# **TEST REPORT**

**Reference No.** : WTS15S1035968-2E

FCC ID ..... : 2AEE8LAVAIRIS600

Applicant.....: LAVA INTERNATIONAL (H.K) LIMITED

Address.....: UNIT L 1/F MAU LAM COMM BLDG 16-18 MAU LAM ST,

JORDAN KL, HK

Manufacturer .....: The same as above

Address..... : The same as above

Product Name.....: Mobile Phone

**Model No**.....: iris 600

Brand.....: LAVA

**Standards**..... FCC CFR47 Part 15C Section 15.247:2014

Date of Receipt sample .... : Oct. 26, 2015

**Date of Test** ...... : Oct. 27, 2015 – Nov. 04, 2015

**Date of Issue**..... : Nov.14, 2015

Test Result.....: Pass

#### Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

### Prepared By:

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Approved by

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# 2 Test Summary

Test Items	Test Requirement	Result
	15.247(d)	
Radiated Spurious Emissions	15.205(a)	PASS
	15.209(a)	
Conducted Spurious Emissions	15.247(d)	PASS
Conducted Emissions	15.207(a)	PASS
6dB Bandwidth	15.247(a)(2)	PASS
Maximum Peak Output Power	15.247(b)(3),(4)	PASS
Power Spectral Density	15.247(e)	PASS
Band Edge	15.247(d)	PASS
Antenna Requirement	15.203	PASS
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS

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### 4 General Information

### 4.1 General Description of E.U.T.

Product Name : Mobile Phone

Model No. : iris 600

Model Description : N/A

GSM Band(s) : GSM 850/900/1800/1900MHz

GPRS/EGPRS Class : 12

WCDMA Band(s) : FDD Band II/V

LTE Band(s) : N/A

Wi-Fi Specification : 2.4G: 802.11b/g/n HT20/n HT40

Bluetooth Version : Bluetooth v4.0 with BLE

GPS : Support

NFC : N/A

Hardware Version : V2.0

Software Version : Lava\_iris600\_MX\_S101\_20151013

### 4.2 Details of E.U.T.

Operation Frequency : GSM/GPRS/EGPRS 850: 824~849MHz

PCS/GPRS/EGPRS1900: 1850~1910MHz

WCDMA Band II: 1850~1910MHz WCDMA Band V: 824~849MHz

WiFi:

802.11b/g/n HT20: 2412~2462MHz 802.11n HT40: 2422-2462MHz Bluetooth: 2402~2480MHz

Max. RF output power : GSM 850: 32.77dBm

EGPRS 850: 25.96dBm PCS1900:29.58dBm EGPRS 1900:24.88dBm WCDMA Band II: 22.52dBm WCDMA Band V: 22.65dBm

WiFi(2.4G): 9.70dBm Bluetooth: 3.61dBm

Type of Modulation : GSM,GPRS: GMSK

EGPRS: GMSK, 8PSK

WCDMA: BPSK WiFi: CCK, OFDM

Bluetooth: GFSK, Pi/4 DQPSK,8DPSK

Antenna installation : GSM/WCDMA: internal permanent antenna

WiFi/Bluetooth: internal permanent antenna

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Antenna Gain : GSM 850: 0.6dBi

PCS1900: 0.7dBi

WCDMA Band II: 0.7dBi WCDMA Band V: 0.6dBi

WiFi: 1.2dBi

Bluetooth: 1.2dBi

Technical Data :Battery DC 3.7V, 1750mAh

DC 5V,500mA, Charging form adapter

(Adapter Input:100-300V~50/60Hz, 0.15A)

Adapter :: Manufacturer: LAVA

Model No.: CLV-3

### 4.3 Channel List

### WIFI

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	2	2417	3	2422	4	2427
5	2432	6	2437	7	2442	8	2447
9	2452	10	2457	11	2462	12	-

#### BT BLE

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
0	2402	1	2404	2	2 2406		2408
4	2410	5	2412	6	2414	7	2416
8	2418	9	2420	10	10 2422		2424
12	2426	13	2428	14	2430	15	2432
16	2434	17	2436	18	2438	19	2440
20	2442	21	2444	22	2446	23	2448
24	2450	25	2452	26 2454		27	2456
28	2458	29	2460	30	2462	31	2464
32	2466	33	2468	34	2470	35	2472
36	2474	37	2476	38	2478	39	2480

### 4.4 Test Mode

Table 1 Tests Carried Out Under FCC part 15.247

Test Items	Mode	Data Rate	Channel	TX/RX
	802.11b	11 Mbps	1/6/11	TX
Maximum Peak Output Power	802.11g	54 Mbps	1/6/11	TX
	802.11n HT20	108 Mbps	1/6/11	TX
	802.11b	11 Mbps	1/6/11	TX
Power Spectral Density	802.11g	54 Mbps	1/6/11	TX
	802.11n HT20	108 Mbps	1/6/11	TX
6dB Bandwidth	802.11b	11 Mbps	1/6/11	TX
	802.11g	54 Mbps	1/6/11	TX
	802.11n HT20	108 Mbps	1/6/11	TX
	802.11b	11 Mbps	1/6/11	TX
Band Edge	802.11g	54 Mbps	1/6/11	TX
	802.11n HT20	108 Mbps	1/6/11	TX
	802.11b	11 Mbps	1/6/11	TX
Transmitter Spurious Emissions	802.11g	54 Mbps	1/6/11	TX
	802.11n HT20	108 Mbps	1/6/11	TX

Table 2 Tests Carried Out Under FCC part 15.247

Test Items	Mode	Data Rate	Channel	TX/RX
Maximum Peak Output Power	BT BLE	1 Mbps	0/19/39	TX
Power Spectral Density	BT BLE	1 Mbps	0/19/39	TX
6dB Bandwidth	BT BLE	1 Mbps	0/19/39	TX
Band Edge	BT BLE	1 Mbps	0/19/39	TX
Transmitter Spurious Emissions	BT BLE	1 Mbps	0/19/39	TX

**Note** :Parameters set by test software during channel & power tests, the software provided by the customer was used to set the operating channels as well as the output power level. The RF output power set is the power expected by the manufacturer and is going to be fixed on the firmware of the final product .

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# 4.5 Test Facility

The test facility has a test site registered with the following organizations:

#### IC – Registration No.: 7760A

Waltek Services(Shenzhen) Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2015.

### • FCC Test Site 1#- Registration No.: 880581

Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 880581, April 29, 2014.

### • FCC Test Site 2#- Registration No.: 328995

Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 328995, December 3, 2014.

# 5 Equipment Used during Test

# 5.1 Equipments List

Condu	cted Emissions at		Disturbance Volta	age		
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMI Test Receiver	R&S	ESCI	101155	Sep.15,2015	Sep.14,2016
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	Sep.15,2015	Sep.14,2016
3.	Limiter	York	MTS-IMP-136	261115-001- 0024	Sep.15,2015	Sep.14,2016
4.	Cable	LARGE	RF300	-	Sep.15,2015	Sep.14,2016
3m Se	mi-anechoic Cham	ber for Radiation				
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	EMC Analyzer	Agilent	E7405A	MY45114943	Sep.15,2015	Sep.14,2016
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	Sep.15,2015	Sep.14,2016
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	Apr.18,2015	Apr.17,2016
4	Coaxial Cable (below 1GHz)	Тор	TYPE16(13M)	-	Sep.15,2015	Sep.14,2016
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	Apr.18,2015	Apr.17,2016
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	669	Apr.18,2015	Apr.17,2016
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	Mar.17,2015	Mar.16,2016
8	Coaxial Cable (above 1GHz)	Тор	1000MHz-25GHz	EW02014-7	Apr.10,2015	Apr.09,2016
9	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	Sep.15,2015	Sep.14,2016
10	Universal Radio Communication Tester	R&S	CMU 200	112461	Apr.10,2015	Apr.09,2016
11	Signal Generator	R&S	SMR20	100046	Sep.15,2015	Sep.14,2016
RF Co	nducted Testing					
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMC Analyzer (9k~26.5GHz)	Agilent	E7405A	MY45114943	Aug. 15,2015	Aug.14,2016
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	Aug. 15,2015	Aug.14,2016
3.	Humidity Chamber	GF	GTH-225-40-1P	IAA061213	Aug. 15,2015	Aug.14,2016

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# 5.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.	
1	1	1	1	

# 5.3 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	± 1 x 10 <sup>-6</sup>
RF Power	± 1.0 dB
RF Power Density	± 2.2 dB
	± 5.03 dB (30M~1000MHz)
Radiated Spurious Emissions test	± 5.47 dB (1000M~25000MHz)
Conducted Spurious Emissions test	± 3.64 dB (AC mains 150KHz~30MHz)

# 5.4 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

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### 6 Conducted Emission

Test Requirement: FCC CFR 47 Part 15 Section 15.207

Test Method: ANSI C63.4:2009

Test Result: PASS

Frequency Range: 150kHz to 30MHz

Class/Severity: Class B

Limit: 66-56 dB<sub>µ</sub>V between 0.15MHz & 0.5MHz

 $56~dB\mu V$  between 0.5MHz & 5MHz  $60~dB\mu V$  between 5MHz & 30MHz

Detector: Peak for pre-scan (9kHz Resolution Bandwidth)

## 6.1 E.U.T. Operation

Operating Environment:

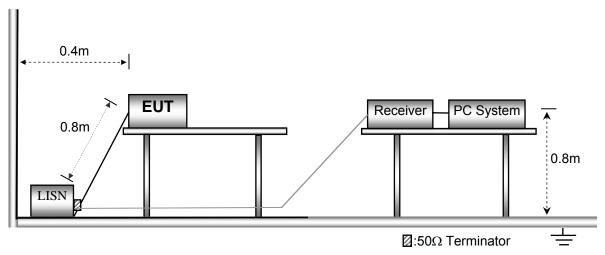
Temperature: 21.5 °C
Humidity: 51.9 % RH
Atmospheric Pressure: 101.2kPa

**EUT Operation:** 

The test was performed in WIFI link mode(Wifi /BT BLE), the worst data were shown in the report.

