TEST REPORT
FCC Rules and Regulations Part PART 15.249

Report Reference No……..: **HTT202601653F01**

FCC ID……..: **2BAQF-TF-VM02**

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Date of issue.....	Feb. 02, 2026

Testing Laboratory Name ..... **Shenzhen HTT Technology Co.,Ltd.**

Address..... 1F, Building B, Huafeng International Robotics Industrial Park, Hangcheng Road,Nanchang Community, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China

Applicant's name..... **Shenzhen Qishun Innovation Technology Development Co., LTD**

Address..... 901, Building A, Longhua Digital Innovation Center, North Station Community, Minzhi Street, Longhua District, Shenzhen

Standard ..... **FCC Rules and Regulations Part PART 15.249**

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Test item description ..... **WIRELESS VERTICAL MOUSE**

Trade Mark ..... N/A

Manufacturer ..... Shenzhen Qishun Innovation Technology Development Co., LTD

Model/Type reference..... TF-VM02

Listed Models ..... N/A

Modulation ..... GFSK

Frequency..... 2402-2480MHz

Ratings..... DC 3.7V From Battery and DC 5V From External Circuit

Result..... **PASS**

T E S T R E P O R T

Equipment under Test	:	WIRELESS VERTICAL MOUSE
Model /Type	:	TF-VM02
Listed Models	:	N/A
Applicant	:	**Shenzhen Qishun Innovation Technology Development Co., LTD**
Address	:	901, Building A, Longhua Digital Innovation Center, North Station Community, Minzhi Street, Longhua District, Shenzhen
Manufacturer	:	**Shenzhen Qishun Innovation Technology Development Co., LTD**
Address	:	901, Building A, Longhua Digital Innovation Center, North Station Community, Minzhi Street, Longhua District, Shenzhen

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz, and 24.0 - 24.25 GHz.

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024: American National Standard for Testing Unlicensed Wireless Devices

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Jan. 22, 2026
Testing commenced on	:	Jan. 22, 2026
Testing concluded on	:	Feb. 02, 2026

2.2. Product Description

Name of EUT	WIRELESS VERTICAL MOUSE
Model Number	TF-VM02
List Model:	N/A
Power Rating	DC 3.7V From Battery and DC 5V From External Circuit
Adapter Information (Auxiliary test provided by the lab):	Mode: GS-0500200 Input: AC100-240V, 50/60Hz, 0.3A max Output: DC 5V, 2A
Sample ID:	HTT202601653-1#(Engineer sample) HTT202601653-2#(Normal sample)
Operation frequency	2402-2480MHz
Modulation	GFSK
Antenna Type	PCB Antenna
Antenna Gain	2.48 dBi

2.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	○	230V / 50 Hz	○	120V / 60Hz
		○	12 V DC	○	24 V DC
		●	Other (specified in blank below)		

DC 3.7V From Battery and DC 5V From External Circuit

2.4. Short description of the Equipment under Test (EUT)

This is a WIRELESS VERTICAL MOUSE

For more details, refer to the user's manual of the EUT.

2.5. EUT operation mode

The Applicant use Key to control the EUT for staying in continuous transmitting and receiving mode for testing .There is 25 channels provided to the EUT. Channel Low,Mid and High was selected to test.

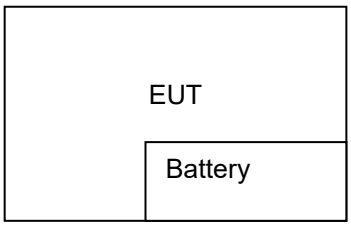
Channel	Frequency(MHz)	Channel	Frequency(MHz)
0	**2402**	20	2442
1	2404	21	2444
2	2406	22	2446
3	2408	23	2448
4	2410	24	2450
5	2412	25	2452
6	2414	26	2454

7	2416	27	2456
8	2418	28	2458
9	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	**2440**	**39**	**2480**

Test frequency:

Channel	Frequency (MHz)
Low	2402
Mid	2440
High	2480

2.6. Block Diagram of Test Setup



2.7. Modifications

No modifications were implemented to meet testing criteria.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen HTT Technology Co.,Ltd.
1F, Building B, Huafeng International Robotics Industrial Park, Hangcheng Road,Nanchang Community, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China
.

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 779513 Designation Number: CN1319
Shenzhen HTT Technology Co.,Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6435.01
Shenzhen HTT Technology Co.,Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Radiated Emission:

Temperature:	23 ° C
Humidity:	48 %
Atmospheric pressure:	950-1050mbar

AC Main Conducted testing：

Temperature:	24 ° C
Humidity:	45 %
Atmospheric pressure:	950-1050mbar

Conducted testing：

Temperature:	24 ° C
Humidity:	45 %
Atmospheric pressure:	950-1050mbar

3.4. Summary of measurement results

FCC PART 15.249		
FCC Part 15.249(a)	Field Strength of Fundamental	PASS
FCC Part 15.209	Spurious Emission	PASS
FCC Part 15.209	Band edge	PASS
FCC Part 15.215(c)	20dB bandwidth	PASS
FCC Part 15.207	Conducted Emission	PASS
FCC Part 15.203	Antenna Requirement	PASS

3.5. Statement of the measurement uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9KHz~30MHz	3.12 dB	(1)
Radiated Emission	30~1000MHz	4.37 dB	(1)
Radiated Emission	1~18GHz	5.40 dB	(1)
Radiated Emission	18-40GHz	5.45 dB	(1)
Conducted Disturbance	0.15~30MHz	2.68 dB	(1)
Spectrum bandwidth	/	1.2%	(1)
Output Peak power	30MHz~18GHz	0.57dB	(1)
Time	/	±10%	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.			

