FCC C2PC Test Report

FCC ID	:	**SQG-LWB5PLUS**
Equipment	:	**Sterling-LWB5+ WiFi 5 + Bluetooth 5.2 USB Adapter PCBA**
Model No.	:	**Sterling LWB5+**
Brand Name	:	**Laird Connectivity**
Applicant	:	**Laird Connectivity LLC**
Address	:	**W66N220 Commerce Court, Cedarburg, WI 53012 United States Of America**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Nov. 21, 2022**
Tested Date	:	**Nov. 28 ~ Dec. 02, 2022**

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FR061103-09AD	Rev. 01	Initial issue	Dec. 16, 2022

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.150MHz 47.56 (Margin -18.44dB) - QP	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 86.11MHz 30.11 (Margin -9.89dB) - PK	Pass
15.247(d)	Band Edge	Meet the requirement of limit	Pass
15.247(b)(1)	Conducted Output Power	Power [dBm]: 7.60	Pass
15.247(a)(1)(iii)	Number of Hopping Channels	Meet the requirement of limit	Pass
15.247(a)(1)	Hopping Channel Separation	Meet the requirement of limit	Pass
15.247(a)(1)(iii)	Dwell Time	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

This report is prepared for FCC class II change.
This report is issued as a duplicate report to original ICC report no. FR061103AD. The modification is concerned with following items:

- ✧ Adding a carrier board
- ✧ Reducing conducted output power of 2 Mbps / 3 Mbps by software setting.
- ✧ Changing product name and applicant
- ✧ Changing antenna model name

Therefore, related test items had been performed and presented in the following sections.

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information				
Frequency Range (MHz)	**Bluetooth Mode**	**Ch. Frequency (MHz)**	**Channel Number**	**Data Rate**
2400-2483.5	BR	2402-2480	0-78 [79]	1 Mbps
2400-2483.5	EDR	2402-2480	0-78 [79]	2 Mbps
2400-2483.5	EDR	2402-2480	0-78 [79]	3 Mbps
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: Bluetooth BR uses a GFSK. Note 3: Bluetooth EDR uses a combination of π/4-DQPSK and 8DPSK.				

1.1.2 Antenna Details

Ant. No.	Manufacturer	Model	Laird Part Number	Type	Connector	Antenna Gain (dBi)
1	ACX	AD1608-A2455AA_/LF	NA	Chip Antenna	N/A	1.0

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	5Vdc

1.1.4 Accessories

N/A

1.1.5 Channel List

Frequency band (MHz)				2400~2483.5			
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	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Blue tool , Version: 1.9.8.6 Bluetooth simulator: Brand: R&S, Model: CMW270	
Modulation Mode	**Duty Cycle Of Test Signal (%)**	**Duty Factor (dB)**
DH5	78.94%	1.03
2DH5	78.76%	1.04
3DH5	79.07%	1.02

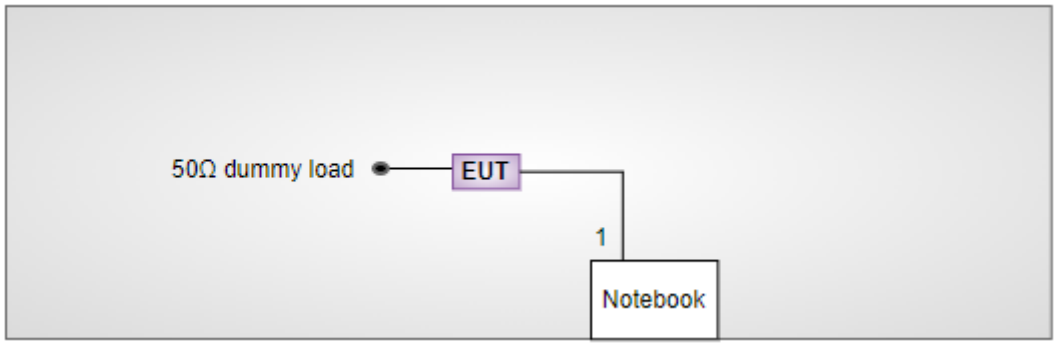
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)		
	2402	**2441**	**2480**
GFSK / 1Mbps	9	9	9
π/4-DQPSK / 2Mbps	11	11	11
8DPSK / 3Mbps	11	11	11

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude 5400	DoC	---
2	50Ω terminator	---	---	---	---

1.3 Test Setup Chart

Test Setup Diagram


No.	Signal cable / Length (m)
1	USB, 0.96m non-shielded.

