TEST REPORT

Applicant	:	Inventful Pty Ltd
Address	:	Suite 1, 13-15 Thompson Street, Frankston VIC, 3199, Australia
Manufacturer	:	E-FORTUNE Digital Manufactory Limited
Address	:	Floor 4, Building 4, Jinmeiwei Industrial Park, Shajing Street, Baoan District, Shenzhen, China.
Product Name	:	Serenade
Model Number	:	Serenade-M, Serenade-L, Serenade-XL
Trademark	:	Blisstil
FCC ID	:	2BU27-SERENADE
Test Date	:	Jan. 28, 2026 - Feb. 05, 2026
Date of Report	:	Feb. 28, 2026
Test Result	:	This device described above has been tested by BKC, 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 15.249 ANSI C63.10-2020+Cor.1-2023

Prepared by(Test Engineer):
Carey Zheng

Reviewer(Supervisor):
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Approved(Manager):
Jerry Liao

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Revision History of This Test Report		
Report Number	Description	Issued Date
BKC26010462AE-1	Initial Issue	2026-02-28

1. General Information

1.1.Description of Device (EUT)

EUT Name	:	Serenade
Model No.	:	Serenade-M, Serenade-L, Serenade-XL
Model Difference	:	Only the model names are different. The mains test model is Serenade-M.
Power supply	:	Rating(s): 5V Battery: 3.2V⎓ 220mAh
Operation frequency	:	2402-2480MHz
Max. RF output power:	:	97.37dBuV/m
Modulation	:	GFSK
Data Rate	:	LE 1Mbps, LE 2Mbps
Antenna Type	:	Ceramic Antenna, Maximum Gain is 2dBi
Hardware Version	:	V1.0
Software Version	:	V3.3.18
Intend use environment	:	Residential, commercial and light industrial environment

1.2.Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	**2402**	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	**19**	**2440**	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	**2480**
12	2426	26	2454		
13	2428	27	2456		

1.3.Summary of test result

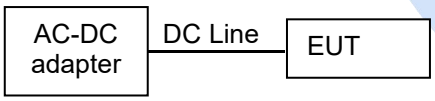
RF PART		
Test Items	**Test Requirement**	**Result**
Antenna requirement	FCC part 15.203	PASS
AC Power Line Conducted Emission	FCC part 15.207	PASS
Field strength of the fundamental signal	FCC part 15.249 (a)	PASS
Spurious emissions	FCC part 15.249 (a) (d)/15.209	PASS
Band edge	FCC part 15.249 (d)/15.205	PASS
20dB Occupied Bandwidth	FCC part 15.215 (c)	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

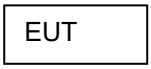
Description	Manufacturer	Model No.	Hardware Version	Software Version
AC-DC adapter	/	WH088	/	/
Serial port board	/	USB-TTL-01	/	/
PC	DELL	DESKTOP-P4V7MAJ	21H1	Windows 10

1.5.Block Diagram

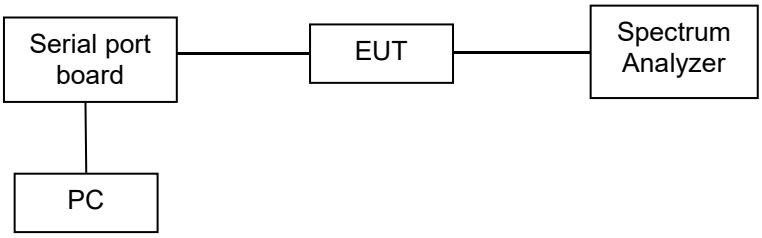
Conducted Emission



Radiated Emission



RF Conducted Test



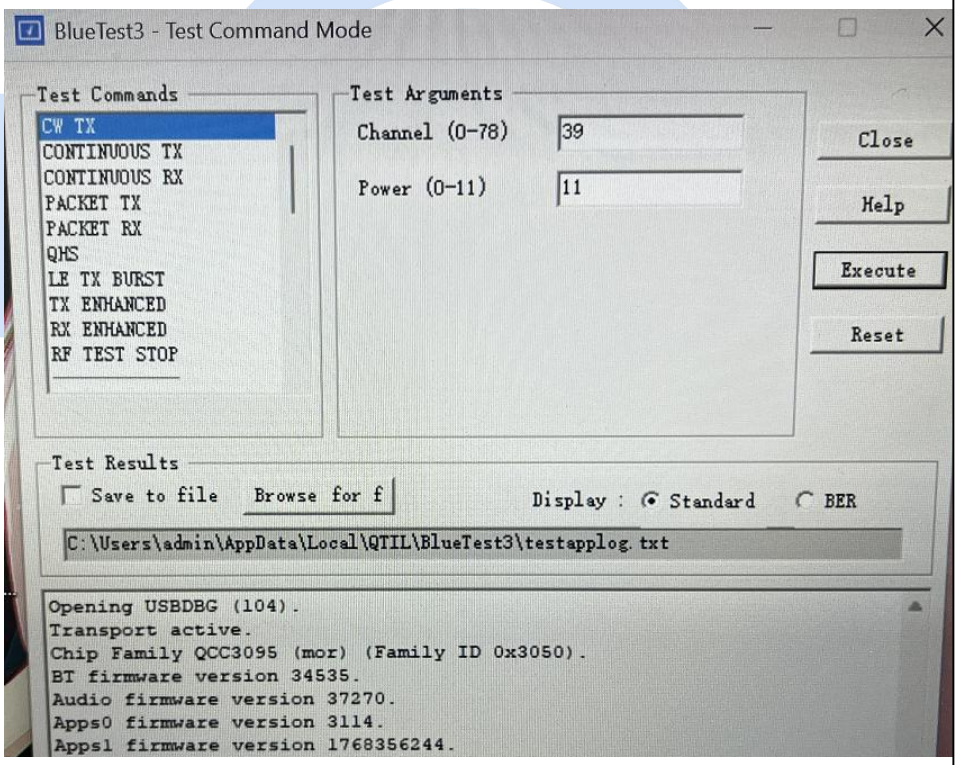
1.6.Test mode

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

Test mode	Low channel	Middle channel	High channel
GFSK 1M	2402MHz	2440MHz	2480MHz
GFSK 2M	2402MHz	2440MHz	2480MHz
Note：/			

1.7.Test configuration

Test Software	BlueTest3
Power level setup	0-11 (maximum)



1.8.Test Conditions

Category	Normal Conditions	Extreme Conditions
Temperature range	15-35℃	N/A
Humidity range	20-75%	N/A
Pressure range	86-106kPa	N/A
Power supply	Rating(s): 5V Battery: 3.2V	N/A
Note: N/A is an abbreviation for Not Applicable.		

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

Item	MU	Remark
Uncertainty for radio frequency	±7×10-8	
Conducted Emissions (150kHz~30MHz)	±2.54dB	
Radiated Emission(9KHz~30MHz)	±1.6 dB	
Radiated Emission(30MHz~1GHz)	Vertical:±4.14dB Horizontal:±4.25dB	
Radiated Emission(1GHz~6GHz)	±3.9dB	
Radiated Emission(6GHz~18GHz)	±4.3dB	
Radiated Emission(18GHz~40GHz)	±3.38dB	
Uncertainty for conducted RF Power	±0.20dB	
Conducted spurious emissions	±0.24dB	
Uncertainty for temperature	0.6℃	
Uncertainty for humidity	1%	
Bandwidth	± 1.5 x 10-6	
Time	±2%	
Duty Cycle	±2%	
Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%		

1.10.Test Facility

Site Description		
Name of Firm	:	Shenzhen BKC Testing Co., Ltd.
Site Location	:	Room 103, 1/F, Huaya Building, Huaya Industrial Park, Longhua Community, Longhua District, Shenzhen, Guangdong, China.
ISED CAB identifier	:	CN0188
ISED Company Number	:	34333
FCC Designation Number	:	CN1416
FCC Test Firm Registration Number	:	701543

1.11.Test Equipment

Conducted Test Site

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	102762	Mar. 10. 2025	Mar. 09. 2026
2	EMI Test Receiver	R&S	ESCI	101424	Mar. 10. 2025	Mar. 09. 2026
3	Rf cables	HTEC	HCE 2M-CE	N/A	Mar. 10. 2025	Mar. 09. 2026
4	Coupling/ Decoupling Network	Diamond	CX210	N/A	Mar. 10. 2025	Mar. 09. 2026
5	CE Testing software	EZ	EZ-EMC	/	/	/

