

TEST REPORT

Applicant : Qingdao Mingce Zhida Import and Export Trading Co., Ltd

Address : Room 102, Building 1, No.1369, Zhaizishan Road, Huangdao District,
Qingdao City, Shandong Province, China

Manufacturer : Shenzhen Marry Acoustics Technology Co., Ltd.

Address : Room 1558, Yongjingxuan Commercial Building, No. 134 Huasheng
Road, Dalang Sub-district Office, Longhua District, Shenzhen City,
Guangdong Province, China

Product Name : Ski Headphones

Model Number : OM-MZ04m, OM-MZ04

Trademark : OutdoorMaster

FCC ID : 2BG3W-MZ504

Test Date : Jul. 31, 2026 - Sep. 08, 2026

Date of Report : Sep. 08, 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+C63.10a-2024+Errata to
C63.10a-2024

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Reviewer(Supervisor):
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Approved(Manager):
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1. General Information

1.1. Description of Device (EUT)

EUT Name : Ski Headphones

Model No. : OM-MZ04m, OM-MZ04

Model Difference : Only the model names are different, while the internal components and circuit layout of the left and right earphones are consistent. The main test model is OM-MZ04m

Power supply : Rating(s): 5V
Battery: 3.7V

Operation frequency : 2402-2480MHz

Modulation : GFSK, Pi/4 DQPSK, 8DPSK

Antenna Type : Ceramic Antenna, Maximum Gain is -0.27dBi

Hardware Version : N/A

Software Version : N/A

Intend use environment : Residential, commercial and light industrial environment

1.2. Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	1	2403	2	2404	3	2405
4	2406	5	2407	6	2408	7	2409
8	2410	9	2411	10	2412	11	2413
12	2414	13	2415	14	2416	15	2417
16	2418	17	2419	18	2420	19	2421
20	2422	21	2423	22	2424	23	2425
24	2426	25	2427	26	2428	27	2429
28	2430	29	2431	30	2432	31	2433
32	2434	33	2435	34	2436	35	2437
36	2438	37	2439	38	2440	39	2441
40	2442	41	2443	42	2444	43	2445
44	2446	45	2447	46	2448	47	2449
48	2450	49	2451	50	2452	51	2453
52	2454	53	2455	54	2456	55	2457
56	2458	57	2459	58	2460	59	2461
60	2462	61	2463	62	2464	63	2465
64	2466	65	2467	66	2468	67	2469
68	2470	69	2471	70	2472	71	2473
72	2474	73	2475	74	2476	75	2477
76	2478	77	2479	78	2480	-	-

1.3.Summary of test result

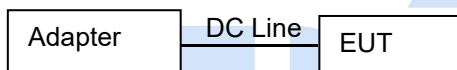
RF PART		
Test Items	Test Requirement	Result
AC Power Line Conducted Emission	FCC part 15.207	PASS
Radiated Spurious Emissions	FCC part 15.249&15.209	PASS
Remark: N/A is an abbreviation for Not Applicable. Measurement Uncertainty is not taken into account for conformity statement		

1.4.Special Accessories and Auxiliary Equipment

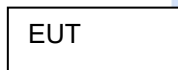
Description	Manufacturer	Model No.	Hardware Version	Software Version
Adapter	-	HW088	-	-
-	-	-	-	-

1.5.Block Diagram

Conducted Emission



Radiated Emission



1.6.Test mode

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

Test mode	Low channel	Middle channel	High channel
GFSK	2402MHz	2441MHz	2480MHz
PI/4 DQPSK	2402MHz	2441MHz	2480MHz
8DPSK	2402MHz	2441MHz	2480MHz
Note: /			

1.7.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
Power supply	Rating(s): 5V Battery: 3.7V	N/A

