

TEST REPORT

Reference No. : WTS14S0514551E
FCC ID..... : 2ACEVAXF35
Applicant..... : IED CONEXION VIRTUAL S.A DE C.V
Address : Rio Tiber # 103 Int 502 Colonia DF CP: 06500 Cuauhtemoc Mexico
Manufacturer : Shenzhen Kente Science & Technology Co.,Ltd.
Address : Rm ABC, 15F, B Tower, Xuesong Building, Tairan 6th Rd, Tairan
Industrial & Trading Park, Futian, Shenzhen, China
Product Name : 3.5 inch smartphone
Model No. : AX F35
Standards..... : FCC CFR47 Part 15 C Section 15.247:2012
Date of Receipt sample..... : Jun.04, 2014
Date of Test..... : Jun.04~Jun.09, 2014
Date of Issue : Jun.30, 2014
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:

Waltek Services (Shenzhen) Co., Ltd.

Address: 1/F., Fukangtai Building, West Baima Road, Songgang Street, Baoan District, Shenzhen, Guangdong, China

Testing location: 1/F., Fukangtai Building, West Baima Road, Songgang Street, Baoan District, Shenzhen, Guangdong, China

Tel :+86-755-83551033

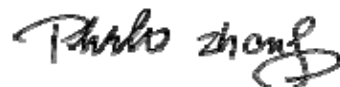
Fax:+86-755-83552400

Compiled by:

Approved by:



Zero Zhou / Project Engineer



Philo Zhong / Manager

2 Test Summary

Test Items	Test Requirement	Result
Radiated Emissions	15.247 15.205(a) 15.209(a)	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
Emissions from out of band	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
1 COVER PAGE.....	1
2 TEST SUMMARY	2
3 CONTENTS	3
4 GENERAL INFORMATION.....	5
4.1 GENERAL DESCRIPTION OF E.U.T.	5
4.2 DETAILS OF E.U.T.	5
4.3 CHANNEL LIST	6
4.4 TEST MODE	7
4.5 TEST FACILITY	8
5 EQUIPMENT USED DURING TEST	9
5.1 EQUIPMENTS LIST	9
5.2 MEASUREMENT UNCERTAINTY	10
5.3 TEST EQUIPMENT CALIBRATION	10
6 CONDUCTED EMISSION	11
6.1 E.U.T. OPERATION	11
6.2 EUT SETUP	11
6.3 MEASUREMENT DESCRIPTION	11
6.4 CONDUCTED EMISSION TEST RESULT	12
7 RADIATED EMISSIONS.....	14
7.1 EUT OPERATION.....	14
7.2 TEST SETUP	15
7.3 SPECTRUM ANALYZER SETUP	16
7.4 TEST PROCEDURE	17
7.5 CORRECTED AMPLITUDE & MARGIN CALCULATION	17
7.6 SUMMARY OF TEST RESULTS	18
8 BAND EDGE MEASUREMENT	33
8.1 TEST PROCEDURE.....	33
8.2 TEST RESULT	34
9 6 DB BANDWIDTH MEASUREMENT	39
9.1 TEST PROCEDURE:	39
9.2 TEST RESULT:	39
10 MAXIMUM PEAK OUTPUT POWER	48
10.1 TEST PROCEDURE:.....	48
10.2 TEST RESULT:	49
11 POWER SPECTRAL DENSITY	50
11.1 TEST PROCEDURE:.....	50
11.2 TEST RESULT:	50
12 ANTENNA REQUIREMENT	59
13 RF EXPOSURE.....	60
13.1 REQUIREMENTS.....	60
13.2 THE PROCEDURES / LIMIT	60
14 PHOTOGRAPHS – MODEL AX F35 TEST SETUP	61
14.1 CONDUCTED EMISSION	61
14.2 RADIATED EMISSION	61
15 PHOTOGRAPHS - CONSTRUCTIONAL DETAILS	65

15.1	MODEL AX F35- EXTERNAL VIEW	65
15.2	MODEL AX F35- – INTERNAL PHOTOS	70

4 General Information

4.1 General Description of E.U.T.

Product Name	: 3.5 inch smartphone
Model No.	: AX F35
Model Difference	: N/A
GSM Band(s)	: GSM 850/1900MHz
GPRS Class	: 12
WCDMA Band(s)	: FDD Band II/V
Wi-Fi Specification	: 802.11b/g/n HT20/n HT40
Bluetooth Version	: Bluetooth v4.0 with BLE
GPS	: Support
NFC	: N/A

4.2 Details of E.U.T.

Operation Frequency	: GSM/GPRS 850: 824~849MHz PCS/GPRS 1900: 1850~1910MHz WCDMA/UPA/DPA Band V: 824~849MHz WCDMA/UPA/DPA Band II: 1850~1910MHz WiFi: 802.11b/g/n HT20:2412-2462MHz 802.11n HT40:2422-2452MHz Bluetooth: 2402-2480MHz GPS:1.57GHz
Max. RF output power	: GSM 850: 32.74dBm PCS 1900: 30.00dBm WCDMA Band V:21.30dBm WCDMA Band II:20.37dBm WiFi:8.87dBm Bluetooth:2.90dBm
Type of Modulation	: GSM,GPRS:GMSK WCDMA:QPSK WiFi:CCK, OFDM Bluetooth: GFSK, Pi/4 DQPSK,8DPSK
Antenna installation	: GSM/WCDMA:Monopole antenna WiFi/Bluetooth:Monopole antenna

Antenna Gain : GSM 850: 0dBi
 PCS 1900: 0dBi
 WCDMA Band II: 0dBi
 WCDMA Band V: 0dBi
 WiFi: 0dBi
 Bluetooth: 0dBi

Technical Data : (1)DC 5V, 500±50mA by Adapter
 (Adapter Input: AC 100-240V, 50/60Hz, 0.2A)
 (2)DC 5V for USB charging
 (3)DC 3.7V by Battery

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	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

4.4 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	108 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	108 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	108 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	108 Mbps	3/6/9	TX
Frequency Range	802.11b	11 Mbps	1/11	TX
	802.11g	54 Mbps	1/11	TX
	802.11n HT20	108 Mbps	1/11	TX
	802.11n HT40	108 Mbps	3/9	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	108 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	1/19/39	TX
Power Spectral Density	BT BLE	1 Mbps	1/19/39	TX
6dB Bandwidth	BT BLE	1 Mbps	1/19/39	TX
Band Edge	BT BLE	1 Mbps	1/19/39	TX
Frequency Range	BT BLE	1 Mbps	1/19/39	TX
Transmitter Spurious Emissions	BT BLE	1 Mbps	1/19/39	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 .

Table 3 Tests Carried Out Under FCC part 15.207 & FCC part 15.209

Test Item	Test Mode
Conduction Emission, 0.15MHz to 30MHz	Communication(Wifi & BT BLE)

4.5 Test Facility

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

- **IC – Registration No.: 7760A-1**

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-1, July 12, 2012.

- **FCC – 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.

5 Equipment Used during Test

5.1 Equipments List

Conducted Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMI Test Receiver	R&S	ESCI	101155	Sep.18,2013	Sep.17,2014
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	Sep.18,2013	Sep.17,2014
3.	Limitter	York	MTS-IMP-136	261115-001-0024	Sep.18,2013	Sep.17,2014
4.	Cable	LARGE	RF300	-	Sep.18,2013	Sep.17,2014
3m Semi-anechoic Chamber for Radiation Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	EMC Analyzer	Agilent	E7405A	MY45114943	Sep.18,2013	Sep.17,2014
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	Sep.18,2013	Sep.17,2014
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	Apr.19,2014	Apr.18,2015
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	Sep.18,2013	Sep.17,2014
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	Apr.19,2014	Apr.18,2015
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	Apr.19,2014	Apr.18,2015
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	Mar.17,2014	Mar.16,2015
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	Apr.10,2014	Apr.09,2015
9	Universal Radio Communication Tester	R&S	CMU 200	112461	Apr. 11,2014	Apr. 10,2015
10	Signal Generator	R&S	SMR20	100046	Apr. 11,2014	Apr. 10,2015
RF Conducted Testing						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMC Analyzer	R&S	ESCI	101155	Sep.18,2013	Sep.17,2014
2.	Humidity Chamber	GF	GTH-225-40-1P	IAA061213	May 16,2014	May 15,2015
3.	DC Power Supply	EVERFINE	WY305	1004002	Apr.11,2014	Apr.10,2015
4.	Universal Radio Communication Tester	R&S	CMU 200	112461	Apr.11,2014	Apr.10,2015
5.	Synthesized Sweeper	HP	8341B	2624A00177	Apr.11,2014	Apr.10,2015
6.	Matching Network	SUN MOON ELECTRONICS	N/A	MP0835-6	Apr.11,2014	Apr.10,2015

5.2 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-6}$
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)

5.3 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.

6 Conducted Emission

Test Requirement:	FCC CFR 47 Part 15 Section 15.207
Test Method:	ANSI C63.4:2003
Test Result:	PASS
Frequency Range:	150kHz to 30MHz
Class/Severity:	Class B
Limit:	66-56 dB μ V between 0.15MHz & 0.5MHz 56 dB μ V between 0.5MHz & 5MHz 60 dB μ V between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)

6.1 E.U.T. Operation

Operating Environment :

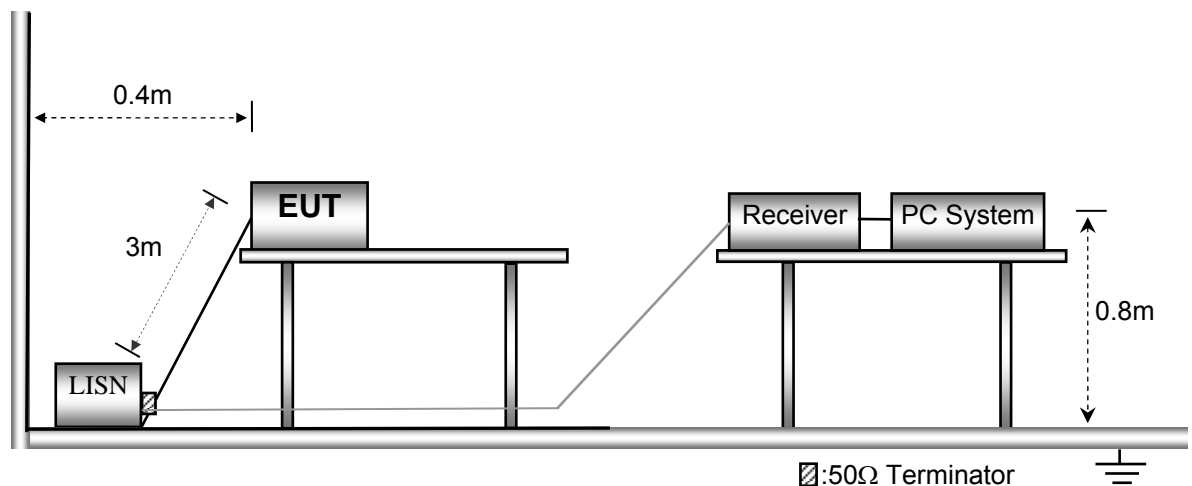
Temperature:	22.2 °C
Humidity:	52.5 % RH
Atmospheric Pressure:	101.2kPa

EUT Operation :

The test was performed in Wifi(802.11b) / Wifi(802.11g) Wifi(802.11n-20)/ Wifi(802.11n-40)/BT BLE) modes, the worst data(Wifi(802.11b)) were shown in the report.

6.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.4:2003.



6.3 Measurement Description

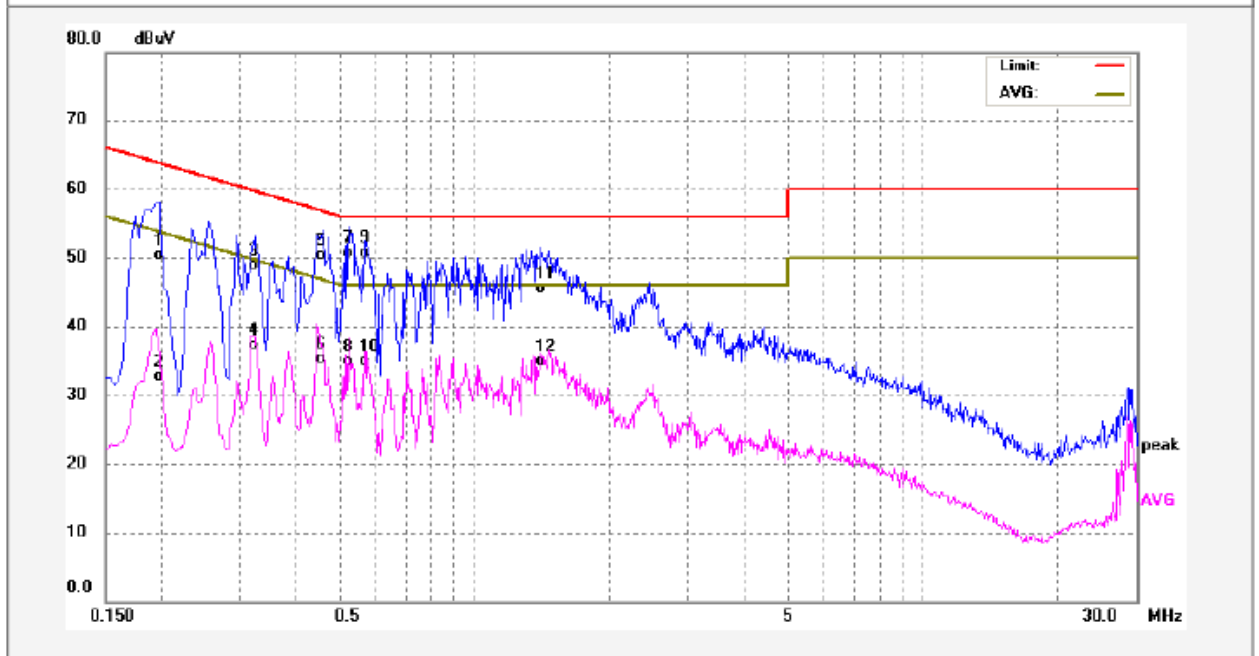
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

6.4 Conducted Emission Test Result

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

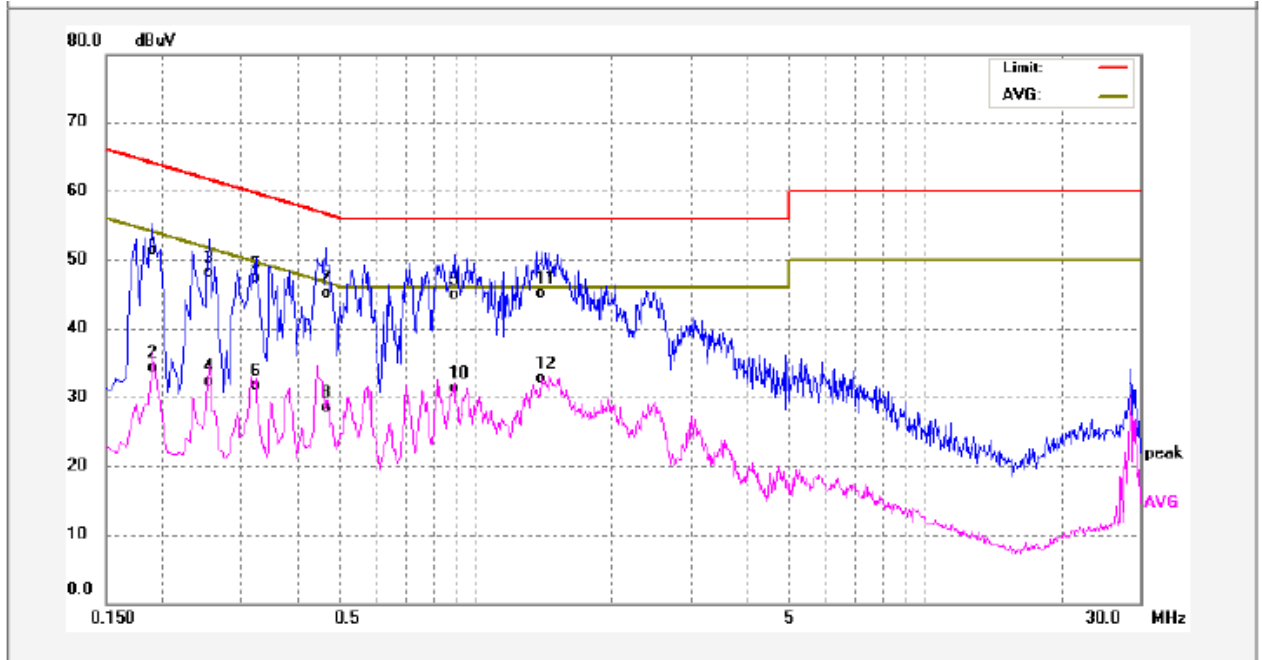
Worst Mode: Wifi(802.11b)

