FCC TEST REPORT

FCC ID: SY4-A02077

On Behalf of

Shanghai Huace Navigation Technology Ltd.

Tablet

Model No.: CB-H12(T)

Prepared for	:	Shanghai Huace Navigation Technology Ltd.
Address	:	577 Songying Road, Qingpu District, 201706 Shanghai, China

Prepared By	:	Shenzhen Alpha Product Testing Co., Ltd.
Address	:	Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

Report Number	:	A2604056-C01-R01
Date of Receipt	:	May 08, 2026
Date of Test	:	May 09, 2026 –September 07, 2026
Date of Report	:	September 07, 2026
Version Number	:	V0
Test Result	**:**	**Pass**

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TEST REPORT DECLARATION

Applicant	:	Shanghai Huace Navigation Technology Ltd.
Address	:	577 Songying Road, Qingpu District, 201706 Shanghai, China
Manufacturer	:	Shanghai Huace Navigation Technology Ltd.
Address	:	577 Songying Road, Qingpu District, 201706 Shanghai, China
EUT Description	:	Tablet
(A) Model No.	:	CB-H12(T)
(B) Trademark	:	CHCNAV

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247

ANSI C63.10-2020

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature).....:	Yannis Wen Project Engineer	Yannis Wen
Approved by (name + signature).....:	Alan Fan Project Manager	Alan Fan
Date of issue.....:	September 07, 2026	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	September 07, 2026	Initial released Issue	Yannis Wen

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Standards Paragraph	Result
Maximum Peak Output Power	FCC Part 15: 15.247(b)(1)	P
Bandwidth	FCC Part 15: 15.215	P
Carrier Frequency Separation	FCC Part 15: 15.247(a)(1)	P
Number Of Hopping Channel	FCC Part 15: 15.247(a)(1)(iii)	P
Dwell Time	FCC Part 15: 15.247(a)(1)(iii)	P
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d)	P
Band Edge Compliance	FCC Part 15: 15.247(d)	P
Power Line Conducted Emissions	FCC Part 15: 15.207	N/A
Antenna requirement	FCC Part 15: 15.203	P

Note: 1. P is an abbreviation for Pass.

2. F is an abbreviation for Fail.
3. N/A is an abbreviation for Not Applicable.
4. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description	:	Tablet
Model Number	:	CB-H12(T)
Diff	:	N/A
Power supply	:	DC 12V from battery

Radio Technology	:	Bluetooth BR/EDR
Operation frequency	:	2402-2480MHz
Channel No.	:	79 Channels
Channel spacing	:	1MHz
Modulation type	:	GFSK, π/4 DQPSK, 8DPSK
Antenna Type	:	Internal antenna, Maximum Gain is 0.86dBi (Antenna information is provided by applicant.)
Software version	:	Android 14
Hardware version	:	V0.3
Intend use environment	:	Residential, commercial and light industrial environment

2.2. Accessories of Device (EUT)

Accessories : /

Manufacturer : /

Model : /

Ratings : /

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or SDoC
1.	Notebook	ACER	ZQT	N/A	N/A

2.4. Block Diagram of Test

Radiated Emission

RF conduction method

2.5. Test Mode Description

Tested mode, channel information		
Mode	**Channel**	**Frequency (MHz)**
GFSK, π/4 DQPSK, 8DPSK Hopping-off mode	Low :CH0	2402
	Middle: CH39	2441
	High: CH78	2480
GFSK, π/4 DQPSK, 8DPSK Hopping-on mode	Hopping	2402-2480

Use the engineering interface to control EUT work in Continuous TX mode, and select test channel, wireless mode, the power level of the test is set to default.

2.6. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	23.1℃
Humidity range:	25-75%	55.8%

Pressure range:	86-106kPa	98kPa

2.7. Test Facility

Shenzhen Alpha Product Testing Co., Ltd

Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

2.8. Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	1.63dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.74dB(Polarize: V)
	3.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	3.77dB(Polarize: V)
	3.80dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (18GHz to 40GHz)	4.31 dB(Polarize: V)
	4.30 dB(Polarize: H)
Uncertainty for radio frequency	5.06×10^{-8}GHz
Uncertainty for conducted RF Power	0.40dB
Uncertainty for temperature	0.2℃
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%
Uncertainty for Power Spectral Density	0.39dB
Uncertainty for Occupied-Bandwidth	968Hz

2.9. Test Equipment List

Equipment	Manufacturer	Model No.	Firmware version	Serial No.	Last Cal.	Cal. Due day
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2025.03.09	2029.03.08
4*4*3 Shielded room	CHENYU	4*4*3	/	N/A	2025.03.09	2029.03.08
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2025.08.04	2026.08.03
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2025.08.04	2026.08.03
Spectrum analyzer	Keysight	N9020A	A.19.05	MY54500254	2025.08.04	2026.08.03
Spectrum analyzer	ROHDE&SCHWARZ	FSU	4.71.SP5	200002	2025.08.04	2026.08.03
CMW500	ROHDE&SCHWARZ	CMW500	V 3.7.22	1201.0002K50 -117239-sM	2025.08.04	2026.08.03
UXM 5G Base Wireless Test Platform	Keysight	E5175E	1.8.1.2908 2(NR)(LTE)	MY62226130	2026.03.03	2027.03.02
Test Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03 -102082-Wa	2025.08.04	2026.08.03
Test Receiver	ROHDE&SCHWARZ	ESCI	4.42 SP1	101165	2025.08.04	2026.08.03
Bilog Antenna	SCHWARZBECK	VULB 9168	/	VULB 9168#627	2025.08.11	2027.08.10
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2025.08.11	2027.08.10
Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2025.08.11	2027.08.10
RF Cable	Resenberger	Cable 1	/	RE1	2025.08.04	2026.08.03
RF Cable	Resenberger	Cable 2	/	RE2	2025.08.04	2026.08.03
RF Cable	Resenberger	Cable 3	/	CE1	2025.08.04	2026.08.03
Amplifier	HP	HP8347A	/	2834A00455	2025.08.04	2026.08.03
Amplifier	Agilent	8449B	/	3008A02664	2025.08.04	2026.08.03
Amplifier	SKET	LNPA_0118G-45	/	SK202001080 1	2025.08.04	2026.08.03
Filter/Amplifier bank unit	SKET	RSESU-HPH-LNPP18G	/	SK20190712	2025.08.04	2026.08.03
L.I.S.N.#1	SCHWARZBECK	NSLK8126	/	8126-466	2025.08.04	2026.08.03
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2025.08.04	2026.08.03
Pulse Limiter	SCHWARZBECK	9516F	/	9618	2025.08.04	2026.08.03
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2025.08.11	2027.08.10
Preamplifier	SKET	LNPA_1840-50	/	SK201810180 1	2025.08.04	2026.08.03
Vector Signal Generator	Agilent	N5182A	/	MY49060042	2025.08.04	2026.08.03
Vector Signal Generator	Agilent	N5172B	2.02	MY51350397	2025.08.04	2026.08.03
Analog Signal	HP	83712B	10.02	US34490219	2025.08.04	2026.08.03

