

TEST REPORT

Applicant : Shantou Lemu technology Co., LTD
Address : 2nd Floor, No.1, Lane 22, Xindong Road, Xinning, Fengxiang Sub district, Chenghai District, Shantou City, Guangdong Province, P.R.China
Manufacturer : Shantou City Chenghai District Xinyuanyu Toy Factory
Address : Xia Dao Road, Daomen Village, Shanghua Town, Chenghai District, Shantou City, Guangdong Province, China
Product Name : RC car
Model Number : 0888B
Trademark : BYTEWAR
FCC ID : 2BYR4-0888B
Test Date : Sept. 17, 2026 – Sept. 22, 2026
Date of Report : Sept. 22, 2026

Test Result : This device described above has been tested by NTT, and the test results show that the equipment under test (EUT) is in compliance with the Standard requirements. And it is applicable only to the tested sample identified in the report.

Test Procedure Used:

Standards : FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
KDB 558074 D01 15.247 Meas Guidance v05r02

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TABLE OF CONTENT

1. General Information	4
1.1. Description of Device (EUT).....	4
1.2. Channel List.....	4
1.3. Summary of test result	5
1.4. Special Accessories and Auxiliary Equipment	5
1.5. Test mode.....	5
1.6. Test configuration	5
1.7. Block Diagram	6
1.8. Test Conditions	6
1.9. Measurement Uncertainty (95% confidence levels, k=2)	6
1.10. Test Facility	7
1.11. Test Equipment.....	8
2. Conducted emission at the mains terminals test	10
2.1. Limit.....	10
2.2. Test Setup	10
2.3. Test Procedure	10
2.4. Test Result	11
3. Radiated Spurious Emissions	12
3.1. Limit.....	12
3.2. Test Setup	13
3.3. Test Procedure	15
3.4. Test Result	16
4. Conducted Spurious Emissions.....	21
4.1. Limit.....	21
4.2. Test Setup	21
4.3. Test Procedure	21
4.4. Test Result	22
5. Band Edge Measurement	23
5.1. Limit.....	23
5.2. Test setup	23
5.3. Test Procedure	23
5.4. Test Result	23
6. -6 dB Bandwidth and 99% Bandwidth Measurement	24
6.1. Limit.....	24
6.2. Test Setup	24
6.3. Test Procedure	24
6.4. Test Result	24
7. Maximum Peak Output Power.....	25
7.1. Limit.....	25
7.2. Test Setup	25
7.3. Test Procedure	25
7.4. Test Result	25
8. Power Spectral density.....	26
8.1. Limit.....	26
8.2. Test Setup	26
8.3. Test Procedure	26
8.4. Test Result	26
9. Antenna Requirement	27
10. TEST SETUP & EUT PHOTOGRAPH	28

[illegible]

1. General Information

1.1. Description of Device (EUT)

EUT Name	:	RC car
Model No.	:	0888B
Serial Model No.	:	0878, 0878A, 0878B, 0878B, 0878C, 0878D, 0888, 0888A, 0888C, 0888D, 0898, 0898A, 0898B, 0898C, 0898D
Model Difference	:	Except for the model and appearance color, all models use the same circuitry and modules.
Power supply	:	DC 1.5V*2 cell "AA" alkaline battery
Operation frequency	:	2405-2475MHz
Modulation	:	GFSK
Antenna Type	:	PCB antenna, Maximum Gain is 0.17 dBi
Intend use environment	:	Residential, commercial and light industrial environment

1.2. Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2405	25	2430	50	2455
01	2406	26	2431	51	2456
02	2407	27	2432	52	2457
03	2408	28	2433	53	2458
04	2409	29	2434	54	2459
05	2410	30	2435	55	2460
06	2411	31	2436	56	2461
07	2412	32	2437	57	2462
08	2413	33	2438	58	2463
09	2414	34	2439	59	2464
10	2415	35	2440	60	2465
11	2416	36	2441	61	2466
12	2417	37	2442	62	2467
13	2418	38	2443	63	2468
14	2419	39	2444	64	2469
15	2420	40	2445	65	2470
16	2421	41	2446	66	2471
17	2422	42	2447	67	2472
18	2423	43	2448	68	2473
19	2424	44	2449	69	2474
20	2425	45	2450	70	2475
21	2426	46	2451		
22	2427	47	2452		
23	2428	48	2453		
24	2429	49	2454		

1.3.Summary of test result

RF PART		
Test Items	Test Requirement	Result
Antenna requirement	FCC part 15.203/15.247 (b)(4)	PASS
AC Power Line Conducted Emission	FCC part 15.207	N/A
Conducted Peak Output Power	FCC part 15.247 (b)(3)	PASS
Channel Bandwidth& 99% OCB	FCC part 15.247 (a)(2)	PASS
Power Spectral Density	FCC part 15.247 (e)	PASS
Band Edge	FCC part 15.247(d)	PASS
Spurious Emission	FCC part 15.205/15.209	PASS
Remark: N/A is an abbreviation for Not Applicable. Measurement Uncertainty is not taken into account for conformity statement		

1.4.Special Accessories and Auxiliary Equipment

Description	Manufacturer	Model No.	Hardware Version	Software Version
USB serial port	/	/	/	/
PC	Lenovo	M420-N000	/	/

1.5.Test mode

The special RF test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode.

