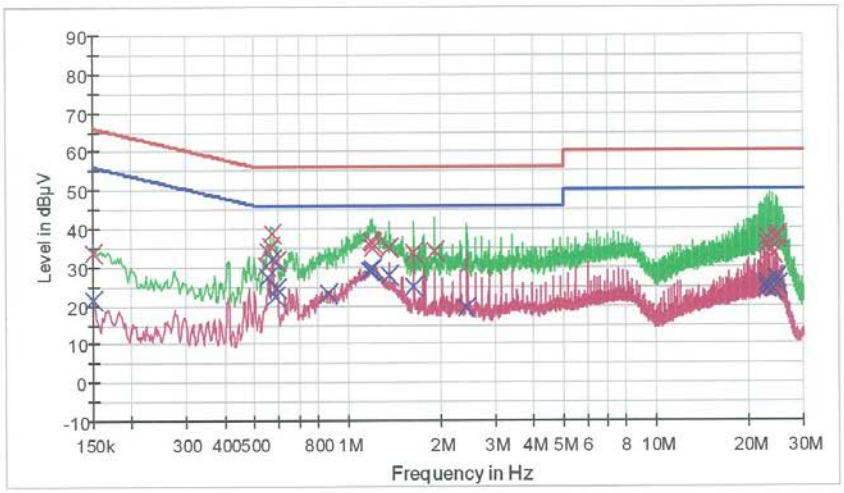
EMI Auto Test(10) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G (WIRELESS CHARGE PAD_#1)
Operator Name:	KS KANG

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	33.6	9.000	Off	L1	9.6	32.4	66.0
0.548000	30.5	9.000	Off	L1	9.7	25.5	56.0
0.554000	34.0	9.000	Off	L1	9.7	22.0	56.0
0.566000	35.2	9.000	Off	L1	9.7	20.8	56.0
0.572000	38.8	9.000	Off	L1	9.7	17.2	56.0
0.588000	31.7	9.000	Off	L1	9.7	24.3	56.0
1.190000	36.5	9.000	Off	L1	9.7	19.5	56.0
1.204000	36.3	9.000	Off	L1	9.7	19.7	56.0
1.210000	34.9	9.000	Off	L1	9.7	21.1	56.0
1.366000	35.1	9.000	Off	L1	9.7	20.9	56.0
1.642000	33.9	9.000	Off	L1	9.7	22.1	56.0
1.914000	34.1	9.000	Off	L1	9.7	21.9	56.0
22.762000	37.3	9.000	Off	L1	10.3	22.7	60.0
22.944000	35.7	9.000	Off	L1	10.3	24.3	60.0
23.438000	34.0	9.000	Off	L1	10.3	26.0	60.0
23.848000	33.4	9.000	Off	L1	10.3	26.6	60.0

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EMI Auto Test(10) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
24.416000	37.6	9.000	Off	L1	10.4	22.4	60.0
24.688000	38.2	9.000	Off	L1	10.4	21.8	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	21.6	9.000	Off	L1	9.6	34.4	56.0
0.554000	27.6	9.000	Off	L1	9.7	18.4	46.0
0.572000	32.1	9.000	Off	L1	9.7	13.9	46.0
0.584000	22.5	9.000	Off	L1	9.7	23.5	46.0
0.588000	24.3	9.000	Off	L1	9.7	21.7	46.0
0.872000	23.3	9.000	Off	L1	9.7	22.7	46.0
1.176000	29.0	9.000	Off	L1	9.7	17.0	46.0
1.194000	29.2	9.000	Off	L1	9.7	16.8	46.0
1.210000	29.6	9.000	Off	L1	9.7	16.4	46.0
1.364000	27.8	9.000	Off	L1	9.7	18.2	46.0
1.642000	24.9	9.000	Off	L1	9.7	21.1	46.0
2.442000	19.6	9.000	Off	L1	9.7	26.4	46.0
22.938000	25.8	9.000	Off	L1	10.3	24.2	50.0
22.944000	24.6	9.000	Off	L1	10.3	25.4	50.0
23.438000	24.9	9.000	Off	L1	10.3	25.1	50.0
23.848000	24.2	9.000	Off	L1	10.3	25.8	50.0
24.416000	26.9	9.000	Off	L1	10.4	23.1	50.0
24.688000	25.2	9.000	Off	L1	10.4	24.8	50.0

