

RF Test Report

For

Applicant name: SHENZHEN GAT-IoT TECHNOLOGY CO., LTD
Address: Room 401, Bldg 5, Xinfu Industrial, Chongqing Road, zhancheng Community, Fuhai Street, Baoan District, Shenzhen, China
EUT name: LoRa mesh tracker
Brand name: 
Model number: GAT562 Tracker 30X
Series model number: Refer to section 2
FCC ID: 2BWQS-GAT562

Issued By

Company name: BTF Testing Lab (Shenzhen) Co., Ltd.
Address: Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Report number: BTF260605R00301
Test standards: 47 CFR Part 15.249
Test conclusion: Pass
Date of sample receipt: 2026-06-05
Test date: 2026-06-06 to 2026-06-18
Date of issue: 2026-06-25

Prepared by: 
Chris.Liu / Project engineer

Approved by: 
Ryan.CJ / EMC Manager



Note: All the test results in this report only related to the testing samples. Which can be duplicated completely for the legal use with approval of applicant; it shall not be reproduced except in full without the written approval of BTF Testing Lab (Shenzhen) Co., Ltd., All the objections should be raised within thirty days from the date of issue. To validate the report, you can contact us.

Revision History		
Version	Issue Date	Revisions Content
R_V0	2026-06-25	Original
Note: <i>Once the revision has been made, then previous versions reports are invalid.</i>		

Table of Contents

1 Introduction	4
1.1 Laboratory Location	4
1.2 Laboratory Facility	4
1.3 Announcement	4
2 Product Information	5
2.1 Application Information	5
2.2 Manufacturer Information	5
2.3 Factory Information	5
2.4 General Description of Equipment under Test (EUT)	5
2.5 Technical Information	6
3 Summary of Test Results	7
3.1 Test Standards	7
3.2 Uncertainty of Test	7
3.3 Summary of Test Result	7
3.4 Additions to, deviations, or exclusions from the method	7
4 Test Configuration	8
4.1 Test Equipment List	8
4.2 Test Auxiliary Equipment	9
4.3 Test Modes	9
4.4 Test software	9
5 Evaluation Results (Evaluation)	10
5.1 Antenna requirement	10
5.1.1 Conclusion	10
6 Radio Spectrum Matter Test Results (RF)	11
6.1 Conducted Emission at AC power line	11
6.1.1 Test Data	12
6.2 99% bandwidth &20dB Bandwidth	14
6.2.1 Test Data	15
6.3 Field Strength of Fundamental	16
6.3.1 Test Data	17
6.4 Emissions in frequency bands (below 1GHz)	18
6.4.1 Test Data	20
6.5 Emissions in frequency bands (above 1GHz)	22
6.5.1 Test Data	24
6.6 Emissions in Band Edge	25
6.6.1 Test Data	26
7 Test Setup Photos	27
8 EUT Constructional Details (EUT Photos)	27

1 Introduction

1.1 Laboratory Location

Test location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Phone number:	+86-0755-23146130
Fax number:	+86-0755-23146130

1.2 Laboratory Facility

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

- **FCC - Designation No.: CN1409**
BTF Testing Lab (Shenzhen) Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The test firm Registration No. is 695374.
- **CNAS - Registration No.: CNAS L17568**
BTF Testing Lab (Shenzhen) Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L17568.
- **A2LA - Registration No.: 6660.01**
BTF Testing Lab (Shenzhen) Co., Ltd. is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.
- **VCCI - Registration No.: C-20122, G-20157, R-20166**
EMC LAB: Certificated by VCCI, Japan
Registration No.: C-20122, G-20157, R-20166
Date of Registration: June 20, 2025
This Certificate is valid until June 19, 2028

1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.
- (7) All entrusted information in this report is provided by the client and has been confirmed through consultation with the client; The testing items for this report have been discussed and confirmed with the client, and our company is only responsible for the content reflected in the report.

2 Product Information

2.1 Application Information

Company name:	SHENZHEN GAT-IoT TECHNOLOGY CO., LTD
Address:	Room 401, Bldg 5, Xinfu Industrial, Chongqing Road, zhancheng Community, Fuhai Street, Baoan District, Shenzhen, China

2.2 Manufacturer Information

Company name:	SHENZHEN GAT-IoT TECHNOLOGY CO., LTD
Address:	Room 401, Bldg 5, Xinfu Industrial, Chongqing Road, zhancheng Community, Fuhai Street, Baoan District, Shenzhen, China

2.3 Factory Information

Company name:	SHENZHEN GAT-IoT TECHNOLOGY CO., LTD
Address:	Room 401, Bldg 5, Xinfu Industrial, Chongqing Road, zhancheng Community, Fuhai Street, Baoan District, Shenzhen, China

2.4 General Description of Equipment under Test (EUT)

EUT name:	LoRa mesh tracker
Under test model name:	GAT562 Tracker 30X
Series model name:	N/A
Description of model name differentiation:	N/A
Hardware version:	V1.3
Software version:	2.7.18
Rating:	INPUT: DC 5V 1A Battery: 3.7V 2500mAh 9.25Wh

2.5 Technical Information

Operation Frequency:	906.875MHz
Channel numbers:	1
Modulation technology:	FSK
Antenna type:	External Antenna
Antenna gain:	-1.18dBi (declare by Applicant)

3 Summary of Test Results

3.1 Test Standards

The tests were performed according to following standards:

47 CFR 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: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

3.2 Uncertainty of Test

Measurement	Value
Occupied Channel Bandwidth	±5 %
Unwanted Emissions, conducted	±3.0 dB
Supply voltages	±3 %
Time	±5 %
Conducted Emission for LISN (9kHz ~ 150kHz)	±2.97 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	±2.45 dB
Radiated Emission(9kHz~30MHz)	±2.20 dB
Radiated Emission (30MHz ~ 1000MHz)	±4.80 dB
Radiated Emission (1GHz ~ 18GHz)	±4.82 dB

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.3 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.249	15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.249	15.207(a)	Pass
99% bandwidth & 20dB Bandwidth	47 CFR Part 15.249	15.215	Pass
Fundamental & Radiated Spurious Emission Measurement	47 CFR Part 15.249	15.205(a), 15.209(a) 15.249(a), 15.249(c)	Pass
Emissions in non-restricted frequency bands	47 CFR Part 15.249	15.205(a), 15.209(a) 15.249(a), 15.249(c)	Pass
Band edge emissions (Radiated)	47 CFR Part 15.249	15.205(a), 15.209(a) 15.249(a), 15.249(c)	Pass

Remark:

1. Pass: Meet the requirements.
2. N/A: not applicable.

3.4 Additions to, deviations, or exclusions from the method

None

4 Test Configuration

4.1 Test Equipment List

Conducted Emission at AC power line					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	Rohde & Schwarz	ESCI3	101422	2025/10/17	2026/10/16
V-LISN	Schwarzbeck	NSLK 8127	01073	2025/8/23	2026/8/22
Coaxial Switcher	Schwarzbeck	CX210	CX210	/	/
Pulse Limiter	Schwarzbeck	VTSD 9561-F	00953	/	/
Test Software	Frad	EZ_EMC	Version: EMC-CON 3A1.1+	/	/

Conducted Method Test					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Keysight	N9020A	MY50410020	2025/10/17	2026/10/16
ESG Vector Signal Generator	Agilent	E4438C	MY45094854	2025/10/17	2026/10/16
MXG Vector Signal Generator	Agilent	N5182A	MY46240163	2025/10/17	2026/10/16
Wideband Radio Communication Tester	Rohde&Schwarz	CMW500	161997	2025/10/17	2026/10/16
Temperature Humidity Chamber	ZZCKONG	ZZ-K02A	20210928007	2025/10/17	2026/10/16
DC Power Supply	Tongmen	etm-6050c	20211026123	2025/10/17	2026/10/16
RF Control Unit	Techy	TR1029-1	10291	2025/10/17	2026/10/16
RF Sensor Unit	Techy	TR1029-2	10292	2025/10/17	2026/10/16
Test Software	TST Pass	/	Version: 2.0	/	/

Radiated Emission Test					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	Rohde & Schwarz	ESCI7	101032	2025/10/17	2026/10/16
Signal Analyzer	Rohde & Schwarz	FSQ40	100010	2025/10/17	2026/10/16
Log periodic antenna	Schwarzbeck	VULB 9168	01328	2025/10/18	2026/10/17
Loop antenna	Schwarzbeck	FMZB1519B	00191	2025/06/30	2026/06/29
Preamplifier (9KHz ~ 6GHz)	Schwarzbeck	BBV9744	00246	2026/5/10	2027/5/9
BELOW-Cable	REBES Talent	9K1G	21101576	2025/8/23	2026/8/22
Horn Antenna	Schwarzbeck	BBHA9120D	2597	2025/10/18	2026/10/17
Preamplifier (1GHz ~ 18GHz)	Schwarzbeck	BBV9718D	00008	2026/5/10	2027/5/9

Preamplifier	TSTPASS	LNA10180G45	TS2215007	2025/5/10	2027/5/9
ABOVE-Cable	REBES Talent	1~18G	21101558	2025/8/23	2026/8/22
Horn Antenna	SCHWARZBECK	BBHA9170	1157	2025/10/18	2026/10/17
Low Noise Pre-amplifier	Sket	LNPA_1840G-50	SK2022032902	2025/10/17	2026/10/16
ABOVE-Cable2	REBES Talent	18~40G	21101686	2025/8/23	2026/8/22
ABOVE-Cable1	REBES Talent	18~40G	21101687	2025/8/23	2026/8/22
Test Software	Frad	EZ EMC	Version: FA-03A2 RE+		

4.2 Test Auxiliary Equipment

The EUT has been tested as an independent unit.

4.3 Test Modes

No.	Test Modes
TM1	TX mode

4.4 Test software

Test software:	Version:	Power Class:
Press and hold the button to transmit	/	Default

