TEST REPORT

Reference No.	:	WTS14S1221789-2E
FCC ID.....	:	2ADYRS737
Applicant	:	Shenzhen Da&Fong Electronics Co., Ltd.
Address	:	Floor 3, Block 1, Huali Industrial Park,Baoan Street, Fuyong, Bao'an, Shenzhen,China
Manufacturer	:	The same as above
Address	:	The same as above
Product Name	:	Tablet PC
Model No.	:	S737
Standards.....	:	FCC CFR47 Part 15 C Section 15.247:2014
Date of Receipt sample.....	:	Dec.27, 2014
Date of Test.....	:	Jan, 10, 2015~Jan.19, 2015
Date of Issue	:	Feb. 02, 2015
Test Result	:	**Pass**

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

Prepared By:
Waltek Services (Shenzhen) Co., Ltd.
Address: 1/F., Fukangtai Building, West Baima Road, Songgang Street, Baoan District, Shenzhen, Guangdong, China
Tel :+86-755-83551033
Fax:+86-755-83552400

Compiled by:

Zero Zhou / Project Engineer

Approved by:

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
Antenna Requirement	15.203	PASS
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS

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4 General Information

4.1 General Description of E.U.T.

Product Name:	: Tablet PC
Model No.:	: S737
Model Difference:	: Only the model name is different. PT-700D is the tested sample.
Operation Frequency:	: 2412MHz ~ 2462MHz, 2422MHz~2452MHz
The Lowest Oscillator:	: 32.768 kHz
Antenna installation:	: Internal permanent antenna
Antenna Gain:	: 0 dBi
Type of modulation:	: IEEE 802.11b (CCK/QPSK/BPSK,11Mbps max.) IEEE 802.11g (BPSK/QPSK/16QAM/64QAM,54Mbps max.) IEEE 802.11n (BPSK/QPSK/16QAM/64QAM,HT20:72Mbps max., HT40:150Mbps max.)

4.2 Details of E.U.T.

Technical Data:	: DC 3.8V 3000mAh by battery DC 5V, 2.0A, charging by adapter (Adapter Input: 110-240V~0.5A 50/60Hz,Output: 5V, 2A)

4.3 Channel List

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	-

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	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
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	150 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	150 Mbps	3/6/9	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 2 Tests Carried Out Under FCC part 15.207 & FCC part 15.209

Test Item	Test Mode
Conduction Emission, 0.15MHz to 30MHz	Communication

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 Test Site 1#– Registration No.: 880581**

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

- **FCC Test Site 2#– Registration No.: 328995**

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

5 Equipment Used during Test

5.1 Equipments List

Conducted Emissions Test Site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	100947	Sep.15,2014	Sep.14,2015
2.	LISN	R&S	ENV216	101215	Sep.15,2014	Sep.14,2015
3.	Cable	Top	TYPE16(3.5M)	-	Sep.15,2014	Sep.14,2015
Conducted Emissions Test Site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	101155	Sep.15,2014	Sep.14,2015
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	Sep.15,2014	Sep.14,2015
3.	Limiter	York	MTS-IMP-136	261115-001-0024	Sep.15,2014	Sep.14,2015
4.	Cable	LARGE	RF300	-	Sep.15,2014	Sep.14,2015
3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1	EMC Analyzer	Agilent	E7405A	MY45114943	Sep.15,2014	Sep.14,2015
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	Sep.15,2014	Sep.14,2015
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	Apr.19,2014	Apr.18,2015
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	Sep.15,2014	Sep.14,2015
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
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No**	**Last Calibration Date**	**Calibration Due Date**
1	Test Receiver	R&S	ESCI	101296	Sep.15,2014	Sep.14,2015
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	Sep.15,2014	Sep.14,2015
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	Sep.15,2014	Sep.14,2015
4	Cable	HUBER+SUHNER	CBL2	525178	Sep.15,2014	Sep.14,2015
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.15,2014	Sep.14,2015
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	Sep.15,2014	Sep.14,2015
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	Sep.15,2014	Sep.14,2015

5.2 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)

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 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)

6.1 E.U.T. Operation

Operating Environment **:**

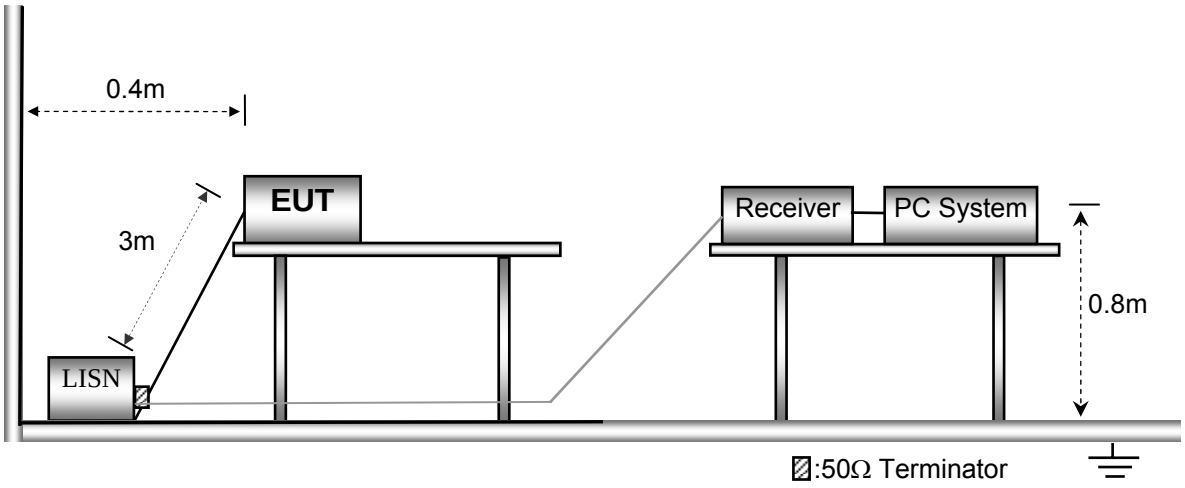
Temperature:	21.5 °C
Humidity:	51.9 % RH
Atmospheric Pressure:	101.2kPa

EUT Operation **:**

The test was performed in communication mode, the test data were shown in the report.

6.2 EUT Setup

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



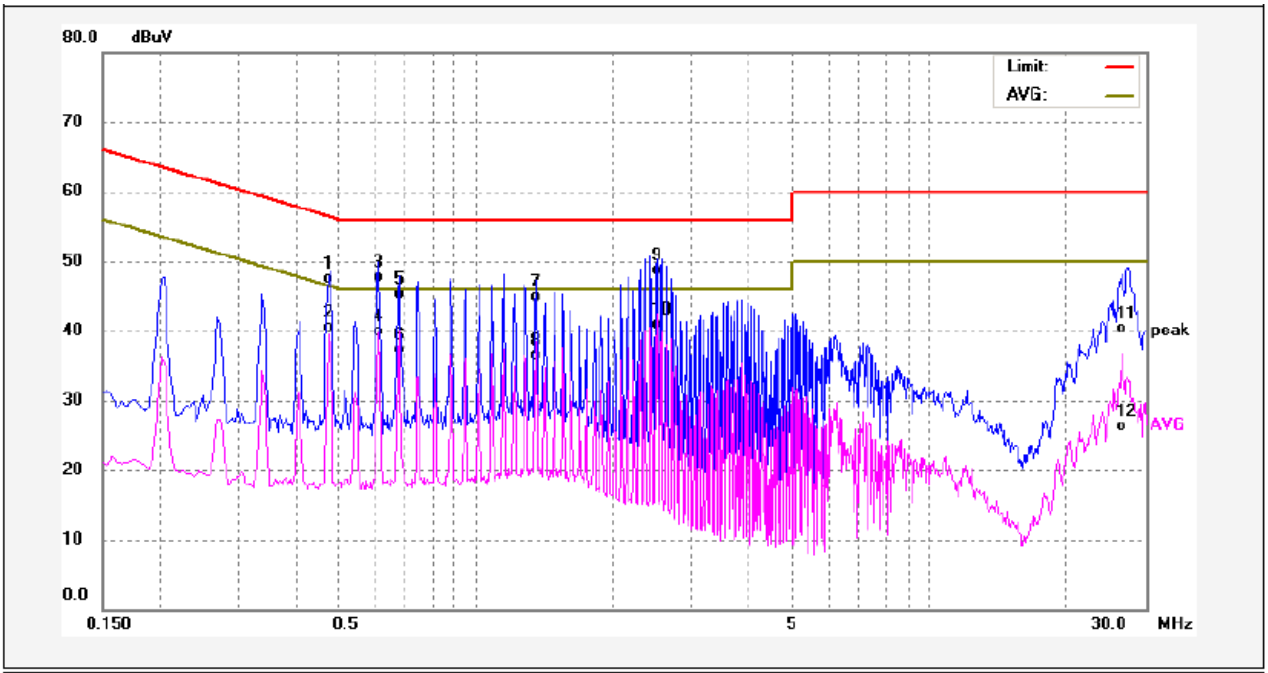
6.3 Measurement Description

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

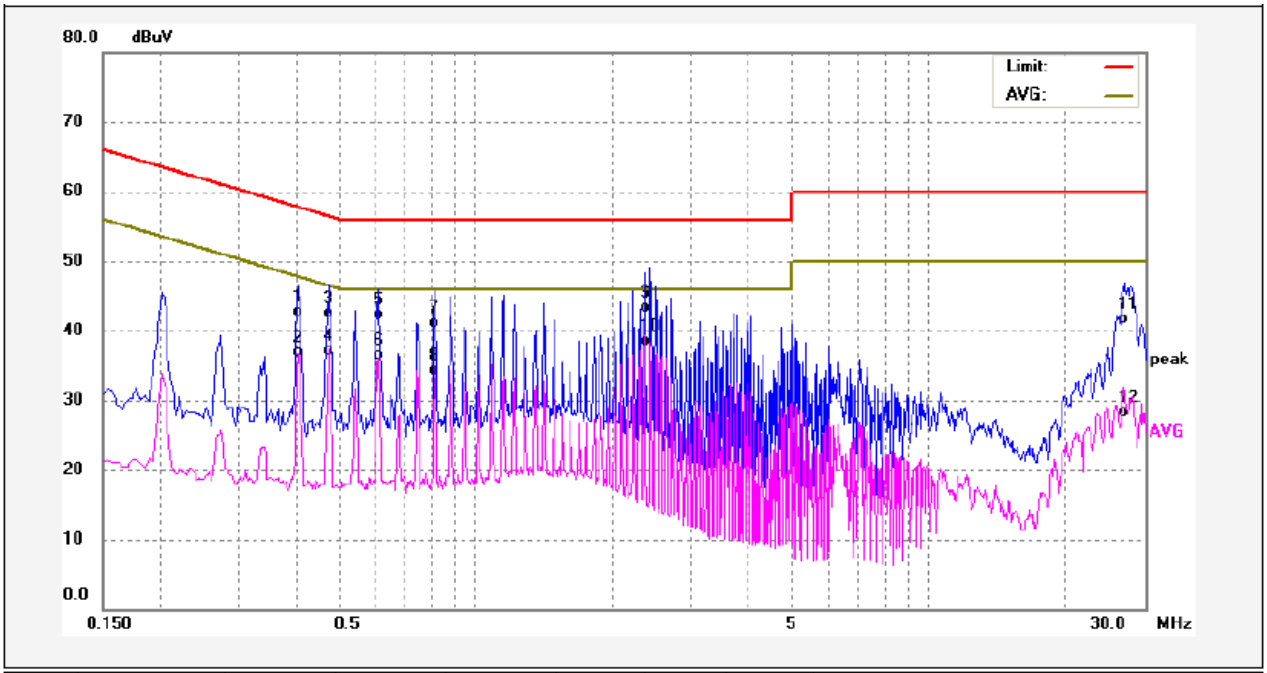
An initial pre-scan was performed on the live and neutral lines.

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.4740	36.17	11.31	47.48	56.44	-8.96	QP	
2	0.4740	29.23	11.31	40.54	46.44	-5.90	AVG	
3	0.6100	36.40	11.33	47.73	56.00	-8.27	QP	
4	0.6100	28.60	11.33	39.93	46.00	-6.07	AVG	
5	0.6780	34.00	11.34	45.34	56.00	-10.66	QP	
6	0.6780	25.94	11.34	37.28	46.00	-8.72	AVG	
7	1.3540	33.65	11.19	44.84	56.00	-11.16	QP	
8	1.3540	25.29	11.19	36.48	46.00	-9.52	AVG	
9	2.5020	37.59	11.21	48.80	56.00	-7.20	QP	
10	2.5020	29.64	11.21	40.85	46.00	-5.15	AVG	
11	26.4900	28.82	11.54	40.36	60.00	-19.64	QP	
12	26.4900	14.83	11.54	26.37	50.00	-23.63	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.4060	31.31	11.31	42.62	57.73	-15.11	QP	
2	0.4060	25.50	11.31	36.81	47.73	-10.92	AVG	
3	0.4740	31.10	11.31	42.41	56.44	-14.03	QP	
4	0.4740	25.83	11.31	37.14	46.44	-9.30	AVG	
5	0.6100	30.95	11.33	42.28	56.00	-13.72	QP	
6	0.6100	25.27	11.33	36.60	46.00	-9.40	AVG	
7	0.8100	29.76	11.28	41.04	56.00	-14.96	QP	
8	0.8100	22.94	11.28	34.22	46.00	-11.78	AVG	
9	2.3660	32.20	11.20	43.40	56.00	-12.60	QP	
10	2.3660	27.25	11.20	38.45	46.00	-7.55	AVG	
11	26.9620	30.11	11.53	41.64	60.00	-18.36	QP	
12	26.9620	16.87	11.53	28.40	50.00	-21.60	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(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	$20\log^{(500)}$

7.1 EUT Operation

Operating Environment **:**

Temperature: 23.5 °C

Humidity: 52.1 % RH

Atmospheric Pressure: 101.2kPa

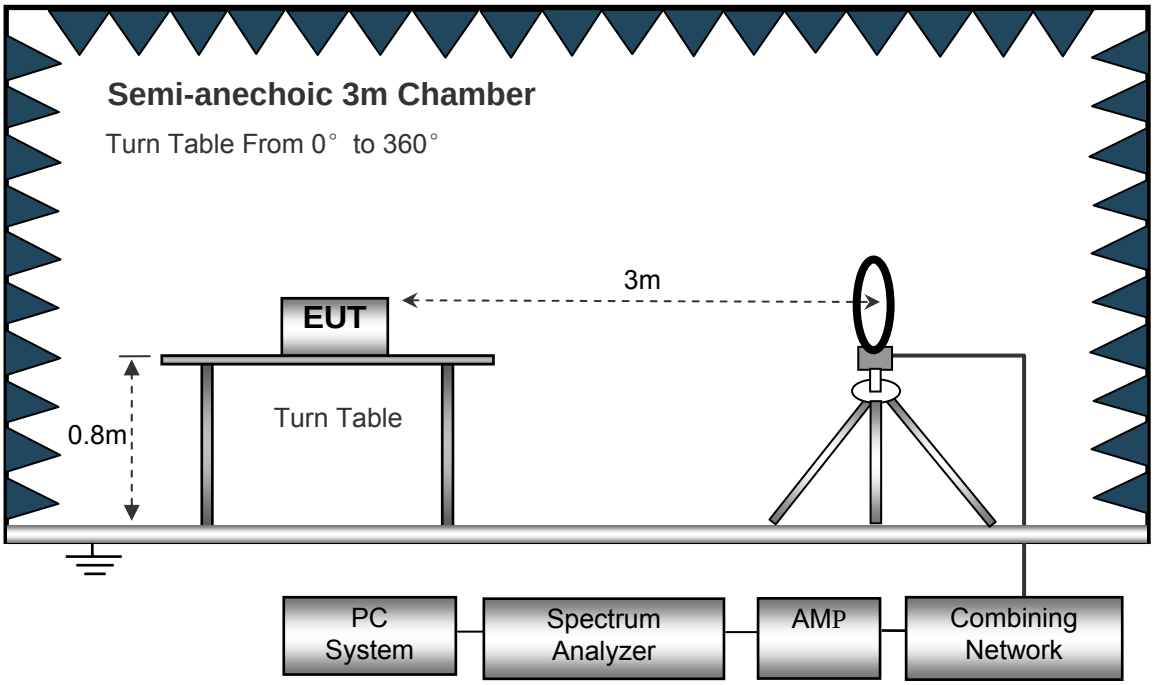
EUT Operation **:**

The test was performed in transmitting mode, the test data were shown in the report.