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With wireless charging pad(CT 06801)

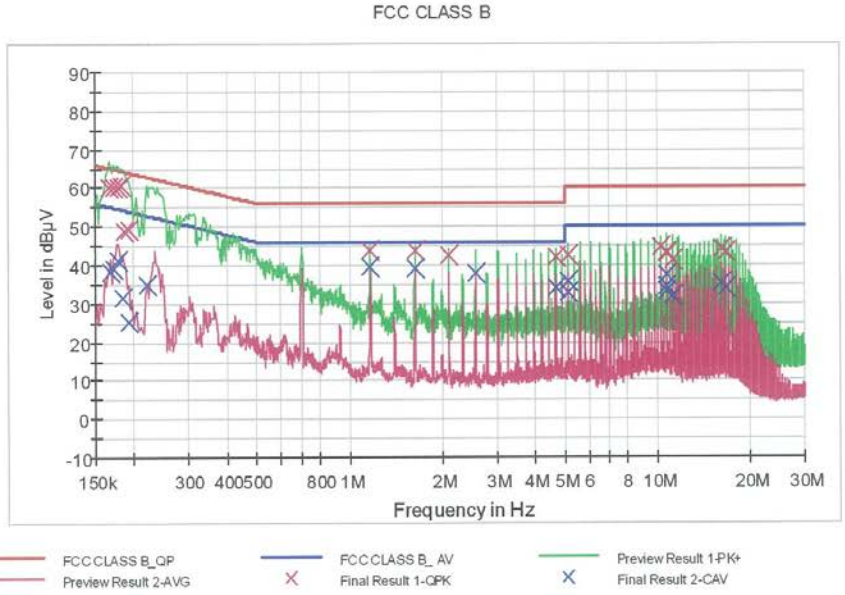
Conducted Emissions (Line 1)

EMI Auto Test(10) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G (WIRELESS CHARGE PAD_#2)
Operator Name:	KS KANG



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	60.2	9.000	Off	N	9.6	5.0	65.2
0.172000	60.0	9.000	Off	N	9.6	4.9	64.9
0.178000	60.3	9.000	Off	N	9.6	4.3	64.6
0.182000	60.5	9.000	Off	N	9.6	3.9	64.4
0.186000	48.8	9.000	Off	N	9.6	15.4	64.2
0.192000	49.3	9.000	Off	N	9.6	14.6	63.9
1.166000	44.0	9.000	Off	N	9.7	12.0	56.0
1.632000	43.6	9.000	Off	N	9.7	12.4	56.0
2.100000	42.7	9.000	Off	N	9.7	13.3	56.0
4.664000	42.0	9.000	Off	N	9.8	14.0	56.0
5.128000	42.6	9.000	Off	N	9.8	17.4	60.0
5.134000	42.6	9.000	Off	N	9.8	17.4	60.0
10.270000	44.5	9.000	Off	N	10.0	15.5	60.0
10.720000	43.3	9.000	Off	N	10.0	16.7	60.0
10.730000	43.1	9.000	Off	N	10.0	16.9	60.0
11.188000	41.1	9.000	Off	N	10.0	18.9	60.0

