

# FCC TEST REPORT(Bluetooth)

for

Borqs BeiJing Ltd.

6" Tablet Remote

Model Number: XR6

FCC ID: 2ABDK-XR6

IC : 12695A-XR6

Prepared for : Borqs BeiJing Ltd.

Address : Tower A, Building B23, Universal Business Park, No. 10  
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Report No. : 15KWE012373F

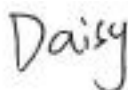
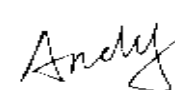

Date of Test : Jan. 15~25, 2015

Date of Report : Jan. 27, 2015

## TABLE OF CONTENTS

Test Report Declaration	Page
1. TEST SUMMARY .....	4
2. GENERAL PRODUCT INFORMATION.....	5
2.1. Product Function .....	5
2.2. Description of Device (EUT) .....	5
2.3. Independent Operation Modes .....	5
2.4. Product Version.....	6
2.5. Channel List .....	6
2.6. TEST SITES.....	6
2.7. List of Test and Measurement Instruments.....	7
3. TEST SET-UP AND OPERATION MODES .....	8
3.1. Principle of Configuration Selection .....	8
3.2. Block Diagram of Test Set-up.....	8
3.3. Test Operation Mode and Test Software .....	8
3.4. Special Accessories and Auxiliary Equipment .....	8
3.5. Countermeasures to Achieve EMC Compliance .....	8
4. EMISSION TEST RESULTS .....	9
4.1. Conducted Emission at the Mains Terminals Test .....	9
4.2. Radiated Emission Test.....	12
5. 20DB & 99% OCCUPY BANDWIDTH.....	20
5.1. Limits.....	20
5.2. Test setup .....	20
6. BAND EDGE COMPLIANCE TEST .....	22
6.1. Limits.....	22
6.2. Test setup .....	22
7. ANTENNA REQUIREMENTS .....	23
7.1. Limits.....	23
7.2. Result.....	23
8. PHOTOGRAPHS OF TEST SET-UP .....	24
9. PHOTOGRAPHS OF THE EUT .....	26

## Keyway Testing Technology Co., Ltd.

<b>Applicant:</b>	Borqs BeiJing Ltd.		
<b>Address:</b>	Tower A, Building B23, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District Beijing, 100015 China		
<b>Manufacturer:</b>	Borqs BeiJing Ltd.		
<b>Address:</b>	Tower A, Building B23, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District Beijing, 100015 China		
<b>E.U.T:</b>	6" Tablet Remote		
<b>Model Number:</b>	XR6		
<b>Trade Name:</b>	VIZIO	<b>Serial No.:</b>	-----
<b>Date of Receipt:</b>	Jan. 14, 2015	<b>Date of Test:</b>	Jan. 15~25, 2015
<b>Test Specification:</b>	FCC Part 15, Subpart 15.249: Oct. 1, 2014 ANSI C63.10:2013 RSS-210 Issue 8 December 2010 RSS-Gen Issue 4 November 2014		
<b>Test Result:</b>	The equipment under test was found to be compliance with the requirements of the standards applied.		
		<b>Issue Date: Jan. 27, 2015</b>	
<b>Tested by:</b>	<b>Reviewed by:</b>	<b>Approved by:</b>	
			
Daisy Chen / Engineer	Andy Gao / Supervisor	Jade Yang / Supervisor	
<b>Other Aspects:</b>	None.		
<i>Abbreviations: OK/P=passed    fail/F=failed    n.a/N=not applicable    E.U.T=equipment under tested</i>			
<i>This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Keyway Testing Technology Co., Ltd.</i>			

## 1. TEST SUMMARY

Test Items	Test Requirement	Result
Conducted Emissions	15.207,RSS-210/RSS-GEN	PASS
Radiated Emissions	15.205(a)/15.209/15.249(d) RSS-210/RSS-GEN	PASS
20dB&99% Bandwidth	15.249/RSS-210/RSS-GEN	PASS
Emissions from out of band	15.249 RSS-210	PASS
Antenna Requirement	15.203	PASS

## 2. GENERAL PRODUCT INFORMATION

### 2.1. Product Function

Refer to Technical Construction Form and User Manual.

### 2.2. Description of Device (EUT)

Product Name:	6" Tablet Remote
Model No.:	XR6
Operation Frequency:	WIFI:2412MHz~2462MHz (802.11b/802.11g/802.11n(H20)) 2422MHz~2452MHz (802.11n(H40)) WIFI:5180-5240 MHz; (5G 802.11a/n(HT20)) 5190-5230 MHz; (802.11n(HT40)) BT: 2402MHz~2480MHz
Channel numbers:	WIFI:11 for 802.11b/802.11g/802.11n(H20) ,7 for 802.11n(H40) BT: 79 Channels 7channels for 5G 802.11a/n(HT20) 8channels 5G for 802.11n(HT40)
Modulation technology:	WIFI: Direct Sequence Spread Spectrum (DSSS) for (IEEE 802.11b) Orthogonal Frequency Division Multiplexing(OFDM) for (IEEE 802.11g/802.11n) BT: GFSK
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps
Data speed (IEEE 802.11n):	Up to 150Mbps
Antenna Type:	Internal
Antenna gain:	1.0dBi for WIFI 1.0dBi for BT
Power supply:	DC 3.7V form battery DC 5V from adapter
Adapter	Manufacturer: AQUIL STAR PRECISION INDUSTRIAL(SHENZHEN)CO., LTD M/N: ASUC41a-050120 I/P:AC 100~240V 50/60Hz 0.2A O/P:DC 5V 1.2A

### 2.3. Independent Operation Modes

The basic operation modes are:

Channel	Frequency
Low	2402MHz
Middle	2440MHz
High	2480MHz

## 2.4. Product Version

Product SW version	BORQS_VIZIO_141204_1213 40
Product HW version	DVT1
Radio SW version	80-WL007-1 Rev. D
Radio HW version	WCN3680B Rev. D
Test SW Version	TV1.0
RF power setting in TEST SW	2.4G:11b 15 dBm;11g 14 dBm;11n(HT20) 13 dBm; 11n(HT40) 11 dBm 5G:11n 12 dBm; 11a 14 dBm BT:0dBm

Note: SW means software, HW means hardware.

## 2.5. Channel List

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	11	2422MHz	21	2442MHz	31	2462MHz
2	2404MHz	12	2424MHz	22	2444MHz	32	2464MHz
~	~	~	~	~	~	~	~
19	2418MHz	19	2438MHz	29	2458MHz	39	2478MHz
10	2420MHz	20	2440MHz	30	2460MHz	40	2480MHz

## 2.6. TEST SITES

Lab Qualifications : Certified by Industry Canada  
Registration No.: 9868A  
Date of registration: December 8, 2011

Certificated by FCC, USA  
Registration No.: 370994  
Date of registration: February 21, 2012

Certificated by CNAS China  
Registration No.: CNAS L5783  
Date of registration: August 8, 2012

## 2.7. List of Test and Measurement Instruments

### 2.7.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,14	Apr. 27,15
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	Apr. 27,14	Apr. 27,15
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	Apr. 27,14	Apr. 27,15
RF Cable	FUJIKURA	3D-2W	944 Cable	Apr. 27,14	Apr. 27,15