### 6.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.4.



### **6.3** Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

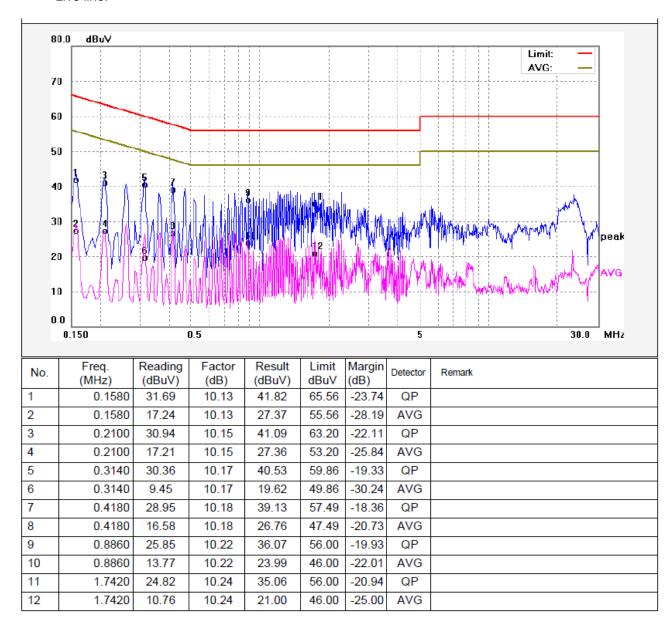
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#### 6.4 Conducted Emission Test Result

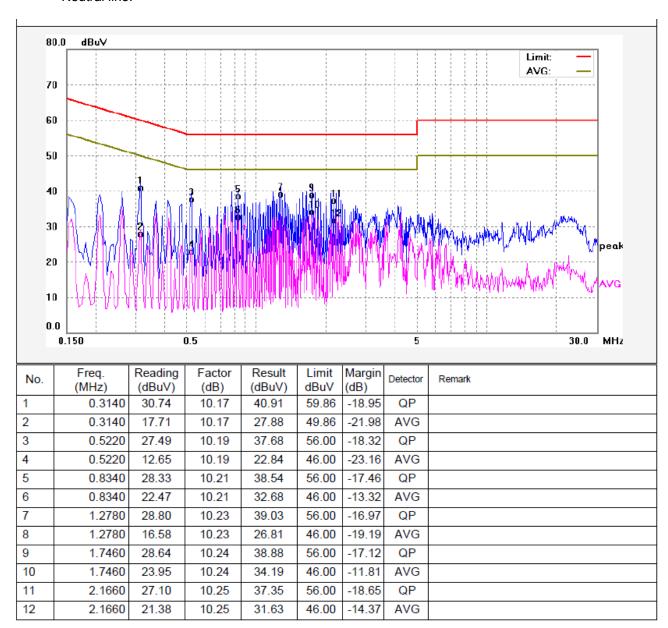
An initial pre-scan was performed on the live and neutral lines.

Worst Mode: BT+WIFI mode (Wifi)

Live line:



#### Neutral line:



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## 7 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.247

Test Method: ANSI C63.4:2009

Test Result: PASS
Measurement Distance: 3m

Limit:

LIIIIIL.					
_	Field Stre	ngth	Field Strength Limit at 3m Measurement Dist		
Frequency (MHz)	uV/m	Distance (m)	uV/m	dBuV/m	
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	20log <sup>(2400/F(kHz))</sup> + 80	
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log <sup>(24000/F(kHz))</sup> + 40	
1.705 ~ 30	30	30	100 * 30	20log <sup>(30)</sup> + 40	
30 ~ 88	100	3	100	20log <sup>(100)</sup>	
88 ~ 216	150	3	150	20log <sup>(150)</sup>	
216 ~ 960	200	3	200	20log <sup>(200)</sup>	
Above 960	500	3	500	20log <sup>(500)</sup>	

# 7.1 EUT Operation

Operating Environment:

Temperature: 23.5 °C
Humidity: 52.1 % RH
Atmospheric Pressure: 101.2kPa

**EUT Operation:** 

The test was performed in WIFI/BT BLE link mode, the test data were shown in the report.

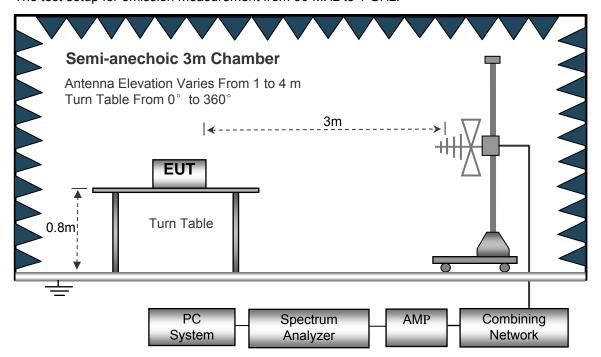
## 7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



Anechoic 3m Chamber

Antenna Elevation Varies From 1 to 4 m

Turn Table From 0° to 360°

Turn Table

PC

Spectrum

AMP

Combining

Analyzer

Network

The test setup for emission measurement above 1 GHz.

System

# 7.3 Spectrum Analyzer Setup

Below 30MHz		
	Sweep Speed	. Auto
	IF Bandwidth	.10kHz
	Video Bandwidth	.10kHz
	Resolution Bandwidth	.10kHz
30MHz ~ 1GH:	z	
	Sweep Speed	. Auto
	Detector	.PK
	Resolution Bandwidth	.100kHz
	Video Bandwidth	.300kHz
Above 1GHz		
	Sweep Speed	. Auto
	Detector	.PK
	Resolution Bandwidth	.1MHz
	Video Bandwidth	.3MHz
	Detector	.Ave.
	Resolution Bandwidth	.1MHz
	Video Bandwidth	.10Hz

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#### 7.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

- 3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until the measurements for all frequencies are complete.
- 7. The radiation measurements are performed in X,Y and Z axis positioning(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),the worst condition was tested putting the eut in X axis,so the worst data were shown as follow.
- 8. A 2.4GHz high -pass filter is used druing radiated emissions above 1GHz measurement.

### 7.5 Corrected Amplitude & Margin Calculation

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

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. - Limit

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# 7.6 Summary of Test Results

Wifi:

Test Frequency : 26MHz ~ 30MHz

The measurements were more than 20 dB below the limit and not reported.

Test Frequency: 30MHz ~ 18GHz

F	Receiver	Datastan	Turn	RX An	tenna	Corrected	Compated	FCC F 15.247/2	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
11b: Low Channel 2412MHz									
225.12	40.15	QP	235	1.8	Н	-11.62	28.53	46.00	-17.47
225.12	37.56	QP	81	2.0	V	-11.62	25.94	46.00	-20.06
4824.00	50.46	PK	83	1.5	V	-1.06	49.40	74.00	-24.60
4824.00	44.37	Ave	83	1.5	V	-1.06	43.31	54.00	-10.69
7236.00	42.05	PK	328	2.0	Н	1.33	43.38	74.00	-30.62
7236.00	41.86	Ave	328	2.0	Н	1.33	43.19	54.00	-10.81
2311.14	45.10	PK	356	1.1	V	-13.19	31.91	74.00	-42.09
2311.14	37.59	Ave	356	1.1	V	-13.19	24.40	54.00	-29.60
2388.10	43.99	PK	128	1.5	Н	-13.14	30.85	74.00	-43.15
2388.10	36.33	Ave	128	1.5	Н	-13.14	23.19	54.00	-30.81
2499.09	42.75	PK	52	1.3	V	-13.08	29.67	74.00	-44.33
2499.09	36.67	Ave	52	1.3	V	-13.08	23.59	54.00	-30.41

F	Receiver	Datastan	Turn	RX An	tenna	Corrected	Compated	FCC F 15.247/2	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			11b: Mid	dle Chan	nel 243	7MHz			
225.12	41.39	QP	358	1.2	Н	-11.62	29.77	46.00	-16.23
225.12	36.65	QP	352	1.7	V	-11.62	25.03	46.00	-20.97
4874.00	51.14	PK	133	1.5	V	-0.62	50.52	74.00	-23.48
4874.00	44.36	Ave	133	1.5	V	-0.62	43.74	54.00	-10.26
7311.00	40.90	PK	311	1.6	Н	2.21	43.11	74.00	-30.89
7311.00	42.77	Ave	311	1.6	Н	2.21	44.98	54.00	-9.02
2324.72	46.05	PK	100	1.5	V	-13.19	32.86	74.00	-41.14
2324.72	39.82	Ave	100	1.5	V	-13.19	26.63	54.00	-27.37
2377.49	43.28	PK	69	1.2	Н	-13.14	30.14	74.00	-43.86
2377.49	36.20	Ave	69	1.2	Н	-13.14	23.06	54.00	-30.94
2493.21	42.37	PK	247	1.7	V	-13.08	29.29	74.00	-44.71
2493.21	37.27	Ave	247	1.7	V	-13.08	24.19	54.00	-29.81

