TEST REPORT

Application No.:	GZCR2503000442HS
Applicant:	XIAMEN OLT CO.,LTD.
Address of Applicant:	Room 501, Building 1, No.950, Tonglong 2nd Road, Xiamen Torch High-tech Zone (Xiang'an) Industrial Zone, Xiamen, Fujian, China
Manufacturer:	XIAMEN OLT CO.,LTD.
Address of Manufacturer:	Room 501, Building 1, No.950, Tonglong 2nd Road, Xiamen Torch High-tech Zone(Xiang'an) Industrial Zone, Xiamen, Fujian, China
Factory:	XIAMEN OLT CO.,LTD.
Address of Factory:	No. 950, Tonglong 2nd Road, Xiamen Torch High-tech Zone (Xiang'an) Industrial Zone, Xiamen,Fujian,China
Product Name:	REMOTE CONTROL
Model No.:	ZNYK02-B01, ZNYK02-B02, ZNYK02-B03, ZNYK02-B04, ZNYK02-B05, ZNYK02-B06, ZNYK02-B07, ZNYK02-B08, ZNYK02-B09 ¤
¤	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark:	TCK
Standard(s) :	47 CFR Part 15, Subpart C 15.249
Date of Receipt:	2025-03-28
Date of Test:	2025-04-08 to 2025-04-09
Date of Issue:	2025-06-17
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Ricky Liu
Manager

Revision Record			
Version	**Report No.**	**Date**	**Remark**
01	GZCR250300044201	2025-06-17	Original

Authorized for issue by:				
		Luke Lin **Luke Lin/Project Engineer**		
		Vico Cui **Vico Cui/Reviewer**		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15.249	N/A	47 CFR Part 15, Subpart C 15.203	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Field Strength of the Fundamental Signal (15.249(a))	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.5&6.6	47 CFR Part 15, Subpart C 15.249(a)	Pass
Restricted Band Around Fundamental Frequency		ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209	Pass
Radiated Emissions Below 1GHz		ANSI C63.10 (2013) Section 6.4&6.5	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
Radiated Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
20dB Bandwidth		ANSI C63.10 (2013) Section 6.9	47 CFR Part 15, Subpart C 15.215	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

¤ Declaration of EUT Family Grouping:

Model No.: ZNYK02-B01, ZNYK02-B02, ZNYK02-B03, ZNYK02-B04, ZNYK02-B05, ZNYK02-B06, ZNYK02-B07, ZNYK02-B08, ZNYK02-B09

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference on the model name, appearance, color and silk-screen.

Therefore only one model ZNYK02-B01 was tested in this report.

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3V= Battery size 'AAA 1.5V' *2pcs.
Cable(s):	N/A
Test Voltage:	DC 3V
Operation Frequency:	2408/2443/2480MHz
Number of Channels:	3
Channel Spacing:	35MHz/37MHz
Modulation Type:	GFSK
Antenna Gain:	-0.85 dBi according to antenna specification.
Antenna Type:	PCB Antenna
Antenna Number:	1

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

The EUT has been tested as an independent unit.

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Field Strength of the Fundamental Signal (15.249(a))	±4.88dB (1GHz-6GHz); ±5.06dB (6GHz-18GHz); ±5.30dB (18GHz-40GHz)
Restricted Band Around Fundamental Frequency	±4.88dB (1GHz-6GHz); ±5.06dB (6GHz-18GHz)
Radiated Emissions Below 1GHz	±3.08dB (9kHz to 150kHz); ±3.19dB(150kHz to 30MHz); ±5.14dB (30MHz-1GHz) (3m); ±4.90dB (30MHz-1GHz) (10m)
Radiated Emissions Above 1GHz	±4.88dB (1GHz-6GHz); ±5.06dB (6GHz-18GHz); ±5.30dB (18GHz-40GHz)
20dB Bandwidth	± 0.274%

Remark:

The U_{lab} (lab Uncertainty) is less than U_{cispr} (CISPR Uncertainty) or U_{ETSI}(ETSI Uncertainty).

Emission decision rule:

– Compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit, marked as Pass in the report.

– Non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit, marked as Fail in the report.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663

Tel: +86 20 82155555

No tests were sub-contracted.

4.5 Test Facility

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

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

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5 Equipment List

Field Strength of the Fundamental Signal (15.249(a))					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2024-10-14	2025-10-13
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2024-09-02	2025-09-01
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2024-08-19	2026-08-18
Horn Antenna (1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2022-09-23	2025-09-22
EXA Signal Analyzer (10Hz-44GHz)	Keysight	N9010A	EMC2138	2024-08-19	2025-08-18
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2023-12-20	2026-12-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

Restricted Band Around Fundamental Frequency					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2024-10-14	2025-10-13
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2024-09-02	2025-09-01
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2024-08-19	2026-08-18
Horn Antenna (1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2022-09-23	2025-09-22
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2023-12-20	2026-12-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

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Radiated Emissions Below 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2022-10-16	2025-10-15
Coaxial cable	Mirco-COAX UTIFLEX	311A	EMC0540	2024-08-19	2026-08-18
Amplifier (9kHz-1.3GHz)	HP	8447F	EMC2065	2024-12-04	2025-12-03
Active Loop Antenna-RED	ETS-Lindgren	6502	EMC2190	2024-04-08	2026-04-07
EMI Test Receiver (9kHz-7GHz)	Rohde & Schwarz	ESR7	EMC2220	2024-12-04	2025-12-03
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
Trilog Broadband Antenna (25MHz-2GHz)	Schwarzbeck Mess-Elektronik	VULB 9168	EMC2174	2022-06-19	2025-06-18

Radiated Emissions Above 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2024-10-14	2025-10-13
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2024-09-02	2025-09-01
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2024-08-19	2026-08-18
Horn Antenna (1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2022-09-23	2025-09-22
Horn Antenna (14-40GHz)	SCHWARZBECK	BBHA 9170	EMC2041	2023-06-18	2026-06-17
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2024-10-14	2025-10-13
EXA Signal Analyzer (10Hz-44GHz)	Keysight	N9010A	EMC2138	2024-08-19	2025-08-18
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2023-12-20	2026-12-19
Microwave Broadband Preamplifier (18-40GHz)	SCHWARZBECK	BBV 9721	EMC2172	2024-08-19	2025-08-18
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

RF Conducted Test					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
MXA Signal Analyzer (10Hz-8.4GHz)	Agilent Technologies	N9020A	SEM004-10	2024-12-03	2025-12-02
MI CABLE	SGS-EMC	0.8M	EMC2136	2023-11-02	2025-11-01

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General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
DMM	Fluke	73	EMC0006	2024-06-13	2025-06-12

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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

15.203 requirement:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement.

The best case gain of the antenna is -0.85 dBi.

Antenna location:

Refer to Internal photos

7 Radio Spectrum Matter Test Results

7.1 Field Strength of the Fundamental Signal (15.249(a))

Test Requirement 47 CFR Part 15, Subpart C 15.249(a)

Test Method: ANSI C63.10 (2013) Section 6.5&6.6

Limit:

Test Distance: 3m

Fundamental frequency (MHz)	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500
Remark: The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For fundamental frequency in “902-928MHz”, the field strength of fundamental is based on Quasi-Peak.		

7.1.1 E.U.T. Operation

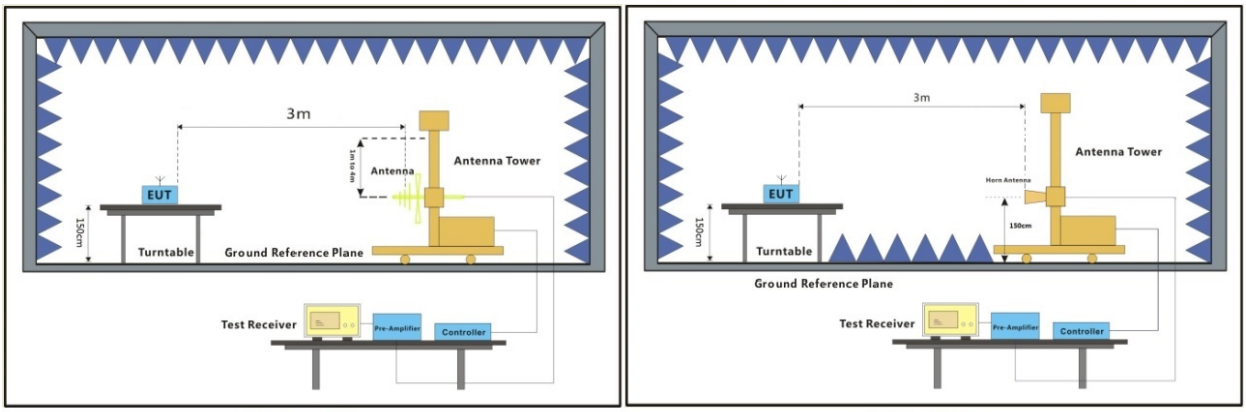
Operating Environment:

Temperature: 23.2 °C Humidity: 58.6 % RH Atmospheric Pressure: 1020 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.1.3 Test Setup Diagram



30MHz-1GHz Above 1GHz

7.1.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 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.

c.The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g.If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

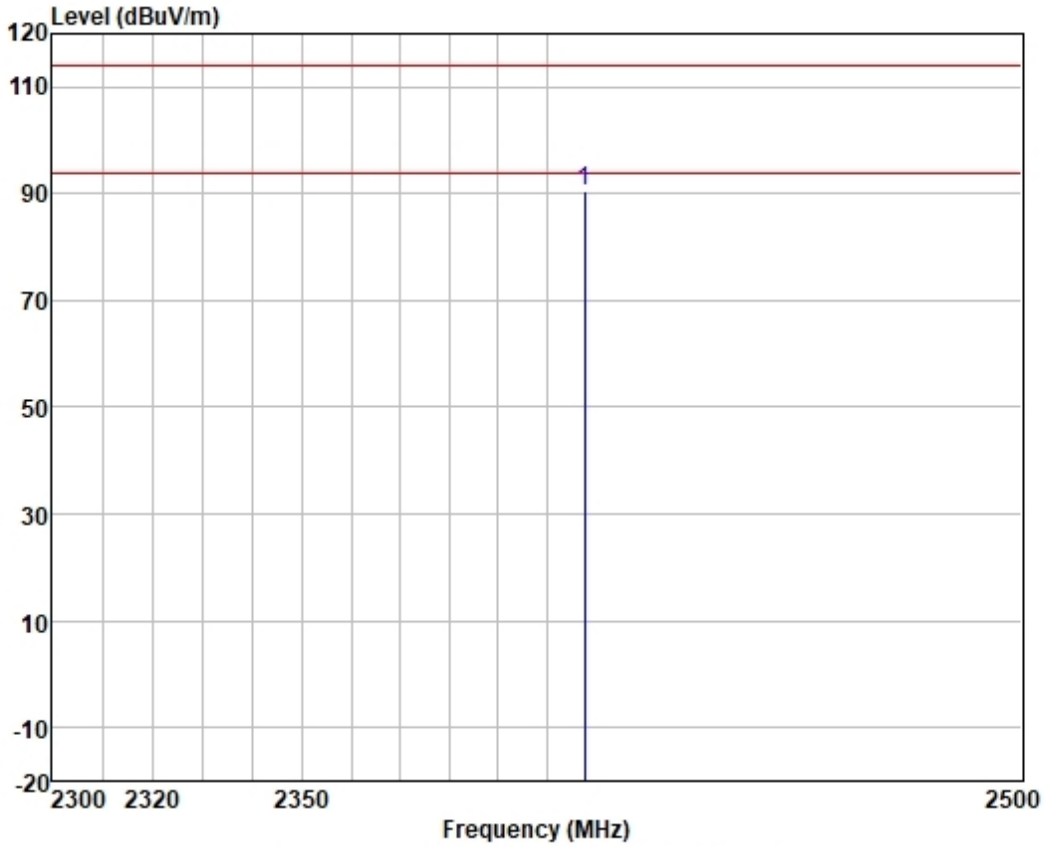
h.Test the EUT in the lowest channel, the middle channel, the Highest channel.

