

TEST REPORT

For

Handheld Wireless Terminal

Model Number: T8F1B

FCC ID: 2AH25T8F1BH

IC: 22621-T8F1BH

Report Number : WT268500180

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The "Important statement" on the back of the report's first page is part of the document, and copies without it are incomplete.

Revision History

No	Date	Remark
V1.0	2026.03.03	Initial issue

TEST REPORT DECLARATION

Applicant : Shanghai Sunmi Technology Co.,Ltd.
Address : Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Manufacturer : Shanghai Sunmi Technology Co.,Ltd.
Address : Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
EUT Description : Handheld Wireless Terminal
Model No. : T8F1B
Trade mark : SUNMI
HVIN : T8F1BH
FCC ID : 2AH25T8F1BH
IC : 22621-T8F1BH

Test Standards:

FCC Part 15 Subpart C
RSS-247 Issue 4 (2025-07)
RSS-GEN Issue 5 (2021-02)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results, unless they depend on the manufacturer information.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

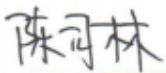
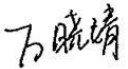
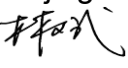
Project Engineer:	 (Chen Silin 陈司林)	Date:	<u>Mar. 03, 2026</u>
Checked by:	 (Wan Xiaojing 万晓婧)	Date:	<u>Mar. 03, 2026</u>
Approved by:	 (Lin Bin 林斌)	Date:	<u>Mar. 03, 2026</u>

TABLE OF CONTENTS

TEST REPORT DECLARATION	3
1. TEST RESULTS SUMMARY	6
2. GENERAL INFORMATION	7
2.1. Report Information.....	7
2.2. Laboratory Accreditation and Relationship to Customer	7
2.3. Measurement Uncertainty	8
3. PRODUCT DESCRIPTION.....	9
3.1. EUT Description.....	9
3.2. Related Submittal(s) / Grant (s)	10
3.3. Block Diagram of EUT Configuration	10
3.4. Operating Condition of EUT	10
3.5. Support Equipment List	10
3.6. Test Conditions.....	10
3.7. Special Accessories	10
3.8. Equipment Modifications	10
3.9. Equipment Requirements.....	10
4. TEST EQUIPMENT USED	12
5. CONDUCTED EMISSION TEST	13
5.1. Test Standard and Limit	13
5.2. Test Procedure	13
5.3. Test Arrangement.....	13
5.4. Test Data	13
6. RADIATED EMISSION TEST	16
6.1. Test Standard and Limit	16
6.2. Test Procedure	17
6.3. Test Arrangement.....	17
6.4. Test Data	17
7. 20DB BANDWIDTH MEASUREMENT	35
7.1. Limits of 20dB Bandwidth Measurement	35
7.2. Test Procedure	35
7.3. Test Setup	35
7.4. Test Data	35
8. CARRIER FREQUENCY SEPARATION MEASUREMENT	39
8.1. Limits of Carrier Frequency Separation Measurement	39
8.2. Test Procedure	39
8.3. Test Setup	39
8.4. Test Data	39
9. NUMBER OF HOPPING CHANNEL	41
9.1. Limits of Number of Hopping Channel	41
9.2. Test Procedure	41
9.3. Test Setup	41
9.4. Test Data	41

10.	TIME OF OCCUPANCY.....	43
10.1.	Limits of Time Occupancy.....	43
10.2.	Test Procedure	43
10.3.	Test Data	43
11.	MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	50
11.1.	Limits of Maximum Conducted Output Power Measurement.....	50
11.2.	Test Procedure	50
11.3.	Test Data	50
12.	CONDUCTED BANDEDGE AND SPURIOUS.....	54
12.1.	Limits of Band Edges Measurement	54
12.2.	Test Procedure	54
12.3.	Test Data	54
13.	99% OCCUPIED BANDWIDTH.....	67
13.1.	LIMITS OF 99%Occupied Bandwidth	67
13.2.	TEST PROCEDURE.....	67
13.3.	TEST DATA.....	67
14.	ANTENNA REQUIREMENTS	71
14.1.	Antenna Connector	71
14.2.	Antenna Gain	71

1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	ISED Rules	Test Results
20dB bandwidth measurement	15.247 (a) (1)	RSS-247 Clause 6.2.3.1(a)	Pass
Carrier frequency separation measurement	15.247 (a) (1)	RSS-247 Clause 6.2.3.1(b)	Pass
Number of hopping channel	15.247 (a) (1) III	RSS-247 Clause 6.2.3.1(b)	Pass
Time of occupancy	15.247 (a) (1) III	RSS-247 Clause 6.2.3.1(b)	Pass
Maximum conducted output power	15.247 (b) (1)	RSS-247 Clause 6.2.3.2	Pass
Radiated spurious emission & Radiated restricted band measurement	15.247 (d) / 15.205 & 15.209	RSS-Gen Clause 8.9 RSS-247 Clause 6.6	Pass
Conducted Bandedge and Spurious	15.247 (d)	RSS-247 Clause 6.6	Pass
Conducted emission	15.207	RSS-GEN Clause 8.8	Pass
99% Occupied bandwidth	N/A	RSS-Gen Clause 6.7	Pass
Antenna requirements	15.203	RSS-GEN Clause 6.8	Pass

Remark: "N/A" means "Not applicable."

2. GENERAL INFORMATION

2.1. Report Information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

The lab will not be liable for any loss or damage resulting for false, inaccurate, inappropriate or incomplete product information provided by the applicant/manufacturer.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Innovation, Science and Economic Development (ISED), and the registration number is 11177A.

The Laboratory is registered to perform emission tests with VCCI, and the registration number are C-20048, G20076, R-20077, R-20078 and T-20047.

The Laboratory is Accredited Testing Laboratory of American Association for Laboratory Accreditation (A2LA) and certificate number is 3292.01.

2.3.Measurement Uncertainty

Conducted Emission

9 kHz~150 kHz $U=3.7\text{dB}$ $k=2$

150 kHz~30MHz $U=3.3\text{dB}$ $k=2$

Radiated Emission

30MHz~1000MHz $U=4.3\text{dB}$ $k=2$

1GHz~6GHz $U=4.6\text{ dB}$ $k=2$

6GHz~40GHz $U=5.1\text{dB}$ $k=2$

3. PRODUCT DESCRIPTION

NOTE: The extreme test conditions for temperature and antenna gain were declared by the manufacturer.

3.1.EUT Description

Description : Handheld Wireless Terminal
Manufacturer : Shanghai Sunmi Technology Co.,Ltd.
Model Number : T8F1B
Operate Frequency : 2.402 GHz~2.480 GHz
Antenna : IFA 2.4 dBi
Designation
Operating Voltage : DC 3.87 V
Software Version : 4.0.1
Hardware Version : V01

Remark: The product has the following configurations

Object	1st Source	2nd Source
Battery	Model name: GYPA Manufacturer: HUNAN GAOYUAN BATTERY CO.,LTD.	Model name: HPPC Manufacturer: Guangdong Highpower New Energy Technology Co., Ltd.
LCD	Model name: 98-03067 7201A Manufacturer: SHENZHEN DJN PHOTOELECTRIC TECHNOLOGY CO.,LTD	Model name: G674AAA085A2(GF3825B) Manufacturer: GUANGDONGSUPERVIEWOPTOELECTRONICSCO.,LTD.

For Radiated test, Pre-scan was performed on all configurations. The worst configuration is: Battery: GYPA + LCD: G674AAA085A2 (GF3825B), which was selected for all radiated tests.

Remark: /

Bluetooth:

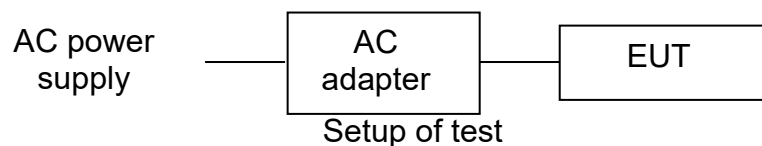
Table 2 Working Frequency List

Regulatory Range	RF Channels
2.400-2.4835 GHz	$f=2402+k$ MHz, $k=0, \dots, 78$

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **2AH25T8F1BH** and IC: **22621-T8F1BH** filing to comply with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules and RSS-247.

3.3. Block Diagram of EUT Configuration



3.4. Operating Condition of EUT

The transmitter has a maximum peak conducted output power of Basic rate GFSK modulation and EDR mode 8DPSK modulation. Tests were performed with Basic rate GFSK modulation and EDR mode 8DPSK modulation.

3.5. Support Equipment List

Table 3 Support Equipment List

Name	Model No	S/N	Manufacturer
Adapter 1# for EUT	TPA-10120150UU	---	SHENZHEN TIANYIN ELECTRONICS CO.,LTD.
Adapter 2# for EUT	TPA-141A050200UU01	---	SHENZHEN TIANYIN ELECTRONICS CO.,LTD.
Adapter 3# for EUT	UC12US	---	Jiangsu Chenyang Electron Co.,Ltd.

3.6. Test Conditions

Date of test: Jan. 22, 2026- Feb. 05, 2026

Date of EUT Receive: Jan. 19, 2026

Temperature: 22 °C- 23 °C

Relative Humidity: 31%-48%

3.7. Special Accessories

Not available for this EUT intended for grant.

3.8. Equipment Modifications

Not available for this EUT intended for grant.

3.9. Equipment Requirements

The device is designed according to specifications of SIG. So, it has a full support to Medium access protocol and fully compliant with the KDB558074 standard. The device is compliant Pseudorandom hopping, Equal hopping frequency, receiver

bandwidth synchronizes and have same bandwidth with transmitted signal. And the ability to have adaptive hopping when encountering other signals.

4. TEST EQUIPMENT USED

Table 4 Test Equipment

No.	Equipment	Manufacturer	Model No.	Calibration Due Date	Calibration Interval
SB3997	Test Receiver	R&S	ESPI3	Oct.14, 2026	1 Year
SB8501/06	AMN	R&S	ESH-Z5	May.08, 2026	1 Year
SB9548	Shielded Room	Albatross	SR	Aug.14, 2028	3 Years
SB20321	EMI Test Receiver	FSW43	R&S	Apr.17, 2026	1 Year
SB12724/11	Loop Antenna	R&S	HFH2-Z2	Apr.22, 2026	1 Year
SB3955	Broadband Antenna	SCHWARZB ECK	VULB9163	Aug.24, 2026	1 Year
SB15044/01	Test Receiver	R&S	ESW8	Feb.01, 2027	1 Year
SB18844	Semi Anechoic Chamber	Albatross	9×6×6(m)	Jan.25, 2027	1 Year
SB8501/09	Test Receiver	R&S	ESU40	Jan.03, 2027	1 Year
SB3435	Horn Antenna	R&S	HF906	Nov.13, 2026	1 Year
SB9058/03	Pre-Amplifier	R&S	SCU 18	Jan.03, 2027	1 Year
SB8501/11	Antenna	R&S	3160-09	Feb.01, 2029	3 Years
SB8501/16	Pre-Amplifier	R&S	SCU-26	Jan.03, 2027	1 Year
SB19867/04	Spectrum Analyzer	Ceyear	Ceyear4051E-S	Apr.17, 2026	1 Year

Table 5 Test software

Name	Manufacturer	Version
Bluetooth and WiFi Test System	Shenzhen JS tonscond co.,ltd	3.3.10

5. CONDUCTED EMISSION TEST

5.1. Test Standard and Limit

5.1.1. Test Standard

CFR 47 (FCC) part 15.207
RSS-Gen Clause 8.8

5.1.2. Test Limit

Table 6 Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

* Decreasing linearly with logarithm of the frequency

* The lower limit shall apply at the transition frequency.

5.2. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver is used to test the emissions from both sides of AC line.

Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

The bandwidth of EMI test receiver is set at 9 kHz.

5.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

5.4. Test Data

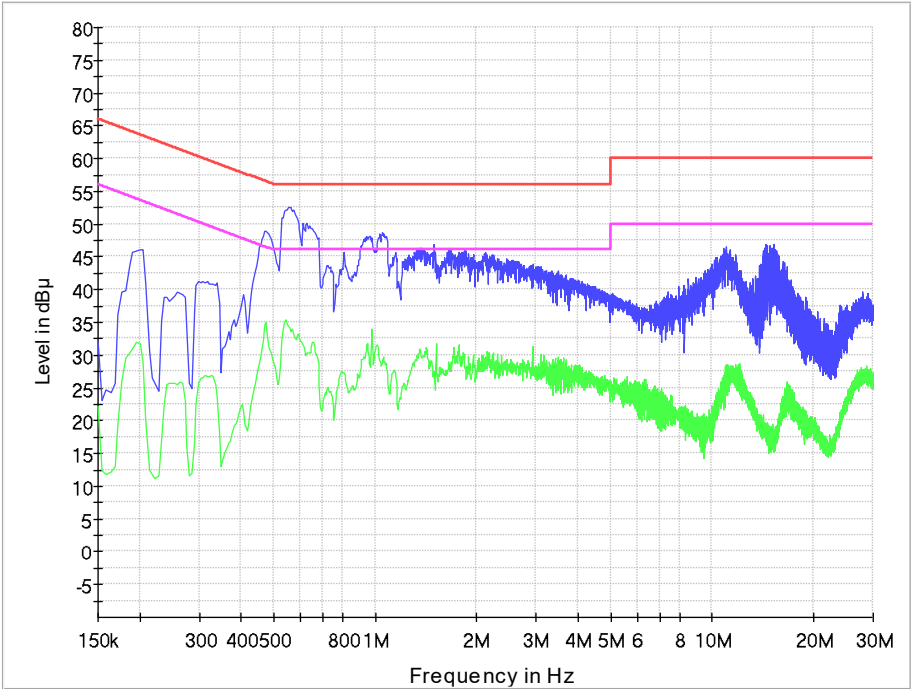
The emissions don't show in below are too low against the limits. Refer to the test curves.

