

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Report No.: RFBBUI-WTW-P26020159-2

FCC ID: TX2-RTL8922D

Product: 11be RTL8922D M.2 1216 Combo module

Brand: REALTEK

Model No.: RTL8922D

Received Date: 2026/2/9

Test Date: 2026/5/22 ~ 2026/6/12

Issued Date: 2026/7/21

Applicant: Realtek Semiconductor Corp.

Address: No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

FCC Registration / 723255 / TW2022

Designation Number:

Approved by: _____, **Date:** 2026/7/21
May Chen / Manager

This test report consists of 96 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.

Prepared by: Vito Lung / Specialist



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Table of Contents

Release Control Record	4
1 Certificate.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Supplementary Information	6
3 General Information	7
3.1 General Description	7
3.2 Antenna Description of EUT	8
3.3 Channel List	9
3.4 Test Mode Applicability and Tested Channel Detail	10
3.5 Duty Cycle of Test Signal	11
3.6 Test Program Used and Operation Descriptions	12
3.7 Connection Diagram of EUT and Peripheral Devices	12
3.8 Configuration of Peripheral Devices and Cable Connections	13
4 Test Instruments	14
4.1 RF Output Power	14
4.2 Number of Hopping Frequency Used	14
4.3 Dwell Time on Each Channel	14
4.4 Hopping Channel Separation	14
4.5 20 dB Bandwidth	14
4.6 Conducted Out of Band Emissions	14
4.7 AC Power Conducted Emissions	15
4.8 Unwanted Emissions below 1 GHz	15
4.9 Unwanted Emissions above 1 GHz	16
5 Limits of Test Items.....	17
5.1 RF Output Power	17
5.2 Number of Hopping Frequency Used	17
5.3 Dwell Time on Each Channel	17
5.4 Hopping Channel Separation	17
5.5 20 dB Bandwidth	17
5.6 Conducted Out of Band Emissions	17
5.7 AC Power Conducted Emissions	17
5.8 Unwanted Emissions below 1 GHz	18
5.9 Unwanted Emissions above 1 GHz	18
6 Test Arrangements.....	19
6.1 RF Output Power	19
6.1.1 Test Setup	19
6.1.2 Test Procedure	19
6.2 Number of Hopping Frequency Used	19
6.2.1 Test Setup	19
6.2.2 Test Procedure	19
6.3 Dwell Time on Each Channel	20
6.3.1 Test Setup	20
6.3.2 Test Procedure	20
6.4 Hopping Channel Separation	21
6.4.1 Test Setup	21
6.4.2 Test Procedure	21
6.5 20 dB Bandwidth	22
6.5.1 Test Setup	22
6.5.2 Test Procedure	22
6.6 Conducted Out of Band Emissions	23
6.6.1 Test Setup	23
6.6.2 Test Procedure	23
6.7 AC Power Conducted Emissions	24

6.7.1	Test Setup	24
6.7.2	Test Procedure	24
6.8	Unwanted Emissions below 1 GHz	25
6.8.1	Test Setup	25
6.8.2	Test Procedure	26
6.9	Unwanted Emissions above 1 GHz	27
6.9.1	Test Setup	27
6.9.2	Test Procedure	27
7	Test Results of Test Item	28
7.1	RF Output Power	28
7.2	Number of Hopping Frequency Used	30
7.3	Dwell Time on Each Channel	31
7.4	Hopping Channel Separation	33
7.5	20 dB Bandwidth	35
7.6	Conducted Out of Band Emissions	37
7.7	AC Power Conducted Emissions	43
7.8	Unwanted Emissions below 1 GHz	45
7.9	Unwanted Emissions above 1 GHz	53
8	Pictures of Test Arrangements	95
9	Information of the Testing Laboratories	96

Release Control Record

Issue No.	Description	Date Issued
RFBBUI-WTW-P26020159-2	Original release.	2026/7/21

1 Certificate

Product: 11be RTL8922D M.2 1216 Combo module

Brand: REALTEK

Test Model: RTL8922D

Sample Status: Engineering sample

Applicant: Realtek Semiconductor Corp.

Test Date: 2026/5/22 ~ 2026/6/12

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Measurement ANSI C63.10-2020

procedure: KDB 558074 D01 15.247 Meas Guidance v05r02

KDB 662911 D01 Multiple Transmitter Output v02r01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247 (a)(1)	RF Output Power	Pass	Meet the requirement of limit.
15.247(a)(1) (iii)	Number of Hopping Frequency Used	Pass	Meet the requirement of limit.
15.247(a)(1) (iii)	Dwell Time on Each Channel	Pass	Meet the requirement of limit.
15.247(a)(1)	Hopping Channel Separation	Pass	Meet the requirement of limit.
15.247(a)(1)	20 dB Bandwidth	-	Refer to Note 1
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -13.40 dB at 0.48594 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -9.5 dB at 697.04 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -7.3 dB at 2390.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is IPEX, MHF4, MHF4L, not a standard connector.

Notes:

1. If the Frequency Hopping System operating in 2400-2483.5 MHz band and the output power less than 125 mW. The hopping channel carrier frequencies separated by a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of hopping channel whichever is greater.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Parameter	Specification	Uncertainty (±)
RF Output Power	-	1.1 dB
Number of Hopping Frequency Used	-	1050.00 Hz
Dwell Time on Each Channel	-	2.2 ms
Hopping Channel Separation	-	1050.00 Hz
20 dB Bandwidth	-	1050.00 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.6 dB
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.4 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.0 dB
	18 GHz ~ 40 GHz	5.3 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	11be RTL8922D M.2 1216 Combo module
Brand	REALTEK
Test Model	RTL8922D
Status of EUT	Engineering sample
Power Supply Rating	3.3 Vdc from host equipment
Modulation Type	GFSK, pi/4-DQPSK, 8DPSK
Modulation Technology	FHSS
Transfer Rate	Up to 3 Mbps
Operating Frequency	2.402 GHz ~ 2.48 GHz
Number of Channel	79
Output Power	36.803 mW (15.66 dBm)

Note:

1. There are Bluetooth and WLAN (2.4 GHz & 5 GHz & 6 GHz) technology used for the EUT.
2. Simultaneously transmission combination.

1Tx		
Combination	Technology	
	S0 (Chain 1)	S1 (Chain 0)
1	WLAN (5 GHz)_H	Bluetooth + WLAN (5 GHz)_L
2	WLAN (6 GHz)	Bluetooth + WLAN (5 GHz)_H
3	WLAN (5 GHz)_H	Bluetooth + WLAN (6 GHz)
4	WLAN (2.4 GHz)	WLAN (5 GHz) Full
5	WLAN (2.4 GHz)	WLAN (6 GHz)
6	WLAN (5 GHz) Full	Bluetooth
7	WLAN (6 GHz)	Bluetooth
2Tx		
1	WLAN (5 GHz)_H + Bluetooth	WLAN (5 GHz)_H + Bluetooth
2	WLAN (5 GHz)_H	WLAN (5 GHz)_H + Bluetooth
3	WLAN (6 GHz) + Bluetooth	WLAN (6 GHz) + Bluetooth

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Set	EUT Port No.	RF Chain No.	Brand	Model	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type	Cable Length (mm)
1	1/2	Chain0/1	REALTEK	RTK-ANT-0022	3.4	2.4~2.4835	PIFA	IPEX, MHF4	300
					5	5.15~5.85			
					5	5.925~7.125			
2	1/2	Chain0/1	HongBo	260-25096	3.11	2.4~2.4835	Monopole	MHF4L	300
					4.91	5.15~5.85			
					4.73	5.925~7.125			

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

3.3 Channel List

79 channels are provided for BT-EDR:

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

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The PIFA/ Monopole antenna can be used in the following ways: X / Y / Z axis. Pre-scan in these ways and find the worst case as a representative test condition. 2. For 1Tx diversity configuration. Pre-scan in these chains and find the worst case as a representative test condition. 3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.
Worst Case:	1. The antenna sets of the worst case was found when positioned on (X / Y / Z axis) ➤ PIFA antenna: Y axis ➤ Monopole antenna: X axis 2. For 1Tx diversity configuration the worst chain is: Chain0 (S1)

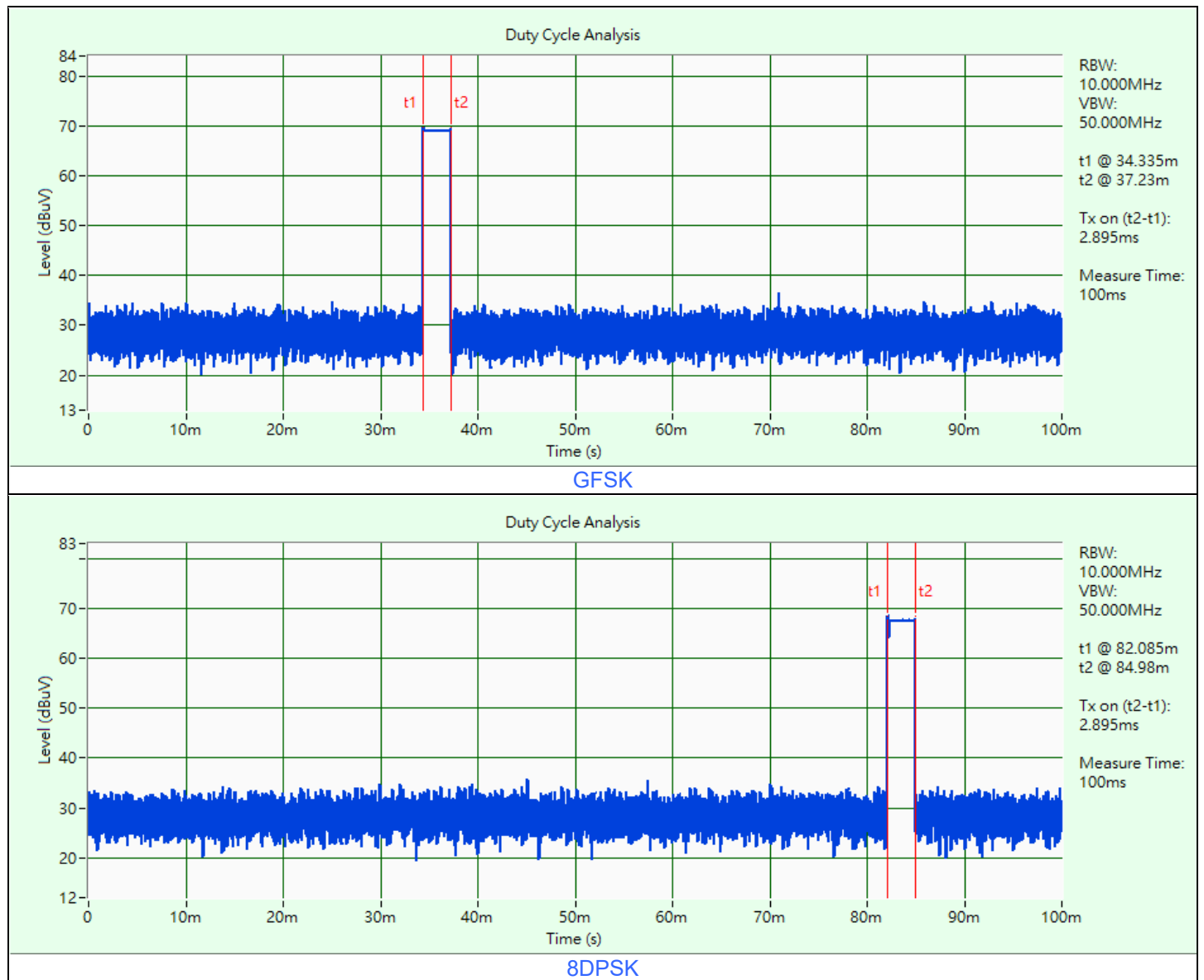
Following channel(s) was (were) selected for the final test as listed below:

Test Item	EUT Configure Mode	Transmitter Configuration	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	-	1Tx / 2Tx	0, 39, 78	GFSK	DH5
				8DPSK	3DH5
Number of Hopping Frequency Used	-	-	Hopping	GFSK	DH5
				8DPSK	3DH5
Dwell Time on Each Channel	-	-	Hopping	GFSK	DH1/DH3/DH5
				8DPSK	3DH1/3DH3/3DH5
Hopping Channel Separation / 20 dB Bandwidth	-	1Tx / 2Tx	0, 39, 78	GFSK	DH5
				8DPSK	3DH5
Conducted Out of Band Emissions	-	1Tx / 2Tx	Hopping 0, 78	GFSK	DH5
				8DPSK	3DH5
AC Power Conducted Emissions	A	2Tx	0	GFSK	DH5
Unwanted Emissions below 1 GHz	A, B	1Tx	78	GFSK	DH5
		2Tx	0	GFSK	DH5
Unwanted Emissions above 1 GHz	A, B	1Tx / 2Tx	0, 39, 78	GFSK	DH5
				8DPSK	3DH5
EUT Configure Mode:	A	PIFA antenna (Model: RTK-ANT-0022)			
	B	Monopole antenna (Model: 260-25096)			

3.5 Duty Cycle of Test Signal

GFSK: Duty cycle = 2.895 ms / 100 ms x 100% = 2.9%

8DPSK: Duty cycle = 2.895 ms / 100 ms x 100% = 2.9%



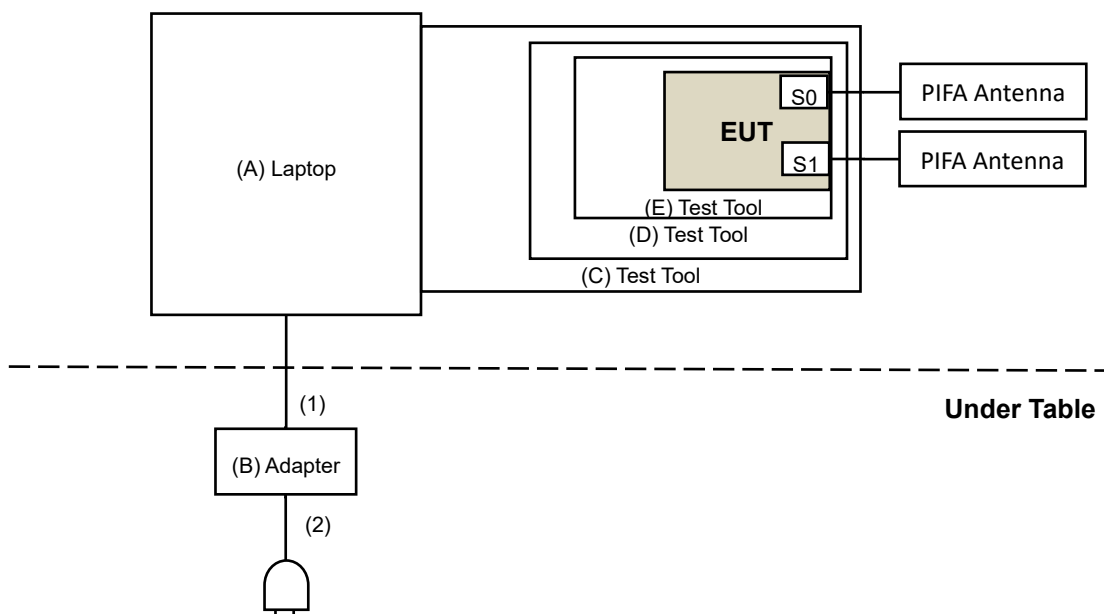
3.6 Test Program Used and Operation Descriptions

Controlling software (20260515_Realtek Bluetooth MP Kit Setup Package(234338)) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

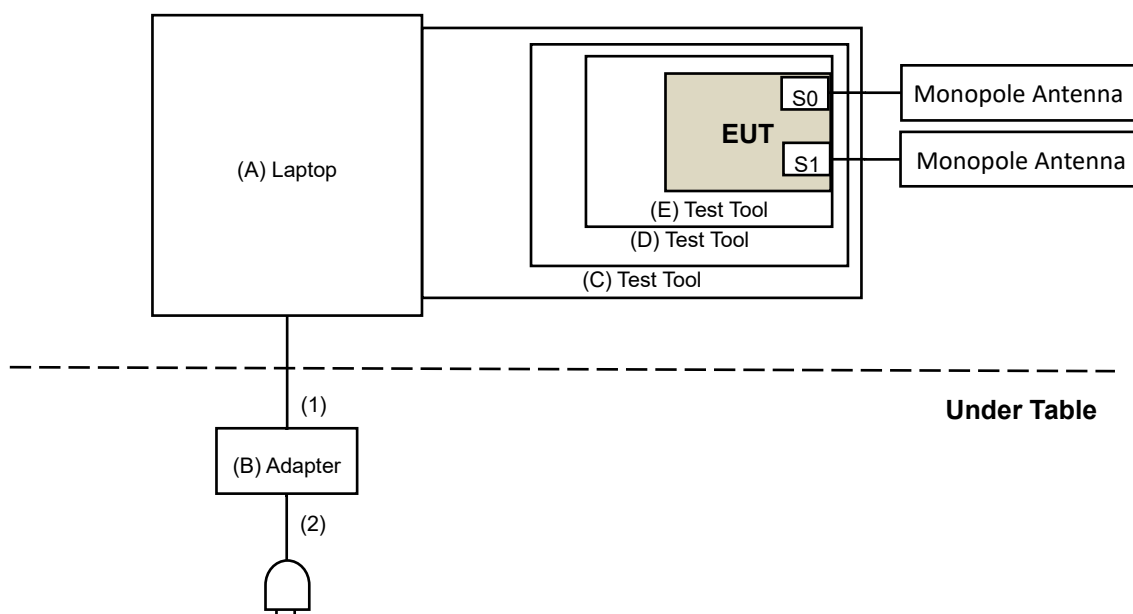
3.7 Connection Diagram of EUT and Peripheral Devices

For Unwanted Emissions test:

Mode A

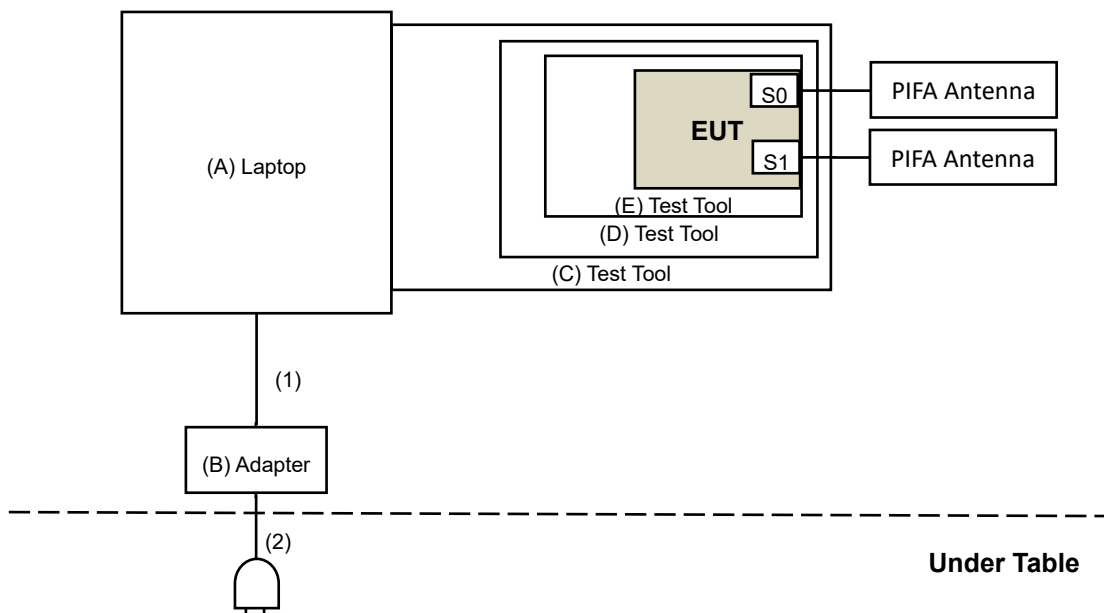


Mode B



For AC Power Conducted Emission test:

Mode A



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Notebook	DELL	E6230	G94PSY1	N/A	Provided by Lab
B	Adapter	DELL	LA65NM130	N/A	N/A	Provided by Lab
C	Test Tool	Realtek	MTE	N/A	N/A	Supplied by applicant
D	Test Tool	NFHK	N-9437 Ver2.0	N/A	N/A	Supplied by applicant
E	Test Tool	Realtek	N/A	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.8	0	0	Provided by Lab
2	AC Cable	1	1	0	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-20	00800A1K01A-20-02	2026/5/21	2027/5/20
Pulse Power Sensor Anritsu	MA2411B	1726433	2026/5/8	2027/5/7
RF Power Meter Anritsu	ML2496A	1920012	2026/5/8	2027/5/7

Notes:

1. The test was performed in HC - Oven room 2(Hsinchu).
2. Tested Date: 2026/6/12

4.2 Number of Hopping Frequency Used

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2026/5/21	2027/5/20
MXA Signal Analyzer Keysight	N9020B	MY60112408	2026/2/12	2027/2/11
Software	ADT_RF Test Software v8.5.6.4	N/A	N/A	N/A

Notes:

1. The test was performed in HC - Oven room 2(Hsinchu).
2. Tested Date: 2026/6/12

4.3 Dwell Time on Each Channel

Refer to section 4.2 to get the tested date and information of the instruments.

4.4 Hopping Channel Separation

Refer to section 4.2 to get the tested date and information of the instruments.

4.5 20 dB Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.6 Conducted Out of Band Emissions

Refer to section 4.2 to get the tested date and information of the instruments.

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2025/10/29	2026/10/28
EMI Test Receiver R&S	ESCS 30	100375	2026/5/20	2027/5/19
Fixed Attenuator STI	STI02-2200-10	005	2026/2/9	2027/2/8
LISN R&S	ESH3-Z5	835239/001	2026/3/30	2027/3/29
		848773/004	2025/10/3	2026/10/2
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2026/2/9	2027/2/8
Software BVADT	BVADT_Cond_V7.4.1.0	N/A	N/A	N/A

Notes:

1. The test was performed in HC - Conduction 1(Hsinchu).
2. Tested Date: 2026/5/22

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-361	2025/9/16	2026/9/15
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Fixed Attenuator Woken	00800N1G01A-05	00800N1G01A-05-003	2026/1/31	2027/1/30
Loop Antenna TESEQ	HLA 6121	63620	2025/10/20	2026/10/19
MXE EMI Receiver Agilent	N9038A	MY50010156	2025/6/5	2026/6/4
Preamplifier EMCI	EMC330N	980852	2026/1/31	2027/1/30
RF Coaxial Cable PEWC	8D	001	2026/1/31	2027/1/30
		966-3-2	2026/1/31	2027/1/30
		966-3-3	2026/1/31	2027/1/30
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in HC - 966 Chamber No. 3(Hsinchu).
2. Tested Date: 2026/5/22

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-406	2025/11/9	2026/11/8
	BBHA 9170	9170-739	2025/11/9	2026/11/8
MXE EMI Receiver Agilent	N9038A	MY50010156	2025/6/5	2026/6/4
Preamplifier EMCI	EMC12630SE	980384	2026/1/10	2027/1/9
	EMC184045SE	980387	2025/8/7	2026/8/6
PXA Signal Analyzer Keysight	N9030B	MY57141948	2026/5/25	2027/5/24
RF Coaxial Cable EMCI	EMC102-KM-KM-1200	160924	2026/1/15	2027/1/14
	EMC102-KM-KM-4000	200214	2026/1/15	2027/1/14
	EMC104-SM-SM-1500	180504	2026/1/17	2027/1/16
	EMC104-SM-SM-2000	180601	2026/1/17	2027/1/16
	EMC104-SM-SM-6000	210201	2026/1/17	2027/1/16
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in HC - 966 Chamber No. 3(Hsinchu).
2. Tested Date: 2026/5/26 ~ 2026/6/4

5 Limits of Test Items

5.1 RF Output Power

The Maximum Output Power Measurement is 125 mW (21 dBm).

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

5.2 Number of Hopping Frequency Used

At least 15 channels frequencies, and should be equally spaced.

5.3 Dwell Time on Each Channel

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.

5.4 Hopping Channel Separation

At least 25 kHz or two-third of 20 dB hopping channel bandwidth (whichever is greater).

5.5 20 dB Bandwidth

Maximum bandwidth is not specified.

5.6 Conducted Out of Band Emissions

Below 20 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

5.7 AC Power Conducted Emissions

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Notes:

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

5.8 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (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
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.9 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

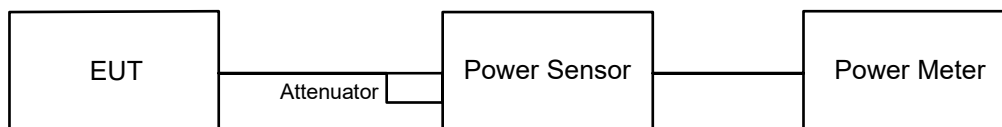
Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



6.1.2 Test Procedure

Peak Power:

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

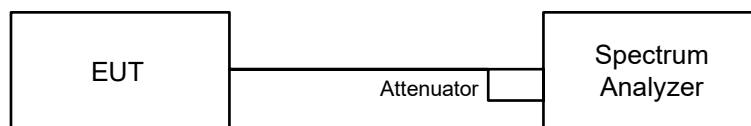
The power meter video bandwidth is greater than or equal to the DTS bandwidth and use a fast responding diode detector.

Average Power:

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

6.2 Number of Hopping Frequency Used

6.2.1 Test Setup



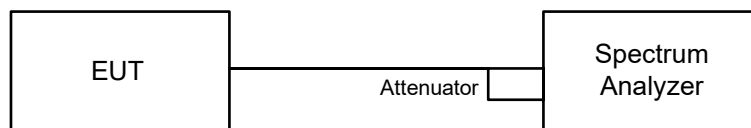
6.2.2 Test Procedure

- Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
- Span: The frequency band of operation. Depending on the number of channels the device supports, it could be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- Video (or average) bandwidth (VBW) $\geq$ RBW.
- Sweep: No faster than coupled (auto) time.
- Detector function: Peak.
- Trace: Max-hold.
- Allow the trace to stabilize

Note: Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the number of channels need only be measured for one of those modulation schemes or data rates.