i.The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j.Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:Low



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2408.000	97.28	27.73	3.45	37.77	90.69	114.00	-23.31	VERTICAL	Peak

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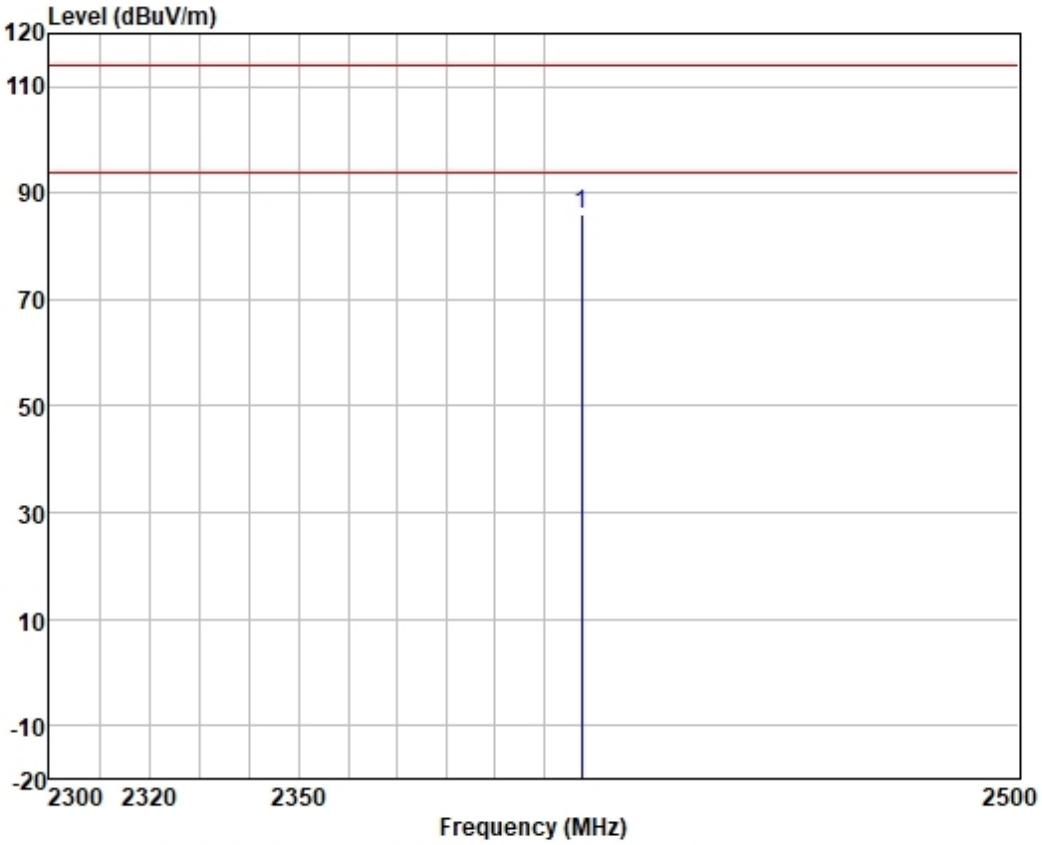
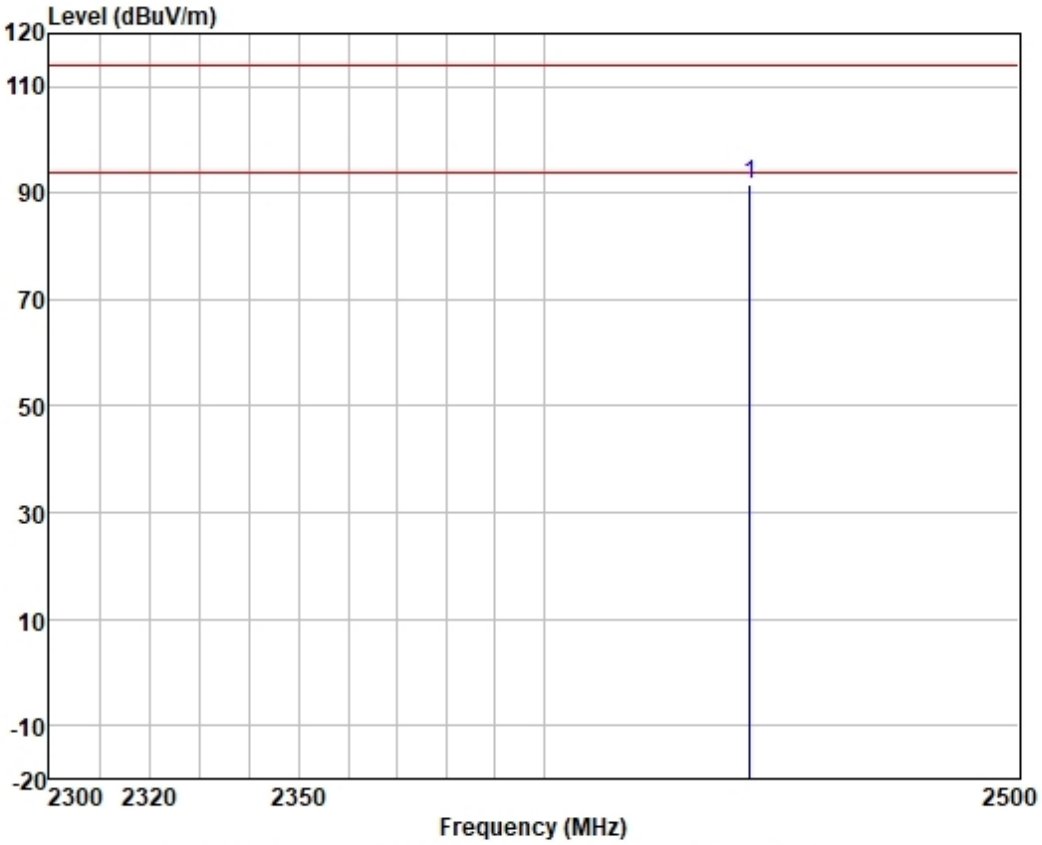
Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:Low



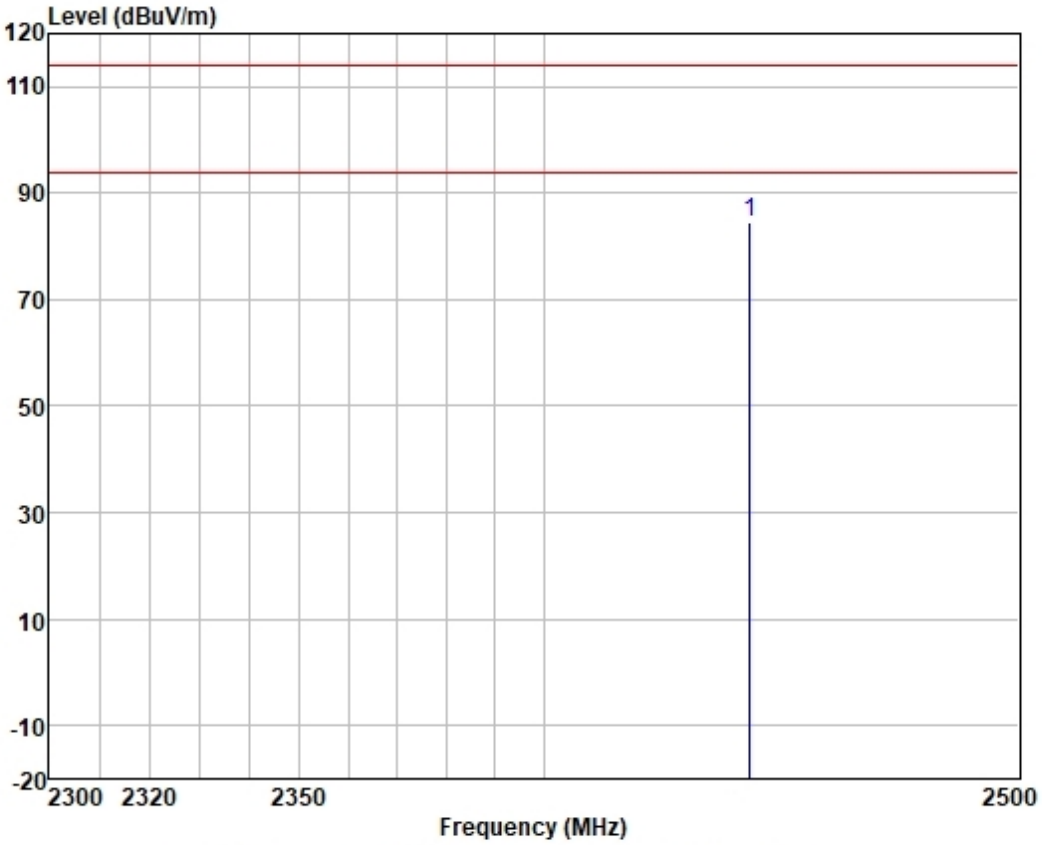
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2408.000	92.67	27.73	3.45	37.77	86.08	114.00	-27.92	HORIZONTAL	Peak

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:middle



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2443.000	98.02	27.79	3.47	37.76	91.52	114.00	-22.48	VERTICAL	Peak

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:middle



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2443.000	90.87	27.79	3.47	37.76	84.37	114.00	-29.63	HORIZONTAL	Peak

