

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBBUI-WTW-P23070201B-1

FCC ID: TX2-RTL8922AE

Product: 11be RTL8922AE Combo module

Brand: REALTEK

Model No.: RTL8922AE

Received Date: 2024/1/26

Test Date: 2024/2/22 ~ 2024/5/31

Issued Date: 2024/6/4

Applicant: Realtek Semiconductor Corp.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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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: 2024/6/4

May Chen / Manager

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Prepared by : Vito Lung / Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFBBUI-WTW-P23070201B-1	Original release.	2024/6/4

1 Certificate

Product: 11be RTL8922AE Combo module

Brand: REALTEK

Test Model: RTL8922AE

Sample Status: Engineering sample

Applicant: Realtek Semiconductor Corp.

Test Date: 2024/2/22 ~ 2024/5/31

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

Measurement ANSI C63.10-2013

procedure: KDB 558074 D01 15.247 Meas Guidance v05r02

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	N/A	Refer to Note 1 below
15.247(a)(1) (iii)	Dwell Time on Each Channel	N/A	Refer to Note 1 below
15.247(a)(1)	Hopping Channel Separation	N/A	Refer to Note 1 below
15.247(a)(1)	20 dB Bandwidth	N/A	Refer to Note 1 below
15.247(d)	Conducted Out of Band Emissions	N/A	Refer to Note 1 below
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -8.43 dB at 0.15000 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.2 dB at 143.90 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -5.2 dB at 2390.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is IPEX, MHF4, MHF4L not a standard connector.

Note:

- RF Output Power, AC Power Conducted Emissions and Unwanted Emissions test items were performed for this addendum. The others testing data refer to original test report and evaluated of the summary as following:
 - No changes are made to the module itself; this C2PC is for adding new sets of antennas.
 - The worst-case (max) antenna gain is still the same as original approved antennas, and only the antenna type is different. Therefore, for test items performed using conducted method / conducted method + max antenna gain, the original test results remain valid.
 - Conducted Output power was verified to be same as original filing.
- 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:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
RF Output Power	-	1.1 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	5.1 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 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 RTL8922AE Combo module
Brand	REALTEK
Test Model	RTL8922AE
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	19.679 mW (12.94 dBm)

Note:

1. This report is prepared for FCC Class II permissive change. The difference compared with the Report No.: RFBBUI-WTW-P23070201-1 R1 design is as the following information:
 - ◆ Adding Dipole & Monopole antenna. (Refer to section 3.2)
2. According to above condition, therefore only the RF Output Power, AC Power Conducted Emission and Unwanted Emissions test items need to be performed. And all data were verified to meet the requirements.
3. There are Bluetooth and WLAN (2.4 GHz & 5 GHz & 6 GHz) technology used for the EUT.
4. Simultaneously transmission condition.

1Tx		
Condition	Technology	
	S0 (Chain 1)	S1 (Chain 0)
1	WLAN (5 GHz)_H	Bluetooth + WLAN (5 GHz)_L
2	WLAN (5 GHz)_L	Bluetooth + WLAN (5 GHz)_H
3	WLAN (5 GHz)_L	Bluetooth + WLAN (6 GHz)
4	WLAN (6 GHz)	Bluetooth + WLAN (5 GHz)_L
5	WLAN (6 GHz)	Bluetooth + WLAN (5 GHz)_H
6	WLAN (5 GHz)_H	Bluetooth + WLAN (6 GHz)
7	WLAN (2.4 GHz)	WLAN (5 GHz) Full
8	WLAN (2.4 GHz)	WLAN (6 GHz)
9	WLAN (5 GHz) Full	Bluetooth
10	WLAN (6 GHz)	Bluetooth
2TX		
1	WLAN (5 GHz)_L	WLAN (5 GHz)_L + Bluetooth
2	WLAN (5 GHz)_H	WLAN (5 GHz)_H + Bluetooth
3	WLAN (6 GHz)	WLAN (6 GHz) + Bluetooth

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

5. 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.

Original									
Ant. Set	RF Port No.	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	5.15~5.895			
					5	5.925~7.125			
2	1/2	Chain0/1	ARISTOTLE	RFA-57-JP805-4B-300	-1.87	5.15~5.895	PIFA	IPEX, MHF4	300
					-1.88	5.925~7.125			
Newly									
3	1/2	Chain0/1	HongBo	260-25096	3.11	2.4~2.4835	Monopole	MHF4L	300
					4.91	5.15~5.895			
					4.73	5.925~7.125			
4	1/2	Chain0/1	ARISTOTLE	RFA-27-C38H1-MHF4300	3	2.4~2.4835	Dipole	IPEX, MHF4	300
					5	5.15~5.895			
					5	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 Monopole / Dipole 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. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.
Worst Case:	1. The monopole antenna the worst case was found when positioned on (X / Y / Z axis): X axis 2. The Dipole antenna the worst case was found when positioned on (X / Y / Z axis): Z axis

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

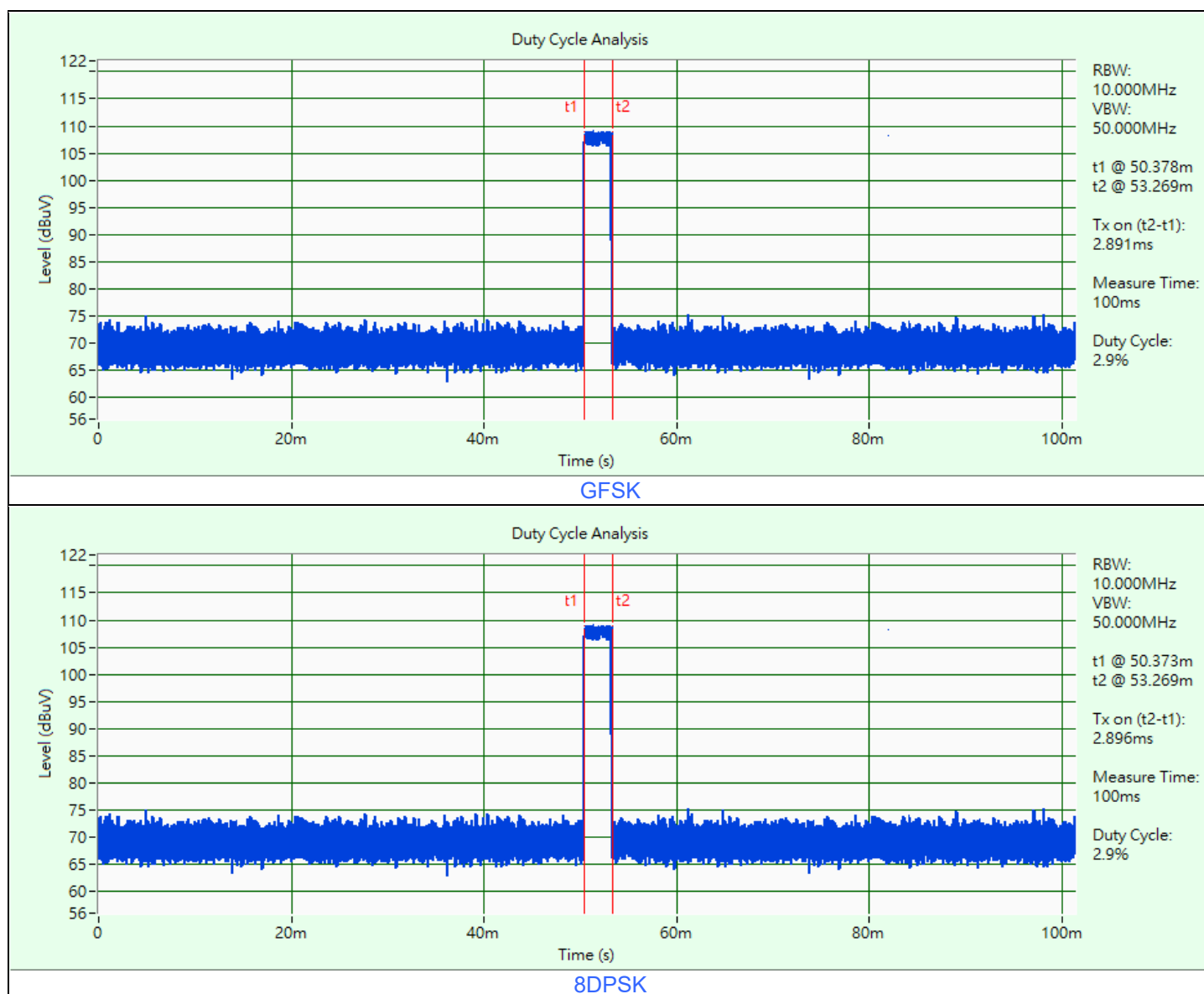
Test Item	EUT Configure Mode	Power Profile	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	-	High	0, 39, 78	GFSK	DH5
				8DPSK	3DH5
AC Power Conducted Emissions	A, B	High	39	GFSK	DH5
Unwanted Emissions below 1 GHz	A, B	High	39	GFSK	DH5
Unwanted Emissions above 1 GHz	A, B	High	0, 39, 78	GFSK	DH5
				8DPSK	3DH5
EUT Configure Mode:	A	Monopole Antenna			
	B	Dipole Antenna			
Note: Bluetooth technology will fix transmission on Chain 0.					

3.5 Duty Cycle of Test Signal

High Power

GFSK: Duty cycle = 2.891 ms / 100 ms x 100% = 2.9%

8DPSK: Duty cycle = 2.891 ms / 100 ms x 100% = 2.9%

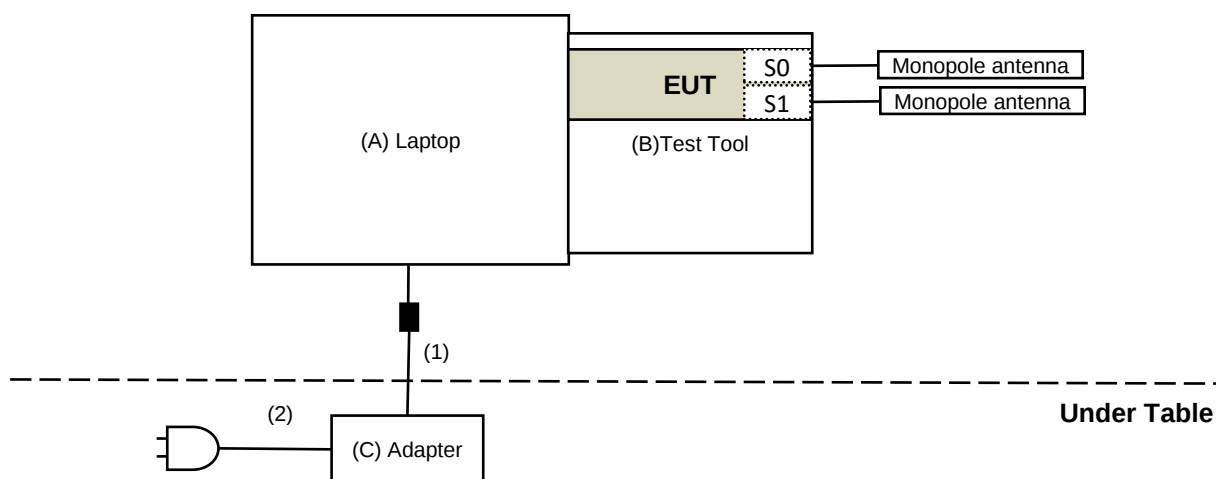


3.6 Test Program Used and Operation Descriptions

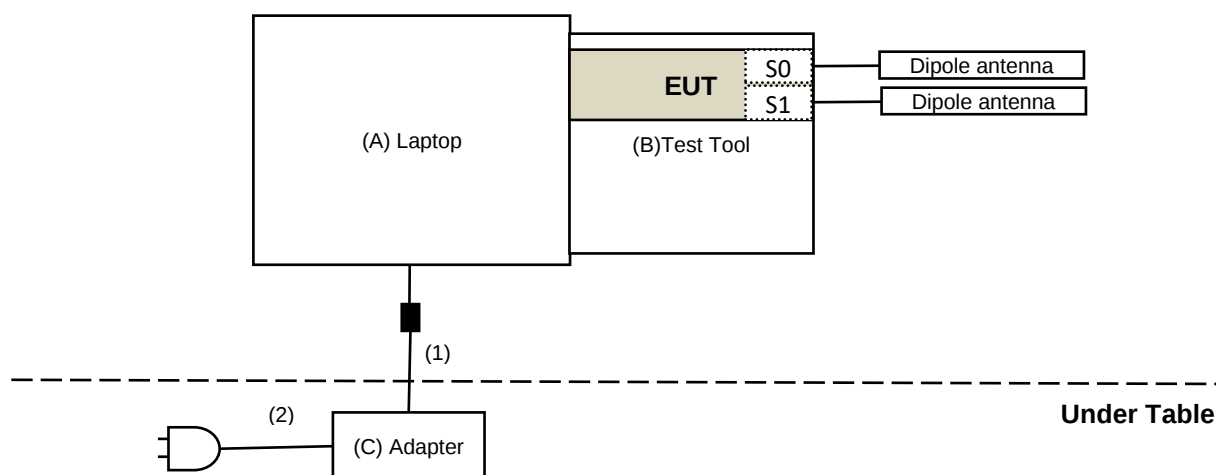
Controlling software (Bluetooth RF test tool (5.2.3.79)) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

Mode A



Mode B



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	Dell	E5420	FHNS4S1	N/A	Provided by Lab
B	Test Tool	Realtek	N/A	N/A	N/A	Supplied by applicant
C	Adapter	Dell	LA65NS1-00	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.8	No	1	Provided by Lab
2	AC Cable	1	1	No	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
Pulse Power Sensor Anritsu	MA2411B	1726434	2023/6/19	2024/6/18
RF Power Meter Anritsu	ML2495A	1529002	2023/6/17	2024/6/16

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2024/4/8

4.2 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2023/10/20	2024/10/19
EMI Test Receiver R&S	ESCS 30	847124/029	2023/10/18	2024/10/17
Fixed Attenuator STI	STI02-2200-10	005	2024/2/19	2025/2/18
LISN R&S	ESH3-Z5	835239/001	2023/4/6	2024/4/5
		848773/004	2023/10/13	2024/10/12
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2024/2/19	2025/2/18
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2024/2/22 ~ 2024/2/23

4.3 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-0842	2023/10/12	2024/10/11
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
EMI Test Receiver R&S	ESR7	102026	2024/3/25	2025/3/24
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-02	2024/3/30	2025/3/29
Loop Antenna Electro-Metrics	EM-6879	264	2024/2/23	2025/2/22
Preamplifier EMCI	EMC330N	980538	2024/3/30	2025/3/29
	EMC001340	980142	2024/2/19	2025/2/18
PXA Signal Analyzer Keysight	N9030B	MY57141948	2023/5/19	2024/5/18
RF Coaxial Cable JYEBAO	5D-FB	LOOPCAB-001	2024/2/19	2025/2/18
		LOOPCAB-002	2024/2/19	2025/2/18
RF Coaxial Cable PEWC	8D	966-5-1	2024/3/30	2025/3/29
		966-5-2	2024/3/30	2025/3/29
		966-5-3	2024/3/30	2025/3/29
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 5.
2. Tested Date: 2024/4/1

4.4 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
EMI Test Receiver R&S	ESR7	102026	2024/3/25	2025/3/24
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-1819	2023/11/12	2024/11/11
	BBHA 9170	9170-739	2023/11/12	2024/11/11
Preamplifier EMCI	EMC12630SE	980509	2024/1/29	2025/1/28
	EMC184045SE	980387	2023/8/9	2024/8/8
PXA Signal Analyzer Keysight	N9030B	MY57141948	2024/5/20	2025/5/19
RF Coaxial Cable EMCI	EMC102-KM-KM-1200	160924	2024/1/29	2025/1/28
	EMC102-KM-KM-4000	200214	2024/1/29	2025/1/28
	EMC104-SM-SM-1500	180503	2024/3/16	2025/3/15
	EMC104-SM-SM-2000	180501	2024/3/16	2025/3/15
	EMC104-SM-SM-6000	180506	2024/3/16	2025/3/15
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 5.
2. Tested Date: 2024/5/28 ~ 2024/5/31

5 Limits of Test Items

5.1 RF Output Power

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

5.2 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.