Note: The notebook is disconnected from EUT and removed from test table when EUT is set to transmit continuously.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Dec. 01, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101658	Feb. 16, 2022	Feb. 15, 2023
LISN	R&S	ENV216	101579	Apr. 21, 2022	Apr. 20, 2023
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127667	Jan .07, 2022	Jan .06, 2023
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 17, 2022	Oct. 16, 2023
50 ohm terminal (Support Unit)	NA	50	01	May 10, 2022	May 09, 2023
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Nov. 28 ~ Dec. 02, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Mar. 15, 2022	Mar. 14, 2023
Spectrum Analyzer	R&S	FSV40	101498	Nov. 21, 2022	Nov. 20, 2023
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 01, 2022	Oct. 31, 2023
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 03, 2022	Aug. 02, 2023
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Sep. 16, 2022	Sep. 15, 2023
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 27, 2022	Oct. 26, 2023
Preamplifier	EMC	EMC02325	980225	Jun. 28, 2022	Jun. 27, 2023
Preamplifier	EMC	EMC118A45SE	980898	Jul. 16, 2022	Jul. 15, 2023
Preamplifier	EMC	EMC184045SE	980903	Jul. 16, 2022	Jul. 15, 2023
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 04, 2022	Oct. 03, 2023
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 04, 2022	Oct. 03, 2023
LF cable 11M	EMC	EMCCFD400-NW-NW-11000	200801	Oct. 04, 2022	Oct. 03, 2023
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 04, 2022	Oct. 03, 2023
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 04, 2022	Oct. 03, 2023
RF Cable	EMC	EMC104-35M-35M-3000	210922	Oct. 04, 2022	Oct. 03, 2023
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Dec. 02, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101910	Apr. 08, 2022	Apr. 07, 2023
Power Meter	Anritsu	ML2495A	1241002	Nov. 23, 2022	Nov. 22, 2023
Power Sensor	Anritsu	MA2411B	1207366	Nov. 23, 2022	Nov. 22, 2023
Measurement Software	Sporton	SENSE-15247_DTS	V5.10.8.7.3	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.130 Hz
Conducted power	±0.808 dB
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Unwanted Emission ≤ 1GHz	±3.41 dB
Unwanted Emission > 1GHz	±4.59 dB
Time	±0.1%

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Mode	Test Frequency (MHz)	Data Rate (Mbps)	Test Configuration
AC Power Line Conducted Emissions	GFSK	2402	1Mbps	---
Unwanted Emissions ≤ 1GHz	GFSK	2402	1Mbps	---
Unwanted Emissions > 1GHz	GFSK	2402	1Mbps	---
Conducted Output Power	GFSK π/4 DQPSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480 2402, 2441, 2480	1Mbps 2Mbps 3Mbps	---
Number of Hopping Channels	π/4 DQPSK 8DPSK	2402~2480 2402~2480	2Mbps 3Mbps	---
Hopping Channel Separation 20dB and Occupied bandwidth	GFSK π/4 DQPSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480 2402, 2441, 2480	1Mbps 2Mbps 3Mbps	---
Dwell Time	π/4 DQPSK 8DPSK	2402 2402	2Mbps 3Mbps	---

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.
2. 50Ω terminator was connected to antenna port of EUT for radiated emission measurement.

3 Transmitter Test Results

3.1 Unwanted Emissions into Restricted Frequency Bands

3.1.1 Limit of Unwanted Emissions into Restricted Frequency Bands

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit
Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.1.2 Test Procedures

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

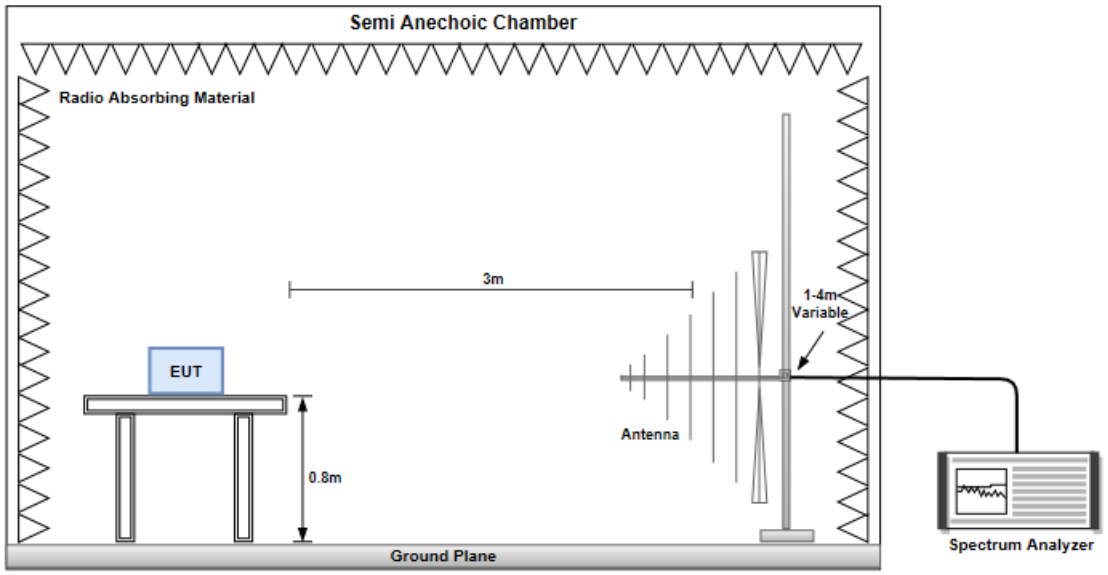
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. Radiated emission above 1GHz / Peak value
   RBW=1MHz, VBW=3MHz and Peak detector
3. Radiated emission above 1GHz / Average value for harmonics
   The average value is: Average = Peak value + 20log(Duty cycle) Where the duty factor is calculated from following formula for DH5 packet type which has worst duty factor:

$$20\log(\text{Duty cycle}) = 20\log\frac{1\text{s} / 1600 * 5}{100\text{ ms}} = -30.1\text{dB}$$