Generator						
Power Meter	Agilent	E4419B	/	GB40202122	2025.08.04	2026.08.03
Power Sensor	Agilent	E9300A	/	MY41496628	2025.08.04	2026.08.03
Power Sensor	Agilent	E9304A	/	MY41496815	2025.08.04	2026.08.03
Power Sensor	DARE	RPR3006W	/	15100041SNO 91	2025.08.04	2026.08.03
Power Sensor	DARE	RPR3006W	/	15100041SNO 92	2025.08.04	2026.08.03
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205-01	2025.07.14	2026.07.13
Electronic Thermo-Hygrometer	S.H.Qixiang	HTC-1	/	N/A	2025.08.04	2026.08.03
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2025.08.04	2026.08.03
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A
6dB Fixed Attenuator	SKET	AP_DC01G-2W-N-6dB	/	N/A	2025.08.04	2026.08.03

Equipment	Manufacturer	Model No.	Firmware version	Serial No.	Last Cal.	Cal. Due day
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2025/03/09	2029/03/08
4*4*3 Shielded room	CHENYU	4*4*3	/	N/A	2025/03/09	2029/03/08
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2026/7/28	2027/7/27
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2026/7/27	2027/7/26
Spectrum analyzer	Keysight	N9020A	A.19.05	MY54500254	2026/7/27	2027/7/26
Spectrum analyzer	ROHDE&SCHWARZ	FSU	4.71.SP5	200002	2026/7/28	2027/7/27
CMW500	ROHDE&SCHWARZ	CMW500	V 3.7.22	1201.0002K50-117239-sM	2026/7/27	2027/7/26
UXM 5G Base Wireless Test Platform	Keysight	E5175E	1.8.1.29082(NR)(LTE)	MY62226130	2026/03/03	2027/03/02
Test Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03-102082-Wa	2026/7/27	2027/7/26
Test Receiver	ROHDE&SCHWARZ	ESCI	4.42 SP1	101165	2026/7/28	2027/7/27
Bilog Antenna	SCHWARZBECK	VULB 9168	/	VULB 9168#627	2025/08/11	2027/08/10
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2025/08/11	2027/08/10

Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00128	2025/08/11	2027/08/10
RF Cable	Resenberger	Cable 1	/	RE1	2026/7/27	2027/7/26
RF Cable	Resenberger	Cable 2	/	RE2	2026/7/27	2027/7/26
RF Cable	Resenberger	Cable 3	/	CE1	2026/7/27	2027/7/26
Amplifier	HP	HP8347A	/	2834A00455	2026/7/28	2027/7/27
Amplifier	Agilent	8449B	/	3008A02664	2026/7/27	2027/7/26
Amplifier	SKET	LNPA_0118G-45	/	SK2020010801	2026/7/27	2027/7/26
Filter/Amplifier bank unit	SKET	RSESU-HPH-LNPP18G	/	SK20190712	2026/7/27	2027/7/26
L.I.S.N.#1	SCHWARZBECK	NSLK8126	/	8126-466	2026/7/28	2027/7/27
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2026/7/28	2027/7/27
Pulse Limiter	SCHWARZBECK	9516F	/	9618	2026/7/27	2027/7/26
Horn Antenna	SCHWARZBECK	BBHA 9170	/	00946	2025/8/11	2027/8/10
Preamplifier	SKET	LNPA_1840-50	/	SK2018101801	2026/7/27	2027/7/26
Vector Signal Generator	Agilent	N5182A	/	MY49060042	2026/7/28	2027/7/27
Vector Signal Generator	Agilent	N5172B	2.02	MY51350397	2026/7/27	2027/7/26
Analog Signal Generator	HP	83712B	10.02	US34490219	2026/7/27	2027/7/26
Power Meter	Agilent	E4419B	/	GB40202122	2026/7/27	2027/7/26
Power Sensor	Agilent	E9300A	/	MY41496628	2026/7/27	2027/7/26
Power Sensor	Agilent	E9304A	/	MY41496815	2026/7/27	2027/7/26
Power Sensor	DARE	RPR3006W	/	15100041SNO91	2026/7/28	2027/7/27
Power Sensor	DARE	RPR3006W	/	15100041SNO92	2026/7/28	2027/7/27
Temp. & Humid. Chamber	Teelong	TL-HW408S	/	TL-20191205-01	2026/07/07	2027/07/06
Electronic Thermo-Hygrometer	S.H.Qixiang	HTC-1	/	N/A	2026/7/31	2027/7/30
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2026/7/27	2027/7/26
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A
6dB Fixed Attenuator	SKET	AP_DC01G-2W-N-6dB	/	N/A	2026/7/28	2027/7/27

Software Information			
Test Item	Software Name	Manufacturer	Version
RE	EZ-EMC	Farad	Alpha-3A1
CE	EZ-EMC	Farad	Alpha-3A1
RF-CE	MTS 8310	MWRFtest	V2.0.0.0

3. MAXIMUM PEAK OUTPUT POWER

3.1. Limit

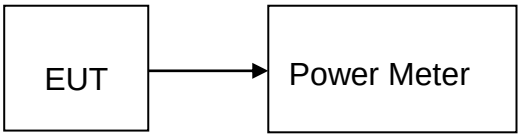
Please refer section 15.247.

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts, the e.i.r.p shall not exceed 4W

3.2. Test Procedure

The transmitter output is connected to the RF Power Meter. The RF Power Meter is set to the peak power detection.

3.3. Test Setup



3.4. Test Result

Please refer to Appendix of EDR data.

4. BANDWIDTH

4.1. Limit

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.

4.2. Test Procedure

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

4.3. Test Result

Please refer to Appendix of EDR data.

5. CARRIER FREQUENCY SEPARATION

5.1. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW

5.2. Test Procedure

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The carrier frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW.

5.3. Test Result

Please refer to Appendix of EDR data.

6. NUMBER OF HOPPING CHANNEL

6.1. Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels

6.2. Test Procedure

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The number of hopping channel was measured by spectrum analyzer with 100kHz RBW and 300KHz VBW.

6.3. Test Result

Please refer to Appendix of EDR data.

7. DWELL TIME

7.1. Test Limit

Please refer section15.247

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400MHz-2483.5 MHz. The average time of occupancy on any frequency shall not greater than 0.4 s within period of 0.4 sec- onds multiplied by the number of hopping channel employed.

7.2. Test Procedure

7.2.1. Place the EUT on the table and set it in transmitting mode.

7.2.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

7.2.3. Set center frequency of spectrum analyzer = operating frequency.

7.2.4. Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span = 0Hz, Sweep = auto.