6.3 Dwell Time on Each Channel

6.3.1 Test Setup



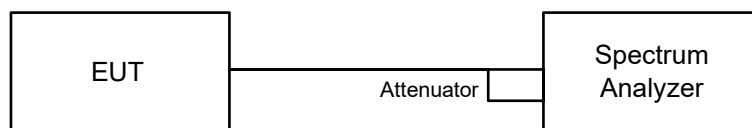
6.3.2 Test Procedure

- Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
- Span: Zero span, centered on a hopping channel.
- RBW shall be $\leq$ channel spacing and where possible RBW should be set $\gg 1/T$, where T is the expected transmission time per hop.
- Sweep time: Set so that the start of the first transmission and end of the last transmission for the hop are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period = $1/\text{hopping rate}$) should achieve this.
- Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed. The trigger level might need adjustment to reduce the chance of triggering when the system hops on an adjacent channel.
- Detector function: Peak.
- Trace: Clear-write, single sweep.
- Place markers at the start of the first transmission on the channel and at the end of the last transmission. The dwell time per hop is the time between these two markers.

Note: Where the device shares the same hopping algorithms (dwell time, channel selection) across multiple data rates or modulation schemes then the time of occupancy need only be measured for one of those modulation schemes or data rates. If the dwell time value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in dwell time.

6.4 Hopping Channel Separation

6.4.1 Test Setup



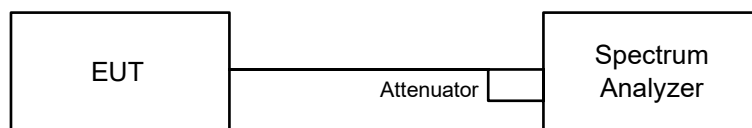
6.4.2 Test Procedure

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range.
- Span: Wide enough to capture the peaks of two adjacent channels.
- RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
- Video (or average) bandwidth (VBW) $\geq$ RBW.
- Sweep: No faster than coupled (auto) time.
- Detector function: Peak.
- Trace: Max-hold.
- Allow the trace to stabilize.

Note: Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the carrier separation need only be measured for one of those modulation schemes or data rates.

6.5 20 dB Bandwidth

6.5.1 Test Setup

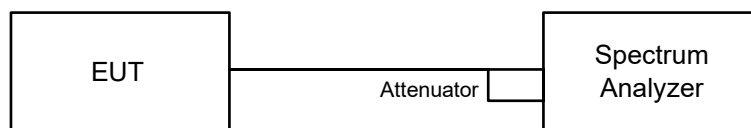


6.5.2 Test Procedure

- a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
- c. The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be at least three times RBW, unless otherwise specified by the applicable requirement.
- d. Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level.
- e. Steps a) through c) might require iteration to adjust within the specified tolerances.
- f. The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- g. Set detection mode to peak and trace mode to max-hold.
- h. Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- i. Determine the “-xx dB down amplitude” using $[(\text{reference value}) - xx]$. Alternatively, this calculation may be made by using the marker-delta function of the instrument.

6.6 Conducted Out of Band Emissions

6.6.1 Test Setup



6.6.2 Test Procedure

MEASUREMENT PROCEDURE REF

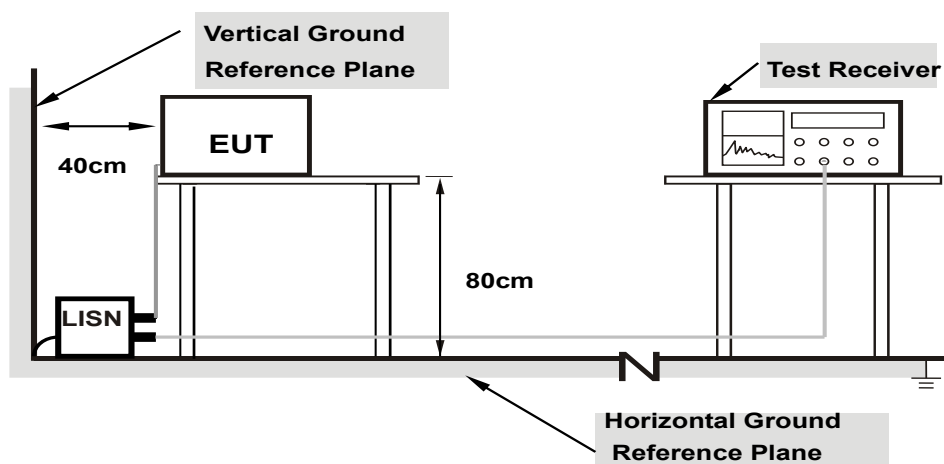
- Set instrument center frequency to DTS channel center frequency.
- Set the span to ≥ 1.5 times the DTS bandwidth.
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum PSD level.

MEASUREMENT PROCEDURE OOB

- Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution.
- Set RBW = 100 kHz.
- Set VBW ≥ 300 kHz.
- Detector = peak.
- Sweep = No faster than coupled (auto) time.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

6.7 AC Power Conducted Emissions

6.7.1 Test Setup



Note: 1. Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.7.2 Test Procedure

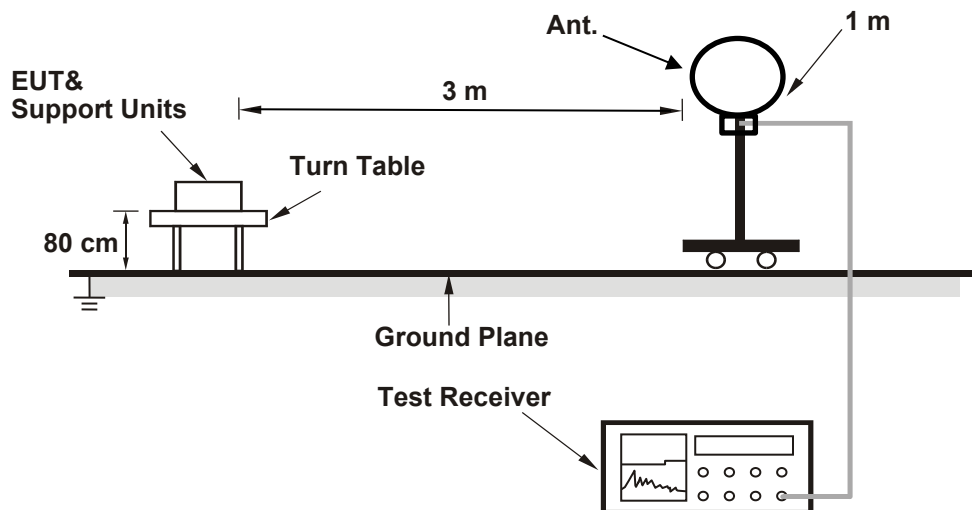
- Exploratory ac power-line conducted emission measurements: The EUT shall be operated on the mid channel and in the mode with highest output power unless the fundamental operates in the AC power-line emission test range then the EUT shall be operated in the range of typical modes of operation.
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

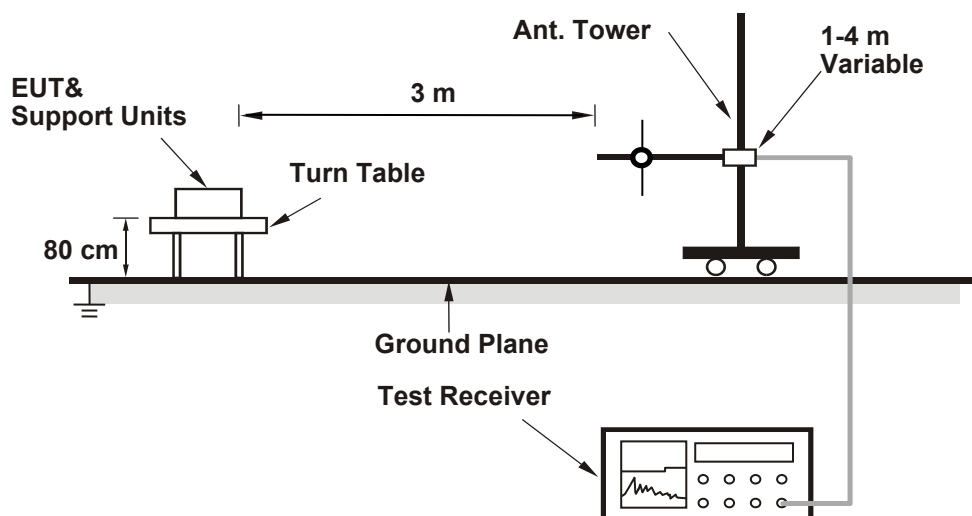
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.8.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode (however, peak detector measurements may be used to determine compliance with QP requirements), except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

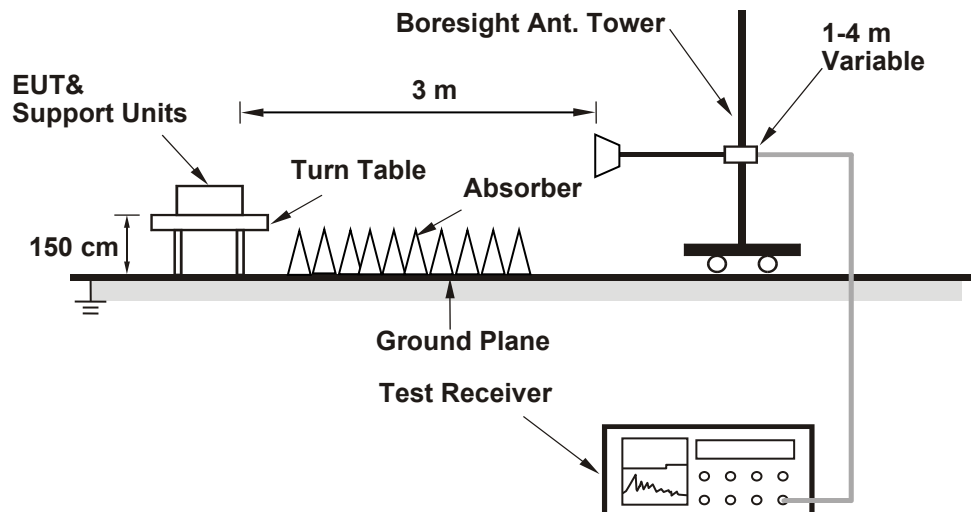
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-peak(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequencies less than or equal to 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz (however, peak detector measurements may be used to determine compliance with QP requirements).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.9.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
- The maximum dwell time per 1 MHz is determined as follows:
 Maximum dwell time per 1 MHz = dwell time per 100 ms per channel × (channel separation correction + overlapping channel correction) where:
 - Channel separation correction = $[1 / \text{channel separation (MHz)}]$ for channel separation < 1 MHz, and = 1 for channel separation ≥ 1 MHz, as determined using the procedures ANSI C63.10 of 7.8.2. If the average measurements are performed on the Nth harmonic, the channel separation value is N times the separation at the fundamental frequency.
 - Overlapping channel correction = 0 when the 20 dB channel bandwidth < channel separation and = 1 for when the 20 dB channel bandwidth > channel separation.
 The average value may be determined as follows:
 From the peak value of the emission: The measured peak value in dBuV/m is corrected by $20\log(\text{maximum dwell time in 100 ms} / 100)$.
- All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

1Tx

For Peak Power

GFSK

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	16.634	12.21	21	Pass
39	2441	16.331	12.13	21	Pass
78	2480	16.672	12.22	21	Pass

Note: The antenna gain is 3.4 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

8DPSK

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	17.824	12.51	21	Pass
39	2441	18.75	12.73	21	Pass
78	2480	19.543	12.91	21	Pass

Note: The antenna gain is 3.4 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

For Average Power

GFSK

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	15.171	11.81
39	2441	14.859	11.72
78	2480	15.241	11.83

8DPSK

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	8.551	9.32
39	2441	8.974	9.53
78	2480	9.661	9.85

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

2Tx

For Peak Power

GFSK

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
0	2402	12.02	12.25	32.71	15.15	20.59	Pass
39	2441	11.93	12.25	32.384	15.10	20.59	Pass
78	2480	12.05	11.53	30.256	14.81	20.59	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 6.41 dBi > 6 dBi, so the output power limit shall be reduced to 21-(6.41-6) = 20.59 dBm.

8DPSK

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
0	2402	12.36	12.53	35.125	15.46	20.59	Pass
39	2441	12.61	12.36	35.458	15.50	20.59	Pass
78	2480	12.82	12.47	36.803	15.66	20.59	Pass

Notes:

1. Directional gain = gain of antenna element + 10 log (2 of TX antenna elements)
2. The directional gain is 6.41 dBi > 6 dBi, so the output power limit shall be reduced to 21-(6.41-6) = 20.59 dBm.

For Average Power

GFSK

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
0	2402	11.70	11.93	30.387	14.83
39	2441	11.64	11.92	30.148	14.79
78	2480	11.73	11.20	28.076	14.48

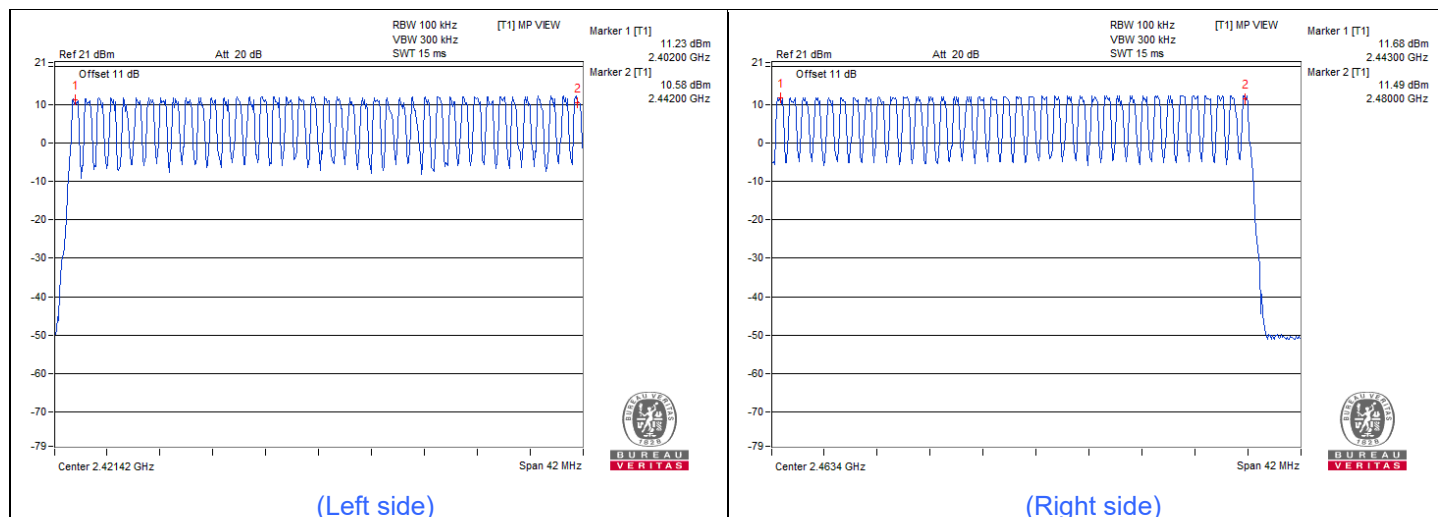
8DPSK

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
0	2402	9.12	9.05	16.201	12.10
39	2441	9.36	8.96	16.5	12.17
78	2480	9.71	9.03	17.352	12.39

7.2 Number of Hopping Frequency Used

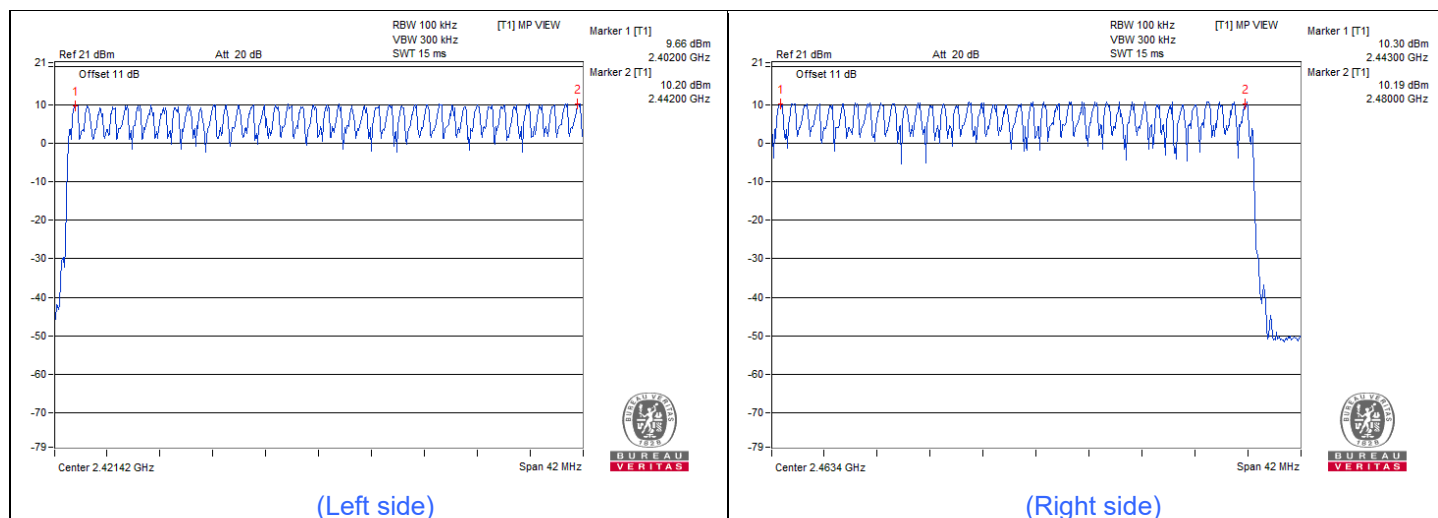
Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

GFSK



Note: There are 79 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

8DPSK



Note: There are 79 hopping frequencies in the hopping mode. On the plots, it shows that the hopping frequencies are equally spaced.

7.3 Dwell Time on Each Channel

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

GFSK

Mode	Number of transmission in 31.6 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
DH1	50 (times / 5 sec) * 6.32 = 316 times	0.462	146	400	Pass
DH3	24 (times / 5 sec) * 6.32 = 152 times	1.69	256.9	400	Pass
DH5	18 (times / 5 sec) * 6.32 = 114 times	2.976	339.3	400	Pass

Spectrum plots of Dwell Time



8DPSK

Mode	Number of transmission in 31.6 sec	Length of transmission time (msec)	Dwell Time (msec)	Limit (msec)	Test Result
3DH1	50 (times / 5 sec) * 6.32 = 316 times	0.45	142.2	400	Pass
3DH3	26 (times / 5 sec) * 6.32 = 165 times	1.68	277.2	400	Pass
3DH5	16 (times / 5 sec) * 6.32 = 102 times	3.024	308.4	400	Pass

Spectrum plots of Dwell Time



7.4 Hopping Channel Separation

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

1Tx

GFSK

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.00	0.64	Pass
39	2441	1.01	0.64	Pass
78	2480	1.00	0.64	Pass

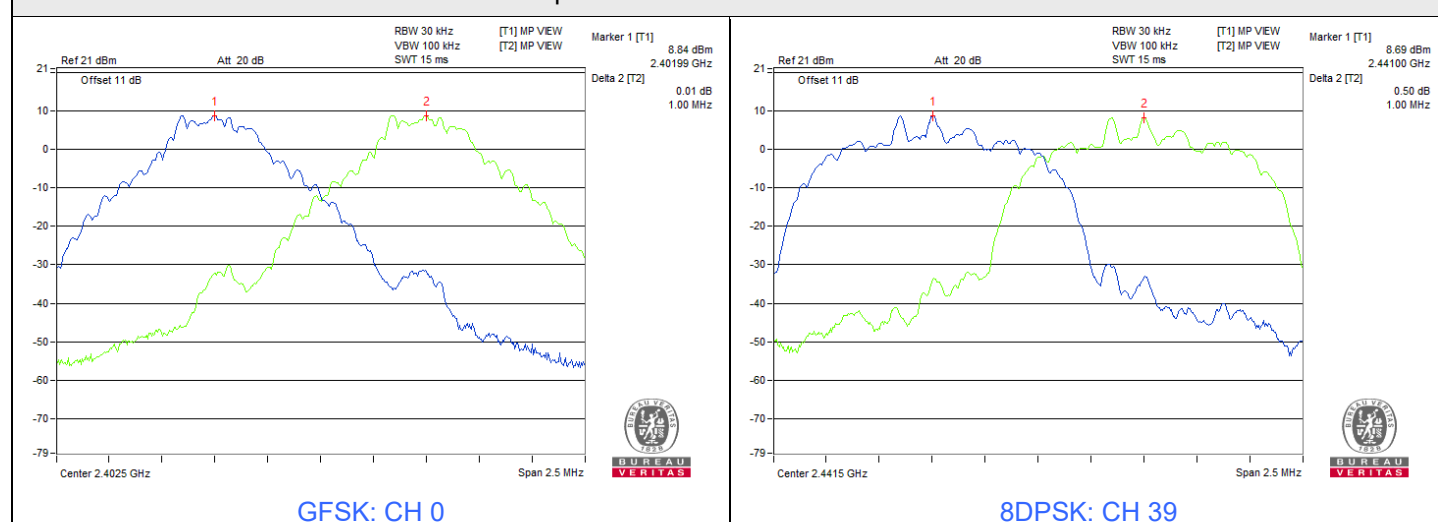
Note: The minimum limit is two-third 20dB bandwidth.

8DPSK

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.01	0.86	Pass
39	2441	1.00	0.86	Pass
78	2480	1.01	0.86	Pass

Note: The minimum limit is two-third 20dB bandwidth.

Spectrum Plot of Minimum Value



Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

2Tx

GFSK

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
0	2402	1.00	1.00	0.64	Pass
39	2441	1.01	1.00	0.64	Pass
78	2480	1.00	1.00	0.64	Pass

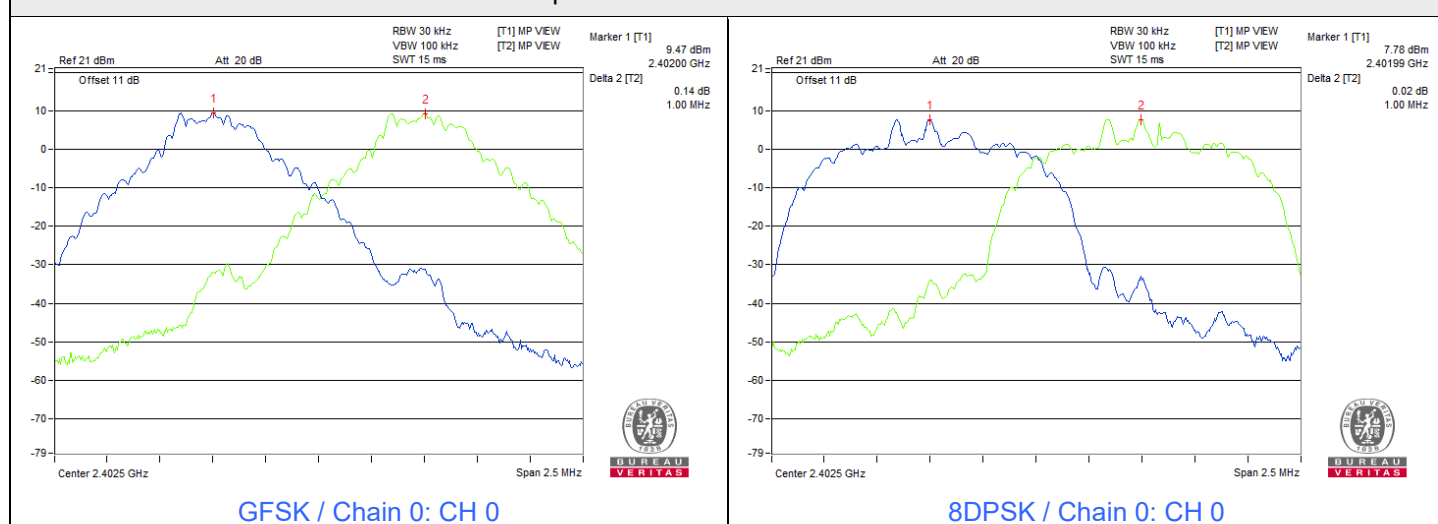
Note: The minimum limit is two-third 20dB bandwidth.

8DPSK

Channel	Frequency (MHz)	Hopping Channel Separation (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
0	2402	1.00	1.01	0.86	Pass
39	2441	1.01	1.01	0.86	Pass
78	2480	1.00	1.01	0.86	Pass

Note: The minimum limit is two-third 20dB bandwidth.