Table 7 Conducted Emission Test Data

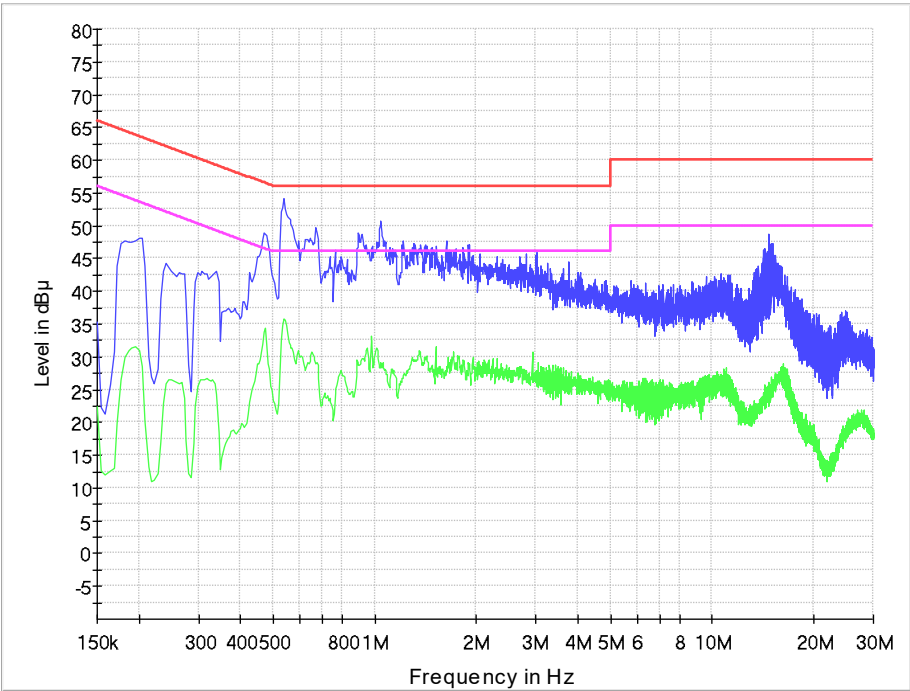
Test mode: Charging and Transmitting								
	Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
			Reading (dB μ V)	Emission Level (dB μ V)	Limit (dB μ V)	Reading (dB μ V)	Emission Level (dB μ V)	Limit (dB μ V)
Line	0.474	9.7	38.0	47.7	56.4	35.4	25.7	46.4
	0.555	9.8	40.4	50.2	56	34.0	24.2	46
	0.627	9.8	37.1	46.9	56	30.6	20.8	46
	0.945	9.8	35.6	45.4	56	31.9	22.1	46
	1.050	9.8	36.6	46.4	56	31.1	21.3	46
	1.495	9.8	33.1	42.9	56	28.2	18.4	46
Neutral	0.469	9.7	36.7	46.4	56.5	34.0	24.3	46.5
	0.537	9.8	39.4	49.2	56	35.8	26.0	46
	0.667	9.8	34.6	44.4	56	29.9	20.1	46
	0.892	9.8	33.3	43.1	56	29.7	19.9	46
	1.041	9.8	34.9	44.7	56	29.2	19.4	46
	1.891	9.8	30.4	40.2	56	29.4	19.6	46

REMARKS: 1. Emission level (dB μ V) = Read Value (dB μ V) + Correction Factor (dB)
2. Correction Factor (dB) = LISN Factor (dB) + Cable Factor (dB) + Limiter Factor (dB)
3. The other emission levels were very low against the limit.

Line



Neutral



6. RADIATED EMISSION TEST

6.1. Test Standard and Limit

6.1.1. Test Standard

CFR 47 (FCC) part 15.247 (d), 15.205, 15.209
 RSS-247 Clause 6.6
 RSS GEN Clause 8.9

6.1.2. Test Limit

Table 8 Radiation Emission Test Limit for FCC (Class B) (9 kHz-1GHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Table 9 Radiation Emission Test Limit for FCC (Class B) (Above 1G)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	74	54

* The lower limit shall apply at the transition frequency.

* The test distance is 3m.

Table 10 Restricted Band Radiated Emission

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
10.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 -	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.17775	73 - 74.6	1645.5 -	9.3 - 9.5
4.20725 -	74.8 - 75.2	1646.5	10.6-12.7
4.20775	108 - 121.94	1660 - 1710	13.25-13.4
6.215 - 6.218	123 - 138	1718.8 -	14.47-14.5
6.26775 -	149.9 - 150.05	1722.2	15.35-16.2
6.26825	156.52475 -	2200 - 2300	17.7-21.4
6.31175 -	156.52525	2310 - 2390	22.01-23.12
6.31225	156.7 - 156.9	2483.5 - 2500	23.6-24.0
8.291 - 8.294	162.0125 - 167.17	2655 - 2900	31.2-31.8

8.362 - 8.366		167.72 - 173.2	3260 - 3267	36.43-36.5
8.37625	-	240 - 285	3332 - 3339	(²)
8.38675		322 - 335.4	3345.8 - 3358	
8.41425	-		3600 - 4400	
8.41475				
12.29 - 12.293				
12.51975	-			
12.52025				
12.57675	-			
12.57725				
13.36 - 13.41				

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

6.2. Test Procedure

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode. Radiated measurements were performed on the frequency range from 30MHz to 25GHz. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz, VBW≥RBW. All readings above 1 GHz are AV and PK values. RBW=1MHz and 1/T (10Hz) for AV value, RBW=1MHz and VBW≥RBW for peak value. Measurements were made at 3 meters.

6.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

6.4. Test Data

The emissions don't show in following result tables are more than 20dB below the limits. Bluetooth basic rate and Bluetooth EDR mode were tested, below only shows worst case result of Bluetooth basic rate.

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

9 kHz-30MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Table 11 Radiated Emission Test Data 9k Hz-30MHz

Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Reading (dBμV/m)	Level (dBμV/m)	Polarity (H/V)	Limit (dBμV/m)	Margin (dB)	Note
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

30MHz-1GHz

Worst case is shown below for 30MHz-1GHz only.

The emissions don't show in following result tables are more than 20dB below the limits.

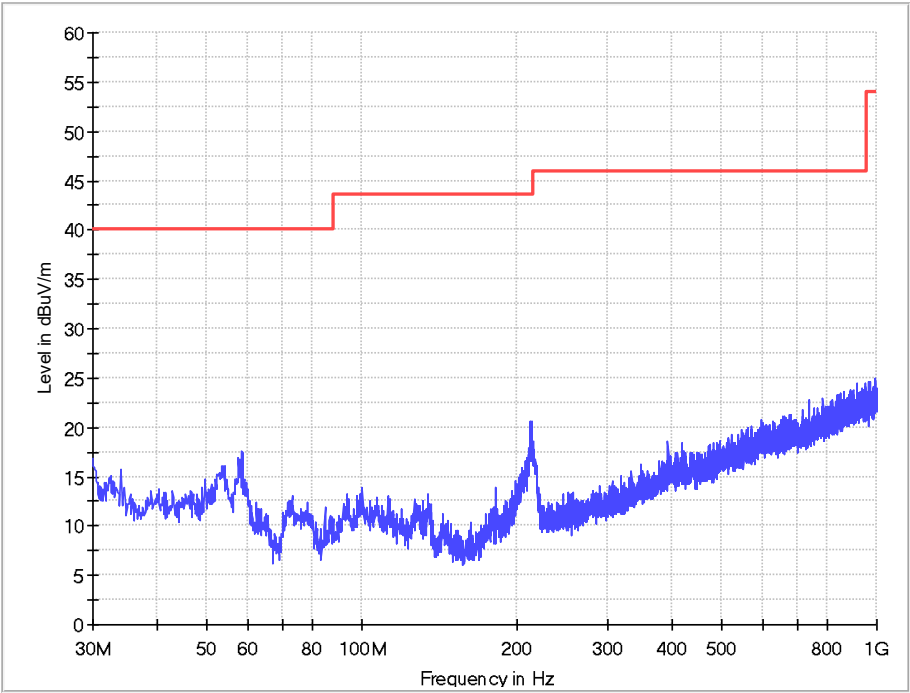
Table 12 Radiated Emission Test Data 30MHz-1GHz

Frequency (MHz)	Cable Loss +preamp (dB)	Antenna Factor (dB)	Reading (dBμV/m)	Level (dBμV/m)	Polarity (Horizontal/ Vertical)	Limit (dBμV/m)	Margin (dB)	Note
58.421	0.8	13.0	1.4	15.2	Horizontal	40.0	24.8	QP
100.228	1.1	13.2	1.1	15.4	Horizontal	43.5	28.1	QP
181.417	1.6	9.7	3.2	14.5	Horizontal	43.5	29.0	QP
212.263	1.8	10.6	5.1	17.5	Horizontal	43.5	26.0	QP
392.974	2.4	14.6	0.8	17.8	Horizontal	46.0	28.2	QP
739.846	3.4	18.8	-3.6	18.6	Horizontal	46.0	27.4	QP
30.291	0.6	12.3	9.6	22.5	Vertical	40	17.5	QP
53.474	0.7	13.3	8.4	22.4	Vertical	40	17.6	QP
57.936	0.8	13.0	8.7	22.5	Vertical	40	17.5	QP
71.613	0.9	8.7	11.2	20.8	Vertical	40	19.2	QP
143.102	1.3	8.2	12.4	21.9	Vertical	43.5	21.6	QP
982.540	4.0	21.1	-4.9	20.2	Vertical	54	33.8	QP

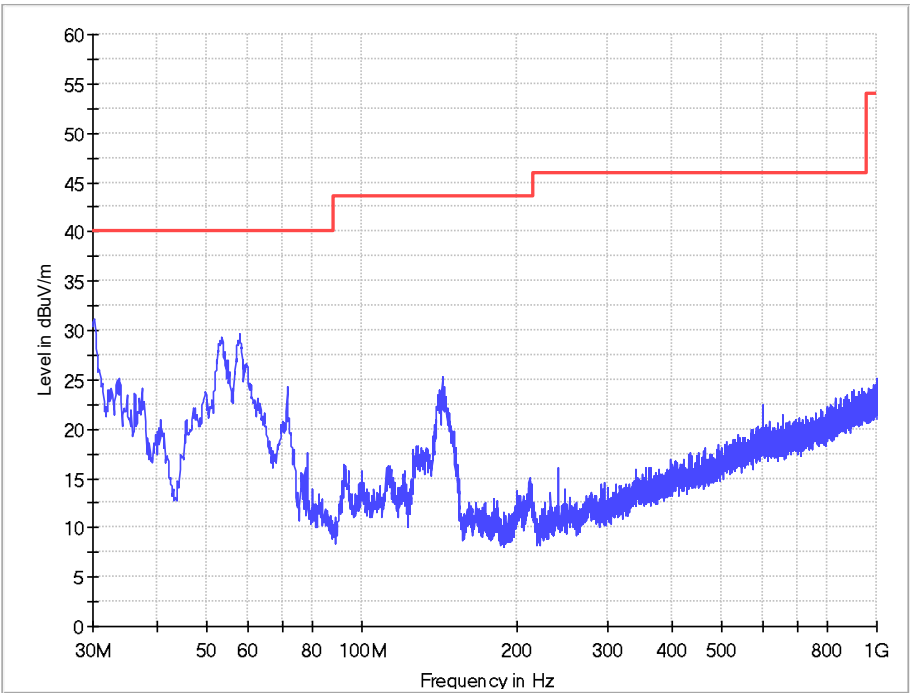
Remark: Emission level (dBμV)=Read Value(dBμV/m) + Antenna Factor(dB)+ Cable Loss +preamp(dB)