### 2.7.2. For radiated emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,14	Apr. 27,15
System Simulator	Agilent	E5515C	GB43130245	Apr. 27,14	Apr. 27,15
Power Splitter	Weinschel	1506A	NW425	Apr. 27,14	Apr. 27,15
Bilog Antenna	ETS-LINDGREEN	3142D	135452	Apr. 27,14	Apr. 27,15
Spectrum Analyzer	Agilent	E4411B	MY4511304	Apr. 27,14	Apr. 27,15
Spectrum Analyzer	R&S	FSV40	132.1.3008K39 -100967	Apr. 27,14	Apr. 27,15
3m Semi-anechoic Chamber	ETS-LINDGREEN	966	KW01	Apr. 27,14	Apr. 27,15
Signal Amplifier	SONOMA	310	187016	Apr. 27,14	Apr. 27,15
Signal Amplifier	Agilent	8449B	3008A00251	Apr. 27,14	Apr. 27,15
RF Cable	IMRO	IMRO-400	966 Cable 1#	N/A	N/A
MULTI-DEVICE Controller	ETS-LINDGREEN	2090	126913	N/A	N/A
Horn Antenna	DAZE	ZN30701	11003	Apr. 27,14	Apr. 27,15
Horn Antenna	SCHWARZBECK	BBHA9170	9170-068	Apr. 27,14	Apr. 27,15
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 27,14	Apr. 27,15
Spectrum Analyzer	Agilent	E4408B	MY44211125	Apr. 27,14	Apr. 27,15
Signal Amplifier	DAZE	ZN3380C	11001	Apr. 27,14	Apr. 27,15
High Pass filter	Micro	HPM50111	324216	Apr. 27,14	Apr. 27,15
Filter	COM-MW	ZBSF-C836.5-25-X	KW032	Apr. 27,14	Apr. 27,15
Filter	COM-MW	ZBSF-C1747.5-75-X2	KW035	Apr. 27,14	Apr. 27,15
Filter	COM-MW	ZBSF-C1880-60-X2	KW037	Apr. 27,14	Apr. 27,15
DC Power Supply	LongWei	PS-305D	010964729	Apr. 27,14	Apr. 27,15
Constant temperature and humidity box	GF	GTH-800-40-1P	MAA9906-005	Apr. 27,14	Apr. 27,15
Universal radio communication tester	Rohde&Schwarz	CMU200	3215420	Apr. 27,14	Apr. 27,15
Splitter	Agilent	11636B	0025164	Apr. 27,14	Apr. 27,15

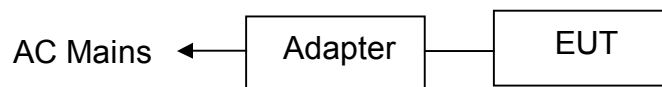
### 3. TEST SET-UP AND OPERATION MODES

#### 3.1. Principle of Configuration Selection

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

#### 3.2. Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators



*(EUT: 6" Tablet Remote)*

#### 3.3. Test Operation Mode and Test Software

None.

#### 3.4. Special Accessories and Auxiliary Equipment

None.

#### 3.5. Countermeasures to Achieve EMC Compliance

None.



## 4. EMISSION TEST RESULTS

### 4.1. Conducted Emission at the Mains Terminals Test

#### 4.1.1. Limit 15.207 limits

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

#### 4.1.2. Test Setup

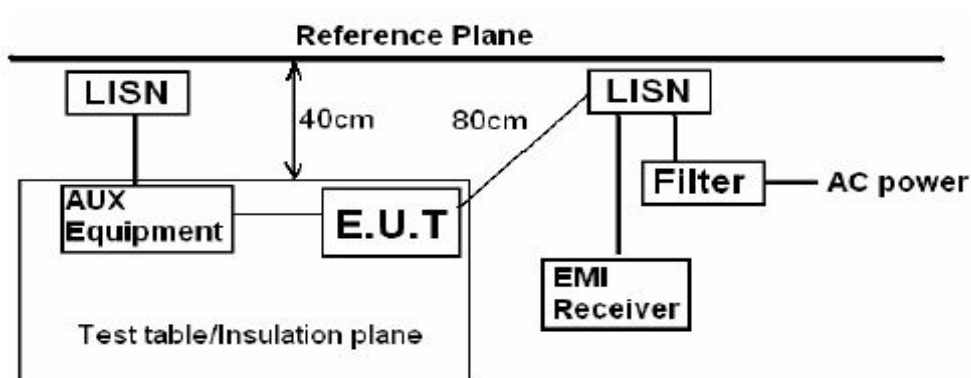
The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 0.8 m, the excess was folded back and forth parallel to the cable at the centre so as to form a bundle no longer than 0.4 m.

The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.

The frequency range from 150 kHz to 30 MHz was investigated.

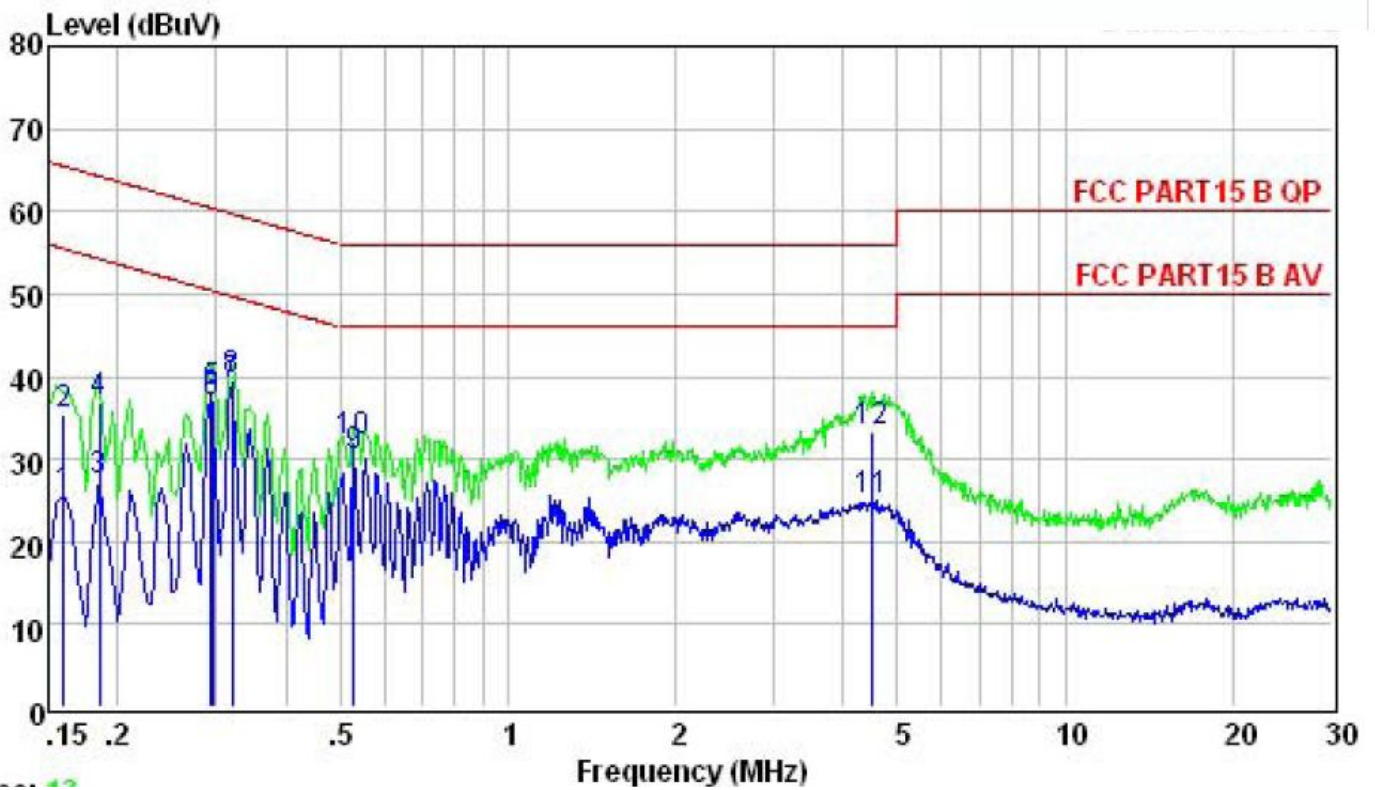
The bandwidth of the test receiver was set at 9 kHz.