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

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

Item	MU	Remark
Uncertainty for radio frequency	$\pm 7 \times 10^{-8}$	
Conducted Emissions (150kHz~30MHz)	$\pm 2.54\text{dB}$	
Radiated Emission(9KHz~30MHz)	$\pm 1.6\text{ dB}$	
Radiated Emission(30MHz~1GHz)	Vertical: $\pm 4.14\text{dB}$ Horizontal: $\pm 4.25\text{dB}$	
Radiated Emission(1GHz~6GHz)	$\pm 3.9\text{dB}$	
Radiated Emission(6GHz~18GHz)	$\pm 4.3\text{dB}$	
Radiated Emission(18GHz~40GHz)	$\pm 3.38\text{dB}$	
Uncertainty for conducted RF Power	$\pm 0.20\text{dB}$	
Conducted spurious emissions	$\pm 0.24\text{dB}$	
Uncertainty for temperature	0.6°C	
Uncertainty for humidity	1%	
Bandwidth	$\pm 1.5 \times 10^{-6}$	
Time	$\pm 2\%$	
Duty Cycle	$\pm 2\%$	

Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%

1.9.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

1.10.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. 11, 2026	Mar. 10, 2027
2	EMI Test Receiver	R&S	ESCI	101424	Mar. 11, 2026	Mar. 10, 2027
3	Rf cables	HTEC	HCE 2M-CE	N/A	Mar. 11, 2026	Mar. 10, 2027
4	Coupling/ Decoupling Network	Diamond	CX210	N/A	Mar. 11, 2026	Mar. 10, 2027

5	CE Testing software	EZ	EZ-EMC	/	/	/
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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. 11, 2026	Mar. 10, 2027
3	Preamplifier	HP	8447D	2727A05345	Mar. 11, 2026	Mar. 10, 2027
4	Double Ridged Broadband	SCHWARZBECK	BBHA 9120D	02621	Mar. 11, 2026	Mar. 19, 2028
5	Preamplifier	Schwarzbeck	BBV 9718D	00041	Mar. 11, 2026	Mar. 10, 2027
6	Rf cables	HUBER+SUHNER	8M-RE	N/A	Mar. 11, 2026	Mar. 10, 2027
7	Rf cables	HUBER+SUHNER	1.5M-RE	N/A	Mar. 11, 2026	Mar. 10, 2027
8	Rf cables	HUBER+SUHNER	1.5M-AP-RE	N/A	Mar. 11, 2026	Mar. 10, 2027
9	Loop antenna	ANRF	ANRF-6603	091802	Mar. 13, 2026	Mar. 12, 2027
10	Spectrum analyzer	R&S	FSP40	200061	Mar. 11, 2026	Mar. 10, 2027
11	Double Ridged Broadband Horn Antenna	COM-POWER	AH-1840	10100009	Mar. 11, 2026	Mar. 10, 2027
12	Spectrum	Agilent	N9020A	MY50510311	Mar. 11, 2026	Mar. 10, 2027
13	Band Stop Filter	Bafang	BSF5G	2024052610	Mar. 11, 2026	Mar. 10, 2027
14	RE Testing software	EZ	EZ-EMC	/	/	/

