FCC TEST REPORT

FCC ID: 2AJ3O-A58

On Behalf of

SHENZHEN FZONE TECHNOLOGY CO.,LTD

Guitar Wireless System

Model No.: A58

Prepared for	:	SHENZHEN FZONE TECHNOLOGY CO.,LTD
Address	:	2nd floor, Building12, Xicheng Industrial Area, Xixiang Town, Baoan District, Shenzhen, Guangdong, China.

Prepared By	:	Shenzhen PSI Testing Co., Ltd.
Address	:	1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Report Number	:	psi2405087-C01-R04
Date of Receipt	:	June 3, 2024
Date of Test	:	June 3, 2024-June 9, 2024
Date of Report	:	June 9, 2024
Version Number	:	V0

TABLE OF CONTENTS

TEST REPORT DECLARATION

Applicant	:	SHENZHEN FZONE TECHNOLOGY CO.,LTD
Address	:	2nd floor, Building12, Xicheng Industrial Area, Xixiang Town, Baoan District, Shenzhen, Guangdong, China.
Manufacturer	:	SHENZHEN FZONE TECHNOLOGY CO.,LTD
Address	:	2nd floor, Building12, Xicheng Industrial Area, Xixiang Town, Baoan District, Shenzhen, Guangdong, China.
EUT Description	:	Guitar Wireless System
		(A) Model No. : A58
		(B) Trademark :

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.249

ANSI C63.10:2013

The device described above is tested by Shenzhen PSI Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen PSI Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen PSI Testing Co., Ltd.

Tested by (name + signature).....:	Felix Pang Test Engineer	
Approved by (name + signature).....:	Simple Guan Project Manager	
Date of issue.....:	June 9, 2024	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	June 9, 2024	Initial released Issue	Felix Pang

1. General Information

1.1. Description of Device (EUT)

EUT Name	:	Guitar Wireless System
Model No./HVIN	:	A58
DIFF.	:	N/A
Power supply	:	DC 5V from USB, DC 3.8V from battery.
Radio technology	:	5.8G SRD
Operation frequency	:	5730~5844MHz
Modulation	:	GFSK
Channel No.		18CH
Antenna Type	:	Internal antenna, max gain 3.09dBi
Software version	:	V0.5
Hardware version	:	V0.5
Intend use environment	:	Residential, commercial and light industrial environment
Note	:	Antenna information is provided by applicant. Testing lab is not responsible for the accuracy of the information.

1.2. Test Facility

Shenzhen PSI Testing Co., Ltd.

1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

September 21, 2023 File on Federal Communication Commission
Registration Number: 916281

September 21, 2023 Certificated by IC
Registration Number: 31123
CAB identifier: CN0158

1.3. Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2022.12.20	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2023.12.19	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV216	102282	/	2023.12.19	1 Year
4.	L.I.S.N.#2	RFT	NNB111	13835240	/	2023.12.19	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2023.04.03	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2022.12.26	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV-40N	101648	3.70	2023.12.19	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2022.12.26	2 Year
9.	Amplifier	SKET	LAPA_01G18G-45dB	SK2022032901	/	2023.12.19	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2022.12.25	2 Year
11.	Amplifier	SKET	LNPA_0118G-45	SK2020010801	/	2023.12.19	1 Year
12	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.02-1111533-Fz	/	2023.12.19	1 Year
13	Spectrum Analyzer	Agilent	N9020A	MY51281067	A.14.03	2023.12.19	1 Year
14	Temp. & Humid Chamber	Auchno	9606	/	/	2023.12.19	1 Year
15	Regulated DC Power Supply	Xinouhua	ADC120V10A	202211251638		2023.12.19	1 Year

For Test Software Information

Item	Software Name	Manufacturer	Version
RE	EZ_EMC	Farad	PSI-3A1
CE	EZ_EMC	Farad	PSI-3A1
RF	RTS	TACHOY	V1.0.0

2. Summary Of Measurement

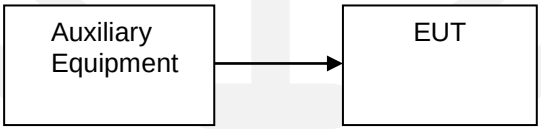
2.1. Summary of Test Result

EMISSION			
Description of Test Item	**Test Requirement**	**Standard Paragraph**	**Results**
Power Line Conducted Emission Test	FCC Part 15 RSS 210	Section 15.207 RSS-GEN(8.8)	P
Spurious Emission Test	FCC Part 15 RSS 210	Section 15.249&15.209 RSS-210 Annex B.10(a) & (b)	P
Occupied bandwidth	FCC Part 15 RSS 210	Section 15. 249 RSS-Gen §6.7	P
Band edge Requirement	FCC Part 15 RSS 210	Section 15.249&15.209 RSS-210 Annex B.10(a) & (b)	P
Antenna Requirement	FCC Part 15 RSS 210	Section 15.203 RSS-Gen §6.8	P

Note:
1. P is an abbreviation for Pass.
2. F is an abbreviation for Fail.
3. N/A is an abbreviation for Not Applicable.
4. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.

Note: The EUT has been tested as an independent unit. And continual transmitting in maximum power.

2.2. Test Connection



2.3. Assistant Equipment Used For Test

No.	Description	Manufacturer	Model	Serial Number	Certification
1	Adapter	Baseus	CCXFK65CC	N/A	N/A

2.4. Test Mode

Mode	Channel	Frequency(MHz)
GFSK	CH1	5730
	CH5	5780
	CH18	5844
	Charging	
Note: According exploratory test, EUT will have maximum output power in those data rate. So those data rate were used for all test.		

Channel List

Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	**5730**	10	5805
2	5736	11	5811
3	5742	12	5813
4	5756	13	5827
5	**5780**	14	5829
6	5785	15	5833
7	5791	16	5835
8	5797	17	5842
9	5803	18	**5844**

2.5. Software test version and power setting information

Mode	The client 's preset testing software is used to control the operation of EUT in continuous transmission mode and select the testing channel, wireless mode:		
Power level setup by client			
Mode	Channel	Frequency (MHz)	Soft Set
GFSK	CH1	5730	TX level is set as
	CH5	5780	TX level is set as
	CH18	5844	TX level is set as

2.6. Test Conditions

Temperature range	21-25℃
Humidity range	40-75%
Pressure range	86-106kPa

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

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	2.17dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	2.74dB(Polarize: V)
	2.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 18GHz)	4.29dB(Polarize: V)
	4.82dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (18GHz to 40GHz)	4.31dB(Polarize: V)
	4.30dB(Polarize: H)
Uncertainty for radio frequency	48.24KHz
Uncertainty for conducted RF Power	0.41dB
Uncertainty for Power Spectral Density	0.39 dB
Uncertainty for OBW	928Hz

