FCC TEST REPORT
FCC ID:2BDXD-AW69

Product: Duo Talk Wireless Microphone

Model Name: 7143-69BK

Brand: N/A

Report No.: NCT26028428E1-1

Prepared for

Shenzhen Aiwei Electronics Co., LTD

6th floor, Jinxing Building, Heping Industrial Park, Heping Road, Yucui Community, Longhua Street, Longhua District, Shenzhen, China

Prepared by

Shenzhen NCT Testing Technology Co., Ltd.

A101&2F B2, Fuqiao 6th Area, Xintian Community, Fuhai Street, Baoan District, Shenzhen, People's Republic of China

TEL: 400-8868-419

1 TEST RESULT CERTIFICATION

Applicant's name	:	Shenzhen Aiwei Electronics Co., LTD
Address	:	6th floor, Jinxing Building, Heping Industrial Park, Heping Road, Yucui Community,Longhua Street, Longhua District, Shenzhen, China
Manufacture's name	:	Shenzhen Aiwei Electronics Co., LTD
Address	:	6th floor, Jinxing Building, Heping Industrial Park, Heping Road, Yucui Community,Longhua Street, Longhua District, Shenzhen, China
Product name	:	Duo Talk Wireless Microphone
Model name	:	7143-69BK
Standards	:	FCC CFR47 Part 15 Section 15.247
Test procedure	:	ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024
Date of test	:	Jul. 07, 2025 to Jul. 21, 2025
Date of Issue	:	Jul. 21, 2025

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

This report shall not be reproduced except in full, without the written approval of NCT, this document may be altered or revised by NCT, personal only, and shall be noted in the revision of the document.

Prepared by:

Shine Wu

Reviewer:

Keven Wu

Approved:

Henry Wang

Contents

Page

1 TEST RESULT CERTIFICATION 2

2 TEST SUMMARY 5

2.1 TEST SITE 6

3 GENERAL INFORMATION 7

3.1 GENERAL DESCRIPTION OF E.U.T. 7

3.2 CHANNEL LIST 8

3.3 TEST SETUP CONFIGURATION 9

3.4 TEST CONFIGURATION 9

3.5 VERSION 9

3.6 TEST MODE 10

3.7 TEST VOLTAGE STABILITY 10

4 EQUIPMENT DURING TEST 11

4.1 EQUIPMENTS LIST 11

4.2 MEASUREMENT UNCERTAINTY 13

4.3 DESCRIPTION OF SUPPORT UNITS 13

5 CONDUCTED EMISSION 14

5.1 E.U.T. OPERATION 14

5.2 EUT SETUP 14

5.3 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 14

5.4 MEASUREMENT PROCEDURE 14

5.5 CONDUCTED EMISSION LIMIT 15

5.6 MEASUREMENT DESCRIPTION 15

5.7 CONDUCTED EMISSION TEST RESULT 15

6 RADIATED SPURIOUS EMISSIONS 18

6.1 EUT OPERATION 18

6.2 TEST SETUP 19

6.3 SPECTRUM ANALYZER SETUP 20

6.4 TEST PROCEDURE 20

6.5 SUMMARY OF TEST RESULTS 21

7 CONDUCT BAND EDGE AND SPURIOUS EMISSIONS MEASUREMENT 40

7.1 TEST PROCEDURE 40

7.2 TEST SETUP BLOCKING 40

7.3 TEST RESULT 40

8 6DB BANDWIDTH MEASUREMENT 41

8.1 TEST PROCEDURE 41
8.2 TEST SETUP BLOCKING 41
8.3 TEST RESULT 41
9 MAXIMUM PEAK OUTPUT POWER 42
9.1 TEST PROCEDURE 42
9.2 TEST SETUP BLOCKING 42
9.3 TEST RESULT 42
10 POWER SPECTRAL DENSITY 43
10.1 TEST PROCEDURE 43
10.2 TEST SETUP BLOCKING 43
10.3 TEST RESULT 43
11 ANTENNA APPLICATION 44
11.1 ANTENNA REQUIREMENT 44
11.2 RESULT 44
12 TEST SETUP PHOTOS AND EUT PHOTOS 45

Shenzhen NCT Testing Technology Co., Ltd. 2008

2 Test Summary

Test Items	Test Requirement	Result
Conduct Emission	FCC part 15.207	PASS
Radiated Spurious Emissions	FCC part 15.205/15.209	PASS
Conducted Spurious Emission	FCC part 15. 247(d)	PASS
Band edge	FCC part 15.247(d)	PASS
6dB&99% Bandwidth	FCC part 15.247 (a)(2)	PASS
Maximum Peak Output Power	FCC part 15.247 (b)(3)	PASS
Power Spectral Density	FCC part 15.247 (e)	PASS
Antenna Requirement	FCC part 15.203/15.247 (c)	PASS

Remark:

1. “N/A” denotes test is not applicable in this Test Report.

Shenzhen NCT Testing Technology Co., Ltd. 2008

2.1 Test Site

Site Description

EMC Lab. : Accredited by CNAS, 2022-09-27

The certificate is valid until 2028.01.07

The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2017)

The Certificate Registration Number is L8251

Designation Number: CN1347

Test Firm Registration Number: 894804

Accredited by A2LA, June 14, 2023

The Certificate Registration Number is 6837.01

Accredited by Industry Canada, November 09, 2018

The Conformity Assessment Body Identifier is CN0150

Company Number: 30806

Name of Firm : Shenzhen NCT Testing Technology Co., Ltd.

Site Location : A101&2F B2, Fuqiao 6th Area, Xintian Community, Fuhai Street, Baoan District, Shenzhen, People's Republic of China

3 General Information

3.1 General Description of E.U.T.

Product Name	:	Duo Talk Wireless Microphone
Model Name	:	7143-69BK
Sample ID	:	NCT26028428-001
Sample(s) Status:	:	Engineer sample
Series Model	:	N/A
Model Different.:	:	N/A
Operating frequency	:	2402-2480MHz
Number of Channels	:	40 channels
Type of Modulation	:	GFSK
Rate	:	1M &2M
Antenna installation	:	Chip Antenna
Antenna gain of the earphone case	:	2.67dBi
Power supply	:	DC 3.7V from battery; Charging input: DC 5V
Hardware Version	:	Ver1.0
Software Version	:	Ver1.0
Remark：the Antenna gain is provided by customer from Antenna spec. and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.		

3.2 Channel List

The EUT has been tested under its typical operating condition. Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting. Only the worst case data were reported.

The EUT has been associated with peripherals pursuant to ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The details of test channels and bandwidth were for RF conductive measurement.

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		

Note:

1. Test of channel was included the lowest, middle and highest frequency in highest data rate and to perform the test, then record on this report.

Test Channel：

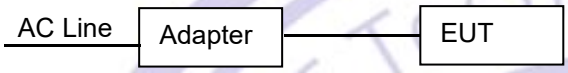
	Channel	Frequency(MHz)
Low Channel	0	2402
Mid Channel	19	2440
High Channel	39	2480

3.3 Test Setup Configuration

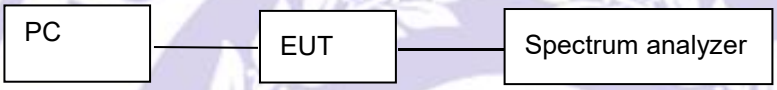
Radiated Emission

Radiated Spurious

Conducted Emission



Conducted Spurious



3.4 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	FCC_assist_1.0.2.2
Power level setup	0 dBm

3.5 Version

Report No.	Version	Description	Approved
NCT26028428E1-1	Rev.01	Initial issue of report	Jul. 21, 2026

3.6 Test mode

Test Modes:	Modes Description	Remark
Mode 1	BLE 2402_1M(GFSK)	Recoeded
Mode 2	BLE 2440_1M(GFSK)	Recoeded
Mode 3	BLE 2480_1M(GFSK)	Recoeded
Mode 4	BLE 2402_2M(GFSK)	Recoeded
Mode 5	BLE 2440_2M(GFSK)	Recoeded
Mode 6	BLE 2480_2M(GFSK)	Recoeded
Note: All test modes were pre-tested, but we only recorded the worst case in this report.		

3.7 Test voltage stability

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans. were completed in all Modes to determine worst case levels.

Voltage Fluctuation Test		Normal Voltage	High Voltage: Normal Voltage+ 10% of Normal Voltage	Low Voltage: Normal Voltage- 10% of Normal Voltage
Test Voltage		DC 3.7V	DC 4.07V	DC 3.33V
RF Module Voltage		DC 3.30V	DC 3.30	DC 3.302
Voltage error(%)	Result	Ref.level	0	0.0

Note:

Voltage Variation (%)

= (Output high or Low Voltage - Output Normal Voltage)/ Output Normal Voltage* 100

During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

4 Equipment During Test

4.1 Equipments List

Conducted emission Test Equipment

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date	Equipment State
944 Shielded Room	944 Room	/	EMToni	2025/1/17	2028/1/16	Normal
EMI Test Receiver	ESPI	101604	Rohde & Schwarz	2025/6/05	2027/6/04	Normal
LISN	ENV 216	102796	Rohde & Schwarz	2025/6/05	2027/6/04	Normal
LISN	VN1-13S	004023	CRANAGE	2025/6/05	2027/6/04	Normal
Cable	RG223-1500MM	NA	RG	2025/6/05	2027/6/04	Normal

Radiated emission & Radio Frequency Test Equipment

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date	Equipment State
966 Shielded Room	966 Room	/	EMToni	2025/1/17	2028/1/16	Normal
EMI Test Receiver	ESCI	101178	Rohde & Schwarz	2025/6/05	2027/6/04	Normal
Amplifi（30MHz-1GHz）	BBV 9743 B	00374	SCHWARZBECK	2025/6/05	2027/6/04	Normal
Bilog Antenna（30MHz-1GHz）	VULB9162	00473	SCHWARZBECK	2026/3/07	2027/3/06	Normal
Horn antenna（1GHz-18GHz）	BBHA 9120 D	02622	SCHWARZBECK	2026/3/07	2027/3/06	Normal
Pream plifier（1GHz-18GHz）	BBV 9718D	0024	SCHWARZBECK	2025/6/05	2027/6/04	Normal
Spectrum Analyze（10Hz-40GHz）	FSV 40	100952	Rohde & Schwarz	2025/6/05	2027/6/04	Normal
Pream plifier（18GHz-40GHz）	BBV 9721	0056	SCHWARZBECK	2025/6/05	2027/6/04	Normal
Double Ridge Guide Horn Antenna（18GHz-40GHz）	SAS-574	588	A.H.System	2025/6/05	2027/6/04	Normal
Loop Antenna (9KHz-30MHz)	FMZB 1513-60	00074	SCHWARZBECK	2025/6/05	2027/6/04	Normal
Amplifier (9KHz-30MHz)	BBV 9745	00109	CHNWARZBECK	2025/6/05	2027/6/04	Normal
MXG Signal Analyzer	N9020A	MY50510202	Agilent	2025/6/05	2027/6/04	Normal

MXG Vector Signal Generator	N5182A	MY50140020	Agilent	2026/6/05	2027/6/04	Normal
MXG Analog Signal Generator	N5181A	MY47420919	Agilent	2026/6/05	2027/6/04	Normal
Power Sensor	TR1029-2	512364	Techoy	2025/6/05	2027/6/04	Normal
RF Switch	TR1029-1	512364	Techoy	2025/6/05	2027/6/04	Normal
Cable	DA800-4000MM	NA	DA	2025/6/05	2027/6/04	Normal
Cable	DA800-11000MM	NA	DA	2025/6/05	2027/6/04	Normal

Other

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

4.2 Measurement Uncertainty

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)	±3.24dB
Radiated Emission(9KHz~30MHz)	±4.51dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB
Radiated Emission(25GHz~40GHz)	±3.38dB
Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%	