Test software

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

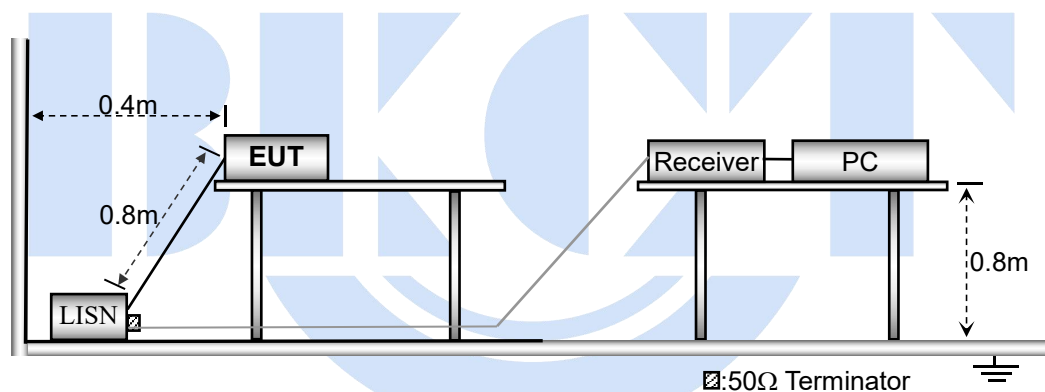
2.1.Limit

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

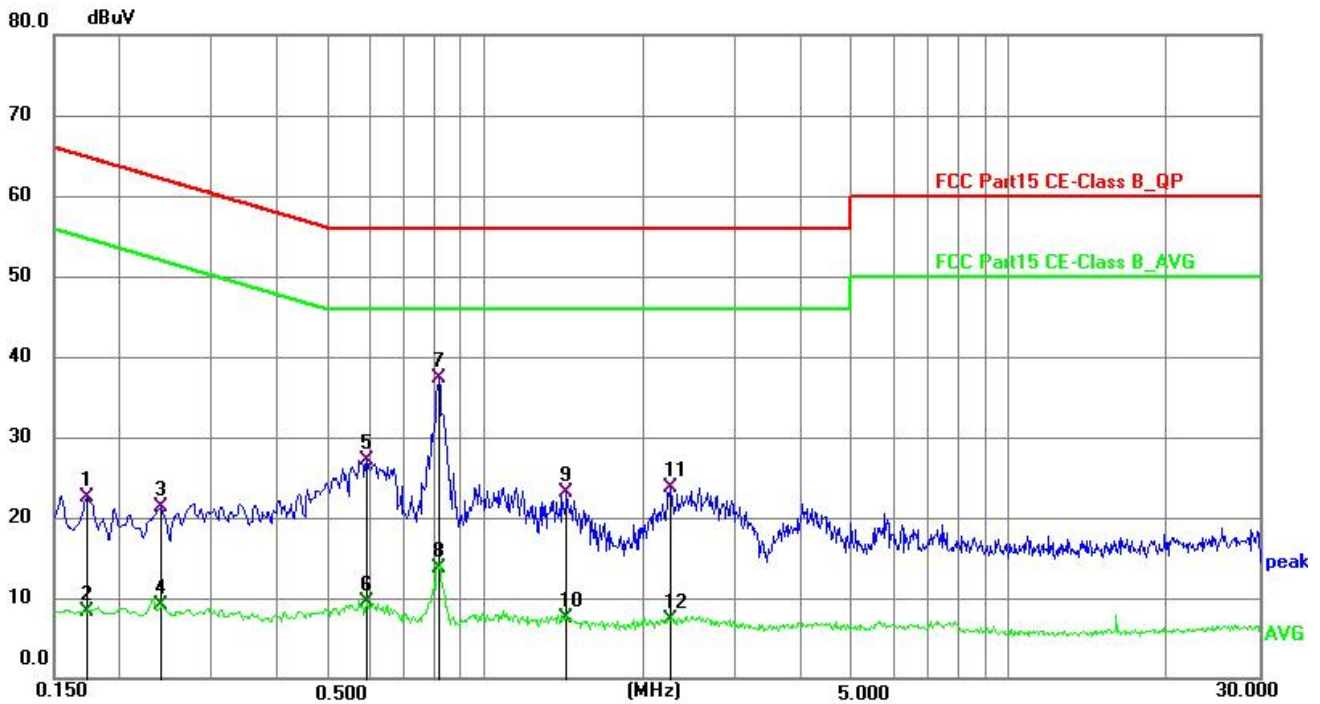


2.3.Test Procedure

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.