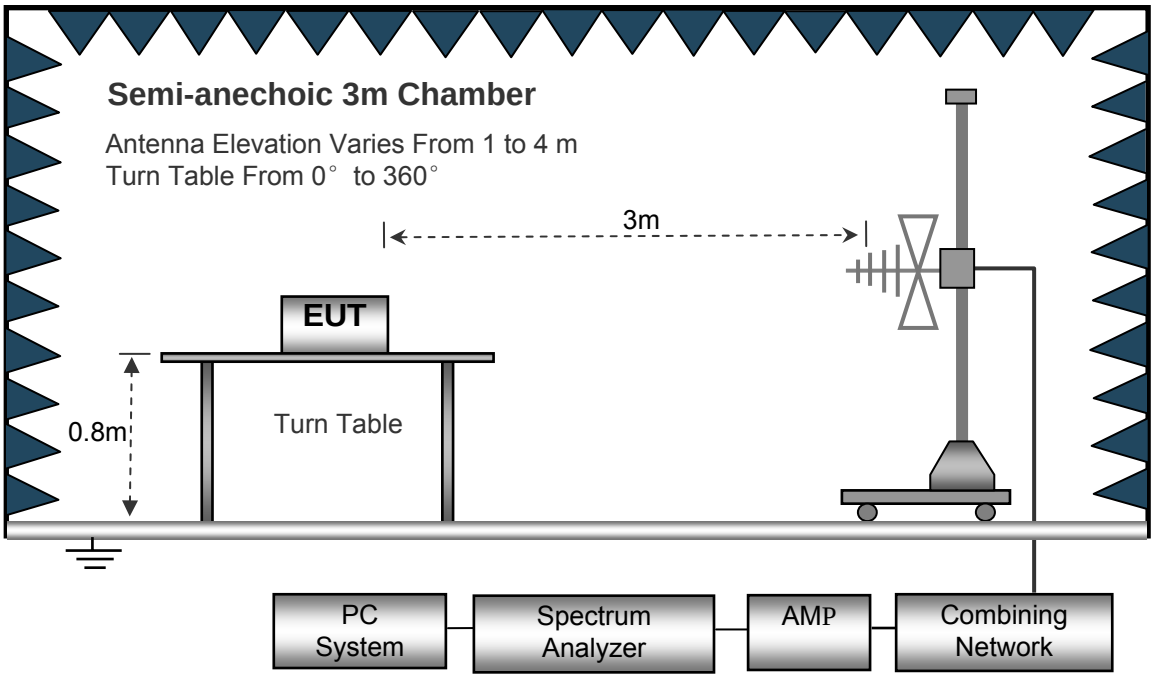
7.2 Test Setup

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

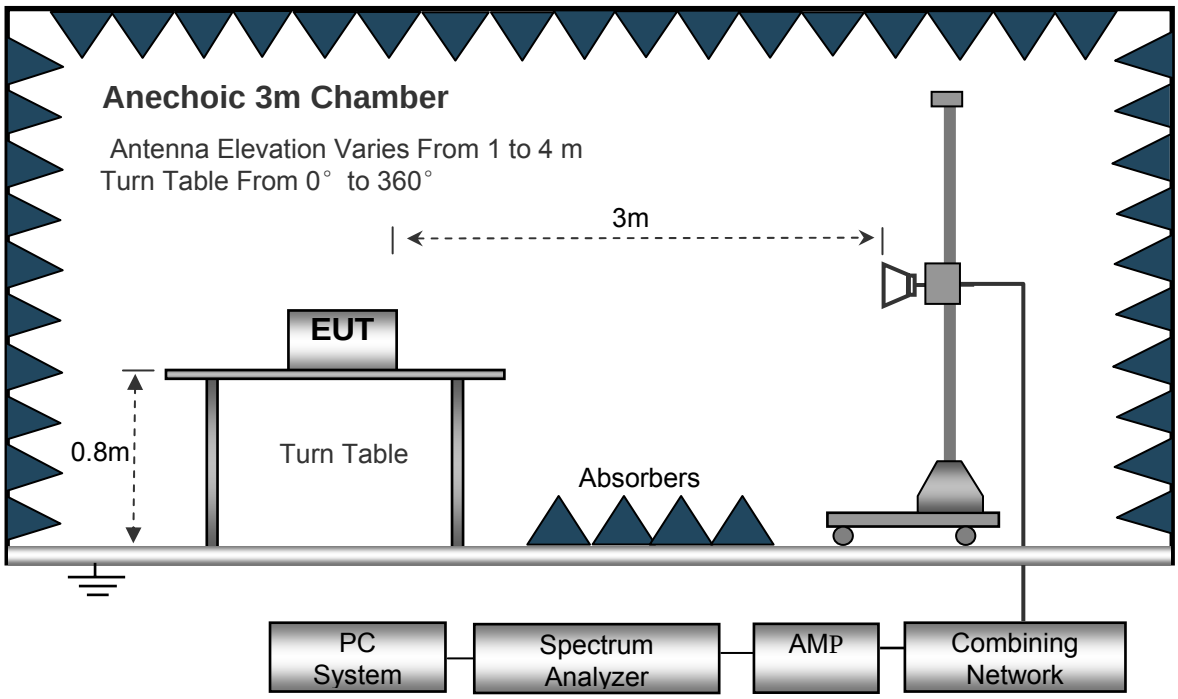
The test setup for emission measurement below 30MHz.



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:

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

7.6 Summary of Test Results

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)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11b: Low Channel 2412MHz									
212.53	23.17	PK	360	1.4	H	11.13	34.30	43.50	-9.20
212.53	20.38	PK	75	1.7	V	11.13	31.51	43.50	-11.99
4824.00	53.43	PK	93	1.5	V	-1.06	52.37	74.00	-21.63
4824.00	46.21	Ave	93	1.5	V	-1.06	45.15	54.00	-8.85
7236.00	43.86	PK	212	1.9	H	1.33	45.19	74.00	-28.81
7236.00	40.63	Ave	212	1.9	H	1.33	41.96	54.00	-12.04
2332.79	45.73	PK	59	1.8	V	-13.19	32.54	74.00	-41.46
2332.79	38.20	Ave	59	1.8	V	-13.19	25.01	54.00	-28.99
2360.74	43.24	PK	109	1.2	H	-13.14	30.10	74.00	-43.90
2360.74	38.88	Ave	109	1.2	H	-13.14	25.74	54.00	-28.26
2499.75	42.05	PK	19	2.0	V	-13.08	28.97	74.00	-45.03
2499.75	38.32	Ave	19	2.0	V	-13.08	25.24	54.00	-28.76

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									
212.53	24.30	PK	180	1.1	H	11.13	35.43	43.50	-8.07
212.53	24.45	PK	296	1.5	V	11.13	35.58	43.50	-7.92
4874.00	54.31	PK	31	1.8	V	-0.62	53.69	74.00	-20.31
4874.00	47.78	Ave	31	1.8	V	-0.62	47.16	54.00	-6.84
7311.00	43.63	PK	175	1.1	H	2.21	45.84	74.00	-28.16
7311.00	40.73	Ave	175	1.1	H	2.21	42.94	54.00	-11.06
2319.60	46.18	PK	2	1.8	V	-13.19	32.99	74.00	-41.01
2319.60	39.58	Ave	2	1.8	V	-13.19	26.39	54.00	-27.61
2386.79	44.81	PK	5	1.1	H	-13.14	31.67	74.00	-42.33
2386.79	38.63	Ave	5	1.1	H	-13.14	25.49	54.00	-28.51
2491.30	44.07	PK	21	1.3	V	-13.08	30.99	74.00	-43.01
2491.30	36.63	Ave	21	1.3	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)
11b: High Channel 2462MHz									
212.53	22.90	PK	75	1.6	H	11.13	34.03	43.50	-9.47
212.53	25.51	PK	116	1.7	V	11.13	36.64	43.50	-6.86
4924.00	56.28	PK	340	1.2	V	-0.24	56.04	74.00	-17.96
4924.00	47.28	Ave	340	1.2	V	-0.24	47.04	54.00	-6.96
7386.00	44.62	PK	3	1.2	H	2.84	47.46	74.00	-26.54
7386.00	40.80	Ave	3	1.2	H	2.84	43.64	54.00	-10.36
2345.23	46.46	PK	180	1.4	V	-13.19	33.27	74.00	-40.73
2345.23	38.08	Ave	180	1.4	V	-13.19	24.89	54.00	-29.11
2384.68	43.91	PK	22	1.7	H	-13.14	30.77	74.00	-43.23
2384.68	38.27	Ave	22	1.7	H	-13.14	25.13	54.00	-28.87
2495.59	42.62	PK	291	1.6	V	-13.08	29.54	74.00	-44.46
2495.59	38.48	Ave	291	1.6	V	-13.08	25.40	54.00	-28.60

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									
212.53	23.91	PK	79	1.8	H	11.13	35.04	43.50	-8.46
212.53	26.06	PK	253	1.9	V	11.13	37.19	43.50	-6.31
4824.00	55.06	PK	99	1.7	V	-1.06	54.00	74.00	-20.00
4824.00	46.40	Ave	99	1.7	V	-1.06	45.34	54.00	-8.66
7236.00	44.77	PK	187	1.4	H	1.33	46.10	74.00	-27.90
7236.00	40.81	Ave	187	1.4	H	1.33	42.14	54.00	-11.86
2330.01	46.34	PK	236	1.4	V	-13.19	33.15	74.00	-40.85
2330.01	39.99	Ave	236	1.4	V	-13.19	26.80	54.00	-27.20
2385.57	44.55	PK	305	1.9	H	-13.14	31.41	74.00	-42.59
2385.57	37.85	Ave	305	1.9	H	-13.14	24.71	54.00	-29.29
2485.15	43.74	PK	301	1.1	V	-13.08	30.66	74.00	-43.34
2485.15	37.05	Ave	301	1.1	V	-13.08	23.97	54.00	-30.03

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									
212.53	22.69	PK	12	1.4	H	11.13	33.82	43.50	-9.68
212.53	24.43	PK	64	1.8	V	11.13	35.56	43.50	-7.94
4874.00	54.34	PK	186	1.9	V	-0.62	53.72	74.00	-20.28
4874.00	46.27	Ave	186	1.9	V	-0.62	45.65	54.00	-8.35
7311.00	44.74	PK	287	1.9	H	2.21	46.95	74.00	-27.05
7311.00	41.51	Ave	287	1.9	H	2.21	43.72	54.00	-10.28
2339.40	45.33	PK	249	1.3	V	-13.19	32.14	74.00	-41.86
2339.40	38.83	Ave	249	1.3	V	-13.19	25.64	54.00	-28.36
2350.78	42.86	PK	334	1.6	H	-13.14	29.72	74.00	-44.28
2350.78	36.49	Ave	334	1.6	H	-13.14	23.35	54.00	-30.65
2484.97	42.30	PK	160	1.5	V	-13.08	29.22	74.00	-44.78
2484.97	36.32	Ave	160	1.5	V	-13.08	23.24	54.00	-30.76

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									
212.53	25.35	PK	125	1.5	H	11.13	36.48	43.50	-7.02
212.53	21.77	PK	70	1.8	V	11.13	32.90	43.50	-10.60
4924.00	56.88	PK	286	1.2	V	-0.24	56.64	74.00	-17.36
4924.00	46.12	Ave	286	1.2	V	-0.24	45.88	54.00	-8.12
7386.00	47.52	PK	295	1.5	H	2.84	50.36	74.00	-23.64
7386.00	42.31	Ave	295	1.5	H	2.84	45.15	54.00	-8.85
2312.85	46.00	PK	29	1.7	V	-13.19	32.81	74.00	-41.19
2312.85	37.34	Ave	29	1.7	V	-13.19	24.15	54.00	-29.85
2370.61	43.91	PK	27	1.7	H	-13.14	30.77	74.00	-43.23
2370.61	36.61	Ave	27	1.7	H	-13.14	23.47	54.00	-30.53
2486.17	42.39	PK	99	1.3	V	-13.08	29.31	74.00	-44.69
2486.17	38.78	Ave	99	1.3	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: Low Channel 2412MHz									
212.53	21.69	PK	123	1.1	H	11.13	32.82	43.50	-10.68
212.53	23.92	PK	152	1.7	V	11.13	35.05	43.50	-8.45
4824.00	55.37	PK	89	1.4	V	-1.06	54.31	74.00	-19.69
4824.00	45.23	Ave	89	1.4	V	-1.06	44.17	54.00	-9.83
7236.00	46.95	PK	317	1.8	H	1.33	48.28	74.00	-25.72
7236.00	44.02	Ave	317	1.8	H	1.33	45.35	54.00	-8.65
2322.42	45.24	PK	103	1.5	V	-13.19	32.05	74.00	-41.95
2322.42	39.59	Ave	103	1.5	V	-13.19	26.40	54.00	-27.60
2354.82	42.20	PK	103	1.6	H	-13.14	29.06	74.00	-44.94
2354.82	38.60	Ave	103	1.6	H	-13.14	25.46	54.00	-28.54
2486.54	44.42	PK	256	1.3	V	-13.08	31.34	74.00	-42.66
2486.54	38.39	Ave	256	1.3	V	-13.08	25.31	54.00	-28.69

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									
212.53	21.90	PK	146	1.8	H	11.13	33.03	43.50	-10.47
212.53	24.91	PK	114	1.9	V	11.13	36.04	43.50	-7.46
4874.00	55.68	PK	207	1.7	V	-0.62	55.06	74.00	-18.94
4874.00	45.16	Ave	207	1.7	V	-0.62	44.54	54.00	-9.46
7311.00	46.11	PK	79	1.8	H	2.21	48.32	74.00	-25.68
7311.00	43.05	Ave	79	1.8	H	2.21	45.26	54.00	-8.74
2344.32	46.52	PK	287	1.1	V	-13.19	33.33	74.00	-40.67
2344.32	38.32	Ave	287	1.1	V	-13.19	25.13	54.00	-28.87
2380.08	42.84	PK	190	1.7	H	-13.14	29.70	74.00	-44.30
2380.08	36.35	Ave	190	1.7	H	-13.14	23.21	54.00	-30.79
2493.70	42.32	PK	192	1.3	V	-13.08	29.24	74.00	-44.76
2493.70	37.89	Ave	192	1.3	V	-13.08	24.81	54.00	-29.19

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									
212.53	22.04	PK	39	1.2	H	11.13	33.17	43.50	-10.33
212.53	24.01	PK	19	1.2	V	11.13	35.14	43.50	-8.36
4924.00	56.76	PK	136	1.4	V	-0.24	56.52	74.00	-17.48
4924.00	44.53	Ave	136	1.4	V	-0.24	44.29	54.00	-9.71
7386.00	46.67	PK	27	1.2	H	2.84	49.51	74.00	-24.49
7386.00	42.98	Ave	27	1.2	H	2.84	45.82	54.00	-8.18
2314.43	45.61	PK	169	1.9	V	-13.19	32.42	74.00	-41.58
2314.43	37.60	Ave	169	1.9	V	-13.19	24.41	54.00	-29.59
2380.71	42.06	PK	168	1.4	H	-13.14	28.92	74.00	-45.08
2380.71	38.15	Ave	168	1.4	H	-13.14	25.01	54.00	-28.99
2496.46	43.57	PK	31	1.3	V	-13.08	30.49	74.00	-43.51
2496.46	37.18	Ave	31	1.3	V	-13.08	24.10	54.00	-29.90

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									
212.53	21.88	PK	305	1.2	H	11.13	33.01	43.50	-10.49
212.53	24.79	PK	226	1.2	V	11.13	35.92	43.50	-7.58
4844.00	55.43	PK	352	1.2	V	-1.06	54.37	74.00	-19.63
4844.00	44.91	Ave	352	1.2	V	-1.06	43.85	54.00	-10.15
7266.00	48.60	PK	261	1.1	H	1.33	49.93	74.00	-24.07
7266.00	42.68	Ave	261	1.1	H	1.33	44.01	54.00	-9.99
2315.58	46.51	PK	55	1.5	V	-13.19	33.32	74.00	-40.68
2315.58	39.13	Ave	55	1.5	V	-13.19	25.94	54.00	-28.06
2383.32	42.61	PK	15	1.6	H	-13.14	29.47	74.00	-44.53
2383.32	36.52	Ave	15	1.6	H	-13.14	23.38	54.00	-30.62
2497.03	42.67	PK	253	1.2	V	-13.08	29.59	74.00	-44.41
2497.03	38.71	Ave	253	1.2	V	-13.08	25.63	54.00	-28.37

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									
212.53	23.01	PK	309	1.2	H	11.13	34.14	43.50	-9.36
212.53	24.12	PK	195	1.0	V	11.13	35.25	43.50	-8.25
4874.00	54.78	PK	188	1.4	V	-0.62	54.16	74.00	-19.84
4874.00	46.06	Ave	188	1.4	V	-0.62	45.44	54.00	-8.56
7311.00	49.24	PK	346	1.6	H	2.21	51.45	74.00	-22.55
7311.00	41.81	Ave	346	1.6	H	2.21	44.02	54.00	-9.98
2339.24	46.96	PK	222	1.2	V	-13.19	33.77	74.00	-40.23
2339.24	39.00	Ave	222	1.2	V	-13.19	25.81	54.00	-28.19
2386.63	44.84	PK	6	1.5	H	-13.14	31.70	74.00	-42.30
2386.63	37.10	Ave	6	1.5	H	-13.14	23.96	54.00	-30.04
2497.44	43.27	PK	278	1.4	V	-13.08	30.19	74.00	-43.81
2497.44	38.33	Ave	278	1.4	V	-13.08	25.25	54.00	-28.75