3.6. Equipments Used during the Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	Shenzhen C.R.T technology co., LTD	9*6*6	HTT-E028	Aug. 10 2024	Aug. 09 2027
2	Control Room	Shenzhen C.R.T technology co., LTD	4.8*3.5*3.0	HTT-E030	Aug. 10 2024	Aug. 09 2027
3	EMI Test Receiver	Rohde&Schwar	ESCI7	HTT-E022	Apr. 22 2025	Apr. 21 2026
4	Spectrum Analyzer	ROHDE&SCHWARZ	FSV40-N	HTT-E050	Jun. 09 2025	Jun. 08 2026
5	Coaxial Cable	ZDecl	ZT26-NJ-NJ-0.6M	HTT-E018	Apr. 22 2025	Apr. 21 2026
6	Coaxial Cable	ZDecl	ZT26-NJ-SMAJ-2M	HTT-E019	Apr. 22 2025	Apr. 21 2026
7	Coaxial Cable	ZDecl	ZT26-NJ-SMAJ-0.6M	HTT-E020	Apr. 22 2025	Apr. 21 2026
8	Coaxial Cable	ZDecl	ZT26-NJ-SMAJ-8.5M	HTT-E021	Apr. 22 2025	Apr. 21 2026
9	Composite logarithmic antenna	Schwarzbeck	VULB 9168	HTT-E017	Apr. 19 2025	Apr. 18 2026
10	Horn Antenna	Schwarzbeck	BBHA9120D	HTT-E016	Apr. 19 2025	Apr. 18 2026
11	Loop Antenna	Zhinan	ZN30900C	HTT-E039	Apr. 19 2025	Apr. 18 2026
12	Horn Antenna	A.H. Systems, inc.	SAS-574	HTT-E040	Jun. 04 2025	Jun. 03 2026
13	low frequency Amplifier	Sonoma Instrument	310	HTT-E015	Apr. 22 2025	Apr. 21 2026
14	high-frequency Amplifier	HP	8449B	HTT-E014	Apr. 22 2025	Apr. 21 2026
15	Variable frequency power supply	Shenzhen Anbiao Instrument Co., Ltd	ANB-10VA	HTT-082	Apr. 22 2025	Apr. 21 2026
16	EMI Test Receiver	Rohde & Schwarz	ESCI3	HTT-E043	Apr. 22 2025	Apr. 21 2026

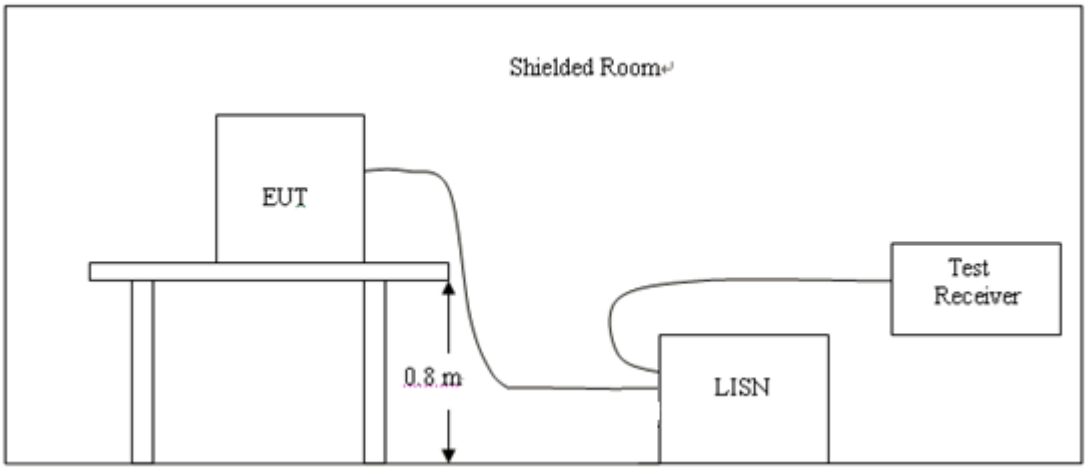
17	Artificial Mains	Rohde & Schwarz	ESH3-Z5	HTT-E006	Apr. 22 2025	Apr. 21 2026
18	Artificial Mains	Rohde & Schwarz	ENV-216	HTT-E038	Apr. 22 2025	Apr. 21 2026
19	Cable Line	Robinson	Z302S-NJ-BNCJ-1.5M	HTT-E001	Apr. 22 2025	Apr. 21 2026
20	Filter	ROHDE&SCHWARZ	ESH3-Z2	HTT-E045	May. 19 2025	May. 18 2026
21	Variable frequency power supply	Shenzhen Yanghong Electric Co., Ltd	YF-650（5KVA）	HTT-E032	Apr. 22 2025	Apr. 21 2026
22	Control Room	Shenzhen C.R.T technology co., LTD	8*4*3.5	HTT-E029	Aug. 10 2024	Aug. 09 2027
23	DC power supply	Agilent	E3632A	HTT-E023	Apr. 22 2025	Apr. 21 2026
24	EMI Test Receiver	Agilent	N9020A	HTT-E024	Apr. 22 2025	Apr. 21 2026
25	Analog signal generator	Agilent	N5181A	HTT-E025	Apr. 22 2025	Apr. 21 2026
26	Vector signal generator	Agilent	N5182A	HTT-E026	Apr. 22 2025	Apr. 21 2026
27	RF Switch box	Keysight	Switchbox	HTT-E047	May. 19 2025	May. 18 2026
28	Temperature and humidity meter	Shenzhen Anbiao Instrument Co., Ltd	TH10R	HTT-074	Apr. 21 2025	Apr. 20 2026
29	Radiated Emission Test Software	Farad	EZ-EMC	N/A	N/A	N/A
30	Conducted Emission Test Software	Farad	EZ-EMC	N/A	N/A	N/A
31	RF Test Software	panshanrf	TST	N/A	N/A	N/A
32	Power Meter	R&S	NRVS	HTT-E057	Apr. 22 2025	Apr. 21 2026

Note: The Cal.Interval was one year.

