RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C

Test Standard	**FCC Part 15.247**
FCC ID	**NOIKB-E70P24**
Product name	**7.8” Digital Note Pad; 7.8” Color Digital Note Pad; 7.8” Digital Reader; 7.8” Color Digital Reader**
Brand Name	**MobiScribe**
Model No.	**E70P24**
Test Result	**Pass**
Statements of Conformity	**Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.**

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.
The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory)

Approved by:

Sehni Hu
Supervisor

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com.tw/Terms-and-Conditions and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com.tw/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company’s findings at the time of its intervention only and within the limits of client’s instruction, if any. The Company’s sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	November 7, 2022	Initial Issue	ALL	Allison Chen
01	November 10, 2022	See the following Note Rev.(01)	P.66-67	Allison Chen

Note:
Rev.(01)
1. Modify bandedge test data in section 4.8.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Table of contents

1. GENERAL INFORMATION 4
1.1 EUT INFORMATION 4
1.2 INFORMATION ABOUT THE FHSS CHARACTERISTICS 5
1.3 EUT CHANNEL INFORMATION 6
1.4 ANTENNA INFORMATION 6
1.5 MEASUREMENT UNCERTAINTY 7
1.6 FACILITIES AND TEST LOCATION 8
1.7 INSTRUMENT CALIBRATION 9
1.8 SUPPORT AND EUT ACCESSORIES EQUIPMENT 11
1.9 TEST METHODOLOGY AND APPLIED STANDARDS 11
2. TEST SUMMARY 12
3. DESCRIPTION OF TEST MODES 13
3.1 THE WORST MODE OF OPERATING CONDITION 13
3.2 THE WORST MODE OF MEASUREMENT 14
3.3 EUT DUTY CYCLE 15
4. TEST RESULT 19
4.1 AC POWER LINE CONDUCTED EMISSION 19
4.2 20DB BANDWIDTH AND OCCUPIED BANDWIDTH (99%) 24
4.3 OUTPUT POWER MEASUREMENT 32
4.4 FREQUENCY SEPARATION 35
4.5 NUMBER OF HOPPING 40
4.6 CONDUCTED BANDEDGE AND SPURIOUS EMISSION 43
4.7 TIME OF OCCUPANCY (DWELL TIME) 51
4.8 RADIATION BANDEDGE AND SPURIOUS EMISSION 56
APPENDIX 1 - PHOTOGRAPHS OF EUT

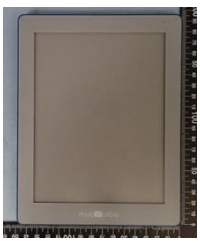
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	NETRONIX, INC. No. 945, Boai St., Jubei City, Hsin-Chu, 30265, Taiwan
Manufacturer	NETRONIX, INC. No. 945, Boai St., Jubei City, Hsin-Chu, 30265, Taiwan
Equipment	7.8” Digital Note Pad; 7.8” Color Digital Note Pad; 7.8” Digital Reader; 7.8” Color Digital Reader
Model Name	E70P24
Product Discrepancy	Please see remark as below.
Brand Name	MobiScribe
Received Date	August 5, 2022
Date of Test	September 1~15, 2022
Power Supply	1. Power from Host System. (DC 5V) 2. Power from Battery. Brand / Model: EVE Energy Co., LTD. / EVE2275A7GH Rating: 3.85VDC, 9.63Wh

Remark:
1. For more details, please refer to the User’s manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. Disclaimer: Variant information between/among model numbers / trademarks is provided by the applicant, test results of this report are applicable to the sample EUT received of main test model name.
4. Model Discrepancy:

Product Name	7.8” Digital Note Pad	7.8” Color Digital Note Pad	7.8” Digital Reader	7.8” Color Digital Reader
Model Name	E70P24			
Button	N/A	N/A	Yes	Yes
Touch Pen	Yes	Yes	N/A	N/A
Panel display	Black and White	Color	Black and White	Color
Appearance				

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

1.2 INFORMATION ABOUT THE FHSS CHARACTERISTICS

1.2.1 Pseudorandom Frequency Hopping Sequence

The channel is represented by a pseudo-random hopping sequence hopping through the 79 RF channels. The hopping sequence is unique for the piconet and is determined by the Bluetooth device address of the master; the phase in the hopping sequence is determined by the Bluetooth clock of the master. The channel is divided into time slots where each slot corresponds to an RF hop frequency. Consecutive hops correspond to different RF hop frequencies. The nominal hop rate is 1 600 hops/s.

1.2.2 Equal Hopping Frequency Use

The channels of this system will be used equally over the long-term distribution of the hopsets.

1.2.3 Example of a 79 hopping sequence in data mode:

02, 05, 31, 24, 20, 10, 43, 36, 30, 23, 40, 06, 21, 50, 44, 09, 71, 78, 01, 13, 73, 07, 70, 72, 35, 62, 42, 11, 41, 08, 16, 29, 60, 15, 34, 61, 58, 04, 67, 12, 22, 53, 57, 18, 27, 76, 39, 32, 17, 77, 52, 33, 56, 46, 37, 47, 64, 49, 45, 38, 69, 14, 51, 26, 79, 19, 28, 65, 75, 54, 48, 03, 25, 66, 05, 16, 68, 74, 59, 63, 55

1.2.4 System Receiver Input Bandwidth

Each channel bandwidth is 1MHz.
The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

1.2.5 Equipment Description

15.247(a)(1) that the Rx input bandwidths shift frequencies in synchronization with the transmitted signals.
15.247(g): In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) system.
15.247(h): In accordance with the Bluetooth Industry Standard, the system does not coordinate it channels selection/ hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

1.3 EUT CHANNEL INFORMATION

Frequency Range	2402MHz-2480MHz
Modulation Type	1. GFSK for BDR-1Mbps 2. π/4-DQPSK for EDR-2Mbps 3. 8DPSK for EDR-3Mbps
Number of channel	79 Channels

Remark:
Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	**Number of frequencies**	**Location in frequency range of operation**
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.4 ANTENNA INFORMATION

Antenna Specification	☐ PIFA ☒ PCB ☐ Dipole ☐ Coils
Antenna Gain	Gain: 2.64 dBi
Brand / Model	INPAQ Technology Co., Ltd. / RFPCA310710EMLB301

Notes:
1.The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

1.5 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	± 2.1183
Channel Bandwidth	± 2.1863
RF output power (Power Meter + Power sensor)	± 1.2688
Power Spectral density	± 2.1855
Conducted Bandedge	± 2.1866
Conducted Spurious Emission	± 2.1859
Radiated Emission_9kHz-30MHz	± 3.814
Radiated Emission_30MHz-200MHz	± 4.272
Radiated Emission_200MHz-1GHz	± 4.619
Radiated Emission_1GHz-6GHz	± 5.522
Radiated Emission_6GHz-18GHz	± 5.228
Radiated Emission_18GHz-26GHz	± 4.089
Radiated Emission_26GHz-40GHz	± 4.019

Remark:
1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

1.6 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan.

☐ No. 12, Ln. 116, Wugong 3rd Rd., Wugu Dist., New Taipei City, Taiwan.

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	Tony Chao	-
Radiation	Tony Chao	-
RF Conducted	Jack Chen	-

Remark: The lab has been recognized as the FCC accredited lab. under the KDB 974614 D01 and is listed in the FCC pubic Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

1.7 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Coaxial Cable	Woken	SUMITOMO	12	2022-03-02	2023-03-01
Power Meter	Anritsu	ML2496A	2136002	2021-12-06	2022-12-05
EXA Signal Analyzer	Keysight	N9010B	MY60242460	2022-01-30	2023-01-29
Power Sensor	Anritsu	MA2411B	1911386	2022-08-08	2023-08-07
Power Sensor	Anritsu	MA2411B	1911387	2022-08-08	2023-08-07
Bluetooth Test Set	Anritsu	MT8852B	750013	2022-05-08	2023-05-07
Power Divider	Marvelous Microwave	MVE8586	16011205	2022-06-29	2023-06-28
Software	Radio Test Software Ver. 21				

AC Power-line Conducted Test Room					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
CABLE	EMCI	CFD300-NL	CERF	2022-06-27	2023-06-26
EMI Test Receiver	R&S	ESCI	100064	2022-06-17	2023-06-16
LISN	SCHAFFNER	NNB 41	03/10013	2022-02-15	2023-02-14
Software	EZ-EMC(CCS-3A1-CE-wugu)				

Remark:
1. Each piece of equipment is scheduled for calibration once a year.
2. N.C.R. = No Calibration Required.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

3M 966 Chamber Test Site					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
K-Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	2021-12-05	2022-12-04
Bi-Log Antenna	Sunol Sciences	JB3	A030105	2022-08-03	2023-08-02
Spectrum Analyzer	Agilent	E4446A	MY46180323	2021-12-06	2022-12-05
Thermo-Hygro Meter	WISEWIND	1206	D07	2021-12-28	2022-12-27
Loop Antenna	COM-POWER	AL-130	121051	2022-04-13	2023-04-12
Coaxial Cable	EMCI	EMC101G-KM-KM-500	211041	2021-12-23	2022-12-22
Coaxial Cable	EMC	EMC101G-KM-KM-9000	211042	2021-12-23	2022-12-22
Horn Antenna	ETS LINDGREN	3116	00026370	2021-11-30	2022-11-29
Cable	Woken	J-1099	201709090004	2021-12-23	2022-12-22
Preamplifier	EMEC	EM330	060609	2022-02-23	2023-02-22
Preamplifier	HP	8449B	3008A00965	2021-12-24	2022-12-23
Band Reject Filter	MICRO TRONICS	BRM 50702	112	2021-11-23	2022-11-22
Cable	Huber+Suhner	104PEA	20995+11112+182330	2022-02-23	2023-02-22
Coaxial Cable	EMCI	EMC105	190914+33953	2022-06-15	2023-06-14
Horn Antenna	ETC	MCTD 1209	DRH13M02003	2022-01-25	2023-01-24
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180419c				

Remark:
1. Each piece of equipment is scheduled for calibration once a year.
2. N.C.R. = No Calibration Required.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

1.8 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment						
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**	**IC**
	N/A					

Support Equipment						
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**	**IC**
1	NB(E)	Lenovo	IBM 7663	N/A	PD97260H	N/A
2	NB(G)	Lenovo	IBM 1951	N/A	N/A	N/A
3	Adapter	SAMSUNG	ETA-U90JWS	N/A	N/A	N/A

1.9 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

2. TEST SUMMARY

FCC Standard Section	Report Section	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.207(a)	4.1	AC Conducted Emission	Pass
15.247(a)(1)	4.2	20 dB Bandwidth	Pass
-	4.2	Occupied Bandwidth (99%)	Pass
15.247(b)(1)	4.3	Output Power Measurement	Pass
15.247(a)(1)	4.4	Frequency Separation	Pass
15.247(a)(1)(iii)	4.5	Number of Hopping	Pass
15.247(d)	4.6	Conducted Band Edge	Pass
15.247(d)	4.6	Conducted Spurious Emission	Pass
15.247(a)(1)(iii)	4.7	Time of Occupancy	Pass
15.247(d)	4.8	Radiation Band Edge	Pass
15.247(d)	4.8	Radiation Spurious Emission	Pass

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	GFSK for BDR-1Mbps (DH5) π/4-DQPSK for 2Mbps (2DH5) 8DPSK for EDR-3Mbps (3DH5)
Test Channel Frequencies	**GFSK for BDR-1Mbps:** 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz **π/4-DQPSK for 2Mbps:** 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz **8DPSK for EDR-3Mbps:** 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. The system support GFSK ,π/4 DQPSK ,8DPSK , the π/4 DQPSK were reduced since the identical parameters with 8dpsk. In the following test items, frequency hopping, Conducted band edge, radiated band edge and spurious emissions.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

3.2 THE WORST MODE OF MEASUREMENT

AC Power Line Conducted Emission	
Test Condition	**AC Power line conducted emission for line and neutral**
Power supply Mode	**Mode 1: EUT (7.8" Digital Note Pad) power by Adapter Mode 2: EUT (7.8" Digital Reader) power by Adapter Mode 3: EUT (7.8" Color Digital Note Pad) power by Adapter Mode 4: EUT (7.8" Color Digital Reader) power by Adapter**
Worst Mode	☒ **Mode 1** ☐ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**

Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
Power supply Mode	**Mode 1: EUT (7.8" Digital Reader) power by Host System Mode 2: EUT (7.8" Digital Note Pad) power by Host System Mode 3: EUT (7.8" Color Digital Reader) power by Host System Mode 4: EUT (7.8" Color Digital Note Pad) power by Host System**
Worst Mode	☒ **Mode 1** ☒ **Mode 2** ☒ **Mode 3** ☒ **Mode 4**

Radiated Emission Measurement Above 1G	
Test Condition	**Radiated Emission Above 1G**
Power supply Mode	**Mode 1: EUT (7.8" Digital Reader) power by Host System Mode 2: EUT (7.8" Digital Note Pad) power by Host System Mode 3: EUT (7.8" Color Digital Reader) power by Host System Mode 4: EUT (7.8" Color Digital Note Pad) power by Host System**
Worst Mode	☐ **Mode 1** ☐ **Mode 2** ☐ **Mode 3** ☒ **Mode 4**
Worst Position	☐ **Placed in fixed position.** ☒ **Placed in fixed position at X-Plane (E2-Plane)** ☐ **Placed in fixed position at Y-Plane (E1-Plane)** ☐ **Placed in fixed position at Z-Plane (H-Plane)**

Remark:

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(X-Plane) were recorded in this report.
3. Samples are available in four configurations. RF hardware components and antenna parts are the same. For different configurations, RSE is evaluated at below 1GHz and ac line, all test items are tested using the worst model.
4. AC power line conducted emission were performed the EUT transmit at the highest output power channel as worst case.
5. Radiation emission(below 1GH) were performed the EUT transmit at the BDR mode's high channel as worst case.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

3.3 EUT DUTY CYCLE

Temperature: 24.1~24.4℃ **Test date:** September 1~2, 2022

Humidity: 51~53% RH **Tested by:** Jack Chen

For GFSK (1Mbps)

Configuration	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
DH1	30.80	5.11	2.60	3.00
DH3	66.00	1.80	0.61	1.00
DH5	77.20	1.12	0.35	1.00

For π/4 DQPSK (2Mbps)

Configuration	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
2DH1	31.20	5.06	2.56	3.00
2DH3	65.60	1.83	0.61	1.00
2DH5	77.20	1.12	0.35	1.00

For 8-DPSK (3Mbps)

Configuration	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
3DH1	30.80	5.11	2.60	3.00
3DH3	65.20	1.86	0.61	1.00
3DH5	77.20	1.12	0.35	1.00

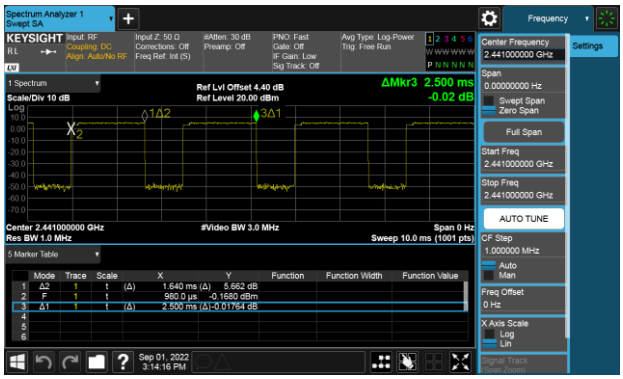
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

For GFSK (1Mbps)

DH1	DH3
DH5	

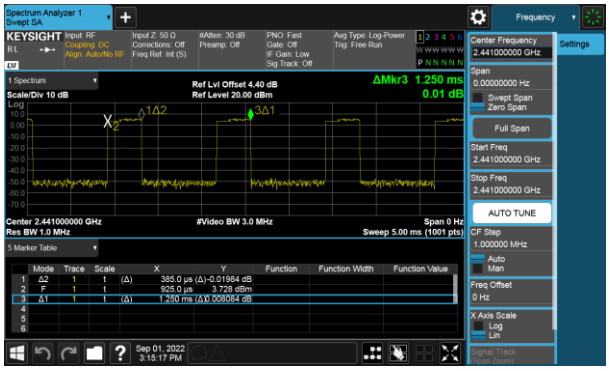
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

For π/4 DQPSK (2Mbps)

2DH1	2DH3
	
2DH5	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

For 8-DPSK (3Mbps)

3DH1	3DH3
	
3DH5	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a),

Frequency Range (MHz)	Limits(dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

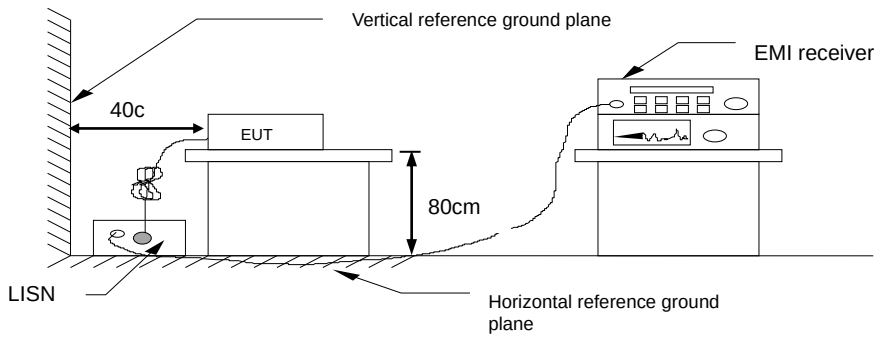
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 6.2,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