Spectrum Plot of Minimum Value



7.5 20 dB Bandwidth

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

1Tx

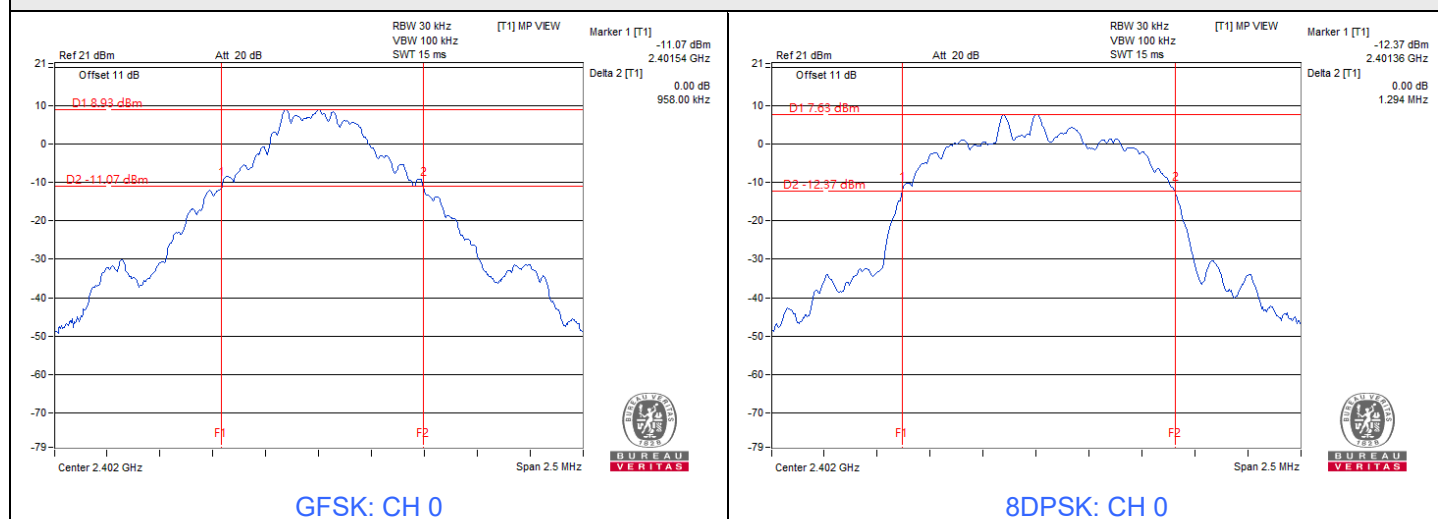
GFSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	0.95
39	2441	0.96
78	2480	0.95

8DPSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	2402	1.29
39	2441	1.29
78	2480	1.29

Spectrum Plot of Minimum Value



Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

2Tx

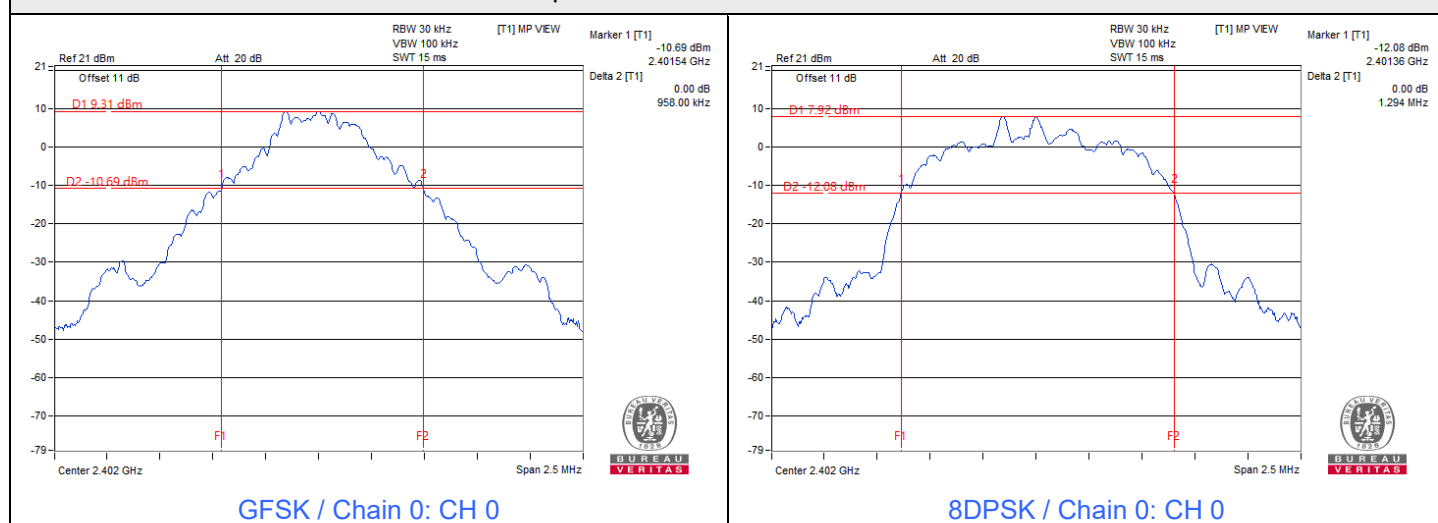
GFSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	
		Chain 0	Chain 1
0	2402	0.95	0.95
39	2441	0.95	0.95
78	2480	0.95	0.95

8DPSK

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	
		Chain 0	Chain 1
0	2402	1.29	1.29
39	2441	1.29	1.29
78	2480	1.29	1.29

Spectrum Plot of Minimum Value

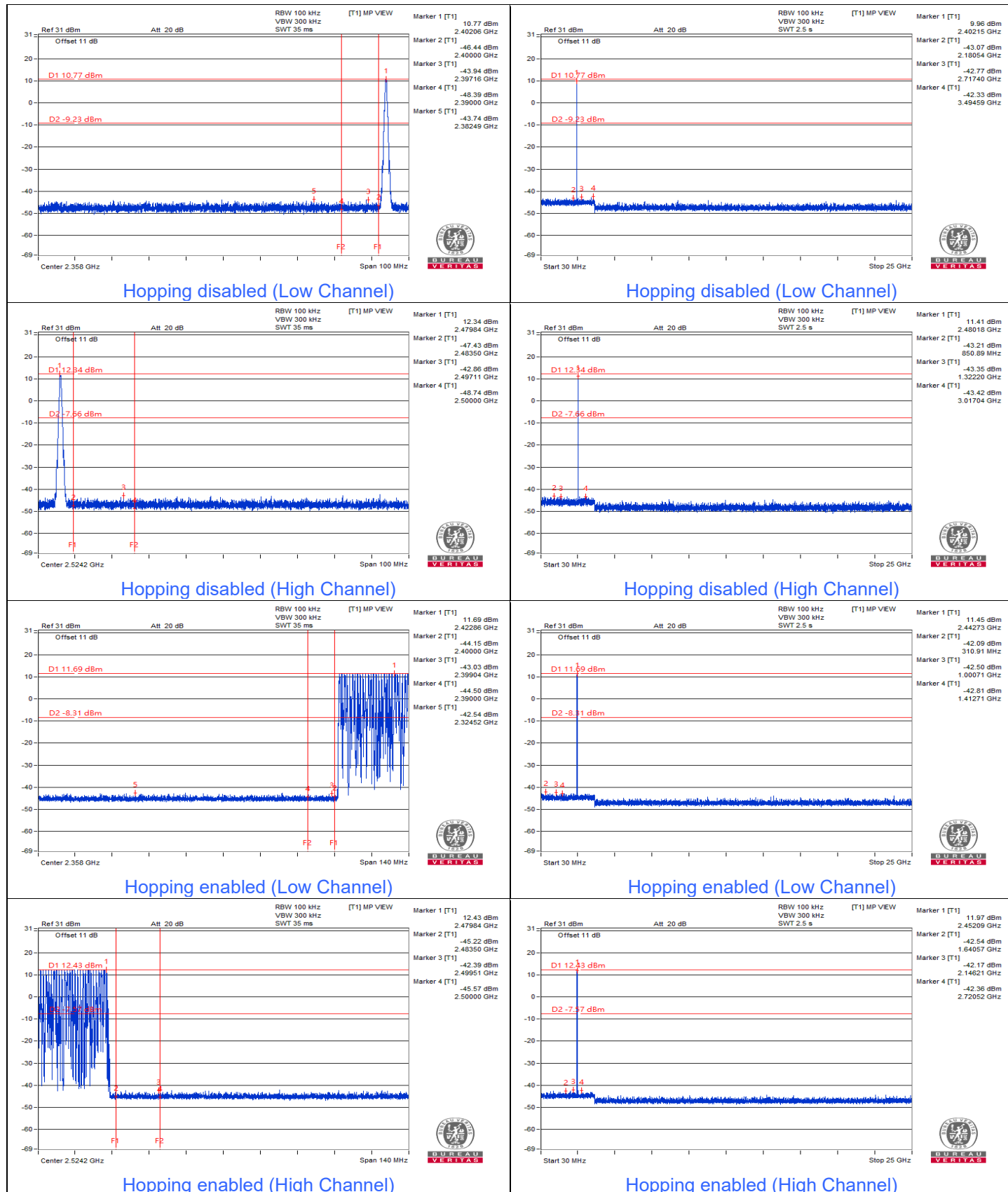


7.6 Conducted Out of Band Emissions

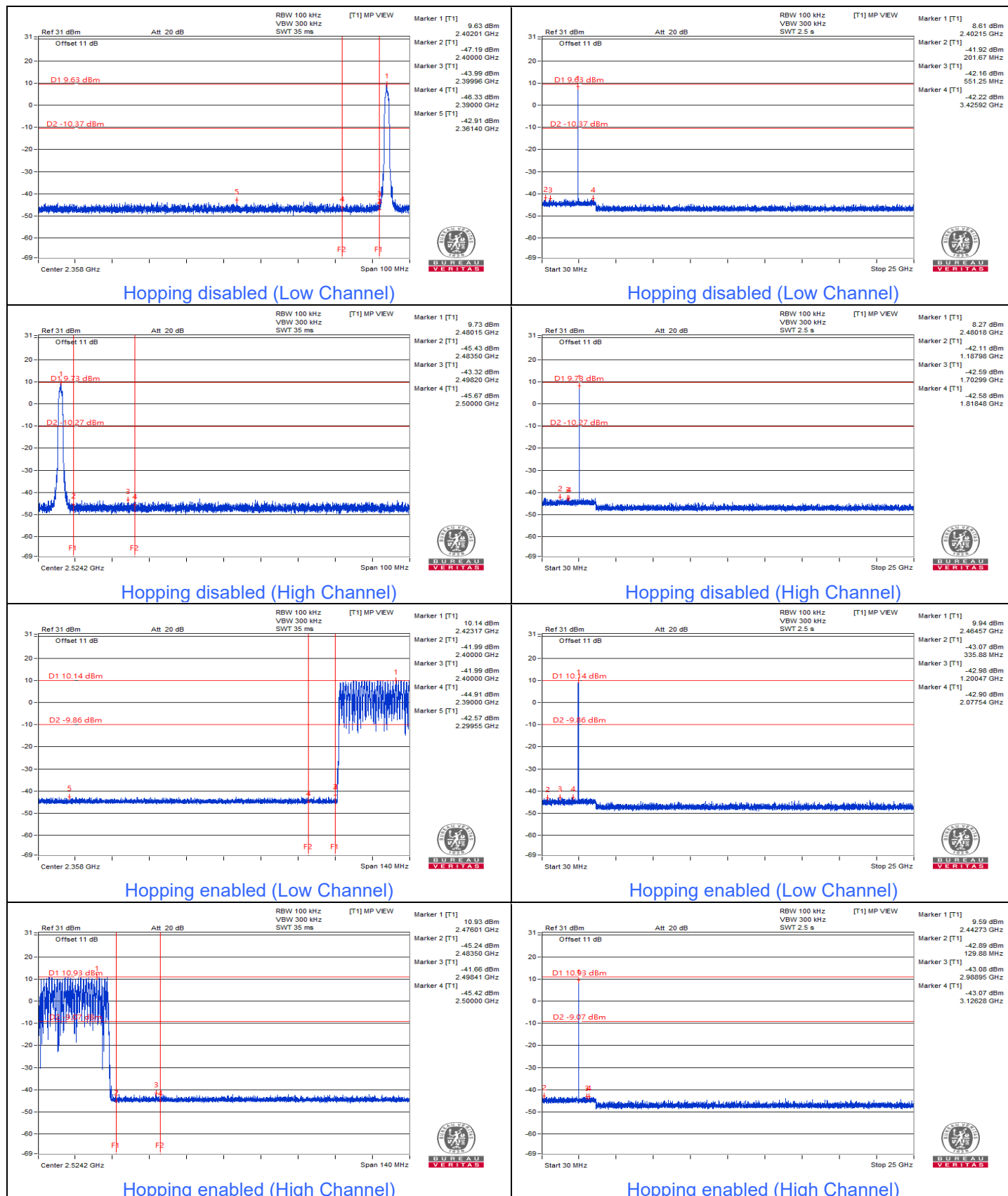
Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

1Tx

GFSK



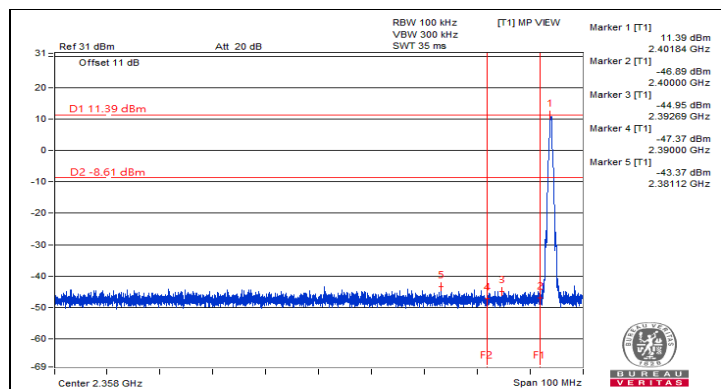
8DPSK



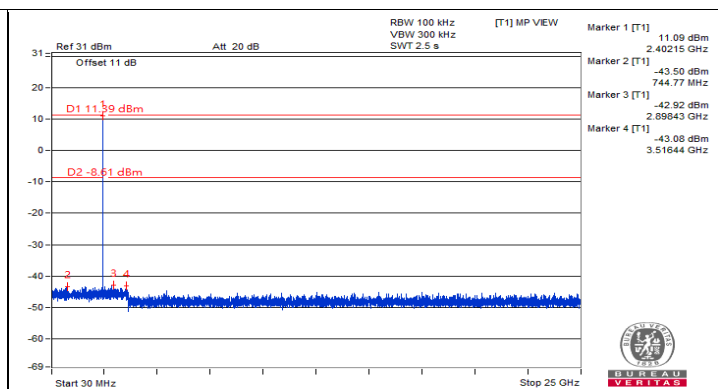
Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Stars Liu
--------------	---------	---------------------------	--------------	------------	-----------

2Tx

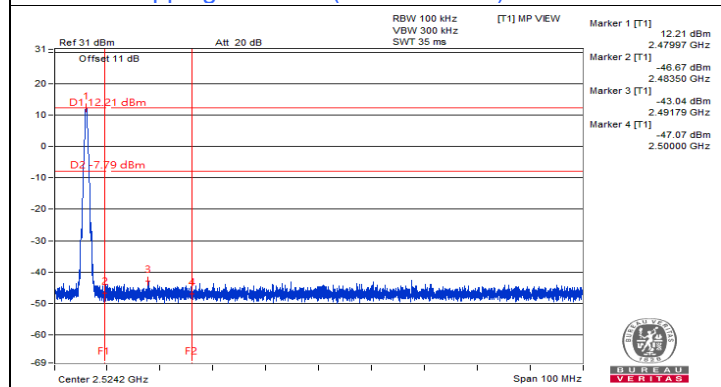
GFSK



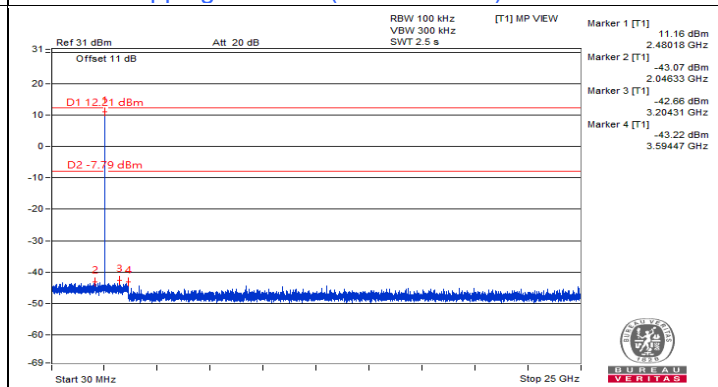
Hopping disabled (Low Channel) / Chain 0



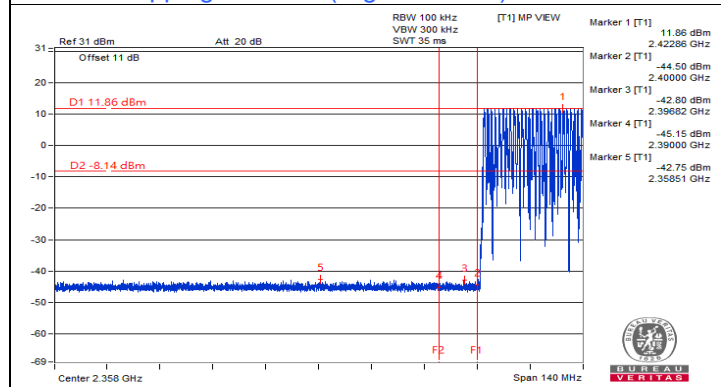
Hopping disabled (Low Channel) / Chain 0



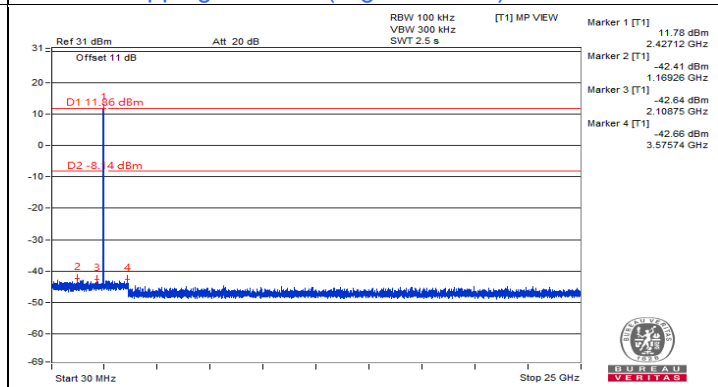
Hopping disabled (High Channel) / Chain 0



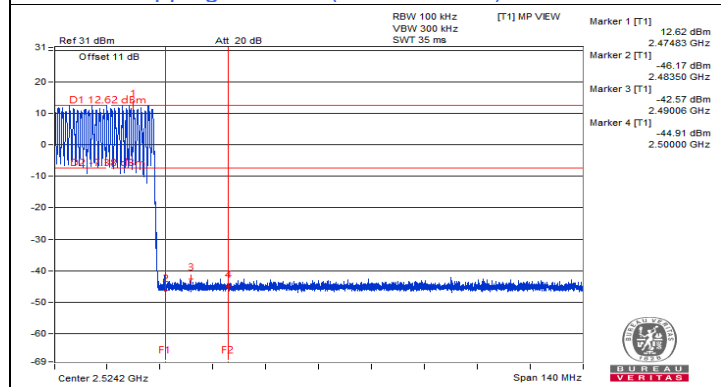
Hopping disabled (High Channel) / Chain 0



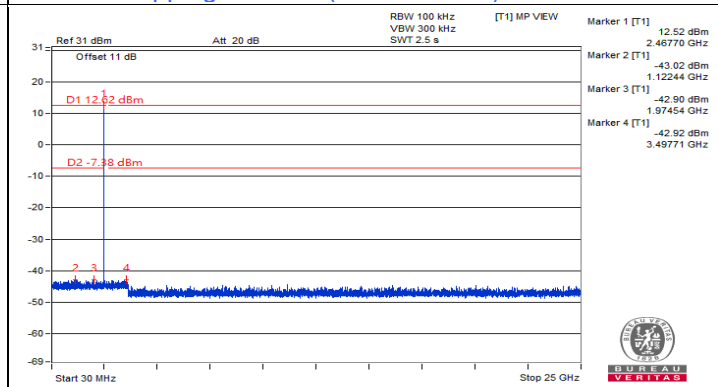
Hopping enabled (Low Channel) / Chain 0



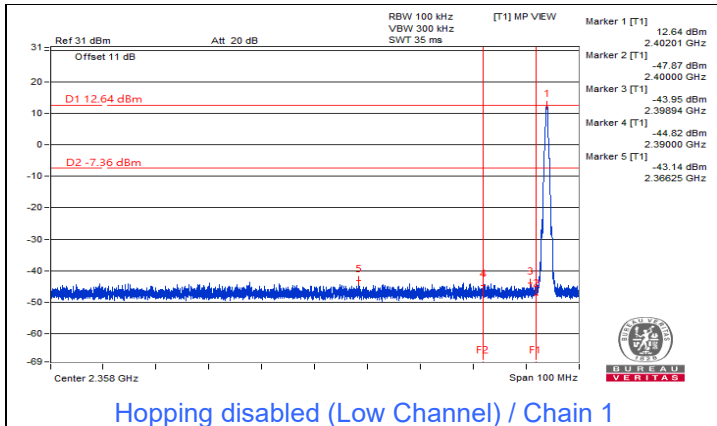
Hopping enabled (Low Channel) / Chain 0



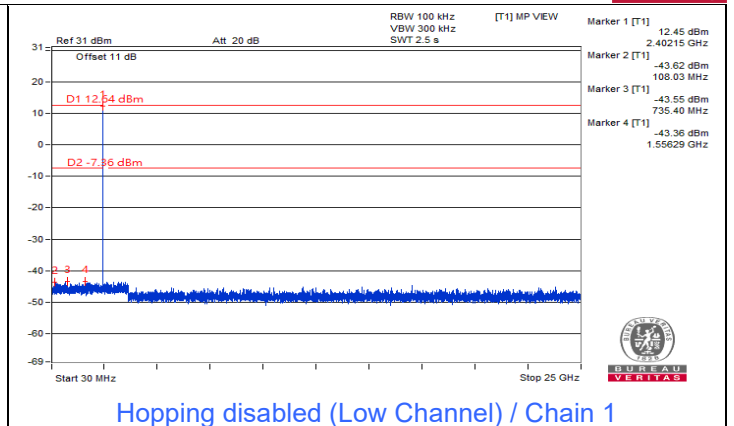
Hopping enabled (High Channel) / Chain 0



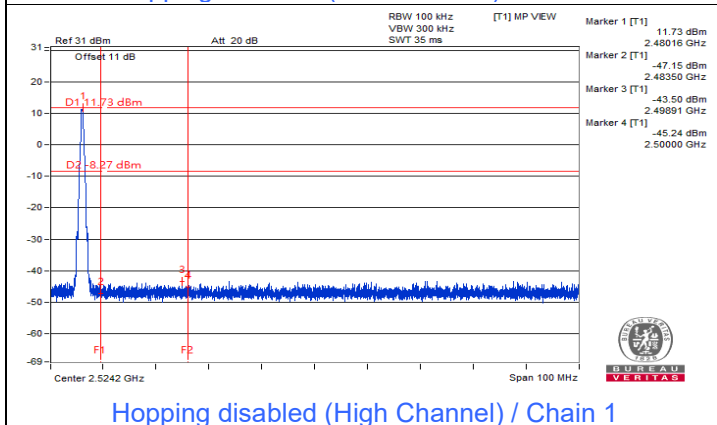
Hopping enabled (High Channel) / Chain 0



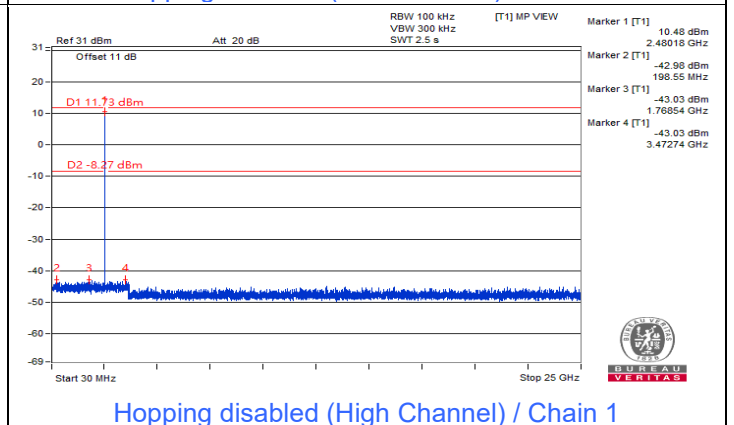
Hopping disabled (Low Channel) / Chain 1



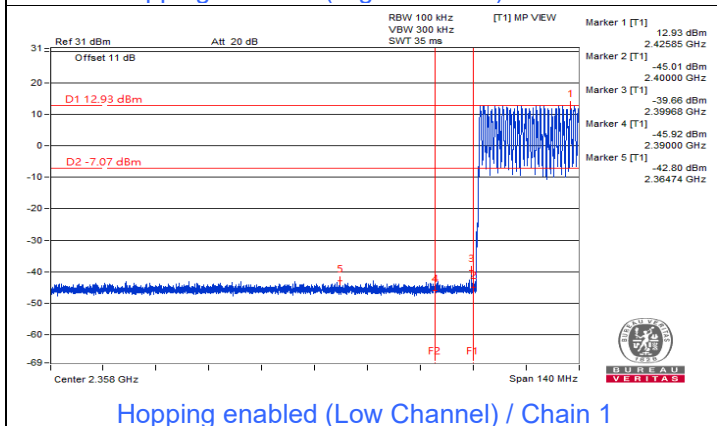
Hopping disabled (Low Channel) / Chain 1



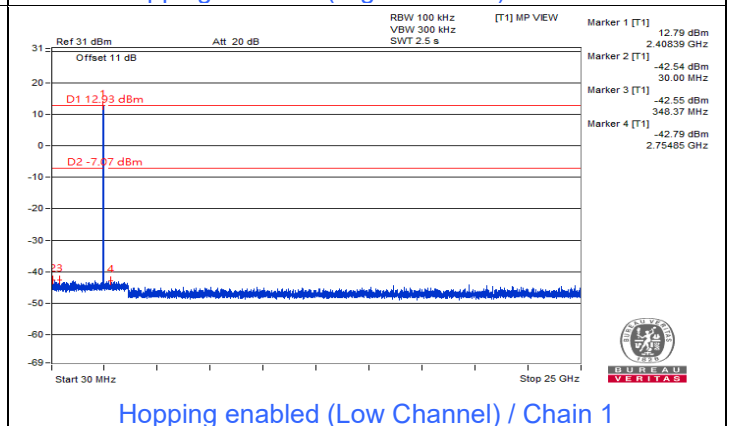
Hopping disabled (High Channel) / Chain 1



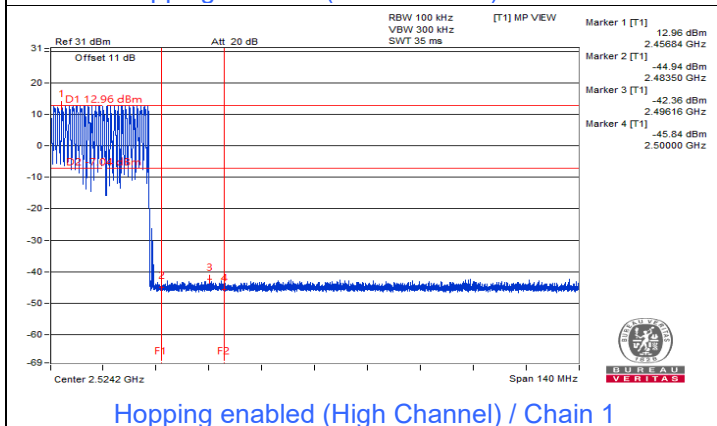
Hopping disabled (High Channel) / Chain 1