4. TEST CONDITIONS AND RESULTS

4.1. AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2, Support equipment, if needed, was placed as per ANSI C63.10.
3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5, All support equipments received AC power from a second LISN, if any.
6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

AC Power Conducted Emission Limit

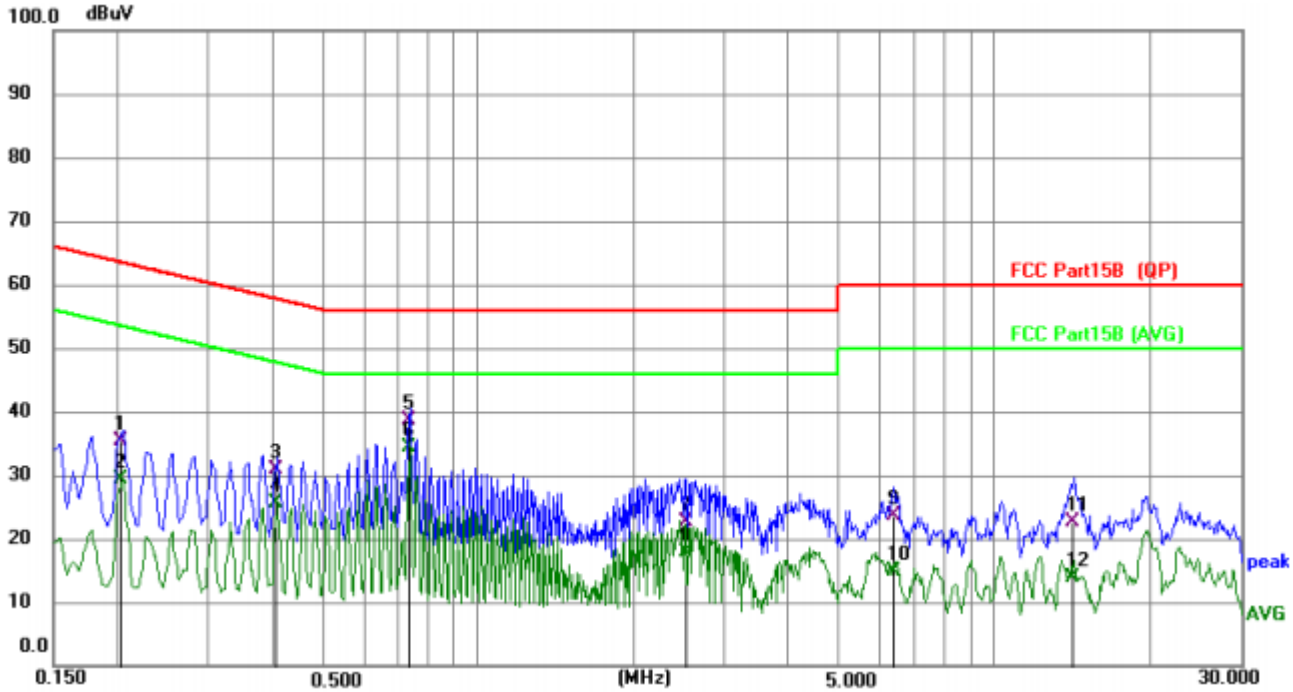
For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following：

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
* Decreases with the logarithm of the frequency.		

TEST RESULTS

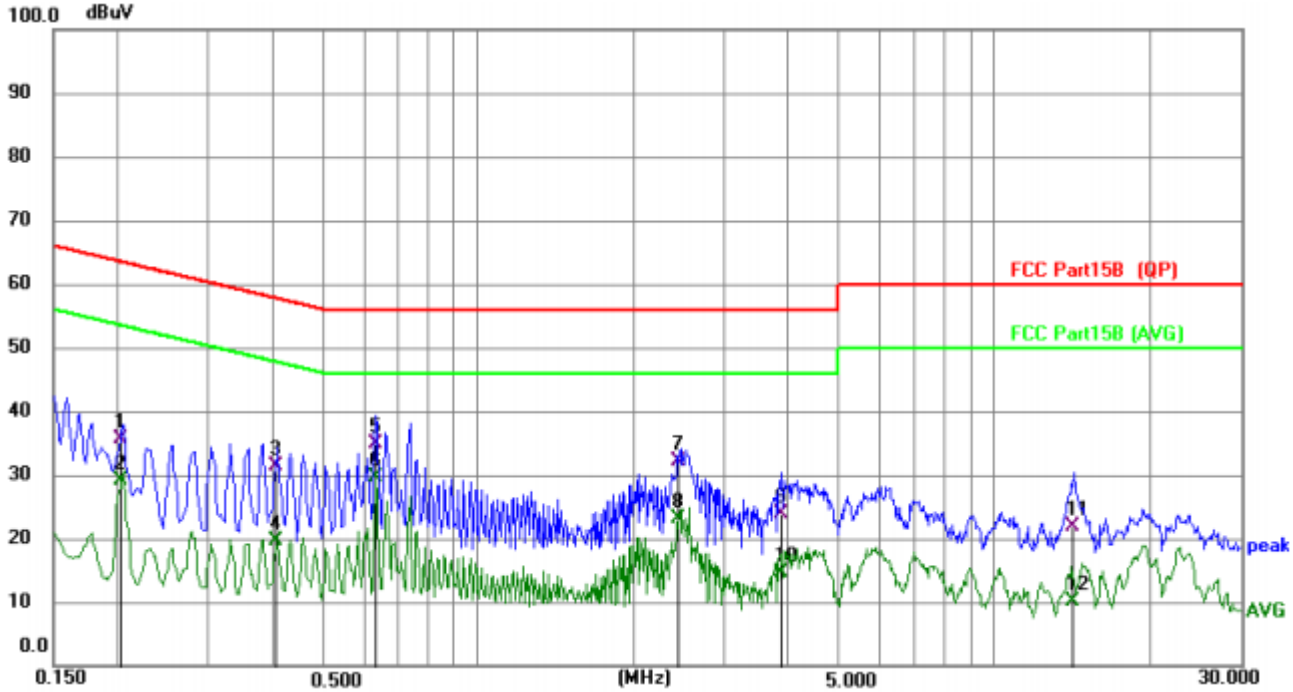
Remark: Both high and low voltages have been tested to show only the worst low voltage test data.