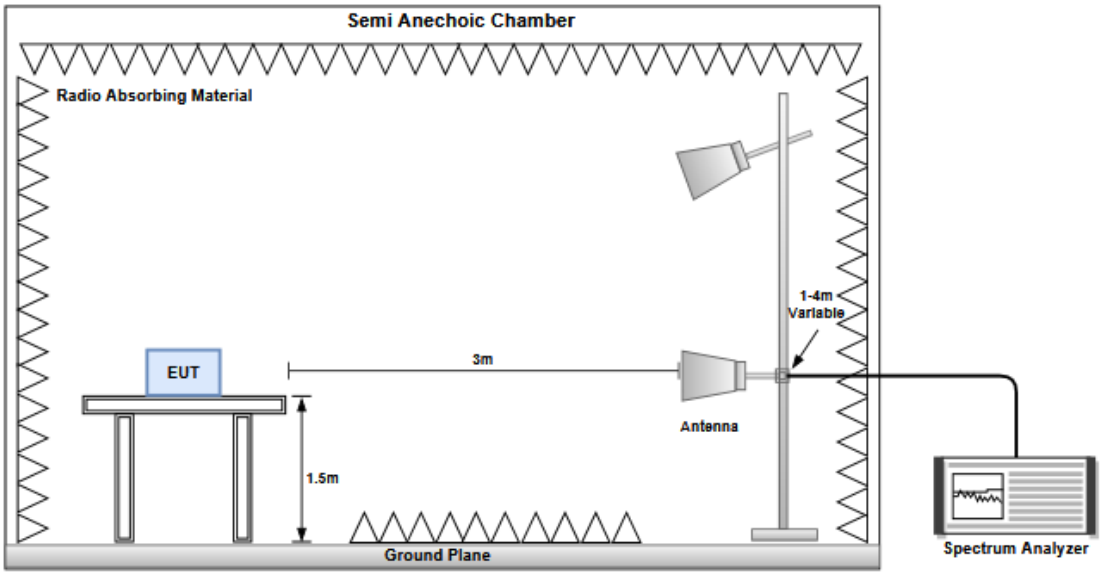
4. Radiated emission above 1GHz / Average value for other emissions
   RBW=1MHz, VBW=1/T and Peak detector

3.1.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.1.4 Test Results

Refer to Appendix A.

3.2 Unwanted Emissions into Non-Restricted Frequency Bands

3.2.1 Limit of Unwanted Emissions into Non-Restricted Frequency Bands

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.2.2 Test Procedures

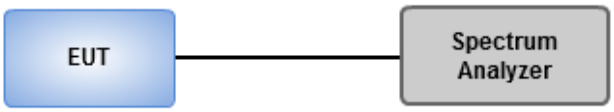
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.2.3 Test Setup



3.2.4 Test Results

Ambient Condition	25°C / 67%	**Tested By**	Roger Lu

Refer to Appendix B.

3.3 Conducted Output Power

3.3.1 Limit of Conducted Output Power

☐ 1 Watt
For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band.

☒ 0.125 Watt
For all other frequency hopping systems in the 2400–2483.5 MHz band.

☐ 0.125 Watt
For Frequency hopping systems operating in the 2400–2483.5 MHz band have hopping channel carrier frequencies that are separated by two-thirds of the 20 dB bandwidth of the hopping channel.

3.3.2 Test Procedures

1. A wideband power meter is used for power measurement. Bandwidth of power senor and meter is 50MHz

2 If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power

3.3.3 Test Setup

3.3.4 Test Results

Ambient Condition	25°C / 67%	**Tested By**	Roger Lu

Refer to Appendix C.

3.4 Number of Hopping Frequency

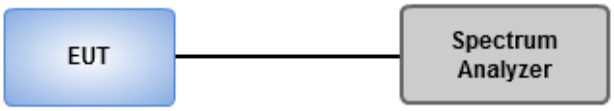
3.4.1 Limit of Number of Hopping Frequency

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

3.4.2 Test Procedures

1. Set RBW = 100kHz, VBW = 300kHz, Sweep time = Auto, Detector = Peak Trace max hold.
2 Allow trace to stabilize.

3.4.3 Test Setup



3.4.4 Test Results

Ambient Condition	25°C / 67%	**Tested By**	Roger Lu

Refer to Appendix D.

3.5 20dB and Occupied Bandwidth

3.5.1 Test Procedures

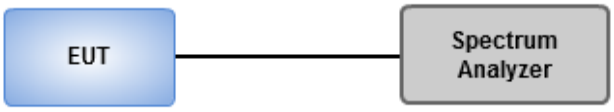
20dB Bandwidth

1. Set RBW=20kHz, VBW=100kHz, Sweep time = Auto, Detector=Peak , Trace max hold
2 Allow trace to stabilize
3 Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set RBW=20kHz, VBW=100kHz, Sweep time = Auto, Detector=Sample , Trace max hold
2 Allow trace to stabilize
3. Use Occupied bandwidth function of spectrum analyzer to measuring 99% occupied bandwidth

3.5.2 Test Setup



3.5.3 Test Results

Ambient Condition	25°C / 67%	**Tested By**	Roger Lu

Refer to Appendix E.