5 Evaluation Results (Evaluation)

5.1 Antenna requirement

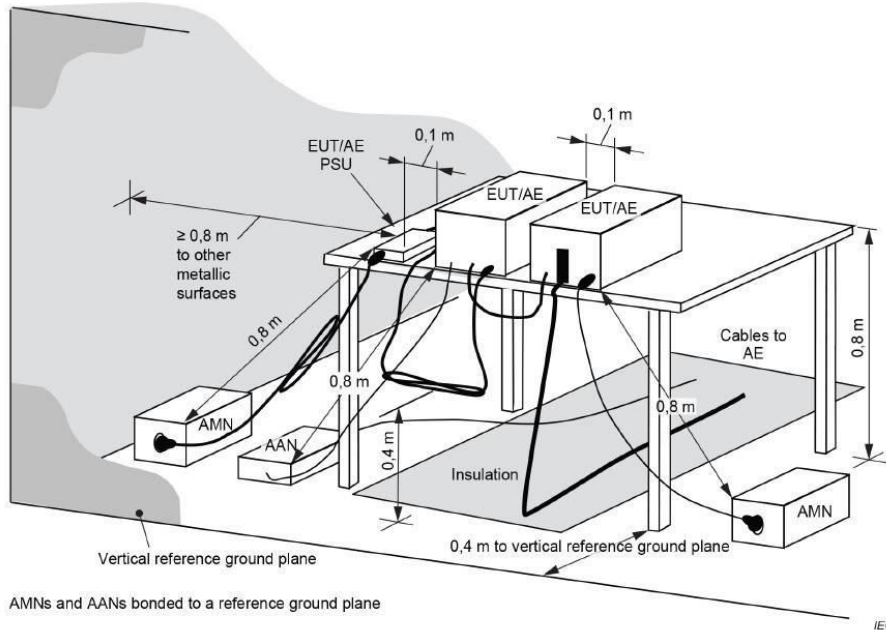
Test Requirement:	Refer to 47 CFR Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.
Operating Environment:	
Temperature:	23.5 °C
Humidity:	50.8 %
Atmospheric Pressure:	1010 mbar
Test voltage:	/

5.1.1 Conclusion

The antenna is an External Antenna which permanently attached, and the best case gain of the antenna is -1.18dBi. See product internal photos for details.

6 Radio Spectrum Matter Test Results (RF)

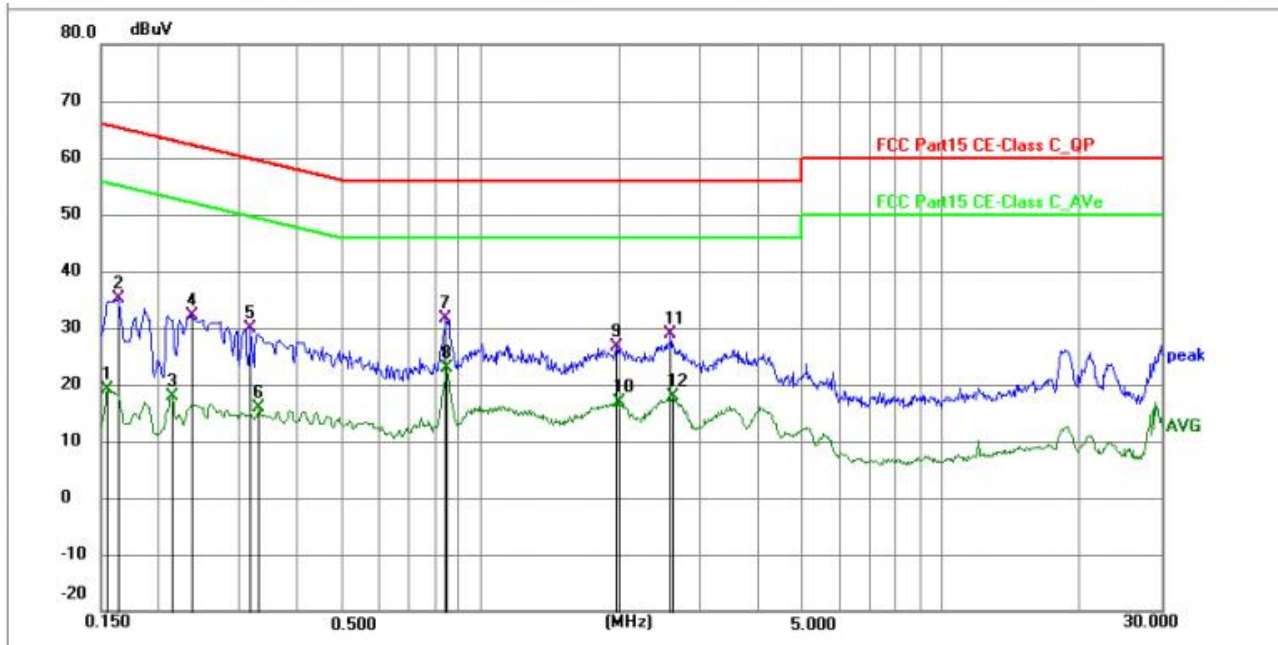
6.1 Conducted Emission at AC power line

Test Requirement:	Refer to 47 CFR 15.207(a), Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).		
Test Method:	ANSI C63.10-2020+Cor.1-2023 section 6.2		
Test Limit:	Frequency of emission (MHz)	Conducted limit (dBμV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
*Decreases with the logarithm of the frequency.			
Procedure:	Refer to ANSI C63.10-2020 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices		
Test Setup:			
Operating Environment:			
Temperature:	24.8 °C		
Humidity:	52.1 %		
Atmospheric Pressure:	1010 mbar		
Test voltage:	AC 120V 60Hz		

6.1.1 Test Data

Remark: The report only reflects the test data of worst mode.