4.1.3 Test Setup



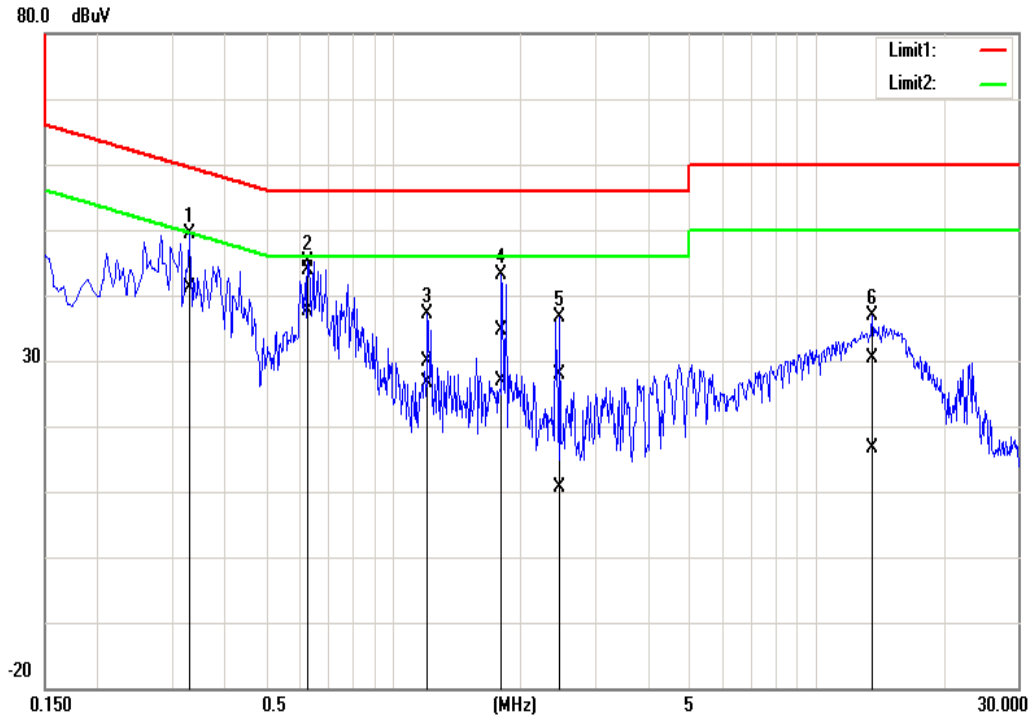
4.1.4 Test Result

Pass.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Data

Test Mode:	BT BR	Temp/Hum	24.3(℃)/ 52%RH
Phase:	Line	Test Date	September 15, 2022
Test Voltage:	120Vac, 60Hz	Test Engineer	Tony Chao

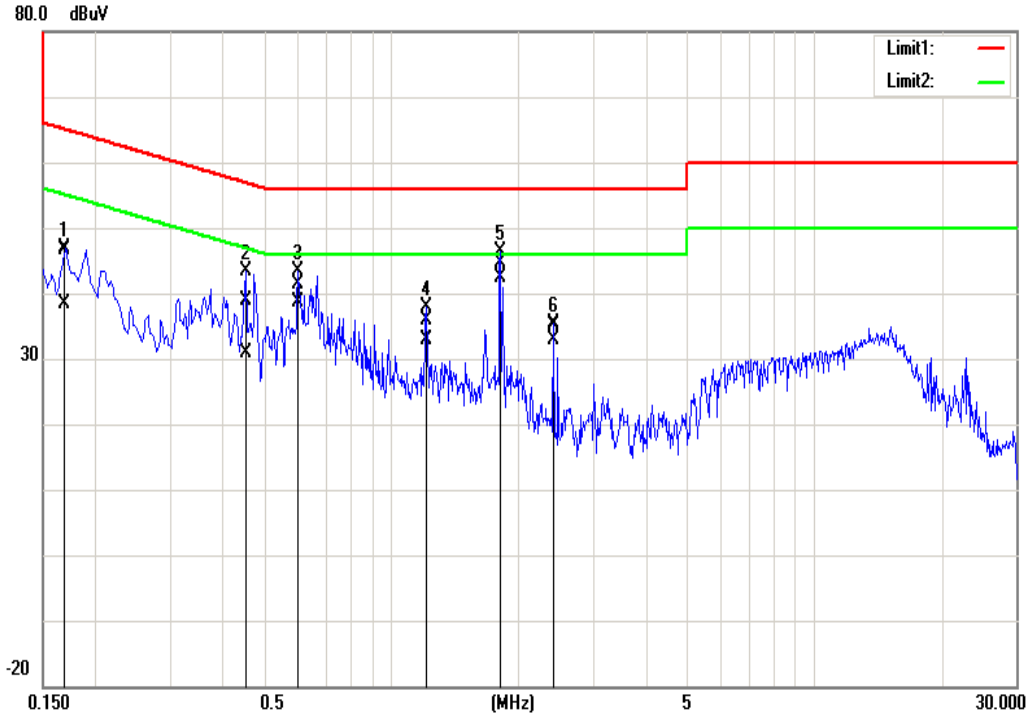


Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.3300	39.16	30.98	10.19	49.35	41.17	59.45	49.45	-10.10	-8.28	Pass
0.6300	33.76	27.41	10.19	43.95	37.60	56.00	46.00	-12.05	-8.40	Pass
1.2060	19.67	16.49	10.22	29.89	26.71	56.00	46.00	-26.11	-19.29	Pass
1.8060	24.38	16.74	10.25	34.63	26.99	56.00	46.00	-21.37	-19.01	Pass
2.4820	17.58	0.26	10.26	27.84	10.52	56.00	46.00	-28.16	-35.48	Pass
13.5580	19.93	6.24	10.36	30.29	16.60	60.00	50.00	-29.71	-33.40	Pass

Note: Correction factor = LISN loss + Cable loss.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	BT BR	Temp/Hum	24.3(℃)/ 52%RH
Phase:	Neutral	Test Date	September 15, 2022
Test Voltage:	120Vac, 60Hz	Test Engineer	Tony Chao

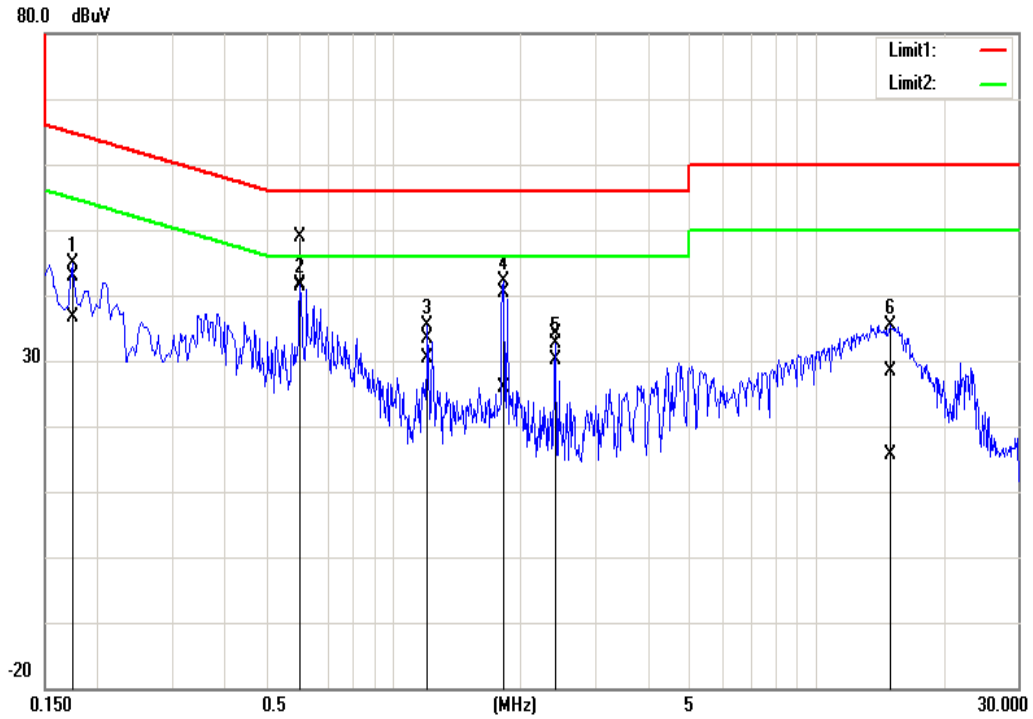


Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1700	36.46	28.19	10.17	46.63	38.36	64.96	54.96	-18.33	-16.60	Pass
0.4540	28.79	20.66	10.18	38.97	30.84	56.80	46.80	-17.83	-15.96	Pass
0.6020	31.11	28.46	10.18	41.29	38.64	56.00	46.00	-14.71	-7.36	Pass
1.2100	25.58	22.65	10.21	35.79	32.86	56.00	46.00	-20.21	-13.14	Pass
1.8100	34.36	32.16	10.23	44.59	42.39	56.00	46.00	-11.41	-3.61	Pass
2.4140	25.00	22.66	10.24	35.24	32.90	56.00	46.00	-20.76	-13.10	Pass

Note: Correction factor = LISN loss + Cable loss.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	BT EDR	Temp/Hum	24.3(℃)/ 52%RH
Phase:	Line	Test Date	September 15, 2022
Test Voltage:	120Vac, 60Hz	Test Engineer	Tony Chao

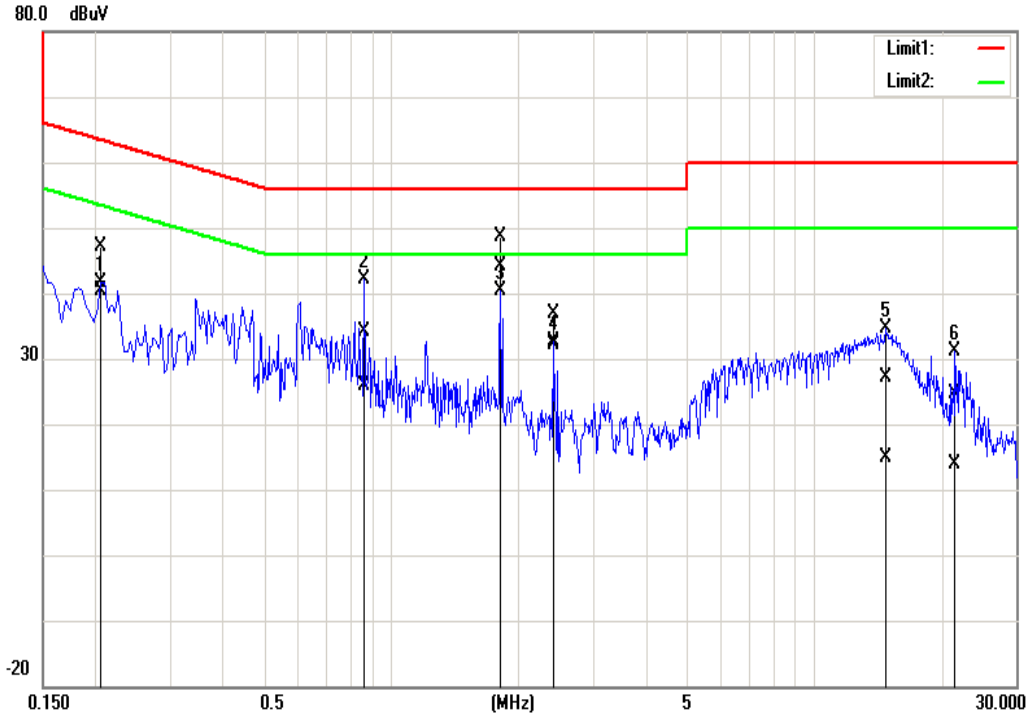


Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1740	32.78	26.43	10.17	42.95	36.60	64.77	54.77	-21.82	-18.17	Pass
0.6020	38.63	31.24	10.19	48.82	41.43	56.00	46.00	-7.18	-4.57	Pass
1.2060	23.20	20.22	10.22	33.42	30.44	56.00	46.00	-22.58	-15.56	Pass
1.8220	30.01	15.67	10.25	40.26	25.92	56.00	46.00	-15.74	-20.08	Pass
2.4140	23.77	19.88	10.26	34.03	30.14	56.00	46.00	-21.97	-15.86	Pass
14.9900	18.05	5.21	10.36	28.41	15.57	60.00	50.00	-31.59	-34.43	Pass

Note: Correction factor = LISN loss + Cable loss.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	BT EDR	Temp/Hum	24.3(℃)/ 52%RH
Phase:	Neutral	Test Date	September 15, 2022
Test Voltage:	120Vac, 60Hz	Test Engineer	Tony Chao



Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.2060	37.06	30.25	10.17	47.23	40.42	63.37	53.37	-16.14	-12.95	Pass
0.8620	23.92	15.74	10.20	34.12	25.94	56.00	46.00	-21.88	-20.06	Pass
1.8140	38.50	33.94	10.23	48.73	44.17	56.00	46.00	-7.27	-1.83	Pass
2.4180	26.62	21.90	10.24	36.86	32.14	56.00	46.00	-19.14	-13.86	Pass
14.7620	16.83	4.48	10.38	27.21	14.86	60.00	50.00	-32.79	-35.14	Pass
21.5260	14.23	3.52	10.44	24.67	13.96	60.00	50.00	-35.33	-36.04	Pass

Note: Correction factor = LISN loss + Cable loss.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.2 20dB BANDWIDTH AND OCCUPIED BANDWIDTH (99%)

4.2.1 Test Limit

According to §15.247(a) (1)

20 dB Bandwidth ：For reporting purposes only.

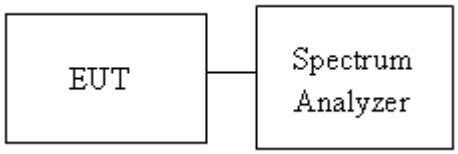
Occupied Bandwidth(99%) ：For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 7.8.7,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 1% ~ 5% OBW, VBW ≥3*RBW and Detector = Peak, to measurement 20 dB Bandwidth.
4. SA set RBW = 1% ~ 5% OBW, VBW ≥ three times the RBW and Detector = Peak, to measurement 99% Bandwidth
5. Measure and record the result of 20 dB Bandwidth and 99% Bandwidth. in the test report.

4.2.3 Test Setup



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.2.4 Test Result

Temperature:	24.1~24.4℃	**Test date:**	September 1~2, 2022
Humidity:	51~53% RH	**Tested by:**	Jack Chen

Test mode: GFSK_BDR-1Mbps mode / 2402-2480 MHz			
Channel	**Frequency (MHz)**	**OBW(99%) (MHz)**	**20dB BW (MHz)**
Low	2402	0.86549	0.9707
Mid	2441	0.86777	0.9720
High	2480	0.86735	0.9728

Test mode: π/4-DQPSK_2Mbps mode / 2402-2480 MHz			
Channel	**Frequency (MHz)**	**OBW(99%) (MHz)**	**20dB BW (MHz)**
Low	2402	1.1695	1.312
Mid	2441	1.1691	1.310
High	2480	1.1703	1.310

Test mode: 8DPSK_EDR-3Mbps mode / 2402-2480 MHz			
Channel	**Frequency (MHz)**	**OBW(99%) (MHz)**	**20dB BW (MHz)**
Low	2402	1.1712	1.299
Mid	2441	1.1716	1.299
High	2480	1.1718	1.299

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Data

20dB BANDWIDTH

GFSK_BDR-1Mbps mode	
Low CH	**Mid CH**
High CH	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

π/4-DQPSK_2Mbps mode	
Low CH	**Mid CH**
High CH	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

8DPSK_EDR-3Mbps mode	
Low CH	**Mid CH**
High CH	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Data

BANDWIDTH 99%

GFSK_BDR-1Mbps mode	
Low CH	**Mid CH**
High CH	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

π/4-DQPSK_2Mbps mode	
Low CH	**Mid CH**
High CH	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

8DPSK_EDR-3Mbps mode	
Low CH	**Mid CH**
High CH	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.3 OUTPUT POWER MEASUREMENT

4.3.1 Test Limit

According to §15.247(a)(1),

Peak output power：

FCC

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, provided the systems operate with an output power no greater than 125 mW.

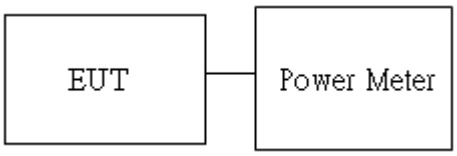
Limit	☒ Antenna not exceed 6 dBi：21dBm ☐ Antenna with DG greater than 6 dBi：21dBm [Limit = 30 – (DG – 6)]

Average output power：For reporting purposes only.