3.6 Channel Separation

3.6.1 Limit of Channel Separation

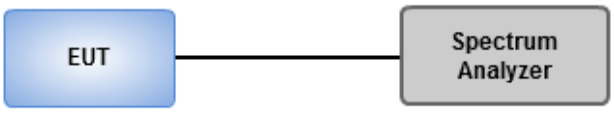
☐ Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

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

3.6.2 Test Procedures

1. Set RBW=30kHz, VBW=100kHz,Sweep time = Auto, Detector=Peak Trace max hold
2. Allow trace to stabilize
3. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The EUT shall show compliance with the appropriate regulatory limit

3.6.3 Test Setup



3.6.4 Test Results

Ambient Condition	25°C / 67%	**Tested By**	Roger Lu

Refer to Appendix F.

3.7 Number of Dwell Time

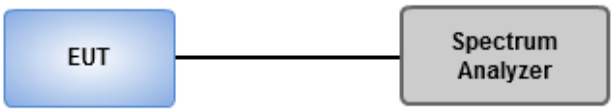
3.7.1 Limit of Dwell time

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.

3.7.2 Test Procedures

1. Set RBW=300 kHz, VBW=1 MHz, Sweep time=8 ms, Detector=Peak, Span=0 Hz,Trace max hold.
2 Enable gating and trigger function of spectrum analyzer to measure burst on time.
3. Set RBW=300 kHz, VBW=1 MHz, Sweep time=5 s / 2 s, Detector=Peak, Span=0 Hz,Trace max hold.
4. Enable gating and trigger function of spectrum analyzer to measure burst on number of transmission.
5 Set RBW=300 kHz, VBW=1 MHz, Sweep time=31.6 s / 8 s, Detector=Peak, Span=0 Hz,Trace max hold.
6 Enable gating and trigger function of spectrum analyzer to measure burst on number of transmission of entire time cycle.

3.7.3 Test Setup



3.7.4 Test Results

Ambient Condition	25°C / 67%	Tested By	Roger Lu

Refer to Appendix G.

3.8 AC Power Line Conducted Emissions

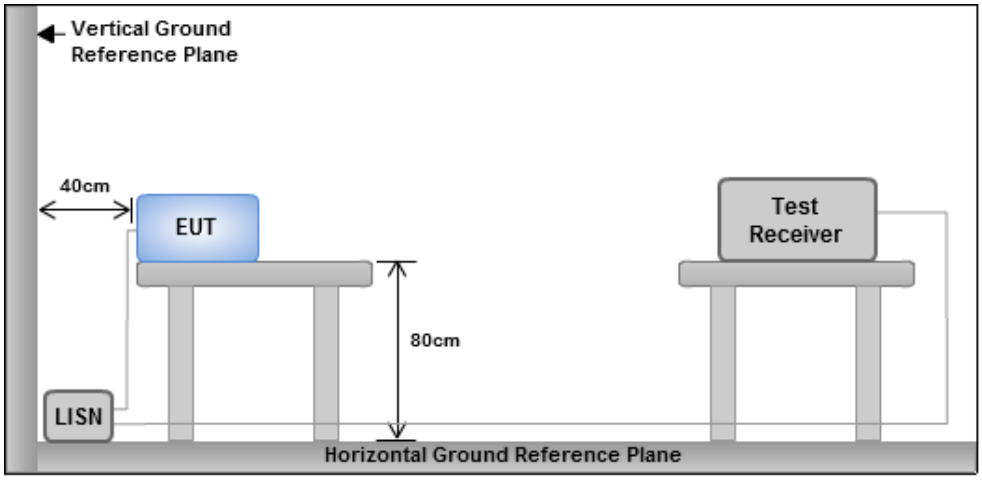
3.8.1 Limit of AC Power Line Conducted Emissions

Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.8.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V/60Hz

3.8.3 Test Setup



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

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.8.4 Test Results

Refer to Appendix H.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

No.2-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 333, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

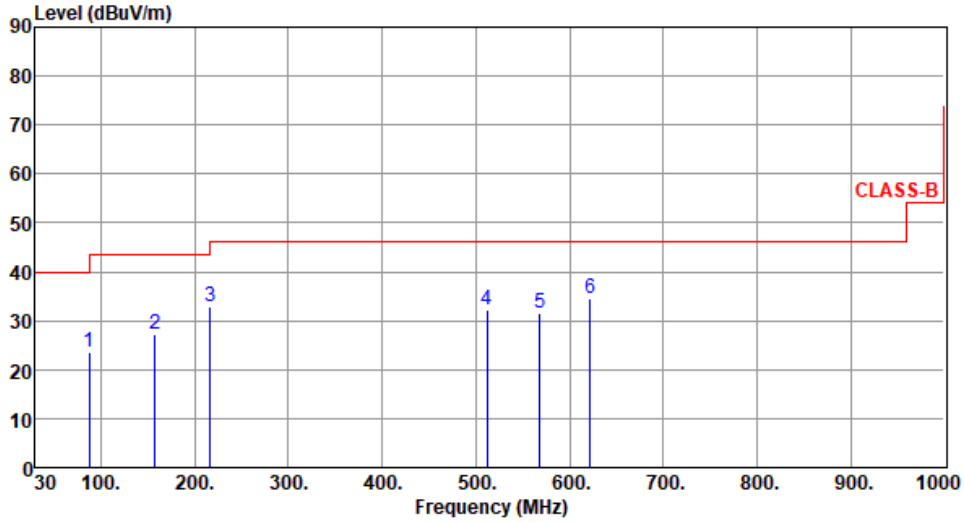
Tel: 886-3-271-8666
Fax: 886-3-318-0345
Email: ICC_Service@icertifi.com.tw