Measurement data:
Line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2028	25.21	10.07	35.28	63.50	-28.22	QP
2		0.2028	19.21	10.07	29.28	53.50	-24.22	AVG
3		0.4045	20.74	10.09	30.83	57.76	-26.93	QP
4		0.4045	15.66	10.09	25.75	47.76	-22.01	AVG
5		0.7347	28.53	10.08	38.61	56.00	-17.39	QP
6	*	0.7347	24.39	10.08	34.47	46.00	-11.53	AVG
7		2.5302	12.56	10.16	22.72	56.00	-33.28	QP
8		2.5302	7.83	10.16	17.99	46.00	-28.01	AVG
9		6.3755	13.50	10.18	23.68	60.00	-36.32	QP
10		6.3755	4.69	10.18	14.87	50.00	-35.13	AVG
11		14.2655	12.09	10.65	22.74	60.00	-37.26	QP
12		14.2655	3.27	10.65	13.92	50.00	-36.08	AVG

Neutral:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.2024	25.58	10.04	35.62	63.51	-27.89	QP
2		0.2024	19.20	10.04	29.24	53.51	-24.27	AVG
3		0.4035	21.27	10.08	31.35	57.78	-26.43	QP
4		0.4035	9.48	10.08	19.56	47.78	-28.22	AVG
5		0.6320	24.95	10.05	35.00	56.00	-21.00	QP
6	*	0.6320	19.63	10.05	29.68	46.00	-16.32	AVG
7		2.4568	22.13	10.09	32.22	56.00	-23.78	QP
8		2.4568	13.13	10.09	23.22	46.00	-22.78	AVG
9		3.8789	13.68	10.10	23.78	56.00	-32.22	QP
10		3.8789	4.54	10.10	14.64	46.00	-31.36	AVG
11		14.2258	11.36	10.61	21.97	60.00	-38.03	QP
12		14.2258	-0.39	10.61	10.22	50.00	-39.78	AVG

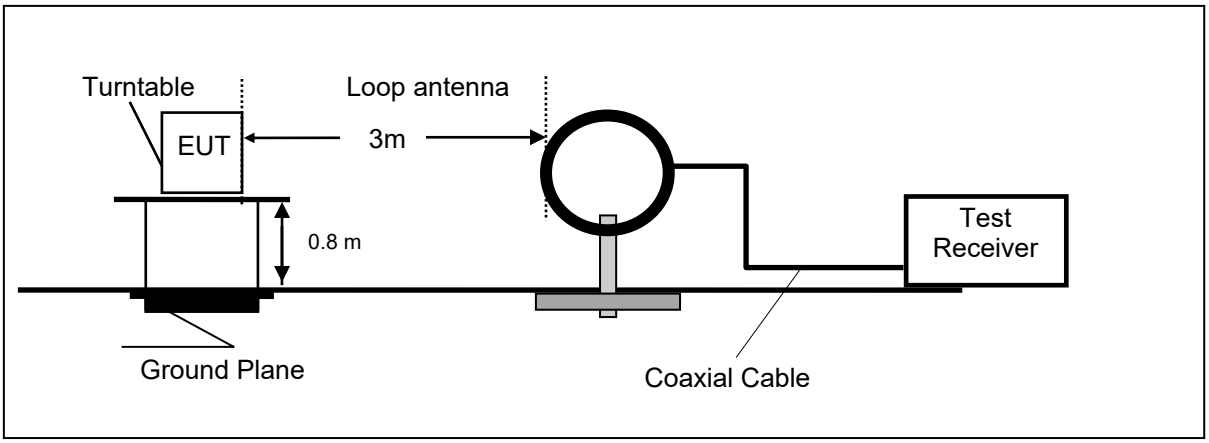
Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Los