_	Receiver	<b>D</b> 4 4	Turn	RX An	tenna	Corrected		FCC F 15.247/2	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			11b: Hi	gh Chanr	nel 2462	MHz			
225.12	42.60	QP	246	1.6	Н	-11.62	30.98	46.00	-15.02
225.12	37.77	QP	175	1.8	V	-11.62	26.15	46.00	-19.85
4924.00	50.75	PK	239	1.9	V	-0.24	50.51	74.00	-23.49
4924.00	45.59	Ave	239	1.9	V	-0.24	45.35	54.00	-8.65
7386.00	41.85	PK	225	1.1	Н	2.84	44.69	74.00	-29.31
7386.00	43.17	Ave	225	1.1	Н	2.84	46.01	54.00	-7.99
2346.50	45.22	PK	133	1.7	V	-13.19	32.03	74.00	-41.97
2346.50	39.61	Ave	133	1.7	V	-13.19	26.42	54.00	-27.58
2357.52	43.05	PK	228	1.5	Н	-13.14	29.91	74.00	-44.09
2357.52	36.70	Ave	228	1.5	Н	-13.14	23.56	54.00	-30.44
2494.53	43.16	PK	132	1.0	V	-13.08	30.08	74.00	-43.92
2494.53	36.92	Ave	132	1.0	V	-13.08	23.84	54.00	-30.16

_	Receiver	<b>D</b> 4 4	Turn	RX An	tenna	Corrected		FCC Part 15.247/209/205	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			11g: Lo	w Chann	el 2412I	MHz			
225.12	42.58	QP	351	1.7	Н	-11.62	30.96	46.00	-15.04
225.12	36.79	QP	195	1.6	V	-11.62	25.17	46.00	-20.83
4824.00	51.85	PK	100	1.4	V	-1.06	50.79	74.00	-23.21
4824.00	44.33	Ave	100	1.4	V	-1.06	43.27	54.00	-10.73
7236.00	42.51	PK	314	1.8	Н	1.33	43.84	74.00	-30.16
7236.00	42.34	Ave	314	1.8	Н	1.33	43.67	54.00	-10.33
2342.07	46.95	PK	231	1.8	V	-13.19	33.76	74.00	-40.24
2342.07	38.17	Ave	231	1.8	V	-13.19	24.98	54.00	-29.02
2369.48	44.98	PK	198	1.8	Н	-13.14	31.84	74.00	-42.16
2369.48	37.50	Ave	198	1.8	Н	-13.14	24.36	54.00	-29.64
2499.71	42.28	PK	310	1.5	V	-13.08	29.20	74.00	-44.80
2499.71	37.32	Ave	310	1.5	V	-13.08	24.24	54.00	-29.76

F	Receiver	D 1 1	Turn	RX An	tenna	Corrected		FCC F 15.247/2	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			11g: Mid	dle Chan	nel 243	7MHz			
225.12	43.01	QP	6	1.6	Н	-11.62	31.39	46.00	-14.61
225.12	37.58	QP	201	1.7	V	-11.62	25.96	46.00	-20.04
4874.00	50.44	PK	356	1.3	V	-0.62	49.82	74.00	-24.18
4874.00	43.88	Ave	356	1.3	V	-0.62	43.26	54.00	-10.74
7311.00	41.04	PK	279	1.6	Н	2.21	43.25	74.00	-30.75
7311.00	42.93	Ave	279	1.6	Н	2.21	45.14	54.00	-8.86
2314.07	46.24	PK	35	1.2	V	-13.19	33.05	74.00	-40.95
2314.07	39.50	Ave	35	1.2	V	-13.19	26.31	54.00	-27.69
2385.71	42.36	PK	280	1.1	Н	-13.14	29.22	74.00	-44.78
2385.71	37.92	Ave	280	1.1	Н	-13.14	24.78	54.00	-29.22
2490.27	44.53	PK	98	1.2	V	-13.08	31.45	74.00	-42.55
2490.27	38.76	Ave	98	1.2	V	-13.08	25.68	54.00	-28.32

_	Receiver	5	Turn	RX An	tenna	Corrected		FCC Part 15.247/209/205	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			11g: Hiç	gh Chann	el 2462	MHz			
225.12	43.52	QP	357	1.1	Н	-11.62	31.90	46.00	-14.10
225.12	36.31	QP	203	1.1	V	-11.62	24.69	46.00	-21.31
4924.00	49.95	PK	197	2.0	V	-0.24	49.71	74.00	-24.29
4924.00	44.52	Ave	197	2.0	V	-0.24	44.28	54.00	-9.72
7386.00	40.06	PK	177	1.1	Н	2.84	42.90	74.00	-31.10
7386.00	43.60	Ave	177	1.1	Н	2.84	46.44	54.00	-7.56
2336.26	45.02	PK	8	1.5	V	-13.19	31.83	74.00	-42.17
2336.26	39.58	Ave	8	1.5	V	-13.19	26.39	54.00	-27.61
2388.83	43.78	PK	333	1.2	Н	-13.14	30.64	74.00	-43.36
2388.83	38.37	Ave	333	1.2	Н	-13.14	25.23	54.00	-28.77
2497.25	42.98	PK	205	1.4	V	-13.08	29.90	74.00	-44.10
2497.25	36.59	Ave	205	1.4	V	-13.08	23.51	54.00	-30.49

_	Receiver	<b>D</b> 1 1	Turn	RX An	tenna	Corrected		FCC F 15.247/2	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			n20: Lo	w Chann	el 2412l	MHz			
225.12	44.83	QP	256	1.3	Н	-11.62	33.21	46.00	-12.79
225.12	36.19	QP	322	2.0	V	-11.62	24.57	46.00	-21.43
4824.00	50.40	PK	340	1.1	V	-1.06	49.34	74.00	-24.66
4824.00	43.21	Ave	340	1.1	V	-1.06	42.15	54.00	-11.85
7236.00	38.90	PK	95	1.9	Н	1.33	40.23	74.00	-33.77
7236.00	43.07	Ave	95	1.9	Н	1.33	44.40	54.00	-9.60
2318.41	45.79	PK	56	1.3	V	-13.19	32.60	74.00	-41.40
2318.41	39.95	Ave	56	1.3	V	-13.19	26.76	54.00	-27.24
2362.34	42.42	PK	283	1.8	Н	-13.14	29.28	74.00	-44.72
2362.34	38.78	Ave	283	1.8	Н	-13.14	25.64	54.00	-28.36
2496.83	42.76	PK	259	1.6	V	-13.08	29.68	74.00	-44.32
2496.83	36.48	Ave	259	1.6	V	-13.08	23.40	54.00	-30.60

	Receiver	D 1 1	Turn	RX An	tenna	Corrected		FCC Part 15.247/209/205	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			n20: Mid	dle Chan	nel 243	7MHz			
225.12	46.07	QP	329	1.1	Н	-11.62	34.45	46.00	-11.55
225.12	35.75	QP	109	1.4	V	-11.62	24.13	46.00	-21.87
4874.00	49.17	PK	79	1.0	V	-0.62	48.55	74.00	-25.45
4874.00	43.84	Ave	79	1.0	V	-0.62	43.22	54.00	-10.78
7311.00	39.40	PK	112	1.2	Н	2.21	41.61	74.00	-32.39
7311.00	42.94	Ave	112	1.2	Н	2.21	45.15	54.00	-8.85
2326.13	46.16	PK	11	1.3	V	-13.19	32.97	74.00	-41.03
2326.13	37.41	Ave	11	1.3	V	-13.19	24.22	54.00	-29.78
2358.72	42.63	PK	182	1.7	Н	-13.14	29.49	74.00	-44.51
2358.72	38.66	Ave	182	1.7	Н	-13.14	25.52	54.00	-28.48
2492.52	43.08	PK	3	1.8	V	-13.08	30.00	74.00	-44.00
2492.52	38.61	Ave	3	1.8	V	-13.08	25.53	54.00	-28.47

_	Receiver	<b>D</b> 4 4	Turn	RX An	tenna	Corrected		FCC Part 15.247/209/205	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			n20: Hiç	gh Chann	el 2462	MHz			
225.12	46.24	QP	171	1.5	Н	-11.62	34.62	46.00	-11.38
225.12	34.27	QP	11	1.6	V	-11.62	22.65	46.00	-23.35
4924.00	49.68	PK	339	1.2	V	-0.24	49.44	74.00	-24.56
4924.00	44.61	Ave	339	1.2	V	-0.24	44.37	54.00	-9.63
7386.00	40.83	PK	163	1.6	Н	2.84	43.67	74.00	-30.33
7386.00	41.55	Ave	163	1.6	Н	2.84	44.39	54.00	-9.61
2344.09	45.31	PK	303	1.2	V	-13.19	32.12	74.00	-41.88
2344.09	37.98	Ave	303	1.2	V	-13.19	24.79	54.00	-29.21
2369.76	43.36	PK	54	1.2	Н	-13.14	30.22	74.00	-43.78
2369.76	36.86	Ave	54	1.2	Н	-13.14	23.72	54.00	-30.28
2489.05	44.35	PK	138	1.7	V	-13.08	31.27	74.00	-42.73
2489.05	36.13	Ave	138	1.7	V	-13.08	23.05	54.00	-30.95