5.3 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).

5.4 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

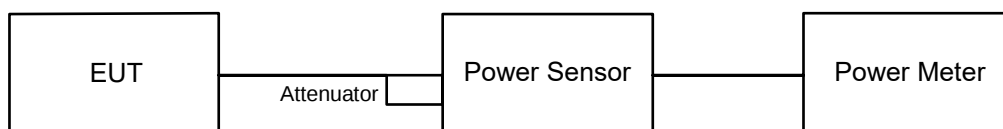
Notes:

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:

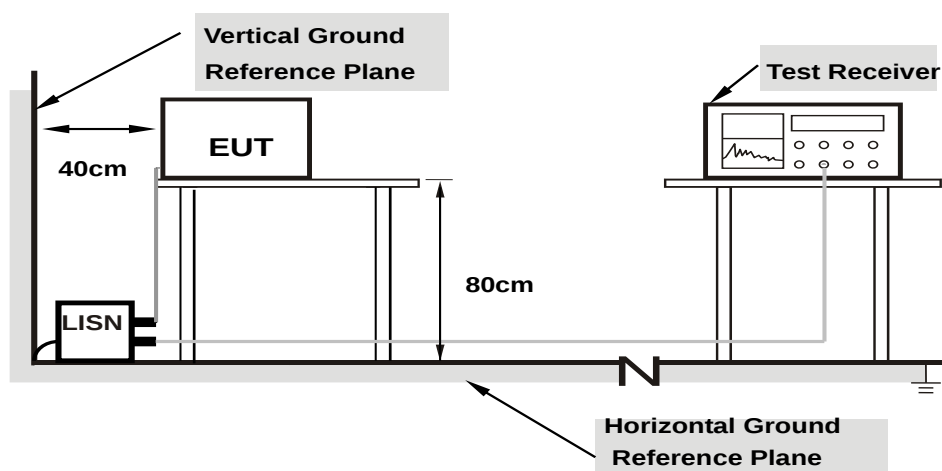
A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

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 AC Power Conducted Emissions

6.2.1 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).

6.2.2 Test Procedure

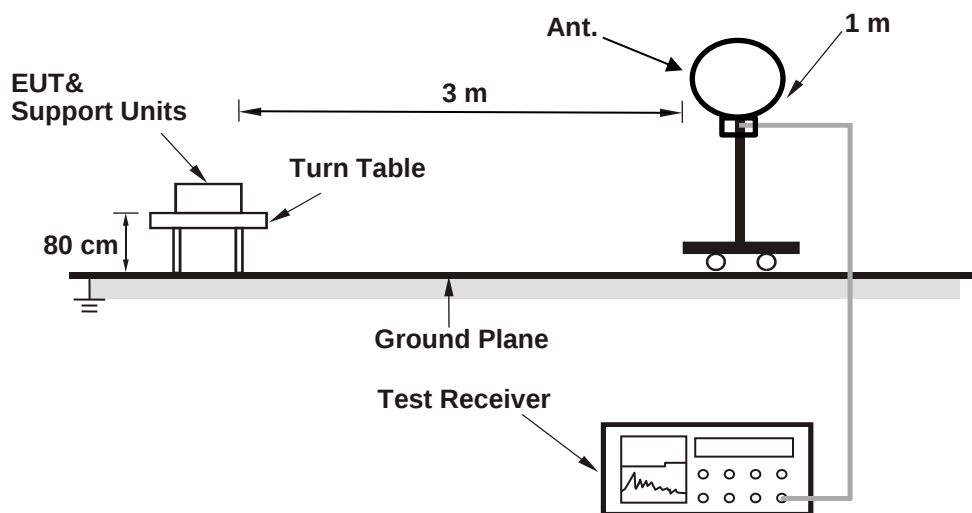
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The 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.

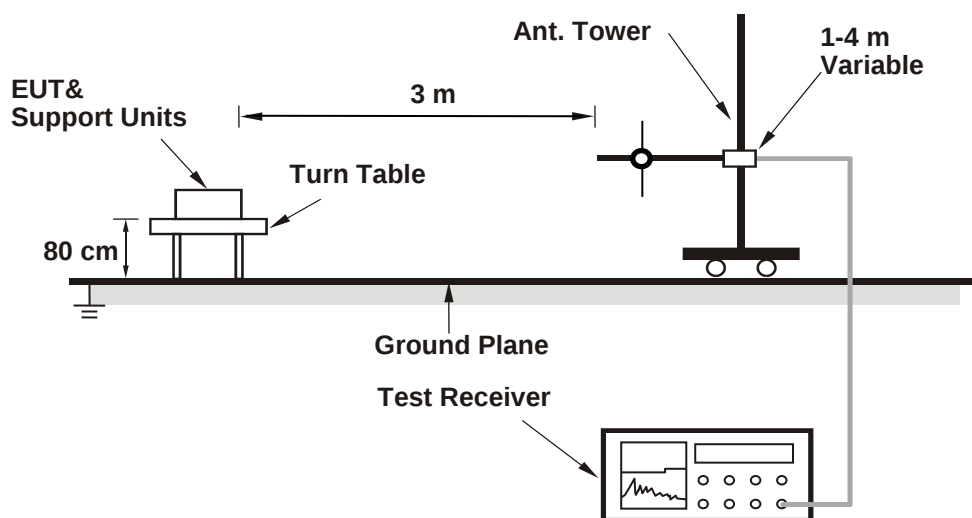
6.3 Unwanted Emissions below 1 GHz

6.3.1 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).

6.3.2 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, 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

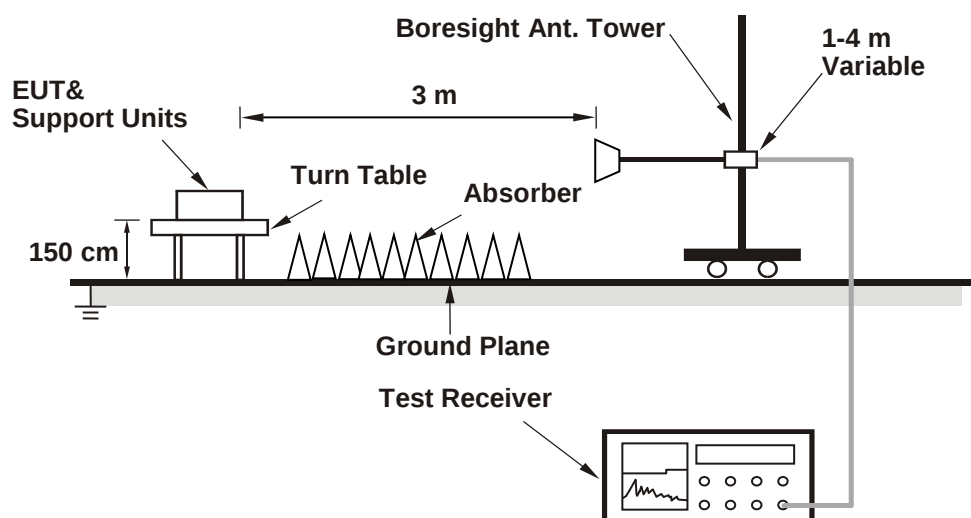
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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 detect function and specified bandwidth with maximum hold mode when the test frequency is below 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.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.4 Unwanted Emissions above 1 GHz

6.4.1 Test Setup



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

6.4.2 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.
- According to ANSI C63.10 section 6.6.4 and 4.1.4.2.2. For fundamental and harmonic signal measurement, according to ANSI C63.10 section 7.5, the average value = peak value + duty cycle correction factor. For duty cycle correction factor values, see the Test Signal Duty Cycle section in this report.
- 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:	22°C, 57% RH	Tested By:	John Peng
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High Power

For Peak Power

GFSK

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	18.197	12.60	21	Pass
39	2441	19.32	12.86	21	Pass
78	2480	18.197	12.60	21	Pass

Note: The antenna gain is 3.4 dBi < 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	19.679	12.94	21	Pass
39	2441	18.45	12.66	21	Pass
78	2480	19.143	12.82	21	Pass

Note: The antenna gain is 3.4 dBi < 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	17.258	12.37
39	2441	18.75	12.73
78	2480	17.298	12.38

8DPSK

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	10.864	10.36
39	2441	10.069	10.03
78	2480	10.74	10.31

7.2 AC Power Conducted Emissions

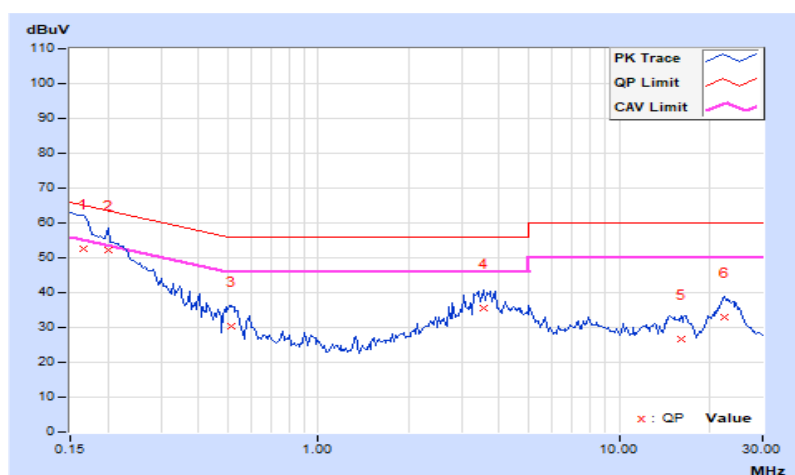
Mode A

RF Mode	BT GFSK	Channel	CH 39 : 2441 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	22°C, 69% RH
Tested By	Louis Yang		

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	0.16562	9.94	42.57	30.14	52.51	40.08	65.18	55.18	-12.67	-15.10
2	0.20078	9.94	42.15	24.33	52.09	34.27	63.58	53.58	-11.49	-19.31
3	0.51328	9.96	20.48	7.02	30.44	16.98	56.00	46.00	-25.56	-29.02
4	3.53125	10.14	25.29	17.15	35.43	27.29	56.00	46.00	-20.57	-18.71
5	16.04297	11.06	15.56	5.56	26.62	16.62	60.00	50.00	-33.38	-33.38
6	22.35547	11.42	21.41	15.54	32.83	26.96	60.00	50.00	-27.17	-23.04

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

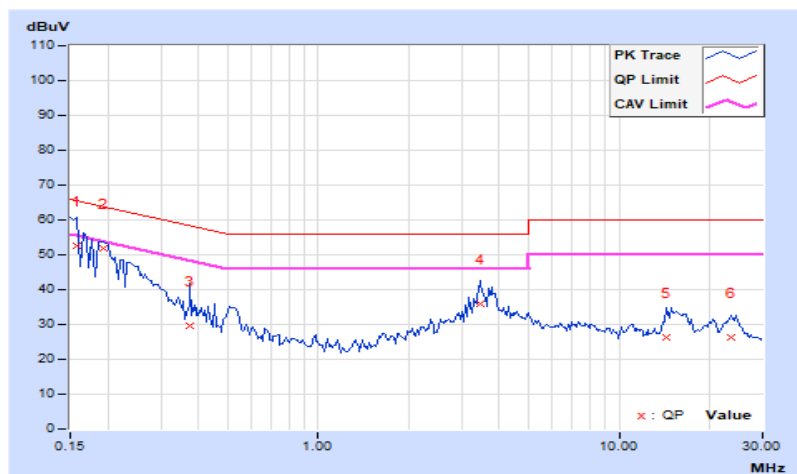


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22°C, 69% RH
Tested By	Louis Yang		

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	0.15781	10.01	42.63	24.90	52.64	34.91	65.58	55.58	-12.94	-20.67
2	0.19297	10.01	41.87	27.87	51.88	37.88	63.91	53.91	-12.03	-16.03
3	0.37656	10.02	19.72	3.24	29.74	13.26	58.35	48.35	-28.61	-35.09
4	3.46094	10.17	25.74	17.77	35.91	27.94	56.00	46.00	-20.09	-18.06
5	14.38672	10.80	15.67	7.23	26.47	18.03	60.00	50.00	-33.53	-31.97
6	23.49609	11.14	15.29	10.15	26.43	21.29	60.00	50.00	-33.57	-28.71