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

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Antenna	Schwarzbeck	VULB 9168	01321	Mar. 20. 2025	Mar. 19. 2028
2	EMI Test Receiver	R&S	ESRP	101478	Mar. 10. 2025	Mar. 09. 2026
3	Preamplifier	HP	8447D	2727A05345	Mar. 10. 2025	Mar. 09. 2026
4	Double Ridged Broadband	SCHWARZBECK	BBHA 9120D	02621	Mar. 10. 2025	Mar. 19. 2028
5	Preamplifier	Schwarzbeck	BBV 9718D	00041	Mar. 10. 2025	Mar. 09. 2026
6	Rf cables	HUBER+SUHNER	8M-RE	N/A	Mar. 10. 2025	Mar. 09. 2026
7	Rf cables	HUBER+SUHNER	1.5M-RE	N/A	Mar. 10. 2025	Mar. 09. 2026
8	Rf cables	HUBER+SUHNER	1.5M-AP-RE	N/A	Mar. 10. 2025	Mar. 09. 2026
9	Loop antenna	TESEQ	HLA6121	58357	Mar. 09. 2025	Mar. 10. 2026
10	Spectrum analyzer	R&S	FSP40	200061	Feb. 13. 2025	Feb. 12. 2026
					Feb. 11. 2026	Feb. 10. 2027
11	Double Ridged Broadband Horn Antenna	COM-POWER	AH-1840	10100009	Mar. 10. 2025	Mar. 09. 2026
12	Spectrum	Agilent	N9020A	MY50510311	Mar. 09. 2025	Mar. 10. 2026
13	High Pass Filter	Bafang	BSF5G	2024052610	Mar. 09. 2025	Mar. 10. 2026
14	RE Testing software	EZ	EZ-EMC	/	/	/

RF Test Site

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum	Agilent	N9020A	MY50510311	Mar. 09. 2025	Mar. 10. 2026
2	Vector source	Agilent	N5182A	MY47420223	Mar. 09. 2025	Mar. 10. 2026
3	All instrument	Rohde & Schwarz	CMW 500	101131	Mar. 09. 2025	Mar. 10. 2026
4	control unit	MW	MW100-RFCB	MW200411BK-34	Mar. 09. 2025	Mar. 10. 2026

5	RF Testing software	MW	MTS 8310	/	Mar. 09. 2025	/
6	Spectrum analyzer	R&S	FSP40	200061	Feb. 13. 2025	Feb. 12. 2026
					Feb. 11. 2026	Feb. 10. 2027

Test software

Software name	RF Testing software
Software version	2.0.0.0
Software name	RE Testing software
Software version	EMEC-03A2 RE+
Software name	CE Testing software
Software version	EMEC-3A1+

2. Conducted emission at the mains terminals test

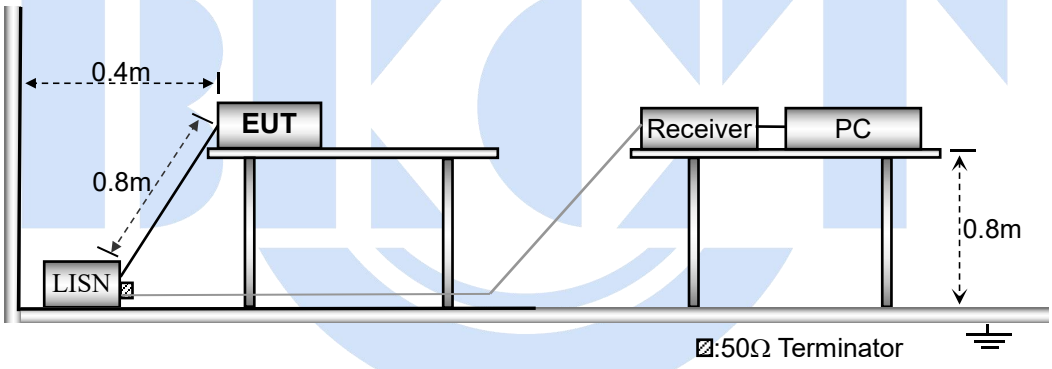
2.1.Limit

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020+Cor.1-2023
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

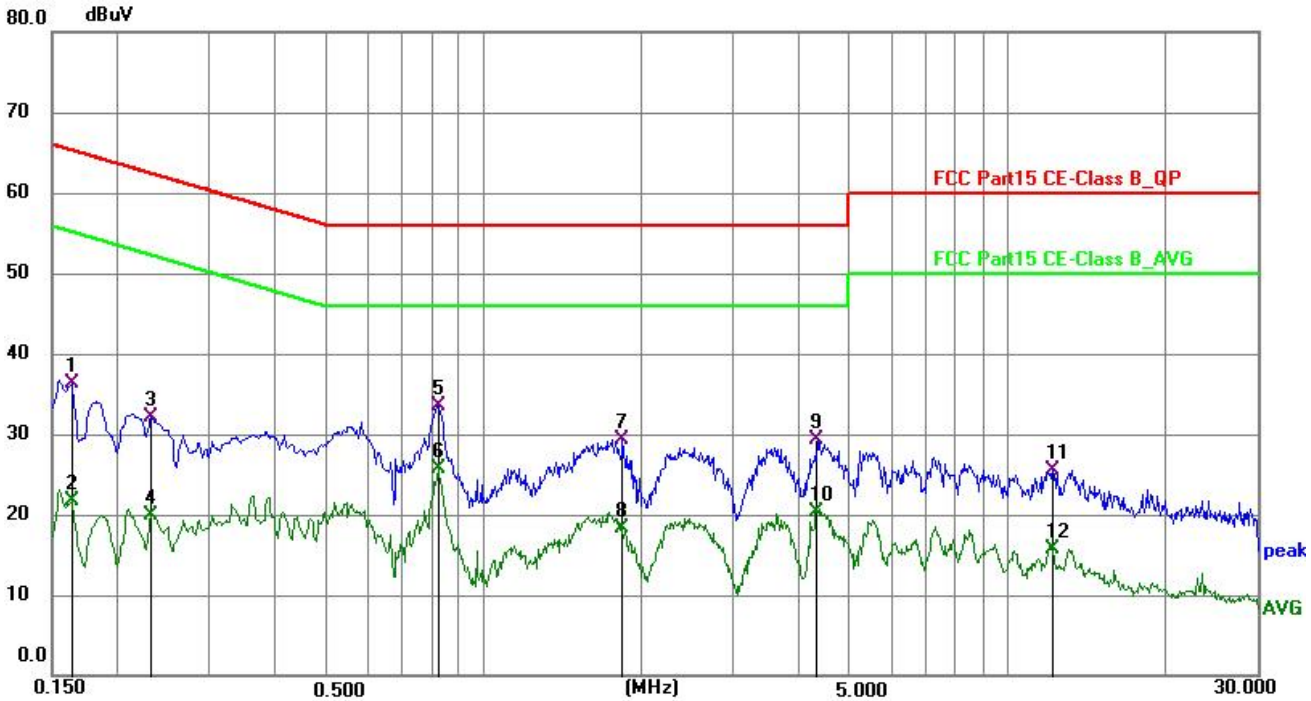


2.3.Test Procedure

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.