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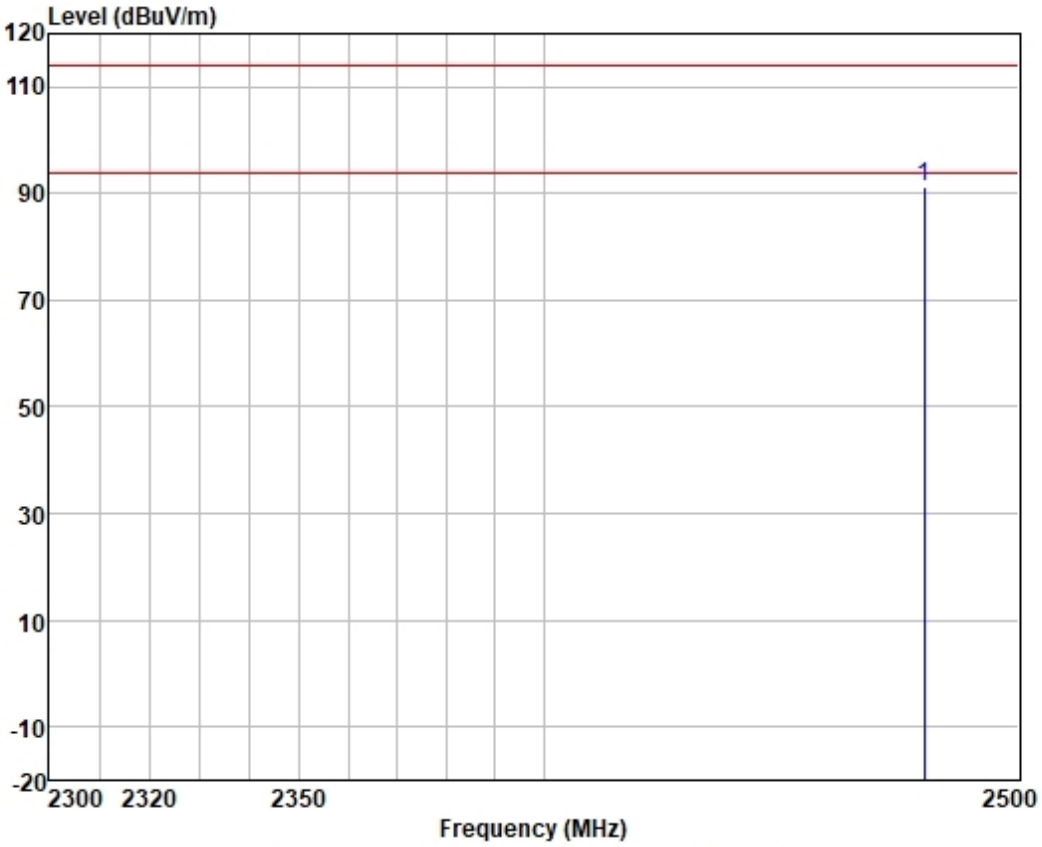
Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:High



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2480.000	97.58	27.84	3.48	37.76	91.14	114.00	-22.86	VERTICAL	Peak

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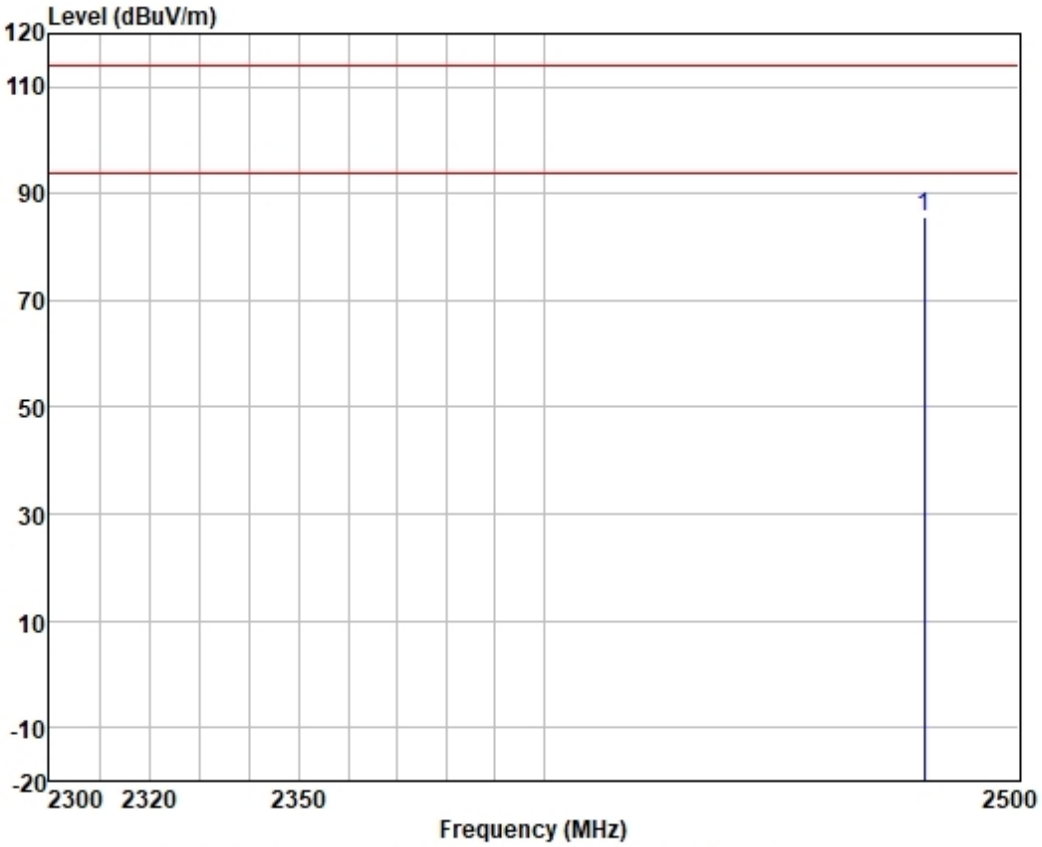
Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:High



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2480.000	92.18	27.84	3.48	37.76	85.74	114.00	-28.26	HORIZONTAL	Peak

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7.2 Restricted Band Around Fundamental Frequency

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

Test Distance: 3 m

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
Above 1GHz	74.0	Peak Value
Emission 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 Section 15.209, whichever is the lesser attenuation.		

7.2.1 E.U.T. Operation

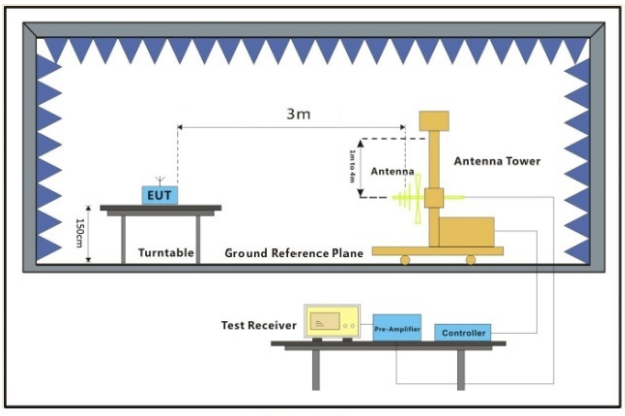
Operating Environment:

Temperature: 23.2 °C Humidity: 58.6 % RH Atmospheric Pressure: 1020 mbar

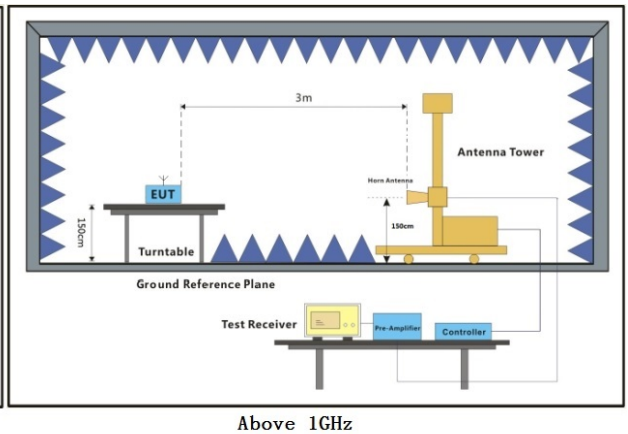
7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.2.3 Test Setup Diagram



30MHz-1GHz



Above 1GHz

7.2.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 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.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

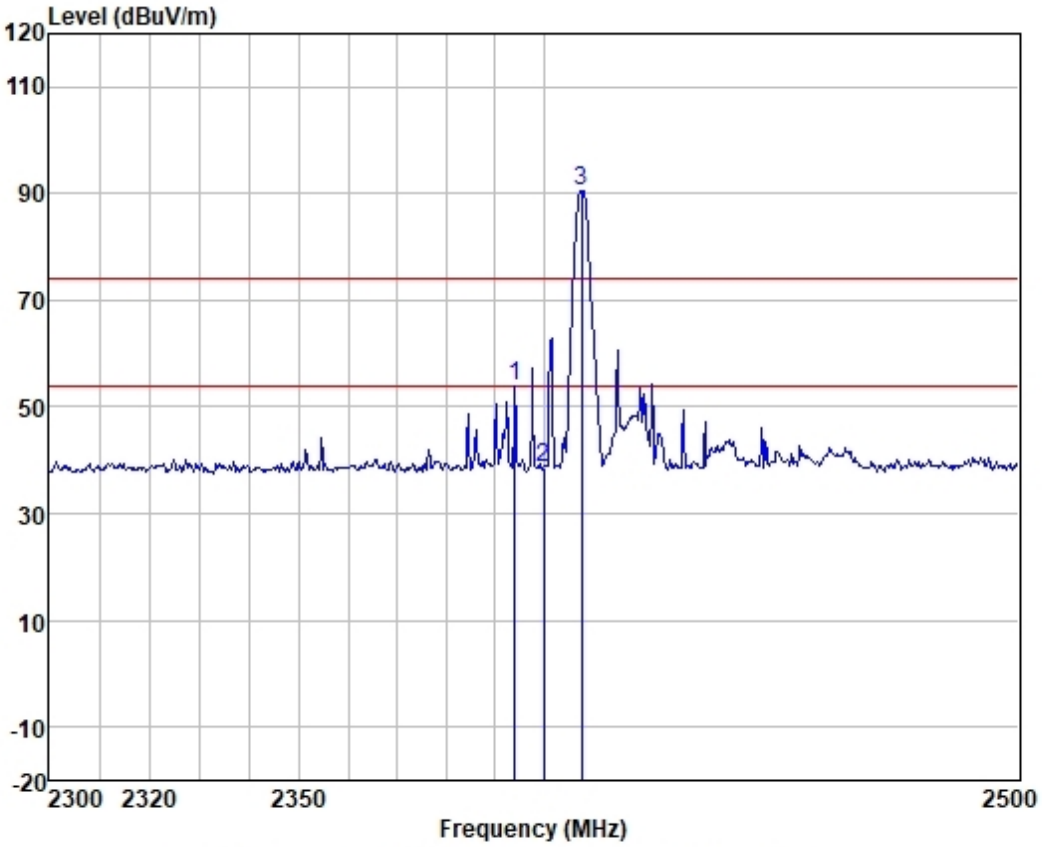
h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:Low