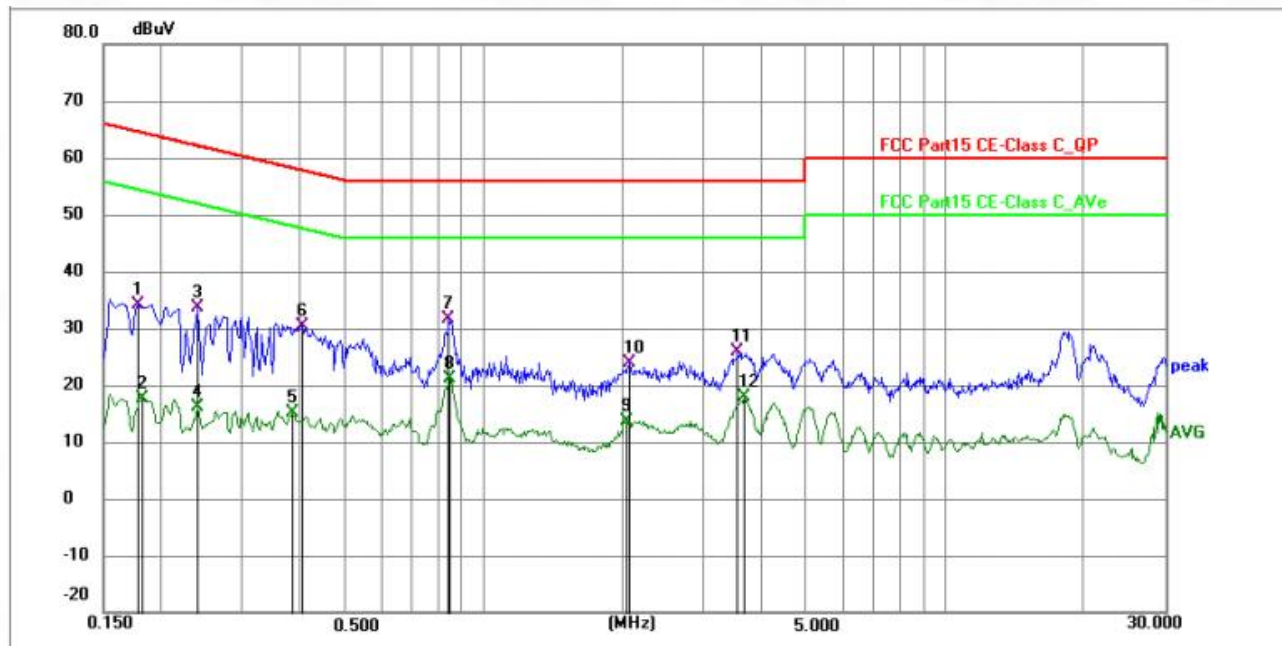
Test phase: L phase



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1544	8.95	10.13	19.08	55.76	-36.68	AVG	P	
2	0.1635	24.86	10.18	35.04	65.28	-30.24	QP	P	
3	0.2130	7.67	10.12	17.79	53.09	-35.30	AVG	P	
4	0.2354	22.01	10.08	32.09	62.26	-30.17	QP	P	
5	0.3165	19.69	10.13	29.82	59.80	-29.98	QP	P	
6	0.3300	5.72	10.13	15.85	49.45	-33.60	AVG	P	
7	0.8430	21.54	10.10	31.64	56.00	-24.36	QP	P	
8 *	0.8475	12.76	10.10	22.86	46.00	-23.14	AVG	P	
9	1.9724	16.35	10.27	26.62	56.00	-29.38	QP	P	
10	2.0040	6.65	10.27	16.92	46.00	-29.08	AVG	P	
11	2.5844	18.59	10.23	28.82	56.00	-27.18	QP	P	
12	2.6160	7.55	10.23	17.78	46.00	-28.22	AVG	P	

Note: Margin = Level - Limit = Reading + factor - Limit

Test phase: N phase



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1770	24.00	10.11	34.11	64.63	-30.52	QP	P	
2	0.1815	7.52	10.11	17.63	54.42	-36.79	AVG	P	
3	0.2400	23.45	10.12	33.57	62.10	-28.53	QP	P	
4	0.2400	6.07	10.12	16.19	52.10	-35.91	AVG	P	
5	0.3840	4.90	10.12	15.02	48.19	-33.17	AVG	P	
6	0.4020	20.17	10.12	30.29	57.81	-27.52	QP	P	
7 *	0.8430	21.42	10.15	31.57	56.00	-24.43	QP	P	
8	0.8475	10.88	10.15	21.03	46.00	-24.97	AVG	P	
9	2.0445	3.44	10.21	13.65	46.00	-32.35	AVG	P	
10	2.0715	13.67	10.21	23.88	56.00	-32.12	QP	P	
11	3.5565	15.54	10.28	25.82	56.00	-30.18	QP	P	
12	3.6735	7.50	10.28	17.78	46.00	-28.22	AVG	P	