30MHz-1GHz

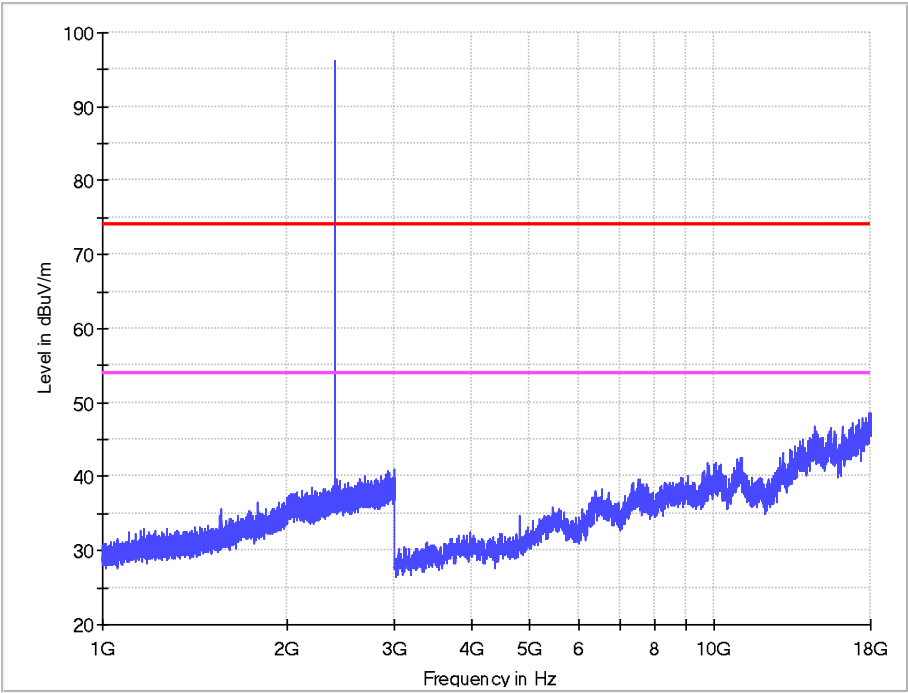
Horizontal



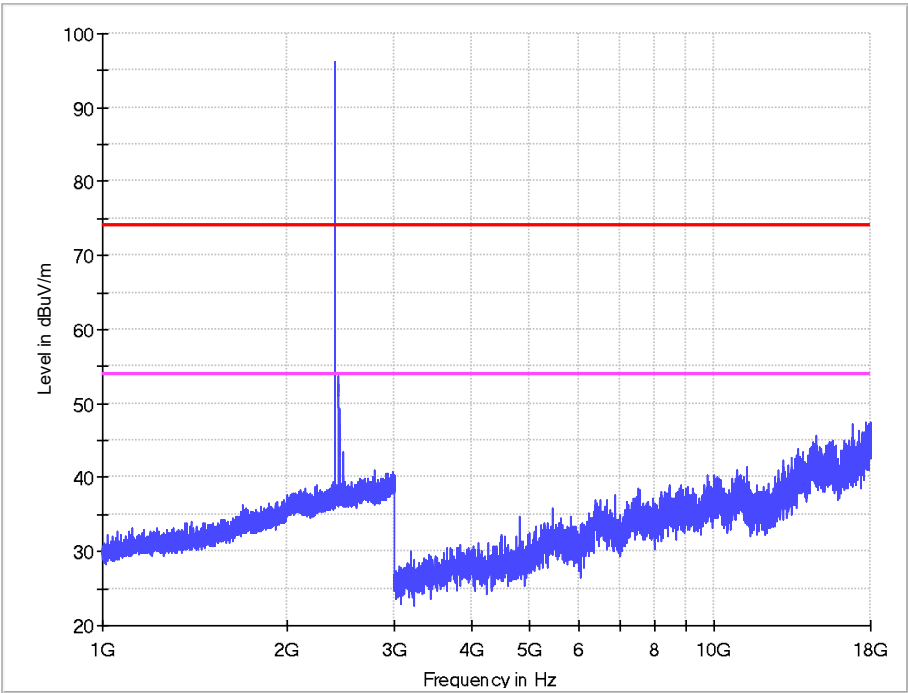
Vertical



1GHz-18GHz
GFSK CH0
Horizontal



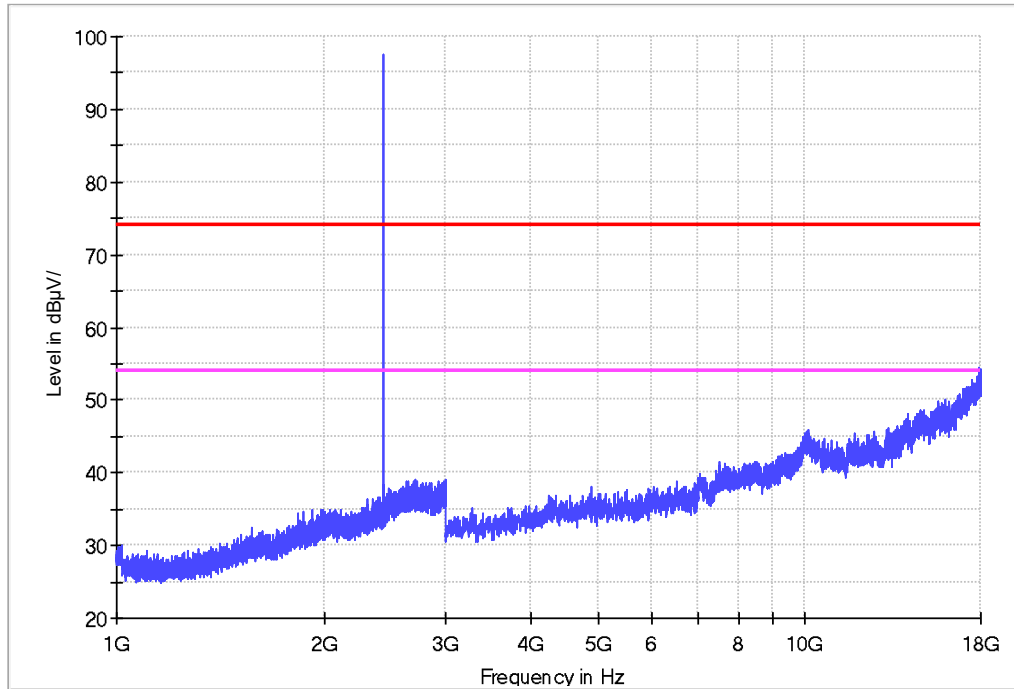
Vertical



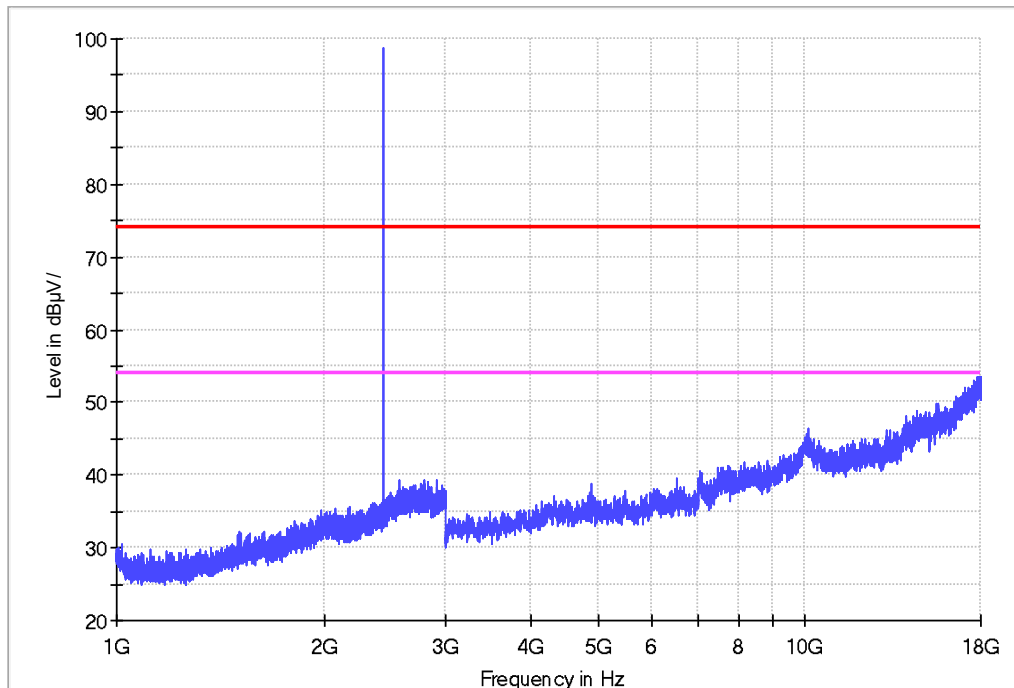
1GHz-18GHz

GFSK CH39

Horizontal



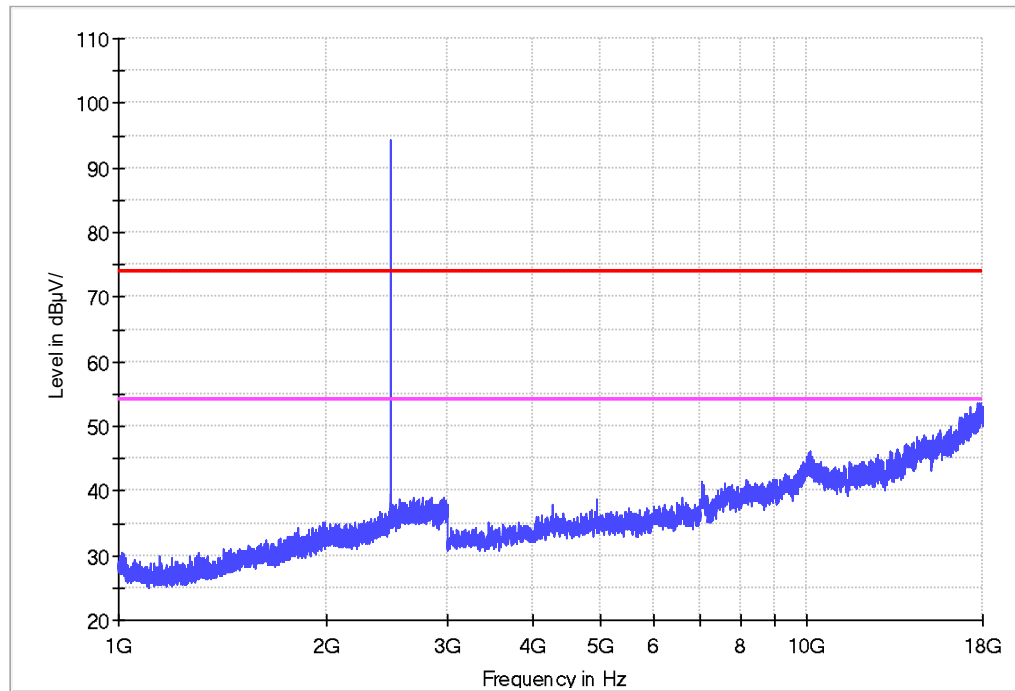
Vertical



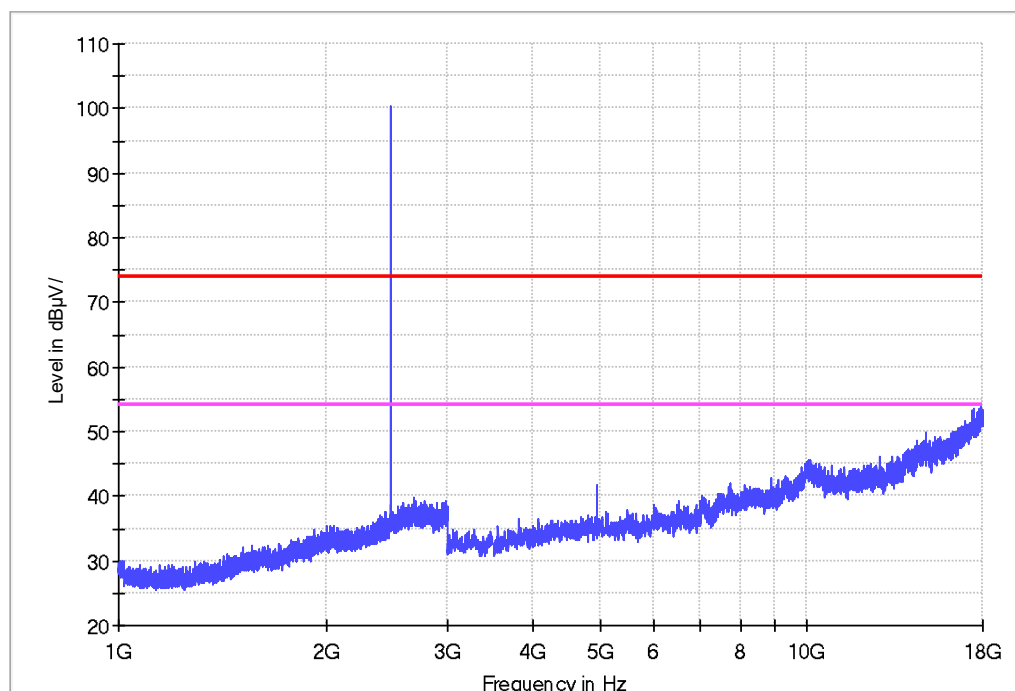
1GHz-18GHz

GFSK CH78

Horizontal



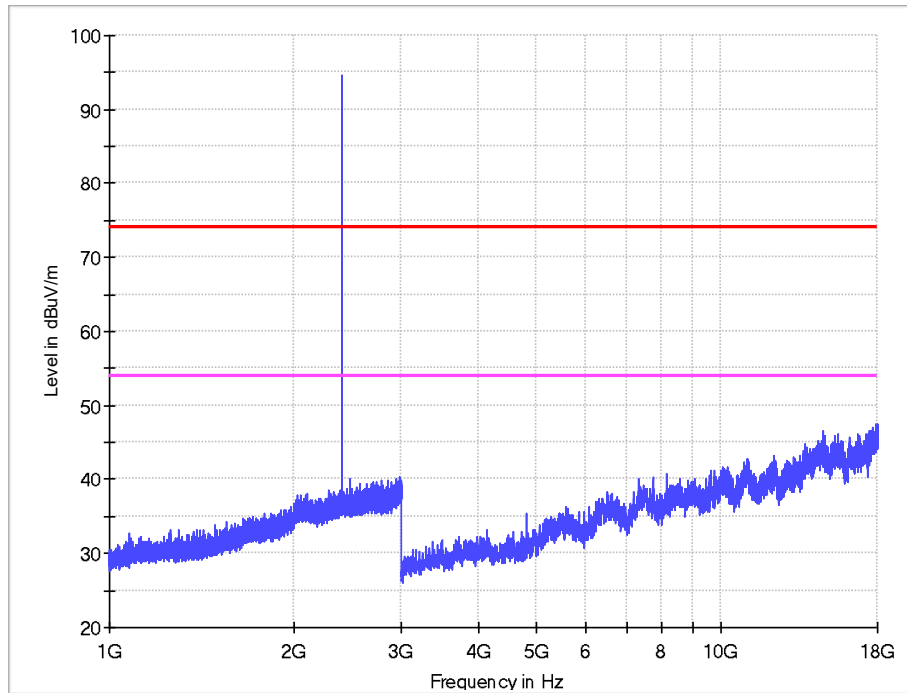
Vertical



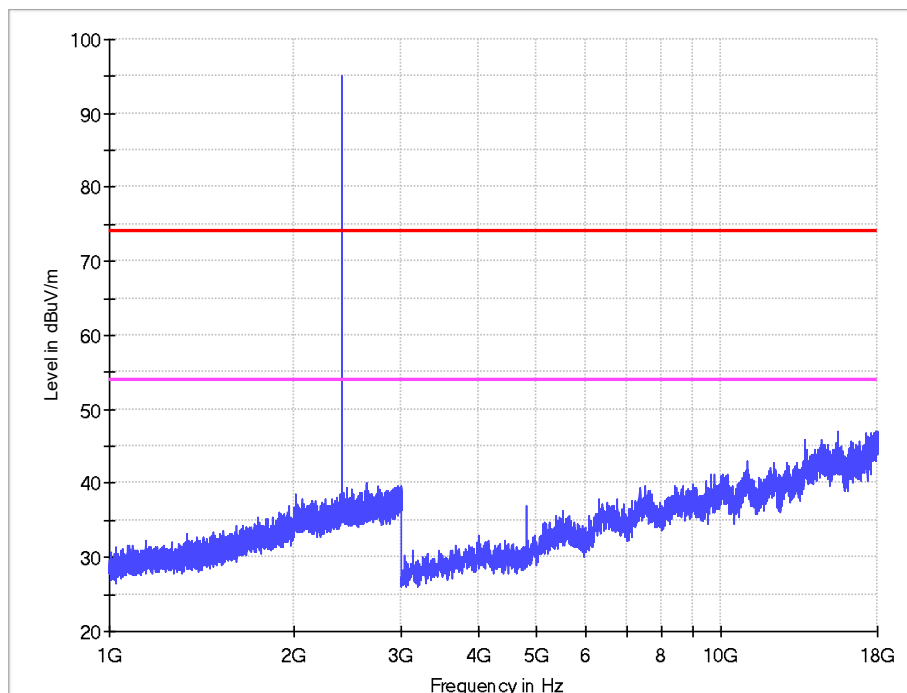
1GHz-18GHz