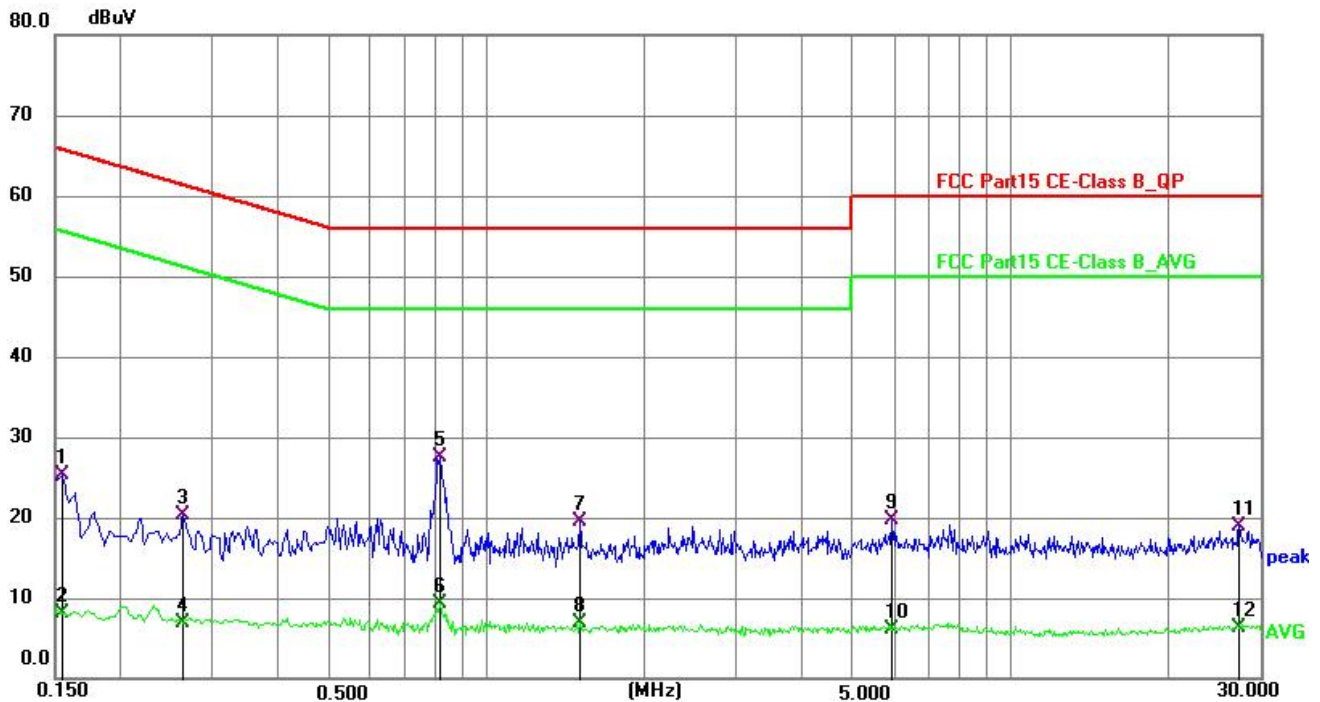
2.4. Test Result

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:	BT transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1725	12.77	9.78	22.55	64.84	-42.29	QP	P
2	0.1725	-1.39	9.78	8.39	54.84	-46.45	AVG	P
3	0.2400	11.51	9.80	21.31	62.10	-40.79	QP	P
4	0.2400	-0.76	9.80	9.04	52.10	-43.06	AVG	P
5	0.5910	17.35	9.76	27.11	56.00	-28.89	QP	P
6	0.5910	-0.34	9.76	9.42	46.00	-36.58	AVG	P
7 *	0.8160	27.57	9.76	37.33	56.00	-18.67	QP	P
8	0.8160	4.04	9.76	13.80	46.00	-32.20	AVG	P
9	1.4280	13.29	9.75	23.04	56.00	-32.96	QP	P
10	1.4280	-2.33	9.75	7.42	46.00	-38.58	AVG	P
11	2.2559	14.00	9.76	23.76	56.00	-32.24	QP	P
12	2.2559	-2.54	9.76	7.22	46.00	-38.78	AVG	P

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



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1548	15.59	9.68	25.27	65.74	-40.47	QP	P
2	0.1548	-1.56	9.68	8.12	55.74	-47.62	AVG	P
3	0.2630	10.55	9.71	20.26	61.34	-41.08	QP	P
4	0.2630	-2.77	9.71	6.94	51.34	-44.40	AVG	P
5 *	0.8131	17.86	9.69	27.55	56.00	-28.45	QP	P
6	0.8131	-0.43	9.69	9.26	46.00	-36.74	AVG	P
7	1.5033	9.81	9.69	19.50	56.00	-36.50	QP	P
8	1.5033	-2.86	9.69	6.83	46.00	-39.17	AVG	P
9	5.9293	10.03	9.72	19.75	60.00	-40.25	QP	P
10	5.9293	-3.54	9.72	6.18	50.00	-43.82	AVG	P
11	27.2711	9.23	9.77	19.00	60.00	-41.00	QP	P
12	27.2711	-3.47	9.77	6.30	50.00	-43.70	AVG	P

Remark:

- Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor
- Only the worst Data GFSK/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	120KHz	360KHz	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:

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	$10000 * 2400/F(kHz)$	$20\log(2400/F(kHz)) + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(kHz)$	$20\log(24000/F(kHz)) + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log(30) + 40$
30 ~ 88	100	3	100	$20\log(100)$
88 ~ 216	150	3	150	$20\log(150)$
216 ~ 960	200	3	200	$20\log(200)$
Above 960	500	3	500	$20\log(500)$