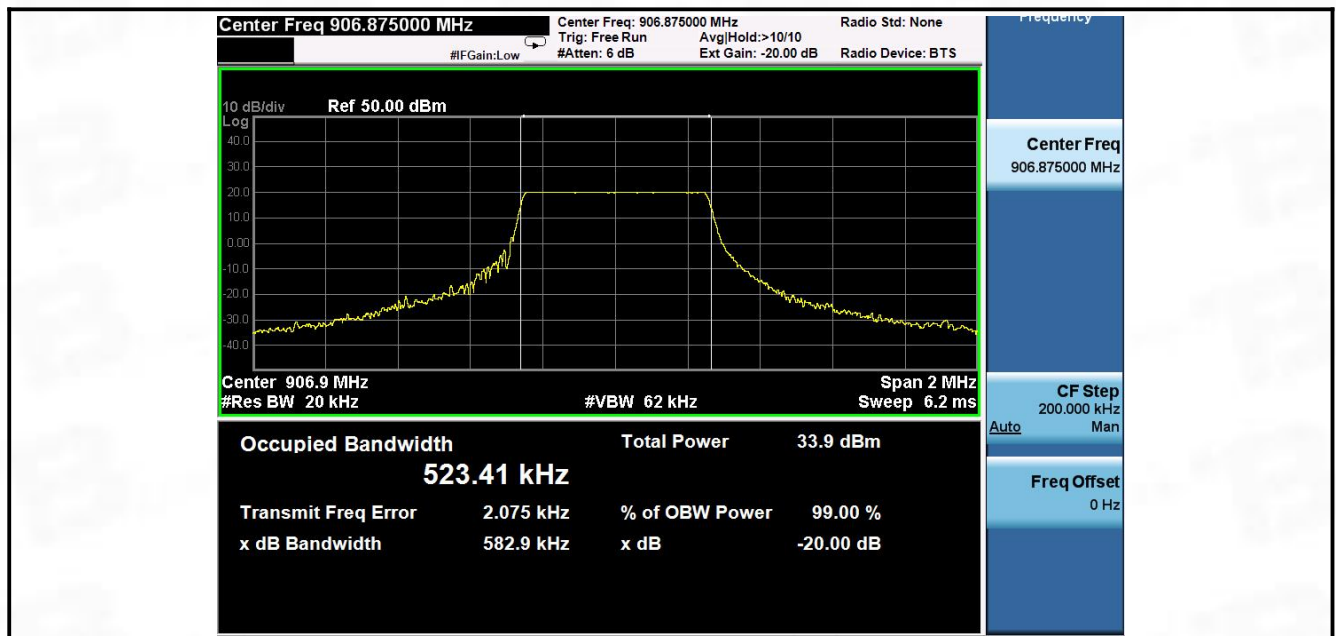
6.2 99% bandwidth &20dB Bandwidth

Test Requirement:	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.
Test Method:	Occupied bandwidth—relative measurement procedure
Test 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.
Procedure:	a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW. b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement. c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2. d) Steps a) through c) might require iteration to adjust within the specified tolerances. e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value. f) Set detection mode to peak and trace mode to max hold. g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value). h) Determine the “-xx dB down amplitude” using $[(\text{reference value}) - \text{xx}]$. Alternatively, this calculation may be made by using the marker-delta function of the instrument. i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j). j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth. k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly

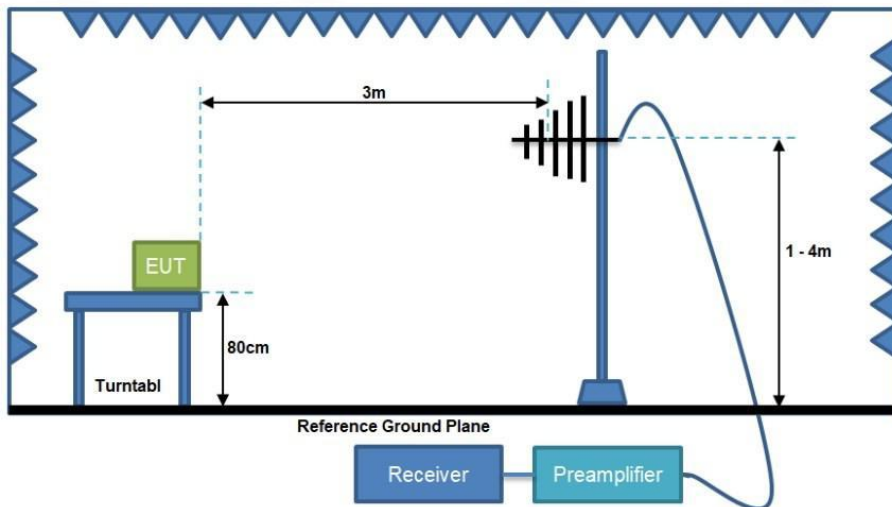
	labeled. Tabular data may be reported in addition to the plot(s).
Test Setup:	See section 4.6 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos
Operating Environment:	
Temperature:	22.5℃
Humidity:	46%RH
Atmospheric Pressure:	1010 hpa
Test voltage:	DC 3.7V from Battery

6.2.1 Test Data

Frequency (MHz)	99% Occupied Bandwidth (kHz)	20dB Bandwidth (kHz)
	Result	Result
906.875	523.41	582.9



6.3 Field Strength of Fundamental

Test Requirement:	47 CFR 15.249 (a)		
Test Method:	ANSI C63.10-2020+Cor.1-2023 section 6.5 6.6		
Test Limit:	Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
	902-928 MHz	50	500
	2400-2483.5 MHz	50	500
	5725-5875 MHz	50	500
	24.0-24.25 GHz	250	2500
Procedure:	a) The EUT was setup and tested according to ANSI C63.10 requirements. b) The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. c) 3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. d) The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10 on radiated measurement.		
Test Setup:			
Operating Environment:			
Temperature:	22.4 °C		
Humidity:	48.2 %		
Atmospheric Pressure:	1010 mbar		
Test voltage:	DC 3.7V from Battery		