3. Radiated Emission and Band Edge

3.1. Radiated Emission Limits

FCC Part 15.209

Frequency MHz	Distance (Meters)	Field Strengths Limits	
		uV/m	dB uV/m
0.009 ~ 0.490	300	2400/F(kHz)	---
0.490 1.705	30	24000/F(kHz)	----
1.705 30	30	30	29.5
30 88	3	100(3nW)	40
88 216	3	150(6.8nW)	43.5
216 960	3	200(12nW)	46
Above 960	3	500(75nW)	54
Carrier frequency	3	50000(avg)	113.97(peak) 93.97(avg)

Notes: 1. Emission level = Read level + Antenna Factor - Preamp Factor + Cable Loss

2. The smaller limit shall apply at the cross point between two frequency bands.

3. Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4. For frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Radiated Spurious Emission						
Test Standard	RSS-Gen 8.9					
Test Limit	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)	
	0.009MHz~0.490MHz	6.37/F (F in kHz)	-	-	300	
	0.490MHz-1.705MHz	63.7/F (F in kHz)	-	-	30	
	1.705MHz-30MHz	0.08	-	-	30	
	30MHz~88MHz	100	40.0	Quasi-peak	3	
	88MHz~216MHz	150	43.5	Quasi-peak	3	
	216MHz~960MHz	200	46.0	Quasi-peak	3	
	Above 960MHz	500	54.0	Average	3	
		-	74.0	Peak	3	
Remark: (1)The lower limit shall apply at the transition frequency. (2) Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.						
Transmitters with wanted and unwanted emissions that are within the general field strength limits						
Test Standard	RSS-210 Annex B.10, Table B2					

	Frequency bands (MHz)	Field Strength (mV/m)		Measurement distance (m)
		Fundamental emissions	Harmonics emissions	
Test Limit	902-928	50	0.5	3
	2400-2483.5	50	0.5	3
	5725-5875	50	0.5	3
	24000-24250	250	2.5	3

Remark:

(1) The field strength shall be measured using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using an International Special Committee on Radio Interference (CISPR) quasi-peak detector.

(2) Emissions radiated outside of the specified frequency bands, except for harmonic emissions, shall be attenuated by at least 50 dB below the level of the fundamental emissions or to the general field strength limits listed in RSS-Gen, whichever is less stringent.

Spectrum Parameter	Setting
Detector	Peak
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz/3MHz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2. Test Procedure

a. The measuring distance of 3m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation(Below 1GHz)

b. The measuring distance of 3m shall used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation(Above 1GHz)

c. The height of the test antenna shall vary between 1m to 4m.Both horizontal and vertical polarization of the antenna are set to make the measurement.

d. The initial step in collecting radiated emission data is a receive peak detector mode. Pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

e. All readings are peak unless otherwise stated QP in column of Note. Peak denoted that the Peak reading compliance with the QP limits and then QP Mode measurement didn't perform

(Below 1GHz)

f. All readings are Peak mode value unless otherwise stated AVG in column of Note. If the Peak mode measured value compliance with the Peak limits and lower than AVG Limits, the EUT shall be deemed to meet Peak & AVG limits and then only Peak mode was measured, but AVG mode didn't perform.(Above 1GHz)

g. For the actual test configuration, please refer to the related Item –EUT Test Photos.

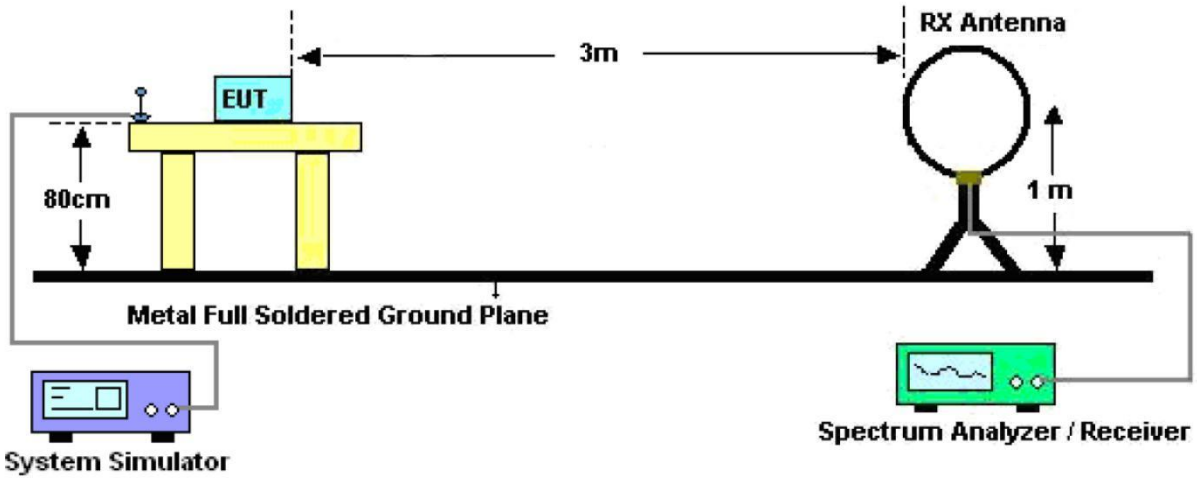
Note: Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.3. Deviation From Test Standard