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2394.120	60.39	27.70	3.45	37.77	53.77	74.00	-20.23	VERTICAL	peak
2	2400.000	45.15	27.71	3.45	37.77	38.54	74.00	-35.46	VERTICAL	peak
3 *	2408.000	97.27	27.73	3.45	37.77	90.68	74.00	16.68	VERTICAL	peak

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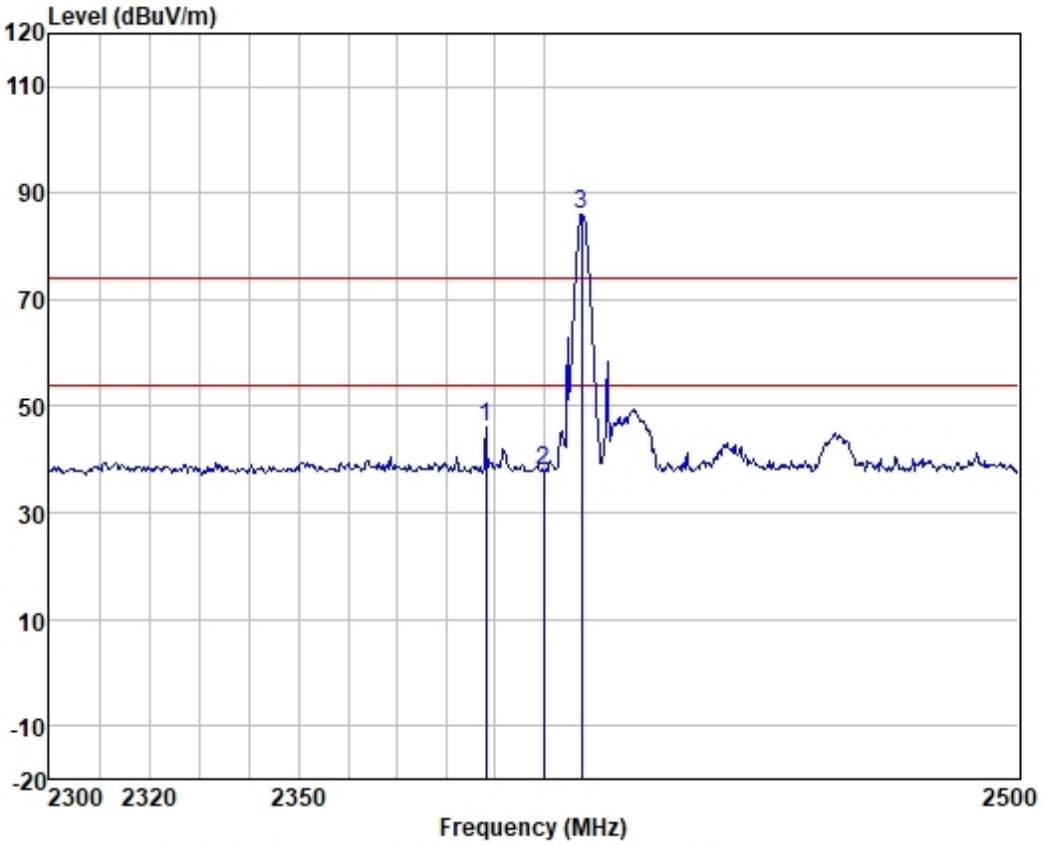
Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:Low



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2388.139	52.70	27.68	3.44	37.77	46.05	74.00	-27.95	HORIZONTAL	peak
2	2400.000	44.37	27.71	3.45	37.77	37.76	74.00	-36.24	HORIZONTAL	peak
3 *	2408.000	92.59	27.73	3.45	37.77	86.00	74.00	12.00	HORIZONTAL	peak

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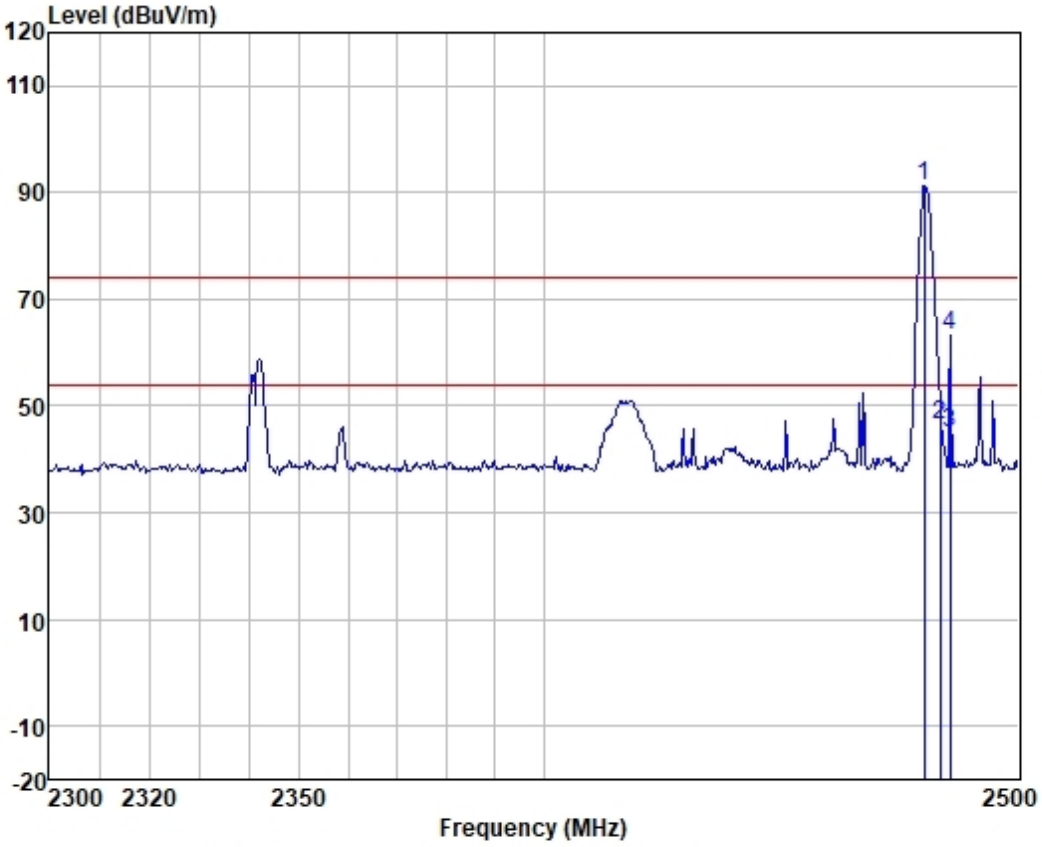
Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:High



		Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
		MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	*	2480.000	97.58	27.84	3.48	37.76	91.14	74.00	17.14	VERTICAL	peak
2		2483.500	52.83	27.85	3.49	37.76	46.41	74.00	-27.59	VERTICAL	peak
3		2485.658	51.41	27.85	3.49	37.76	44.99	54.00	-9.01	VERTICAL	Average
4		2485.658	69.78	27.85	3.49	37.76	63.36	74.00	-10.64	VERTICAL	peak

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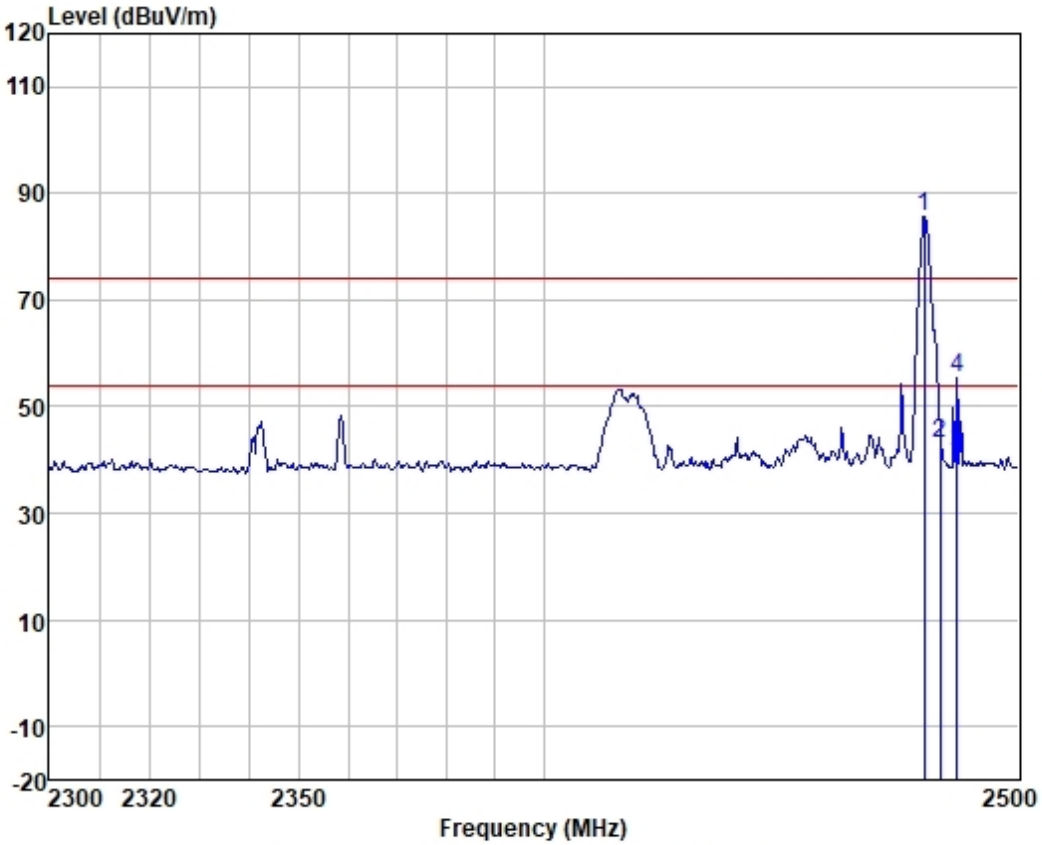
Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:High



		Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
		MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	*	2480.000	92.15	27.84	3.48	37.76	85.71	74.00	11.71	HORIZONTAL	peak
2		2483.500	49.56	27.85	3.49	37.76	43.14	74.00	-30.86	HORIZONTAL	peak
3		2487.109	47.63	27.85	3.49	37.76	41.21	54.00	-12.79	HORIZONTAL	Average
4		2487.109	61.91	27.85	3.49	37.76	55.49	74.00	-18.51	HORIZONTAL	peak