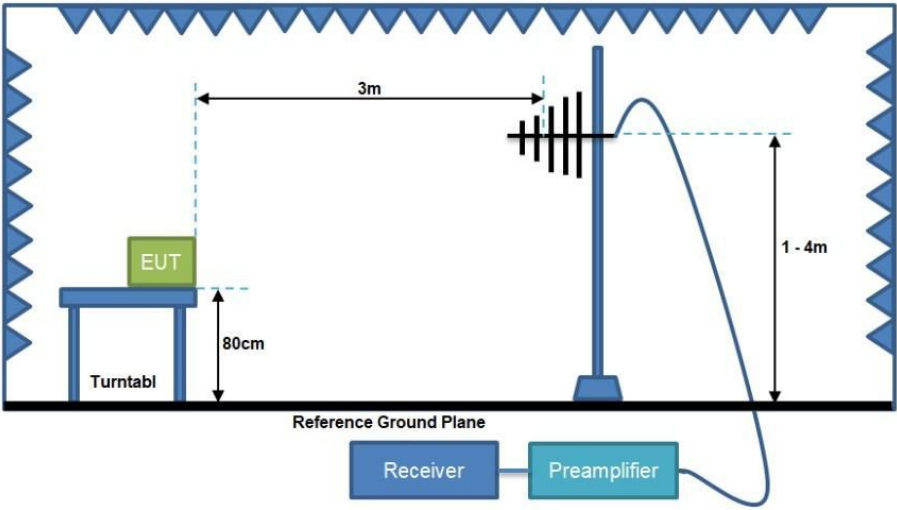
6.3.1 Test Data

Test Channel: 902.25MHz								
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Polarization:	Result
906.8742	72.35	8.41	80.76	94.00	-13.24	QP	H	Pass
906.8748	72.66	8.41	81.07	94.00	-12.93	QP	V	Pass

Note:Margin=Level-Limit=Reading+factor-Limit
Factor= Antenna factor+ cable loss -amplifier gain

6.4 Emissions in frequency bands (below 1GHz)

Test Requirement:	Refer to 47 CFR 15.249(a), 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)).`		
Test Method:	ANSI C63.10-2020+Cor.1-2023 section 6.6.4		
Test Limit:	Part 15.209 Radiated emission limits; general requirements:		
	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
	Above 960	500	3
	** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Part 15.249(a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:		
	Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
	902-928 MHz	50	500
	2400-2483.5 MHz	50	500
	5725-5875 MHz	50	500
	24.0-24.25 GHz	250	2500
Procedure:	ANSI C63.10-2020+Cor.1-2023 section 6.6.4		

Test Setup:	
Operating Environment:	
Temperature:	25.7 °C
Humidity:	53.5 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V from Battery

6.4.1 Test Data

Remark: The report only reflects the test data of worst mode.

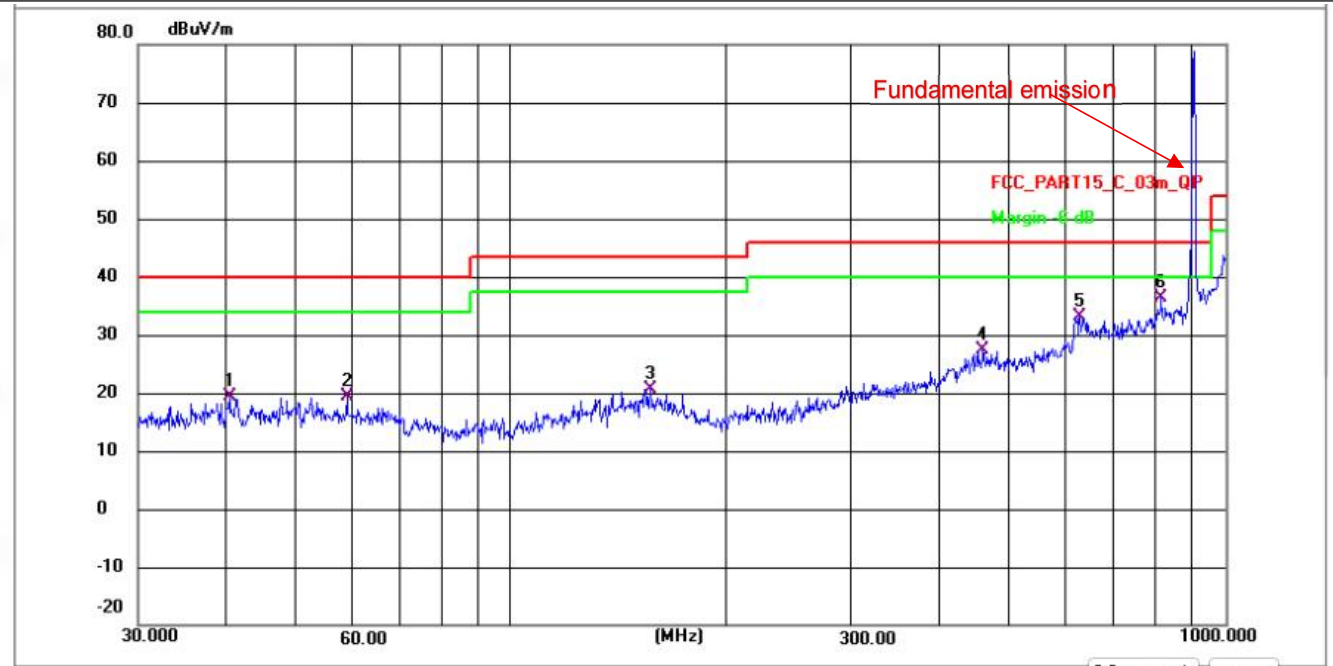
Note:

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

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})(\text{dB})$;