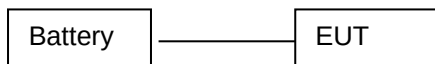
Test mode	Low channel	Middle channel	High channel
GFSK	2405MHz	2440MHz	2475MHz
Note: Only the worst Data Record in the report			

1.6. Test configuration

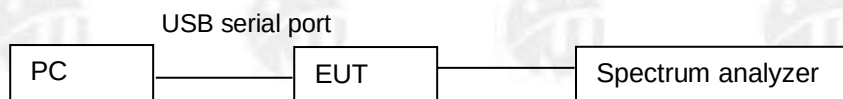
Transmitting mode	Keep the EUT in continuously transmitting mode.
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	
Test Software	Engineering mode
Power level setup	Default

1.7.Block Diagram

Radiated Emission



RF Conducted Test



1.8.Test Conditions

Category	Normal Conditions	Extreme Conditions
Temperature range	15-35°C	N/A
Humidity range	20-75%	N/A
Pressure range	86-106kPa	N/A

Note: N/A is an abbreviation for Not Applicable.

1.9.Measurement Uncertainty (95% confidence levels, k=2)

Parameter	Uncertainty
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10 ⁻⁶
Bandwidth	± 1.5 x 10 ⁻⁶
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(9KHz~30MHz)	±4.51dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB

Remark:When making a conformity declaration based on test results for regulations/standards or specifications,the default is to use Clause 4.2.1of ILAC-G8:09/2019 and the guidelines on decision rules and conformity declaration in IEC Guide 115:2023.

1.10.Test Facility

Site Description		
Name of Firm	:	Shenzhen NTT Testing Technology Co.,Ltd.
Site Location	:	1B, Building 2, Factory Building & 103, Building 3, Factory Building, Dayang Industrial Park No.4, Industrial Avenue, Tangwei Community, Fuhai Sub-district, Bao 'an District, Shenzhen City, China
FCC Designation Number	:	CN3446
FCC Test Firm Registration Number	:	129414

1.11. Test Equipment

Conducted Test Site

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
944 Shielded Room	HSRCE944	/	HTEC	2025/04/30	2028/04/29
EMI Test Receiver	ESCI	100881/003	ROHDE&SCHWARZ	2026/09/04	2027/09/03
LISN	AMN6500	101185	ROHDE&SCHWARZ	2026/09/04	2027/09/03
LISN	NNLK 8129	00603	SCHWARZBECK	2026/09/04	2027/09/03
Pulse Limiters	VTSD 9561 F	00343	SCHWARZBECK	2026/09/04	2027/09/03
Cable	RG223-2M	/	RG	2026/09/04	2027/09/03

Radiated Test Site(Below 1G and Above 1G)&RF Test Site

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
966 Shielded Room	966 Room	/	EMToni	2025/07/24	2028/07/23
EMI Test Receiver	ESPI	101018	ROHDE&SCHWARZ	2026/09/04	2027/09/03
Amplifier (30MHz-1GHz)	BBV 9745	00431	SCHWARZBECK	2026/09/09	2027/09/08
Bilog Antenna (30MHz-1GHz)	VULB9168	1858	SCHWARZBECK	2026/09/05	2027/09/04
Horn antenna (1GHz-18GHz)	BBHA 9120 D	02622	SCHWARZBECK	2026/09/05	2027/09/04
Preamplifier (1GHz-18GHz)	BBV 9718D	0024	SCHWARZBECK	2026/09/04	2027/09/03
Spectrum Analyzer (10Hz-40GHz)	FSV 40	100952	ROHDE&SCHWARZ	2026/09/04	2027/09/03
Preamplifier (18GHz-40GHz)	BBV 9721	0056	SCHWARZBECK	2026/09/04	2027/09/03
Double Ridge Guide Horn Antenna (18GHz-40GHz)	SAS-574	588	A.H.System	2026/09/05	2027/09/04
Loop Antenna (9KHz-30MHz)	FMZB 1513-60	00115	SCHWARZBECK	2026/09/04	2027/09/03
MXG Signal Analyzer	N9020A	MY491007 30	Agilent	2026/09/04	2027/09/03
MXG Vector Signal Generator	N5182A	MY501449 20	Agilent	2026/09/04	2027/09/03

WIDEBAND RADIO COMMUNICATION TESTER	CMW500	/	ROHDE&SCHWARZ	2026/09/07	2027/09/06
Power Sensor	MW100-RFCB-2	MW260105 NTT-64	MWRFTtest	2026/09/04	2027/09/03
RF Swith	MW100-RFCB-1	MW260105 NTT-64	MWRFTtest	2026/09/04	2027/09/03
Cable	RG223-3M	/	DA	2026/09/04	2027/09/03
Cable	RG223-12M	/	DA	2026/09/04	2027/09/03
Cable	SFT205-NMN MSW-2.5M	/	DA	2026/09/04	2027/09/03
Cable	SFT205-NMN M-12M	/	DA	2026/09/04	2027/09/03
Cable	UCA500-NJW SM-1.5M	017	MWRFTtest	2026/09/04	2027/09/03
High Pass Filter	HXHPF-3G-S	202507220 001	luanwei	2026/09/04	2027/09/03