7.3 Radiated Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10 (2013) Section 6.4&6.5

Limit:

Test Distance: 3 m below 30 MHz, 10 m above 30 MHz

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

7.3.1 E.U.T. Operation

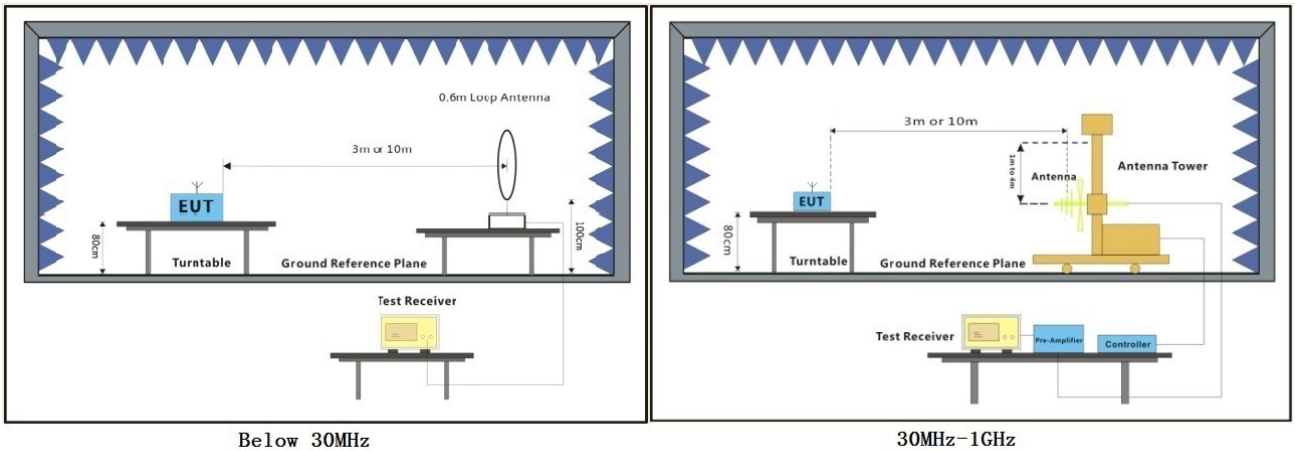
Operating Environment:

Temperature: 21.8 °C Humidity: 55.8 % RH Atmospheric Pressure: 1020 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.3.3 Test Setup Diagram



Below 30MHz 30MHz-1GHz

7.3.4 Measurement Procedure and Data

a. For below 1GHz, 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.

b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

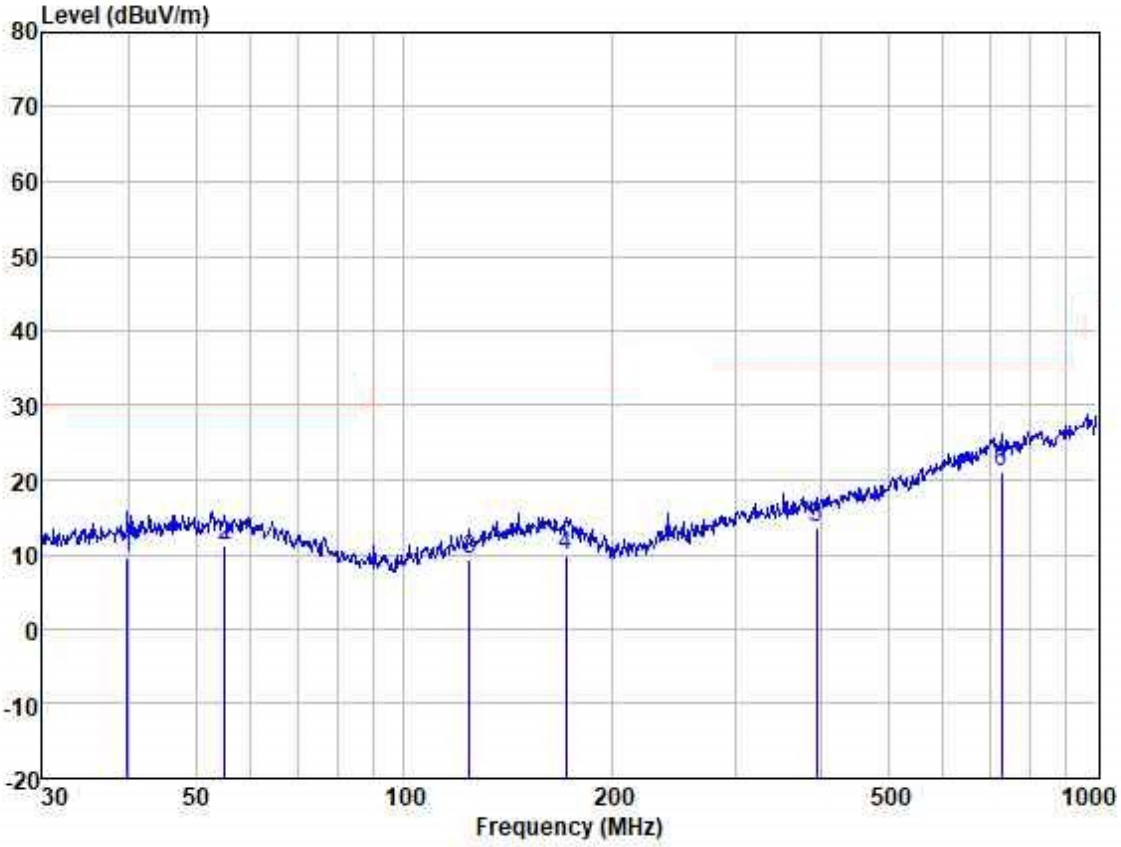
i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

Test Mode: 00; Polarity: Horizontal



Site : SGS
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Anterna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	39.854	23.42	13.50	0.69	27.98	9.63			HORIZONTAL	QP
2	55.027	24.50	13.81	0.76	27.95	11.12			HORIZONTAL	QP
3	124.133	24.54	11.59	0.91	27.77	9.27			HORIZONTAL	QP
4	171.393	23.43	13.10	1.06	27.67	9.92			HORIZONTAL	QP
5	393.472	24.14	15.44	1.82	27.71	13.69			HORIZONTAL	QP
6	729.358	25.53	21.51	2.38	28.32	21.10			HORIZONTAL	QP

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Frequency (MHz)	Level @10m (dBuV/m)	Convert Factor (dB)*	Level @ 3m (dBuV/m)	Limit @3m (dBuV/m)	Over limit (dB)	Remark
39.854	9.63	10.46	20.09	40.00	-19.91	QP
55.027	11.12	10.46	21.58	40.00	-18.42	QP
124.133	9.27	10.46	19.73	43.52	-23.79	QP
171.393	9.92	10.46	20.38	43.52	-23.14	QP
393.472	13.69	10.46	24.15	46.02	-21.87	QP
729.358	21.10	10.46	31.56	46.02	-14.46	QP

*Remark：

Level (dBuV/m) @3m = Level (dBuV/m) @10m + Convert Factor (dB)

Convert Factor (dB) = 20*log(Measurement Distance/Specified Distance) = 20*log(10/3) = 10.46 dB according to 15.31 (f) (1)

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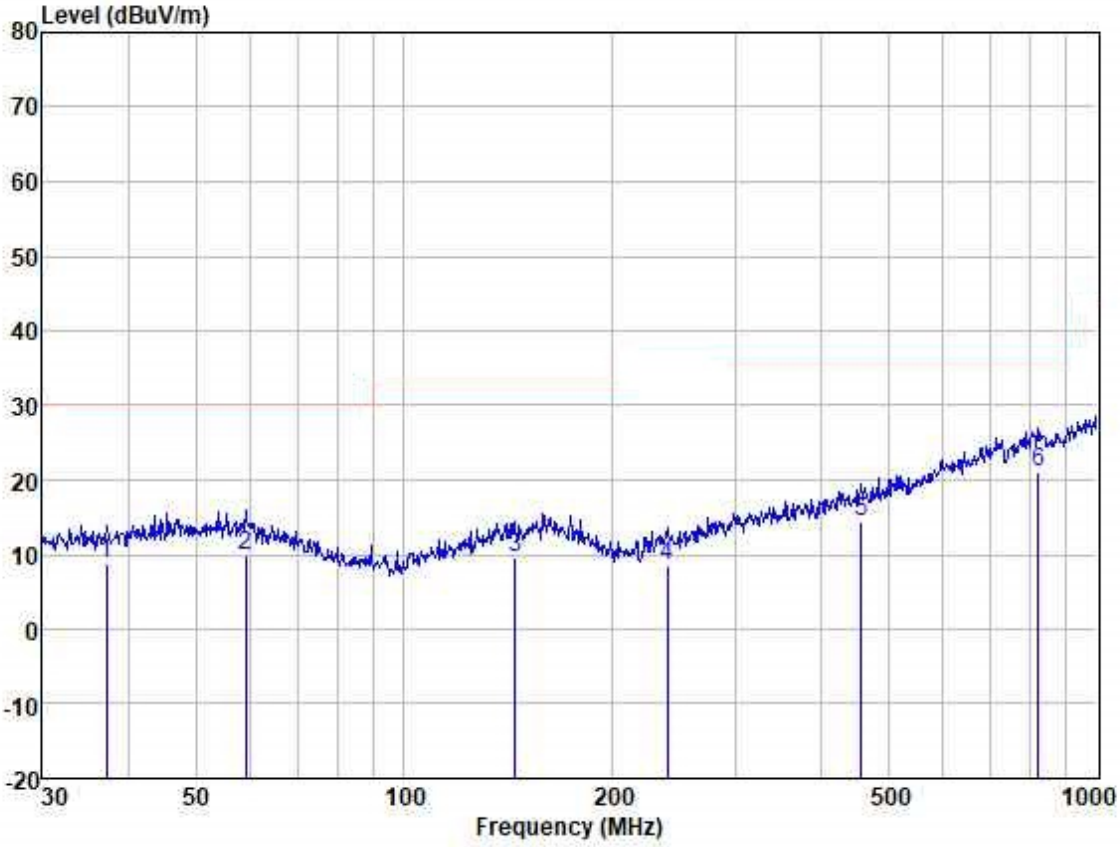
Test Mode: 00; Polarity: Vertical



Site : SGS
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Anterna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	37.155	23.02	13.20	0.66	27.99	8.89			VERTICAL	QP
2	59.025	23.62	13.45	0.77	27.93	9.91			VERTICAL	QP
3	144.842	23.04	13.24	0.97	27.74	9.51			VERTICAL	QP
4	239.987	22.77	11.60	1.48	27.30	8.55			VERTICAL	QP
5	457.507	23.80	17.09	1.87	28.37	14.39			VERTICAL	QP
6	824.597	23.36	23.32	2.55	28.27	20.96			VERTICAL	QP