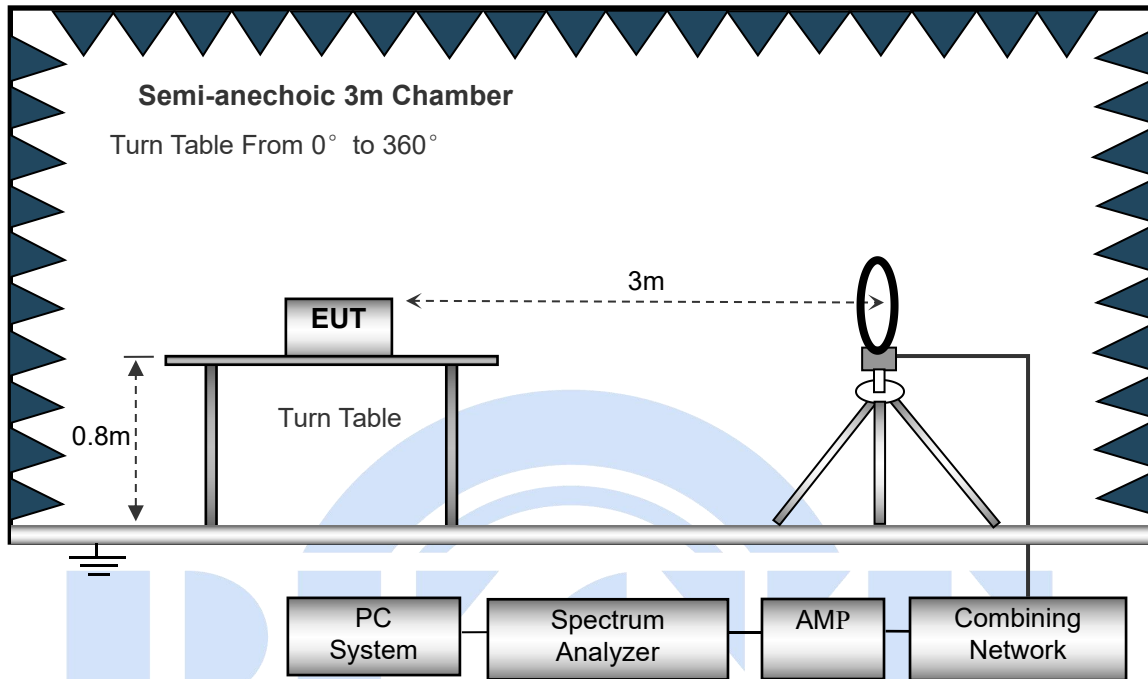
Limit 2:

§ 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.