4.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Adater	OMIX	X2903	N/A	Auxiliary
E-2	serial port	N/A	USB to TTL	N/A	Auxiliary
E-3	PC	N/A	X1502ZA1240-0DASXBJX10	N/A	Auxiliary

Note: (1)The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

5 Conducted Emission

Test Requirement	:	FCC CFR 47 Part 15 Section 15.207
Test Method	:	ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024
Test Result	:	PASS
Frequency Range	:	150kHz to 30MHz
Class/Severity	:	Class B

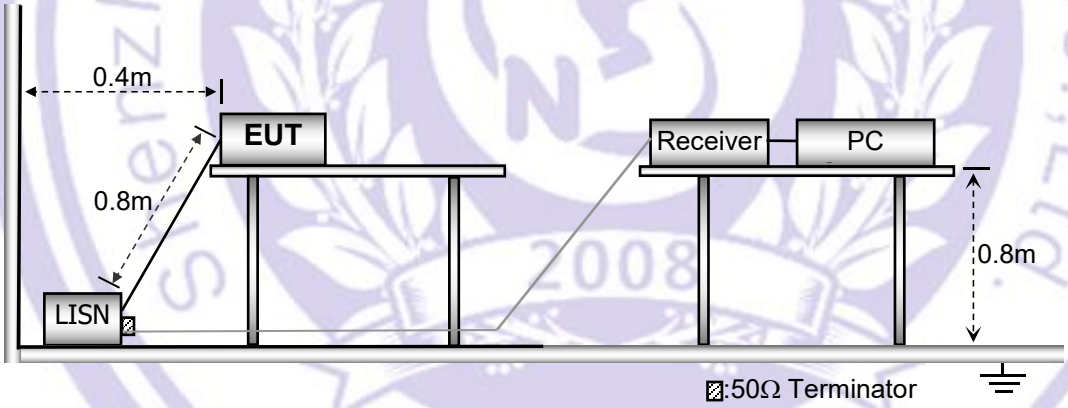
5.1 E.U.T. Operation

Operating Environment :

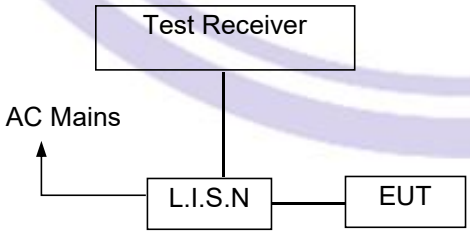
Temperature	:	25.5 °C
Humidity	:	51 % RH
Atmospheric Pressure	:	101.2kPa

5.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024.



5.3 Test SET-UP (Block Diagram of Configuration)



5.4 Measurement Procedure

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

5.5 Conducted Emission Limit

Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note:

1. The lower limit shall apply at the transition frequencies

2.The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

5.6 Measurement Description

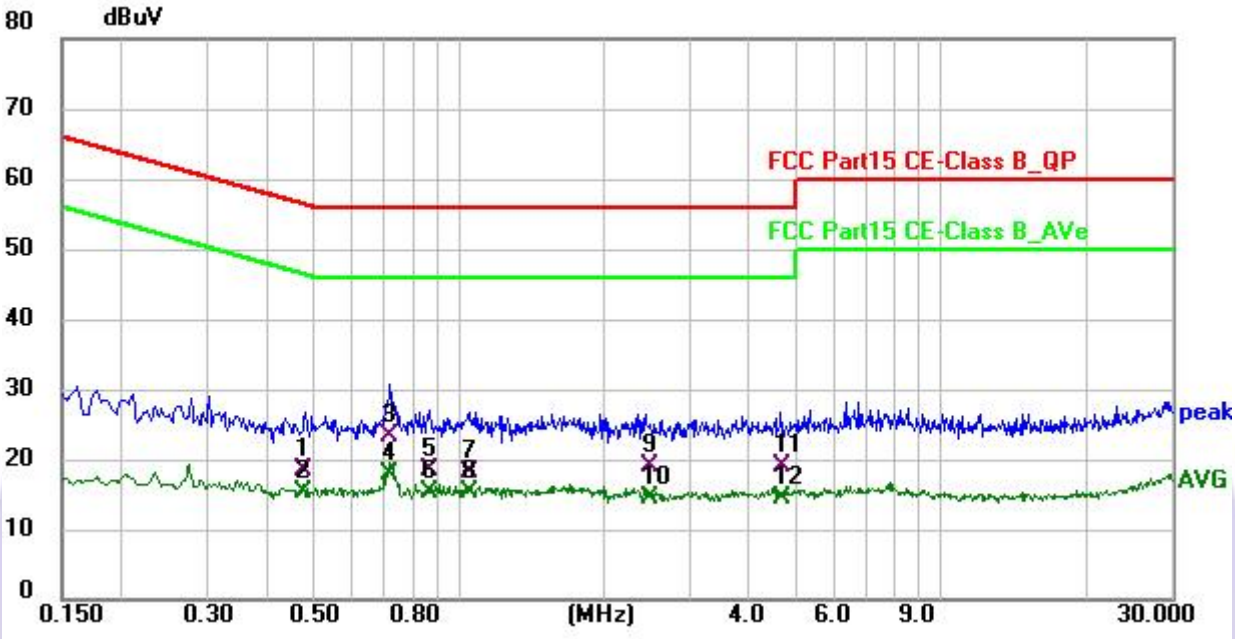
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

5.7 Conducted Emission Test Result

Pass

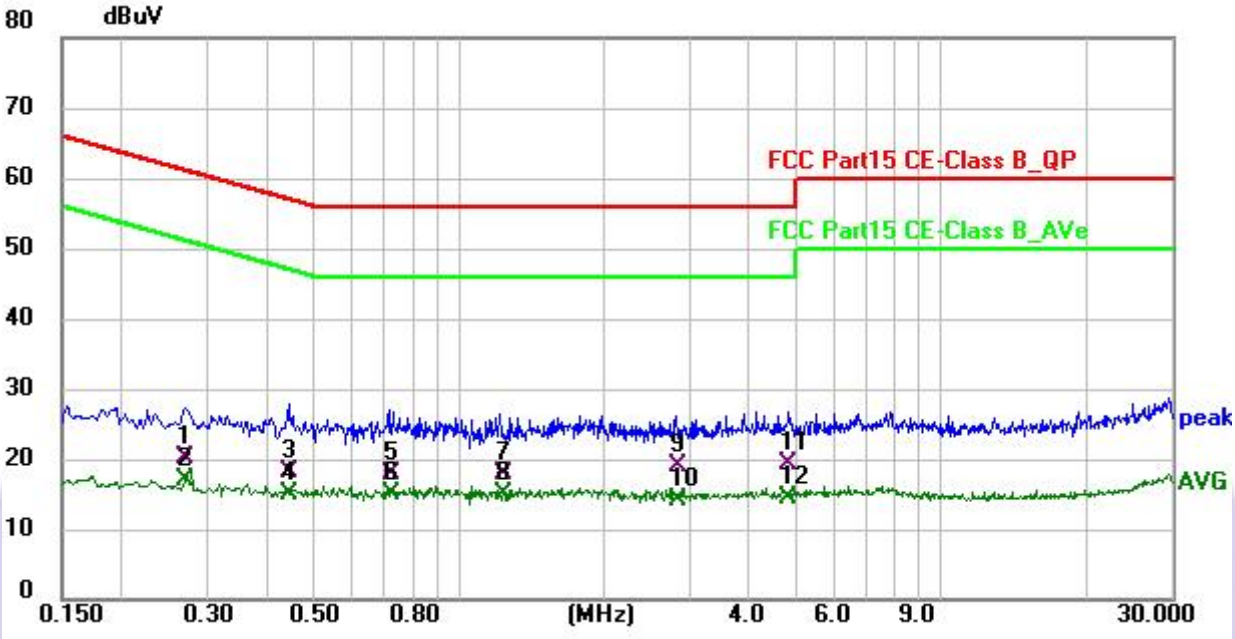
Note: 1) Refer to section 3.6 for testing mode
2) All test modes were pre-tested, but we only recorded the worst case in this report.

Temperature:	25.5 °C	Relative Humidity:	51 %
Pressure:	101.2kPa	Phase :	L
Test Voltage :	DC 5V From Adapter Input AC 120V 60Hz	Test mode	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4752	-0.99	19.44	18.45	56.42	-37.97	QP
2	0.4752	-4.25	19.44	15.19	46.42	-31.23	AVG
3	0.7234	3.76	19.47	23.23	56.00	-32.77	QP
4 *	0.7234	-1.70	19.47	17.77	46.00	-28.23	AVG
5	0.8676	-1.17	19.60	18.43	56.00	-37.57	QP
6	0.8676	-4.40	19.60	15.20	46.00	-30.80	AVG
7	1.0526	-1.20	19.48	18.28	56.00	-37.72	QP
8	1.0526	-4.29	19.48	15.19	46.00	-30.81	AVG
9	2.4617	-0.27	19.36	19.09	56.00	-36.91	QP
10	2.4617	-4.99	19.36	14.37	46.00	-31.63	AVG
11	4.6626	-0.25	19.39	19.14	56.00	-36.86	QP
12	4.6626	-5.01	19.39	14.38	46.00	-31.62	AVG

Temperature:	25.5 °C	Relative Humidity:	51 %
Pressure:	101.2kPa	Phase :	N
Test Voltage :	DC 5V From Adapter Input AC 120V 60Hz	Test mode	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2707	0.51	19.51	20.02	61.10	-41.08	QP
2	0.2707	-2.46	19.51	17.05	51.10	-34.05	AVG
3	0.4417	-1.43	19.47	18.04	57.03	-38.99	QP
4	0.4417	-4.45	19.47	15.02	47.03	-32.01	AVG
5	0.7260	-1.61	19.51	17.90	56.00	-38.10	QP
6	0.7260	-4.58	19.51	14.93	46.00	-31.07	AVG
7	1.2318	-1.69	19.55	17.86	56.00	-38.14	QP
8 *	1.2318	-4.55	19.55	15.00	46.00	-31.00	AVG
9	2.8256	-0.54	19.53	18.99	56.00	-37.01	QP
10	2.8256	-5.25	19.53	14.28	46.00	-31.72	AVG
11	4.8342	-0.37	19.52	19.15	56.00	-36.85	QP
12	4.8342	-5.10	19.52	14.42	46.00	-31.58	AVG

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Margin = -Limit +Level, Correct Factor = Cable lose + LISN insertion loss,
4.Mesurement Level = Reading level + Correct Factor

6 Radiated Spurious Emissions

Test Requirement	:	FCC CFR47 Part 15 Section 15.209 & 15.247,
Test Method	:	ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024
Test Result	:	PASS
Measurement Distance	:	3m
Limit	:	See the follow table

