FCC TEST REPORT(Bluetooth)

for

Chandler Systems,Inc.

Legacy View Valve

Model Number: LV-019

FCC ID: SWPLV-019

Prepared for : Chandler Systems,Inc.
Address : 710 Orange Street, Ashland, Ohio 44805 USA

Prepared by : Keyway Testing Technology Co., Ltd.
Address : Buliding 1, Baishun Industrial Zone, Zhangmutou Town, Dongguan, Guangdong, China

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Report No. : 15KWE094352F
Date of Test : Sept. 18~23, 2015
Date of Report : Sept. 24, 2015

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Keyway Testing Technology Co., Ltd.

Applicant: **Address:**	Chandler Systems,Inc. 710 Orange Street, Ashland, Ohio 44805 USA		
Manufacturer: **Address:**	Tech Billion Limited 2/F Fenghe Park Building, 322 Xixiang Road, Baoan District, Shenzhen, China		
E.U.T:	Legacy View Valve		
Model Number:	LV-019		
Trade Name:	N/A	**Serial No.:**	------
Date of Receipt:	Sept. 17, 2015	**Date of Test:**	Sept. 18~23, 2015
Test Specification:	FCC Part 15, Subpart C Section 15.249: 2014 ANSI C63.10:2013		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		

Issue Date: Sept. 24, 2015

Tested by:	Reviewed by:	Approved by:
William	Andy	Jade Yang
William Huang / Engineer	Andy Gao / Supervisor	Jade Yang/ Supervisor

Other Aspects:

None.

Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested

1. TEST SUMMARY

Test Items	Test Requirement	Result
Conducted Emissions	15.207	PASS
Radiated Emissions	15.205(a)/15.209/15.249(d)	PASS
20dB Bandwidth	15.249	PASS
Emissions from out of band	15.249	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:	Legacy View Valve
Model No.:	LV-019
Operation Frequency:	2402~2480MHz
Channel numbers:	BT:79 Channels
Channel separation:	BT :1M
Modulation technology:	BT:GFSK, Pi/4DPSK, 8-DPSK
Antenna Type:	Integral Antenna
Antenna gain:	BT:0dBi
Power supply:	DC 12V from adapter
BT version:	2.1+EDR
Product SW version:	V02
Product HW version:	V01
Serial No.:	001
Adapter:	HIGHTECH M/N:UP12-1200500 Input: 100-240V~ 47-63Hz 0.5A Output: DC 12V/0.5A DC Line: Unshielded, Undetachable, 1.2m

2.3. Difference between Model Numbers

None.

2.4. Independent Operation Modes

		Channel	Frequency
1	TX Mode	Low	2402MHz
		Middle	2441MHz
		High	2480MHz

Note: Bluetooth signal has 3 packages DH1, DH3, DH5, DH5 package is largest; we are testing DH5 in the report.

2.5. Test Supporting System

None.

2.6. Test Facilities

Lab Qualifications : 944 Shielded Room built by ETS-Lindgren, USA
Date of completion: March 28, 2011

966 Chamber built by ETS-Lindgren, USA
Date of completion: March 28, 2011

Certificated by TUV Rheinland, Germany.
Registration No.: UA 50207153
Date of registration: July 13, 2011

Certificated by UL, USA
Registration No.: 100567-237
Date of registration: September 1, 2011

Certificated by Intertek
Registration No.: 2011-RTL-L1-31
Date of registration: October 11, 2011

Certificated 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

Name of Firm : Keyway Testing Technology Co., Ltd.

Site Location : Building1, Baishun Industrial Zone, Zhangmutou Town, Dongguan, Guangdong, China

2.7. List of Test and Measurement Instruments

2.7.1. For radiated emission, 20dB bandwith, band edge test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,15	Apr. 26,16
Bilog Antenna (30MHz~1GHz)	ETS-LINDGREEN	3142D	135452	Apr. 27,15	Apr. 26,16
Loop antenna (9kHz~30MHz)	teseq	HLA6120	22032	Apr. 30,15	Apr. 29,16
3m Semi-anechoic Chamber	ETS-LINDGREEN	966	KW01	Apr. 27,15	Apr. 26,16
Signal Amplifier	SONOMA	310	187016	Apr. 27,15	Apr. 26,16
Signal Amplifier	Agilent	8449B	3008A00251	Apr. 27,15	Apr. 26,16
RF Cable (9kHz~1GHz)	IMRO	IMRO-400	966 Cable 1#	Apr. 27,15	Apr. 26,16
RF Cable (1GHz~25GHz)	nogps	Z09	966 Cable 2#	Apr. 27,15	Apr. 26,16
Antenna connector	Florida RFLabs	Lab-Fle	RF Cable 1#	Apr. 30,15	Apr. 29,16
MULTI-DEVICE Controller	ETS-LINDGREEN	2090	126913	N/A	N/A
Horn Antenna (1GHz ~18GHz)	DAZE	ZN30701	11003	Apr. 27,15	Apr. 26,16
Horn Antenna (18GHz ~26.5GHz)	SCHWARZBECK	BBHA9170	9170-068	Apr. 27,15	Apr. 26,16
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 27,15	Apr. 26,16
Spectrum Analyzer	Agilent	E4408B	MY44211125	Apr. 30,15	Apr. 29,16
Signal Amplifier	DAZE	ZN3380C	11001	Apr. 27,15	Apr. 26,16
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,15	Apr. 27,16
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	Apr. 27,15	Apr. 27,16
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	Apr. 27,15	Apr. 27,16
RF Cable	FUJIKURA	3D-2W	944 Cable	Apr. 27,15	Apr. 27,16

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list

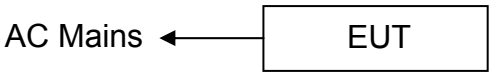
3. TEST SET-UP AND OPERATION MODES

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: Legacy View Valve*)*

3.3. Test Operation Mode and Test Software

None.

3.4. Special Accessories and Auxiliary Equipment

Adapter:	HIGHTECH M/N:UP12-1200500 Input: 100-240V~ 47-63Hz 0.5A Output: DC 12V/0.5A DC Line: Unshielded, Undetachable, 1.2m

3.5. Countermeasures to Achieve EMC Compliance

None.

3.6. Test Environment:

Ambient conditions in the test laboratory:

Items	Actual
Temperature (℃)	21~23
Humidity (%RH)	50~65

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 (dBμV)	
	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.