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									
212.53	22.82	PK	337	2.0	H	11.13	33.95	43.50	-9.55
212.53	24.31	PK	310	1.5	V	11.13	35.44	43.50	-8.06
4904.00	56.10	PK	295	1.4	V	-0.24	55.86	74.00	-18.14
4904.00	46.63	Ave	295	1.4	V	-0.24	46.39	54.00	-7.61
7356.00	48.36	PK	133	1.4	H	2.84	51.20	74.00	-22.80
7356.00	43.23	Ave	133	1.4	H	2.84	46.07	54.00	-7.93
2322.32	45.73	PK	230	1.6	V	-13.19	32.54	74.00	-41.46
2322.32	39.83	Ave	230	1.6	V	-13.19	26.64	54.00	-27.36
2365.12	42.21	PK	179	1.2	H	-13.14	29.07	74.00	-44.93
2365.12	37.04	Ave	179	1.2	H	-13.14	23.90	54.00	-30.10
2486.64	42.35	PK	221	1.3	V	-13.08	29.27	74.00	-44.73
2486.64	36.50	Ave	221	1.3	V	-13.08	23.42	54.00	-30.58

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:	558074 D01 DTS Meas Guidance v03r02 June 5, 2014
Test Mode:	Transmitting

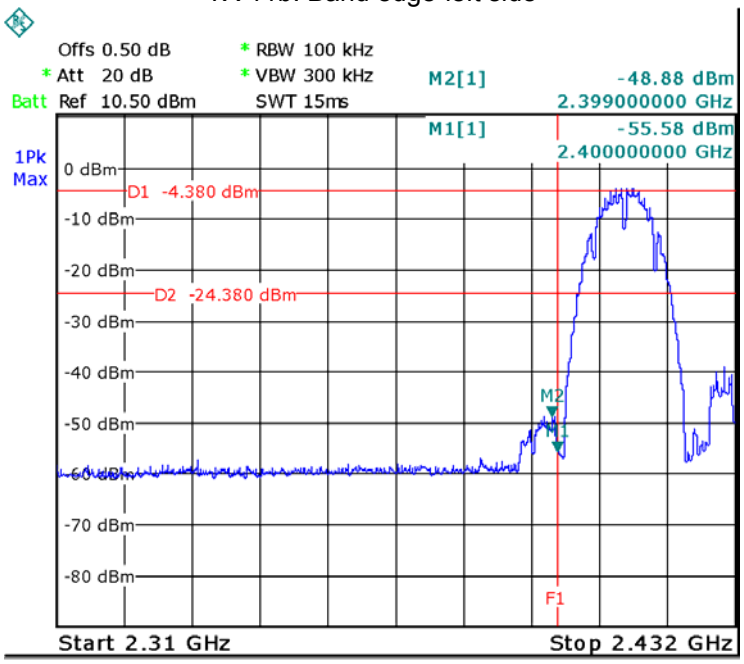
8.1 Test Produce

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.

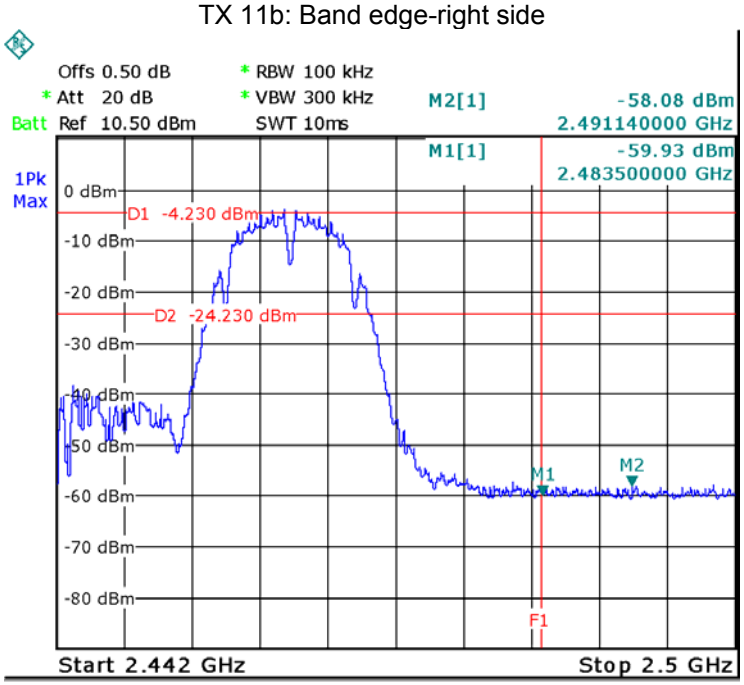
8.2 Test Result

Test result plots shown as follows:

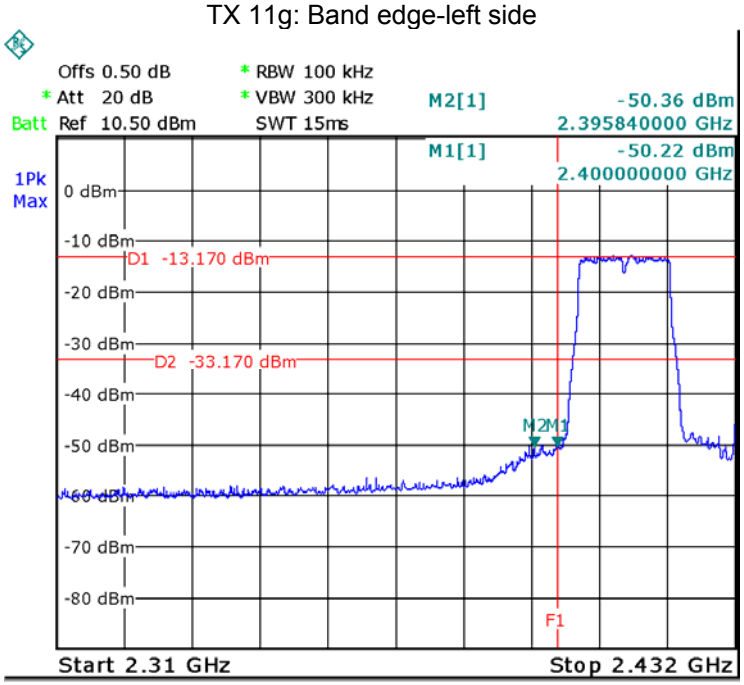
TX 11b: Band edge-left side



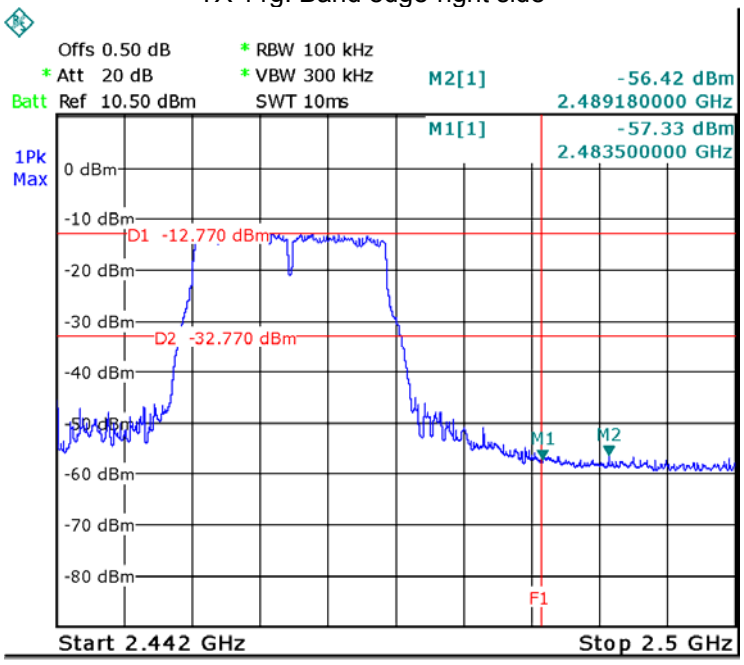
TX 11b: Band edge-right side



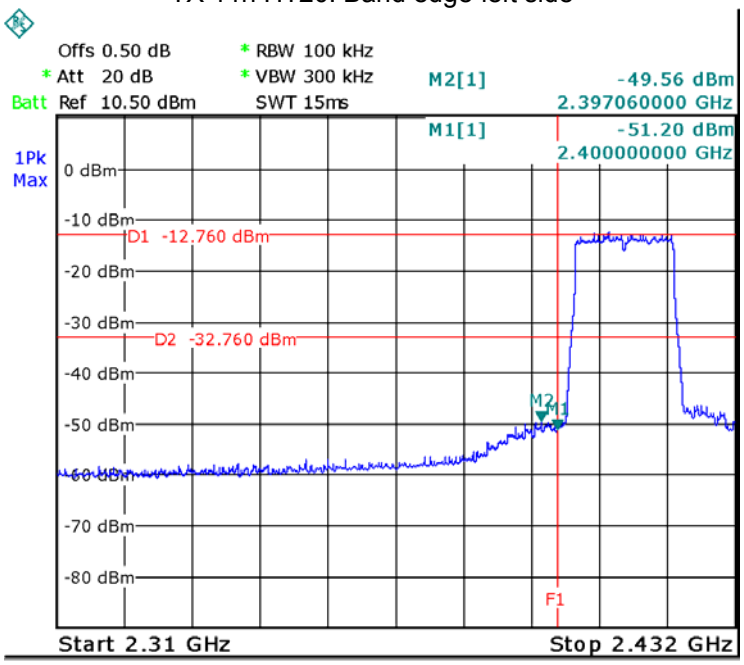
TX 11g: Band edge-left side



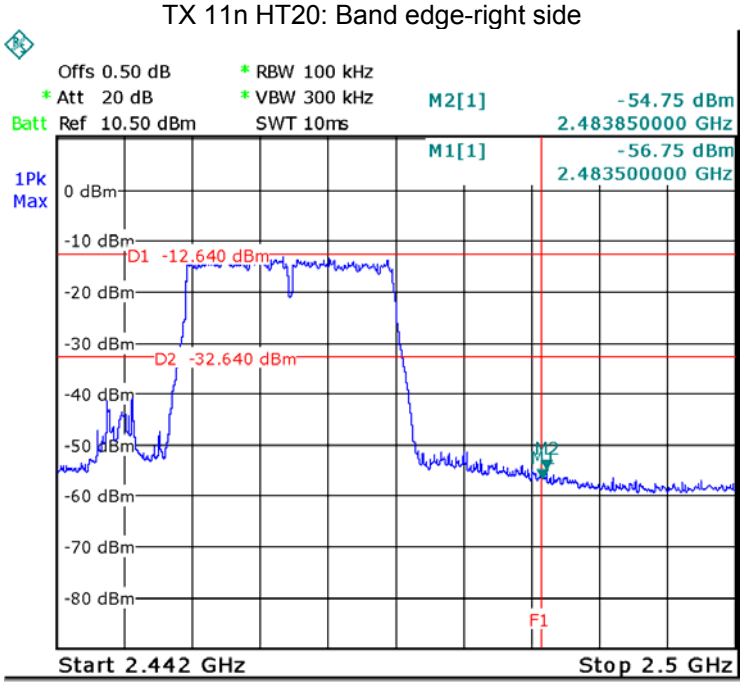
TX 11g: Band edge-right side



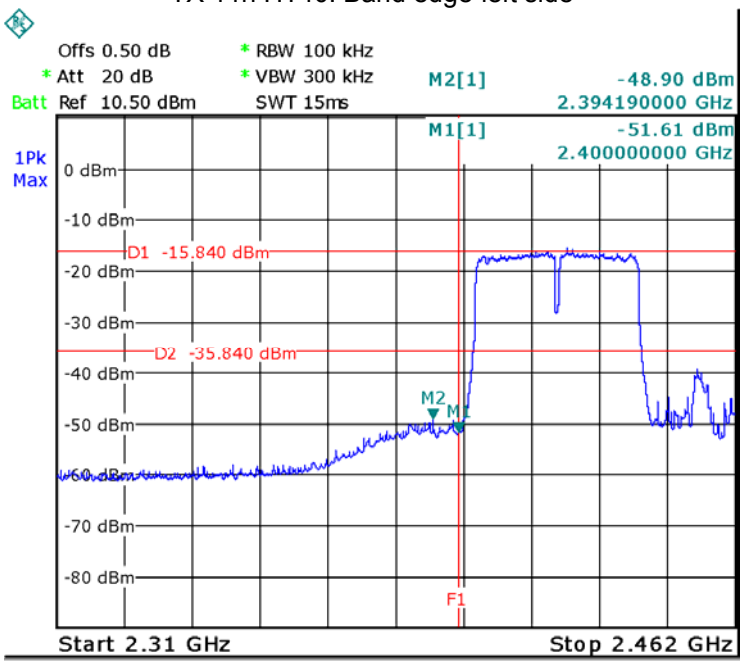
TX 11n HT20: Band edge-left side



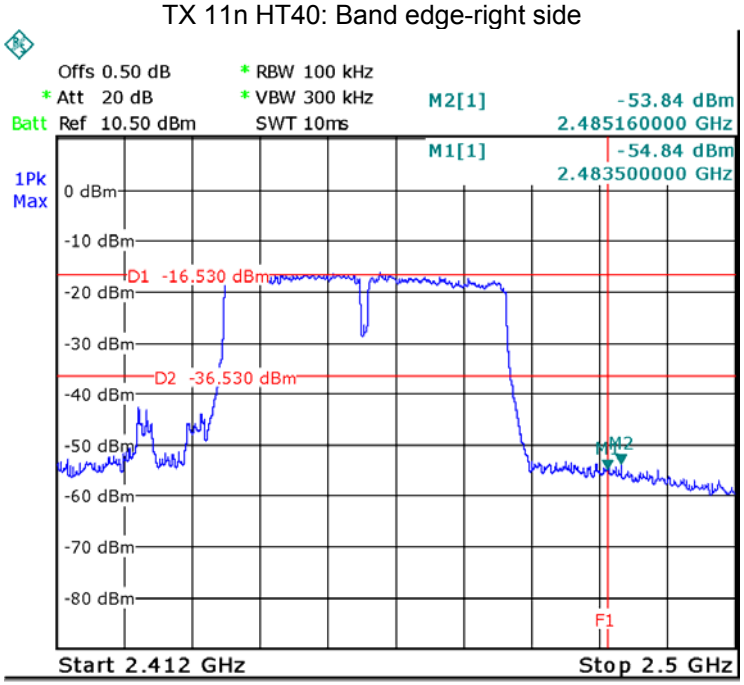
TX 11n HT20: Band edge-right side



TX 11n HT40: Band edge-left side



TX 11n HT40: Band edge-right side



9 6 dB Bandwidth Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: 558074 D01 DTS Meas Guidance v03r02 June 5, 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;

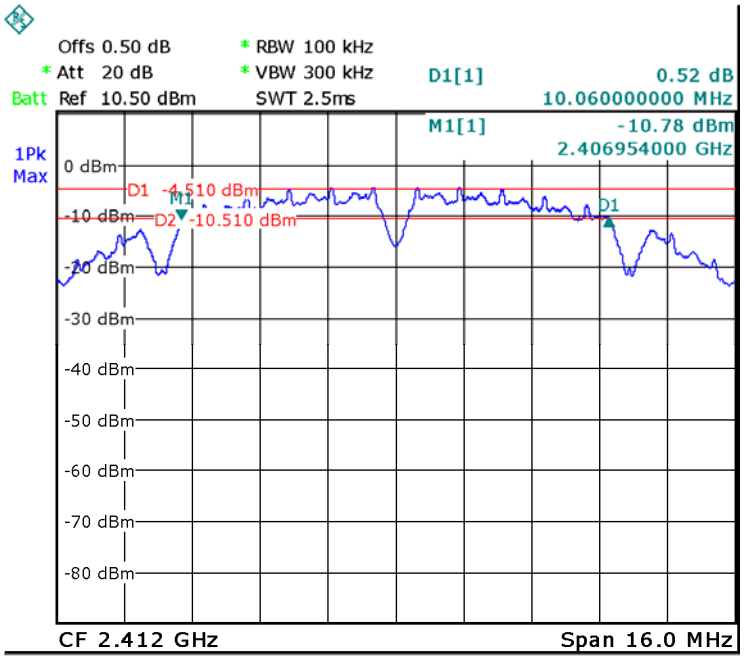
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