8DPSK CH0

Horizontal

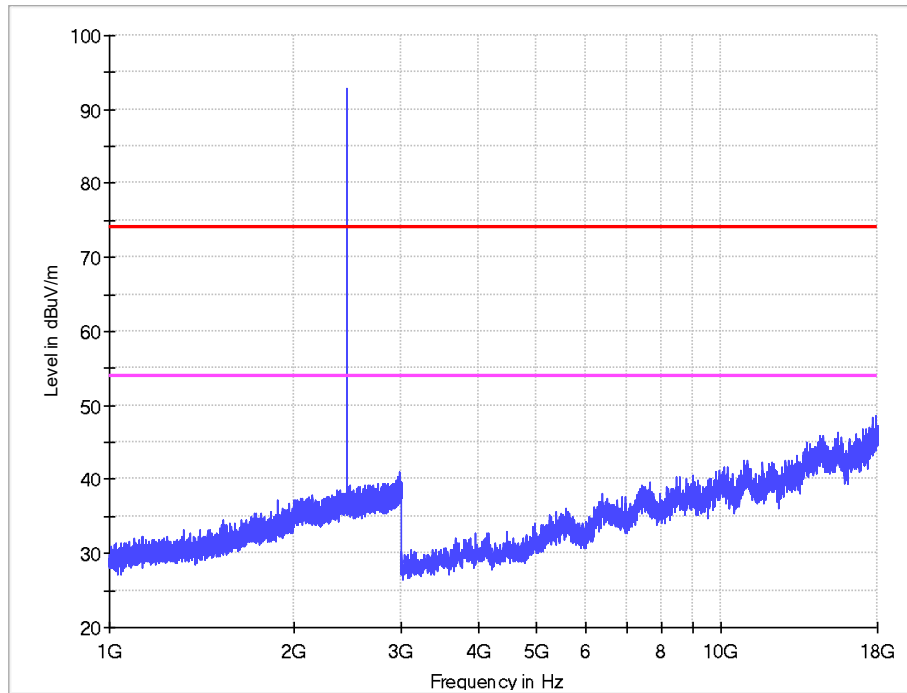


Vertical

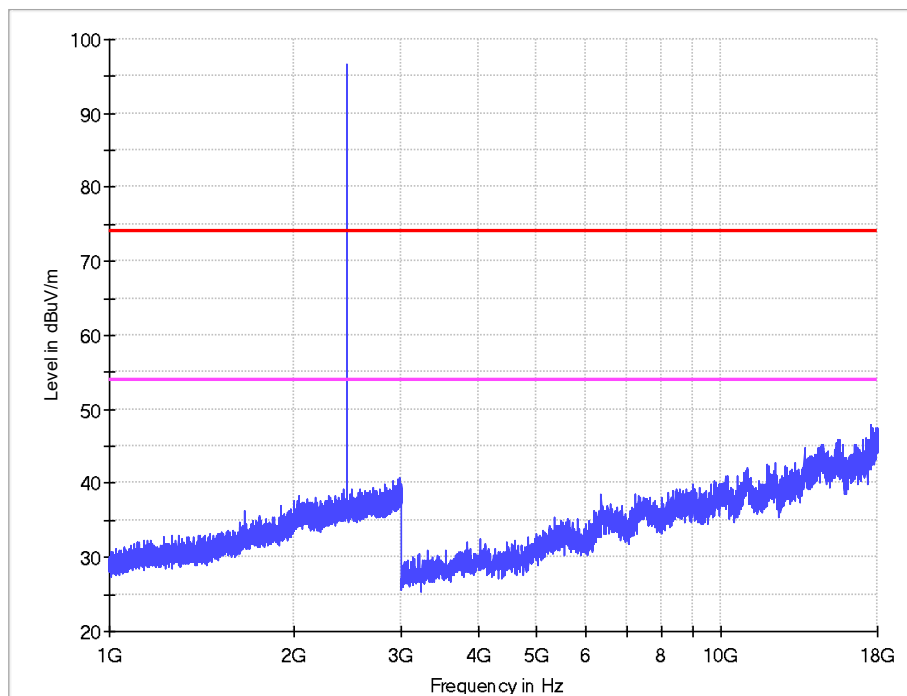


1GHz-18GHz

8DPSK CH39
Horizontal



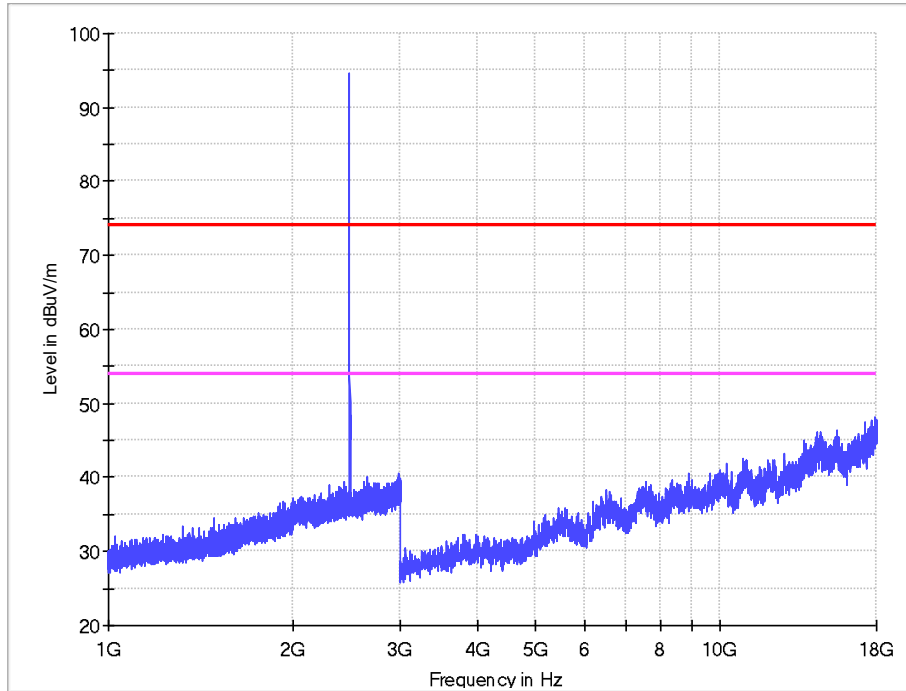
Vertical



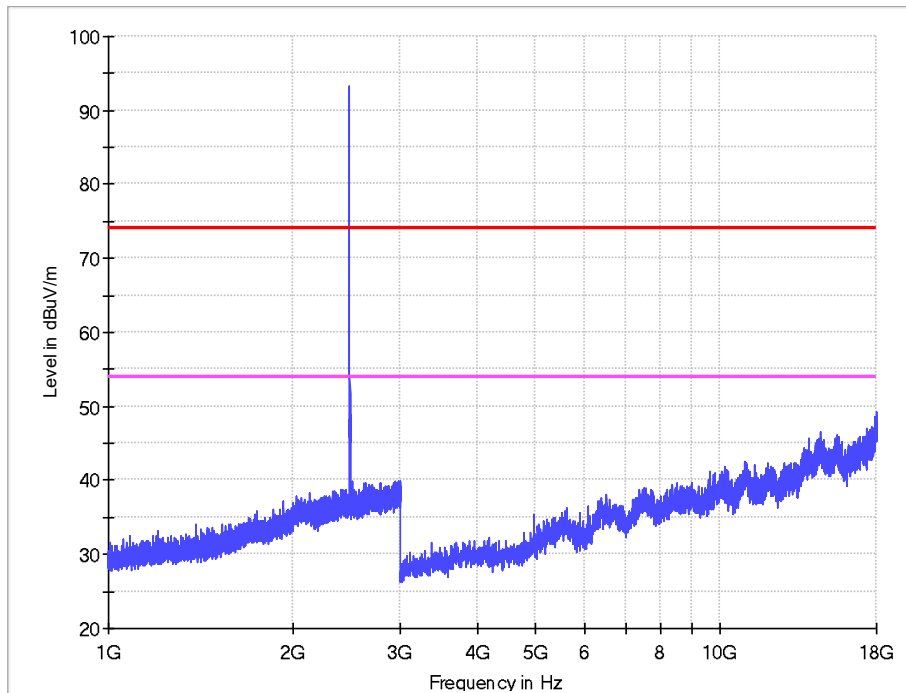
1GHz-18GHz

8DPSK CH78

Horizontal

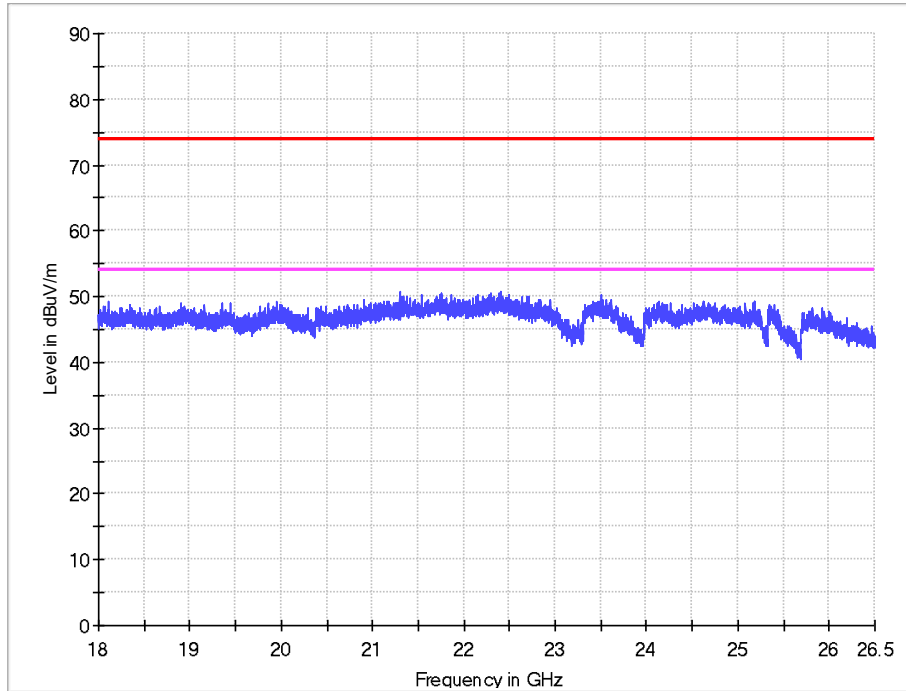


Vertical

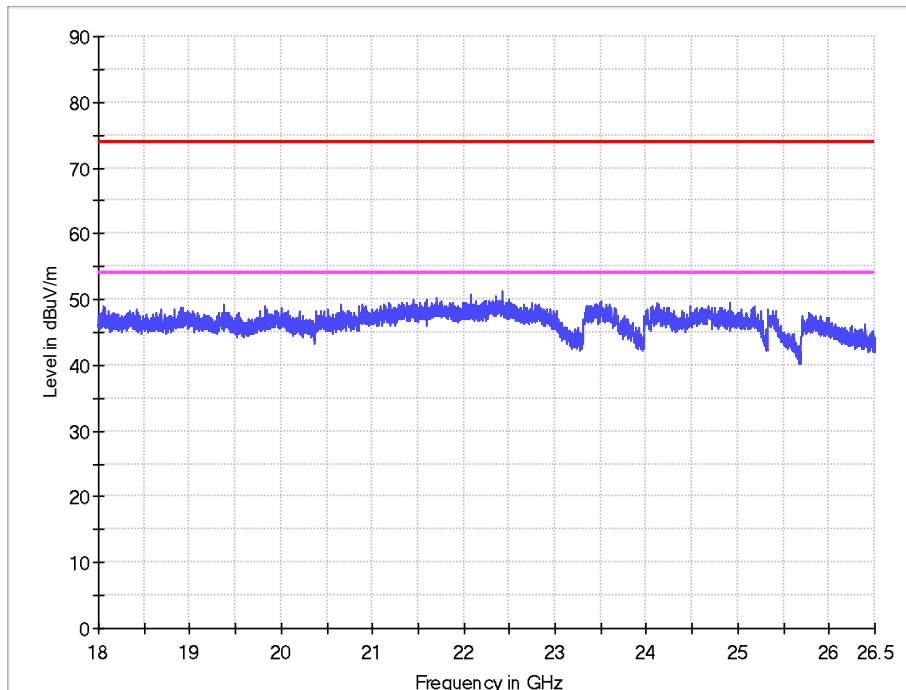


18-26.5 GHz

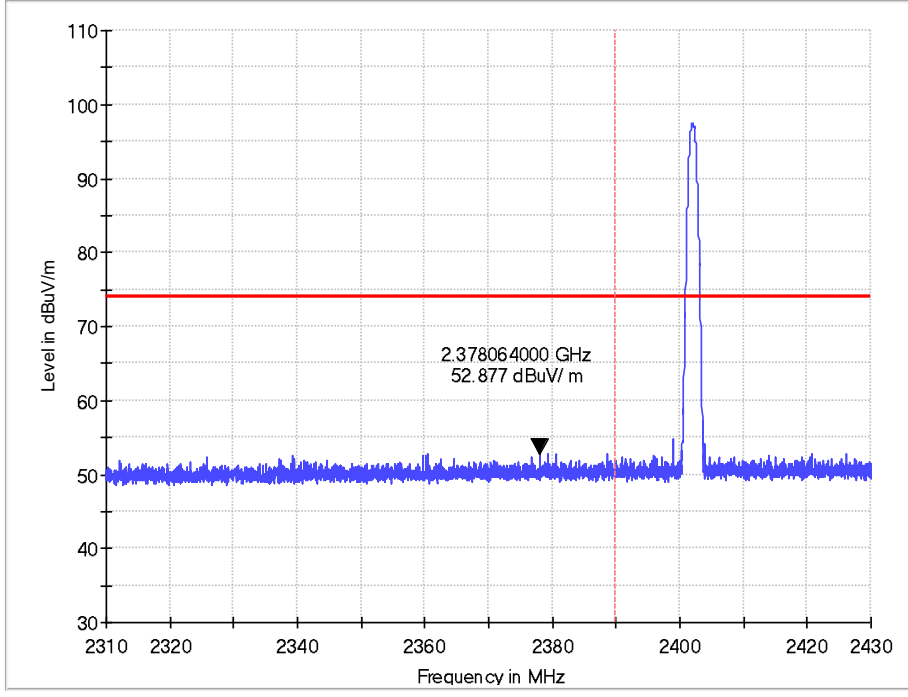
No Peak found in pre-scan, only worst case result is listed in this report.
Horizontal