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



Mode B

RF Mode	BT GFSK	Channel	CH 39 : 2441 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	22°C, 73% RH
Tested By	Louis Yang		

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	0.15000	9.95	47.62	32.03	57.57	41.98	66.00	56.00	-8.43	-14.02
2	0.18906	9.94	40.78	24.33	50.72	34.27	64.08	54.08	-13.36	-19.81
3	0.37656	9.95	17.98	3.26	27.93	13.21	58.35	48.35	-30.42	-35.14
4	0.53281	9.96	19.12	10.86	29.08	20.82	56.00	46.00	-26.92	-25.18
5	3.64063	10.15	25.36	16.78	35.51	26.93	56.00	46.00	-20.49	-19.07
6	22.61719	11.43	21.18	15.94	32.61	27.37	60.00	50.00	-27.39	-22.63

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

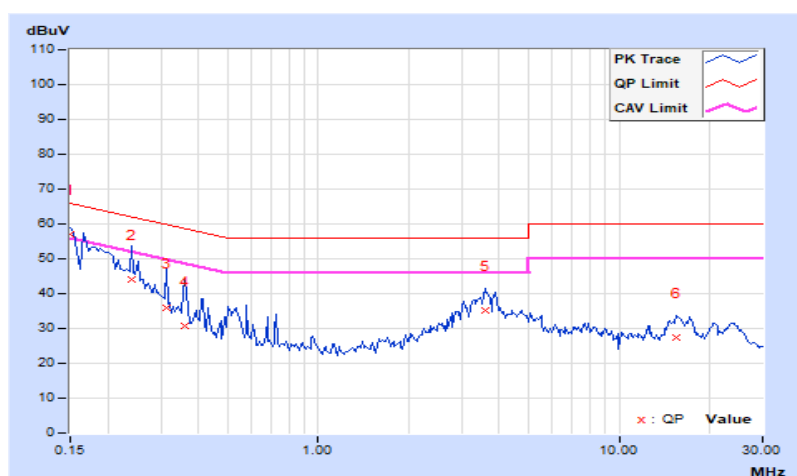


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22°C, 73% RH
Tested By	Louis Yang		

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	10.02	46.99	32.49	57.01	42.51	66.00	56.00	-8.99	-13.49
2	0.23984	10.01	34.14	14.96	44.15	24.97	62.10	52.10	-17.95	-27.13
3	0.31406	10.02	25.80	4.52	35.82	14.54	59.86	49.86	-24.04	-35.32
4	0.36094	10.02	20.60	4.68	30.62	14.70	58.71	48.71	-28.09	-34.01
5	3.59375	10.18	25.18	17.49	35.36	27.67	56.00	46.00	-20.64	-18.33
6	15.48438	10.86	16.58	8.06	27.44	18.92	60.00	50.00	-32.56	-31.08

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



7.3 Unwanted Emissions below 1 GHz

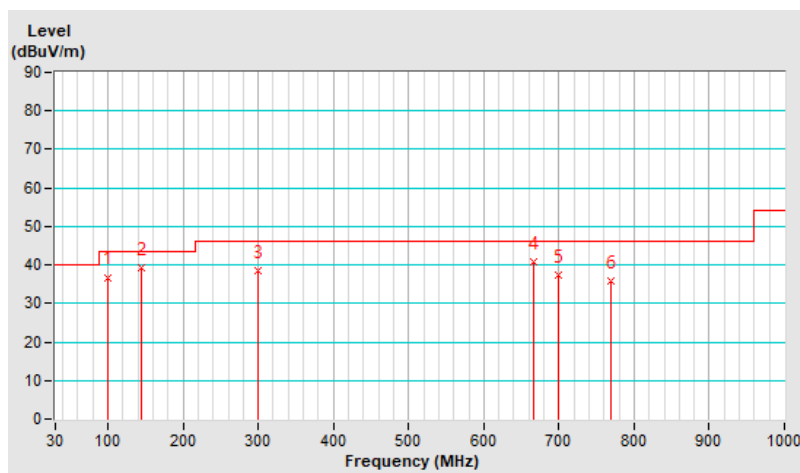
Mode A

RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Louis Yang		

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	99.70	36.8 QP	43.5	-6.7	1.05 H	208	53.9	-17.1
2	143.90	39.3 QP	43.5	-4.2	1.51 H	344	51.8	-12.5
3	299.20	38.5 QP	46.0	-7.5	1.00 H	242	50.4	-11.9
4	665.90	40.9 QP	46.0	-5.1	2.55 H	262	44.5	-3.6
5	699.70	37.3 QP	46.0	-8.7	2.14 H	45	40.2	-2.9
6	769.90	35.7 QP	46.0	-10.3	2.02 H	128	37.2	-1.5

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.

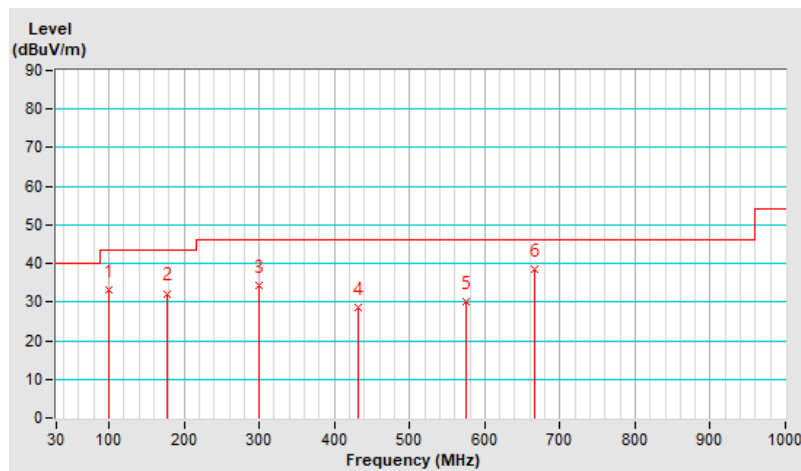


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Louis Yang		

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	100.60	33.0 QP	43.5	-10.5	2.46 V	101	50.0	-17.0
2	177.20	32.2 QP	43.5	-11.3	2.98 V	150	45.8	-13.6
3	298.80	34.4 QP	46.0	-11.6	3.05 V	309	46.3	-11.9
4	431.30	28.5 QP	46.0	-17.5	1.99 V	230	36.8	-8.3
5	574.70	30.0 QP	46.0	-16.0	1.08 V	344	35.4	-5.4
6	666.70	38.4 QP	46.0	-7.6	1.08 V	274	42.0	-3.6

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.



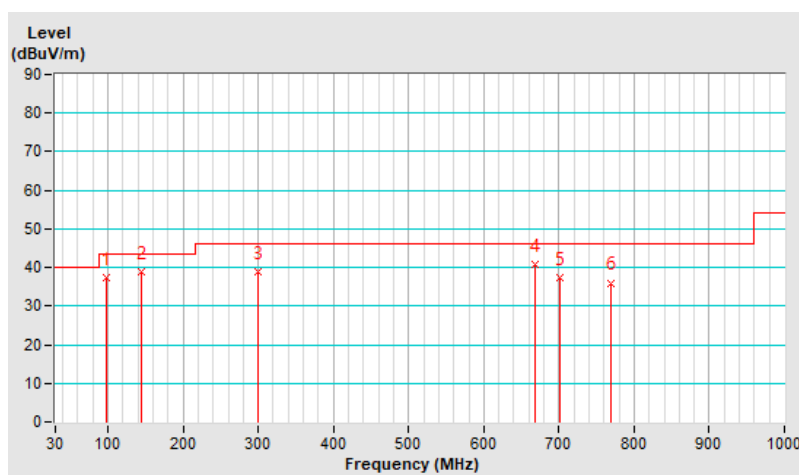
Mode B

RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Louis Yang		

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	98.80	37.4 QP	43.5	-6.1	1.05 H	208	54.7	-17.3
2	144.70	38.8 QP	43.5	-4.7	1.55 H	360	51.2	-12.4
3	299.10	38.8 QP	46.0	-7.2	1.00 H	252	50.7	-11.9
4	668.10	40.9 QP	46.0	-5.1	2.53 H	235	44.5	-3.6
5	700.40	37.5 QP	46.0	-8.5	2.06 H	89	40.4	-2.9
6	769.90	36.0 QP	46.0	-10.0	1.93 H	128	37.5	-1.5

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.

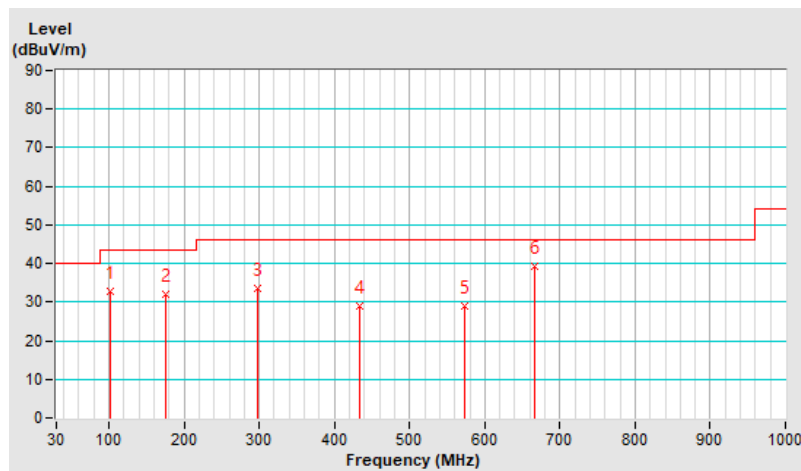


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Louis Yang		

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	101.70	32.8 QP	43.5	-10.7	2.53 V	152	49.7	-16.9
2	176.20	31.9 QP	43.5	-11.6	3.05 V	162	45.4	-13.5
3	298.50	33.5 QP	46.0	-12.5	3.06 V	316	45.4	-11.9
4	432.80	29.0 QP	46.0	-17.0	2.13 V	226	37.2	-8.2
5	573.90	28.8 QP	46.0	-17.2	1.12 V	360	34.2	-5.4
6	667.10	39.2 QP	46.0	-6.8	1.00 V	276	42.8	-3.6

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.



7.4 Unwanted Emissions above 1 GHz

Mode A

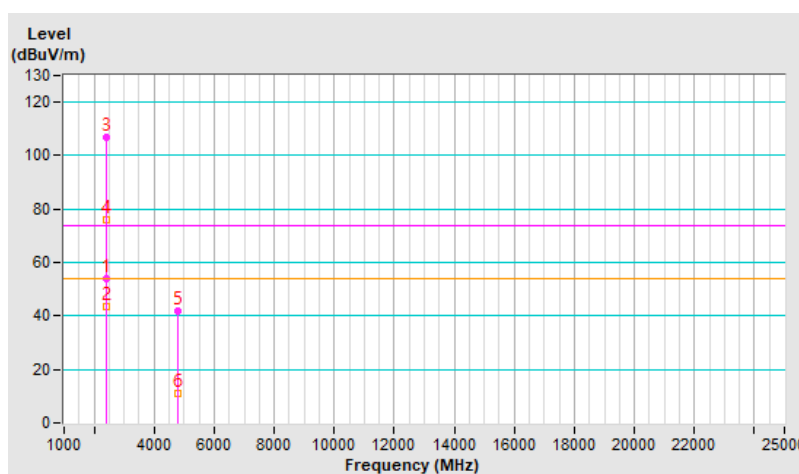
RF Mode	BT GFSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	54.2 PK	74.0	-19.8	2.00 H	116	57.8	-3.6
2	2390.00	43.4 AV	54.0	-10.6	2.00 H	116	47.0	-3.6
3	*2402.00	106.7 PK			2.00 H	116	110.3	-3.6
4	*2402.00	75.9 AV			2.00 H	116	79.5	-3.6
5	4804.00	41.7 PK	74.0	-32.3	1.00 H	144	40.0	1.7
6	4804.00	10.9 AV	54.0	-43.1	1.00 H	144	9.2	1.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$

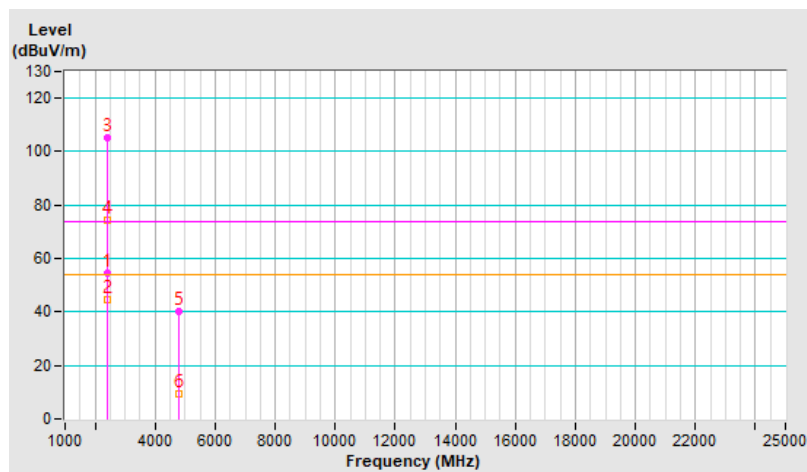


RF Mode	BT GFSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	54.7 PK	74.0	-19.3	2.88 V	224	58.3	-3.6
2	2390.00	44.7 AV	54.0	-9.3	2.88 V	224	48.3	-3.6
3	*2402.00	105.0 PK			2.88 V	224	108.6	-3.6
4	*2402.00	74.2 AV			2.88 V	224	77.8	-3.6
5	4804.00	40.3 PK	74.0	-33.7	1.11 V	173	38.6	1.7
6	4804.00	9.5 AV	54.0	-44.5	1.11 V	173	7.8	1.7