9.2 Test Result:

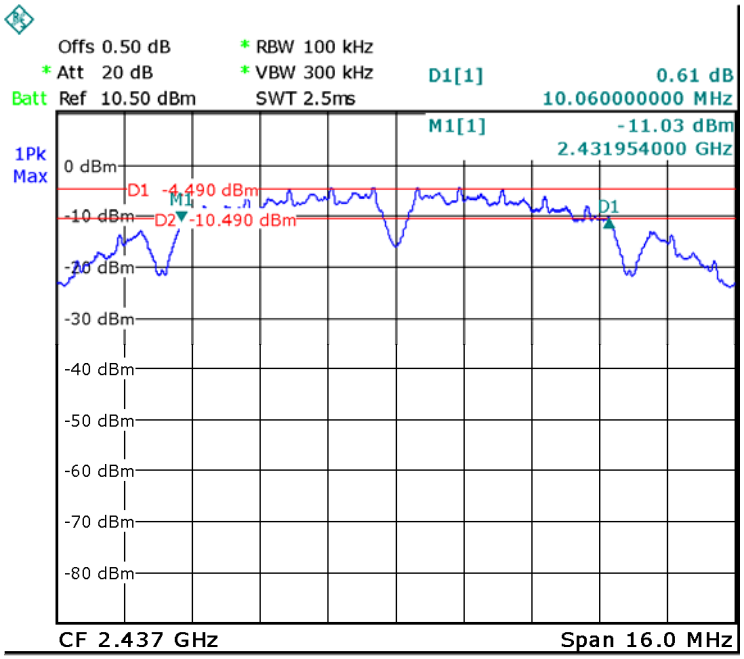
Operation mode	Bandwidth (MHz)		
TX 11b	Channel 1	Channel 6	Channel 11
	10.06	10.06	10.06
TX 11g	Channel 1	Channel 6	Channel 11
	16.62	16.62	16.62
TX 11n HT20	Channel 1	Channel 6	Channel 11
	17.84	17.84	17.84
TX 11n HT40	Channel 3	Channel 6	Channel 9
	36.56	36.56	36.56

Test result plot as follows:

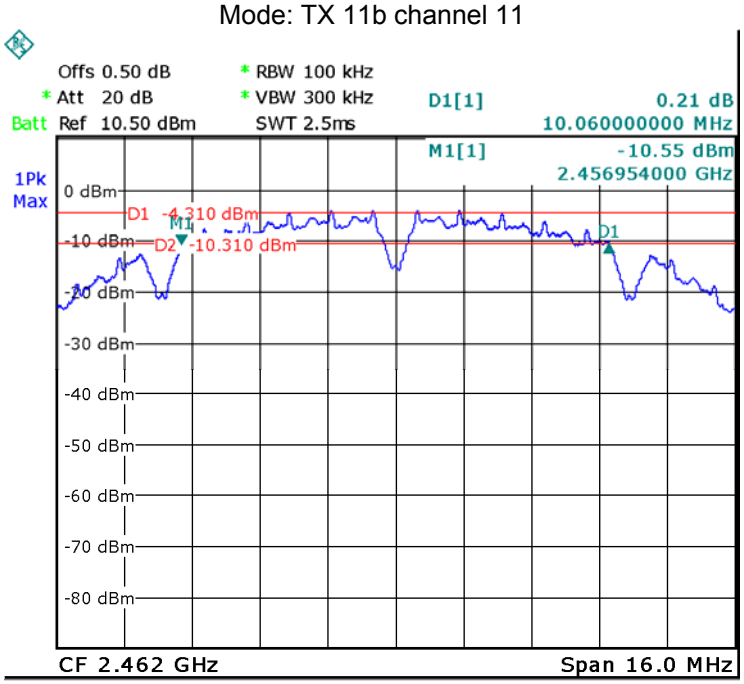
Mode: TX 11b channel 1



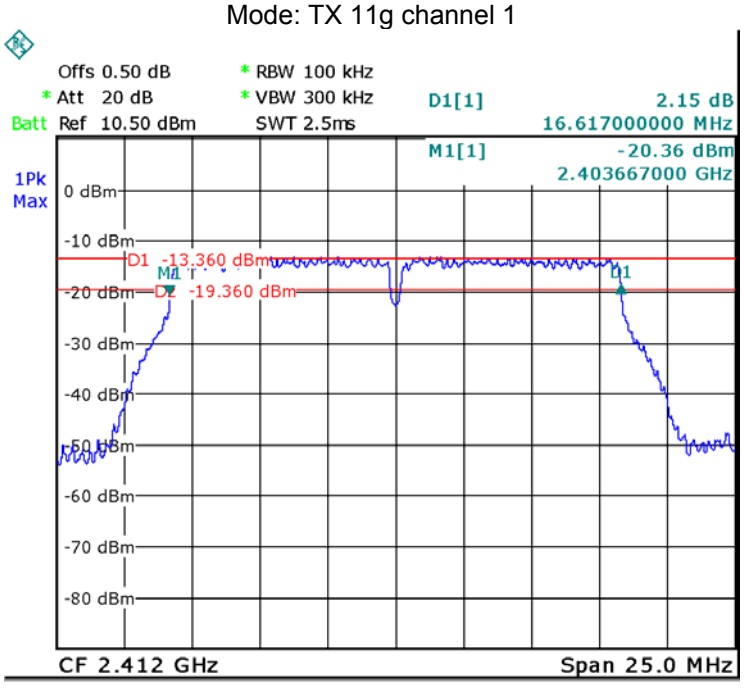
Mode: TX 11b channel 6



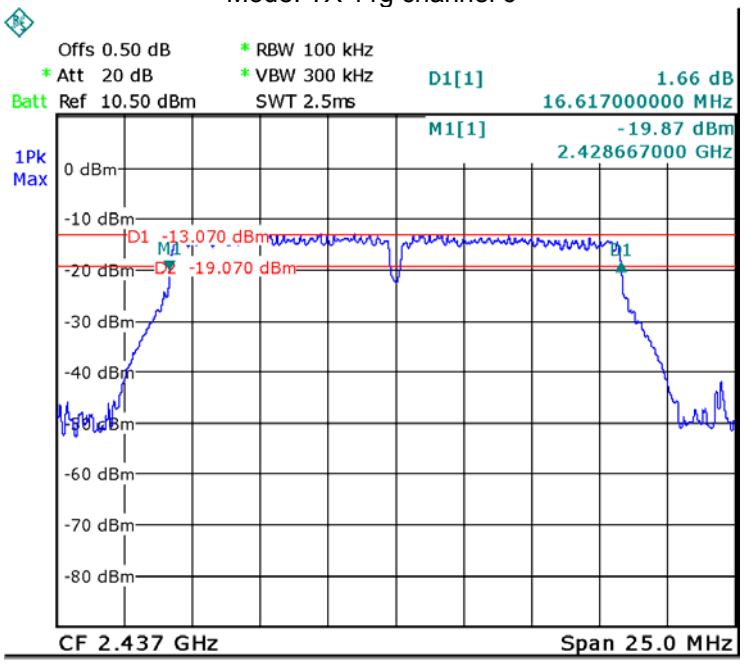
Mode: TX 11b channel 11



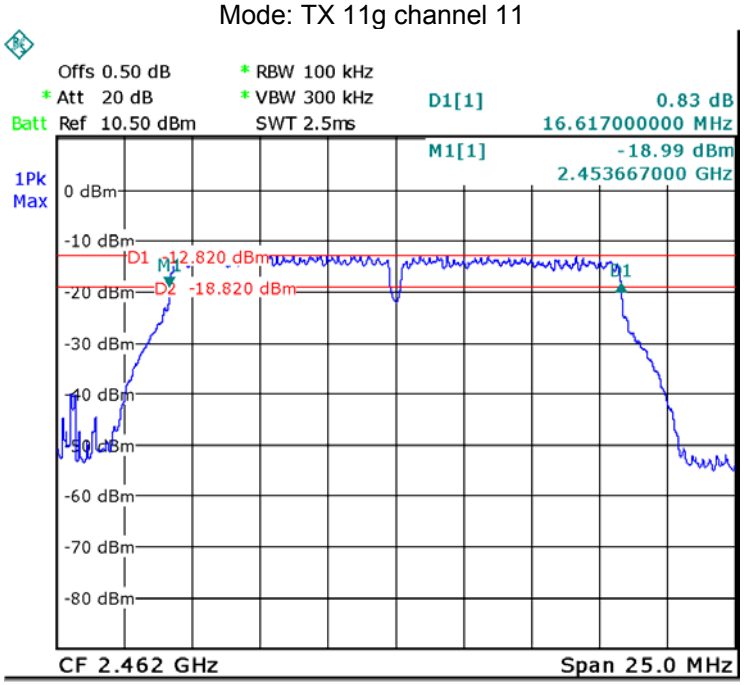
Mode: TX 11g channel 1



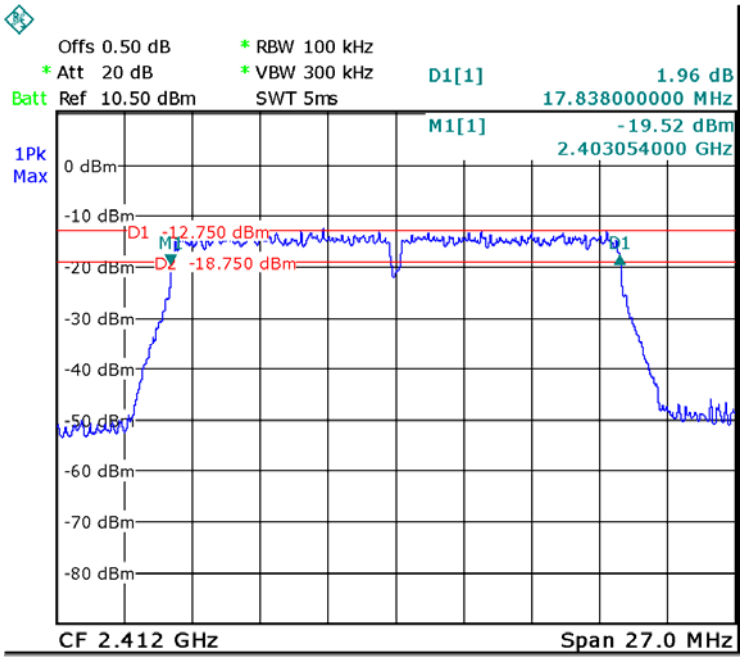
Mode: TX 11g channel 6



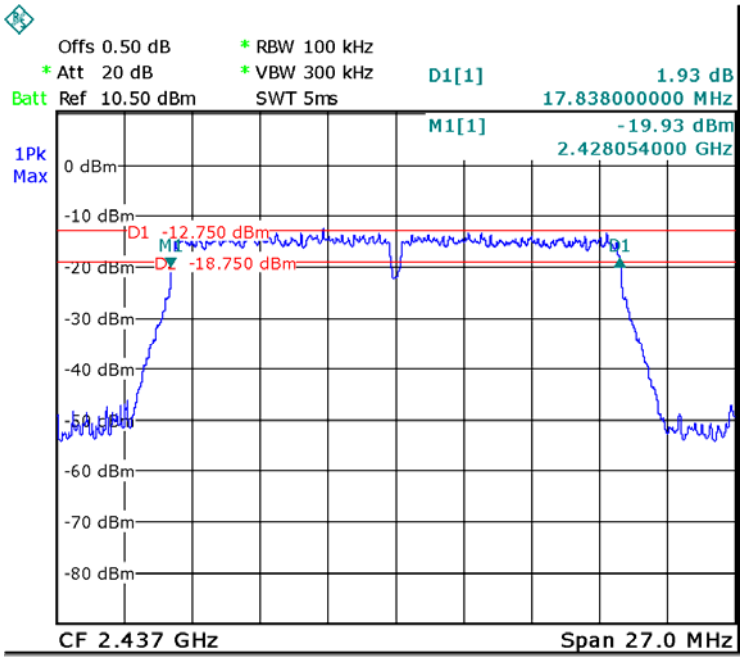
Mode: TX 11g channel 11



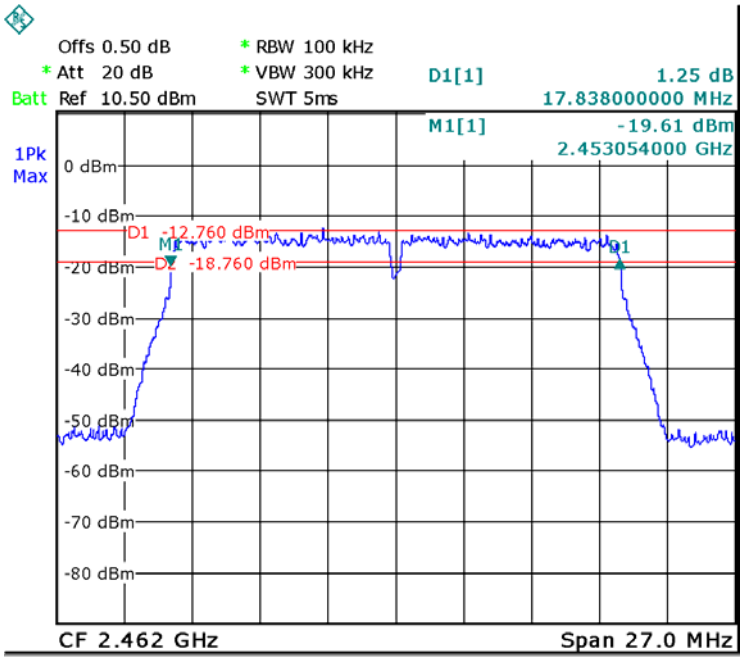
Mode: TX 11n HT20 channel 1



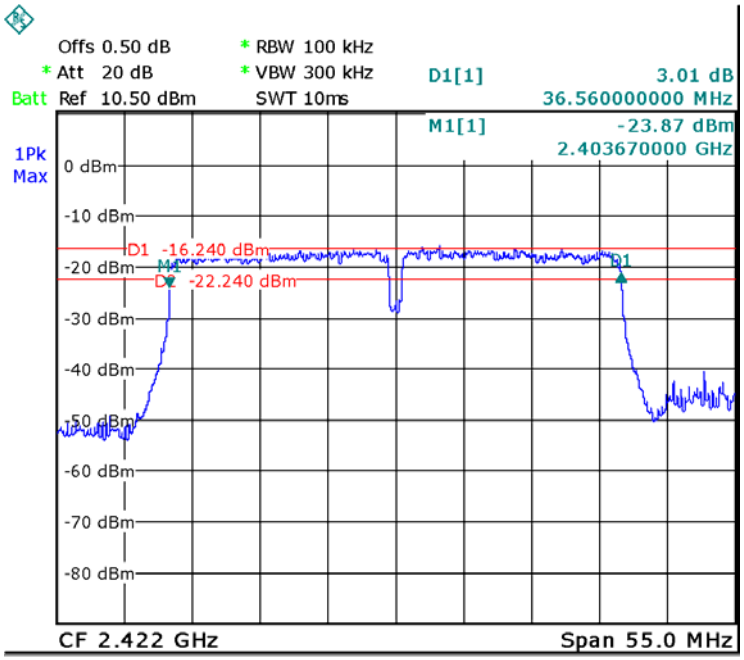
Mode: TX 11n HT20 channel 6



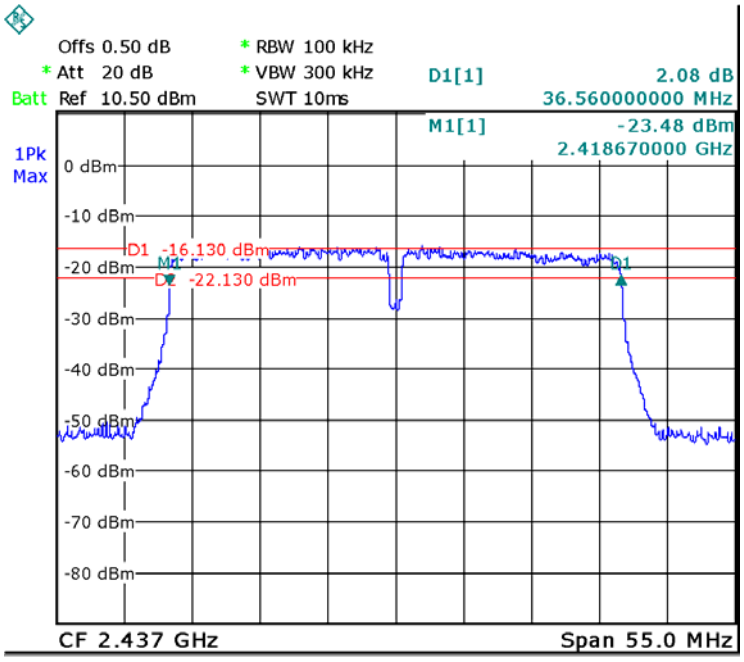
Mode: TX 11n HT20 channel 11



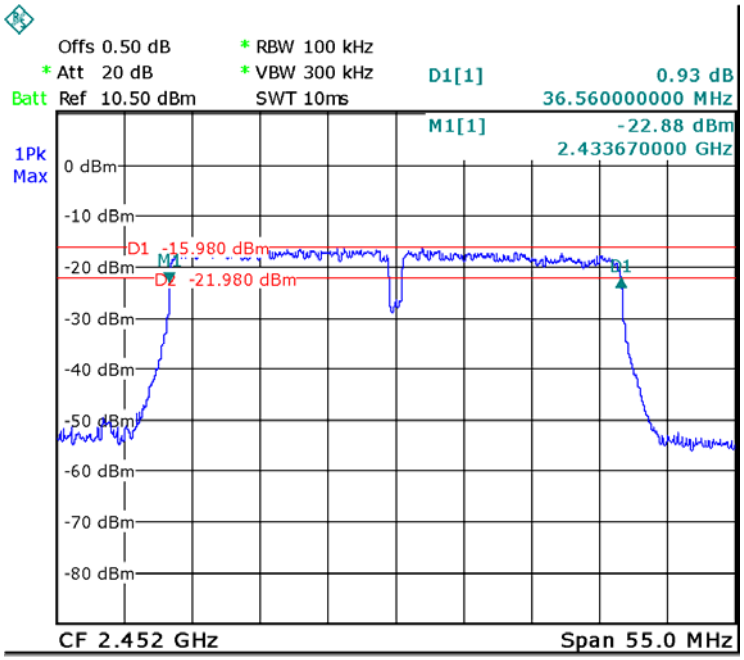
Mode: TX 11n HT40 channel 3



Mode: TX 11n HT40 channel 6



Mode: TX 11n HT40 channel 9



10 Maximum Peak Output Power

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: 558074 D01 DTS Meas Guidance v03r02 June 5, 2014