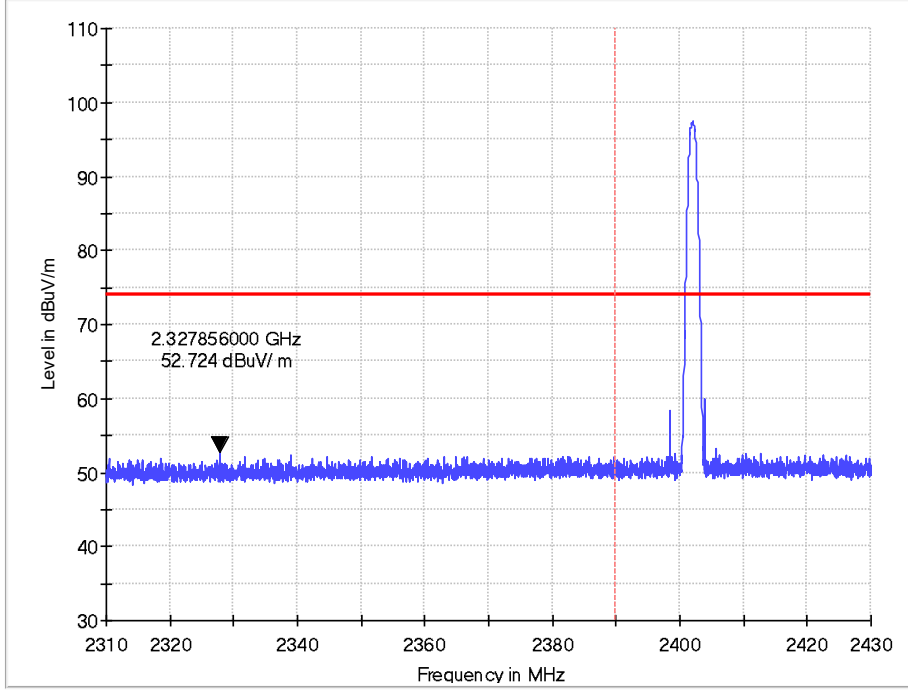
Vertical



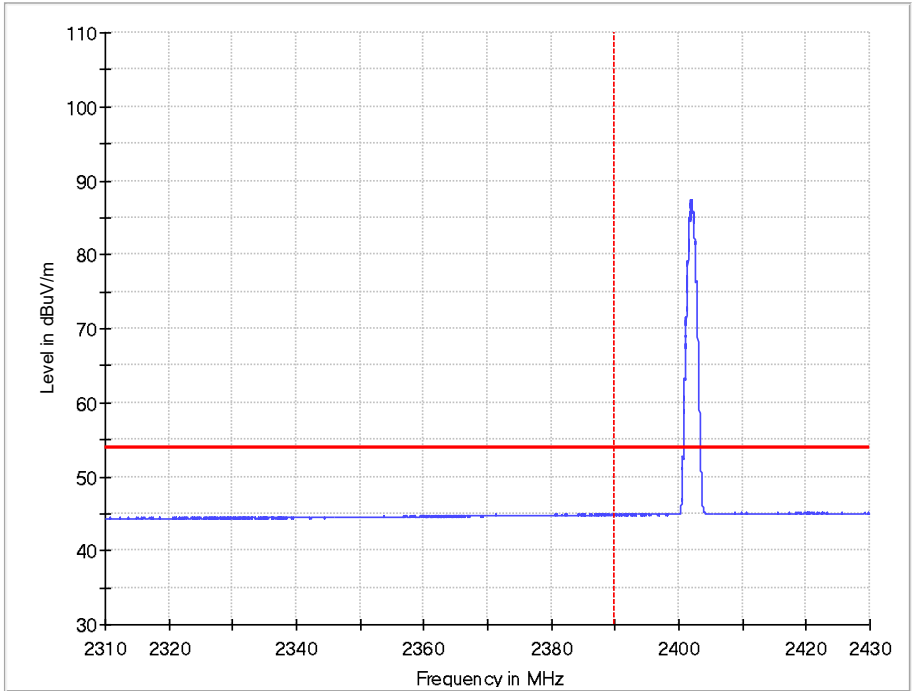
GFSK
Low edge
PK
Horizontal



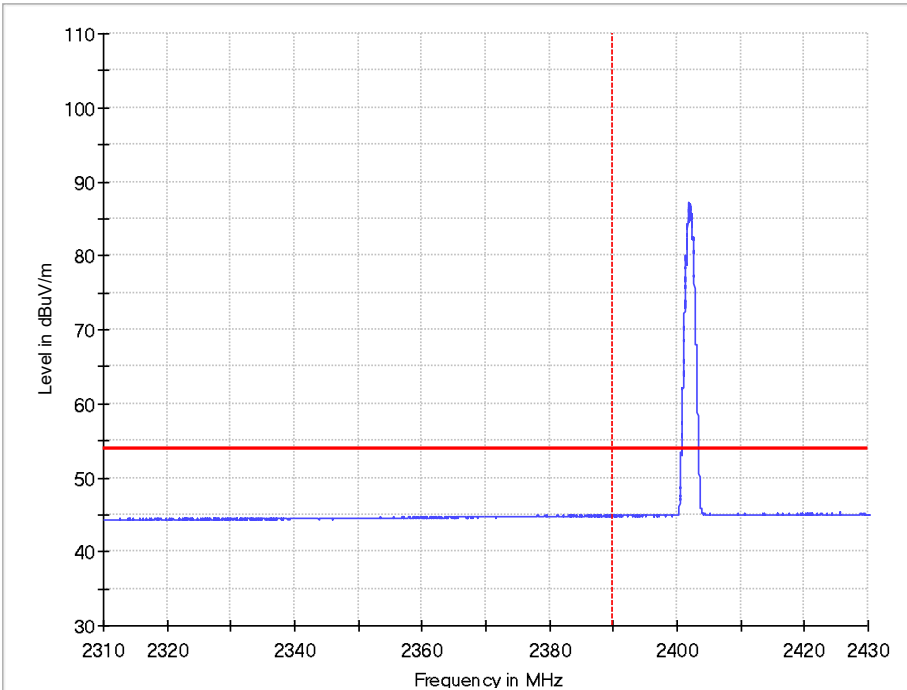
Vertical



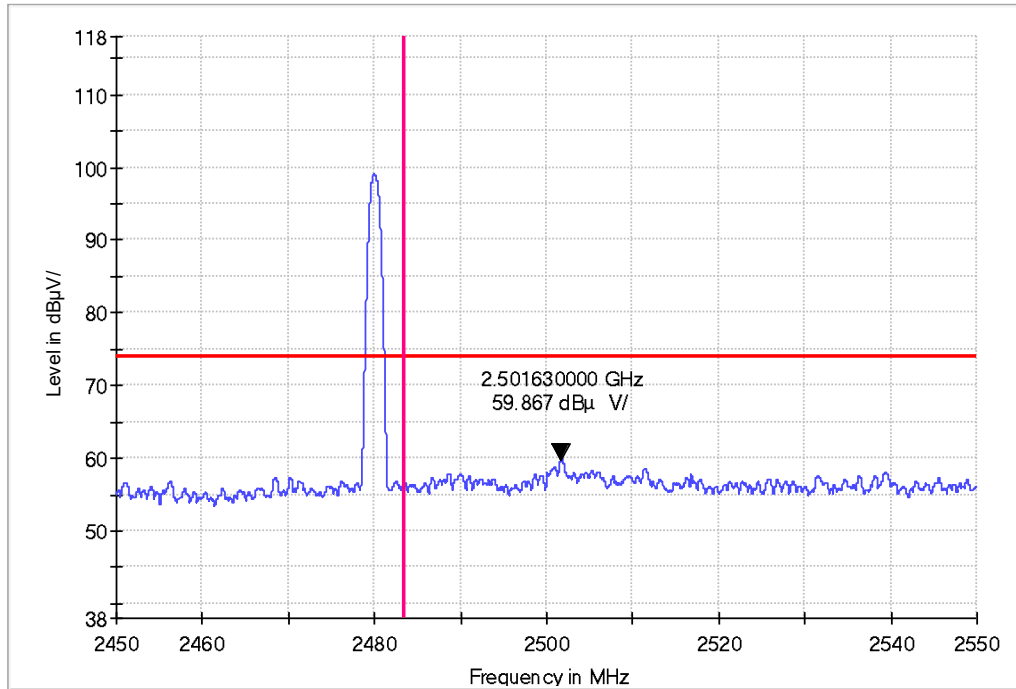
AV
Horizontal



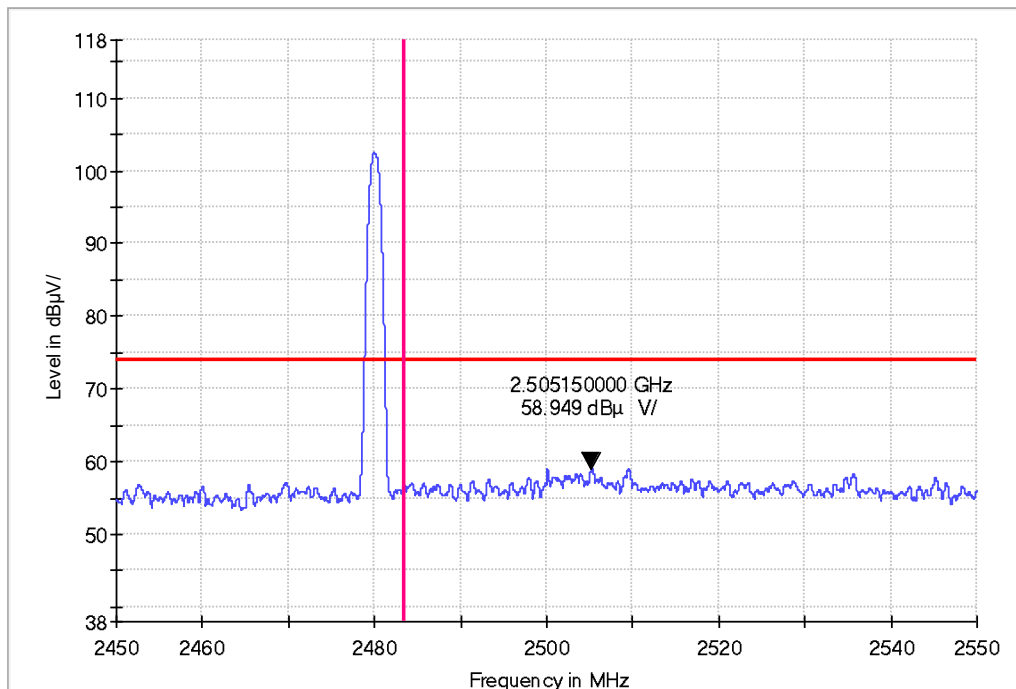
Vertical



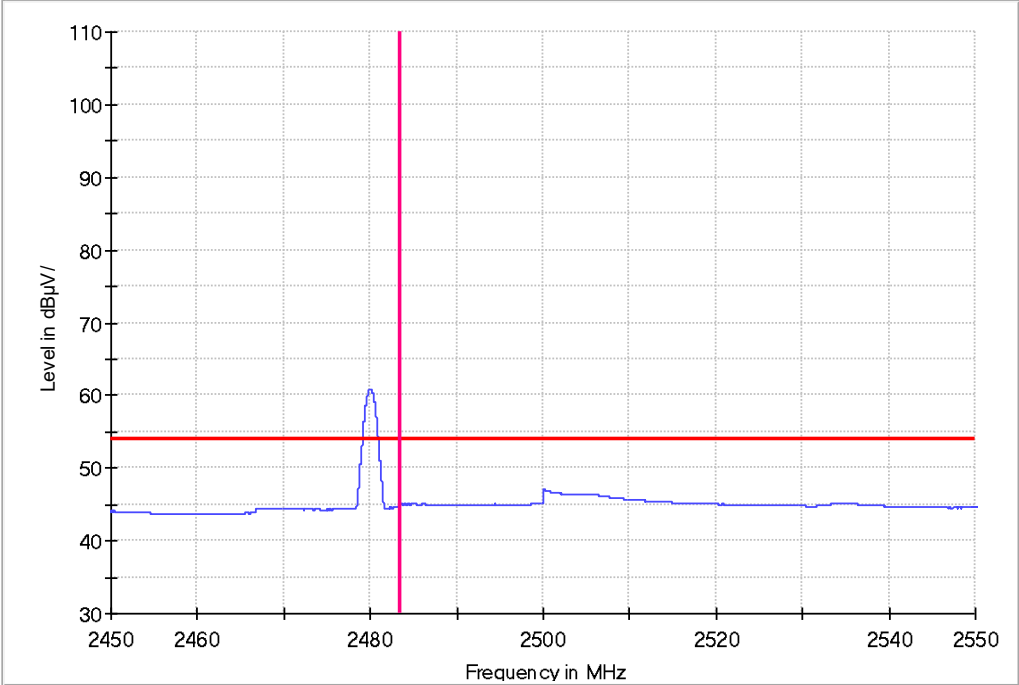
GFSK
Upper edge
PK
Horizontal



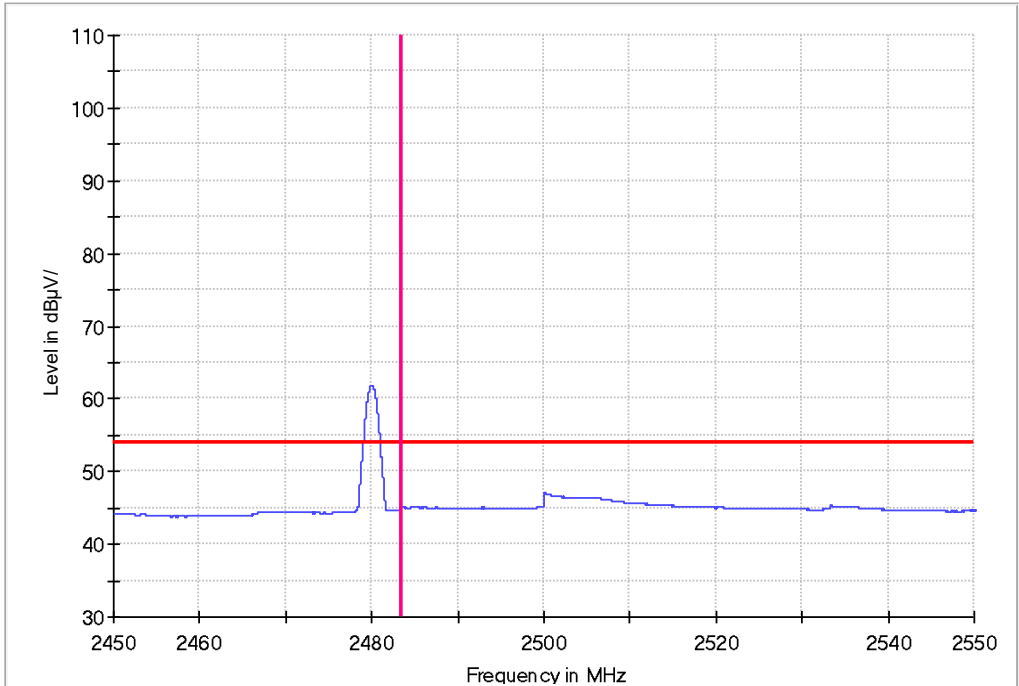
Vertical



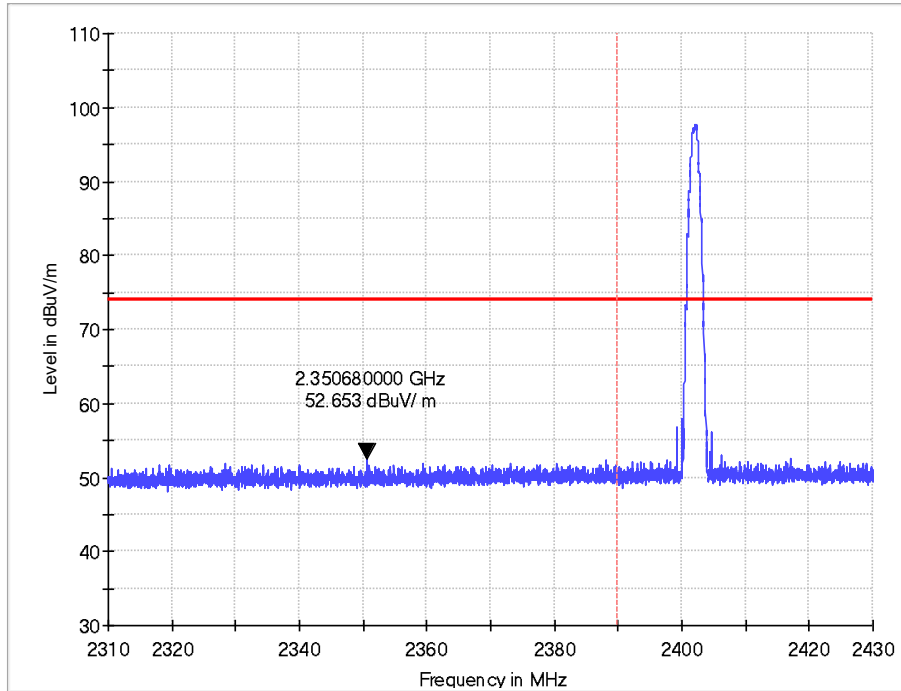
AV
Horizontal



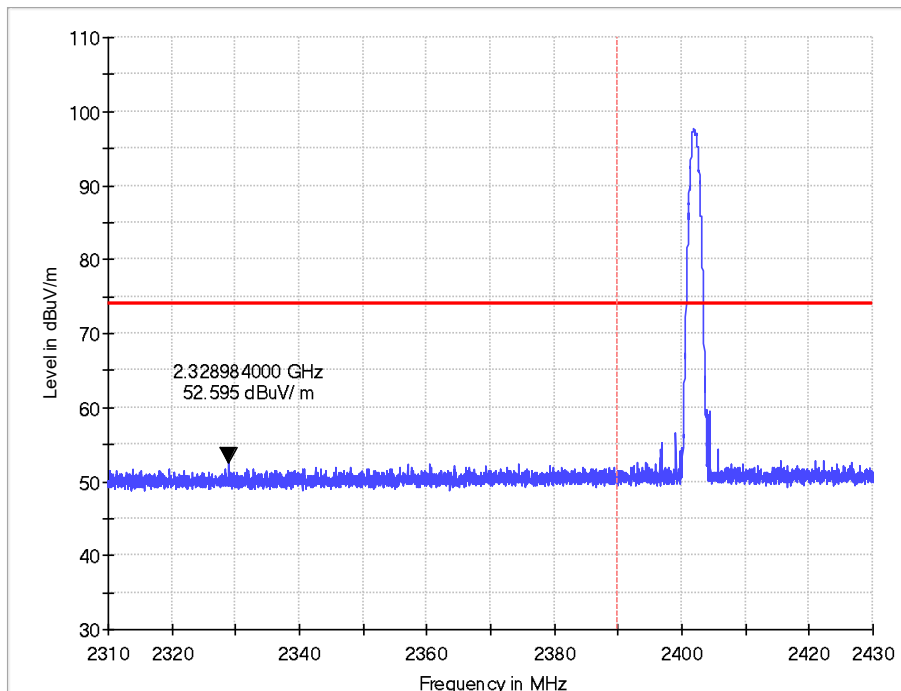
Vertical



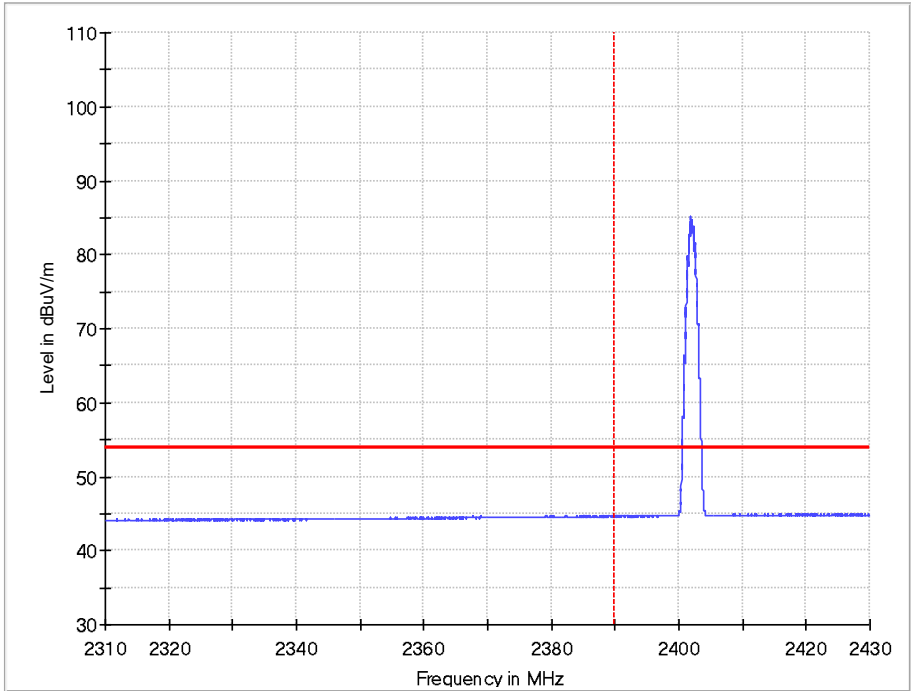
8DPSK
Low edge
PK
Horizontal



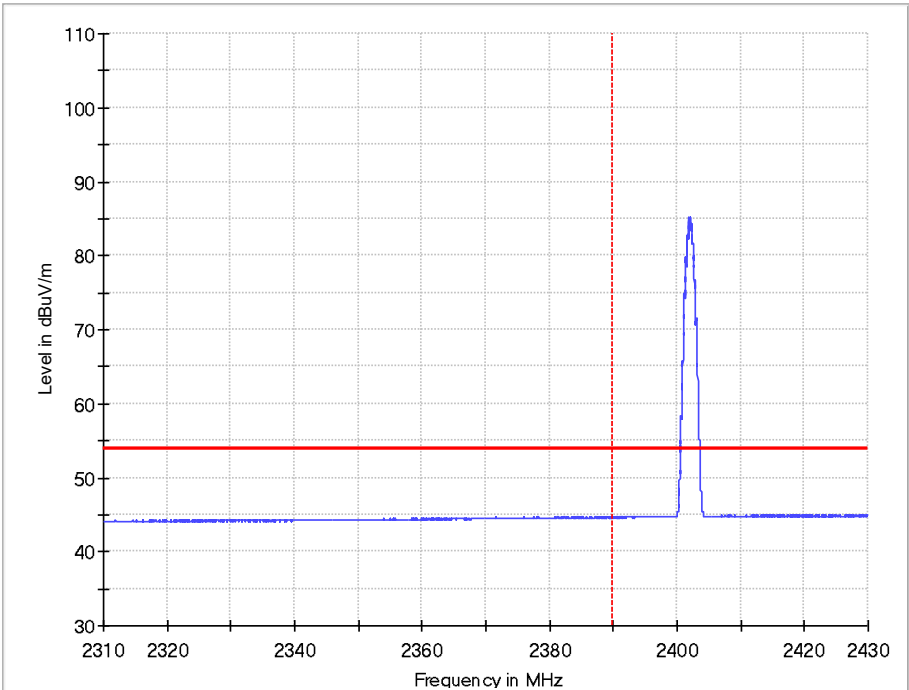
Vertical



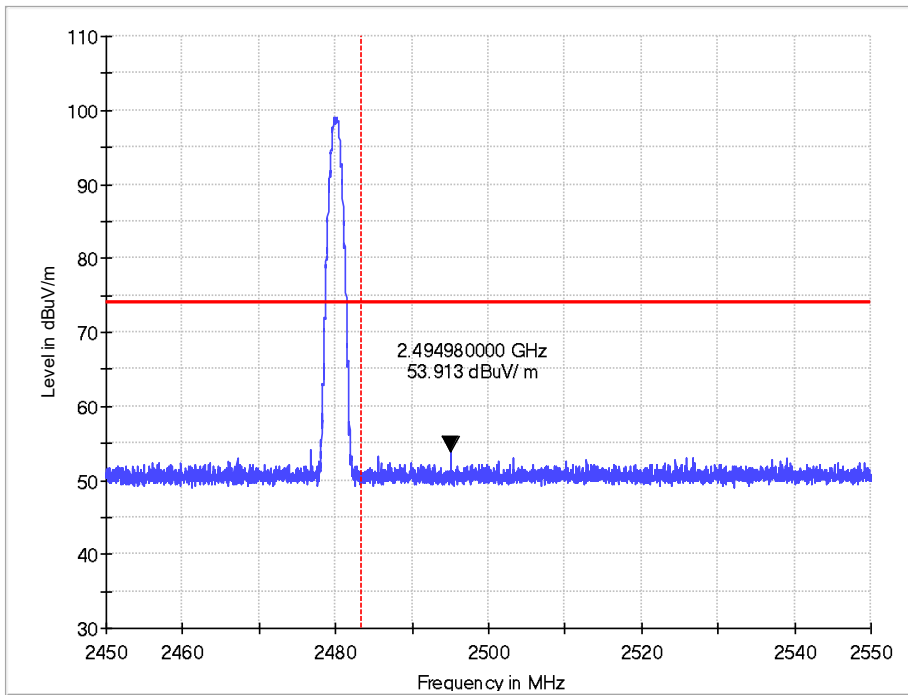
AV
Horizontal



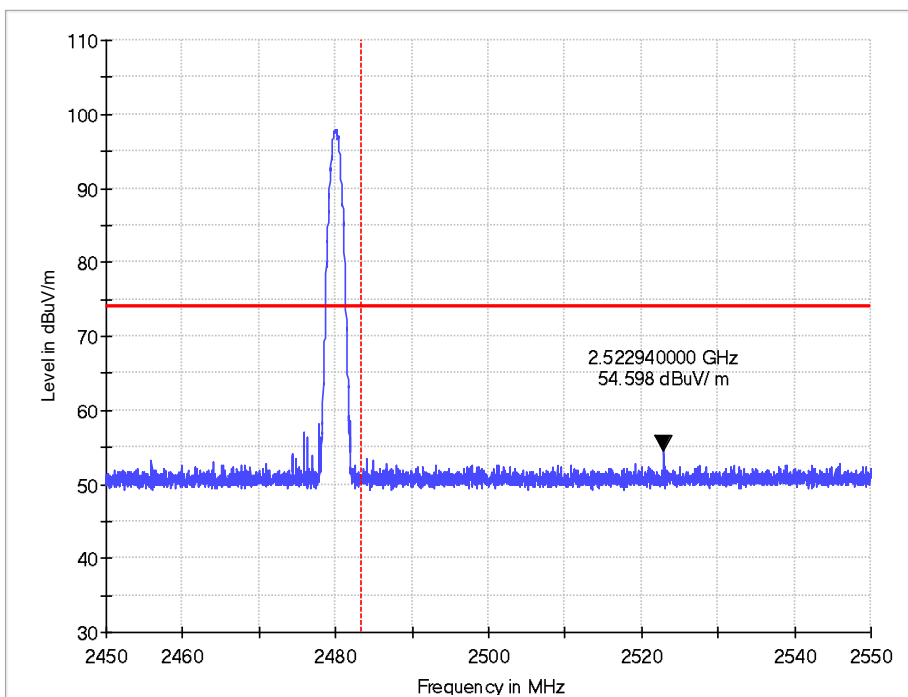
Vertical



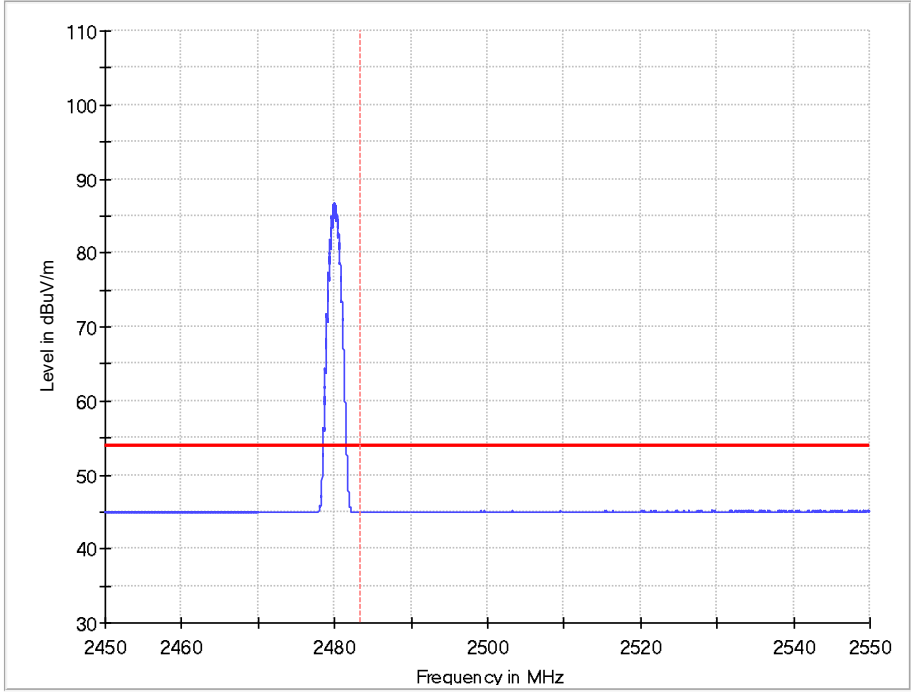
8DPSK
Upper Edge
PK
Horizontal



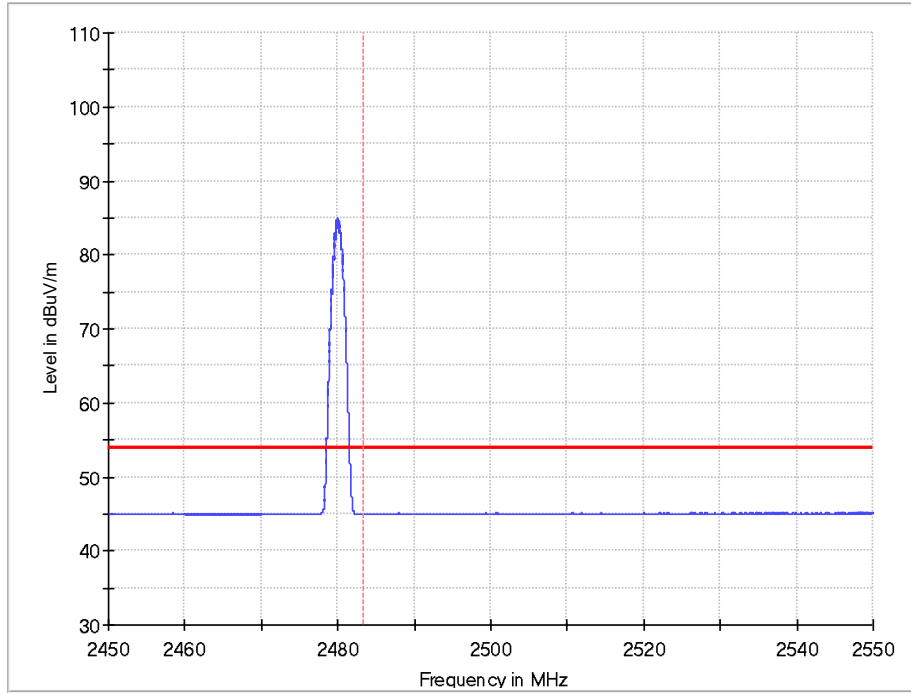
Vertical



AV
Horizontal