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	$20\log^{(500)}$

6.1 EUT Operation

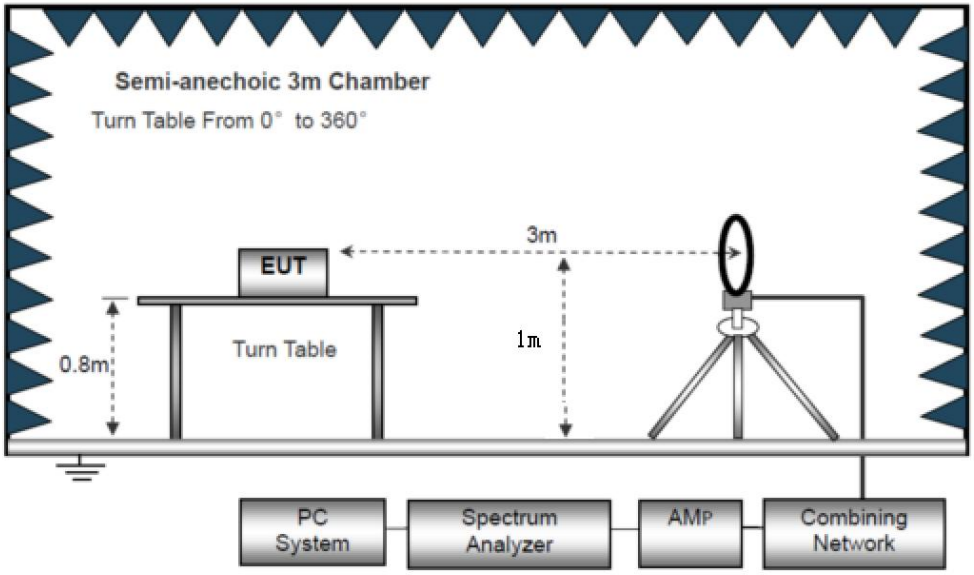
Operating Environment :

Temperature	:	23.5 °C
Humidity	:	51.1 % RH
Atmospheric Pressure	:	101.2kPa

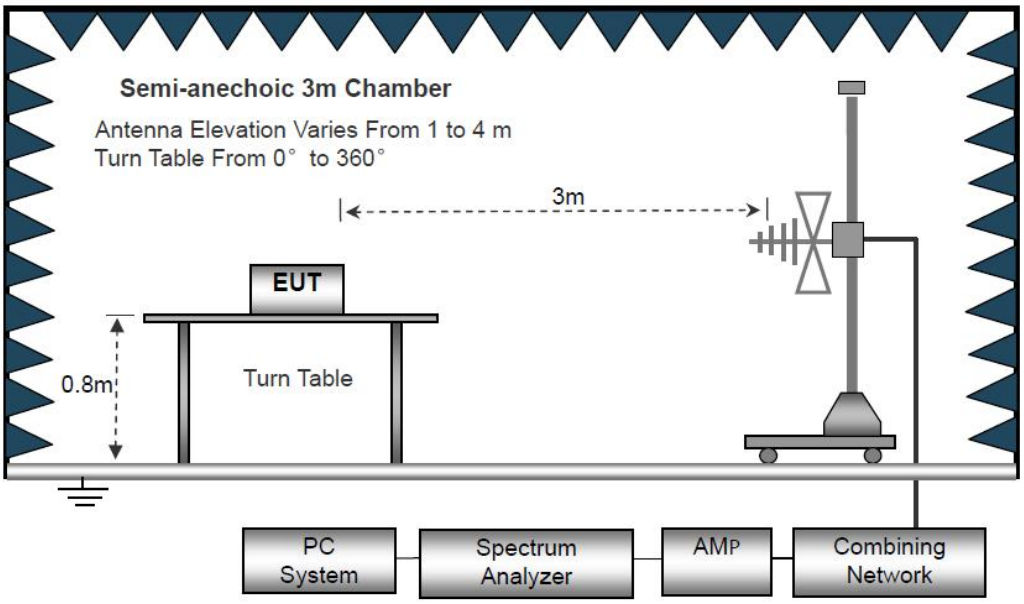
6.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site

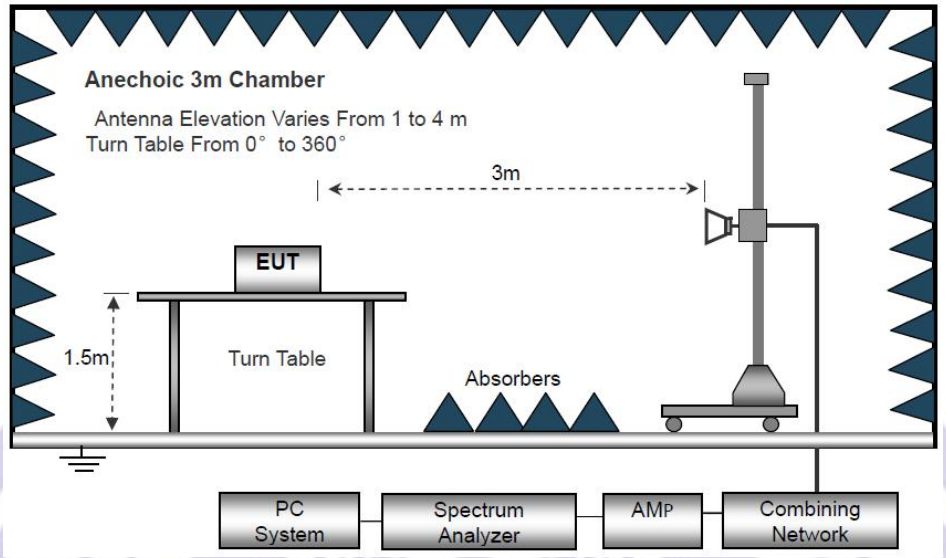
The test setup for emission measurement below 30MHz



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



The test setup for emission measurement above 1 GHz



6.3 Spectrum Analyzer Setup

	Frequency	Detector	RBW	VBW	Remark
Receiver Setup	Below 30MHz	--	10kHz	10kHz	--
	30MHz ~ 1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		RMS	1MHz	3MHz	Average Value

6.4 Test Procedure

1. The testing follows the guidelines in Spurious Radiated Emissions of ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024.

2. Below 1000MHz, The EUT was placed on a turn table which is 0.8m above ground plane. And above 1000MHz, The EUT was placed on a styrofoam table which is 1.5m above ground plane.

3. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (From 1m to 4m) and turntable (from 0 degree to 360 degree) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.

5. Set to the maximum power setting and enable the EUT transmit continuously.

6. Final measurement (Above 1GHz): The frequency range will be divided into different sub ranges depending of the frequency range of the used horn antenna. The EMI Receiver set to peak and average mode and a resolution bandwidth of 1MHz. The measurement will be performed in horizontal and vertical polarization of the measuring antenna and while rotating the EUT in its vertical axis in the range of 0 degree to 360 degree in order to have the antenna inside the cone of radiation.

7. Test Procedure of measurement (For Above 1GHz):

1) Monitor the frequency range at horizontal polarization and move the antenna over all sides of the EUT(if necessary move the EUT to another orthogonal axis).

2) Change the antenna polarization and repeat 1) with vertical polarization.

3) Make a hardcopy of the spectrum.

4) Measure the frequency of the detected emissions with a lower span and resolution bandwidth to increase the accuracy and note the frequency value.

5) Change the analyser mode to Clear/ Write and found the cone of emission.

6) Rotate and move the EUT, so that the measuring distance can be enlarged to 3m and the antenna will be still inside the cone of emission.

7) Measure the level of the detected frequency with the correct resolution bandwidth, with the antenna polarization and azimuth and the peak and average detector, which causes the maximum emission.

8) Repeat steps 1) to 7) for the next antenna spot if the EUT is larger than the antenna beamwidth.

8. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

For Average Measurement:

VBW=10Hz, when duty cycle is no less than 98 percent.

VBW≥1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

6.5 Summary of Test Results

Test Frequency: 9KHz-30MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
--	--	--	--	>20

Note:

The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);
Limit line=Specific limits(dBuV) + distance extrapolation factor.

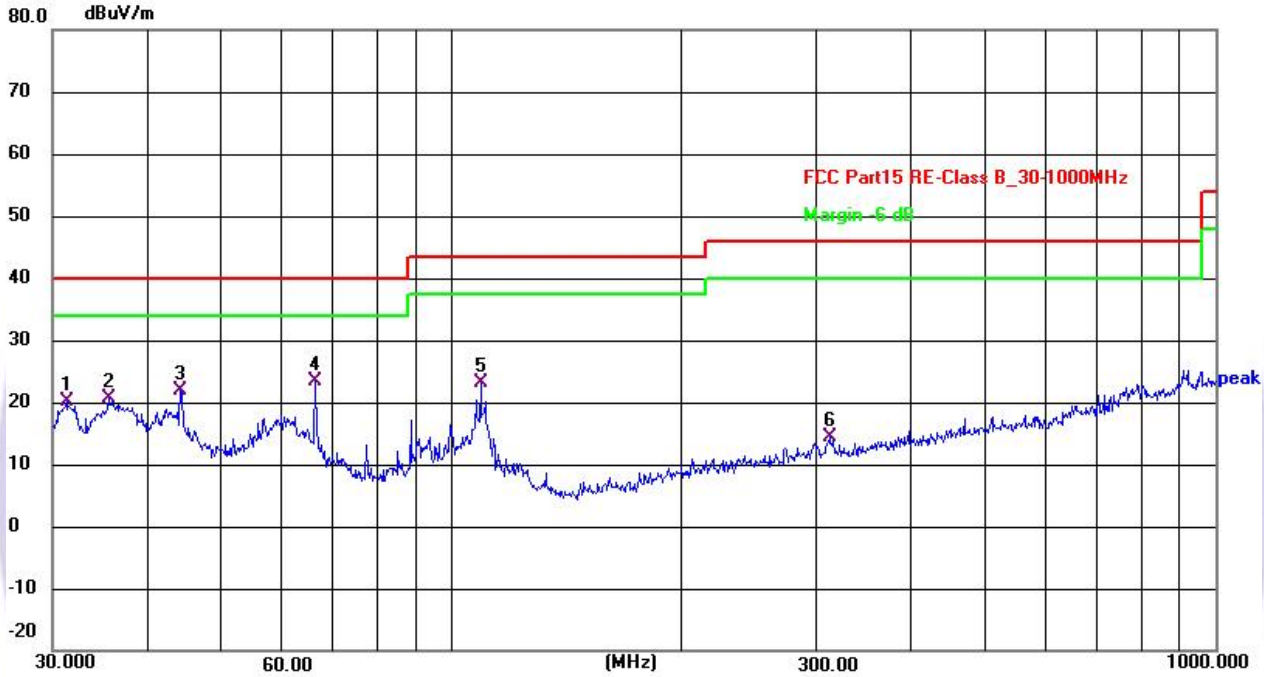
Test Frequency: 30MHz ~ 1GHz

Pass.

Note: 1) Refer to section 3.6 for testing mode

2) All test modes were pre-tested, but we only recorded the worst case(GFSK(2M), Lowest Channel) in this report.

