TEST REPORT

Reference No.	:	WTS16S0756058-2E V1
FCC ID	:	2AIE9-K4006007
Applicant	:	Shenzhen Hongkaijiawei Technology Co., Ltd
Address	:	Room 7c, Block A,Hongsong Building, Tairan six road, Chegongmiao, Futian District, Shenzhen, Guangdong, China.
Manufacturer	:	Shenzhen Hongkaijiawei Technology Co., Ltd
Address	:	11/F, Block3, Jincheng Industrial Park, Longhua new district, Shenzhen, Guangdong, China.
Product Name	:	3G Smart Phone
Model No.	:	K4006, Lush Mint, Lush Ace, Ring Majo 2
Brand	:	N/A
Standards	:	FCC CFR47 Part 15.247:2015
Date of Receipt sample	:	Jul. 17, 2016
Date of Test	:	Jul. 18 – Aug. 03, 2016
Date of Issue	:	Aug. 16, 2016
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.

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Compiled by:

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Approved by:

Philo Zhong / Manager

2 Test Summary

Test Items	Test Requirement	Result
Radiated Spurious Emissions	15.247(d) 15.205(a) 15.209(a)	PASS
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

3 Contents

Page

4 Report Revision History

Report No.	Report Version	Description	Issue Date
WTS16S0756058-2E	NONE	Original	Aug. 05, 2016
WTS16S0756058-2E	V1	Version 1	Aug. 16, 2016

5 General Information

5.1 General Description of E.U.T.

Product Name	: 3G Smart Phone
Model No.	: K4006, Lush Mint, Lush Ace, Ring Majo 2
Model Description	: Only the model names are different.
GSM Band(s)	: GSM 850/900/1800/1900MHz
GPRS Class	: 12
WCDMA Band(s)	: FDD Band II/V
LTE Bnad(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	: WW816 V8.3
Software Version	: WW816_80_HK_K4006_TN_M_324-USER_20160704.1550
Storage Location	: Internal Storage

5.2 Details of E.U.T.

Operation Frequency	: GSM/GPRS 850: 824~849MHz PCS/GPRS1900: 1850~1910MHz WCDMA Band II: 1850~1910MHz WCDMA Band V: 824~849MHz WiFi: 802.11b/g/n HT20: 2412~2462MHz 802.11n HT40: 2422~2452MHz Bluetooth: 2402~2480MHz
Max. RF output power	: GSM 850: 32.56dBm PCS1900:30.23dBm WCDMA Band II: 22.49dBm WCDMA Band V: 21.57dBm WiFi(2.4G): 9.44dBm Bluetooth:2.98dBm
Type of Modulation	: GSM,GPRS: GMSK WCDMA: BPSK WiFi: CCK, OFDM Bluetooth: GFSK, Pi/4 DQPSK,8DPSK
Antenna installation	: GSM/WCDMA: internal permanent antenna WiFi/Bluetooth: internal permanent antenna

Antenna Gain	:GSM 850: -0.7dBi PCS1900: -0.1dBi WCDMA Band II: -0.1dBi WCDMA Band V: -0.7dBi WiFi(2.4G): -0.5dBi Bluetooth: -0.5dBi
Technical Data	: Battery DC 3.7V, 1300mAh DC 5.0V, 600mA, charging from adapter (Adapter Input: 100-240V~50/60Hz)
Adapter	: Manufacture: Shenzhen Changsheng Gaoneng Electronic Co.,Ltd Model No.: K4006

5.3 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	2406	3	2408
4	2410	5	2412	6	2414	7	2416
8	2418	9	2420	10	2422	11	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

5.4 Test Mode

Table 1 Tests Carried Out Under FCC part 15.247

Test Items	Mode	Data Rate	Channel	TX/RX
Maximum Peak Output Power	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
	802.11n HT40	150 Mbps	3/6/9	TX
Power Spectral Density	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
	802.11n HT40	150 Mbps	3/6/9	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
	802.11n HT40	150 Mbps	3/6/9	TX
Band Edge	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
	802.11n HT40	150 Mbps	3/6/9	TX
Transmitter Spurious Emissions	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
	802.11n HT40	150 Mbps	3/6/9	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 .

5.5 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.

6 Equipment Used during Test

6.1 Equipments List

Conducted Emissions at Mains Terminals Disturbance Voltage						
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 Semi-anechoic Chamber 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.18,2016	Apr.17,2017
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	Sep.15,2015	Sep.14,2016
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	Apr.18,2016	Apr.17,2017
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	669	Apr.18,2016	Apr.17,2017
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	Mar.17,2016	Mar.16,2017
8	Coaxial Cable (above 1GHz)	Top	1000MHz-25GHz	EW02014-7	Apr.09,2016	Apr.08,2017
9	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	Apr.18,2016	Apr.17,2017
10	Universal Radio Communication Tester	R&S	CMU 200	112461	Apr.10,2016	Apr.09,2017
11	Signal Generator	R&S	SMR20	100046	Sep.15,2015	Sep.14,2016
RF Conducted Testing						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMC Analyzer (9k~26.5GHz)	Agilent	E7405A	MY45114943	Sep.15,2015	Sep.14,2016
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	Sep.15,2015	Sep.14,2016
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	Sep.15,2015	Sep.14,2016

6.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
/	/	/	/

6.3 Measurement Uncertainty

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

6.4 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.

7 Conducted Emission

Test Requirement:	FCC CFR 47 Part 15 Section 15.207
Test Method:	ANSI C63.10:2013
Test Result:	PASS
Frequency Range:	150kHz to 30MHz
Class/Severity:	Class B
Limit:	66-56 dBμV between 0.15MHz & 0.5MHz
	56 dBμV between 0.5MHz & 5MHz
	60 dBμV between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)

7.1 E.U.T. Operation

Operating Environment **:**

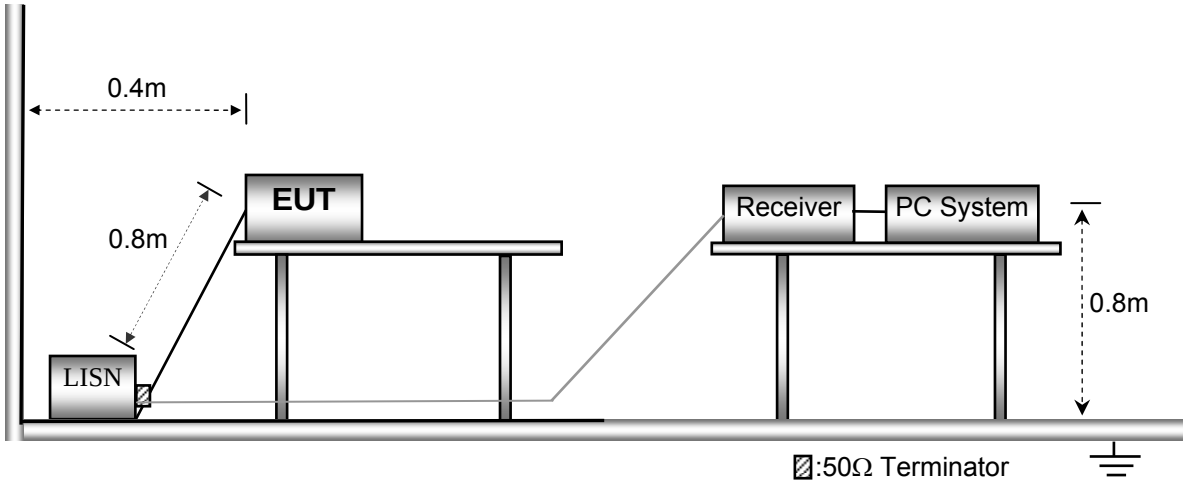
Temperature:	21.5 °C
Humidity:	51.9 % RH
Atmospheric Pressure:	101.2kPa

EUT Operation **:**

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

7.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10.



7.3 Measurement Description

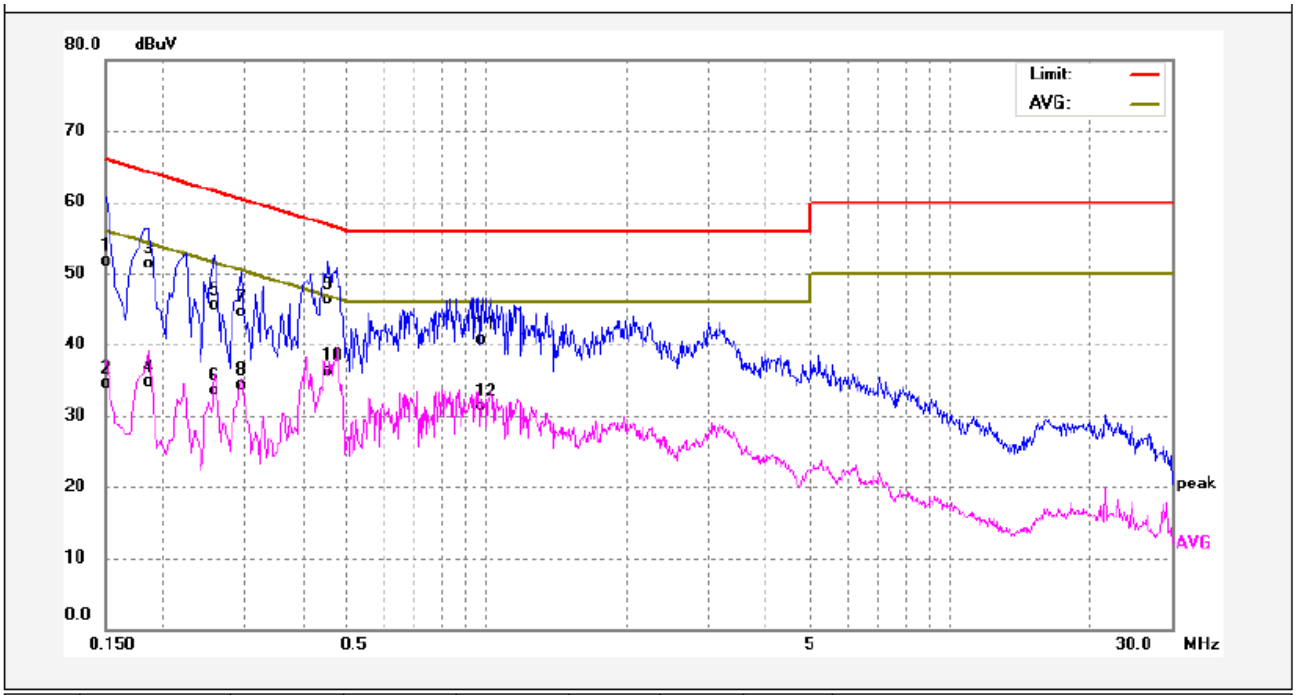
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

7.4 Conducted Emission Test Result

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

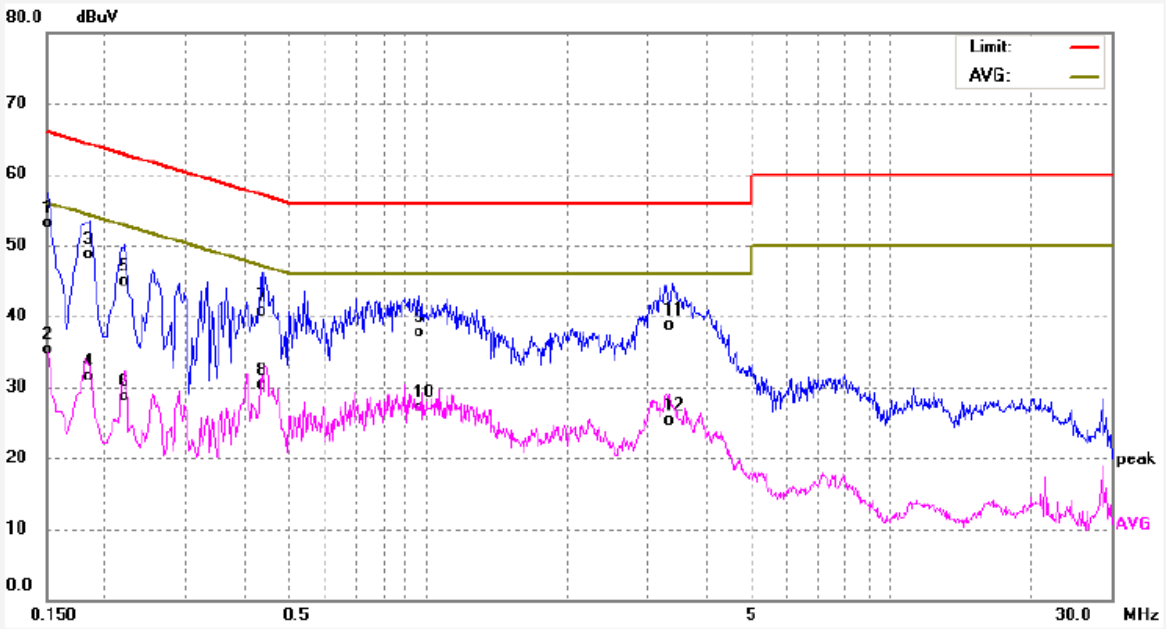
WIFI mode

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1524	41.45	10.29	51.74	65.86	-14.12	QP	
2	0.1524	24.24	10.29	34.53	55.86	-21.33	AVG	
3	0.1860	41.02	10.27	51.29	64.21	-12.92	QP	
4	0.1860	24.52	10.27	34.79	54.21	-19.42	AVG	
5	0.2580	35.28	10.26	45.54	61.49	-15.95	QP	
6	0.2580	23.32	10.26	33.58	51.49	-17.91	AVG	
7	0.2940	34.16	10.28	44.44	60.41	-15.97	QP	
8	0.2940	23.93	10.28	34.21	50.41	-16.20	AVG	
9	0.4540	36.11	10.26	46.37	56.80	-10.43	QP	
10	0.4540	26.05	10.26	36.31	46.80	-10.49	AVG	
11	0.9820	30.38	10.39	40.77	56.00	-15.23	QP	
12	0.9820	20.96	10.39	31.35	46.00	-14.65	AVG	

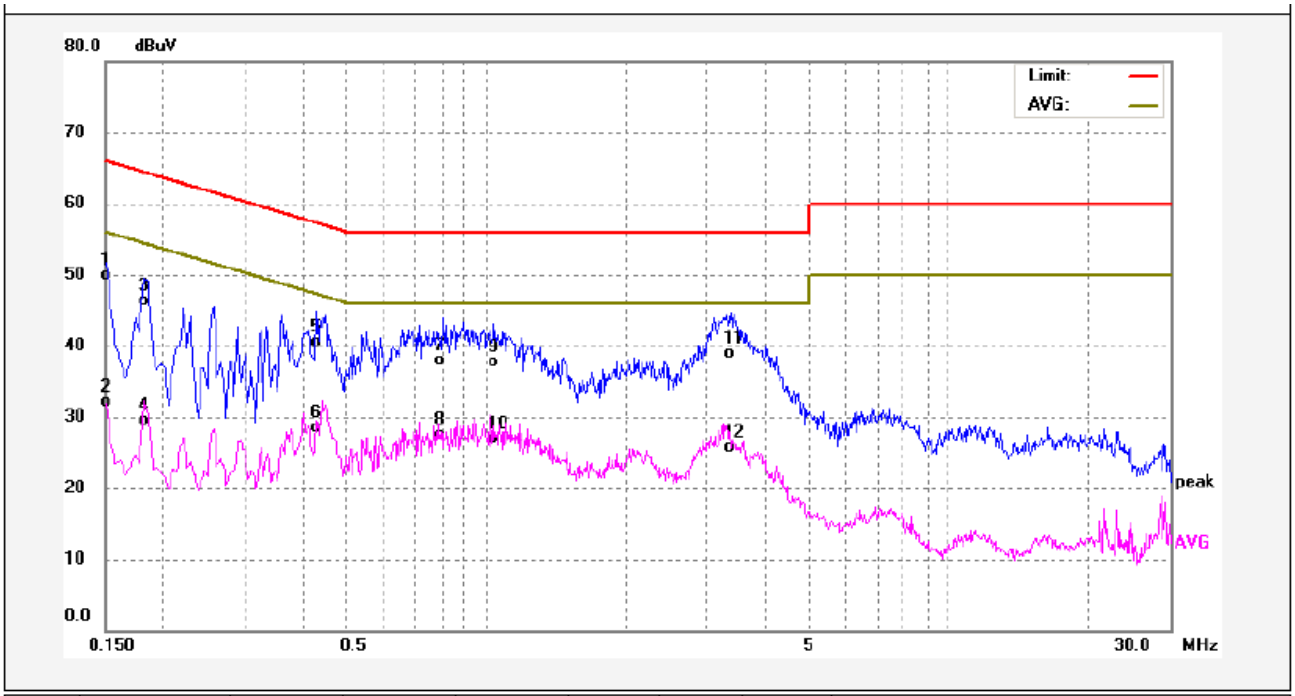
Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	42.80	10.29	53.09	65.99	-12.90	QP	
2	0.1500	25.11	10.29	35.40	55.99	-20.59	AVG	
3	0.1860	38.39	10.27	48.66	64.21	-15.55	QP	
4	0.1860	21.19	10.27	31.46	54.21	-22.75	AVG	
5	0.2220	34.65	10.26	44.91	62.74	-17.83	QP	
6	0.2220	18.47	10.26	28.73	52.74	-24.01	AVG	
7	0.4380	30.42	10.26	40.68	57.10	-16.42	QP	
8	0.4380	20.07	10.26	30.33	47.10	-16.77	AVG	
9	0.9620	27.33	10.39	37.72	56.00	-18.28	QP	
10	0.9620	16.75	10.39	27.14	46.00	-18.86	AVG	
11	3.3660	28.13	10.50	38.63	56.00	-17.37	QP	
12	3.3660	14.78	10.50	25.28	46.00	-20.72	AVG	

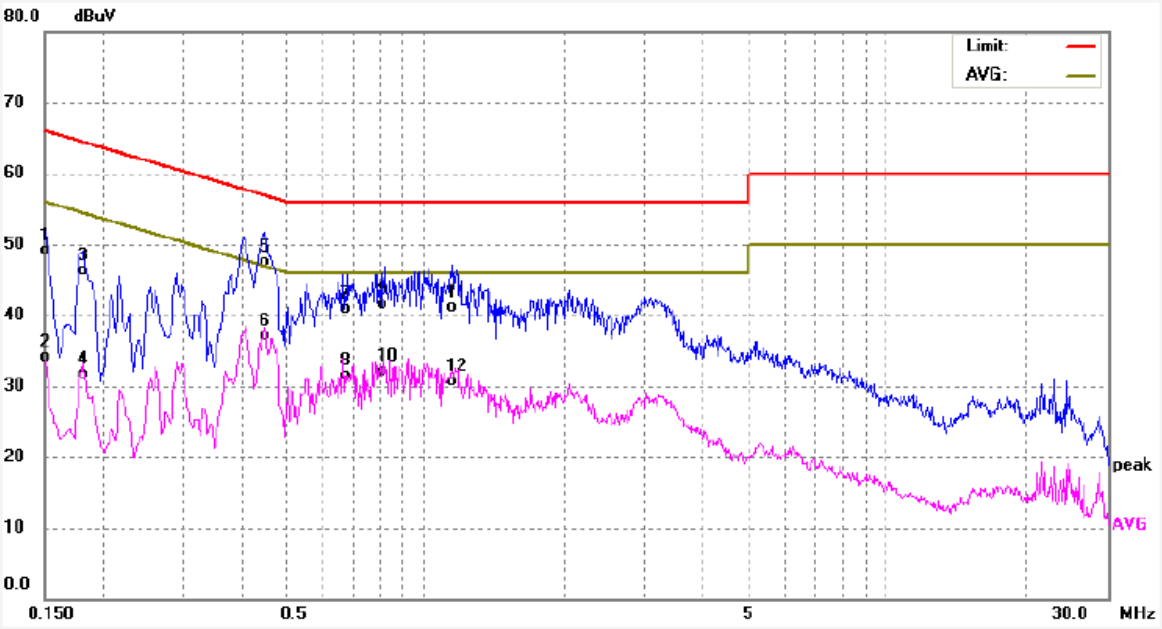
BLE mode

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	39.56	10.29	49.85	65.99	-16.14	QP	
2	0.1500	21.82	10.29	32.11	55.99	-23.88	AVG	
3	0.1819	36.05	10.27	46.32	64.39	-18.07	QP	
4	0.1819	19.32	10.27	29.59	54.39	-24.80	AVG	
5	0.4300	30.26	10.26	40.52	57.25	-16.73	QP	
6	0.4300	18.17	10.26	28.43	47.25	-18.82	AVG	
7	0.8059	27.52	10.36	37.88	56.00	-18.12	QP	
8	0.8059	17.15	10.36	27.51	46.00	-18.49	AVG	
9	1.0380	27.28	10.39	37.67	56.00	-18.33	QP	
10	1.0380	16.58	10.39	26.97	46.00	-19.03	AVG	
11	3.3660	28.46	10.50	38.96	56.00	-17.04	QP	
12	3.3660	15.28	10.50	25.78	46.00	-20.22	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	38.78	10.29	49.07	65.99	-16.92	QP	
2	0.1500	23.86	10.29	34.15	55.99	-21.84	AVG	
3	0.1819	36.05	10.27	46.32	64.39	-18.07	QP	
4	0.1819	21.43	10.27	31.70	54.39	-22.69	AVG	
5	0.4500	37.26	10.26	47.52	56.87	-9.35	QP	
6	0.4500	26.79	10.26	37.05	46.87	-9.82	AVG	
7	0.6820	30.52	10.35	40.87	56.00	-15.13	QP	
8	0.6820	21.16	10.35	31.51	46.00	-14.49	AVG	
9	0.8180	31.11	10.36	41.47	56.00	-14.53	QP	
10	0.8180	21.65	10.36	32.01	46.00	-13.99	AVG	
11	1.1460	30.76	10.40	41.16	56.00	-14.84	QP	
12	1.1460	20.36	10.40	30.76	46.00	-15.24	AVG	