10.1 Test Procedure:

KDB558074 D01 v03r01 04/09/2013 section 9.1.2

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 = 1 MHz. VBW = 3 MHz. Sweep = auto; Detector Function = Peak, Set the span to fully encompass the DTS bandwidth.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

10.2 Test Result:

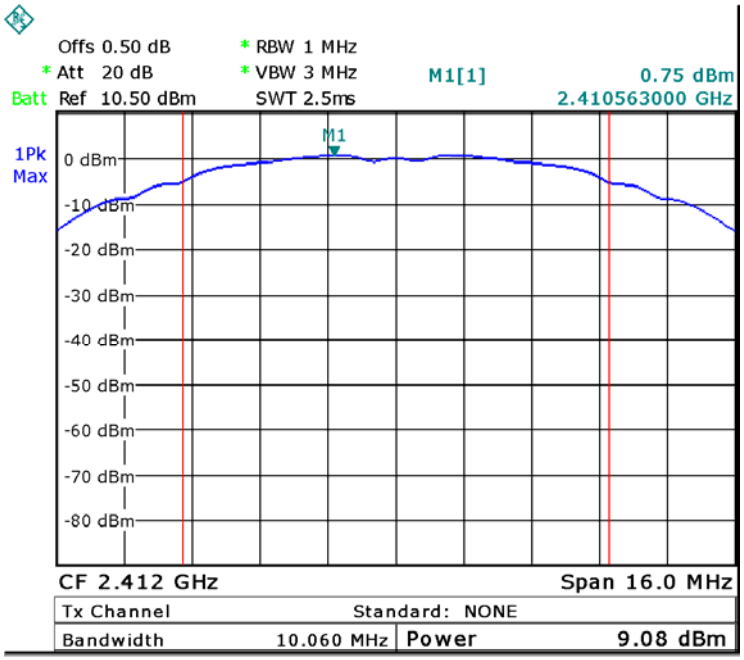
Test mode :TX 11b		
10 Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
9.08	9.10	9.05
Limit: 1W/30dBm		
1W/30dBm		

Test mode :TX 11g		
10 Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
9.11	9.09	9.39
Limit		
1W/30dBm		

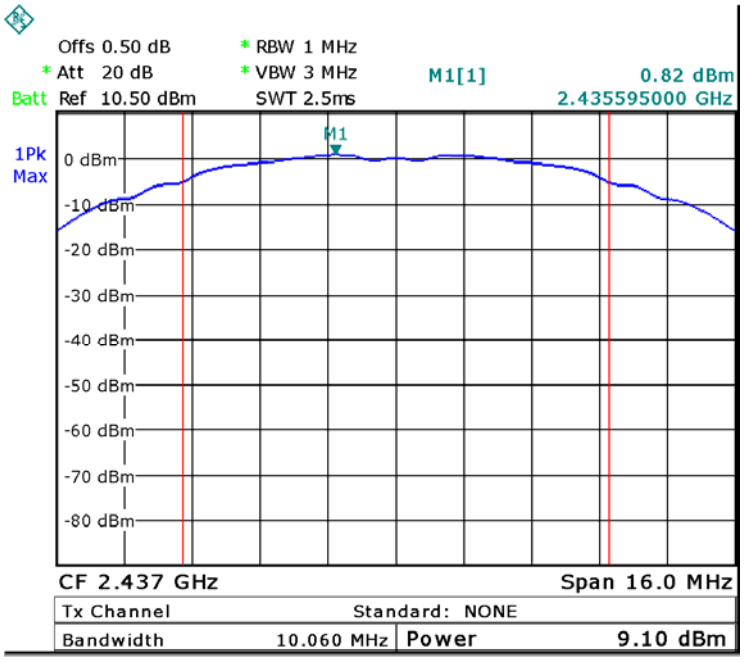
Test mode :TX 11n HT20		
10 Maximum Peak Output Power (dBm)		
2412MHz	2437MHz	2462MHz
9.33	9.55	9.18
Limit		
1W/30dBm		

Test mode : TX 11n HT40		
10 Maximum Peak Output Power (dBm)		
2422MHz	2437MHz	2452MHz
9.17	9.39	9.07
Limit		
1W/30dBm		