Pretest for all mode, The test data of the worst case condition(s) was reported on the following page.



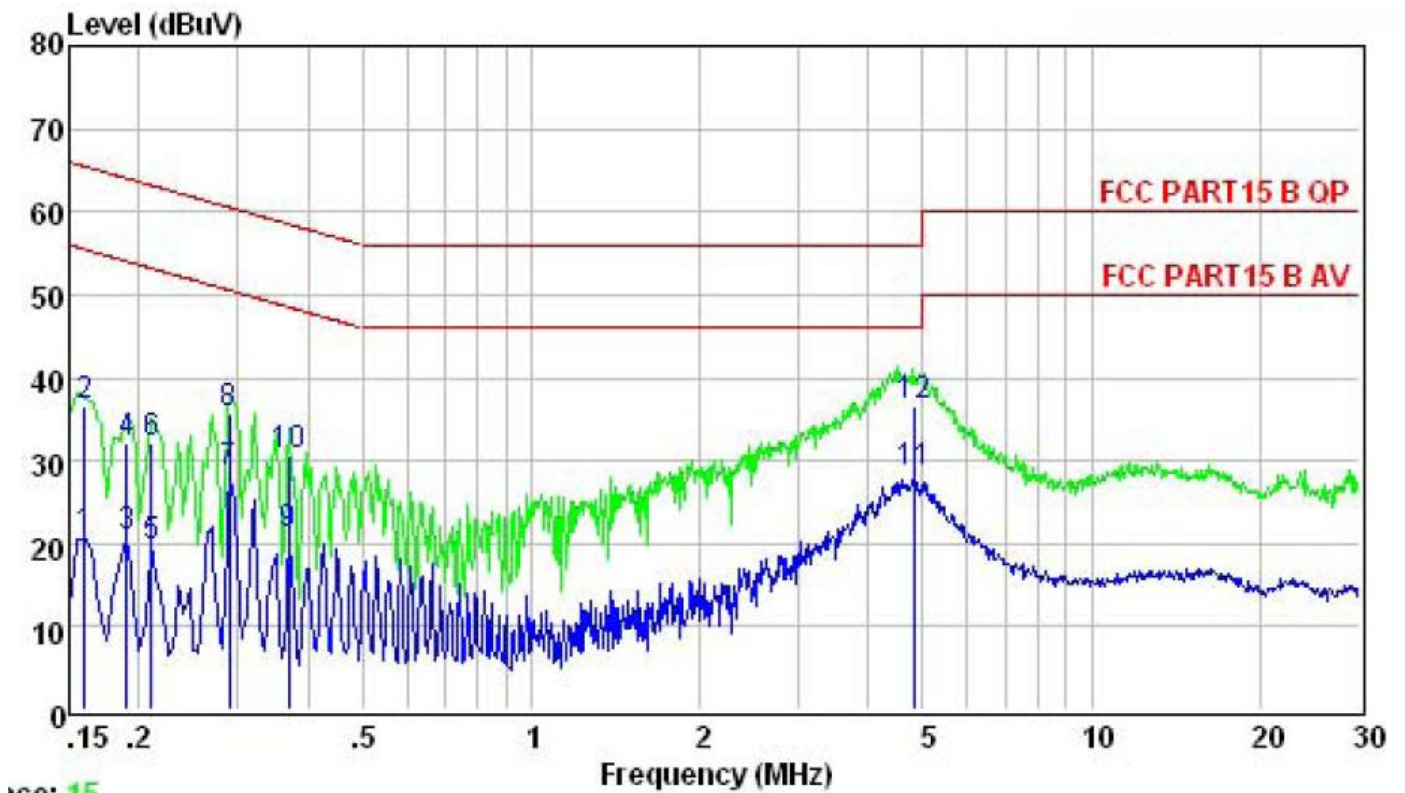
*Remark:*  
 E.U.T: Equipment Under Test  
 LISN: Line Impedance Stabilization Network  
 Test table height=0.8m

Line



	Freq	Level	Limit	Over	Remark
	MHz	dBuV	Line	Limit	
			dBuV	dB	
1	0.160	25.68	55.47	-29.79	Average
2	0.160	35.26	65.47	-30.21	QP
3	0.185	27.44	54.24	-26.80	Average
4	0.185	36.95	64.24	-27.29	QP
5	0.294	38.12	60.41	-22.29	QP
6	0.296	36.90	50.37	-13.47	Average
7	0.320	38.95	49.71	-10.76	Average
8	0.320	39.69	59.71	-20.02	QP
9	0.529	30.22	46.00	-15.78	Average
10	0.529	32.12	56.00	-23.88	QP
11	4.501	25.03	46.00	-20.97	Average
12	4.501	33.25	56.00	-22.75	QP

Neutral



	Freq	Level	Limit	Over	Remark
	MHz	dBuV	Line	Limit	
			dBuV	dB	
1	0.160	20.76	55.47	-34.71	Average
2	0.160	36.59	65.47	-28.88	QP
3	0.190	20.95	54.02	-33.07	Average
4	0.190	32.12	64.02	-31.90	QP
5	0.211	19.66	53.18	-33.52	Average
6	0.211	32.16	63.18	-31.02	QP
7	0.289	28.65	50.54	-21.89	Average
8	0.289	35.69	60.54	-24.85	QP
9	0.369	21.19	48.52	-27.33	Average
10	0.369	30.54	58.52	-27.98	QP
11	4.848	28.43	46.00	-17.57	Average
12	4.848	36.59	56.00	-19.41	QP

## 4.2. Radiated Emission Test

### 4.2.1. Limit 15.209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

### 4.2.2. Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

### 4.2.3. Test setup

The EUT was placed on a turn table which was 0.8 m (above 1GHz, the table was 1.5m) above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

The frequency range from 30MHz to 10<sup>th</sup> harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

Notes: 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading-Preamp Factor.