7.2.5. Repeat above procedures until all frequency measured were complete.

7.3. Test Result

Please refer to Appendix of EDR data.

8. RADIATED EMISSIONS

8.1. Limit

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.

15.205 Restricted frequency band

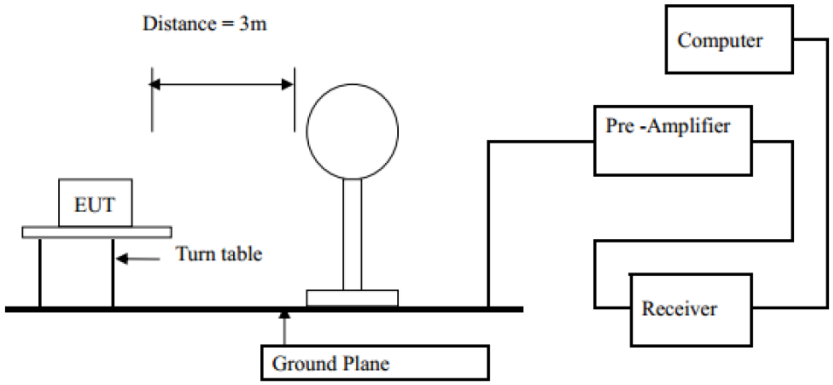
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 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	([2])

15.209 Limit

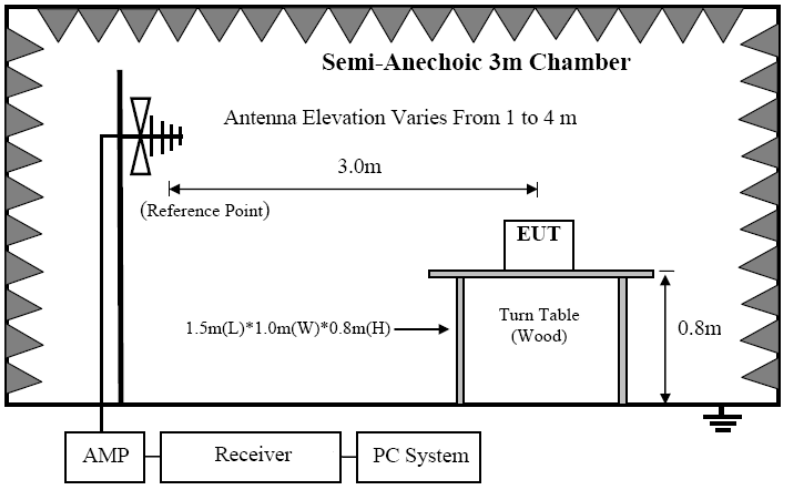
FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009-0.490	300	2400/F(KHz)	/
0.490-1.705	30	24000/F(KHz)	/
1.705-30	30	30	29.5
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
960-1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

8.2. Block Diagram of Test Setup

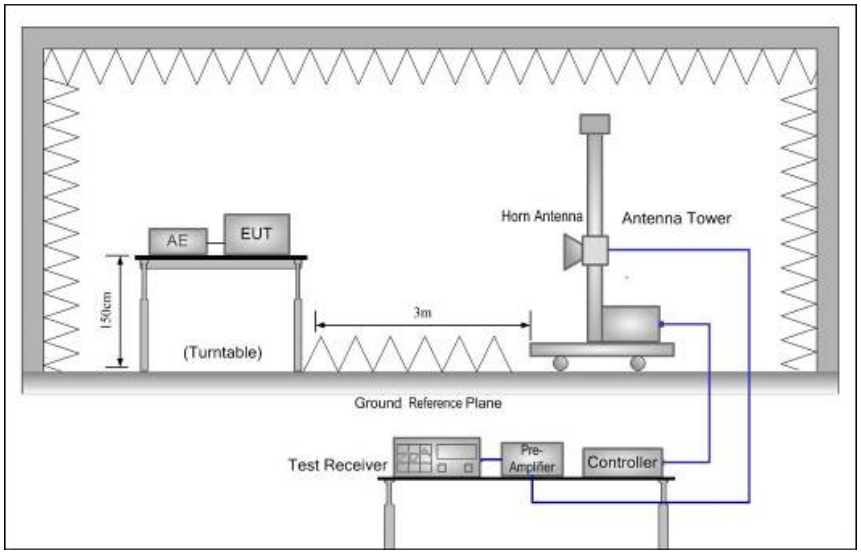
8.2.1 In 3m Anechoic Chamber Test Setup Diagram for below 30MHz



8.2.2 In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



8.2.3 In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

8.3. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Setup EUT and simulator as shown in section 1.4 and 6.1

(3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.

(a) Change work frequency or channel of device if practicable.

(b) Change modulation type of device if practicable.

(c) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions

(4) Spectrum frequency from 9KHz to 25GHz (tenth harmonic of fundamental frequency) was investigated

(5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2020 on Radiated Emission test.

(6) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure; RBW is set at 1MHz, VBW is set at 10Hz for Average measure.

8.4. Test Result

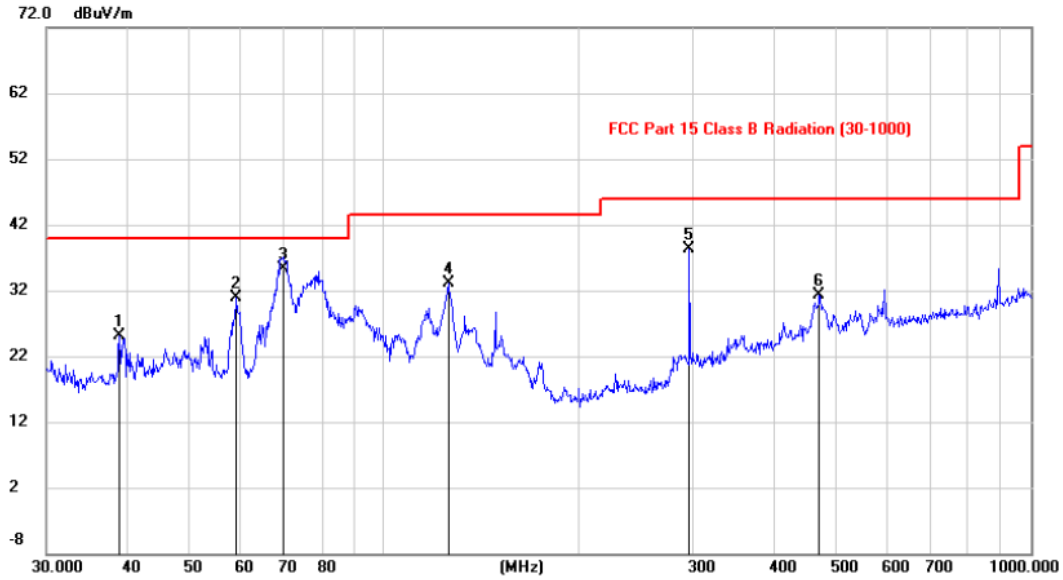
We have scanned the 10th harmonic from 9KHz to the EUT's highest frequency.
Detailed information please see the following page.