4.3.2 Test Procedure

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

4.3.3 Test Setup



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.3.4 Test Result

Temperature:	24.1~24.4℃	**Test date:**	September 1~2, 2022
Humidity:	51~53% RH	**Tested by:**	Jack Chen

Peak output power：

For GFSK

1M BR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	5	**6.54**	4.508	125
Mid	2441	5	6.42	4.385	125
High	2480	5	6.24	4.207	125

For π/4-DQPSK

2M EDR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	5	**6.41**	4.375	125
Mid	2441	5	6.28	4.246	125
High	2480	5	6.09	4.064	125

For 8DPSK

3M EDR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	5	**6.70**	4.677	125
Mid	2441	5	6.56	4.529	125
High	2480	5	6.36	4.325	125

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Average output power：

For GFSK

1M BR mode (Average):

CH	Freq. (MHz)	Power set	Max. Avg. Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	5	5.45	3.511	125
Mid	2441	5	5.47	3.527	125
High	2480	5	5.36	3.439	125

For π/4-DQPSK

2M EDR mode (Average):

CH	Freq. (MHz)	Power set	Max. Avg. Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	5	2.61	1.826	125
Mid	2441	5	2.48	1.772	125
High	2480	5	2.39	1.735	125

For 8DPSK

3M EDR mode (Average):

CH	Freq. (MHz)	Power set	Max. Avg. Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	5	2.68	1.855	125
Mid	2441	5	2.56	1.805	125
High	2480	5	2.43	1.751	125

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.4 FREQUENCY SEPARATION

4.4.1 Test Limit

According to §15.247(a)(1)

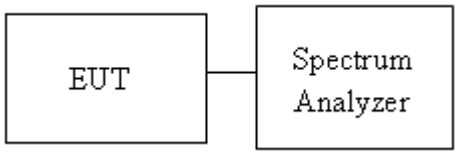
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

Limit	> two-thirds of the 20 dB bandwidth

4.4.2 Test Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. EUT RF output port connected to the SA by RF cable.
3. Set the spectrum analyzer as RBW = 300kHz, VBW = 300kHz, Sweep = auto. Max hold, mark 3 peaks of hopping channel and record the 3 peaks frequency

4.4.3 Test Setup



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.4.4 Test Result

Temperature:	24.1~24.4℃	**Test date:**	September 1~2, 2022
Humidity:	51~53% RH	**Tested by:**	Jack Chen

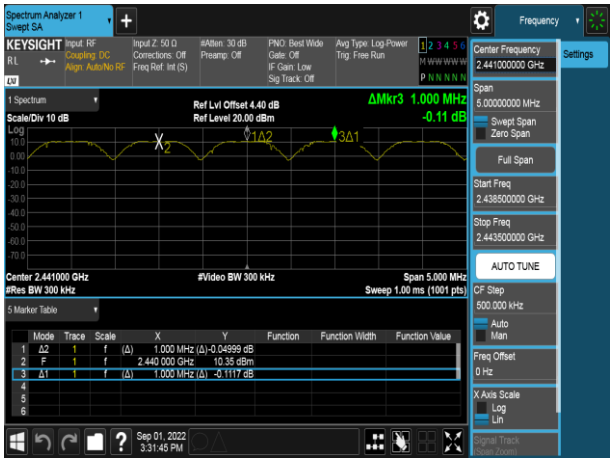
Test mode: GFSK_BDR-1Mbps mode / 2402-2480 MHz				
Channel	**Frequency (MHz)**	**Channel Separation (MHz)**	**Channel Separation Limits (MHz)**	**Result**
Low	2402	1.000	0.65	PASS
Mid	2441	1.000	0.65	PASS
High	2480	1.000	0.65	PASS

Test mode: π/4-DQPSK_2Mbps mode / 2402-2480 MHz				
Channel	**Frequency (MHz)**	**Channel Separation (MHz)**	**Channel Separation Limits (MHz)**	**Result**
Low	2402	1.000	0.87	PASS
Mid	2441	1.000	0.87	PASS
High	2480	1.000	0.87	PASS

Test mode: 8DPSK_EDR-3Mbps mode / 2402-2480 MHz				
Channel	**Frequency (MHz)**	**Channel Separation (MHz)**	**Channel Separation Limits (MHz)**	**Result**
Low	2402	1.000	0.87	PASS
Mid	2441	1.000	0.87	PASS
High	2480	1.000	0.87	PASS

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Data

GFSK_BDR-1Mbps mode	
Low CH	**Mid CH**
	
High CH	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

π/4-DQPSK_2Mbps mode

Low CH

Mid CH

High CH

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

8DPSK_EDR-3Mbps mode

Low CH

Mid CH

High CH

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.5 NUMBER OF HOPPING

4.5.1 Test Limit

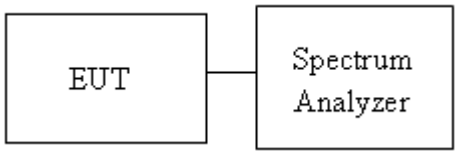
According to §15.247(a)(1)(iii)

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

4.5.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 7.8.3
1. Place the EUT on the table and set it in transmitting mode.
2. EUT RF output port connected to the SA by RF cable.
3. Set spectrum analyzer Start Freq. = 2400 MHz, Stop Freq. = 2441 MHz for Low range, Start Freq. = 2441 MHz, Stop Freq. = 2483.5 MHz for High range ; RBW=430KHz, VBW = 1.5MHz.
4. Max hold, view and count how many channel in the band.

4.5.3 Test Setup



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

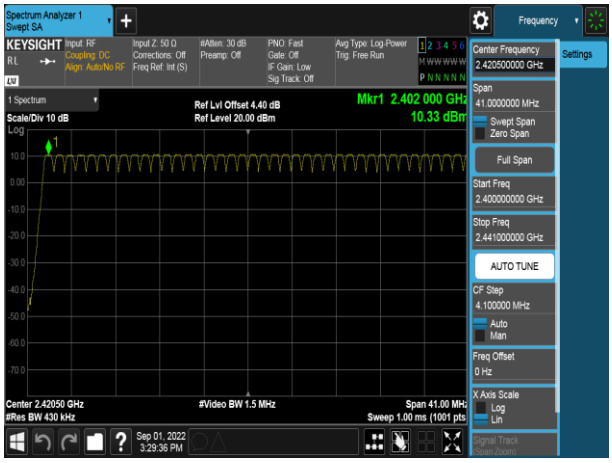
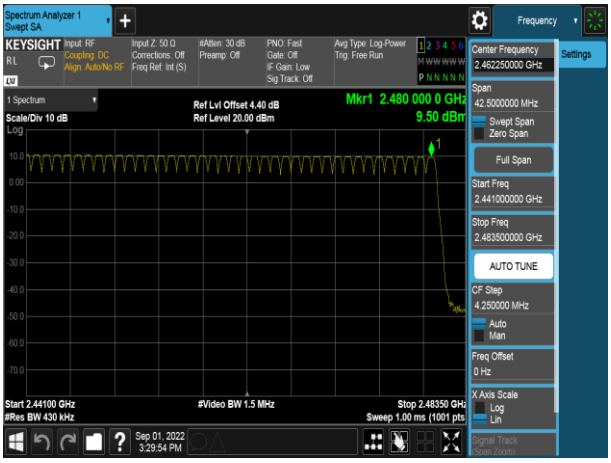
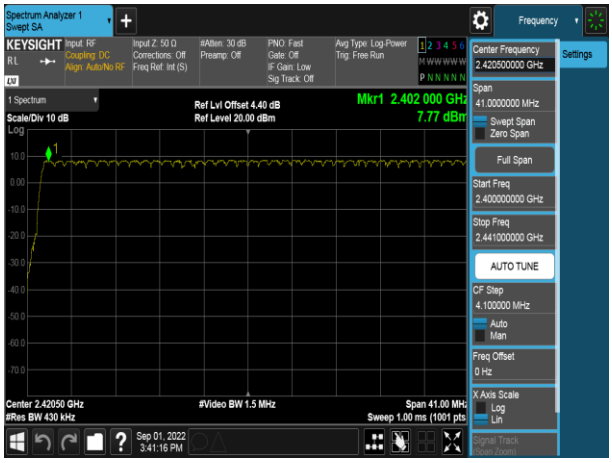
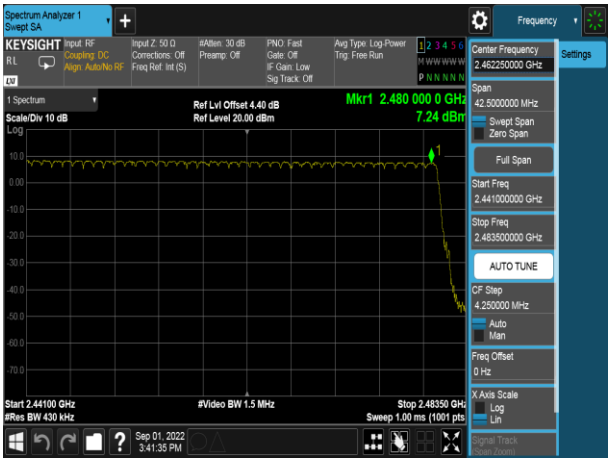
4.5.4 Test Result

Temperature:	24.1~24.4℃	**Test date:**	September 1~2, 2022
Humidity:	51~53% RH	**Tested by:**	Jack Chen

Number of Hopping				
Mode	**Frequency (MHz)**	**Hopping Channel Number**	**Hopping Channel Number Limits**	**Result**
BDR-1Mbps	2402-2480	79	15	Pass
EDR-3Mbps	2402-2480	79	15	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Data

Number of Hopping	
GFSK_BDR-1Mbps mode	
Low	High
	
8DPSK_EDR-3Mbps mode	
Low	High
	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.6 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

4.6.1 Test Limit

According to §15.247(d)

Limit	-20 dBc

.

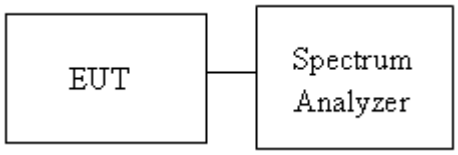
4.6.2 Test Procedure

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.

2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.

3. The Band Edge at 2.4GHz and 2.4835GHz are investigated with both hopping “ON” and “OFF” modes “.

4.6.3 Test Setup



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.6.4 Test Result

Temperature:	24.1~24.4℃	**Test date:**	September 1~2, 2022
Humidity:	51~53% RH	**Tested by:**	Jack Chen

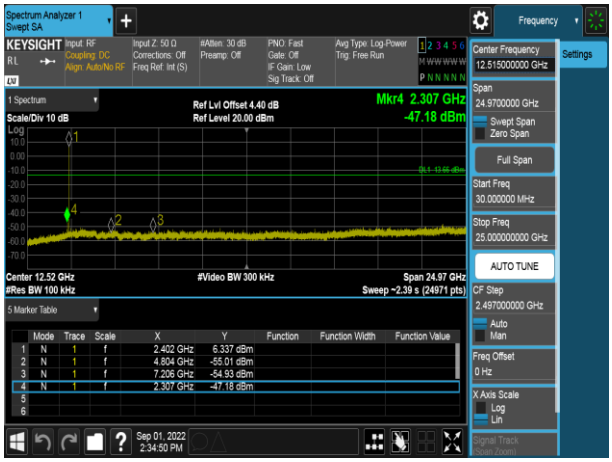
Test Data

GFSK_BDR-1Mbps mode Band Edge	
Low CH	**High CH**

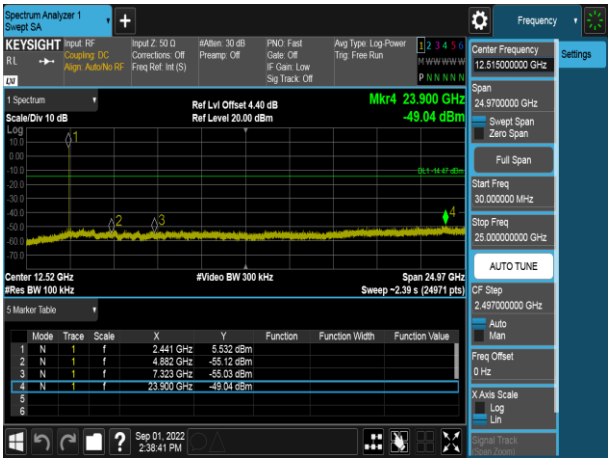
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

GFSK_BDR-1Mbps mode Spurious Emission 30MHz-25GHz

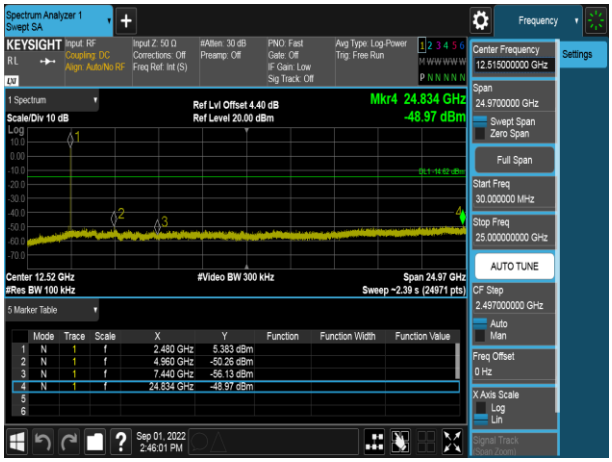
Low CH



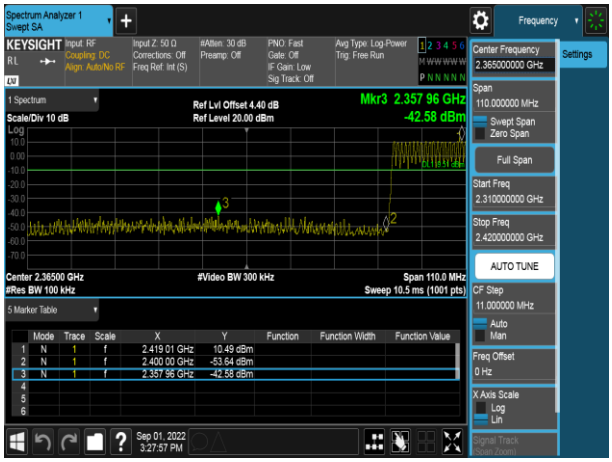
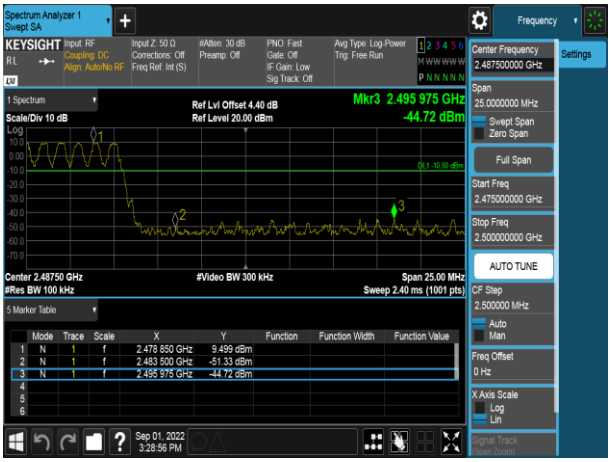
Mid CH



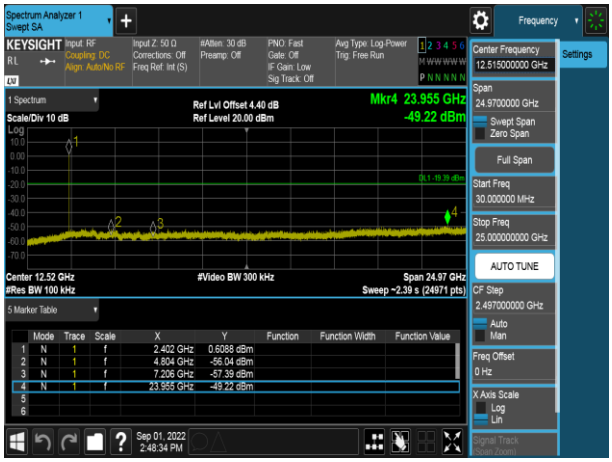
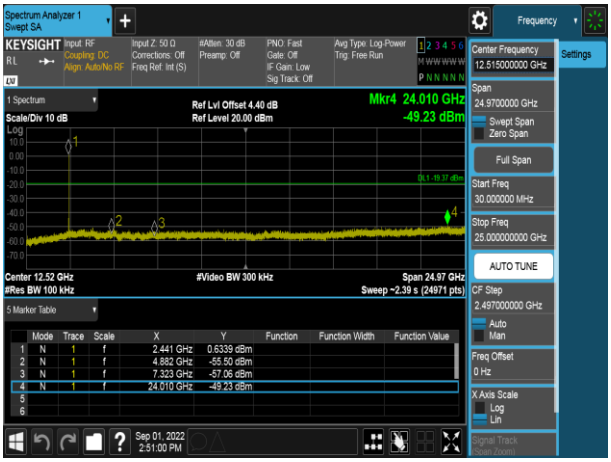
High CH



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

GFSK_BDR-1Mbps Hopping mode	
Low Band Edge	**High Band Edge**
	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

π/4-DQPSK_2Mbps mode Spurious Emission 30MHz-25GHz	
Low CH	**Mid CH**
	
High CH	

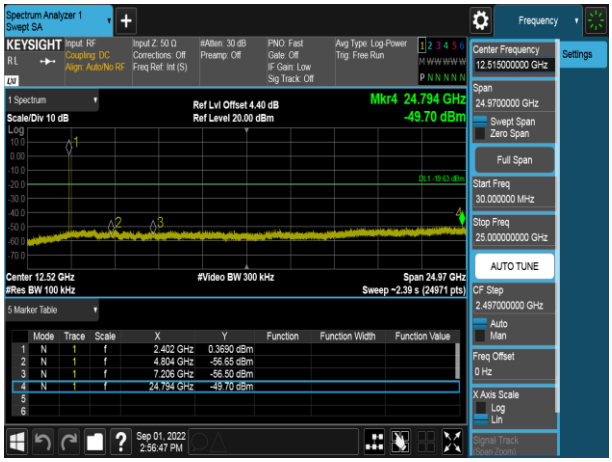
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

8DPSK_EDR-3Mbps mode Band Edge	
Low CH	**High CH**

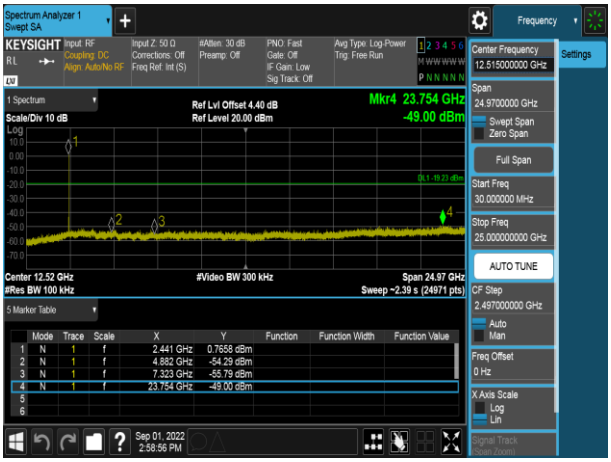
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

8DPSK_EDR-3Mbps mode Spurious Emission 30MHz-25GHz

Low CH

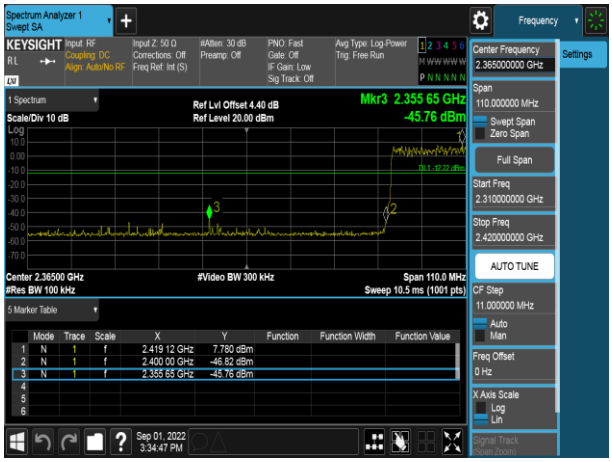


Mid CH



High CH

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

8DPSK_EDR-3Mbps mode Hopping mode	
Low Band Edge	**High Band Edge**
	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.7 TIME OF OCCUPANCY (DWELL TIME)

4.7.1 Test Limit

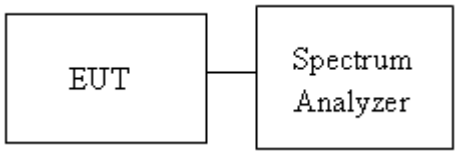
According to §15.247(a)(1)(iii)

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.