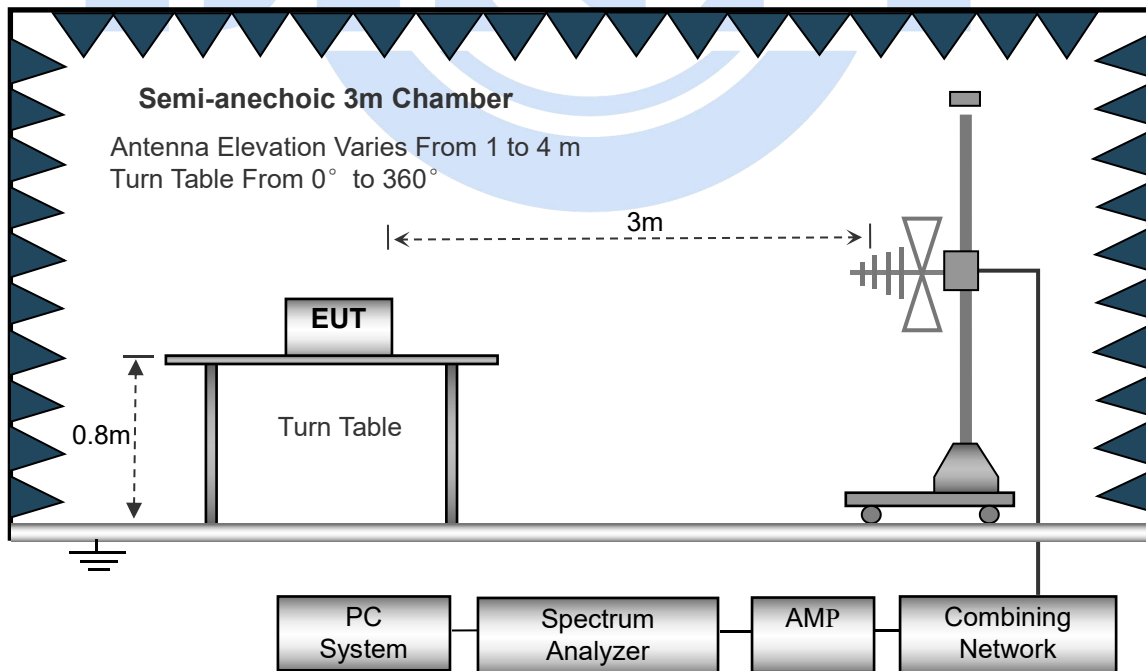
3.2. Test Setup

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

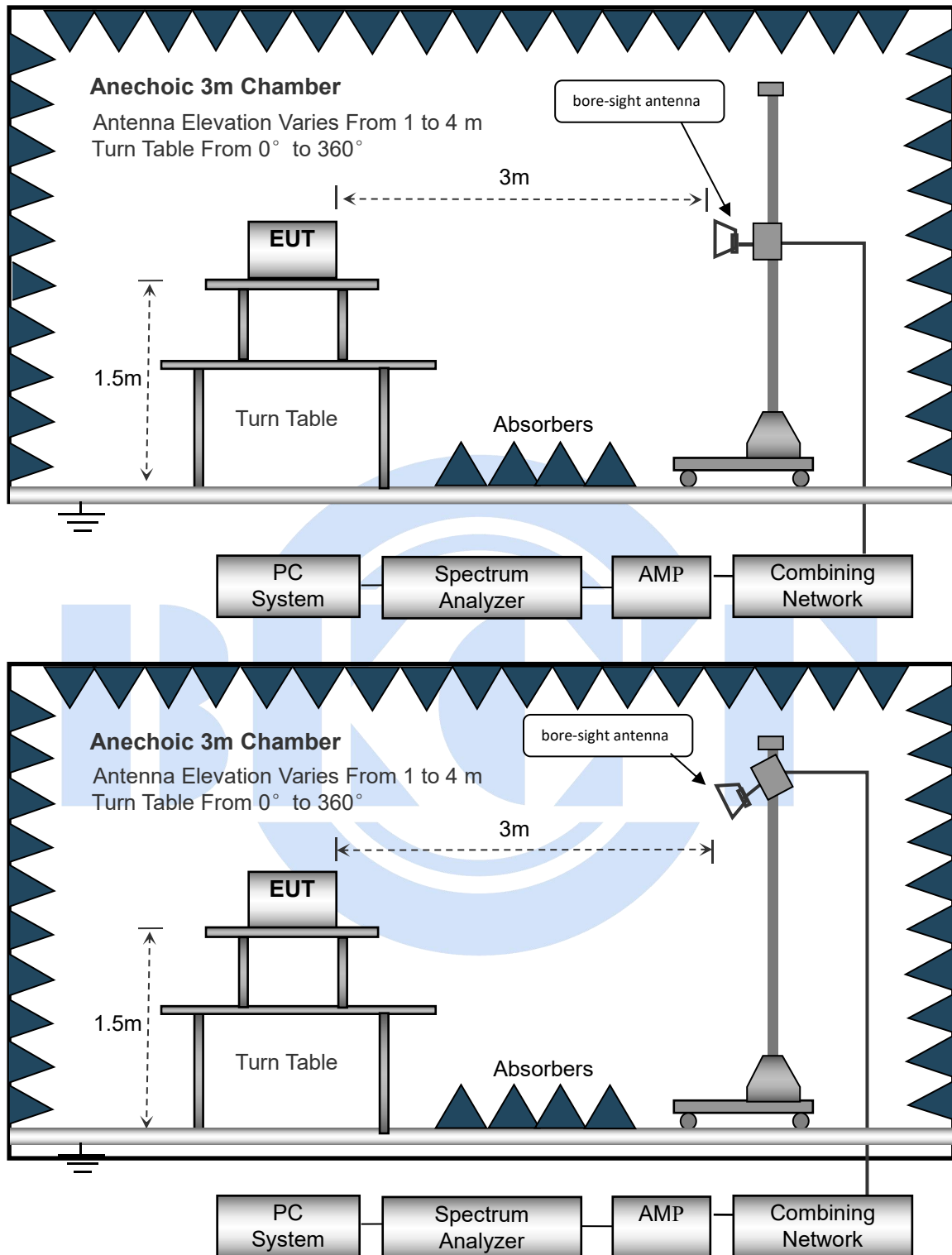
The test setup for emission measurement below 30MHz.