8 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.247

Test Method: ANSI C63.10:2013

Test Result: PASS

Measurement Distance: 3m

Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

8.1 EUT Operation

Operating Environment **:**

Temperature: 23.5 °C

Humidity: 52.1 % RH

Atmospheric Pressure: 101.2kPa

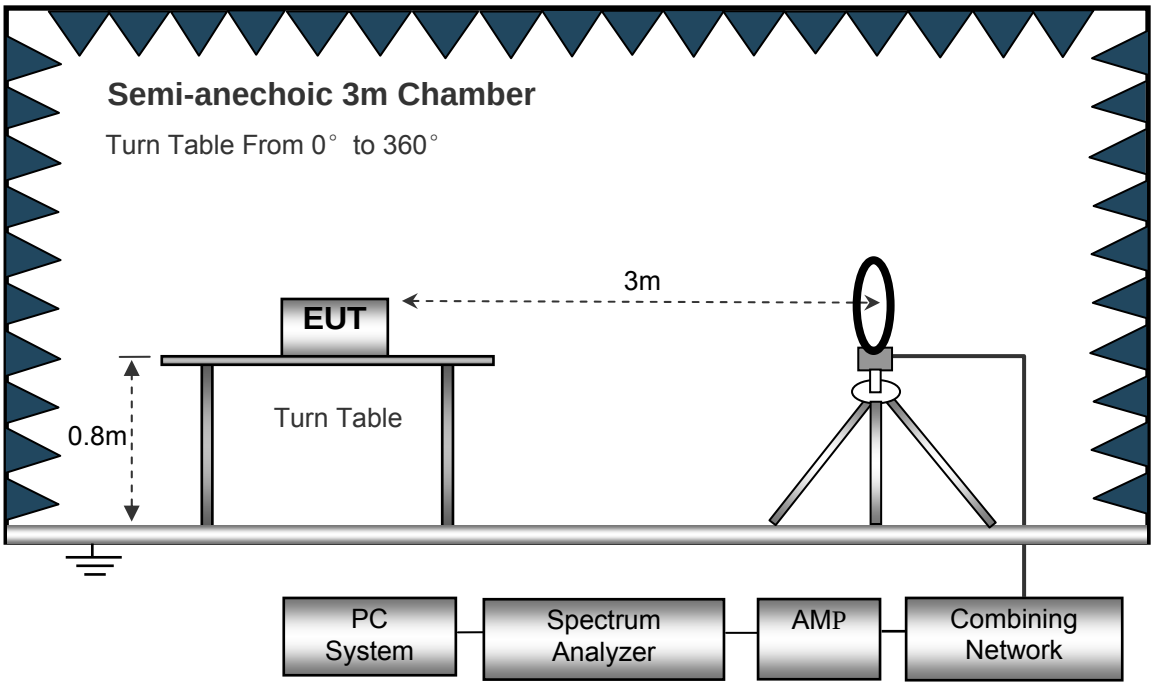
EUT Operation **:**

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

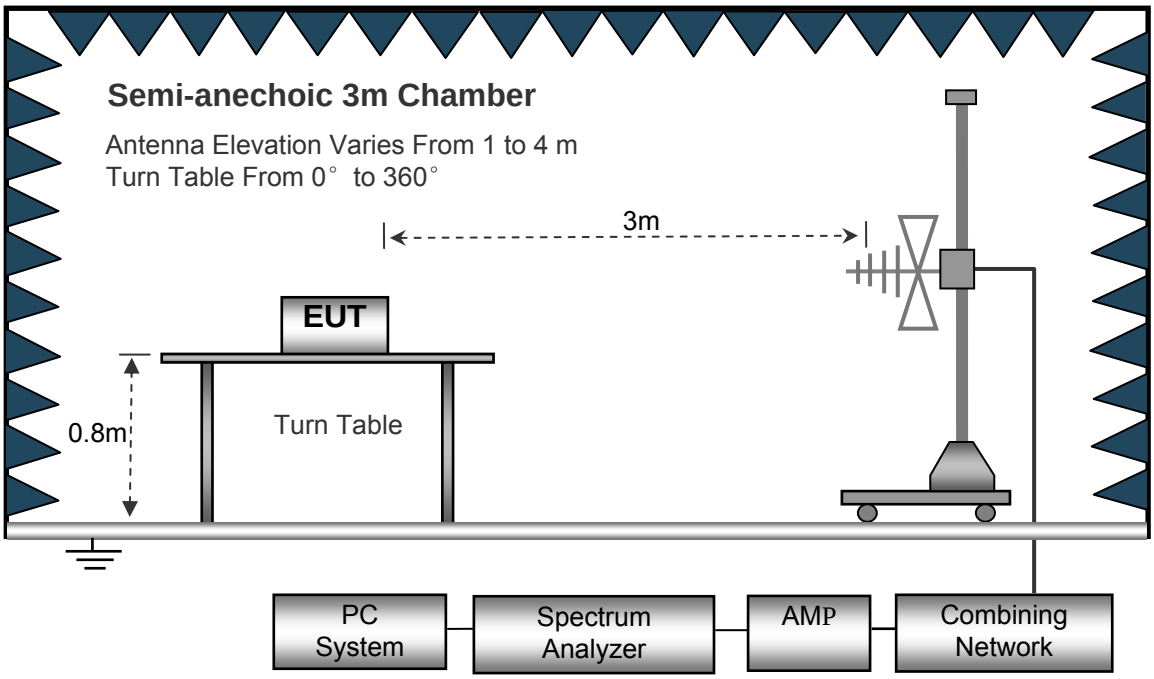
8.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10.

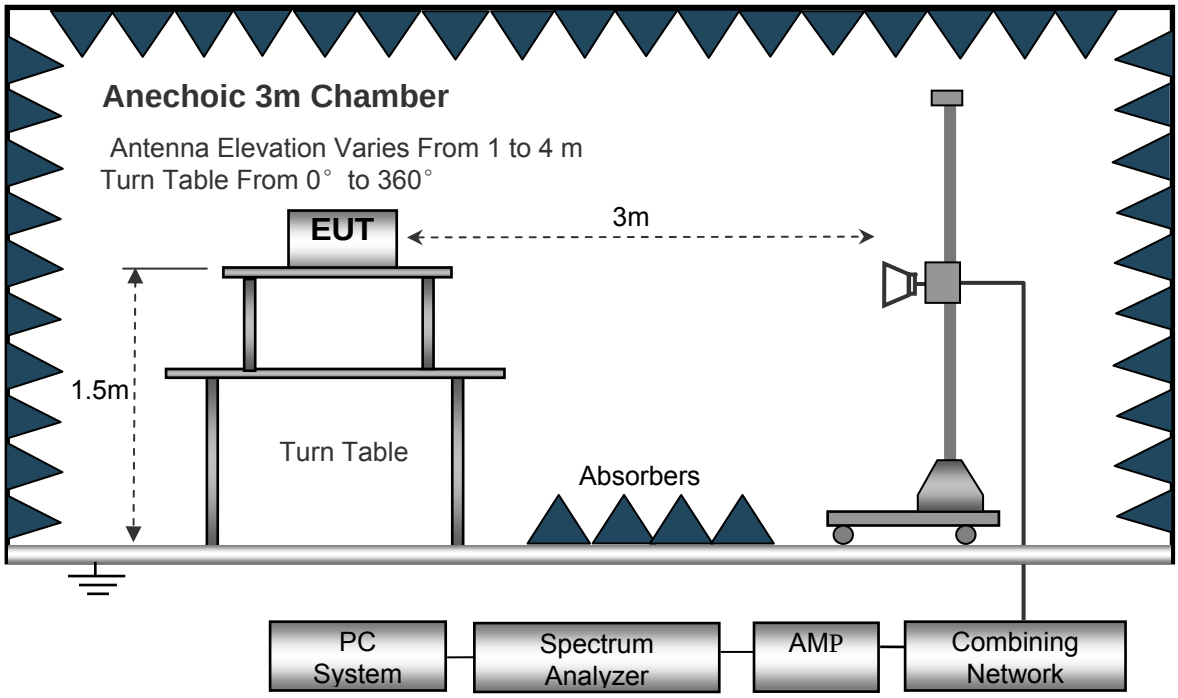
The test setup for emission measurement below 30MHz.



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



The test setup for emission measurement above 1 GHz.



8.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed	Auto
IF Bandwidth	10kHz
Video Bandwidth	10kHz
Resolution Bandwidth	10kHz

30MHz ~ 1GHz

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

8.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.
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.

8.5 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

8.6 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

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11b: Low Channel 2412MHz									
225.04	40.25	QP	259	1.5	H	-11.62	28.63	46.00	-17.37
225.04	37.63	QP	299	1.5	V	-11.62	26.01	46.00	-19.99
4824.00	51.43	PK	351	1.2	V	-1.06	50.37	74.00	-23.63
4824.00	44.51	Ave	351	1.2	V	-1.06	43.45	54.00	-10.55
7236.00	42.07	PK	278	1.3	H	1.33	43.40	74.00	-30.60
7236.00	41.26	Ave	278	1.3	H	1.33	42.59	54.00	-11.41
2342.77	45.40	PK	138	1.7	V	-13.19	32.21	74.00	-41.79
2342.77	38.95	Ave	138	1.7	V	-13.19	25.76	54.00	-28.24
2384.97	42.78	PK	45	1.5	H	-13.14	29.64	74.00	-44.36
2384.97	36.09	Ave	45	1.5	H	-13.14	22.95	54.00	-31.05
2486.57	44.39	PK	299	1.1	V	-13.08	31.31	74.00	-42.69
2486.57	36.01	Ave	299	1.1	V	-13.08	22.93	54.00	-31.07

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11b: Middle Channel 2437MHz									
225.04	41.31	QP	110	1.3	H	-11.62	29.69	46.00	-16.31
225.04	36.45	QP	9	1.4	V	-11.62	24.83	46.00	-21.17
4874.00	51.68	PK	228	1.4	V	-0.62	51.06	74.00	-22.94
4874.00	43.27	Ave	228	1.4	V	-0.62	42.65	54.00	-11.35
7311.00	42.23	PK	189	1.6	H	2.21	44.44	74.00	-29.56
7311.00	42.64	Ave	189	1.6	H	2.21	44.85	54.00	-9.15
2343.57	46.90	PK	142	1.3	V	-13.19	33.71	74.00	-40.29
2343.57	38.13	Ave	142	1.3	V	-13.19	24.94	54.00	-29.06
2354.61	44.40	PK	155	1.4	H	-13.14	31.26	74.00	-42.74
2354.61	38.44	Ave	155	1.4	H	-13.14	25.30	54.00	-28.70
2496.24	43.31	PK	198	1.7	V	-13.08	30.23	74.00	-43.77
2496.24	36.55	Ave	198	1.7	V	-13.08	23.47	54.00	-30.53

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11b: High Channel 2462MHz									
225.04	41.37	QP	261	1.5	H	-11.62	29.75	46.00	-16.25
225.04	36.04	QP	284	1.2	V	-11.62	24.42	46.00	-21.58
4924.00	52.24	PK	221	1.4	V	-0.24	52.00	74.00	-22.00
4924.00	44.48	Ave	221	1.4	V	-0.24	44.24	54.00	-9.76
7386.00	43.53	PK	16	1.8	H	2.84	46.37	74.00	-27.63
7386.00	43.39	Ave	16	1.8	H	2.84	46.23	54.00	-7.77
2337.30	45.72	PK	254	1.3	V	-13.19	32.53	74.00	-41.47
2337.30	38.11	Ave	254	1.3	V	-13.19	24.92	54.00	-29.08
2355.22	43.32	PK	124	1.7	H	-13.14	30.18	74.00	-43.82
2355.22	38.45	Ave	124	1.7	H	-13.14	25.31	54.00	-28.69
2488.37	42.56	PK	274	1.2	V	-13.08	29.48	74.00	-44.52
2488.37	37.24	Ave	274	1.2	V	-13.08	24.16	54.00	-29.84

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11g: Low Channel 2412MHz									
225.04	41.47	QP	242	1.4	H	-11.62	29.85	46.00	-16.15
225.04	36.74	QP	93	1.3	V	-11.62	25.12	46.00	-20.88
4824.00	52.11	PK	358	1.5	V	-1.06	51.05	74.00	-22.95
4824.00	43.73	Ave	358	1.5	V	-1.06	42.67	54.00	-11.33
7236.00	42.76	PK	15	1.5	H	1.33	44.09	74.00	-29.91
7236.00	42.55	Ave	15	1.5	H	1.33	43.88	54.00	-10.12
2324.42	45.82	PK	292	1.0	V	-13.19	32.63	74.00	-41.37
2324.42	39.10	Ave	292	1.0	V	-13.19	25.91	54.00	-28.09
2357.78	44.91	PK	29	1.9	H	-13.14	31.77	74.00	-42.23
2357.78	38.14	Ave	29	1.9	H	-13.14	25.00	54.00	-29.00
2491.48	44.23	PK	139	1.1	V	-13.08	31.15	74.00	-42.85
2491.48	38.60	Ave	139	1.1	V	-13.08	25.52	54.00	-28.48

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11g: Middle Channel 2437MHz									
225.04	40.39	QP	349	1.5	H	-11.62	28.77	46.00	-17.23
225.04	35.41	QP	219	1.7	V	-11.62	23.79	46.00	-22.21
4874.00	52.20	PK	216	1.3	V	-0.62	51.58	74.00	-22.42
4874.00	42.62	Ave	216	1.3	V	-0.62	42.00	54.00	-12.00
7311.00	42.88	PK	90	1.3	H	2.21	45.09	74.00	-28.91
7311.00	42.66	Ave	90	1.3	H	2.21	44.87	54.00	-9.13
2316.26	45.55	PK	42	1.7	V	-13.19	32.36	74.00	-41.64
2316.26	38.97	Ave	42	1.7	V	-13.19	25.78	54.00	-28.22
2353.53	43.35	PK	266	1.7	H	-13.14	30.21	74.00	-43.79
2353.53	37.87	Ave	266	1.7	H	-13.14	24.73	54.00	-29.27
2496.28	42.36	PK	345	1.4	V	-13.08	29.28	74.00	-44.72
2496.28	36.16	Ave	345	1.4	V	-13.08	23.08	54.00	-30.92

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11g: High Channel 2462MHz									
225.04	40.64	QP	94	1.2	H	-11.62	29.02	46.00	-16.98
225.04	36.34	QP	102	1.6	V	-11.62	24.72	46.00	-21.28
4924.00	53.69	PK	114	1.1	V	-0.24	53.45	74.00	-20.55
4924.00	41.58	Ave	114	1.1	V	-0.24	41.34	54.00	-12.66
7386.00	43.21	PK	110	1.1	H	2.84	46.05	74.00	-27.95
7386.00	42.02	Ave	110	1.1	H	2.84	44.86	54.00	-9.14
2310.56	45.92	PK	149	1.8	V	-13.19	32.73	74.00	-41.27
2310.56	38.68	Ave	149	1.8	V	-13.19	25.49	54.00	-28.51
2373.40	42.43	PK	275	1.7	H	-13.14	29.29	74.00	-44.71
2373.40	37.81	Ave	275	1.7	H	-13.14	24.67	54.00	-29.33
2491.01	42.80	PK	20	2.0	V	-13.08	29.72	74.00	-44.28
2491.01	37.98	Ave	20	2.0	V	-13.08	24.90	54.00	-29.10

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
n20: Low Channel 2412MHz									
225.04	41.26	QP	215	1.1	H	-11.62	29.64	46.00	-16.36
225.04	36.35	QP	166	1.5	V	-11.62	24.73	46.00	-21.27
4824.00	54.80	PK	236	1.8	V	-1.06	53.74	74.00	-20.26
4824.00	40.18	Ave	236	1.8	V	-1.06	39.12	54.00	-14.88
7236.00	44.47	PK	126	1.0	H	1.33	45.80	74.00	-28.20
7236.00	41.62	Ave	126	1.0	H	1.33	42.95	54.00	-11.05
2317.13	46.60	PK	191	1.7	V	-13.19	33.41	74.00	-40.59
2317.13	39.96	Ave	191	1.7	V	-13.19	26.77	54.00	-27.23
2388.88	43.56	PK	311	1.3	H	-13.14	30.42	74.00	-43.58
2388.88	38.74	Ave	311	1.3	H	-13.14	25.60	54.00	-28.40
2491.06	42.14	PK	215	1.8	V	-13.08	29.06	74.00	-44.94
2491.06	38.78	Ave	215	1.8	V	-13.08	25.70	54.00	-28.30

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
n20: Middle Channel 2437MHz									
225.04	41.90	QP	343	1.5	H	-11.62	30.28	46.00	-15.72
225.04	35.05	QP	295	1.7	V	-11.62	23.43	46.00	-22.57
4874.00	55.46	PK	246	1.7	V	-0.62	54.84	74.00	-19.16
4874.00	41.37	Ave	246	1.7	V	-0.62	40.75	54.00	-13.25
7311.00	43.94	PK	55	1.3	H	2.21	46.15	74.00	-27.85
7311.00	41.04	Ave	55	1.3	H	2.21	43.25	54.00	-10.75
2334.68	45.74	PK	163	1.6	V	-13.19	32.55	74.00	-41.45
2334.68	39.05	Ave	163	1.6	V	-13.19	25.86	54.00	-28.14
2380.94	44.48	PK	120	2.0	H	-13.14	31.34	74.00	-42.66
2380.94	37.04	Ave	120	2.0	H	-13.14	23.90	54.00	-30.10
2484.22	44.56	PK	63	1.8	V	-13.08	31.48	74.00	-42.52
2484.22	36.63	Ave	63	1.8	V	-13.08	23.55	54.00	-30.45

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
n20: High Channel 2462MHz									
225.04	41.15	QP	312	1.4	H	-11.62	29.53	46.00	-16.47
225.04	34.07	QP	125	1.5	V	-11.62	22.45	46.00	-23.55
4924.00	54.25	PK	41	1.9	V	-0.24	54.01	74.00	-19.99
4924.00	41.36	Ave	41	1.9	V	-0.24	41.12	54.00	-12.88
7386.00	44.78	PK	241	1.7	H	2.84	47.62	74.00	-26.38
7386.00	41.67	Ave	241	1.7	H	2.84	44.51	54.00	-9.49
2344.21	45.67	PK	132	1.7	V	-13.19	32.48	74.00	-41.52
2344.21	38.15	Ave	132	1.7	V	-13.19	24.96	54.00	-29.04
2381.57	42.58	PK	227	1.8	H	-13.14	29.44	74.00	-44.56
2381.57	38.40	Ave	227	1.8	H	-13.14	25.26	54.00	-28.74
2498.21	43.01	PK	111	1.9	V	-13.08	29.93	74.00	-44.07
2498.21	37.42	Ave	111	1.9	V	-13.08	24.34	54.00	-29.66

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
N40: Low Channel 2422MHz									
225.04	40.55	QP	200	1.5	H	-11.62	28.93	46.00	-17.07
225.04	32.70	QP	353	1.3	V	-11.62	21.08	46.00	-24.92
4844.00	53.20	PK	350	1.6	V	-1.06	52.14	74.00	-21.86
4844.00	39.83	Ave	350	1.6	V	-1.06	38.77	54.00	-15.23
7266.00	43.30	PK	19	1.5	H	1.33	44.63	74.00	-29.37
7266.00	40.57	Ave	19	1.5	H	1.33	41.90	54.00	-12.10
2324.33	45.90	PK	314	1.6	V	-13.19	32.71	74.00	-41.29
2324.33	39.01	Ave	314	1.6	V	-13.19	25.82	54.00	-28.18
2360.26	43.78	PK	159	1.7	H	-13.14	30.64	74.00	-43.36
2360.26	38.90	Ave	159	1.7	H	-13.14	25.76	54.00	-28.24
2486.11	44.90	PK	125	1.6	V	-13.08	31.82	74.00	-42.18
2486.11	36.21	Ave	125	1.6	V	-13.08	23.13	54.00	-30.87

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
N40: Middle Channel 2437MHz									
225.04	40.37	QP	163	1.1	H	-11.62	28.75	46.00	-17.25
225.04	32.09	QP	354	1.3	V	-11.62	20.47	46.00	-25.53
4874.00	53.94	PK	297	1.4	V	-0.62	53.32	74.00	-20.68
4874.00	39.90	Ave	297	1.4	V	-0.62	39.28	54.00	-14.72
7311.00	42.86	PK	206	1.6	H	2.21	45.07	74.00	-28.93
7311.00	41.17	Ave	206	1.6	H	2.21	43.38	54.00	-10.62
2349.41	45.37	PK	82	1.6	V	-13.19	32.18	74.00	-41.82
2349.41	38.05	Ave	82	1.6	V	-13.19	24.86	54.00	-29.14
2384.51	44.77	PK	338	1.7	H	-13.14	31.63	74.00	-42.37
2384.51	37.35	Ave	338	1.7	H	-13.14	24.21	54.00	-29.79
2487.57	42.59	PK	95	1.4	V	-13.08	29.51	74.00	-44.49
2487.57	37.37	Ave	95	1.4	V	-13.08	24.29	54.00	-29.71

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
N40: High Channel 2452MHz									
225.04	41.26	QP	121	1.7	H	-11.62	29.64	46.00	-16.36
225.04	32.49	QP	337	1.3	V	-11.62	20.87	46.00	-25.13
4904.00	53.35	PK	80	1.7	V	-0.24	53.11	74.00	-20.89
4904.00	40.57	Ave	80	1.7	V	-0.24	40.33	54.00	-13.67
7356.00	43.28	PK	20	2.0	H	2.84	46.12	74.00	-27.88
7356.00	40.96	Ave	20	2.0	H	2.84	43.80	54.00	-10.20
2328.94	45.58	PK	81	1.5	V	-13.19	32.39	74.00	-41.61
2328.94	38.62	Ave	81	1.5	V	-13.19	25.43	54.00	-28.57
2367.96	42.80	PK	35	2.0	H	-13.14	29.66	74.00	-44.34
2367.96	38.06	Ave	35	2.0	H	-13.14	24.92	54.00	-29.08
2486.37	44.27	PK	316	1.5	V	-13.08	31.19	74.00	-42.81
2486.37	36.66	Ave	316	1.5	V	-13.08	23.58	54.00	-30.42

Test Frequency: 18GHz~25GHz

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

BT BLE:

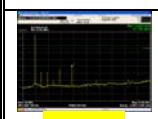
Test Frequency : 26MHz ~ 30MHz

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

Test Frequency : 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
Low Channel 2402MHz									
266.35	36.89	QP	81	1.6	H	-13.35	23.54	46.00	-22.46
266.35	41.33	QP	239	1.3	V	-13.35	27.98	46.00	-18.02
4804.00	46.15	PK	316	1.6	V	-1.06	45.09	74.00	-28.91
4804.00	43.52	Ave	316	1.6	V	-1.06	42.46	54.00	-11.54
7206.00	40.62	PK	46	1.0	H	1.33	41.95	74.00	-32.05
7206.00	35.37	Ave	46	1.0	H	1.33	36.70	54.00	-17.30
2323.35	46.54	PK	301	1.4	V	-13.19	33.35	74.00	-40.65
2323.35	39.11	Ave	301	1.4	V	-13.19	25.92	54.00	-28.08
2379.55	42.77	PK	321	1.7	H	-13.14	29.63	74.00	-44.37
2379.55	37.62	Ave	321	1.7	H	-13.14	24.48	54.00	-29.52
2485.99	42.69	PK	13	1.3	V	-13.08	29.61	74.00	-44.39
2485.99	36.54	Ave	13	1.3	V	-13.08	23.46	54.00	-30.54

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
Middle Channel 2440MHz									
266.35	36.79	QP	128	1.7	H	-13.35	23.44	46.00	-22.56
266.35	40.76	QP	39	1.6	V	-13.35	27.41	46.00	-18.59
4880.00	46.73	PK	341	1.2	V	-0.62	46.11	74.00	-27.89
4880.00	44.02	Ave	341	1.2	V	-0.62	43.40	54.00	-10.60
7320.00	41.94	PK	66	1.5	H	2.21	44.15	74.00	-29.85
7320.00	36.16	Ave	66	1.5	H	2.21	38.37	54.00	-15.63
2311.43	46.89	PK	239	1.7	V	-13.19	33.70	74.00	-40.30
2311.43	38.05	Ave	239	1.7	V	-13.19	24.86	54.00	-29.14
2357.55	44.82	PK	47	1.7	H	-13.14	31.68	74.00	-42.32
2357.55	38.18	Ave	47	1.7	H	-13.14	25.04	54.00	-28.96
2497.06	43.98	PK	311	1.2	V	-13.08	30.90	74.00	-43.10
2497.06	37.23	Ave	311	1.2	V	-13.08	24.15	54.00	-29.85

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
High Channel 2480MHz									
 266.35	38.06	QP	190	2.0	H	-13.35	24.71	46.00	-21.29
266.35	40.77	QP	122	2.0	V	-13.35	27.42	46.00	-18.58
4960.00	46.36	PK	244	1.5	V	-0.24	46.12	74.00	-27.88
4960.00	43.70	Ave	244	1.5	V	-0.24	43.46	54.00	-10.54
7440.00	42.75	PK	267	1.7	H	2.84	45.59	74.00	-28.41
7440.00	35.92	Ave	267	1.7	H	2.84	38.76	54.00	-15.24
2311.68	46.08	PK	301	1.1	V	-13.19	32.89	74.00	-41.11
2311.68	37.86	Ave	301	1.1	V	-13.19	24.67	54.00	-29.33
2351.51	43.94	PK	256	1.0	H	-13.14	30.80	74.00	-43.20
2351.51	36.15	Ave	256	1.0	H	-13.14	23.01	54.00	-30.99
2492.17	42.95	PK	197	1.6	V	-13.08	29.87	74.00	-44.13
2492.17	38.06	Ave	197	1.6	V	-13.08	24.98	54.00	-29.02

Test Frequency: 18GHz~25GHz

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

9 Conducted Spurious Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r04 January 7, 2016

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)).