2. Measurement Uncertainty:  $\pm 3.2$  dB at a level of confidence of 95%.

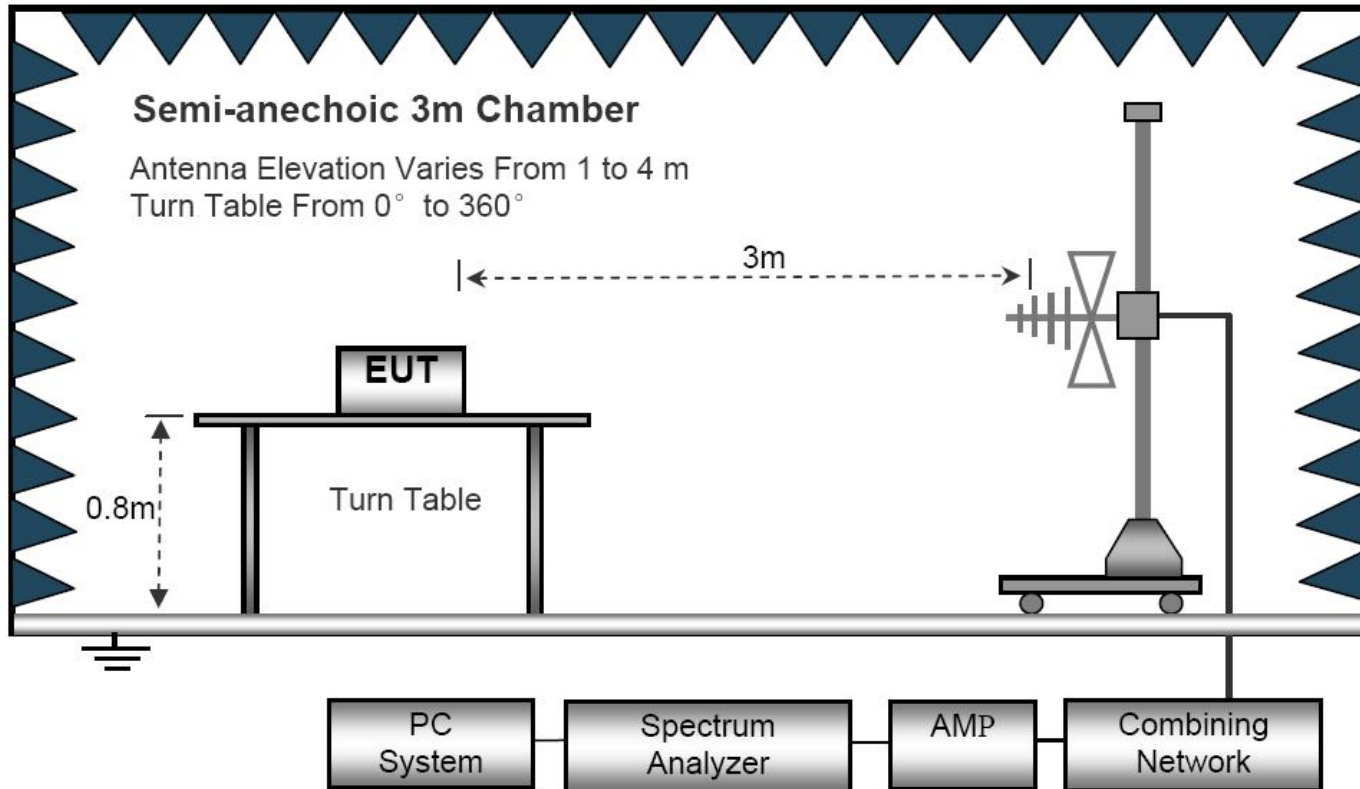
3. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

4. For emissions below 1GHz, pretest for all mode, The test data of the worst case condition(s) was reported on the following pages.

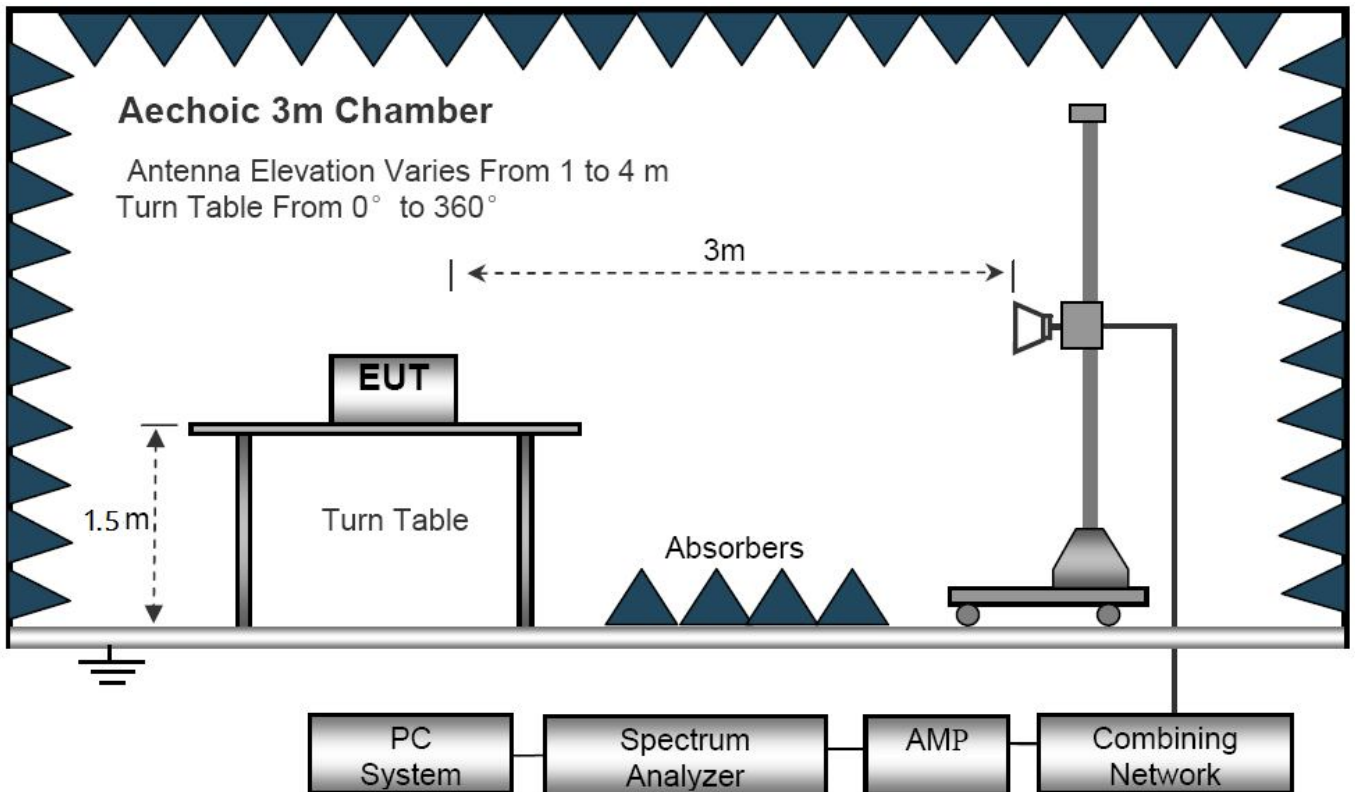
5: During the test, pre-scan the GFSK, Pi/4DQPSK, 8DPSK modulation, and found the GFSK modulation which it is worse case.

6: Pre-scan below 1GHz for all model, The other test only show worst model in report.