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EMI Auto Test(10) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
16.098000	44.2	9.000	Off	N	10.2	15.8	60.0
16.566000	43.6	9.000	Off	N	10.2	16.4	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.168000	38.5	9.000	Off	N	9.6	16.6	55.1
0.172000	39.3	9.000	Off	N	9.6	15.6	54.9
0.178000	41.4	9.000	Off	N	9.6	13.2	54.6
0.184000	31.5	9.000	Off	N	9.6	22.8	54.3
0.192000	25.4	9.000	Off	N	9.6	28.5	53.9
0.220000	35.1	9.000	Off	N	9.6	17.7	52.8
1.166000	39.6	9.000	Off	N	9.7	6.4	46.0
1.632000	39.1	9.000	Off	N	9.7	6.9	46.0
2.566000	37.8	9.000	Off	N	9.7	8.2	46.0
4.662000	34.3	9.000	Off	N	9.8	11.7	46.0
5.128000	35.8	9.000	Off	N	9.8	14.2	50.0
5.136000	33.0	9.000	Off	N	9.8	17.0	50.0
10.718000	33.1	9.000	Off	N	10.0	16.9	50.0
10.722000	34.7	9.000	Off	N	10.0	15.3	50.0
10.728000	37.3	9.000	Off	N	10.0	12.7	50.0
11.188000	32.0	9.000	Off	N	10.0	18.0	50.0
16.098000	35.4	9.000	Off	N	10.2	14.6	50.0
16.566000	34.1	9.000	Off	N	10.2	15.9	50.0

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Conducted Emissions (Line 2)

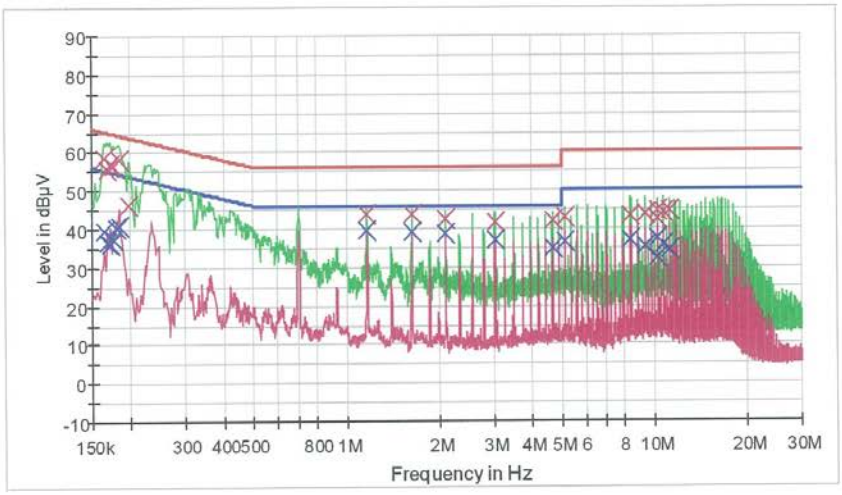
EMI Auto Test(10) 1 / 2

HCT TEST Report

Common Information

EUT:	LG-H960
Manufacturer:	LG
Test Site:	SHIELD ROOM
Operating Conditions:	WLAN MODE_2.4G (WIRELESS CHARGE PAD_#2)
Operator Name:	KS KANG

FCC CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.164000	58.5	9.000	Off	L1	9.6	6.9	65.3
0.168000	55.7	9.000	Off	L1	9.6	9.4	65.1
0.172000	56.8	9.000	Off	L1	9.6	8.1	64.9
0.176000	56.6	9.000	Off	L1	9.6	8.1	64.7
0.184000	58.0	9.000	Off	L1	9.6	6.3	64.3
0.196000	46.2	9.000	Off	L1	9.6	17.6	63.8
1.166000	43.9	9.000	Off	L1	9.7	12.1	56.0
1.632000	43.8	9.000	Off	L1	9.7	12.2	56.0
2.100000	42.7	9.000	Off	L1	9.7	13.3	56.0
3.032000	41.5	9.000	Off	L1	9.8	14.5	56.0
4.664000	42.1	9.000	Off	L1	9.8	13.9	56.0
5.128000	43.1	9.000	Off	L1	9.8	16.9	60.0
8.394000	43.3	9.000	Off	L1	9.9	16.7	60.0
9.324000	43.8	9.000	Off	L1	9.9	16.2	60.0
10.250000	42.4	9.000	Off	L1	10.0	17.6	60.0
10.258000	44.7	9.000	Off	L1	10.0	15.3	60.0