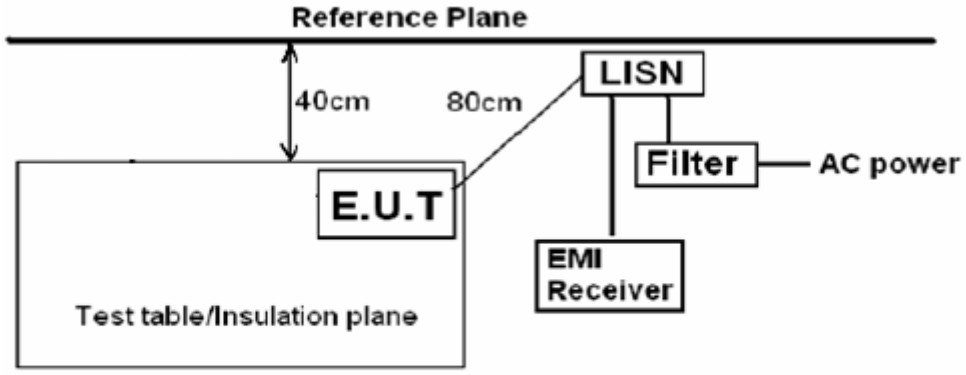
The frequency range from 150 kHz to 30 MHz was investigated.

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

Measurement Uncertainty: ±2.6 dB at a level of confidence of 95%.

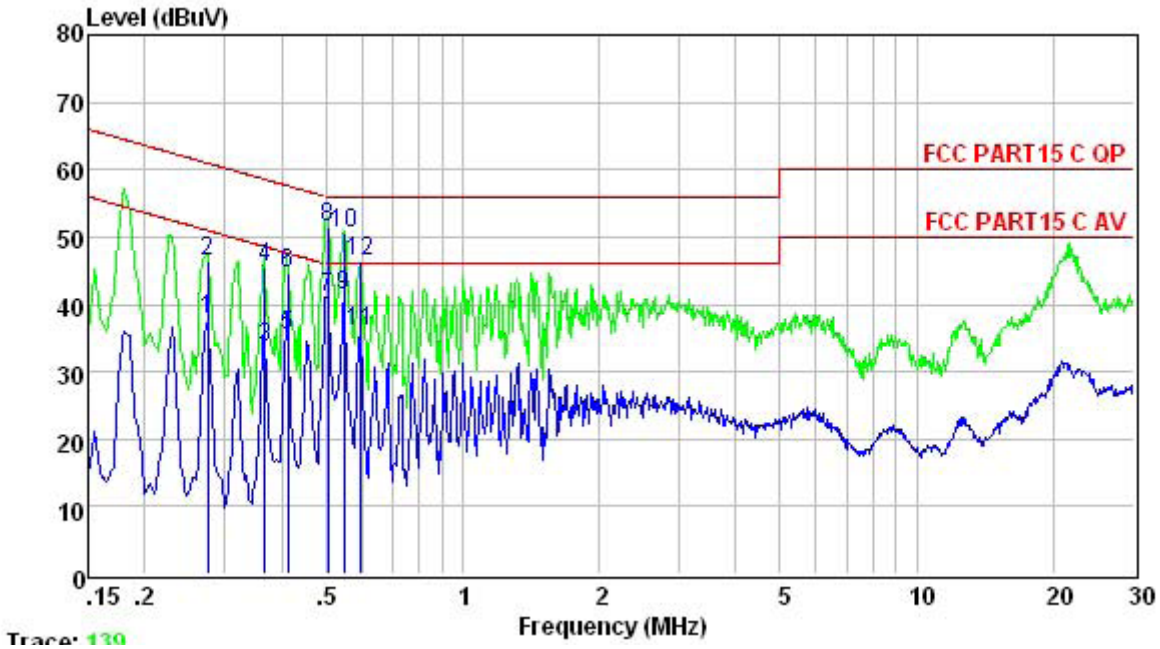
Pretest for all mode, the worst case was GFSK low channel and the data was reported on the following page.

Test voltage was AC 120V/60Hz.



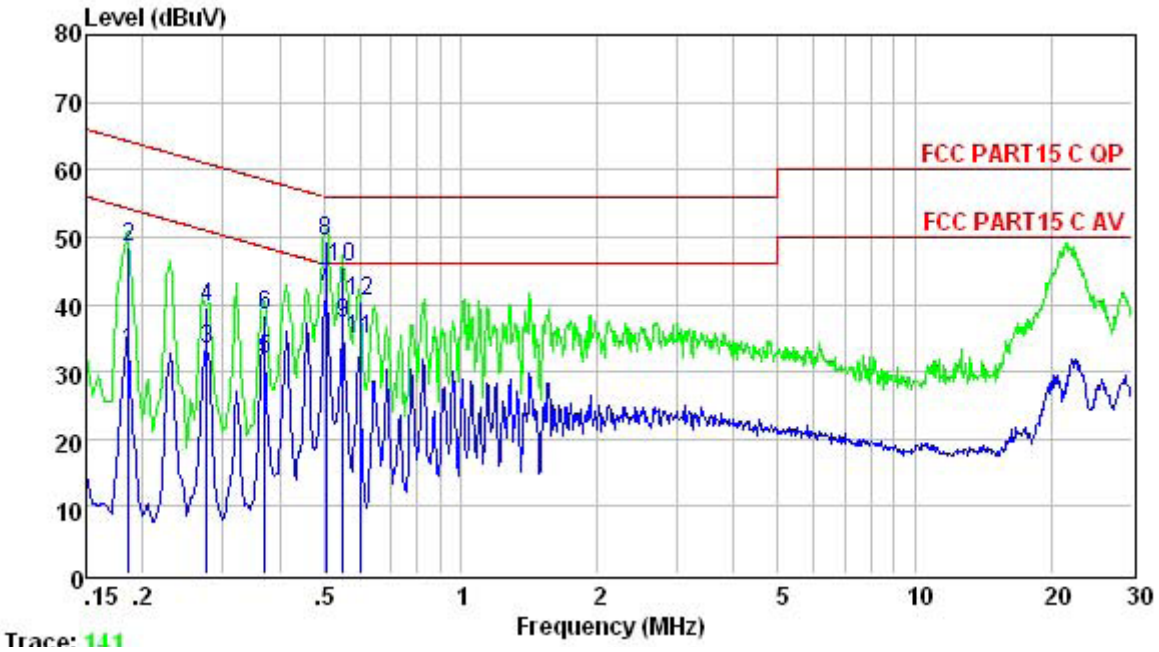
Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m

Line



	Freq	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	
1	0.274	37.66	50.98	-13.32	Average
2	0.274	46.50	60.98	-14.48	QP
3	0.367	33.53	48.56	-15.03	Average
4	0.367	45.50	58.56	-13.06	QP
5	0.413	35.28	47.59	-12.31	Average
6	0.413	44.50	57.59	-13.09	QP
7	0.505	40.94	46.00	-5.06	Average
8	0.505	51.50	56.00	-4.50	QP
9	0.549	41.48	46.00	-4.52	Average
10	0.549	50.50	56.00	-5.50	QP
11	0.595	36.13	46.00	-9.87	Average
12	0.595	46.50	56.00	-9.50	QP