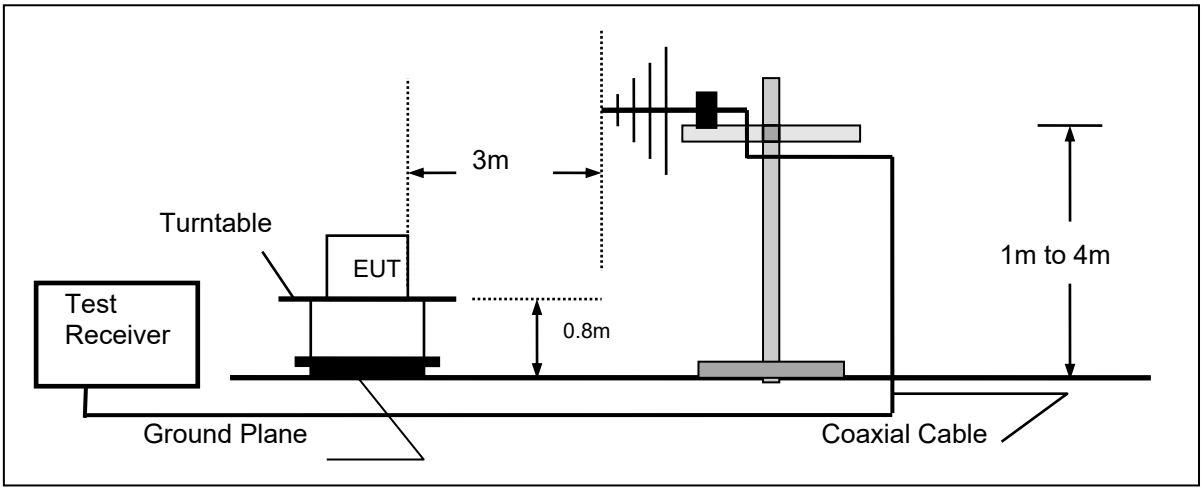
4.2. Radiated Emission and Band Edges

TEST CONFIGURATION

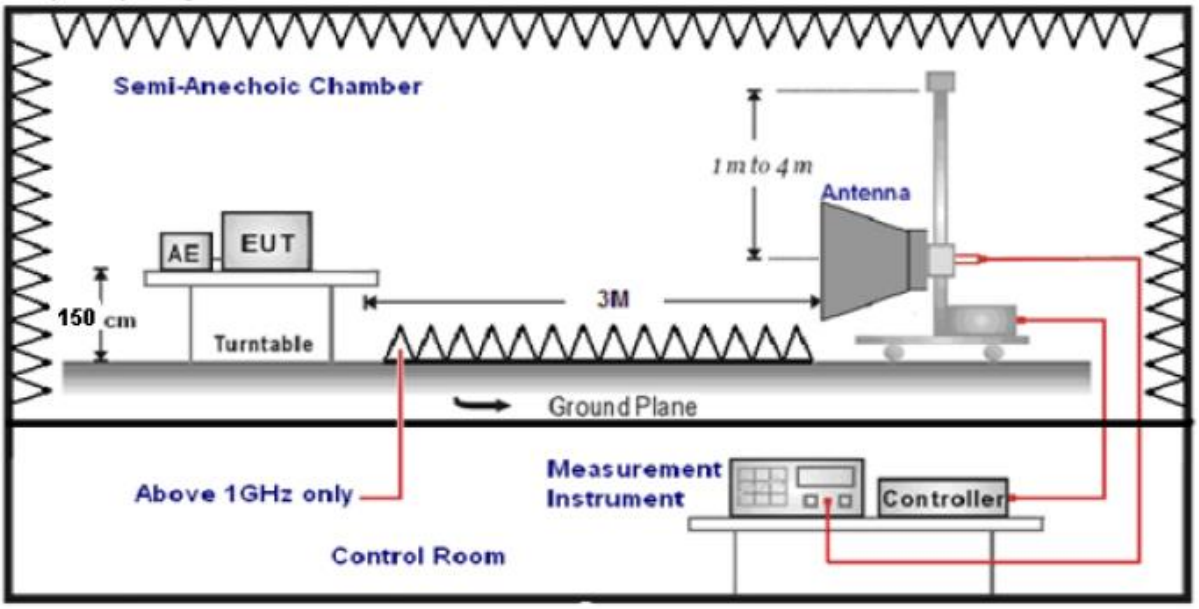
Frequency range 9 KHz – 30MHz

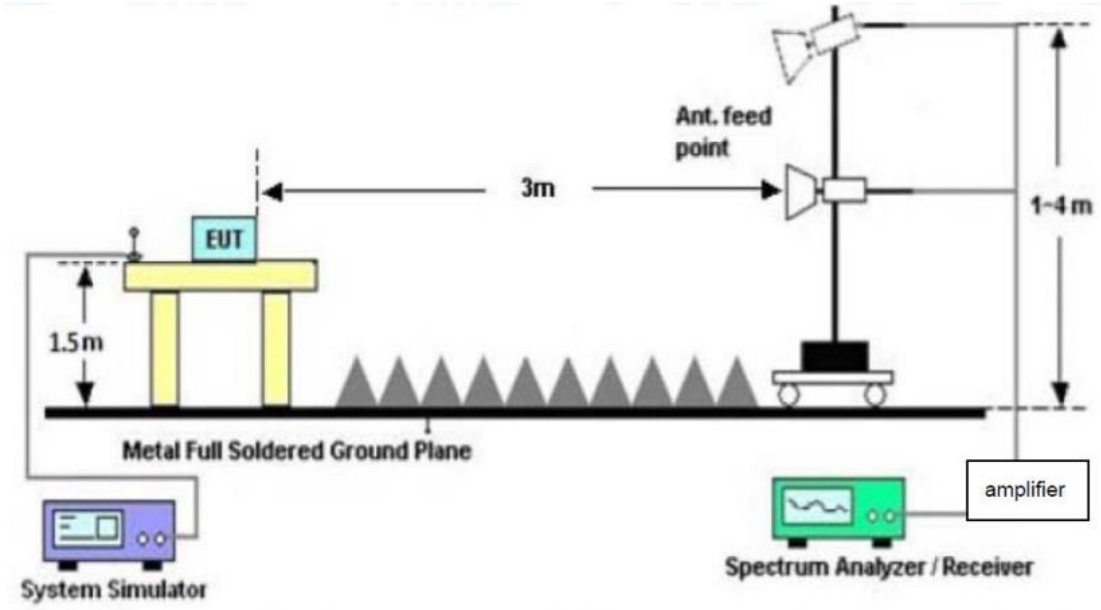


Frequency range 30MHz – 1000MHz



Frequency range above 1GHz-25GHz





TEST PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane when testing frequency range 9 KHz –25GHz.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0℃ to 360℃ to acquire the highest emissions from EUT.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.
5. The EUT minimum operation frequency was 26MHz and maximum operation frequency was 1910MHz.so radiated emission test frequency band from 9KHz to 25GHz.
6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Ultra-Broadband Antenna	3
1GHz-18GHz	Double Ridged Horn Antenna	3
18GHz-25GHz	Horn Anternna	1

7. Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Transd=AF +CL-AG

RADIATION LIMIT

According 15.249, the field strength of emissions from intentional radiators operated within 2400MHz-2483.5 MHz shall not exceed 94dBμV/m (50mV/m):

FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Radiated emission limits

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

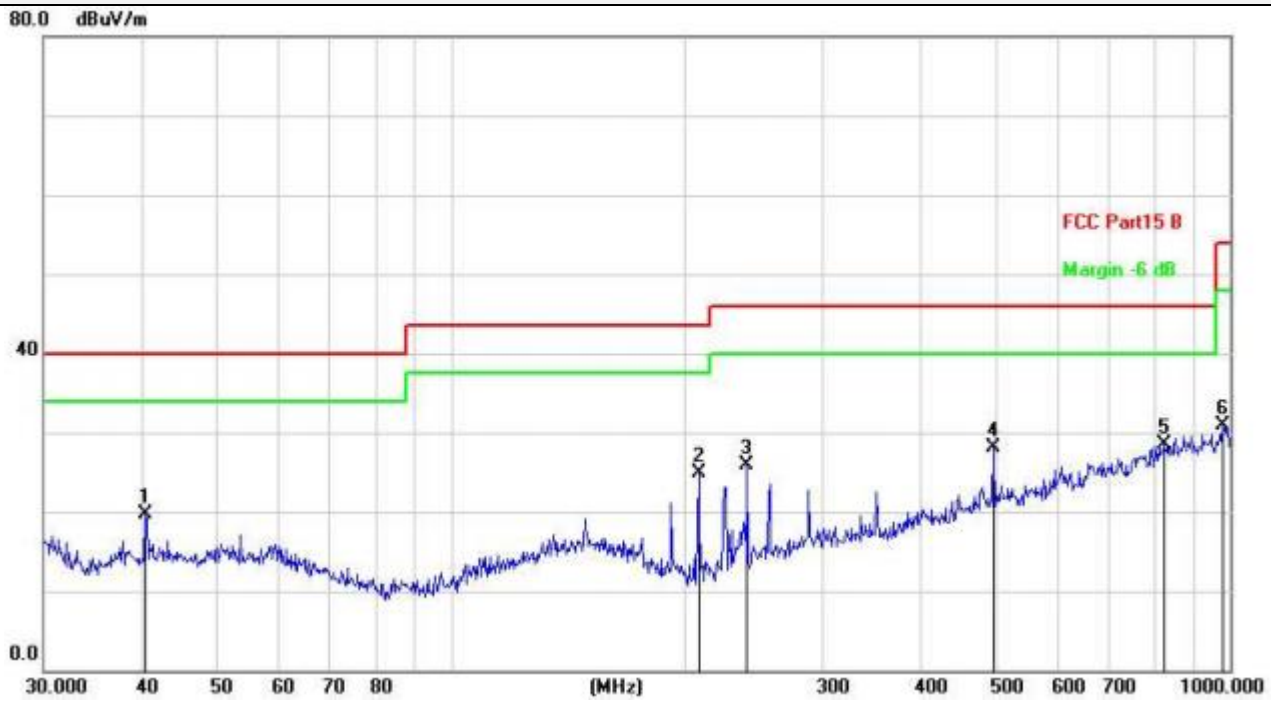
TEST RESULTS

Remark:

1. This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.
2. Both modes of GFSK were tested at Low, Middle, and High channel and recorded worst mode at GFSK
3. Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.

For 30MHz-1GHz

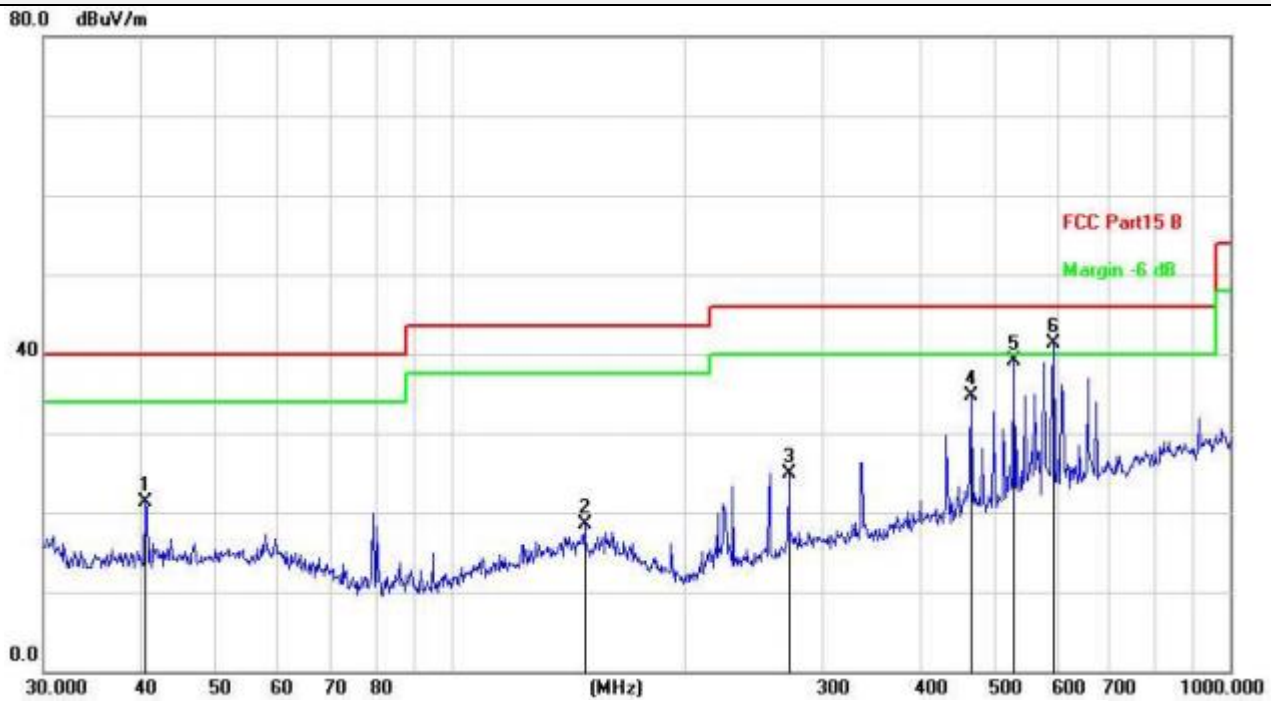
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dB/m	dB	Detector
1		40.5591	31.21	-11.56	19.65	40.00	-20.35	peak
2		207.8500	39.07	-14.20	24.87	43.50	-18.63	peak
3		239.9874	38.20	-12.36	25.84	46.00	-20.16	peak
4		495.9343	33.93	-5.77	28.16	46.00	-17.84	peak
5	*	824.5968	28.49	-0.08	28.41	46.00	-17.59	peak
6		979.1803	28.62	2.33	30.95	54.00	-23.05	peak