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1980	39.10	11.29	50.39	63.69	-13.30	QP	
2	0.1980	21.39	11.29	32.68	53.69	-21.01	AVG	
3	0.3220	37.52	11.30	48.82	59.65	-10.83	QP	
4	0.3220	25.95	11.30	37.25	49.65	-12.40	AVG	
5	0.4580	38.91	11.31	50.22	56.73	-6.51	QP	
6	0.4580	23.98	11.31	35.29	46.73	-11.44	AVG	
7	0.5220	39.34	11.31	50.65	56.00	-5.35	QP	
8	0.5220	23.69	11.31	35.00	46.00	-11.00	AVG	
9	0.5700	39.37	11.32	50.69	56.00	-5.31	QP	
10	0.5700	23.68	11.32	35.00	46.00	-11.00	AVG	
11	1.4060	34.39	11.19	45.58	56.00	-10.42	QP	
12	1.4060	23.70	11.19	34.89	46.00	-11.11	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1900	39.99	11.27	51.26	64.03	-12.77	QP	
2	0.1900	23.02	11.27	34.29	54.03	-19.74	AVG	
3	0.2540	36.71	11.30	48.01	61.62	-13.61	QP	
4	0.2540	21.03	11.30	32.33	51.62	-19.29	AVG	
5	0.3220	35.97	11.30	47.27	59.65	-12.38	QP	
6	0.3220	20.45	11.30	31.75	49.65	-17.90	AVG	
7	0.4620	33.85	11.31	45.16	56.66	-11.50	QP	
8	0.4620	17.16	11.31	28.47	46.66	-18.19	AVG	
9	0.8900	33.71	11.24	44.95	56.00	-11.05	QP	
10	0.8900	19.97	11.24	31.21	46.00	-14.79	AVG	
11	1.3980	33.87	11.19	45.06	56.00	-10.94	QP	
12	1.3980	21.43	11.19	32.62	46.00	-13.38	AVG	

7 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.247

Test Method: ANSI C63.4:2003

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	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
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	$20\log^{(500)}$

7.1 EUT Operation

Operating Environment :

Temperature: 22.5 °C

Humidity: 52.1 % RH

Atmospheric Pressure: 101.2kPa

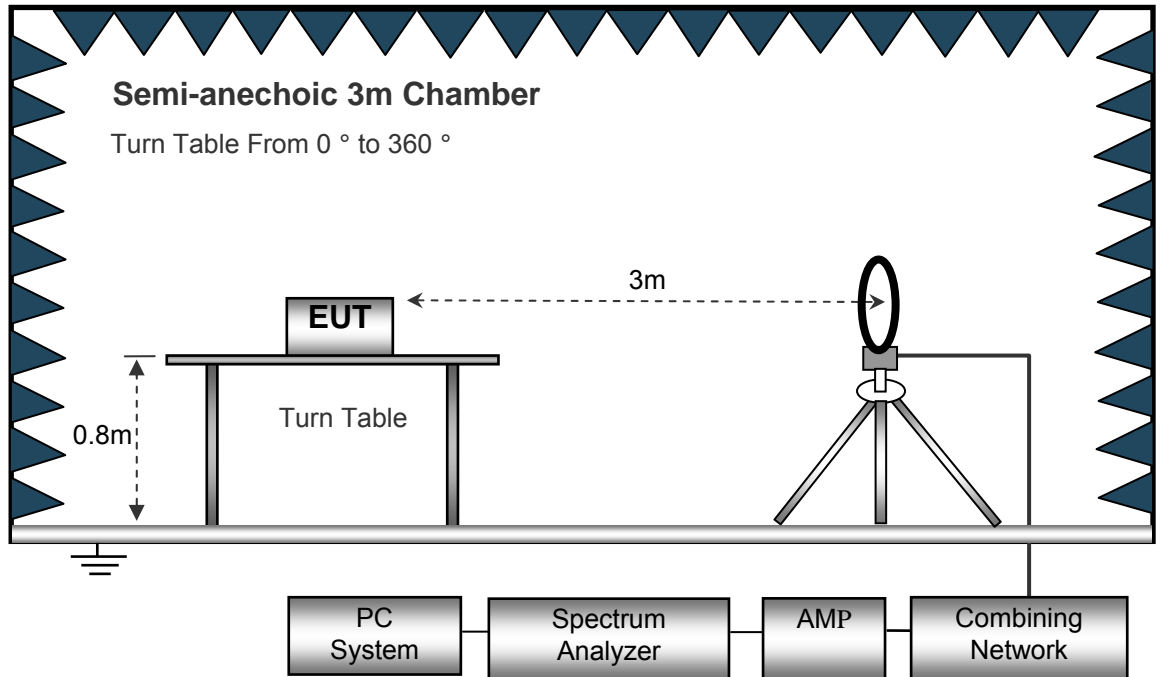
EUT Operation :

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

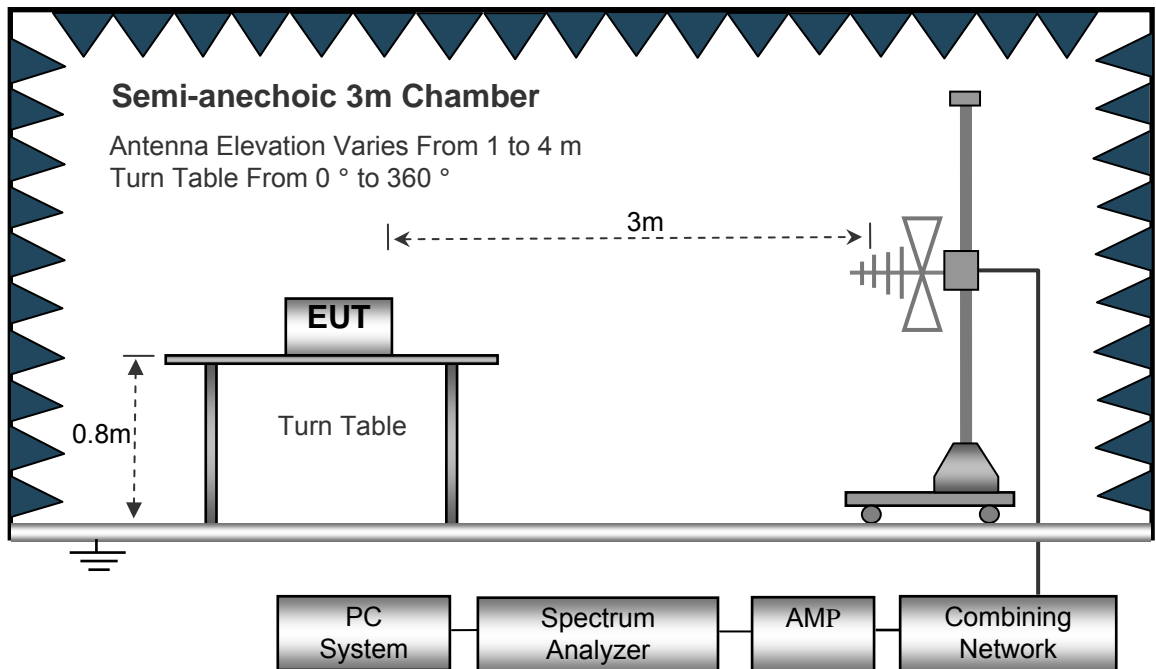
7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4: 2003.

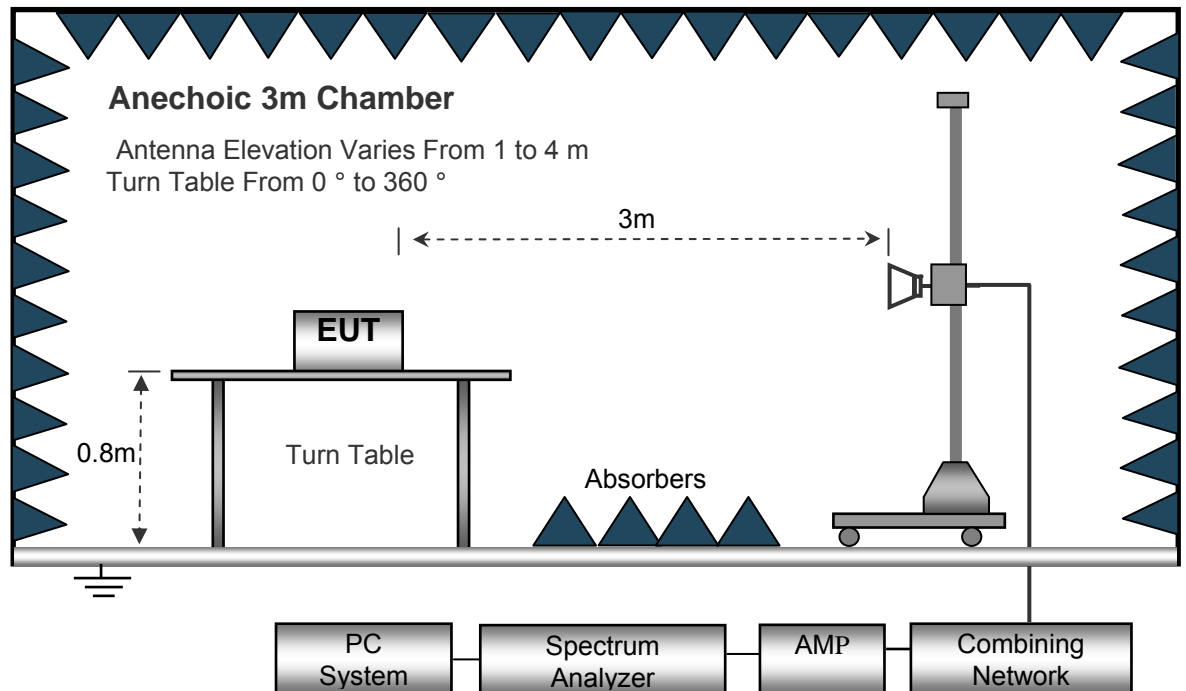
The test setup for emission measurement below 30MHz.



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



The test setup for emission measurement above 1 GHz.



7.3 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

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:

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

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:

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

7.6 Summary of Test Results

Wifi:

Test Frequency: 32.768kHz ~ 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)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: Low Channel 2412MHz									
201.36	21.6	QP	241	1.3	H	11.26	32.86	40	-7.14
201.36	19.78	QP	243	1.5	V	11.26	31.04	40	-8.96
4824	54.68	PK	215	1.3	V	-1.06	53.62	74	-20.38
4824	43.22	Ave	33	1.9	V	-1.06	42.16	54	-11.84
7236	42.18	PK	94	1.5	H	1.33	43.51	74	-30.49
7236	36.33	Ave	8	1.2	H	1.33	37.66	54	-16.34
2310.7	43.08	PK	29	1.5	V	-13.19	29.89	74	-44.11
2310.7	27.61	Ave	270	1.2	V	-13.19	14.42	54	-39.58
2383.04	42.1	PK	151	1.2	H	-13.14	28.96	74	-45.04
2383.04	36.24	Ave	253	1.4	H	-13.14	23.1	54	-30.9
2492.85	42.06	PK	1	1.1	V	-13.08	28.98	74	-45.02
2492.85	36.37	Ave	248	1.5	V	-13.08	23.29	54	-30.71

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: Middle Channel 2437MHz									
201.36	21.83	QP	250	1.0	H	11.26	33.09	40	-6.91
201.36	19.68	QP	134	1.0	V	11.26	30.94	40	-9.06
4874	53.22	PK	285	1.8	V	-0.62	52.6	74	-21.4
4874	44.38	Ave	208	1.9	V	-0.62	43.76	54	-10.24
7311	43.43	PK	46	1.4	H	2.21	45.64	74	-28.36
7311	37.96	Ave	181	2.0	H	2.21	40.17	54	-13.83
2341.83	45.38	PK	229	1.7	V	-13.19	32.19	74	-41.81
2341.83	37.81	Ave	348	1.0	V	-13.19	24.62	54	-29.38
2367.68	42.2	PK	275	2.0	H	-13.14	29.06	74	-44.94
2367.68	37.16	Ave	327	1.6	H	-13.14	24.02	54	-29.98
2495.06	44.7	PK	244	1.3	V	-13.08	31.62	74	-42.38
2495.06	37.38	Ave	55	1.3	V	-13.08	24.3	54	-29.7

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: High Channel 2462MHz									
201.36	20.66	QP	11	1.5	H	11.26	31.92	40	-8.08
201.36	19.49	QP	264	1.4	V	11.26	30.75	40	-9.25
4924	53.52	PK	229	1.2	V	-0.24	53.28	74	-20.72
4924	44.52	Ave	301	1.8	V	-0.24	44.28	54	-9.72
7386	42.67	PK	109	1.3	H	2.84	45.51	74	-28.49
7386	36.67	Ave	130	1.9	H	2.84	39.51	54	-14.49
2313.86	46.6	PK	67	1.7	V	-13.19	33.41	74	-40.59
2313.86	37.32	Ave	139	1.9	V	-13.19	24.13	54	-29.87
2383.55	43.1	PK	194	1.9	H	-13.14	29.96	74	-44.04
2383.55	36.46	Ave	219	1.0	H	-13.14	23.32	54	-30.68
2497.84	44.31	PK	284	2.0	V	-13.08	31.23	74	-42.77
2497.84	37.09	Ave	332	1.4	V	-13.08	24.01	54	-29.99

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11g: Low Channel 2412MHz									
201.36	20.82	QP	121	1.8	H	11.26	32.08	40	-7.92
201.36	18.61	QP	48	1.7	V	11.26	29.87	40	-10.13
4824	52.93	PK	101	1.1	V	-1.06	51.87	74	-22.13
4824	44.71	Ave	146	1.4	V	-1.06	43.65	54	-10.35
7236	42.41	PK	326	1.6	H	1.33	43.74	74	-30.26
7236	37.14	Ave	141	1.9	H	1.33	38.47	54	-15.53
2329.57	45.43	PK	207	1.7	V	-13.19	32.24	74	-41.76
2329.57	36.18	Ave	71	2.0	V	-13.19	22.99	54	-31.01
2387.64	42.36	PK	261	1.2	H	-13.14	29.22	74	-44.78
2387.64	37.13	Ave	255	1.7	H	-13.14	23.99	54	-30.01
2493.18	42.93	PK	82	1.9	V	-13.08	29.85	74	-44.15
2493.18	36.94	Ave	145	1.5	V	-13.08	23.86	54	-30.14

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11g: Middle Channel 2437MHz									
201.36	21.62	QP	108	1.4	H	11.26	32.88	40	-7.12
201.36	18.21	QP	162	1.5	V	11.26	29.47	40	-10.53
4874	53.86	PK	13	1.4	V	-0.62	53.24	74	-20.76
4874	45.65	Ave	344	1.4	V	-0.62	45.03	54	-8.97
7311	42.23	PK	237	1.7	H	2.21	44.44	74	-29.56
7311	37.45	Ave	3	1.8	H	2.21	39.66	54	-14.34
2316.32	46.46	PK	228	1.5	V	-13.19	33.27	74	-40.73
2316.32	36.55	Ave	94	1.6	V	-13.19	23.36	54	-30.64
2374.31	42.61	PK	335	1.6	H	-13.14	29.47	74	-44.53
2374.31	37.51	Ave	75	1.8	H	-13.14	24.37	54	-29.63
2496.69	44.4	PK	149	1.7	V	-13.08	31.32	74	-42.68
2496.69	36.13	Ave	192	1.0	V	-13.08	23.05	54	-30.95

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11g: High Channel 2462MHz									
201.36	20.72	QP	177	1.2	H	11.26	31.98	40	-8.02
201.36	18.94	QP	82	1.9	V	11.26	30.2	40	-9.8
4924	53.03	PK	268	1.7	V	-0.24	52.79	74	-21.21
4924	45.96	Ave	84	1.0	V	-0.24	45.72	54	-8.28
7386	42.21	PK	235	1.5	H	2.84	45.05	74	-28.95
7386	37.97	Ave	345	2.0	H	2.84	40.81	54	-13.19
2310.6	45.57	PK	241	1.3	V	-13.19	32.38	74	-41.62
2310.6	37.33	Ave	20	1.7	V	-13.19	24.14	54	-29.86
2352.87	42.76	PK	227	1.5	H	-13.14	29.62	74	-44.38
2352.87	36.2	Ave	282	1.4	H	-13.14	23.06	54	-30.94
2490.28	44.4	PK	160	1.8	V	-13.08	31.32	74	-42.68
2490.28	36.54	Ave	42	2.0	V	-13.08	23.46	54	-30.54

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
n20: Low Channel 2412MHz									
201.36	21.07	QP	196	1.9	H	11.26	32.33	40	-7.67
201.36	19.23	QP	168	1.7	V	11.26	30.49	40	-9.51
4824	52.99	PK	247	1.2	V	-1.06	51.93	74	-22.07
4824	46.92	Ave	224	1.4	V	-1.06	45.86	54	-8.14
7236	41.41	PK	229	1.6	H	1.33	42.74	74	-31.26
7236	36.45	Ave	95	1.6	H	1.33	37.78	54	-16.22
2332.77	45.69	PK	344	1.2	V	-13.19	32.5	74	-41.5
2332.77	36.57	Ave	233	1.9	V	-13.19	23.38	54	-30.62
2378.39	44.08	PK	344	1.3	H	-13.14	30.94	74	-43.06
2378.39	37.27	Ave	9	1.8	H	-13.14	24.13	54	-29.87
2498.01	43.63	PK	282	1.6	V	-13.08	30.55	74	-43.45
2498.01	36.09	Ave	295	1.6	V	-13.08	23.01	54	-30.99

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
n20: Middle Channel 2437MHz									
201.36	21.45	QP	338	1.4	H	11.26	32.71	40	-7.29
201.36	19.42	QP	47	1.4	V	11.26	30.68	40	-9.32
4874	53.05	PK	294	1.3	V	-0.62	52.43	74	-21.57
4874	46.05	Ave	44	1.9	V	-0.62	45.43	54	-8.57
7311	42.01	PK	58	1.2	H	2.21	44.22	74	-29.78
7311	37.61	Ave	250	1.6	H	2.21	39.82	54	-14.18
2338.94	46.27	PK	253	1.4	V	-13.19	33.08	74	-40.92
2338.94	37.99	Ave	289	1.6	V	-13.19	24.8	54	-29.2
2370.47	44.19	PK	175	1.8	H	-13.14	31.05	74	-42.95
2370.47	37.51	Ave	217	1.7	H	-13.14	24.37	54	-29.63
2497.66	42.65	PK	174	1.4	V	-13.08	29.57	74	-44.43
2497.66	36.83	Ave	245	1.5	V	-13.08	23.75	54	-30.25