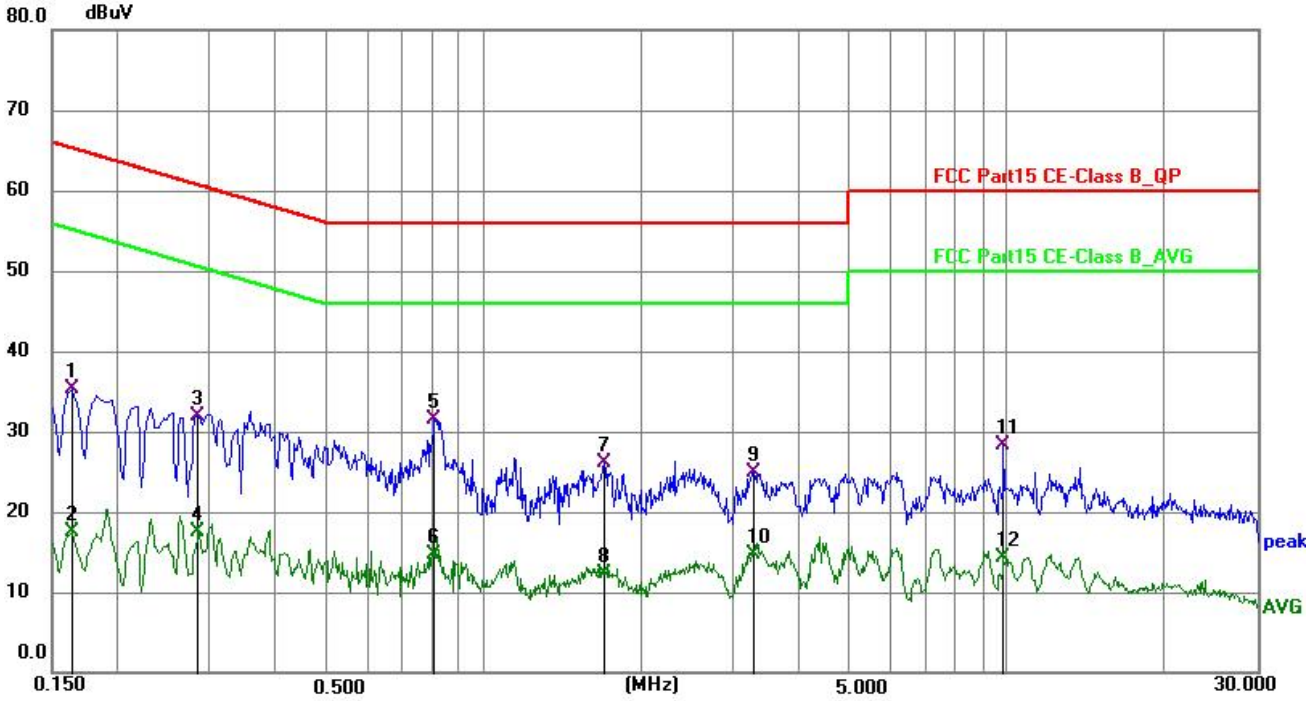
2.4.Test Result

Conducted Emission At The Mains Terminals Test Data			
Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Line
Test Voltage :	AC 120V/60Hz	Test Mode:	BLE Transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1635	26.53	9.78	36.31	65.28	-28.97	QP	P
2	0.1635	11.84	9.78	21.62	55.28	-33.66	AVG	P
3	0.2310	22.30	9.80	32.10	62.41	-30.31	QP	P
4	0.2310	10.16	9.80	19.96	52.41	-32.45	AVG	P
5	0.8205	23.84	9.76	33.60	56.00	-22.40	QP	P
6 *	0.8205	15.97	9.76	25.73	46.00	-20.27	AVG	P
7	1.8465	19.57	9.76	29.33	56.00	-26.67	QP	P
8	1.8465	8.58	9.76	18.34	46.00	-27.66	AVG	P
9	4.3482	19.45	9.81	29.26	56.00	-26.74	QP	P
10	4.3482	10.51	9.81	20.32	46.00	-25.68	AVG	P
11	12.1965	15.81	9.74	25.55	60.00	-34.45	QP	P
12	12.1965	5.96	9.74	15.70	50.00	-34.30	AVG	P

Conducted Emission At The Mains Terminals Test Data			
Temperature:	25.1˚C	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Neutral
Test Voltage :	AC 120V/60Hz	Test Mode:	BLE Transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1635	25.70	9.69	35.39	65.28	-29.89	QP	P
2	0.1635	7.84	9.69	17.53	55.28	-37.75	AVG	P
3	0.2847	22.24	9.71	31.95	60.68	-28.73	QP	P
4	0.2847	7.76	9.71	17.47	50.68	-33.21	AVG	P
5 *	0.8070	21.73	9.69	31.42	56.00	-24.58	QP	P
6	0.8070	4.94	9.69	14.63	46.00	-31.37	AVG	P
7	1.7070	16.46	9.69	26.15	56.00	-29.85	QP	P
8	1.7070	2.55	9.69	12.24	46.00	-33.76	AVG	P
9	3.2820	15.29	9.71	25.00	56.00	-31.00	QP	P
10	3.2820	5.03	9.71	14.74	46.00	-31.26	AVG	P
11	9.8565	18.51	9.70	28.21	60.00	-31.79	QP	P
12	9.8565	4.58	9.70	14.28	50.00	-35.72	AVG	P

Remark:
1. Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor
2. Only the worst Data GFSK 1M/2402MHz mode Record in the report.

3. Radiated Spurious Emissions

3.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.249

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

Standard FCC15.249

Fundamental Frequency	**Field Strength of Fundamental (millivolts/meter)**	**Field Strength of Harmonics (microvolts/meter)**
900-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

Limit 1:

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)

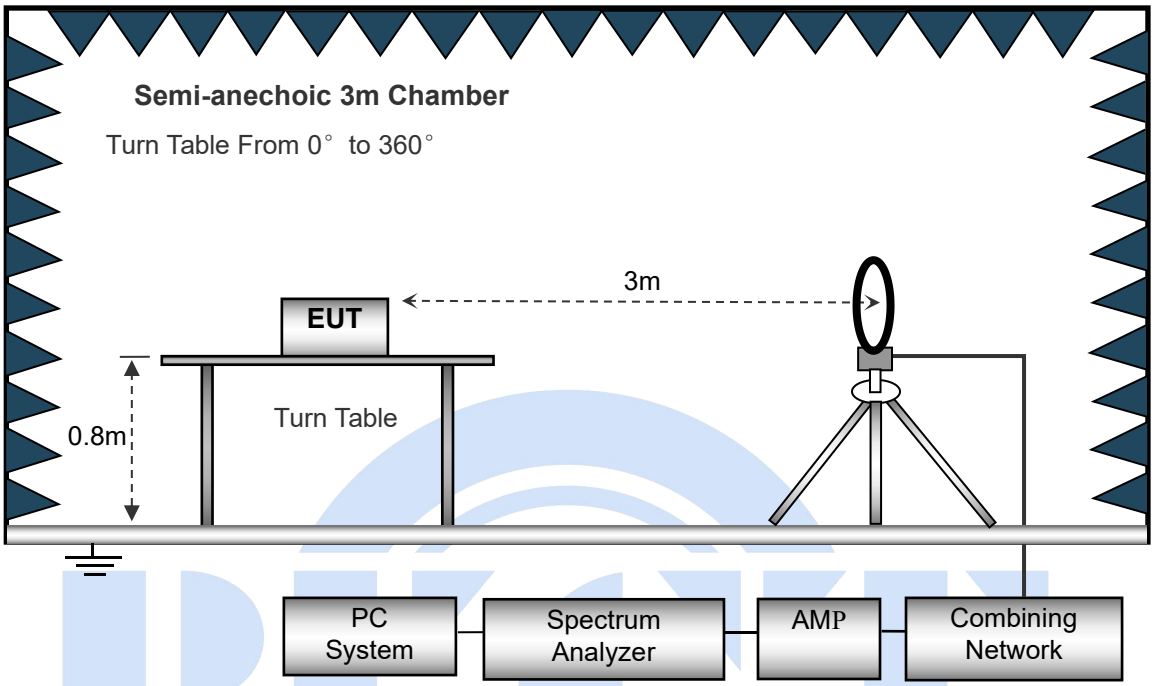
Limit 2:

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

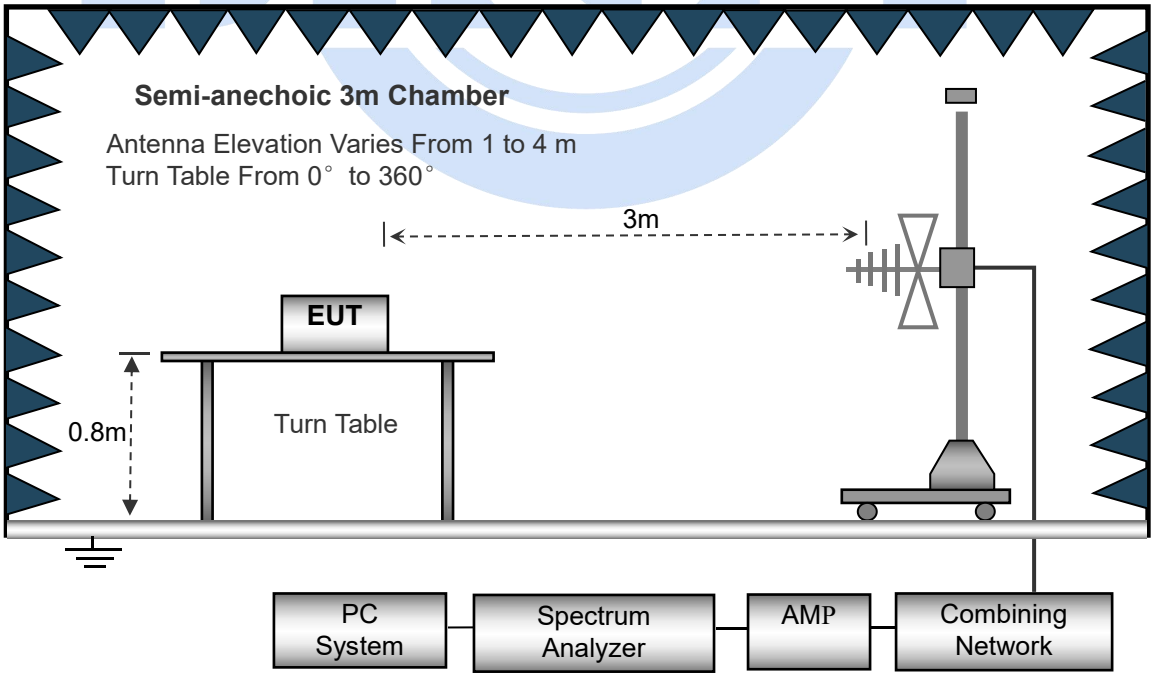
3.2.Test Setup

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

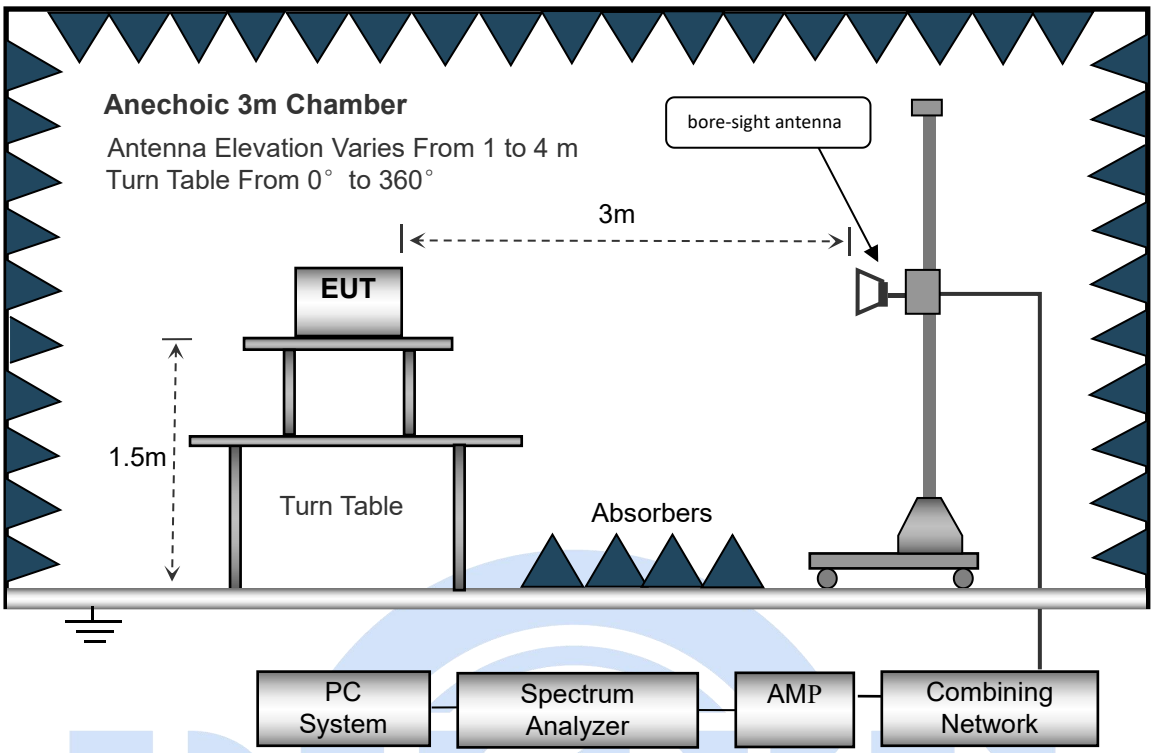
The test setup for emission measurement below 30MHz.

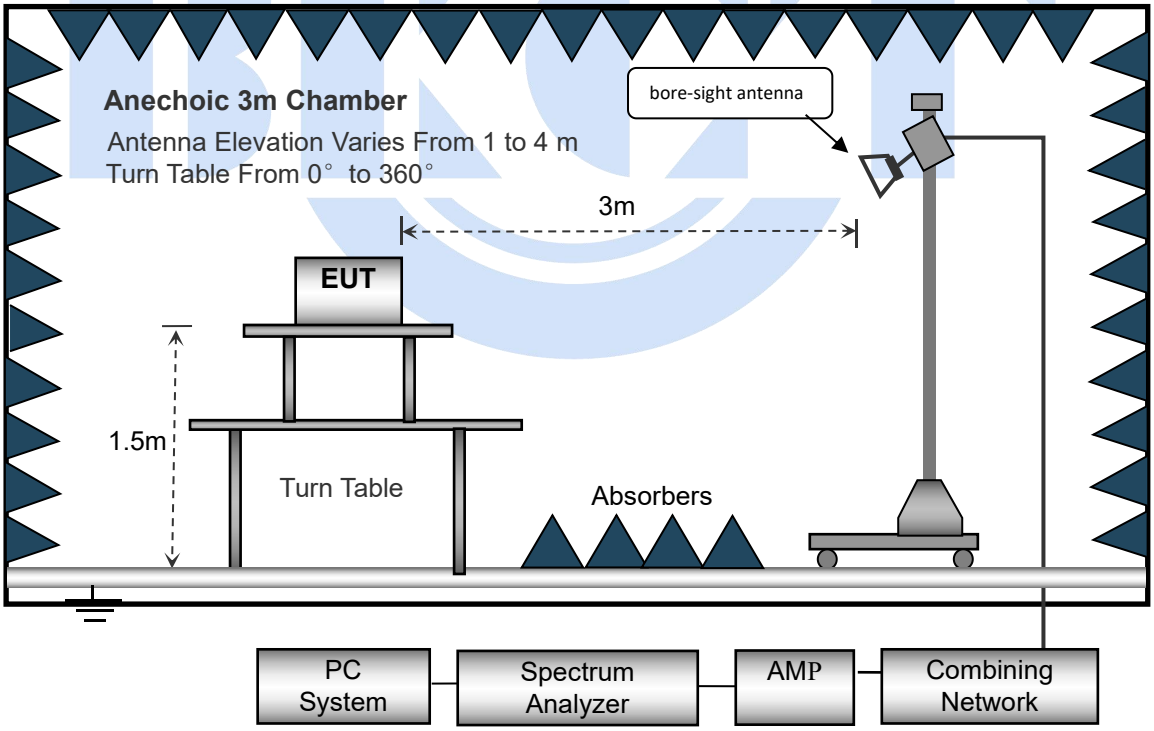


The test setup for emission measurement from 30 MHz to 1 GHz.



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 druing radiated emissions above 1GHz measurement.