Final Level =Receiver Read level + Correct Factor

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dB/m	dB	Detector
1		40.5591	32.83	-11.56	21.27	40.00	-18.73	peak
2		148.4410	28.48	-9.92	18.56	43.50	-24.94	peak
3		271.3245	35.89	-10.90	24.99	46.00	-21.01	peak
4		465.5994	40.61	-5.91	34.70	46.00	-11.30	peak
5		528.2458	44.16	-4.99	39.17	46.00	-6.83	peak
6	*	593.0497	45.08	-3.84	41.24	46.00	-4.76	peak

Final Level =Receiver Read level + Correct Factor

For 1GHz to 25GHz

Frequency(MHz):			2402		Polarity:		HORIZONTAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2402.00	87.44	PK	114	26.56	87.64	27.5	5	32.7	-0.2
2402.00	77.21	AV	94	16.79	77.41	27.5	5	32.7	-0.2
4804.00	59.74	PK	74	14.26	54.04	31	6.5	31.8	5.7
4804.00	45.00	AV	54	9.00	39.30	31	6.5	31.8	5.7
7206.00	54.16	PK	74	19.84	41.51	36	8.15	31.5	12.65
7206.00	43.19	AV	54	10.81	30.54	36	8.15	31.5	12.65

Frequency(MHz):			2402		Polarity:		VERTICAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2402.00	88.50	PK	114	25.50	88.70	27.5	5	32.7	-0.2
2402.00	77.05	AV	94	16.95	77.25	27.5	5	32.7	-0.2
4804.00	60.04	PK	74	13.96	54.34	31	6.5	31.8	5.7
4804.00	45.35	AV	54	8.65	39.65	31	6.5	31.8	5.7
7206.00	54.19	PK	74	19.81	41.54	36	8.15	31.5	12.65
7206.00	45.30	AV	54	8.70	32.65	36	8.15	31.5	12.65

Frequency(MHz):			2440		Polarity:		HORIZONTAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2440.00	86.53	PK	114	27.47	86.48	27.55	5.1	32.6	0.05
2440.00	75.16	AV	94	18.84	75.11	27.55	5.1	32.6	0.05
4880.00	61.42	PK	74	12.58	55.26	31.2	6.61	31.65	6.16
4880.00	43.39	AV	54	10.61	37.23	31.2	6.61	31.65	6.16
7320.00	54.49	PK	74	19.51	41.54	36.2	8.23	31.48	12.95
7320.00	45.14	AV	54	8.86	32.19	36.2	8.23	31.48	12.95

Frequency(MHz):			2440		Polarity:		VERTICAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2440.00	89.17	PK	114	24.83	89.12	27.55	5.1	32.6	0.05
2440.00	77.78	AV	94	16.22	77.73	27.55	5.1	32.6	0.05
4880.00	63.06	PK	74	10.94	56.90	31.2	6.61	31.65	6.16
4880.00	44.22	AV	54	9.78	38.06	31.2	6.61	31.65	6.16
7320.00	54.42	PK	74	19.58	41.47	36.2	8.23	31.48	12.95
7320.00	44.38	AV	54	9.62	31.43	36.2	8.23	31.48	12.95

Frequency(MHz):			2480		Polarity:		HORIZONTAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2480.00	89.81	PK	114	24.19	89.57	27.6	5.14	32.5	0.24
2480.00	47.95	AV	94	46.05	47.71	27.6	5.14	32.5	0.24
4960.00	61.39	PK	74	12.61	54.73	31.4	6.76	31.5	6.66
4960.00	42.30	AV	54	11.70	35.64	31.4	6.76	31.5	6.66
7440.00	55.31	PK	74	18.69	42.01	36.4	8.35	31.45	13.3
7440.00	46.95	AV	54	7.05	33.65	36.4	8.35	31.45	13.3

Frequency(MHz):			2480		Polarity:		VERTICAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2480.00	90.16	PK	114	23.84	89.92	27.6	5.14	32.5	0.24
2480.00	76.53	AV	94	17.47	76.29	27.6	5.14	32.5	0.24
4960.00	64.73	PK	74	9.27	58.07	31.4	6.76	31.5	6.66
4960.00	44.08	AV	54	9.92	37.42	31.4	6.76	31.5	6.66
7440.00	55.05	PK	74	18.95	41.75	36.4	8.35	31.45	13.3
7440.00	46.69	AV	54	7.31	33.39	36.4	8.35	31.45	13.3

Remark：
(1) Data of measurement within this frequency range shown “--- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
(2) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed.

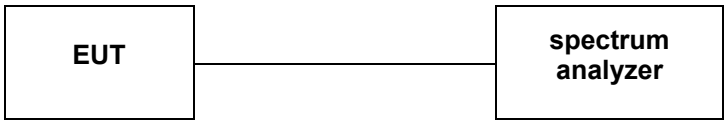
Results of Band Edges Test (Radiated)