==END==

Emissions (Below 1GHz)

Modulation	GFSK	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

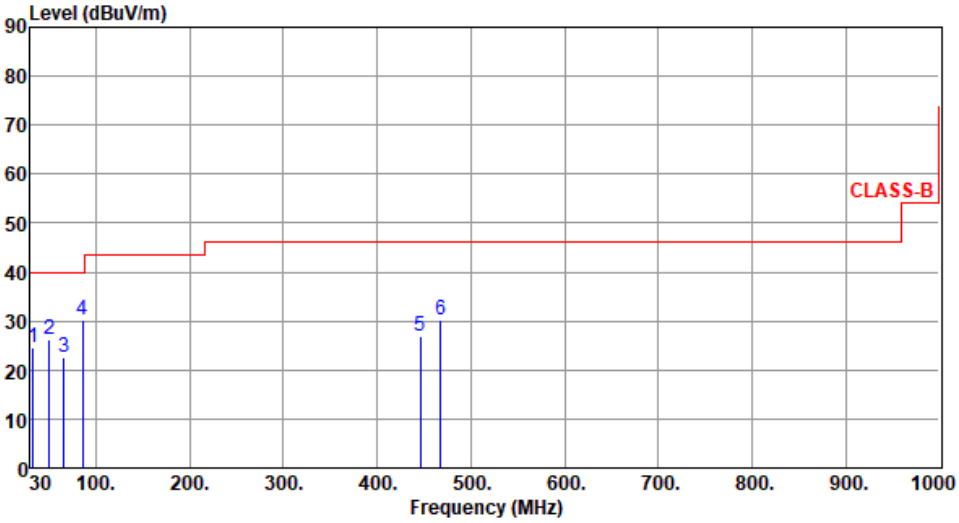


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	87.67	23.58	40.00	-16.42	38.18	-14.60	Peak	---	---
2	157.79	27.37	43.50	-16.13	36.33	-8.96	Peak	---	---
3	216.54	32.77	46.00	-13.23	44.70	-11.93	Peak	---	---
4	511.67	32.26	46.00	-13.74	35.21	-2.95	Peak	---	---
5	568.61	31.43	46.00	-14.57	33.23	-1.80	Peak	---	---
6	622.23	34.47	46.00	-11.53	34.88	-0.41	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	GFSK	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66



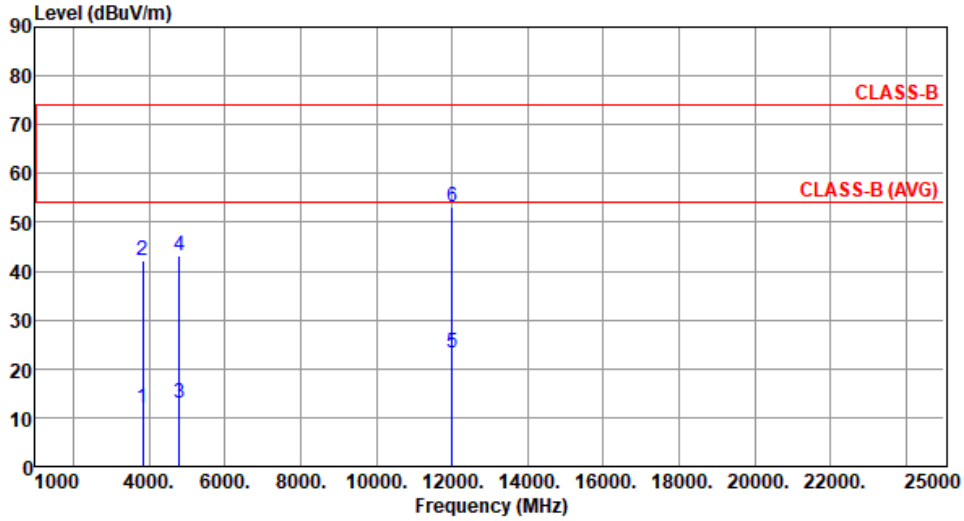
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	32.67	24.58	40.00	-15.42	34.25	-9.67	Peak	---	---
2	50.13	26.34	40.00	-13.66	34.70	-8.36	Peak	---	---
3	66.13	22.58	40.00	-17.42	33.11	-10.53	Peak	---	---
4	86.11	30.11	40.00	-9.89	44.84	-14.73	Peak	---	---
5	446.28	27.01	46.00	-18.99	31.31	-4.30	Peak	---	---
6	467.61	30.15	46.00	-15.85	34.00	-3.85	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Emissions (Above 1GHz) for GFSK