From 9KHz to 30MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

From 30MHz to 1000MHz: Conclusion: PASS

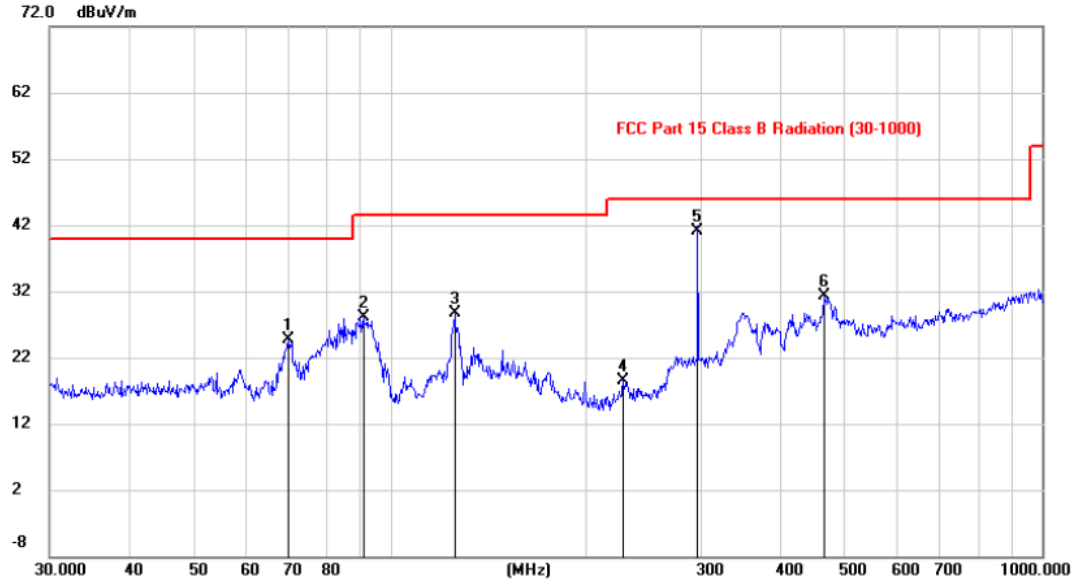
Vertical:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		38.9378	11.16	13.88	25.04	40.00	-14.96	peak			
2		59.1563	18.04	12.87	30.91	40.00	-9.09	peak			
3	*	70.0821	24.24	10.98	35.22	40.00	-4.78	QP			
4		125.4603	20.30	12.90	33.20	43.50	-10.30	peak			
5		297.0156	24.16	14.14	38.30	46.00	-7.70	peak			
6		471.1836	12.96	18.31	31.27	46.00	-14.73	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Horizontal:



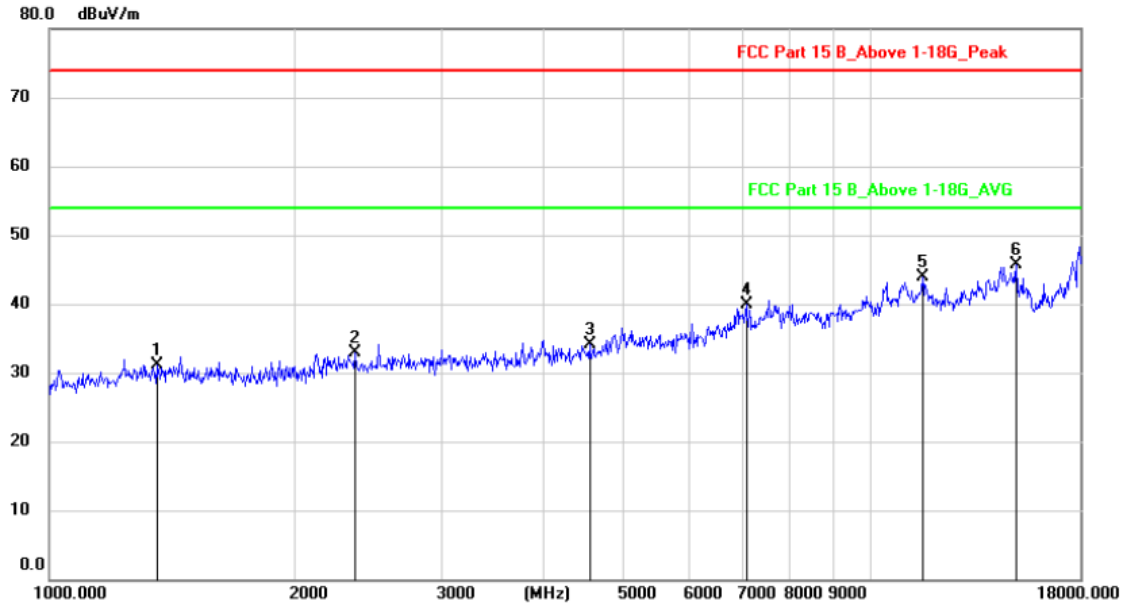
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		69.7304	13.74	11.03	24.77	40.00	-15.23	peak			
2		90.9509	18.40	9.61	28.01	43.50	-15.49	peak			
3		125.8422	15.87	12.90	28.77	43.50	-14.73	peak			
4		227.7435	6.42	12.01	18.43	46.00	-27.57	peak			
5	*	297.0157	26.97	14.14	41.11	46.00	-4.89	QP			
6		463.2110	13.09	18.16	31.25	46.00	-14.75	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Remark: All modes have been tested, and only worst data of GFSK (2402MHz) was listed in this report.