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F	Receiver	Detector	Turn	RX An	tenna	Corrected	0	FCC Part 15.247/209/205	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			N40: Lo	w Chann	el 2422	MHz			
225.12	43.12	QP	131	1.7	Н	-11.62	31.50	46.00	-14.50
225.12	40.61	QP	72	1.3	V	-11.62	28.99	46.00	-17.01
4844.00	50.13	PK	197	1.4	V	-1.06	49.07	74.00	-24.93
4844.00	39.50	Ave	197	1.4	V	-1.06	38.44	54.00	-15.56
7266.00	42.31	PK	96	1.3	Н	1.33	43.64	74.00	-30.36
7266.00	42.33	Ave	96	1.3	Н	1.33	43.66	54.00	-10.34
2325.93	45.19	PK	114	1.6	V	-13.19	32.00	74.00	-42.00
2325.93	38.80	Ave	114	1.6	V	-13.19	25.61	54.00	-28.39
2389.88	42.82	PK	153	1.5	Н	-13.14	29.68	74.00	-44.32
2389.88	36.65	Ave	153	1.5	Н	-13.14	23.51	54.00	-30.49
2495.06	43.04	PK	264	1.7	V	-13.08	29.96	74.00	-44.04
2495.06	38.74	Ave	264	1.7	V	-13.08	25.66	54.00	-28.34

	Receiver	D 1 1	Turn	RX An	tenna	Corrected		FCC Part 15.247/209/205	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			N40: Mid	dle Chan	nel 243	7MHz			
225.12	42.56	QP	192	1.7	Н	-11.62	30.94	46.00	-15.06
225.12	39.75	QP	335	1.0	V	-11.62	28.13	46.00	-17.87
4874.00	49.71	PK	97	1.6	V	-0.62	49.09	74.00	-24.91
4874.00	38.98	Ave	97	1.6	V	-0.62	38.36	54.00	-15.64
7311.00	42.30	PK	8	1.9	Н	2.21	44.51	74.00	-29.49
7311.00	41.50	Ave	8	1.9	Н	2.21	43.71	54.00	-10.29
2314.07	45.35	PK	190	2.0	V	-13.19	32.16	74.00	-41.84
2314.07	38.84	Ave	190	2.0	V	-13.19	25.65	54.00	-28.35
2361.24	44.81	PK	50	1.9	Н	-13.14	31.67	74.00	-42.33
2361.24	36.92	Ave	50	1.9	Н	-13.14	23.78	54.00	-30.22
2495.48	44.65	PK	348	1.3	V	-13.08	31.57	74.00	-42.43
2495.48	37.94	Ave	348	1.3	V	-13.08	24.86	54.00	-29.14

Fragueray	Receiver	Datastar	Turn	RX An	tenna	Corrected	Carrantad	FCC Part 15.247/209/205	
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Corrected Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			N40: Hi	gh Chanr	nel 2452	MHz			
225.12	43.55	QP	41	1.6	Н	-11.62	31.93	46.00	-14.07
225.12	39.24	QP	26	1.1	V	-11.62	27.62	46.00	-18.38
4904.00	48.79	PK	169	1.3	V	-0.24	48.55	74.00	-25.45
4904.00	39.71	Ave	169	1.3	V	-0.24	39.47	54.00	-14.53
7356.00	42.51	PK	154	1.5	Н	2.84	45.35	74.00	-28.65
7356.00	41.73	Ave	154	1.5	Н	2.84	44.57	54.00	-9.43
2327.81	45.92	PK	214	1.6	V	-13.19	32.73	74.00	-41.27
2327.81	38.14	Ave	214	1.6	V	-13.19	24.95	54.00	-29.05
2380.22	44.61	PK	323	1.0	Н	-13.14	31.47	74.00	-42.53
2380.22	36.34	Ave	323	1.0	Н	-13.14	23.20	54.00	-30.80
2488.66	42.92	PK	217	1.4	V	-13.08	29.84	74.00	-44.16
2488.66	36.67	Ave	217	1.4	V	-13.08	23.59	54.00	-30.41

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

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### BT BLE:

Test Frequency : 26MHz ~ 30MHz

The measurements were more than 20 dB below the limit and not reported.

Test Frequency : 30MHz ~ 18GHz

	Receiver		Turn	RX An	tenna	Corrected Corrected	Corrected		
Frequency	Reading	Detector	table Angle	Height	Polar	Factor	Amplitude	Limit	Margin
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
			Low	Channel	2402MH	łz			
264.35	37.56	QP	78	1.7	Н	-13.35	24.21	46.00	-21.79
264.35	40.85	QP	96	1.5	V	-13.35	27.50	46.00	-18.50
4804.00	45.23	PK	88	1.8	V	-1.06	44.17	74.00	-29.83
4804.00	42.81	Ave	88	1.8	V	-1.06	41.75	54.00	-12.25
7206.00	41.05	PK	169	1.2	Н	1.33	42.38	74.00	-31.62
7206.00	39.54	Ave	169	1.2	Н	1.33	40.87	54.00	-13.13
2336.41	45.80	PK	360	1.1	V	-13.19	32.61	74.00	-41.39
2336.41	37.77	Ave	360	1.1	V	-13.19	24.58	54.00	-29.42
2376.82	44.41	PK	281	1.2	Н	-13.14	31.27	74.00	-42.73
2376.82	37.96	Ave	281	1.2	Н	-13.14	24.82	54.00	-29.18
2494.04	42.48	PK	320	1.8	V	-13.08	29.40	74.00	-44.60
2494.04	38.12	Ave	320	1.8	V	-13.08	25.04	54.00	-28.96

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected	Corrected				
				Height	Polar	Factor	Amplitude	Limit	Margin		
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
Middle Channel 2440MHz											
264.35	38.59	QP	326	1.6	Н	-13.35	25.24	46.00	-20.76		
264.35	40.50	QP	262	1.9	V	-13.35	27.15	46.00	-18.85		
4880.00	45.29	PK	126	1.5	V	-0.62	44.67	74.00	-29.33		
4880.00	41.63	Ave	126	1.5	V	-0.62	41.01	54.00	-12.99		
7320.00	40.54	PK	63	1.3	Н	2.21	42.75	74.00	-31.25		
7320.00	39.46	Ave	63	1.3	Н	2.21	41.67	54.00	-12.33		
2313.60	45.10	PK	78	1.3	V	-13.19	31.91	74.00	-42.09		
2313.60	38.42	Ave	78	1.3	V	-13.19	25.23	54.00	-28.77		
2381.67	44.25	PK	281	1.6	Н	-13.14	31.11	74.00	-42.89		
2381.67	38.33	Ave	281	1.6	Н	-13.14	25.19	54.00	-28.81		
2491.39	44.16	PK	217	1.8	V	-13.08	31.08	74.00	-42.92		
2491.39	38.47	Ave	217	1.8	V	-13.08	25.39	54.00	-28.61		

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected	Corrected				
				Height	Polar	Factor	Amplitude	Limit	Margin		
(MHz)	(dBµV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
High Channel 2480MHz											
264.35	39.31	QP	145	1.5	Н	-13.35	25.96	46.00	-20.04		
264.35	41.55	QP	109	1.9	V	-13.35	28.20	46.00	-17.80		
4960.00	44.98	PK	257	2.0	V	-0.24	44.74	74.00	-29.26		
4960.00	41.73	Ave	257	2.0	V	-0.24	41.49	54.00	-12.51		
7440.00	41.78	PK	42	1.6	Н	2.84	44.62	74.00	-29.38		
7440.00	39.17	Ave	42	1.6	Н	2.84	42.01	54.00	-11.99		
2322.79	46.72	PK	337	1.7	V	-13.19	33.53	74.00	-40.47		
2322.79	37.27	Ave	337	1.7	V	-13.19	24.08	54.00	-29.92		
2370.58	44.98	PK	181	1.4	Н	-13.14	31.84	74.00	-42.16		
2370.58	37.34	Ave	181	1.4	Н	-13.14	24.20	54.00	-29.80		
2489.33	42.08	PK	20	1.4	V	-13.08	29.00	74.00	-45.00		
2489.33	37.59	Ave	20	1.4	V	-13.08	24.51	54.00	-29.49		

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported

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# 8 Conducted Spurious Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r03 06/09/2015

Test Result: PASS

Limit:

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 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)).

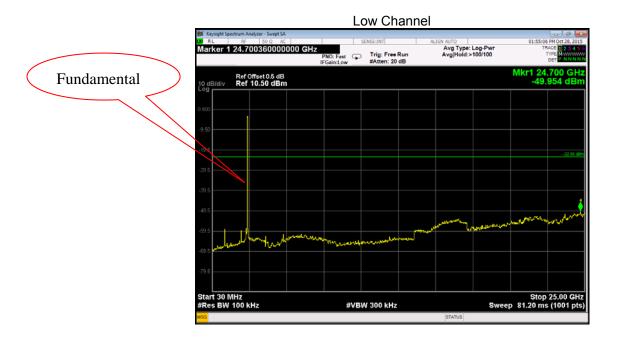
#### 2.1 Test Procedure

- 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
- 2. Set the spectrum analyzer:

RBW = 100kHz, VBW = 300kHz, Sweep = auto Detector function = peak, Trace = max hold

### 2.2 Test Result

802.11b







802.11g

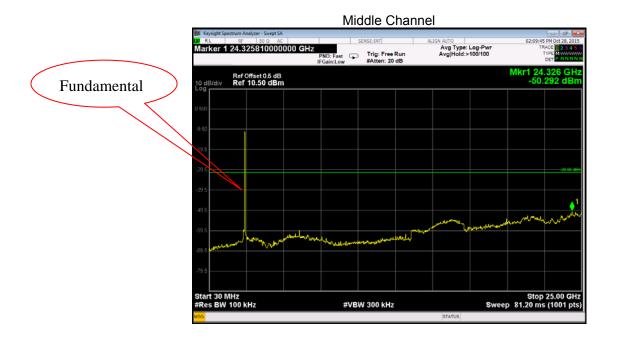






802.11n HT20

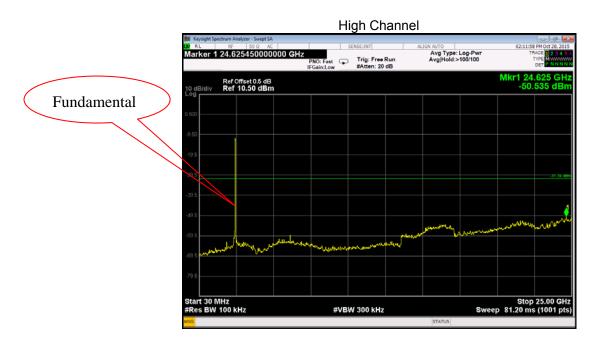




802.11n HT40

#VBW 300 kHz

Stop 25.00 GHz Sweep 81.20 ms (1001 pts)



Waltek Services (Shenzhen) Co.,Ltd. http://www.waltek.com.cn





**BEL GFSK** 







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## 9 Band Edge Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r03 06/09/2015

Test Limit: Regulation 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)).