Test software

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ-EMC	Ver.EMC-CON 3A1.1+
2	EMC radiation test system	FALA	EZ-EMC	Ver.FA-03A2 RE+
3	RF test system	TACHOY	RFTest	V1.0.0
4	RF communication test system	TACHOY	RFTest	V1.0.0

2. Conducted emission at the mains terminals test

2.1.Limit

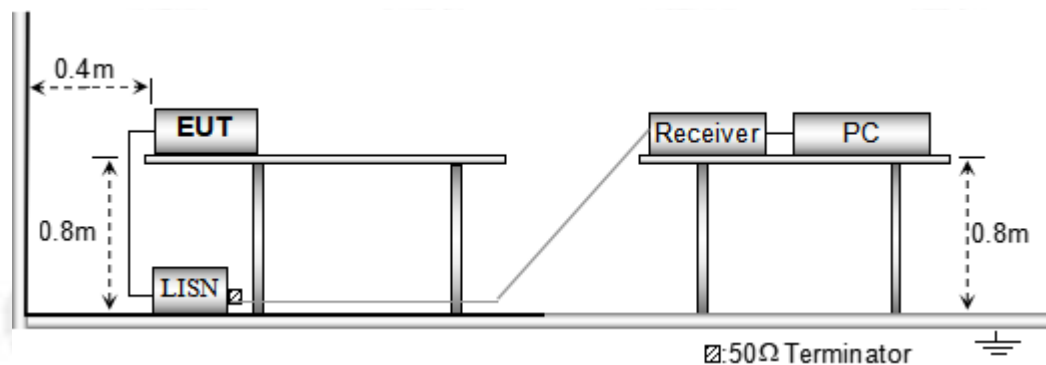
Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

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

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

2.2.Test Setup



2.3.Test Procedure

1. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
2. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
3. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
4. LISN at least 80 cm from nearest part of EUT chassis.
5. For the actual test configuration, please refer to the related Item - EUT Test Photos.



2.4.Test Result

Note: This device is powered by a DC battery and is not suitable for conducting emissions.

3. Radiated Spurious Emissions

3.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.247
 Test Method: KDB 558074 D01 15.247 Meas Guidance v05r02 April 2, 2019;
 ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
 Test Result: PASS
 Measurement Distance: 3m

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

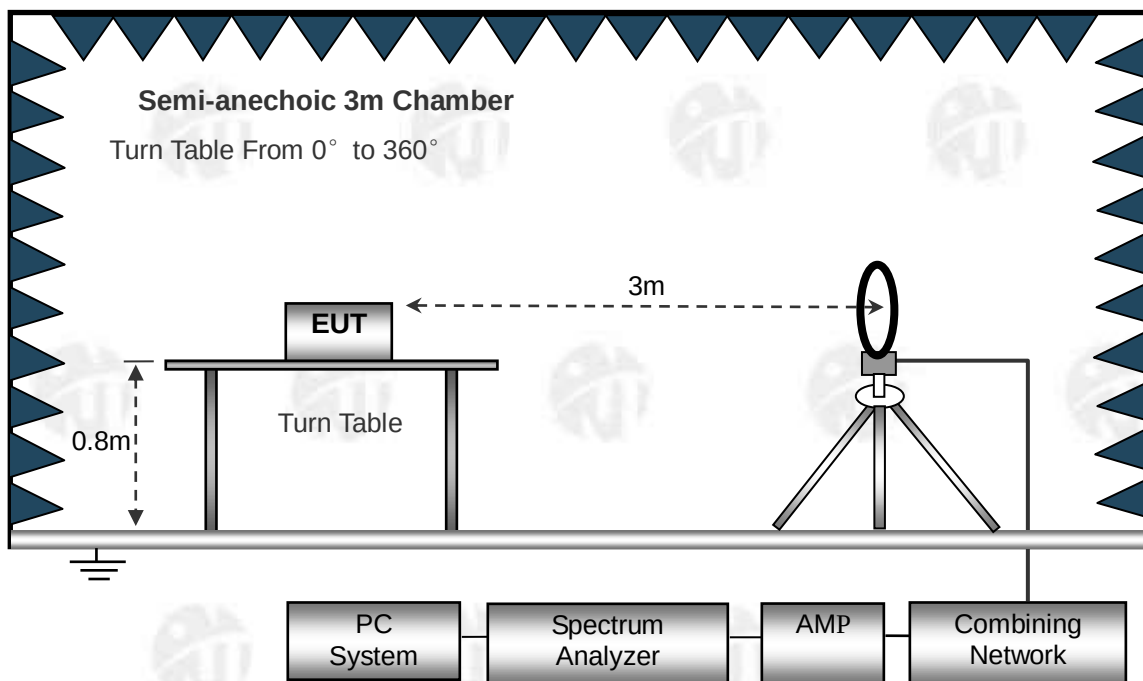
Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	20log(2400/F(kHz)) + 80
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log(24000/F(kHz)) + 40
1.705 ~ 30	30	30	100 * 30	20log(30) + 40
30 ~ 88	100	3	100	20log(100)
88 ~ 216	150	3	150	20log(150)
216 ~ 960	200	3	200	20log(200)
Above 960	500	3	500	20log(500)