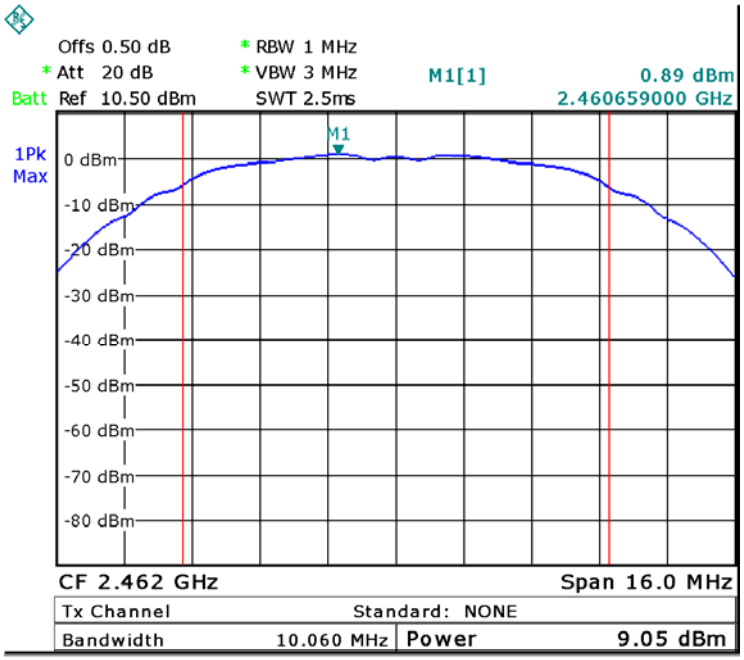
Mode: TX 11b channel 1



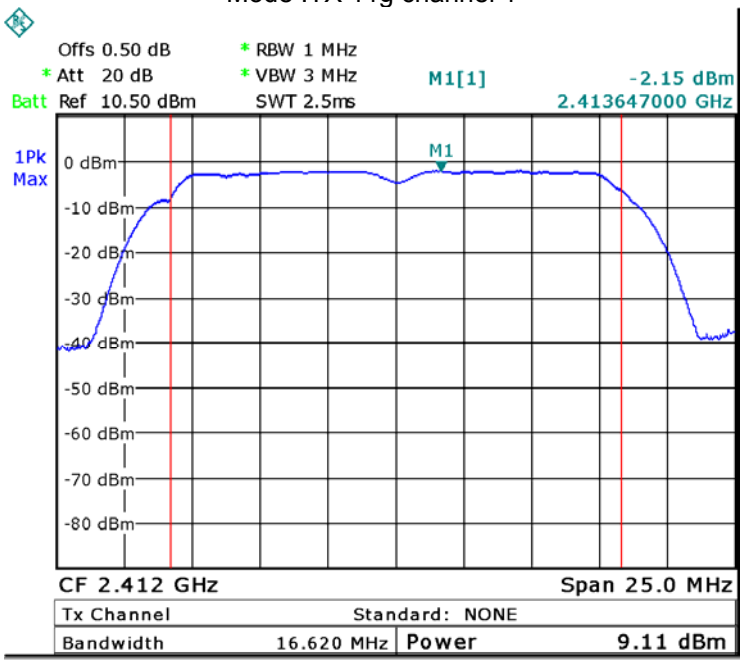
Mode: TX 11b channel 6



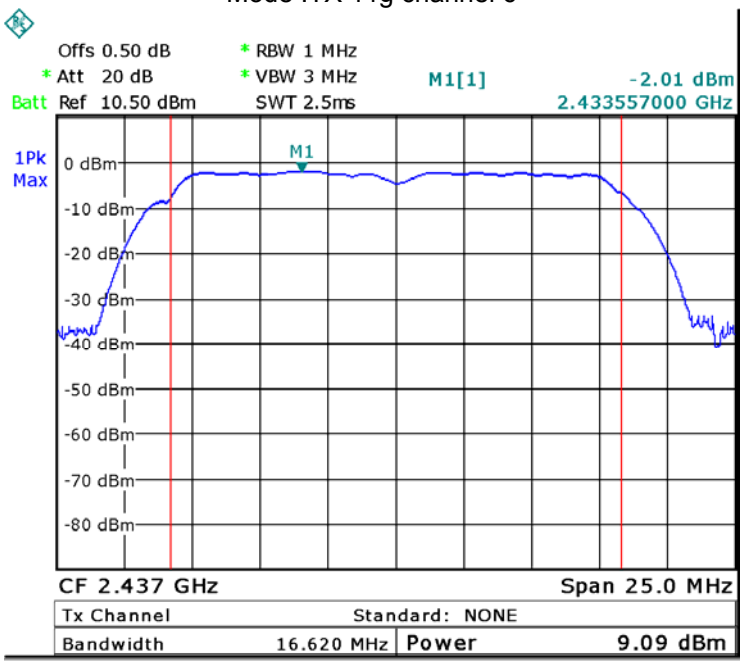
Mode: TX 11b channel 11



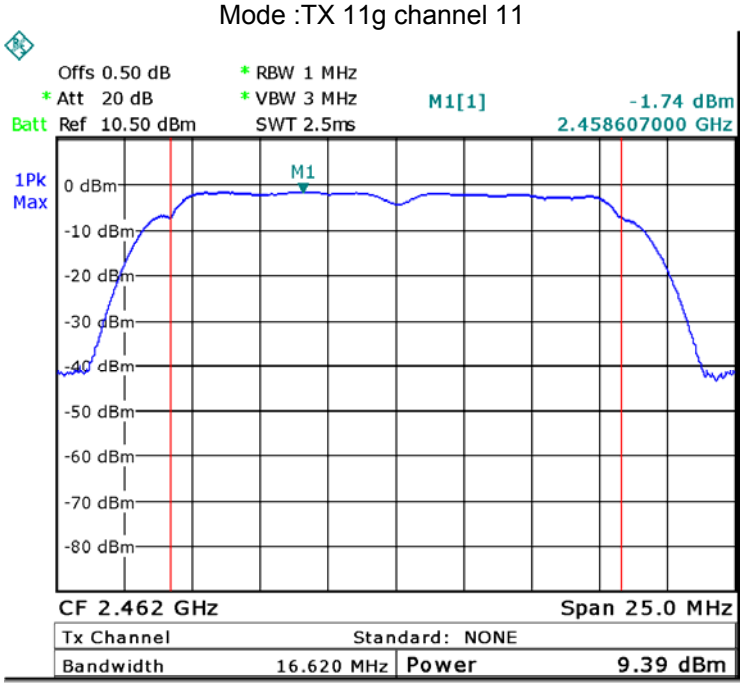
Mode :TX 11g channel 1



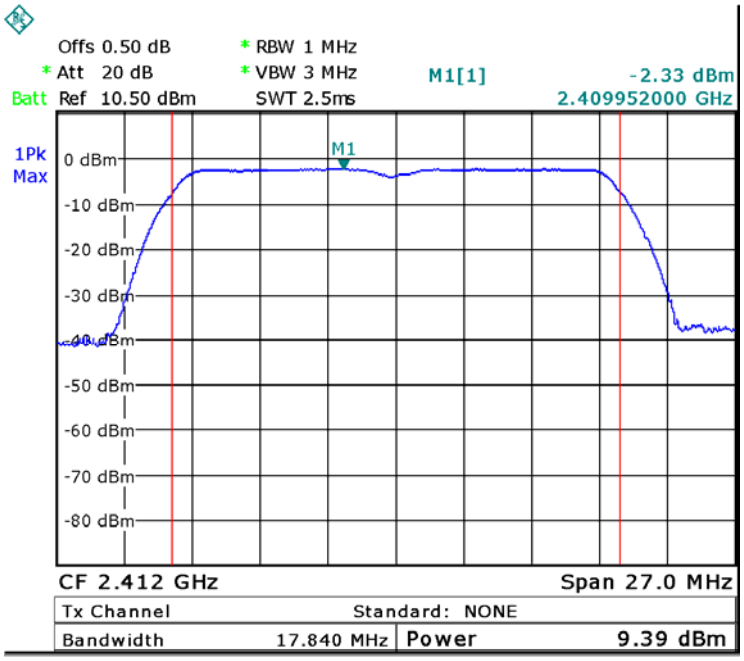
Mode :TX 11g channel 6



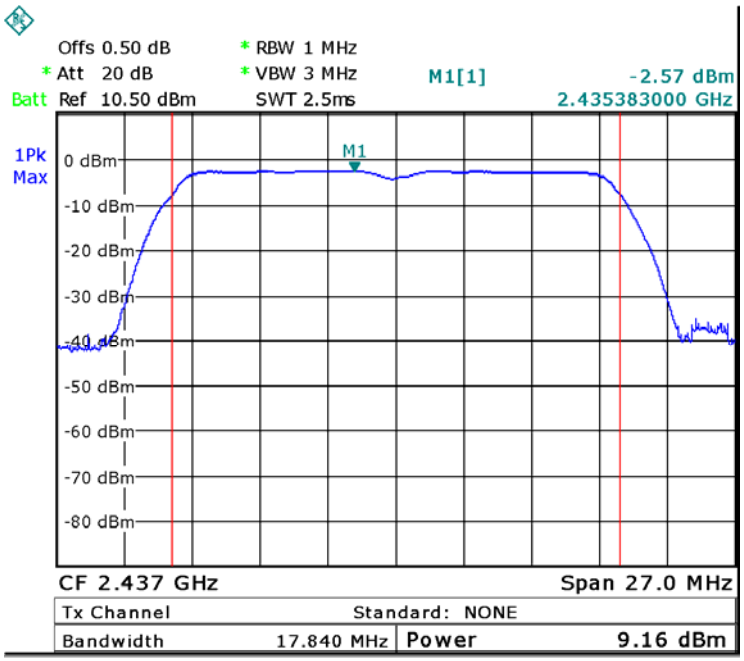
Mode :TX 11g channel 11



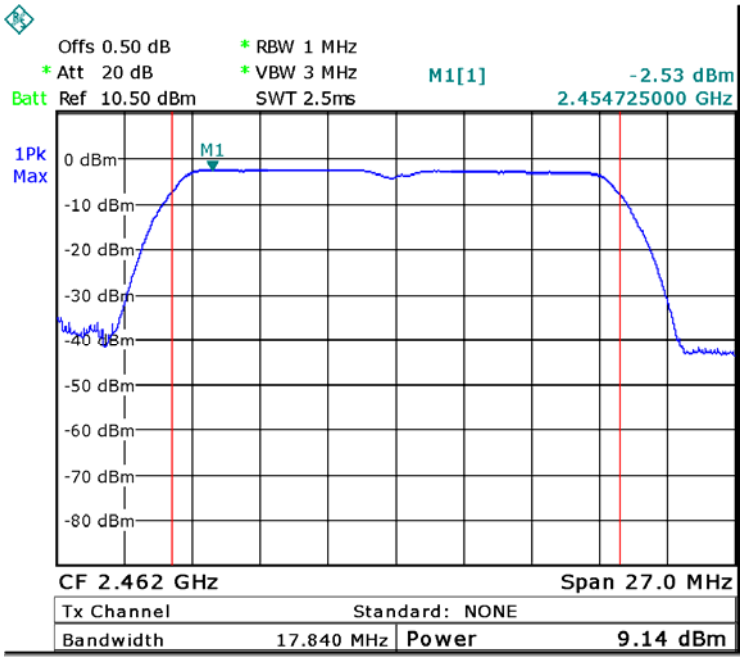
Mode: TX 11n HT20 channel 1



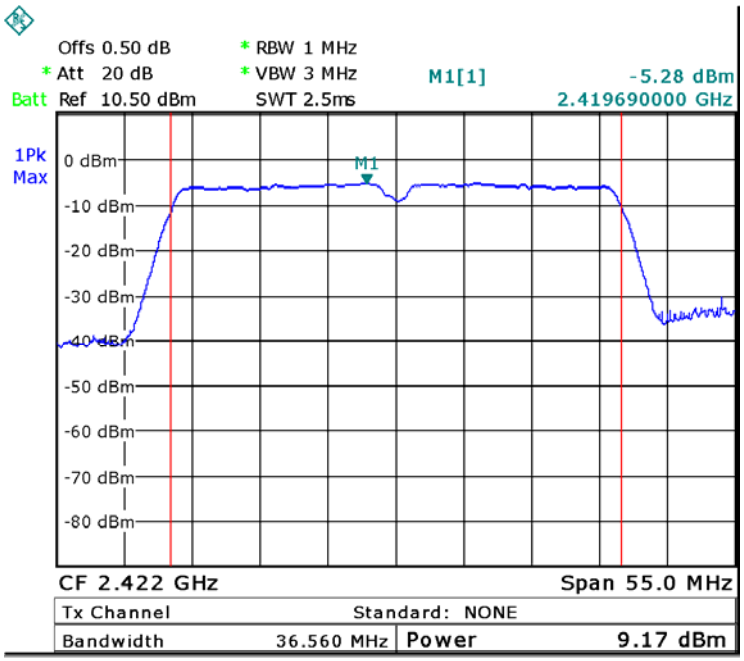
Mode: TX 11n HT20 channel 6



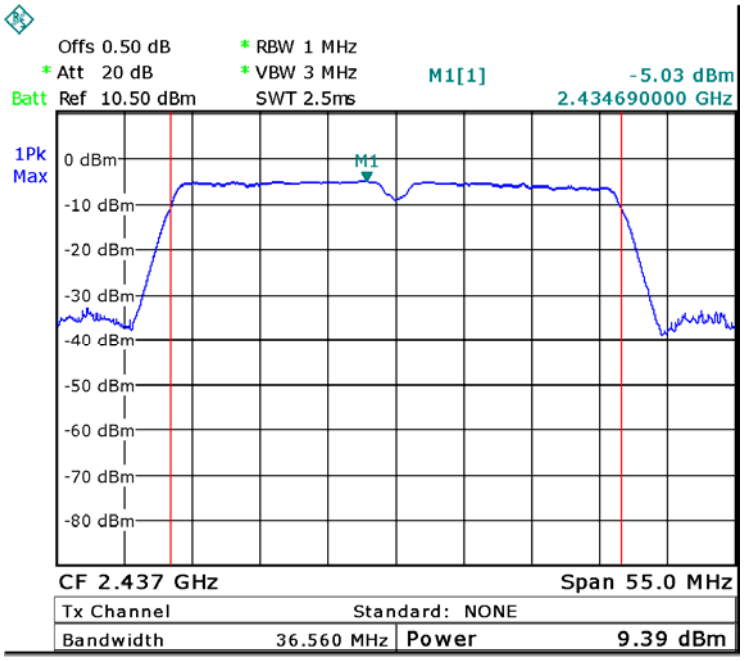
Mode: TX 11n HT20 channel 11



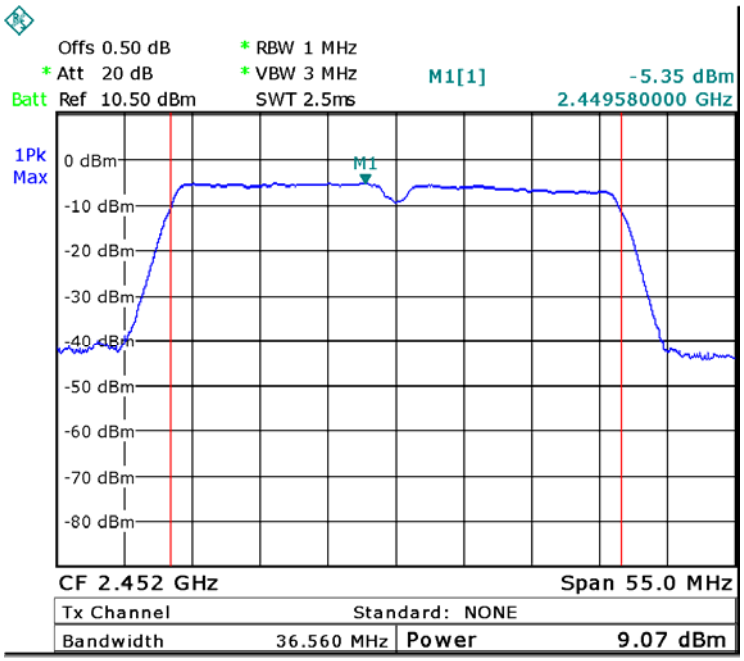
Mode: TX 11n HT40 channel 3



Mode: TX 11n HT40 channel 6



Mode: TX 11n HT40 channel 9



11 Power Spectral density

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: 558074 D01 DTS Meas Guidance v03r02 June 5, 2014

11.1 Test Procedure:

KDB558074 D01 v03r01 04/09/2013 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:

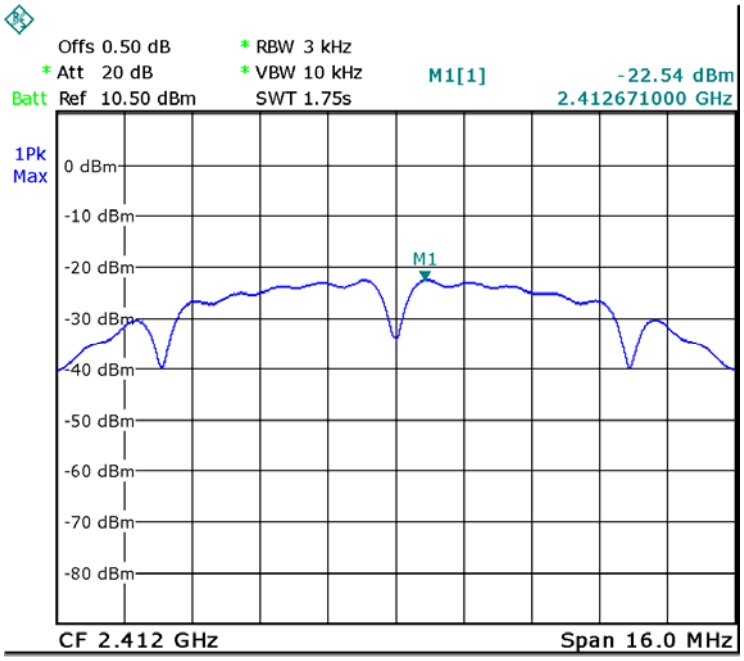
Test mode :TX 11b		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-23.77	-22.54	-22.26
Limit: 1W/30dBm		
8dBm per 3kHz		

Test mode :TX 11g		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-27.04	-27.20	-26.96
Limit		
8dBm per 3kHz		

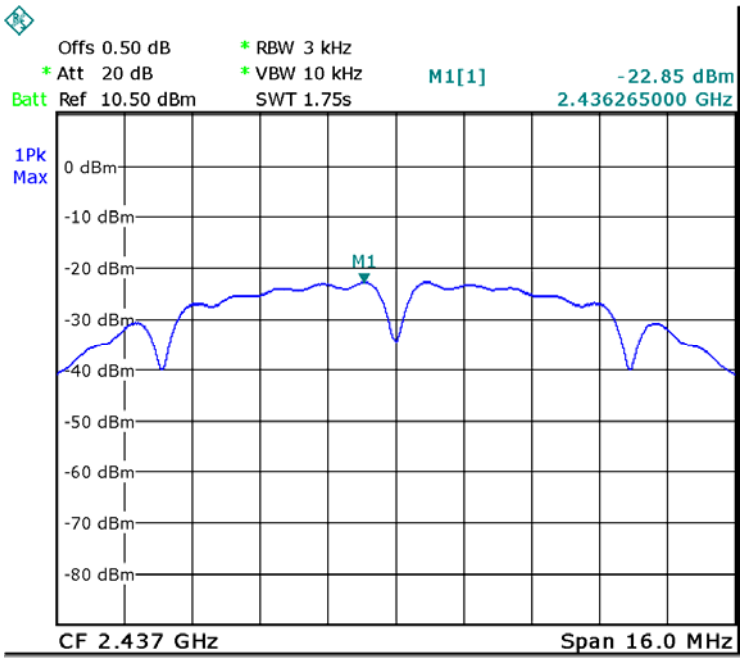
Test mode :TX 11n HT20		
Power Spectral (dBm per 3kHz)		
2412MHz	2437MHz	2462MHz
-26.35	-27.42	-26.71
Limit		
8dBm per 3kHz		

Test mode : TX 11n HT40		
Power Spectral (dBm per 3kHz)		
2422MHz	2437MHz	2452MHz
-29.36	-27.45	-28.80
Limit		
8dBm per 3kHz		