Temperature:	25.5 °C	Relative Humidity:	51%
Pressure:	101.2kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V from Battery		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	31.2892	36.59	-16.37	20.22	40.00	-19.78
2	35.4992	36.82	-16.18	20.64	40.00	-19.36
3	44.1202	36.25	-14.45	21.80	40.00	-18.20
4	66.2661	40.24	-16.95	23.29	40.00	-16.71
5	109.0286	38.88	-15.70	23.18	43.50	-20.32
6	312.1794	27.77	-13.38	14.39	46.00	-31.61

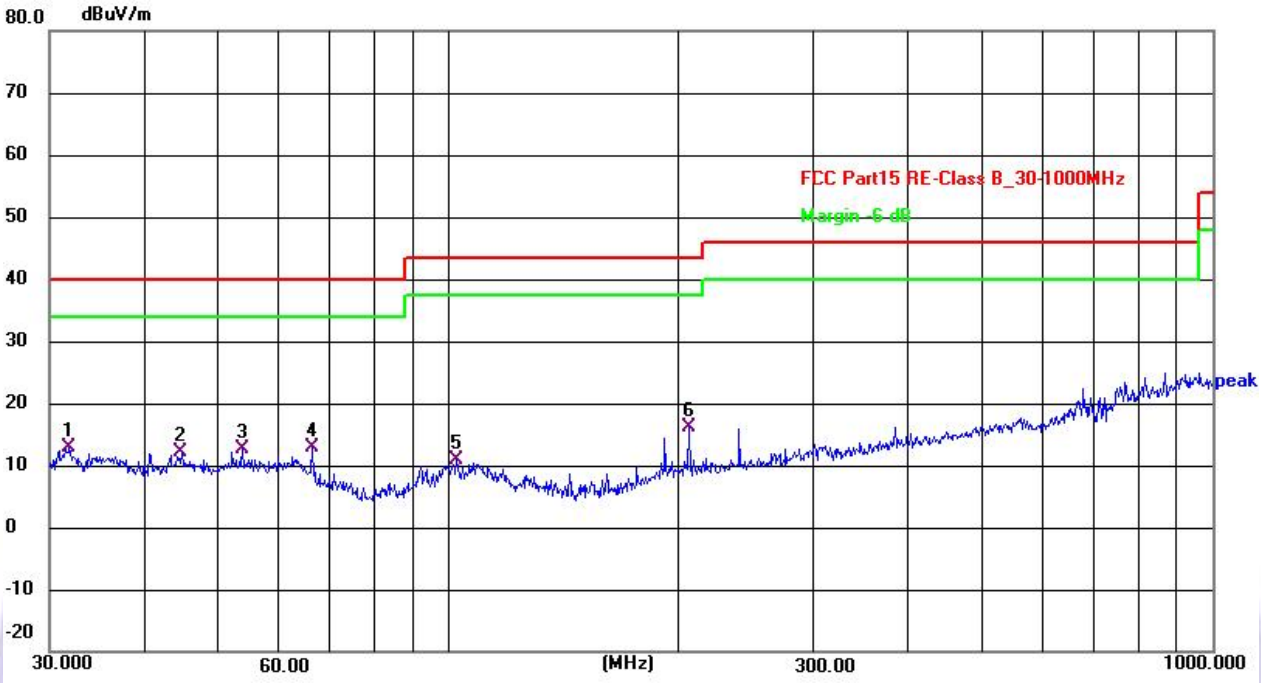
Remark:

Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Factor; Margin =Level - Limit;

Remark：the Antenna gain is provided by customer from Antenna spec. and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.

Temperature:	25.5 °C	Relative Humidity:	51%
Pressure:	101.2kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V from Battery		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	31.8427	29.32	-16.37	12.95	40.00	-27.05	QP
2	44.7433	26.59	-14.36	12.23	40.00	-27.77	QP
3	53.6931	27.02	-14.51	12.51	40.00	-27.49	QP
4	66.2660	29.75	-16.95	12.80	40.00	-27.20	QP
5	102.3596	26.64	-15.84	10.80	43.50	-32.70	QP
6	206.3975	32.30	-16.18	16.12	43.50	-27.38	QP

Remark:

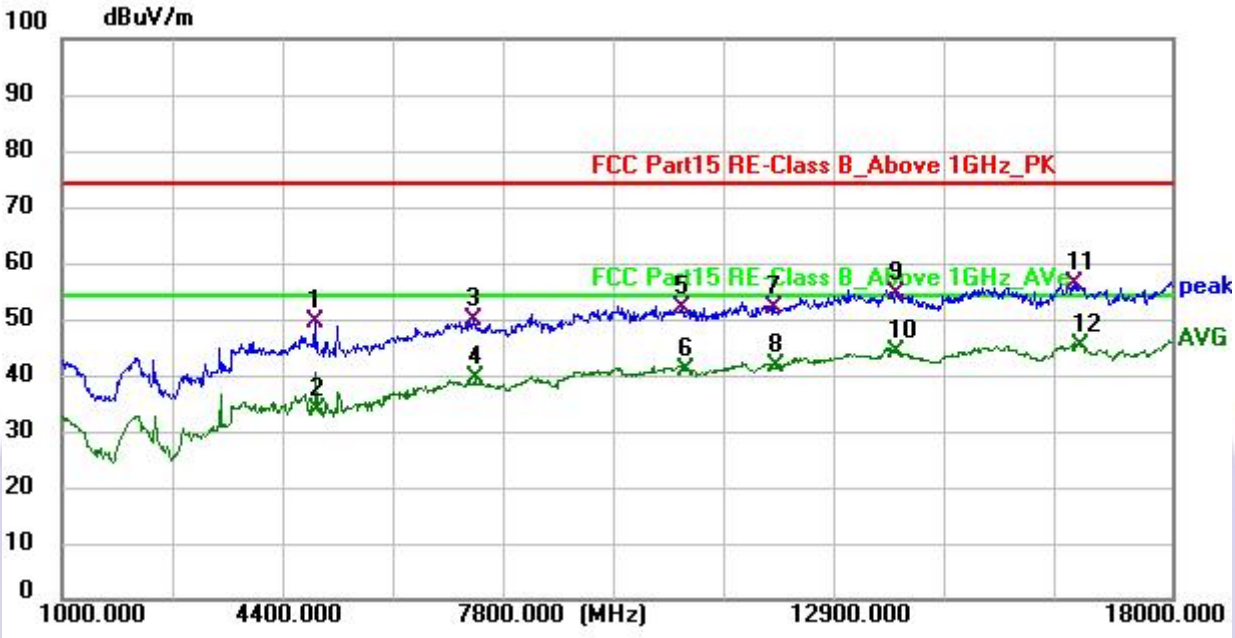
Factor = Cable loss + Antenna factor – Preamplifier;

Level = Reading Level + Factor; Margin =Level - Limit;

Remark：the Antenna gain is provided by customer from Antenna spec. and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.

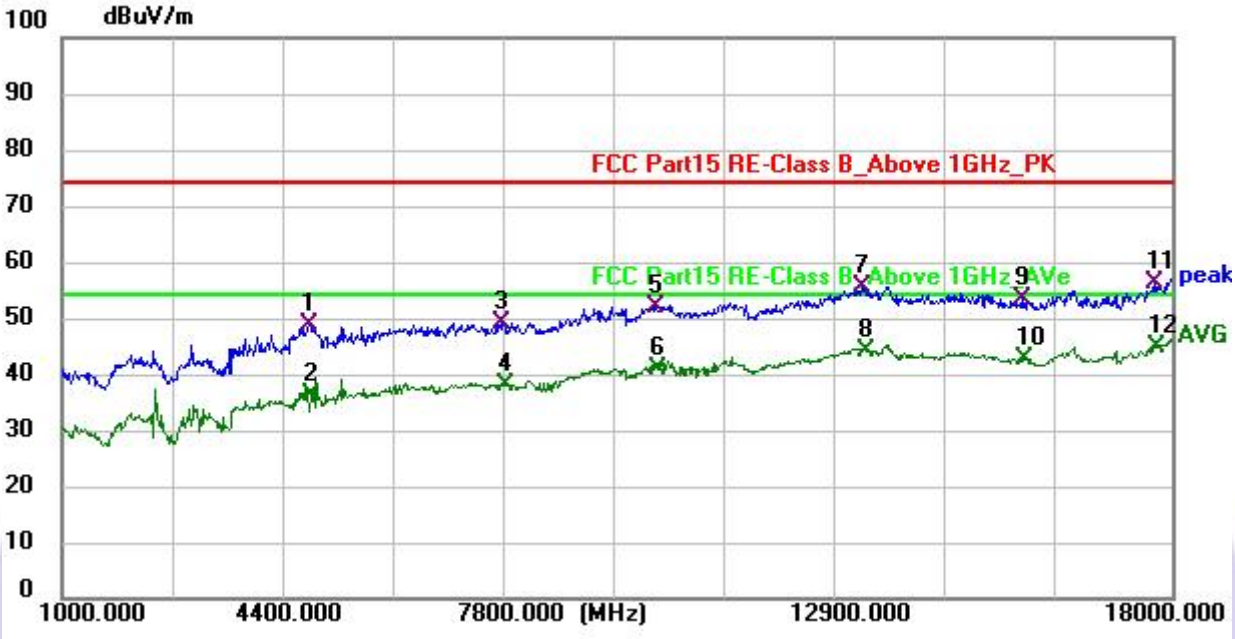
Test Frequency 1GHz-18GHz:

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Low Channel



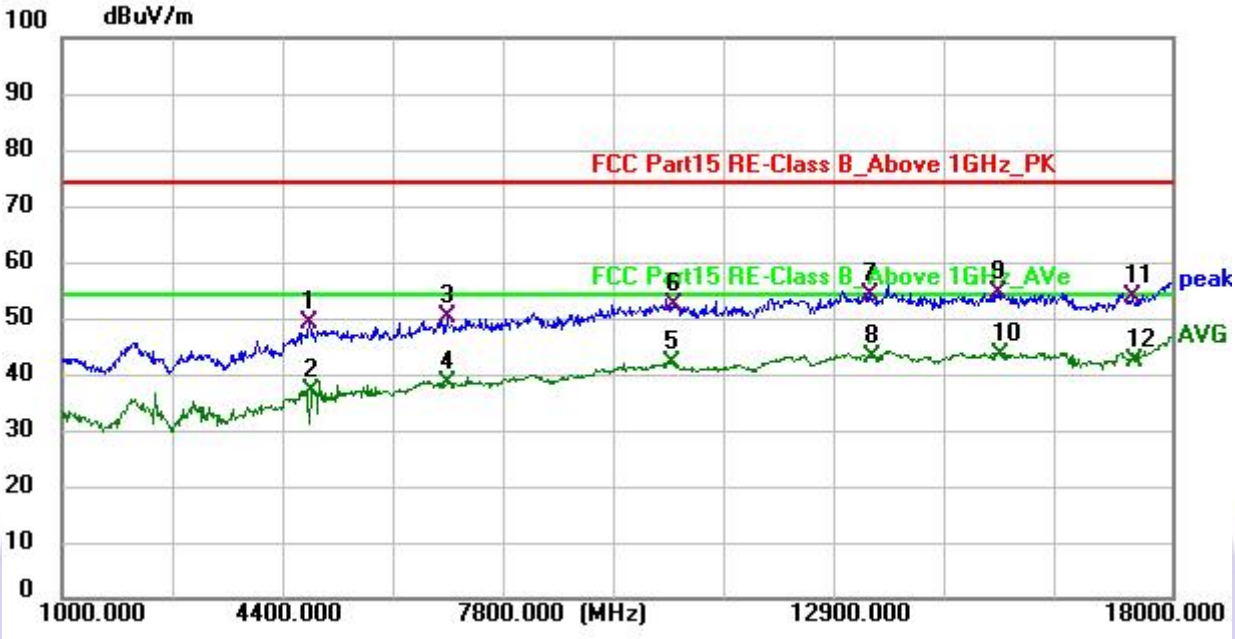
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4876.0000	44.55	4.81	49.36	74.00	-24.64	QP
2	4910.0000	28.70	4.96	33.66	54.00	-20.34	AVG
3	7307.0000	38.07	11.70	49.77	74.00	-24.23	QP
4	7324.0000	27.76	11.64	39.40	54.00	-14.60	AVG
5	10503.0000	37.06	14.95	52.01	74.00	-21.99	QP
6	10554.0000	25.96	14.93	40.89	54.00	-13.11	AVG
7	11914.0000	34.94	16.89	51.83	74.00	-22.17	QP
8	11931.0000	24.56	16.90	41.46	54.00	-12.54	AVG
9	13767.0000	35.36	19.18	54.54	74.00	-19.46	QP
10	13767.0000	24.83	19.18	44.01	54.00	-9.99	AVG
11	16504.0000	38.13	18.11	56.24	74.00	-17.76	QP
12 *	16589.0000	27.05	18.24	45.29	54.00	-8.71	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Low Channel