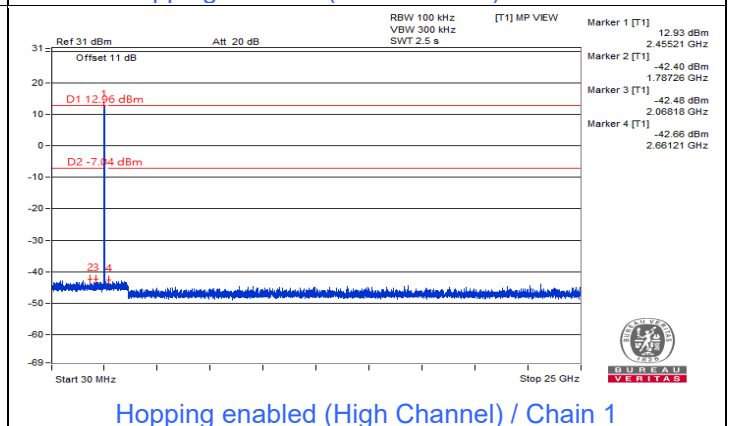
Hopping enabled (Low Channel) / Chain 1



Hopping enabled (Low Channel) / Chain 1

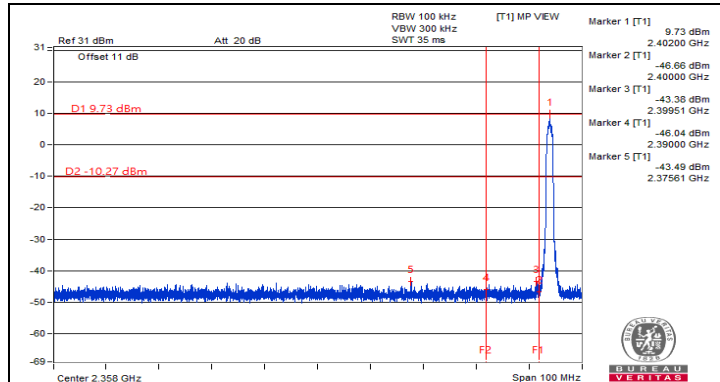


Hopping enabled (High Channel) / Chain 1

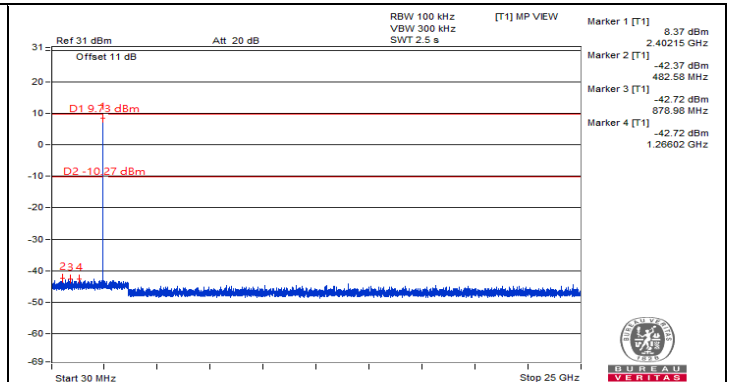


Hopping enabled (High Channel) / Chain 1

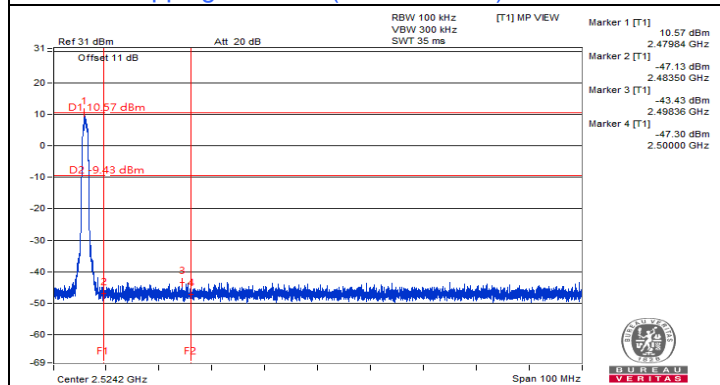
8DPSK



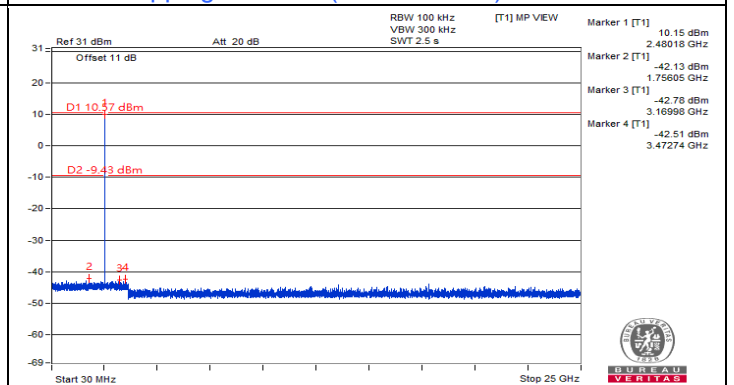
Hopping disabled (Low Channel) / Chain 0



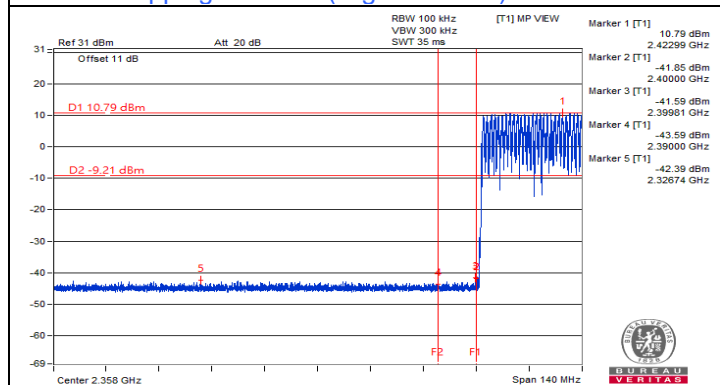
Hopping disabled (Low Channel) / Chain 0



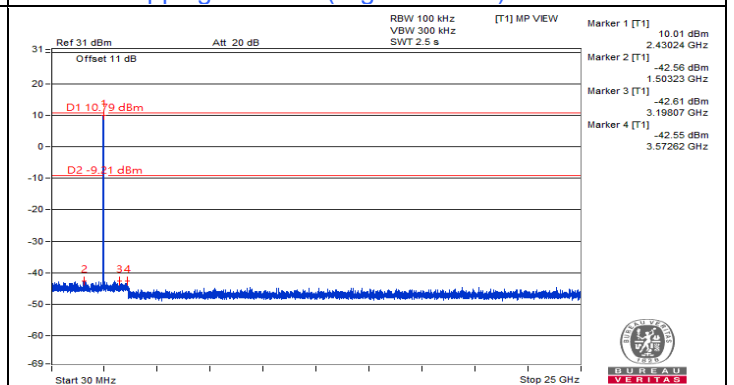
Hopping disabled (High Channel) / Chain 0



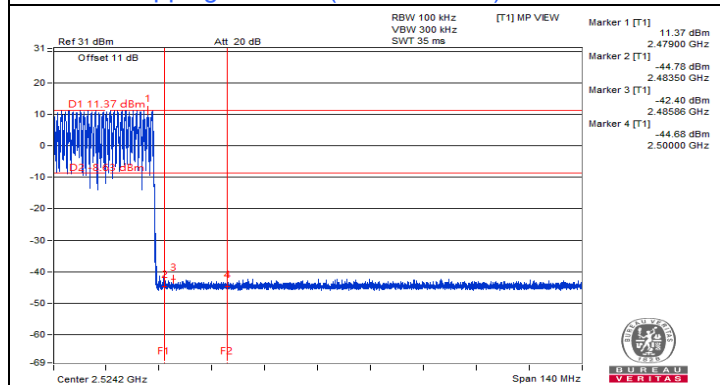
Hopping disabled (High Channel) / Chain 0



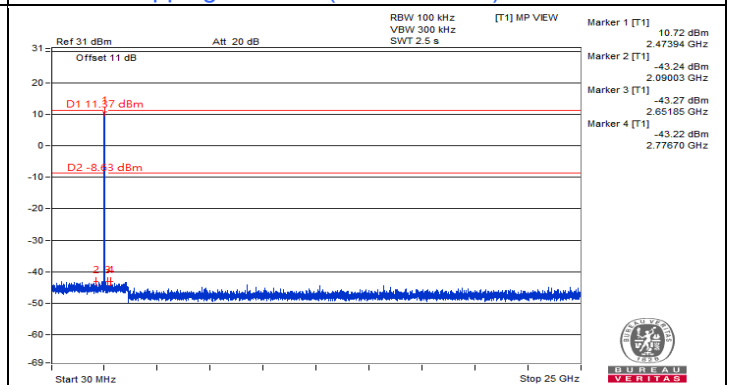
Hopping enabled (Low Channel) / Chain 0



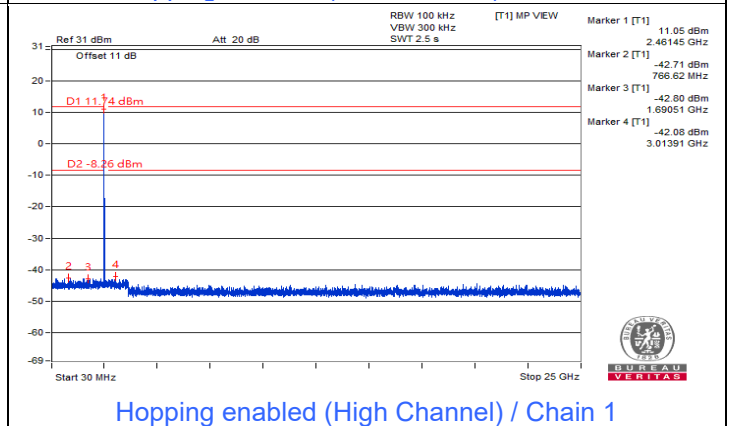
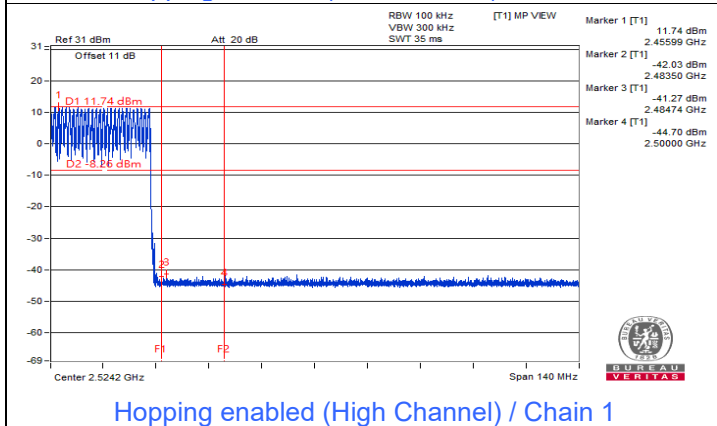
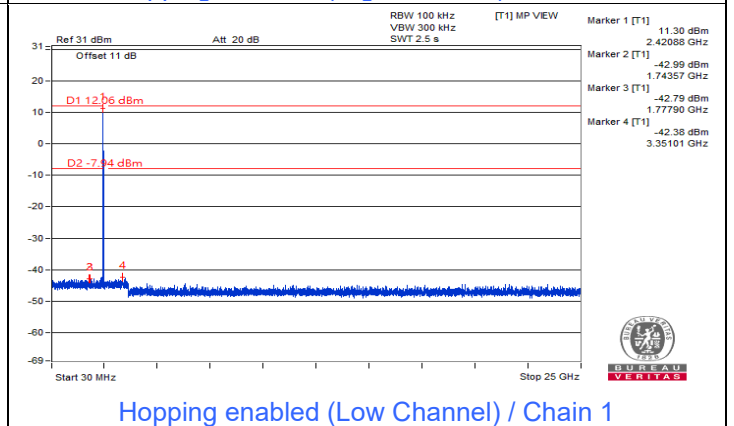
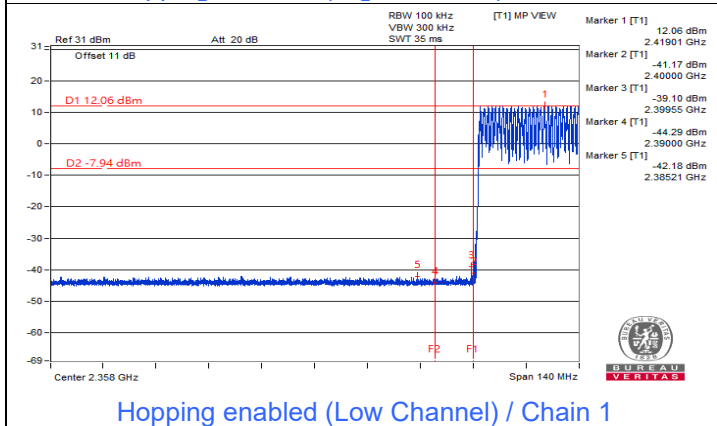
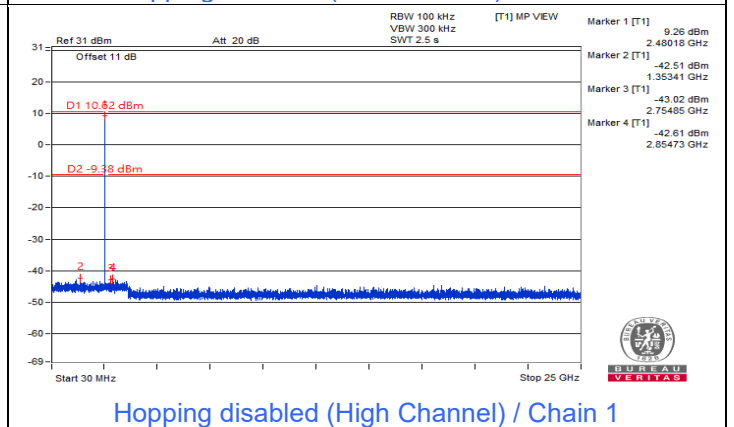
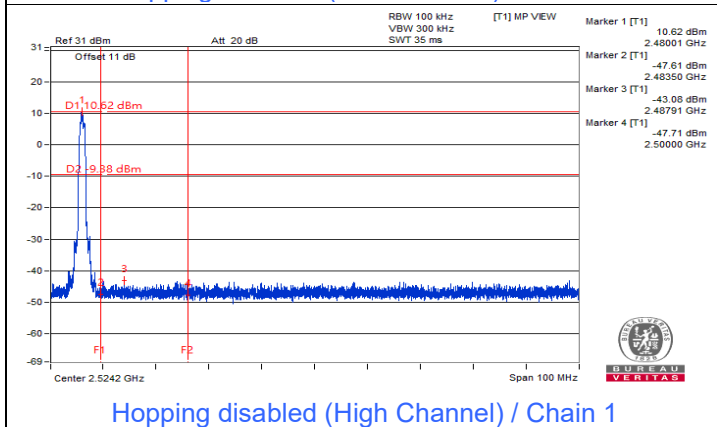
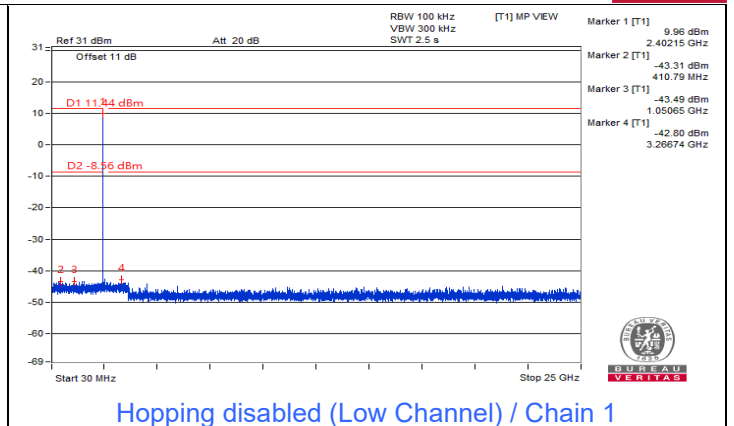
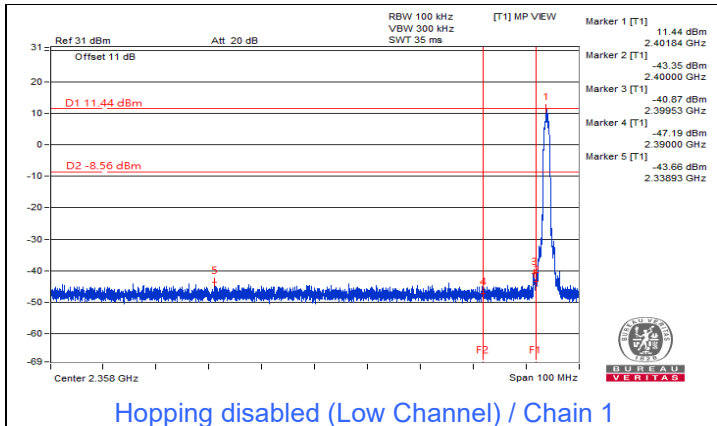
Hopping enabled (Low Channel) / Chain 0



Hopping enabled (High Channel) / Chain 0



Hopping enabled (High Channel) / Chain 0



7.7 AC Power Conducted Emissions

Mode A

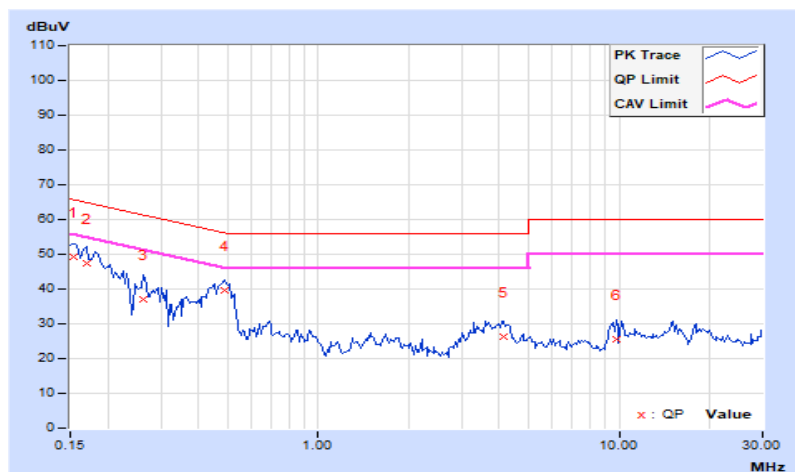
2Tx

RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 71% RH
Tested By	Stars Liu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.99	39.40	19.68	49.39	29.67	65.79	55.79	-16.40	-26.12
2	0.16953	9.99	37.32	22.34	47.31	32.33	64.98	54.98	-17.67	-22.65
3	0.26328	10.03	26.99	13.28	37.02	23.31	61.33	51.33	-24.31	-28.02
4	0.48594	10.11	29.47	22.73	39.58	32.84	56.24	46.24	-16.66	-13.40
5	4.13281	10.49	15.64	7.34	26.13	17.83	56.00	46.00	-29.87	-28.17
6	9.79688	10.92	14.49	7.98	25.41	18.90	60.00	50.00	-34.59	-31.10

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

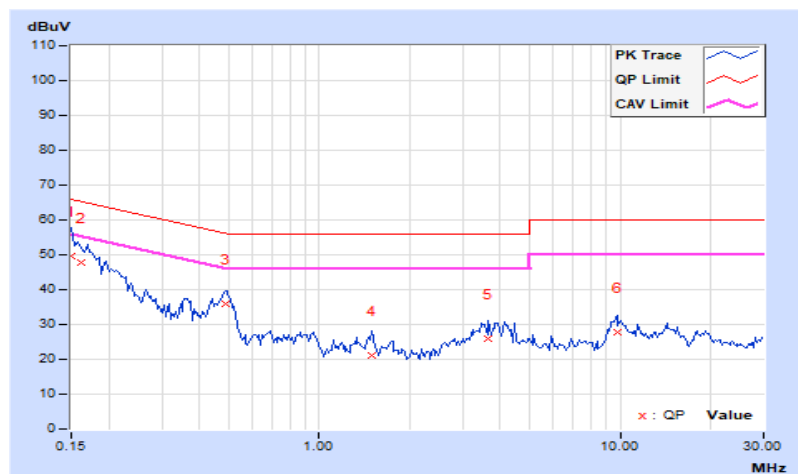


RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 71% RH
Tested By	Stars Liu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.00	39.81	21.42	49.81	31.42	66.00	56.00	-16.19	-24.58
2	0.16172	10.00	37.61	19.09	47.61	29.09	65.38	55.38	-17.77	-26.29
3	0.48594	9.96	25.94	19.32	35.90	29.28	56.24	46.24	-20.34	-16.96
4	1.49219	10.05	11.24	5.90	21.29	15.95	56.00	46.00	-34.71	-30.05
5	3.65625	10.19	15.61	8.45	25.80	18.64	56.00	46.00	-30.20	-27.36
6	9.83594	10.60	17.04	10.80	27.64	21.40	60.00	50.00	-32.36	-28.60

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



7.8 Unwanted Emissions below 1 GHz

Mode A

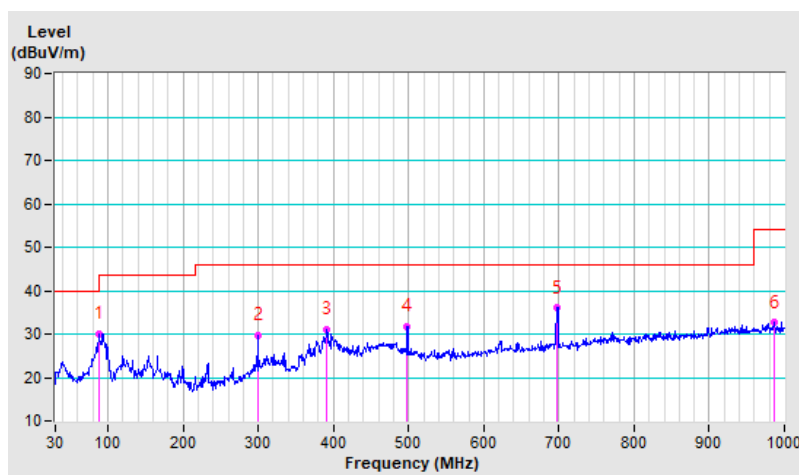
1Tx

RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	88.66	30.1 PK	43.5	-13.4	2.00 H	300	48.7	-18.6
2	299.34	29.7 PK	46.0	-16.3	1.00 H	219	41.6	-11.9
3	391.45	31.0 PK	46.0	-15.0	1.00 H	207	40.7	-9.7
4	497.83	31.7 PK	46.0	-14.3	2.00 H	212	39.0	-7.3
5	697.04	36.0 PK	46.0	-10.0	1.00 H	199	39.5	-3.5
6	986.40	32.6 PK	54.0	-21.4	1.00 H	360	31.9	0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

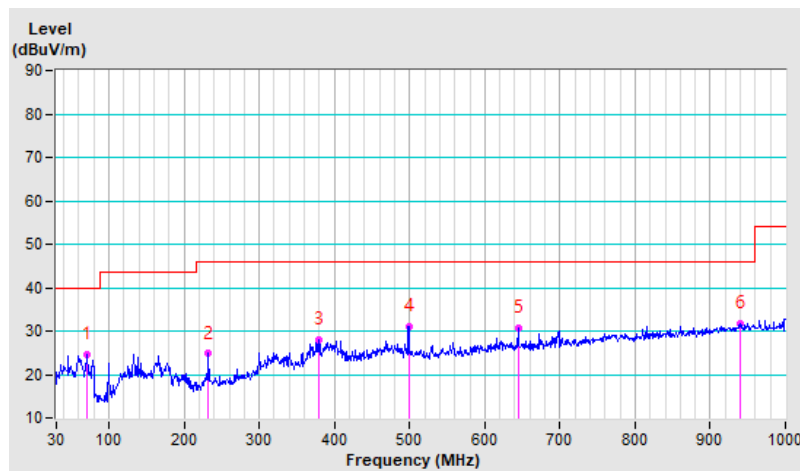


RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	70.98	24.6 PK	40.0	-15.4	1.00 V	0	40.1	-15.5
2	232.37	24.8 PK	46.0	-21.2	1.00 V	62	39.6	-14.8
3	379.64	28.0 PK	46.0	-18.0	2.00 V	38	37.9	-9.9
4	498.85	31.2 PK	46.0	-14.8	1.00 V	171	38.5	-7.3
5	644.33	30.6 PK	46.0	-15.4	2.00 V	172	34.6	-4.0
6	940.22	31.7 PK	46.0	-14.3	2.00 V	224	31.2	0.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

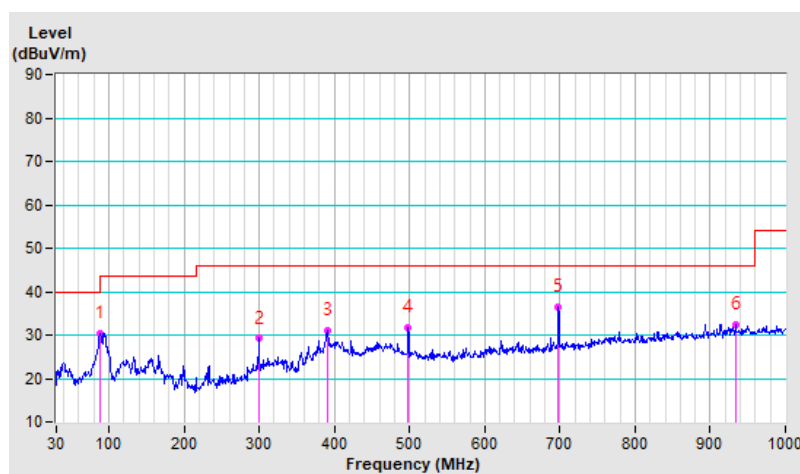


RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	89.12	30.3 PK	43.5	-13.2	2.00 H	278	48.9	-18.6
2	299.27	29.2 PK	46.0	-16.8	1.00 H	223	41.1	-11.9
3	390.40	31.1 PK	46.0	-14.9	1.00 H	163	40.8	-9.7
4	497.93	31.8 PK	46.0	-14.2	2.00 H	205	39.1	-7.3
5	697.04	36.5 PK	46.0	-9.5	1.00 H	116	40.0	-3.5
6	933.41	32.5 PK	46.0	-13.5	2.00 H	23	32.0	0.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