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

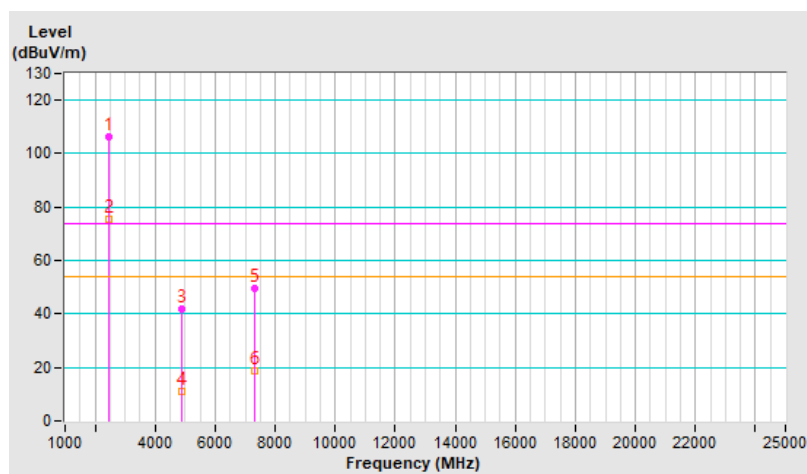


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	106.2 PK			1.85 H	116	109.6	-3.4
2	*2441.00	75.4 AV			1.85 H	116	78.8	-3.4
3	4882.00	42.0 PK	74.0	-32.0	1.02 H	156	40.5	1.5
4	4882.00	11.2 AV	54.0	-42.8	1.02 H	156	9.7	1.5
5	7323.00	49.7 PK	74.0	-24.3	1.08 H	193	42.1	7.6
6	7323.00	18.9 AV	54.0	-35.1	1.08 H	193	11.3	7.6

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

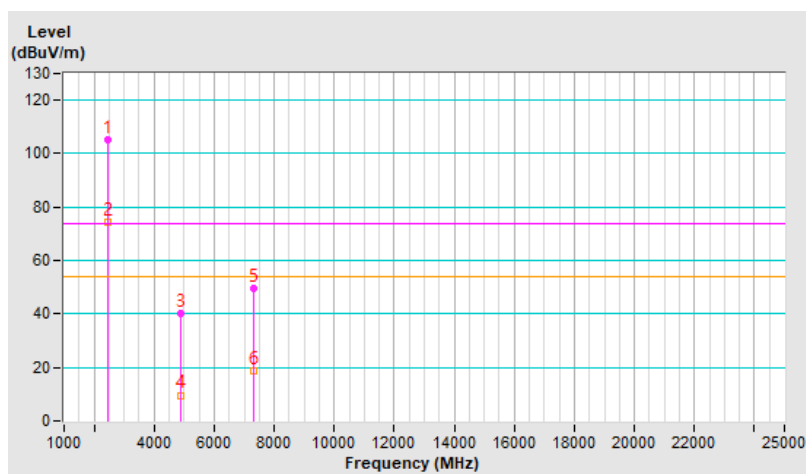


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	105.1 PK			2.93 V	217	108.5	-3.4
2	*2441.00	74.3 AV			2.93 V	217	77.7	-3.4
3	4882.00	40.4 PK	74.0	-33.6	1.11 V	173	38.9	1.5
4	4882.00	9.6 AV	54.0	-44.4	1.11 V	173	8.1	1.5
5	7323.00	49.6 PK	74.0	-24.4	1.10 V	178	42.0	7.6
6	7323.00	18.8 AV	54.0	-35.2	1.10 V	178	11.2	7.6

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$



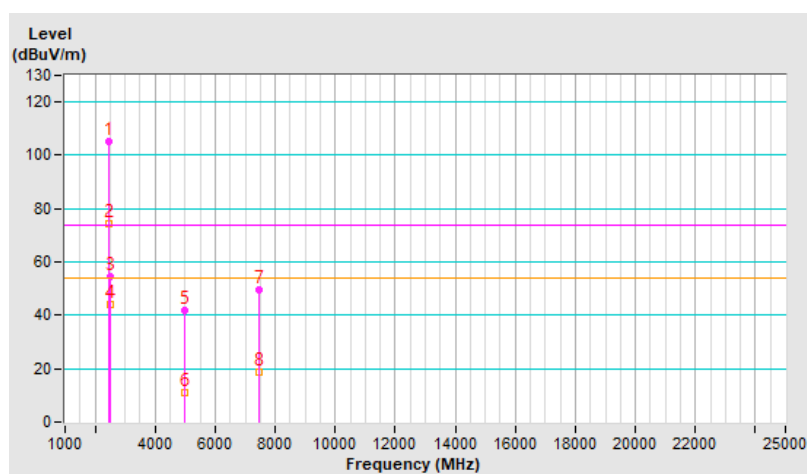
RF Mode	BT GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	105.1 PK			1.86 H	117	108.5	-3.4
2	*2480.00	74.3 AV			1.86 H	117	77.7	-3.4
3	2483.50	54.6 PK	74.0	-19.4	1.86 H	117	58.0	-3.4
4	2483.50	43.8 AV	54.0	-10.2	1.86 H	117	47.2	-3.4
5	4960.00	41.8 PK	74.0	-32.2	1.04 H	178	40.1	1.7
6	4960.00	11.0 AV	54.0	-43.0	1.04 H	178	9.3	1.7
7	7440.00	49.7 PK	74.0	-24.3	1.02 H	169	42.0	7.7
8	7440.00	18.9 AV	54.0	-35.1	1.02 H	169	11.2	7.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$

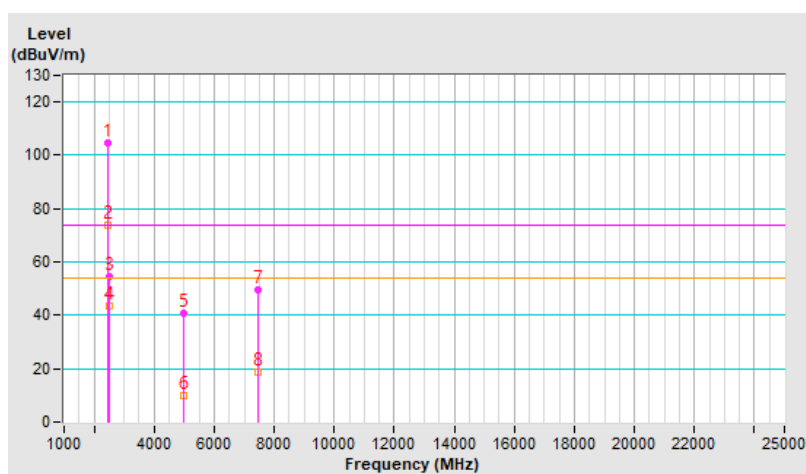


RF Mode	BT GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	104.4 PK			2.83 V	240	107.8	-3.4
2	*2480.00	73.6 AV			2.83 V	240	77.0	-3.4
3	2483.50	54.5 PK	74.0	-19.5	2.83 V	240	57.9	-3.4
4	2483.50	43.4 AV	54.0	-10.6	2.83 V	240	46.8	-3.4
5	4960.00	40.5 PK	74.0	-33.5	1.04 V	167	38.8	1.7
6	4960.00	9.7 AV	54.0	-44.3	1.04 V	167	8.0	1.7
7	7440.00	49.6 PK	74.0	-24.4	1.13 V	188	41.9	7.7
8	7440.00	18.8 AV	54.0	-35.2	1.13 V	188	11.1	7.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$



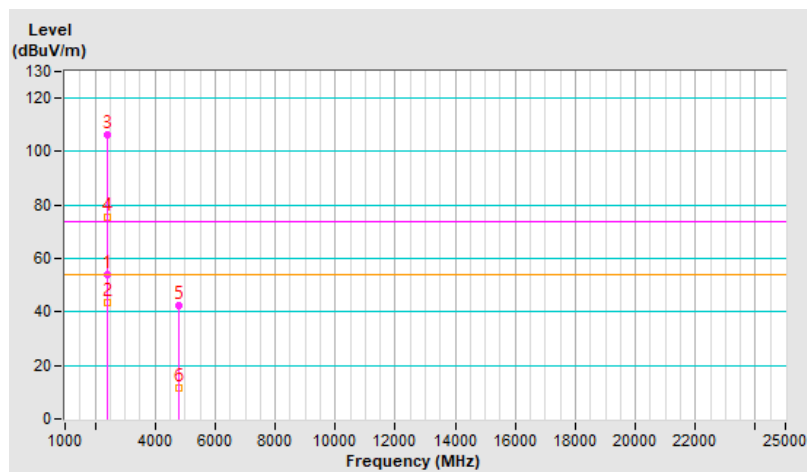
RF Mode	BT 8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	54.2 PK	74.0	-19.8	2.00 H	114	57.8	-3.6
2	2390.00	43.4 AV	54.0	-10.6	2.00 H	114	47.0	-3.6
3	*2402.00	106.4 PK			2.00 H	114	110.0	-3.6
4	*2402.00	75.6 AV			2.00 H	114	79.2	-3.6
5	4804.00	42.4 PK	74.0	-31.6	1.05 H	170	40.7	1.7
6	4804.00	11.6 AV	54.0	-42.4	1.05 H	170	9.9	1.7

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



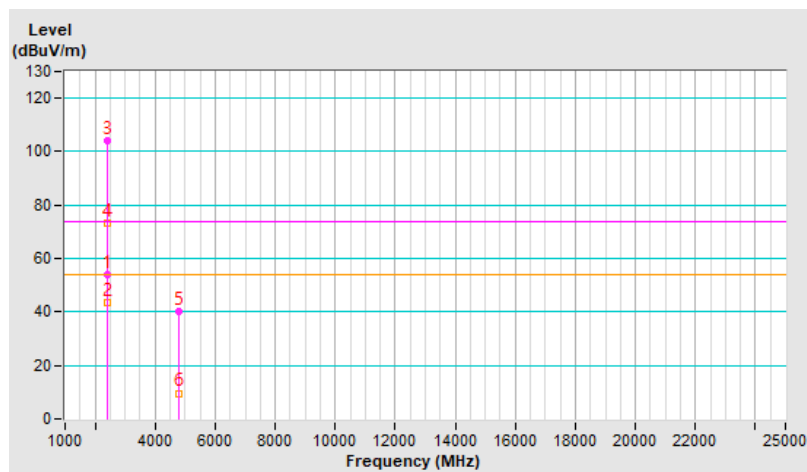
RF Mode	BT 8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	54.1 PK	74.0	-19.9	2.98 V	244	57.7	-3.6
2	2390.00	43.6 AV	54.0	-10.4	2.98 V	244	47.2	-3.6
3	*2402.00	104.0 PK			2.98 V	244	107.6	-3.6
4	*2402.00	73.2 AV			2.98 V	244	76.8	-3.6
5	4804.00	40.4 PK	74.0	-33.6	1.06 V	168	38.7	1.7
6	4804.00	9.6 AV	54.0	-44.4	1.06 V	168	7.9	1.7

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$

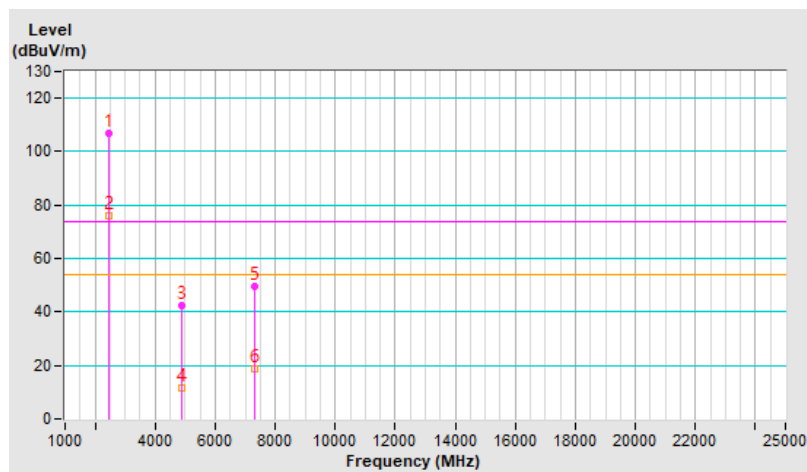


RF Mode	BT 8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	106.6 PK			2.03 H	113	110.0	-3.4
2	*2441.00	75.8 AV			2.03 H	113	79.2	-3.4
3	4882.00	42.4 PK	74.0	-31.6	1.05 H	151	40.9	1.5
4	4882.00	11.6 AV	54.0	-42.4	1.05 H	151	10.1	1.5
5	7323.00	49.7 PK	74.0	-24.3	1.05 H	180	42.1	7.6
6	7323.00	18.9 AV	54.0	-35.1	1.05 H	180	11.3	7.6

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

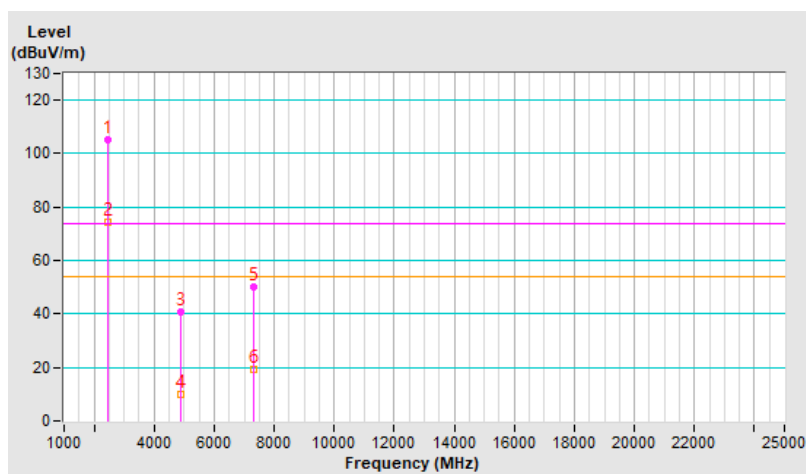


RF Mode	BT 8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	105.2 PK			3.01 V	247	108.6	-3.4
2	*2441.00	74.4 AV			3.01 V	247	77.8	-3.4
3	4882.00	40.5 PK	74.0	-33.5	1.01 V	157	39.0	1.5
4	4882.00	9.7 AV	54.0	-44.3	1.01 V	157	8.2	1.5
5	7323.00	50.0 PK	74.0	-24.0	1.14 V	194	42.4	7.6
6	7323.00	19.2 AV	54.0	-34.8	1.14 V	194	11.6	7.6

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 fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