**Below 1GHz**

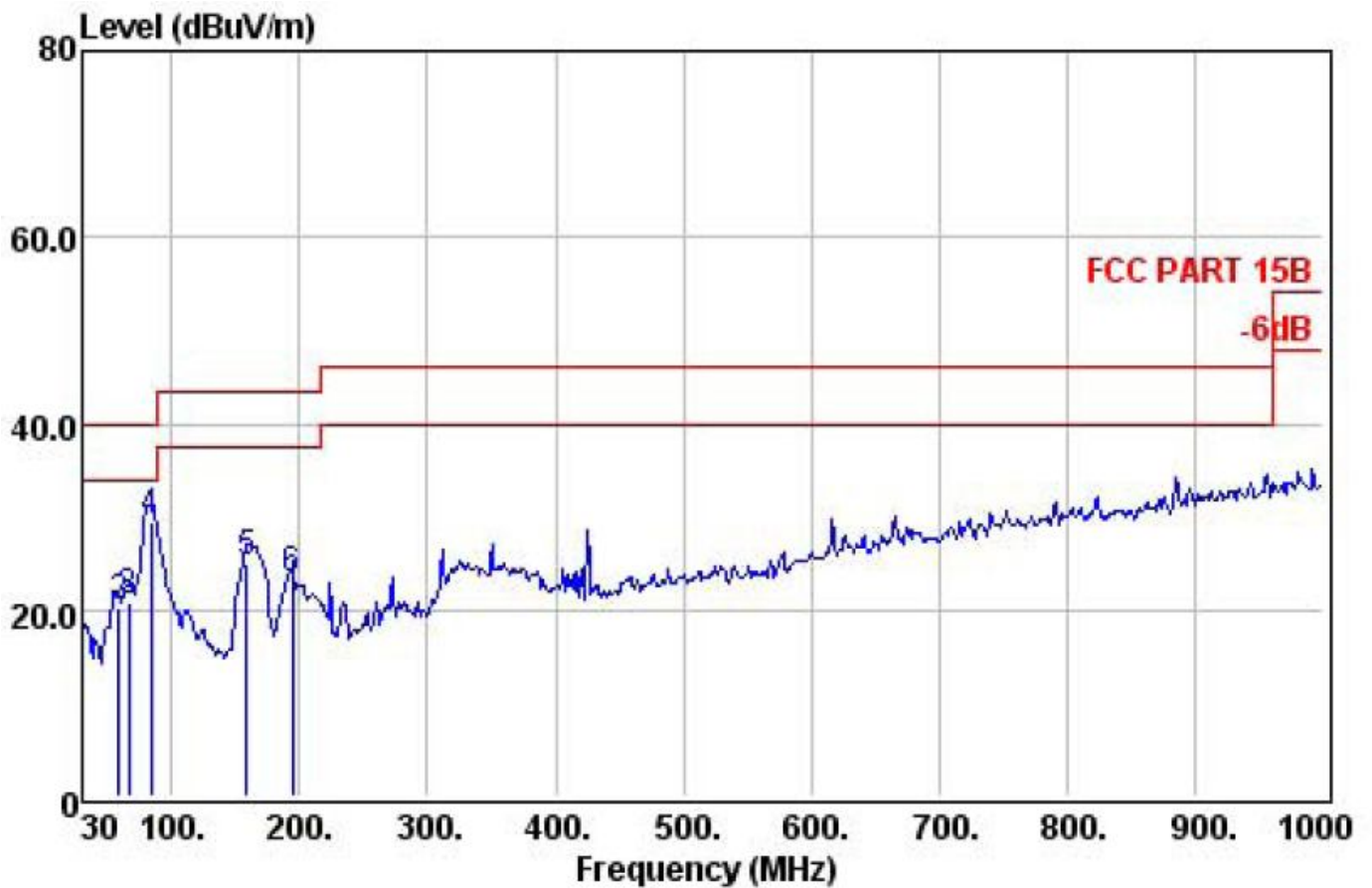


**Above 1GHz**



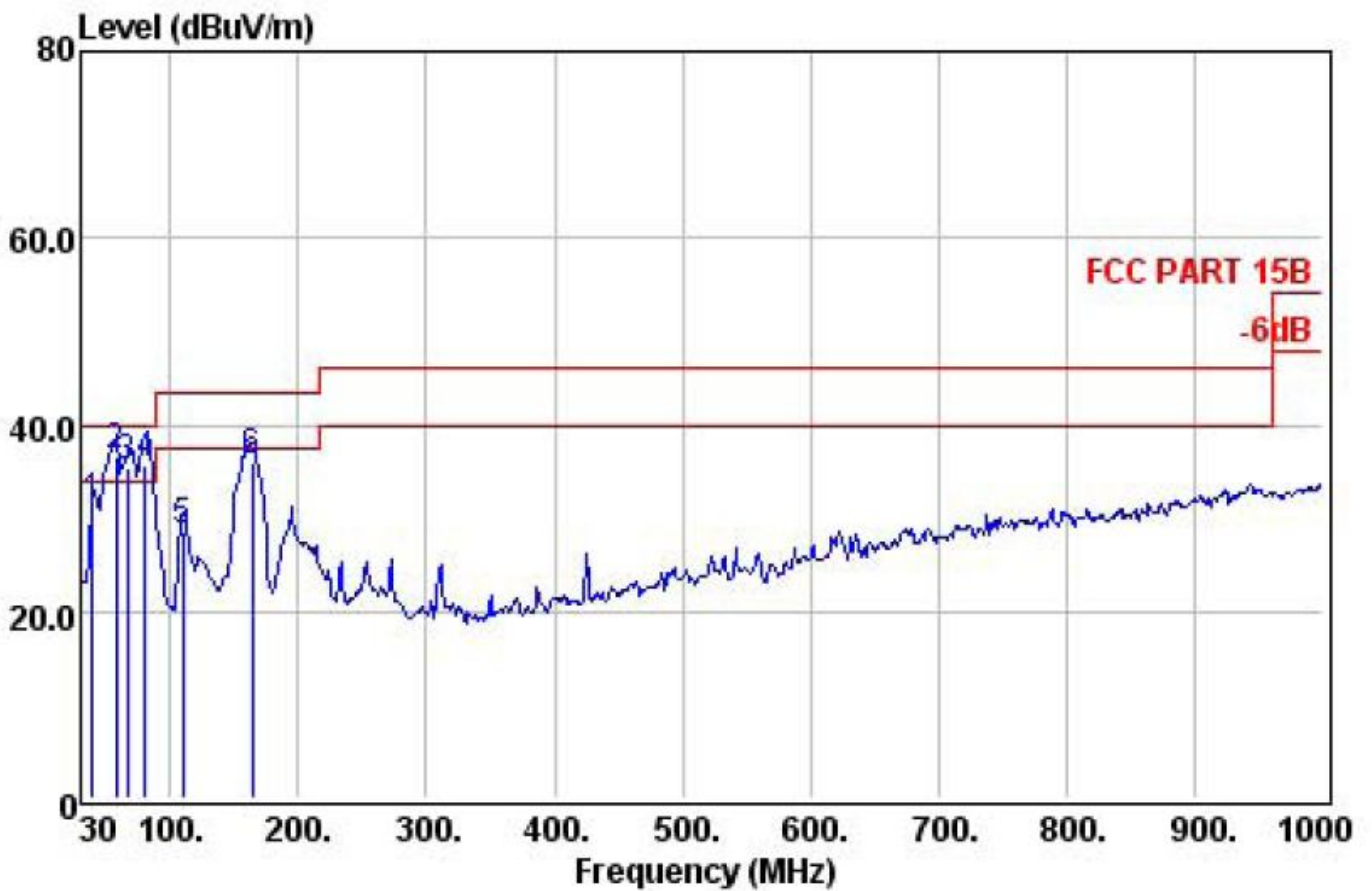
Below 1GHz

Horizontal



	Preamp	Read	CableAntenna	Limit	Over				
	Freq	Factor	Level	Loss	Factor	Level	Line	Limit	
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	30.00	31.41	30.08	0.56	18.80	18.03	40.00	-21.97	QP
2	59.10	31.35	43.30	0.75	7.44	20.14	40.00	-19.86	QP
3	66.86	31.31	43.84	0.85	7.44	20.82	40.00	-19.18	QP
4	83.35	31.35	51.46	0.94	8.37	29.42	40.00	-10.58	QP
5	158.04	31.23	45.77	1.30	9.16	25.00	43.50	-18.50	QP
6	194.90	31.11	42.30	1.46	10.54	23.19	43.50	-20.31	QP

Vertical



	Preamp Freq	Factor	Read Level	CableAntenna Loss	Factor	Limit Level	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	39.70	31.37	49.07	0.56	13.08	31.34	40.00	-8.66 QP
2 !	57.16	31.36	59.32	0.75	7.73	36.44	40.00	-3.56 QP
3 !	66.86	31.31	58.44	0.85	7.44	35.42	40.00	-4.58 QP
4 !	80.44	31.34	58.12	0.85	8.05	35.68	40.00	-4.32 QP
5	109.54	31.31	49.48	1.03	9.31	28.51	43.50	-14.99 QP
6	163.86	31.21	56.45	1.30	9.55	36.09	43.50	-7.41 QP