4.7.2 Test Procedure

1. EUT RF output port connected to the SA by RF cable.
2. Set center frequency of spectrum analyzer = operating frequency.
3. Set the spectrum analyzer as RBW, VBW=3MHz, Sweep > one cycle.

4.7.3 Test Setup



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.7.4 Test Result

Temperature:	24.1~24.4℃	**Test date:**	September 1~2, 2022
Humidity:	51~53% RH	**Tested by:**	Jack Chen

For GFSK (1Mbps)

Channel	PACKET TYPE	Measurement Result (ms)	Limit (ms)
Mid	DH1	121.60	400ms
	DH3	262.40	400ms
	DH5	308.80	400ms

CH Mid	DH1 time slot	=	0.380 *	(1600/2/79)	*	31.6	=	121.60 (ms)
	DH3 time slot	=	1.640 *	(1600/4/79)	*	31.6	=	262.40 (ms)
	DH5 time slot	=	2.895 *	(1600/6/79)	*	31.6	=	308.80 (ms)

For π/4 -DQPSK (2Mbps):

Channel	PACKET TYPE	Measurement Result (ms)	Limit (ms)
Mid	2DH1	123.20	400ms
	2DH3	262.40	400ms
	2DH5	307.20	400ms

CH Mid	2DH1 time slot	=	0.385 *	(1600/2/79)	*	31.6	=	123.20 (ms)
	2DH3 time slot	=	1.640 *	(1600/4/79)	*	31.6	=	262.40 (ms)
	2DH5 time slot	=	2.880 *	(1600/6/79)	*	31.6	=	307.20 (ms)

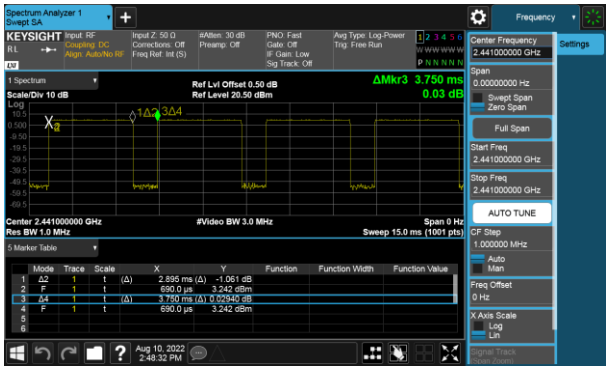
For 8-DPSK (3Mbps)

Channel	PACKET TYPE	Measurement Result (ms)	Limit (ms)
Mid	3DH1	123.20	400ms
	3DH3	262.40	400ms
	3DH5	308.80	400ms

CH Mid	3DH1 time slot	=	0.385 *	(1600/2/79)	*	31.6	=	123.20 (ms)
	3DH3 time slot	=	1.640 *	(1600/4/79)	*	31.6	=	262.40 (ms)
	3DH5 time slot	=	2.895 *	(1600/6/79)	*	31.6	=	308.80 (ms)

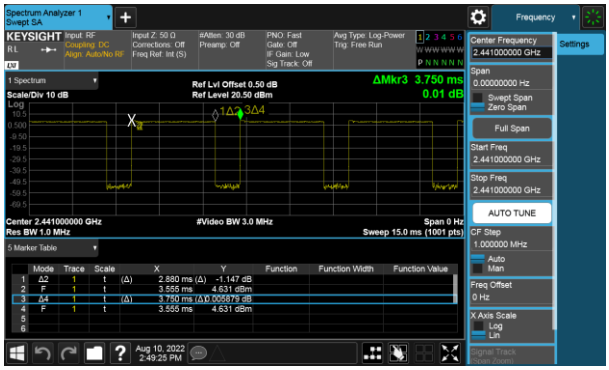
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

For GFSK (1Mbps)

DH1	DH3
DH5	
	

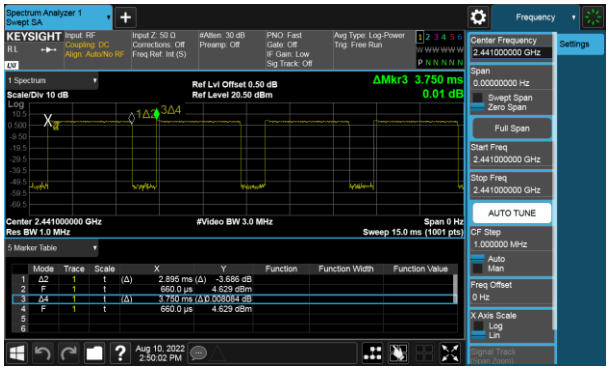
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

For π/4-DQPSK (2Mbps)

2DH1	2DH3
2DH5	
	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

For 8-DPSK (3Mbps)

3DH1	3DH3
3DH5	
	

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.8 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.8.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

Remark:
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.8.2 Test Procedure

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.

3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

4. The SA setting following：

(1) Below 1G：RBW = 100kHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2) Above 1G：

(2.1) For Peak measurement：RBW = 1MHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2.2) For Average measurement：RBW = 1MHz, VBW

˙If Duty Cycle ≥ 98%, VBW=10Hz.

˙If Duty Cycle < 98%, VBW≥1/T.

5. Data result

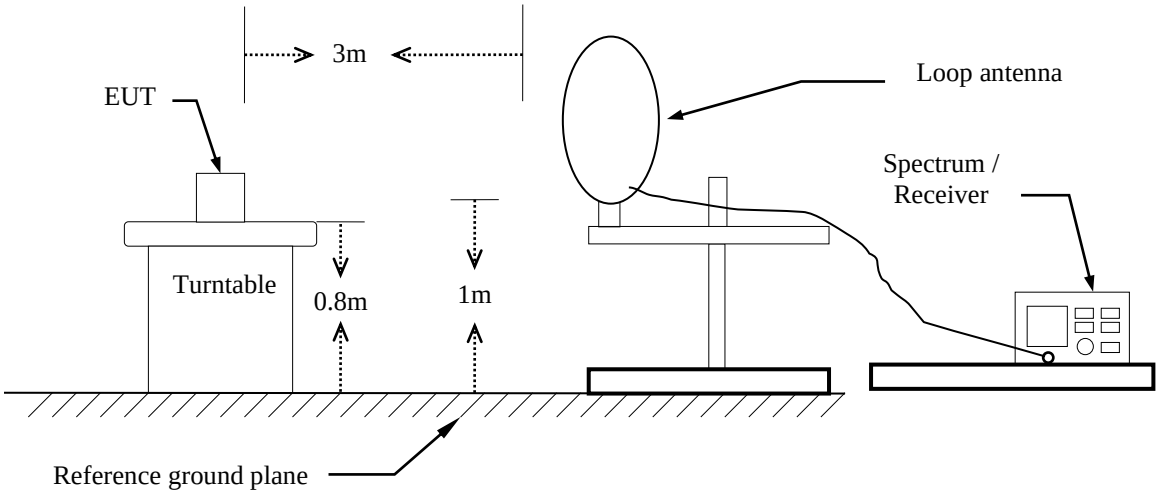
Actual FS=Spectrum Reading Level + Factor

Margin=Actual FS- Limit

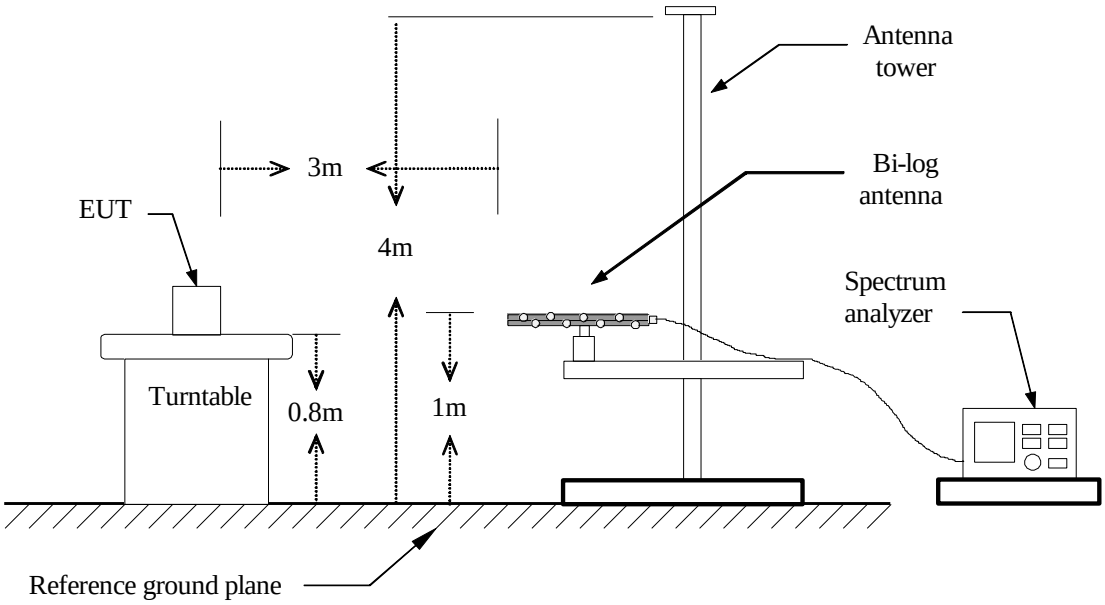
This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.8.3 Test Setup

9kHz ~ 30MHz

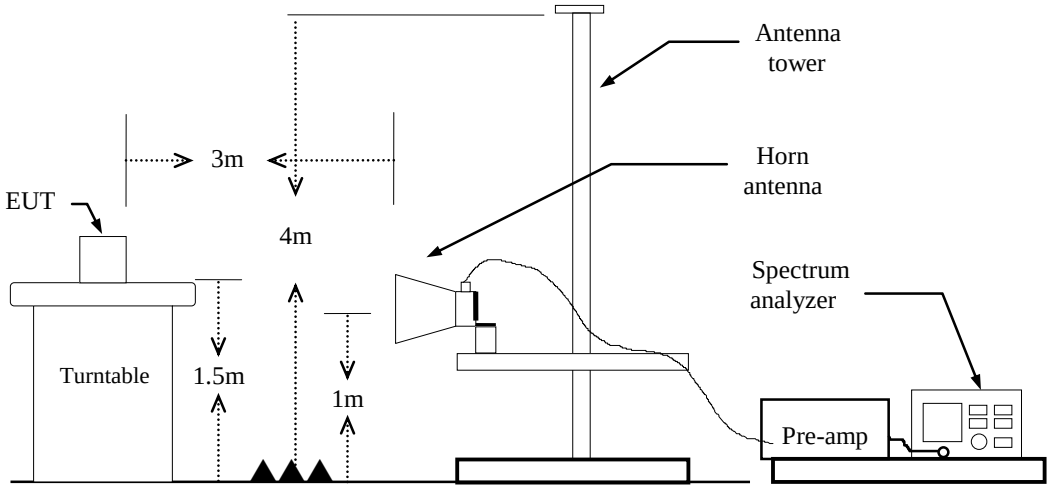


30MHz ~ 1GHz



This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Above 1 GHz

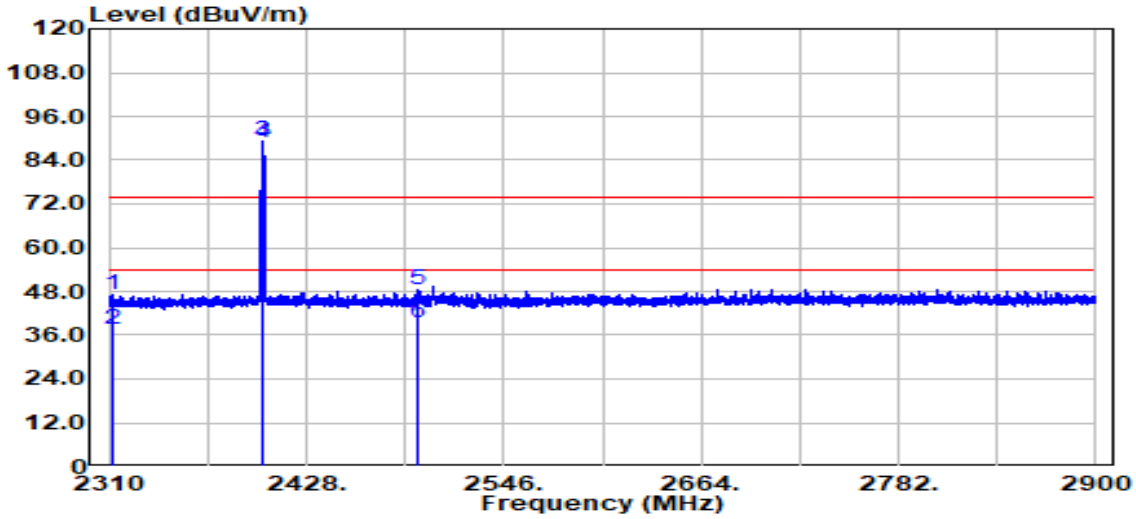


This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

4.8.4 Test Result

Band Edge Test Data

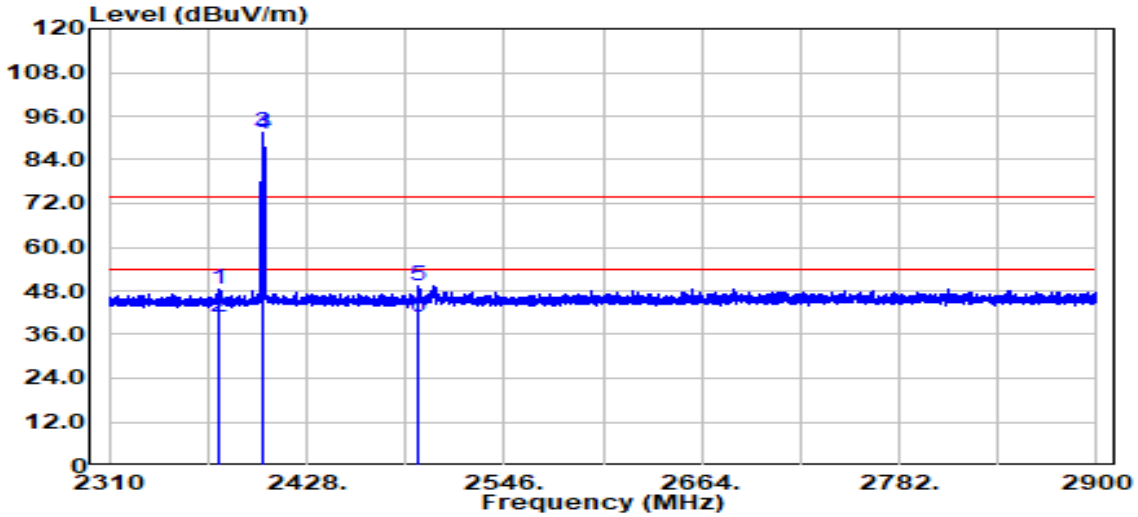
Test Mode:	GFSK_BDR-1Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2311.416	Peak	39.66	7.58	47.24	74.00	-26.76
2311.416	Average	30.04	7.58	37.62	54.00	-16.38
2402.000	Peak	81.38	7.79	89.17	-	-
2402.000	Average	81.18	7.79	88.97	-	-
2494.906	Peak	40.04	8.32	48.35	74.00	-25.65
2494.906	Average	31.04	8.32	39.36	54.00	-14.64