Modulation	GFSK	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

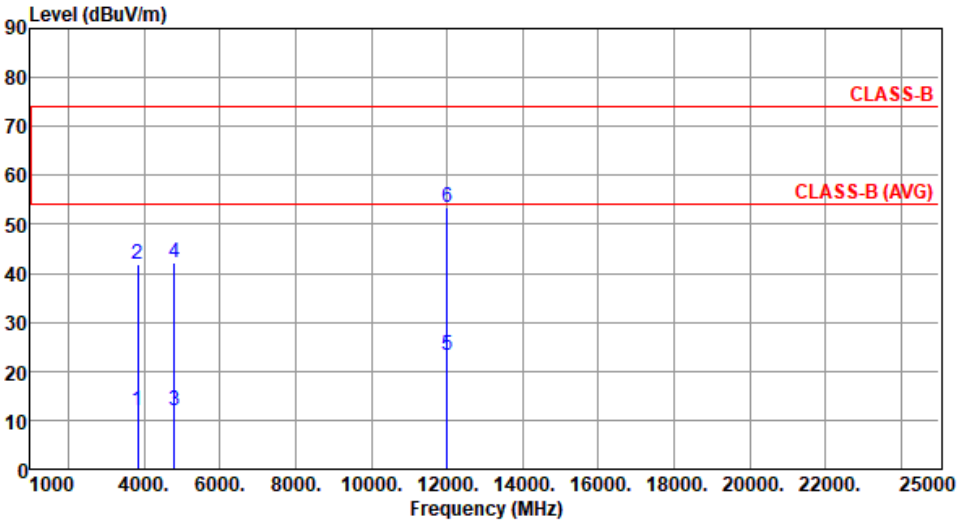


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3843.20	11.96	54.00	-42.04	14.30	-2.34	Average	194	300
2	3843.20	42.06	74.00	-31.94	44.40	-2.34	Peak	194	300
3	4804.00	13.05	54.00	-40.95	13.86	-0.81	Average	100	265
4	4804.00	43.15	74.00	-30.85	43.96	-0.81	Peak	100	265
5	12010.00	23.18	54.00	-30.82	17.47	5.71	Average	100	46
6	12010.00	53.28	74.00	-20.72	47.57	5.71	Peak	100	46

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

Modulation	GFSK	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66



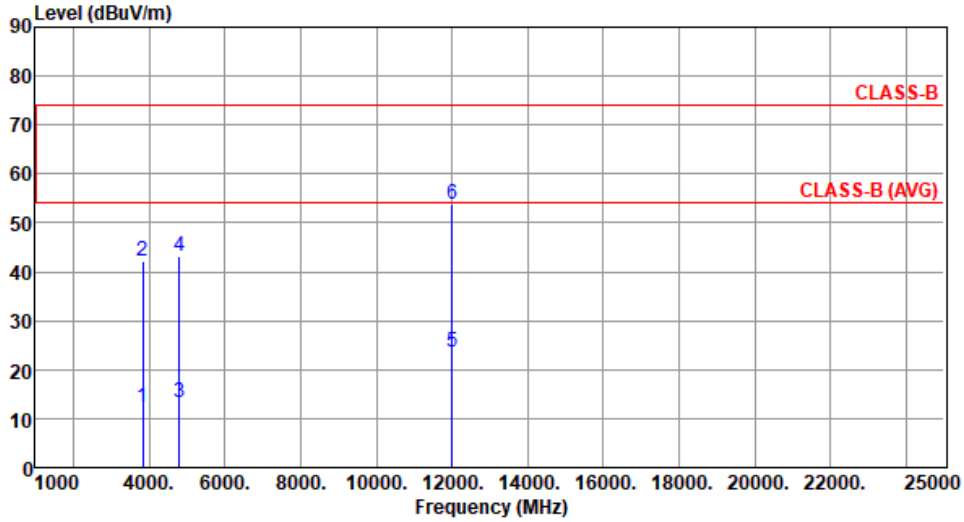
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3843.20	11.88	54.00	-42.12	14.22	-2.34	Average	180	66
2	3843.20	41.98	74.00	-32.02	44.32	-2.34	Peak	180	66
3	4804.00	12.05	54.00	-41.95	12.86	-0.81	Average	100	152
4	4804.00	42.15	74.00	-31.85	42.96	-0.81	Peak	100	152
5	12010.00	23.27	54.00	-30.73	17.56	5.71	Average	100	66
6	12010.00	53.37	74.00	-20.63	47.66	5.71	Peak	100	66