Neutral



	Freq	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	
1	0.186	33.06	54.20	-21.14	Average
2	0.186	48.50	64.20	-15.70	QP
3	0.276	33.42	50.94	-17.52	Average
4	0.276	39.50	60.94	-21.44	QP
5	0.371	31.69	48.47	-16.78	Average
6	0.371	38.50	58.47	-19.97	QP
7	0.505	42.55	46.00	-3.45	Average
8	0.505	49.50	56.00	-6.50	QP
9	0.552	37.24	46.00	-8.76	Average
10	0.552	45.50	56.00	-10.50	QP
11	0.601	34.83	46.00	-11.17	Average
12	0.601	40.50	56.00	-15.50	QP

4.2. Radiated Emission Test

4.2.1. Limit 15.209 limits

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	$20\log^{(500)}$

Fundamental Frequency	Field Strength of Fundamental		Field Strength of Harmonics	
	mV/m	dBμV/m	μV/m	dBμV/m
902- 928 MHz	50	94	500	54
2400- 2483.5 MHz	50	94	500	54
5725- 5875 MHz	50	94	500	54
24.0- 24.25GHz	250	108	2500	68

4.2.2. Test setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10:2013

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)

The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)

The height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

For all test, used peak detector. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

For test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

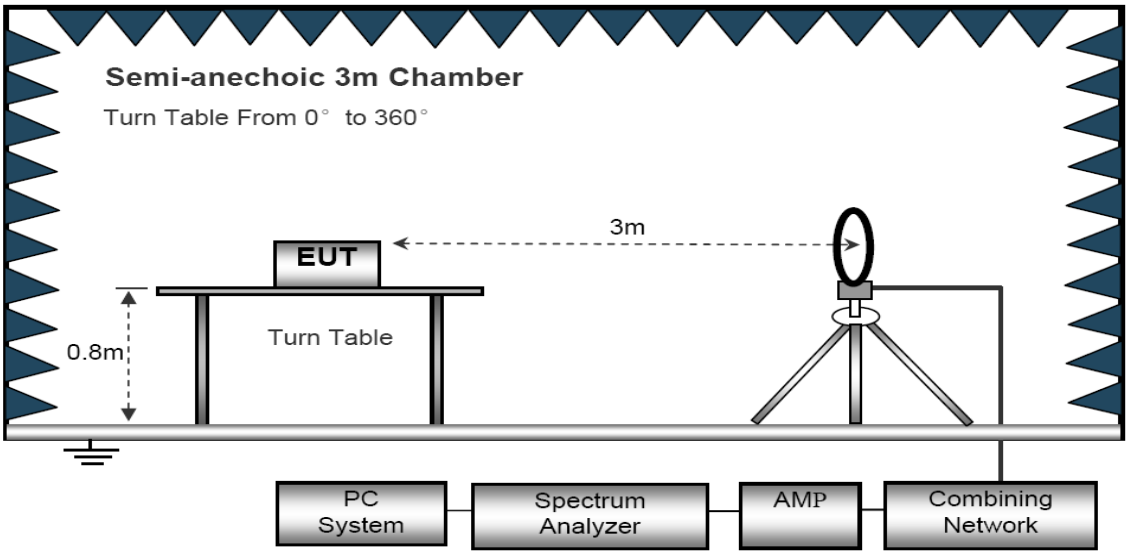
The bandwidth of the EMI test receiver is set at 10kHz for frequency range from 9kHz to 30 MHz, 120kHz for frequency range from 30MHz to 1000MHz.The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

The frequency range from 9kHz to 10^{th} 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.

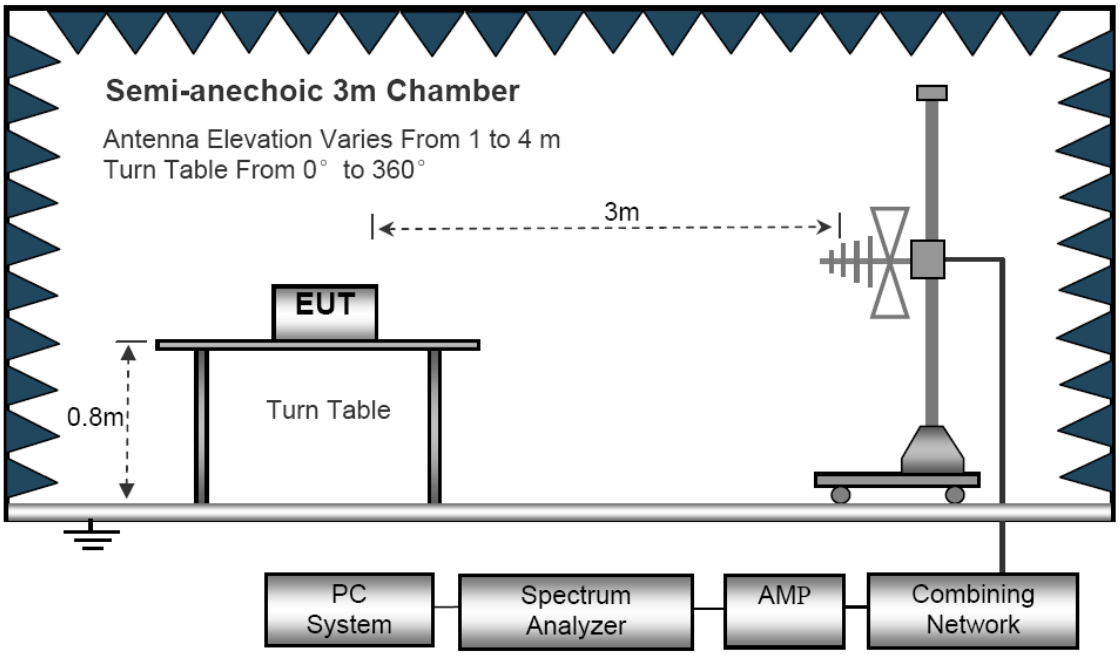
Notes: 1. Emission Level = Antenna Factor + Cable Loss + Meter Reading-Preamp Factor.

2. Measurement Uncertainty: ±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, the worst case was GFSK 2402MHz and the data was reported on the following page.
5. For emissions above 1GHz, the worst case was GFSK and the data was reported on the following page
6. The emission below 30MHz was background noise and met the limit, so no data show it.