From 1G-25GHz

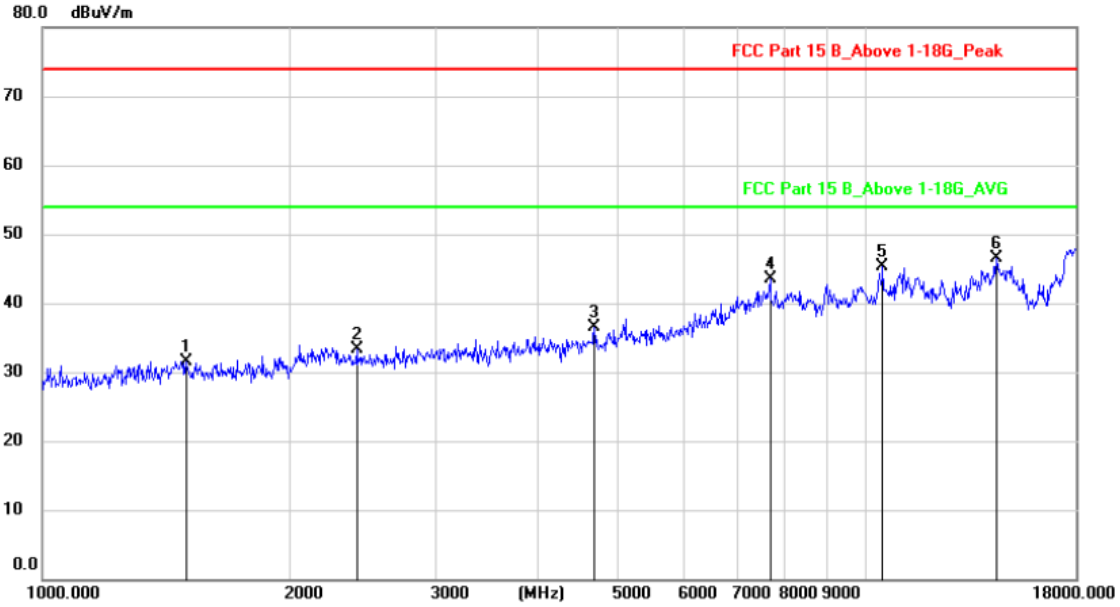
GFSK mode / Polarization: Horizontal / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1354.446	52.47	-21.33	31.14	74.00	-42.86	peak			
2		2355.390	51.62	-18.73	32.89	74.00	-41.11	peak			
3		4557.045	49.08	-15.06	34.02	74.00	-39.98	peak			
4		7059.492	49.54	-9.60	39.94	74.00	-34.06	peak			
5		11572.44	49.51	-5.70	43.81	74.00	-30.19	peak			
6	*	15080.23	49.85	-4.11	45.74	74.00	-28.26	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

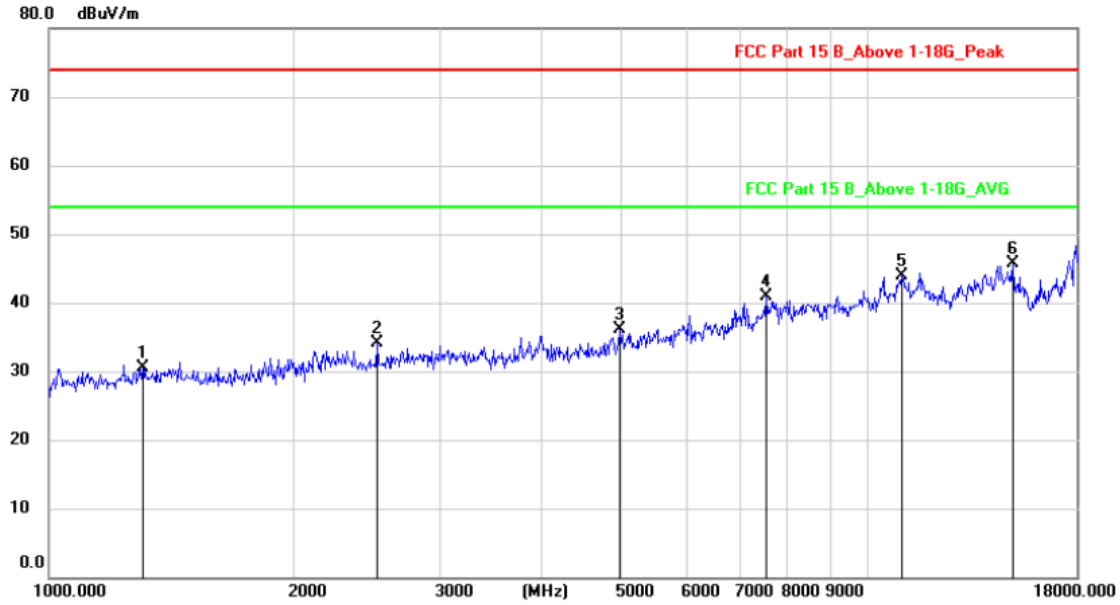
GFSK / Polarization: Vertical / CH: L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1498.492	53.17	-21.59	31.58	74.00	-42.42	peak			
2		2412.114	52.19	-18.82	33.37	74.00	-40.63	peak			
3		4688.423	51.10	-14.64	36.46	74.00	-37.54	peak			
4		7661.953	52.81	-9.28	43.53	74.00	-30.47	peak			
5		10493.32	51.39	-6.06	45.33	74.00	-28.67	peak			
6	*	14444.56	49.28	-2.87	46.41	74.00	-27.59	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

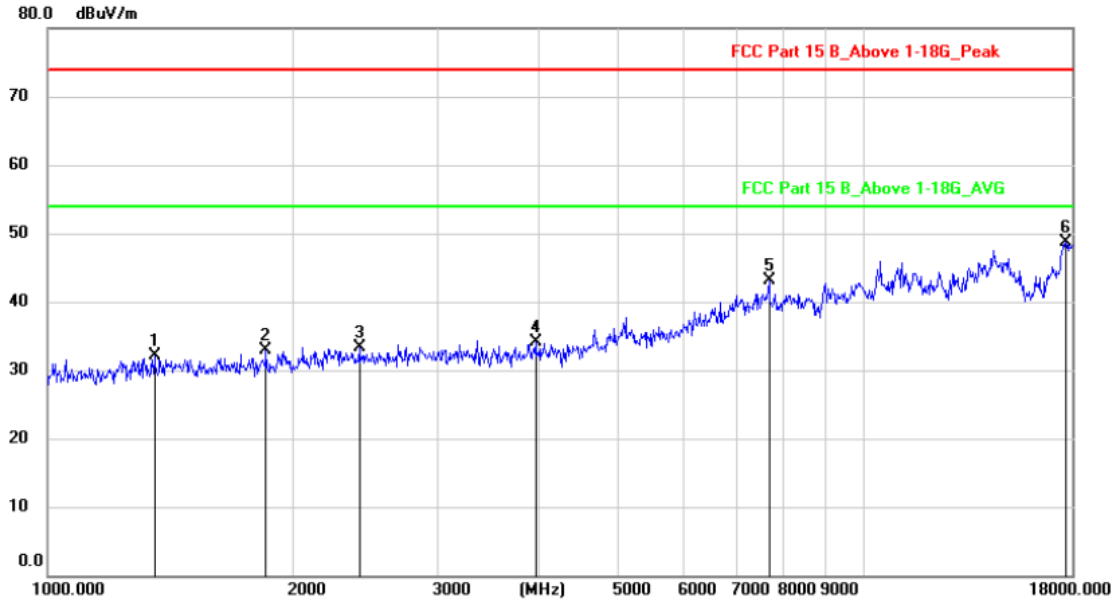
GFSK / Polarization: Horizontal / CH: M



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1303.995	51.87	-21.34	30.53	74.00	-43.47	peak			
2		2518.508	52.99	-18.80	34.19	74.00	-39.81	peak			
3		4987.578	49.97	-13.96	36.01	74.00	-37.99	peak			
4		7531.674	50.10	-9.12	40.98	74.00	-33.02	peak			
5		11023.93	49.50	-5.50	44.00	74.00	-30.00	peak			
6	*	15080.23	49.85	-4.11	45.74	74.00	-28.26	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