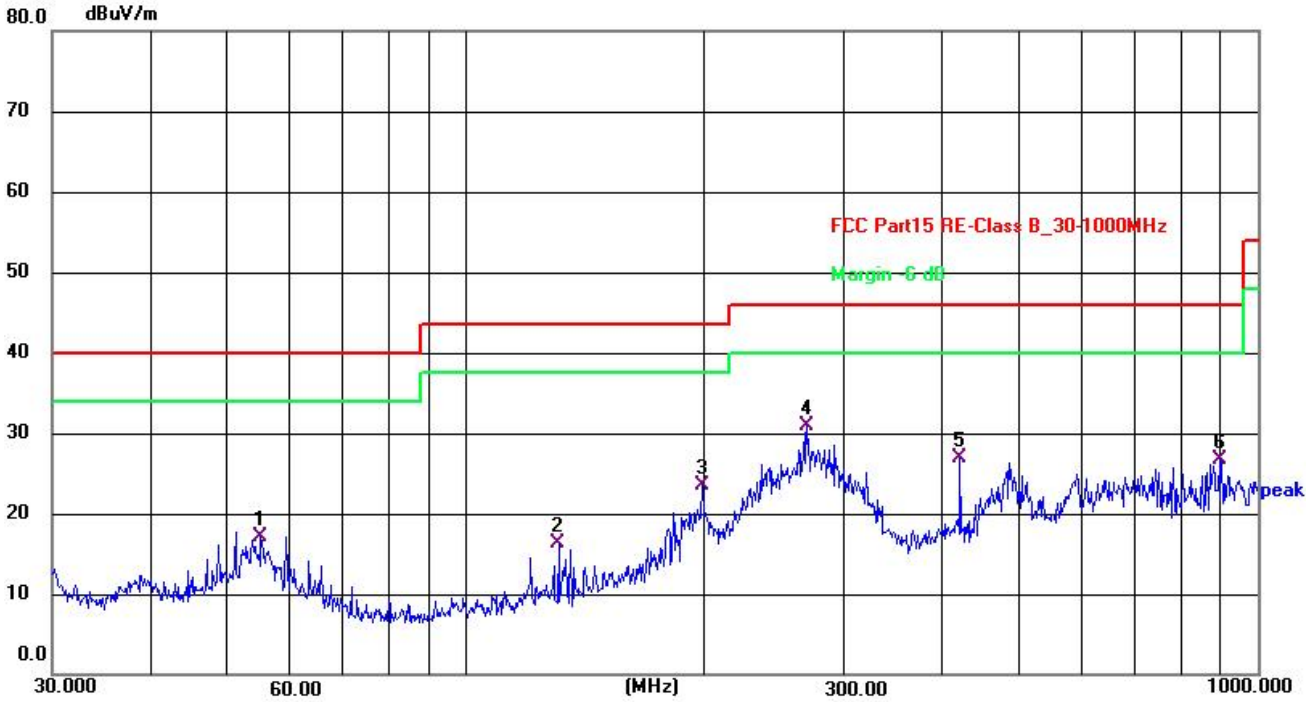
3.4.Test Result

Test Frequency: 9KHz~30MHz

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

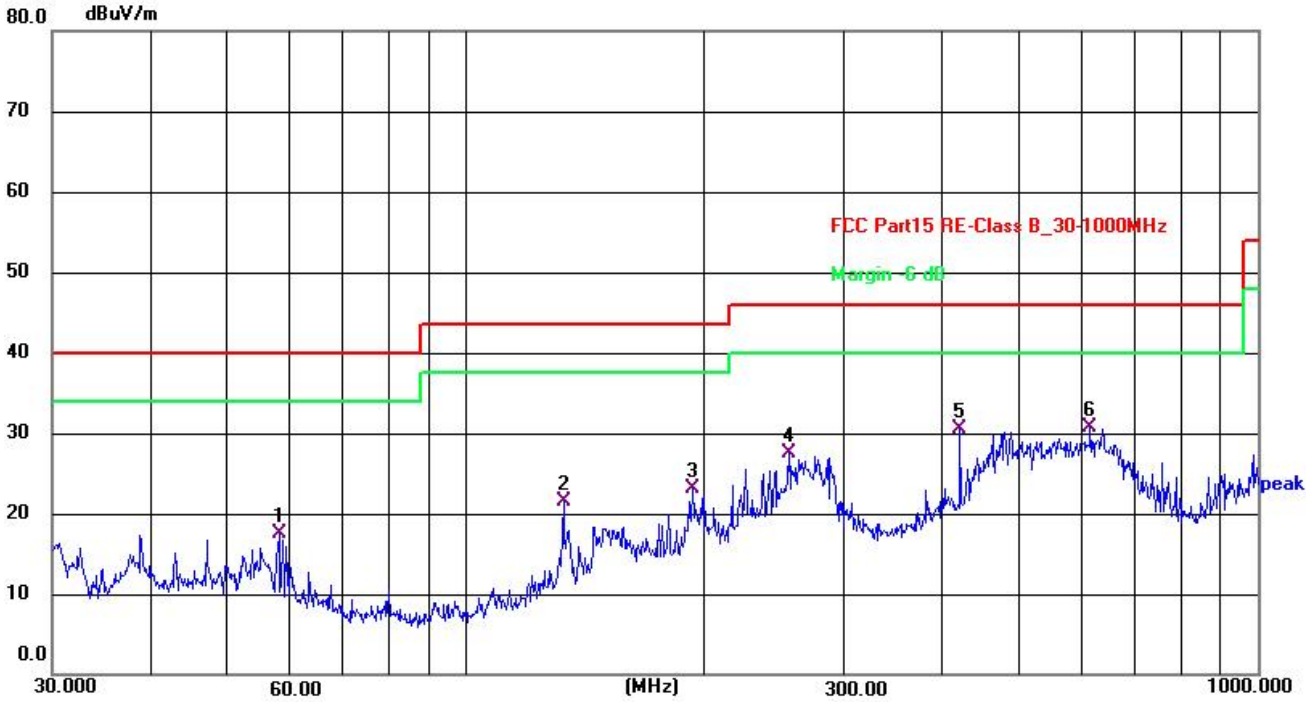
Test Frequency : 30MHz ~ 1GHz

Radiation Emission Test Data			
Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Horizontal
Test Voltage :	DC 3.2V	Test Mode	BLE Transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	55.0274	34.10	-17.05	17.05	40.00	-22.95	QP
2	130.8369	33.67	-17.30	16.37	43.50	-27.13	QP
3	198.5880	43.27	-19.69	23.58	43.50	-19.92	QP
4 *	269.4282	48.14	-17.33	30.81	46.00	-15.19	QP
5	420.5803	41.13	-14.28	26.85	46.00	-19.15	QP
6	893.8564	34.37	-7.68	26.69	46.00	-19.31	QP

Radiation Emission Test Data			
Temperature:	25.1°C	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Vertical
Test Voltage :	DC 3.7V	Test Mode	BLE Transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	57.9992	34.90	-17.35	17.55	40.00	-22.45	QP
2	132.6850	38.68	-17.16	21.52	43.50	-21.98	QP
3	193.0944	42.66	-19.49	23.17	43.50	-20.33	QP
4	255.6230	45.28	-17.73	27.55	46.00	-18.45	QP
5	420.5803	44.76	-14.28	30.48	46.00	-15.52	QP
6 *	614.2142	42.04	-11.33	30.71	46.00	-15.29	QP

Remark:
1. Level = Reading + Correct Factor
2. Correct Factor=Antenna Factor + Cable Loss - Preamplifier Factor
3. Only the worst Data GFSK 1M/2402MHz mode Record in the report.