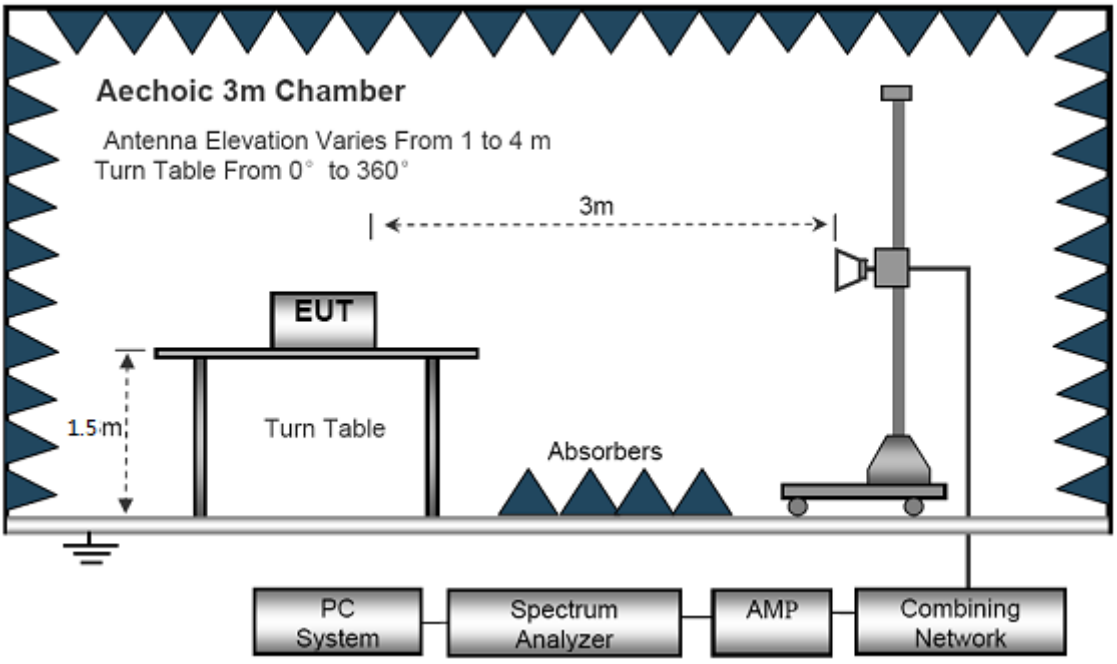
Below 30MHz



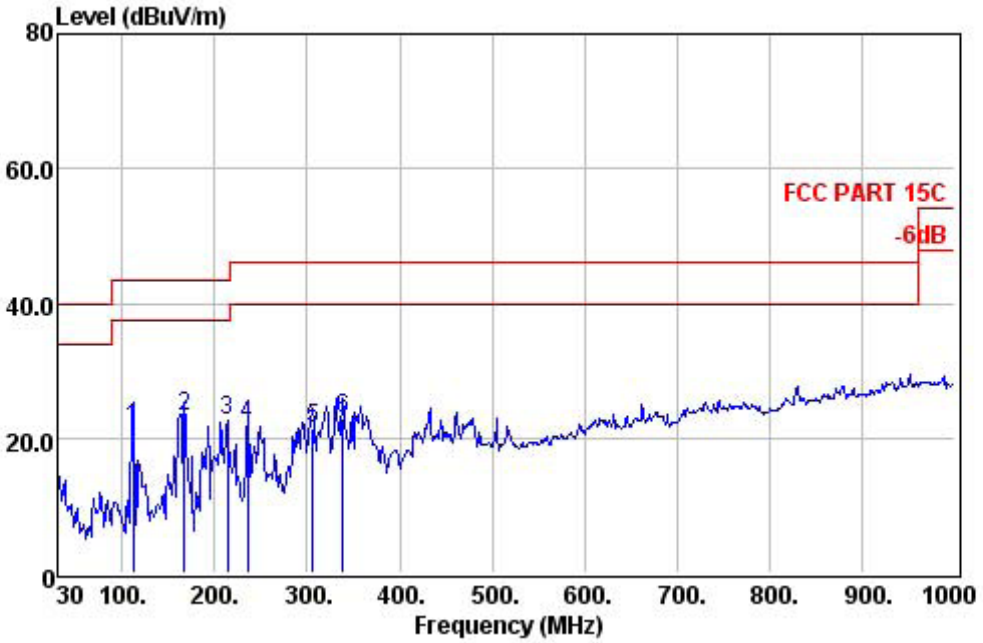
30MHz~1GHz



Above 1GHz

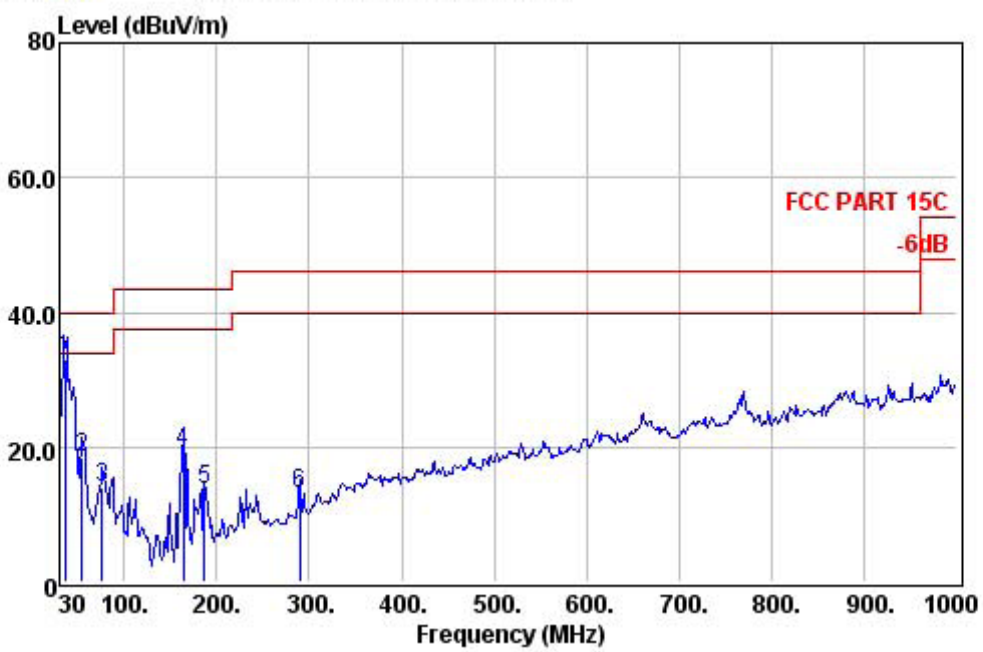


Below 1GHz (DC 12V from adapter input AC 120V/60Hz)
GFSK 2402MHz Horizontal polarizations