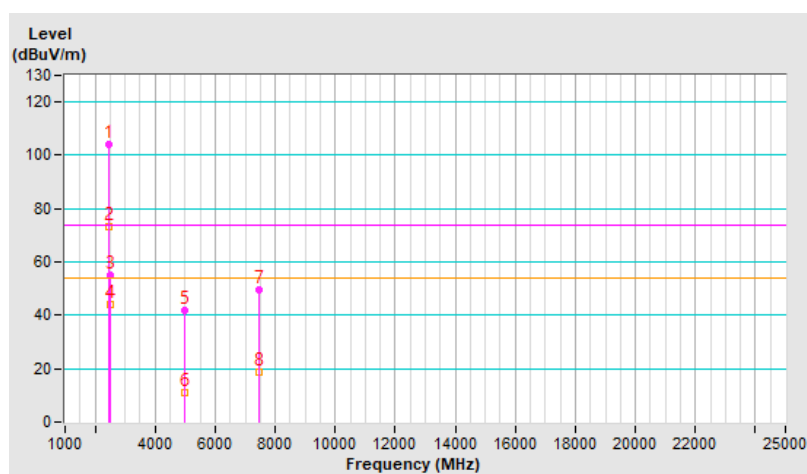


RF Mode	BT 8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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	104.1 PK			2.28 H	158	107.5	-3.4
2	*2480.00	73.3 AV			2.28 H	158	76.7	-3.4
3	2483.50	54.9 PK	74.0	-19.1	2.28 H	158	58.3	-3.4
4	2483.50	43.9 AV	54.0	-10.1	2.28 H	158	47.3	-3.4
5	4960.00	42.0 PK	74.0	-32.0	1.00 H	151	40.3	1.7
6	4960.00	11.2 AV	54.0	-42.8	1.00 H	151	9.5	1.7
7	7440.00	49.5 PK	74.0	-24.5	1.10 H	181	41.8	7.7
8	7440.00	18.7 AV	54.0	-35.3	1.10 H	181	11.0	7.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$



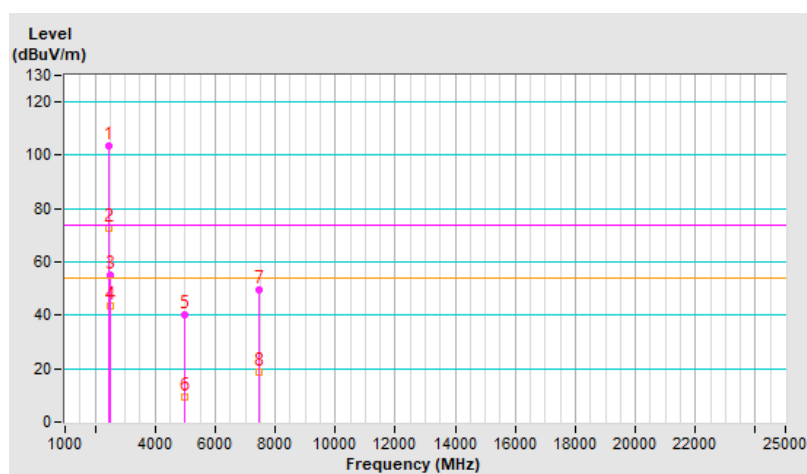
RF Mode	BT 8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	23 °C, 65 % RH
Tested By	Willy Lin		

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			2.77 V	232	106.7	-3.4
2	*2480.00	72.5 AV			2.77 V	232	75.9	-3.4
3	2483.50	55.0 PK	74.0	-19.0	2.77 V	232	58.4	-3.4
4	2483.50	43.4 AV	54.0	-10.6	2.77 V	232	46.8	-3.4
5	4960.00	40.1 PK	74.0	-33.9	1.04 V	153	38.4	1.7
6	4960.00	9.3 AV	54.0	-44.7	1.04 V	153	7.6	1.7
7	7440.00	49.5 PK	74.0	-24.5	1.12 V	173	41.8	7.7
8	7440.00	18.7 AV	54.0	-35.3	1.12 V	173	11.0	7.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$



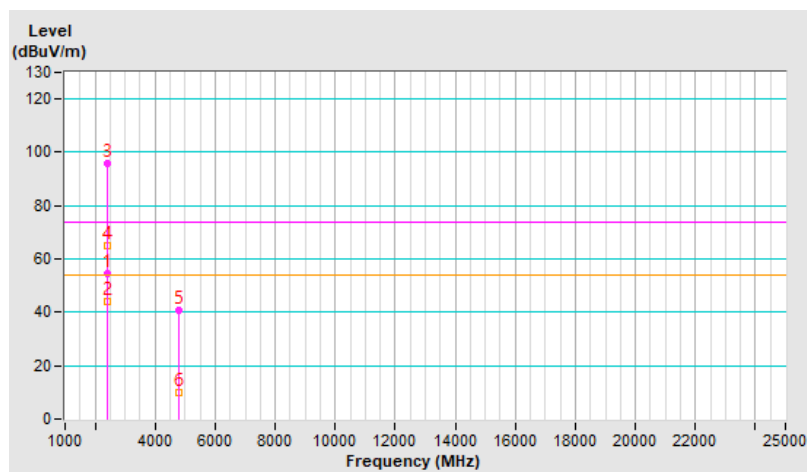
Mode B

RF Mode	BT 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	22 °C, 65 % RH
Tested By	Willy Lin		

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	54.3 PK	74.0	-19.7	1.05 H	194	57.9	-3.6
2	2390.00	43.9 AV	54.0	-10.1	1.05 H	194	47.5	-3.6
3	*2402.00	95.8 PK			1.05 H	194	99.4	-3.6
4	*2402.00	65.0 AV			1.05 H	194	68.6	-3.6
5	4804.00	40.9 PK	74.0	-33.1	1.00 H	0	39.2	1.7
6	4804.00	10.1 AV	54.0	-43.9	1.00 H	0	8.4	1.7

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

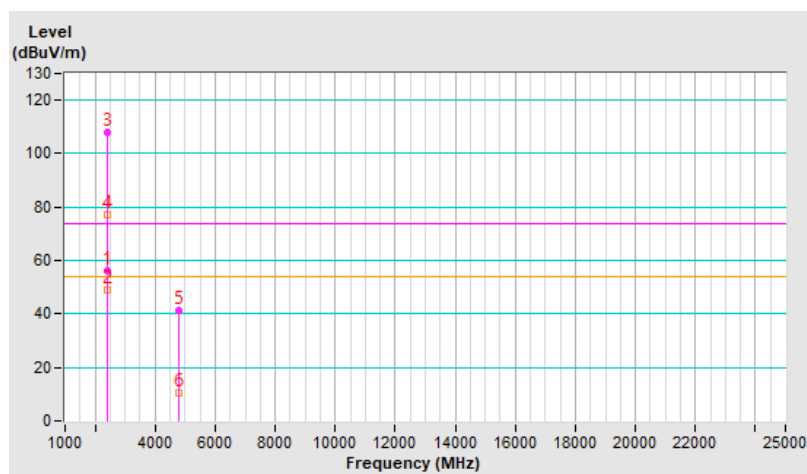


RF Mode	BT GFSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	1.50 V	23	59.9	-3.6
2	2390.00	48.8 AV	54.0	-5.2	1.50 V	23	52.4	-3.6
3	*2402.00	107.9 PK			1.50 V	23	111.5	-3.6
4	*2402.00	77.1 AV			1.50 V	23	80.7	-3.6
5	4804.00	41.2 PK	74.0	-32.8	1.12 V	180	39.5	1.7
6	4804.00	10.4 AV	54.0	-43.6	1.12 V	180	8.7	1.7

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 fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

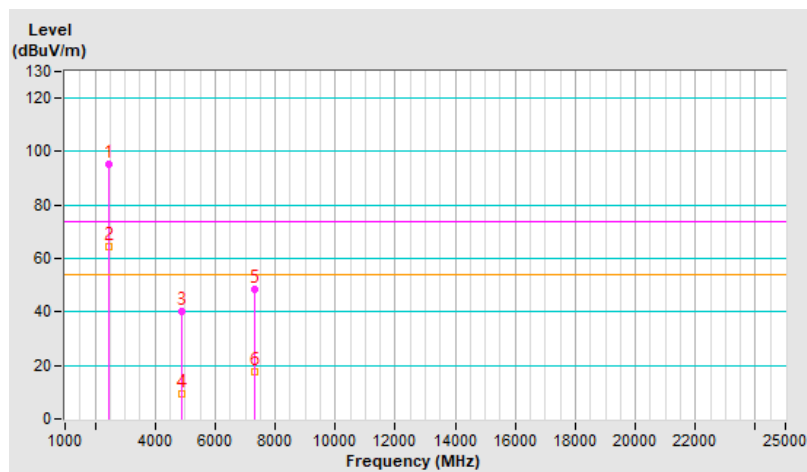


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	95.1 PK			1.06 H	188	98.5	-3.4
2	*2441.00	64.3 AV			1.06 H	188	67.7	-3.4
3	4882.00	40.1 PK	74.0	-33.9	1.08 H	177	38.6	1.5
4	4882.00	9.3 AV	54.0	-44.7	1.08 H	177	7.8	1.5
5	7323.00	48.5 PK	74.0	-25.5	1.02 H	184	40.9	7.6
6	7323.00	17.7 AV	54.0	-36.3	1.02 H	184	10.1	7.6

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

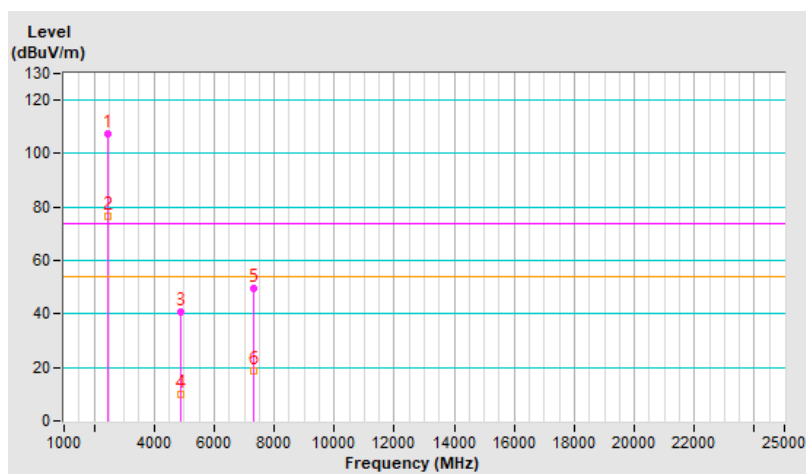


RF Mode	BT GFSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	107.5 PK			1.54 V	13	110.9	-3.4
2	*2441.00	76.7 AV			1.54 V	13	80.1	-3.4
3	4882.00	40.9 PK	74.0	-33.1	1.08 V	181	39.4	1.5
4	4882.00	10.1 AV	54.0	-43.9	1.08 V	181	8.6	1.5
5	7323.00	49.5 PK	74.0	-24.5	1.05 V	175	41.9	7.6
6	7323.00	18.7 AV	54.0	-35.3	1.05 V	175	11.1	7.6

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 fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

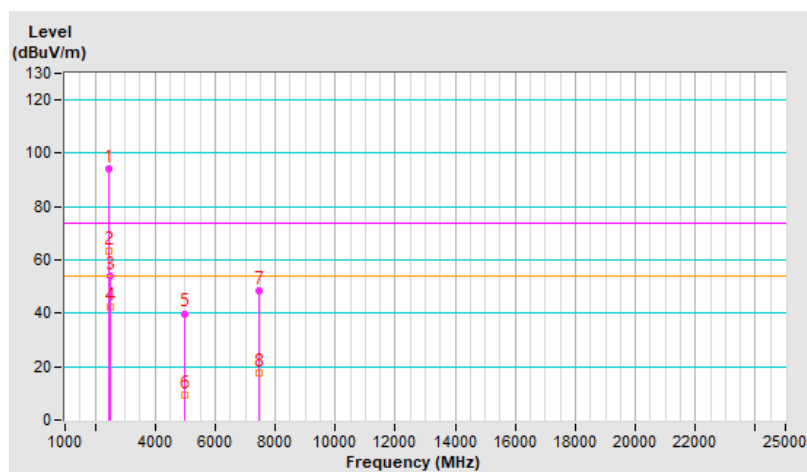


RF Mode	BT GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	94.1 PK			1.06 H	184	97.5	-3.4
2	*2480.00	63.3 AV			1.06 H	184	66.7	-3.4
3	2483.50	54.1 PK	74.0	-19.9	1.06 H	184	57.5	-3.4
4	2483.50	42.3 AV	54.0	-11.7	1.06 H	184	45.7	-3.4
5	4960.00	39.9 PK	74.0	-34.1	1.12 H	187	38.2	1.7
6	4960.00	9.1 AV	54.0	-44.9	1.12 H	187	7.4	1.7
7	7440.00	48.3 PK	74.0	-25.7	1.00 H	177	40.6	7.7
8	7440.00	17.5 AV	54.0	-36.5	1.00 H	177	9.8	7.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

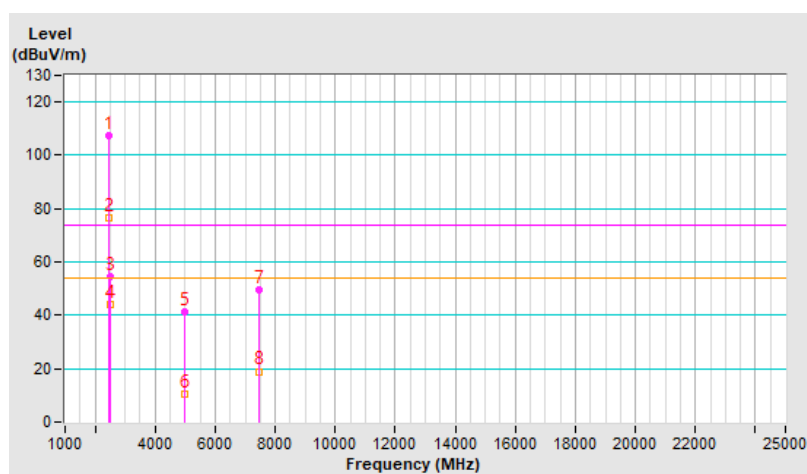


RF Mode	BT GFSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	107.3 PK			1.49 V	26	110.7	-3.4
2	*2480.00	76.5 AV			1.49 V	26	79.9	-3.4
3	2483.50	54.3 PK	74.0	-19.7	1.49 V	26	57.7	-3.4
4	2483.50	44.1 AV	54.0	-9.9	1.49 V	26	47.5	-3.4
5	4960.00	41.2 PK	74.0	-32.8	1.06 V	178	39.5	1.7
6	4960.00	10.4 AV	54.0	-43.6	1.06 V	178	8.7	1.7
7	7440.00	49.8 PK	74.0	-24.2	1.04 V	171	42.1	7.7
8	7440.00	19.0 AV	54.0	-35.0	1.04 V	171	11.3	7.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.891 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