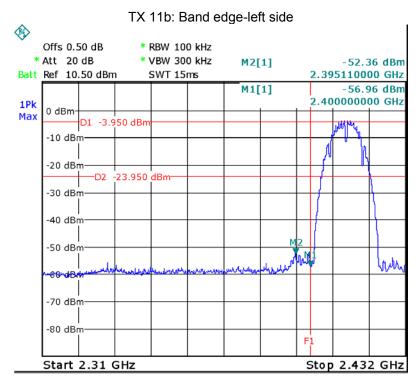
Test Mode: Transmitting

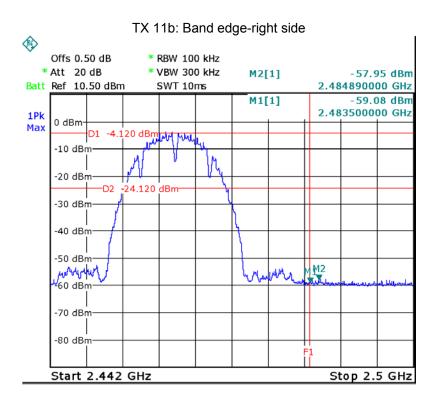
#### 9.1 Test Produce

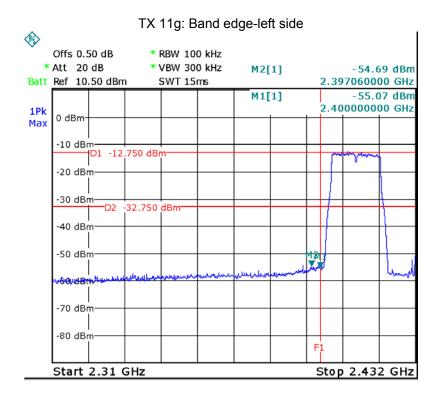
- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- 3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- 5. Repeat above procedures until all measured frequencies were complete.

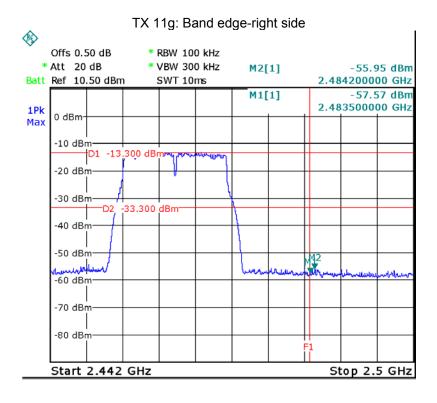
#### 9.2 Test Result

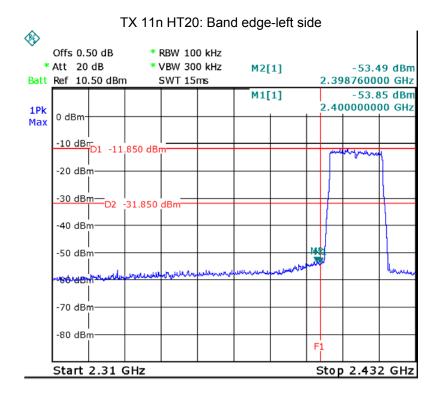
Test result plots shown as follows:

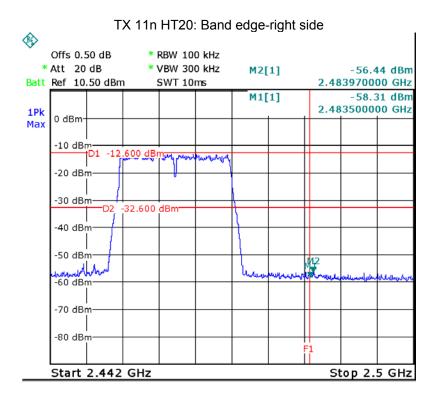


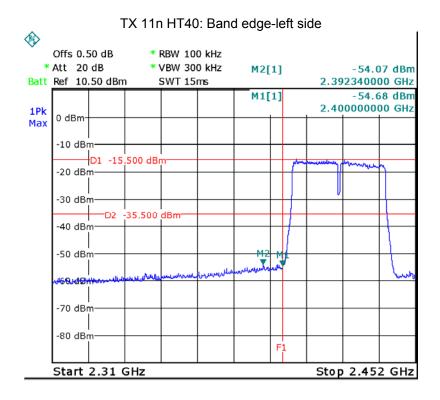


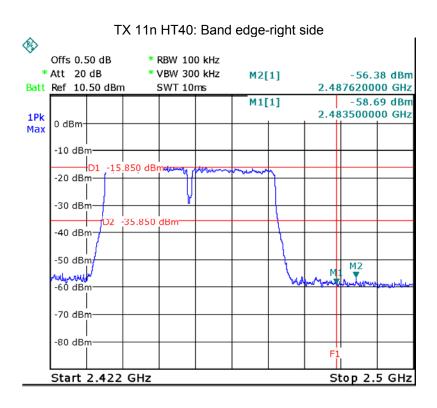


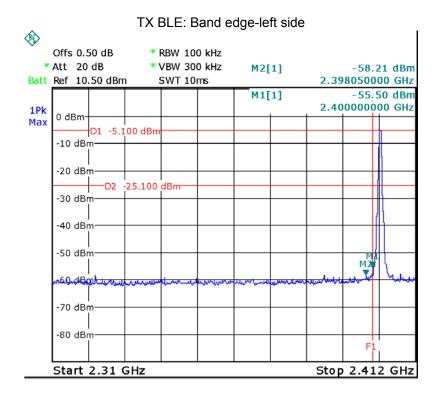


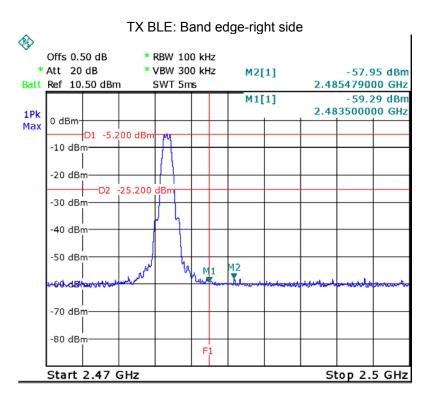












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## 10 6 dB Bandwidth Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r03 06/09/2015

#### 10.1 Test Procedure:

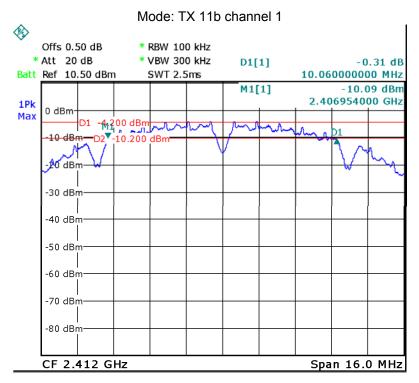
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;

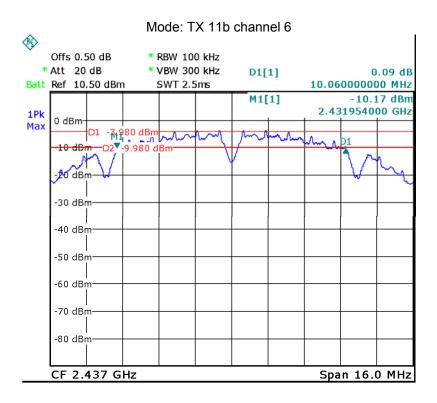
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

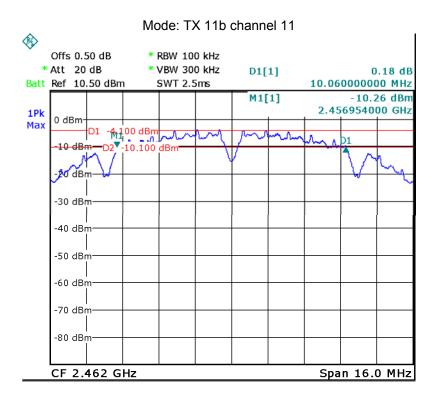
#### 10.2 Test Result:

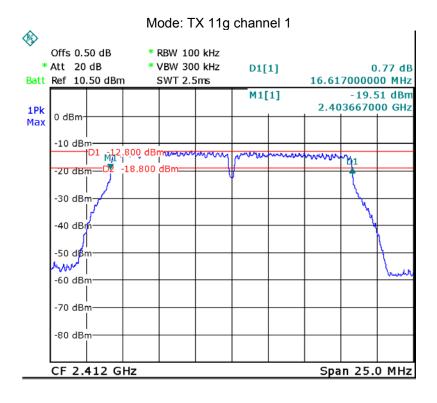
Operation mode	Bandwidth (MHz)		
77.44	Channel 1	Channel 6	Channel 11
TX 11b	10.060	10.060	10.060
	Channel 1	Channel 6	Channel 11
TX 11g	16.617	16.617	16.617
TX 11n HT20	Channel 1	Channel 6	Channel 11
	17.838	17.838	17.838
TV 44 UT40	Channel 1	Channel 6	Channel 11
TX 11n HT40	36.560	36.560	36.560
DT DIE	Channel 0	Channel 19	Channel 39
BT BLE	0.707	0.707	0.707