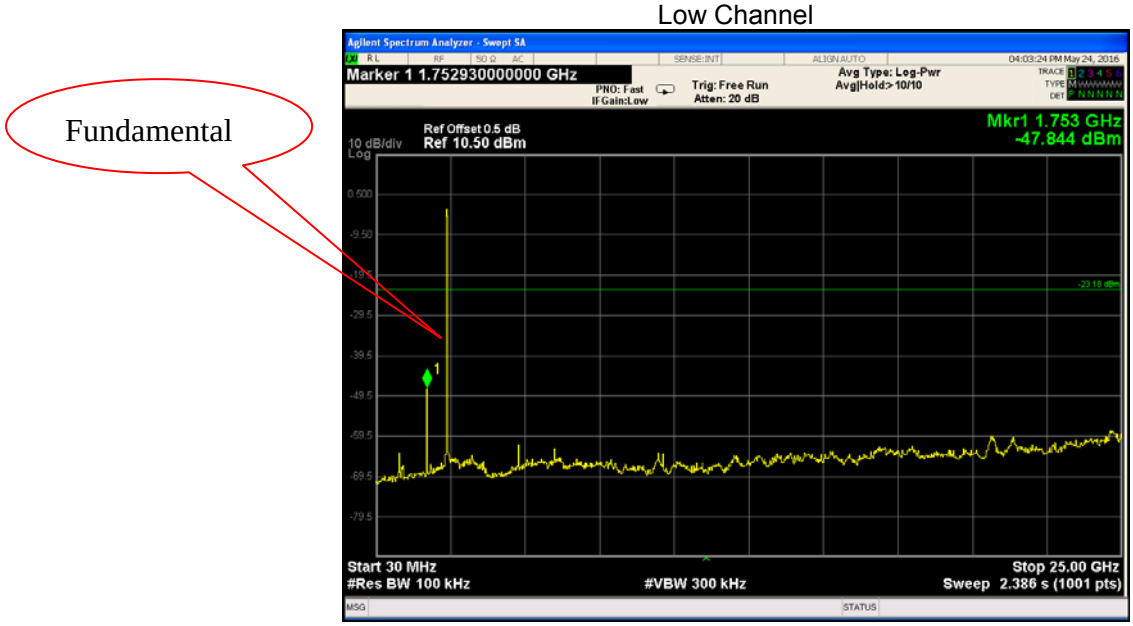
9.1 Test Procedure

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

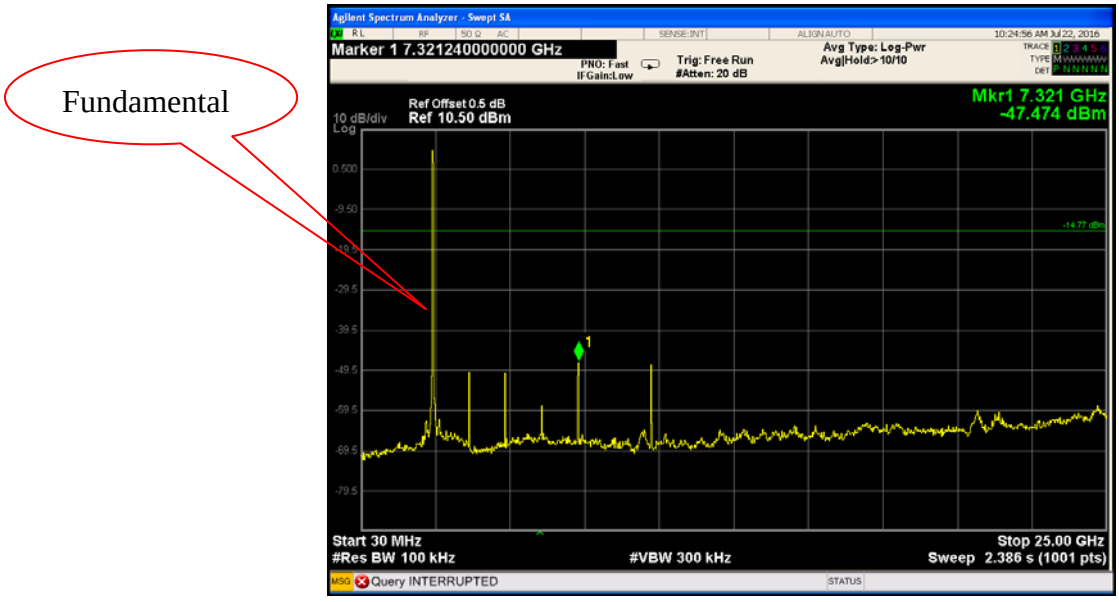
9.2 Test Result

802.11b

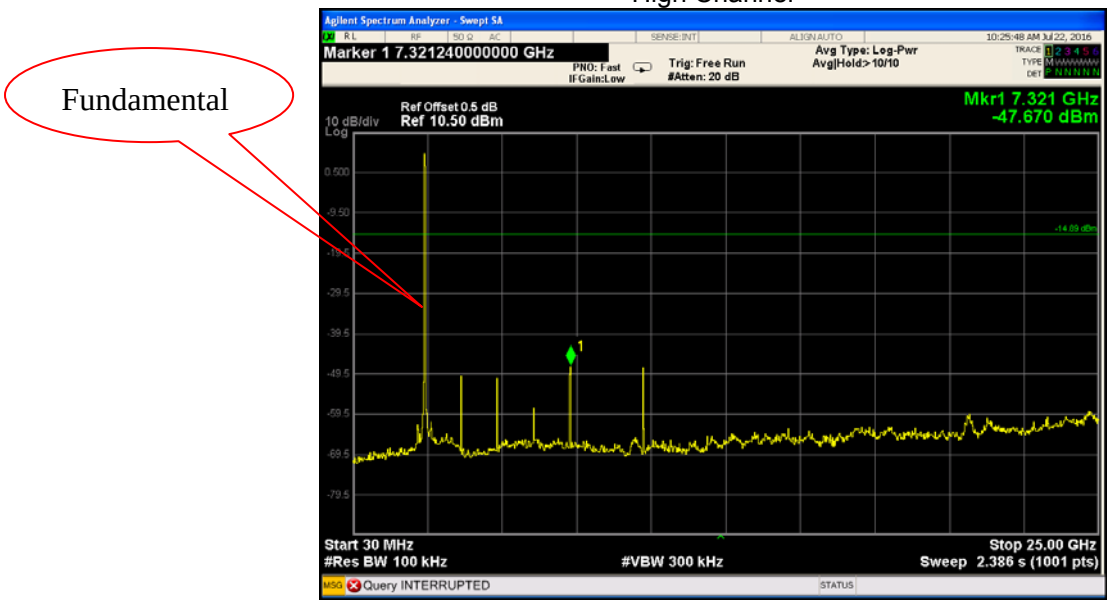
Low Channel



Middle Channel

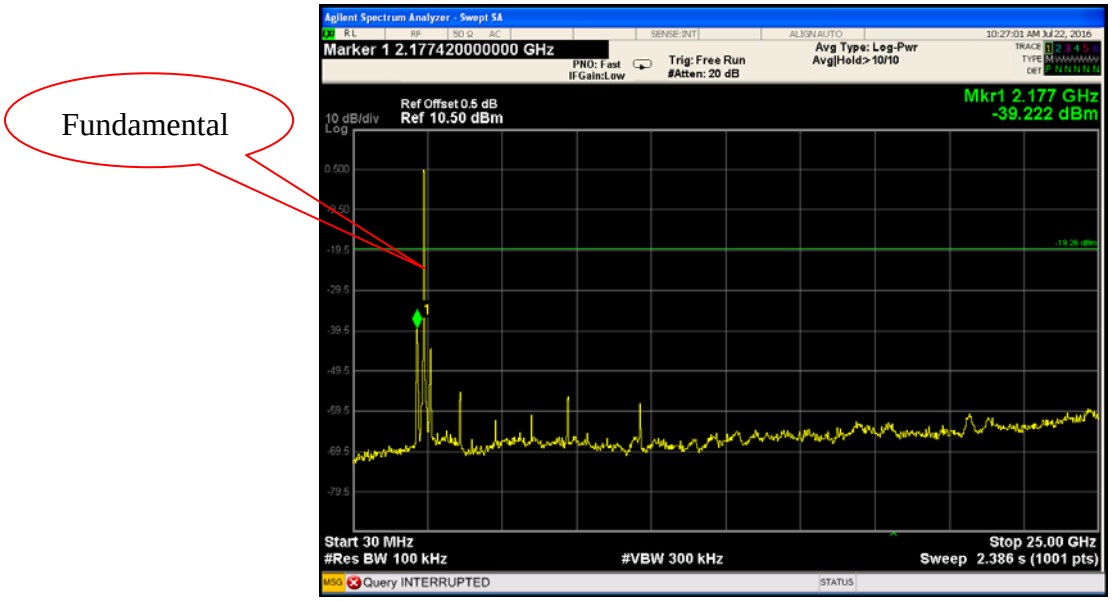


High Channel

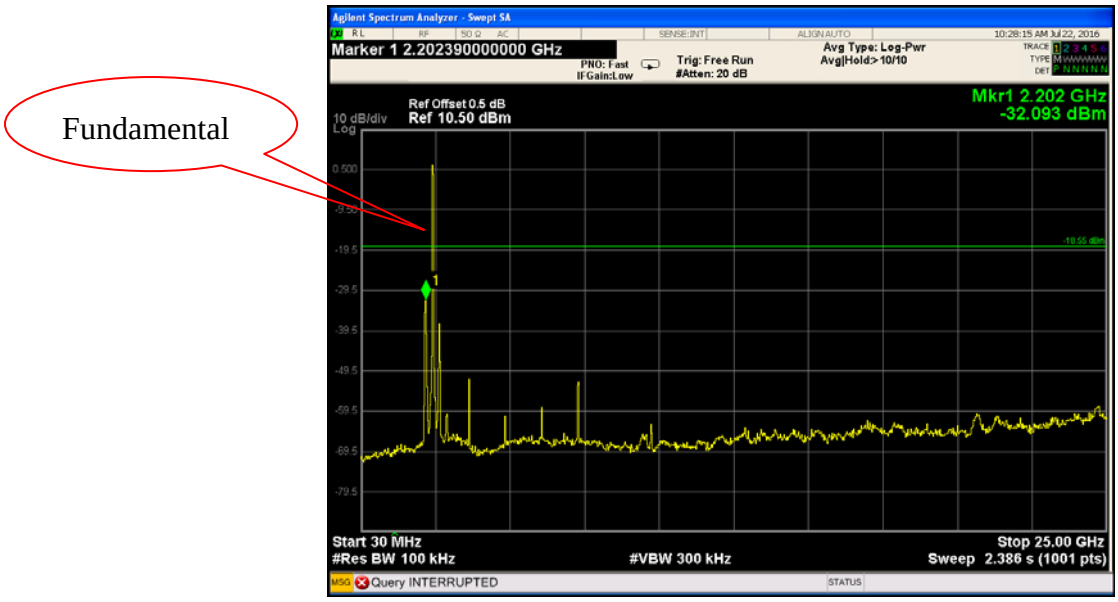


802.11g

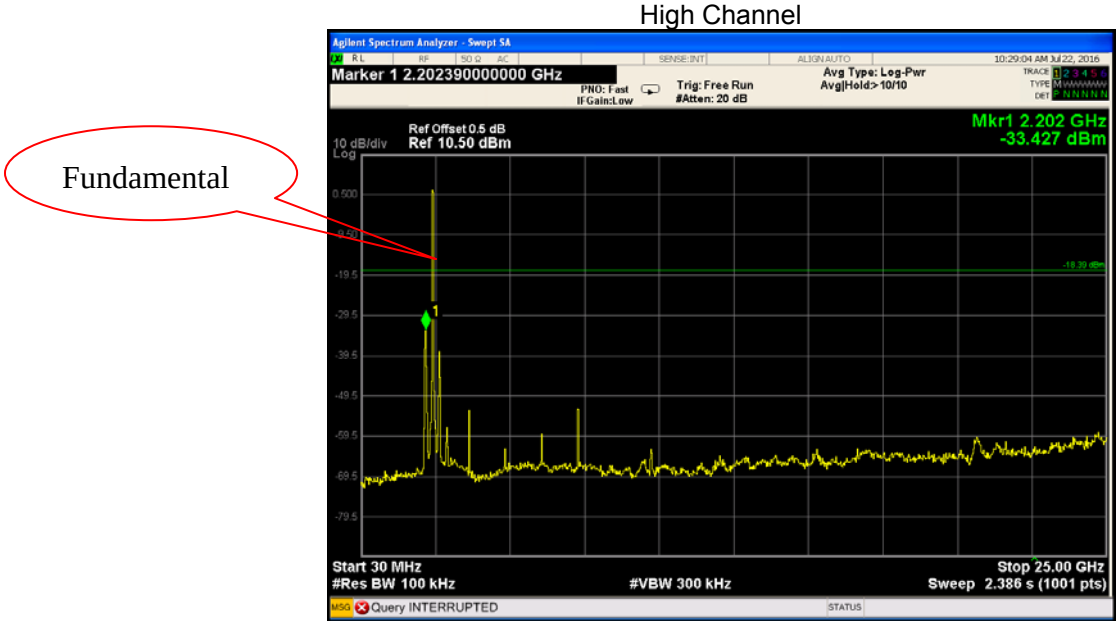
Low Channel



Middle Channel

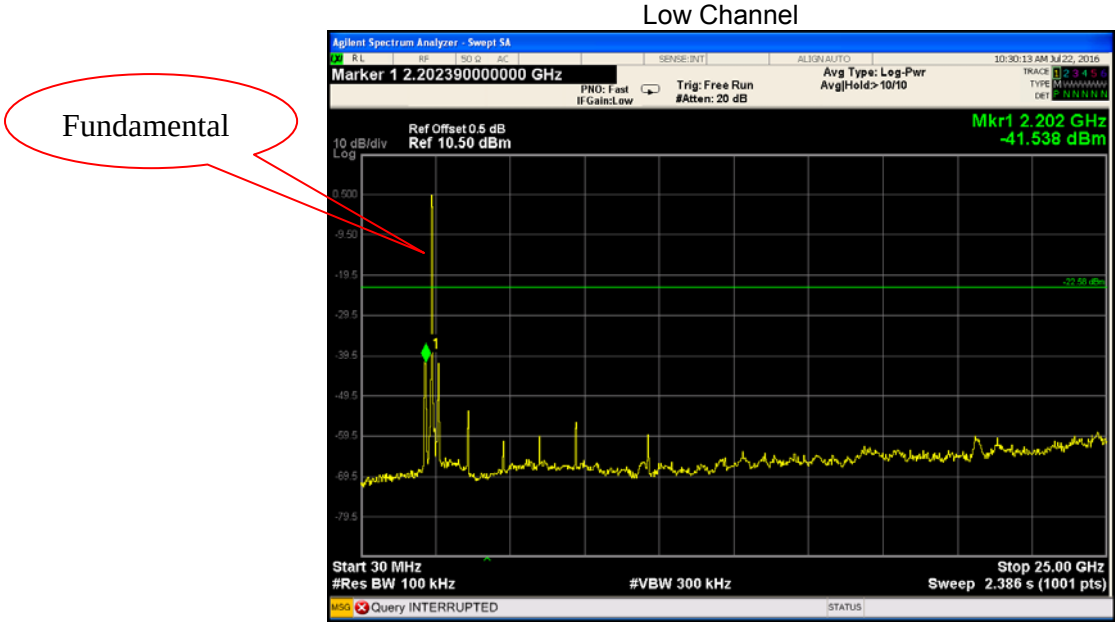


High Channel

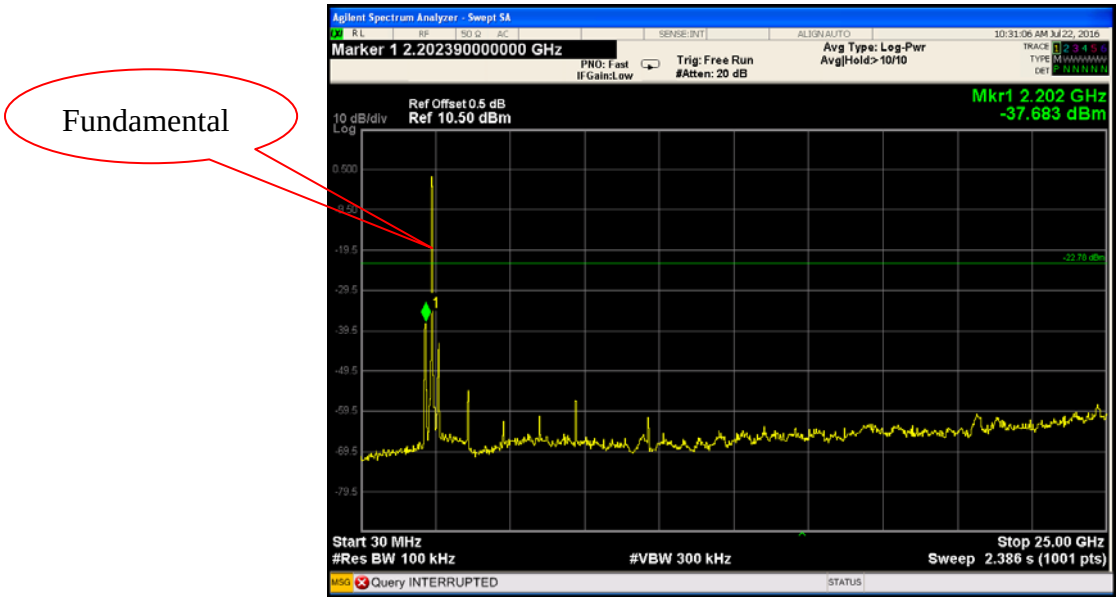


802.11n HT20

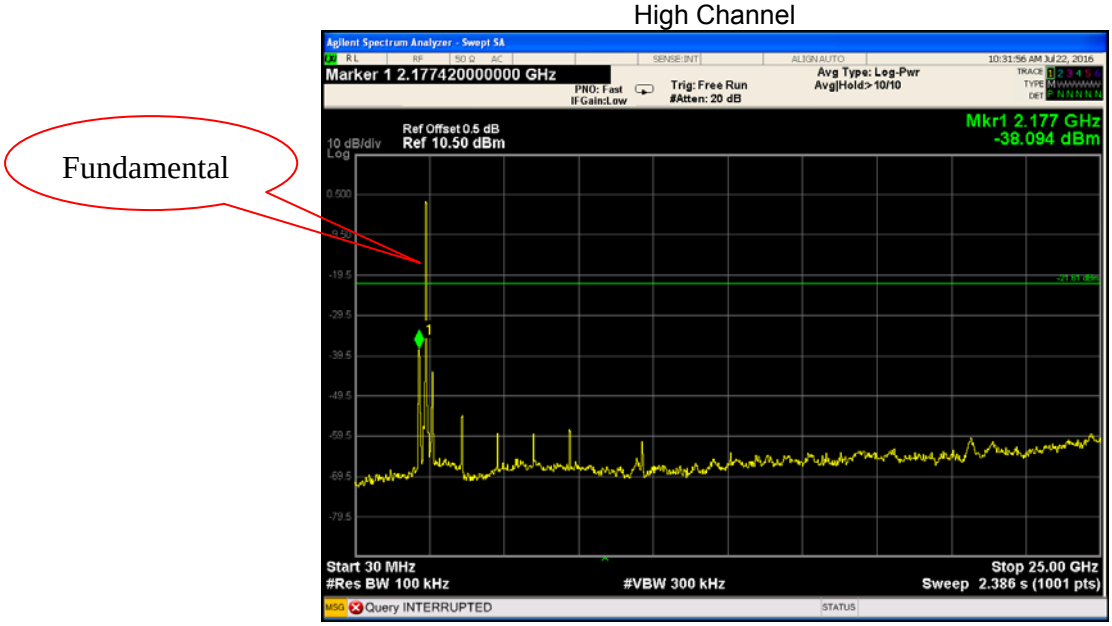
Low Channel



Middle Channel

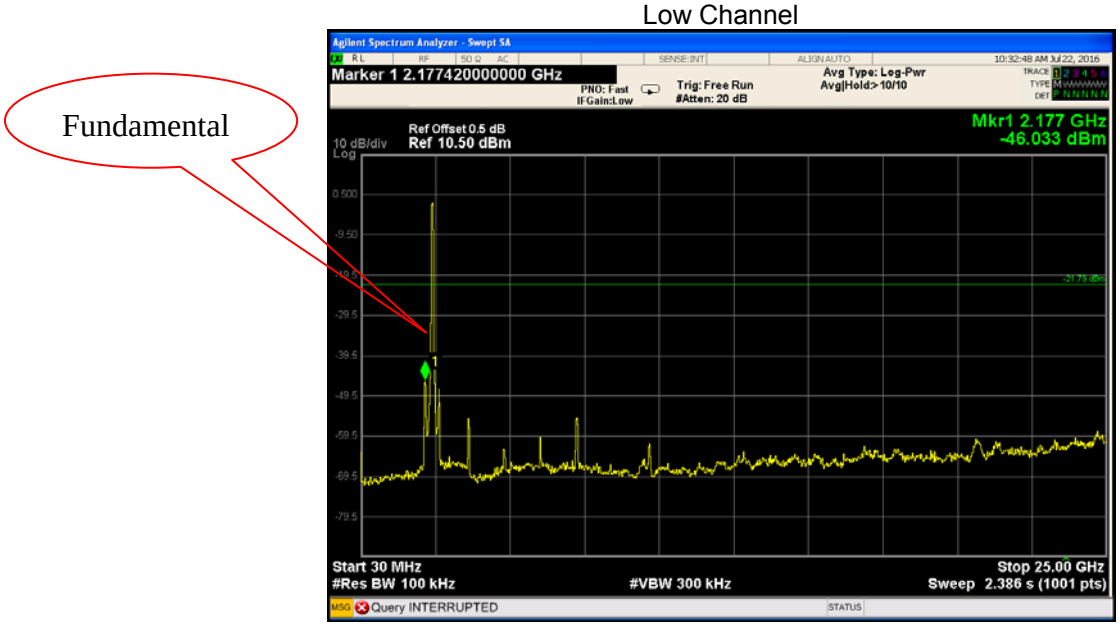


High Channel

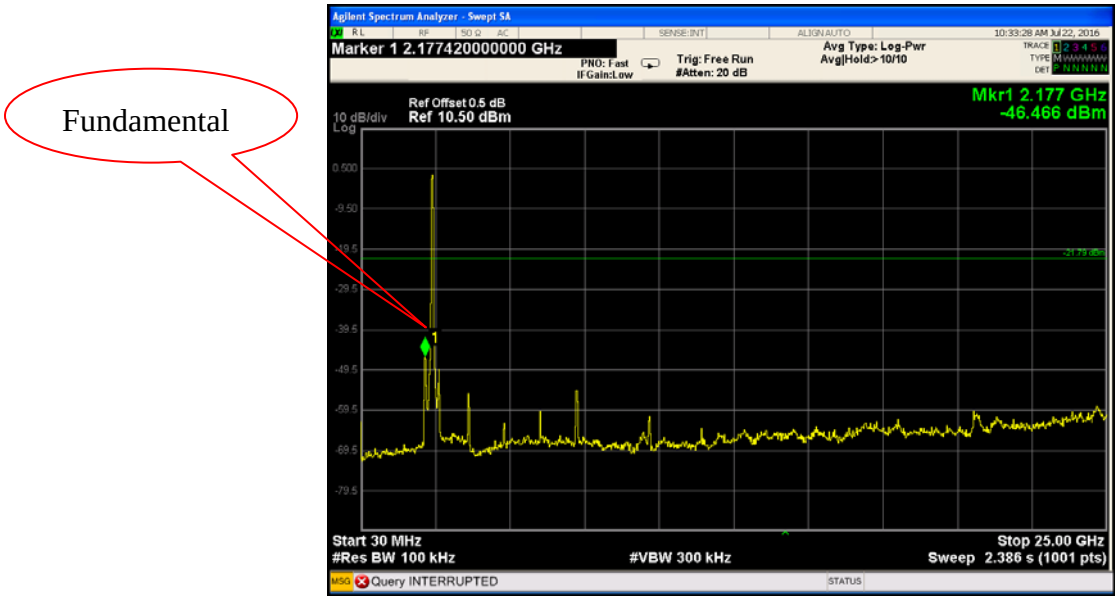