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

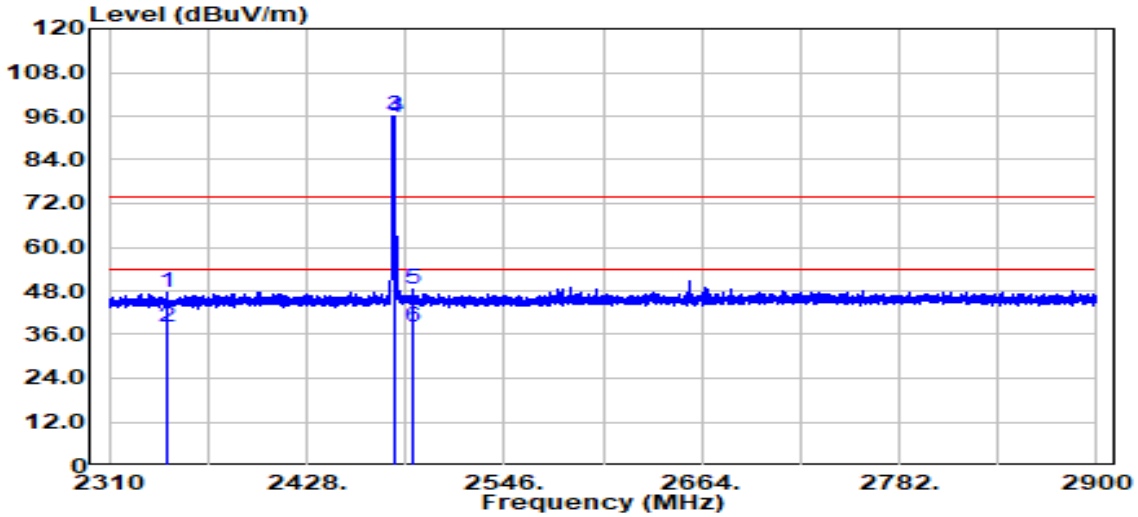
Test Mode:	GFSK_BDR-1Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2375.962	Peak	40.70	7.71	48.41	74.00	-25.59
2375.962	Average	33.17	7.71	40.88	54.00	-13.12
2402.000	Peak	83.64	7.79	91.43	-	-
2402.000	Average	83.44	7.79	91.23	-	-
2495.142	Peak	41.05	8.32	49.37	74.00	-24.63
2495.142	Average	32.57	8.32	40.88	54.00	-13.12

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

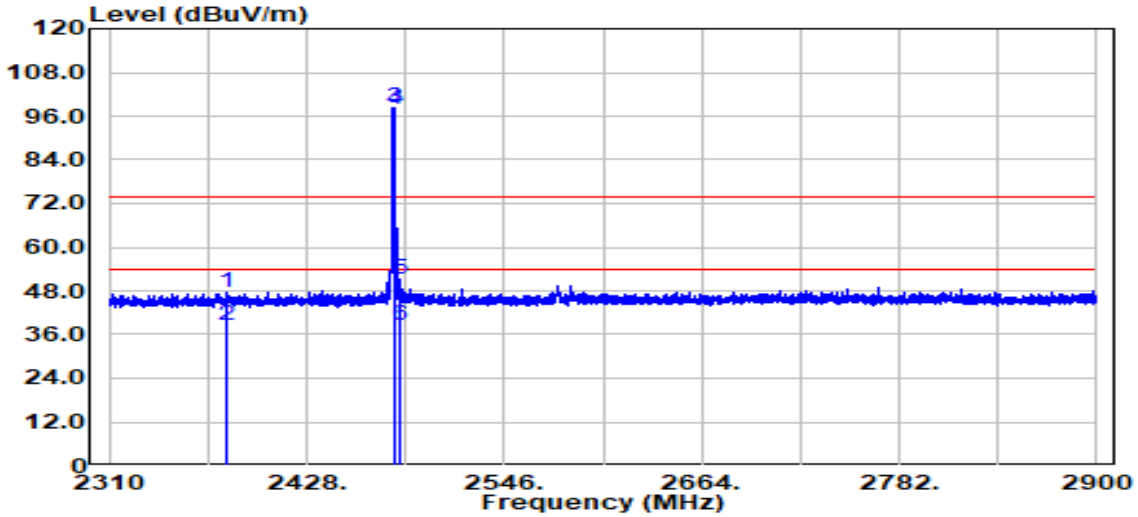
Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2344.928	Peak	39.71	7.63	47.34	74.00	-26.66
2344.928	Average	30.42	7.63	38.05	54.00	-15.95
2480.000	Peak	87.68	8.24	95.92	-	-
2480.000	Average	87.48	8.24	95.73	-	-
2491.956	Peak	39.99	8.30	48.30	74.00	-25.70
2491.956	Average	29.88	8.30	38.18	54.00	-15.82

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

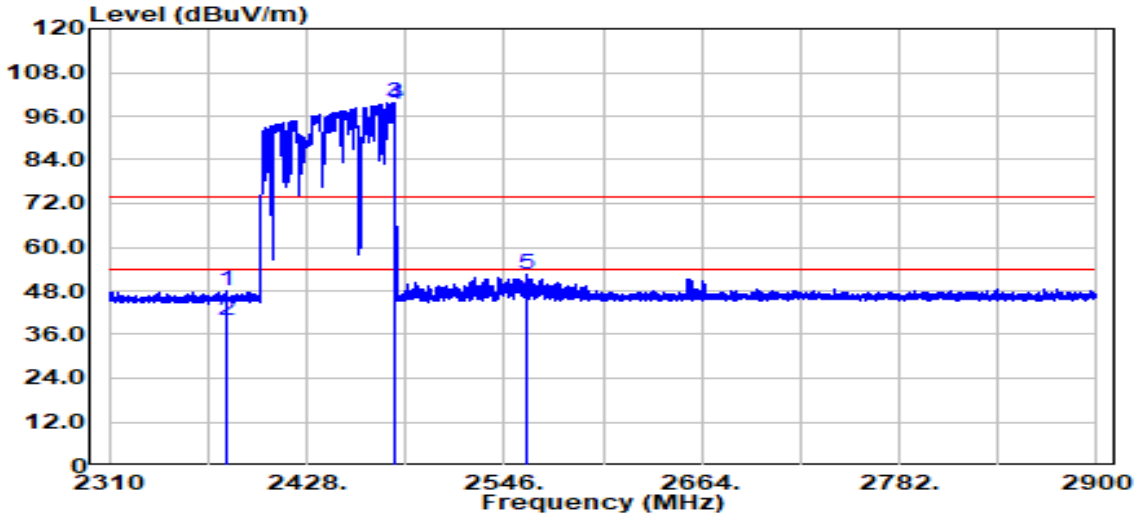
Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2380.210	Peak	39.94	7.72	47.67	74.00	-26.33
2380.210	Average	30.59	7.72	38.32	54.00	-15.68
2480.000	Peak	89.82	8.24	98.07	-	-
2480.000	Average	89.65	8.24	97.90	-	-
2484.168	Peak	42.86	8.26	51.12	74.00	-22.88
2484.168	Average	30.44	8.26	38.70	54.00	-15.30

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

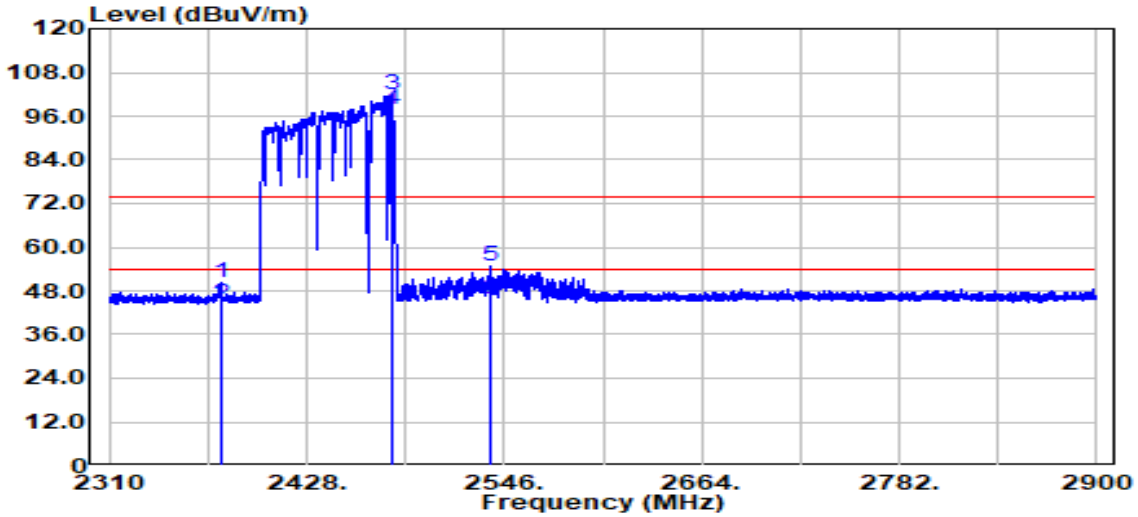
Test Mode:	GFSK_BDR-1Mbps Hopping	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2380.564	Peak	40.37	7.73	48.09	74.00	-25.91
2380.564	Average	31.92	7.73	39.64	54.00	-14.36
2480.156	Peak	91.49	8.24	99.74	-	-
2480.156	Average	91.02	8.24	99.27	-	-
2559.452	Peak	43.97	8.56	52.53	74.00	-21.47
2559.452	Average	36.05	8.56	44.61	54.00	-9.39

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

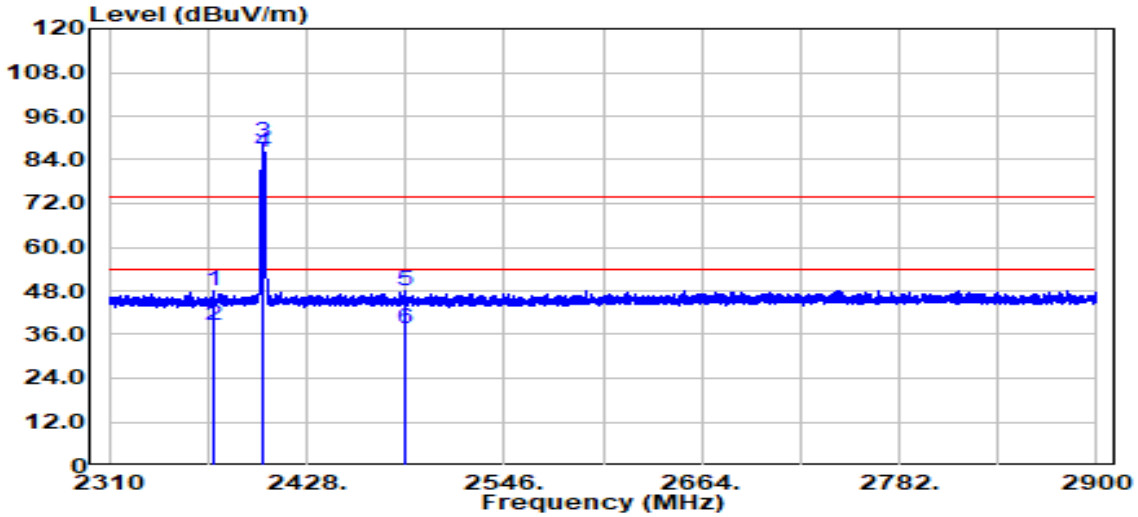
Test Mode:	GFSK_BDR-1Mbps Hopping	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2376.434	Peak	42.71	7.71	50.43	74.00	-23.57
2376.434	Average	36.60	7.71	44.31	54.00	-9.69
2479.094	Peak	93.49	8.24	101.73	-	-
2479.094	Average	89.76	8.24	98.00	-	-
2537.504	Peak	46.51	8.45	54.97	74.00	-19.03
2537.504	Average	37.37	8.45	45.82	54.00	-8.18

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

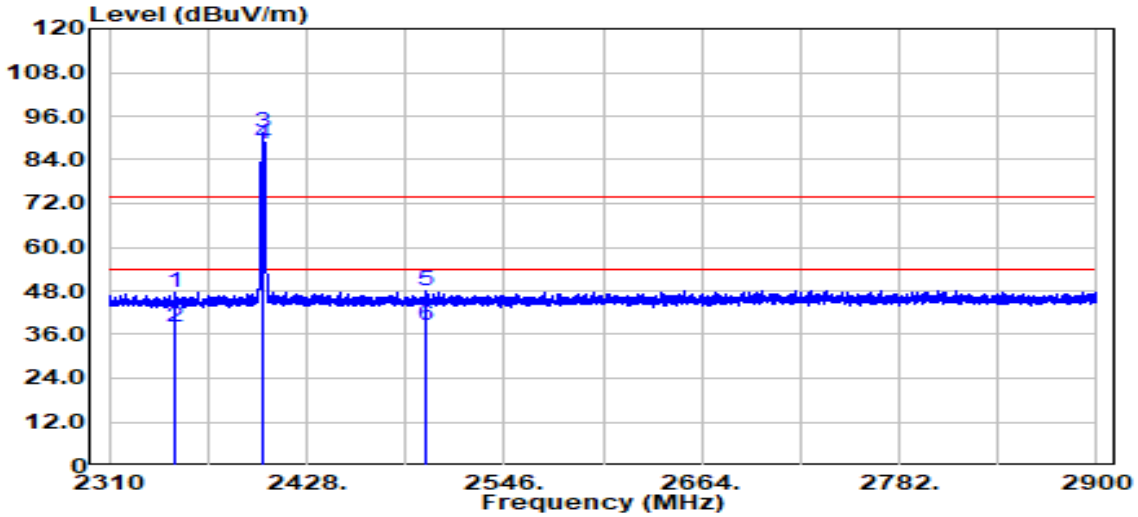
Test Mode:	8DPSK_EDR-3Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2373.012	Peak	40.10	7.70	47.81	74.00	-26.19
2373.012	Average	30.66	7.70	38.36	54.00	-15.64
2402.000	Peak	80.97	7.79	88.77	-	-
2402.000	Average	78.14	7.79	85.94	-	-
2486.882	Peak	39.70	8.28	47.97	74.00	-26.03
2486.882	Average	29.29	8.28	37.56	54.00	-16.44

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

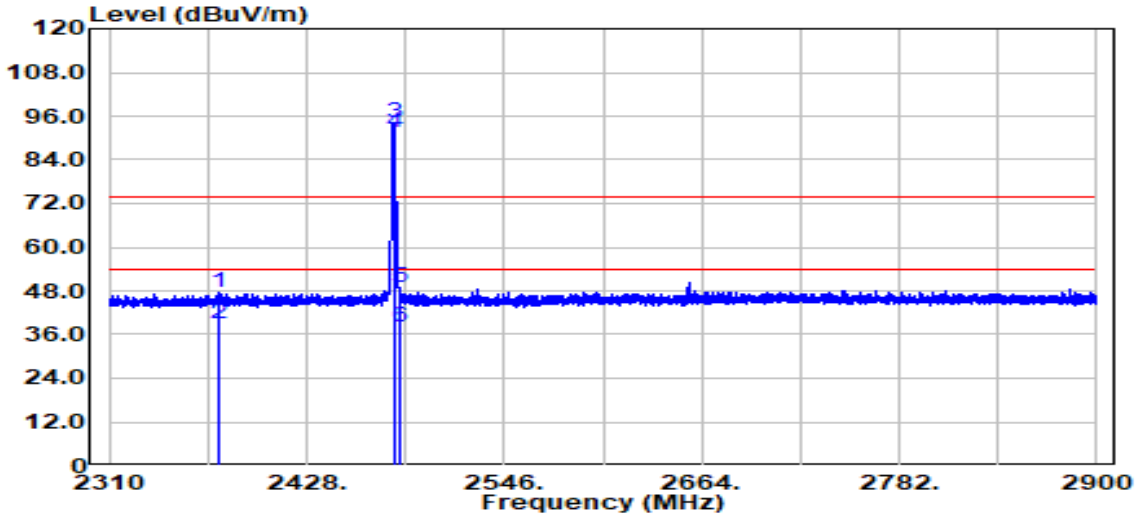
Test Mode:	8DPSK_EDR-3Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2349.766	Peak	39.89	7.64	47.53	74.00	-26.47
2349.766	Average	30.17	7.64	37.81	54.00	-16.19
2402.000	Peak	83.52	7.79	91.32	-	-
2402.000	Average	80.65	7.79	88.44	-	-
2499.744	Peak	39.86	8.34	48.20	74.00	-25.80
2499.744	Average	30.27	8.34	38.61	54.00	-15.39

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

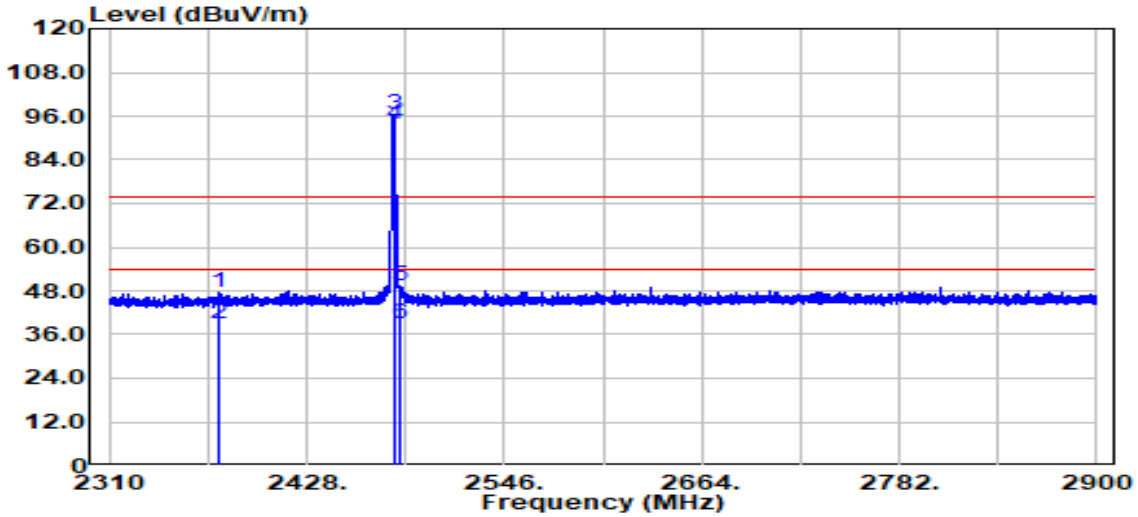
Test Mode:	8DPSK_EDR-3Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
2375.490	Peak	39.79	7.71	47.50	74.00	-26.50
2375.490	Average	31.05	7.71	38.76	54.00	-15.24
2480.000	Peak	85.89	8.24	94.13	-	-
2480.000	Average	83.11	8.24	91.35	-	-
2483.932	Peak	40.64	8.26	48.91	74.00	-25.09
2483.932	Average	29.92	8.26	38.19	54.00	-15.81