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
n20: High Channel 2462MHz									
201.36	21.96	QP	290	1.7	H	11.26	33.22	40	-6.78
201.36	19.49	QP	271	1.5	V	11.26	30.75	40	-9.25
4924	53.63	PK	225	1.6	V	-0.24	53.39	74	-20.61
4924	45.65	Ave	234	1.4	V	-0.24	45.41	54	-8.59
7386	41.54	PK	129	1.7	H	2.84	44.38	74	-29.62
7386	37.77	Ave	269	1.2	H	2.84	40.61	54	-13.39
2314.51	46.79	PK	236	1.8	V	-13.19	33.6	74	-40.4
2314.51	37.69	Ave	131	1.8	V	-13.19	24.5	54	-29.5
2358.53	42.71	PK	247	1.8	H	-13.14	29.57	74	-44.43
2358.53	37.68	Ave	17	1.8	H	-13.14	24.54	54	-29.46
2491.53	43.96	PK	357	1.8	V	-13.08	30.88	74	-43.12
2491.53	36.78	Ave	186	1.2	V	-13.08	23.7	54	-30.3

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
n40: Low Channel 2422MHz									
201.36	21.43	QP	215	1.8	H	11.26	32.69	40	-7.31
201.36	19.31	QP	331	1.2	V	11.26	30.57	40	-9.43
4844	53.03	PK	72	1.7	V	-1.06	51.97	74	-22.03
4844	46.04	Ave	80	1.9	V	-1.06	44.98	54	-9.02
7266	42.24	PK	5	1.9	H	1.33	43.57	74	-30.43
7266	37.75	Ave	131	1.1	H	1.33	39.08	54	-14.92
2344.2	45.93	PK	260	1.8	V	-13.19	32.74	74	-41.26
2344.2	36.85	Ave	68	1.1	V	-13.19	23.66	54	-30.34
2376.81	42.54	PK	173	1.1	H	-13.14	29.4	74	-44.6
2376.81	36.89	Ave	34	1.9	H	-13.14	23.75	54	-30.25
2496.28	43.87	PK	73	2.0	V	-13.08	30.79	74	-43.21
2496.28	37.23	Ave	154	1.8	V	-13.08	24.15	54	-29.85

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									
201.36	21.32	QP	283	1.5	H	11.26	32.58	40	-7.42
201.36	18.84	QP	343	1.1	V	11.26	30.1	40	-9.9
4874	52.56	PK	85	1.0	V	-0.62	51.94	74	-22.06
4874	46.09	Ave	253	1.6	V	-0.62	45.47	54	-8.53
7311	41.62	PK	351	1.5	H	2.21	43.83	74	-30.17
7311	36.9	Ave	221	1.2	H	2.21	39.11	54	-14.89
2328.5	46.81	PK	271	1.1	V	-13.19	33.62	74	-40.38
2328.5	37.33	Ave	240	1.5	V	-13.19	24.14	54	-29.86
2386.54	44.23	PK	331	1.7	H	-13.14	31.09	74	-42.91
2386.54	37.19	Ave	82	1.1	H	-13.14	24.05	54	-29.95
2492.58	44.67	PK	154	1.3	V	-13.08	31.59	74	-42.41
2492.58	36.36	Ave	110	1.2	V	-13.08	23.28	54	-30.72

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.247/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
n40: High Channel 2452MHz									
201.36	21.29	QP	100	1.9	H	11.26	32.55	40	-7.45
201.36	20.41	QP	141	1.2	V	11.26	31.67	40	-8.33
4904	53.52	PK	145	1.8	V	-0.24	53.28	74	-20.72
4904	45.97	Ave	28	1.3	V	-0.24	45.73	54	-8.27
7356	41.4	PK	333	1.5	H	2.84	44.24	74	-29.76
7356	37.23	Ave	188	1.9	H	2.84	40.07	54	-13.93
2332.18	46.44	PK	149	1.6	V	-13.19	33.25	74	-40.75
2332.18	36.79	Ave	126	1.3	V	-13.19	23.6	54	-30.4
2370	42.83	PK	165	1.5	H	-13.14	29.69	74	-44.31
2370	36.85	Ave	18	1.5	H	-13.14	23.71	54	-30.29
2484.56	44.09	PK	276	1.7	V	-13.08	31.01	74	-42.99
2484.56	37.2	Ave	296	1.0	V	-13.08	24.12	54	-29.88

Test Frequency: 18GHz~25GHz

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

BT BLE:**Test Frequency: 32.768kHz ~ 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)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
Low Channel 2402MHz									
166.65	24.36	PK	122	1.3	H	17.01	41.37	46.00	-4.63
166.65	23.15	PK	73	1.2	V	17.01	40.16	46.00	-5.84
4816.00	53.93	PK	339	1.3	V	-1.06	52.87	74.00	-21.13
4816.00	47.82	Ave	339	1.3	V	-1.06	46.76	54.00	-7.24
7224.00	49.93	PK	290	1.4	V	1.33	51.26	74.00	-22.74
7224.00	45.46	Ave	290	1.4	V	1.33	46.79	54.00	-7.21
2323.80	48.03	PK	202	1.3	V	-13.19	34.84	74.00	-39.16
2323.80	43.72	Ave	202	1.3	V	-13.19	30.53	54.00	-23.47
2361.40	46.07	PK	21	2.0	V	-13.14	32.93	74.00	-41.07
2361.40	41.07	Ave	21	2.0	V	-13.14	27.93	54.00	-26.07
2484.40	48.61	PK	223	1.3	H	-13.08	35.53	74.00	-38.47
2484.40	44.27	Ave	223	1.3	H	-13.08	31.19	54.00	-22.81

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
Middle Channel 2440MHz									
166.65	24.88	PK	100	1.5	H	17.01	41.89	46.00	-4.11
166.65	24.02	PK	262	1.7	V	17.01	41.03	46.00	-4.97
4880.00	53.23	PK	254	1.4	V	-0.62	52.61	74.00	-21.39
4880.00	47.00	Ave	254	1.4	V	-0.62	46.38	54.00	-7.62
7320.00	49.18	PK	55	1.6	V	2.21	51.39	74.00	-22.61
7320.00	45.48	Ave	55	1.6	V	2.21	47.69	54.00	-6.31
2318.07	48.17	PK	263	1.6	H	-13.19	34.98	74.00	-39.02
2318.07	44.78	Ave	263	1.6	H	-13.19	31.59	54.00	-22.41
2353.19	46.05	PK	151	1.6	V	-13.14	32.91	74.00	-41.09
2353.19	41.54	Ave	151	1.6	V	-13.14	28.40	54.00	-25.60
2498.11	47.04	PK	183	2.0	V	-13.08	33.96	74.00	-40.04
2498.11	42.66	Ave	183	2.0	V	-13.08	29.58	54.00	-24.42

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
High Channel 2480MHz									
166.65	25.13	PK	310	1.5	H	17.01	42.14	46.00	-3.86
166.65	24.07	PK	104	1.6	V	17.01	41.08	46.00	-4.92
4936.00	53.77	PK	156	1.8	V	-0.24	53.53	74.00	-20.47
4936.00	47.15	Ave	156	1.8	V	-0.24	46.91	54.00	-7.09
7404.00	50.79	PK	79	1.9	V	2.84	53.63	74.00	-20.37
7404.00	45.03	Ave	79	1.9	V	2.84	47.87	54.00	-6.13
2335.73	47.13	PK	137	1.0	H	-13.19	33.94	74.00	-40.06
2335.73	42.85	Ave	137	1.0	H	-13.19	29.66	54.00	-24.34
2375.13	46.39	PK	93	1.7	V	-13.14	33.25	74.00	-40.75
2375.13	42.53	Ave	93	1.7	V	-13.14	29.39	54.00	-24.61
2491.27	47.66	PK	197	1.2	H	-13.08	34.58	74.00	-39.42
2491.27	43.51	Ave	197	1.2	H	-13.08	30.43	54.00	-23.57

Test Frequency: 18GHz~25GHz

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

8 Band Edge Measurement

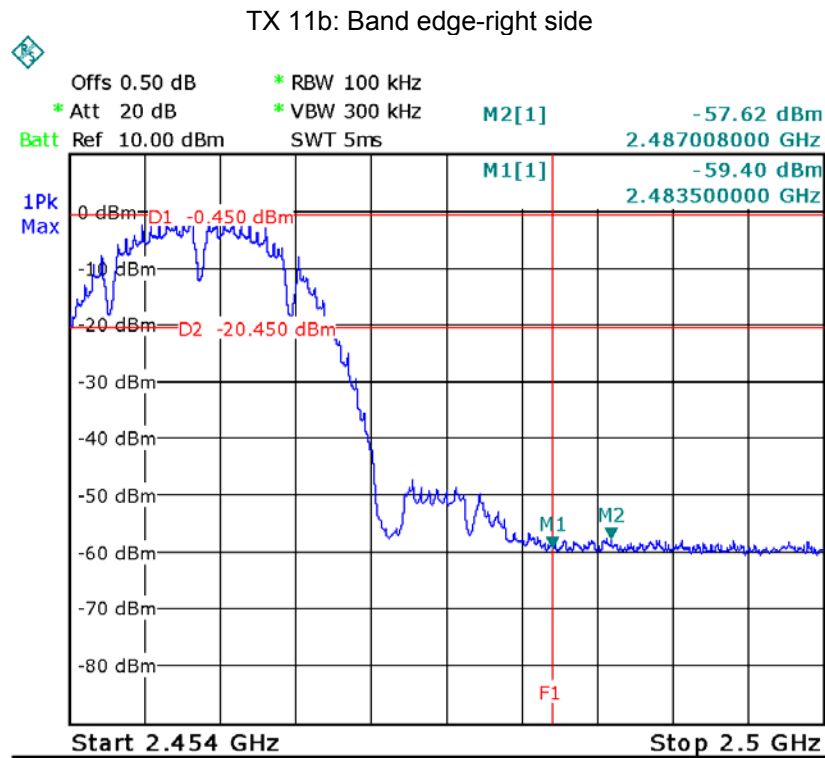
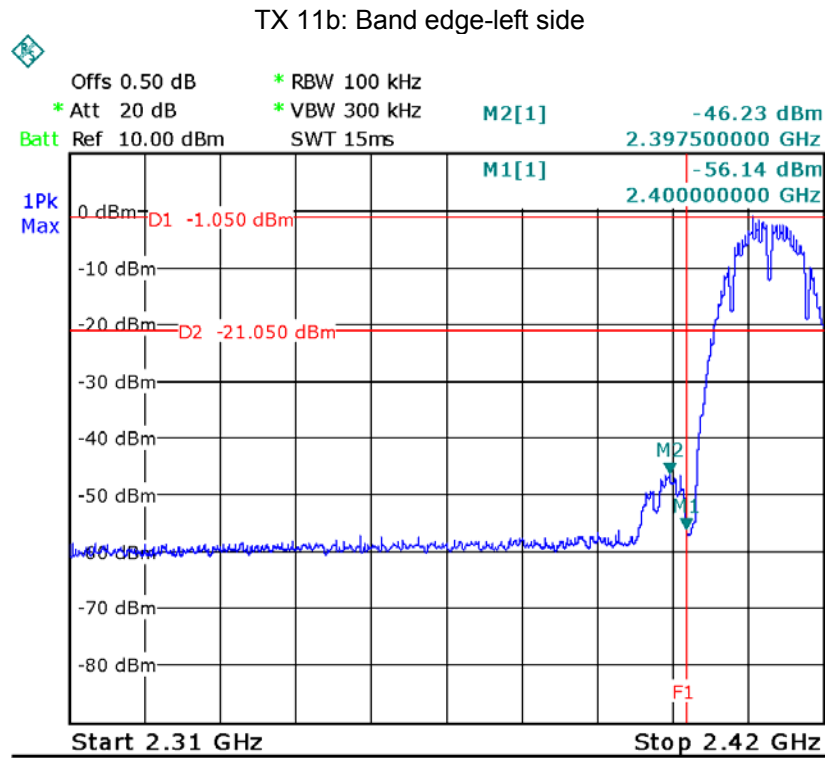
Test Requirement:	FCC CFR47 Part 15 Section 15.247
Test Method:	KDB 558074 D01 v03r02 06/05/2014
Test Mode:	Transmitting

8.1 Test Produce

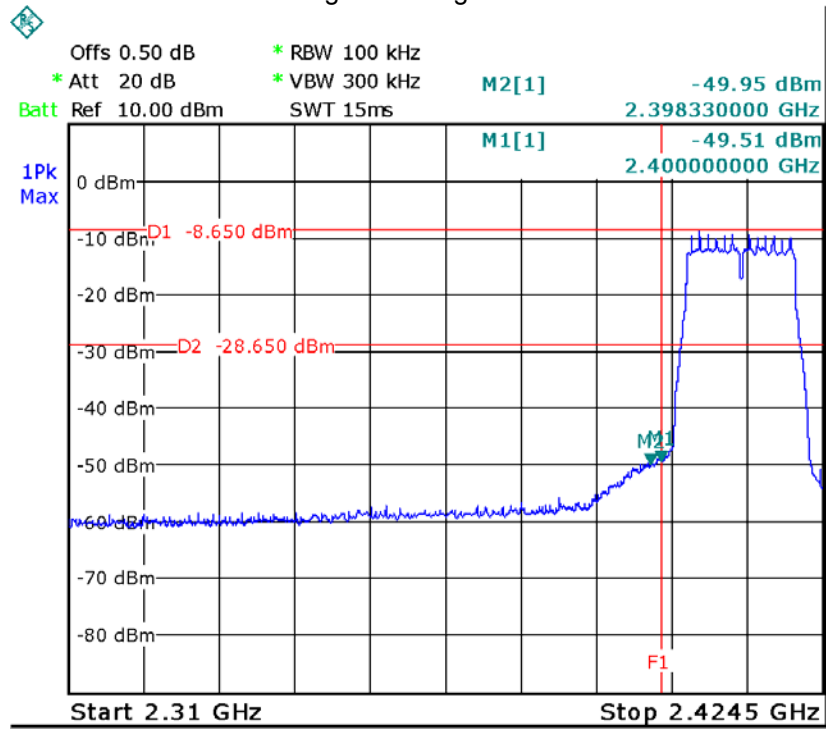
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then 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.

8.2 Test Result

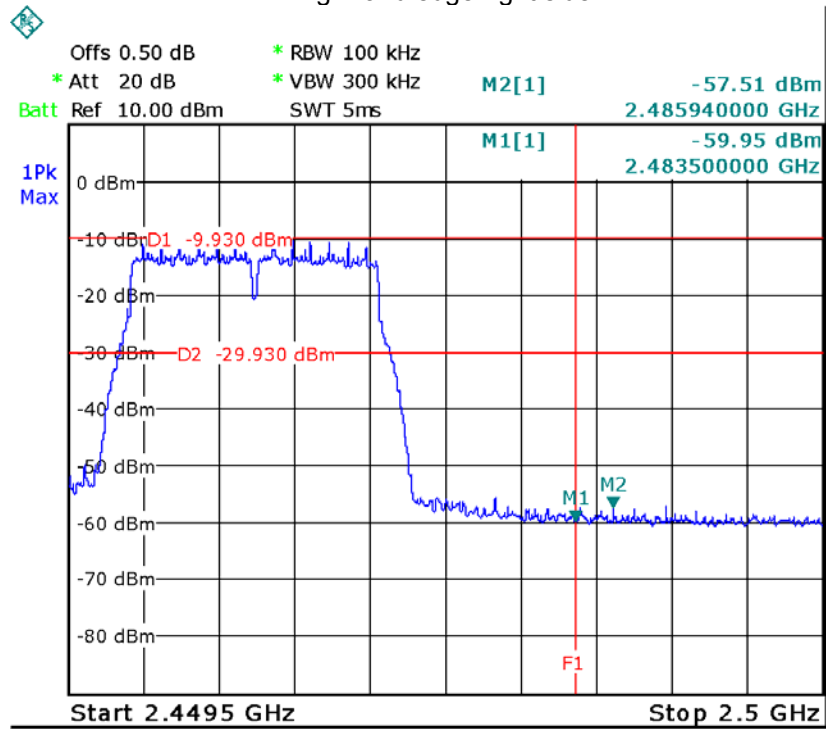
Test result plots shown as follows:



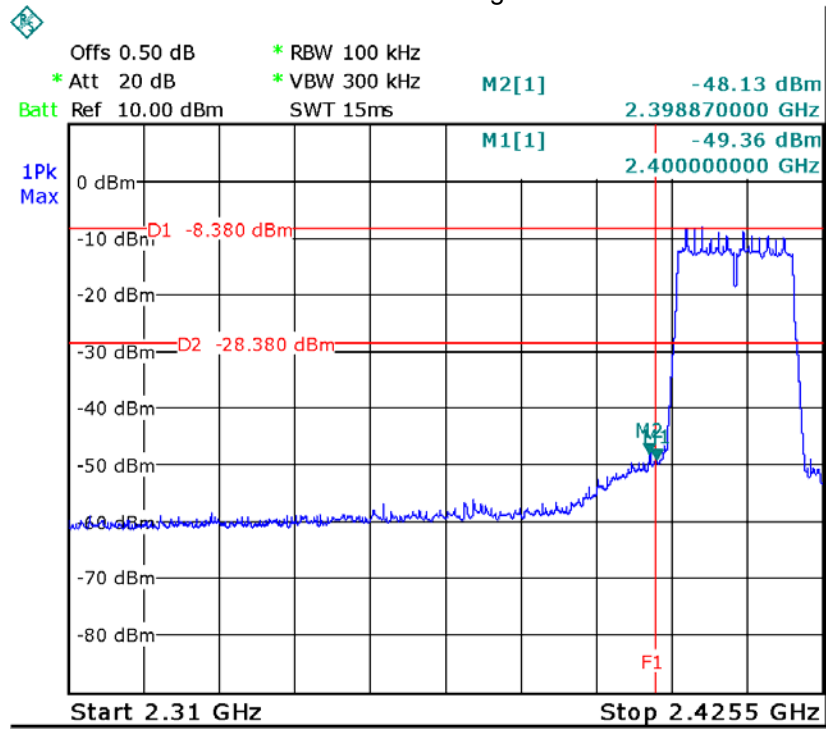
TX 11g: Band edge-left side



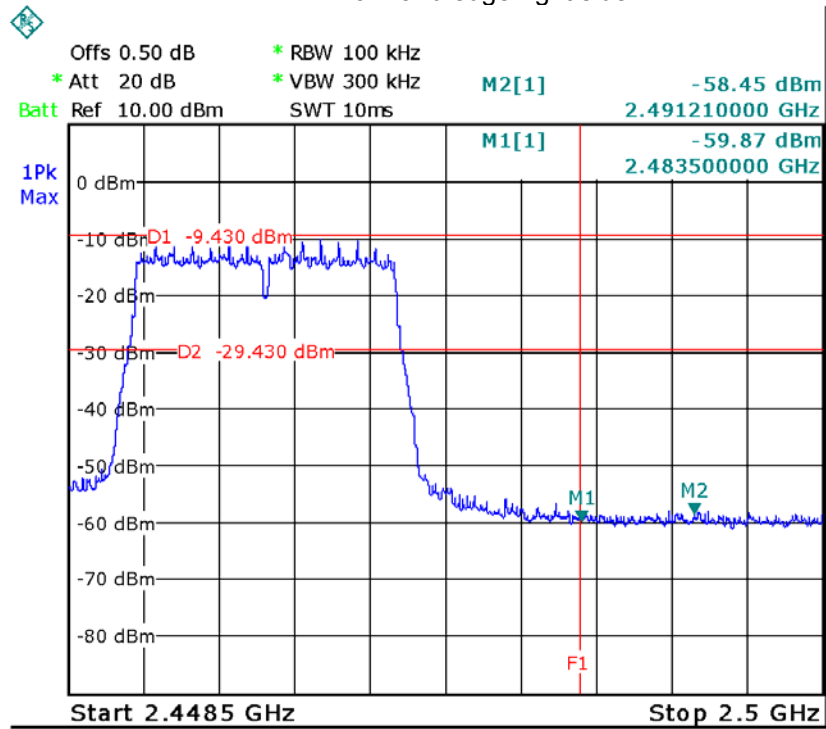
TX 11g: Band edge-right side



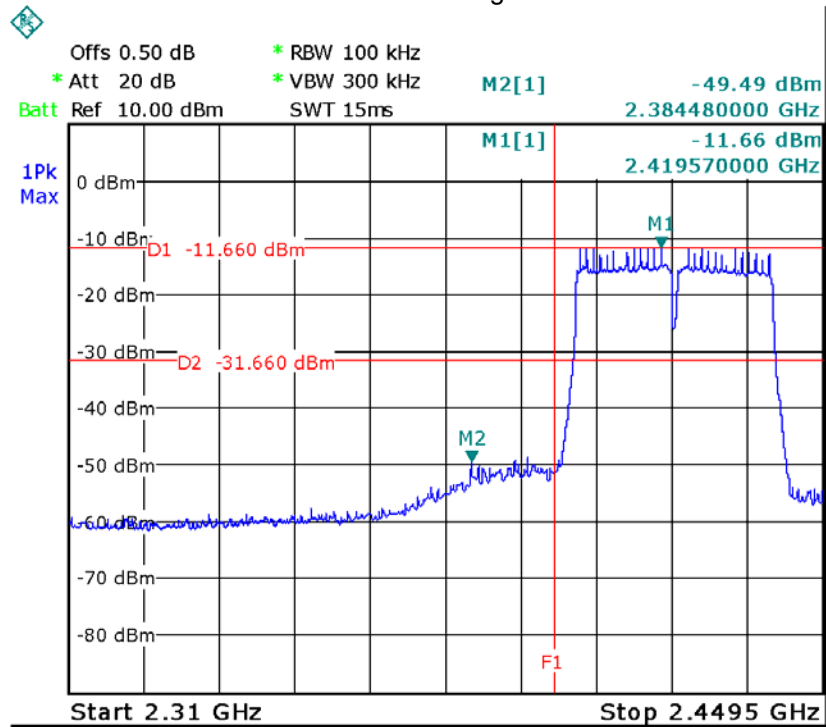
TX 11n HT20: Band edge-left side



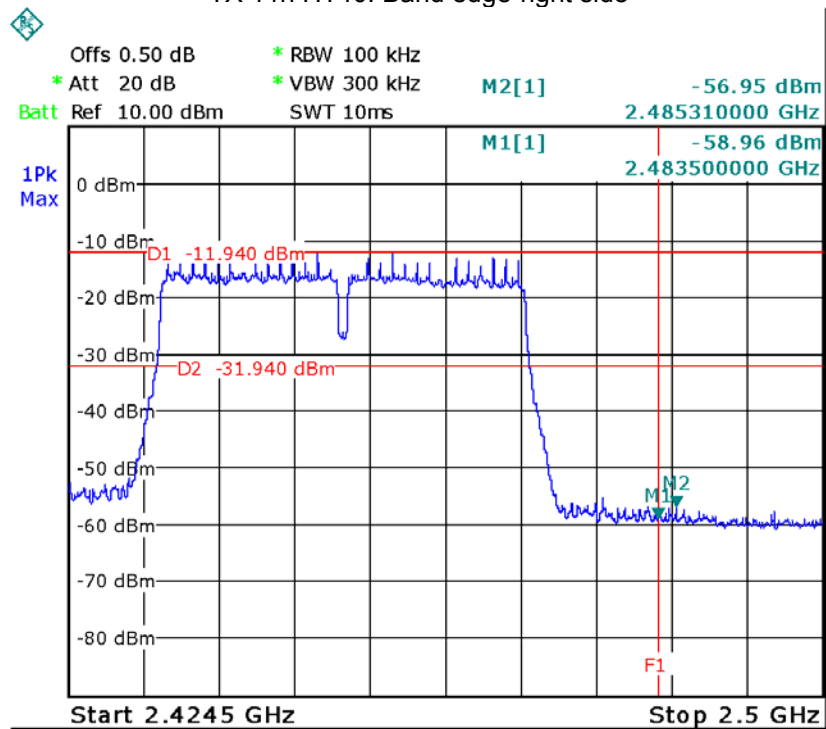
TX 11n HT20: Band edge-right side



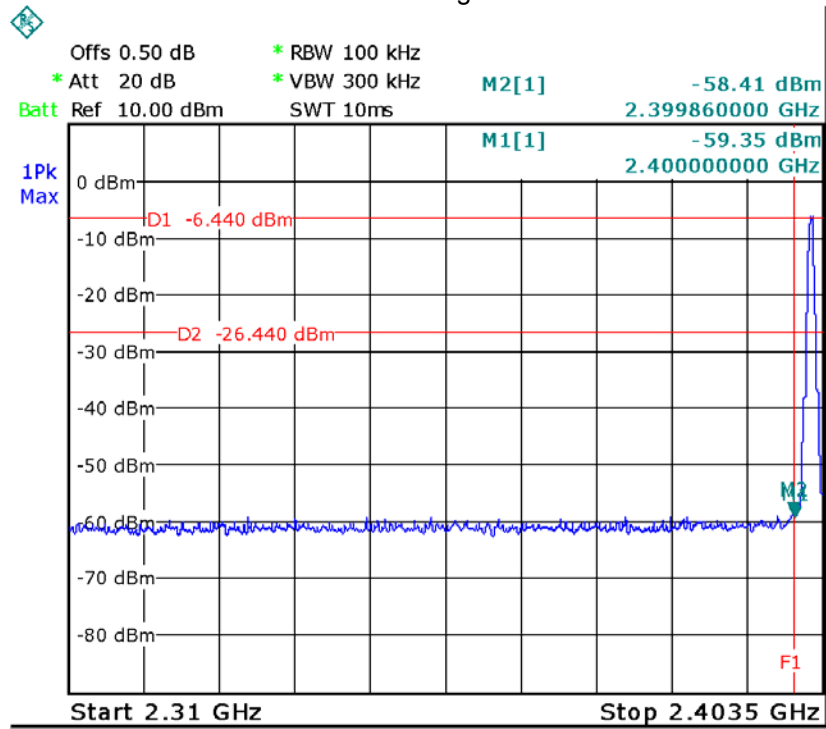
TX 11n HT40: Band edge-left side



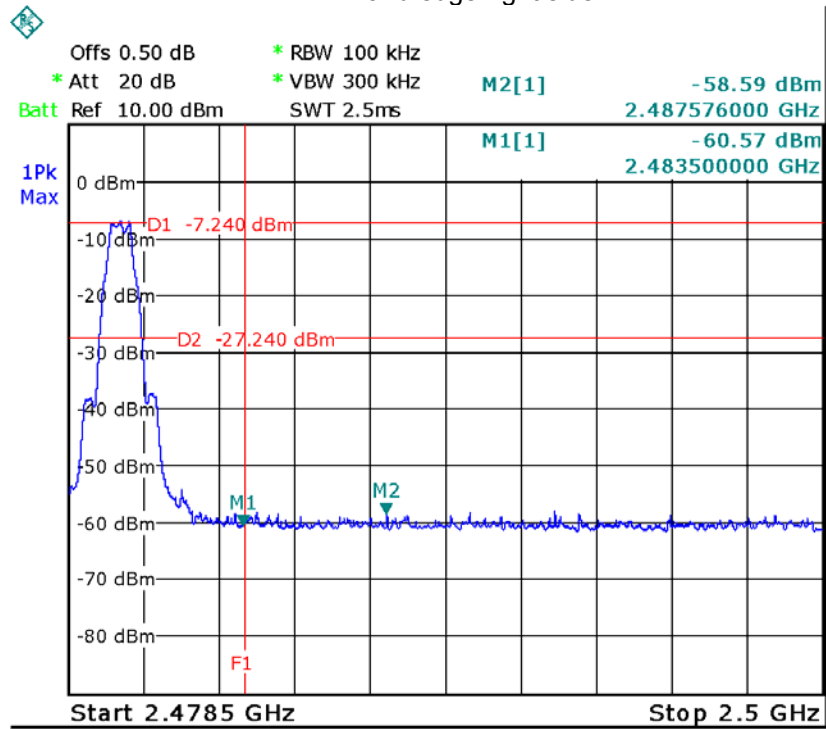
TX 11n HT40: Band edge-right side



TX BLE: Band edge-left side



TX BLE: Band edge-right side



9 6 dB Bandwidth Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 v03r02 06/05/2014

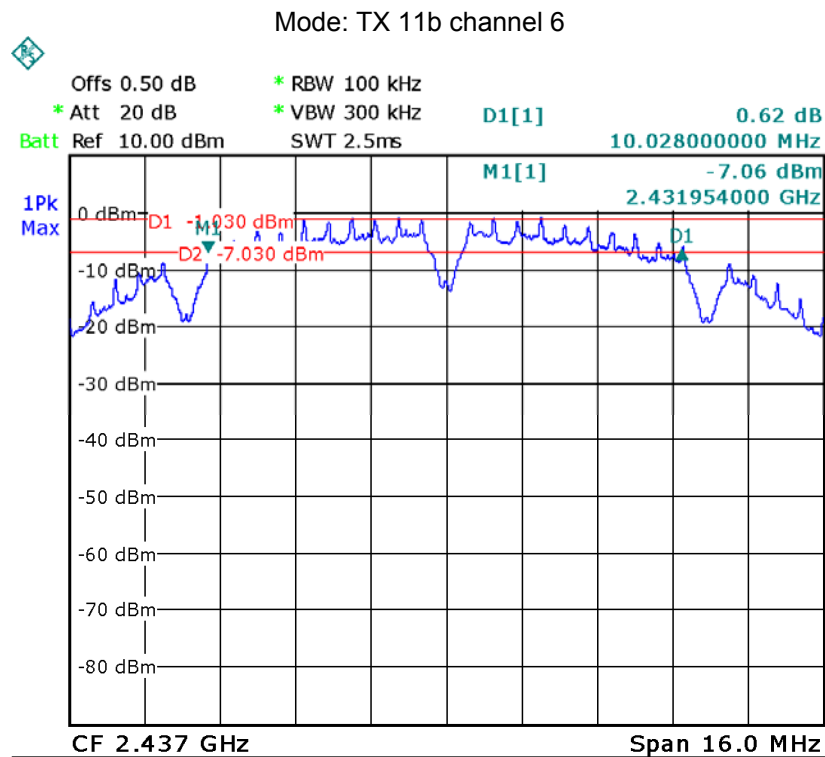
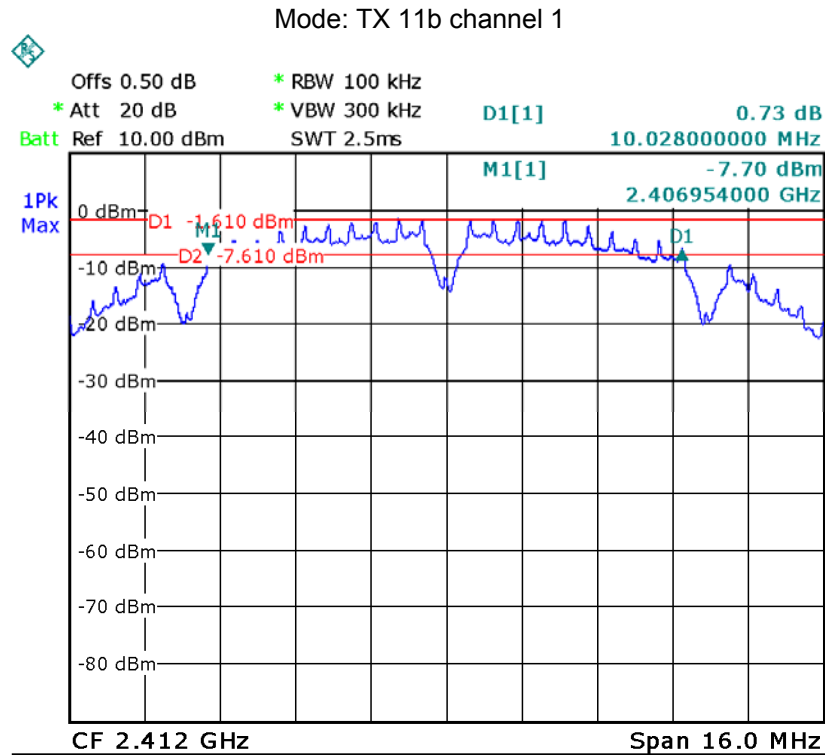
9.1 Test Procedure:

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

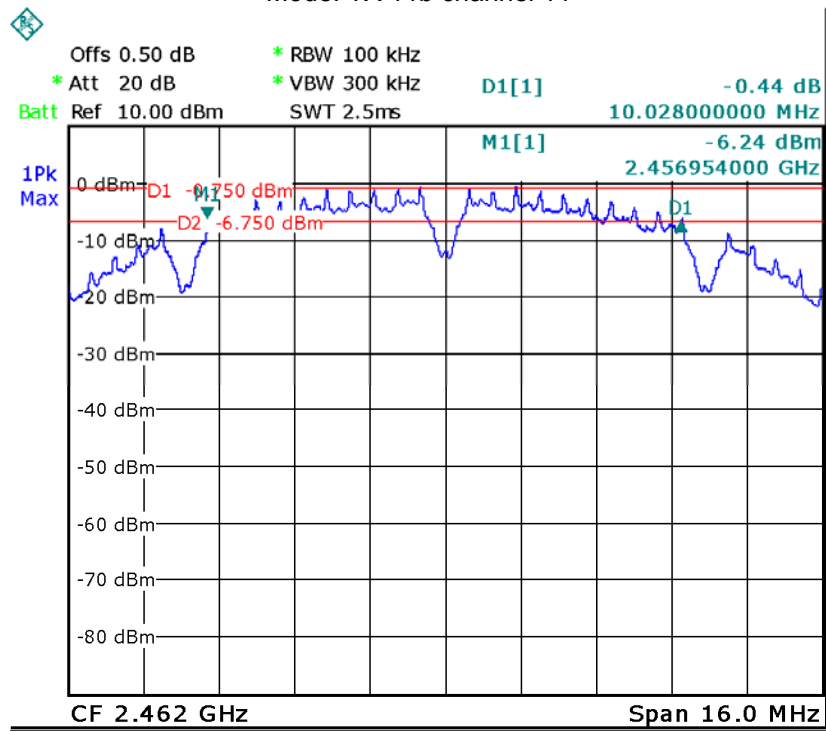
9.2 Test Result:

Operation mode	Bandwidth (MHz)		
	Channel 1	Channel 6	Channel 11
TX 11b	Channel 1	Channel 6	Channel 11
	10.028	10.028	10.028
TX 11g	Channel 1	Channel 6	Channel 11
	16.417	16.417	16.417
TX 11n HT20	Channel 1	Channel 6	Channel 11
	17.569	17.569	17.569
TX 11n HT40	Channel 3	Channel 6	Channel 9
	35.120	36.160	36.090
BT BLE	Channel 1	Channel 19	Channel 39
	0.659	0.659	0.659