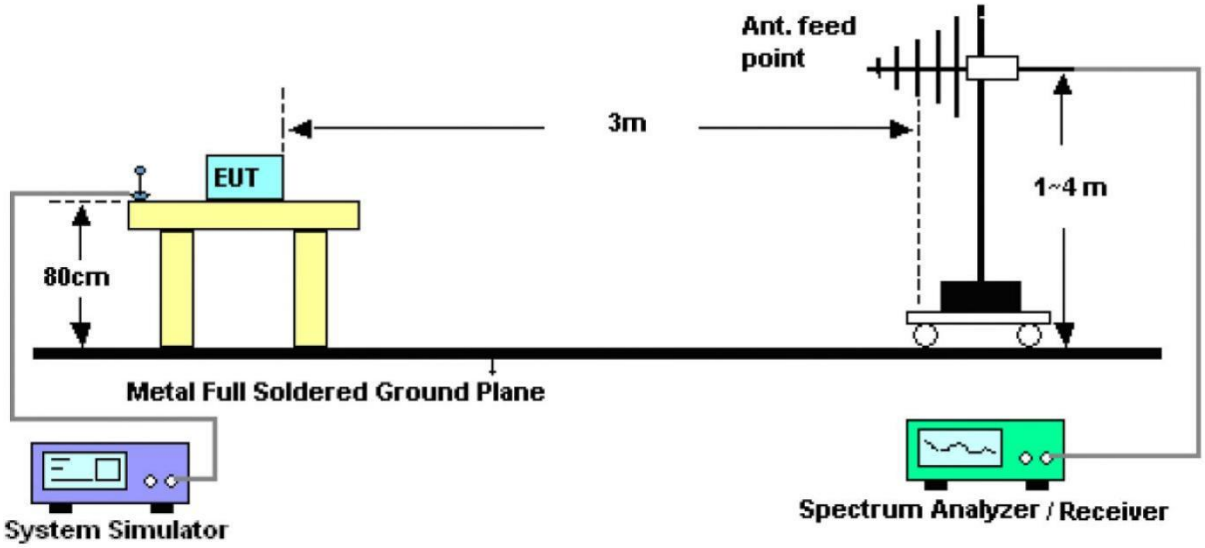
No deviation

3.4. Test Setup

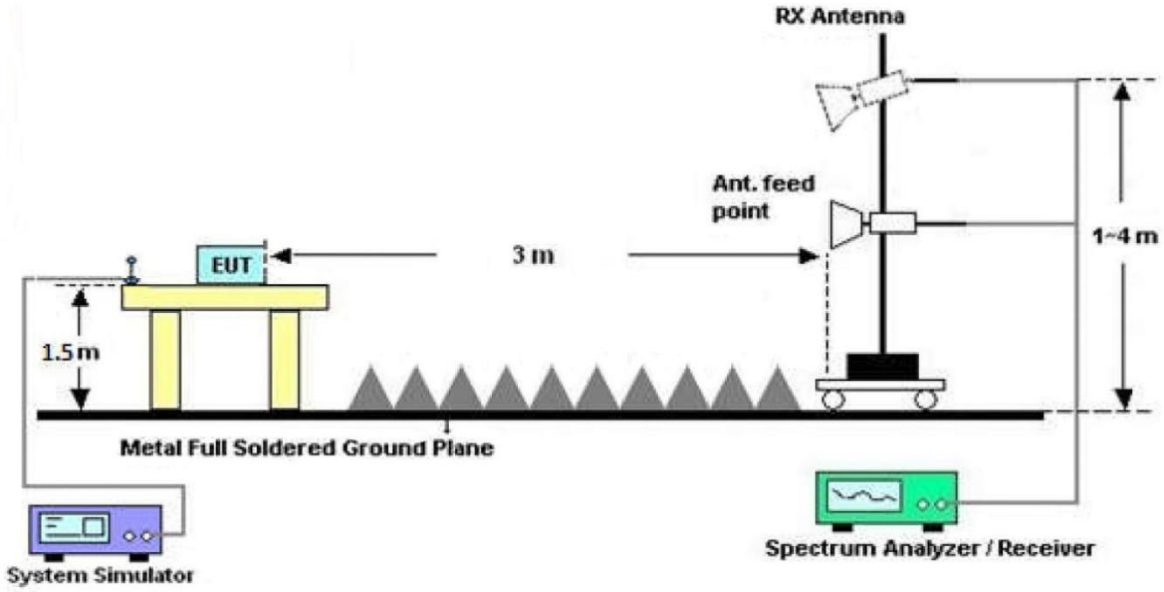
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.5. Eut Operating Conditions

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.6. Test Results

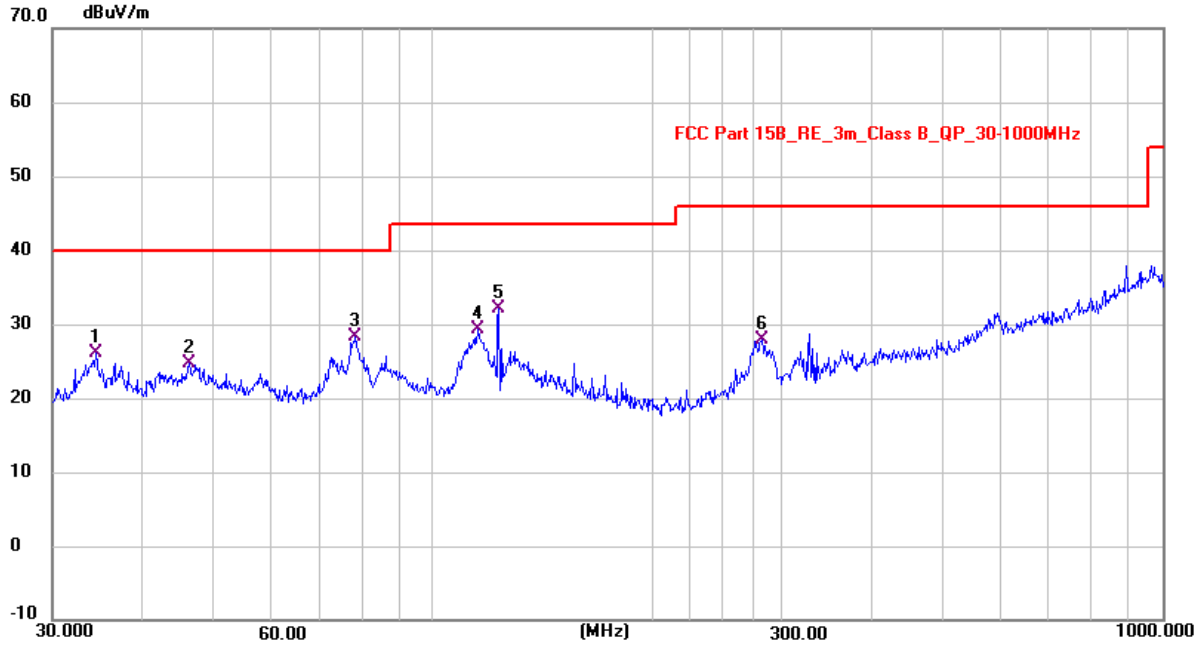
For the actual test, please refer to the ANSI C63.10, refer to section 7 for more detail

We have scanned from 9kHz to the 10th harmonic of the EUT's highest frequency.
Detailed information please see the following page.

From 9KHz to 30MHz:			
Test Date	: 2024.06.05	Temperature	: 26℃
Test Engineer	: Felix Pang	Humidity	: 54%
Test Mode	: GFSK mode		
Test Results	: **PASS**		
Note:	The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.		

From 30MHz to 1000MHz:			
Test Date	: 2024.06.05	Temperature	: 26℃
Test Engineer	: Felix Pang	Humidity	: 54%
Test Mode	: GFSK mode		
Test Results	: **PASS**		
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. All modes have been tested, and only worst data of GFSK 5730MHz mode was listed in this report.		