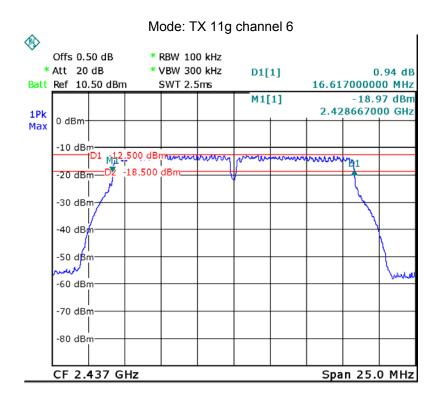
#### Test result plot as follows:

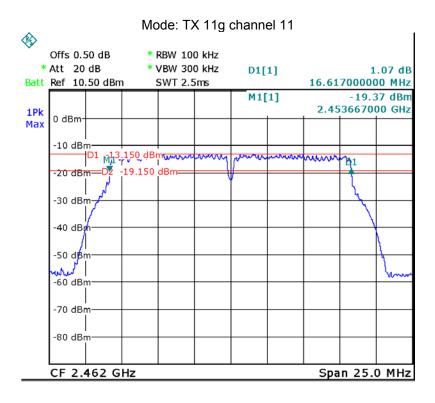


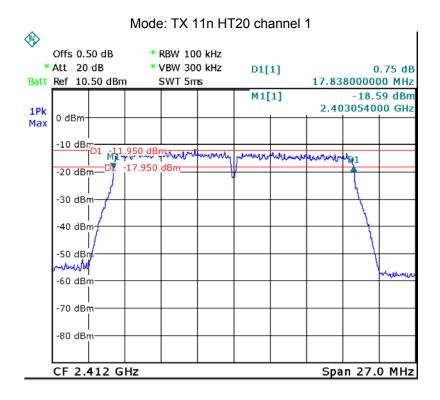


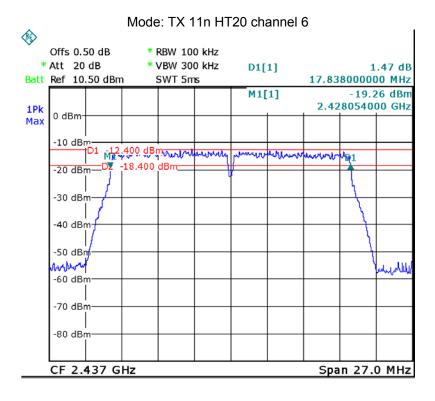


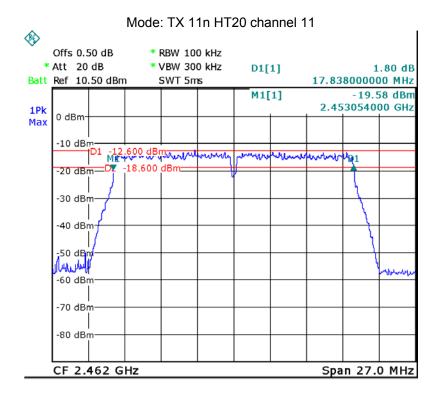


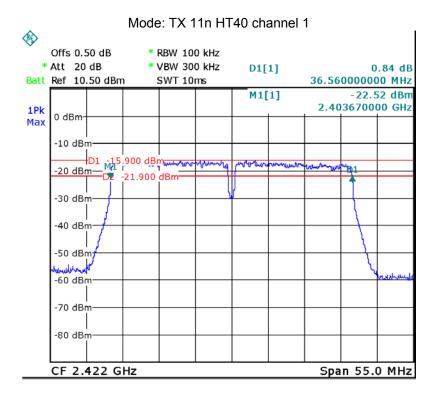


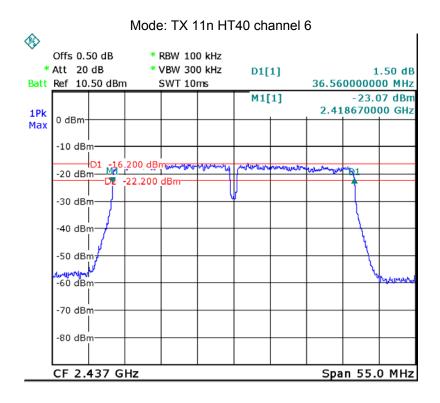


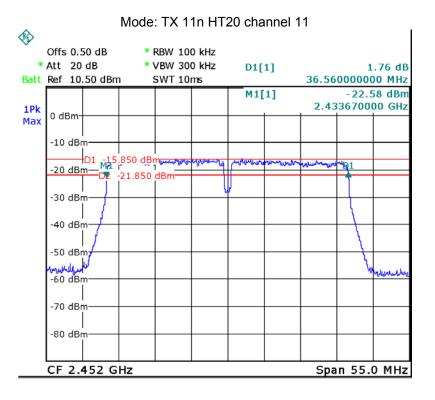


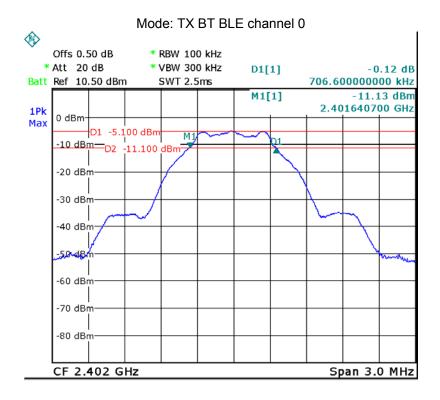


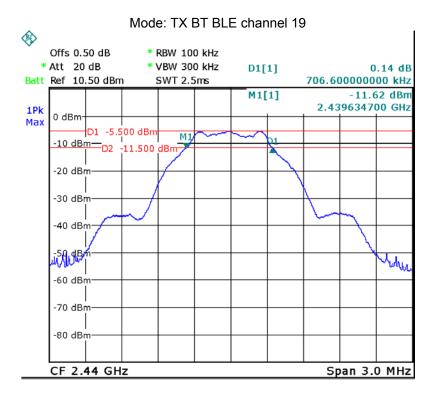


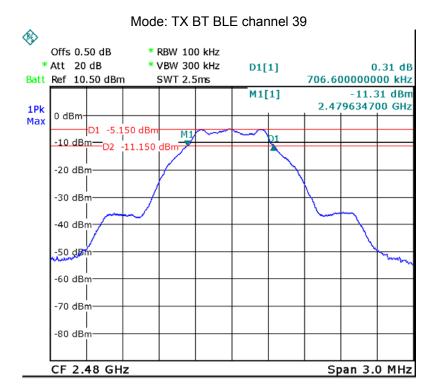












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## 11 Maximum Peak Output Power

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r03 06/09/2015

#### 11.1 Test Procedure:

KDB 558074 D01 DTS Meas Guidance v03r03 06/09/2015

section 9.1.1 (For BLE)

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

- a)Set the RBW ≥ DTS bandwidth.
- b)Set VBW  $\geq 3$  RBW.
- c)Set span ≥ 3 x RBW
- d)Sweep time = auto couple.
- e)Detector = peak.
- f)Trace mode = max hold.
- g)Allow trace to fully stabilize.
- h)Use peak marker function to determine the peak amplitude level.

section 9.1.2 (For WIFI)

This procedure may be used when the maximum available RBW of the measurement instrument is less than the DTS bandwidth.

- a)Set the RBW = 1 MHz.
- b)Set the VBW  $\geqslant$  3 RBW
- c)Set the span  $\geq$  1.5 x DTS bandwidth.
- d)Detector = peak.
- e)Sweep time = auto couple.
- f)Trace mode = max hold.
- g)Allow trace to fully stabilize.
- h)Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select peak detector). If the instrument does not have a band power function, sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS bandwidth.