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

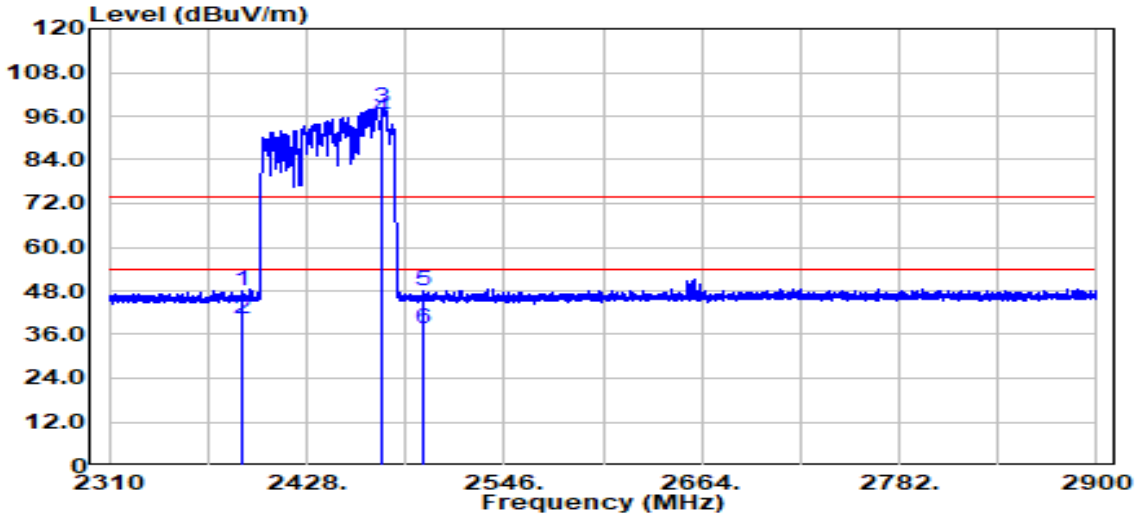
Test Mode:	8DPSK_EDR-3Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2375.018	Peak	39.66	7.71	47.37	74.00	-26.63
2375.018	Average	31.28	7.71	38.99	54.00	-15.01
2480.000	Peak	88.36	8.24	96.60	-	-
2480.000	Average	85.52	8.24	93.77	-	-
2484.050	Peak	41.16	8.26	49.42	74.00	-24.58
2484.050	Average	30.86	8.26	39.12	54.00	-14.88

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

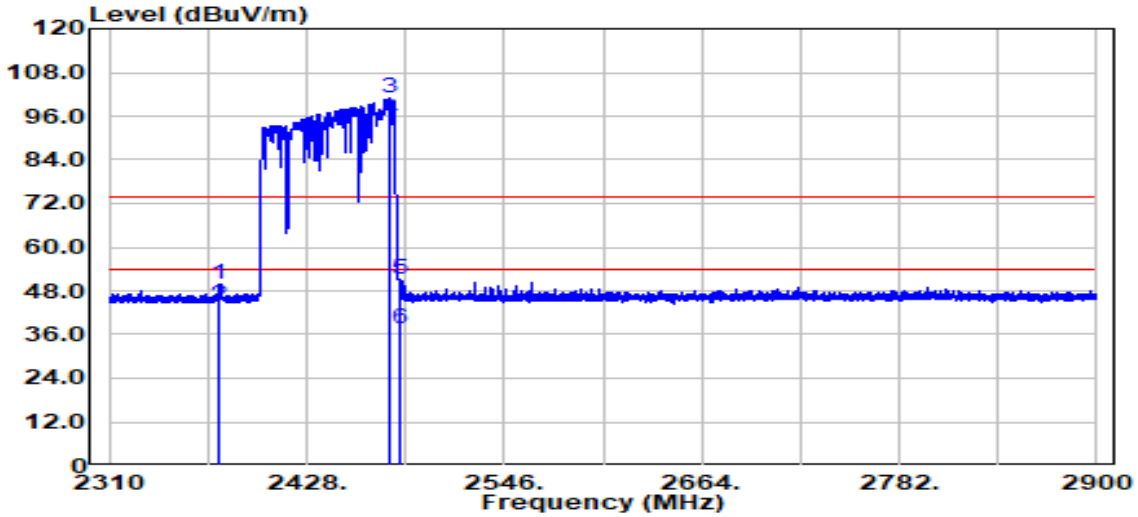
Test Mode:	8DPSK_EDR-3Mbps Hopping	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2389.532	Peak	40.29	7.75	48.04	74.00	-25.96
2389.532	Average	32.39	7.75	40.14	54.00	-13.86
2472.840	Peak	89.95	8.21	98.16	-	-
2472.840	Average	87.34	8.21	95.55	-	-
2497.738	Peak	39.46	8.33	47.79	74.00	-26.21
2497.738	Average	29.16	8.33	37.49	54.00	-16.51

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	8DPSK_EDR-3Mbps Hopping	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Band Edge	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		

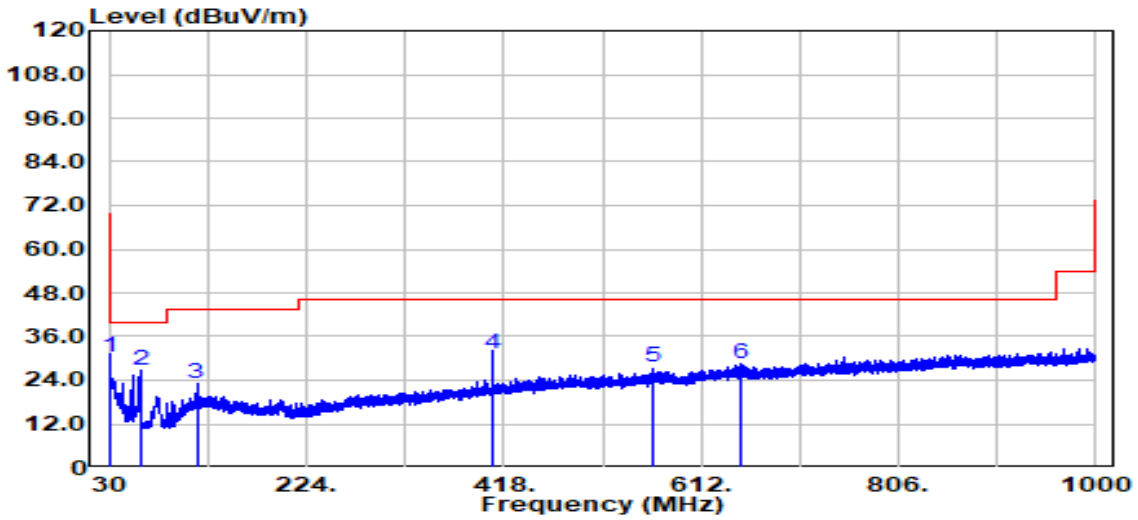


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2375.962	Peak	42.18	7.71	49.90	74.00	-24.10
2375.962	Average	36.44	7.71	44.15	54.00	-9.85
2478.032	Peak	92.61	8.23	100.84	-	-
2478.032	Average	87.06	8.23	95.29	-	-
2483.500	Peak	42.83	8.26	51.09	74.00	-22.91
2483.500	Average	29.31	8.26	37.57	54.00	-16.43

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Below 1G Test Data

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 4: 7.8” Color Digital Note Pad

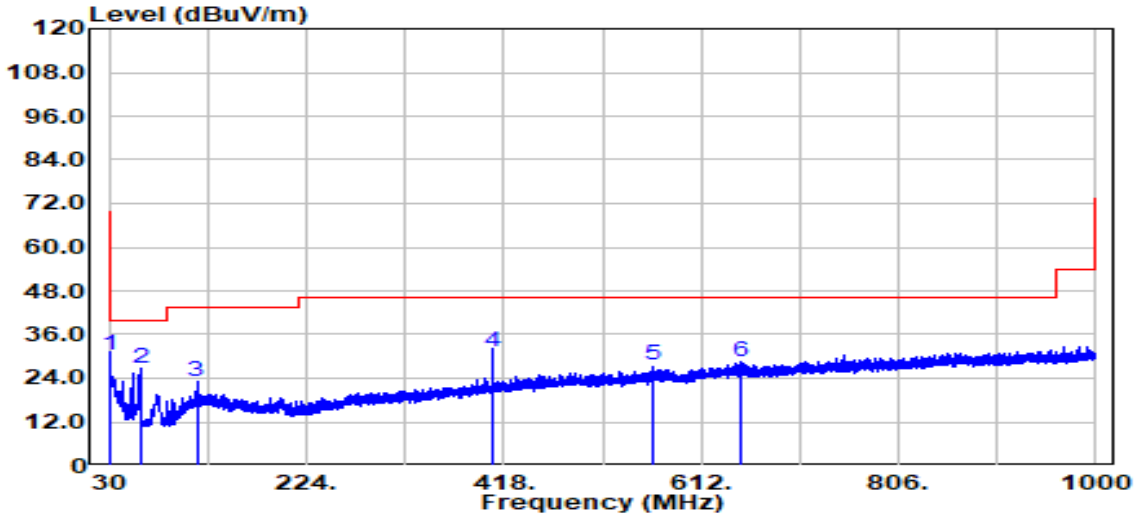


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.000	Peak	33.50	-3.22	30.28	40.00	-9.72
62.495	Peak	42.84	-16.10	26.74	40.00	-13.26
116.088	Peak	32.84	-9.92	22.92	43.50	-20.58
408.058	Peak	36.80	-5.71	31.09	46.00	-14.91
563.864	Peak	30.08	-2.60	27.47	46.00	-18.53
650.194	Peak	29.26	-0.94	28.32	46.00	-17.68

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 4: 7.8” Color Digital Note Pad

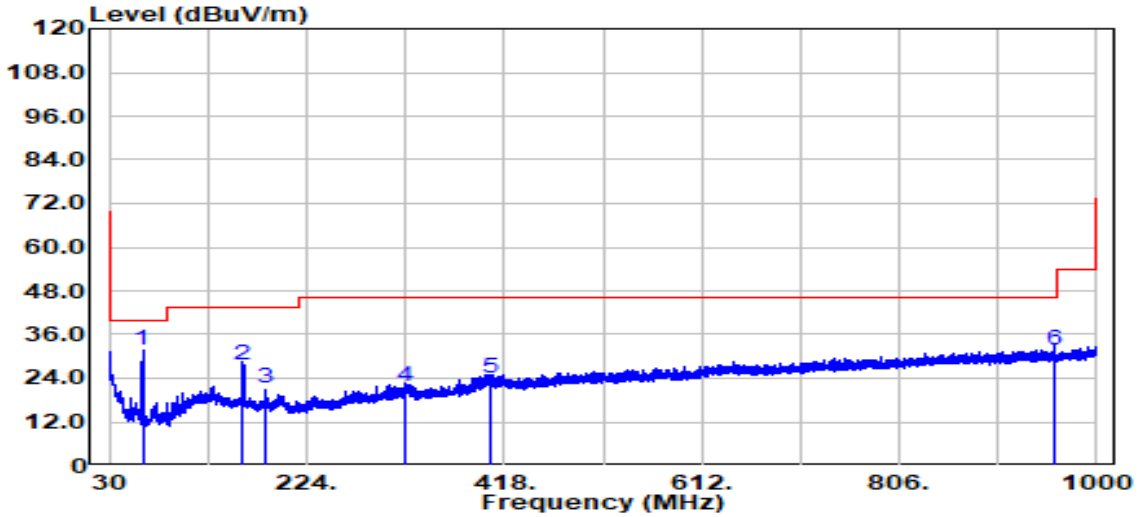


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.000	Peak	33.50	-3.22	30.28	40.00	-9.72
62.495	Peak	42.84	-16.10	26.74	40.00	-13.26
116.088	Peak	32.84	-9.92	22.92	43.50	-20.58
408.058	Peak	36.80	-5.71	31.09	46.00	-14.91
563.864	Peak	30.08	-2.60	27.47	46.00	-18.53
650.194	Peak	29.26	-0.94	28.32	46.00	-17.68

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 1: 7.8” Digital Reader

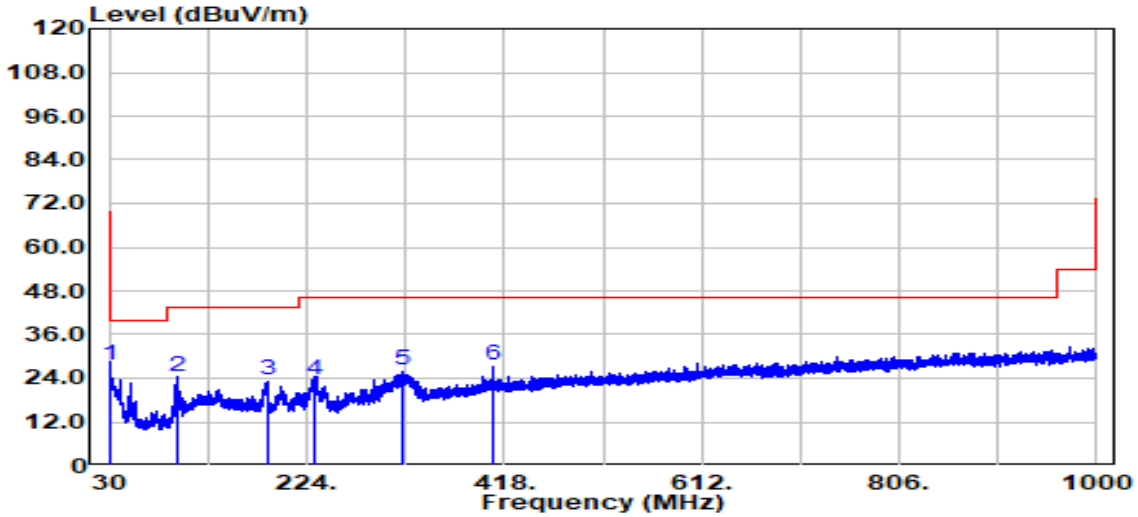


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
62.738	Peak	47.87	-16.07	31.80	40.00	-8.20
161.678	Peak	38.32	-10.88	27.44	43.50	-16.06
184.351	Peak	32.84	-11.75	21.09	43.50	-22.41
321.606	Peak	30.24	-8.40	21.84	46.00	-24.16
403.450	Peak	29.85	-5.86	23.99	46.00	-22.01
958.048	Peak	28.64	3.25	31.88	46.00	-14.12

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 1: 7.8” Digital Reader

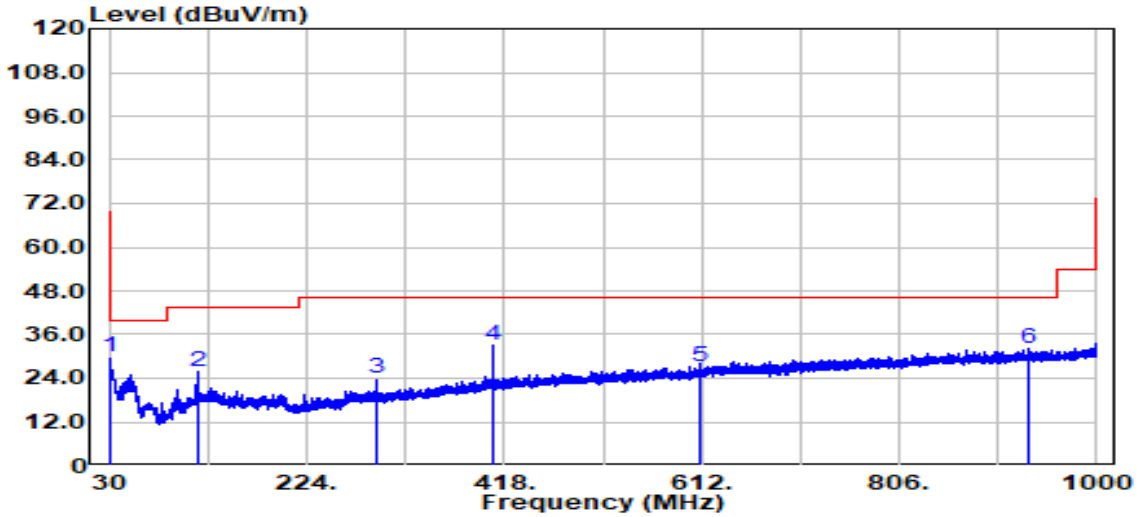


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.000	Peak	30.80	-3.22	27.58	40.00	-12.42
97.658	Peak	38.15	-13.76	24.39	43.50	-19.11
184.958	Peak	35.28	-11.68	23.60	43.50	-19.90
232.124	Peak	34.93	-11.31	23.62	46.00	-22.38
318.818	Peak	34.62	-8.45	26.17	46.00	-19.83
407.936	Peak	33.44	-5.71	27.73	46.00	-18.27