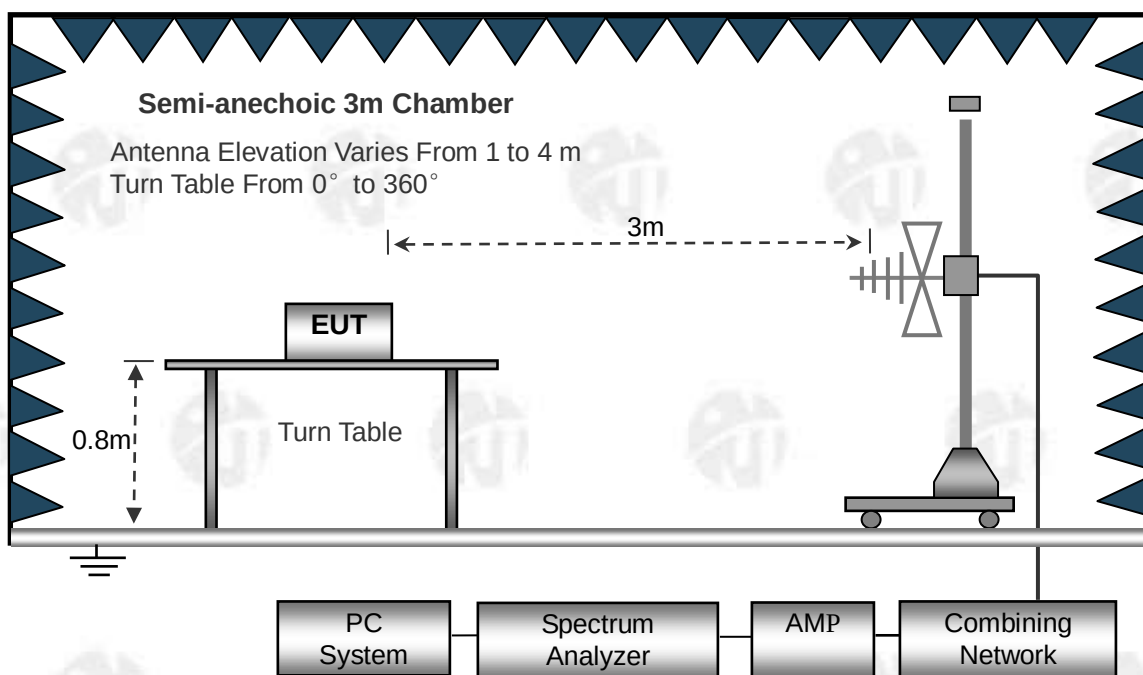
3.2.Test Setup

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

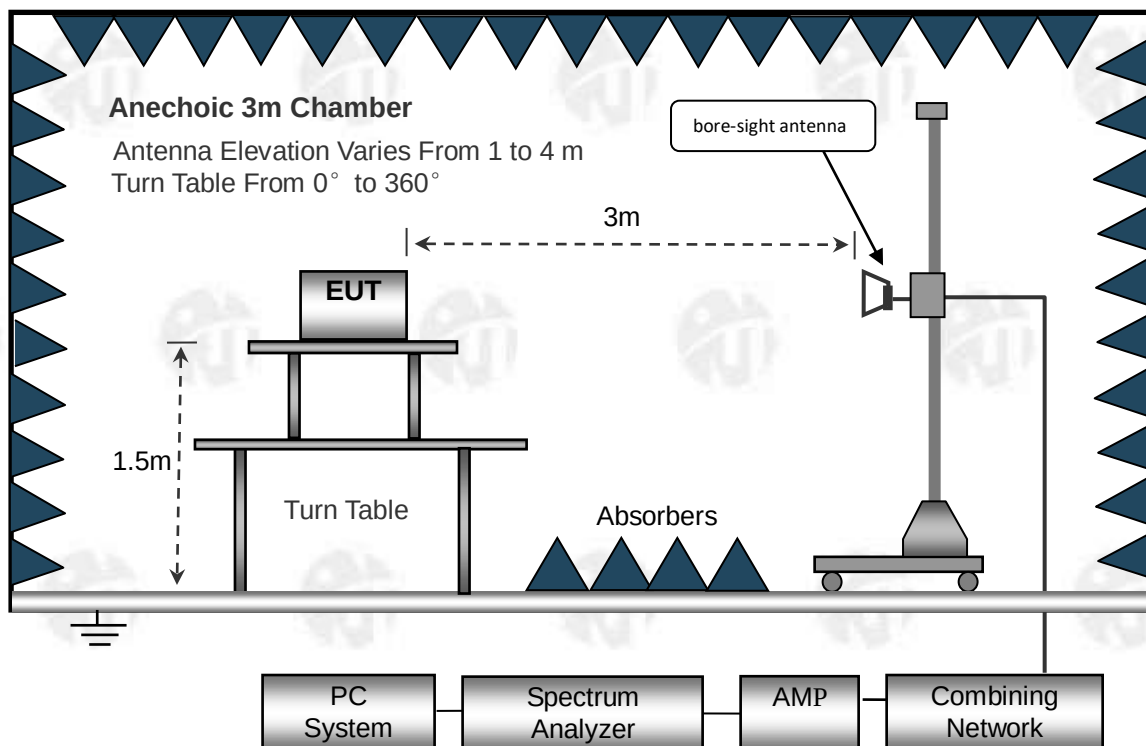
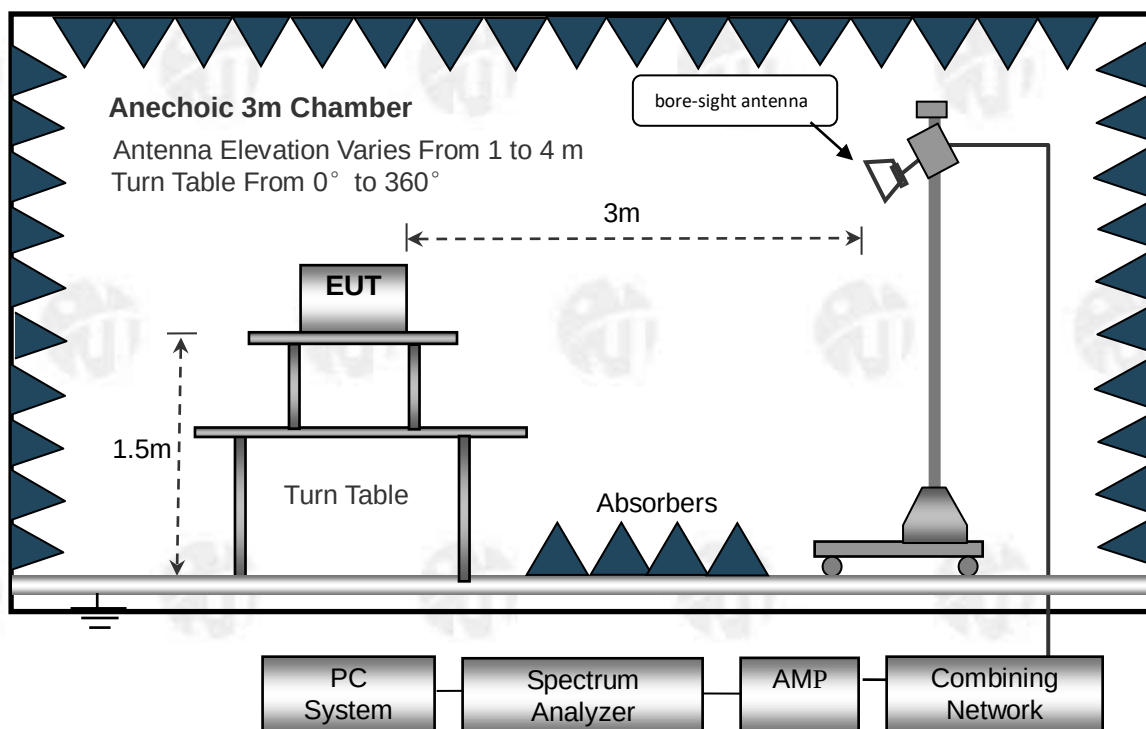
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



3.3.Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are performed in X,Y and Z axis positioning(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),the worst condition was tested putting the eut in Z axis,so the worst data were shown as follow.
8. A 2.4GHz high - pass filter is used during radiated emissions above 1GHz measurement.