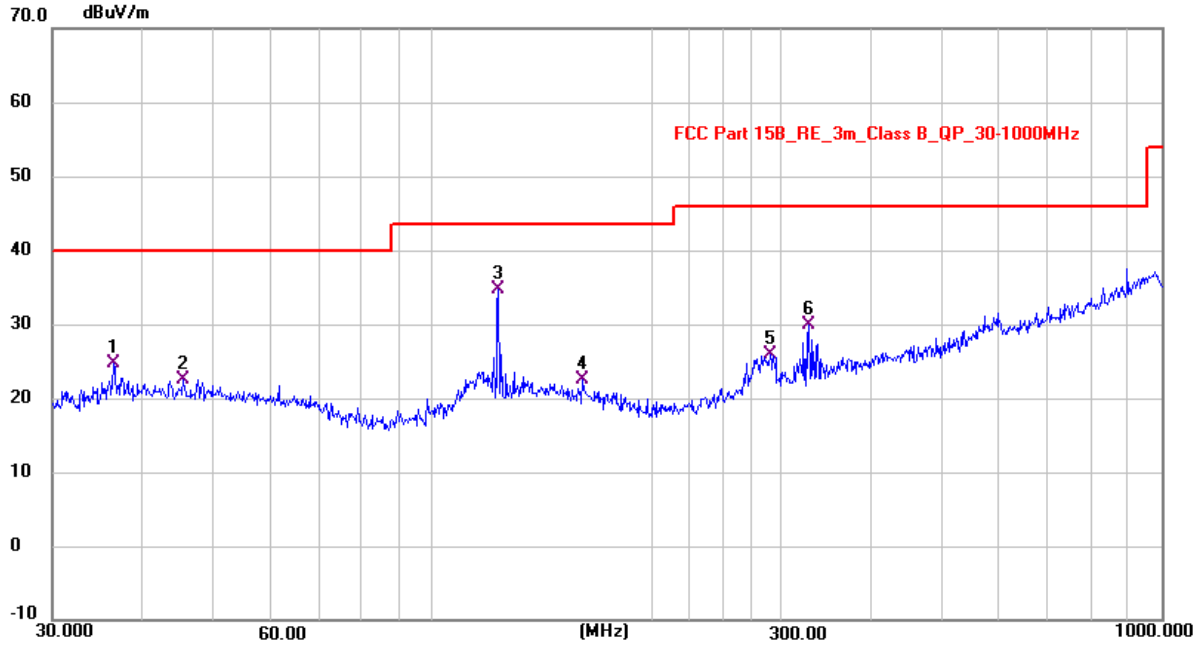
Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	34.4115	13.32	12.82	26.14	40.00	-13.86	QP
2	46.2387	11.38	13.37	24.75	40.00	-15.25	QP
3	78.3789	19.36	8.88	28.24	40.00	-11.76	QP
4	115.1690	18.25	11.01	29.26	43.50	-14.24	QP
5 *	122.8878	20.47	11.68	32.15	43.50	-11.35	QP
6	282.6133	14.48	13.38	27.86	46.00	-18.14	QP

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

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	36.4932	11.66	13.14	24.80	40.00	-15.20	QP
2	45.4551	9.13	13.40	22.53	40.00	-17.47	QP
3 *	122.8878	22.94	11.68	34.62	43.50	-8.88	QP
4	160.4160	9.36	13.22	22.58	43.50	-20.92	QP
5	290.5262	12.31	13.51	25.82	46.00	-20.18	QP
6	328.7507	15.59	14.39	29.98	46.00	-16.02	QP

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

From 1GHz to 40GHz:					
Test Date	:	2024.06.05	Temperature	:	26℃
Test Engineer	:	Felix Pang	Humidity	:	54%
Test Mode	:	GFSK mode			
Test Results	:	**PASS**			
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.				