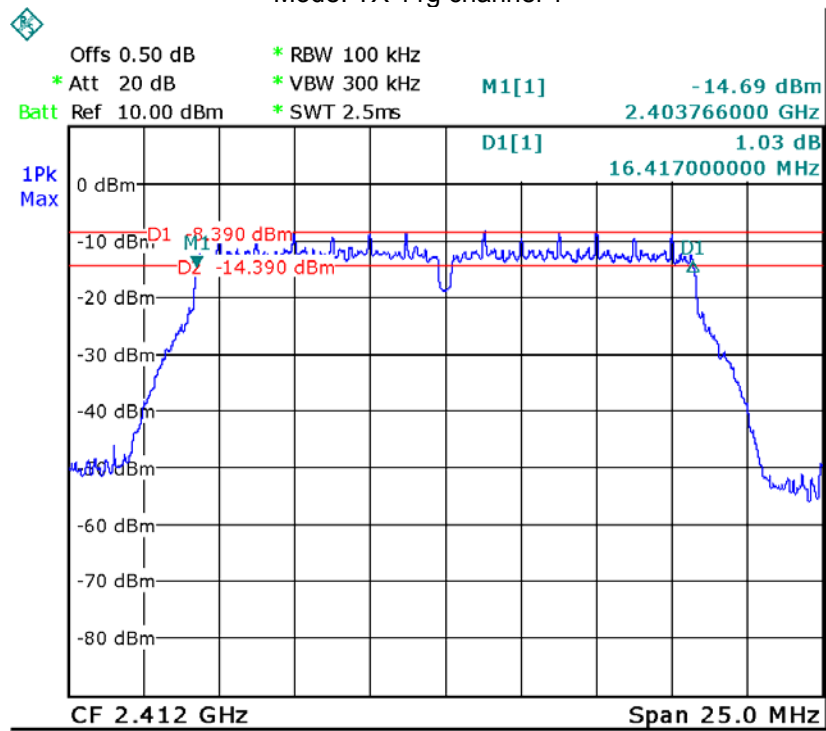
Test result plot as follows:

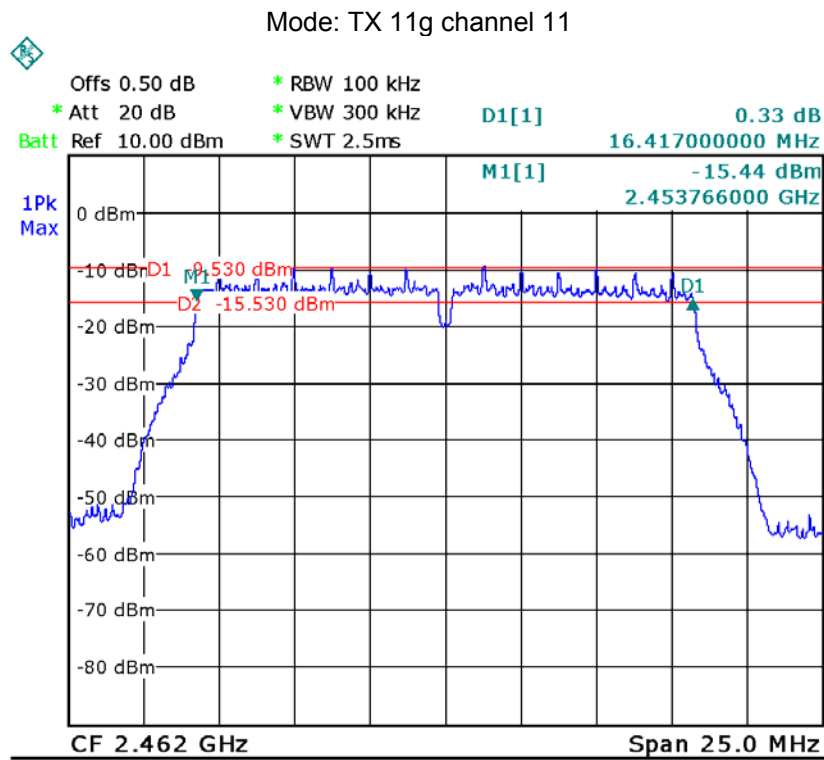
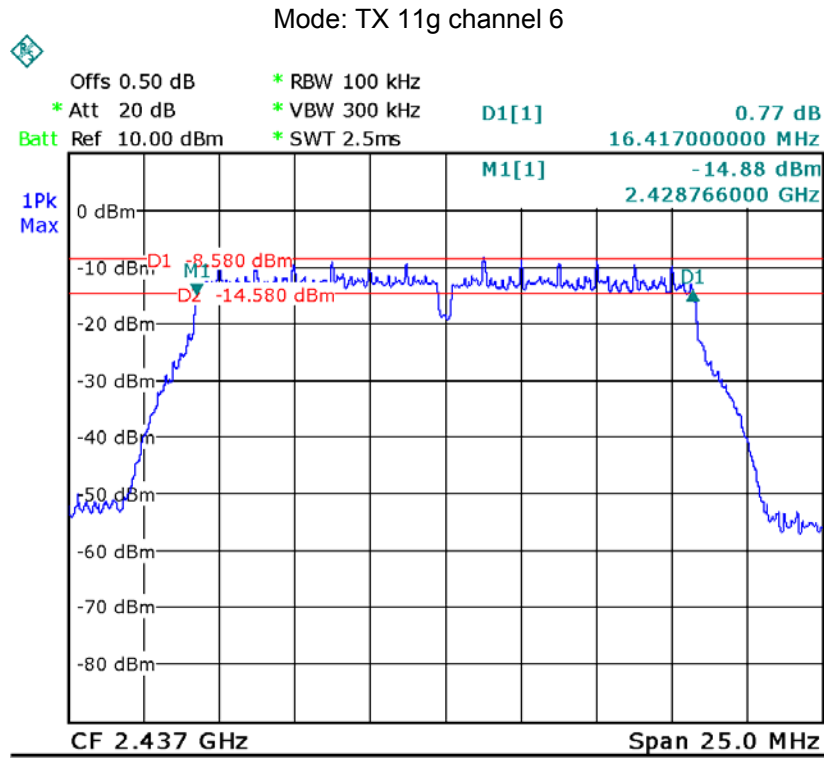