Above 1GHz  
TX 2402MHz  
Horizontal

	Freq	Preamp Factor	Read Level	CableAntenna Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2402.00	26.32	79.53	7.34	28.72	89.27	94.00	-4.73	Average
2	2402.00	26.32	92.92	7.34	28.72	102.66	114.00	-11.34	Peak
3	4804.00	27.49	31.97	11.96	32.94	49.38	74.00	-24.62	Peak
4	6984.00	27.90	18.85	16.60	37.16	44.71	74.00	-29.29	Peak
5	9517.00	28.61	17.09	16.92	38.01	43.41	74.00	-30.59	Peak
6	14158.00	29.42	9.06	19.46	42.60	41.70	74.00	-32.30	Peak

Vertical

	Freq	Preamp Factor	Read Level	CableAntenna Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2402.00	26.32	79.44	7.34	28.72	89.18	94.00	-4.82	Average
2	2402.00	26.32	92.94	7.34	28.72	102.68	114.00	-11.32	Peak
3	4804.00	27.49	31.70	11.96	32.94	49.11	74.00	-24.89	Peak
4	6882.00	27.88	15.26	16.60	36.89	40.87	74.00	-33.13	Peak
5	8735.00	28.32	16.55	16.82	37.08	42.13	74.00	-31.87	Peak
6	14855.00	29.53	12.76	19.91	39.13	42.27	74.00	-31.73	Peak

## TX 2440MHz

## Horizontal

	Freq	Preamp Factor	Read Level	CableAntenna Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2440.00	26.33	79.41	7.48	28.76	89.32	94.00	-4.68	Average
2	2440.00	26.33	92.40	7.48	28.76	102.31	114.00	-11.69	Peak
3	4880.00	27.53	30.92	12.14	33.11	48.64	74.00	-25.36	Peak
4	6984.00	27.90	16.01	16.60	37.16	41.87	74.00	-32.13	Peak
5	9687.00	28.68	17.32	16.94	38.15	43.73	74.00	-30.27	Peak
6	13665.00	29.33	11.10	18.98	43.17	43.92	74.00	-30.08	Peak

## Vertical

	Freq	Preamp Factor	Read Level	CableAntenna Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2440.00	26.33	79.42	7.48	28.76	89.33	94.00	-4.67	Average
2	2440.00	26.33	91.98	7.48	28.76	101.89	114.00	-12.11	Peak
3	4880.00	27.53	31.31	12.14	33.11	49.03	74.00	-24.97	Peak
4	7290.00	27.96	17.39	16.61	37.32	43.36	74.00	-30.64	Peak
5	10112.00	28.81	17.66	16.99	38.59	44.43	74.00	-29.57	Peak
6	11863.00	28.99	16.88	17.34	39.54	44.77	74.00	-29.23	Peak

## TX 2480MHz

## Horizontal

	Freq	Preamplifier Factor	Read Level	Cable & Antenna Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2480.00	26.34	79.34	7.57	28.79	89.36	94.00	-4.64	Average
2	2480.00	26.34	91.35	7.57	28.79	101.37	114.00	-12.63	Peak
3	4960.00	27.58	30.95	12.36	33.32	49.05	74.00	-24.95	Peak
4	7341.00	27.97	15.17	16.62	37.34	41.16	74.00	-32.84	Peak
5	11438.00	28.94	12.39	17.25	39.85	40.55	74.00	-33.45	Peak
6	14447.00	29.47	11.79	19.64	40.90	42.86	74.00	-31.14	Peak

## Vertical

	Freq	Preamplifier Factor	Read Level	Cable & Antenna Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2480.00	26.34	79.29	7.57	28.79	89.31	94.00	-4.69	Average
2	2480.00	26.34	91.13	7.57	28.79	101.15	114.00	-12.85	Peak
3	4960.00	27.58	31.21	12.36	33.32	49.31	74.00	-24.69	Peak
4	7324.00	27.96	17.51	16.62	37.33	43.50	74.00	-30.50	Peak
5	9806.00	28.72	17.11	16.95	38.25	43.59	74.00	-30.41	Peak
6	13801.00	29.36	11.15	19.12	43.30	44.21	74.00	-29.79	Peak

## 5. 20DB & 99% OCCUPY BANDWIDTH

### 5.1. Limits

According to FCC Section 15.247(a)(1), the 20dB bandwidth is known as the 99% emission bandwidth, or 20dB bandwidth( $10 \cdot \log 1\% = 20\text{dB}$ ) taking the RF output power

### 5.2. Test setup

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum, During the measurement, the Bluetooth module of the EUT is activated and controlled by the software, and is set to operate under test mode transmitting 339 bytes DH5 packages at maximum power.

2. Set the spectrum analyzer:

Span: approximately 2 to 3 times the 20dB bandwidth, centered on a hopping channel