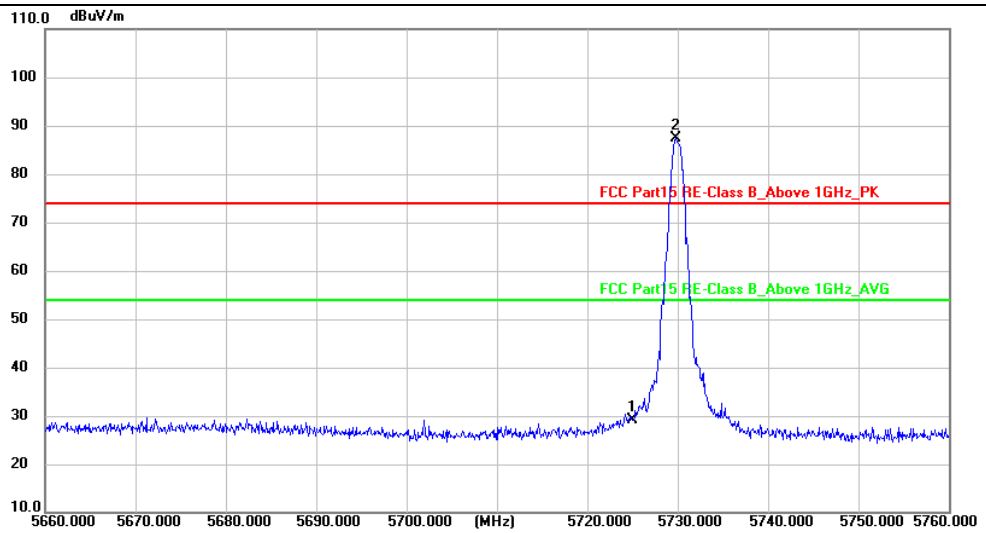
Frequency range: 1GHz~40GHz

Test Mode : GFSK TX 5730MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	5730	V	113.10	-26.32	86.78	113.97	-27.19	Peak
2	5730	V	91.19	-26.32	64.87	93.97	-29.10	Avg
3	11460	V	83.05	-24.09	58.96	74.00	-15.04	Peak
4	11460	V	--	--	--	54.00	--	Avg
5	5730	H	119.04	-26.32	92.72	113.97	-21.25	Peak
6	5730	H	96.67	-26.32	70.35	93.97	-23.62	Avg
7	11460	H	80.29	-24.09	56.20	74.00	-17.80	Peak
8	11460	H	--	--	--	54.00	--	Avg
Test Mode : GFSK TX 5780MHz								
1	5780	V	112.00	-26.32	85.68	113.97	-28.29	Peak
2	5780	V	91.31	-26.32	64.99	93.97	-28.98	Avg
3	11560	V	80.40	-24.09	56.31	74.00	-17.69	Peak
4	11560	V	--	--	--	54.00	--	Avg
5	5780	H	116.05	-26.32	89.73	113.97	-24.24	Peak
6	5780	H	97.10	-26.32	70.78	93.97	-23.19	Avg
7	11560	H	82.93	-24.09	58.84	74.00	-15.16	Peak
8	11560	H	--	--	--	54.00	--	Avg
Test Mode : GFSK TX 5844MHz								
1	5844	V	110.16	-26.32	83.84	113.97	-30.13	Peak
2	5844	V	94.49	-26.32	68.17	93.97	-25.80	Avg
3	11688	V	83.20	-24.09	59.11	74.00	-14.89	Peak
4	11688	V	--	--	--	54.00	--	Avg
5	5844	H	117.31	-26.32	90.99	113.97	-22.98	Peak
6	5844	H	97.04	-26.32	70.72	93.97	-23.25	Avg
7	11688	H	83.98	-24.09	59.89	74.00	-14.11	Peak
8	11688	H	--	--	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit.								

Band Edge Test Results:

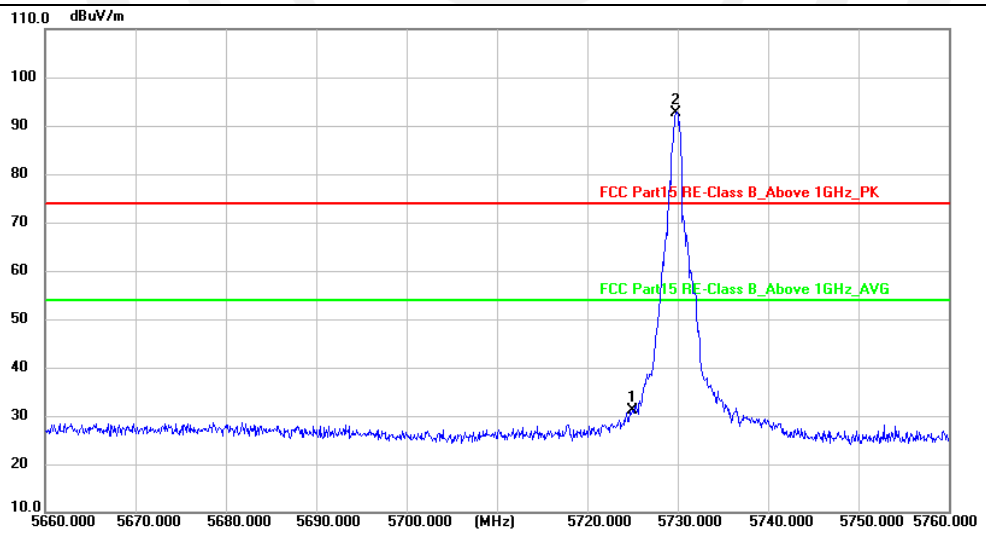
Test Mode : GFSK TX 5730MHz

Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5725.000	46.57	-17.34	29.23	74.00	-44.77	peak
2 *	5729.800	104.64	-17.34	87.30	74.00	13.30	peak

Polarization: Horizontal

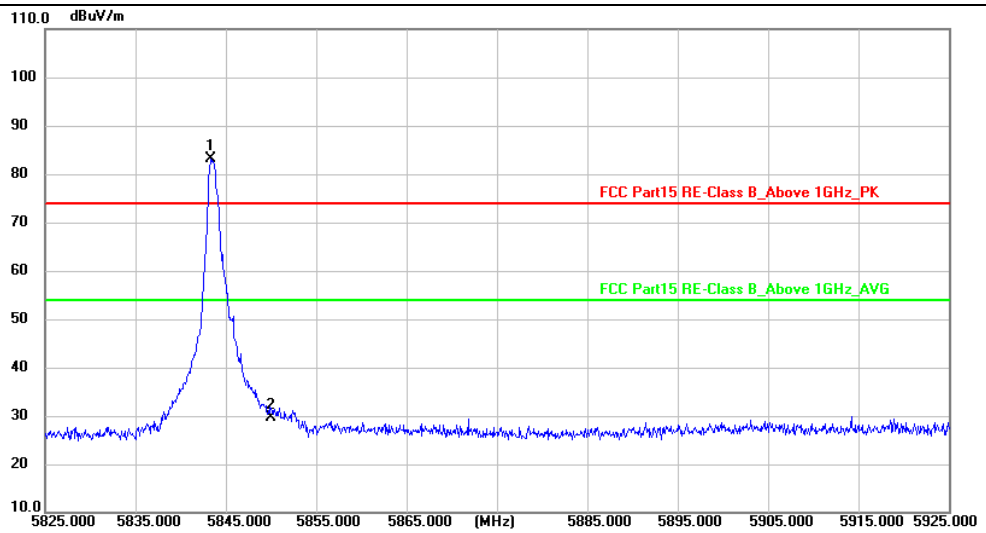


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5725.000	48.35	-17.34	31.01	74.00	-42.99	peak
2 *	5729.800	109.85	-17.34	92.51	74.00	18.51	peak

Level = Reading + Factor Margin = Level - Limit

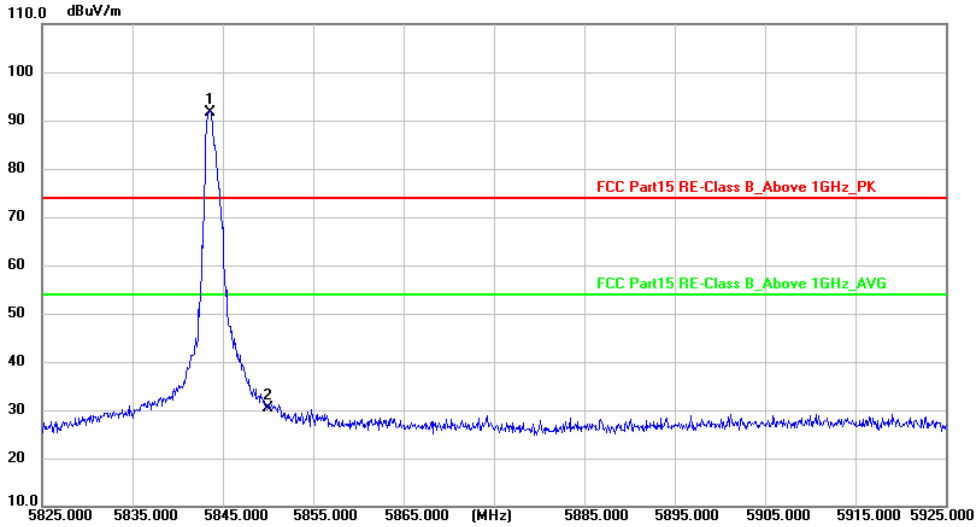
Test Mode : GFSK TX 5844MHz

Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	5843.300	100.17	-17.15	83.02	74.00	9.02	peak
2	5850.000	46.80	-17.14	29.66	74.00	-44.34	peak