	Freq	Preamp Factor	Read Level	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	112.45	0.00	11.17	1.03	21.30	43.50	-22.20	QP
2	167.74	0.00	11.99	1.30	23.19	43.50	-20.31	QP
3	214.30	0.00	9.43	1.53	22.65	43.50	-20.85	QP
4	235.64	0.00	7.90	1.61	22.01	46.00	-23.99	QP
5	306.45	0.00	5.49	1.94	21.41	46.00	-24.59	QP
6	338.46	0.00	5.67	2.10	22.81	46.00	-23.19	QP

GFSK 2402MHz Vertical polarizations



	Freq	Preamp Factor	Read Level	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	36.38	0.00	17.50	0.56	33.10	40.00	-6.90	QP
2	54.25	0.00	9.40	0.75	18.31	40.00	-21.69	QP
3	76.56	0.00	5.19	0.85	13.87	40.00	-26.13	QP
4	163.86	0.00	8.37	1.30	19.22	43.50	-24.28	QP
5	187.14	0.00	2.17	1.39	13.75	43.50	-29.75	QP
6	289.96	0.00	-2.19	1.87	13.16	46.00	-32.84	QP

Above 1GHz (DC 12V from adapter input AC 120V/60Hz)
GFSK 2402MHz Horizontal polarizations

	Freq	Preamp Factor	Read Level	Cable 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	81.84	7.34	28.72	91.58	94.00	-2.42	Average
2	2402.00	26.32	94.63	7.34	28.72	104.37	114.00	-9.63	Peak
3	4804.00	27.49	28.41	11.96	32.94	45.82	74.00	-28.18	Peak
4	9245.00	28.50	17.81	16.90	37.69	43.90	74.00	-30.10	Peak
5	12118.00	29.02	16.63	17.47	39.42	44.50	74.00	-29.50	Peak
6	13053.00	29.21	14.72	18.28	40.94	44.73	74.00	-29.27	Peak
7	14719.00	29.51	15.30	19.83	39.69	45.31	74.00	-28.69	Peak

GFSK 2402MHz Vertical polarizations

	Freq	Preamp Factor	Read Level	Cable 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	80.65	7.34	28.72	90.39	94.00	-3.61	Average
2	2402.00	26.32	94.84	7.34	28.72	104.58	114.00	-9.42	Peak
3	4804.00	27.49	24.75	11.96	32.94	42.16	74.00	-31.84	Peak
4	7596.00	28.02	16.90	16.63	37.20	42.71	74.00	-31.29	Peak
5	9245.00	28.50	17.40	16.90	37.69	43.49	74.00	-30.51	Peak
6	12917.00	29.18	16.08	18.14	40.50	45.54	74.00	-28.46	Peak
7	14719.00	29.51	16.34	19.83	39.69	46.35	74.00	-27.65	Peak

GFSK 2441MHz Horizontal polarizations

	Freq	Preamp Factor	Read Level	Cable Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2441.00	26.33	79.88	7.48	28.76	89.79	94.00	-4.21	Average
2	2441.00	26.33	94.27	7.48	28.76	104.18	114.00	-9.82	Peak
3	4882.00	27.53	28.42	12.14	33.11	46.14	74.00	-27.86	Peak
4	7307.00	27.96	18.86	16.61	37.32	44.83	74.00	-29.17	Peak
5	9092.00	28.43	19.06	16.89	37.50	45.02	74.00	-28.98	Peak
6	10690.00	28.87	17.94	17.10	39.31	45.48	74.00	-28.52	Peak
7	13376.00	29.27	13.48	18.65	42.44	45.30	74.00	-28.70	Peak

GFSK 2441MHz Vertical polarizations

	Freq	Preamp Factor	Read Level	Cable Loss	Antenna Factor	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2441.00	26.33	80.00	7.48	28.76	89.91	94.00	-4.09	Average
2	2441.00	26.33	94.40	7.48	28.76	104.31	114.00	-9.69	Peak
3	4882.00	27.53	29.83	12.14	33.11	47.55	74.00	-26.45	Peak
4	8973.00	28.39	19.72	16.87	37.36	45.56	74.00	-28.44	Peak
5	11353.00	28.94	18.71	17.24	39.78	46.79	74.00	-27.21	Peak
6	12917.00	29.18	18.60	18.14	40.50	48.06	74.00	-25.94	Peak
7	13988.00	29.40	14.85	19.35	43.48	48.28	74.00	-25.72	Peak

GFSK 2480MHz Horizontal polarizations

	Freq	Preamp Factor	Read Level	Cable 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	79.62	7.57	28.79	89.64	94.00	-4.36	Average
2	2480.00	26.34	93.74	7.57	28.79	103.76	114.00	-10.24	Peak
3	4960.00	27.58	25.62	12.36	33.32	43.72	74.00	-30.28	Peak
4	7392.00	27.98	17.01	16.62	37.36	43.01	74.00	-30.99	Peak
5	9517.00	28.61	15.39	16.92	38.01	41.71	74.00	-32.29	Peak
6	10843.00	28.88	15.41	17.13	39.41	43.07	74.00	-30.93	Peak
7	14209.00	29.43	12.30	19.49	42.30	44.66	74.00	-29.34	Peak

GFSK 2480MHz Vertical polarizations

	Freq	Preamp Factor	Read Level	Cable 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	79.25	7.57	28.79	89.27	94.00	-4.73	Average
2	2480.00	26.34	93.94	7.57	28.79	103.96	114.00	-10.04	Peak
3	4960.00	27.58	26.96	12.36	33.32	45.06	74.00	-28.94	Peak
4	7987.00	28.10	19.20	16.66	36.43	44.19	74.00	-29.81	Peak
5	10928.00	28.89	16.10	17.15	39.46	43.82	74.00	-30.18	Peak
6	13495.00	29.30	11.88	18.77	43.00	44.35	74.00	-29.65	Peak
7	14821.00	29.52	14.35	19.88	39.27	43.98	74.00	-30.02	Peak

5. 20DB OCCUPY BANDWIDTH

5.1. Limits

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.2. Test setup

1. Set the RBW =100kHz.
2. Set the VBW = 300kHz
3. Span=3MHz
4. Detector = peak.
5. Sweep time = auto couple.
6. Allow trace to fully stabilize, and view the plot.
7. Measure and record the result in the test report.

Measurement Uncertainty: ±500kHz at a level of confidence of 95%..