Mode: TX 11b channel 11

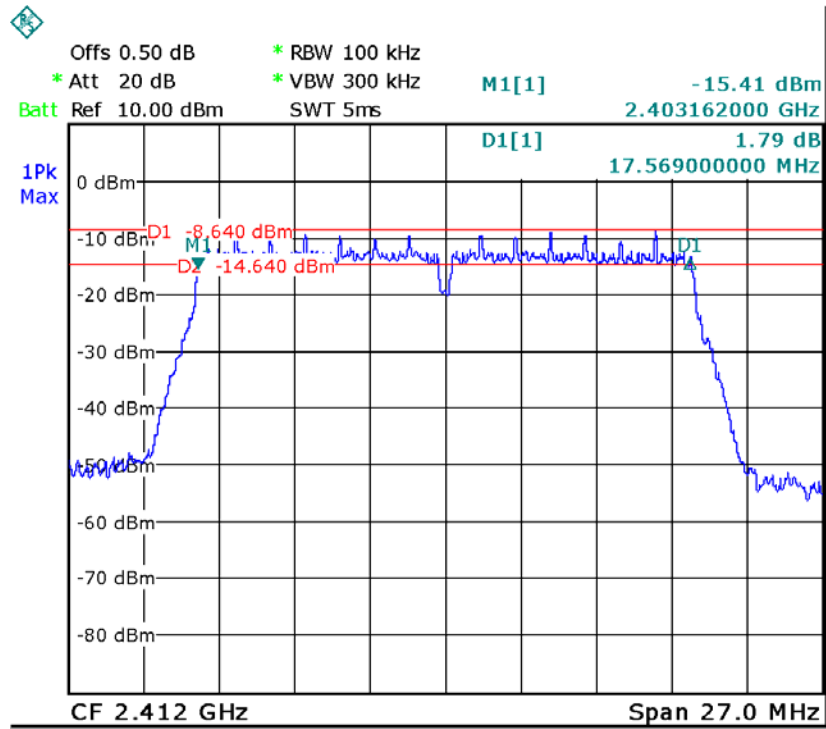


Mode: TX 11g channel 1

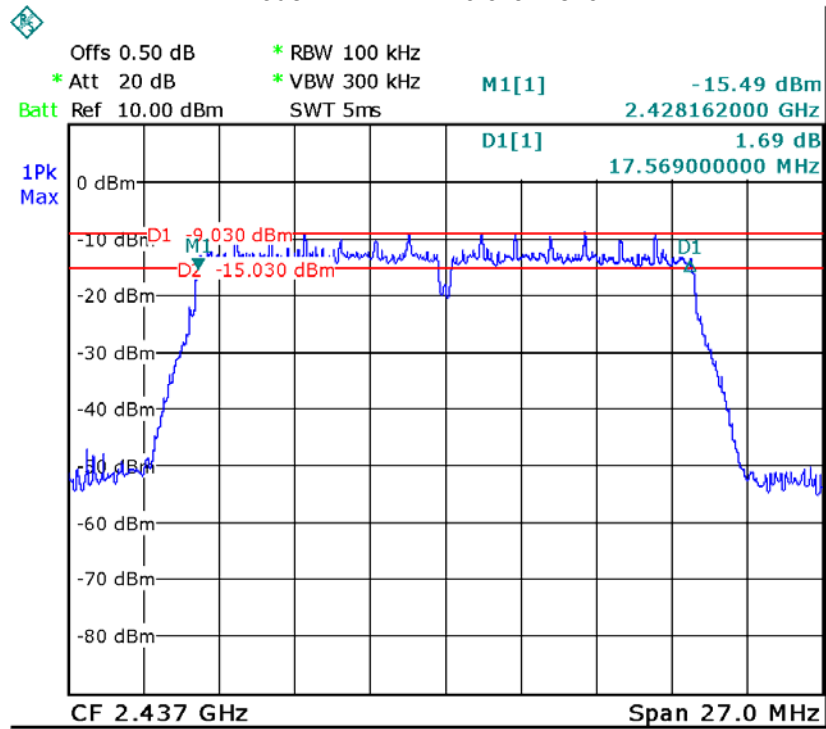




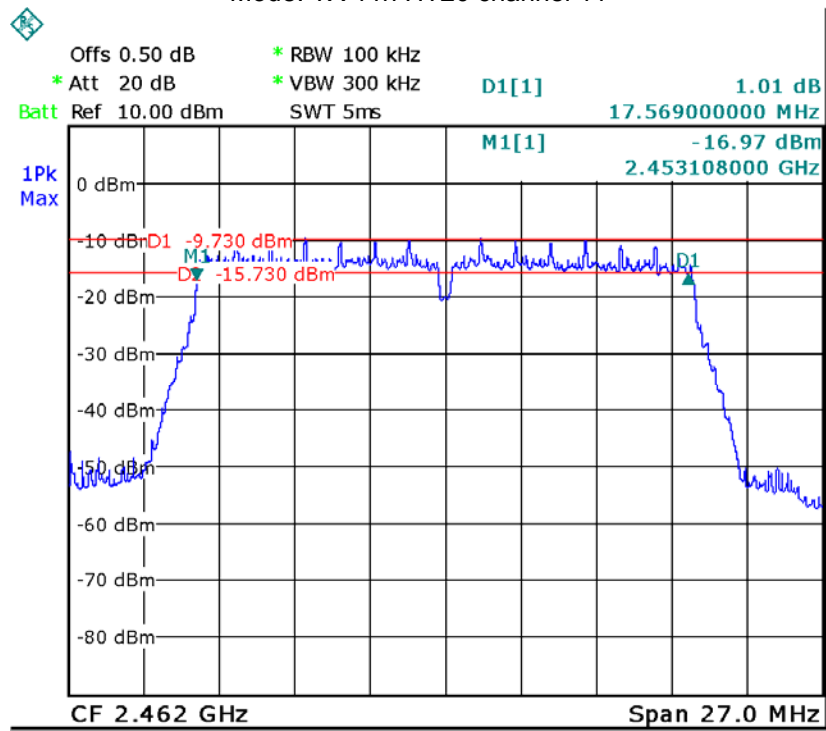
Mode: TX 11n HT20 channel 1



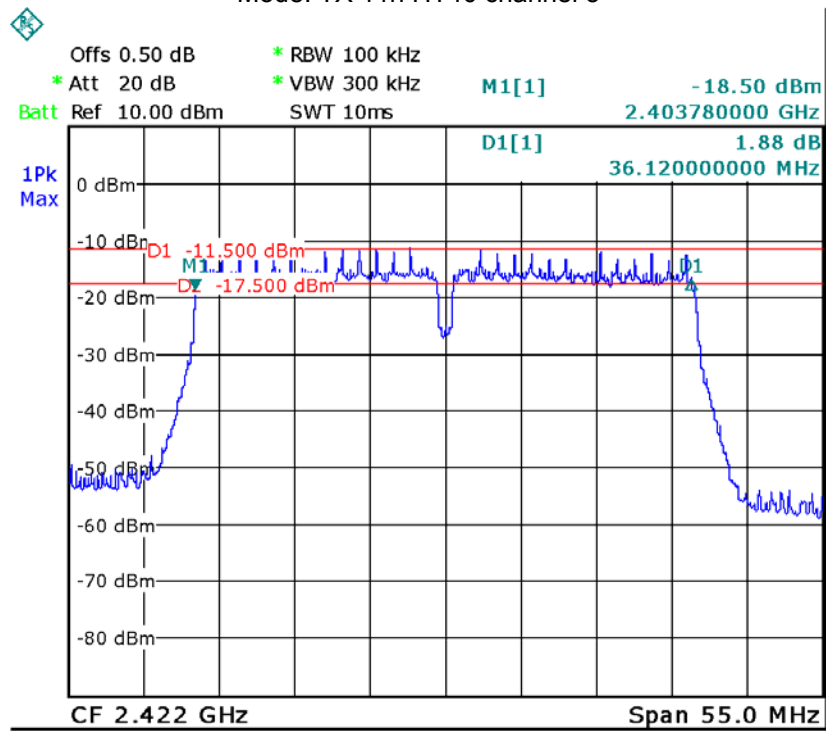
Mode: TX 11n HT20 channel 6



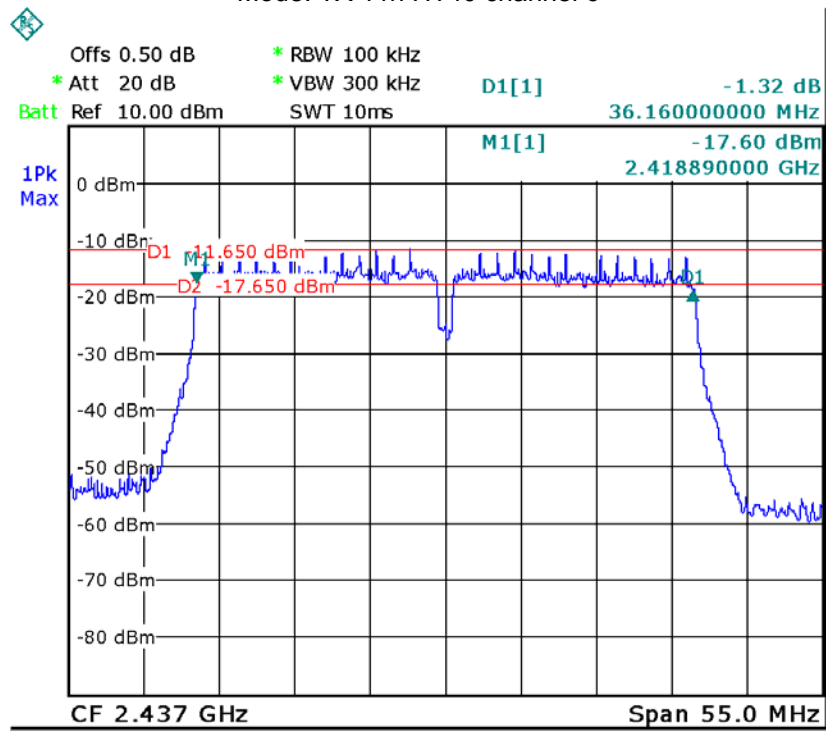
Mode: TX 11n HT20 channel 11



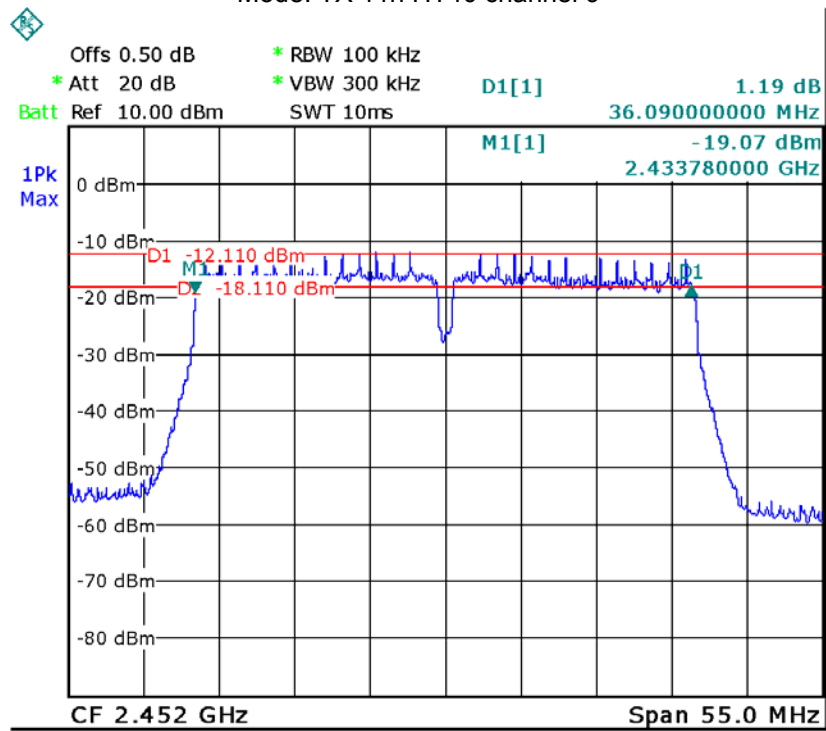
Mode: TX 11n HT40 channel 3



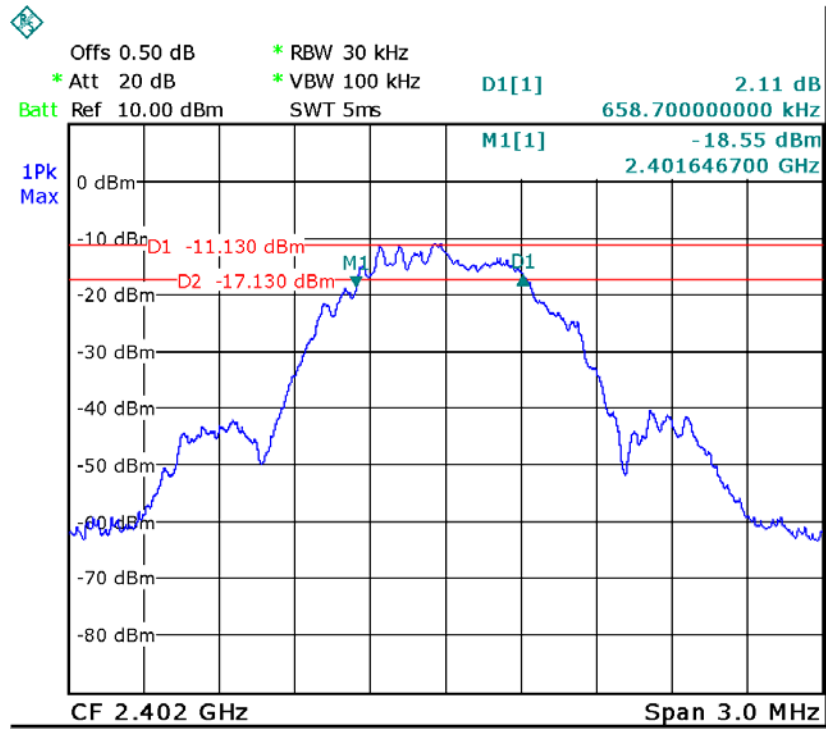
Mode: TX 11n HT40 channel 6



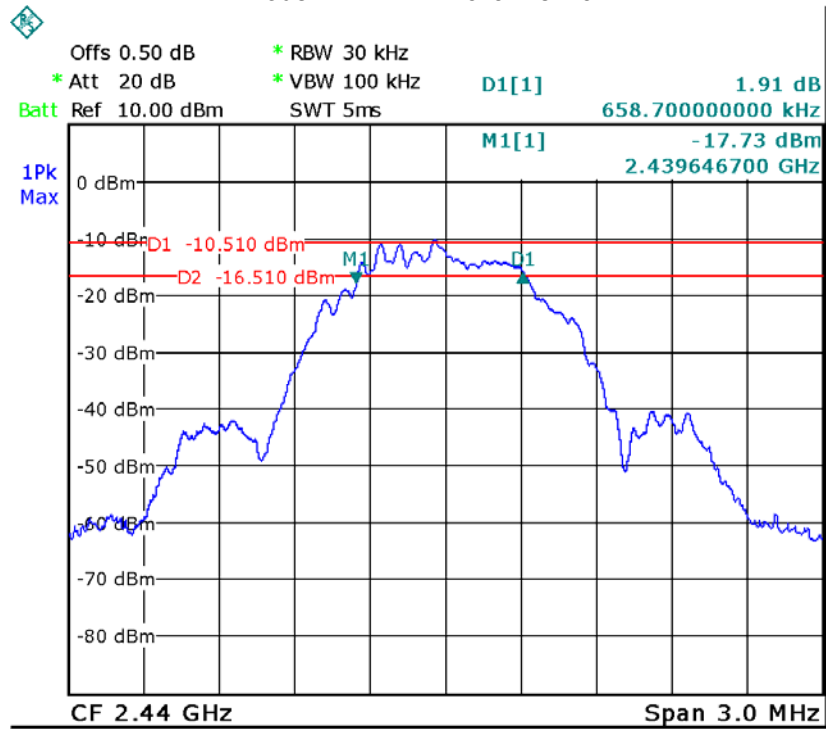
Mode: TX 11n HT40 channel 9

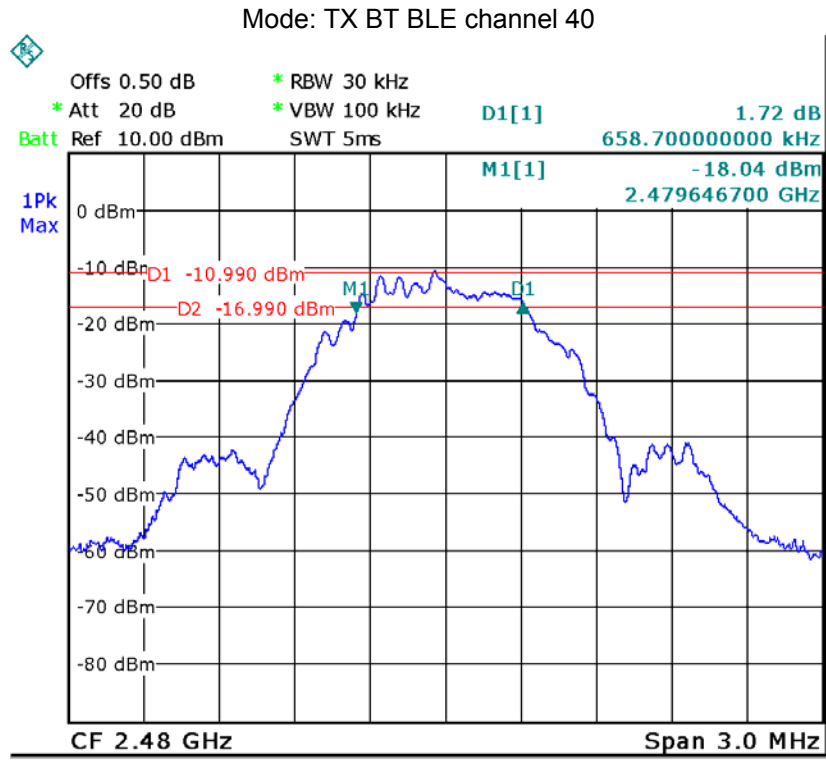


Mode: TX BT BLE channel 1



Mode: TX BT BLE channel 19





10 Maximum Peak Output Power

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 v03r02 06/05/2014

10.1 Test Procedure:

KDB 558074 D01 v03r02 06/05/

14

section 9.1.1

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 × 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

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 × 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.

10.2 Test Result:

Test mode :TX 11b		
10 Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
8.77	8.81	8.87
Limit: 1W/30dBm		
1W/30dBm		

Test mode :TX 11g		
10 Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
8.70	8.86	8.87
Limit		
1W/30dBm		

Test mode :TX 11n HT20		
10 Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
8.69	8.75	8.81
Limit		
1W/30dBm		

Test mode : TX 11n HT40		
10 Maximum Peak Output Power (dBm)		
2422MHz	2437MHz	2452MHz
8.64	8.73	8.81
Limit		
1W/30dBm		

Test mode : TX BT BLE		
10 Maximum Peak Output Power (dBm)		
2402MHz	2440MHz	2480MHz
-5.24	-5.16	-5.09
Limit		
1W/30dBm		

11 Power Spectral density

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 v03r02 06/05/2014

11.1 Test Procedure:

KDB 558074 D01 v03r02 06/05/2014 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.

11.2 Test Result:

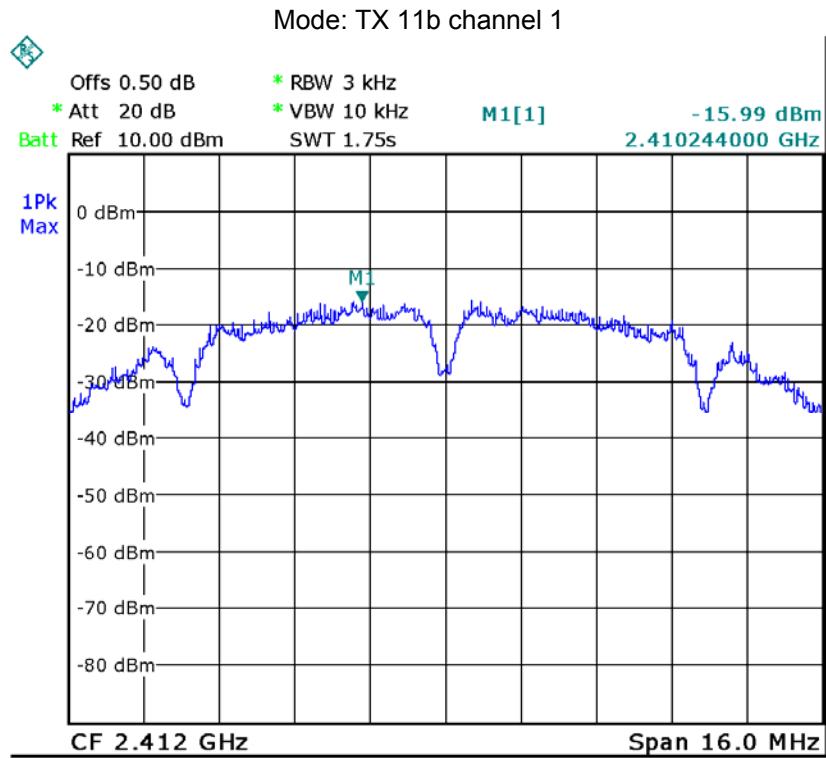
Test mode :TX 11b		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-15.99	-16.41	-16.00
Limit: 1W/30dBm		
8dBm per 3kHz		

Test mode :TX 11g		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-23.54	-23.85	-23.70
Limit		
8dBm per 3kHz		

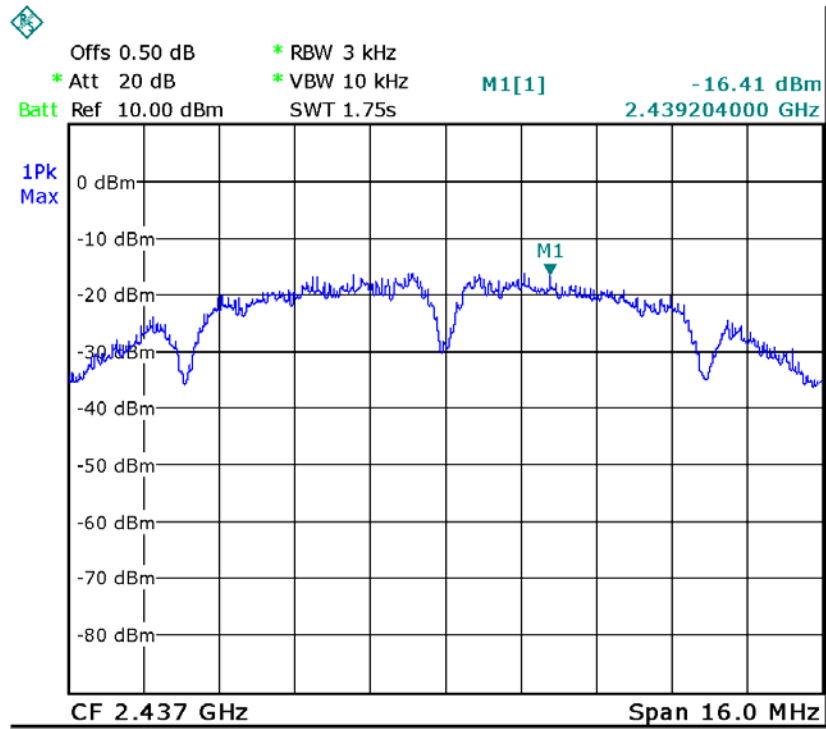
Test mode :TX 11n HT20		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-24.58	-24.48	-24.33
Limit		
8dBm per 3kHz		

Test mode : TX 11n HT40		
Power Spectral (dBm per 3kHz)		
2422MHz	2437MHz	2452MHz
-27.27	-27.33	-27.65
Limit		
8dBm per 3kHz		

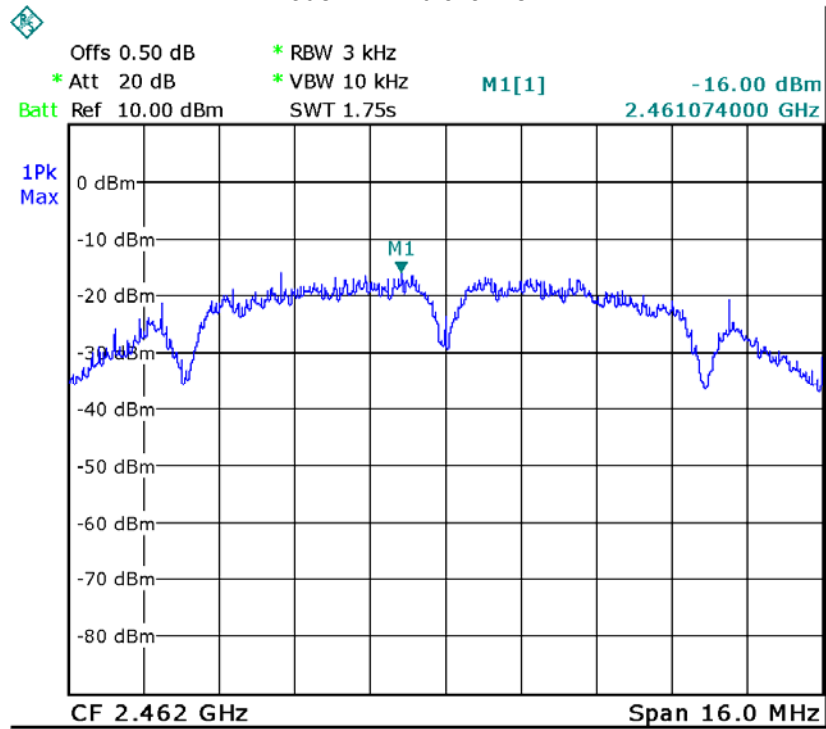
Test mode : TX BT BLE		
Power Spectral (dBm per 3kHz)		
2402MHz	2440MHz	2480MHz
-21.34	-21.19	-21.06
Limit		
8dBm per 3kHz		