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	5843.600	108.66	-17.15	91.51	74.00	17.51	peak
2	5850.000	47.53	-17.14	30.39	74.00	-43.61	peak

Level = Reading + Factor Margin = Level - Limit

Power Line Conducted Emission

3.7. Test Limits

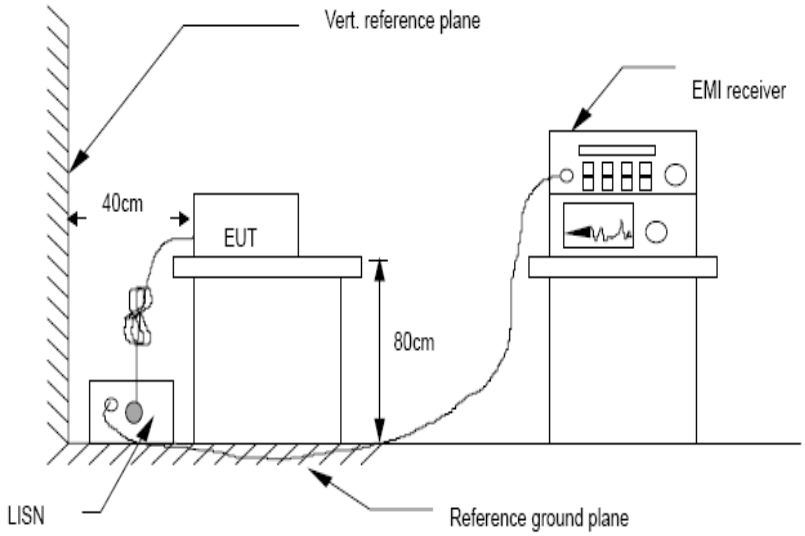
Frequency	Limits dB(μV)	
MHz	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.
3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3.8. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10:2013 on Conducted Emission Measurement.
The bandwidth of test receiver is set at 9 kHz.

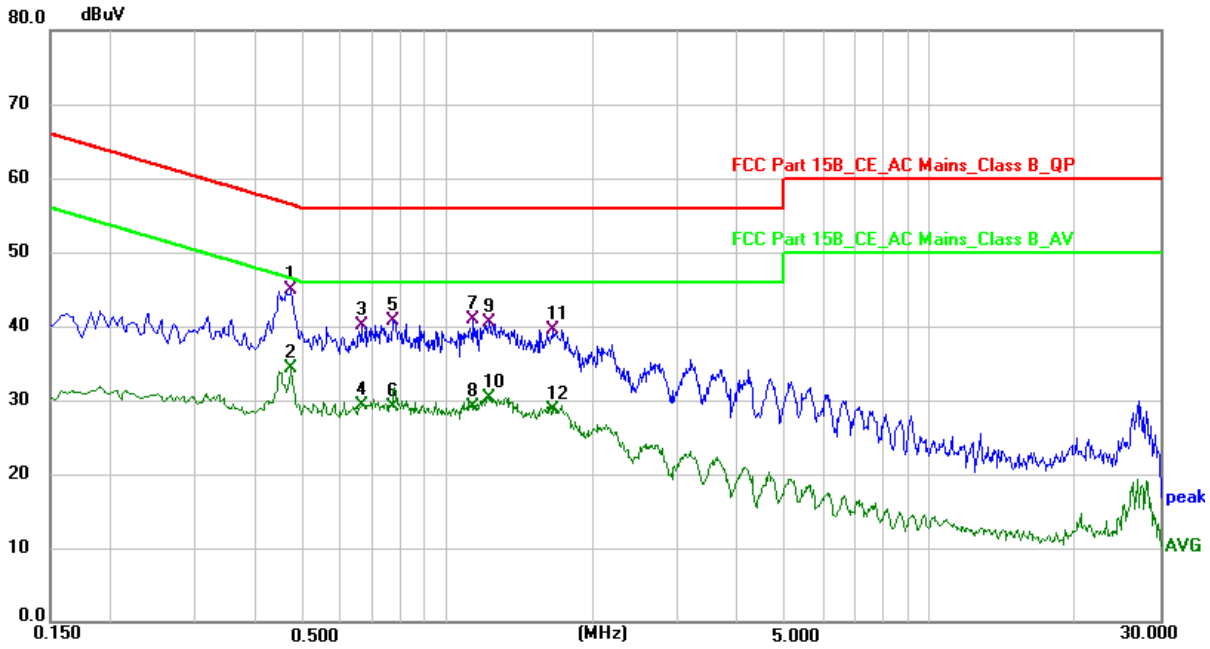
3.9. Test Setup



3.10. Test Results

Test Date	:	2024.06.06	Temperature	:	26℃
Test Engineer	:	Felix Pang	Humidity	:	54%
Test Mode	:	Charging			
Test Results	:	**PASS**			
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.				