Operation Mode: GFSK

Frequency(MHz):			**2402**		**Polarity:**		**HORIZONTAL**		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2390.00	60.17	PK	74	13.83	61.56	27.2	4.31	32.9	-1.39
2390.00	45.10	AV	54	8.90	46.49	27.2	4.31	32.9	-1.39
Frequency(MHz):			**2402**		**Polarity:**		**VERTICAL**		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2390.00	59.03	PK	74	14.97	60.42	27.2	4.31	32.9	-1.39
2390.00	46.48	AV	54	7.52	47.87	27.2	4.31	32.9	-1.39
Frequency(MHz):			**2480**		**P olarity:**		**HORIZONTAL**		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2483.50	56.48	PK	74	17.52	57.41	27.4	4.47	32.8	-0.93
2483.50	45.33	AV	54	8.67	46.26	27.4	4.47	32.8	-0.93
Frequency(MHz):			**2480**		**Polarity:**		**VERTICAL**		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2483.50	55.57	PK	74	18.43	56.50	27.4	4.47	32.8	-0.93
2483.50	44.00	AV	54	10.00	44.93	27.4	4.47	32.8	-0.93

4.3. 20dB Bandwidth Measurement

TEST CONFIGURATION



TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30KHz RBW and 300KHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

LIMIT

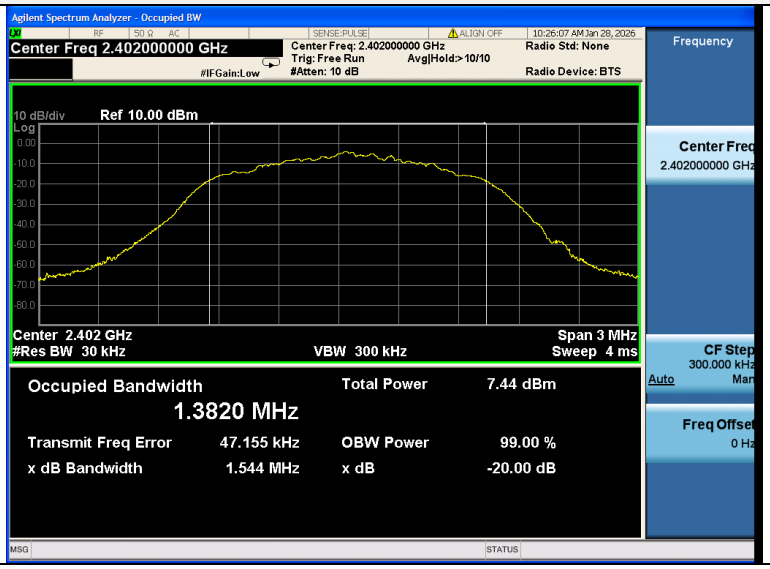
N/A

TEST RESULTS

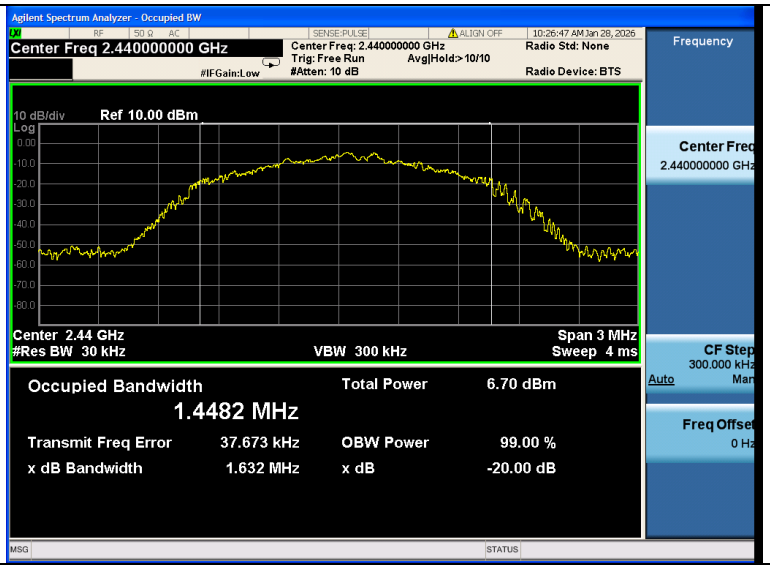
Modulation	Channel	20dB bandwidth (MHz)	Result
GFSK	Low	1.544	PASS
	Mid	1.632	
	High	1.605	

Note: 1.The test results including the cable lose.

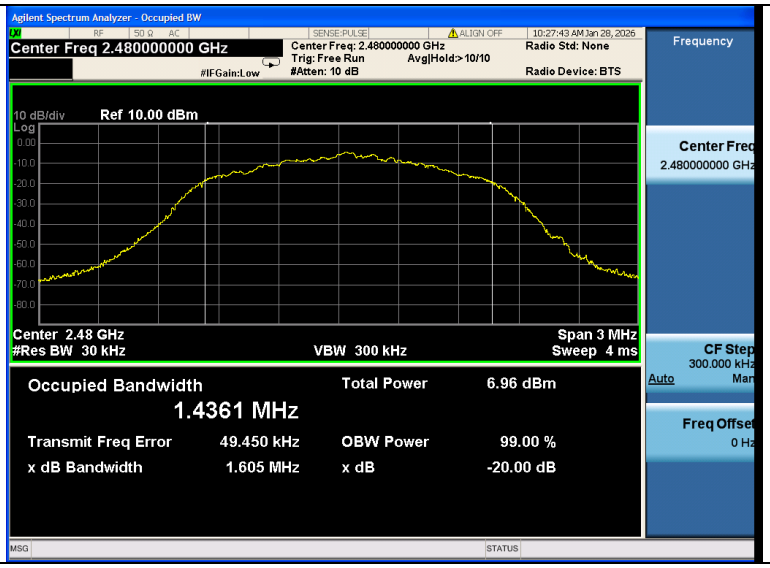
GFSK



Low



Mid



High

4.4. Antenna Requirement

Standard Applicable

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 (c), 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.

Antenna Information

The maximum gain of antenna was 2.48 dBi.

Remark:The antenna gain is provided by the customer , if the data provided by the customer is not accurate, Shenzhen HTT Technology Co.,Ltd. does not assume any responsibility.

5. Test Setup Photos of the EUT

Reference to the **appendix I** for details

6. Test Photos of the EUT

Reference to the **appendix II** for details.

.....End of Report.....