802.11n HT40

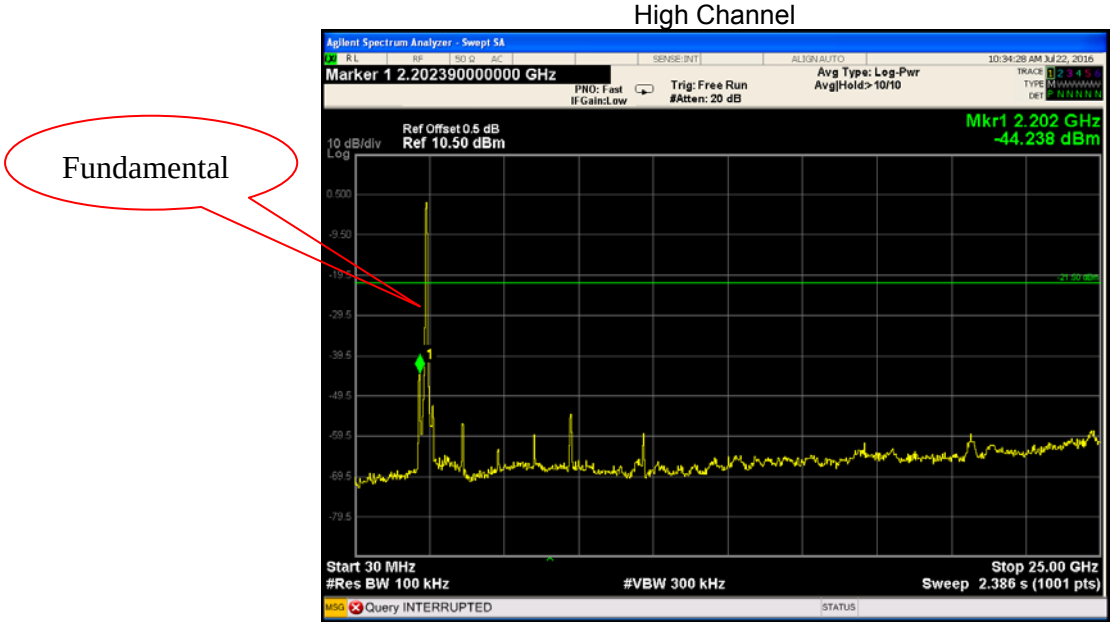
Low Channel



Middle Channel

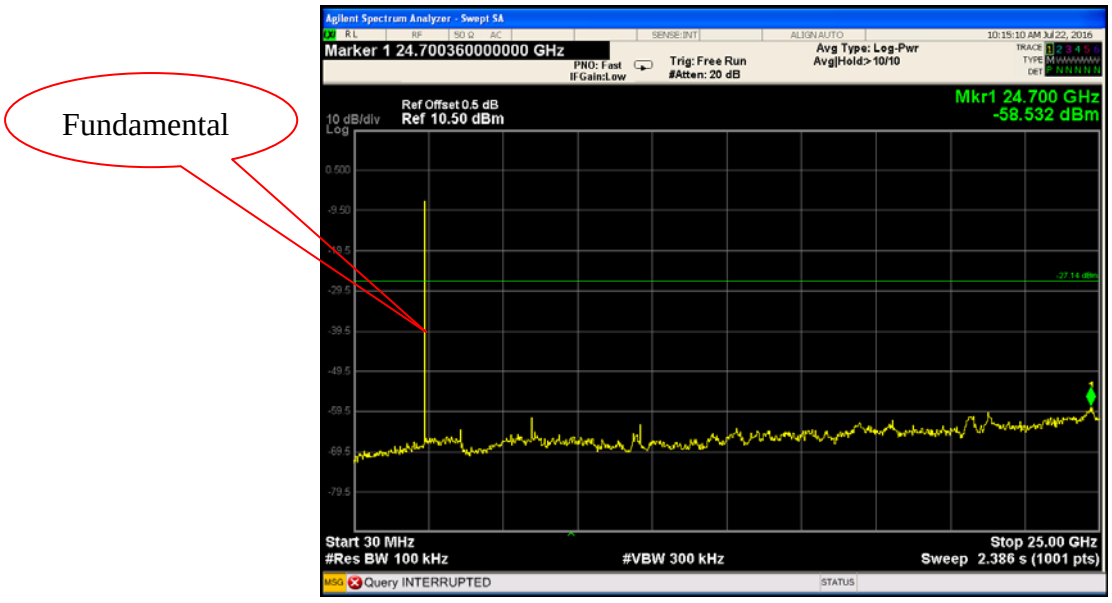


High Channel

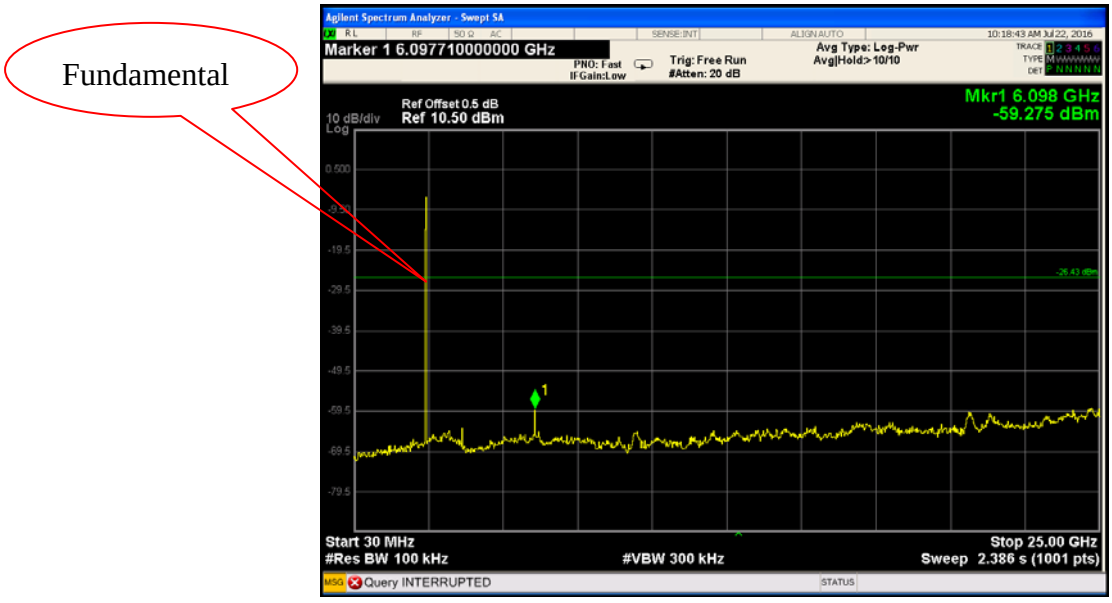


BLE GFSK

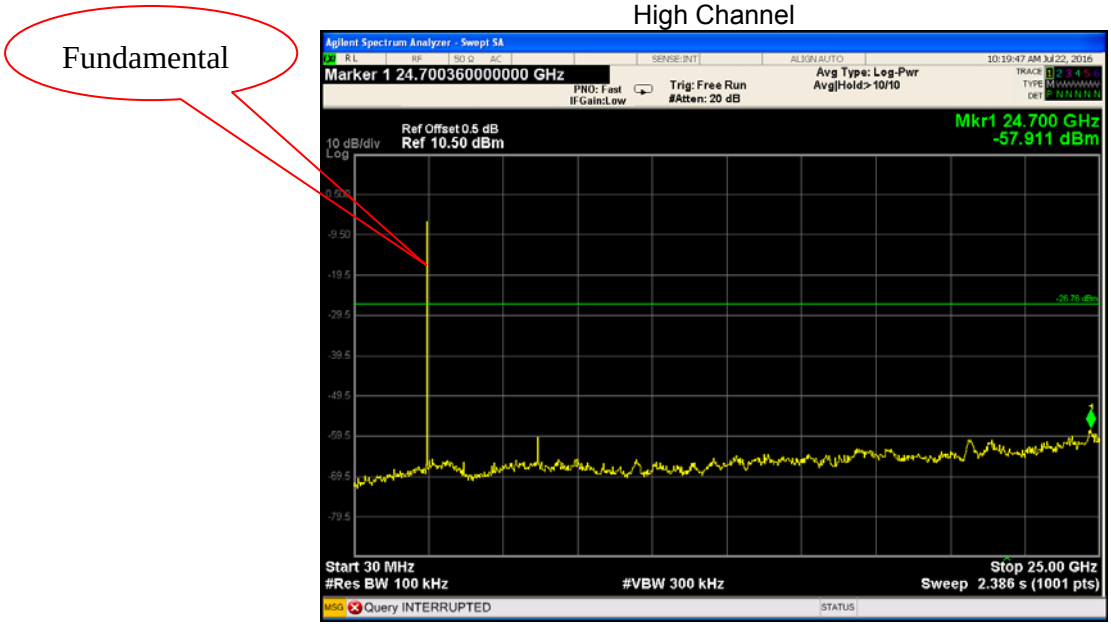
Low Channel



Middle Channel



High Channel



10 Band Edge Measurement

Test Requirement:	FCC CFR47 Part 15 Section 15.247
Test Method:	KDB 558074 D01 DTS Meas Guidance v03r04 January 7, 2016
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

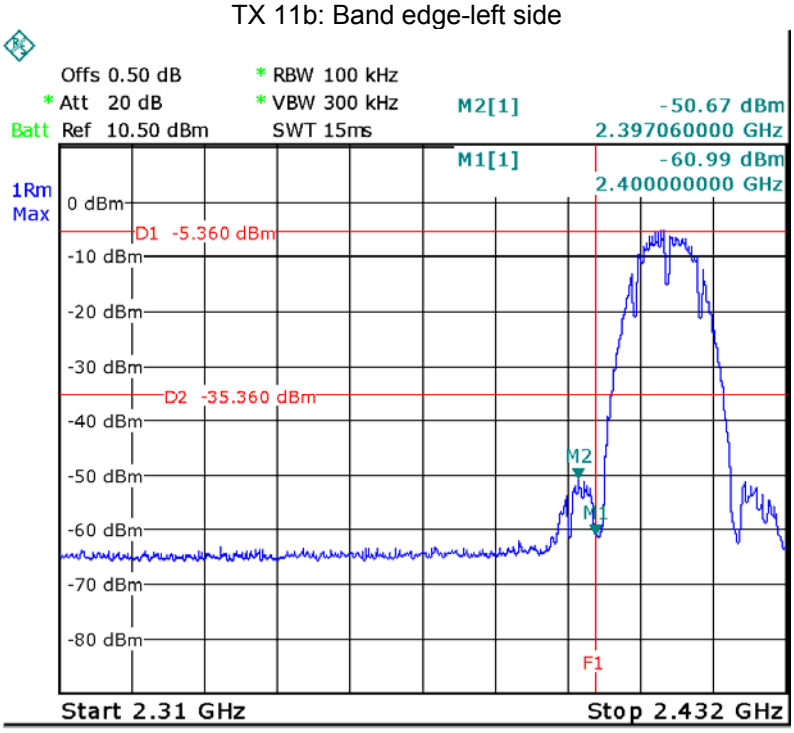
10.1 Test Produce

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.

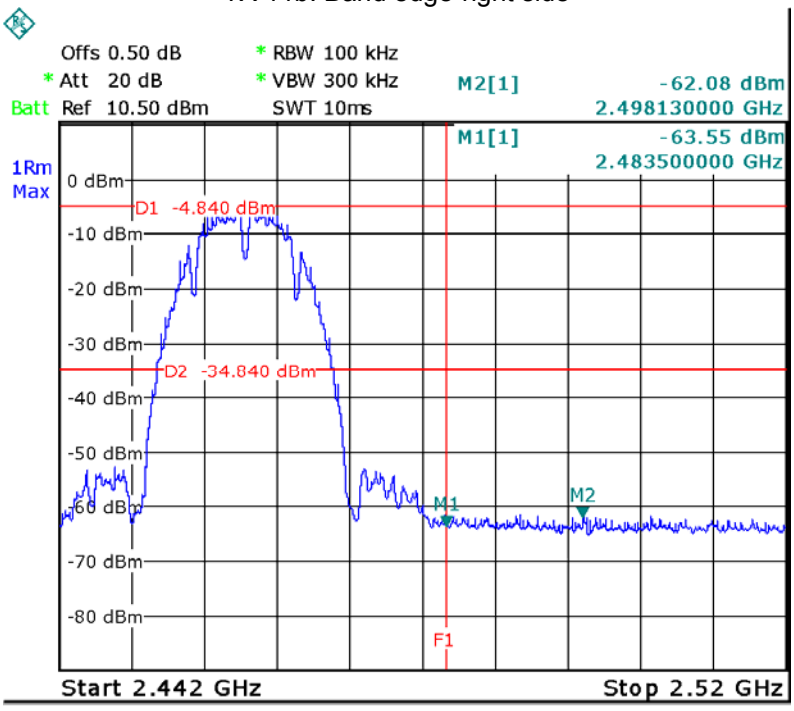
10.2 Test Result

Test result plots shown as follows:

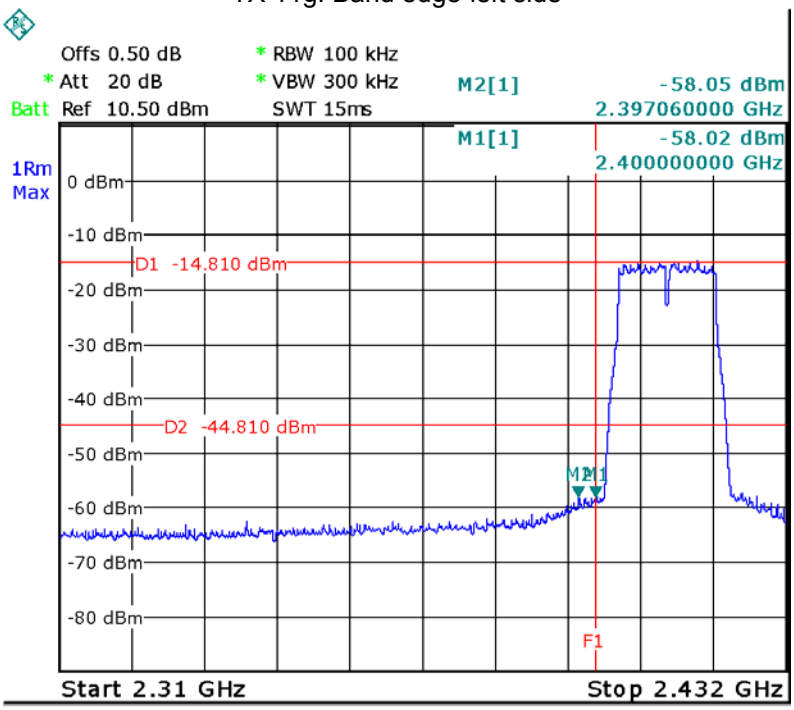
TX 11b: Band edge-left side



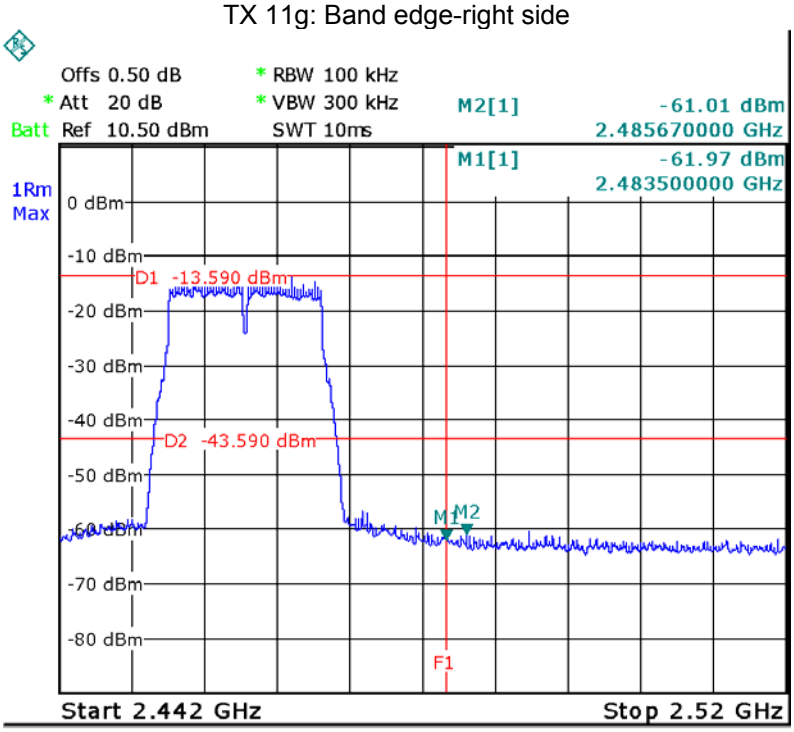
TX 11b: Band edge-right side



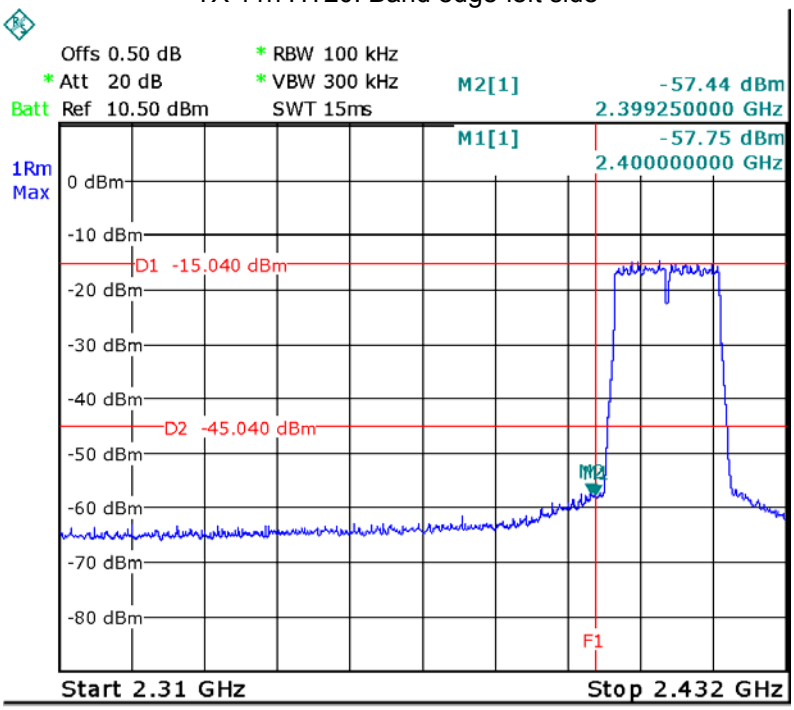
TX 11g: Band edge-left side



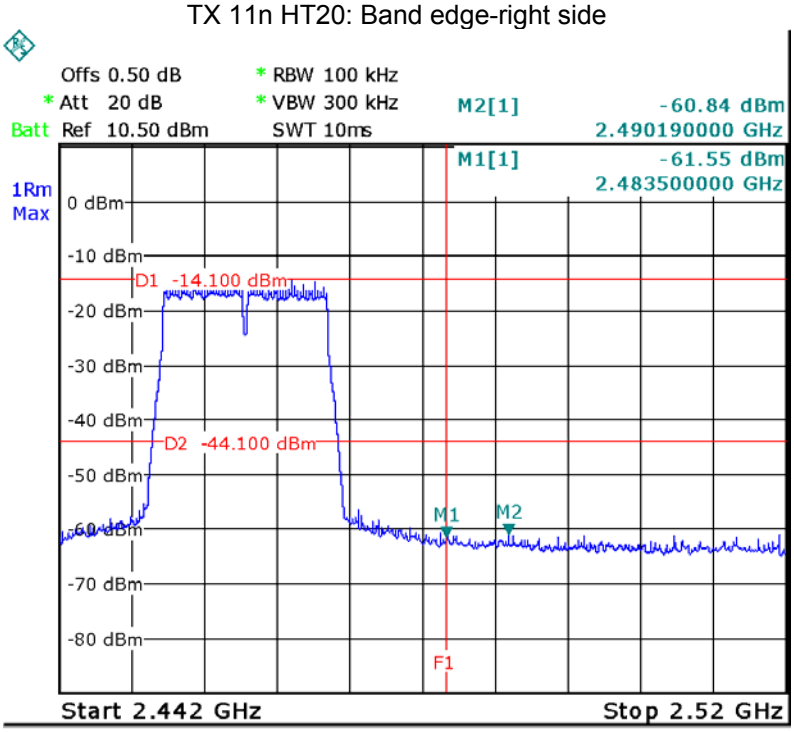
TX 11g: Band edge-right side



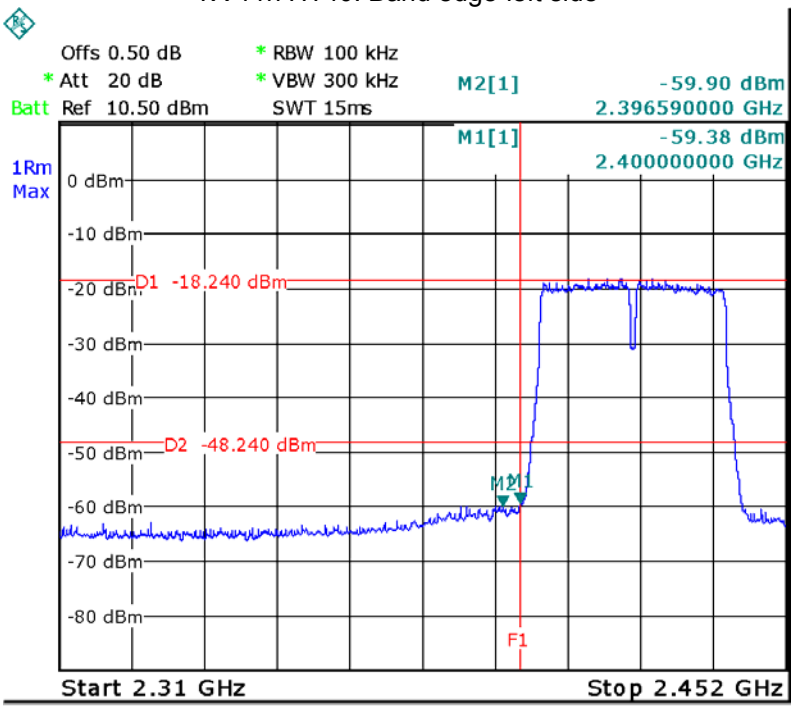
TX 11n HT20: Band edge-left side



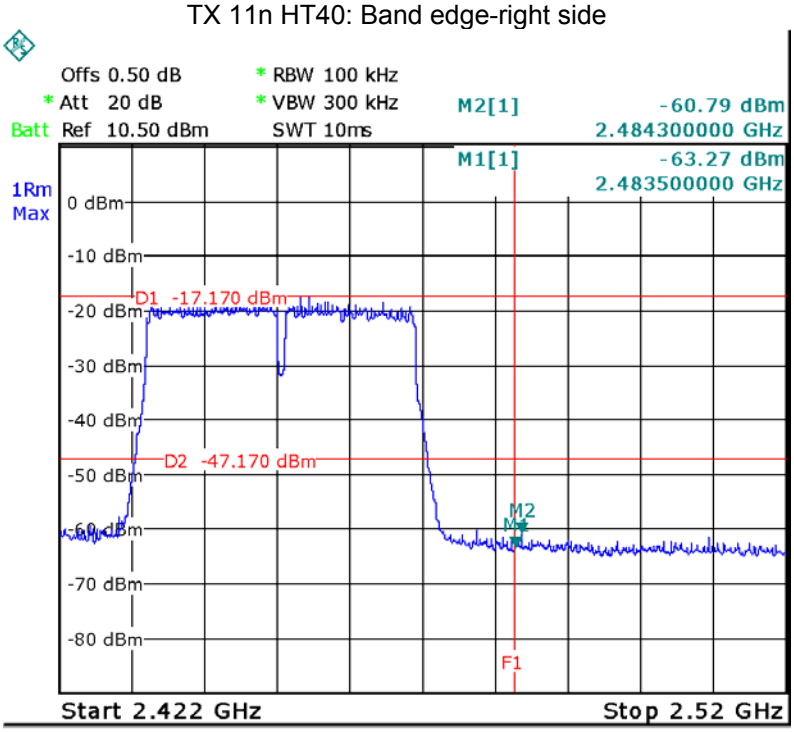
TX 11n HT20: Band edge-right side



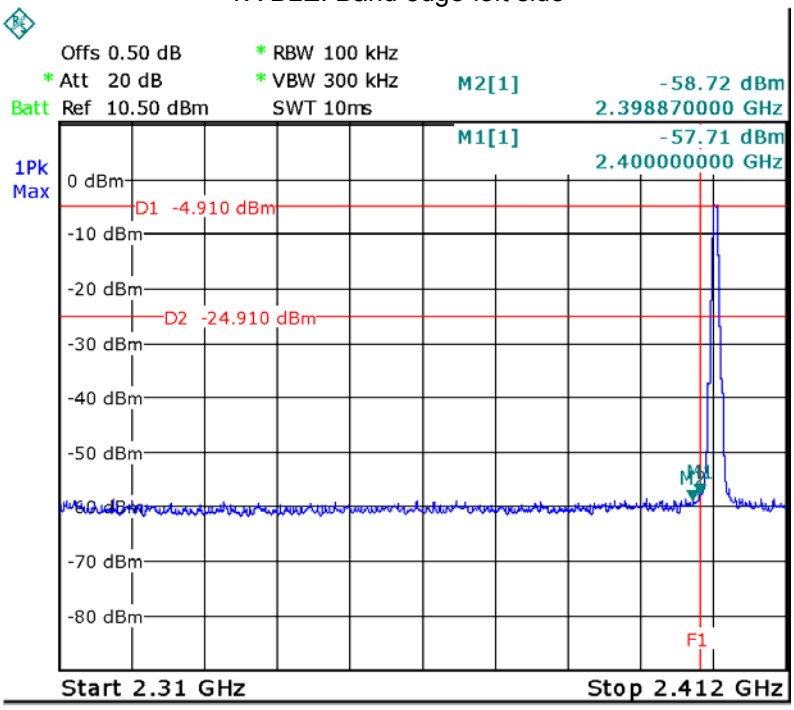
TX 11n HT40: Band edge-left side



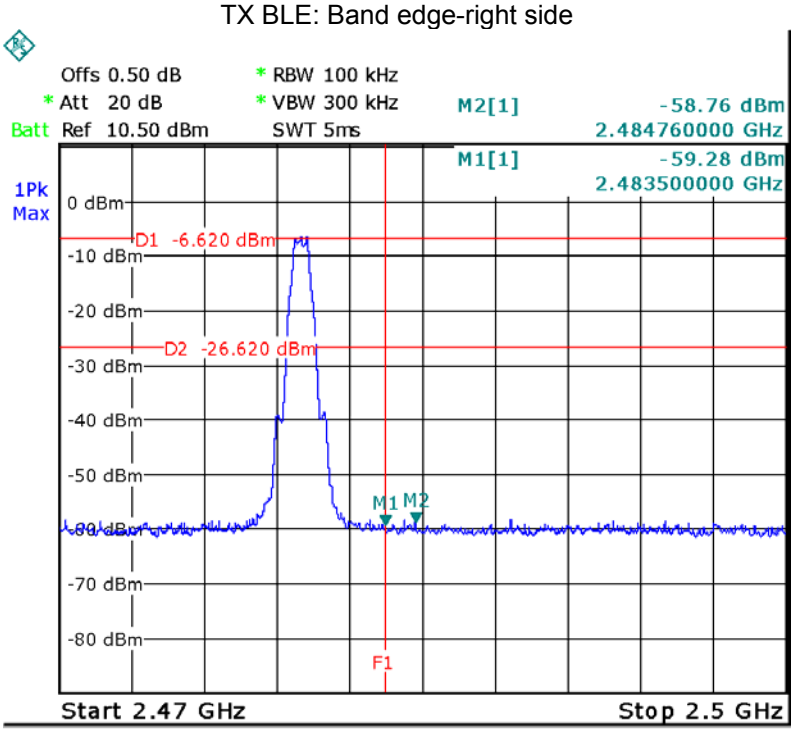
TX 11n HT40: Band edge-right side



TX BLE: Band edge-left side



TX BLE: Band edge-right side



11 6 dB Bandwidth Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r04 January 7, 2016

11.1 Test Procedure:

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

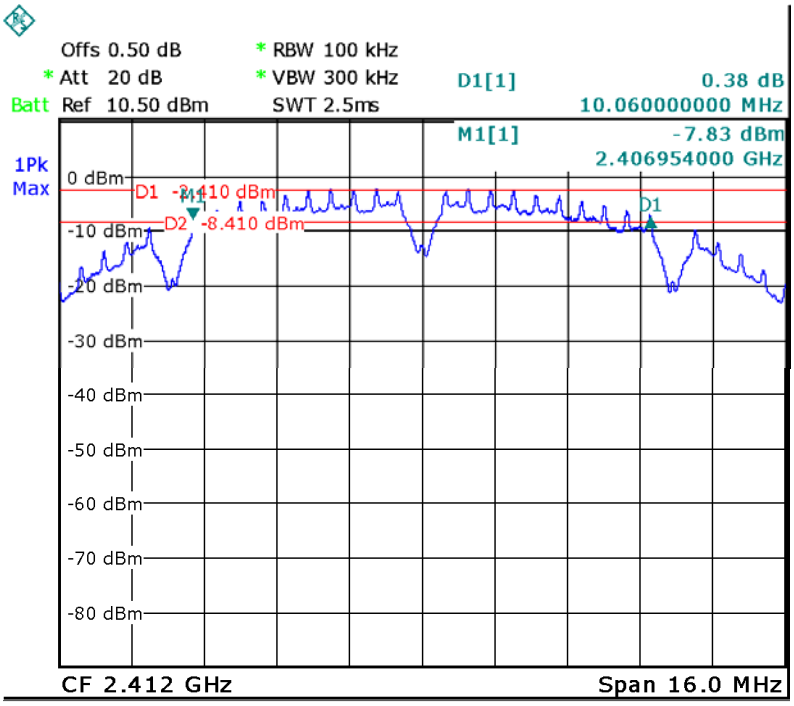
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

11.2 Test Result:

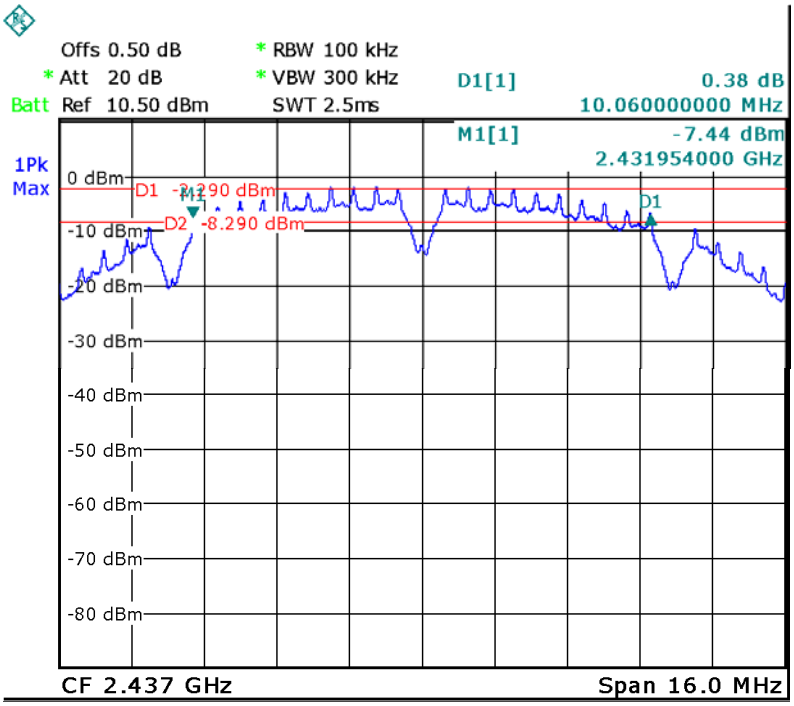
Operation mode	Bandwidth (MHz)		
TX 11b	Channel 1	Channel 6	Channel 11
	10.060	10.060	10.060
TX 11g	Channel 1	Channel 6	Channel 11
	16.467	16.467	16.467
TX 11n HT20	Channel 1	Channel 6	Channel 11
	17.677	17.677	17.677
TX 11n HT40	Channel 3	Channel 6	Channel 9
	36.120	36.120	36.120
BT BLE	Channel 0	Channel 19	Channel 39
	0.713	0.713	0.713

Test result plot as follows:

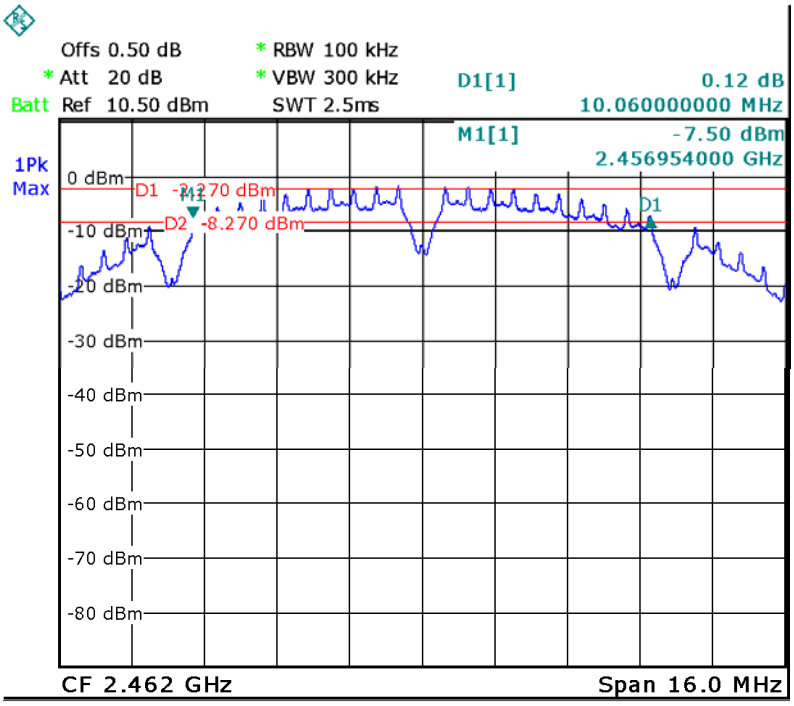
Mode: TX 11b channel 1



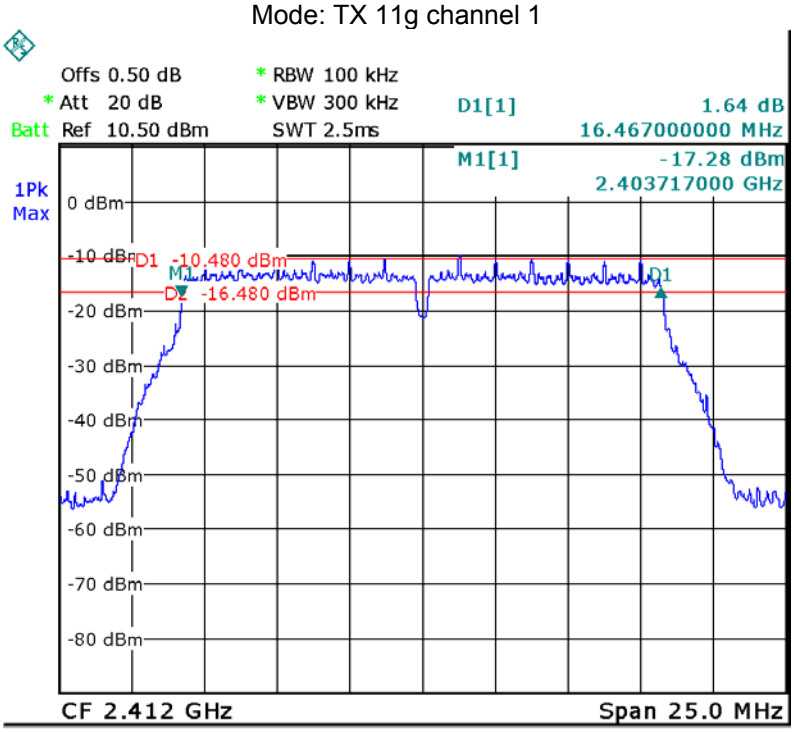
Mode: TX 11b channel 6



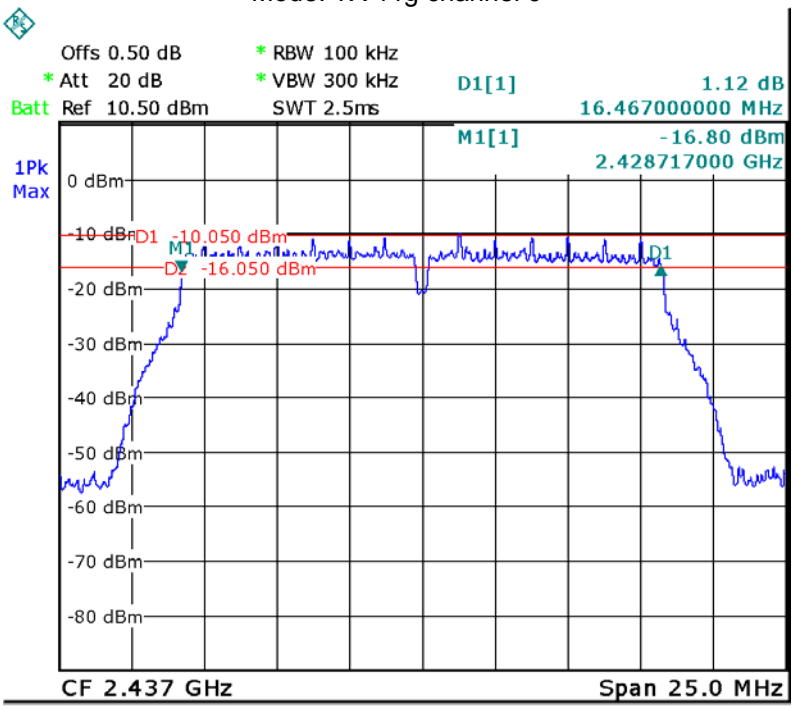
Mode: TX 11b channel 11



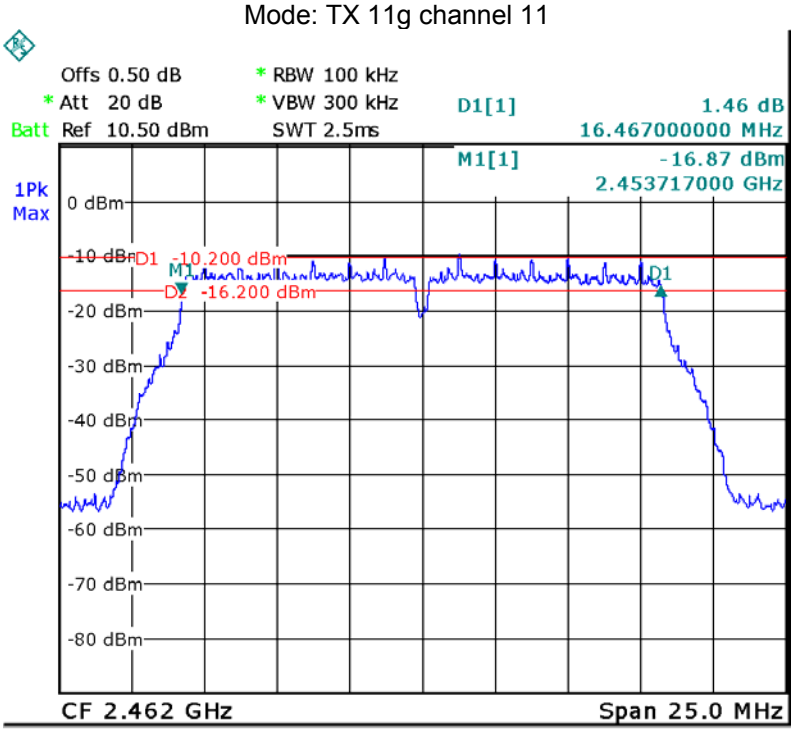
Mode: TX 11g channel 1



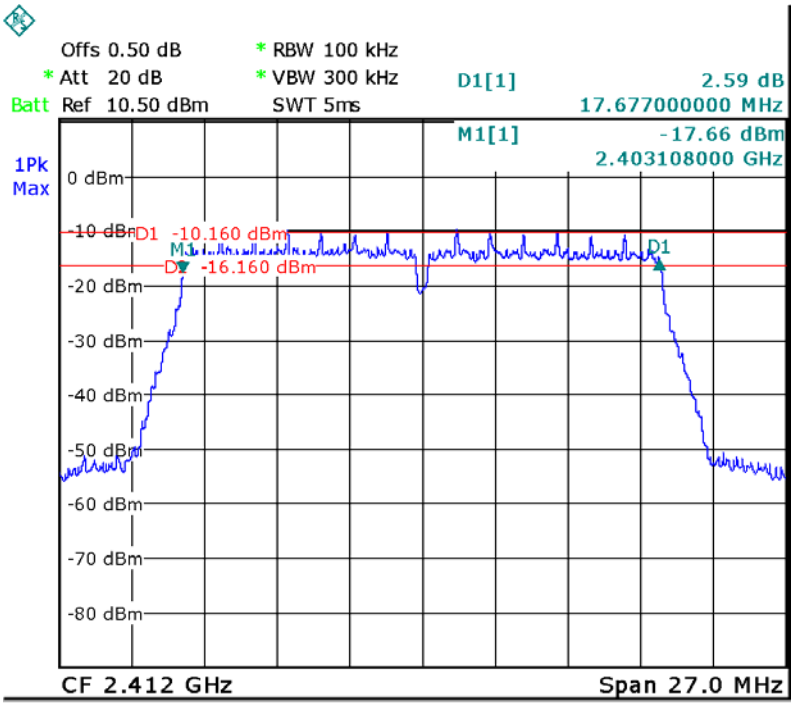
Mode: TX 11g channel 6



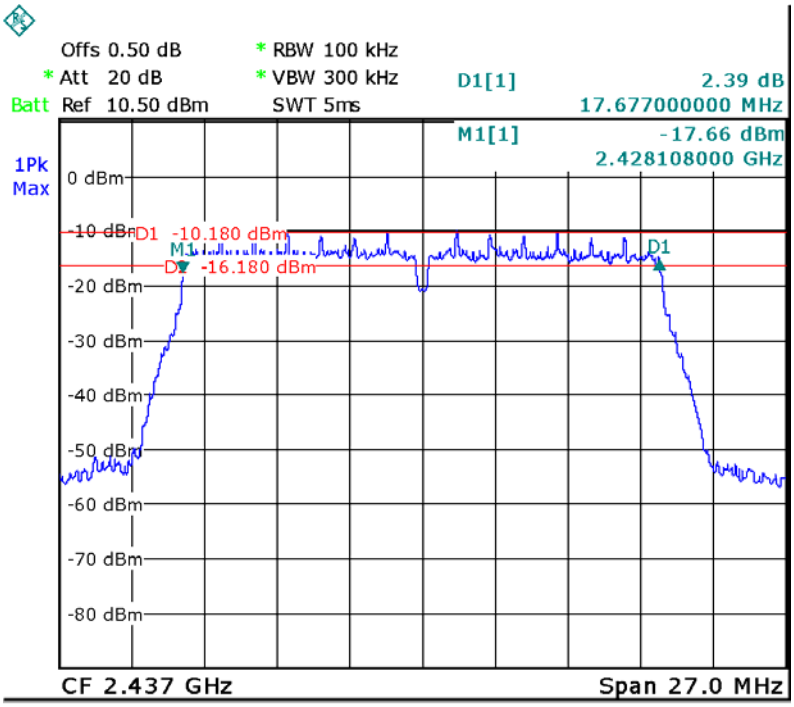
Mode: TX 11g channel 11



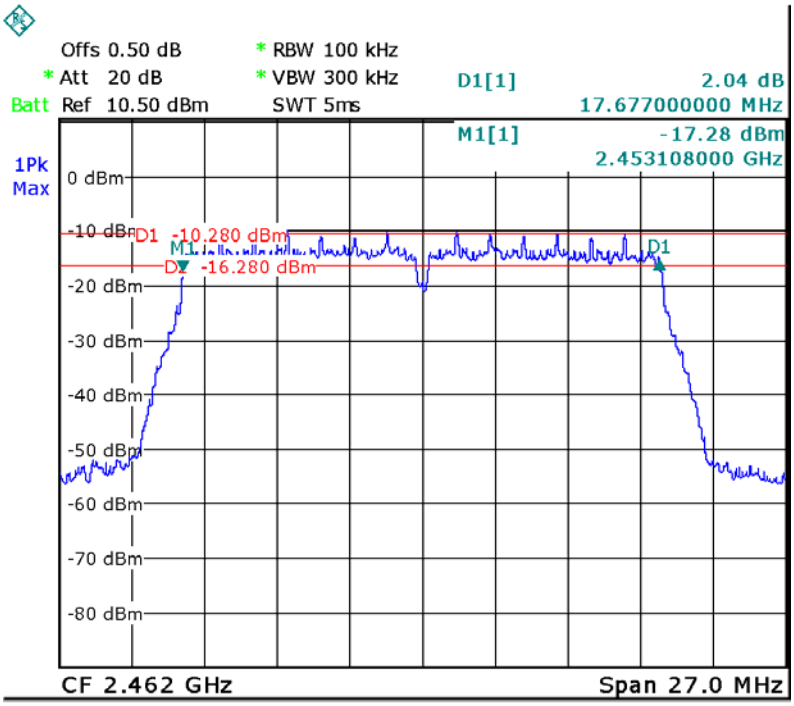
Mode: TX 11n HT20 channel 1



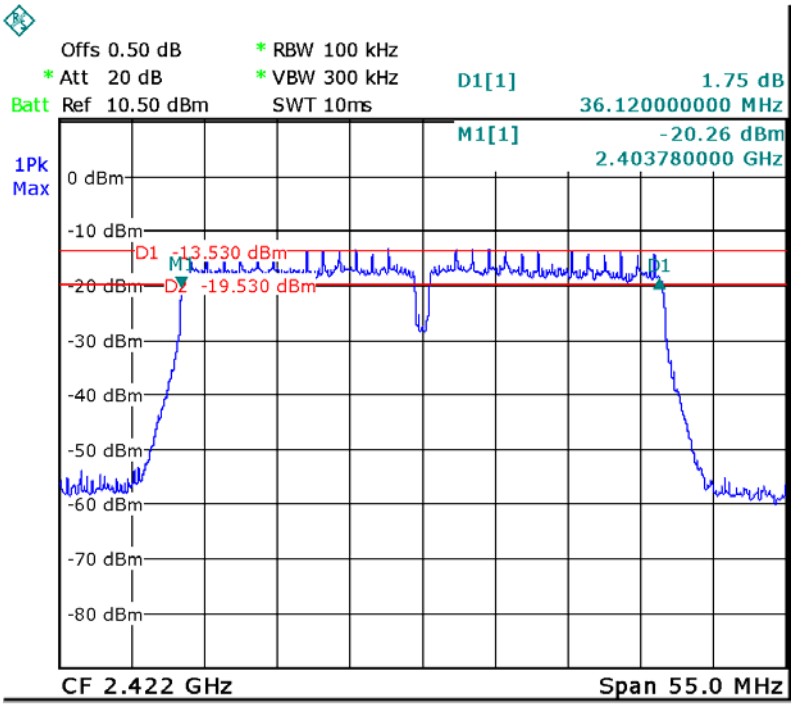
Mode: TX 11n HT20 channel 6



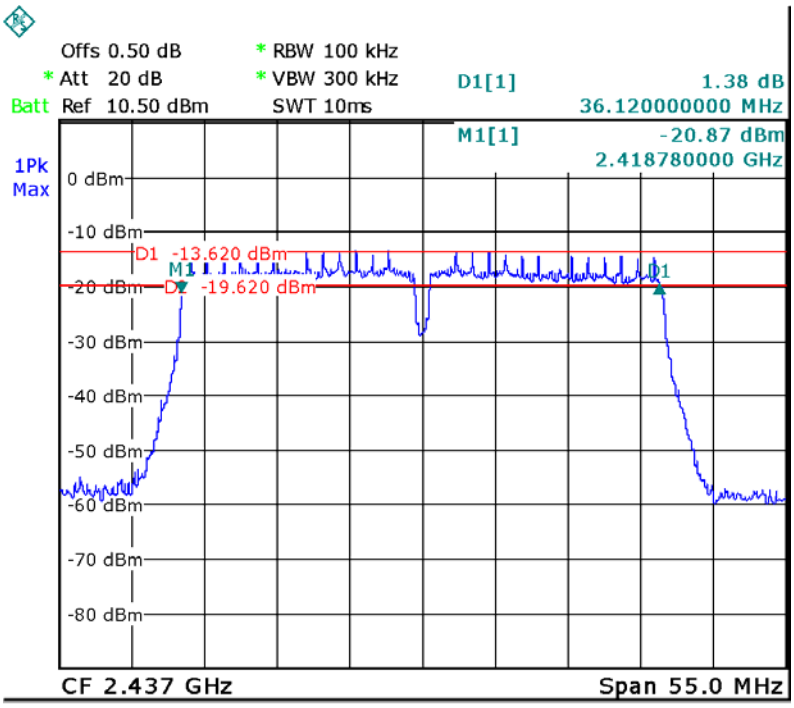
Mode: TX 11n HT20 channel 11



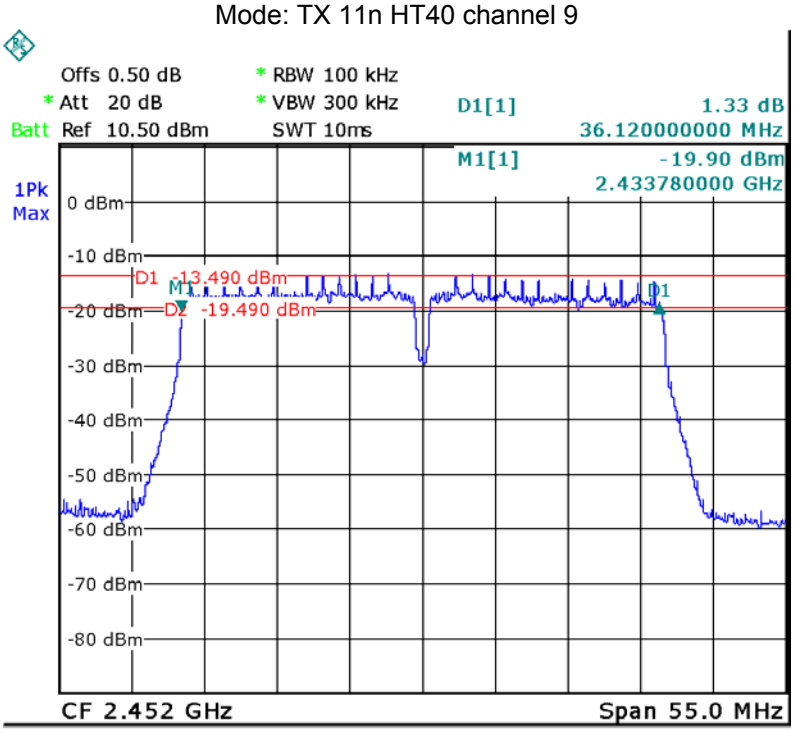
Mode: TX 11n HT40 channel 3



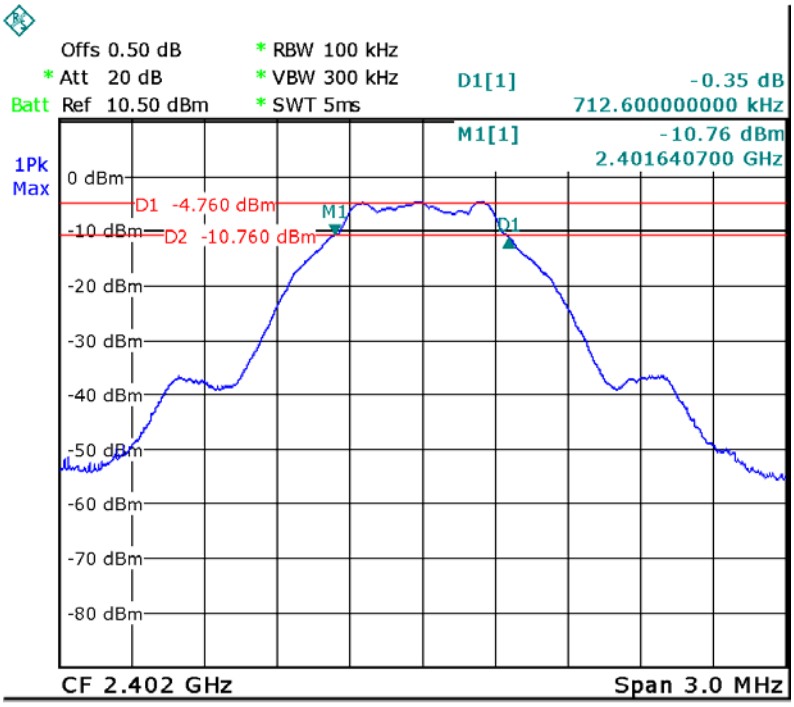
Mode: TX 11n HT40 channel 6



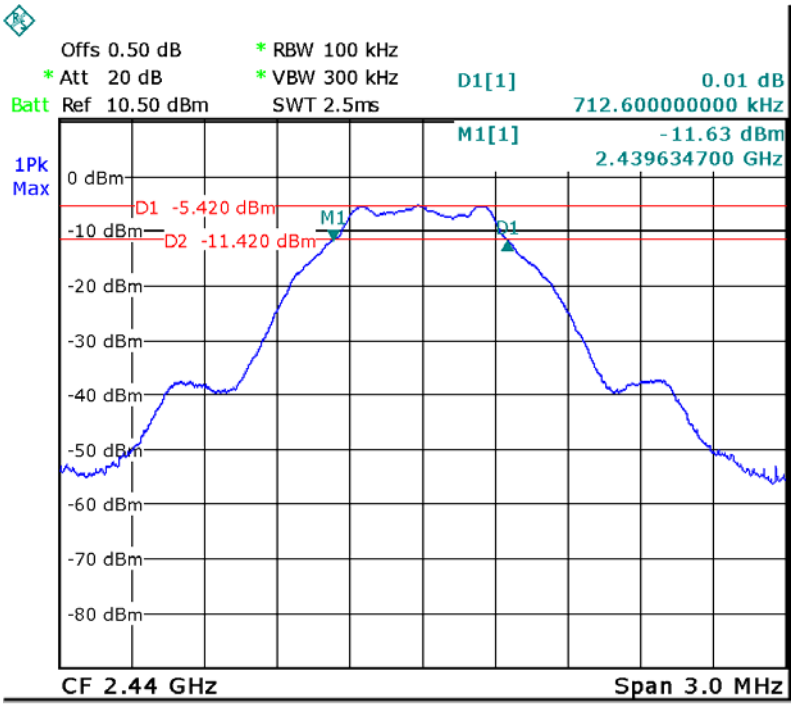
Mode: TX 11n HT40 channel 9



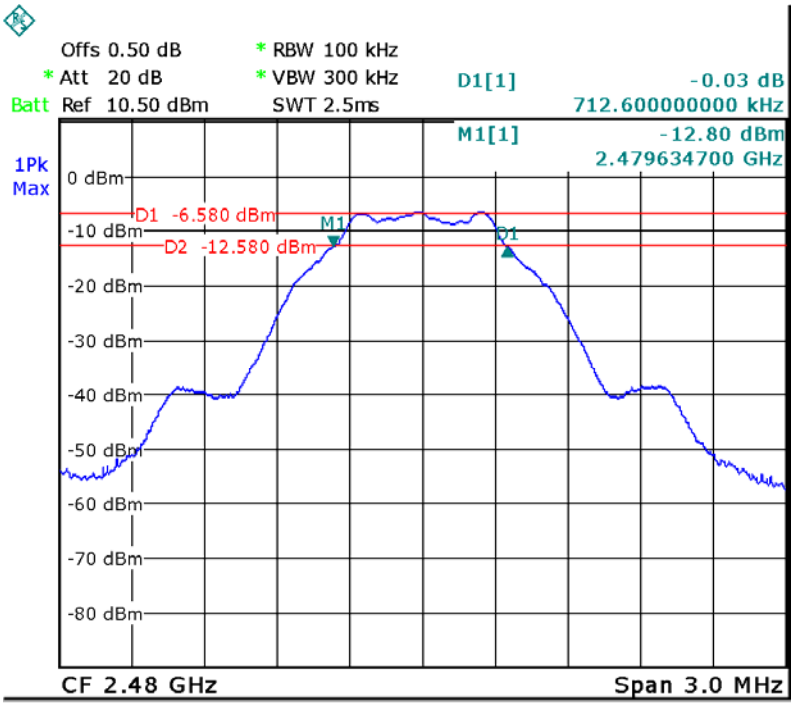
Mode: TX BT BLE channel 0



Mode: TX BT BLE channel 19



Mode: TX BT BLE channel 39



12 Maximum Peak Output Power

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r04 January 7, 2016

12.1 Test Procedure:

KDB 558074 D01 DTS Meas Guidance v03r04 January 7, 2016

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 ⩾ 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 ⩾ 3 RBW

c)Set the span ⩾ 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.

12.2 Test Result:

Test mode :TX 11b		
Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
9.24	9.44	9.36
Limit: 1W/30dBm		

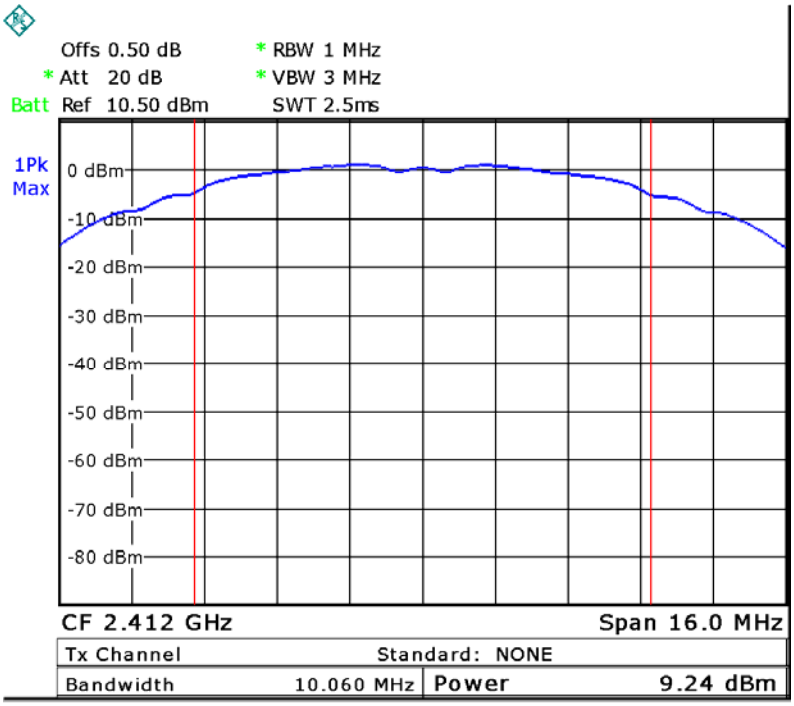
Test mode :TX 11g		
Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
9.24	9.09	9.11
Limit: 1W/30dBm		

Test mode :TX 11n HT20		
Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
9.43	9.19	9.27
Limit: 1W/30dBm		

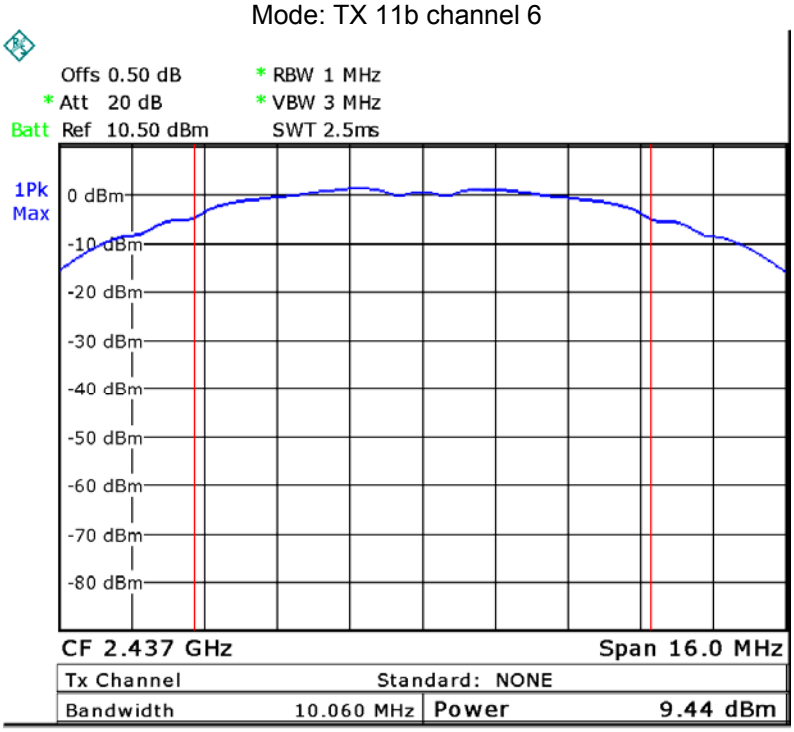
Test mode :TX 11n HT40		
Maximum Peak Output Power (dBm)		
2422MHz	2437MHz	2452MHz
9.28	9.14	9.21
Limit: 1W/30dBm		

Test mode : TX BT BLE		
Maximum Peak Output Power (dBm)		
2402MHz	2440MHz	2480MHz
-3.95	-4.67	-5.83
Limit: 1W/30dBm		