Frequency (MHz)	Level @10m (dBuV/m)	Convert Factor (dB)*	Level @ 3m (dBuV/m)	Limit @3m (dBuV/m)	Over limit (dB)	Remark
37.155	8.89	10.46	19.35	40.00	-20.65	QP
59.025	9.91	10.46	20.37	40.00	-19.63	QP
144.842	9.51	10.46	19.97	43.52	-23.55	QP
239.987	8.55	10.46	19.01	46.02	-27.01	QP
457.507	14.39	10.46	24.85	46.02	-21.17	QP
824.597	20.96	10.46	31.42	46.02	-14.60	QP

*Remark：

Level (dBuV/m) @3m = Level (dBuV/m) @10m + Convert Factor (dB)

Convert Factor (dB) = 20*log(Measurement Distance/Specified Distance) = 20*log(10/3) = 10.46 dB according to 15.31 (f) (1)

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7.4 Radiated Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10 (2013) Section 6.6

Limit:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
Above 1000	500	3

7.4.1 E.U.T. Operation

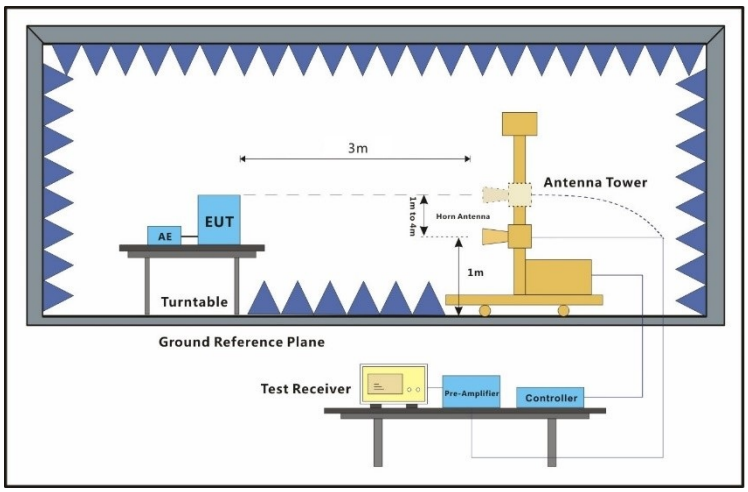
Operating Environment:

Temperature: 23.2 °C Humidity: 58.6 % RH Atmospheric Pressure: 1020 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

a. For above 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.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

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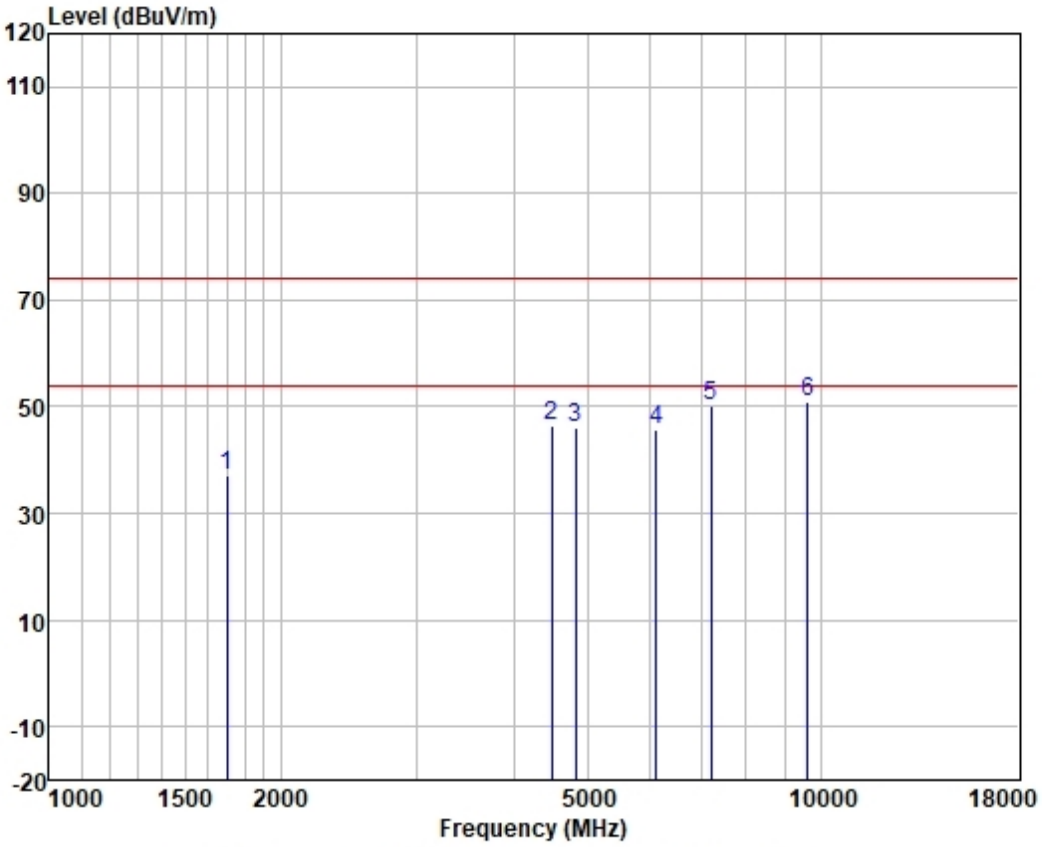
Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:Low



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1702.042	47.04	25.15	2.85	38.03	37.01	74.00	-36.99	VERTICAL	peak
2	4482.150	45.33	34.12	4.62	37.44	46.63	74.00	-27.37	VERTICAL	peak
3	4816.000	44.42	34.16	4.82	37.38	46.02	74.00	-27.98	VERTICAL	peak
4	6124.292	44.24	32.93	5.48	37.10	45.55	74.00	-28.45	VERTICAL	Peak
5	7224.000	45.67	35.70	5.94	37.17	50.14	74.00	-23.86	VERTICAL	peak
6	9632.000	42.27	38.70	7.05	37.11	50.91	74.00	-23.09	VERTICAL	peak

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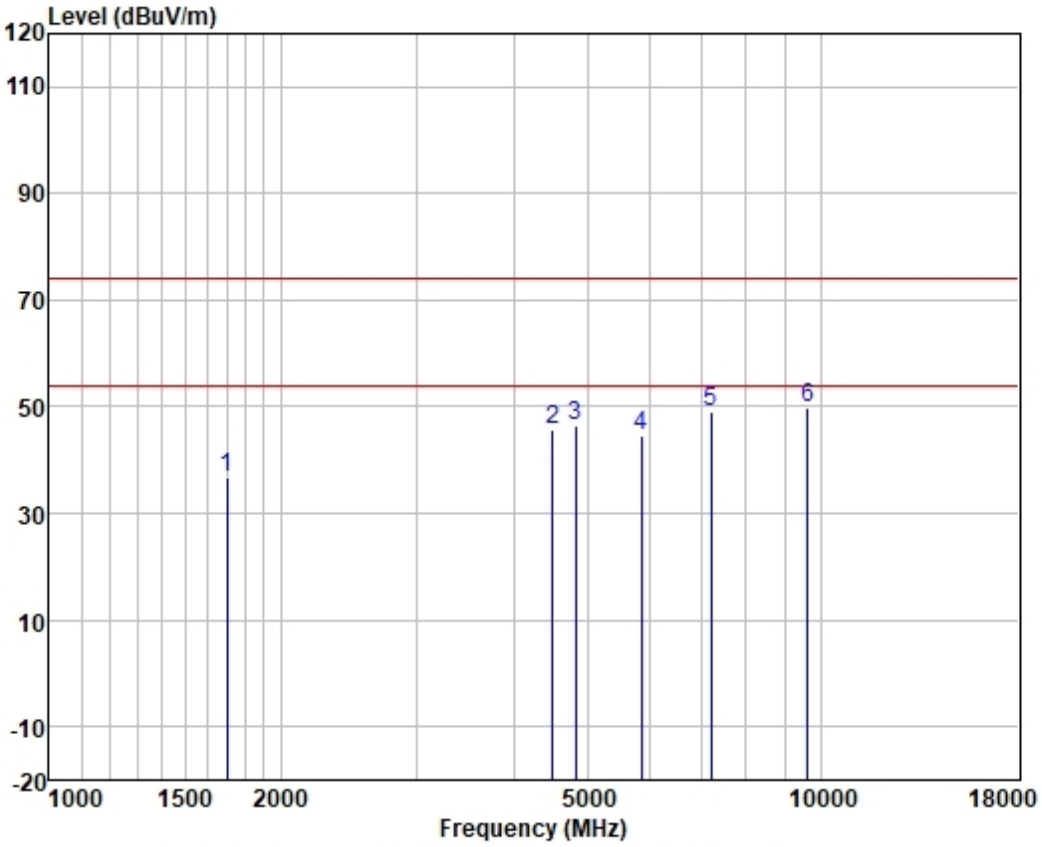
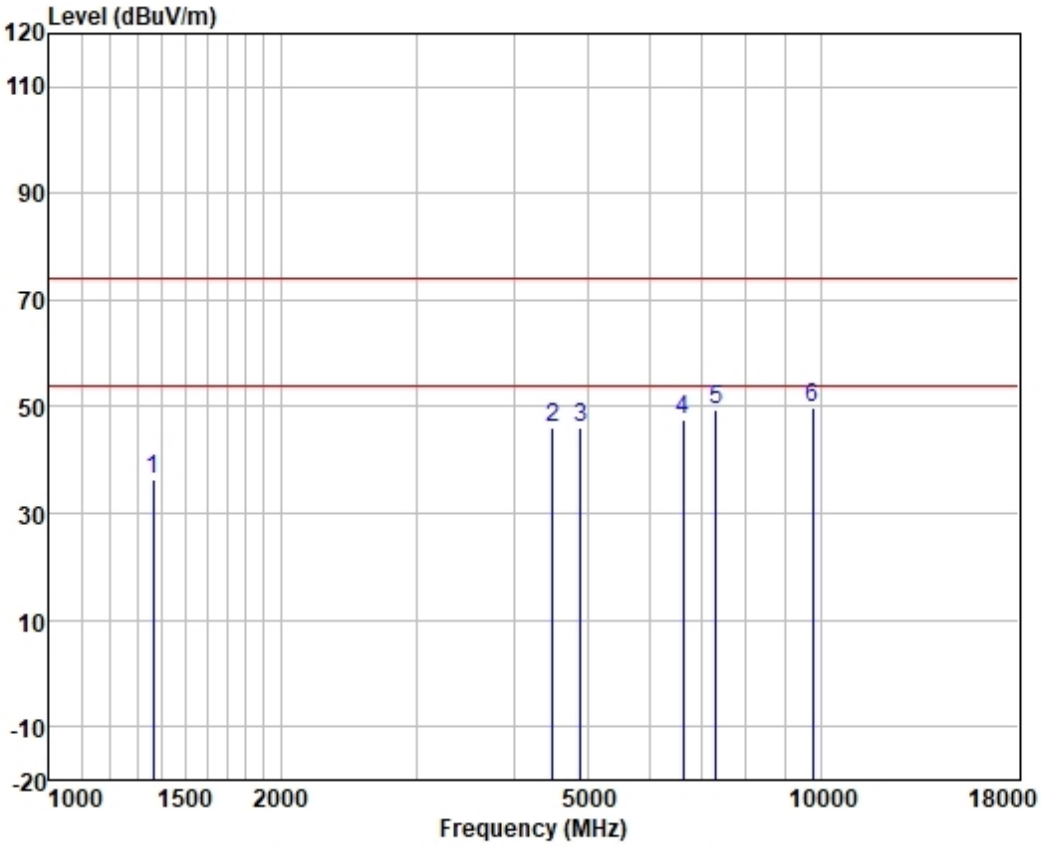
Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:Low