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 during radiated emissions above 1GHz measurement.



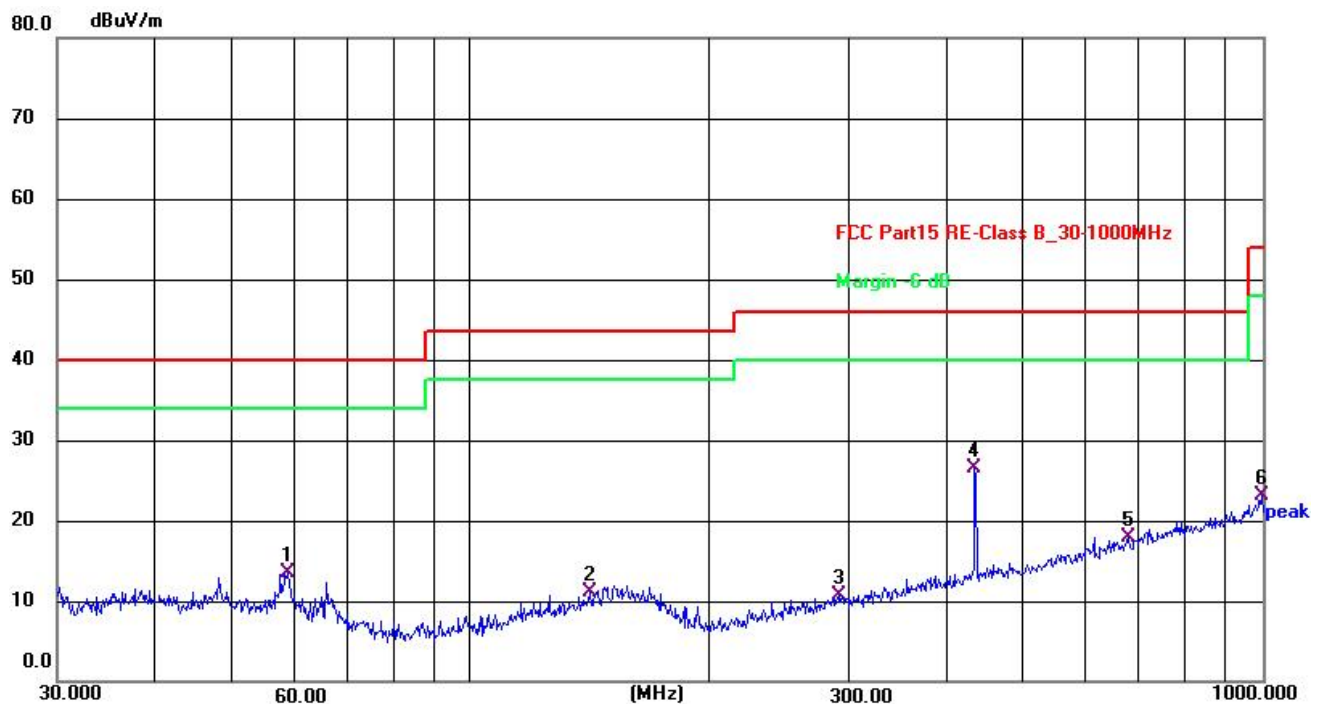
3.4. Test Result

Test Frequency: 9KHz~30MHz

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

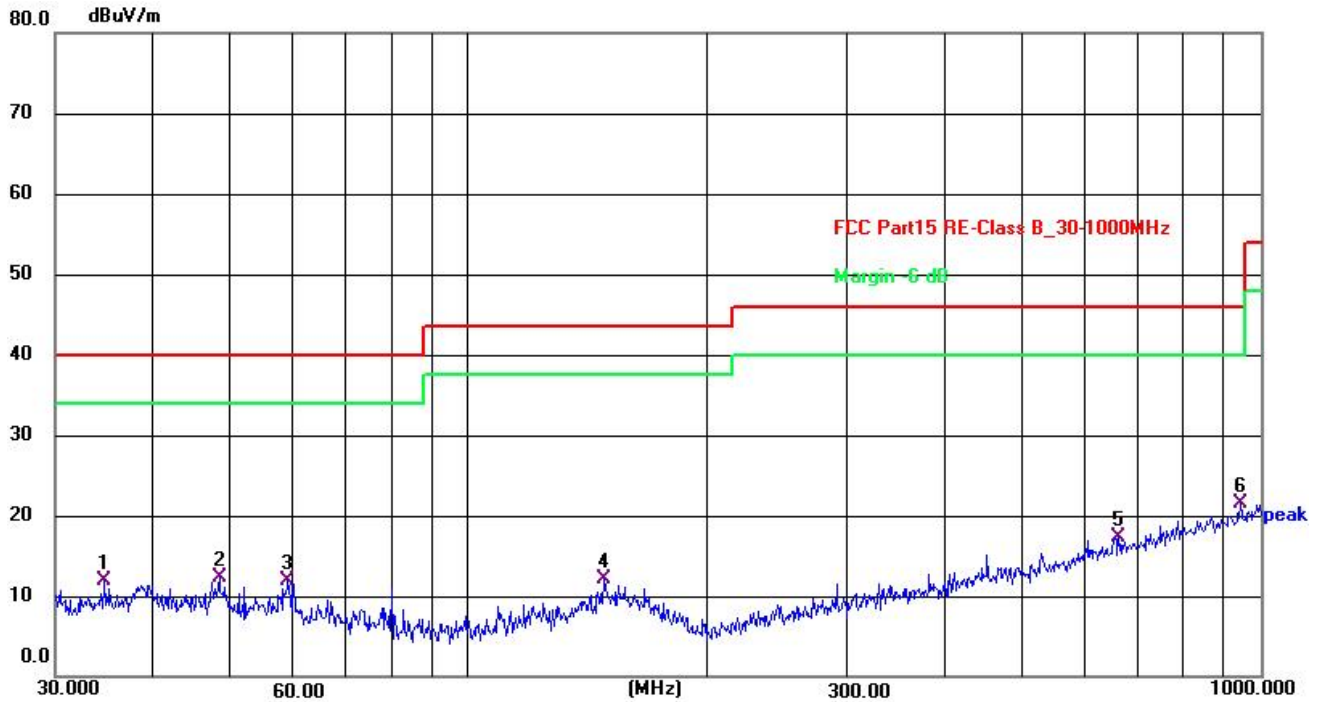
Test Frequency : 30MHz ~ 1GHz

Radiation Emission Test Data			
Temperature:	25.1 °C	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Horizontal
Test Voltage :	DC 3.7V	Test Mode	BT transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	58.6743	30.90	-17.42	13.48	40.00	-26.52	QP
2	141.5777	27.58	-16.49	11.09	43.50	-32.41	QP
3	291.2402	27.42	-16.66	10.76	46.00	-35.24	QP
4 *	433.9129	40.58	-13.99	26.59	46.00	-19.41	QP
5	675.6816	28.45	-10.45	18.00	46.00	-28.00	QP
6	997.8983	29.84	-6.81	23.03	54.00	-30.97	QP

Radiation Emission Test Data			
Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Vertical
Test Voltage :	DC 3.7V	Test Mode	BT transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	34.6871	28.77	-16.84	11.93	40.00	-28.07	QP
2	48.4506	28.91	-16.61	12.30	40.00	-27.70	QP
3	59.0665	29.39	-17.46	11.93	40.00	-28.07	QP
4	148.0252	28.04	-16.01	12.03	43.50	-31.47	QP
5	661.8463	27.97	-10.59	17.38	46.00	-28.62	QP
6 *	943.1221	28.58	-7.04	21.54	46.00	-24.46	QP

Remark:

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

4. Test Photographs

Please see Attachment BKC26074628GE-2.



5. Appendix I: Photos of the EUT

Please see Attachment BKC26074628GE-3 and BKC26074628GE-4.