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

Emissions (Above 1GHz) for 8DPSK

Modulation	8DPSK	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

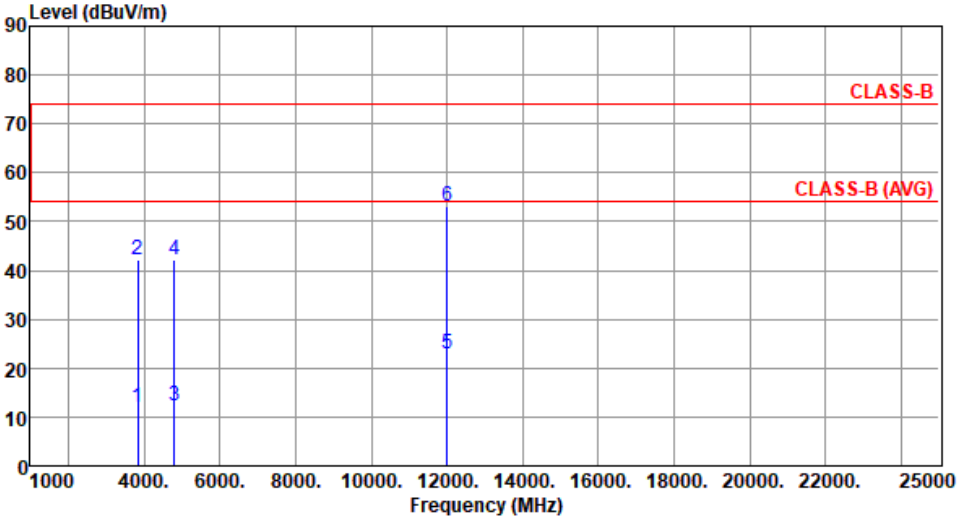


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3843.20	12.21	54.00	-41.79	14.55	-2.34	Average	186	298
2	3843.20	42.31	74.00	-31.69	44.65	-2.34	Peak	186	298
3	4804.00	13.18	54.00	-40.82	13.99	-0.81	Average	100	255
4	4804.00	43.28	74.00	-30.72	44.09	-0.81	Peak	100	255
5	12010.00	23.57	54.00	-30.43	17.86	5.71	Average	100	73
6	12010.00	53.67	74.00	-20.33	47.96	5.71	Peak	100	73

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

Modulation	8DPSK	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

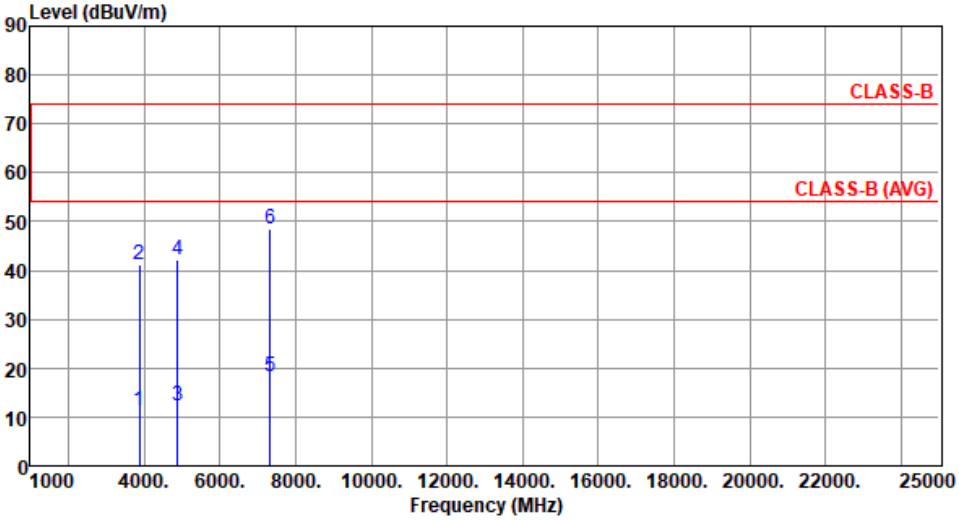


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3843.20	12.01	54.00	-41.99	14.35	-2.34	Average	167	55
2	3843.20	42.11	74.00	-31.89	44.45	-2.34	Peak	167	55
3	4804.00	12.21	54.00	-41.79	13.02	-0.81	Average	100	146
4	4804.00	42.31	74.00	-31.69	43.12	-0.81	Peak	100	146
5	12010.00	23.08	54.00	-30.92	17.37	5.71	Average	100	112
6	12010.00	53.18	74.00	-20.82	47.47	5.71	Peak	100	112

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

Modulation	8DPSK	**Test Freq. (MHz)**	2441
Polarization	Horizontal		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