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 2: 7.8” Digital Note Pad

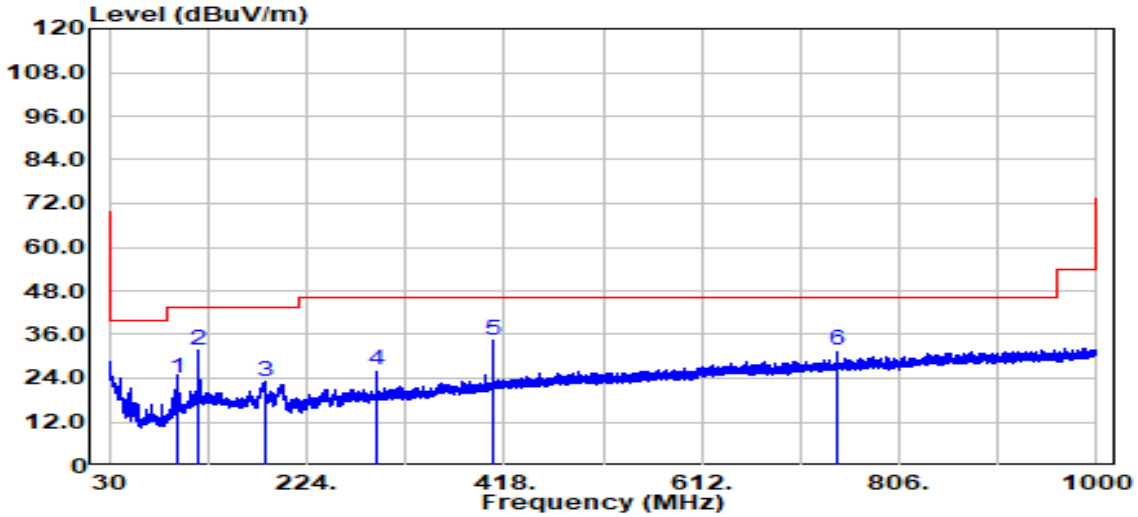


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.000	Peak	32.91	-3.22	29.69	40.00	-10.31
116.330	Peak	35.53	-9.82	25.71	43.50	-17.79
291.779	Peak	32.80	-8.96	23.84	46.00	-22.16
408.058	Peak	38.74	-5.71	33.03	46.00	-12.97
609.939	Peak	29.23	-1.98	27.25	46.00	-18.75
932.343	Peak	28.92	3.13	32.05	46.00	-13.95

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 2: 7.8” Digital Note Pad

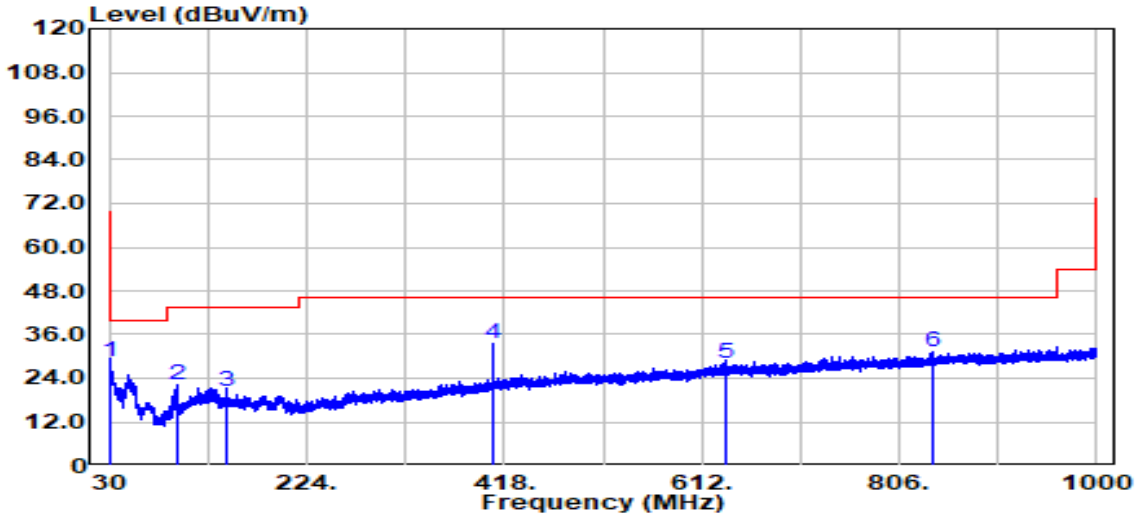


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
96.203	Peak	38.10	-14.12	23.98	43.50	-19.52
116.573	Peak	41.28	-9.72	31.56	43.50	-11.94
182.411	Peak	34.78	-11.71	23.08	43.50	-20.42
291.779	Peak	35.27	-8.96	26.30	46.00	-19.70
408.058	Peak	40.20	-5.71	34.49	46.00	-11.51
744.163	Peak	31.22	0.35	31.57	46.00	-14.43

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 3: 7.8” Color Digital Reader

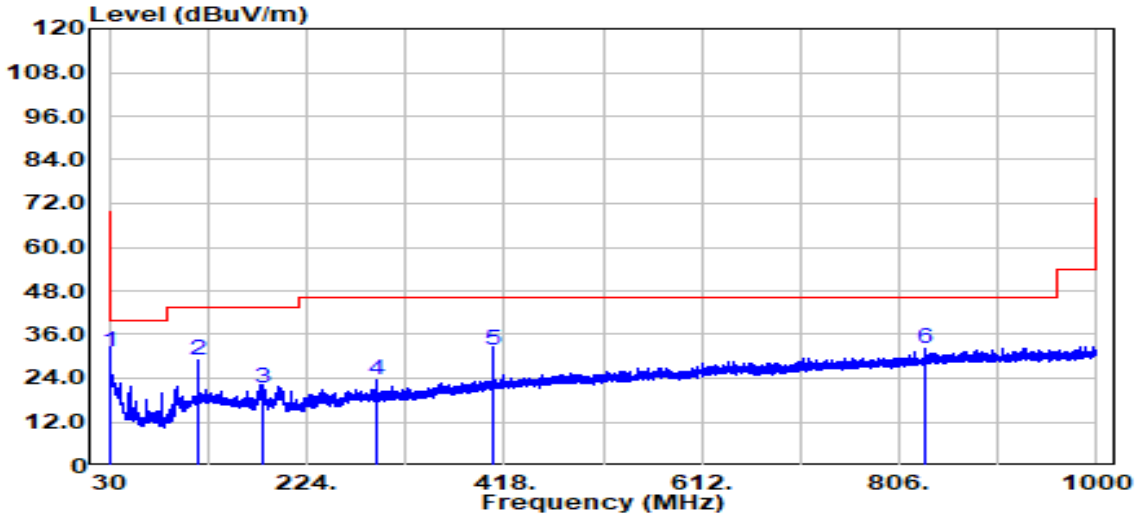


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.000	Peak	31.74	-3.22	28.52	40.00	-11.48
96.203	Peak	36.14	-14.12	22.02	43.50	-21.48
145.673	Peak	30.91	-10.45	20.46	43.50	-23.04
408.058	Peak	39.35	-5.71	33.65	46.00	-12.35
636.250	Peak	28.93	-1.03	27.90	46.00	-18.10
840.071	Peak	29.53	1.88	31.41	46.00	-14.59

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 64%RH
Test Item	30MHz-1GHz	Test Date	September 15, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak	EUT	Mode 3: 7.8” Color Digital Reader



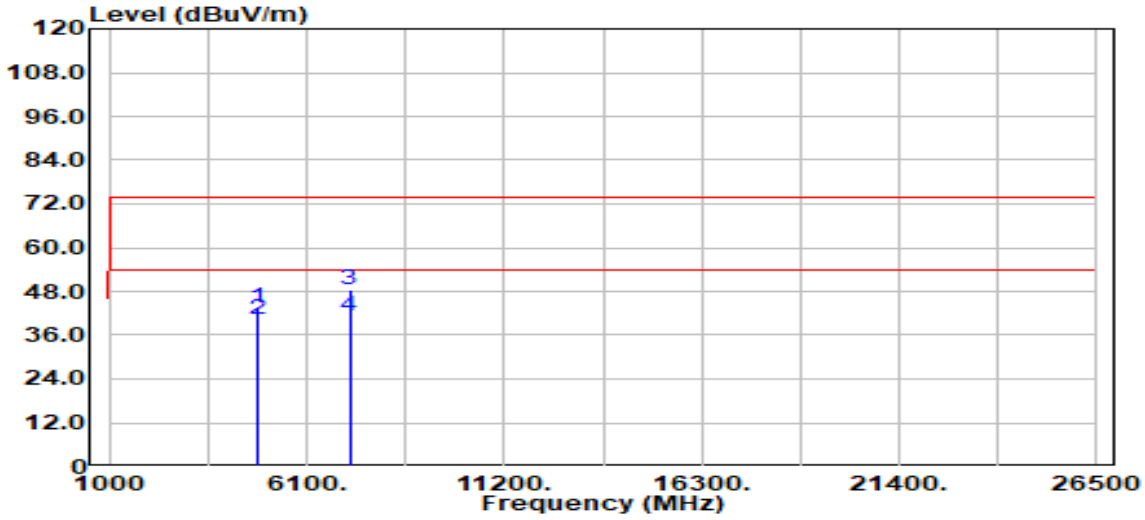
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
30.000	Peak	34.68	-3.22	31.46	40.00	-8.54
116.573	Peak	38.49	-9.72	28.77	43.50	-14.73
181.684	Peak	33.03	-11.74	21.28	43.50	-22.22
291.536	Peak	32.63	-8.96	23.67	46.00	-22.33
408.058	Peak	37.24	-5.71	31.53	46.00	-14.47
831.463	Peak	30.30	1.66	31.97	46.00	-14.03

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Above 1G Test Data

Test Mode:	GFSK_BDR-1Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



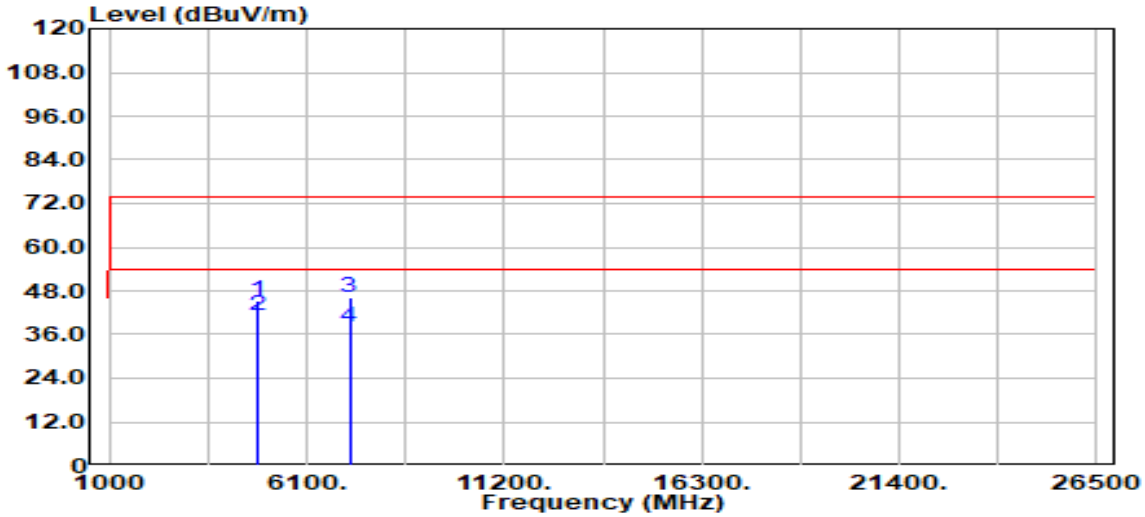
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4804.000	Peak	37.70	5.87	43.57	74.00	-30.43
4804.000	Average	34.58	5.87	40.45	54.00	-13.55
7206.000	Peak	35.15	13.25	48.40	74.00	-25.60
7206.000	Average	28.10	13.25	41.35	54.00	-12.65
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



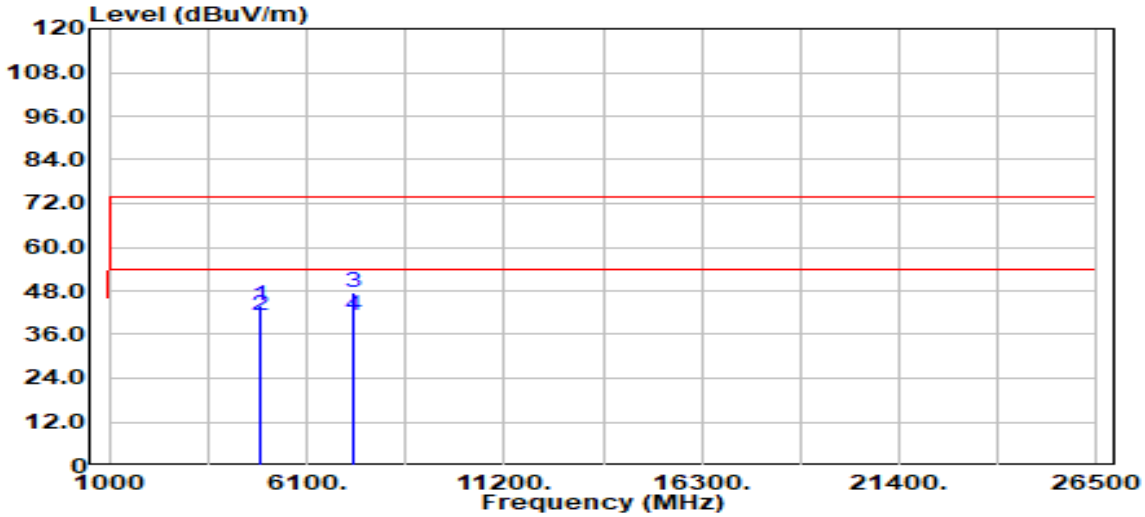
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4804.000	Peak	39.29	5.87	45.16	74.00	-28.84
4804.000	Average	35.31	5.87	41.18	54.00	-12.82
7206.000	Peak	32.72	13.25	45.97	74.00	-28.03
7206.000	Average	24.56	13.25	37.81	54.00	-16.19
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps Mid CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



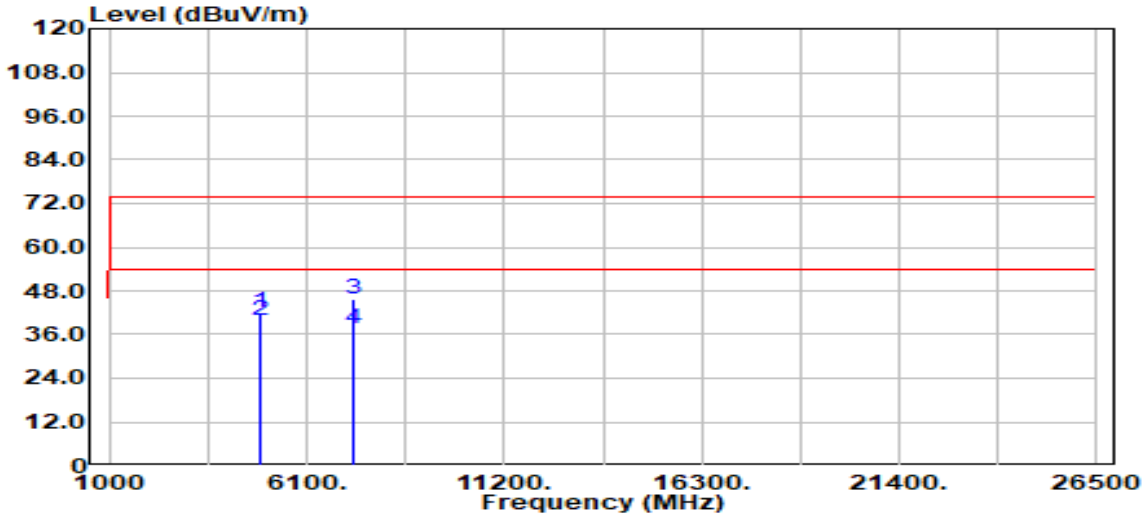
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4882.000	Peak	37.79	6.14	43.93	74.00	-30.07
4882.000	Average	34.86	6.14	41.00	54.00	-13.00
7323.000	Peak	34.22	13.36	47.58	74.00	-26.42
7323.000	Average	27.71	13.36	41.07	54.00	-12.93
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps Mid CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



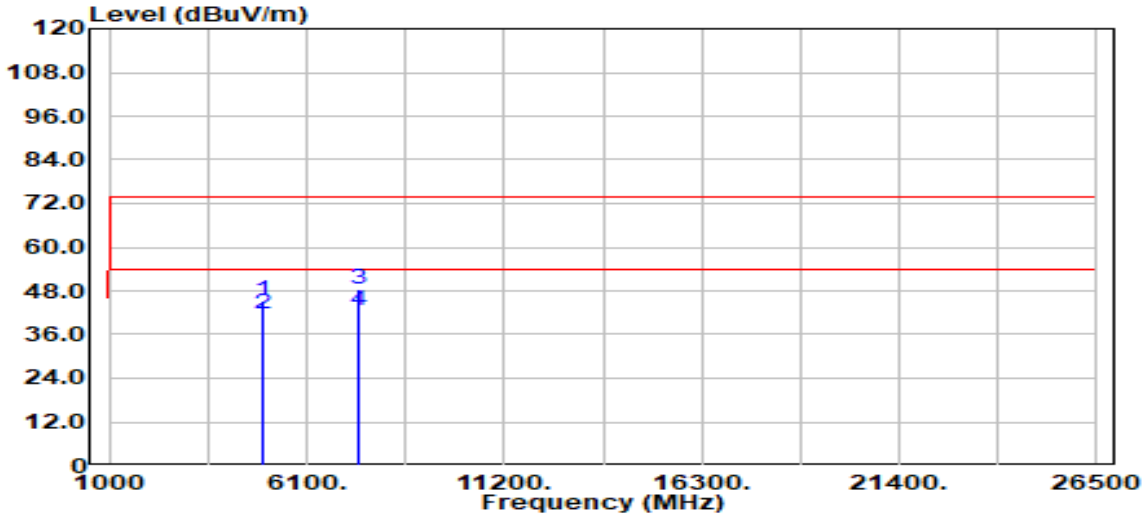
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4882.000	Peak	35.81	6.14	41.95	74.00	-32.05
4882.000	Average	33.78	6.14	39.92	54.00	-14.08
7323.000	Peak	32.20	13.36	45.55	74.00	-28.45
7323.000	Average	24.29	13.36	37.65	54.00	-16.35
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