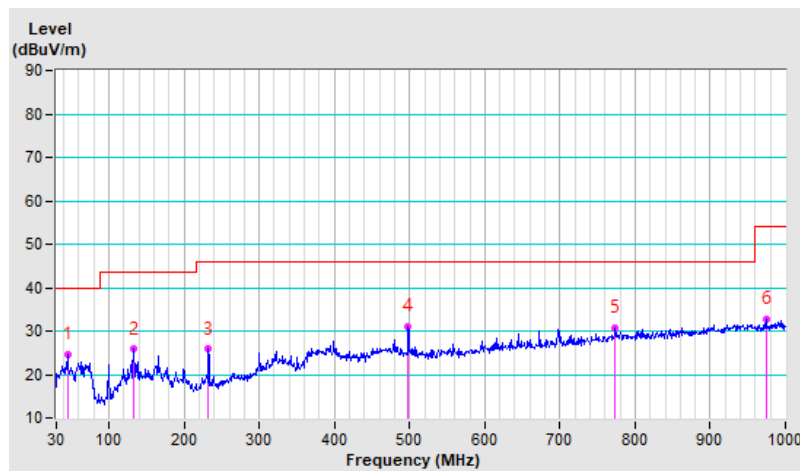


RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	44.67	24.5 PK	40.0	-15.5	1.00 V	136	37.4	-12.9
2	132.99	25.8 PK	43.5	-17.7	1.00 V	123	39.4	-13.6
3	232.32	25.8 PK	46.0	-20.2	1.00 V	67	40.6	-14.8
4	497.86	31.0 PK	46.0	-15.0	1.00 V	171	38.3	-7.3
5	773.53	30.6 PK	46.0	-15.4	1.00 V	18	32.4	-1.8
6	974.17	32.7 PK	54.0	-21.3	2.00 V	181	31.9	0.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



Mode B

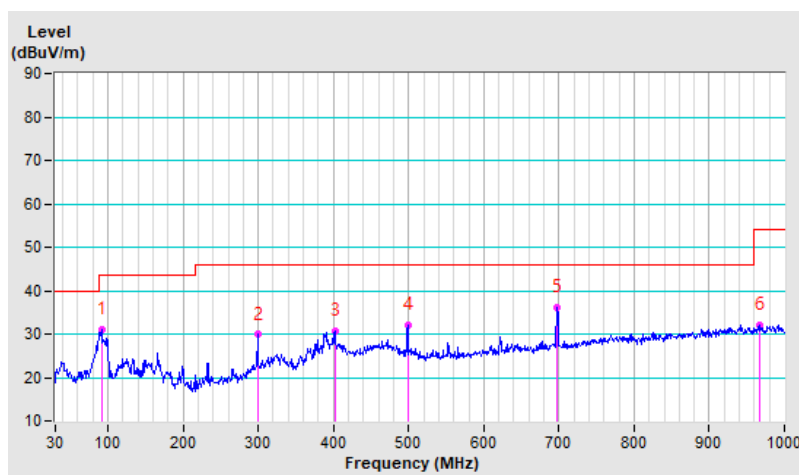
1Tx

RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	92.13	31.0 PK	43.5	-12.5	2.00 H	313	49.3	-18.3
2	299.32	29.9 PK	46.0	-16.1	1.00 H	233	41.8	-11.9
3	402.14	30.6 PK	46.0	-15.4	1.00 H	148	40.0	-9.4
4	498.85	32.2 PK	46.0	-13.8	2.00 H	201	39.5	-7.3
5	697.04	36.2 PK	46.0	-9.8	1.00 H	121	39.7	-3.5
6	967.77	32.2 PK	54.0	-21.8	1.00 H	257	31.5	0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

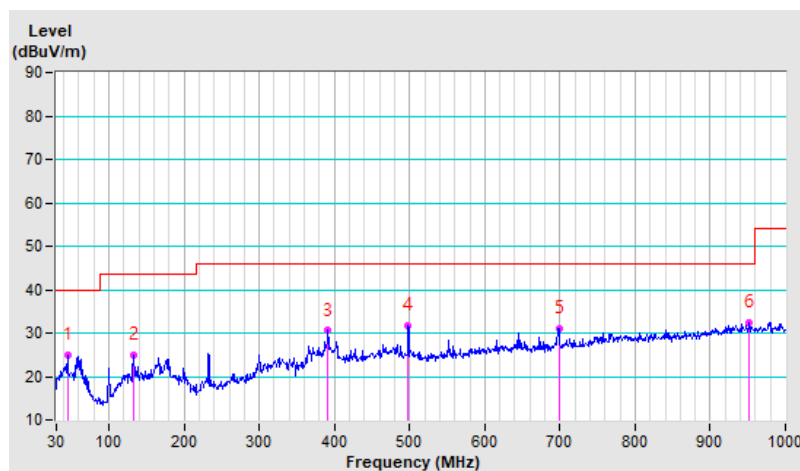


RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	44.67	25.1 PK	40.0	-14.9	1.00 V	99	38.0	-12.9
2	132.84	25.0 PK	43.5	-18.5	1.00 V	106	38.6	-13.6
3	391.13	30.5 PK	46.0	-15.5	1.00 V	242	40.2	-9.7
4	497.88	31.8 PK	46.0	-14.2	1.00 V	167	39.1	-7.3
5	698.43	31.1 PK	46.0	-14.9	1.00 V	198	34.6	-3.5
6	952.08	32.5 PK	46.0	-13.5	3.00 V	2	31.8	0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

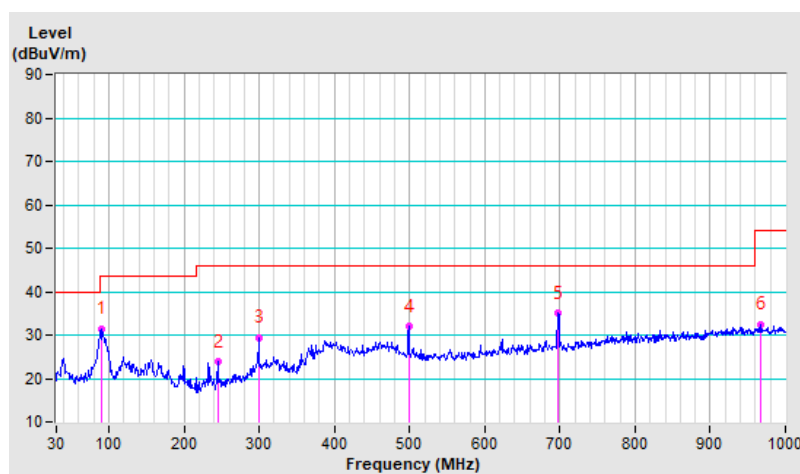


RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	89.51	31.4 PK	43.5	-12.1	2.00 H	274	50.0	-18.6
2	245.07	23.8 PK	46.0	-22.2	1.00 H	246	37.7	-13.9
3	299.32	29.3 PK	46.0	-16.7	1.00 H	92	41.2	-11.9
4	498.87	31.9 PK	46.0	-14.1	2.00 H	212	39.2	-7.3
5	697.00	35.0 PK	46.0	-11.0	1.00 H	192	38.5	-3.5
6	966.32	32.3 PK	54.0	-21.7	3.00 H	0	31.6	0.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

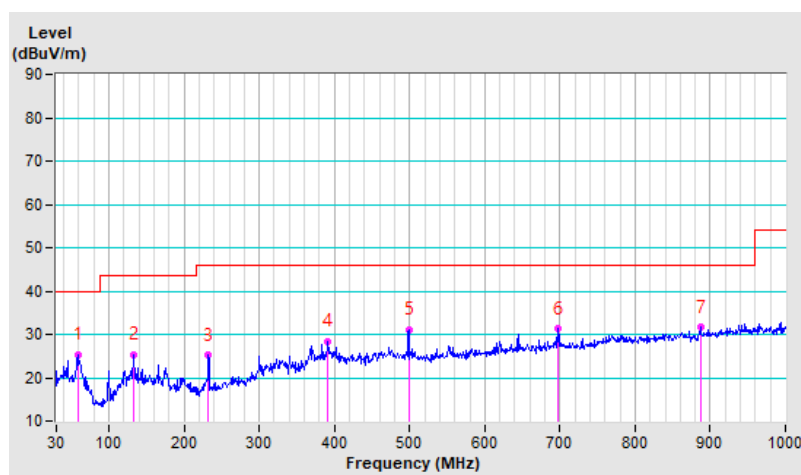


RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	58.76	25.2 PK	40.0	-14.8	2.00 V	0	38.5	-13.3
2	133.04	25.4 PK	43.5	-18.1	1.00 V	127	38.9	-13.5
3	232.68	25.1 PK	46.0	-20.9	1.00 V	67	39.8	-14.7
4	391.35	28.4 PK	46.0	-17.6	2.00 V	42	38.1	-9.7
5	498.87	31.1 PK	46.0	-14.9	1.00 V	155	38.4	-7.3
6	697.04	31.2 PK	46.0	-14.8	1.00 V	195	34.7	-3.5
7	886.83	31.5 PK	46.0	-14.5	2.00 V	0	32.1	-0.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.9 Unwanted Emissions above 1 GHz

Mode A

1Tx

RF Mode	GFSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.0 PK	74.0	-18.0	1.58 H	220	58.0	-2.0
2	2390.00	46.2 AV	54.0	-7.8	1.58 H	220	48.2	-2.0
3	*2402.00	107.1 PK			1.58 H	220	109.2	-2.1
4	*2402.00	76.3 AV			1.58 H	220	78.4	-2.1
5	4804.00	44.3 PK	74.0	-29.7	1.41 H	52	42.3	2.0
6	4804.00	13.5 AV	54.0	-40.5	1.41 H	52	11.5	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.3 PK	74.0	-17.7	3.31 V	155	58.3	-2.0
2	2390.00	46.6 AV	54.0	-7.4	3.31 V	155	48.6	-2.0
3	*2402.00	108.3 PK			3.31 V	155	110.4	-2.1
4	*2402.00	77.5 AV			3.31 V	155	79.6	-2.1
5	4804.00	45.5 PK	74.0	-28.5	2.66 V	360	43.5	2.0
6	4804.00	14.7 AV	54.0	-39.3	2.66 V	360	12.7	2.0

Remarks:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- Margin value = Emission Level – Limit value
- The other emission levels were very low against the limit.
- " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
- The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	107.0 PK			1.55 H	221	109.1	-2.1
2	*2441.00	76.2 AV			1.55 H	221	78.3	-2.1
3	4882.00	45.6 PK	74.0	-28.4	1.38 H	57	43.2	2.4
4	4882.00	14.8 AV	54.0	-39.2	1.38 H	57	12.4	2.4
5	7323.00	47.5 PK	74.0	-26.5	3.25 H	336	40.1	7.4
6	7323.00	16.7 AV	54.0	-37.3	3.25 H	336	9.3	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	107.9 PK			3.21 V	165	110.0	-2.1
2	*2441.00	77.1 AV			3.21 V	165	79.2	-2.1
3	4882.00	45.7 PK	74.0	-28.3	2.61 V	360	43.3	2.4
4	4882.00	14.9 AV	54.0	-39.1	2.61 V	360	12.5	2.4
5	7323.00	47.3 PK	74.0	-26.7	1.88 V	360	39.9	7.4
6	7323.00	16.5 AV	54.0	-37.5	1.88 V	360	9.1	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	105.8 PK			1.34 H	222	108.2	-2.4
2	*2480.00	75.0 AV			1.34 H	222	77.4	-2.4
3	2483.50	56.1 PK	74.0	-17.9	1.34 H	222	58.5	-2.4
4	2483.50	46.5 AV	54.0	-7.5	1.34 H	222	48.9	-2.4
5	4960.00	44.8 PK	74.0	-29.2	1.42 H	47	42.5	2.3
6	4960.00	14.0 AV	54.0	-40.0	1.42 H	47	11.7	2.3
7	7440.00	47.0 PK	74.0	-27.0	3.25 H	342	38.9	8.1
8	7440.00	16.2 AV	54.0	-37.8	3.25 H	342	8.1	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	105.0 PK			2.31 V	190	107.4	-2.4
2	*2480.00	74.2 AV			2.31 V	190	76.6	-2.4
3	2483.50	56.3 PK	74.0	-17.7	2.31 V	190	58.7	-2.4
4	2483.50	46.3 AV	54.0	-7.7	2.31 V	190	48.7	-2.4
5	4960.00	45.6 PK	74.0	-28.4	2.57 V	360	43.3	2.3
6	4960.00	14.8 AV	54.0	-39.2	2.57 V	360	12.5	2.3
7	7440.00	46.9 PK	74.0	-27.1	1.84 V	360	38.8	8.1
8	7440.00	16.1 AV	54.0	-37.9	1.84 V	360	8.0	8.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.5 PK	74.0	-17.5	1.60 H	220	58.5	-2.0
2	2390.00	46.4 AV	54.0	-7.6	1.60 H	220	48.4	-2.0
3	*2402.00	106.9 PK			1.60 H	220	109.0	-2.1
4	*2402.00	82.2 AV			1.60 H	220	84.3	-2.1
5	4804.00	45.2 PK	74.0	-28.8	1.45 H	60	43.2	2.0
6	4804.00	20.5 AV	54.0	-33.5	1.45 H	60	18.5	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.5 PK	74.0	-17.5	3.42 V	163	58.5	-2.0
2	2390.00	46.7 AV	54.0	-7.3	3.42 V	163	48.7	-2.0
3	*2402.00	107.3 PK			3.42 V	163	109.4	-2.1
4	*2402.00	82.6 AV			3.42 V	163	84.7	-2.1
5	4804.00	45.2 PK	74.0	-28.8	2.69 V	360	43.2	2.0
6	4804.00	20.5 AV	54.0	-33.5	2.69 V	360	18.5	2.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	105.7 PK			1.66 H	231	107.8	-2.1
2	*2441.00	81.0 AV			1.66 H	231	83.1	-2.1
3	4882.00	44.5 PK	74.0	-29.5	1.40 H	31	42.1	2.4
4	4882.00	19.8 AV	54.0	-34.2	1.40 H	31	17.4	2.4
5	7323.00	47.2 PK	74.0	-26.8	3.26 H	338	39.8	7.4
6	7323.00	22.5 AV	54.0	-31.5	3.26 H	338	15.1	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	106.4 PK			2.89 V	165	108.5	-2.1
2	*2441.00	81.7 AV			2.89 V	165	83.8	-2.1
3	4882.00	45.9 PK	74.0	-28.1	2.65 V	360	43.5	2.4
4	4882.00	21.2 AV	54.0	-32.8	2.65 V	360	18.8	2.4
5	7323.00	46.6 PK	74.0	-27.4	1.65 V	360	39.2	7.4
6	7323.00	21.9 AV	54.0	-32.1	1.65 V	360	14.5	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	104.3 PK			1.32 H	222	106.7	-2.4
2	*2480.00	79.6 AV			1.32 H	222	82.0	-2.4
3	2483.50	55.5 PK	74.0	-18.5	1.32 H	222	57.9	-2.4
4	2483.50	45.8 AV	54.0	-8.2	1.32 H	222	48.2	-2.4
5	4960.00	44.9 PK	74.0	-29.1	1.37 H	33	42.6	2.3
6	4960.00	20.2 AV	54.0	-33.8	1.37 H	33	17.9	2.3
7	7440.00	47.0 PK	74.0	-27.0	3.14 H	337	38.9	8.1
8	7440.00	22.3 AV	54.0	-31.7	3.14 H	337	14.2	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	104.1 PK			2.50 V	163	106.5	-2.4
2	*2480.00	79.4 AV			2.50 V	163	81.8	-2.4
3	2483.50	56.0 PK	74.0	-18.0	2.50 V	163	58.4	-2.4
4	2483.50	46.0 AV	54.0	-8.0	2.50 V	163	48.4	-2.4
5	4960.00	45.6 PK	74.0	-28.4	2.67 V	360	43.3	2.3
6	4960.00	20.9 AV	54.0	-33.1	2.67 V	360	18.6	2.3
7	7440.00	46.8 PK	74.0	-27.2	1.79 V	360	38.7	8.1
8	7440.00	22.1 AV	54.0	-31.9	1.79 V	360	14.0	8.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	GFSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.4 PK	74.0	-17.6	1.01 H	244	58.4	-2.0
2	2390.00	46.1 AV	54.0	-7.9	1.01 H	244	48.1	-2.0
3	*2402.00	110.1 PK			1.01 H	244	112.2	-2.1
4	*2402.00	79.3 AV			1.01 H	244	81.4	-2.1
5	4804.00	44.3 PK	74.0	-29.7	1.36 H	37	42.3	2.0
6	4804.00	13.5 AV	54.0	-40.5	1.36 H	37	11.5	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.7 PK	74.0	-17.3	3.19 V	173	58.7	-2.0
2	2390.00	46.4 AV	54.0	-7.6	3.19 V	173	48.4	-2.0
3	*2402.00	112.6 PK			3.19 V	173	114.7	-2.1
4	*2402.00	81.8 AV			3.19 V	173	83.9	-2.1
5	4804.00	45.5 PK	74.0	-28.5	2.53 V	360	43.5	2.0
6	4804.00	14.7 AV	54.0	-39.3	2.53 V	360	12.7	2.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	110.0 PK			1.01 H	257	112.1	-2.1
2	*2441.00	79.2 AV			1.01 H	257	81.3	-2.1
3	4882.00	45.0 PK	74.0	-29.0	1.41 H	45	42.6	2.4
4	4882.00	14.2 AV	54.0	-39.8	1.41 H	45	11.8	2.4
5	7323.00	47.1 PK	74.0	-26.9	3.20 H	346	39.7	7.4
6	7323.00	16.3 AV	54.0	-37.7	3.20 H	346	8.9	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	112.7 PK			3.20 V	160	114.8	-2.1
2	*2441.00	81.9 AV			3.20 V	160	84.0	-2.1
3	4882.00	45.5 PK	74.0	-28.5	1.93 V	257	43.1	2.4
4	4882.00	14.7 AV	54.0	-39.3	1.93 V	257	12.3	2.4
5	7323.00	46.8 PK	74.0	-27.2	3.07 V	175	39.4	7.4
6	7323.00	16.0 AV	54.0	-38.0	3.07 V	175	8.6	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	110.4 PK			2.14 H	18	112.8	-2.4
2	*2480.00	79.6 AV			2.14 H	18	82.0	-2.4
3	2483.50	56.3 PK	74.0	-17.7	2.14 H	18	58.7	-2.4
4	2483.50	46.0 AV	54.0	-8.0	2.14 H	18	48.4	-2.4
5	4960.00	44.9 PK	74.0	-29.1	1.46 H	42	42.6	2.3
6	4960.00	14.1 AV	54.0	-39.9	1.46 H	42	11.8	2.3
7	7440.00	46.7 PK	74.0	-27.3	3.23 H	336	38.6	8.1
8	7440.00	15.9 AV	54.0	-38.1	3.23 H	336	7.8	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	113.3 PK			3.31 V	175	115.7	-2.4
2	*2480.00	82.5 AV			3.31 V	175	84.9	-2.4
3	2483.50	56.5 PK	74.0	-17.5	3.31 V	175	58.9	-2.4
4	2483.50	46.2 AV	54.0	-7.8	3.31 V	175	48.6	-2.4
5	4960.00	45.1 PK	74.0	-28.9	2.70 V	360	42.8	2.3
6	4960.00	14.3 AV	54.0	-39.7	2.70 V	360	12.0	2.3
7	7440.00	47.0 PK	74.0	-27.0	1.70 V	360	38.9	8.1
8	7440.00	16.2 AV	54.0	-37.8	1.70 V	360	8.1	8.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.2 PK	74.0	-17.8	1.56 H	239	58.2	-2.0
2	2390.00	46.3 AV	54.0	-7.7	1.56 H	239	48.3	-2.0
3	*2402.00	107.6 PK			1.56 H	239	109.7	-2.1
4	*2402.00	82.9 AV			1.56 H	239	85.0	-2.1
5	4804.00	45.4 PK	74.0	-28.6	1.46 H	55	43.4	2.0
6	4804.00	20.7 AV	54.0	-33.3	1.46 H	55	18.7	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.5 PK	74.0	-17.5	3.30 V	186	58.5	-2.0
2	2390.00	46.5 AV	54.0	-7.5	3.30 V	186	48.5	-2.0
3	*2402.00	110.2 PK			3.30 V	186	112.3	-2.1
4	*2402.00	85.5 AV			3.30 V	186	87.6	-2.1
5	4804.00	45.6 PK	74.0	-28.4	2.42 V	360	43.6	2.0
6	4804.00	20.9 AV	54.0	-33.1	2.42 V	360	18.9	2.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	107.4 PK			1.58 H	244	109.5	-2.1
2	*2441.00	82.7 AV			1.58 H	244	84.8	-2.1
3	4882.00	44.5 PK	74.0	-29.5	1.37 H	46	42.1	2.4
4	4882.00	19.8 AV	54.0	-34.2	1.37 H	46	17.4	2.4
5	7323.00	47.2 PK	74.0	-26.8	3.22 H	341	39.8	7.4
6	7323.00	22.5 AV	54.0	-31.5	3.22 H	341	15.1	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	110.1 PK			3.26 V	178	112.2	-2.1
2	*2441.00	85.4 AV			3.26 V	178	87.5	-2.1
3	4882.00	45.7 PK	74.0	-28.3	2.57 V	360	43.3	2.4
4	4882.00	21.0 AV	54.0	-33.0	2.57 V	360	18.6	2.4
5	7323.00	47.0 PK	74.0	-27.0	1.71 V	360	39.6	7.4
6	7323.00	22.3 AV	54.0	-31.7	1.71 V	360	14.9	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel × (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	108.5 PK			2.18 H	21	110.9	-2.4
2	*2480.00	83.8 AV			2.18 H	21	86.2	-2.4
3	2483.50	56.1 PK	74.0	-17.9	2.18 H	21	58.5	-2.4
4	2483.50	46.2 AV	54.0	-7.8	2.18 H	21	48.6	-2.4
5	4960.00	45.3 PK	74.0	-28.7	1.44 H	35	43.0	2.3
6	4960.00	20.6 AV	54.0	-33.4	1.44 H	35	18.3	2.3
7	7440.00	47.7 PK	74.0	-26.3	3.19 H	357	39.6	8.1
8	7440.00	23.0 AV	54.0	-31.0	3.19 H	357	14.9	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	112.0 PK			3.23 V	172	114.4	-2.4
2	*2480.00	87.3 AV			3.23 V	172	89.7	-2.4
3	2483.50	56.2 PK	74.0	-17.8	3.23 V	172	58.6	-2.4
4	2483.50	46.3 AV	54.0	-7.7	3.23 V	172	48.7	-2.4
5	4960.00	45.5 PK	74.0	-28.5	2.55 V	360	43.2	2.3
6	4960.00	20.8 AV	54.0	-33.2	2.55 V	360	18.5	2.3
7	7440.00	46.7 PK	74.0	-27.3	1.89 V	360	38.6	8.1
8	7440.00	22.0 AV	54.0	-32.0	1.89 V	360	13.9	8.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