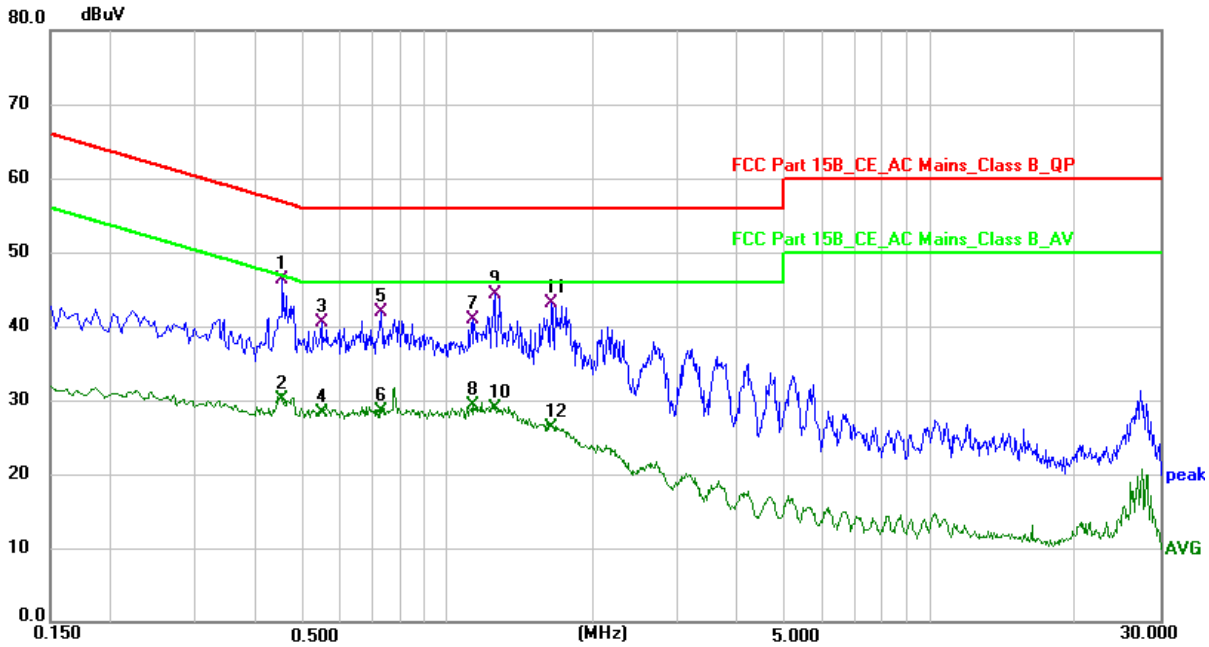
Polarization: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1 *	0.4740	35.25	9.72	44.97	56.44	-11.47	QP	P
2	0.4740	24.60	9.72	34.32	46.44	-12.12	AVG	P
3	0.6620	30.40	9.78	40.18	56.00	-15.82	QP	P
4	0.6620	19.57	9.78	29.35	46.00	-16.65	AVG	P
5	0.7700	30.96	9.72	40.68	56.00	-15.32	QP	P
6	0.7700	19.39	9.72	29.11	46.00	-16.89	AVG	P
7	1.1340	31.37	9.48	40.85	56.00	-15.15	QP	P
8	1.1340	19.59	9.48	29.07	46.00	-16.93	AVG	P
9	1.2220	31.12	9.45	40.57	56.00	-15.43	QP	P
10	1.2220	20.87	9.45	30.32	46.00	-15.68	AVG	P
11	1.6620	30.19	9.34	39.53	56.00	-16.47	QP	P
12	1.6620	19.31	9.34	28.65	46.00	-17.35	AVG	P

Result=Reading + Correct Factor. Margin= Result-Limit.

Polarization: N



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1 *	0.4540	36.56	9.67	46.23	56.80	-10.57	QP	P
2	0.4540	20.34	9.67	30.01	46.80	-16.79	AVG	P
3	0.5460	30.68	9.78	40.46	56.00	-15.54	QP	P
4	0.5460	18.44	9.78	28.22	46.00	-17.78	AVG	P
5	0.7300	32.12	9.75	41.87	56.00	-14.13	QP	P
6	0.7300	18.85	9.75	28.60	46.00	-17.40	AVG	P
7	1.1340	31.34	9.48	40.82	56.00	-15.18	QP	P
8	1.1340	19.92	9.48	29.40	46.00	-16.60	AVG	P
9	1.2540	34.93	9.45	44.38	56.00	-11.62	QP	P
10	1.2540	19.42	9.45	28.87	46.00	-17.13	AVG	P
11	1.6420	33.75	9.35	43.10	56.00	-12.90	QP	P
12	1.6420	17.05	9.35	26.40	46.00	-19.60	AVG	P

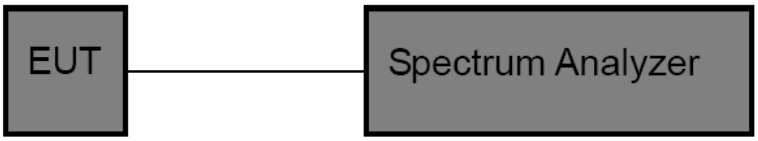
Result=Reading + Correct Factor. Margin= Result-Limit.

4. Bandwidth Test

4.1. Test Standard and Limit

Test Standard	RSS-Gen §6.7, FCC 15.249
Test Limit	N/A

4.2. Test Setup



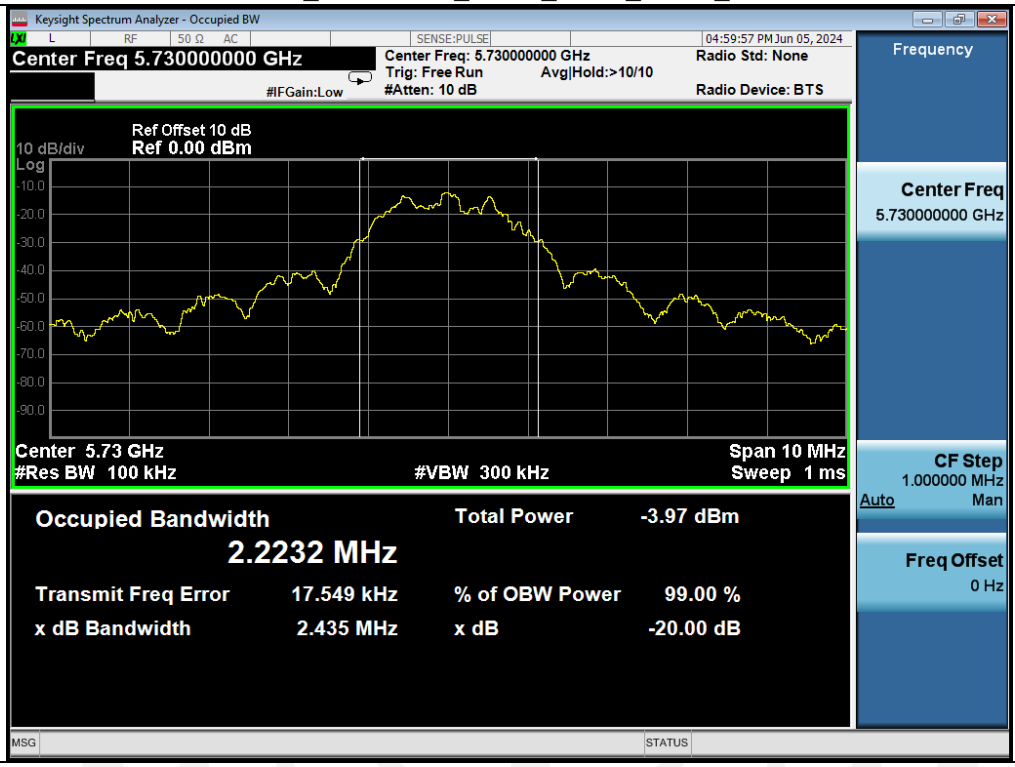
4.3. Test Procedure

Using the following spectrum analyzer settings:
1. Span= approximately 2 to 3 times the 20dB bandwidth, centered on a hopping channel.
2. Set the RBW ≥1% of the 20 dB bandwidth.
3. Set the VBW ≥RBW
4. Sweep time = auto couple.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
9. Measure the 99% Bandwidth use the function button of “Occupied Bandwidth”.