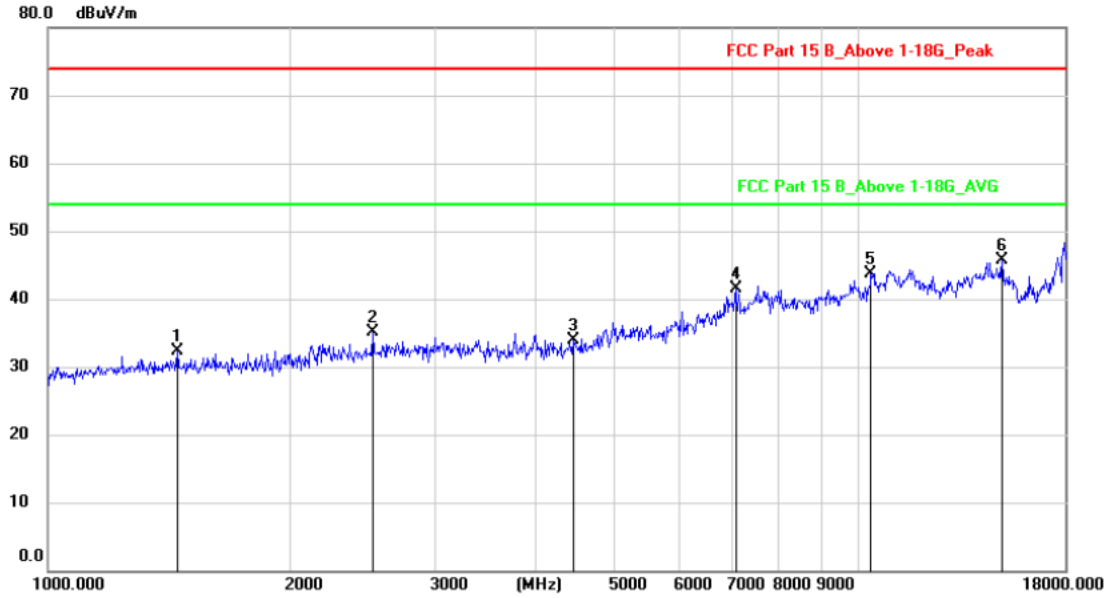
GFSK / Polarization: Vertical / CH: M



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1352.751	53.40	-21.33	32.07	74.00	-41.93	peak			
2		1851.393	54.03	-21.22	32.81	74.00	-41.19	peak			
3		2412.114	52.19	-18.82	33.37	74.00	-40.63	peak			
4		3961.743	50.54	-16.38	34.16	74.00	-39.84	peak			
5		7661.953	52.31	-9.28	43.03	74.00	-30.97	peak			
6	*	17690.53	49.00	-0.35	48.65	74.00	-25.35	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

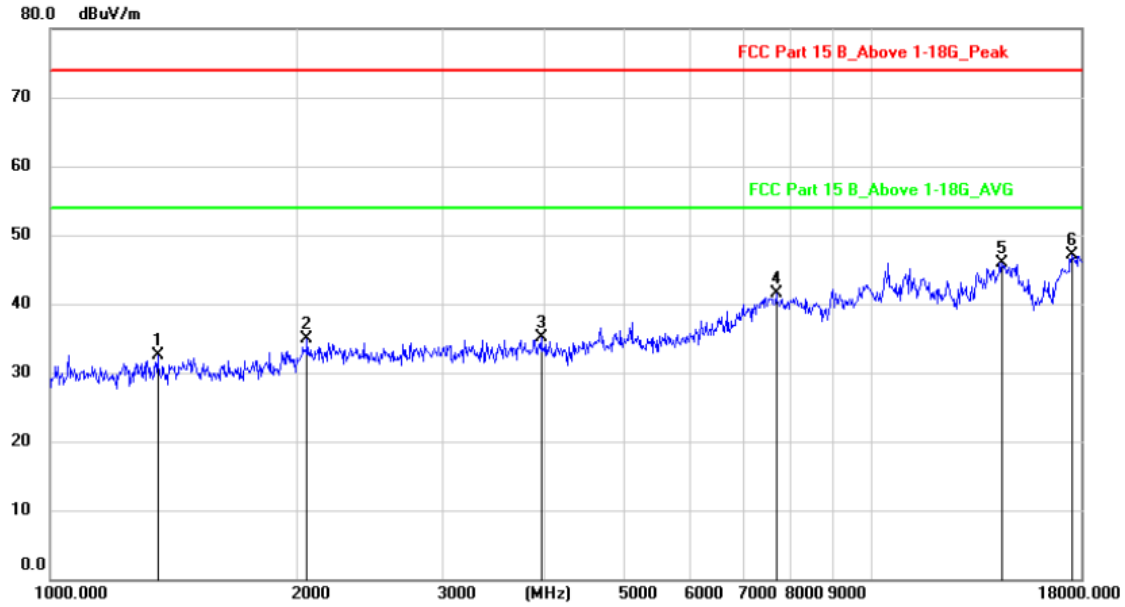
GFSK / Polarization: Horizontal / CH: H



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1446.572	53.76	-21.40	32.36	74.00	-41.64	peak			
2		2518.508	53.99	-18.80	35.19	74.00	-38.81	peak			
3		4446.023	49.23	-15.42	33.81	74.00	-40.19	peak			
4		7059.492	51.04	-9.60	41.44	74.00	-32.56	peak			
5		10378.70	49.80	-6.17	43.63	74.00	-30.37	peak			
6	*	15080.23	49.85	-4.11	45.74	74.00	-28.26	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

GFSK / Polarization: Vertical / CH: H



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1352.751	53.90	-21.33	32.57	74.00	-41.43	peak			
2		2059.172	54.83	-20.00	34.83	74.00	-39.17	peak			
3		3961.743	51.54	-16.38	35.16	74.00	-38.84	peak			
4		7661.953	50.81	-9.28	41.53	74.00	-32.47	peak			
5		14444.56	48.78	-2.87	45.91	74.00	-28.09	peak			
6	*	17556.39	48.46	-1.38	47.08	74.00	-26.92	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Remark:

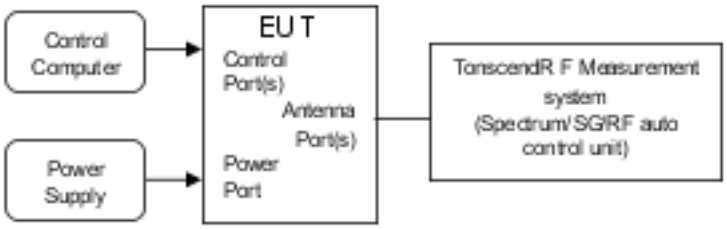
1.Pre-scan all mode, and found the GFSK mode which it is worse case, so only show the test data for worse case.