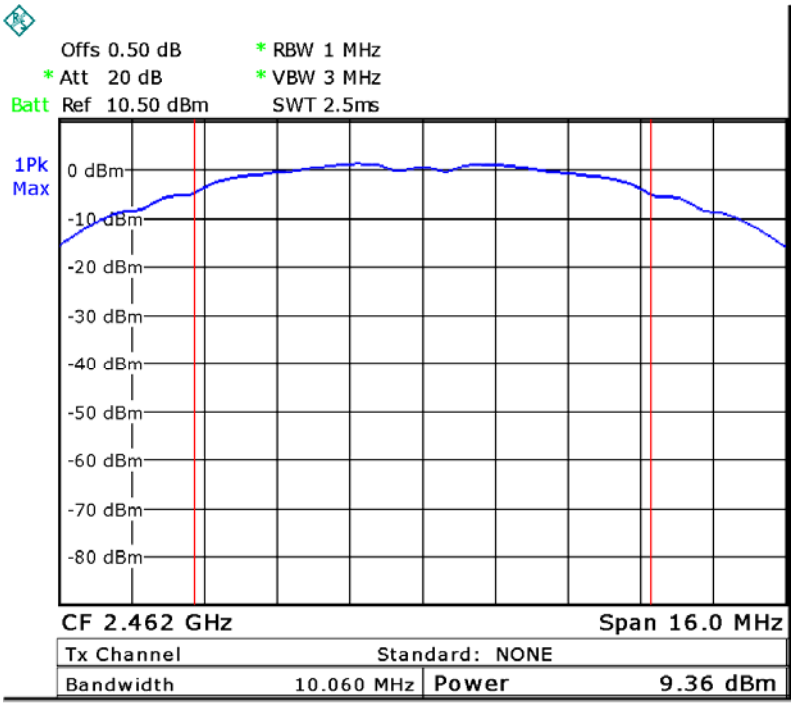
Mode: TX 11b channel 1



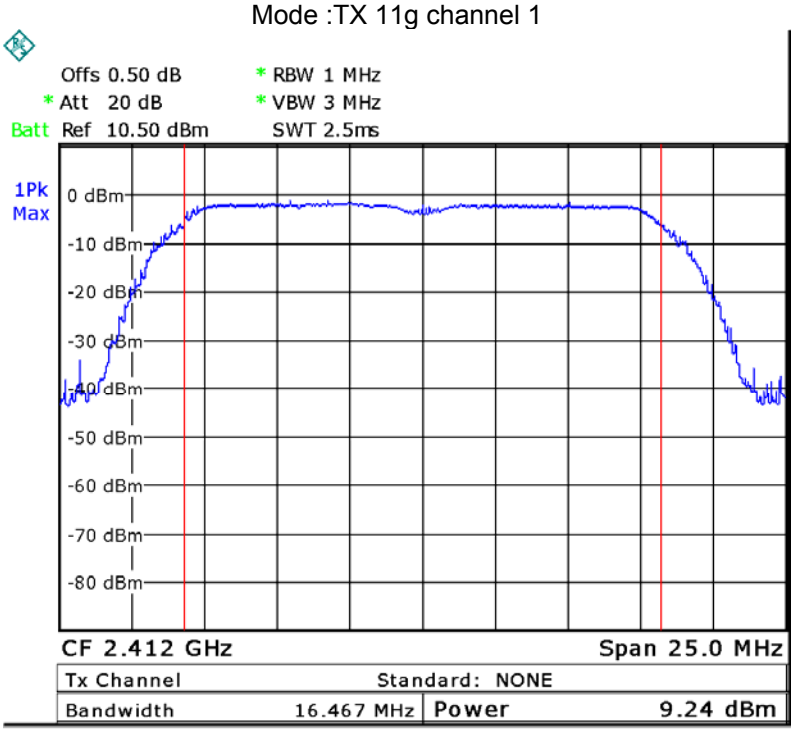
Mode: TX 11b channel 6



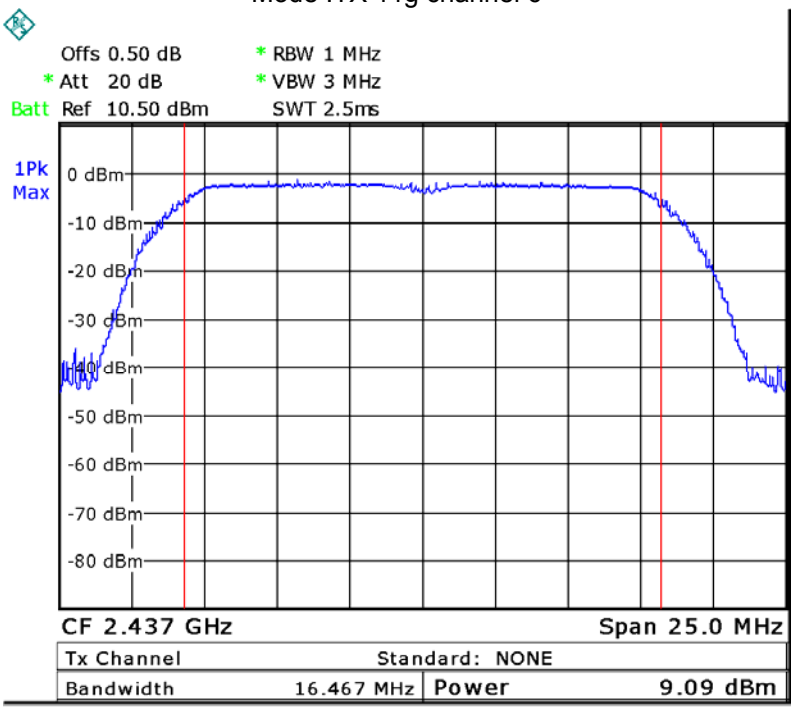
Mode: TX 11b channel 11



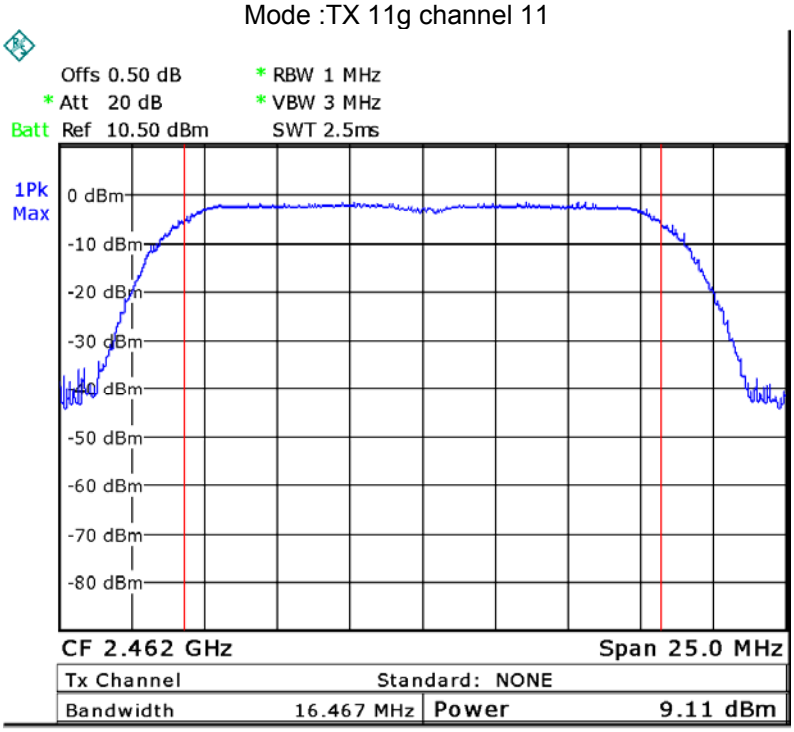
Mode :TX 11g channel 1



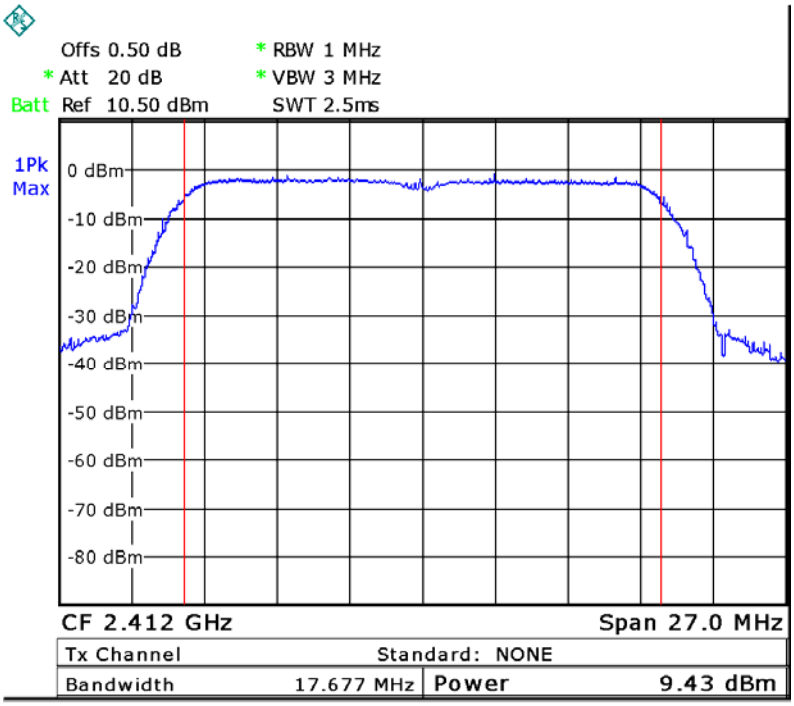
Mode :TX 11g channel 6



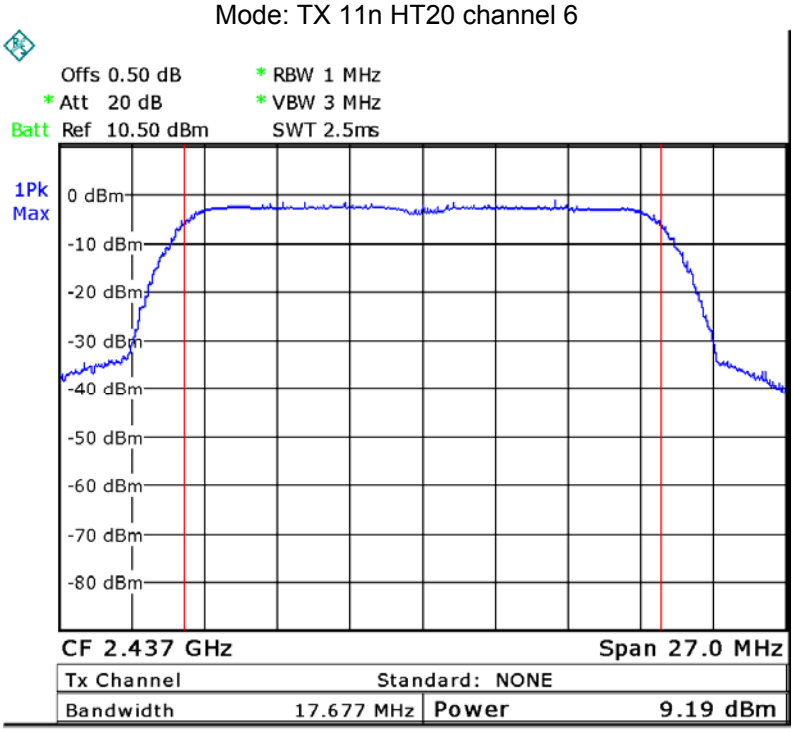
Mode :TX 11g channel 11



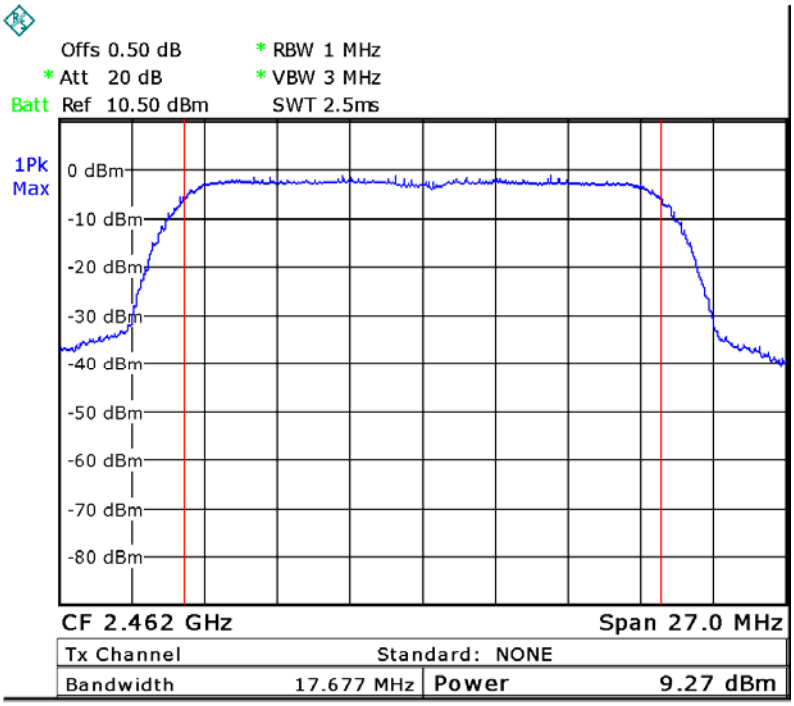
Mode: TX 11n HT20 channel 1



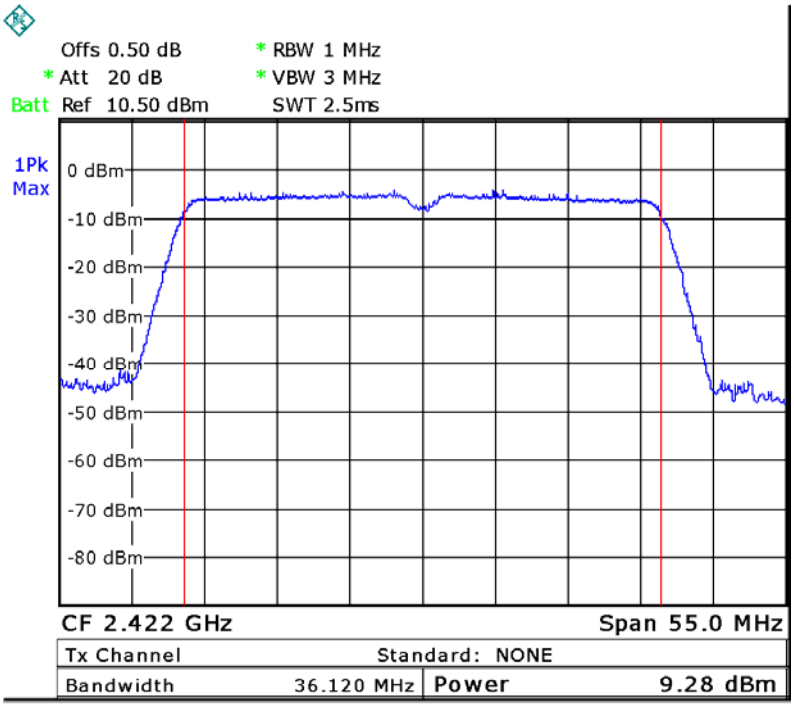
Mode: TX 11n HT20 channel 6



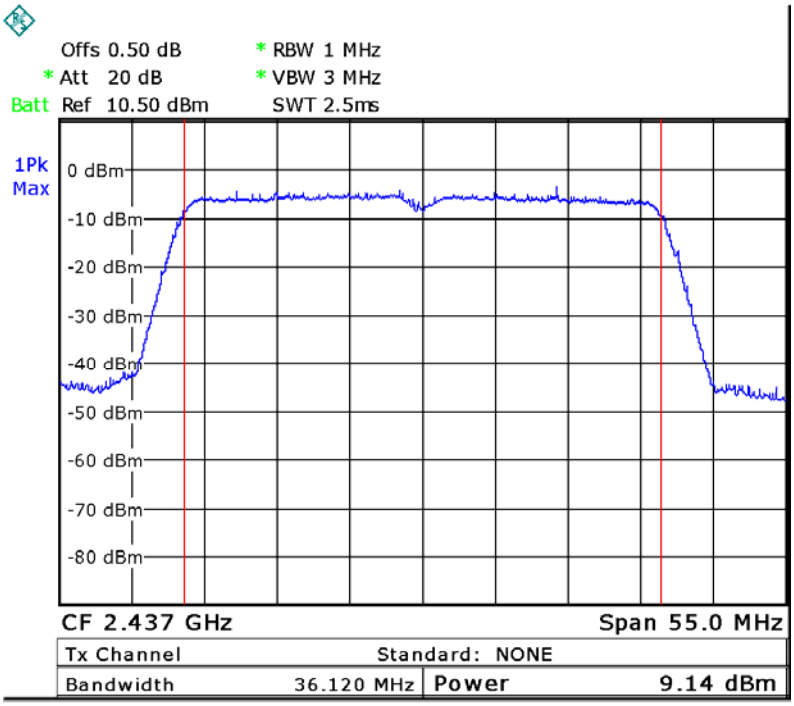
Mode: TX 11n HT20 channel 11



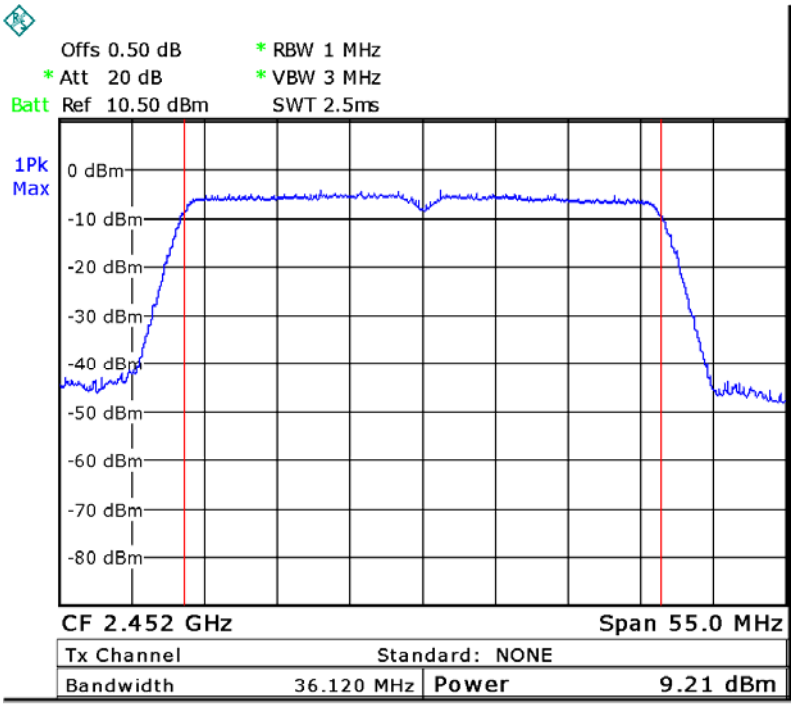
Mode: TX 11n HT40 channel 3



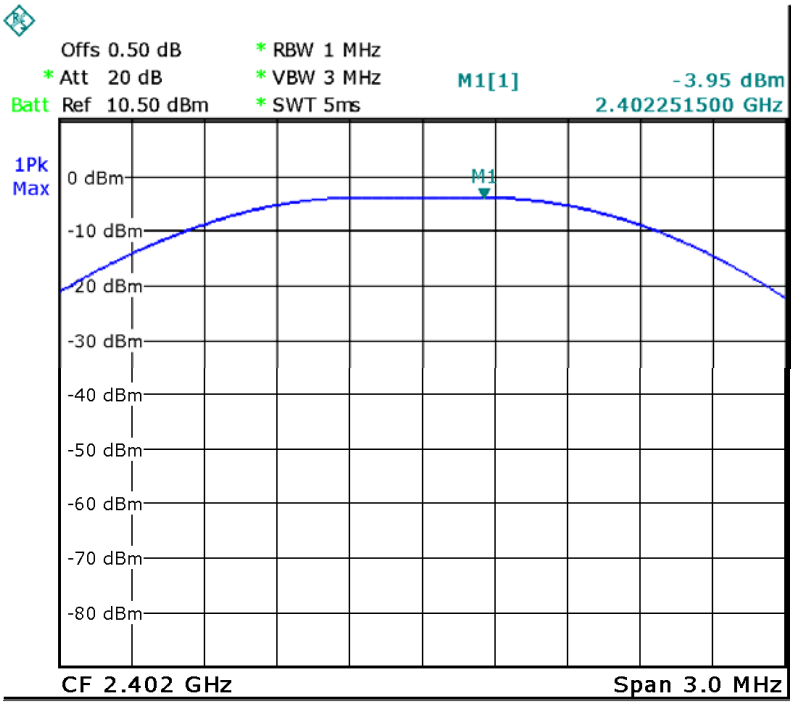
Mode: TX 11n HT40 channel 6



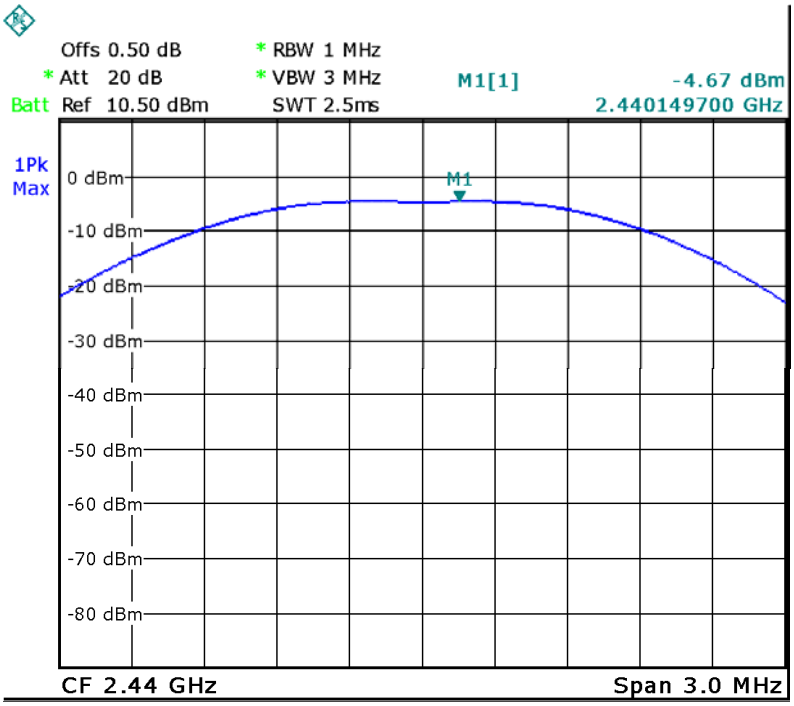
Mode: TX 11n HT40 channel 9



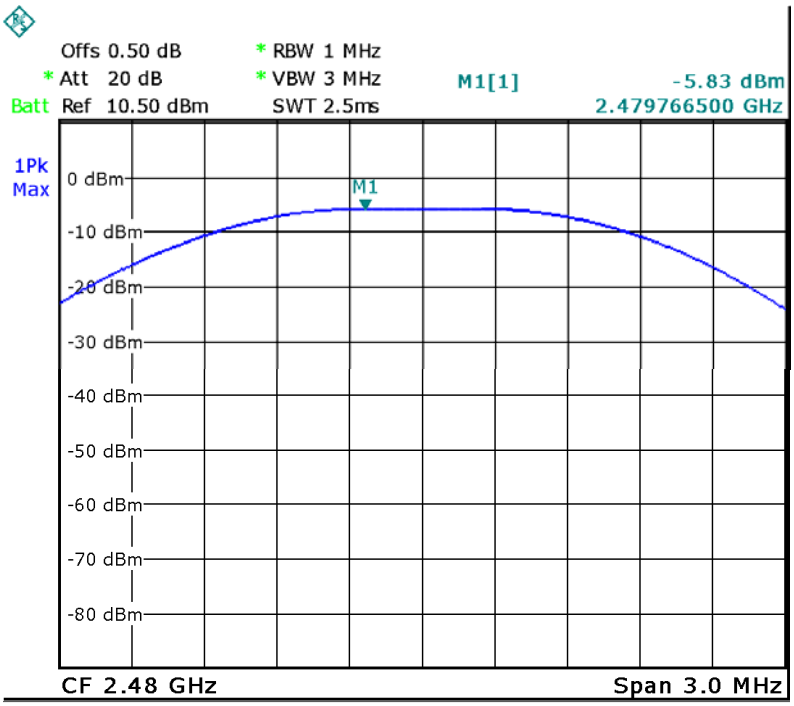
Mode: TX BT BLE channel 0



Mode: TX BT BLE channel 19



Mode: TX BT BLE channel 39



13 Power Spectral density

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 DTS Meas Guidance v03r04 January 7, 2016

13.1 Test Procedure:

KDB 558074 D01 DTS Meas Guidance v03r04 January 7, 2016 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.

13.2 Test Result:

Test mode :TX 11b		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-14.36	-16.51	-16.01
Limit: 8dBm per 3kHz		

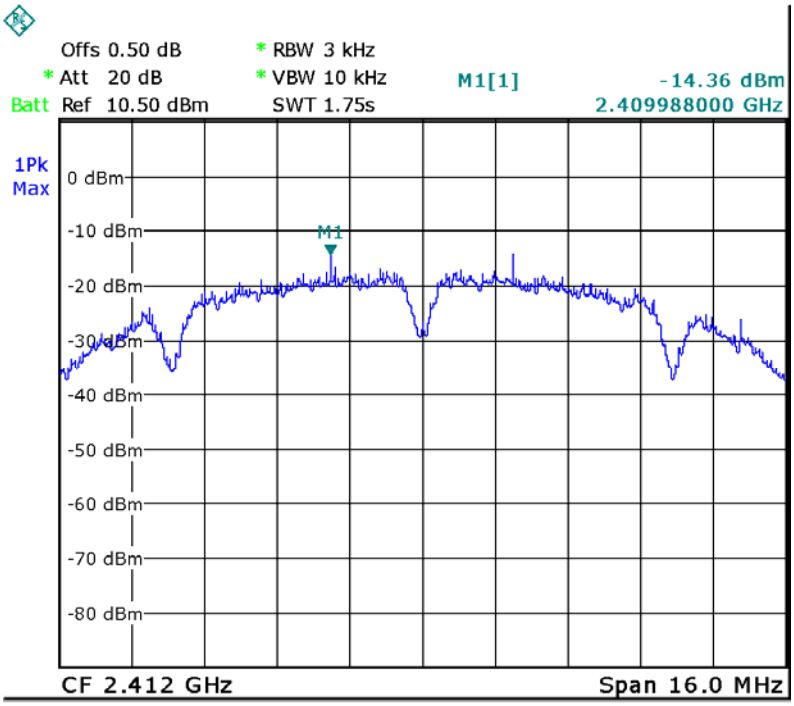
Test mode :TX 11g		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-24.51	-24.97	-25.60
Limit: 8dBm per 3kHz		

Test mode :TX 11n HT20		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-24.85	-25.89	-24.42
Limit: 8dBm per 3kHz		

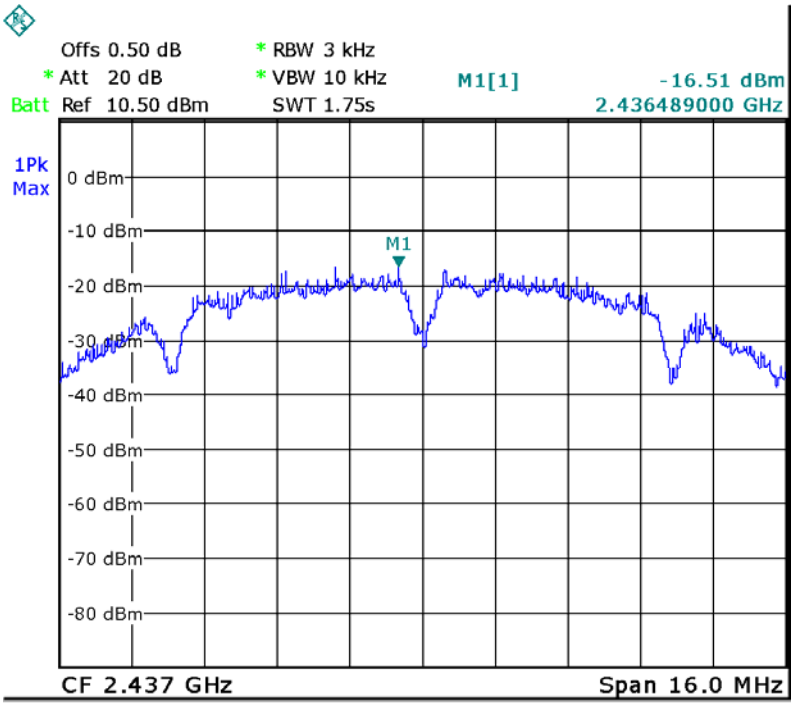
Test mode :TX 11n HT40		
Power Spectral (dBm per 3kHz)		
2422MHz	2437MHz	2452MHz
-28.02	-28.25	-27.49
Limit: 8dBm per 3kHz		

Test mode : TX BT BLE		
Power Spectral (dBm per 3kHz)		
2402MHz	2440MHz	2480MHz
-19.75	-20.44	-21.56
Limit: 8dBm per 3kHz		