Test Frequency 1GHz-25GHz:

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2402MHz									
V	4804.00	55.31	30.55	5.77	24.66	55.19	74.00	-18.81	Pk
V	4804.00	43.48	30.55	5.77	24.66	43.36	54.00	-10.64	AV
V	7206.00	51.20	30.33	6.32	24.55	51.74	74.00	-22.26	Pk
V	7206.00	43.14	30.33	6.32	24.55	43.68	54.00	-10.32	AV
V	9608.00	50.22	30.85	7.45	24.69	51.51	74.00	-22.49	Pk
V	9608.00	43.35	30.85	7.45	24.69	44.64	54.00	-9.36	AV
V	12010.00	52.90	31.02	8.99	25.57	56.44	74.00	-17.56	Pk
V	12010.00	43.31	31.02	8.99	25.57	46.85	54.00	-7.15	AV
H	4804.00	51.45	30.55	5.77	24.66	51.33	74.00	-22.67	Pk
H	4804.00	44.00	30.55	5.77	24.66	43.88	54.00	-10.12	AV
H	7206.00	52.27	30.33	6.32	24.55	52.81	74.00	-21.19	Pk
H	7206.00	43.30	30.33	6.32	24.55	43.84	54.00	-10.16	AV
H	9608.00	51.89	30.85	7.45	24.69	53.18	74.00	-20.82	Pk
H	9608.00	43.23	30.85	7.45	24.69	44.52	54.00	-9.48	AV
H	12010.00	51.90	31.02	8.99	25.57	55.44	74.00	-18.56	Pk
H	12010.00	43.01	31.02	8.99	25.57	46.55	54.00	-7.45	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2440MHz									
V	4880.00	53.36	30.55	5.77	24.66	53.24	74.00	-20.76	Pk
V	4880.00	43.83	30.55	5.77	24.66	43.71	54.00	-10.29	AV
V	7320.00	51.52	30.33	6.32	24.55	52.06	74.00	-21.94	Pk
V	7320.00	43.97	30.33	6.32	24.55	44.51	54.00	-9.49	AV
V	9760.00	50.53	30.85	7.45	24.69	51.82	74.00	-22.18	Pk
V	9760.00	43.44	30.85	7.45	24.69	44.73	54.00	-9.27	AV
V	12200.00	50.60	31.02	8.99	25.57	54.14	74.00	-19.86	Pk
V	12200.00	43.61	31.02	8.99	25.57	47.15	54.00	-6.85	AV
H	4880.00	52.58	30.55	5.77	24.66	52.46	74.00	-21.54	Pk
H	4880.00	43.71	30.55	5.77	24.66	43.59	54.00	-10.41	AV
H	7320.00	51.53	30.33	6.32	24.55	52.07	74.00	-21.93	Pk
H	7320.00	43.16	30.33	6.32	24.55	43.70	54.00	-10.30	AV
H	9760.00	51.67	30.85	7.45	24.69	52.96	74.00	-21.04	Pk
H	9760.00	43.92	30.85	7.45	24.69	45.21	54.00	-8.79	AV
H	12200.00	54.01	31.02	8.99	25.57	57.55	74.00	-16.45	Pk
H	12200.00	43.35	31.02	8.99	25.57	46.89	54.00	-7.11	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2480MHz									
V	4960.00	53.79	30.55	5.77	24.66	53.67	74.00	-20.33	Pk
V	4960.00	43.10	30.55	5.77	24.66	42.98	54.00	-11.02	AV
V	7440.00	51.93	30.33	6.32	24.55	52.47	74.00	-21.53	Pk
V	7440.00	43.49	30.33	6.32	24.55	44.03	54.00	-9.97	AV
V	9920.00	50.68	30.85	7.45	24.69	51.97	74.00	-22.03	Pk
V	9920.00	43.76	30.85	7.45	24.69	45.05	54.00	-8.95	AV
V	12400.00	52.58	31.02	8.99	25.57	56.12	74.00	-17.88	Pk
V	12400.00	43.05	31.02	8.99	25.57	46.59	54.00	-7.41	AV
H	4960.00	50.10	30.55	5.77	24.66	49.98	74.00	-24.02	Pk
H	4960.00	43.30	30.55	5.77	24.66	43.18	54.00	-10.82	AV
H	7440.00	54.36	30.33	6.32	24.55	54.90	74.00	-19.10	Pk
H	7440.00	43.69	30.33	6.32	24.55	44.23	54.00	-9.77	AV
H	9920.00	51.26	30.85	7.45	24.69	52.55	74.00	-21.45	Pk
H	9920.00	43.24	30.85	7.45	24.69	44.53	54.00	-9.47	AV
H	12400.00	52.33	31.02	8.99	25.57	55.87	74.00	-18.13	Pk
H	12400.00	43.70	31.02	8.99	25.57	47.24	54.00	-6.76	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.
4. Only the worst Data GFSK 1M mode Record in the report.

Band Edge:

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Detector Type	Result
GFSK 1M	Low Channel: 2402MHz									
	H	2310.00	53.97	30.22	4.85	23.98	52.58	74.00	PK	PASS
	H	2310.00	44.62	30.22	4.85	23.98	43.23	54.00	AV	PASS
	H	2390.00	54.42	30.22	4.85	23.98	53.03	74.00	PK	PASS
	H	2390.00	44.86	30.22	4.85	23.98	43.47	54.00	AV	PASS
	H	2400.00	53.18	30.22	4.85	23.98	51.79	74.00	PK	PASS
	H	2400.00	44.65	30.22	4.85	23.98	43.26	54.00	AV	PASS
	V	2310.00	53.17	30.22	4.85	23.98	51.78	74.00	PK	PASS
	V	2310.00	44.53	30.22	4.85	23.98	43.14	54.00	AV	PASS
	V	2390.00	54.13	30.22	4.85	23.98	52.74	74.00	PK	PASS
	V	2390.00	44.53	30.22	4.85	23.98	43.14	54.00	AV	PASS
	V	2400.00	53.26	30.22	4.85	23.98	51.87	74.00	PK	PASS
	V	2400.00	44.56	30.22	4.85	23.98	43.17	54.00	AV	PASS
	High Channel: 2480MHz									
	H	2483.50	53.71	30.22	4.85	23.98	52.32	74.00	PK	PASS
	H	2483.50	44.23	30.22	4.85	23.98	42.84	54.00	AV	PASS
	H	2500.00	53.83	30.22	4.85	23.98	52.44	74.00	PK	PASS
	H	2500.00	44.37	30.22	4.85	23.98	42.98	54.00	AV	PASS
	V	2483.50	53.47	30.22	4.85	23.98	52.08	74.00	PK	PASS
	V	2483.50	44.61	30.22	4.85	23.98	43.22	54.00	AV	PASS
	V	2500.00	53.63	30.22	4.85	23.98	52.24	74.00	PK	PASS
	V	2500.00	44.23	30.22	4.85	23.98	42.84	54.00	AV	PASS

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit.
2. Only the worst Data GFSK 1M mode Record in the report.

Field Strength of The Fundamental Signal Data

GFSK 1M

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2402MHz									
V	2402.000	88.64	30.55	5.77	33.51	**97.37**	114.00	-16.63	Pk
V	2402.000	72.17	30.55	5.77	33.51	80.90	94.00	-13.10	AV
H	2402.000	86.21	30.55	5.77	33.51	94.94	114.00	-19.06	Pk
H	2402.000	73.40	30.55	5.77	33.51	82.13	94.00	-11.87	AV
Middle Channel:2440MHz									
V	2440.000	87.44	30.55	5.77	33.58	96.24	114.00	-17.76	Pk
V	2440.000	72.24	30.55	5.77	33.58	81.04	94.00	-12.96	AV
H	2440.000	86.45	30.55	5.77	33.58	95.25	114.00	-18.75	Pk
H	2440.000	73.64	30.55	5.77	33.58	82.44	94.00	-11.56	AV
High Channel:2480MHz									
V	2480.000	88.03	30.55	5.77	33.58	96.83	114.00	-17.17	Pk
V	2480.000	74.34	30.55	5.77	33.58	83.14	94.00	-10.86	AV
H	2480.000	87.81	30.55	5.77	33.58	96.61	114.00	-17.39	Pk
H	2480.000	74.95	30.55	5.77	33.58	83.75	94.00	-10.25	AV

GFSK 2M

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2402MHz									
V	2402.000	88.53	30.55	5.77	33.51	97.26	114.00	-16.74	Pk
V	2402.000	70.60	30.55	5.77	33.51	79.33	94.00	-14.67	AV
H	2402.000	87.49	30.55	5.77	33.51	96.22	114.00	-17.78	Pk
H	2402.000	70.23	30.55	5.77	33.51	78.96	94.00	-15.04	AV
Middle Channel:2440MHz									
V	2440.000	88.01	30.55	5.77	33.58	96.81	114.00	-17.19	Pk
V	2440.000	72.92	30.55	5.77	33.58	81.72	94.00	-12.28	AV
H	2440.000	86.92	30.55	5.77	33.58	95.72	114.00	-18.28	Pk
H	2440.000	74.81	30.55	5.77	33.58	83.61	94.00	-10.39	AV
High Channel:2480MHz									
V	2480.000	87.73	30.55	5.77	33.58	96.53	114.00	-17.47	Pk
V	2480.000	73.40	30.55	5.77	33.58	82.20	94.00	-11.80	AV
H	2480.000	86.95	30.55	5.77	33.58	95.75	114.00	-18.25	Pk
H	2480.000	71.43	30.55	5.77	33.58	80.23	94.00	-13.77	AV