Mode B

1Tx

RF Mode	GFSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.9 PK	74.0	-18.1	3.03 H	199	57.9	-2.0
2	2390.00	45.6 AV	54.0	-8.4	3.03 H	199	47.6	-2.0
3	*2402.00	107.5 PK			3.03 H	199	109.6	-2.1
4	*2402.00	76.7 AV			3.03 H	199	78.8	-2.1
5	4804.00	41.9 PK	74.0	-32.1	2.15 H	40	39.9	2.0
6	4804.00	11.1 AV	54.0	-42.9	2.15 H	40	9.1	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.5 PK	74.0	-17.5	1.03 V	182	58.5	-2.0
2	2390.00	46.0 AV	54.0	-8.0	1.03 V	182	48.0	-2.0
3	*2402.00	104.5 PK			1.03 V	182	106.6	-2.1
4	*2402.00	73.7 AV			1.03 V	182	75.8	-2.1
5	4804.00	40.7 PK	74.0	-33.3	1.89 V	17	38.7	2.0
6	4804.00	9.9 AV	54.0	-44.1	1.89 V	17	7.9	2.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	107.5 PK			2.95 H	198	109.6	-2.1
2	*2441.00	76.7 AV			2.95 H	198	78.8	-2.1
3	4882.00	41.8 PK	74.0	-32.2	2.18 H	53	39.4	2.4
4	4882.00	11.0 AV	54.0	-43.0	2.18 H	53	8.6	2.4
5	7323.00	44.9 PK	74.0	-29.1	1.37 H	260	37.5	7.4
6	7323.00	14.1 AV	54.0	-39.9	1.37 H	260	6.7	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	104.7 PK			1.01 V	181	106.8	-2.1
2	*2441.00	73.9 AV			1.01 V	181	76.0	-2.1
3	4882.00	40.3 PK	74.0	-33.7	1.91 V	29	37.9	2.4
4	4882.00	9.5 AV	54.0	-44.5	1.91 V	29	7.1	2.4
5	7323.00	43.2 PK	74.0	-30.8	2.21 V	352	35.8	7.4
6	7323.00	12.4 AV	54.0	-41.6	2.21 V	352	5.0	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	107.4 PK			2.86 H	200	109.8	-2.4
2	*2480.00	76.6 AV			2.86 H	200	79.0	-2.4
3	2483.50	56.5 PK	74.0	-17.5	2.86 H	200	58.9	-2.4
4	2483.50	46.1 AV	54.0	-7.9	2.86 H	200	48.5	-2.4
5	4960.00	41.8 PK	74.0	-32.2	2.09 H	32	39.5	2.3
6	4960.00	11.0 AV	54.0	-43.0	2.09 H	32	8.7	2.3
7	7440.00	44.5 PK	74.0	-29.5	1.30 H	274	36.4	8.1
8	7440.00	13.7 AV	54.0	-40.3	1.30 H	274	5.6	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	104.6 PK			1.00 V	178	107.0	-2.4
2	*2480.00	73.8 AV			1.00 V	178	76.2	-2.4
3	2483.50	56.1 PK	74.0	-17.9	1.00 V	178	58.5	-2.4
4	2483.50	46.0 AV	54.0	-8.0	1.00 V	178	48.4	-2.4
5	4960.00	39.8 PK	74.0	-34.2	1.82 V	20	37.5	2.3
6	4960.00	9.0 AV	54.0	-45.0	1.82 V	20	6.7	2.3
7	7440.00	43.1 PK	74.0	-30.9	2.23 V	328	35.0	8.1
8	7440.00	12.3 AV	54.0	-41.7	2.23 V	328	4.2	8.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.2 PK	74.0	-17.8	3.54 H	186	58.2	-2.0
2	2390.00	45.7 AV	54.0	-8.3	3.54 H	186	47.7	-2.0
3	*2402.00	105.3 PK			3.54 H	186	107.4	-2.1
4	*2402.00	80.6 AV			3.54 H	186	82.7	-2.1
5	4804.00	41.9 PK	74.0	-32.1	2.10 H	55	39.9	2.0
6	4804.00	17.2 AV	54.0	-36.8	2.10 H	55	15.2	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.5 PK	74.0	-17.5	1.04 V	181	58.5	-2.0
2	2390.00	46.1 AV	54.0	-7.9	1.04 V	181	48.1	-2.0
3	*2402.00	102.9 PK			1.04 V	181	105.0	-2.1
4	*2402.00	78.2 AV			1.04 V	181	80.3	-2.1
5	4804.00	40.4 PK	74.0	-33.6	1.89 V	14	38.4	2.0
6	4804.00	15.7 AV	54.0	-38.3	1.89 V	14	13.7	2.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	106.0 PK			3.30 H	191	108.1	-2.1
2	*2441.00	81.3 AV			3.30 H	191	83.4	-2.1
3	4882.00	40.9 PK	74.0	-33.1	2.16 H	42	38.5	2.4
4	4882.00	16.2 AV	54.0	-37.8	2.16 H	42	13.8	2.4
5	7323.00	45.2 PK	74.0	-28.8	1.28 H	266	37.8	7.4
6	7323.00	20.5 AV	54.0	-33.5	1.28 H	266	13.1	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	103.5 PK			1.01 V	183	105.6	-2.1
2	*2441.00	78.8 AV			1.01 V	183	80.9	-2.1
3	4882.00	40.0 PK	74.0	-34.0	1.86 V	44	37.6	2.4
4	4882.00	15.3 AV	54.0	-38.7	1.86 V	44	12.9	2.4
5	7323.00	43.6 PK	74.0	-30.4	2.16 V	355	36.2	7.4
6	7323.00	18.9 AV	54.0	-35.1	2.16 V	355	11.5	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	105.4 PK			2.87 H	198	107.8	-2.4
2	*2480.00	80.7 AV			2.87 H	198	83.1	-2.4
3	2483.50	55.9 PK	74.0	-18.1	2.87 H	198	58.3	-2.4
4	2483.50	45.9 AV	54.0	-8.1	2.87 H	198	48.3	-2.4
5	4960.00	41.2 PK	74.0	-32.8	2.10 H	35	38.9	2.3
6	4960.00	16.5 AV	54.0	-37.5	2.10 H	35	14.2	2.3
7	7440.00	44.1 PK	74.0	-29.9	1.29 H	268	36.0	8.1
8	7440.00	19.4 AV	54.0	-34.6	1.29 H	268	11.3	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	103.3 PK			1.00 V	182	105.7	-2.4
2	*2480.00	78.6 AV			1.00 V	182	81.0	-2.4
3	2483.50	56.7 PK	74.0	-17.3	1.00 V	182	59.1	-2.4
4	2483.50	46.4 AV	54.0	-7.6	1.00 V	182	48.8	-2.4
5	4960.00	39.9 PK	74.0	-34.1	1.92 V	40	37.6	2.3
6	4960.00	15.2 AV	54.0	-38.8	1.92 V	40	12.9	2.3
7	7440.00	43.7 PK	74.0	-30.3	2.24 V	334	35.6	8.1
8	7440.00	19.0 AV	54.0	-35.0	2.24 V	334	10.9	8.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwel time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwel time per 100 ms per channel × (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	GFSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.4 PK	74.0	-17.6	1.11 H	246	58.4	-2.0
2	2390.00	46.3 AV	54.0	-7.7	1.11 H	246	48.3	-2.0
3	*2402.00	109.0 PK			1.11 H	246	111.1	-2.1
4	*2402.00	78.2 AV			1.11 H	246	80.3	-2.1
5	4804.00	41.3 PK	74.0	-32.7	2.08 H	38	39.3	2.0
6	4804.00	10.5 AV	54.0	-43.5	2.08 H	38	8.5	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.2 PK	74.0	-17.8	2.17 V	185	58.2	-2.0
2	2390.00	45.8 AV	54.0	-8.2	2.17 V	185	47.8	-2.0
3	*2402.00	106.2 PK			2.17 V	185	108.3	-2.1
4	*2402.00	75.4 AV			2.17 V	185	77.5	-2.1
5	4804.00	40.6 PK	74.0	-33.4	1.89 V	20	38.6	2.0
6	4804.00	9.8 AV	54.0	-44.2	1.89 V	20	7.8	2.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	109.1 PK			1.14 H	258	111.2	-2.1
2	*2441.00	78.3 AV			1.14 H	258	80.4	-2.1
3	4882.00	41.4 PK	74.0	-32.6	2.13 H	46	39.0	2.4
4	4882.00	10.6 AV	54.0	-43.4	2.13 H	46	8.2	2.4
5	7323.00	44.7 PK	74.0	-29.3	1.33 H	265	37.3	7.4
6	7323.00	13.9 AV	54.0	-40.1	1.33 H	265	6.5	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	105.5 PK			2.21 V	184	107.6	-2.1
2	*2441.00	74.7 AV			2.21 V	184	76.8	-2.1
3	4882.00	40.3 PK	74.0	-33.7	1.87 V	28	37.9	2.4
4	4882.00	9.5 AV	54.0	-44.5	1.87 V	28	7.1	2.4
5	7323.00	43.6 PK	74.0	-30.4	2.21 V	343	36.2	7.4
6	7323.00	12.8 AV	54.0	-41.2	2.21 V	343	5.4	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	107.0 PK			1.20 H	100	109.4	-2.4
2	*2480.00	76.2 AV			1.20 H	100	78.6	-2.4
3	2483.50	57.1 PK	74.0	-16.9	1.20 H	100	59.5	-2.4
4	2483.50	46.6 AV	54.0	-7.4	1.20 H	100	49.0	-2.4
5	4960.00	41.3 PK	74.0	-32.7	2.17 H	60	39.0	2.3
6	4960.00	10.5 AV	54.0	-43.5	2.17 H	60	8.2	2.3
7	7440.00	44.3 PK	74.0	-29.7	1.36 H	269	36.2	8.1
8	7440.00	13.5 AV	54.0	-40.5	1.36 H	269	5.4	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	104.7 PK			2.09 V	183	107.1	-2.4
2	*2480.00	73.9 AV			2.09 V	183	76.3	-2.4
3	2483.50	56.9 PK	74.0	-17.1	2.09 V	183	59.3	-2.4
4	2483.50	46.4 AV	54.0	-7.6	2.09 V	183	48.8	-2.4
5	4960.00	40.4 PK	74.0	-33.6	1.89 V	22	38.1	2.3
6	4960.00	9.6 AV	54.0	-44.4	1.89 V	22	7.3	2.3
7	7440.00	43.5 PK	74.0	-30.5	2.16 V	328	35.4	8.1
8	7440.00	12.7 AV	54.0	-41.3	2.16 V	328	4.6	8.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+0) / 100 ms) = -30.8 dB

RF Mode	8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.6 PK	74.0	-17.4	2.30 H	252	58.6	-2.0
2	2390.00	46.2 AV	54.0	-7.8	2.30 H	252	48.2	-2.0
3	*2402.00	107.6 PK			2.30 H	252	109.7	-2.1
4	*2402.00	82.9 AV			2.30 H	252	85.0	-2.1
5	4804.00	42.0 PK	74.0	-32.0	2.18 H	57	40.0	2.0
6	4804.00	17.3 AV	54.0	-36.7	2.18 H	57	15.3	2.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.3 PK	74.0	-17.7	2.03 V	180	58.3	-2.0
2	2390.00	46.1 AV	54.0	-7.9	2.03 V	180	48.1	-2.0
3	*2402.00	104.5 PK			2.03 V	180	106.6	-2.1
4	*2402.00	79.8 AV			2.03 V	180	81.9	-2.1
5	4804.00	40.5 PK	74.0	-33.5	1.90 V	23	38.5	2.0
6	4804.00	15.8 AV	54.0	-38.2	1.90 V	23	13.8	2.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	107.6 PK			2.30 H	252	109.7	-2.1
2	*2441.00	82.9 AV			2.30 H	252	85.0	-2.1
3	4882.00	41.3 PK	74.0	-32.7	2.16 H	40	38.9	2.4
4	4882.00	16.6 AV	54.0	-37.4	2.16 H	40	14.2	2.4
5	7323.00	45.0 PK	74.0	-29.0	1.35 H	280	37.6	7.4
6	7323.00	20.3 AV	54.0	-33.7	1.35 H	280	12.9	7.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2441.00	104.5 PK			2.03 V	180	106.6	-2.1
2	*2441.00	79.8 AV			2.03 V	180	81.9	-2.1
3	4882.00	39.7 PK	74.0	-34.3	1.86 V	39	37.3	2.4
4	4882.00	15.0 AV	54.0	-39.0	1.86 V	39	12.6	2.4
5	7323.00	43.2 PK	74.0	-30.8	2.24 V	339	35.8	7.4
6	7323.00	18.5 AV	54.0	-35.5	2.24 V	339	11.1	7.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

RF Mode	8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 70% RH
Tested By	Stars Liu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	106.6 PK			1.56 H	92	109.0	-2.4
2	*2480.00	81.9 AV			1.56 H	92	84.3	-2.4
3	2483.50	56.5 PK	74.0	-17.5	1.56 H	92	58.9	-2.4
4	2483.50	46.1 AV	54.0	-7.9	1.56 H	92	48.5	-2.4
5	4960.00	41.0 PK	74.0	-33.0	2.13 H	33	38.7	2.3
6	4960.00	16.3 AV	54.0	-37.7	2.13 H	33	14.0	2.3
7	7440.00	44.6 PK	74.0	-29.4	1.32 H	255	36.5	8.1
8	7440.00	19.9 AV	54.0	-34.1	1.32 H	255	11.8	8.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	103.0 PK			2.06 V	184	105.4	-2.4
2	*2480.00	78.3 AV			2.06 V	184	80.7	-2.4
3	2483.50	56.7 PK	74.0	-17.3	2.06 V	184	59.1	-2.4
4	2483.50	46.3 AV	54.0	-7.7	2.06 V	184	48.7	-2.4
5	4960.00	40.2 PK	74.0	-33.8	1.91 V	22	37.9	2.3
6	4960.00	15.5 AV	54.0	-38.5	1.91 V	22	13.2	2.3
7	7440.00	43.5 PK	74.0	-30.5	2.25 V	342	35.4	8.1
8	7440.00	18.8 AV	54.0	-35.2	2.25 V	342	10.7	8.1

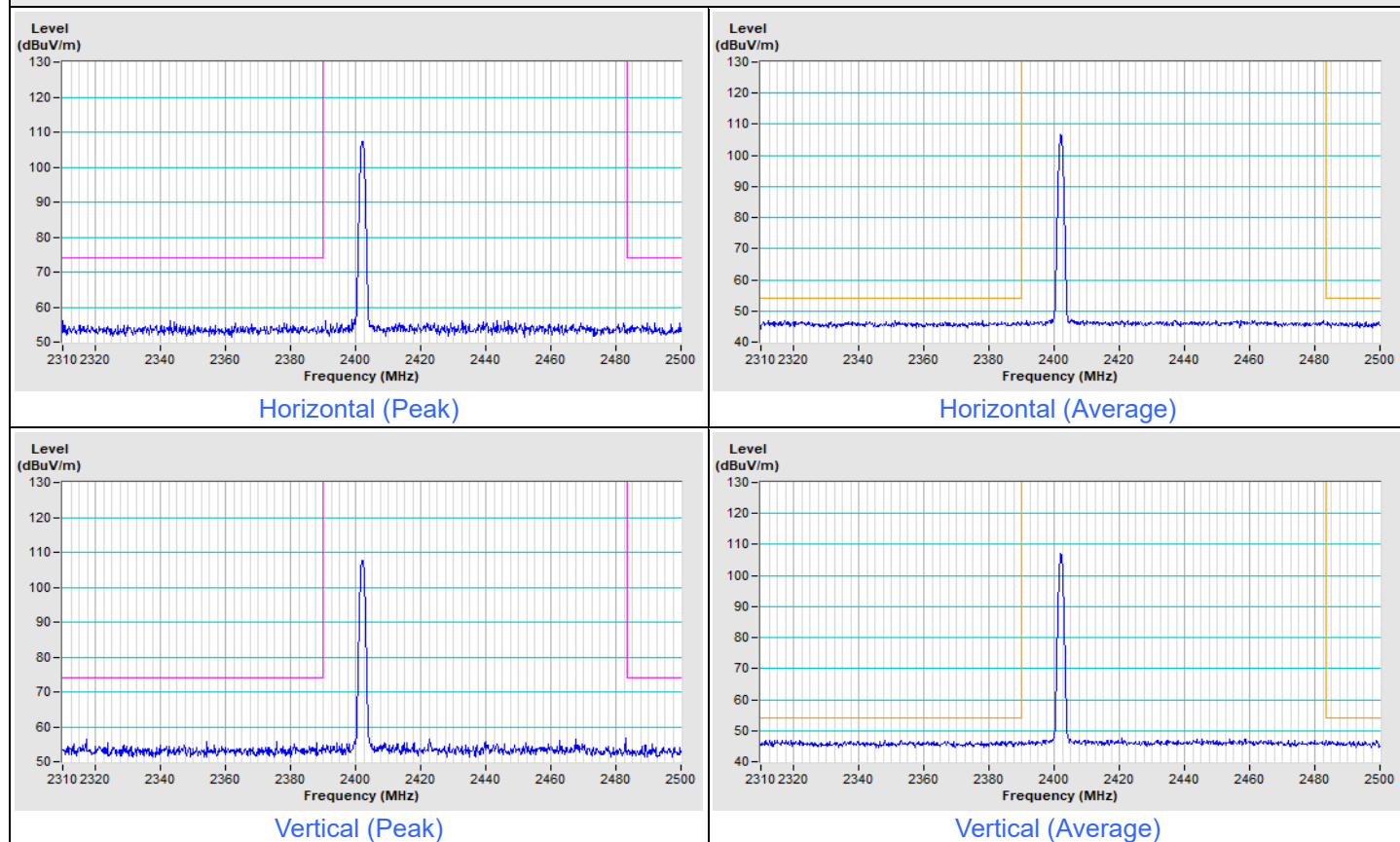
Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of harmonic frequency is: Average = Peak value + 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) Where the duty cycle correction factor is calculated from following formula: 20 log(dwelling time per 100 ms per channel * (channel separation correction + overlapping channel correction)) = 20 log(2.895 ms * (1+1) / 100 ms) = -24.7 dB

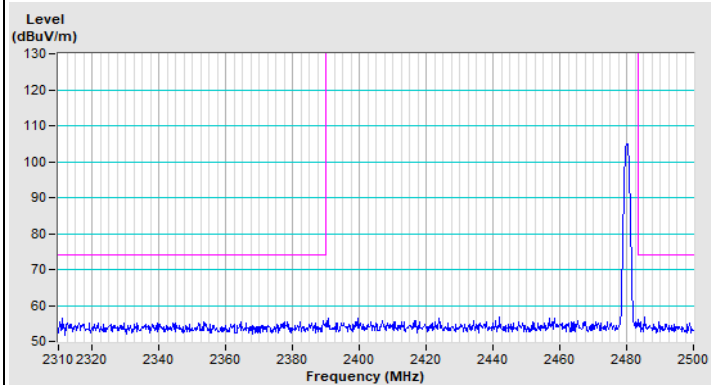
Plot of Band Edge
Mode A
1Tx

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

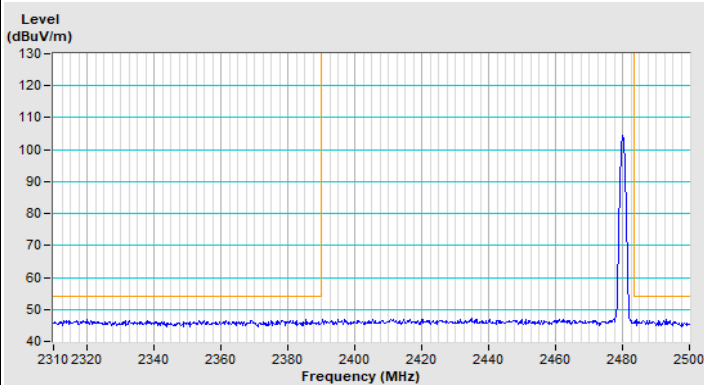
GFSK Channel 0



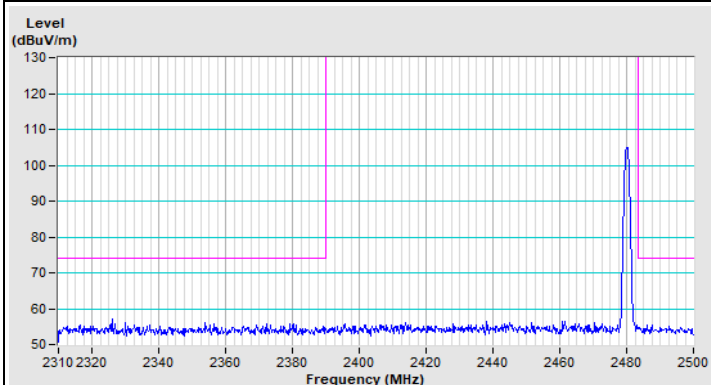
GFSK Channel 78



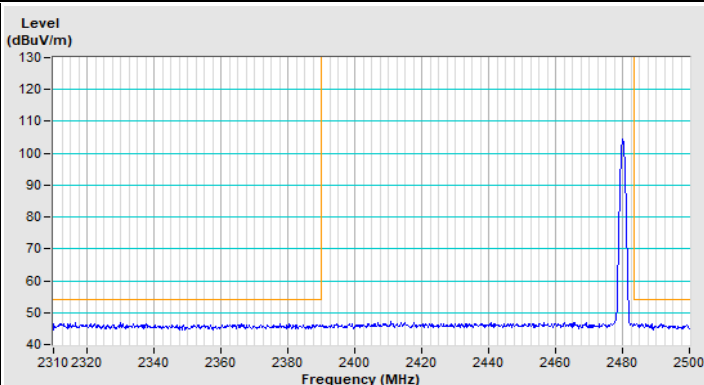
Horizontal (Peak)



Horizontal (Average)



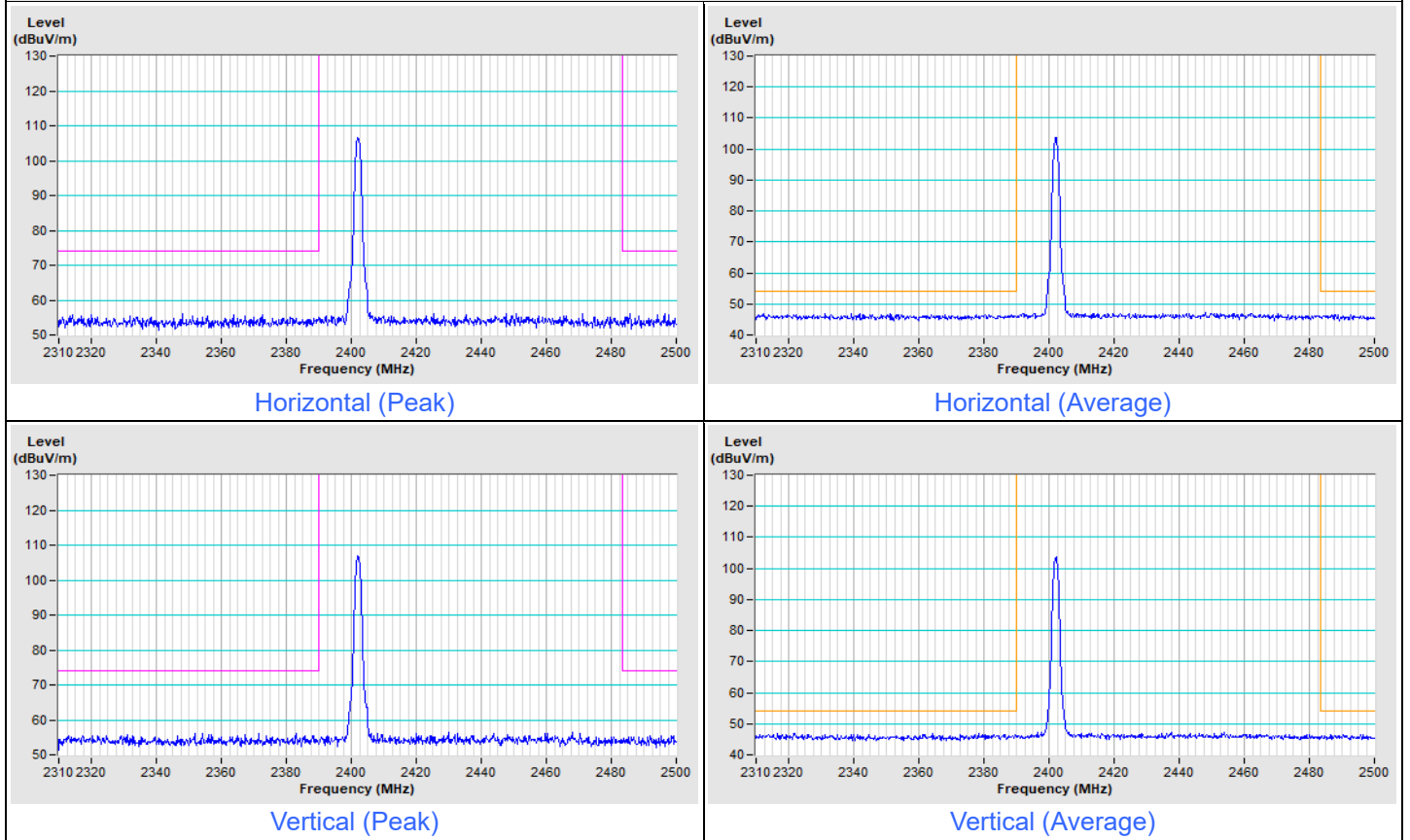
Vertical (Peak)



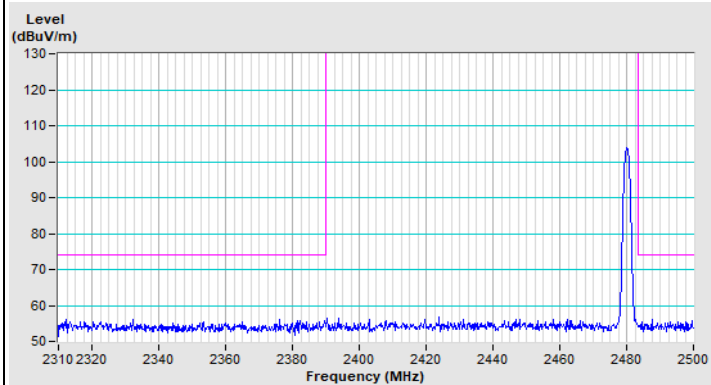
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

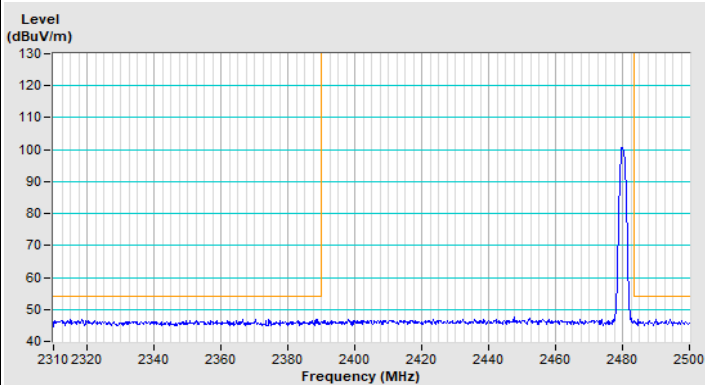
8DPSK Channel 0



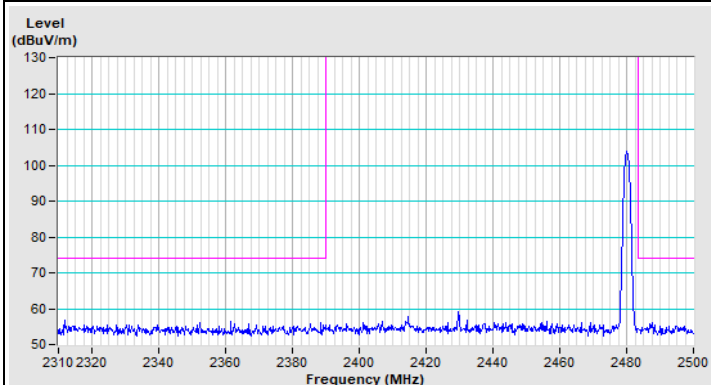
8DPSK Channel 78



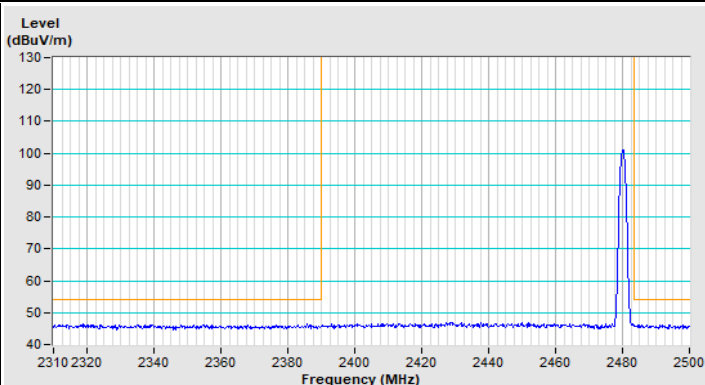
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