2.Since the peak value is less than the limit of the AVG value, there is no AVG data.

3.From 18GHz to 25GHz,the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

9. RF CONDUCTED SPURIOUS EMISSIONS

9.1. Block Diagram of Test Setup



9.2. Limits

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20dB.

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) (see § 15.205(c)).

9.3. Test Procedure

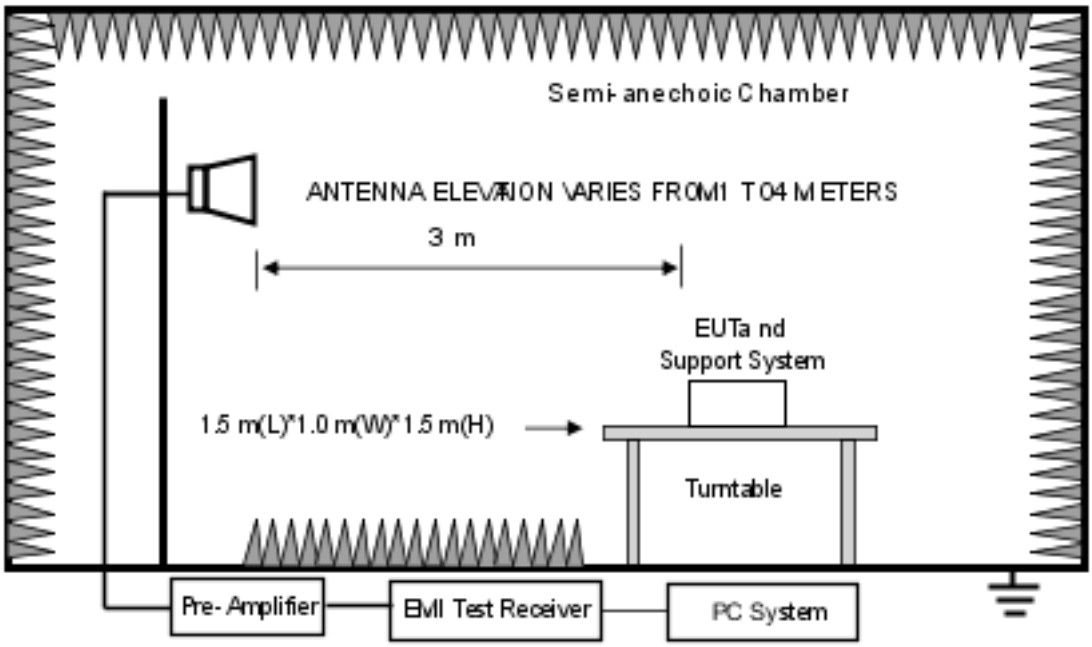
The test receiver set RBW = 100kHz, VBW≥3*RBW =300kHz, sweep time set auto

9.4. Test Result

Please refer to Appendix of EDR data.

10. BAND EDGE COMPLIANCE

10.1.Block Diagram of Test Setup



10.2.Limit

Please refer section 15.247.

10.3.Test Procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

10.3.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

10.3.2 Check the spurious emissions out of band.

10.3.3 RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 3MHz, RMS detector for AV value.

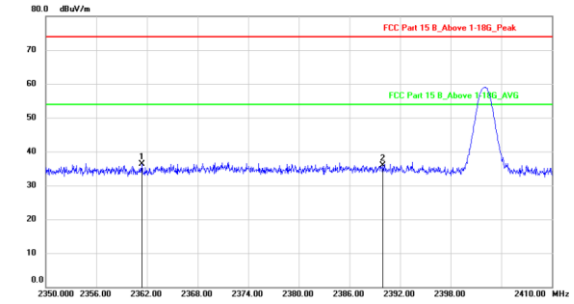
All restriction band and non- restriction band have been tested, only worse case is reported.

10.4.Test Result

PASS. (See below detailed test data)

Test Mode: GFSK-Low Hopping-off

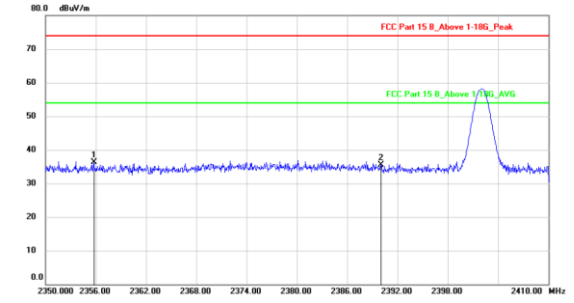
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2361.414	54.96	-18.61	36.35	74.00	-37.65	peak			
2		2390.000	54.57	-18.66	35.91	74.00	-38.09	peak			

Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Vertical

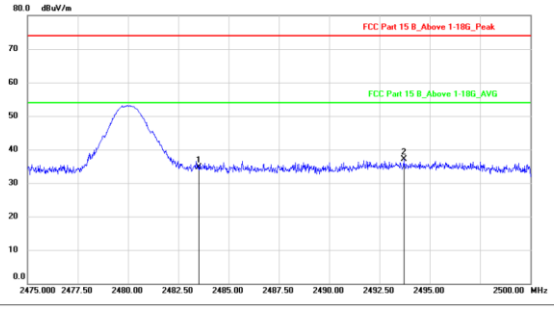


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2355.774	54.98	-18.61	36.37	74.00	-37.63	peak			
2		2390.000	54.19	-18.66	35.53	74.00	-38.47	peak			

Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Test Mode: GFSK-High Hopping-off

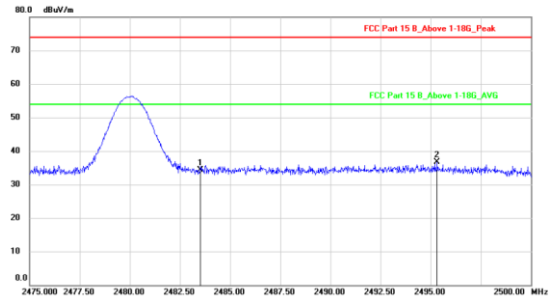
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	53.42	-18.76	34.66	74.00	-39.34	peak			
2	*	2493.716	55.84	-18.75	37.09	74.00	-36.91	peak			

Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Vertical

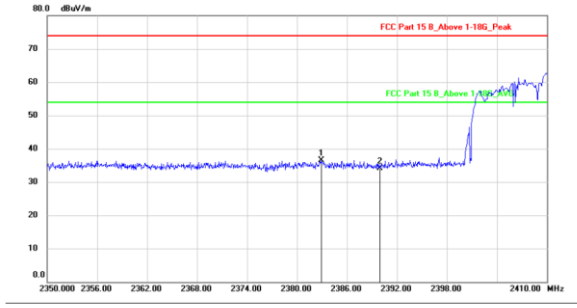


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	53.14	-18.76	34.38	74.00	-39.62	peak			
2	*	2495.331	55.53	-18.75	36.78	74.00	-37.22	peak			

Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Test Mode: GFSK-Low Hopping-on

Horizontal



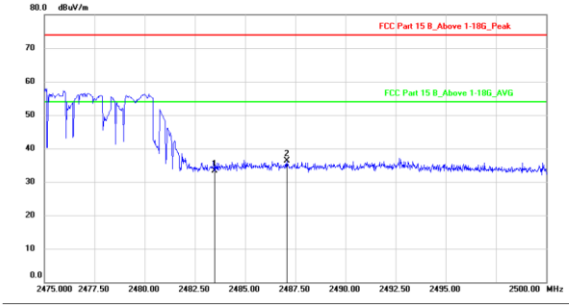
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2382.888	55.17	-18.65	36.52	74.00	-37.48	peak			
2		2390.000	52.78	-18.66	34.12	74.00	-39.88	peak			

Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Vertical

Test Mode: GFSK-High Hopping-on

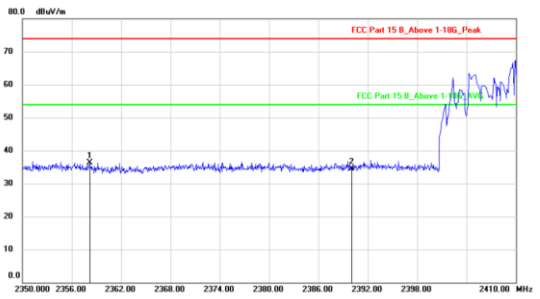
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	52.09	-18.76	33.33	74.00	-40.67	peak			
2	*	2487.091	54.98	-18.76	36.22	74.00	-37.78	peak			

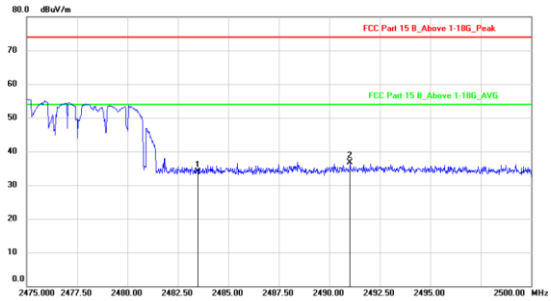
Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2358.206	54.98	-18.62	36.36	74.00	-37.64	peak			
2		2390.000	53.23	-18.66	34.57	74.00	-39.43	peak			

Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	52.58	-18.76	33.82	74.00	-40.18	peak			
2	*	2491.025	55.38	-18.75	36.63	74.00	-37.37	peak			

Note:1. *:Maximum data; x:Over limit; l:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

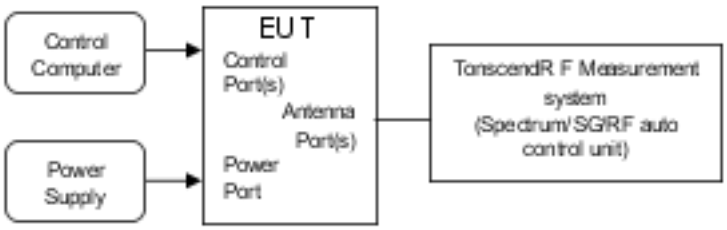
Note:

1.Pre-scan all mode, and found the GFSK mode which it is worse case, so only show the test data for worse case.

2.Since the peak value is less than the limit of the AVG value, there is no AVG data.

11. BAND EDGE (CONDUCTED)

11.1.Block Diagram of Test Setup



11.2.Test Limits

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

11.3.Test Procedure

Details see the KDB 558074 D01 15.247 Meas Guidance v05r02

Place the EUT on the table and set it in transmitting mode.

11.3.1. Place the EUT on the table and set it in transmitting mode.

11.3.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

11.3.3. Set the spectrum analyzer as RBW=100KHz, VBW=300KHz, Sweep = auto.

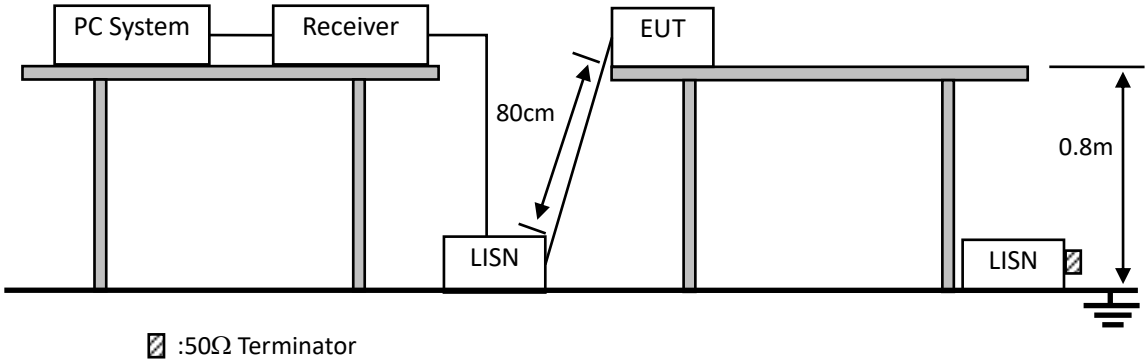
11.3.4. Repeat above procedures until all frequency measured were complete..

11.4.Test Results

Please refer to Appendix of EDR data.

12. POWER LINE CONDUCTED EMISSIONS

12.1.Block Diagram of Test Setup



:50Ω Terminator

12.2.Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

12.3.Test Procedure

(1) The EUT was placed on a non-metallic table, 80cm above the ground plane.

(2) Setup the EUT and simulator as shown in 10.1

(3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 :2020 on conducted Emission test.

(4) The bandwidth of test receiver is set at 10KHz.

(5) The frequency range from 150 KHz to 30MHz is checked.

12.4.Test Result

Not applicable for equipment operated with battery.

13. ANTENNA REQUIREMENTS

13.1.Limit

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.

13.2.Result

The EUT antenna is Internal Antenna. It complies with the standard requirement.

14. TEST SETUP PHOTO

Please refer to the Appendix of Test photos.

15. EUT PHOTO

Please refer to the Appendix of EUT photos.

------END OF REPORT------