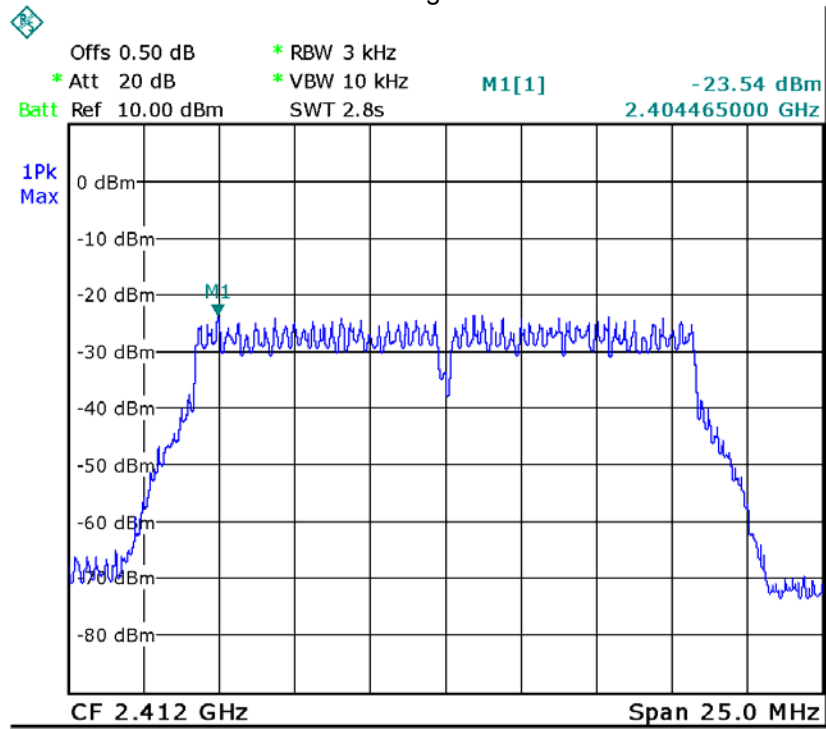
Mode: TX 11b channel 6



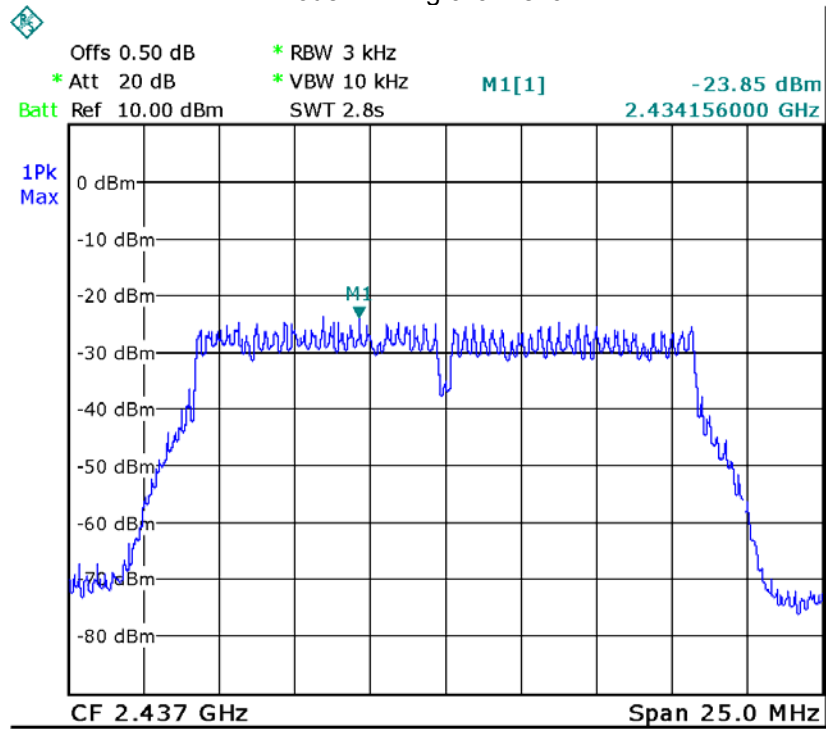
Mode: TX 11b channel 11



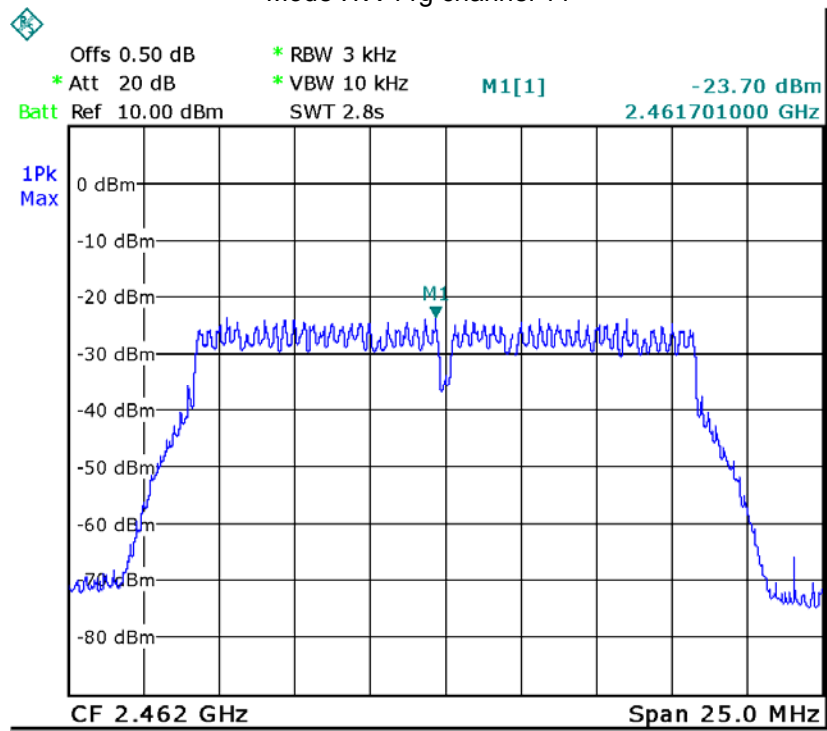
Mode :TX 11g channel 1



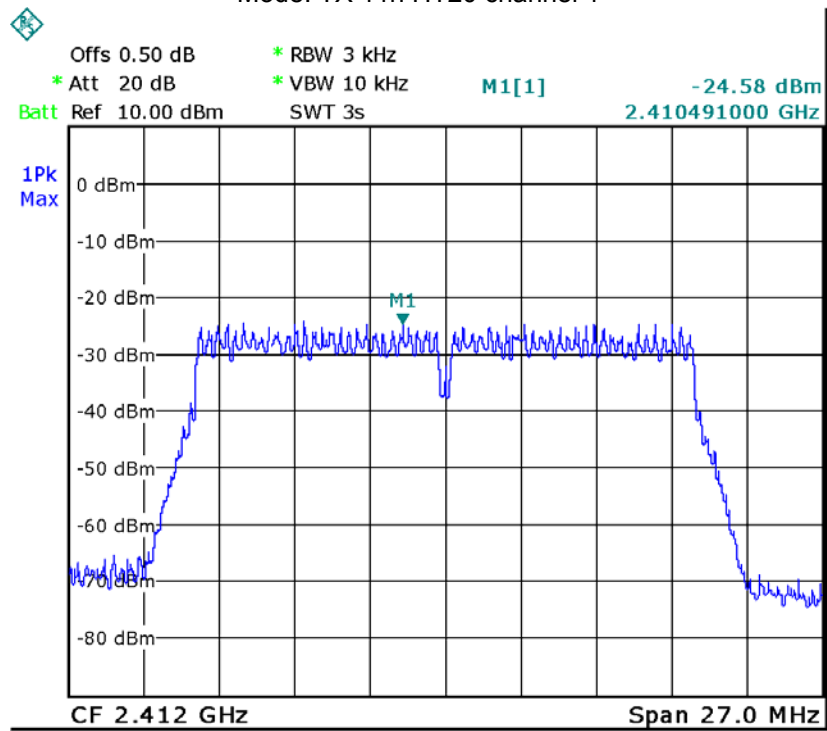
Mode :TX 11g channel 6



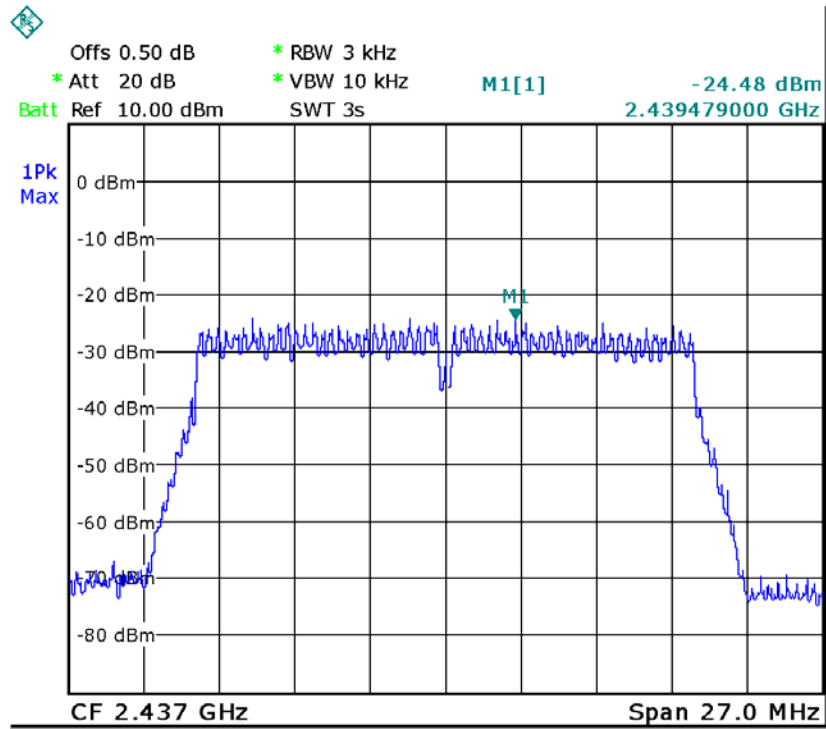
Mode :TX 11g channel 11



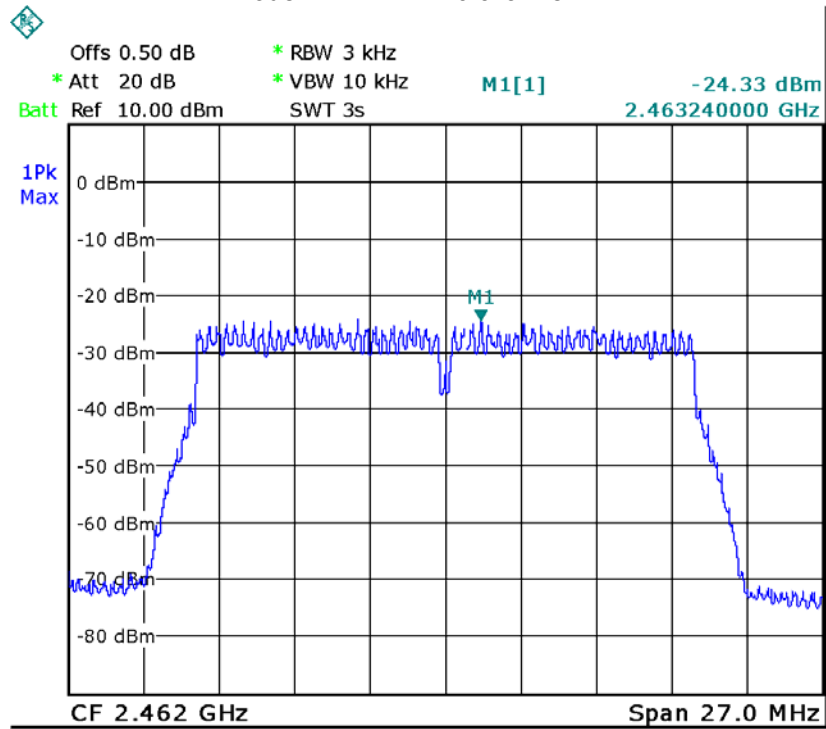
Mode: TX 11n HT20 channel 1



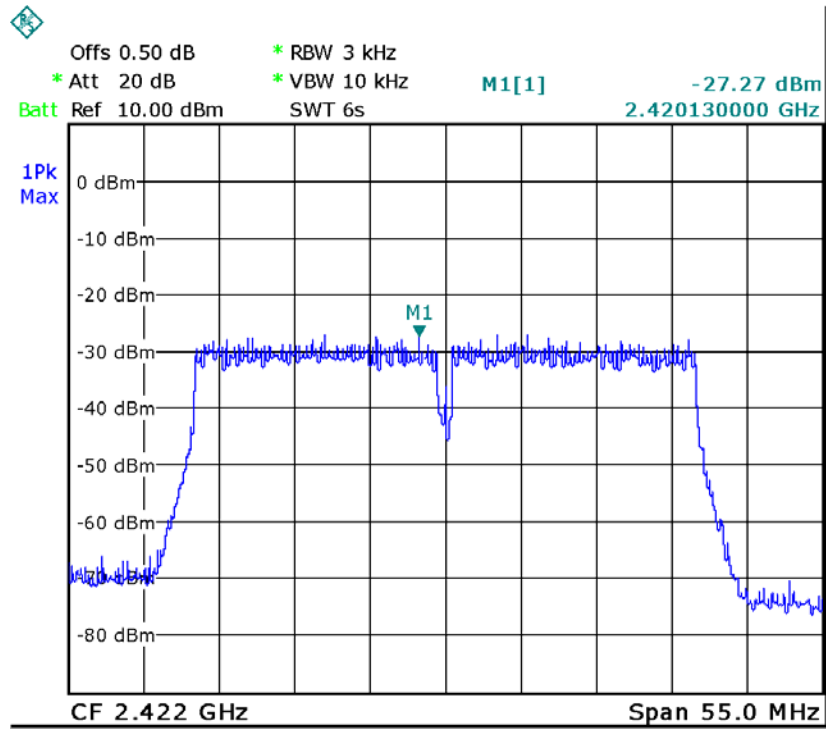
Mode: TX 11n HT20 channel 6



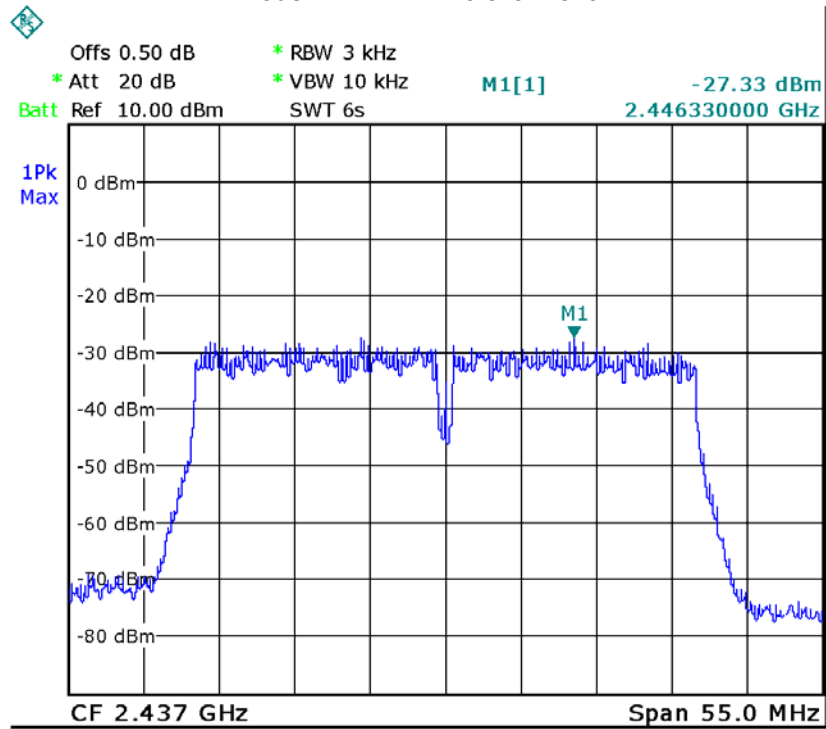
Mode: TX 11n HT20 channel 11



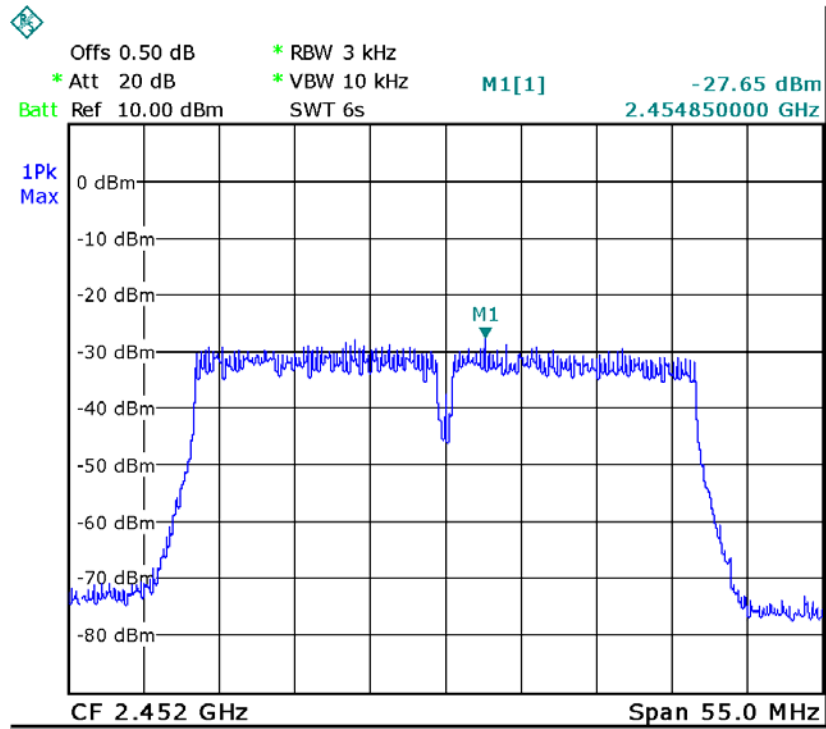
Mode: TX 11n HT40 channel 3



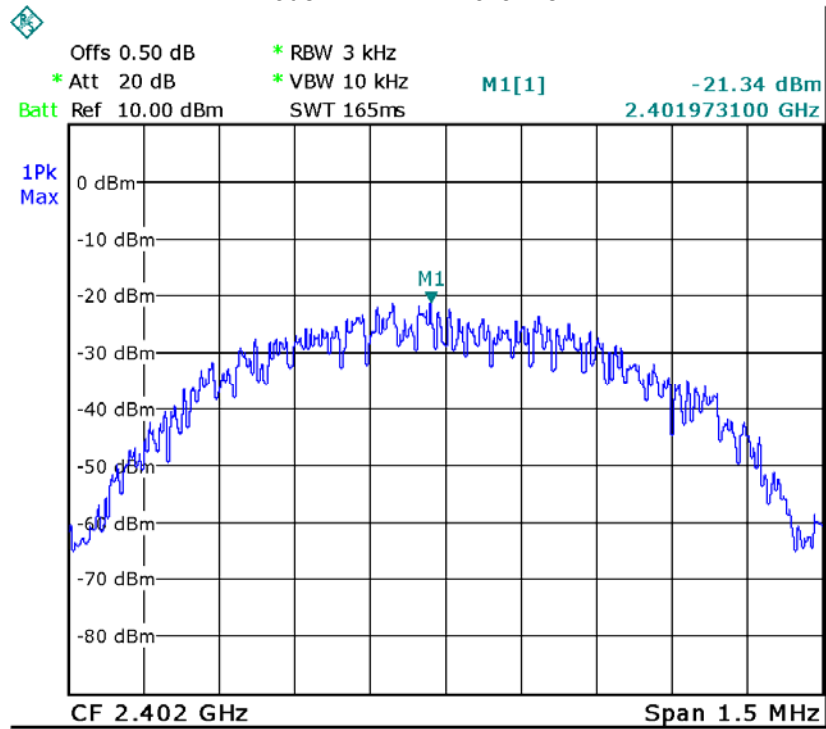
Mode: TX 11n HT40 channel 6



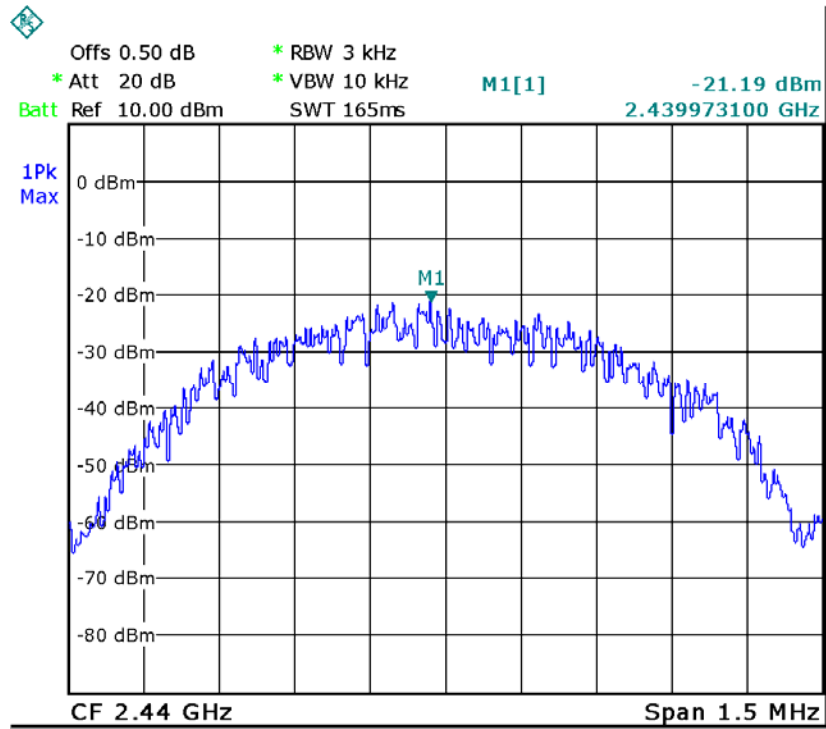
Mode: TX 11n HT40 channel 9



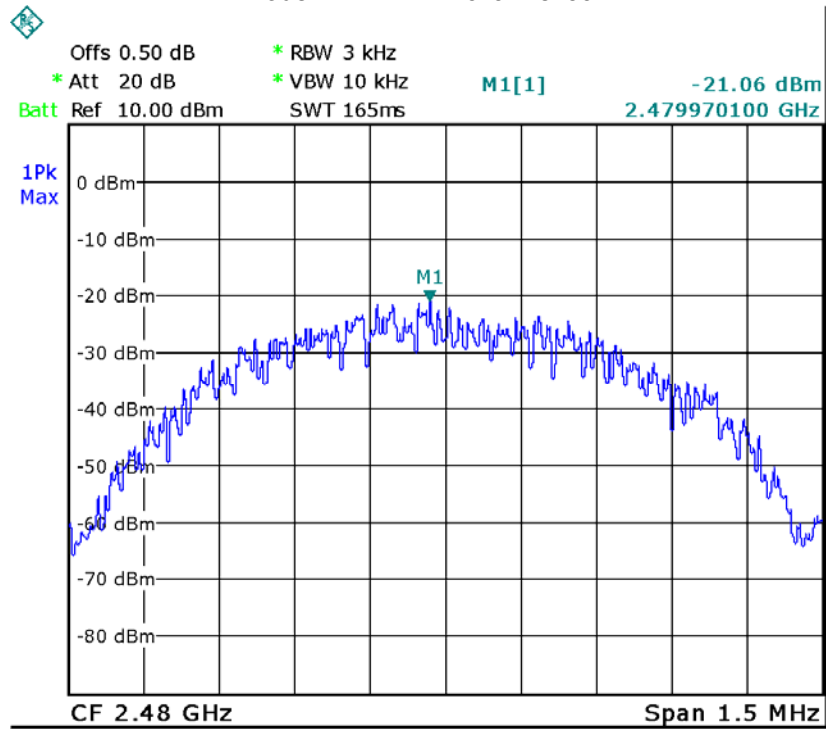
Mode: TX BT BLE channel 1



Mode: TX BT BLE channel 19



Mode: TX BT BLE channel 39



12 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 a Monopole antenna fulfil the requirement of this section.

13 RF Exposure

Test Requirement:	FCC Part 1.1307
Evaluation Method	KDB 447498 D01 General RF Exposure Guidance v05

13.1 Requirements

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances 50 mm are determined by:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot \left[\frac{1}{f(\text{GHz})} \right]$$