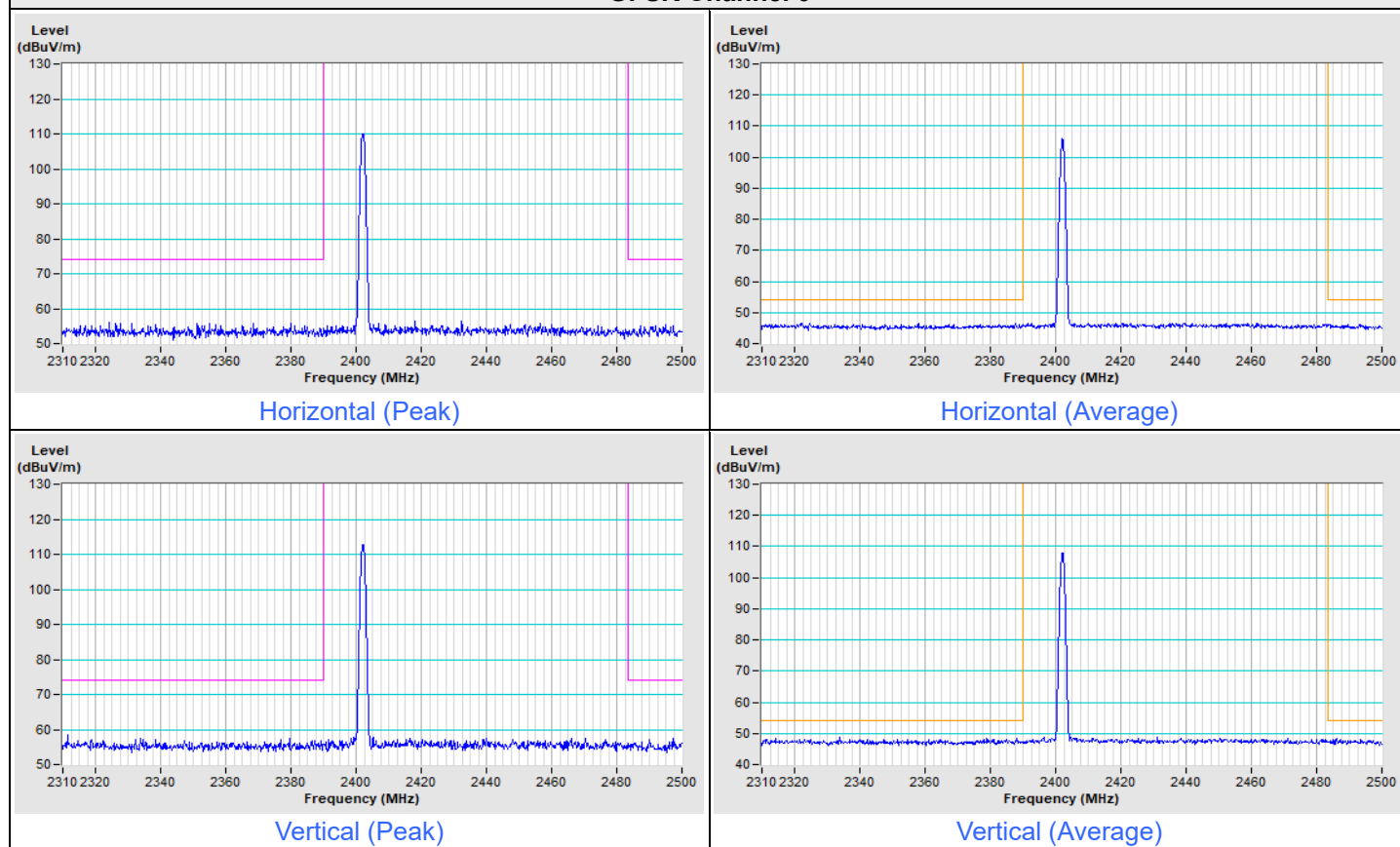


Vertical (Average)

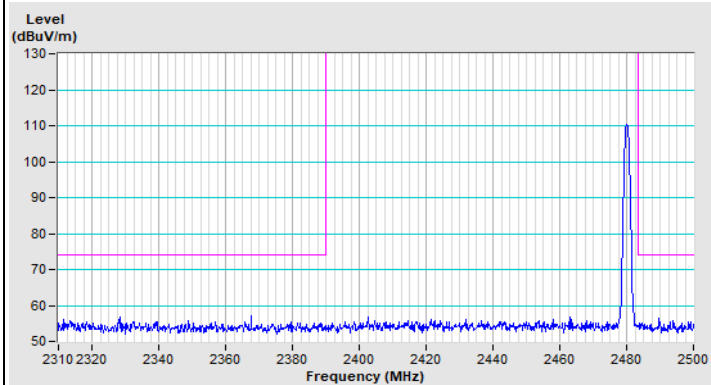
2Tx

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

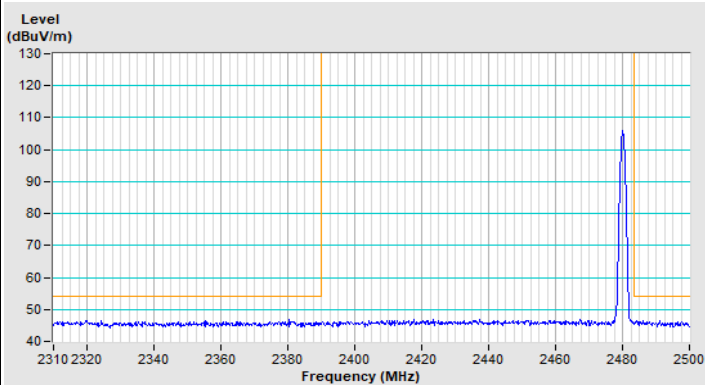
GFSK Channel 0



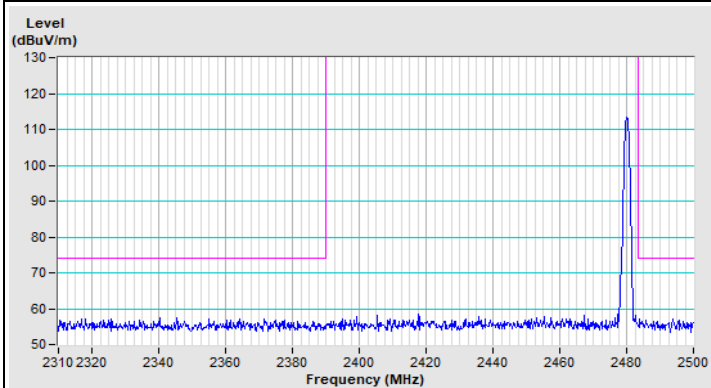
GFSK Channel 78



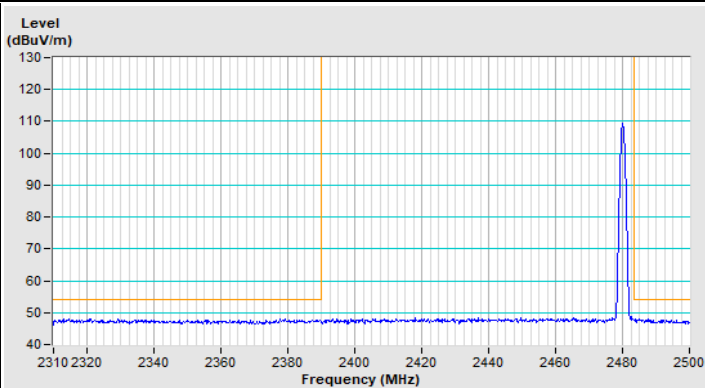
Horizontal (Peak)



Horizontal (Average)



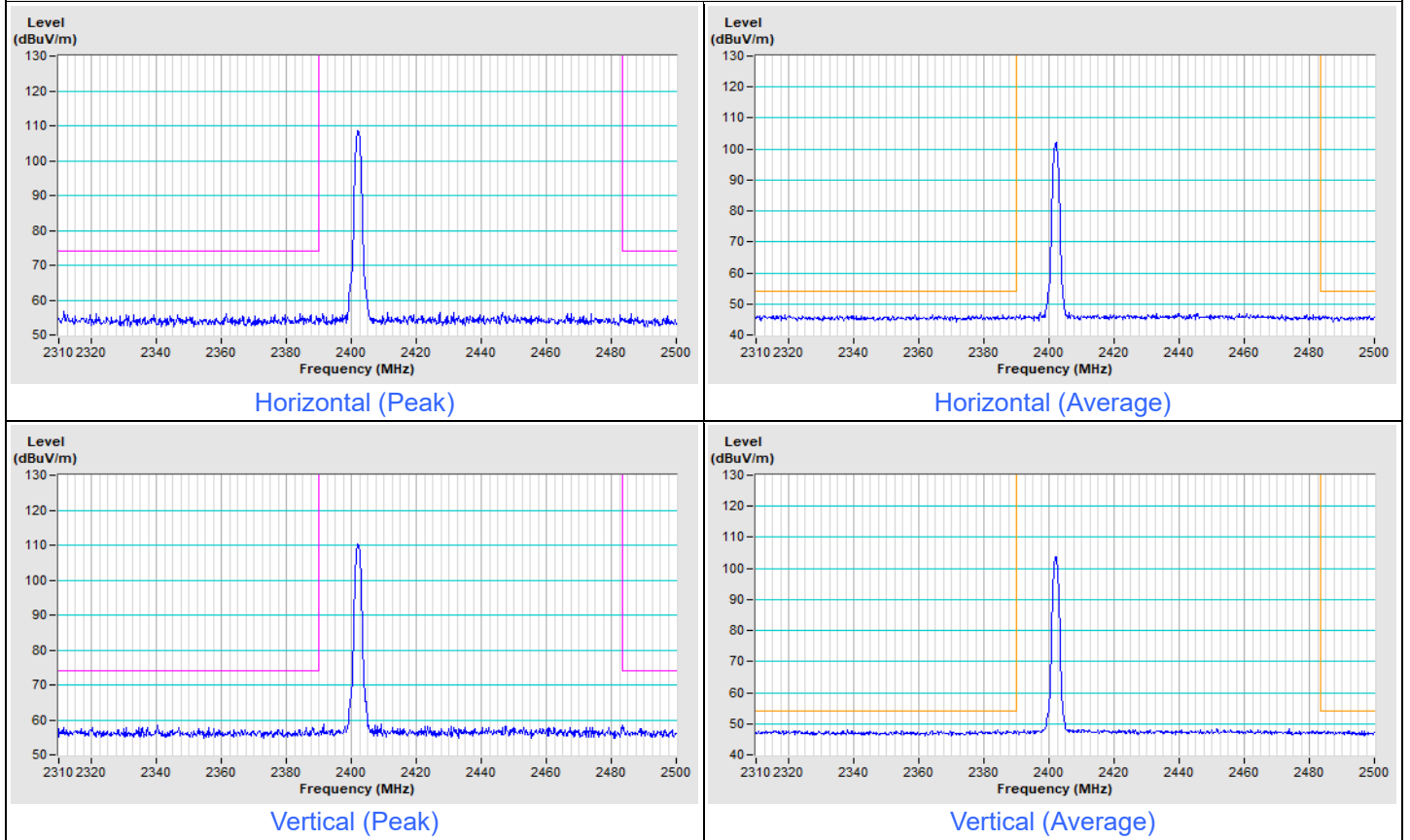
Vertical (Peak)



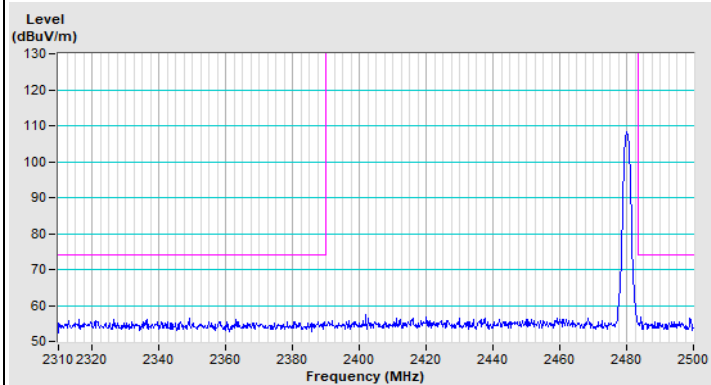
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

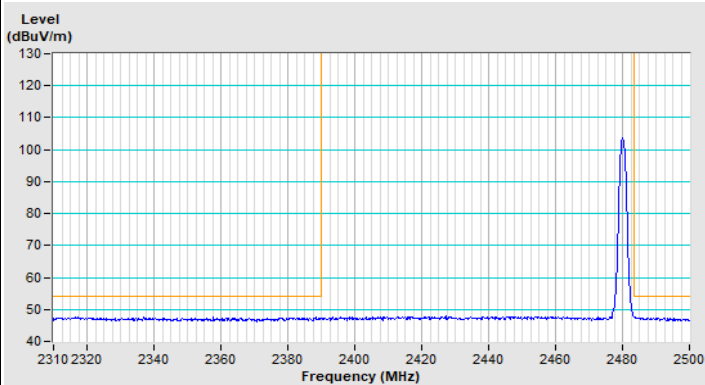
8DPSK Channel 0



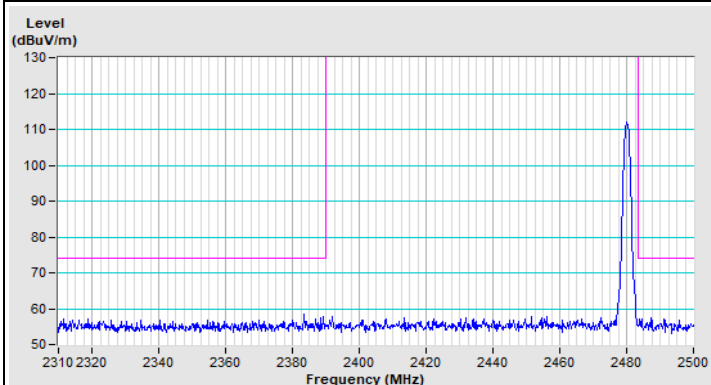
8DPSK Channel 78



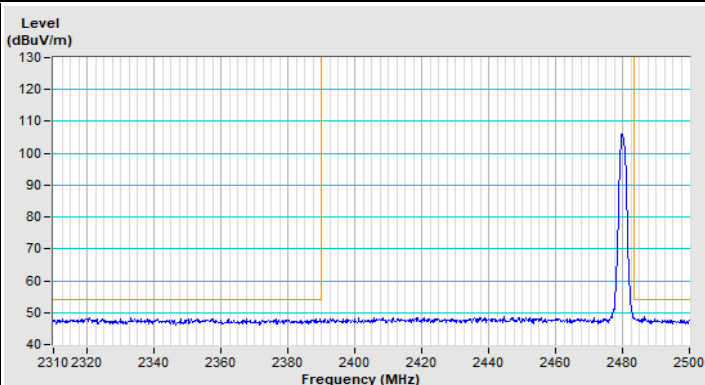
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

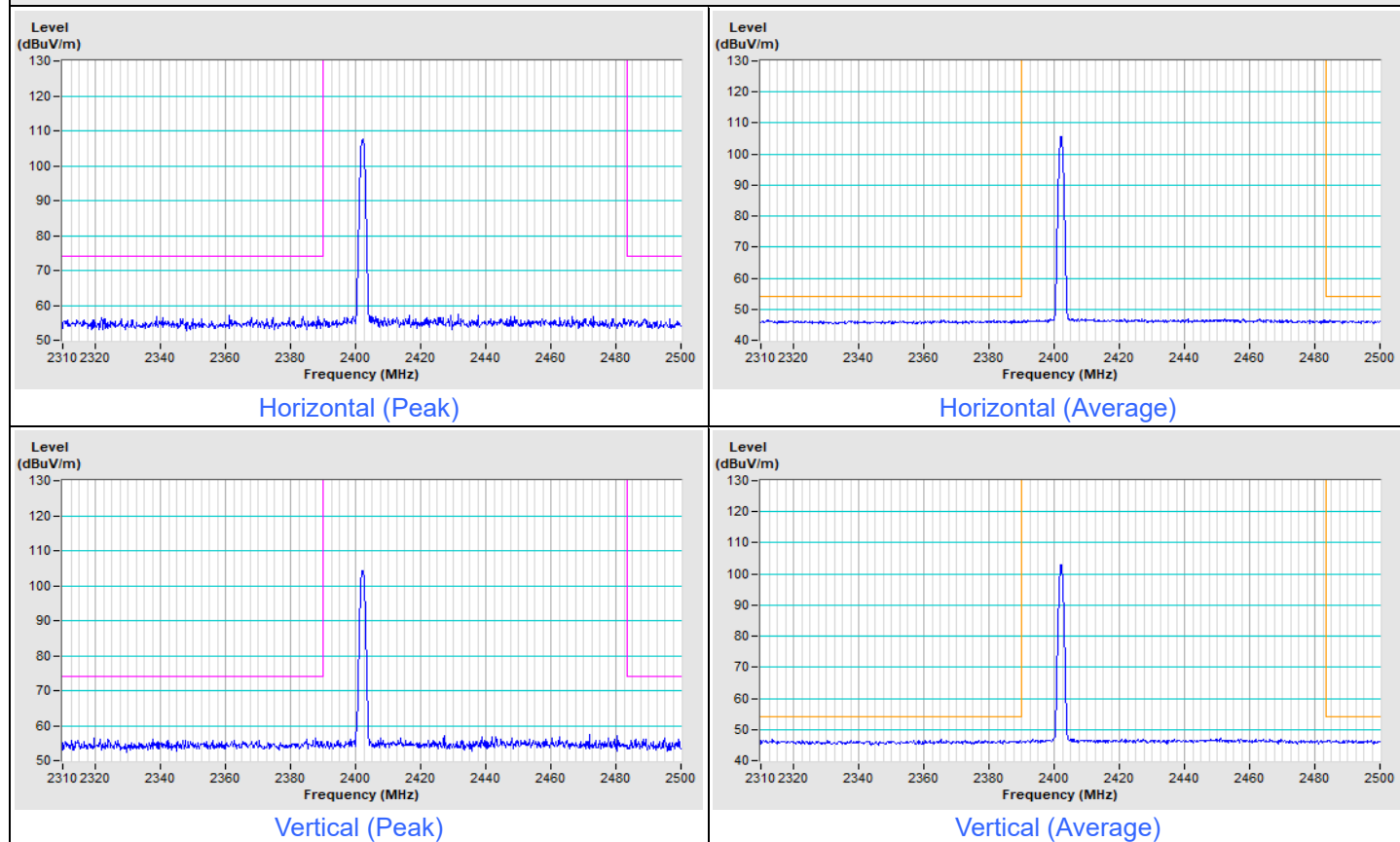


Vertical (Average)

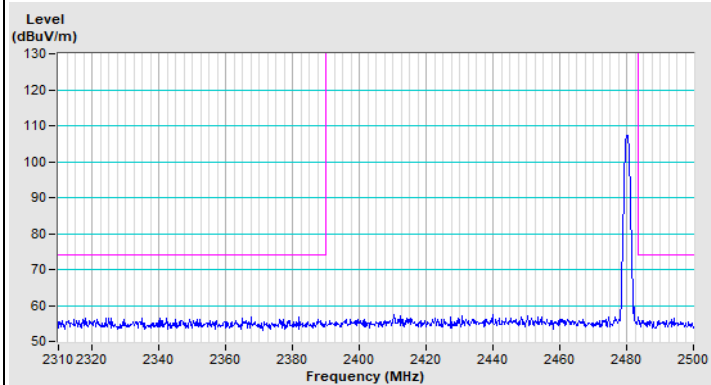
Mode B 1Tx

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

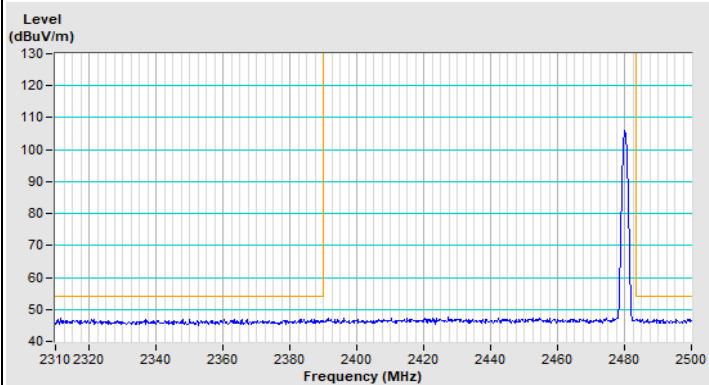
GFSK Channel 0



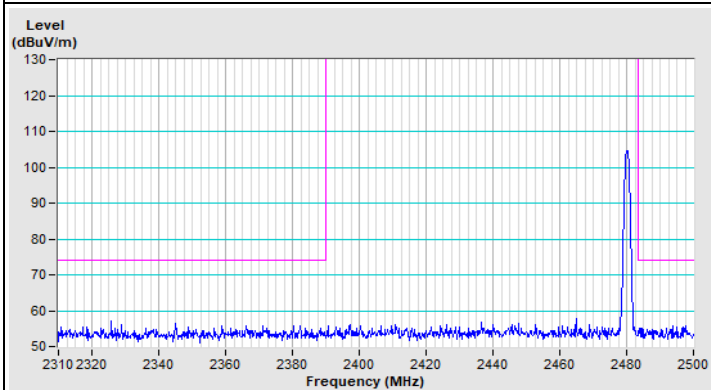
GFSK Channel 78



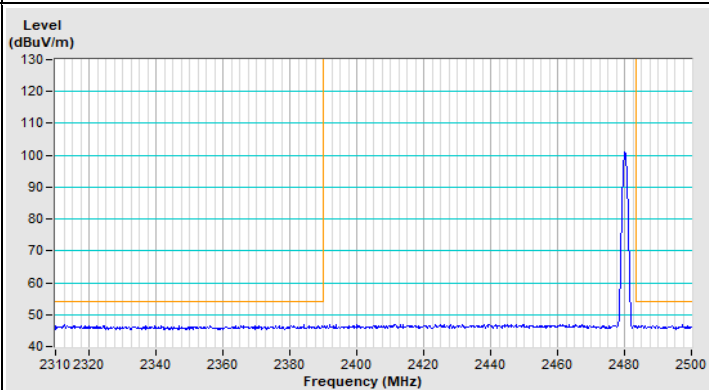
Horizontal (Peak)



Horizontal (Average)



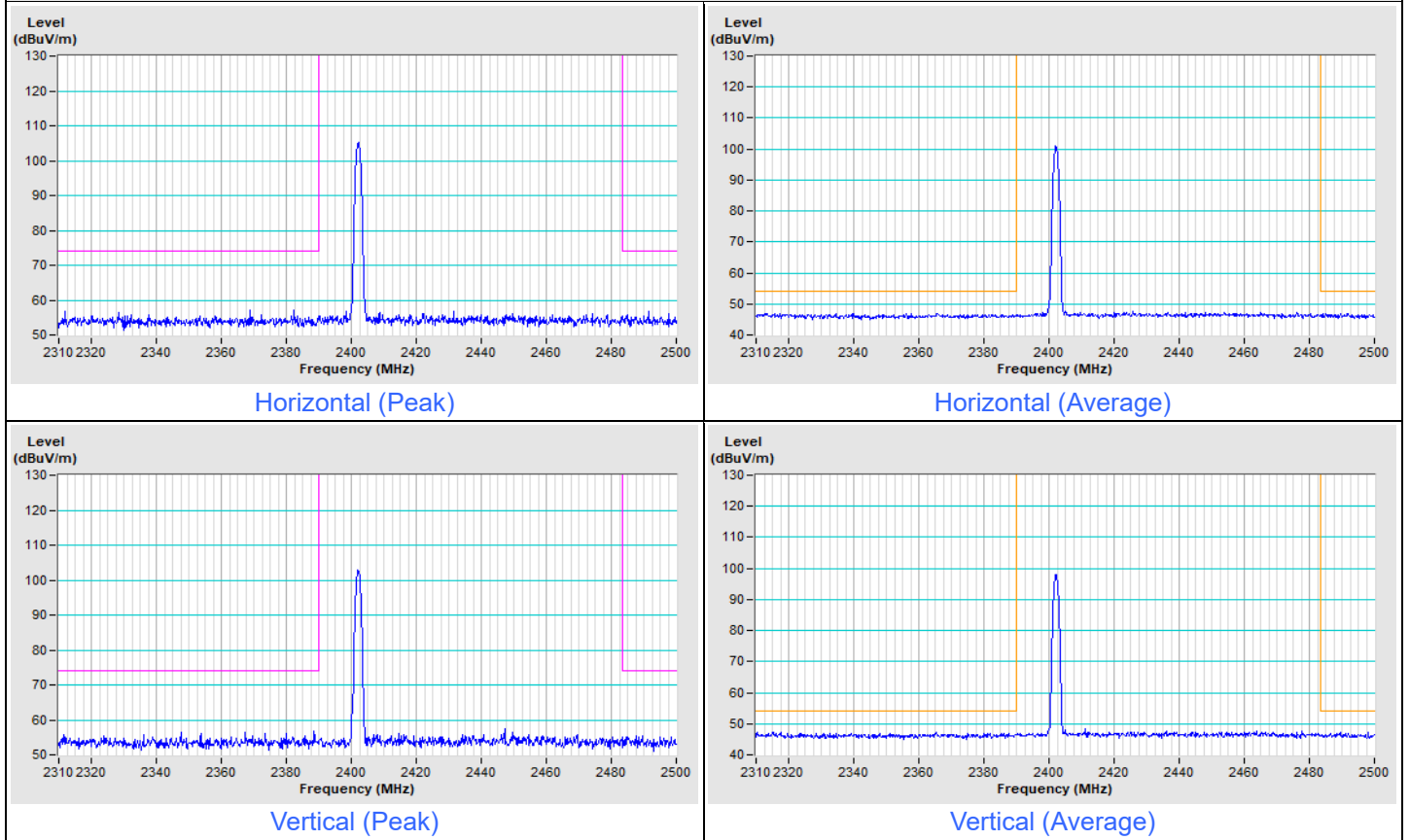
Vertical (Peak)