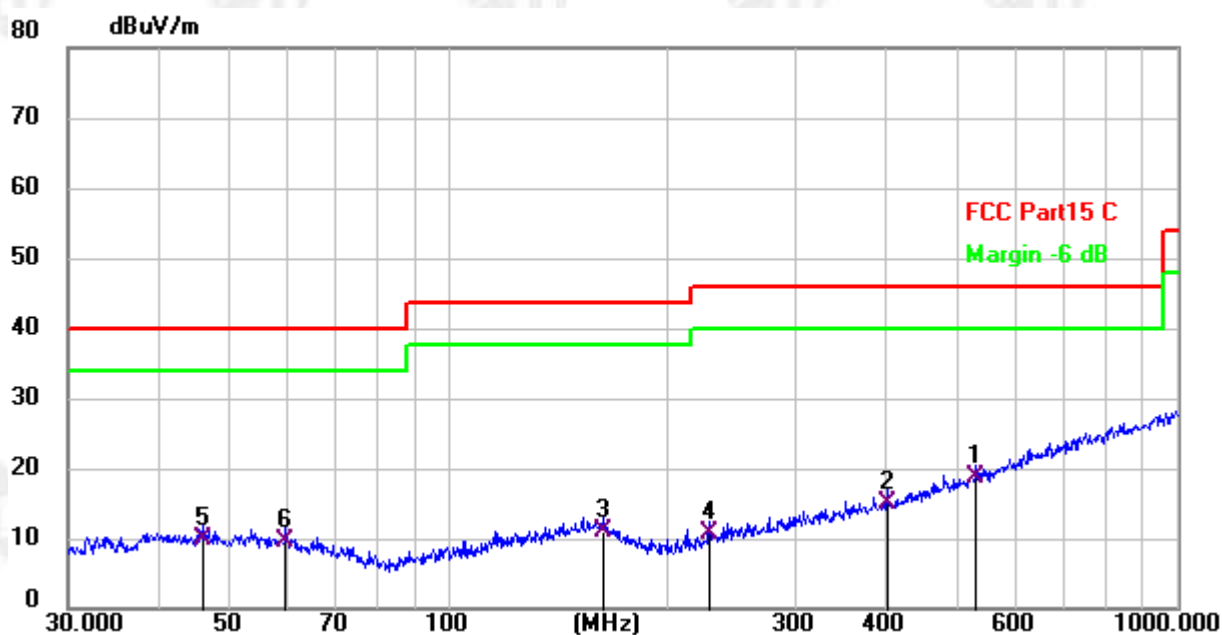
3.4.Test Result

Test Frequency: 9KHz~30MHz

The measurements were more than 20 dB below the limit and not reported.

Test Frequency : 30MHz ~ 1GHz

Radiation Emission Test Data			
Temperature:	25.5℃	Relative Humidity:	53%
Pressure:	1008hPa	Phase :	Horizontal
Test Voltage :	DC 3V from battery	Test Mode:	GFSK 1M(CH70)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	530.1014	33.67	-15.07	18.60	46.00	-27.40	QP
2	400.4319	33.90	-18.80	15.10	46.00	-30.90	QP
3	162.6106	32.71	-21.81	10.90	43.50	-32.60	QP
4	227.6906	34.51	-23.91	10.60	46.00	-35.40	QP
5	46.0164	33.61	-23.71	9.90	40.00	-30.10	QP
6	59.6493	34.01	-24.31	9.70	40.00	-30.30	QP

Note:

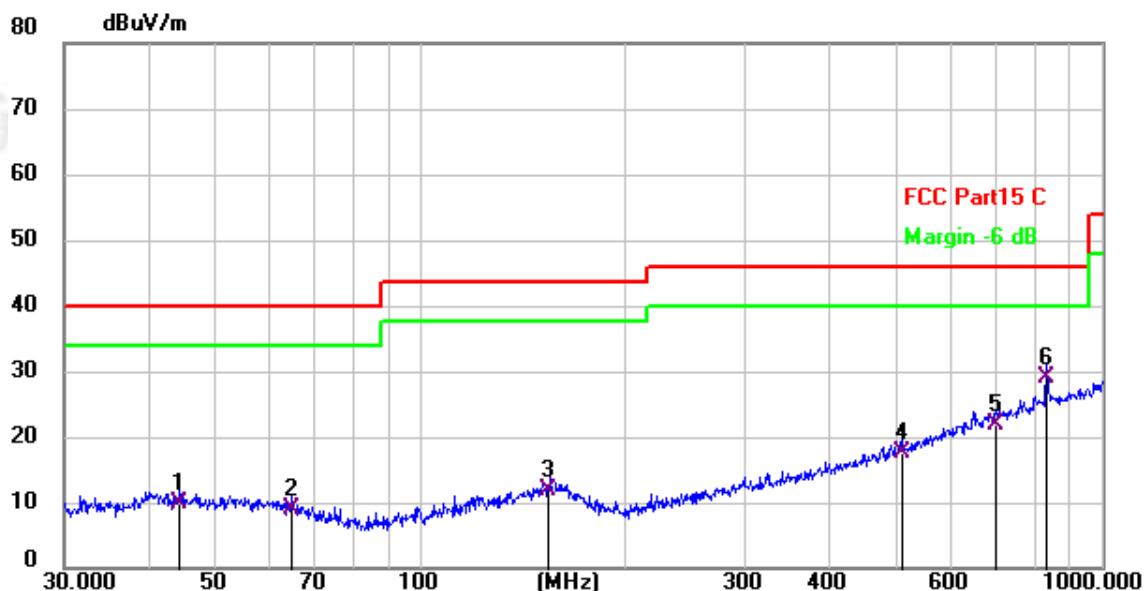
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor

Margin=Emission Level-Limit

2. All the modes have tested and recorded the worst mode(GFSK 1M) in the report

Radiation Emission Test Data			
Temperature:	25.5°C	Relative Humidity:	53%
Pressure:	1008hPa	Phase :	Vertical
Test Voltage :	DC 3V from battery	Test Mode:	GFSK 1M(CH70)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	44.2752	33.46	-23.66	9.80	40.00	-30.20	QP
2	64.8865	34.20	-25.10	9.10	40.00	-30.90	QP
3	154.8204	33.64	-21.74	11.90	43.50	-31.60	QP
4	508.2582	33.31	-15.71	17.60	46.00	-28.40	QP
5	699.3045	32.57	-10.77	21.80	46.00	-24.20	QP
6 *	827.4934	37.42	-8.52	28.90	46.00	-17.10	QP