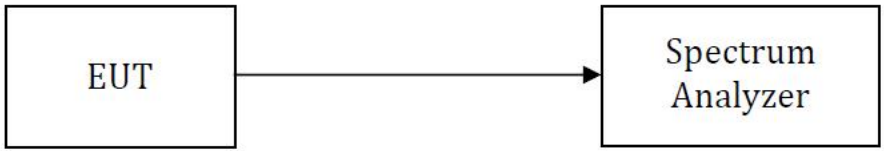
Note:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
2. Margin= Emission Level - Limit

4. -20 dB Bandwidth Measurement

4.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.215

4.2.Test Setup

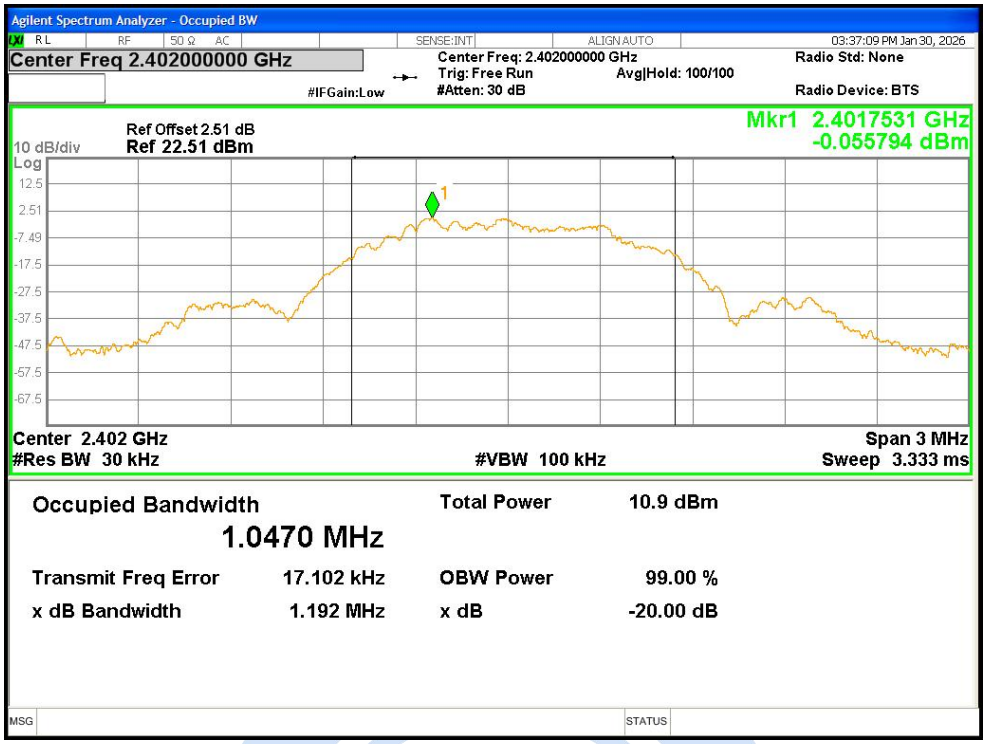


4.3.Test Procedure

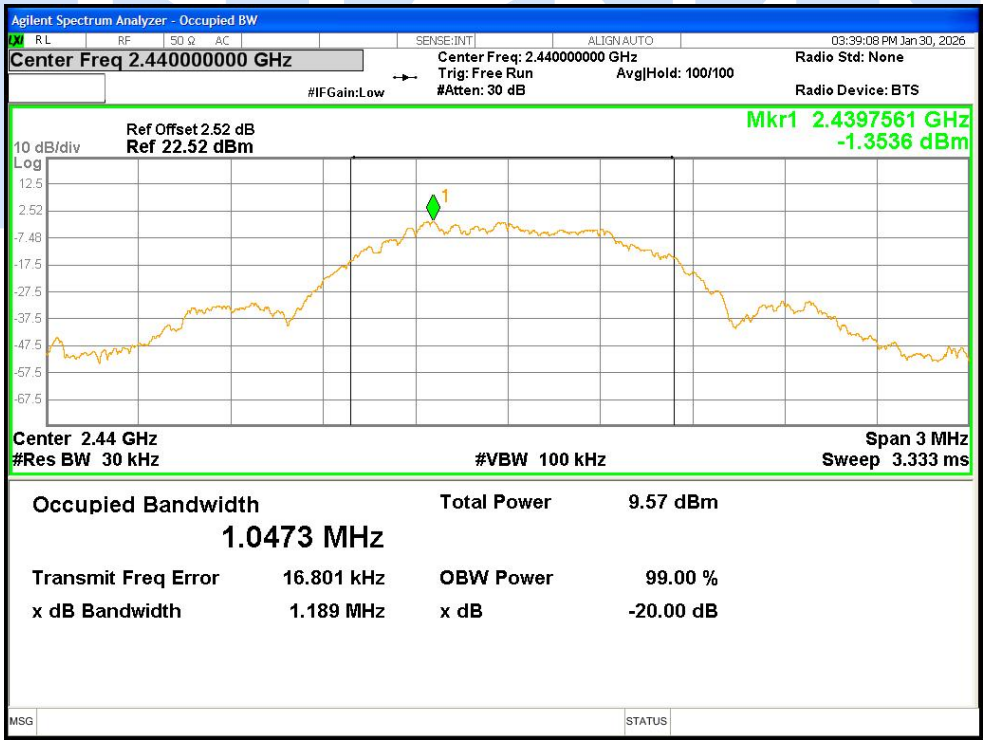
1. Set the spectrum analyzer: RBW = 1%-5% OBW
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by -20 dB relative to the maximum level measured in the fundamental emission

4.4.Test Result

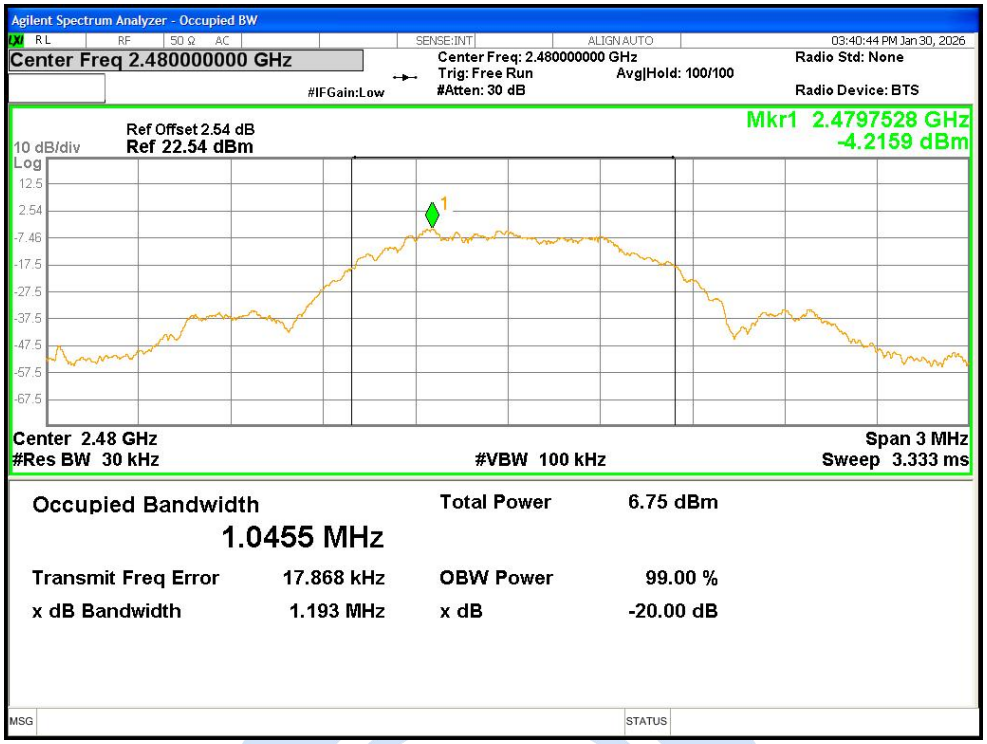
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)	-20dB OBW (MHz)
BLE 1M	2402	Ant1	1.047	1.192
	2440	Ant1	1.047	1.189
	2480	Ant1	1.046	1.193
BLE 2M	2402	Ant1	2.048	2.177
	2440	Ant1	2.051	2.181
	2480	Ant1	2.051	2.172