RBW  $\geq 1\%$  of the 20dB bandwidth

VBW  $\geq$  RBW

Sweep=auto

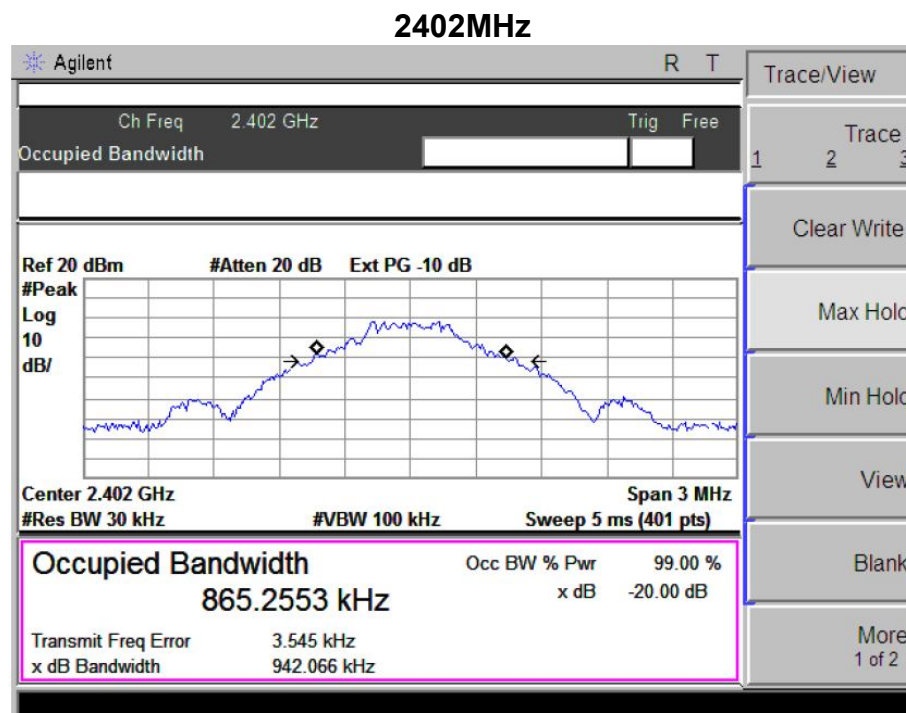
Detector function=peak

Trace=max hold

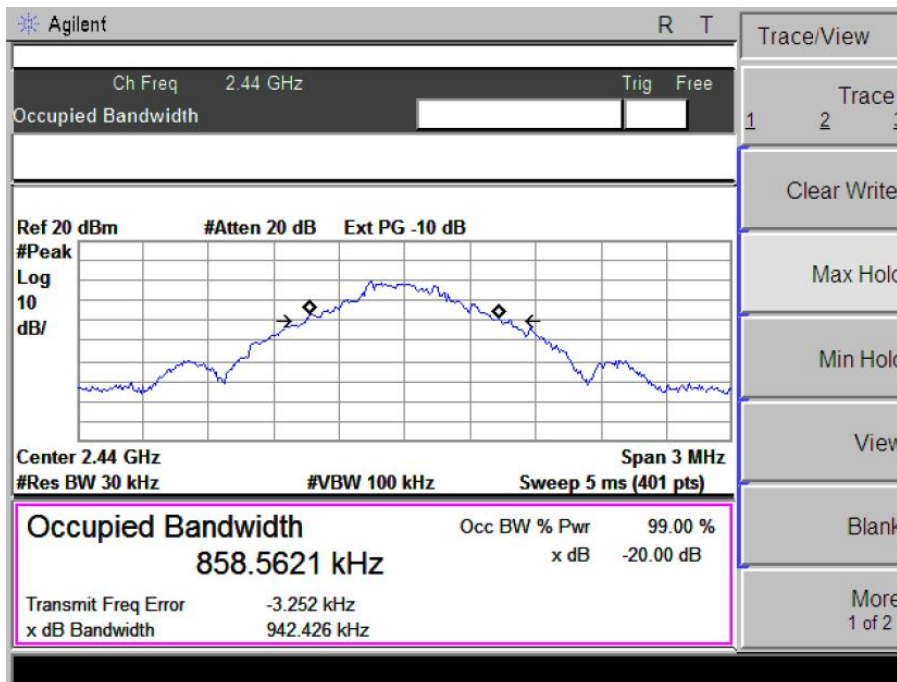
Test data:

Channel Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
2402	0.942	0.865	Pass
2440	0.942	0.859	Pass
2480	0.942	0.859	Pass

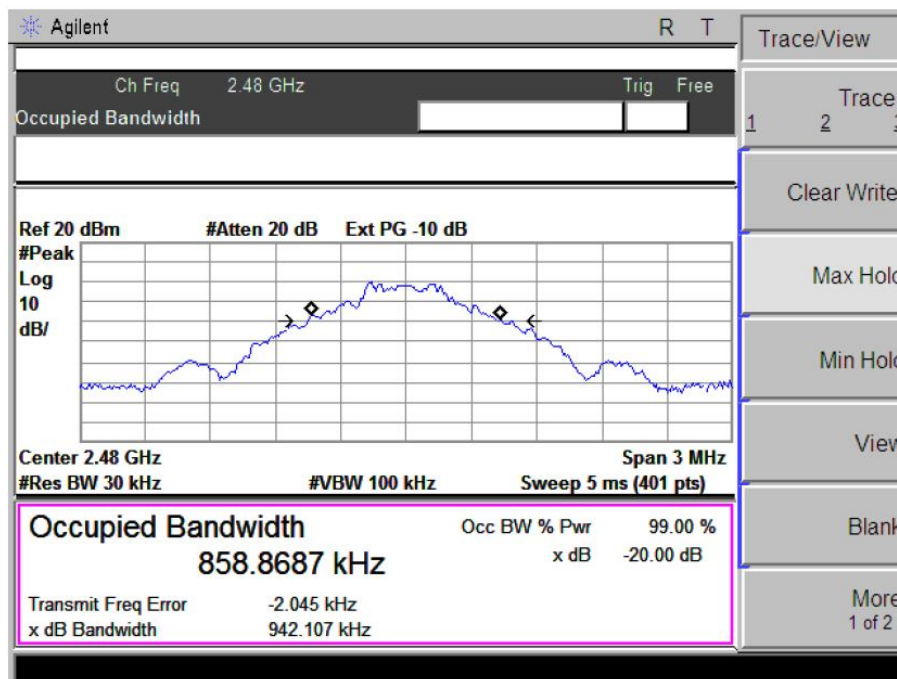
Test plot as follows:



### 2440 MHz



### 2480 MHz



## 6. BAND EDGE COMPLIANCE TEST

### 6.1. Limits

According to FCC Section 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement

### 6.2. Test setup

The EUT was placed on a turn table which was 1.5 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

Set to span from the lowest frequency generated in the device up to and including the tenth harmonic of the highest fundamental frequency

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure. For all test, used peak detector.

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

For radiated test as follows:

	Frequency (MHz)	Antenna polarization (H/V)	Emission (dBuV/m)	Band edge Limit (dBuV/m)		Result
			PK	PK	AV	
	<2400	H	51.15	74.00	54.00	Pass
	<2400	V	50.33	74.00	54.00	Pass
	>2483.5	H	50.47	74.00	54.00	Pass
	>2483.5	V	50.19	74.00	54.00	Pass

If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

## 7. ANTENNA REQUIREMENTS

### 7.1. Limits

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 7.2. Result

The antennas used for this product are permanent attached antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 1.0dBi.