Vertical



7. 20DB BANDWIDTH MEASUREMENT

7.1.Limits of 20dB Bandwidth Measurement

CFR 47 (FCC) part 15.247 (a) (1) and DA 00-705
RSS-247 Clause 6.2.3.1(a)

7.2. Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 20kHz RBW and VBW $\geq$ RBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

7.3. Test Setup

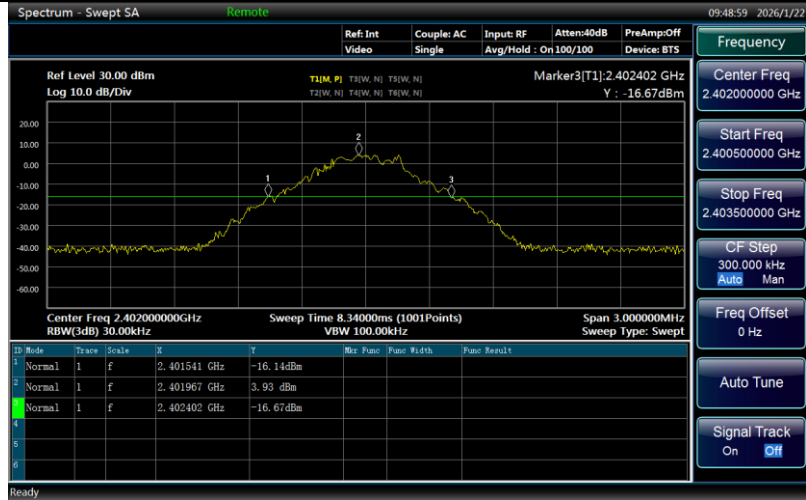


7.4. Test Data

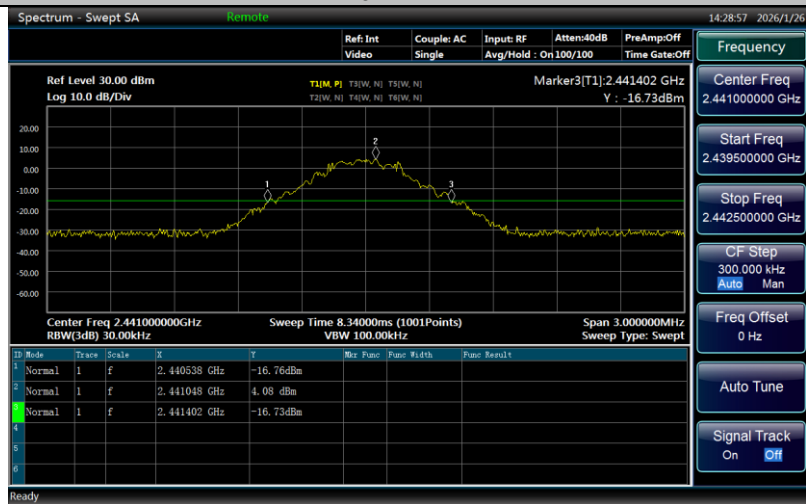
Table 13 20dB Bandwidth Test Data

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.861	2401.541	2402.402	---	---
DH5	Ant1	2441	0.864	2440.538	2441.402	---	---
DH5	Ant1	2480	0.864	2479.538	2480.402	---	---
2DH5	Ant1	2402	1.293	2401.355	2402.648	---	---
2DH5	Ant1	2441	1.275	2440.361	2441.636	---	---
2DH5	Ant1	2480	1.266	2479.364	2480.630	---	---
3DH5	Ant1	2402	1.290	2401.346	2402.636	---	---
3DH5	Ant1	2441	1.296	2440.343	2441.639	---	---
3DH5	Ant1	2480	1.284	2479.346	2480.630	---	---