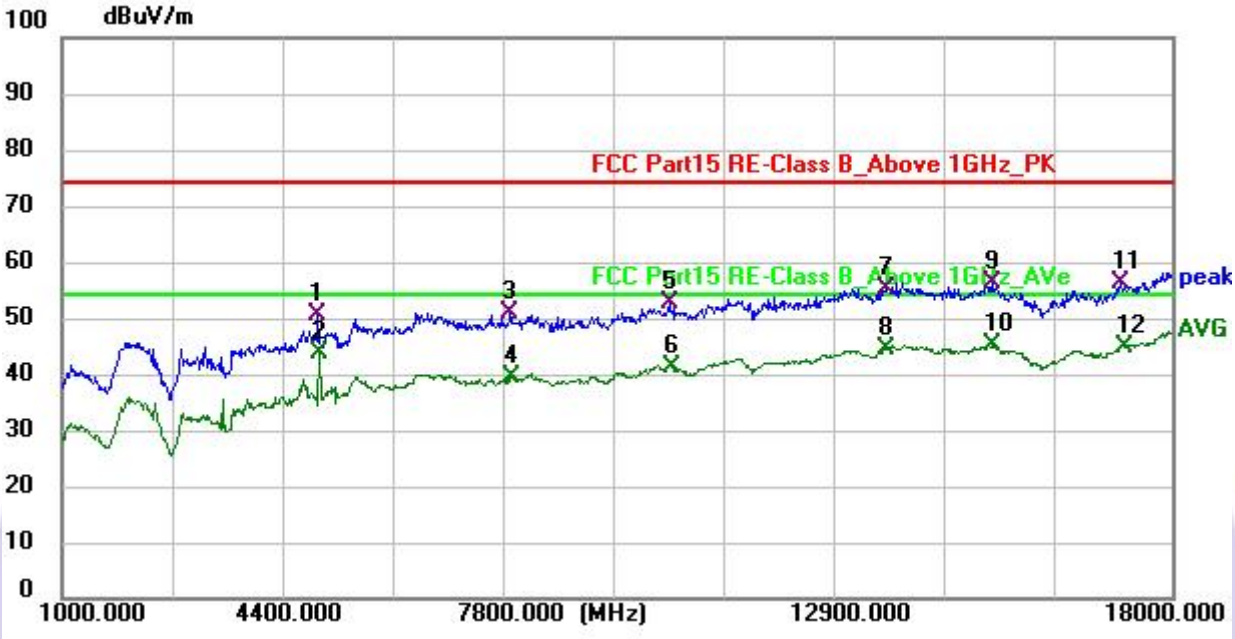
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4791.0000	43.91	4.74	48.65	74.00	-25.35	QP
2	4825.0000	31.43	4.72	36.15	54.00	-17.85	AVG
3	7749.0000	37.10	11.92	49.02	74.00	-24.98	QP
4	7783.0000	26.30	11.79	38.09	54.00	-15.91	AVG
5	10095.0000	37.51	14.44	51.95	74.00	-22.05	QP
6	10129.0000	26.25	14.47	40.72	54.00	-13.28	AVG
7	13257.0000	36.46	19.18	55.64	74.00	-18.36	QP
8	13308.0000	24.92	19.21	44.13	54.00	-9.87	AVG
9	15722.0000	35.80	17.47	53.27	74.00	-20.73	QP
10	15756.0000	25.14	17.40	42.54	54.00	-11.46	AVG
11	17728.0000	33.53	22.81	56.34	74.00	-17.66	QP
12 *	17779.0000	21.86	23.06	44.92	54.00	-9.08	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Mid Channel



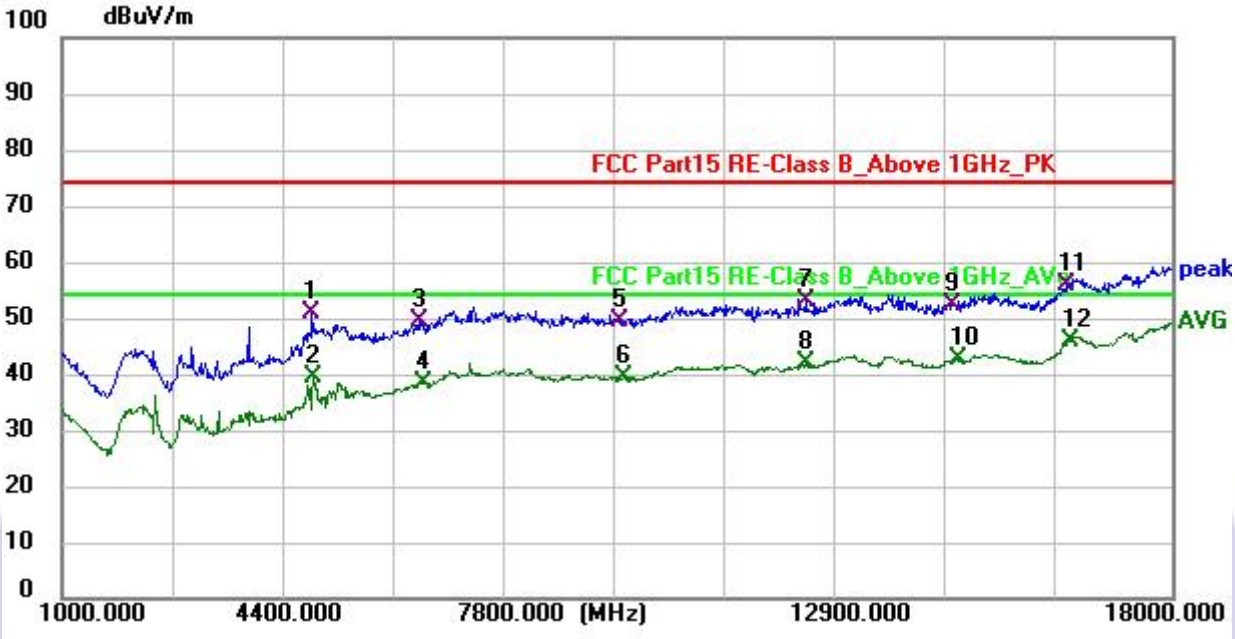
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4791.0000	44.23	4.74	48.97	74.00	-25.03	QP
2	4825.0000	32.19	4.72	36.91	54.00	-17.09	AVG
3	6899.0000	39.08	10.95	50.03	74.00	-23.97	QP
4	6899.0000	27.47	10.95	38.42	54.00	-15.58	AVG
5	10350.0000	27.35	14.78	42.13	54.00	-11.87	AVG
6	10367.0000	37.55	14.81	52.36	74.00	-21.64	QP
7	13376.0000	34.71	19.25	53.96	74.00	-20.04	QP
8	13410.0000	23.95	19.24	43.19	54.00	-10.81	AVG
9	15331.0000	35.89	18.45	54.34	74.00	-19.66	QP
10 *	15382.0000	25.09	18.35	43.44	54.00	-10.56	AVG
11	17388.0000	32.46	21.46	53.92	74.00	-20.08	QP
12	17422.0000	20.87	21.54	42.41	54.00	-11.59	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Mid Channel



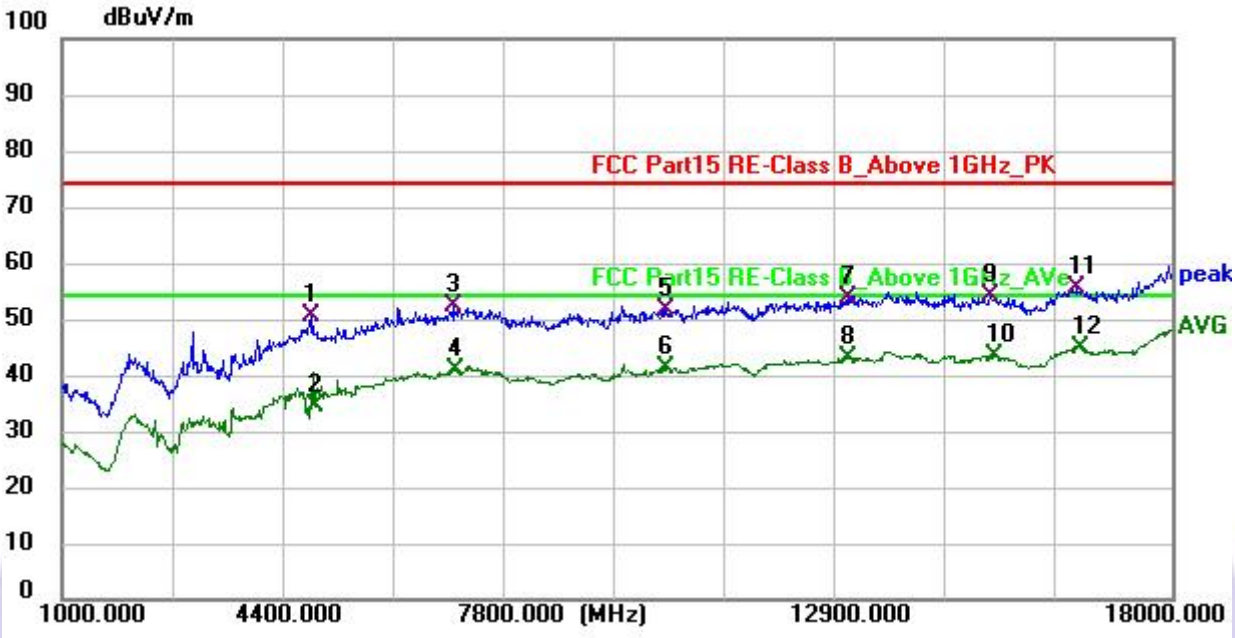
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4927.0000	45.44	5.01	50.45	74.00	-23.55	QP
2	4944.0000	38.76	5.06	43.82	54.00	-10.18	AVG
3	7868.0000	39.28	11.71	50.99	74.00	-23.01	QP
4	7885.0000	27.74	11.79	39.53	54.00	-14.47	AVG
5	10299.0000	37.99	14.65	52.64	74.00	-21.36	QP
6	10350.0000	26.33	14.78	41.11	54.00	-12.89	AVG
7	13614.0000	36.13	19.16	55.29	74.00	-18.71	QP
8	13614.0000	25.47	19.16	44.63	54.00	-9.37	AVG
9	15246.0000	37.80	18.56	56.36	74.00	-17.64	QP
10 *	15246.0000	26.45	18.56	45.01	54.00	-8.99	AVG
11	17218.0000	35.60	20.74	56.34	74.00	-17.66	QP
12	17286.0000	23.87	21.13	45.00	54.00	-9.00	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(1M) High Channel



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4825.0000	46.16	4.72	50.88	74.00	-23.12	QP
2	4859.0000	34.87	4.74	39.61	54.00	-14.39	AVG
3	6474.0000	40.11	9.51	49.62	74.00	-24.38	QP
4	6542.0000	28.80	9.71	38.51	54.00	-15.49	AVG
5	9551.0000	35.56	13.82	49.38	74.00	-24.62	QP
6	9602.0000	25.67	13.85	39.52	54.00	-14.48	AVG
7	12390.0000	35.22	17.83	53.05	74.00	-20.95	QP
8	12407.0000	23.99	17.86	41.85	54.00	-12.15	AVG
9	14651.0000	33.28	18.89	52.17	74.00	-21.83	QP
10	14719.0000	23.74	18.92	42.66	54.00	-11.34	AVG
11	16385.0000	37.90	17.83	55.73	74.00	-18.27	QP
12 *	16453.0000	28.07	17.99	46.06	54.00	-7.94	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(1M) High Channel