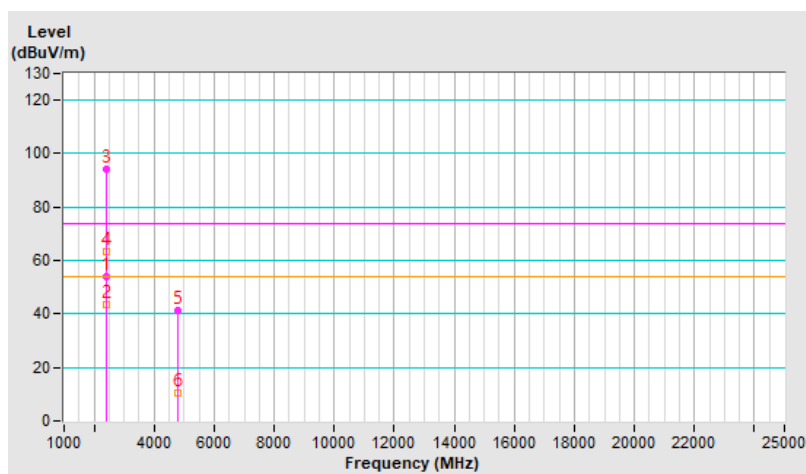


RF Mode	BT 8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	54.2 PK	74.0	-19.8	1.07 H	196	57.8	-3.6
2	2390.00	43.6 AV	54.0	-10.4	1.07 H	196	47.2	-3.6
3	*2402.00	94.3 PK			1.07 H	196	97.9	-3.6
4	*2402.00	63.5 AV			1.07 H	196	67.1	-3.6
5	4804.00	41.3 PK	74.0	-32.7	1.00 H	0	39.6	1.7
6	4804.00	10.5 AV	54.0	-43.5	1.00 H	0	8.8	1.7

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 fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

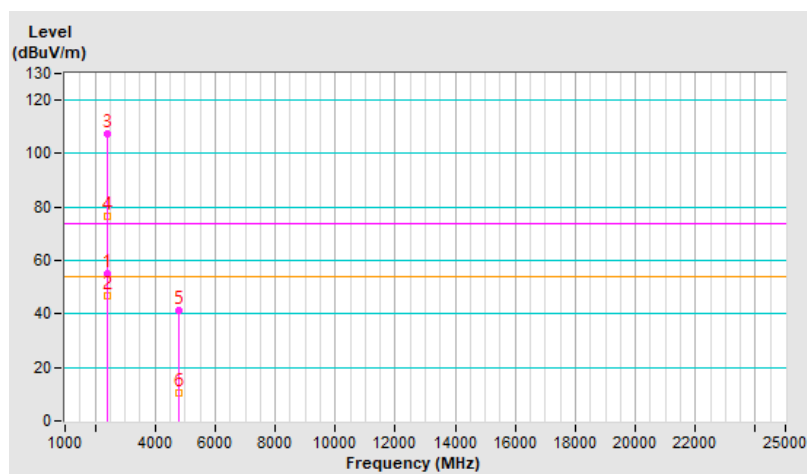


RF Mode	BT 8DPSK	Channel	CH 0 : 2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	55.2 PK	74.0	-18.8	1.46 V	21	58.8	-3.6
2	2390.00	46.7 AV	54.0	-7.3	1.46 V	21	50.3	-3.6
3	*2402.00	107.5 PK			1.46 V	21	111.1	-3.6
4	*2402.00	76.7 AV			1.46 V	21	80.3	-3.6
5	4804.00	41.2 PK	74.0	-32.8	1.00 V	0	39.5	1.7
6	4804.00	10.4 AV	54.0	-43.6	1.00 V	0	8.7	1.7

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 fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

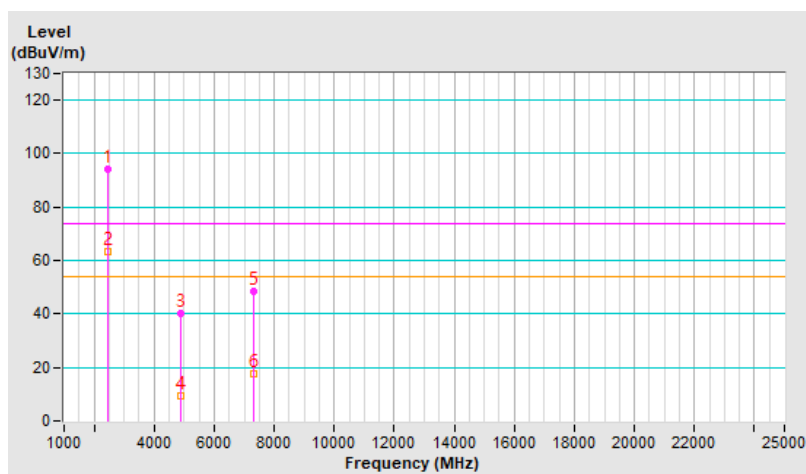


RF Mode	BT 8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	94.1 PK			1.10 H	206	97.5	-3.4
2	*2441.00	63.3 AV			1.10 H	206	66.7	-3.4
3	4882.00	40.1 PK	74.0	-33.9	1.06 H	189	38.6	1.5
4	4882.00	9.3 AV	54.0	-44.7	1.06 H	189	7.8	1.5
5	7323.00	48.3 PK	74.0	-25.7	1.01 H	172	40.7	7.6
6	7323.00	17.5 AV	54.0	-36.5	1.01 H	172	9.9	7.6

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.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$

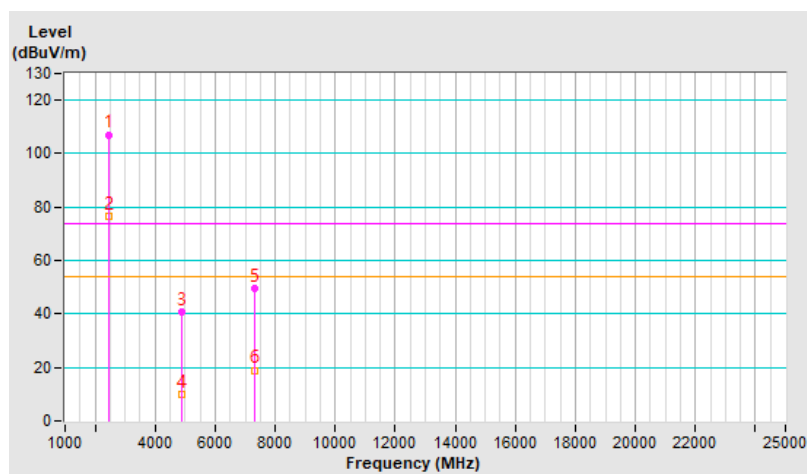


RF Mode	BT 8DPSK	Channel	CH 39 : 2441 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	107.1 PK			1.46 V	27	110.5	-3.4
2	*2441.00	76.3 AV			1.46 V	27	79.7	-3.4
3	4882.00	40.6 PK	74.0	-33.4	1.03 V	179	39.1	1.5
4	4882.00	9.8 AV	54.0	-44.2	1.03 V	179	8.3	1.5
5	7323.00	49.8 PK	74.0	-24.2	1.10 V	190	42.2	7.6
6	7323.00	19.0 AV	54.0	-35.0	1.10 V	190	11.4	7.6

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 fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$



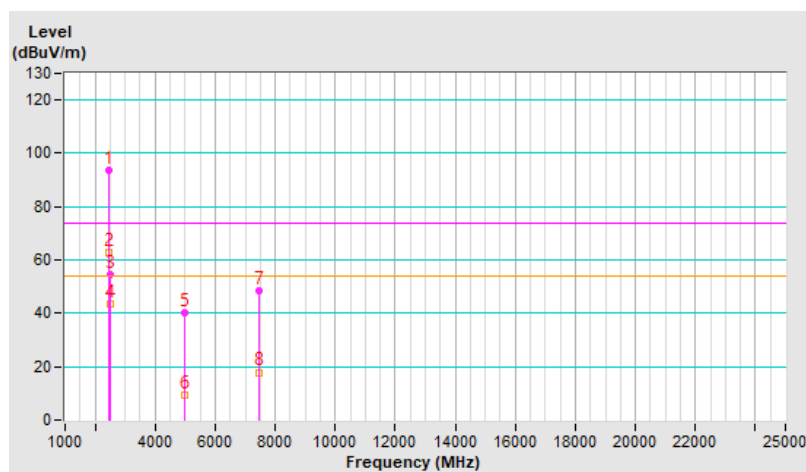
RF Mode	BT 8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	93.6 PK			1.08 H	196	97.0	-3.4
2	*2480.00	62.8 AV			1.08 H	196	66.2	-3.4
3	2483.50	54.4 PK	74.0	-19.6	1.08 H	196	57.8	-3.4
4	2483.50	43.6 AV	54.0	-10.4	1.08 H	196	47.0	-3.4
5	4960.00	40.2 PK	74.0	-33.8	1.14 H	187	38.5	1.7
6	4960.00	9.4 AV	54.0	-44.6	1.14 H	187	7.7	1.7
7	7440.00	48.7 PK	74.0	-25.3	1.02 H	185	41.0	7.7
8	7440.00	17.9 AV	54.0	-36.1	1.02 H	185	10.2	7.7

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$$

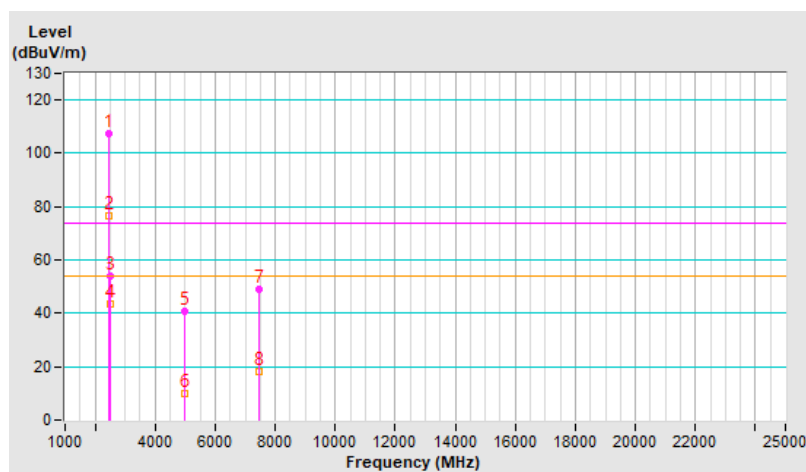


RF Mode	BT 8DPSK	Channel	CH 78 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65 % RH
Tested By	Willy Lin		

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	107.4 PK			1.49 V	26	110.8	-3.4
2	*2480.00	76.6 AV			1.49 V	26	80.0	-3.4
3	2483.50	54.1 PK	74.0	-19.9	1.49 V	26	57.5	-3.4
4	2483.50	43.7 AV	54.0	-10.3	1.49 V	26	47.1	-3.4
5	4960.00	40.5 PK	74.0	-33.5	1.04 V	185	38.8	1.7
6	4960.00	9.7 AV	54.0	-44.3	1.04 V	185	8.0	1.7
7	7440.00	49.2 PK	74.0	-24.8	1.05 V	178	41.5	7.7
8	7440.00	18.4 AV	54.0	-35.6	1.05 V	178	10.7	7.7

Remarks:

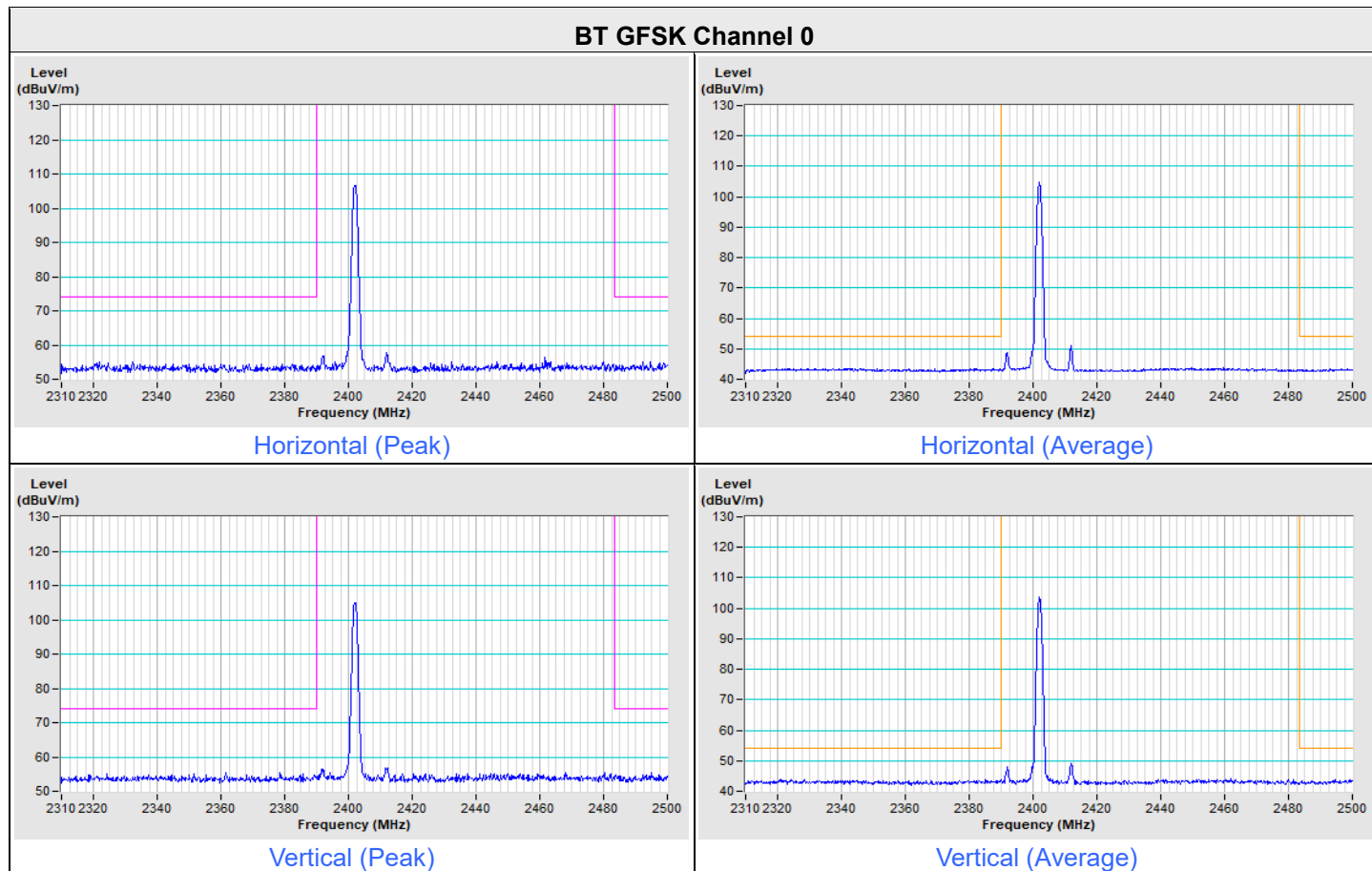
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:
 $20 \log(\text{Duty cycle}) = 20 \log(2.896 \text{ ms} / 100 \text{ ms}) = -30.8 \text{ dB}$