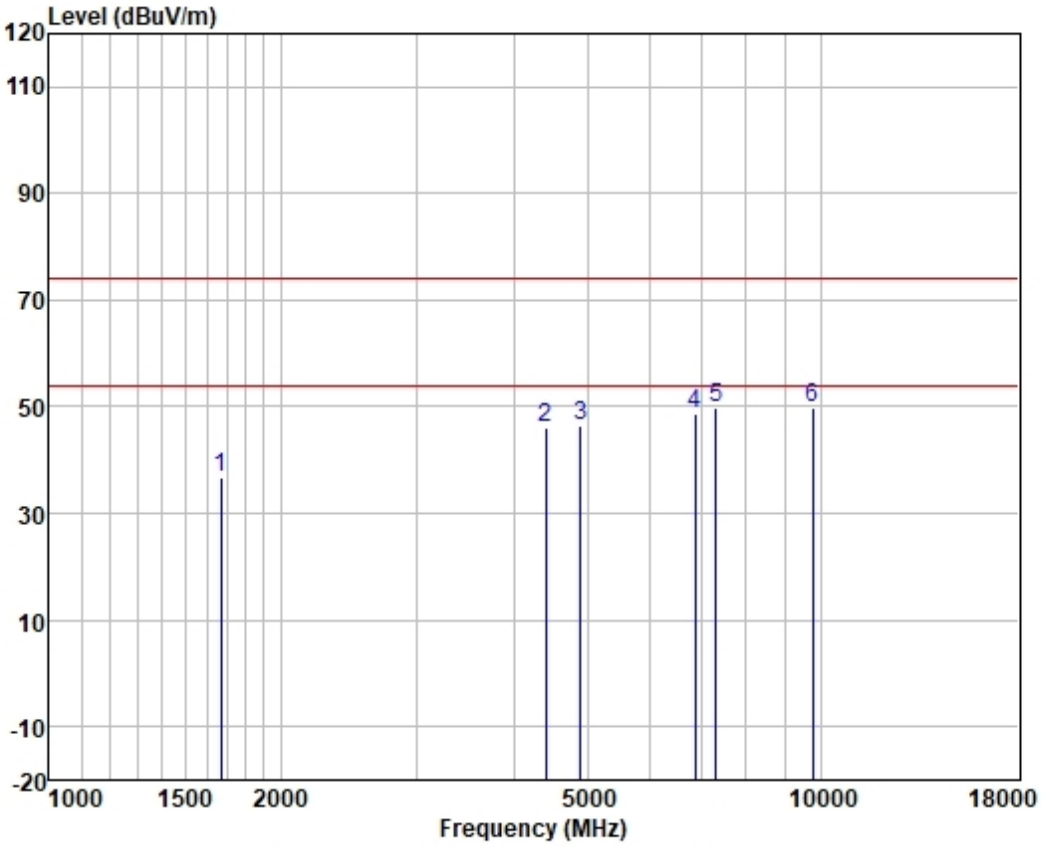
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1702.042	46.70	25.15	2.85	38.03	36.67	74.00	-37.33	HORIZONTAL	peak
2	4495.125	44.47	34.17	4.62	37.44	45.82	74.00	-28.18	HORIZONTAL	peak
3	4816.000	44.81	34.16	4.82	37.38	46.41	74.00	-27.59	HORIZONTAL	peak
4	5864.443	43.58	32.68	5.38	37.11	44.53	74.00	-29.47	HORIZONTAL	Peak
5	7224.000	44.71	35.70	5.94	37.17	49.18	74.00	-24.82	HORIZONTAL	peak
6	9632.000	41.13	38.70	7.05	37.11	49.77	74.00	-24.23	HORIZONTAL	peak

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:middle



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1366.374	47.91	24.18	2.64	38.51	36.22	74.00	-37.78	VERTICAL	peak
2	4495.125	44.57	34.17	4.62	37.44	45.92	74.00	-28.08	VERTICAL	peak
3	4886.000	44.38	34.15	4.86	37.35	46.04	74.00	-27.96	VERTICAL	peak
4	6640.542	44.92	34.17	5.70	37.12	47.67	74.00	-26.33	VERTICAL	peak
5	7329.000	44.43	36.07	5.98	37.18	49.30	74.00	-24.70	VERTICAL	peak
6	9772.000	40.90	38.83	7.13	37.11	49.75	74.00	-24.25	VERTICAL	peak

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:middle



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1672.779	47.01	24.98	2.82	38.05	36.76	74.00	-37.24	HORIZONTAL	peak
2	4405.090	45.01	33.74	4.61	37.46	45.90	74.00	-28.10	HORIZONTAL	peak
3	4886.000	44.66	34.15	4.86	37.35	46.32	74.00	-27.68	HORIZONTAL	peak
4	6874.906	45.07	34.88	5.83	37.14	48.64	74.00	-25.36	HORIZONTAL	peak
5	7329.000	44.88	36.07	5.98	37.18	49.75	74.00	-24.25	HORIZONTAL	peak
6	9772.000	40.82	38.83	7.13	37.11	49.67	74.00	-24.33	HORIZONTAL	peak

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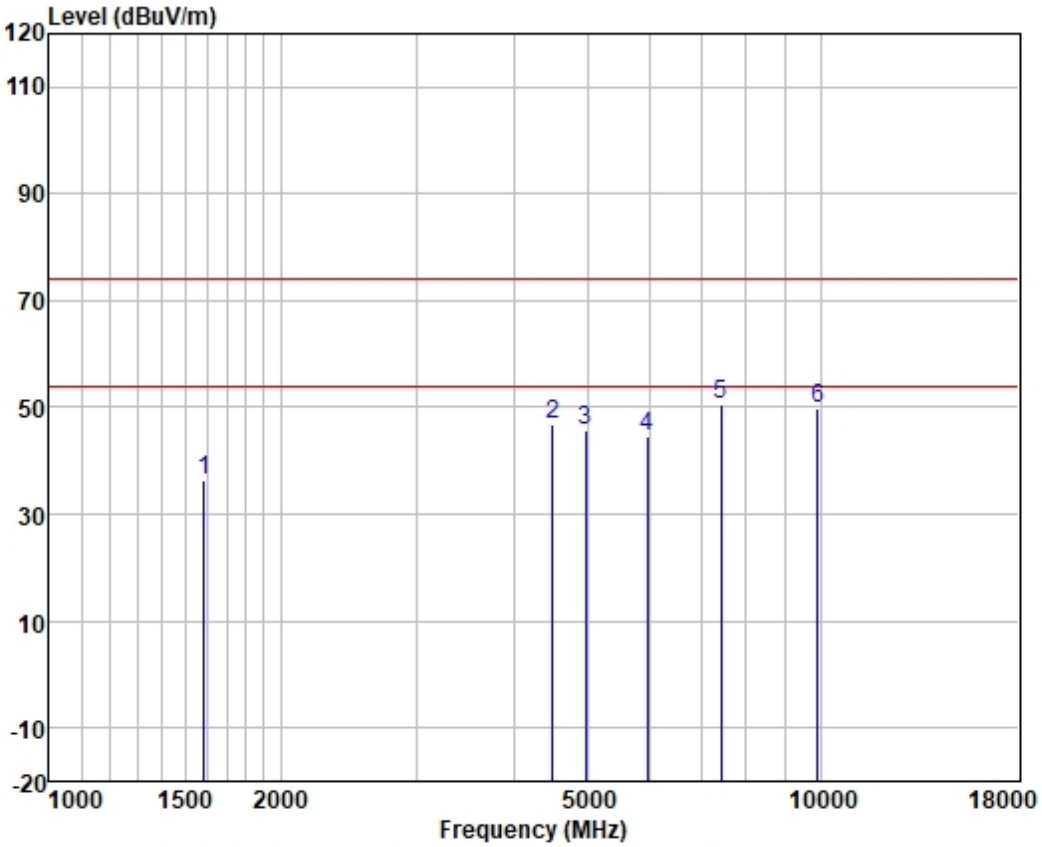
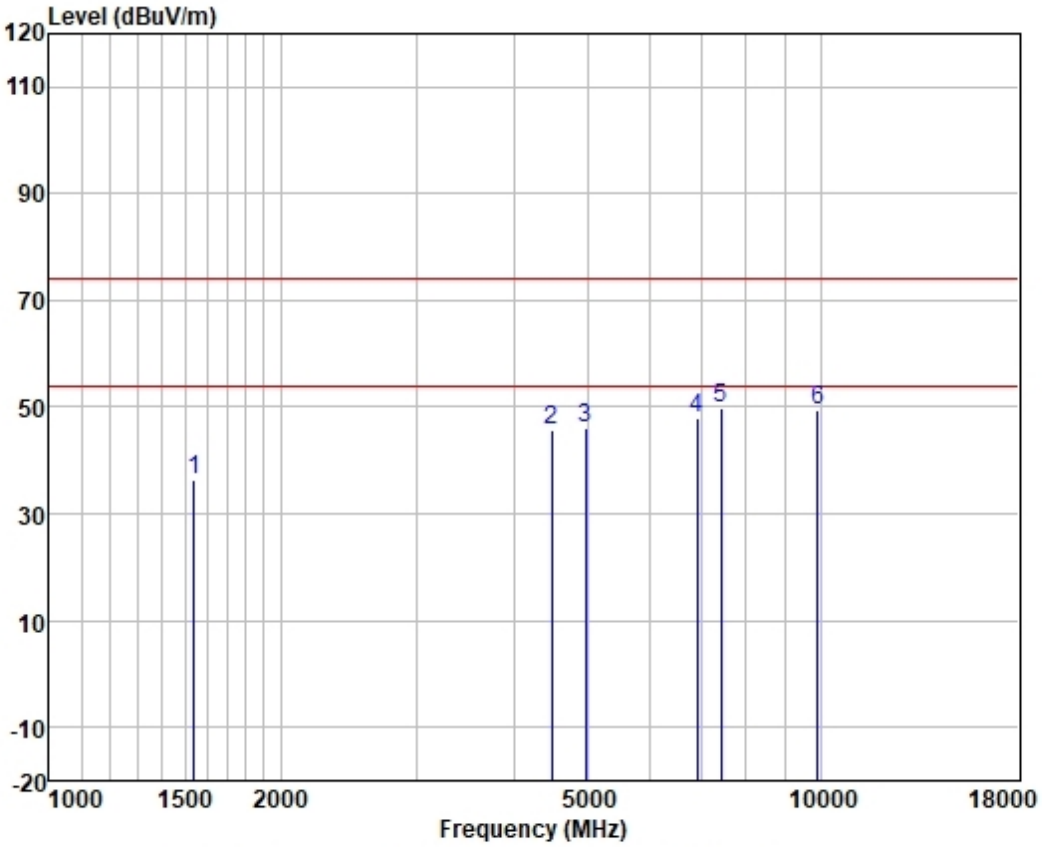
Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:High