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EMI Auto Test(10) 2 / 2

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
10.734000	44.3	9.000	Off	L1	10.0	15.7	60.0
11.194000	44.6	9.000	Off	L1	10.0	15.4	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.164000	39.8	9.000	Off	L1	9.6	15.5	55.3
0.168000	36.7	9.000	Off	L1	9.6	18.4	55.1
0.172000	36.1	9.000	Off	L1	9.6	18.8	54.9
0.176000	37.5	9.000	Off	L1	9.6	17.2	54.7
0.180000	40.3	9.000	Off	L1	9.6	14.2	54.5
0.184000	40.7	9.000	Off	L1	9.6	13.6	54.3
1.166000	39.5	9.000	Off	L1	9.7	6.5	46.0
1.632000	39.0	9.000	Off	L1	9.7	7.0	46.0
2.098000	38.5	9.000	Off	L1	9.7	7.5	46.0
3.032000	37.2	9.000	Off	L1	9.8	8.8	46.0
4.664000	34.9	9.000	Off	L1	9.8	11.1	46.0
5.132000	36.5	9.000	Off	L1	9.8	13.5	50.0
8.394000	36.9	9.000	Off	L1	9.9	13.1	50.0
9.324000	35.5	9.000	Off	L1	9.9	14.5	50.0
10.250000	32.2	9.000	Off	L1	10.0	17.8	50.0
10.258000	37.4	9.000	Off	L1	10.0	12.6	50.0
10.732000	36.0	9.000	Off	L1	10.0	14.0	50.0
11.194000	34.4	9.000	Off	L1	10.0	15.6	50.0

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9. LIST OF TEST EQUIPMENT

9.1 LIST OF TEST EQUIPMENT(Conducted Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216/ LISN	01/13/2015	Annual	100073
Agilent	E4440A/ Spectrum Analyzer	03/18/2015	Annual	US45303008
Agilent	N9020A / SIGNAL ANALYZER	06/30/2015	Annual	MY51110085
Agilent	N9020A / SIGNAL ANALYZER	07/02/2015	Annual	MY50510304
Agilent	N1911A/Power Meter	07/09/2015	Annual	MY45100523
Agilent	N1921A /POWER SENSOR	07/09/2015	Annual	MY45241059
Agilent	87300B/Directional Coupler	12/08/2014	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	04/30/2015	Annual	11275
ITECH	IT6720 / DC POWER SUPPLY	11/04/2014	Annual	010002156287001199
Agilent	8493C / Attenuator(10 dB)	07/21/2015	Annual	07560

9.2 LIST OF TEST EQUIPMENT(Radiated Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Schwarzbeck	VULB 9160/ TRILOG Antenna	10/10/2014	Biennial	3368
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
CERNEX	CBL18265035 / POWER AMP	07/27/2015	Annual	22966
Schwarzbeck	BBHA 9120D/ Horn Antenna	05/07/2015	Biennial	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	04/30/2015	Biennial	BBHA9170124
Rohde & Schwarz	FSP / Spectrum Analyzer	10/23/2014	Annual	836650/016
Wainwright Instrument	WHF3.0/18G-10EF / High Pass Filter	06/28/2015	Annual	8
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	06/15/2015	Annual	1
Rohde & Schwarz	LOOP ANTENNA	09/03/2014	Biennial	1513-175
CERNEX	CBL06185030 / POWER AMP	07/21/2015	Annual	22965
CERNEX	CBLU1183540 / POWER AMP	07/21/2015	Annual	22964