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## 11.2 Test Result:

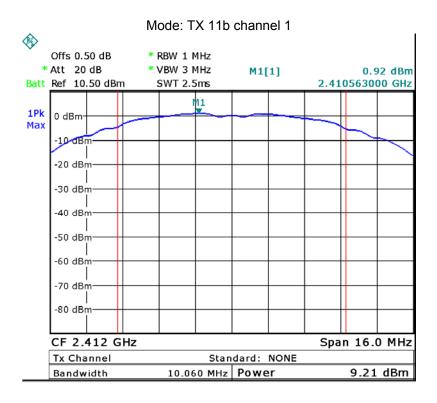
Test mode :TX 11b		
Maximum Peak Output Power (dBm)		
2412MHz 2437MHz 2462MHz		
9.21 9.37 9.32		
Limit: 1W/30dBm		

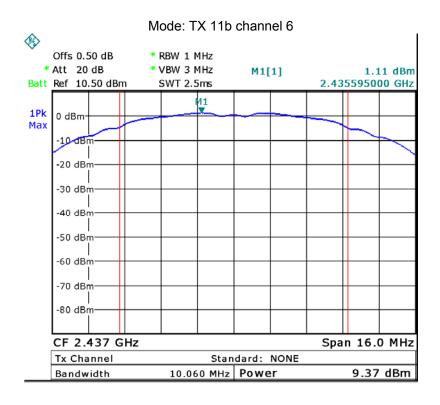
Test mode :TX 11g		
Maximum Peak Output Power (dBm)		
2412MHz 2437MHz 2462MHz		
9.22 9.44 9.14		
Limit: 1W/30dBm		

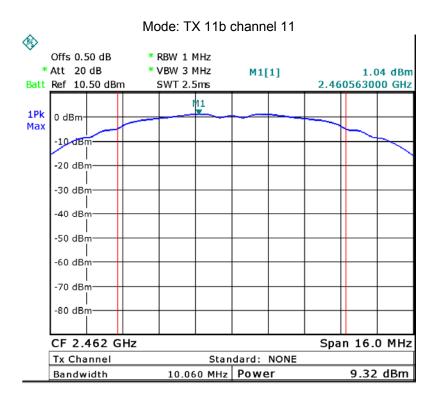
Test mode :TX 11n HT20		
Maximum Peak Output Power (dBm)		
2412MHz 2437MHz 2462MHz		
9.70 9.49 9.32		
Limit: 1W/30dBm		

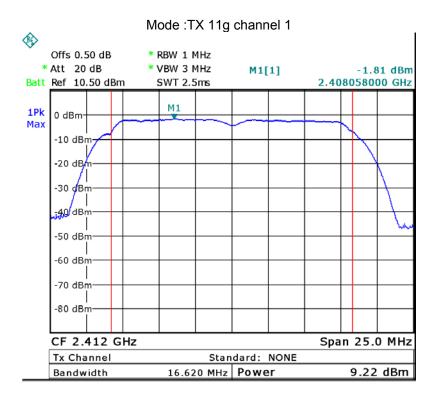
Test mode :TX 11n HT40		
Maximum Peak Output Power (dBm)		
2412MHz 2437MHz 2462MHz		
9.39 9.19 9.50		
Limit: 1W/30dBm		

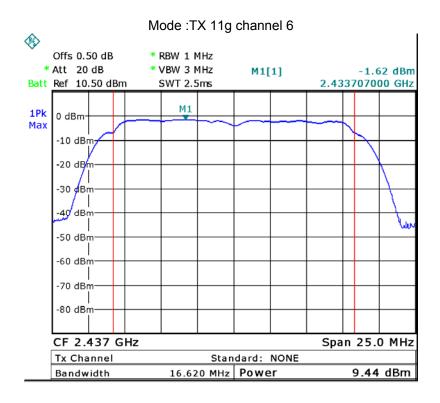
Test mode : TX BT BLE		
Maximum Peak Output Power (dBm)		
2402MHz 2440MHz 2480MHz		
-4.33 -4.70 -4.33		
Limit: 1W/30dBm		

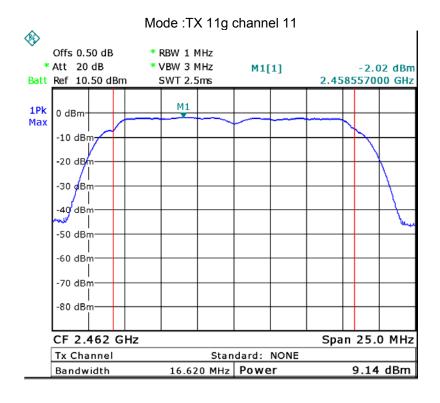


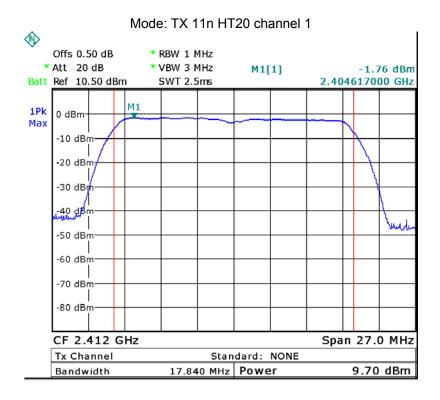


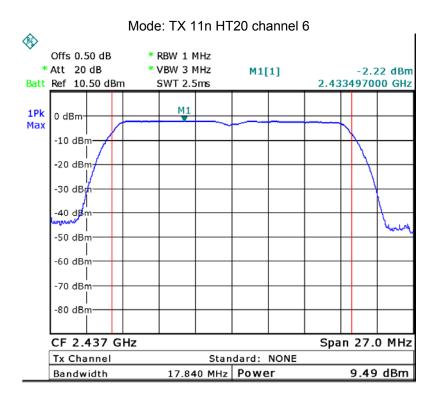


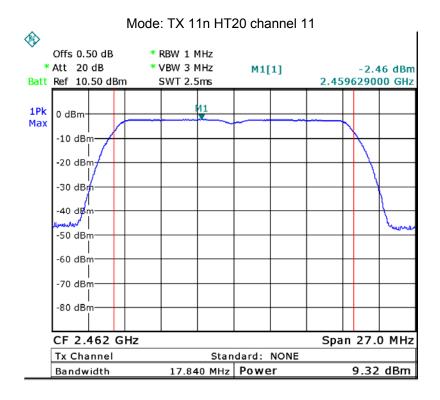


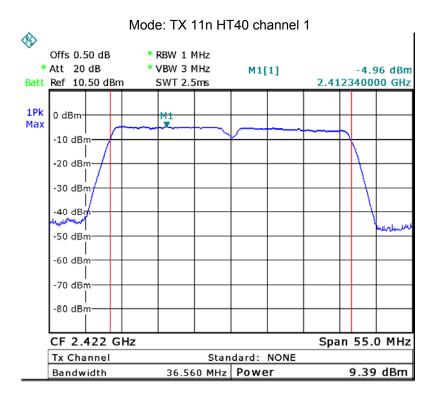


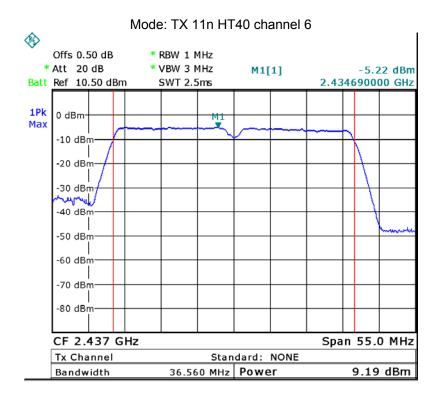


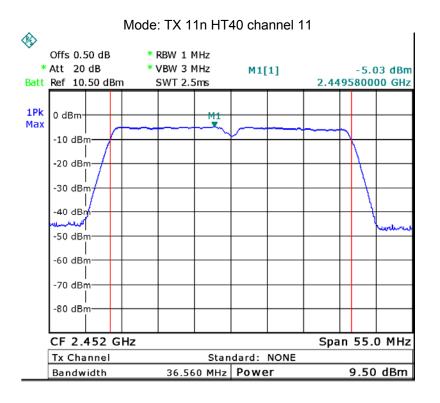


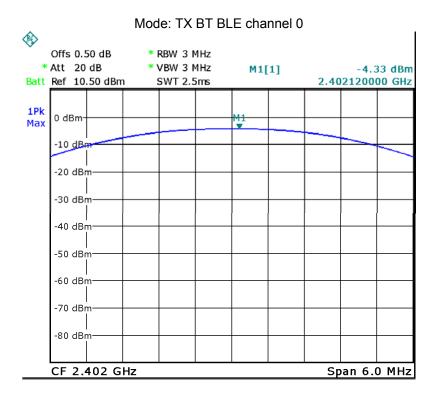


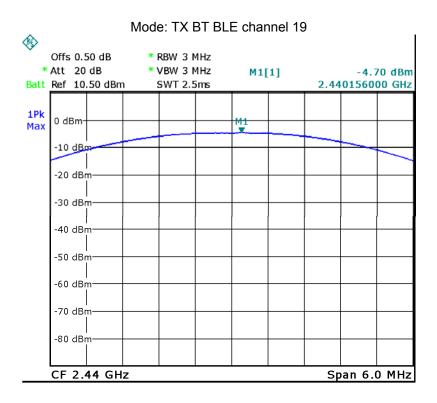


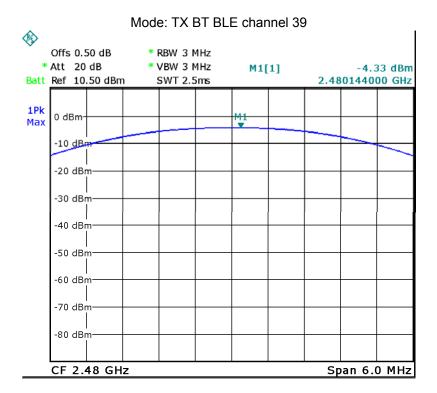












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## 12 Power Spectral density

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r03 06/09/2015

#### 12.1 Test Procedure:

KDB 558074 D01 DTS Meas Guidance v03r03 06/09/2015 section 10.2

- 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
- 2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz , Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.
- 3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

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## 12.2 Test Result:

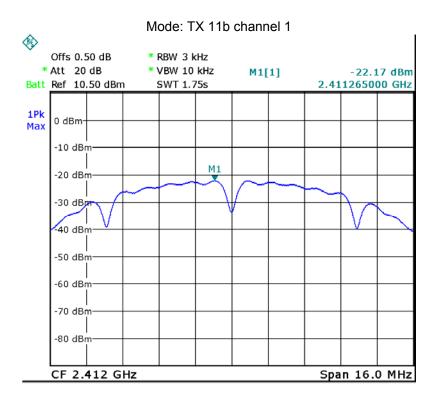
Test mode :TX 11b		
Power Spectral (dBm per 3kHz)		
2412MHz 2437MHz 2462MHz		
-22.17 -22.43 -22.29		
Limit: 8dBm per 3kHz		