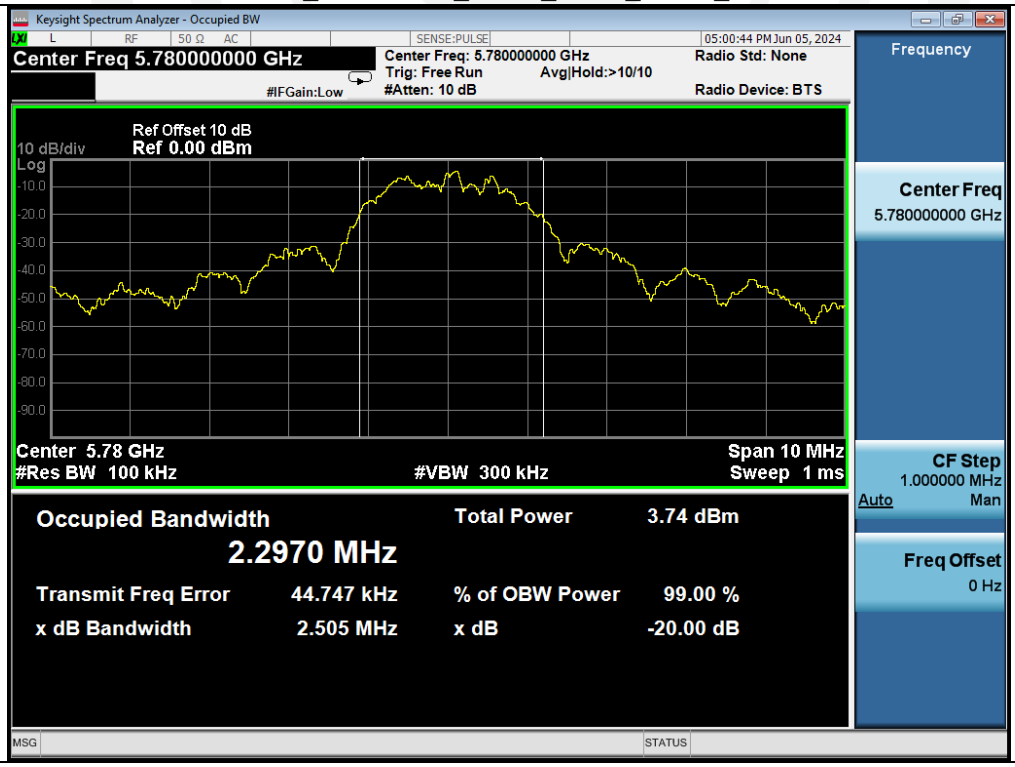
4.4. Test Results

Mode	Antenna	Frequency (MHz)	-20dB BW(MHz)	99% BW(MHz)	limit(kHz)
GFSK	ANT1	5730	2.435	2.2232	/
GFSK	ANT1	5780	2.505	2.2970	/
GFSK	ANT1	5844	2.505	2.2961	/

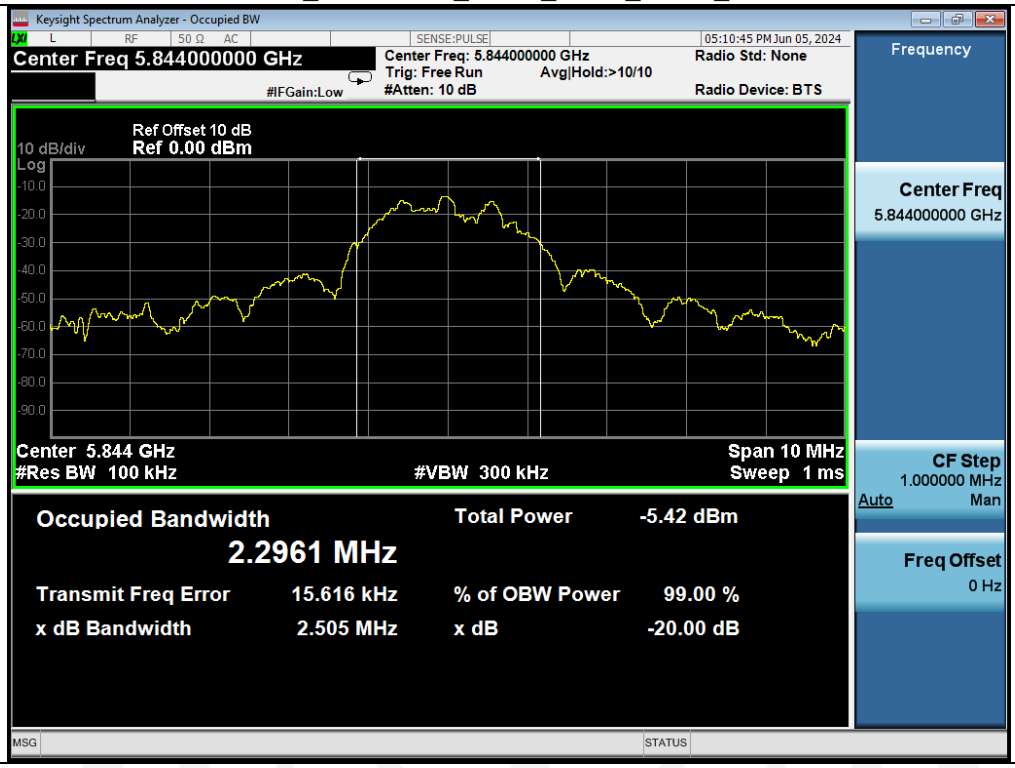
-20dB_Bandwidth_NVNT_ANT1_GFSK_5730



-20dB_Bandwidth_NVNT_ANT1_GFSK_5780



-20dB_Bandwidth_NVNT_ANT1_GFSK_5844



5. Antenna Requirement

5.1. Standard Requirement

According to the FCC Part 15 Paragraph 15.203& RSS-GEN(6.8), 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 to the intentional radiator shall be considered sufficient to comply with the provisions of this section. This product use a permanent ceramic printed antenna, fulfill the requirement of this section

5.2. EUT Antenna

The EUT antenna is internal antenna. It complies with the standard requirement.

6. Photos of test setup

Reference to the **appendix I Test Setup Photo** for details.

7. Photos of EUT

Reference to the **appendix II external photos** and **appendix III internal photos** for details.

------ END OF REPORT------