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1587.975	47.08	24.65	2.75	38.15	36.33	74.00	-37.67	VERTICAL	peak
2	4495.125	45.64	34.17	4.62	37.44	46.99	74.00	-27.01	VERTICAL	peak
3	4960.000	43.88	34.15	4.89	37.32	45.60	74.00	-28.40	VERTICAL	peak
4	5967.033	43.65	32.70	5.43	37.10	44.68	74.00	-29.32	VERTICAL	Peak
5	7440.000	45.55	36.33	6.02	37.18	50.72	74.00	-23.28	VERTICAL	peak
6	9920.000	40.83	38.95	7.19	37.10	49.87	74.00	-24.13	VERTICAL	peak

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:High



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1542.733	47.23	24.53	2.72	38.23	36.25	74.00	-37.75	HORIZONTAL	peak
2	4482.150	44.36	34.12	4.62	37.44	45.66	74.00	-28.34	HORIZONTAL	peak
3	4960.000	44.24	34.15	4.89	37.32	45.96	74.00	-28.04	HORIZONTAL	peak
4	6914.763	44.43	34.97	5.84	37.14	48.10	74.00	-25.90	HORIZONTAL	peak
5	7440.000	44.61	36.33	6.02	37.18	49.78	74.00	-24.22	HORIZONTAL	peak
6	9920.000	40.39	38.95	7.19	37.10	49.43	74.00	-24.57	HORIZONTAL	peak

7.5 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215
Test Method: ANSI C63.10 (2013) Section 6.9

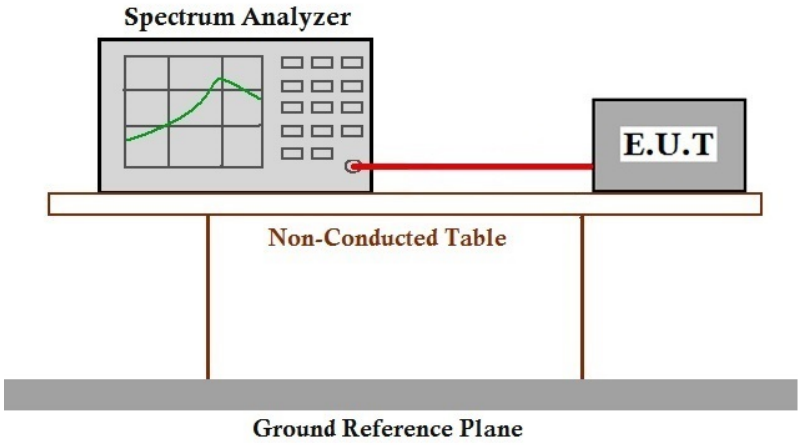
7.5.1 E.U.T. Operation

Operating Environment:
Temperature: 21.8 °C Humidity: 63.0 % RH Atmospheric Pressure: 1020 mbar

7.5.2 Test Mode Description

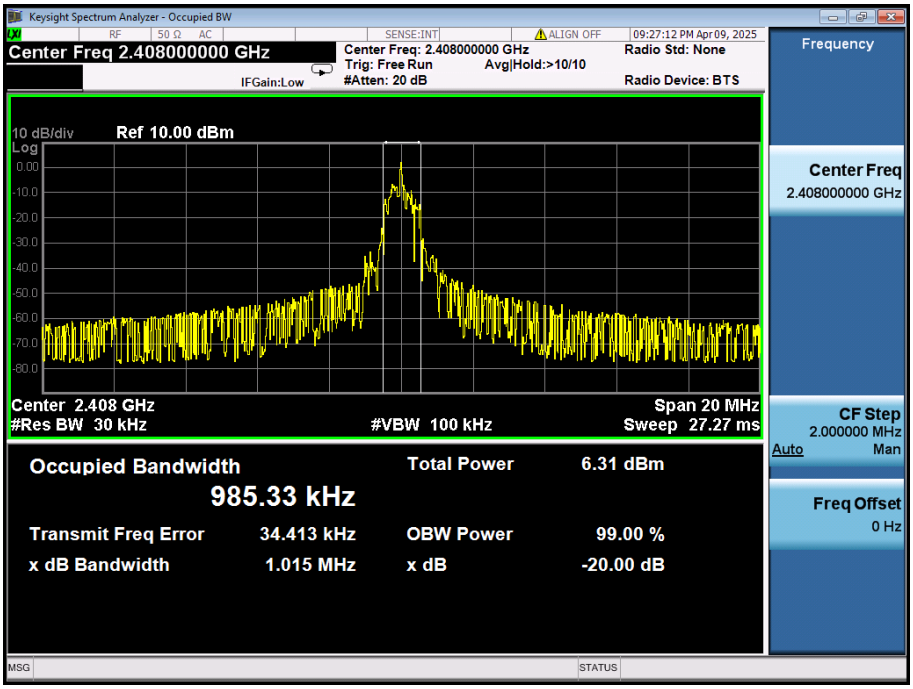
Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.5.3 Test Setup Diagram

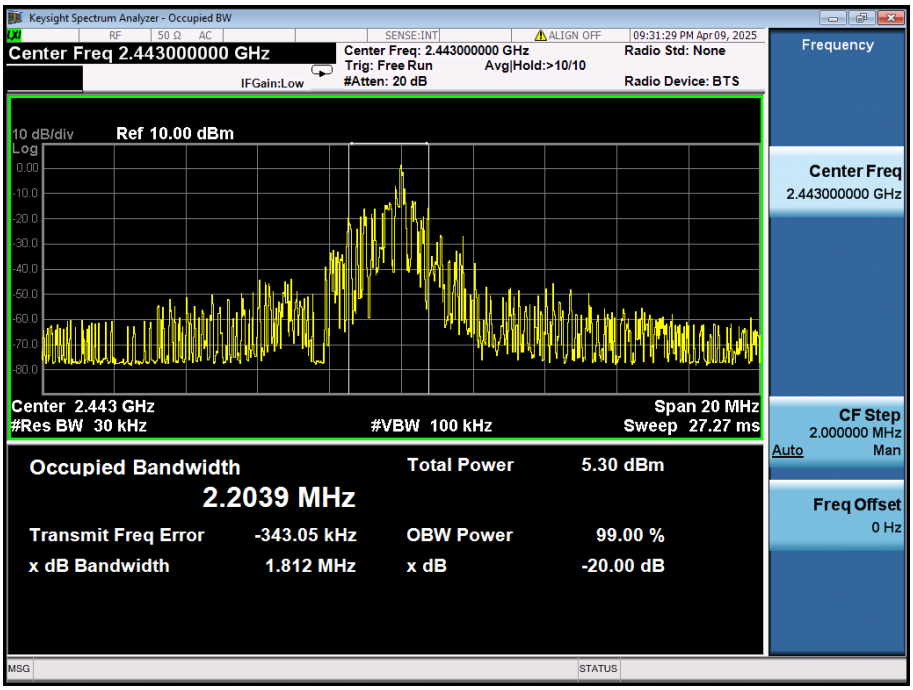


7.5.4 Measurement Procedure and Data

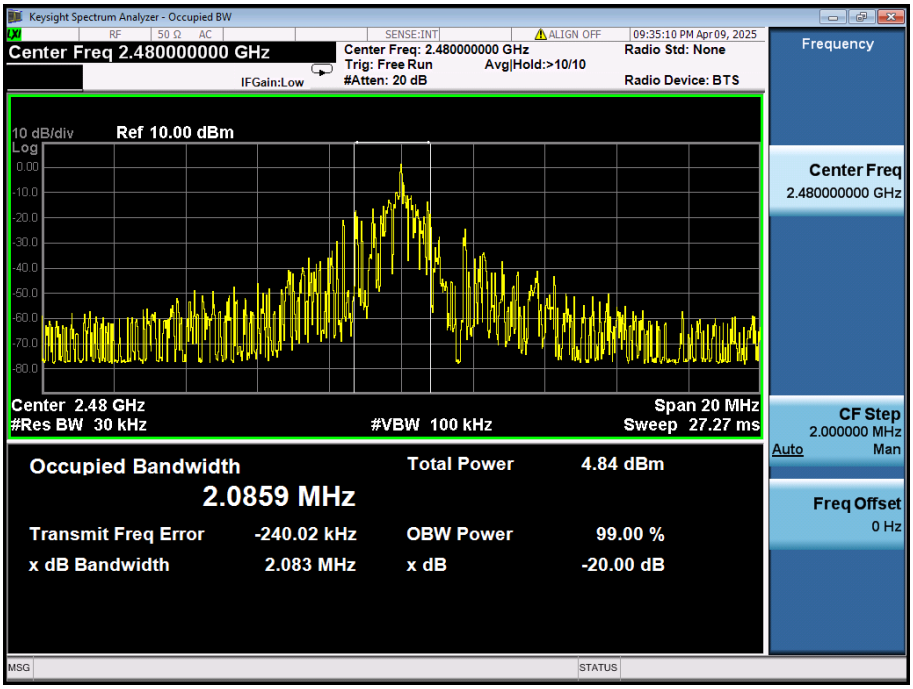
2408MHz



2443MHz



2480MHz



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8 Test Setup Photo

Refer to Appendix_Test Setup Photo for GZCR250300044201

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9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for GZCR2503000442HS

- End of the Report -

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