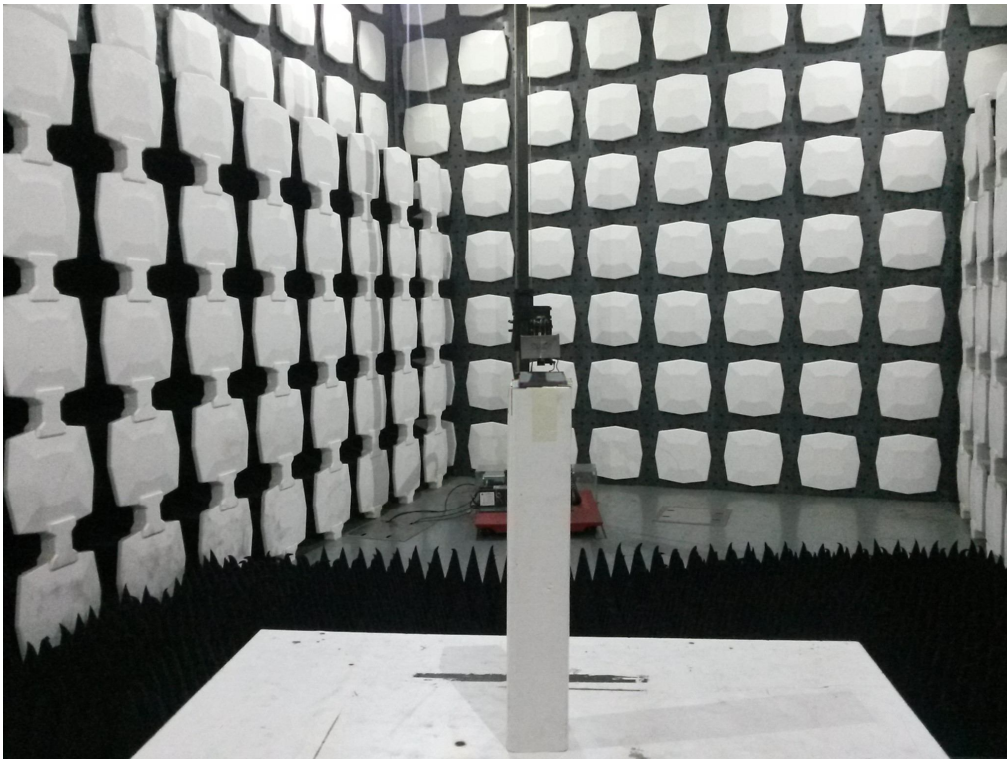
## 8. PHOTOGRAPHS OF TEST SET-UP

Conducted Emission



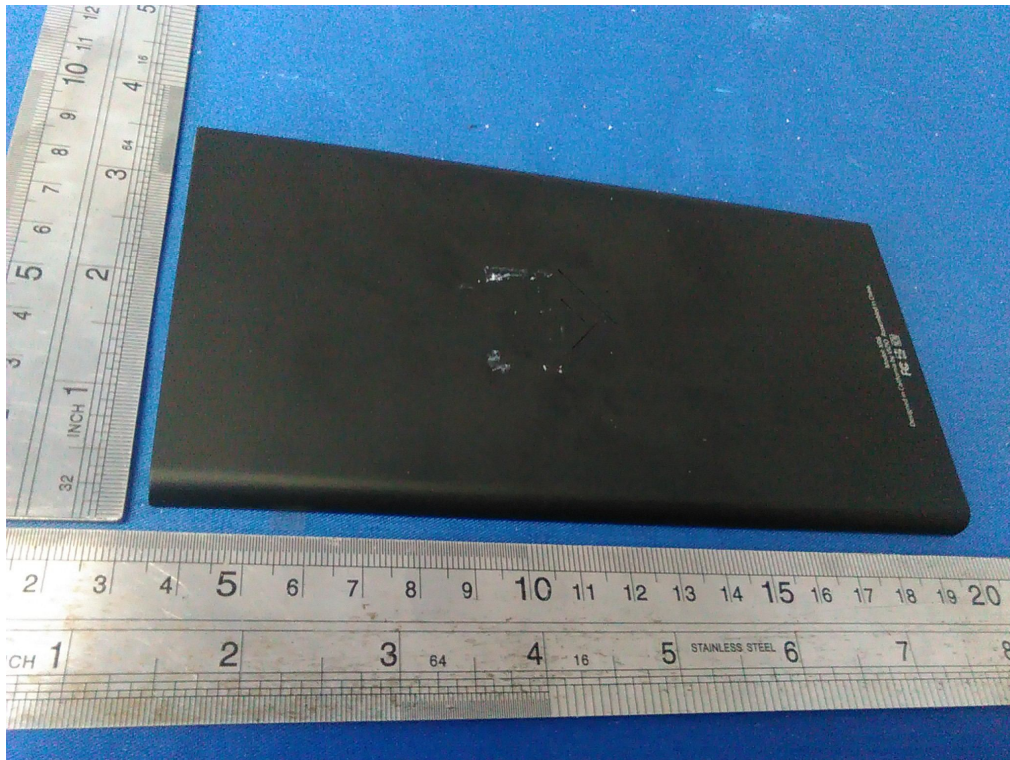
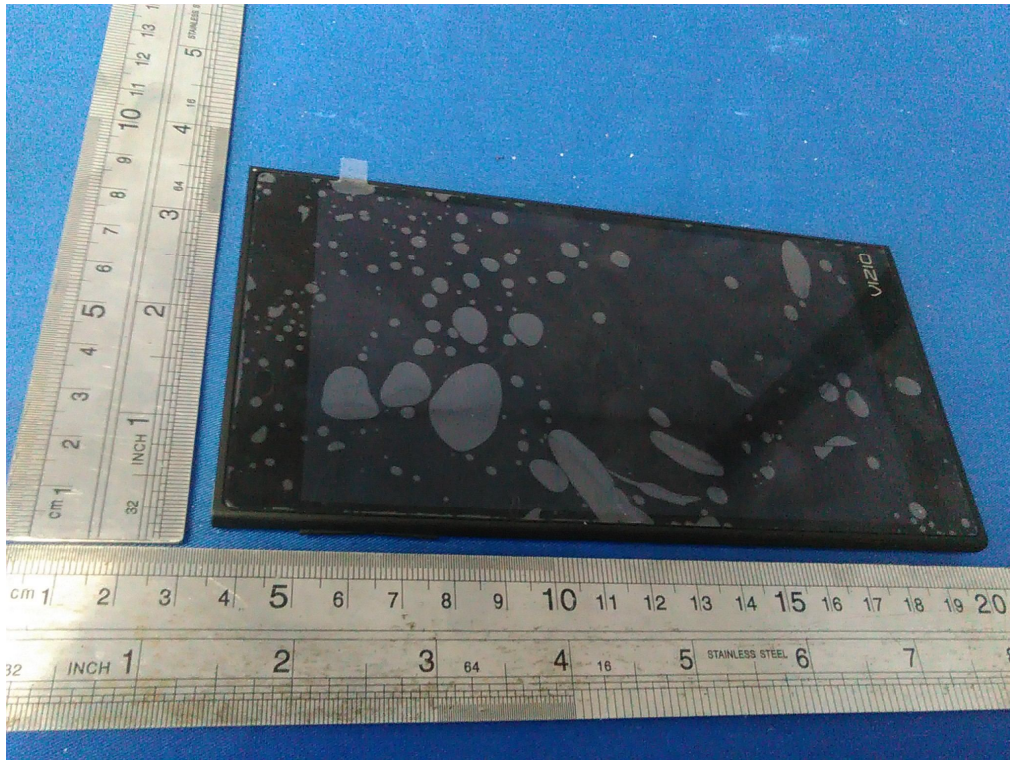


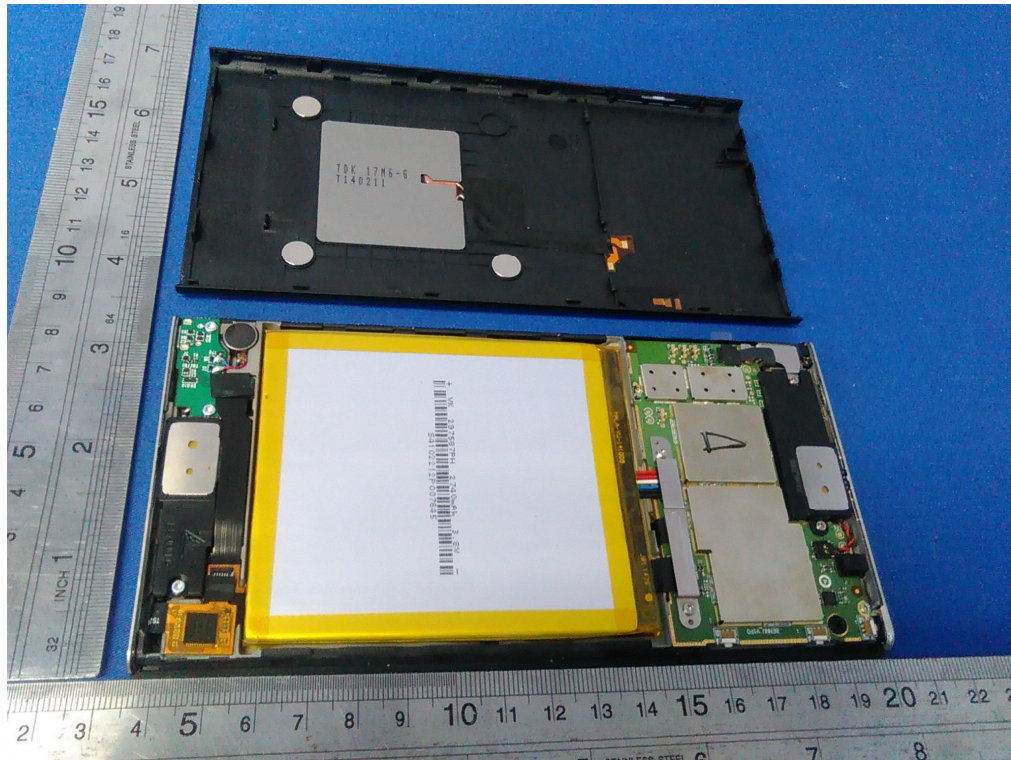
Radiated Emission Test



## 9. PHOTOGRAPHS OF THE EUT







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