 3.0 for 1-g SAR and 7.5 for 10-g extremity SAR where

1. $f(\text{GHz})$ is the RF channel transmit frequency in GHz
2. Power and distance are rounded to the nearest mW and mm before calculation
3. The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

13.2 The procedures / limit

Modulation	Conducted Peak power(dBm)	Conducted Peak power(mW)	Source-based time-averaged maximum conducted output power(mW)	Minimum test separation distance required for the exposure conditions (mm)	SAR Test Exclusion Thresholds(mW)
Wifi	9.87	7.709	7.709	5	10
BT BLE	-5.09	0.310	0.310	5	10

Remark: Max. duty factor is 100%

Calculation formula: Source-based time-averaged maximum conducted output power(mW) =Conducted peak power(mW)*Duty factor

14 Photographs – Model AX F35 Test Setup

14.1 Conducted Emission



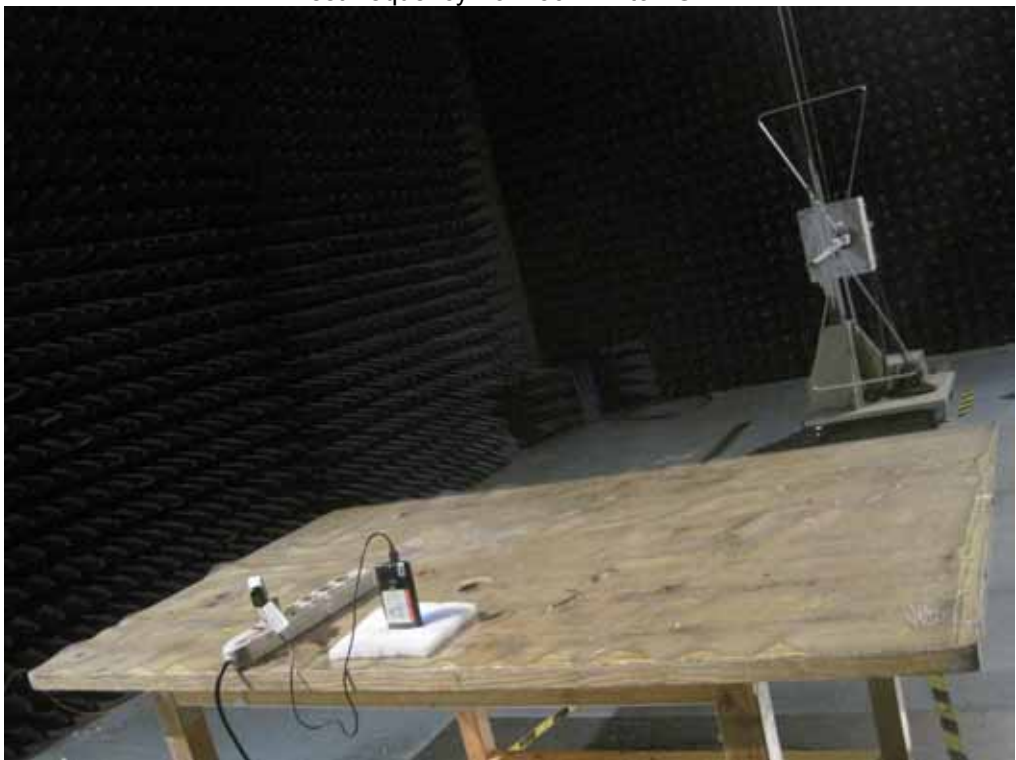
14.2 Radiated Emission

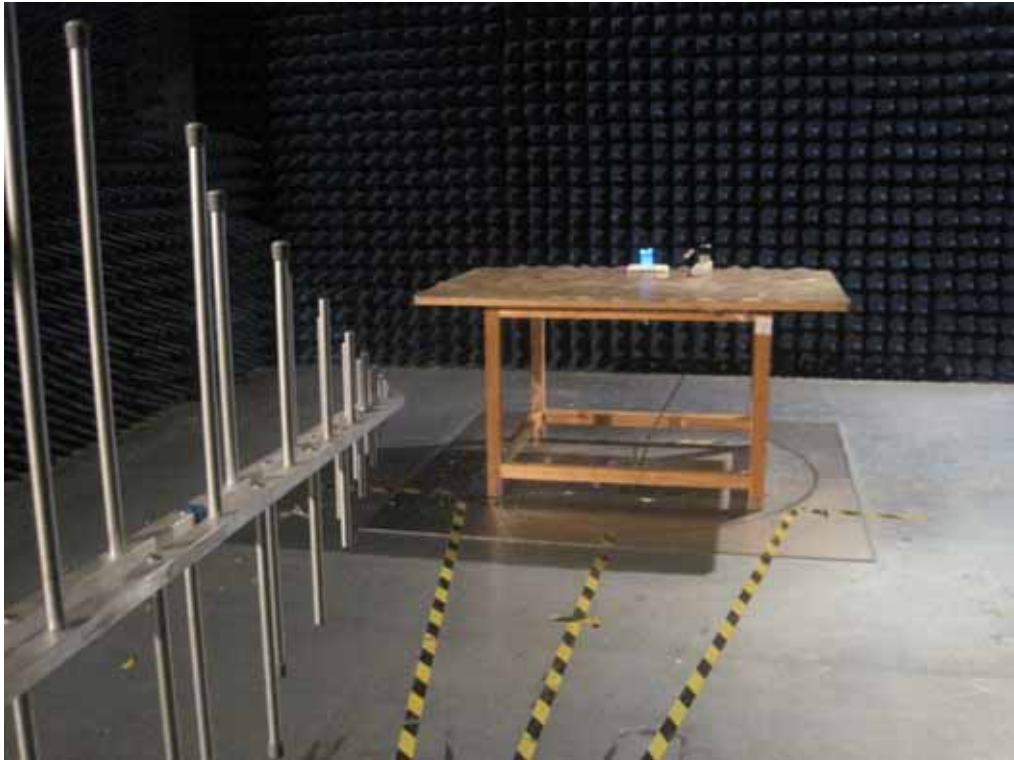
Test frequency from 32.768kHz~30MHz



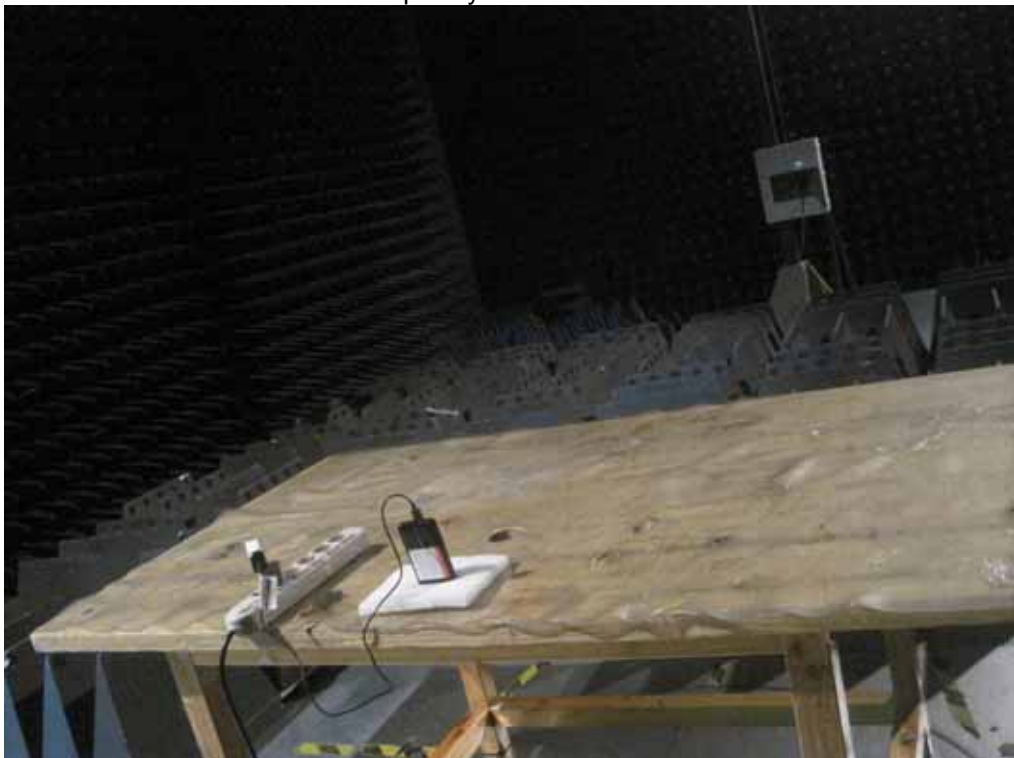


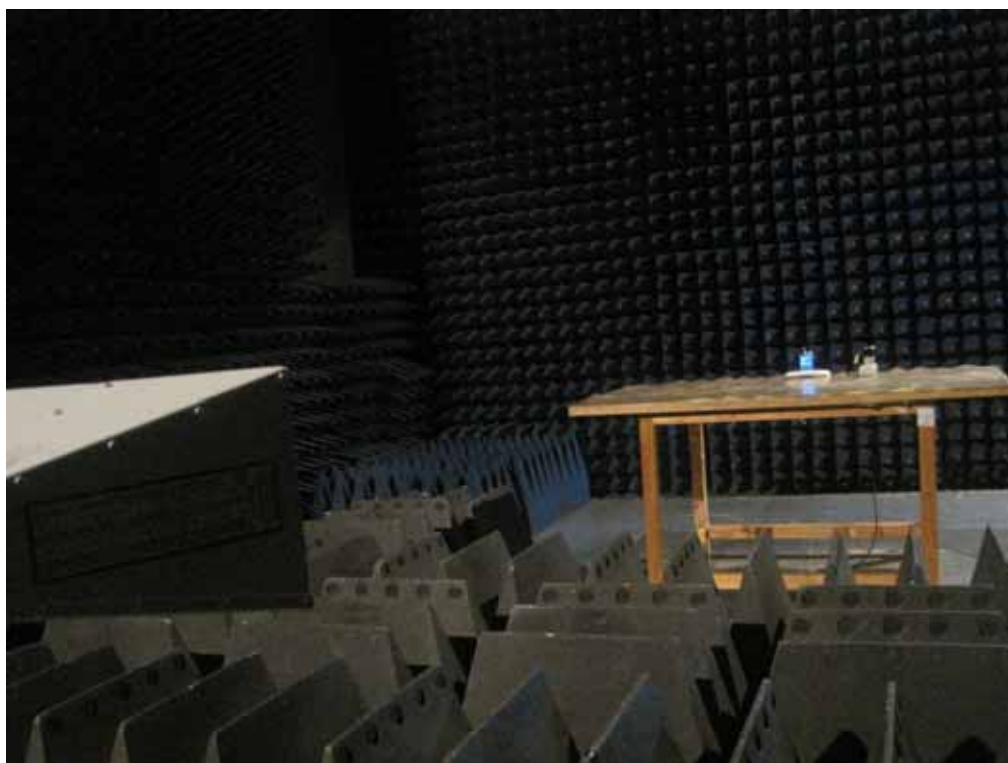
Test frequency from 30MHz to 1GHz





Test frequency from 1GHz~25GHz





15 Photographs - Constructional Details

15.1 Model AX F35- External View





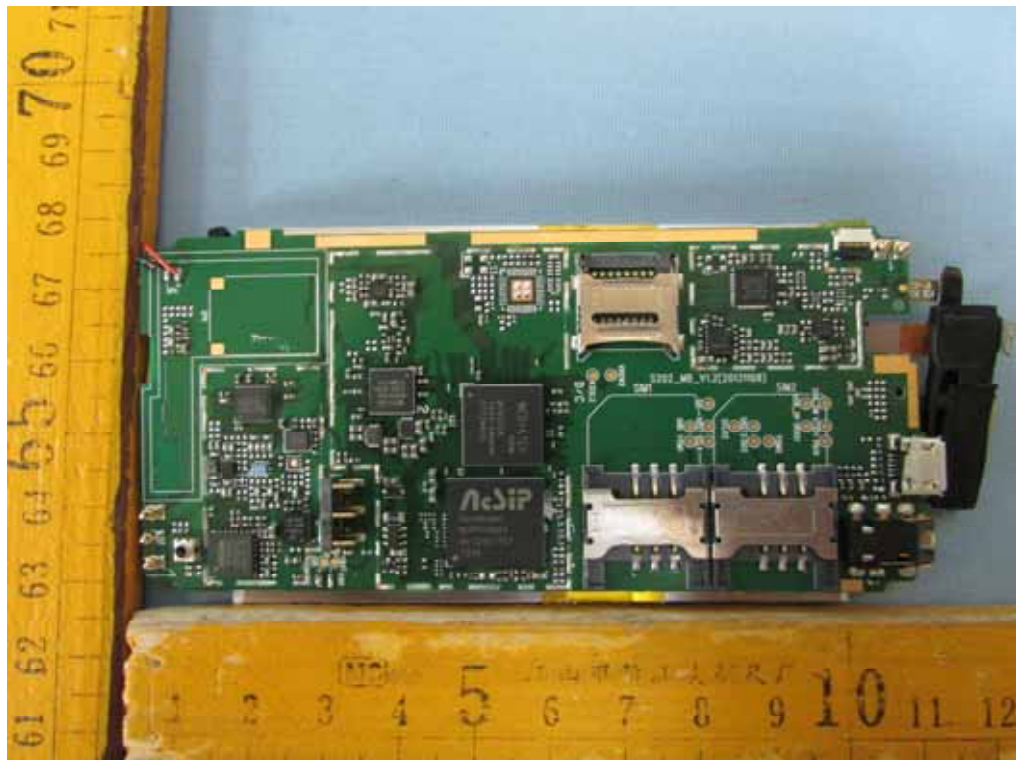






15.2 Model AX F35- – Internal Photos







====End of Report====