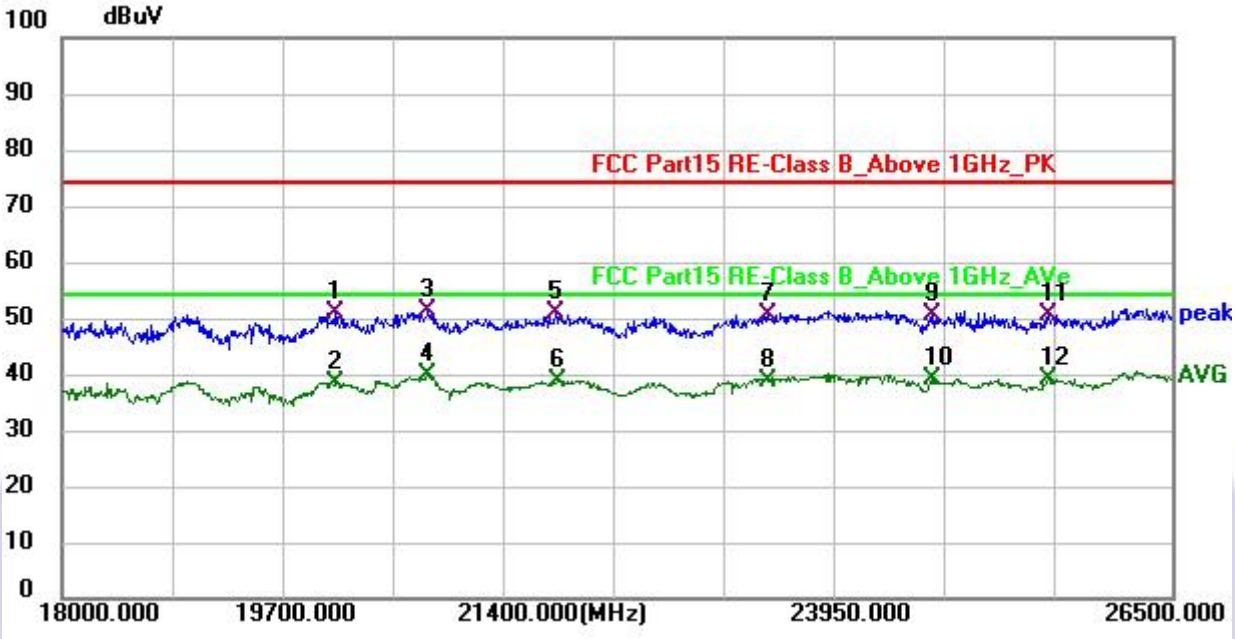
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4825.0000	45.76	4.72	50.48	74.00	-23.52	QP
2	4876.0000	29.75	4.81	34.56	54.00	-19.44	AVG
3	6984.0000	41.05	11.22	52.27	74.00	-21.73	QP
4	7018.0000	29.63	11.32	40.95	54.00	-13.05	AVG
5	10265.0000	36.98	14.59	51.57	74.00	-22.43	QP
6	10265.0000	26.52	14.59	41.11	54.00	-12.89	AVG
7	13036.0000	34.60	19.26	53.86	74.00	-20.14	QP
8	13053.0000	23.67	19.26	42.93	54.00	-11.07	AVG
9	15212.0000	35.56	18.60	54.16	74.00	-19.84	QP
10	15297.0000	24.97	18.51	43.48	54.00	-10.52	AVG
11	16555.0000	37.17	18.19	55.36	74.00	-18.64	QP
12 *	16589.0000	26.71	18.24	44.95	54.00	-9.05	AVG

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

Margin= Emission Level - Limit

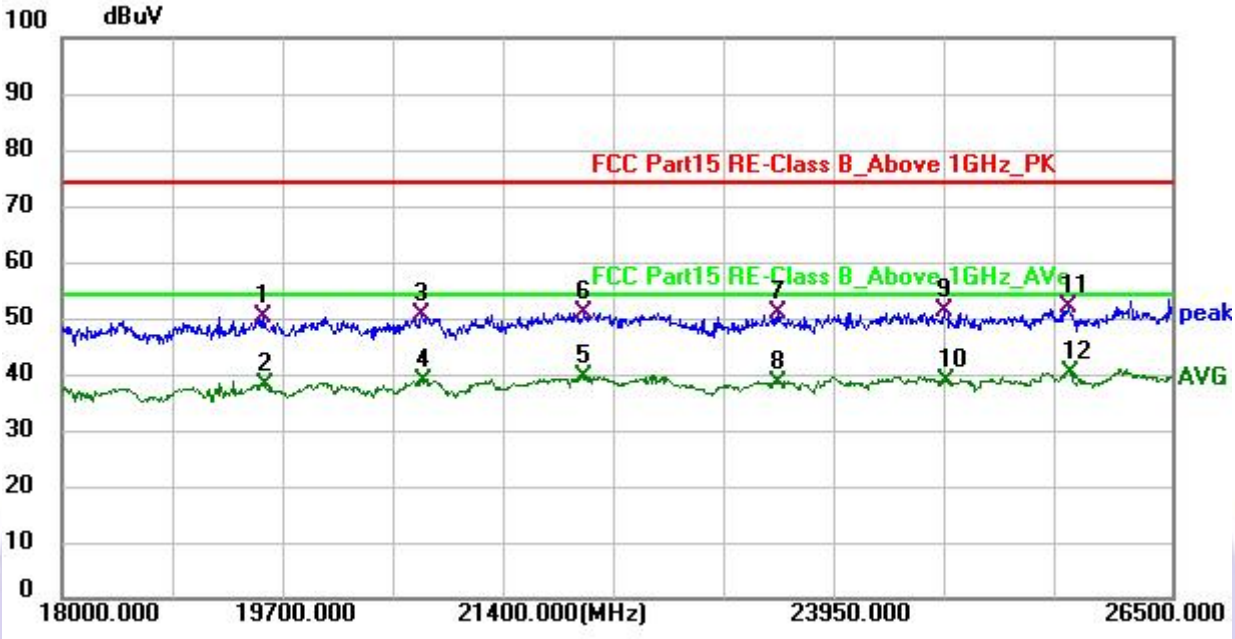
Test Frequency 18GHz-26.5GHz:

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Low Channel



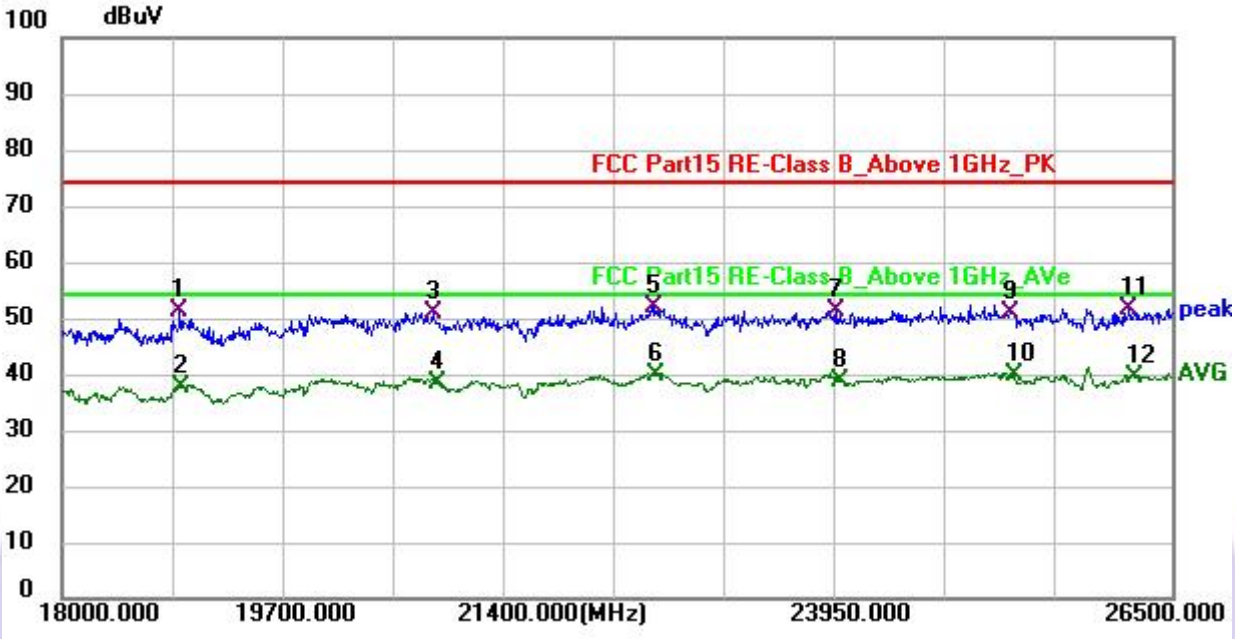
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	20099.5000	58.17	-7.16	51.01	74.00	-22.99	QP
2	20099.5000	45.39	-7.16	38.23	54.00	-15.77	AVG
3	20805.0000	57.76	-6.64	51.12	74.00	-22.88	QP
4 *	20805.0000	46.57	-6.64	39.93	54.00	-14.07	AVG
5	21782.5000	55.90	-4.95	50.95	74.00	-23.05	QP
6	21791.0000	43.52	-4.93	38.59	54.00	-15.41	AVG
7	23406.0000	54.76	-4.27	50.49	74.00	-23.51	QP
8	23414.5000	43.16	-4.26	38.90	54.00	-15.10	AVG
9	24664.0000	53.37	-2.85	50.52	74.00	-23.48	QP
10	24664.0000	41.86	-2.85	39.01	54.00	-14.99	AVG
11	25556.5000	55.07	-4.51	50.56	74.00	-23.44	QP
12	25556.5000	43.69	-4.51	39.18	54.00	-14.82	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Low Channel



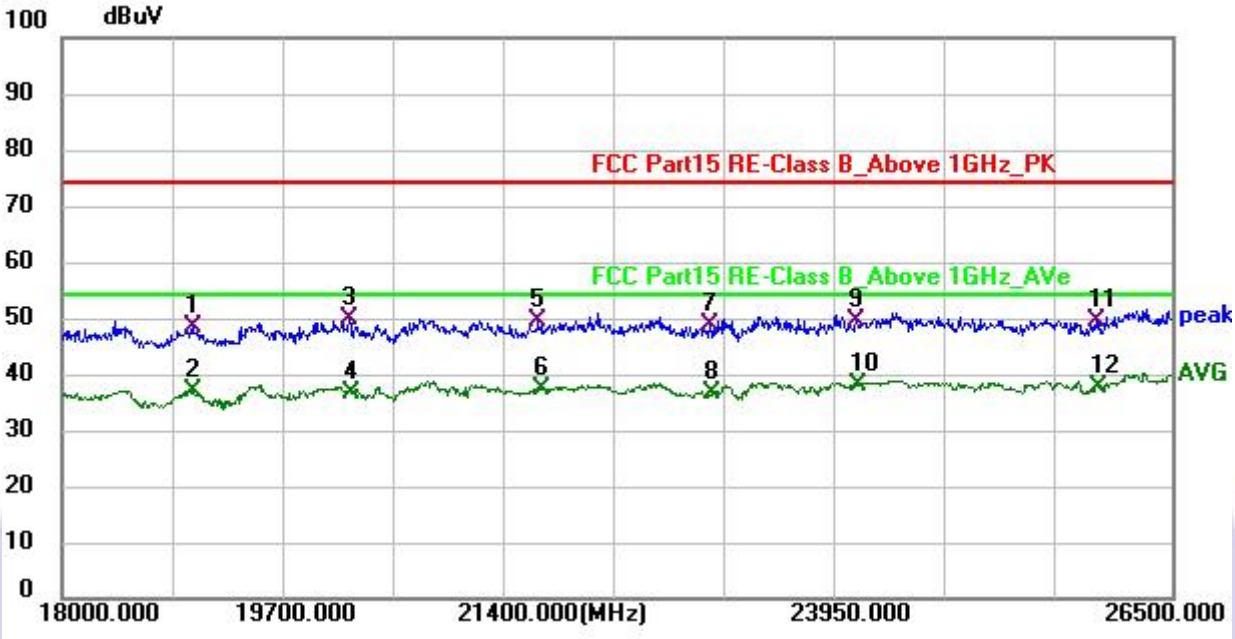
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	19547.0000	57.18	-7.04	50.14	74.00	-23.86	QP
2	19564.0000	45.04	-7.05	37.99	54.00	-16.01	AVG
3	20754.0000	57.05	-6.67	50.38	74.00	-23.62	QP
4	20762.5000	45.30	-6.66	38.64	54.00	-15.36	AVG
5	21995.0000	43.91	-4.61	39.30	54.00	-14.70	AVG
6	22003.5000	55.67	-4.60	51.07	74.00	-22.93	QP
7	23482.5000	55.18	-4.17	51.01	74.00	-22.99	QP
8	23491.0000	42.55	-4.16	38.39	54.00	-15.61	AVG
9	24757.5000	53.90	-2.82	51.08	74.00	-22.92	QP
10	24774.5000	41.43	-2.81	38.62	54.00	-15.38	AVG
11	25709.5000	56.79	-4.97	51.82	74.00	-22.18	QP
12 *	25718.0000	45.15	-4.99	40.16	54.00	-13.84	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Mid Channel