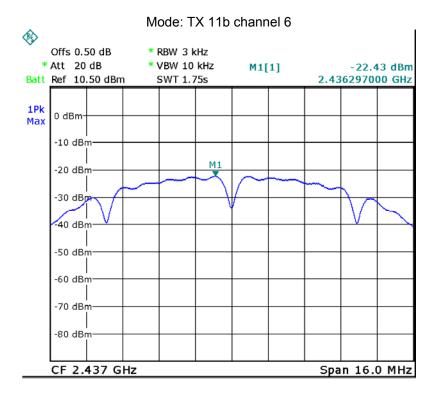
Test mode :TX 11g		
Power Spectral (dBm per 3kHz)		
2412MHz 2437MHz 2462MHz		
-26.61 -26.80 -26.98		
Limit: 8dBm per 3kHz		

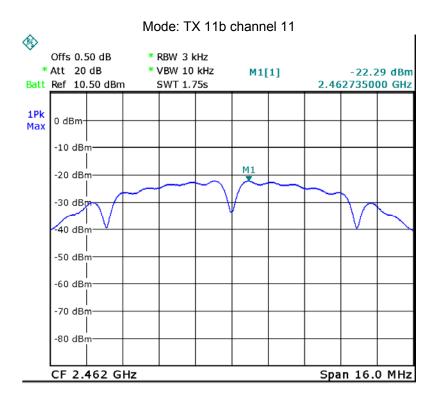
Test mode :TX 11n HT20		
Power Spectral (dBm per 3kHz)		
2412MHz 2437MHz 2462MHz		
-26.61 -26.79 -26.52		
Limit: 8dBm per 3kHz		

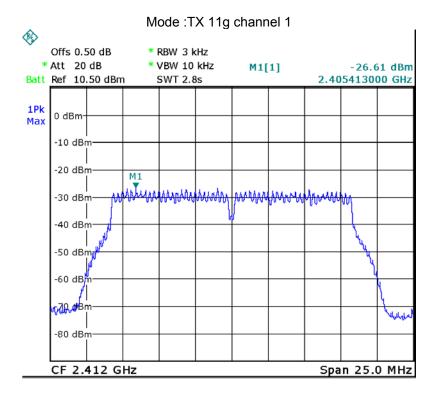
Test mode :TX 11n HT20		
Power Spectral (dBm per 3kHz)		
2412MHz 2437MHz 2462MHz		
-28.55 -29.15 -28.75		
Limit: 8dBm per 3kHz		

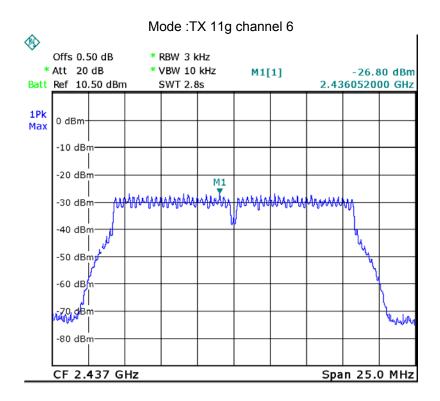
Test mode : TX BT BLE		
Power Spectral (dBm per 3kHz)		
2402MHz 2440MHz 2480MHz		
-20.08 -20.35 -19.92		
Limit: 8dBm per 3kHz		

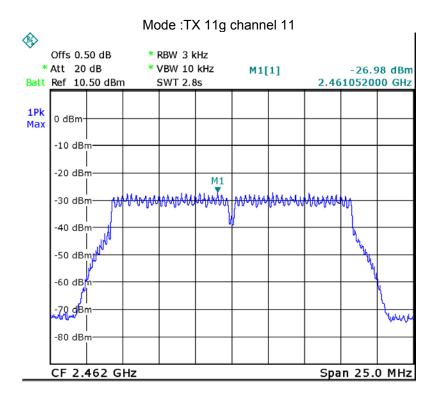


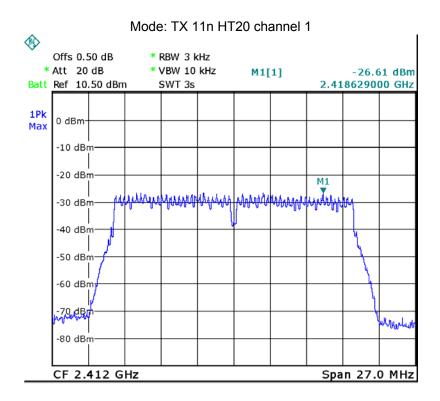


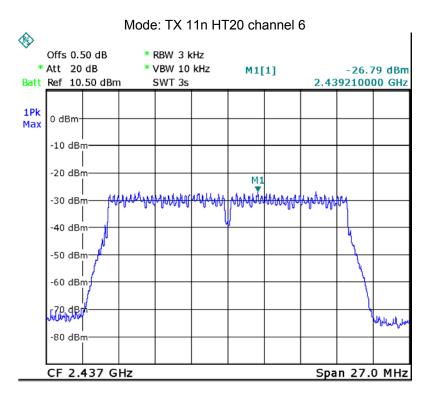


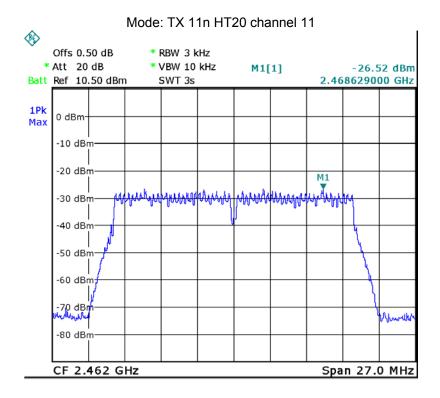


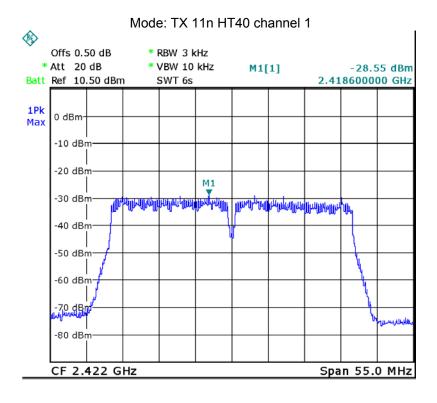


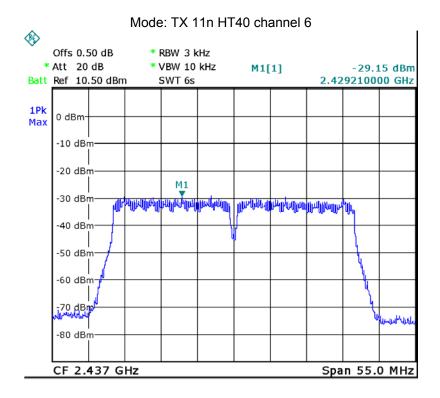


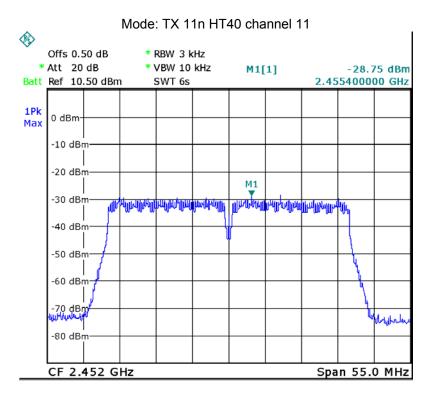


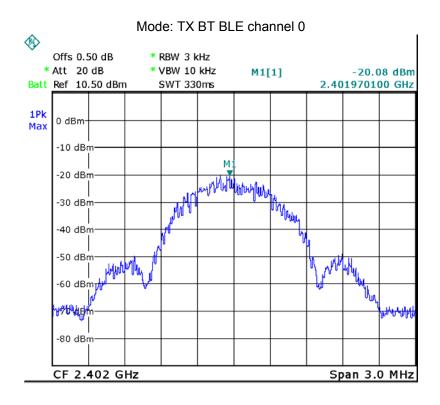


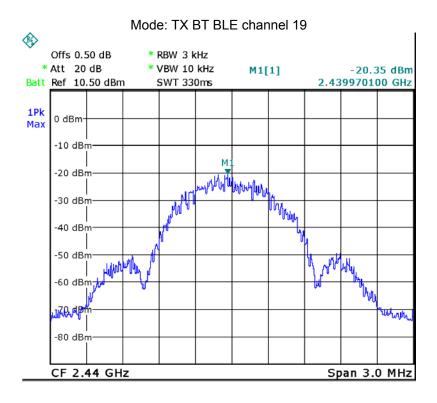


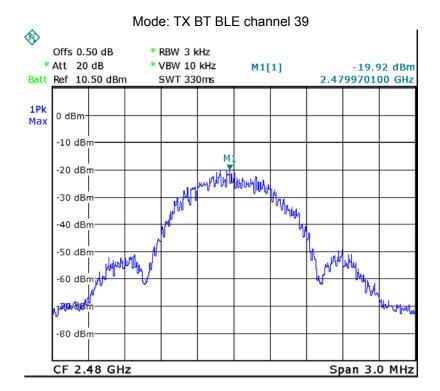












## 13 Antenna Requirement

According to the FCC Part 15 Paragraph 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. This product has an integrated antenna fulfill the requirement of this section.

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# 14 RF Exposure

Remark: refer to SAR test report: WTS15S1035967E.

=====End of Report=====