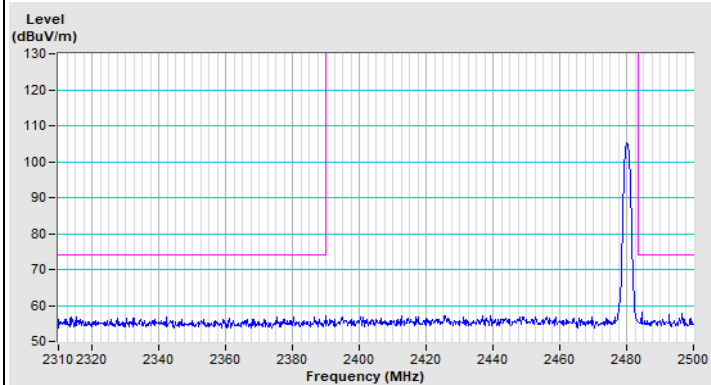
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

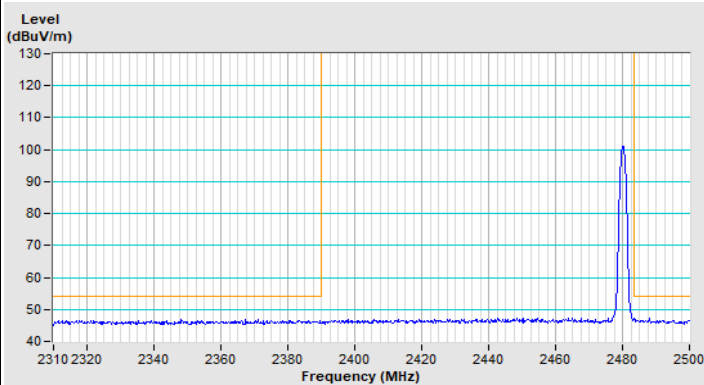
8DPSK Channel 0



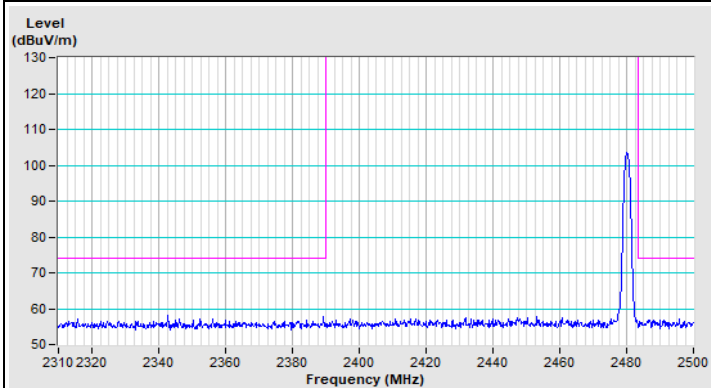
8DPSK Channel 78



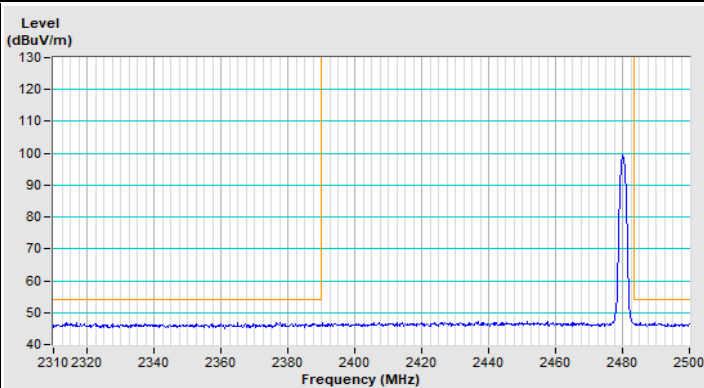
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

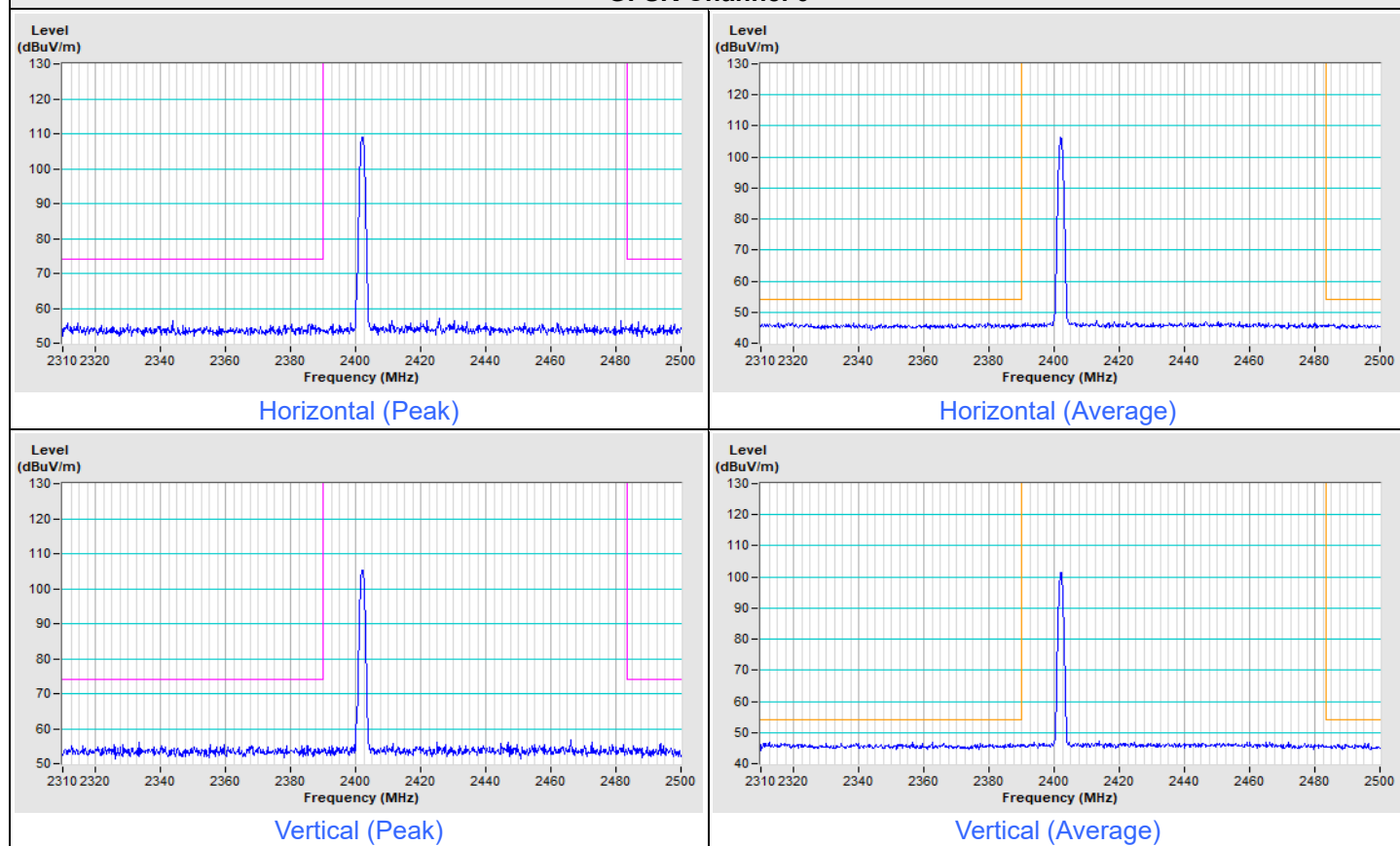


Vertical (Average)

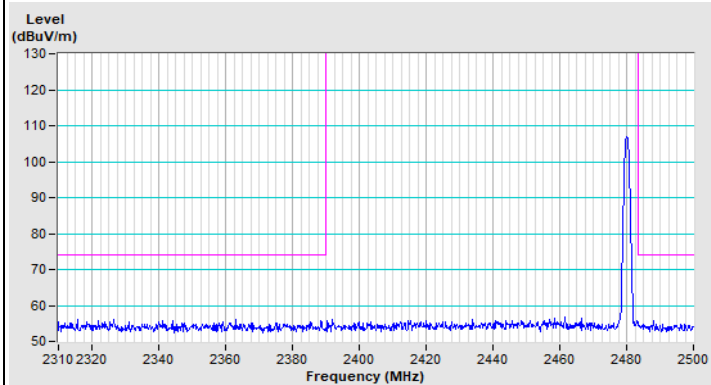
2Tx

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

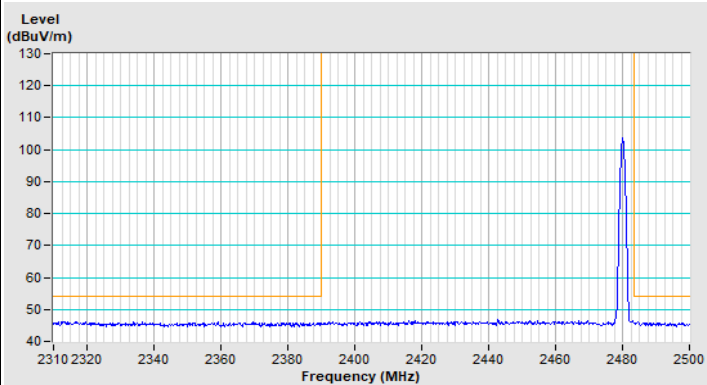
GFSK Channel 0



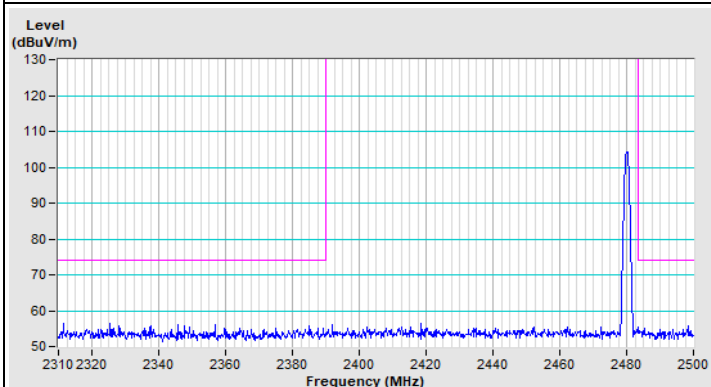
GFSK Channel 78



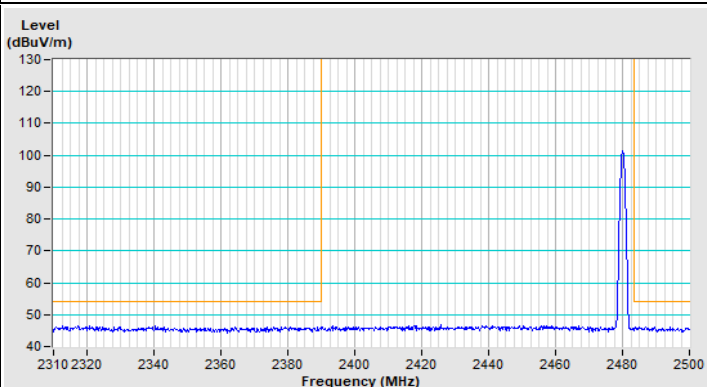
Horizontal (Peak)



Horizontal (Average)



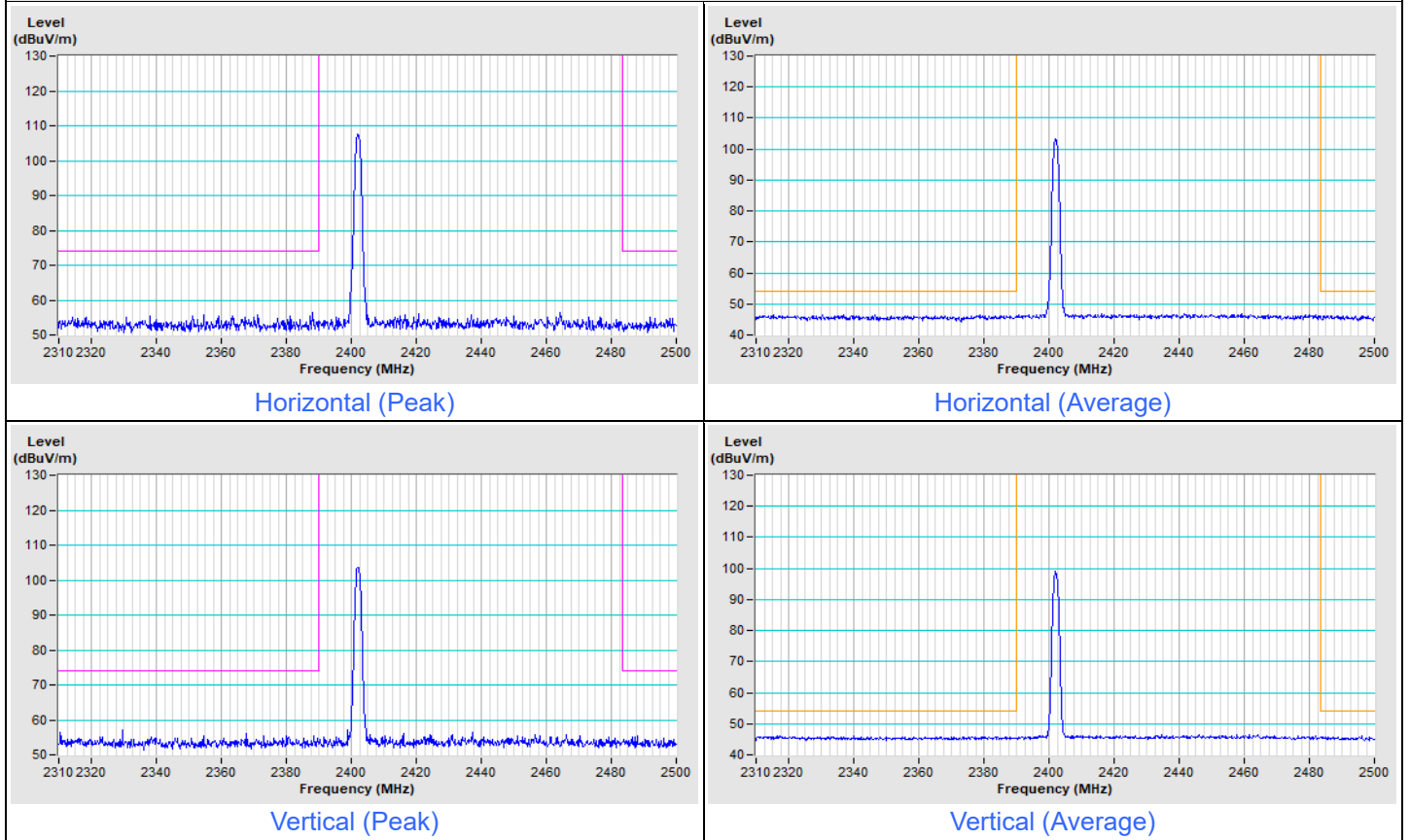
Vertical (Peak)



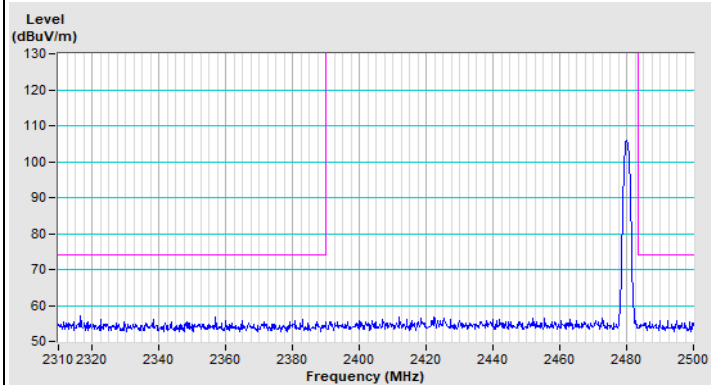
Vertical (Average)

Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	--------------------	-------------------------------	---

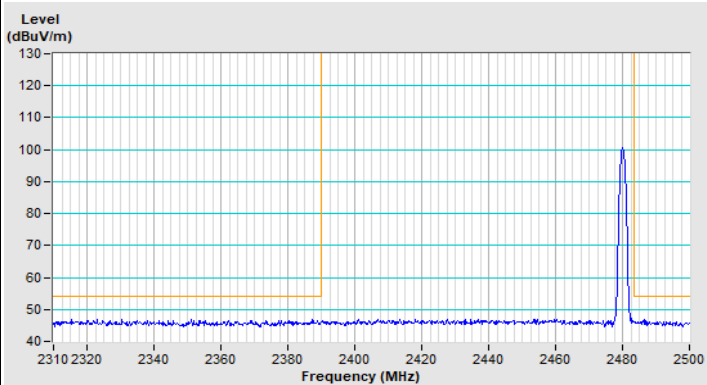
8DPSK Channel 0



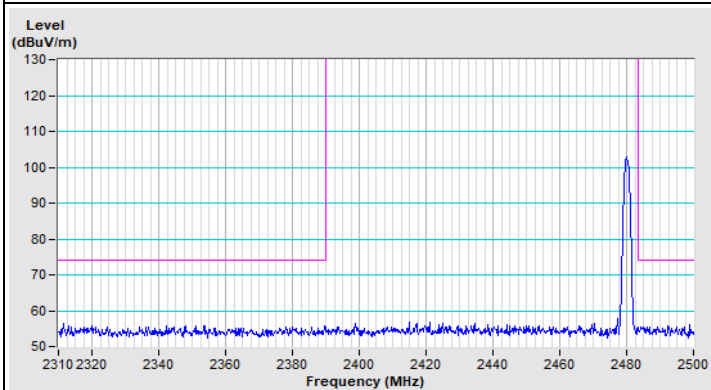
8DPSK Channel 78



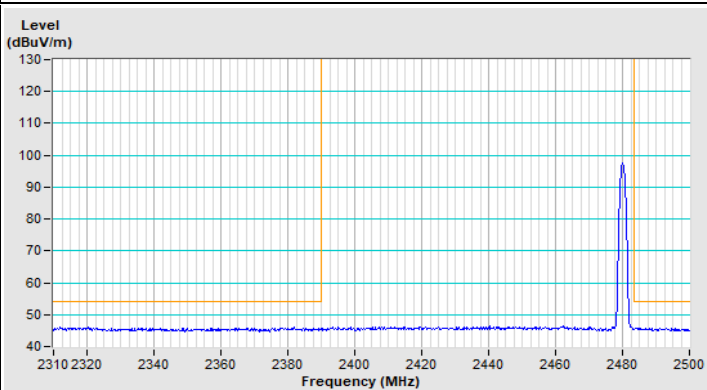
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

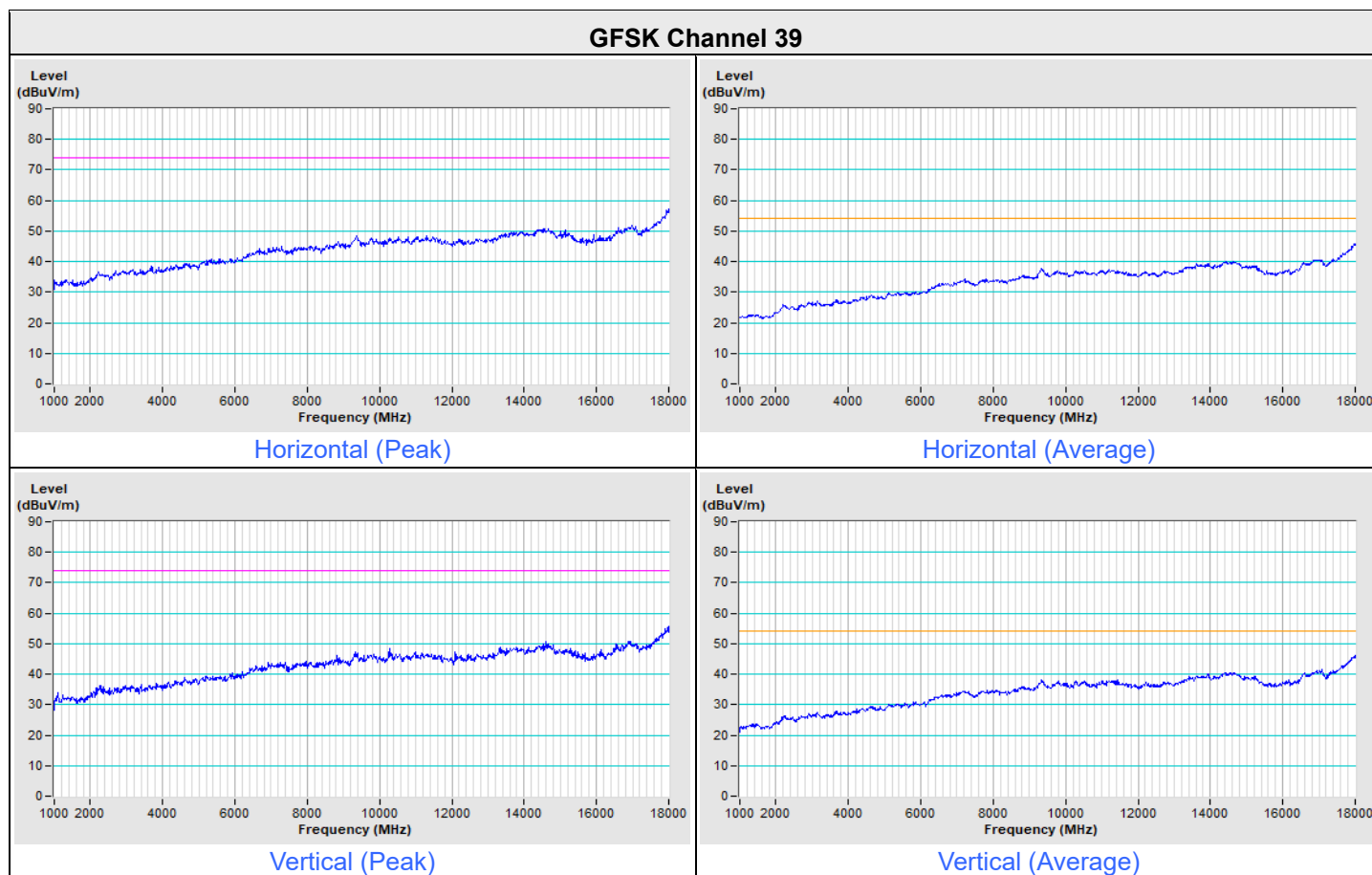


Vertical (Average)

Plot of Other Emission

1Tx

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	----------------	-------------------------------	---



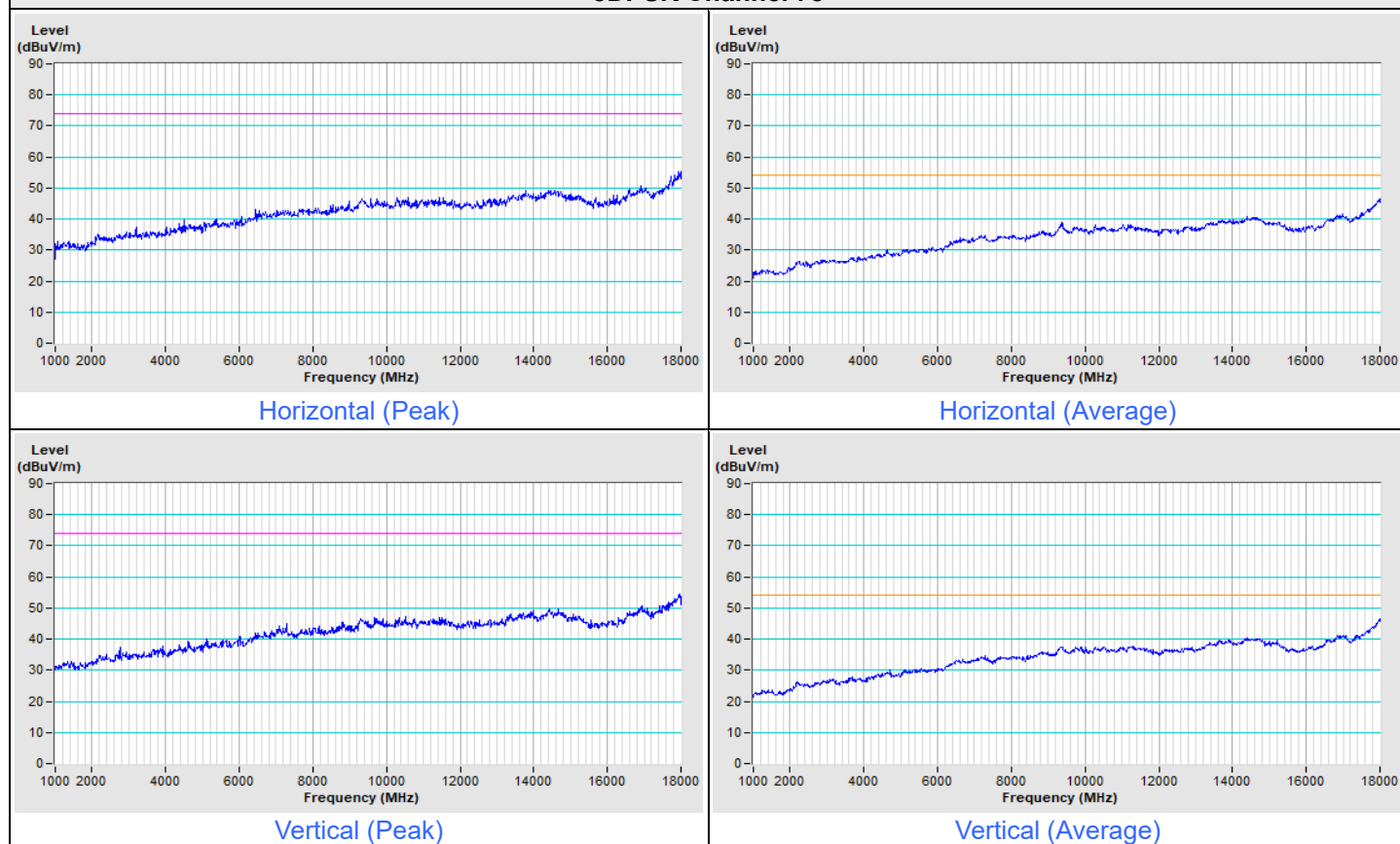
Notes:

1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.
2. The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

2Tx

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	----------------	-------------------------------	---

8DPSK Channel 78



Notes:

1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.
2. The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

The address and road map of all our labs can be found in our web site also.

--- END ---