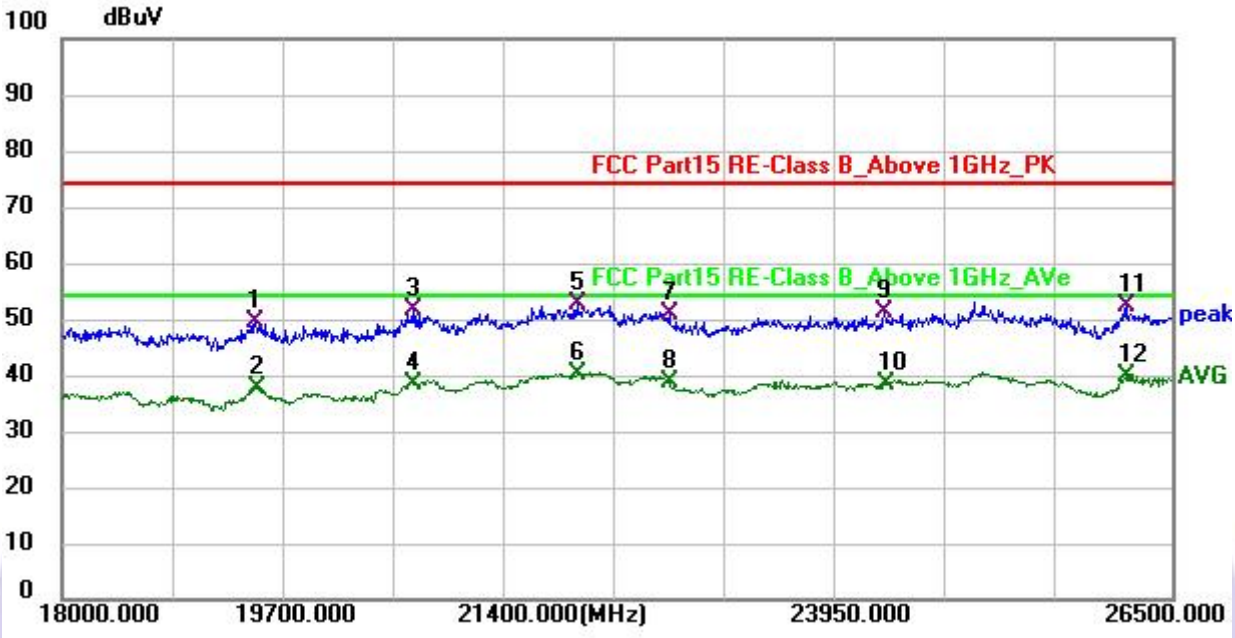
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	18901.0000	57.73	-6.53	51.20	74.00	-22.80	QP
2	18918.0000	44.05	-6.54	37.51	54.00	-16.49	AVG
3	20839.0000	57.57	-6.60	50.97	74.00	-23.03	QP
4	20873.0000	45.04	-6.57	38.47	54.00	-15.53	AVG
5	22539.0000	56.57	-4.63	51.94	74.00	-22.06	QP
6 *	22556.0000	44.53	-4.63	39.90	54.00	-14.10	AVG
7	23933.0000	54.77	-3.64	51.13	74.00	-22.87	QP
8	23958.5000	42.43	-3.61	38.82	54.00	-15.18	AVG
9	25259.0000	54.59	-3.55	51.04	74.00	-22.96	QP
10	25293.0000	43.52	-3.67	39.85	54.00	-14.15	AVG
11	26177.0000	56.26	-4.73	51.53	74.00	-22.47	QP
12	26219.5000	43.86	-4.48	39.38	54.00	-14.62	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(1M) Mid Channel



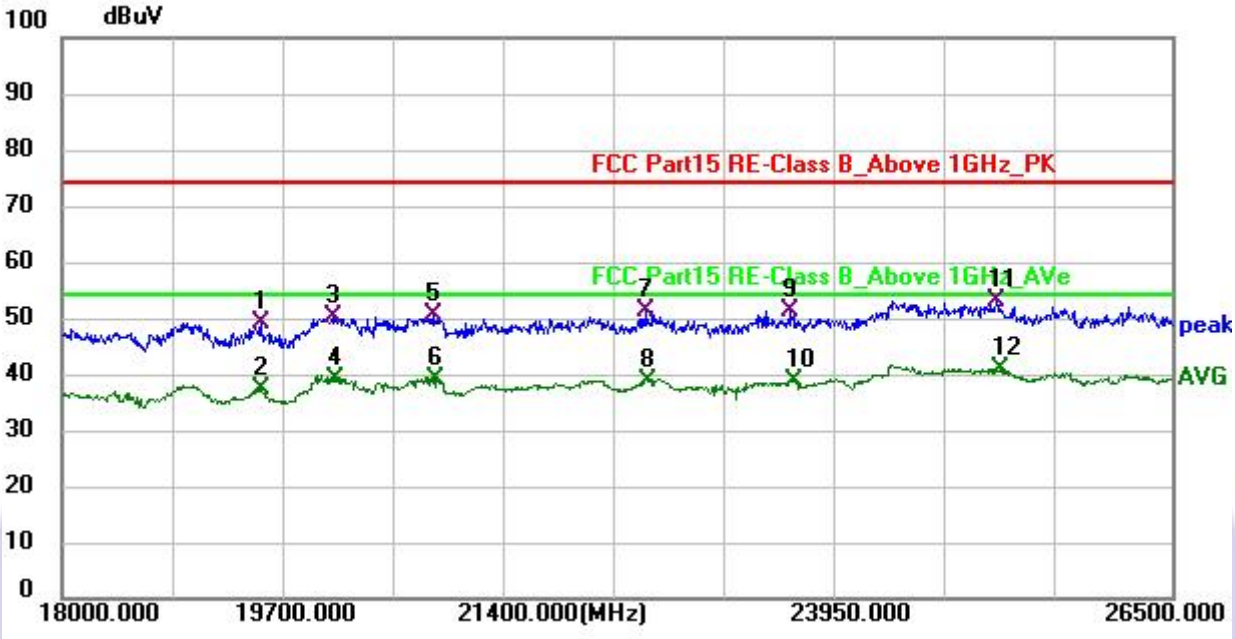
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	19003.0000	54.93	-6.59	48.34	74.00	-25.66	QP
2	19003.0000	43.69	-6.59	37.10	54.00	-16.90	AVG
3	20201.5000	56.79	-7.09	49.70	74.00	-24.30	QP
4	20218.5000	43.81	-7.07	36.74	54.00	-17.26	AVG
5	21646.5000	54.87	-5.25	49.62	74.00	-24.38	QP
6	21680.5000	42.36	-5.17	37.19	54.00	-16.81	AVG
7	22964.0000	53.29	-4.69	48.60	74.00	-25.40	QP
8	22981.0000	41.14	-4.68	36.46	54.00	-17.54	AVG
9	24086.0000	52.89	-3.47	49.42	74.00	-24.58	QP
10 *	24103.0000	41.58	-3.44	38.14	54.00	-15.86	AVG
11	25922.0000	54.92	-5.54	49.38	74.00	-24.62	QP
12	25939.0000	43.37	-5.58	37.79	54.00	-16.21	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(1M) High Channel



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	19487.5000	56.61	-7.01	49.60	74.00	-24.40	QP
2	19496.0000	44.58	-7.02	37.56	54.00	-16.44	AVG
3	20686.0000	58.33	-6.69	51.64	74.00	-22.36	QP
4	20694.5000	44.99	-6.68	38.31	54.00	-15.69	AVG
5	21944.0000	57.26	-4.69	52.57	74.00	-21.43	QP
6 *	21944.0000	44.73	-4.69	40.04	54.00	-13.96	AVG
7	22649.5000	55.46	-4.64	50.82	74.00	-23.18	QP
8	22649.5000	43.44	-4.64	38.80	54.00	-15.20	AVG
9	24298.5000	54.53	-3.20	51.33	74.00	-22.67	QP
10	24307.0000	41.55	-3.19	38.36	54.00	-15.64	AVG
11	26151.5000	57.03	-4.87	52.16	74.00	-21.84	QP
12	26151.5000	44.86	-4.87	39.99	54.00	-14.01	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(1M) High Channel



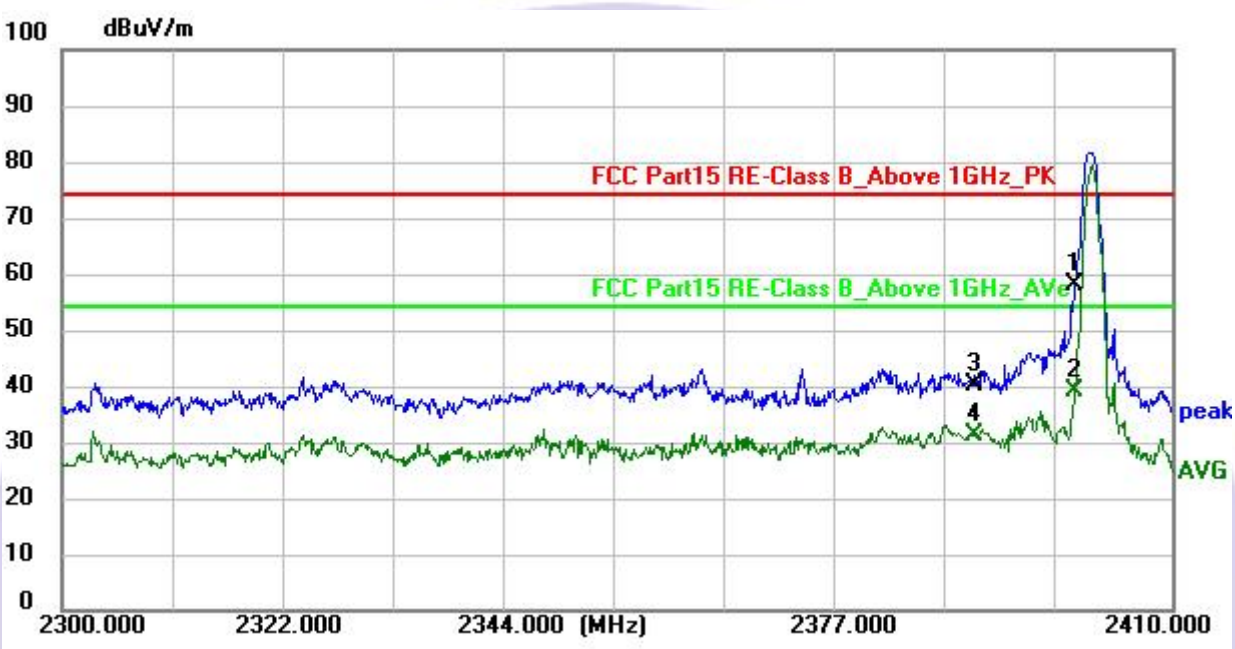
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	19521.5000	56.21	-7.02	49.19	74.00	-24.81	QP
2	19521.5000	44.42	-7.02	37.40	54.00	-16.60	AVG
3	20082.5000	57.28	-7.17	50.11	74.00	-23.89	QP
4	20091.0000	46.11	-7.16	38.95	54.00	-15.05	AVG
5	20839.0000	57.04	-6.60	50.44	74.00	-23.56	QP
6	20856.0000	45.80	-6.59	39.21	54.00	-14.79	AVG
7	22479.5000	55.90	-4.65	51.25	74.00	-22.75	QP
8	22488.0000	43.56	-4.65	38.91	54.00	-15.09	AVG
9	23584.5000	55.33	-4.05	51.28	74.00	-22.72	QP
10	23601.5000	42.70	-4.04	38.66	54.00	-15.34	AVG
11	25157.0000	56.21	-3.21	53.00	74.00	-21.00	QP
12 *	25182.5000	44.10	-3.29	40.81	54.00	-13.19	AVG