Test data:

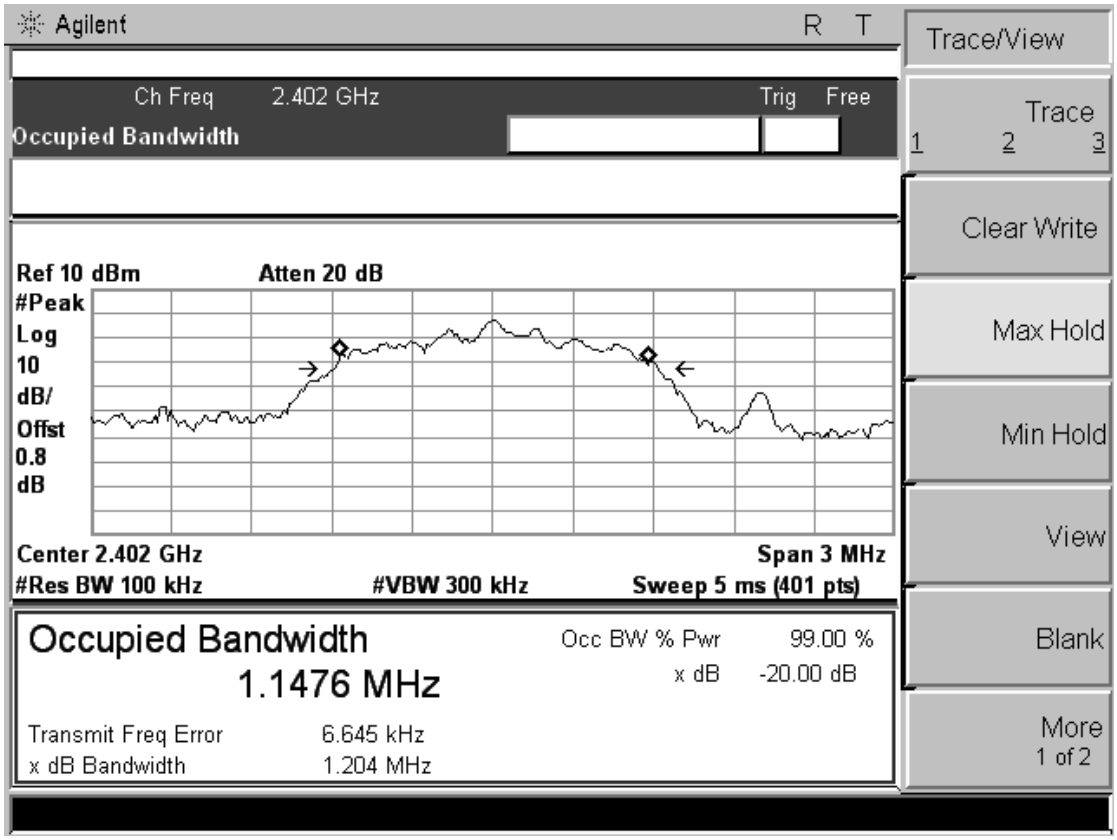
	Channel Frequency (MHz)	20dB Bandwidth (MHz)	Result
GFSK	2402	0.843	Pass
	2441	0.847	Pass
	2480	0.843	Pass
Pi/4DPSK	2402	1.106	Pass
	2441	1.104	Pass
	2480	1.106	Pass
8DPSK	2402	1.204	Pass
	2441	1.201	Pass
	2480	1.225	Pass

Test plot as follows:

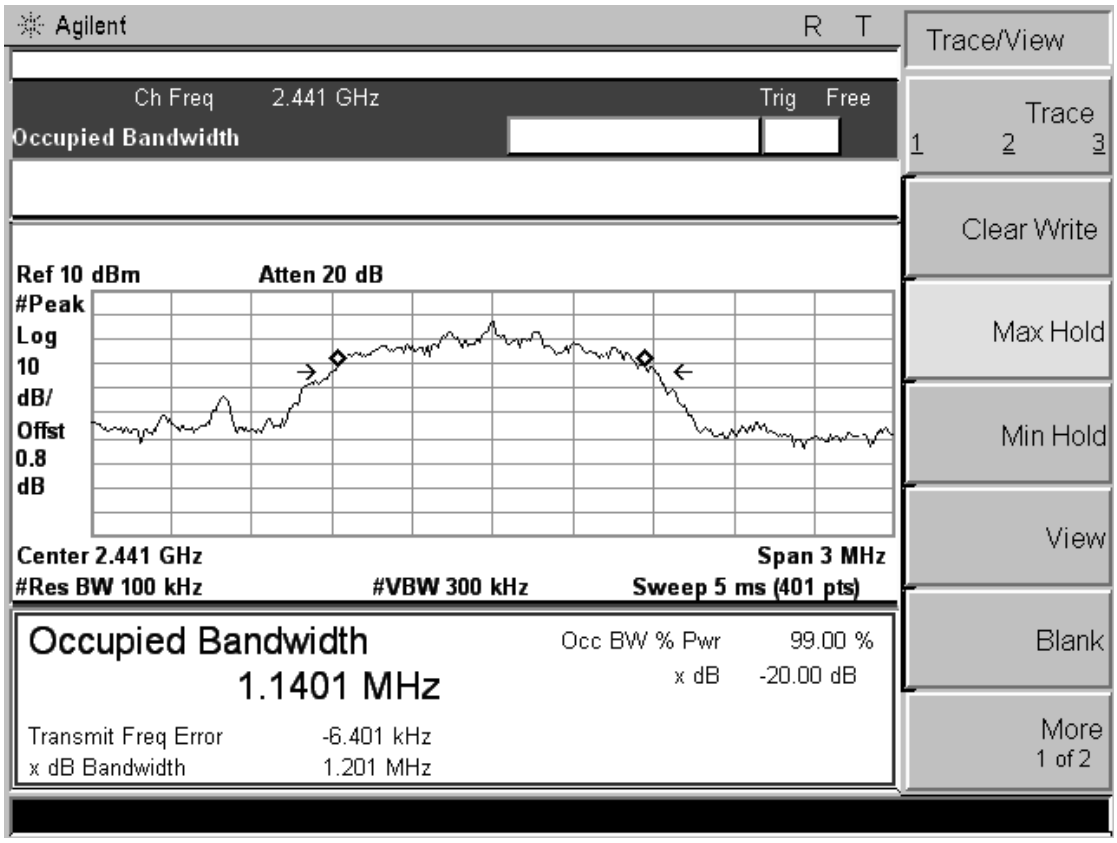
The data only show the worst mode

8DPSK

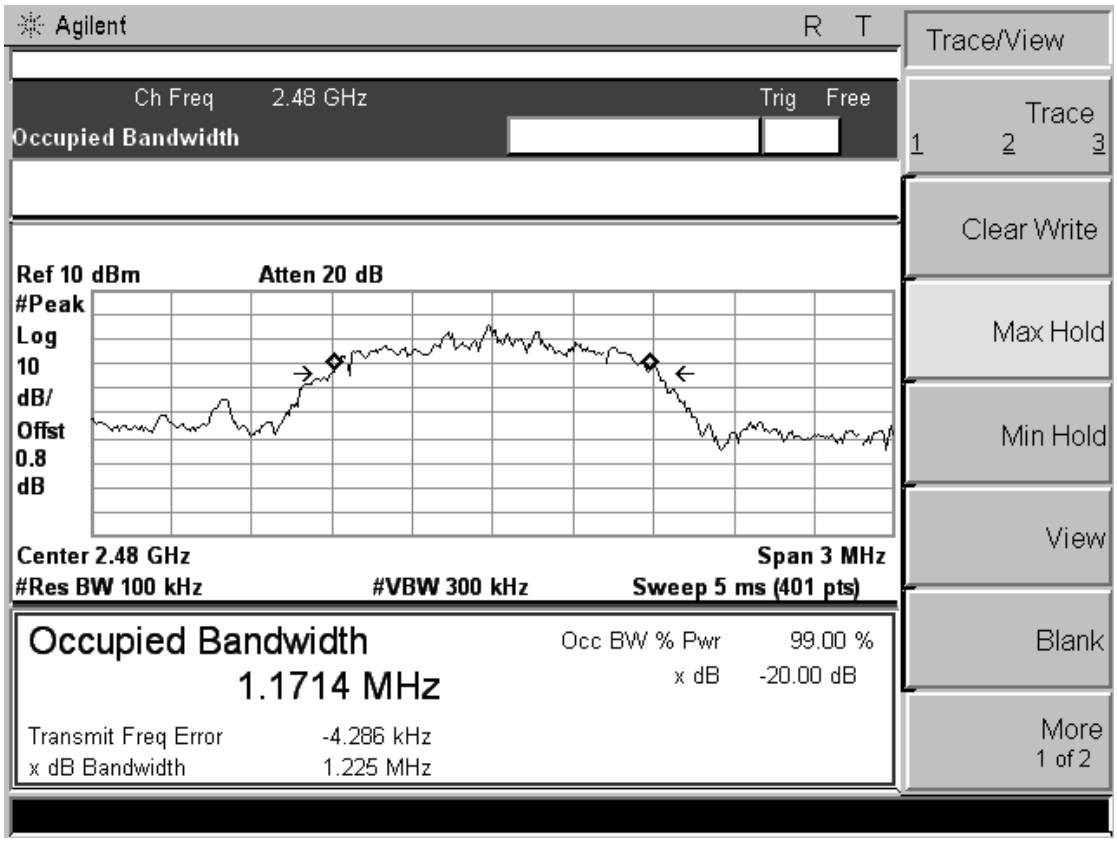
2402MHz



2441 MHz



2480 MHz



6. BAND EDGE COMPLIANCE TEST

6.1. Limits

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

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.

The bandwidth of the Spectrum's setting.

For the radiated test of band-edge above 1GHz:

Restricted band: RBW=1MHz, VBW=3MHz

Non-restricted band: RBW=100kHz, VBW=300kHz

For all tests, it used peak detector.

Measurement Uncertainty: ±3.2 dB at a level of confidence of 95%.

Test data as follows:

	Frequency (MHz)	Antenna polarization (H/V)	Test Frequency (MHz)	Emission (dBuV/m)	Band edge Limit (dBuV/m)		Result
				PK	PK	AV	Pass
Hopping	<2400	H	2397.94	50.24	74.00	54.00	Pass
	<2400	V	2398.06	50.08	74.00	54.00	Pass
	>2483.5	H	2487.62	50.11	74.00	54.00	Pass
	>2483.5	V	2488.06	50.27	74.00	54.00	Pass
Unhopping	<2400	H	2397.61	50.35	74.00	54.00	Pass
	<2400	V	2397.29	50.09	74.00	54.00	Pass
	>2483.5	H	2486.95	49.98	74.00	54.00	Pass
	>2483.5	V	2487.27	50.14	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.

We pretest all mode, the worst mode was GFSK mode.

7. ANTENNA REQUIREMENTS

7.1. Limits

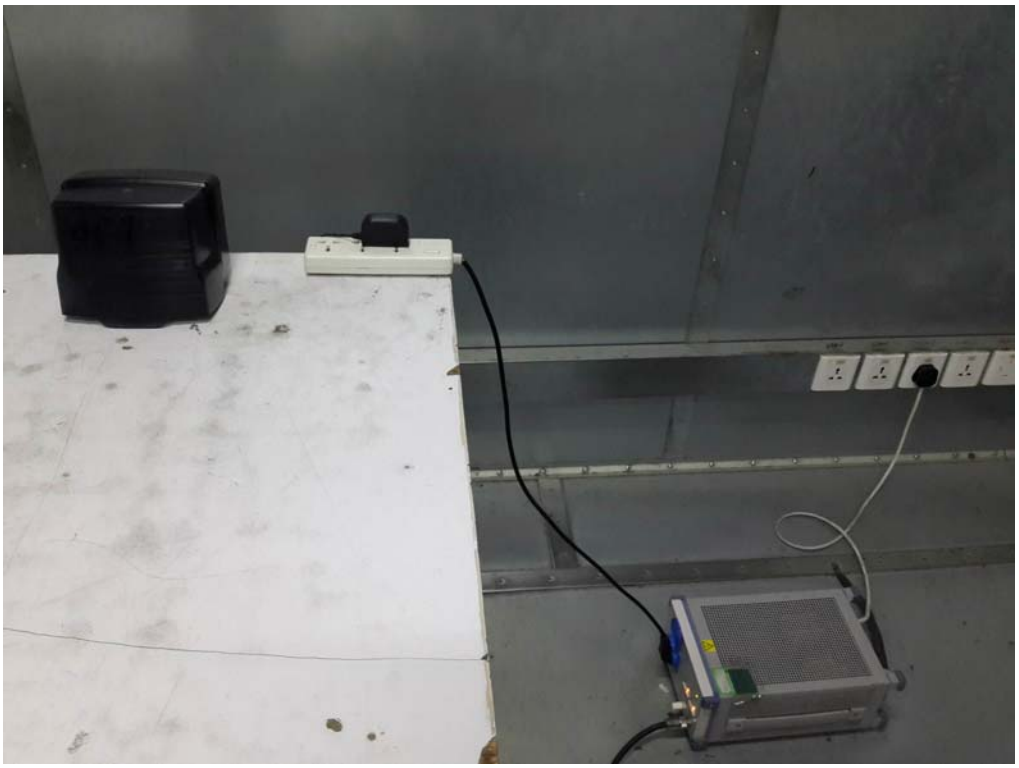
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional 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