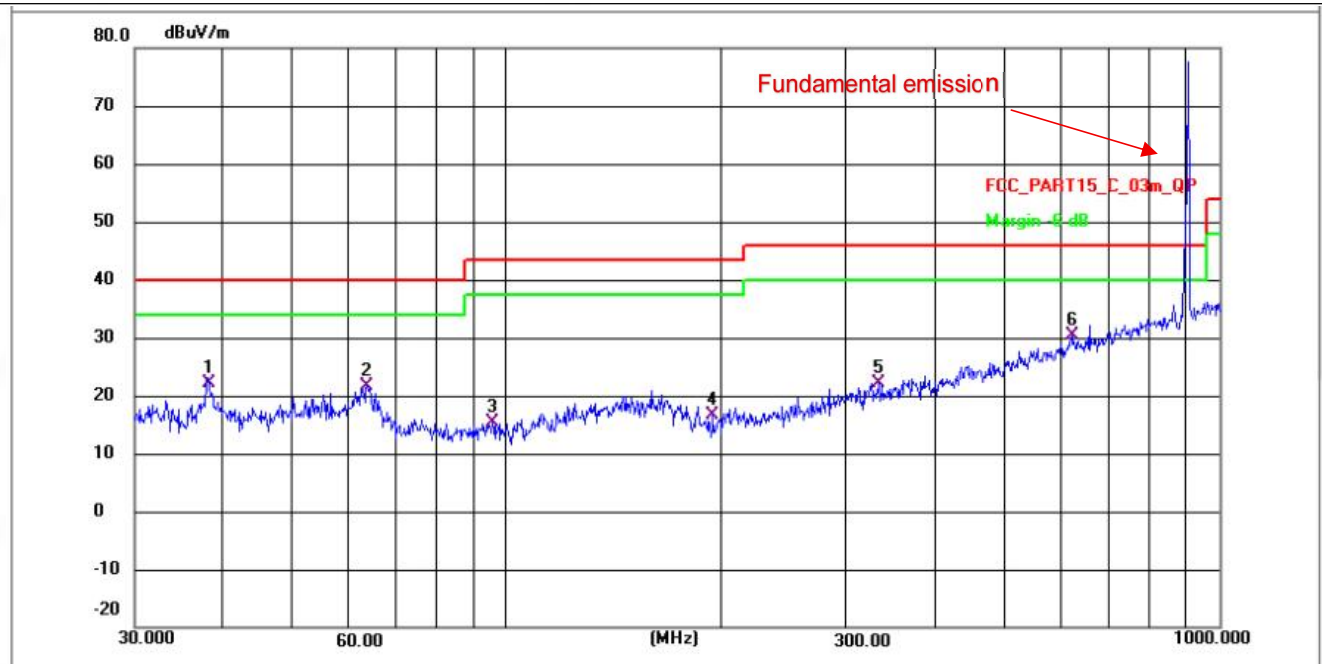
Limit line = specific limits (dBuV) + distance extrapolation factor.

TM1 / Polarization: Horizontal / Band: 906.875 MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	40.4170	28.94	-9.68	19.26	40.00	-20.74	QP	P
2	58.9217	28.76	-9.32	19.44	40.00	-20.56	QP	P
3	157.0072	47.79	-27.09	20.70	43.50	-22.80	QP	P
4	459.1143	51.58	-24.27	27.31	46.00	-18.69	QP	P
5	627.2736	55.87	-22.84	33.03	46.00	-12.97	QP	P
6 *	814.5384	57.86	-21.43	36.43	46.00	-9.57	QP	P

TM1 / Polarization: Vertical / Band: 906.875 MHz

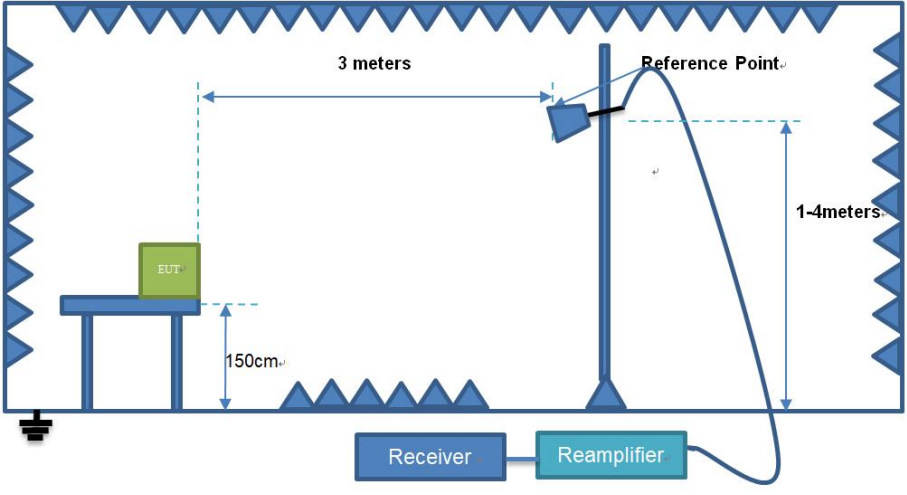


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	38.2120	31.87	-9.74	22.13	40.00	-17.87	QP	P
2	63.7588	30.79	-9.28	21.51	40.00	-18.49	QP	P
3	95.5943	43.19	-27.85	15.34	43.50	-28.16	QP	P
4	194.7946	43.36	-26.65	16.71	43.50	-26.79	QP	P
5	333.1021	47.52	-25.32	22.20	46.00	-23.80	QP	P
6 *	622.8900	53.23	-22.88	30.35	46.00	-15.65	QP	P

Note: Margin = Level - Limit = Reading + factor - Limit
Factor = Antenna factor + cable loss - amplifier gain