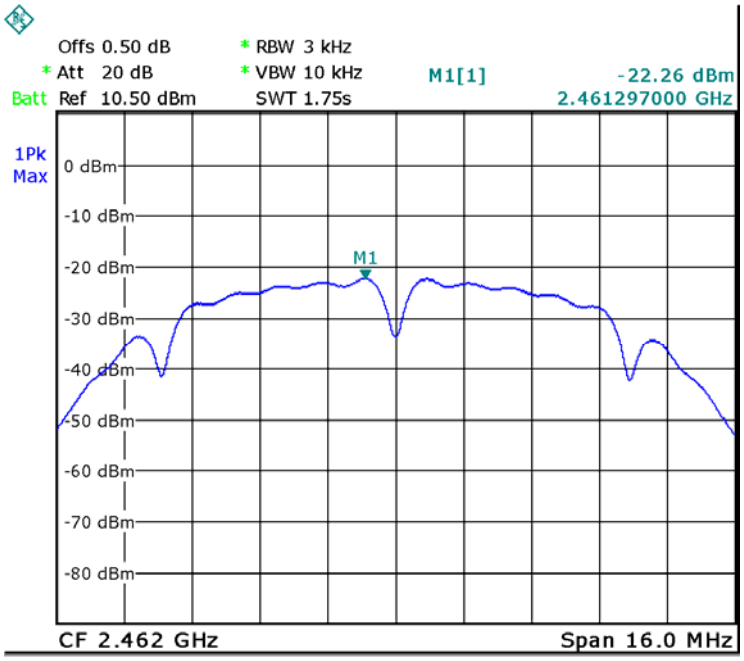
Mode: TX 11b channel 1



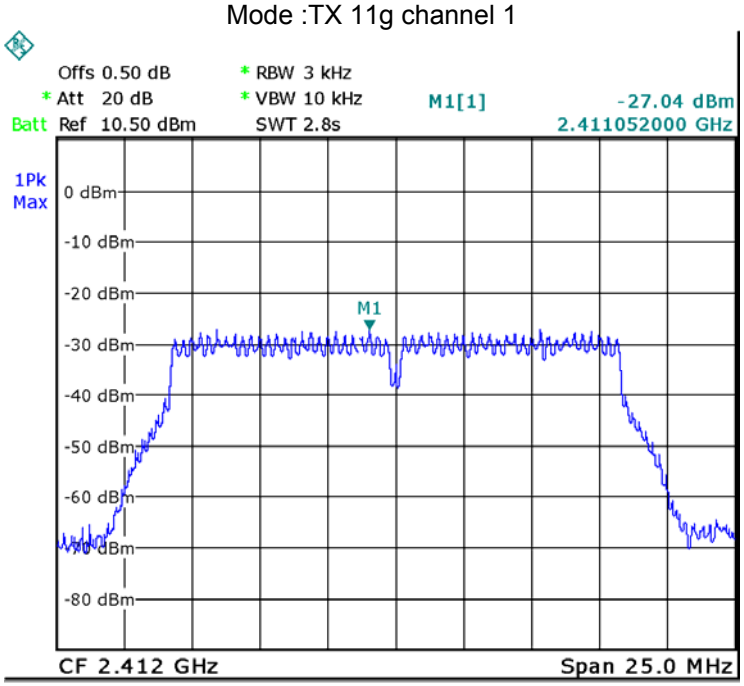
Mode: TX 11b channel 6



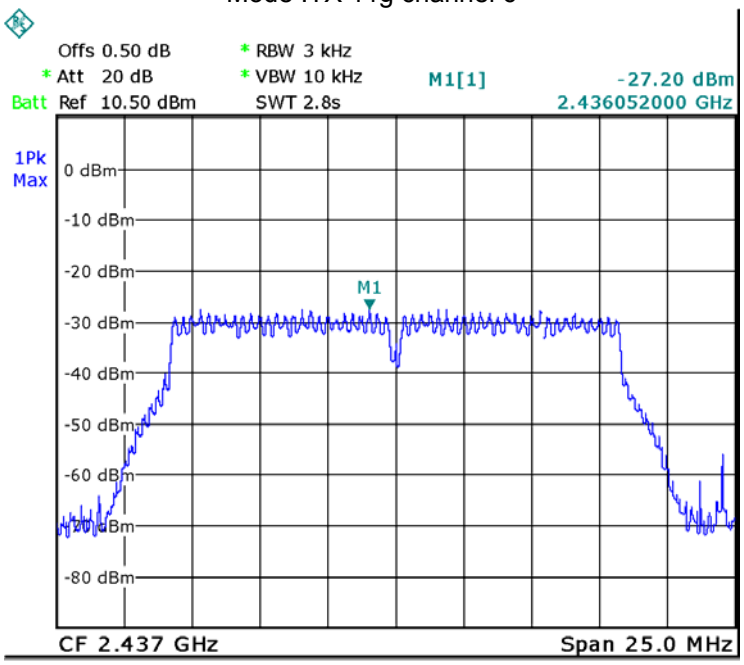
Mode: TX 11b channel 11



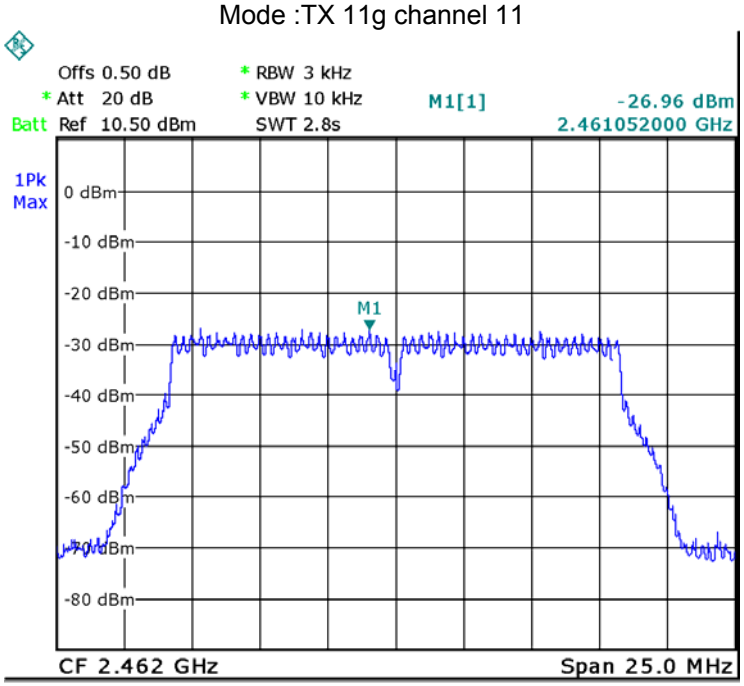
Mode :TX 11g channel 1



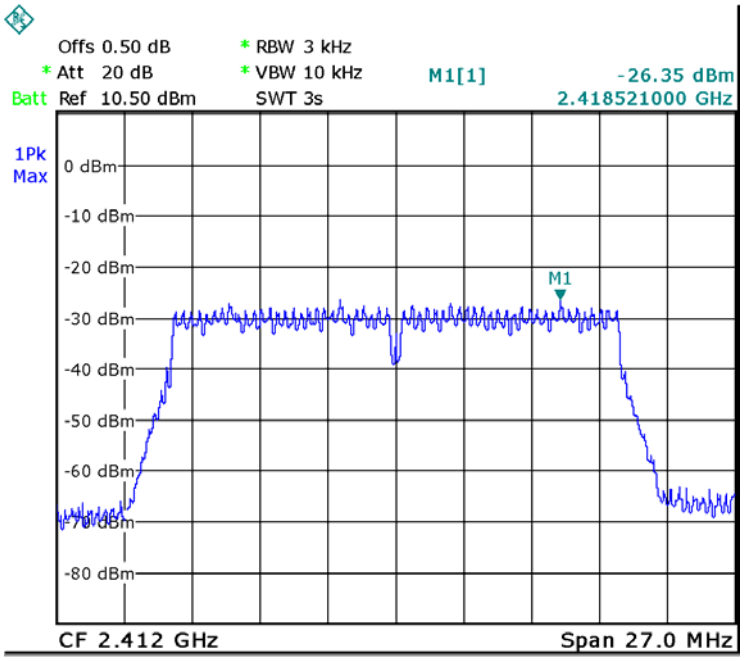
Mode :TX 11g channel 6



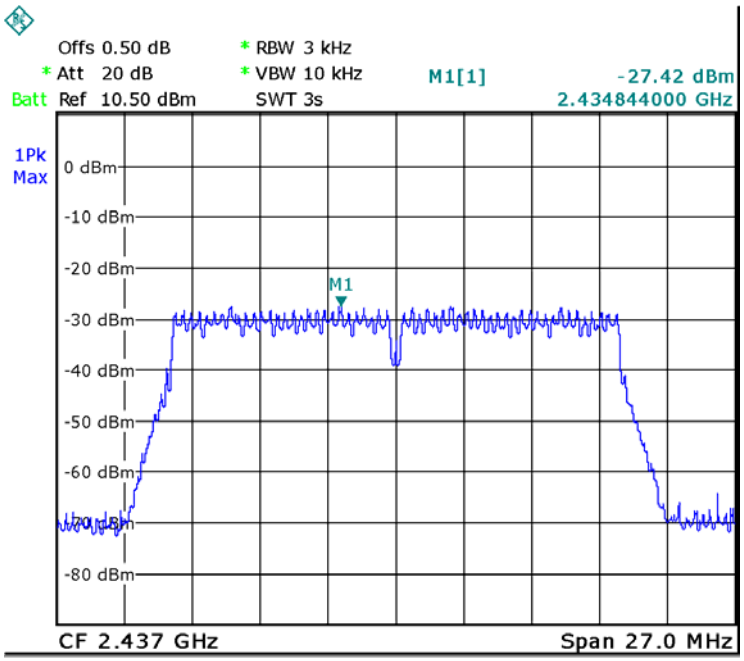
Mode :TX 11g channel 11



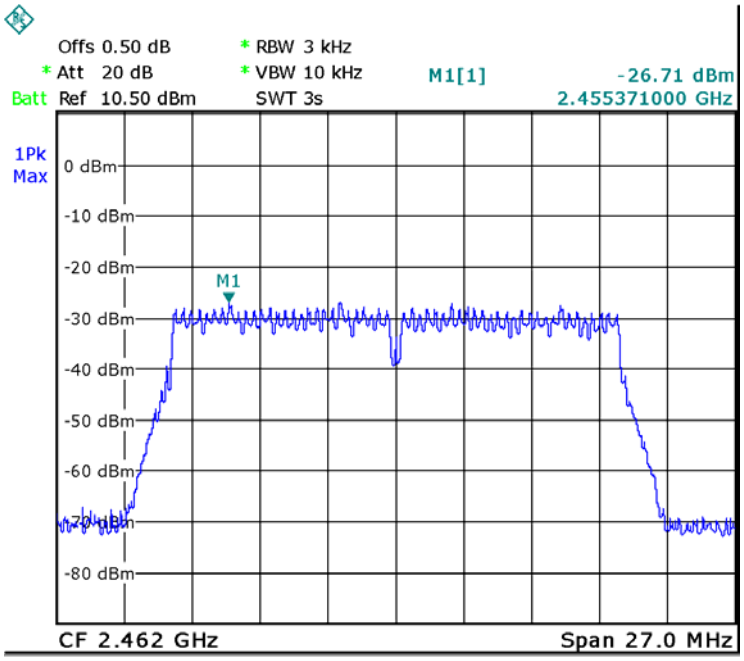
Mode: TX 11n HT20 channel 1



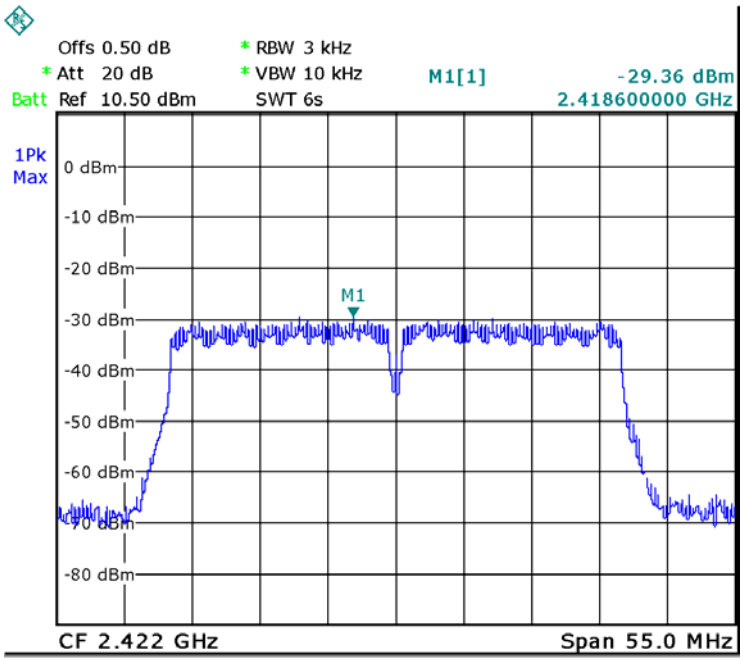
Mode: TX 11n HT20 channel 6



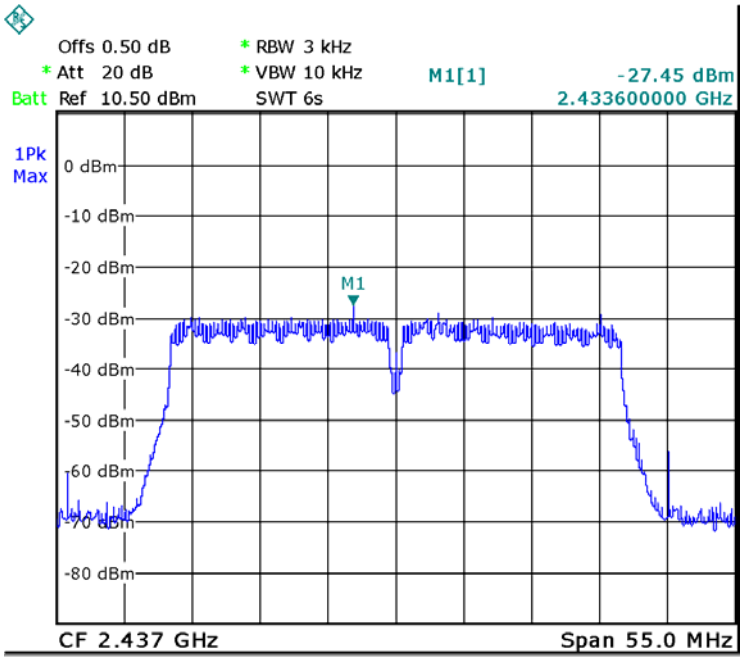
Mode: TX 11n HT20 channel 11



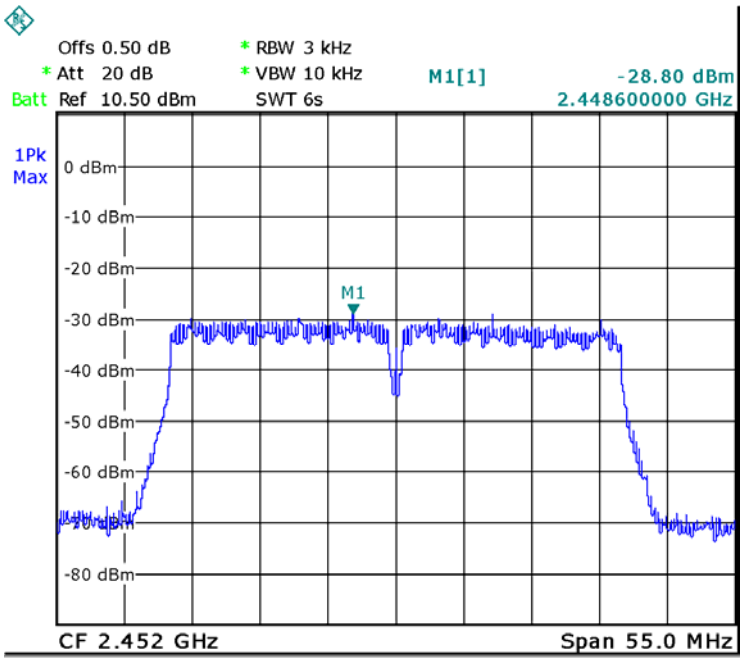
Mode: TX 11n HT40 channel 3



Mode: TX 11n HT40 channel 6



Mode: TX 11n HT40 channel 9



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 an internal integrated antenna fulfill 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:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [√ f(GHz)] ≤3.0 for 1-g SAR and ≤7.5 for 10-g extremity SAR where

1. f(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

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)
9.55	9.016	9.016	5	10

Remark: Max. duty factor is 100%

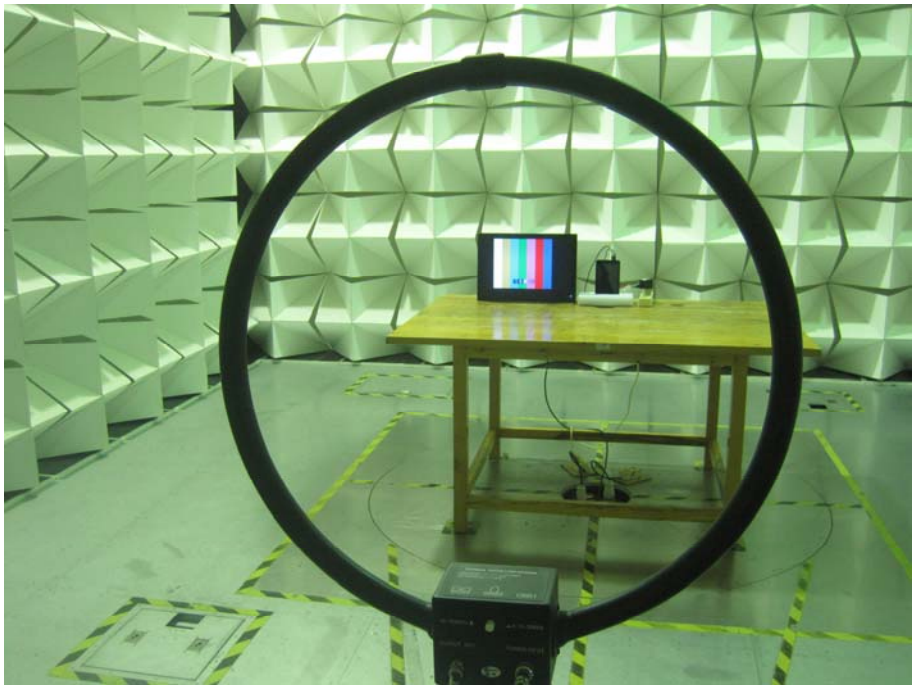
Calculation formula: Source-based time-averaged maximum conducted output power(mW) =Conducted peak power(mW)*Duty factor

14 Photographs – Model S737 Test Setup

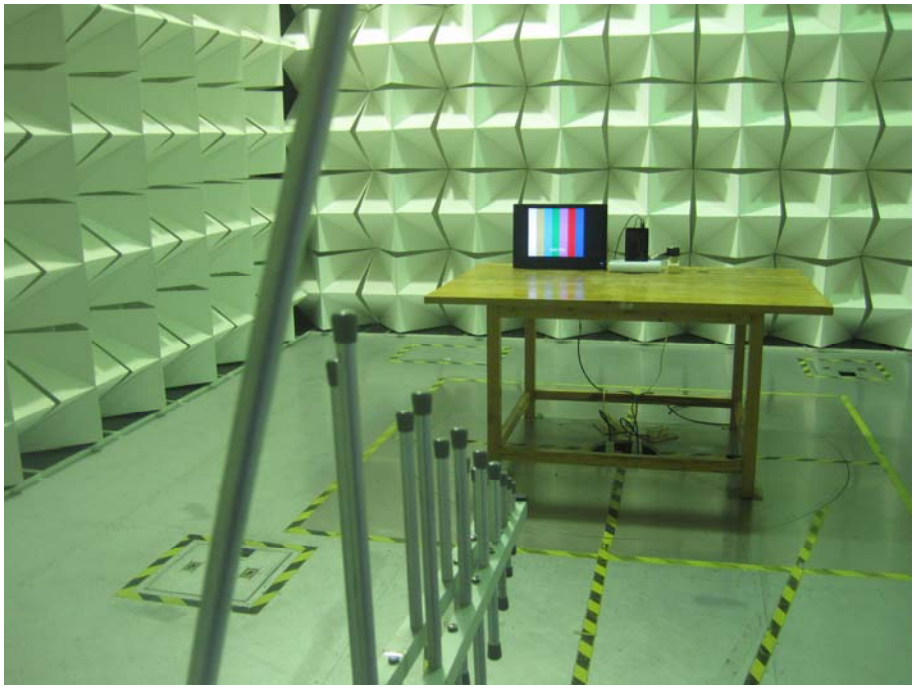
14.1 Photograph – Conducted Emission Test Setup at Test Site 2#