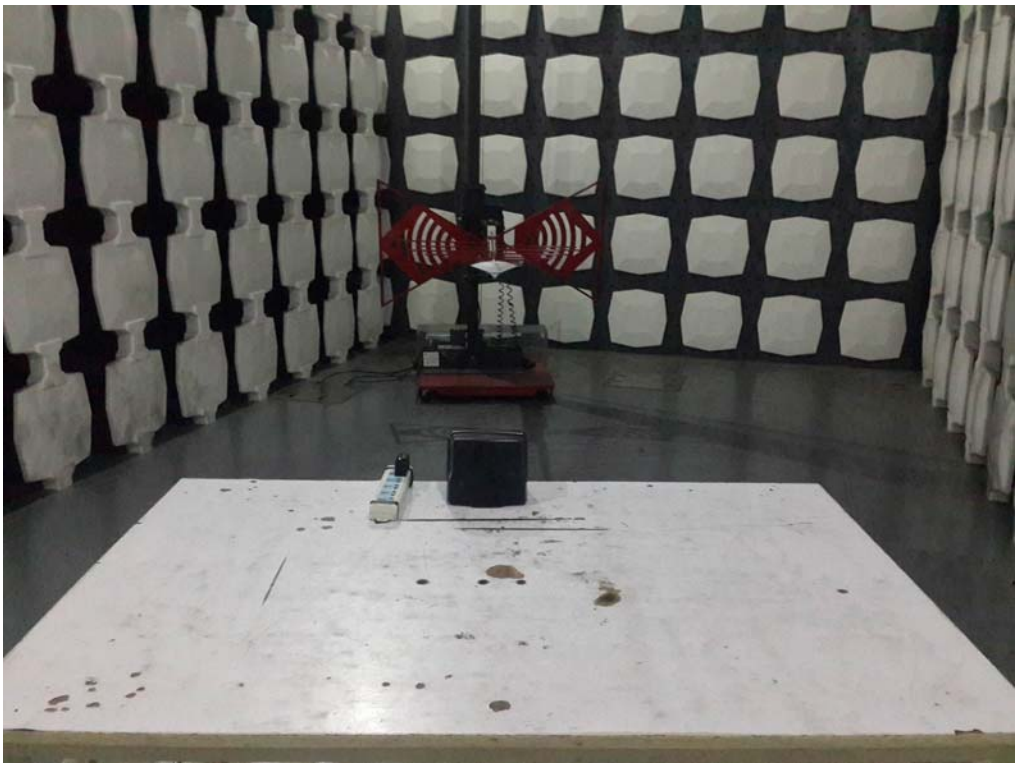
The antennas used for this product is PCB antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0dBi.

8. PHOTOGRAPHS OF TEST SET-UP

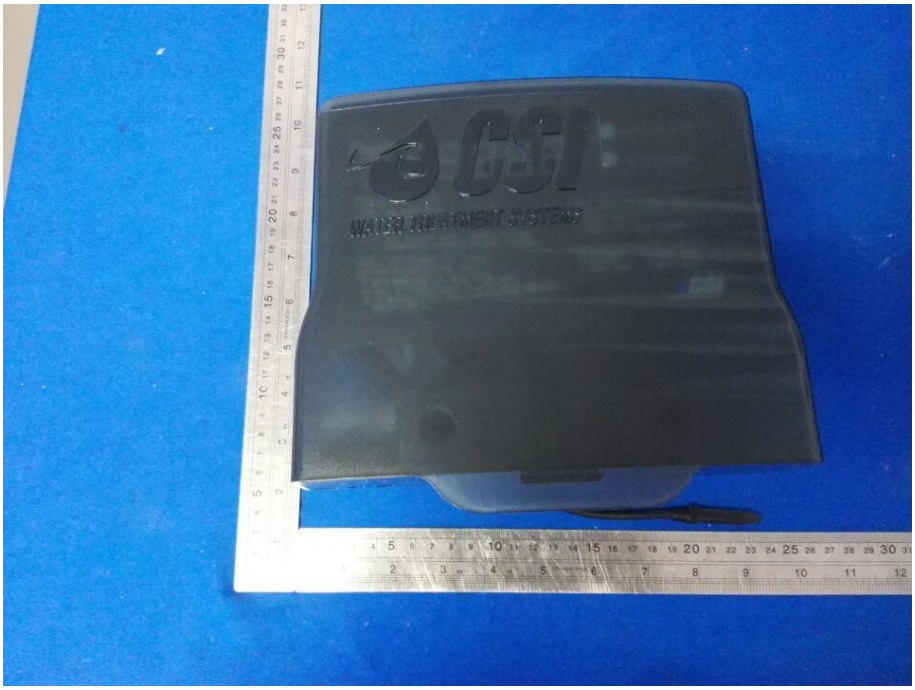
Conducted Emission Test

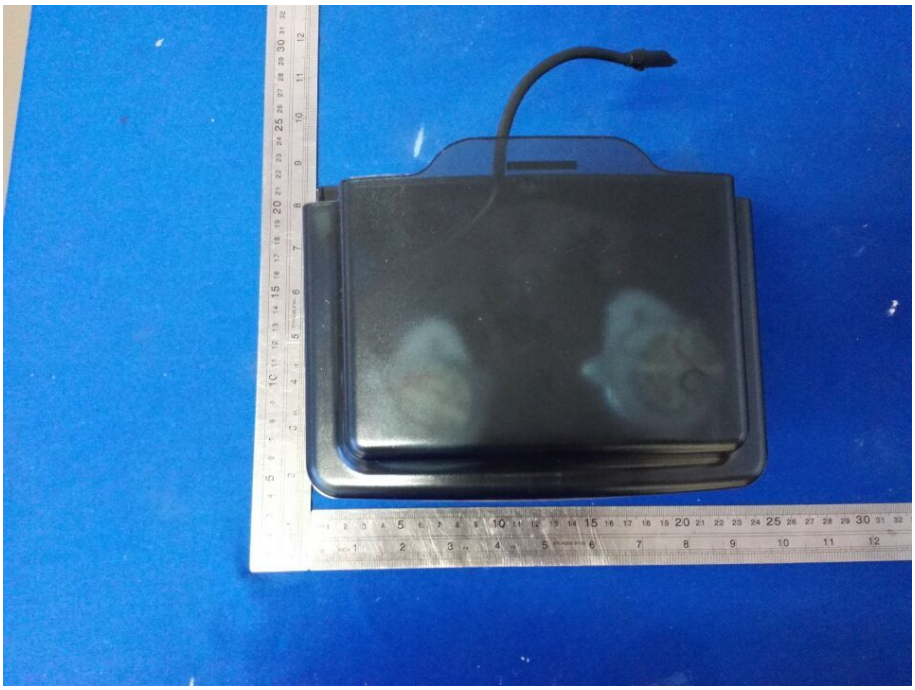


Radiated Emission Test



9. PHOTOGRAPHS OF THE EUT





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