6.5 Emissions in frequency bands (above 1GHz)

Test Requirement:	Refer to 47 CFR 15.249(a), 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)).`		
Test Method:	ANSI C63.10-2020+Cor.1-2023 section 6.6.4		
Test Limit:	Part 15.209 Radiated emission limits; general requirements:		
	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
	Above 960	500	3
	** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Part 15.249(a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:		
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)	
902-928 MHz	50	500	
2400-2483.5 MHz	50	500	
5725-5875 MHz	50	500	
24.0-24.25 GHz	250	2500	
Procedure:	ANSI C63.10-2020+Cor.1-2023 section 6.6.4		

Test Setup:	
Operating Environment:	
Temperature:	22 °C
Humidity:	45.1 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V from Battery

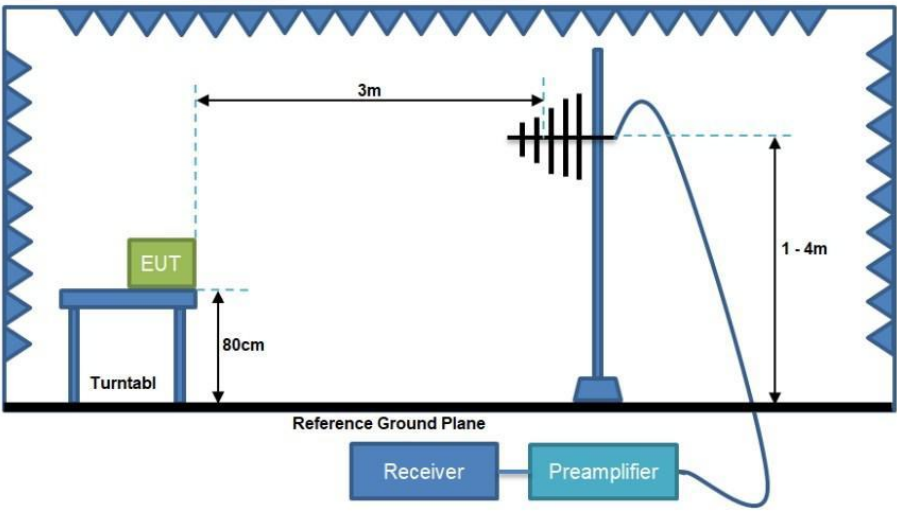
6.5.1 Test Data

Remark: The report only reflects the test data of worst mode.

Test Channel: 906.875MHz, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
1813.750	44.81	6.07	50.89	74.00	-23.11	peak	Pass
1813.750	34.77	6.07	40.84	54.00	-13.16	AVG	Pass
2720.625	47.09	9.92	57.01	74.00	-16.99	peak	Pass
2720.625	37.46	9.92	47.38	54.00	-6.62	AVG	Pass
3627.500	42.44	11.93	54.37	74.00	-19.63	peak	Pass
3627.500	32.17	11.93	44.10	54.00	-9.90	AVG	Pass
Test Channel: 906.875MHz, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
1813.750	45.60	6.07	51.68	74.00	-22.32	peak	Pass
1813.750	34.81	6.07	40.88	54.00	-13.12	AVG	Pass
2720.625	45.79	9.92	55.71	74.00	-18.29	peak	Pass
2720.625	34.88	9.92	44.80	54.00	-9.20	AVG	Pass
3627.500	46.18	11.93	58.11	74.00	-15.89	peak	Pass
3627.500	36.54	11.93	48.47	54.00	-5.53	AVG	Pass

Note:Margin=Level-Limit=Reading+factor-Limit
Factor= Antenna factor+ cable loss -amplifier gain

6.6 Emissions in Band Edge

Test Requirement:	Refer to 47 CFR 15.249(a), 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)).		
Test Method:	ANSI C63.10-2020+Cor.1-2023 section 6.10		
Test Limit:	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
	Above 960	500	3
Procedure:	Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band-edge, as well as any modulation products that fall outside of the authorized band of operation. 2) Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.6.2. 3) Attenuation: Auto (at least 10 dB preferred). 4) Sweep time: No faster than coupled (auto) time. 5) Resolution bandwidth: 100 kHz. 6) Video bandwidth: 300 kHz. 7) Detector: Peak. 8) Trace: Max-hold.		
Test Setup:			
Operating Environment:			
Temperature:	25.7 °C		
Humidity:	53.5 %		
Atmospheric Pressure:	1010 mbar		

Test voltage:	DC 3.7V from Battery
---------------	----------------------

6.6.1 Test Data

Remark: The report only reflects the test data of worst mode.

Test Channel: 906.875MHz, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
890.000	38.93	-3.05	35.89	46.00	-10.11	QP	Pass
902.000	39.97	-2.49	37.49	46.00	-8.51	QP	Pass
Test Channel: 906.875MHz, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
890.000	37.90	-3.05	34.86	46.00	-11.14	QP	Pass
902.000	39.36	-2.49	36.87	46.00	-9.13	QP	Pass

Note:Margin=Level-Limit=Reading+factor-Limit

Factor= Antenna factor+ cable loss -amplifier gain

7 Test Setup Photos

Please refer to the Appendix I Test Setup Photos

8 EUT Constructional Details (EUT Photos)

Please refer to the Appendix II External Photos & Appendix III External Photos



BTF Testing Lab (Shenzhen) Co., Ltd.

101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China

www.btf-lab.com

-- END OF REPORT --