14.2 Photograph – Radiation Spurious Emission Test Setup

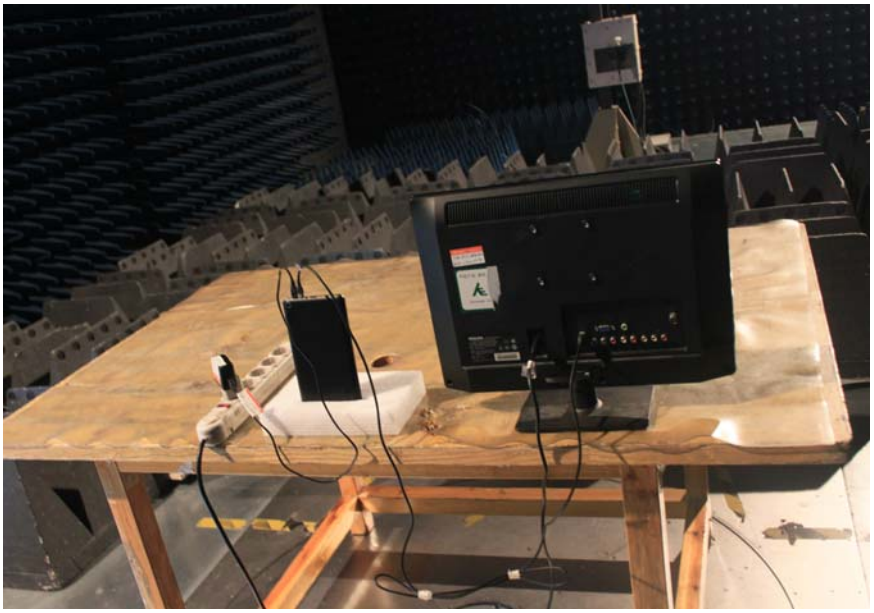
Below 30MHz at Test Site 2#



30MHz-1GHz at Test Site 2#



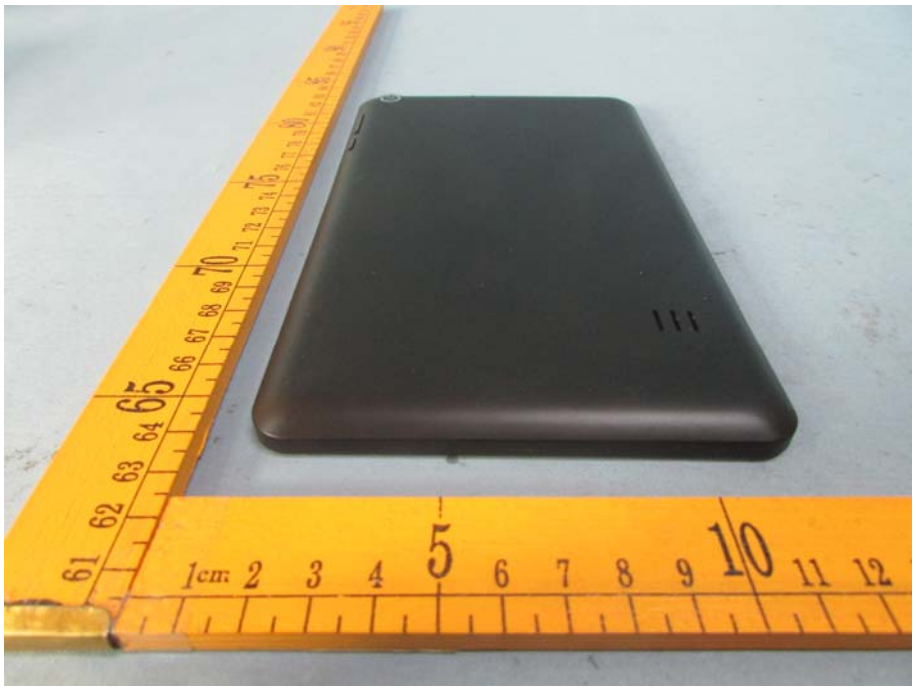
Above 1GHz at Test Site 1#



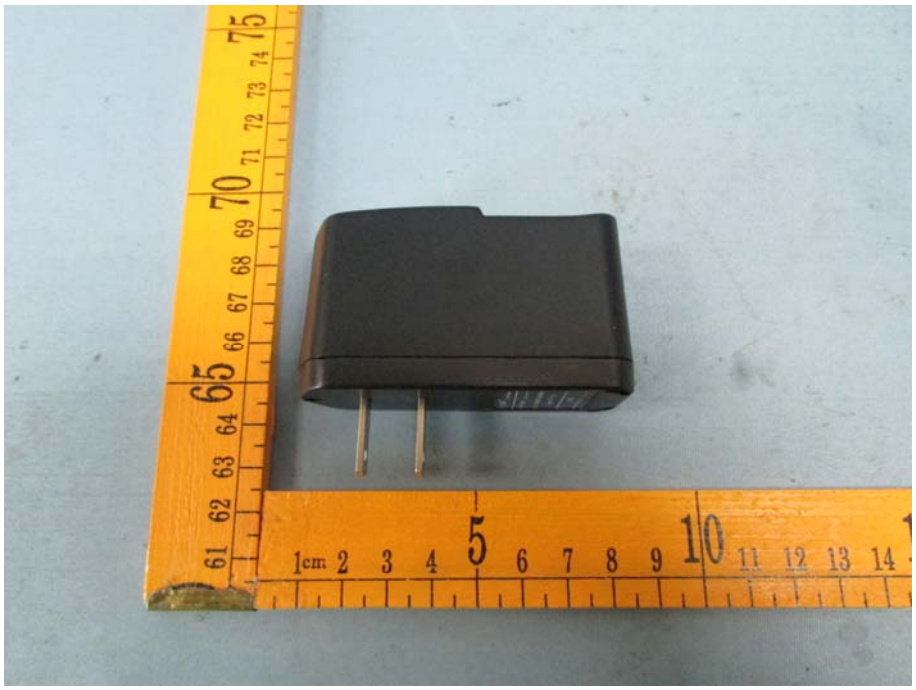
15 Photographs - Constructional Details

15.1 Model S737 External View

Black

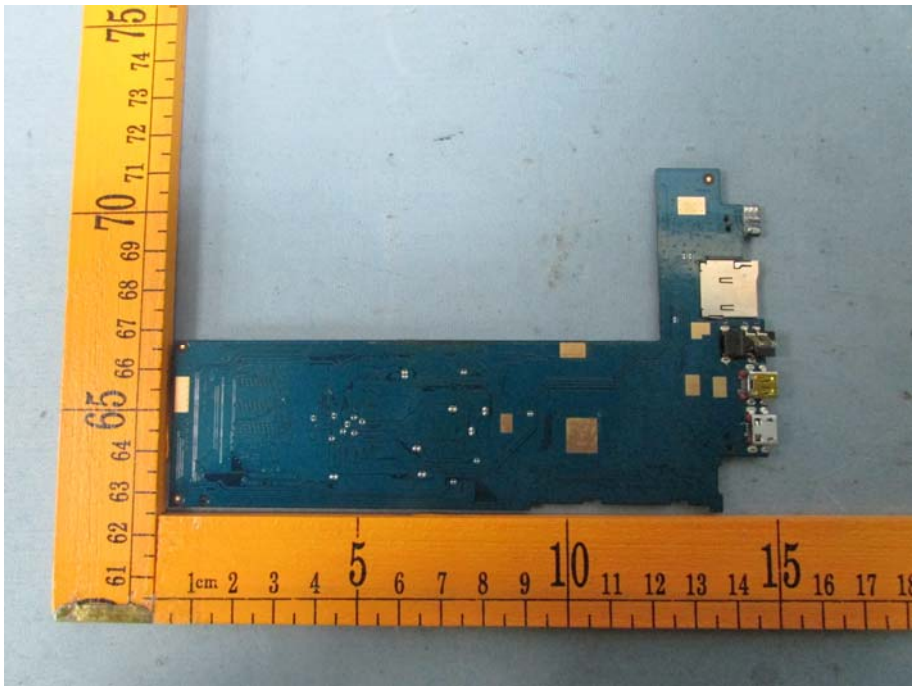


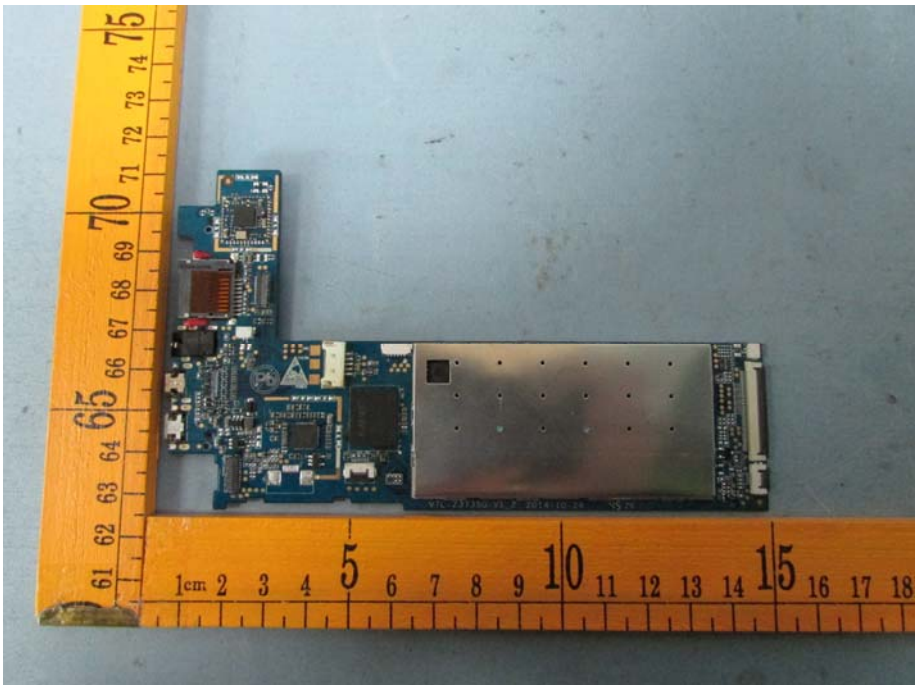
White

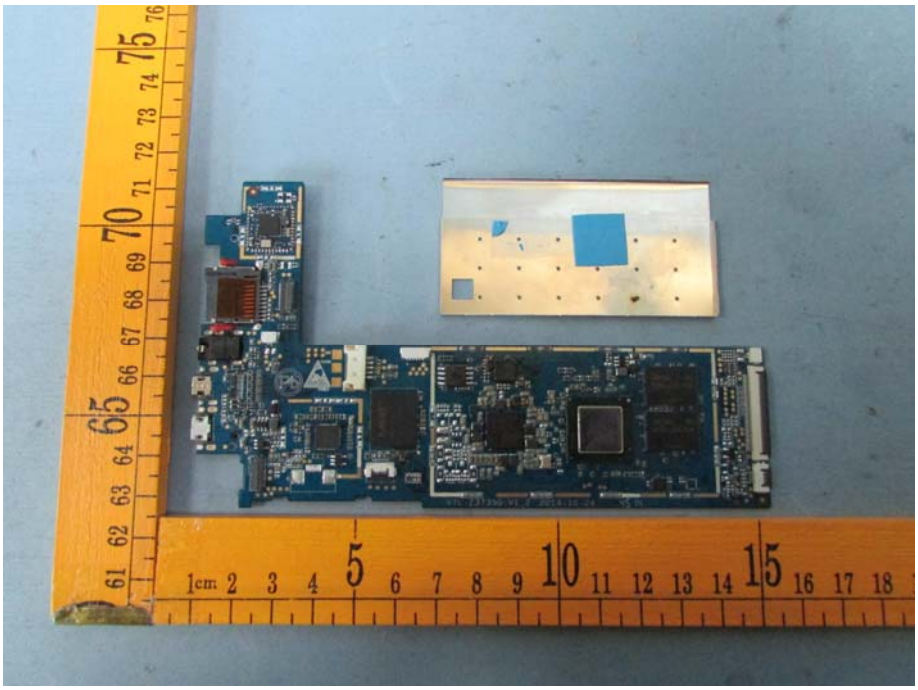


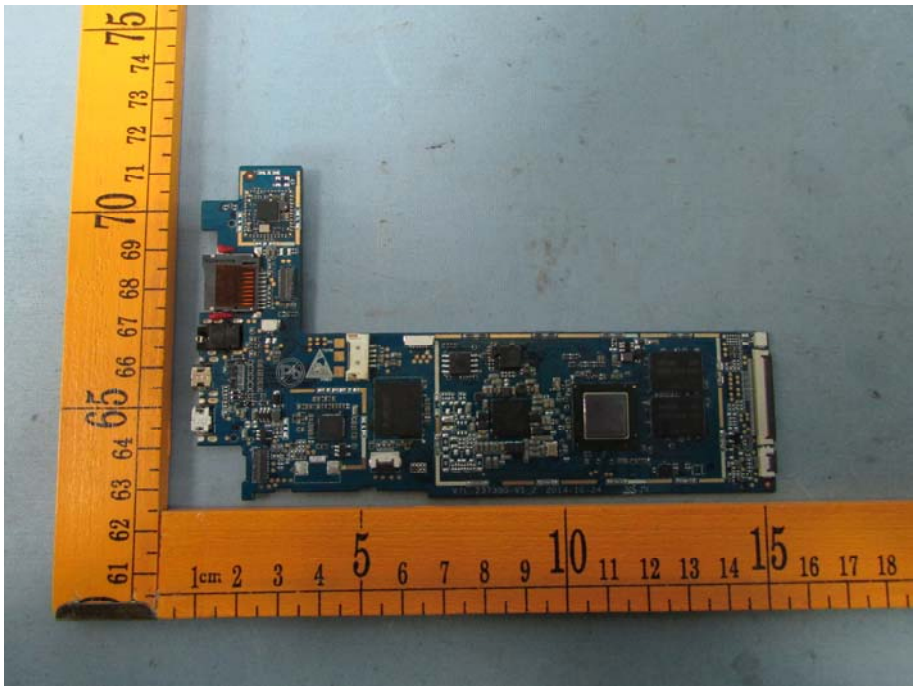

ADAPTER
INPUT:110-240V~50-60Hz
OUTPUT:5V ⎓ 2A
MADE IN CHINA

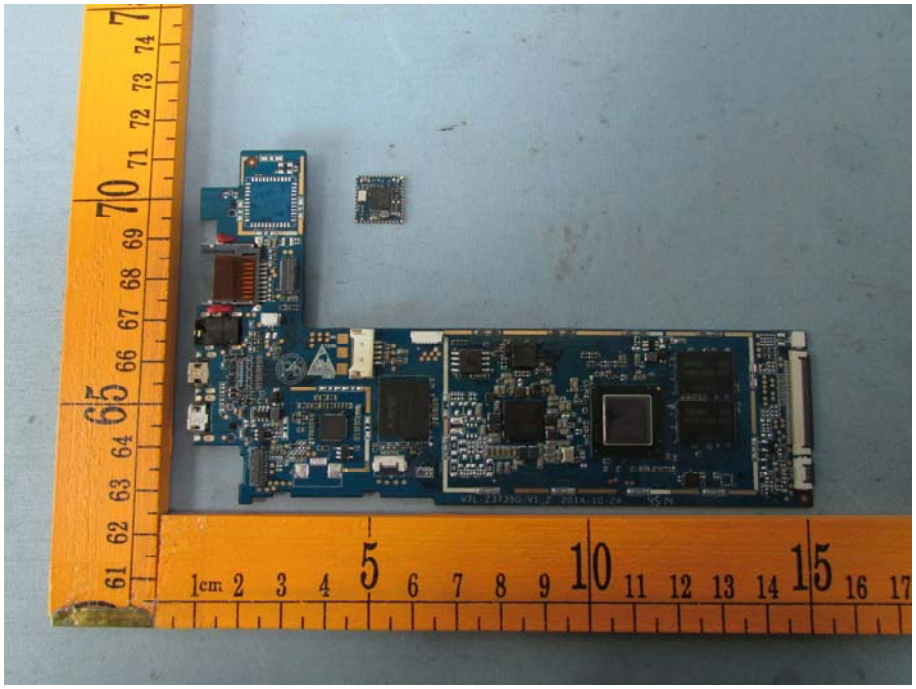
15.2 Model S737 Internal View

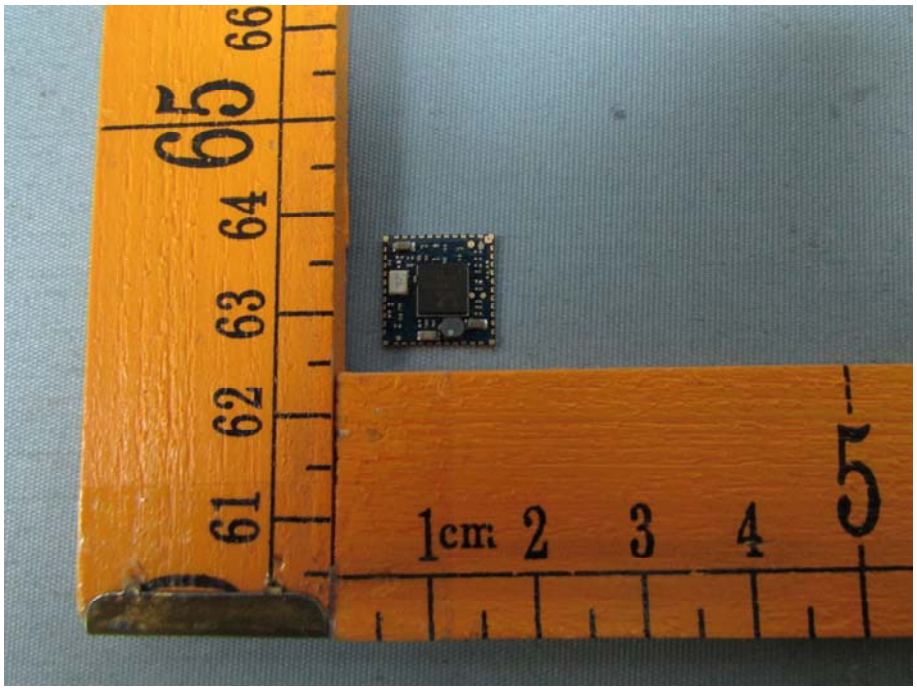


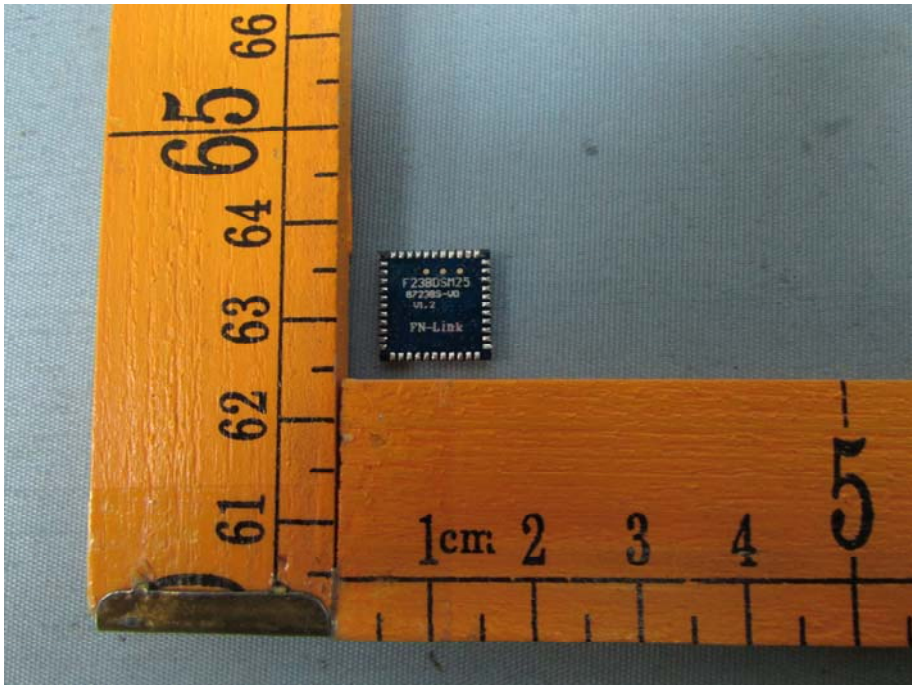









66
65
64
63
62
61
1cm
2
3
4
5


66
65
64
63
62
61
1cm
2
3
4
5
FN-Link

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