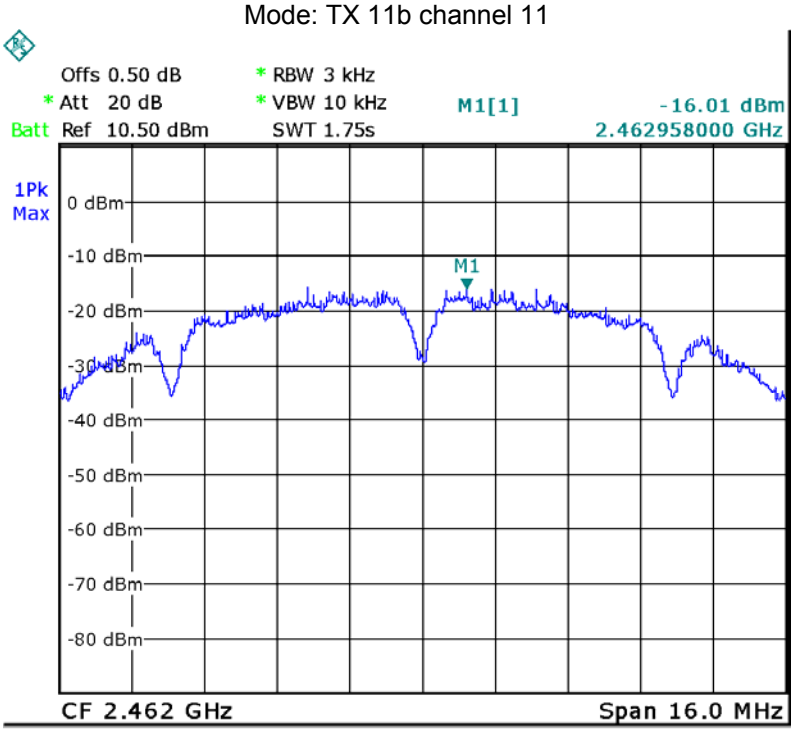
Mode: TX 11b channel 1



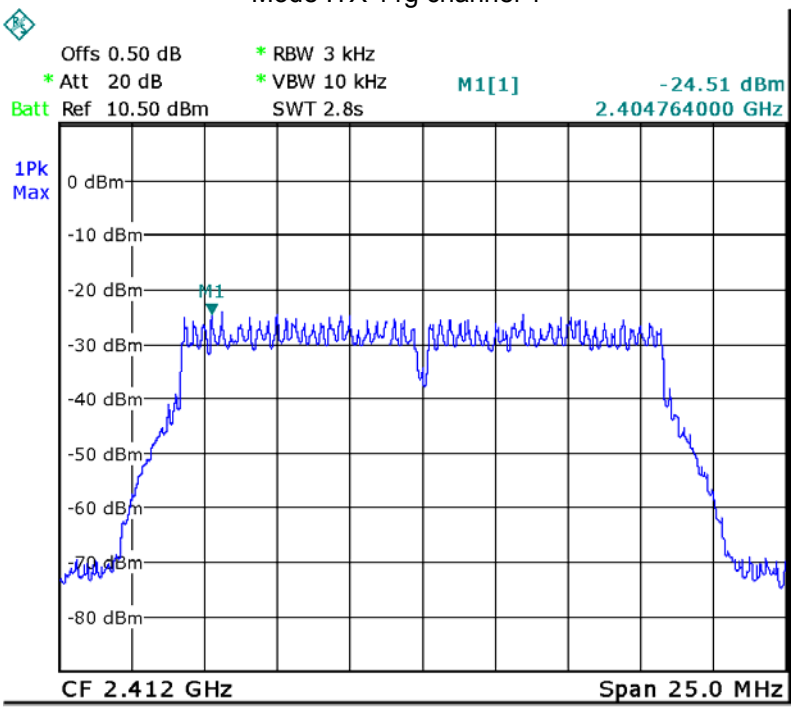
Mode: TX 11b channel 6



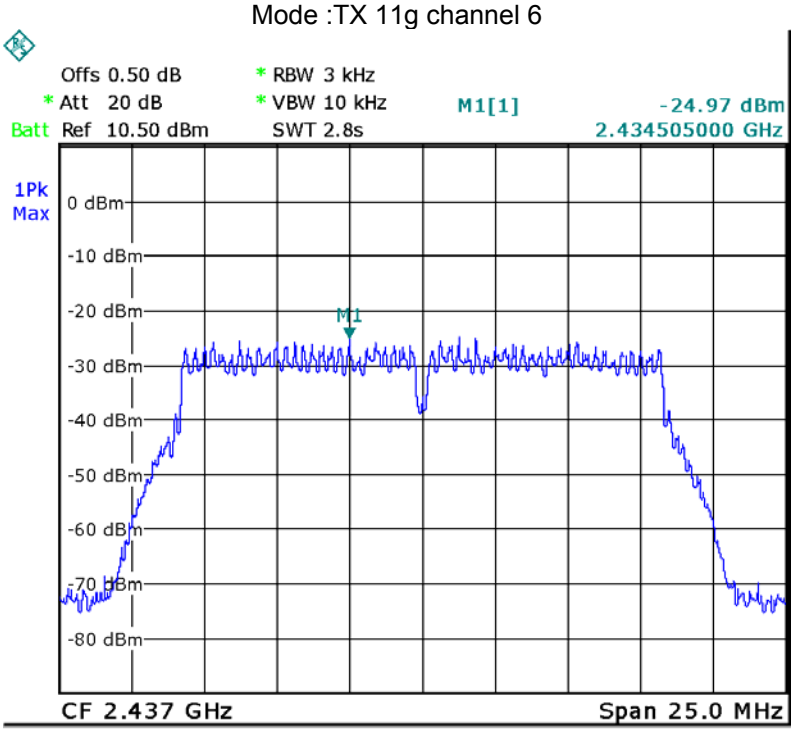
Mode: TX 11b channel 11



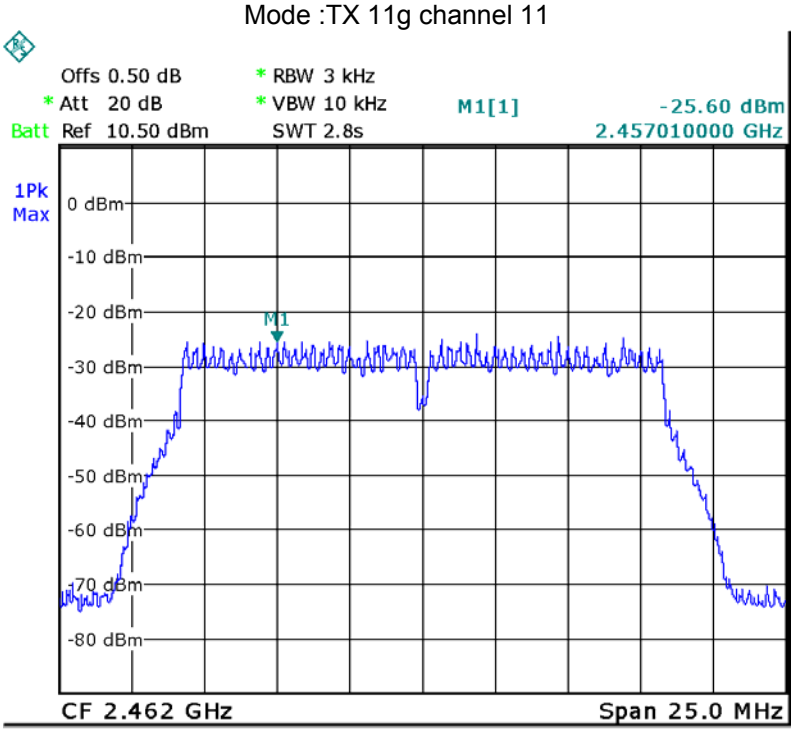
Mode :TX 11g channel 1



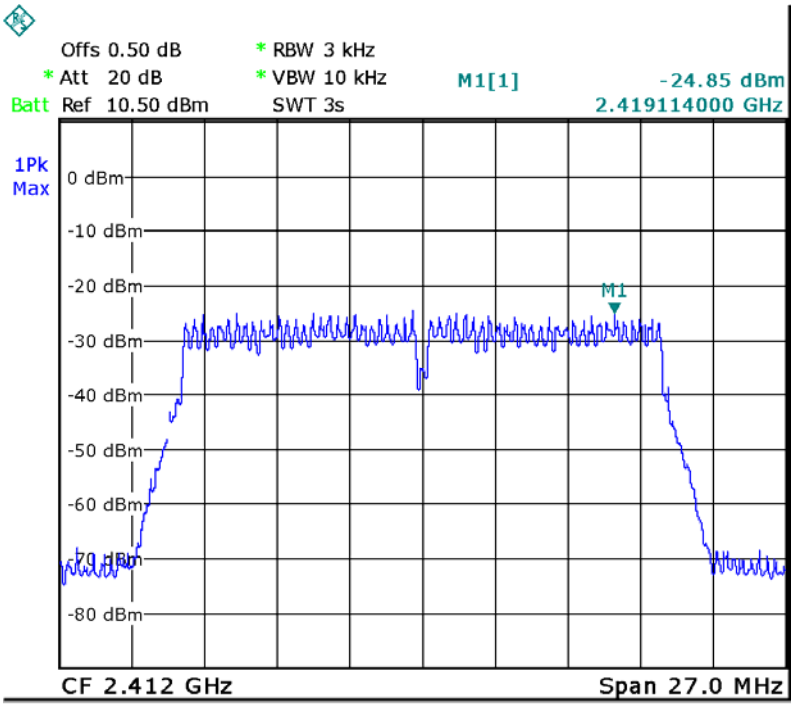
Mode :TX 11g channel 6



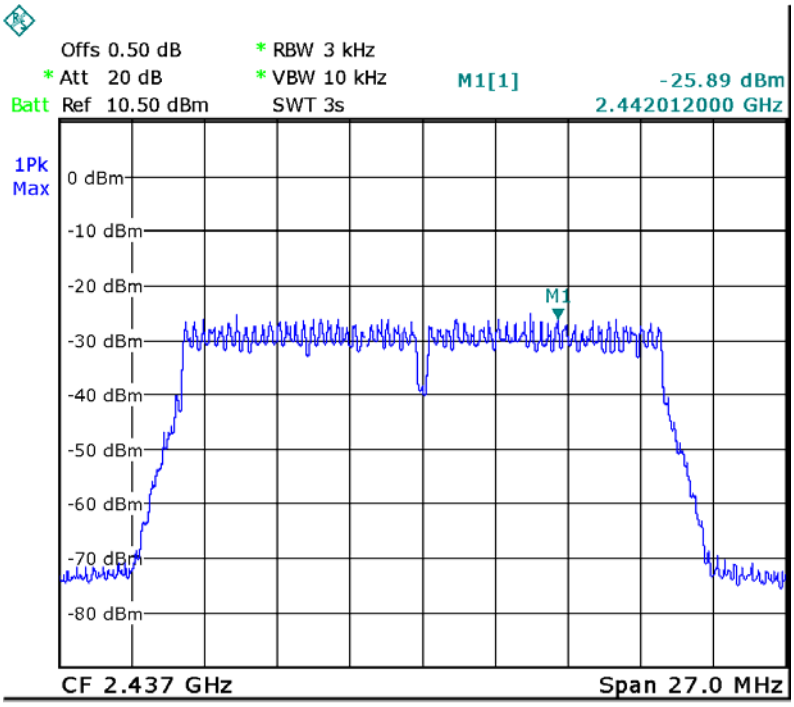
Mode :TX 11g channel 11



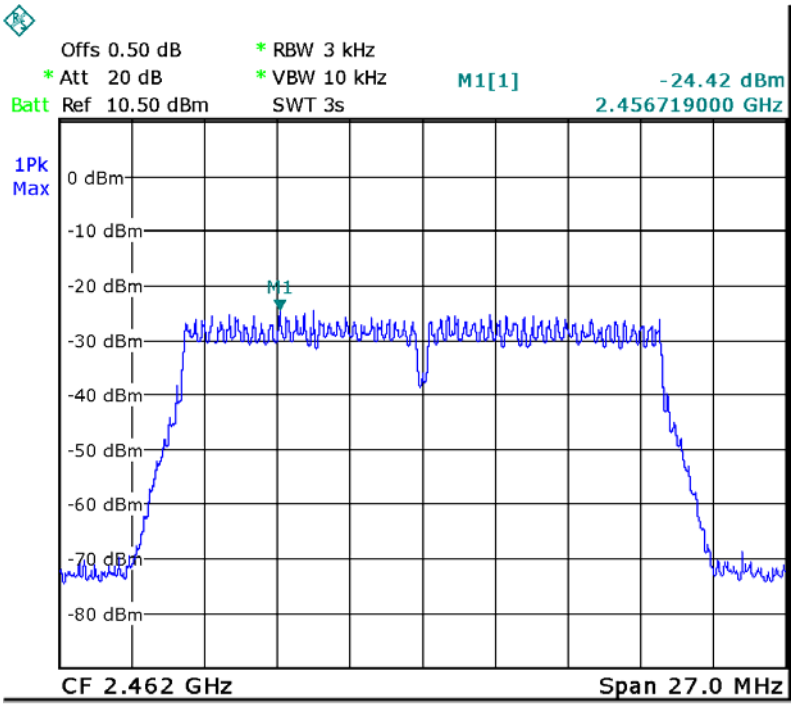
Mode: TX 11n HT20 channel 1



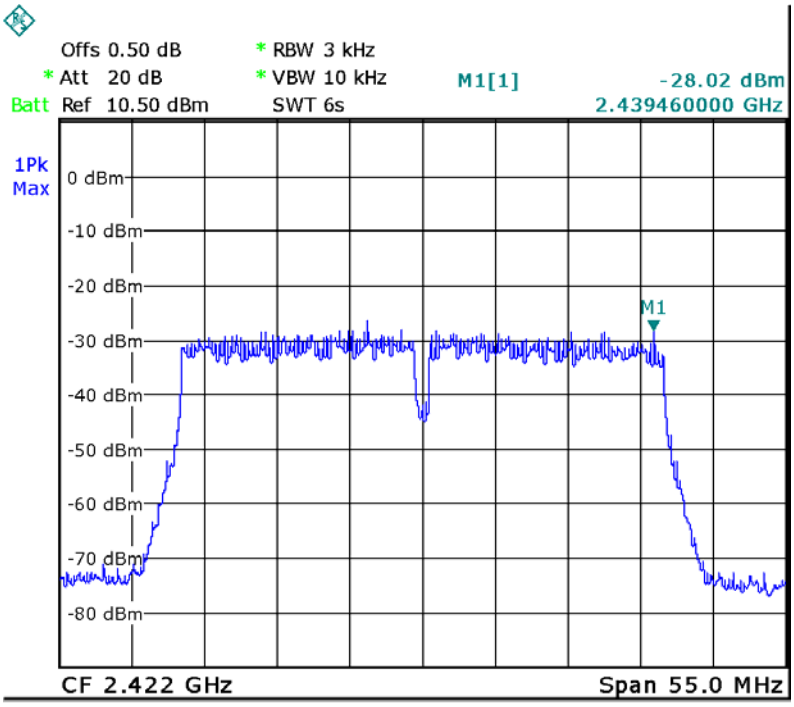
Mode: TX 11n HT20 channel 6



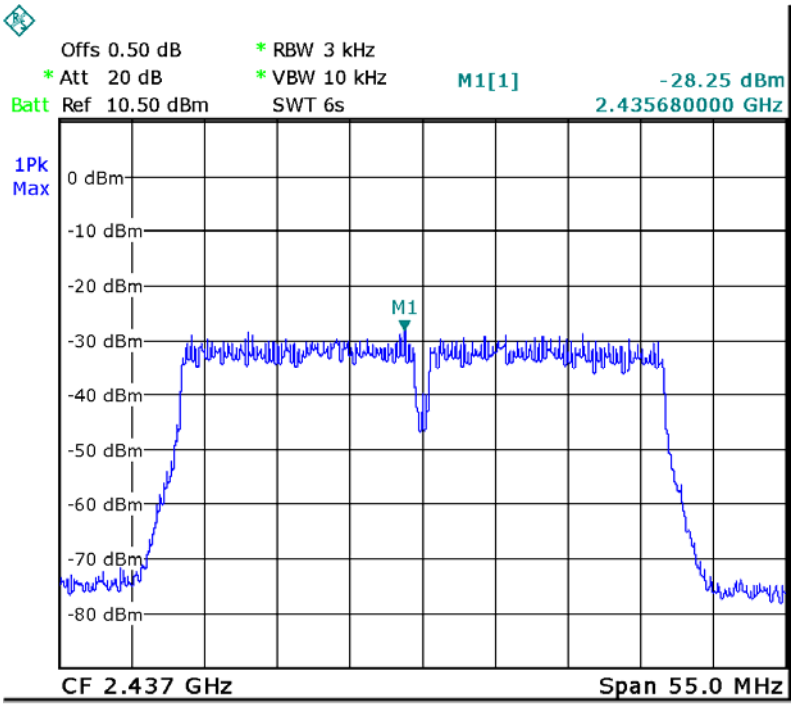
Mode: TX 11n HT20 channel 11



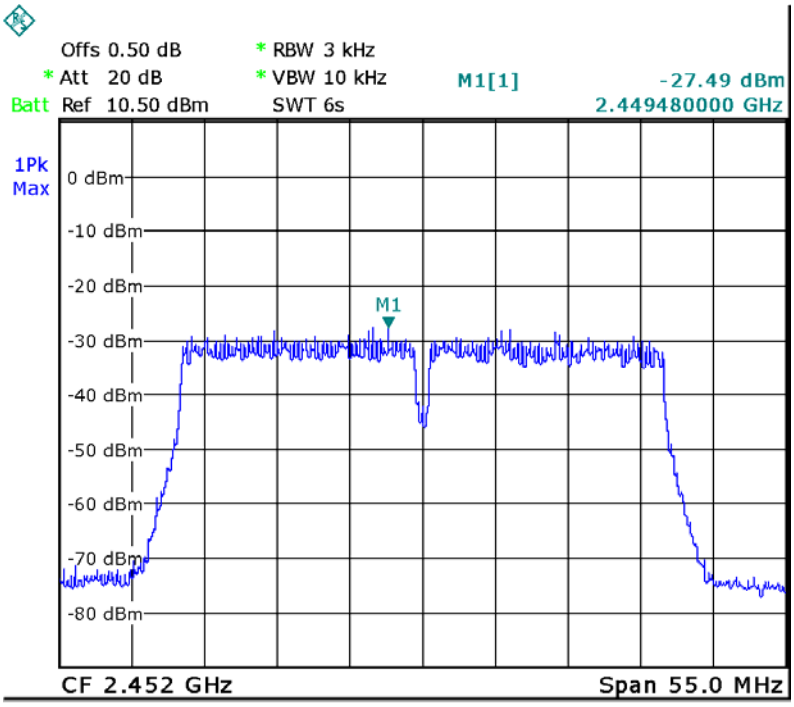
Mode: TX 11n HT40 channel 3



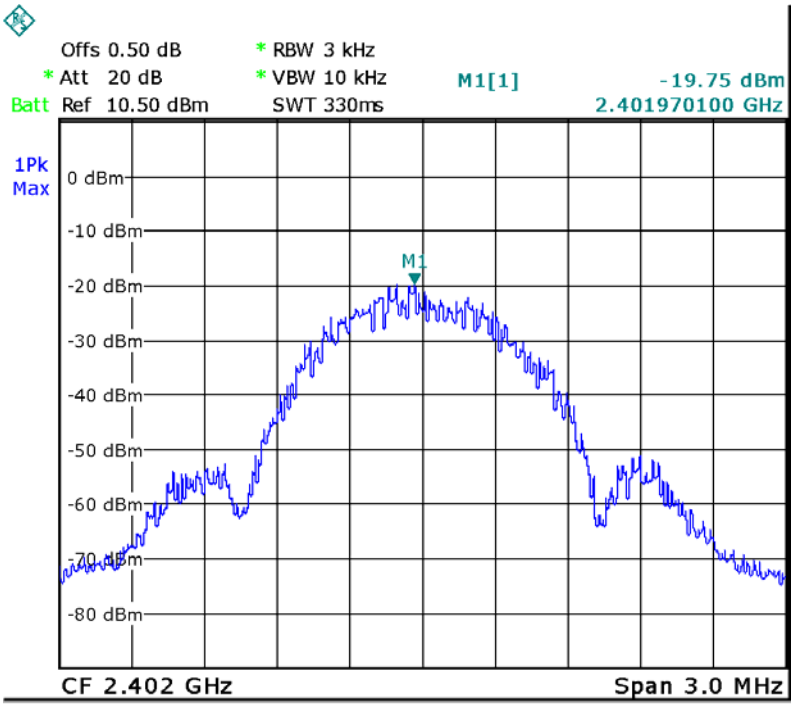
Mode: TX 11n HT40 channel 6



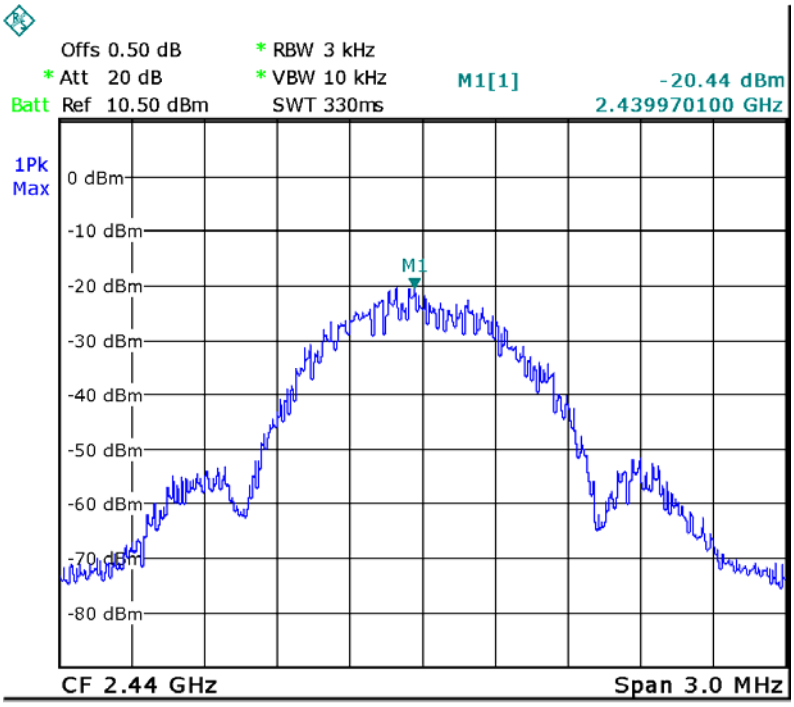
Mode: TX 11n HT40 channel 9



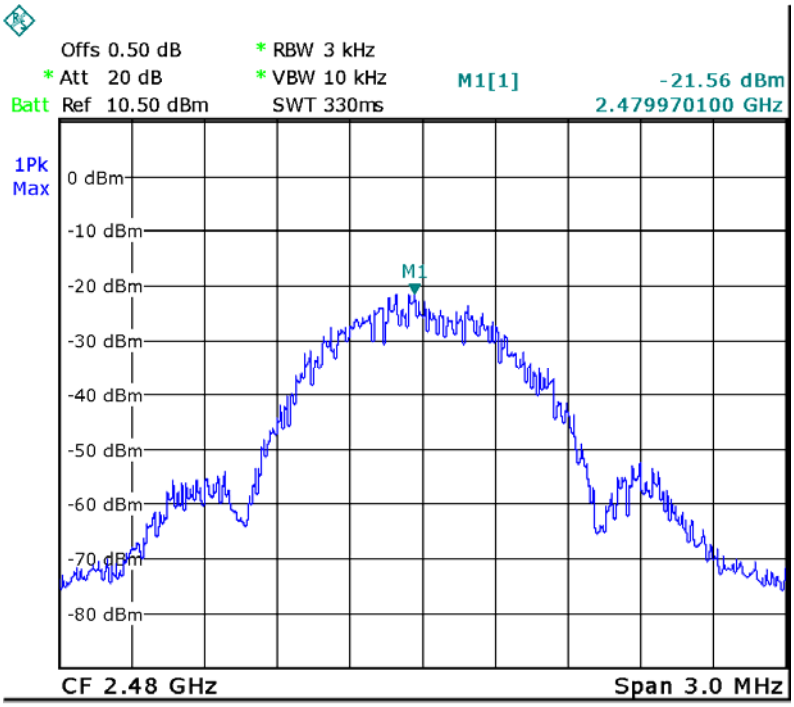
Mode: TX BT BLE channel 0



Mode: TX BT BLE channel 19



Mode: TX BT BLE channel 39



14 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.

15 RF Exposure

Remark: refer to SAR test report: WTS16S0756059E

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