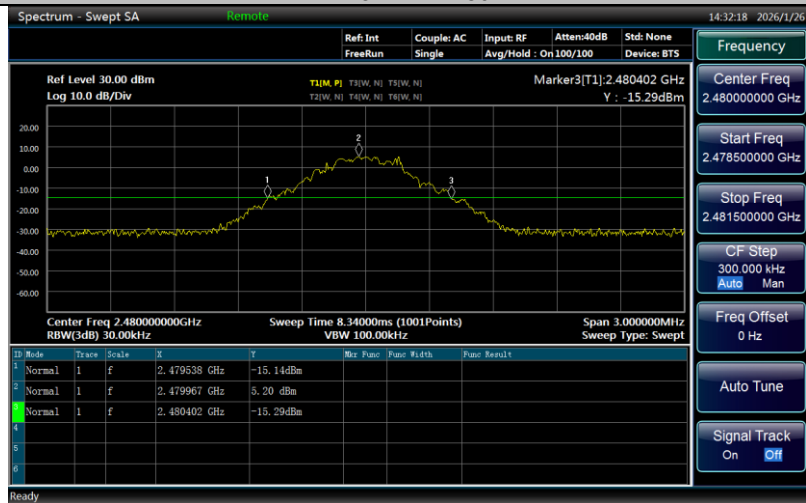
DH5-Ant1-2402



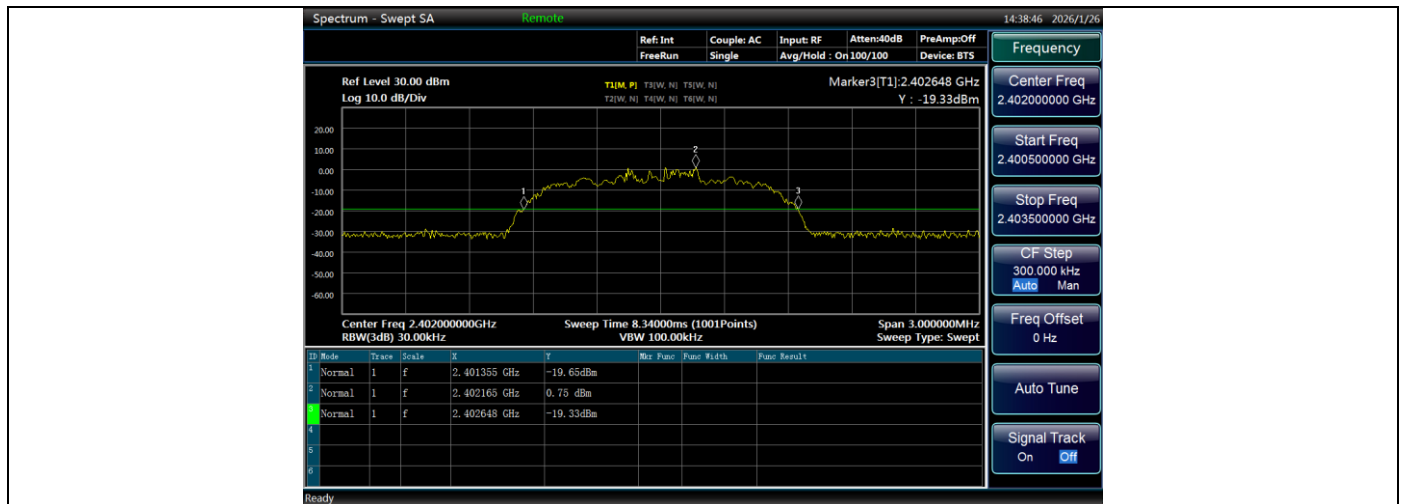
DH5-Ant1-2441



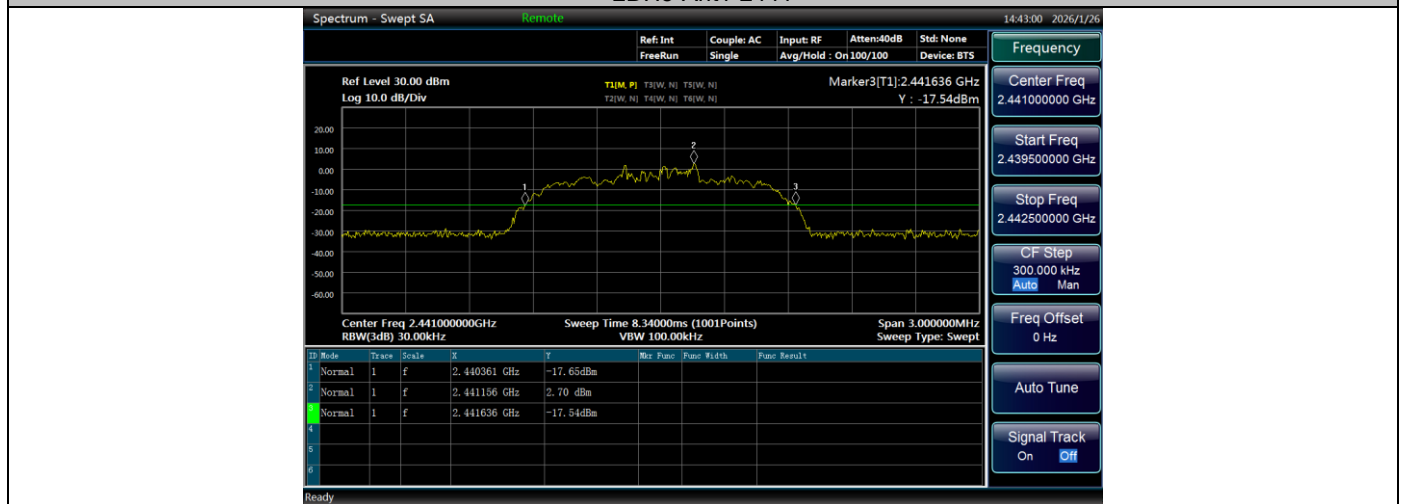
DH5-Ant1-2480



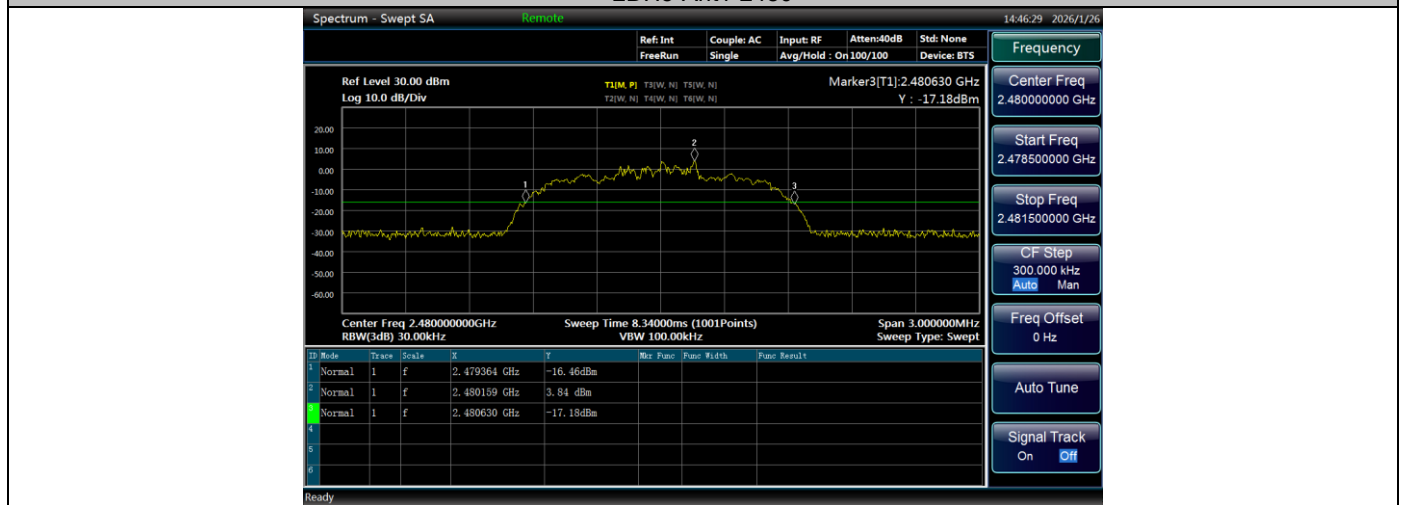
2DH5-Ant1-2402



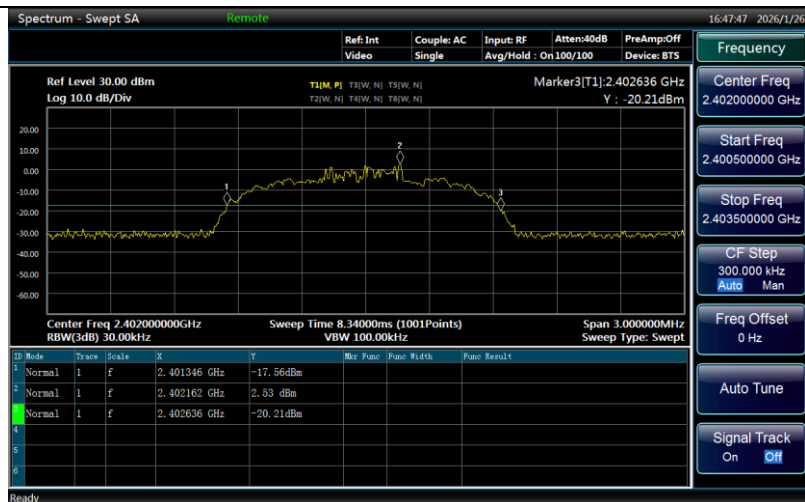
2DH5-Ant1-2441



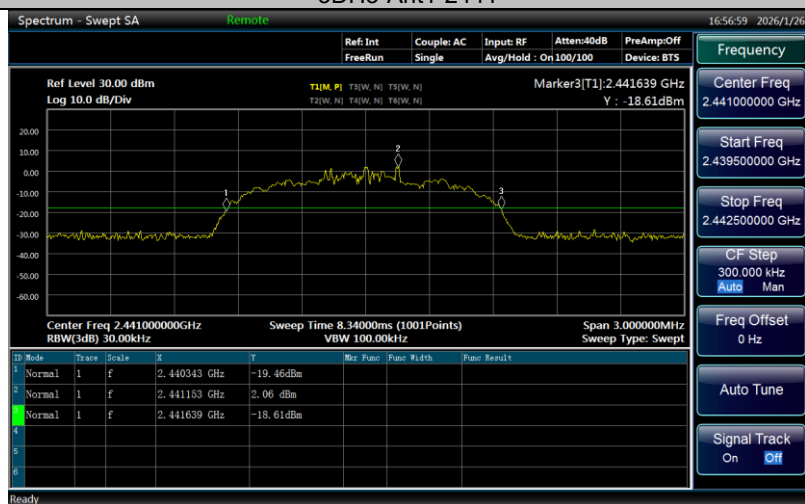
2DH5-Ant1-2480



3DH5-Ant1-2402



3DH5-Ant1-2441



3DH5-Ant1-2480



8. CARRIER FREQUENCY SEPARATION MEASUREMENT

8.1.Limits of Carrier Frequency Separation Measurement

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

8.2.Test Procedure

- (a) Connect test port of EUT to spectrum analyzer and universal communication tester.
- (b) Set the EUT to transmit maximum output power at 2.4GHz and switch off frequency hopping function, then set the measured frequency number to two adjacent channels separately and test the carrier frequency separation with spectrum analyzer.

8.3.Test Setup



8.4.Test Data

Table 14 Carrier Frequencies Separation

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.012	≥0.861	PASS
2DH5	Ant1	Hop	1.325	≥1.293	PASS
3DH5	Ant1	Hop	0.989	≥0.864	PASS



9. NUMBER OF HOPPING CHANNEL

9.1.Limits of Number of Hopping Channel

Number of hopping channels should be compliance with the requirements in part15.247 (a) (1) III and in RSS-247 Clause 6.2.3.1(b).

9.2.Test Procedure

- (a) Connect test port of EUT to spectrum analyzer.
- (b) Set the EUT to transmit maximum output power at 2.4GHz and switch on. Frequency hopping function, then set enough count time (larger than 5000 times) to get all the hopping frequency channel displayed on the screen of spectrum analyzer.
- (c) Count the quantity of peaks to get the number of hopping channels.

9.3.Test Setup



9.4.Test Data

Table 15 Hopping Channel Number Test Data

TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS



10. TIME OF OCCUPANCY

10.1.Limits of Time Occupancy

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

10.2.Test Procedure

- Connect test port of EUT to spectrum analyzer and universal communication tester.
- Set the EUT to transmit maximum output power at 2.4GHz and switch on frequency hopping function.
- Set the span of spectrum analyzer to 0 Hz, and set the resolution bandwidth to 1 MHz and the video bandwidth to 1 MHz, then get the time domain measured diagram. and set sweep time to 2 times of one burst occupancy time, and measure the time of occupancy of one burst.
- Set the resolution bandwidth to 1 MHz and the video bandwidth to 3 MHz, and set the sweep time to a period (0.4 seconds multiplied by the number of hopping channels employed), and count the number of the bursts.
- Calculate the time of occupancy in a period with time occupancy of a burst and quantity of bursts.

GFSK: Dwell time equal to Pluse time (ms)*(1600/2/79)*31.6ms

DH3: Dwell time equal to Pluse time (ms)*(1600/4/79)*31.6ms

DH5: Dwell time equal to Pluse time (ms)*(1600/6/79)*31.6ms

AFH Mode:

GFSK: Dwell time equal to Pluse time (ms)*(800/2/20)* (0.4*20) ms

DH3: Dwell time equal to Pluse time (ms)*(800/4/20)* (0.4*20) ms

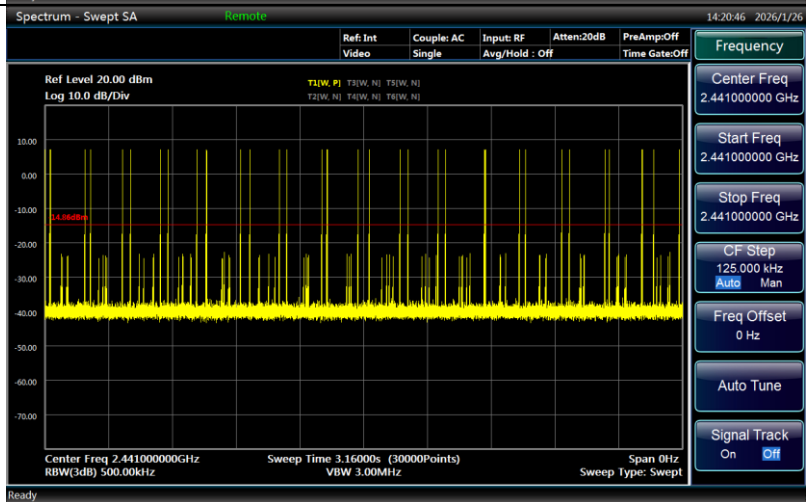
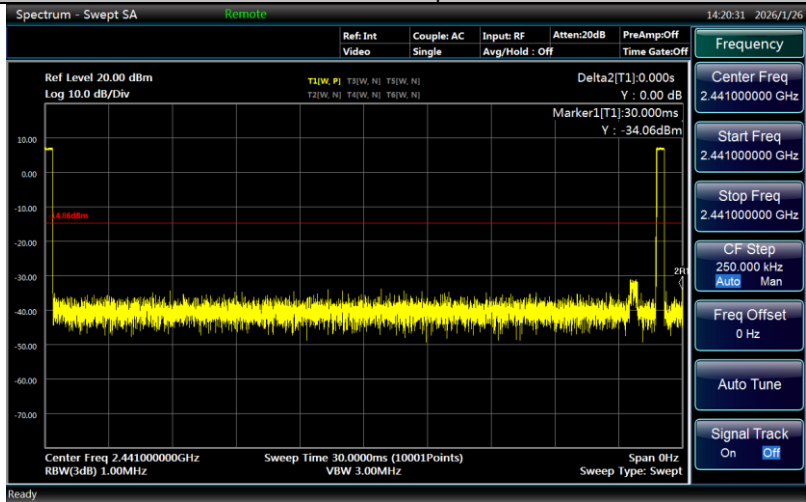
DH5: Dwell time equal to Pluse time (ms)*(800/6/20)* (0.4*20) ms