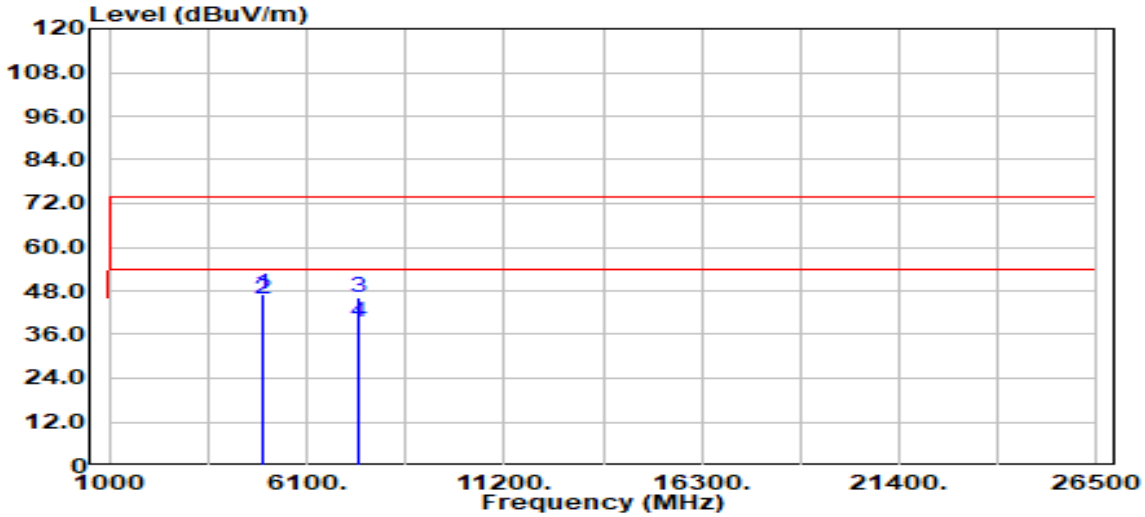
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4960.000	Peak	38.29	6.91	45.21	74.00	-28.79
4960.000	Average	34.95	6.91	41.86	54.00	-12.14
7440.000	Peak	35.06	13.22	48.28	74.00	-25.72
7440.000	Average	29.51	13.22	42.73	54.00	-11.27
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	GFSK_BDR-1Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



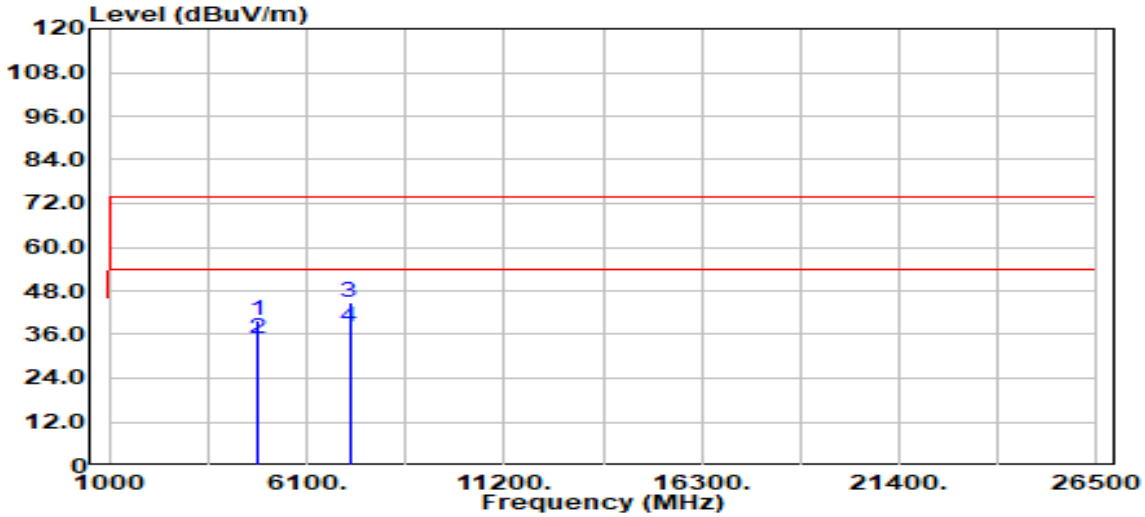
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4960.000	Peak	40.10	6.91	47.02	74.00	-26.98
4960.000	Average	38.88	6.91	45.79	54.00	-8.21
7440.000	Peak	32.81	13.22	46.03	74.00	-27.97
7440.000	Average	26.15	13.22	39.37	54.00	-14.63
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	8DPSK_EDR-3Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



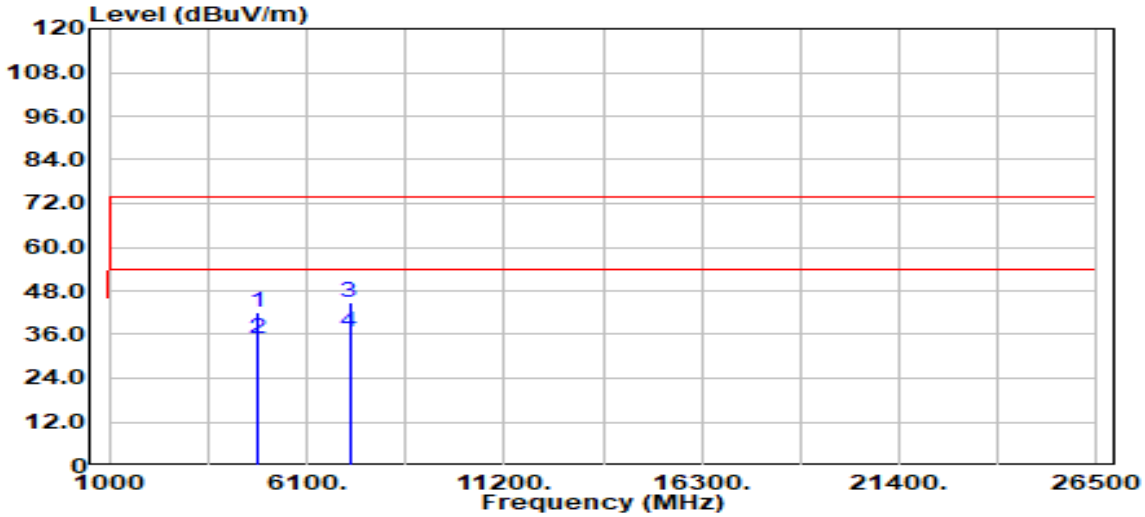
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4804.000	Peak	34.04	5.87	39.90	74.00	-34.10
4804.000	Average	28.86	5.87	34.73	54.00	-19.27
7206.000	Peak	31.49	13.25	44.75	74.00	-29.25
7206.000	Average	24.90	13.25	38.15	54.00	-15.85
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	8DPSK_EDR-3Mbps Low CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



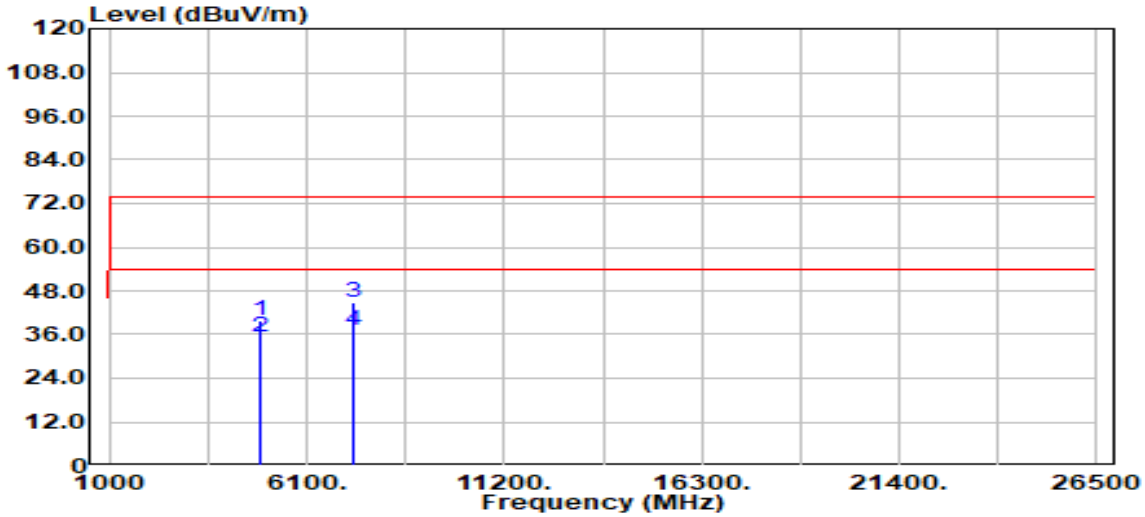
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4804.000	Peak	36.03	5.87	41.90	74.00	-32.10
4804.000	Average	28.89	5.87	34.76	54.00	-19.24
7206.000	Peak	31.61	13.25	44.86	74.00	-29.14
7206.000	Average	23.27	13.25	36.52	54.00	-17.48
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	8DPSK_EDR-3Mbps Mid CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



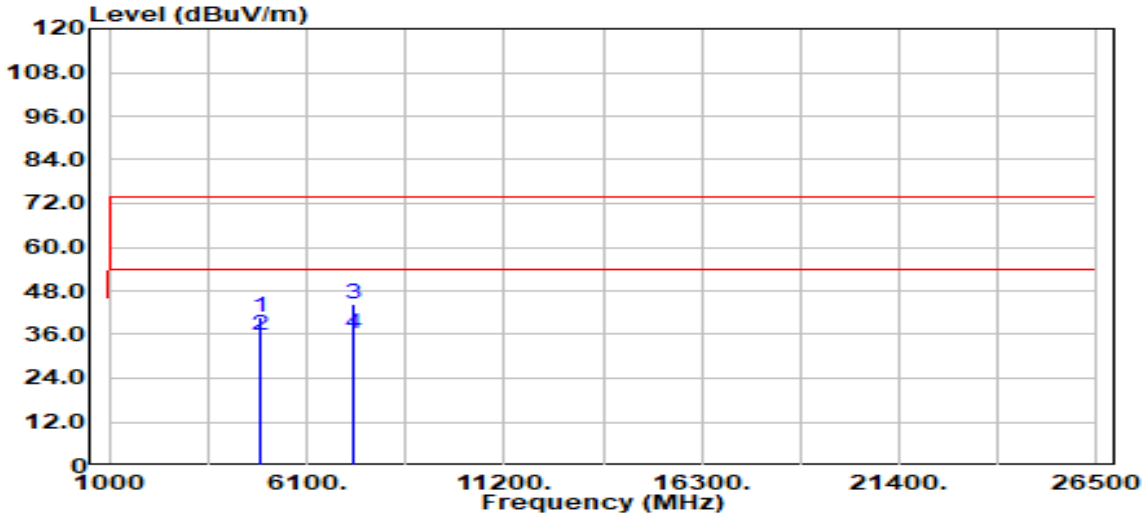
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4882.000	Peak	33.78	6.14	39.92	74.00	-34.08
4882.000	Average	28.98	6.14	35.12	54.00	-18.88
7323.000	Peak	31.66	13.36	45.01	74.00	-28.99
7323.000	Average	23.74	13.36	37.10	54.00	-16.90
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	8DPSK_EDR-3Mbps Mid CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



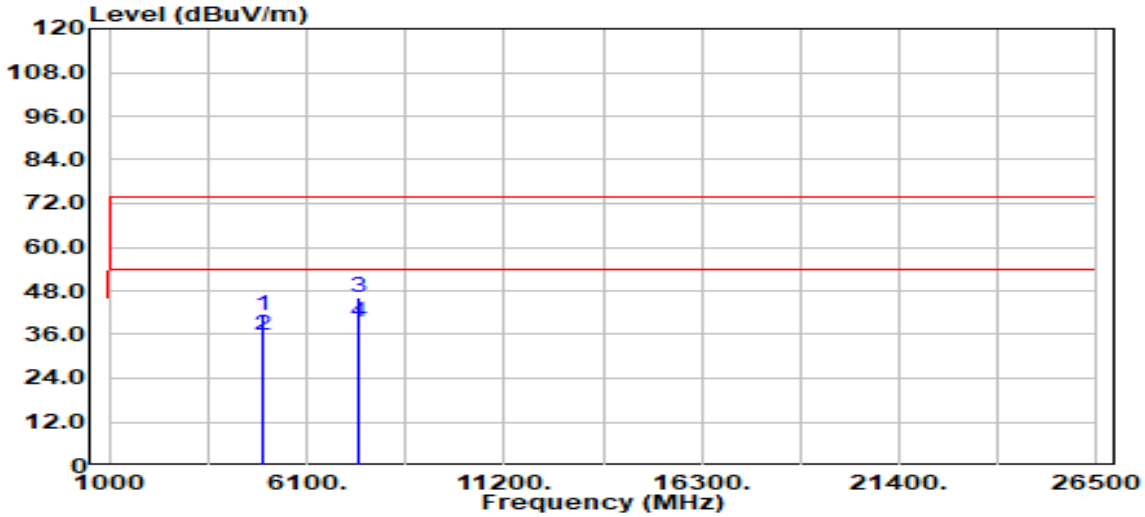
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4882.000	Peak	34.77	6.14	40.91	74.00	-33.09
4882.000	Average	29.62	6.14	35.76	54.00	-18.24
7323.000	Peak	31.17	13.36	44.53	74.00	-29.47
7323.000	Average	22.75	13.36	36.11	54.00	-17.89
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	8DPSK_EDR-3Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Vertical	Test Engineer	Tony Chao
Detector	Peak / Average		



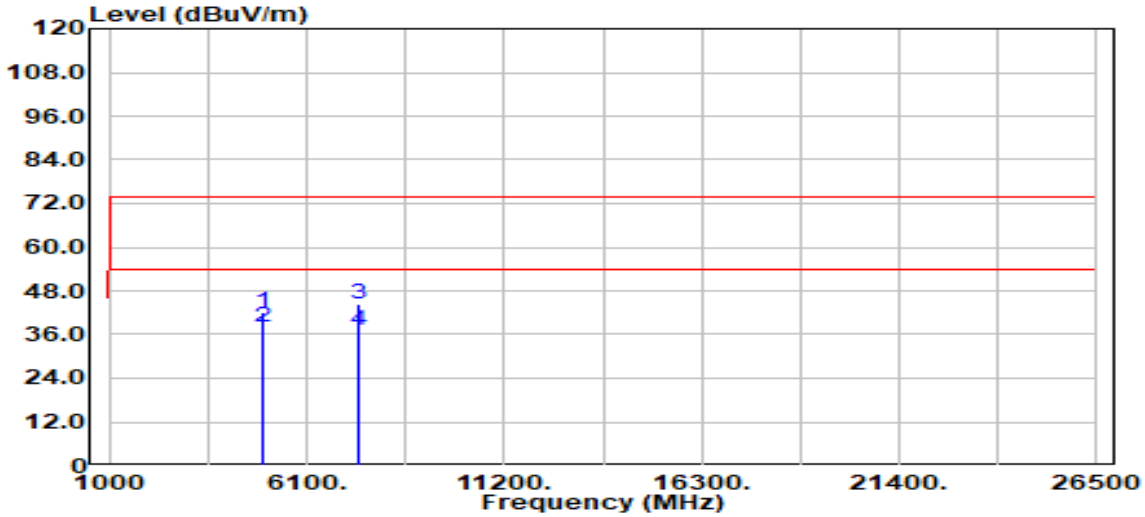
Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4960.000	Peak	34.37	6.91	41.28	74.00	-32.72
4960.000	Average	28.86	6.91	35.77	54.00	-18.23
7440.000	Peak	32.88	13.22	46.10	74.00	-27.90
7440.000	Average	26.08	13.22	39.30	54.00	-14.70
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。

Test Mode:	8DPSK_EDR-3Mbps High CH	Temp/Hum	24.1(℃)/ 63%RH
Test Item	Harmonic	Test Date	September 12, 2022
Polarize	Horizontal	Test Engineer	Tony Chao
Detector	Peak / Average		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBμV)	Factor (dB)	Actual FS (dBμV/m)	Limit @3m (dBμV/m)	Margin (dB)
4960.000	Peak	35.39	6.91	42.30	74.00	-31.70
4960.000	Average	31.13	6.91	38.04	54.00	-15.96
7440.000	Peak	31.21	13.22	44.43	74.00	-29.57
7440.000	Average	23.96	13.22	37.18	54.00	-16.82
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

- End of Test Report -

This document cannot be reproduced except in full, without prior written approval of the Company. 本報告未經本公司書面許可，不可部份複製。