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

Margin= Emission Level - Limit

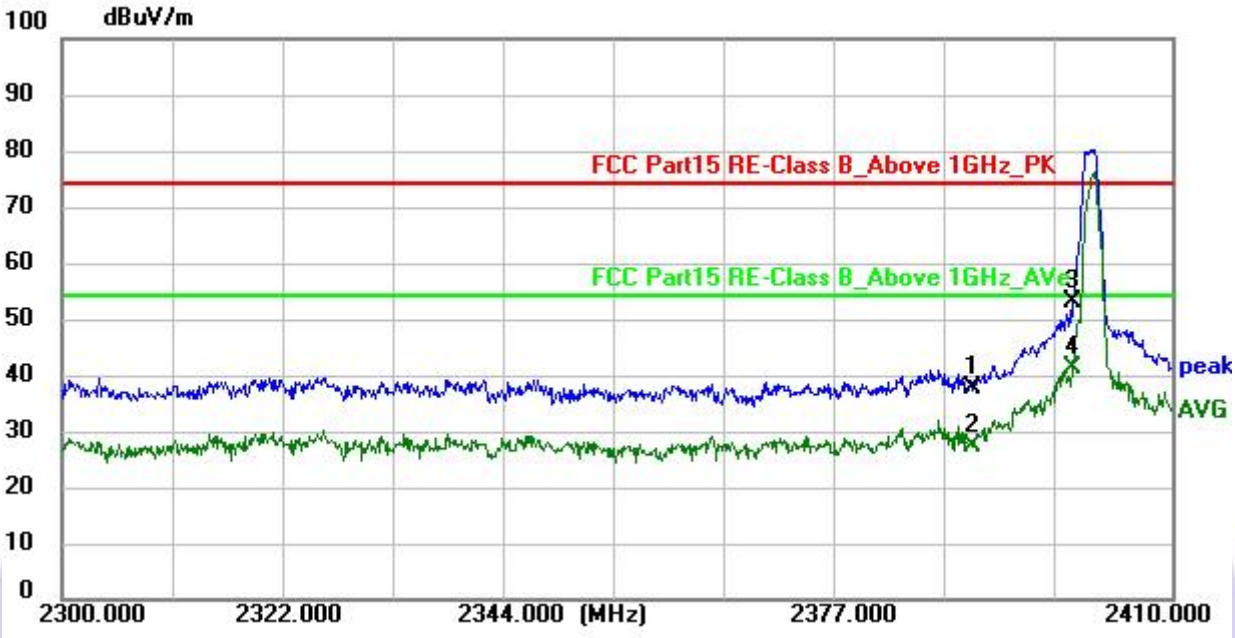
Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(2M) Low Channel



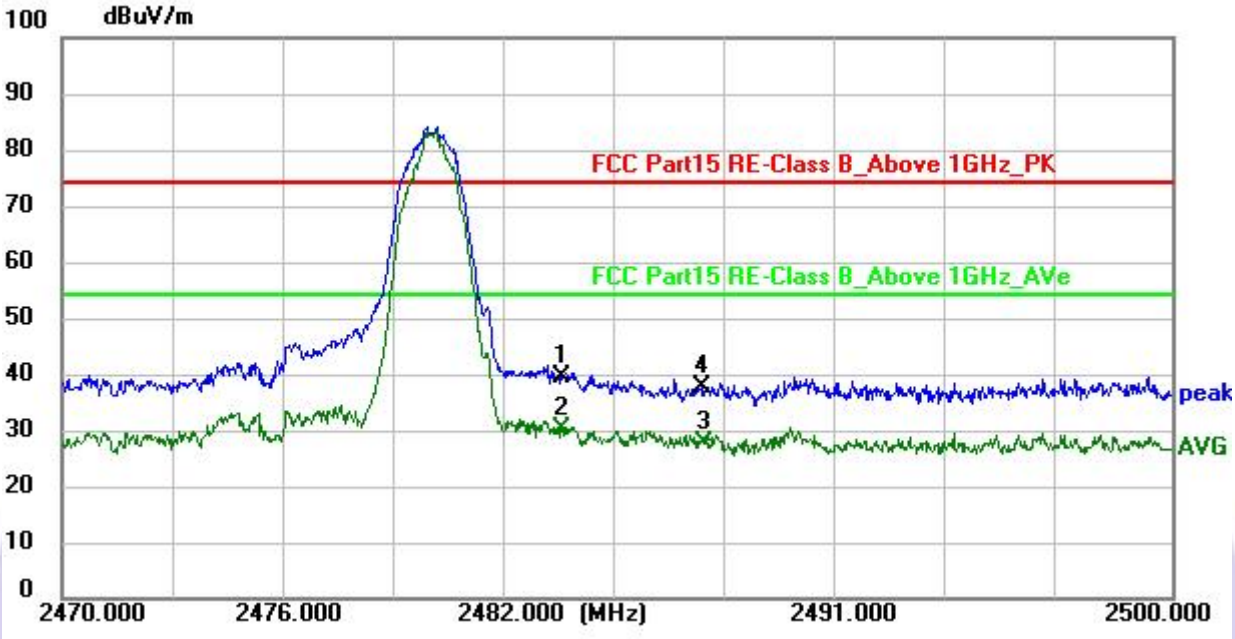
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2400.4300	61.11	-3.03	58.08	74.00	-15.92	peak
2 *	2400.4300	42.01	-3.03	38.98	54.00	-15.02	AVG
3	2390.4200	43.11	-3.06	40.05	74.00	-33.95	peak
4	2390.4200	34.42	-3.06	31.36	54.00	-22.64	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(2M) Low Channel



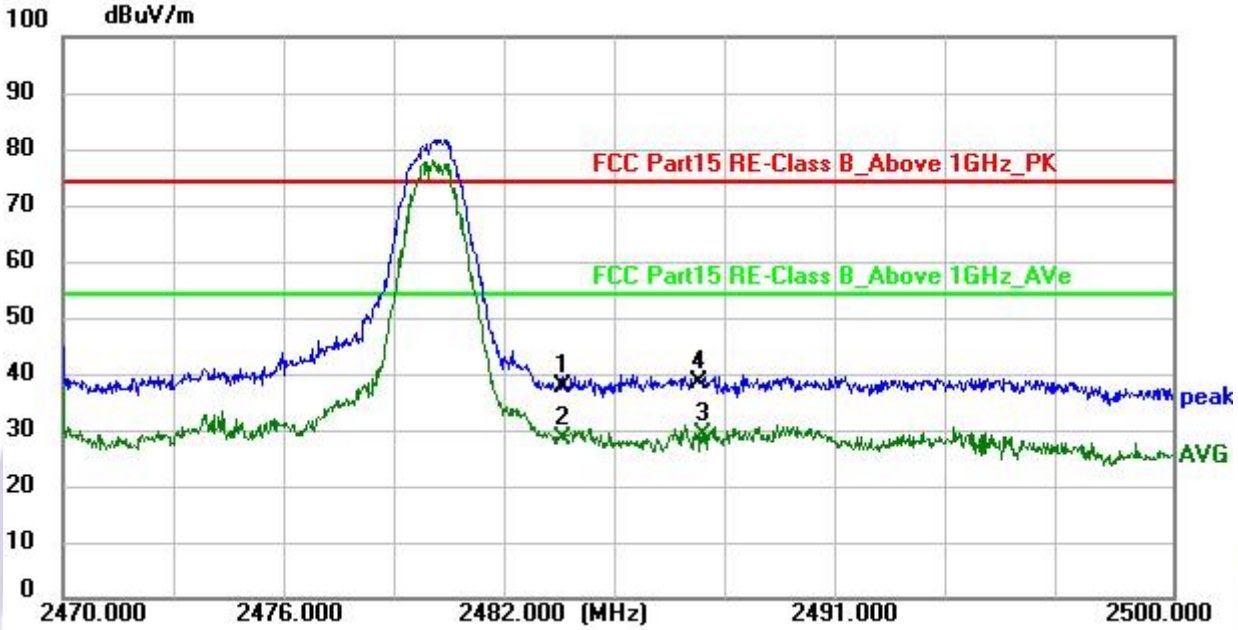
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.2000	40.74	-3.06	37.68	74.00	-36.32	peak
2	2390.2000	30.48	-3.06	27.42	54.00	-26.58	AVG
3	2400.2100	56.05	-3.03	53.02	74.00	-20.98	peak
4 *	2400.2100	44.43	-3.03	41.40	54.00	-12.60	AVG

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Mode	GFSK(2M) High Channel



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.5000	41.89	-2.60	39.29	74.00	-34.71	peak
2 *	2483.5000	32.95	-2.60	30.35	54.00	-23.65	AVG
3	2487.3400	30.23	-2.58	27.65	54.00	-26.35	AVG
4	2487.2800	40.25	-2.58	37.67	74.00	-36.33	peak

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Mode	GFSK(2M) High Channel



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.5000	40.23	-2.60	37.63	74.00	-36.37	peak
2	2483.5000	31.07	-2.60	28.47	54.00	-25.53	AVG
3 *	2487.2800	31.82	-2.58	29.24	54.00	-24.76	AVG
4	2487.2200	40.84	-2.58	38.26	74.00	-35.74	peak

Note:

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

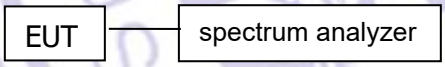
7 Conduct Band Edge And Spurious Emissions Measurement

Test Requirement	:	Section 15.247(d) 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)).
Test Method	:	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 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 §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)).

7.1 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 = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold

7.2 Test Setup Blocking



7.3 Test Result

Please see the Appendix for the BLE data

8 6dB Bandwidth Measurement

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024
Test Limit		Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

8.1 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 = 100kHz, VBW = 300kHz

8.2 Test Setup Blocking

EUT — spectrum analyzer

8.3 Test Result

Please see the Appendix for the BLE data

9 Maximum Peak Output Power

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024
Test Limit	:	Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.

9.1 Test Procedure

1. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Measure the conducted output power and record the results in the test report.

9.2 Test Setup Blocking

EUT — spectrum analyzer

9.3 Test Result

Please see the Appendix for the BLE data

10 Power Spectral density

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024
Test Limit	:	Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

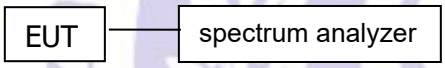
10.1 Test Procedure

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.

10.2 Test Setup Blocking



10.3 Test Result

Please see the Appendix for the BLE data

11 Antenna Application

11.1 Antenna Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

11.2 Result

The antenna is Chip antenna, the Max gain of the antennas is 2.67 dBi, reference to the attachment for details.

12 Test Setup Photos and EUT Photos

Please see the attachment for details.

******THE END REPORT******