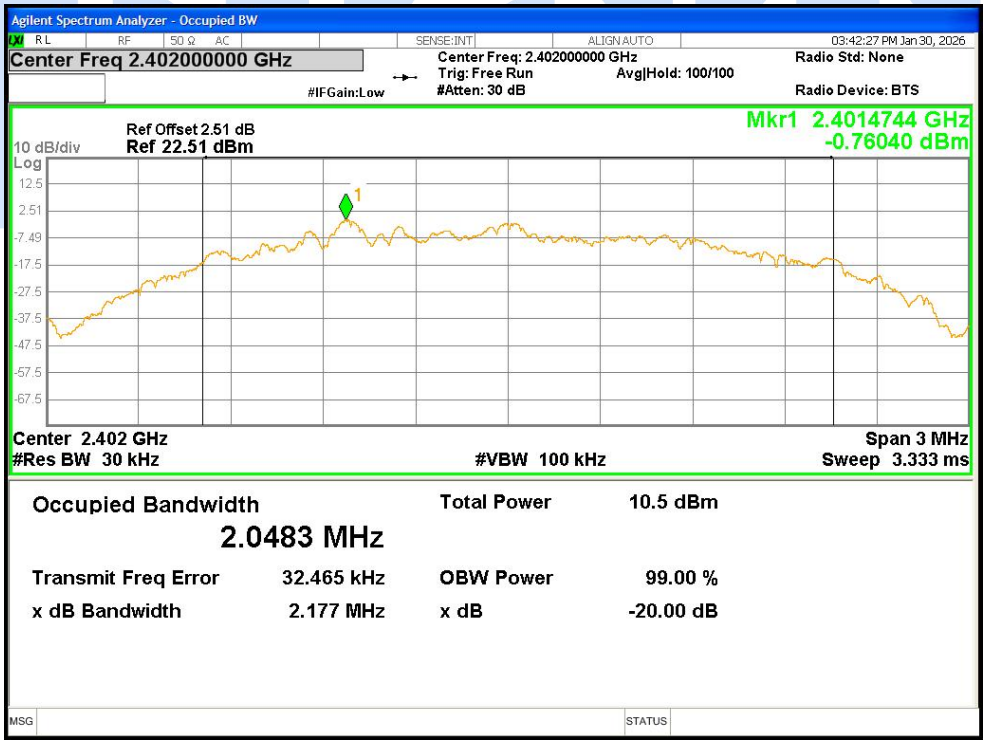
OBW NVNT BLE 1M 2402MHz Ant1



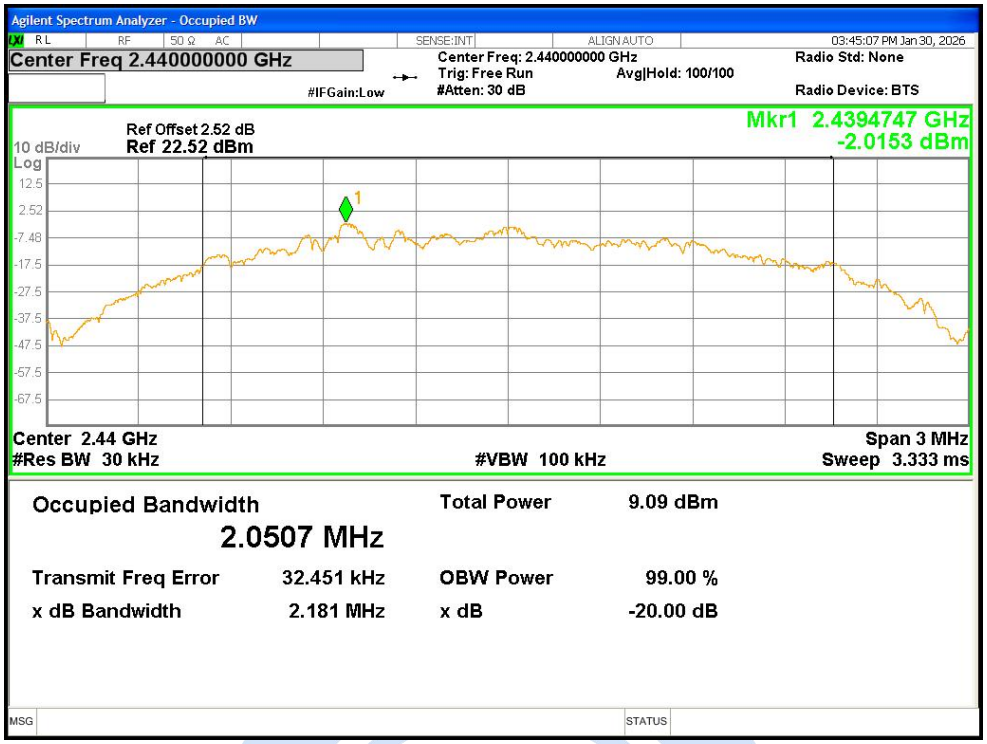
OBW NVNT BLE 1M 2440MHz Ant1



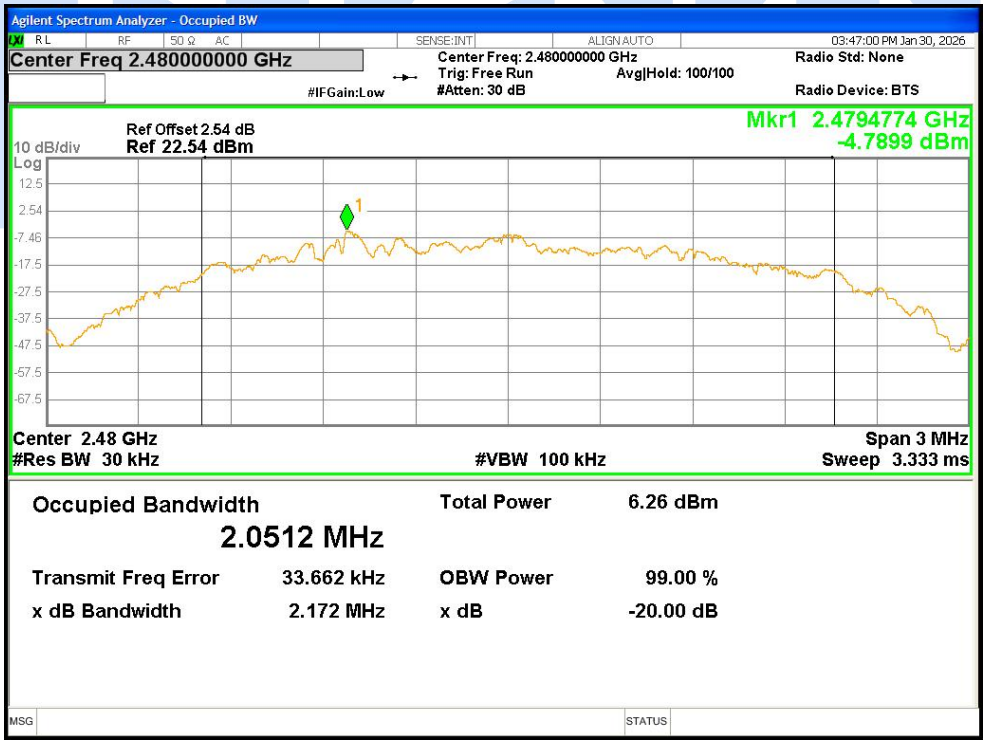
OBW NVNT BLE 1M 2480MHz Ant1



OBW NVNT BLE 2M 2402MHz Ant1



OBW NVNT BLE 2M 2440MHz Ant1



OBW NVNT BLE 2M 2480MHz Ant1

5. 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 Ceramic Antenna fulfill the requirement of this section.

Result

The antenna is Ceramic Antenna, the Max gain of the antennas is 2dBi, reference to the attachment for details.

6. Test Photographs

Please see Attachment BKC26010462AE-4.

7. Appendix I: Photos of the EUT

Please see Attachment BKC26010462AE-5 and BKC26010462AE-6.