10.3.Test Data

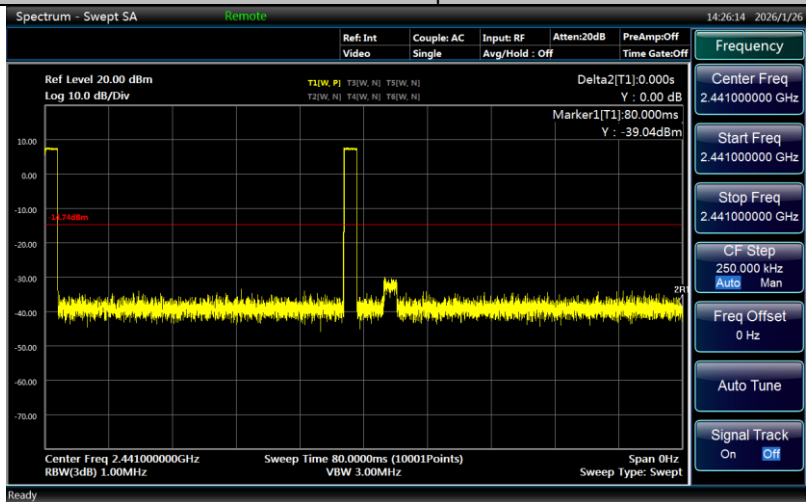
Table 16 Time of Occupancy

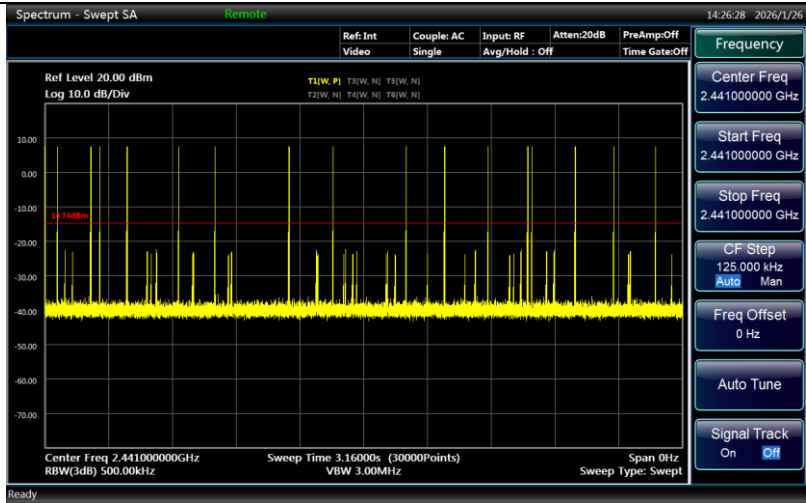
TestMode	Antenna	Frequency [MHz]	BurstWidth	TotalHops	Result	Limit	Verdict
DH1	Ant1	Hop	0.369	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.616	170	0.275	≤0.4	PASS
DH5	Ant1	Hop	2.856	90	0.257	≤0.4	PASS
3DH1	Ant1	Hop	0.375	330	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.626	190	0.309	≤0.4	PASS
3DH5	Ant1	Hop	2.860	50	0.143	≤0.4	PASS

DH1-Ant1-Hop-PASS

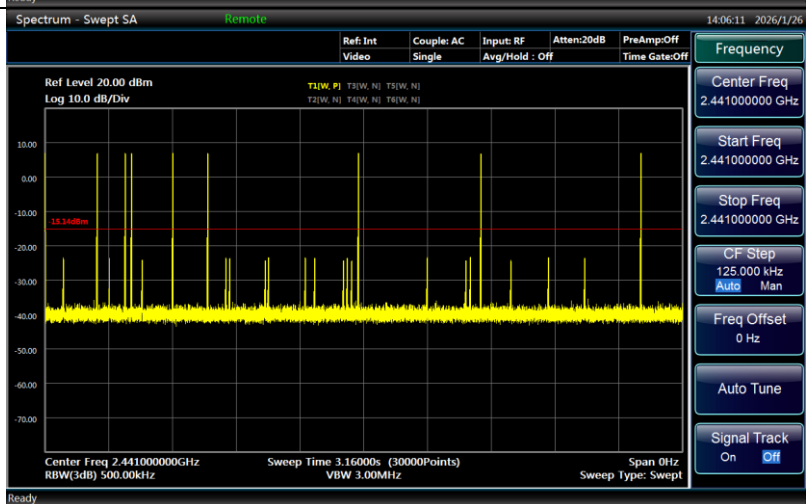
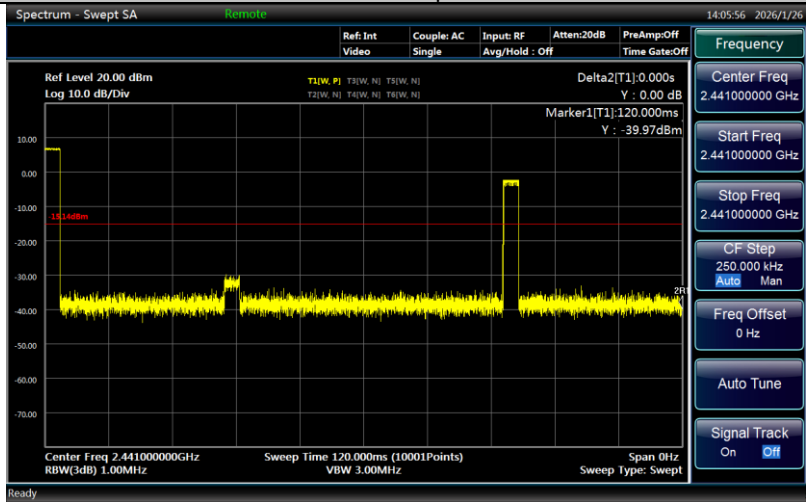


DH3-Ant1-Hop-PASS





DH5-Ant1-Hop-PASS

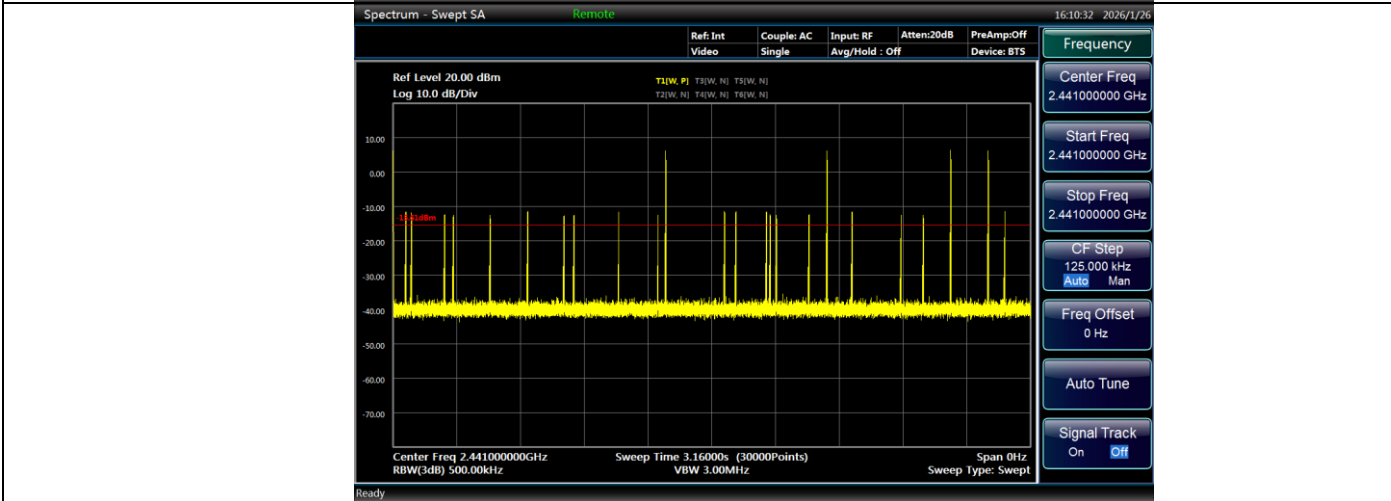
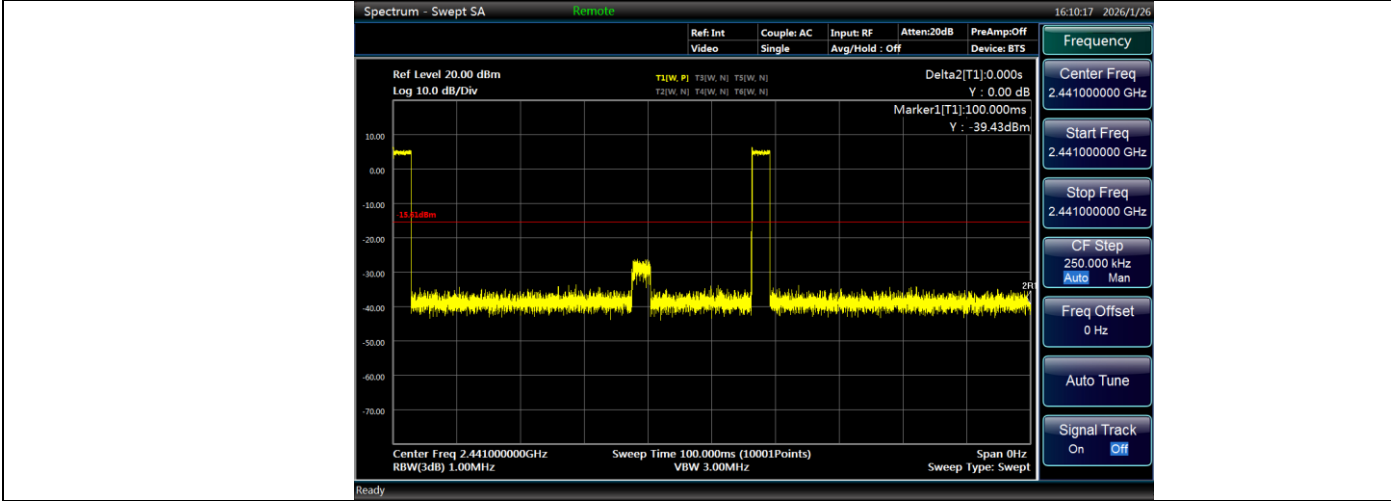


2DH1-Ant1-Hop-PASS

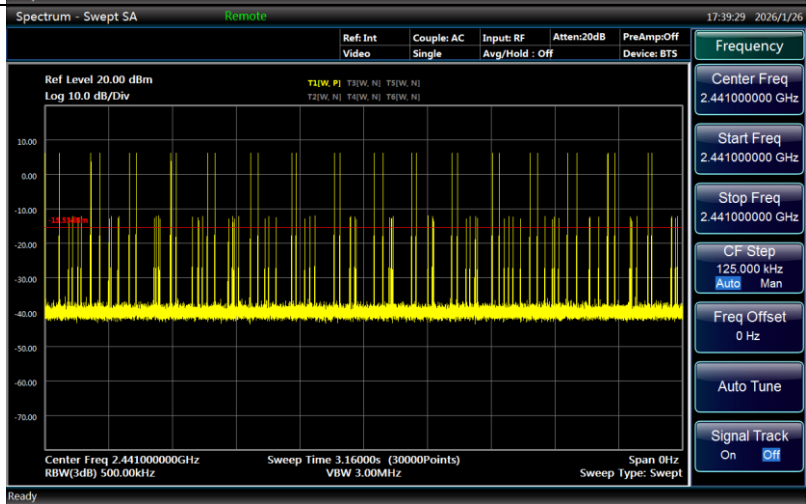
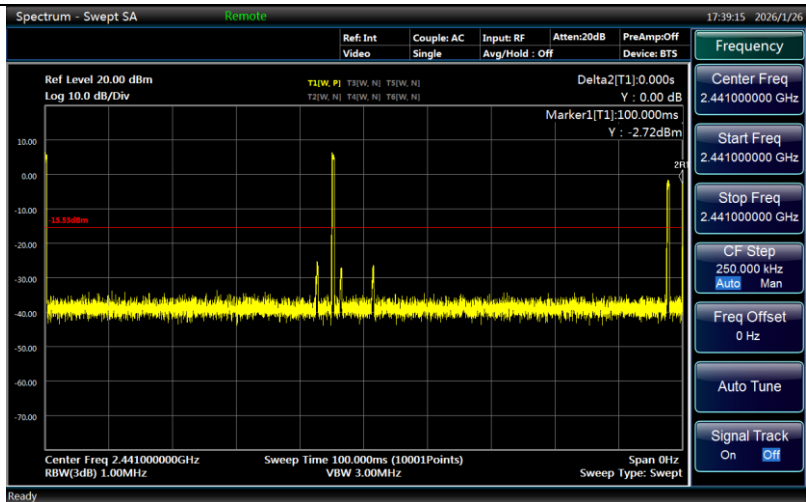




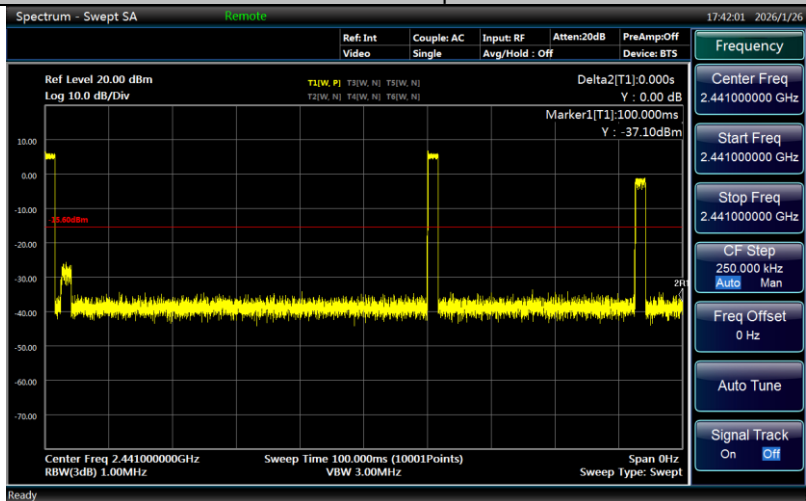
2DH5-Ant1-Hop-PASS



3DH1-Ant1-Hop-PASS



3DH3-Ant1-Hop-PASS





11. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

11.1.Limits of Maximum Conducted Output Power Measurement

Compliance with part 15.247 (b) (1) & RSS-247 Clause 6.2.3.2, for frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt.

For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watt.

11.2.Test Procedure

- (a) Connect test port of EUT to universal communication tester.
- (b) Set the EUT to transmit maximum output power at 2.4GHz and switch off frequency hopping function.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the conducted output power separately.

11.3.Test Data

Table 17 Maximum Conducted Output Power Test Data

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Antenna Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
DH1	Ant1	2402	7.33	≤30	2.4	9.55	≤36.00	PASS
		2441	7.98	≤30	2.4	9.51	≤36.00	PASS
		2480	8.90	≤30	2.4	8.87	≤36.00	PASS
2DH1	Ant1	2402	6.92	≤30	2.4	9.7	≤36.00	PASS
		2441	7.27	≤30	2.4	9.86	≤36.00	PASS
		2480	8.38	≤30	2.4	7.81	≤36.00	PASS
3DH1	Ant1	2402	7.21	≤30	2.4	9.34	≤36.00	PASS
		2441	7.23	≤30	2.4	9.54	≤36.00	PASS
		2480	8.40	≤30	2.4	8.37	≤36.00	PASS