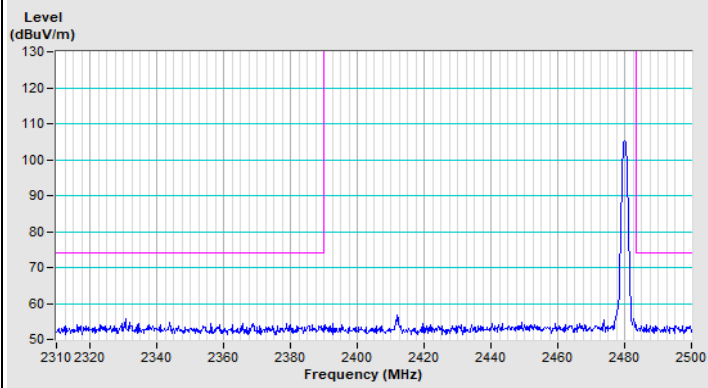
Plot of Band Edge

Mode A

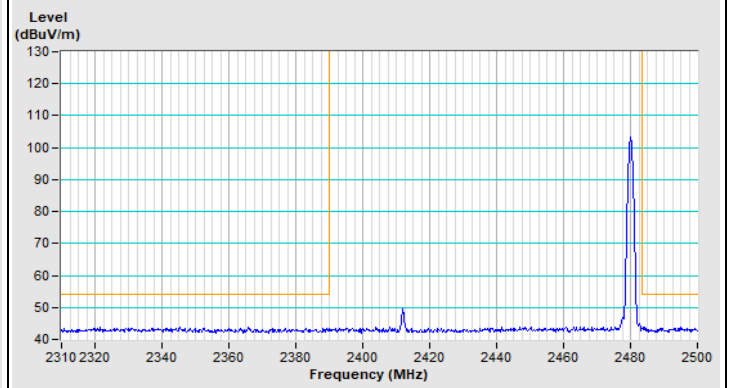
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
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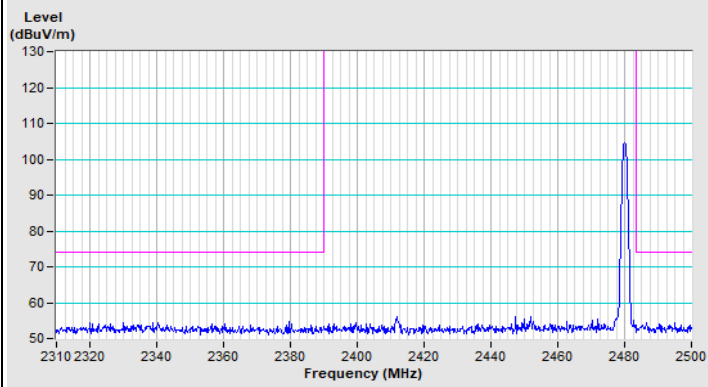
BT GFSK Channel 78



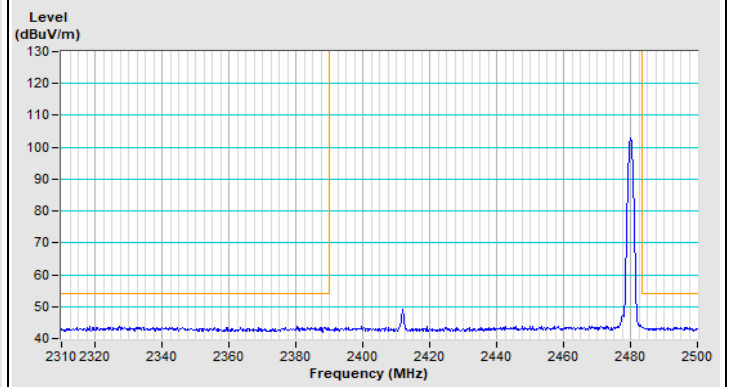
Horizontal (Peak)



Horizontal (Average)



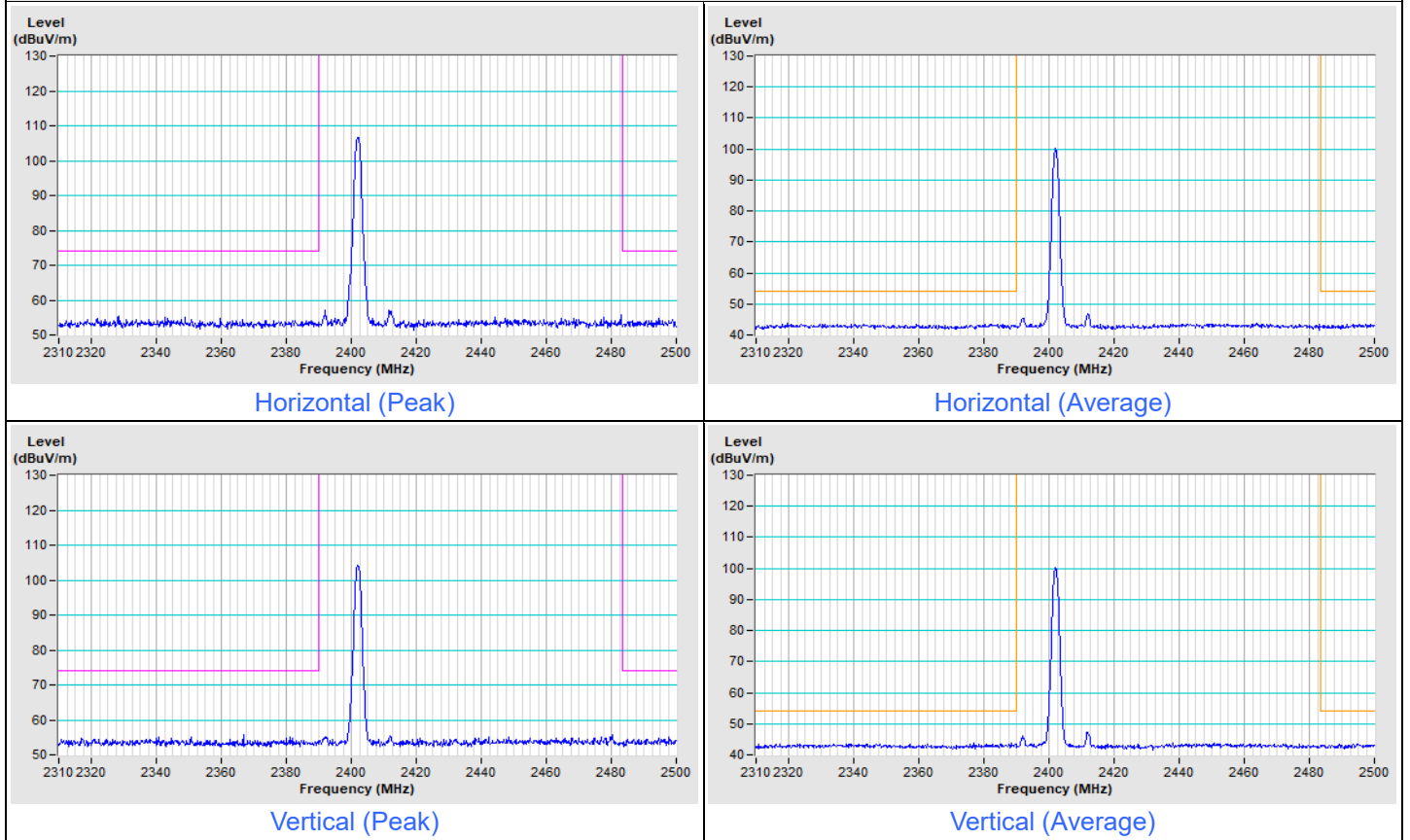
Vertical (Peak)



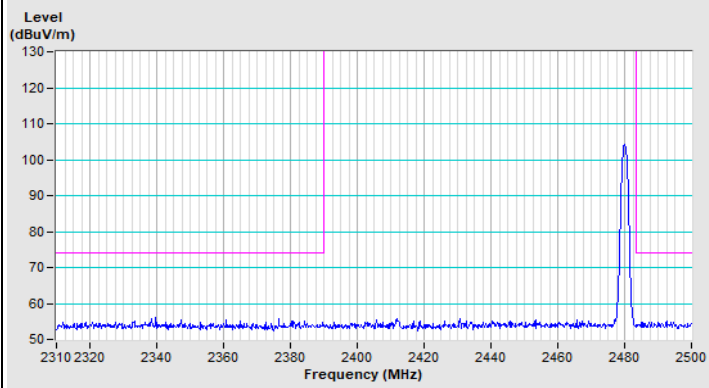
Vertical (Average)

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
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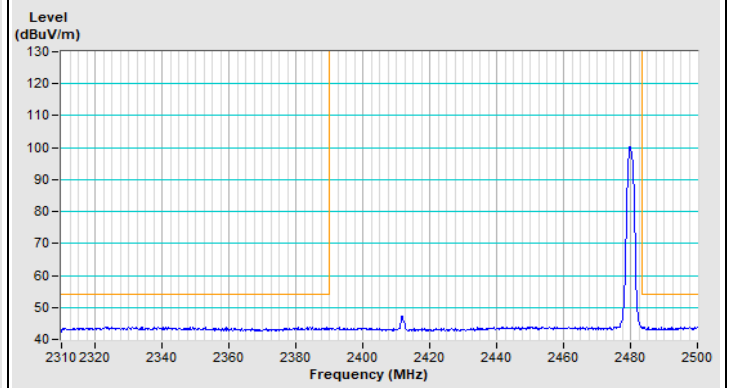
BT 8DPSK Channel 0



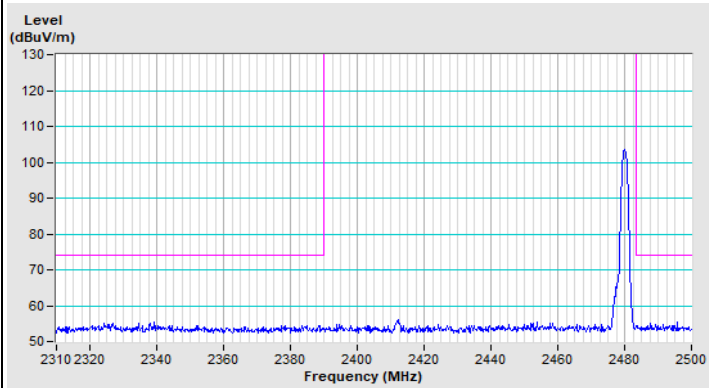
BT 8DPSK Channel 78



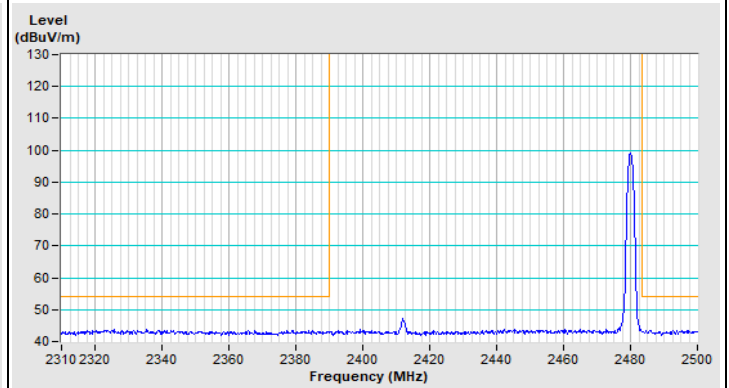
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