Note:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Emission Level = Reading + Factor

Margin=Emission Level-Limit

2. All the modes have tested and recorded the worst mode(GFSK 1M) in the report

1GHz~25GHz

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:2405MHz									
V	4810	51.15	34.12	5.03	32.39	54.45	74.00	-19.55	Pk
V	4810	40.67	34.12	5.03	32.39	43.97	54.00	-10.03	AV
V	7215	49.00	32.54	6.29	35.86	58.61	74.00	-15.39	Pk
V	7215	35.19	32.54	6.29	35.86	44.80	54.00	-9.20	AV
V	9620	45.44	32.98	7.55	38.40	58.41	74.00	-15.59	Pk
V	9620	30.86	32.98	7.55	38.40	43.83	54.00	-10.17	AV
V	12025	43.04	32.09	8.93	39.00	58.88	74.00	-15.12	Pk
V	12025	28.47	32.09	8.93	39.00	44.31	54.00	-9.69	AV
H	4810	50.73	34.12	5.03	32.39	54.03	74.00	-19.97	Pk
H	4810	37.49	34.12	5.03	32.39	40.79	54.00	-13.21	AV
H	7215	47.62	32.54	6.29	35.86	57.23	74.00	-16.77	Pk
H	7215	30.29	32.54	6.29	35.86	39.90	54.00	-14.10	AV
H	9620	46.52	32.98	7.55	38.40	59.49	74.00	-14.51	Pk
H	9620	27.85	32.98	7.55	38.40	40.82	54.00	-13.18	AV
H	12025	39.16	32.09	8.93	39.00	55.00	74.00	-19.00	Pk
H	12025	26.39	32.09	8.93	39.00	42.23	54.00	-11.77	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:2440MHz									
V	4880	50.54	34.07	5.09	32.59	54.15	74.00	-19.85	Pk
V	4880	39.36	34.07	5.09	32.59	42.97	54.00	-11.03	AV
V	7320	45.20	32.63	6.34	35.96	54.87	74.00	-19.13	Pk
V	7320	34.91	32.63	6.34	35.96	44.58	54.00	-9.42	AV
V	9760	42.85	32.92	7.59	38.40	55.92	74.00	-18.08	Pk
V	9760	27.92	32.92	7.59	38.40	40.99	54.00	-13.01	AV
V	12200	39.60	31.96	8.88	39.04	55.56	74.00	-18.44	Pk
V	12200	28.52	31.96	8.88	39.04	44.48	54.00	-9.52	AV
H	4880	49.99	34.07	5.09	32.59	53.60	74.00	-20.40	Pk
H	4880	40.73	34.07	5.09	32.59	44.34	54.00	-9.66	AV
H	7320	44.64	32.63	6.34	35.96	54.31	74.00	-19.69	Pk
H	7320	34.25	32.63	6.34	35.96	43.92	54.00	-10.08	AV
H	9760	41.97	32.92	7.59	38.40	55.04	74.00	-18.96	Pk
H	9760	30.10	32.92	7.59	38.40	43.17	54.00	-10.83	AV
H	12200	38.61	31.96	8.88	39.04	54.57	74.00	-19.43	Pk
H	12200	28.85	31.96	8.88	39.04	44.81	54.00	-9.19	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:2475MHz									
V	4950	47.98	34.02	5.15	32.80	51.91	74.00	-22.09	Pk
V	4950	36.76	34.02	5.15	32.80	40.69	54.00	-13.31	AV
V	7425	45.29	32.71	6.40	36.05	55.03	74.00	-18.97	Pk
V	7425	33.23	32.71	6.40	36.05	42.97	54.00	-11.03	AV
V	9900	39.32	32.86	7.62	38.40	52.48	74.00	-21.52	Pk
V	9900	29.15	32.86	7.62	38.40	42.31	54.00	-11.69	AV
V	12375	37.35	31.82	8.84	39.08	53.45	74.00	-20.55	Pk
V	12375	27.22	31.82	8.84	39.08	43.32	54.00	-10.68	AV
H	4950	47.82	34.02	5.15	32.80	51.75	74.00	-22.25	Pk
H	4950	37.92	34.02	5.15	32.80	41.85	54.00	-12.15	AV
H	7425	43.37	32.71	6.40	36.05	53.11	74.00	-20.89	Pk
H	7425	30.46	32.71	6.40	36.05	40.20	54.00	-13.80	AV
H	9900	39.26	32.86	7.62	38.40	52.42	74.00	-21.58	Pk
H	9900	28.43	32.86	7.62	38.40	41.59	54.00	-12.41	AV
H	12375	40.08	31.82	8.84	39.08	56.18	74.00	-17.82	Pk
H	12375	26.06	31.82	8.84	39.08	42.16	54.00	-11.84	AV

Note: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

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

All the modes have tested and recorded the worst mode(GFSK 1M) in the report.

The 1-25GHz range has been tested, and the report only records the worst performance of the 1-18G range.

Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz

	Polar (H/V)	Frequenc y (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV /m)	Margi n (dB)	Detec tor Type
GFSK	Low Channel: 2405MHz									
	H	2390	57.63	35.17	3.48	27.49	53.43	74	-20.57	PK
	H	2390	49.61	35.17	3.48	27.49	45.41	54	-8.59	AV
	H	2400	58.88	35.16	3.49	27.52	54.73	74	-19.27	PK
	H	2400	49.56	35.16	3.49	27.52	45.41	54	-8.59	AV
	V	2390	57.09	35.17	3.48	27.49	52.89	74	-21.11	PK
	V	2390	48.97	35.17	3.48	27.49	44.77	54	-9.23	AV
	V	2400	58.29	35.16	3.49	27.52	54.14	74	-19.86	PK
	V	2400	49.17	35.16	3.49	27.52	45.02	54	-8.98	AV
	High Channel: 2475MHz									
	H	2483.5	56.86	35.11	3.56	27.75	53.06	74	-20.94	PK
	H	2483.5	48.80	35.11	3.56	27.75	45.00	54	-9	AV
	H	2500	58.82	35.10	3.57	27.80	55.09	74	-18.91	PK
	H	2500	48.81	35.10	3.57	27.80	45.08	54	-8.92	AV
	V	2483.5	57.60	35.11	3.56	27.75	53.80	74	-20.2	PK
	V	2483.5	50.21	35.11	3.56	27.75	46.41	54	-7.59	AV
	V	2500	58.19	35.10	3.57	27.80	54.46	74	-19.54	PK
	V	2500	49.11	35.10	3.57	27.80	45.38	54	-8.62	AV
Remark: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit										

4. Conducted Spurious Emissions

4.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.247
Test Method: KDB 558074 D01 15.247 Meas Guidance v05r02 April 2, 2019;
ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to
C63.10a-2024
Test Result: PASS

Limit:

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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

4.2.Test Setup



4.3.Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer:
 - a) Set instrument center frequency to DTS channel center frequency.
 - b) Set the span to ≈ 1.5 times the DTS bandwidth.
 - c) Set the RBW = 100 kHz.
 - d) Set the VBW $\approx [3 \times \text{RBW}]$.
 - e) Detector = peak.
 - f) Sweep time = auto couple.
 - g) Trace mode = max hold.
 - h) Allow trace to fully stabilize.
 - i) Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Establish an emission level by using the following procedure:

- a) Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution.

NOTE—the number of points can also be increased for large spans to retain frequency resolution

- b) Set the RBW = 100 kHz.
- c) Set the VBW $\geq [3 \times \text{RBW}]$.
- d) Detector = peak.
- e) Sweep time = No faster than coupled (auto) time.
- f) Trace mode = max-hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b).

Report the three highest emissions relative to the limit.



4.4.Test Result

Please see the attachment for data.

5. Band Edge Measurement

5.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 15.247 Meas Guidance v05r02 April 2, 2019;

ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

Test Limit: Regulation 15.247 (d), In any 100 kHz bandwidth outside the frequency band 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. Attenuation below the general limits specified in §15.209(a) is not required. 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 Mode: Transmitting

5.2.Test setup



5.3.Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

5.4.Test Result

Please see the attachment for data.

6. -6 dB Bandwidth and 99% Bandwidth Measurement

6.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 15.247 Meas Guidance v05r02 April 2, 2019;
ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

6.2.Test Setup



6.3.Test Procedure

For 6dB Bandwidth Measurement

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., $RBW = 100\text{ kHz}$, $VBW > 3 \times RBW$, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be $\geq 6\text{ dB}$.
3. The steps for the first option are as follows:
 - a. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
 - b. Set the VBW [$3 \times RBW$].
 - c. Detector = peak
 - d. Trace mode = max-hold.
 - e. Sweep = No faster than coupled (auto) time.
 - f. Allow the trace to stabilize.
 - g. Measure the maximum width of the emission by placing 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 "-6 dB down amplitude". If a marker is below this "-6 dB down amplitude" value, then it shall be as close as possible to this value.

For 99% Bandwidth Measurement

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: $RBW = 1\%-5\% \text{ OBW}$, $VBW \geq 3RBW$

6.4.Test Result

Please see the attachment for data.

7. Maximum Peak Output Power

7.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 15.247 Meas Guidance v05r02 April 2, 2019;

ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

7.2.Test Setup



7.3.Test Procedure

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

- Set the RBW $\geq$ DTS bandwidth.
- Set VBW $\geq 3 \times$ RBW.
- Set span $\geq 3 \times$ RBW
- Sweep time = auto couple.
- Detector = peak.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use peak marker function to determine the peak amplitude level.

7.4.Test Result

Please see the attachment for data.

8. Power Spectral density

8.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 15.247 Meas Guidance v05r02April 2,2019;

ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8dBm/3kHz	2400-2483.5	PASS

8.2.Test Setup



8.3.Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz , Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

8.4.Test Result

Please see the attachment for data.

9. Antenna Requirement

According to the FCC Part 15 Paragraph 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. This product has an integrated antenna fulfill the requirement of this section.

This product has an PCB antenna, and the maximum antenna gain is 0.17 dBi, fulfill the requirement of this section.



10. TEST SETUP & EUT PHOTOGRAPH

Please see the attachment for details.

----- End of Report -----