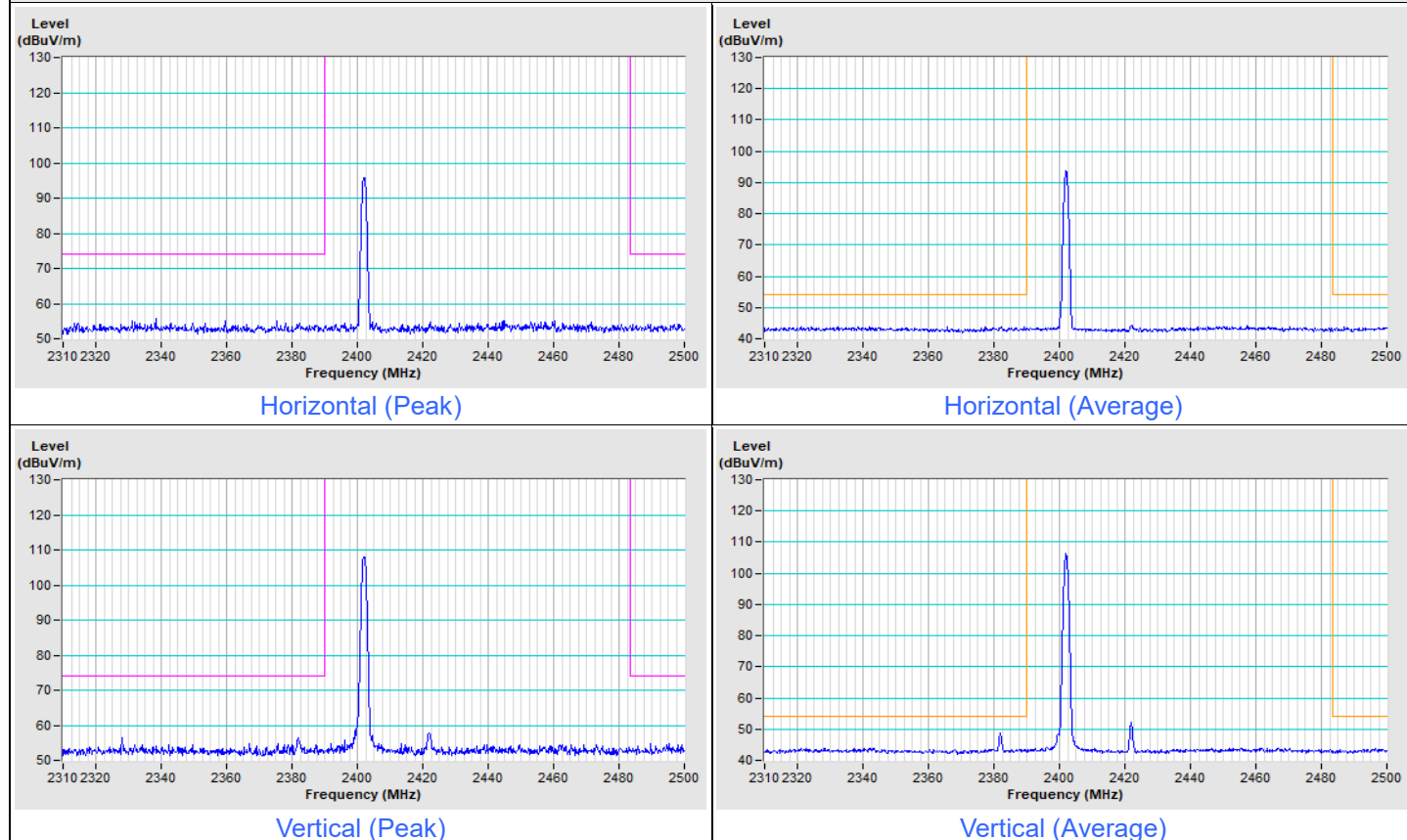


Vertical (Average)

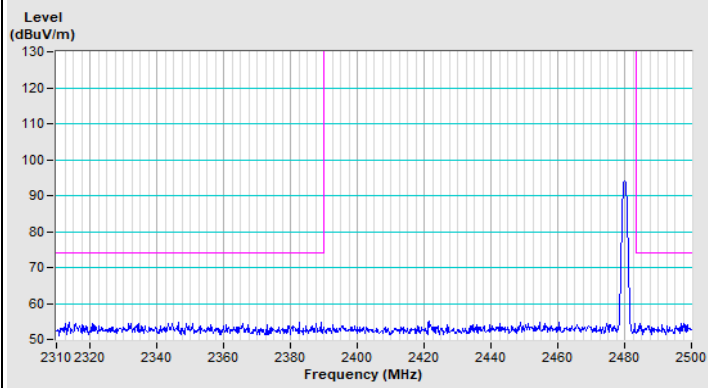
Mode B

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
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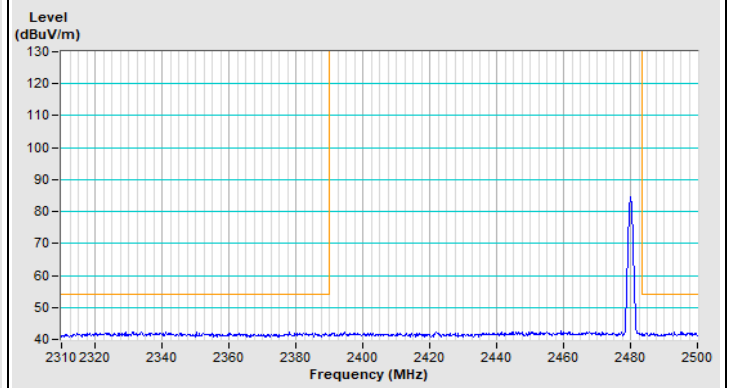
BT GFSK Channel 0



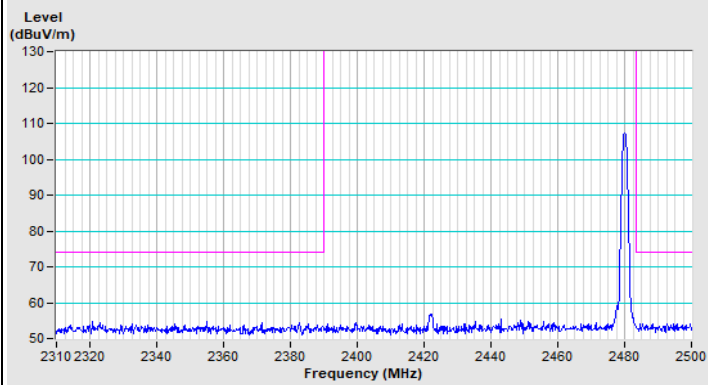
BT GFSK Channel 78



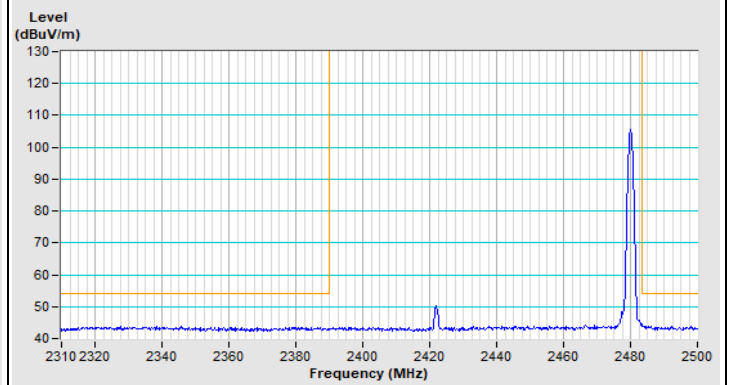
Horizontal (Peak)



Horizontal (Average)



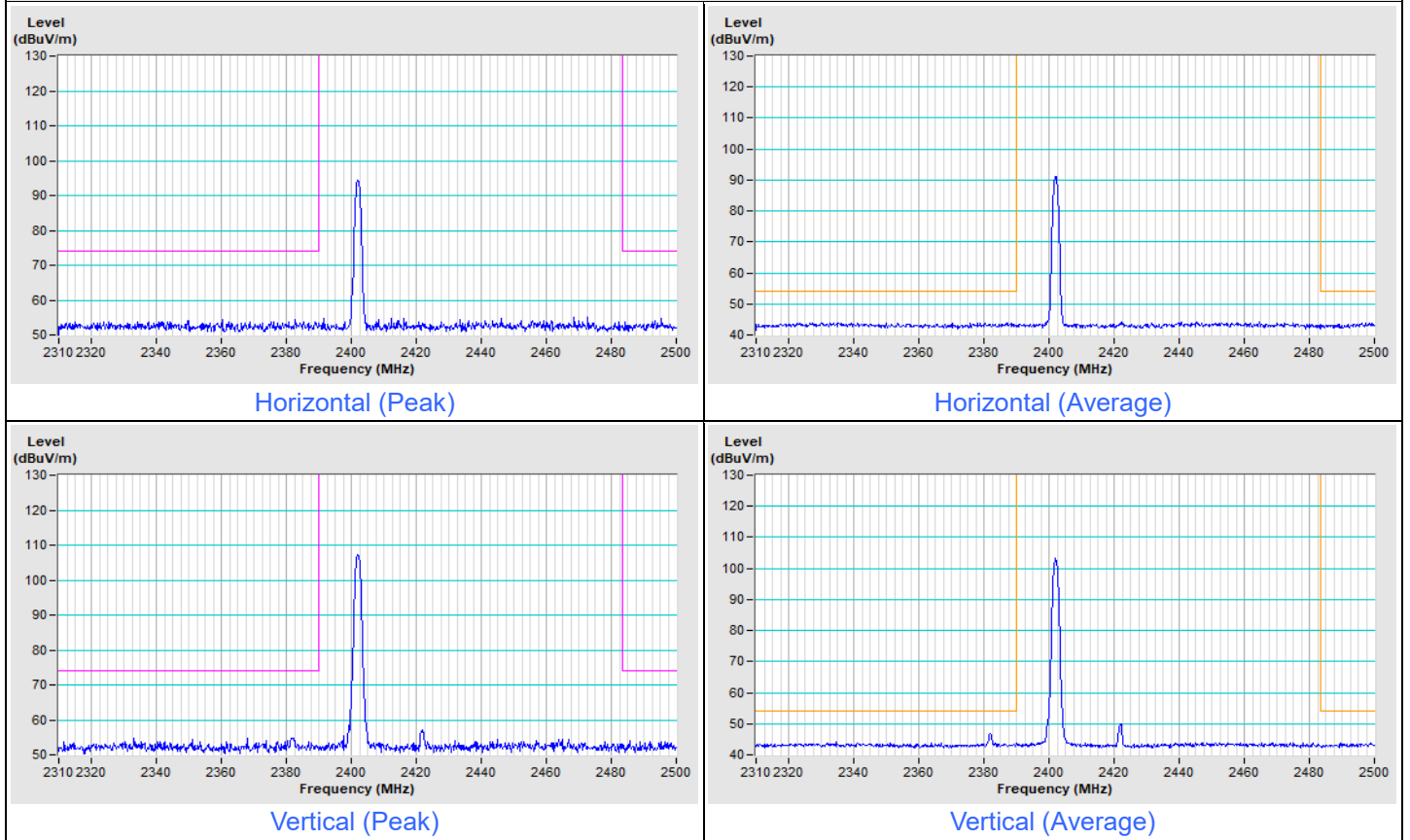
Vertical (Peak)



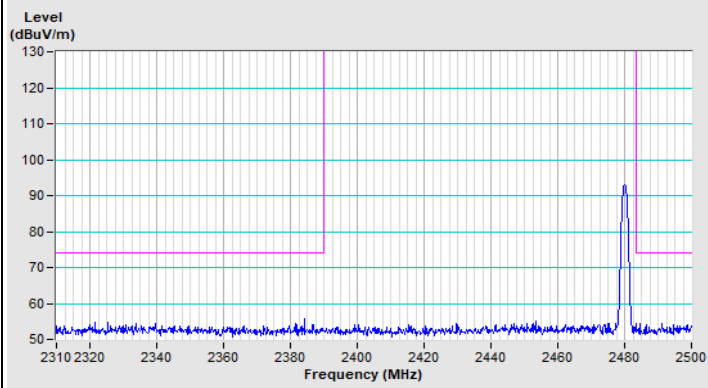
Vertical (Average)

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
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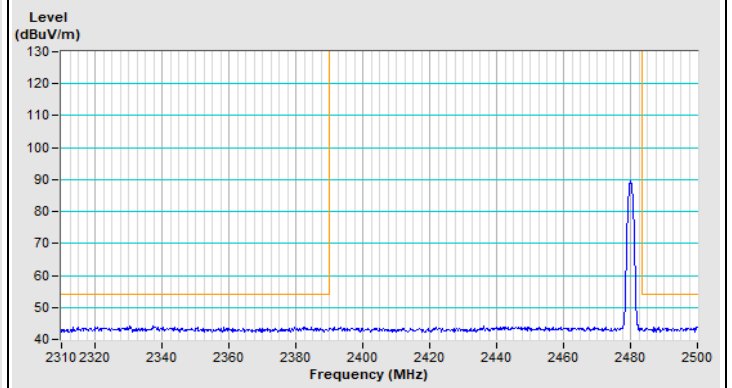
BT 8DPSK Channel 0



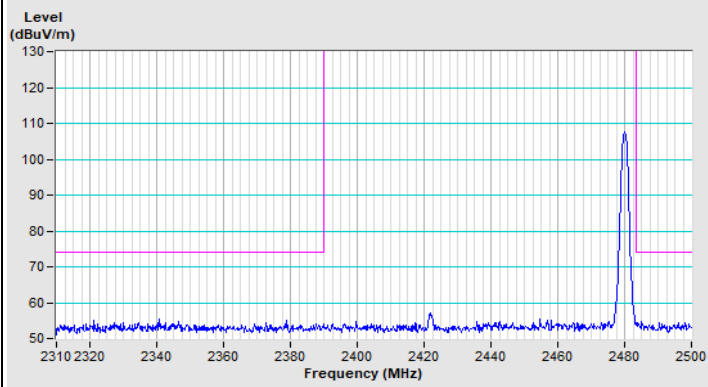
BT 8DPSK Channel 78



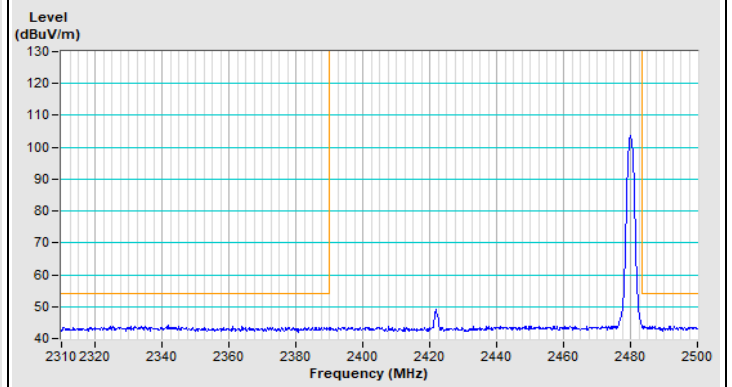
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

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:

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

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