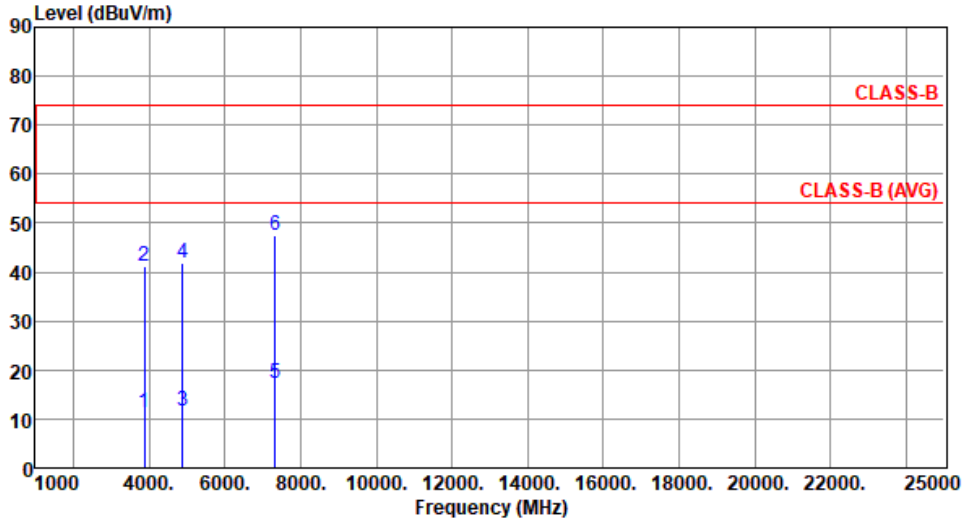


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3882.20	11.21	54.00	-42.79	13.49	-2.28	Average	176	274
2	3882.20	41.31	74.00	-32.69	43.59	-2.28	Peak	176	274
3	4882.00	12.17	54.00	-41.83	12.91	-0.74	Average	100	254
4	4882.00	42.27	74.00	-31.73	43.01	-0.74	Peak	100	254
5	7323.00	18.43	54.00	-35.57	13.60	4.83	Average	100	198
6	7323.00	48.53	74.00	-25.47	43.70	4.83	Peak	100	198

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

Modulation	8DPSK	**Test Freq. (MHz)**	2441
Polarization	Vertical		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

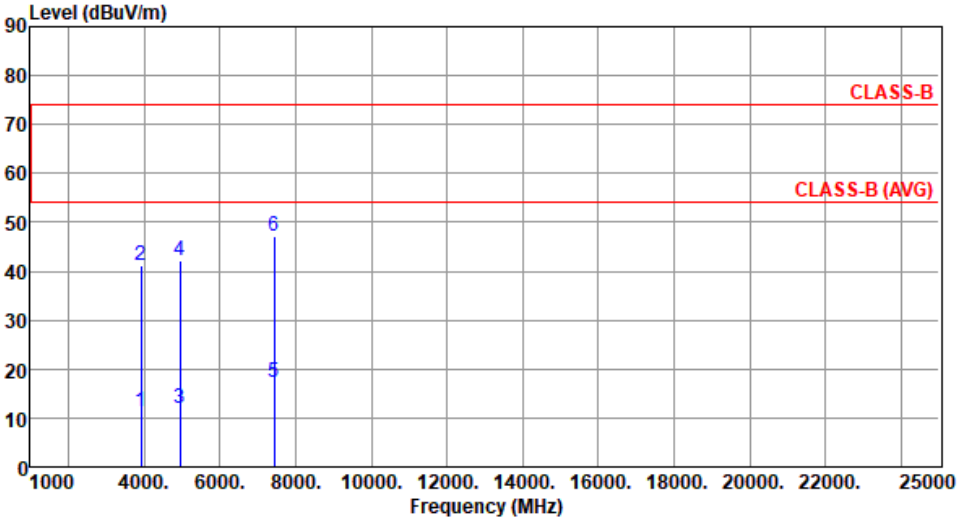


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3882.20	11.23	54.00	-42.77	13.51	-2.28	Average	112	167
2	3882.20	41.33	74.00	-32.67	43.61	-2.28	Peak	112	167
3	4882.00	11.67	54.00	-42.33	12.41	-0.74	Average	100	167
4	4882.00	41.77	74.00	-32.23	42.51	-0.74	Peak	100	167
5	7323.00	17.27	54.00	-36.73	12.44	4.83	Average	100	137
6	7323.00	47.38	74.00	-26.62	42.55	4.83	Peak	100	137

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

Modulation	8DPSK	**Test Freq. (MHz)**	2480
Polarization	Horizontal		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

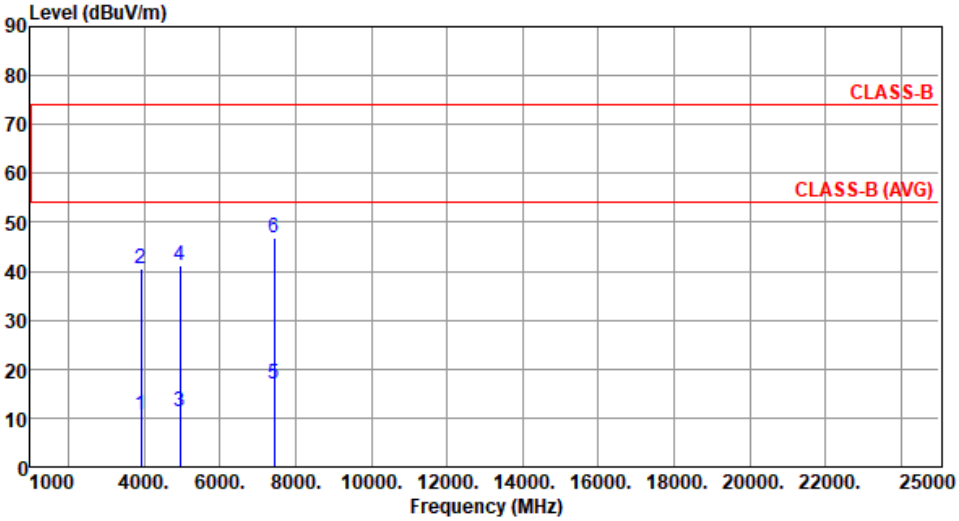


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3921.20	11.17	54.00	-42.83	13.45	-2.28	Average	167	293
2	3921.20	41.27	74.00	-32.73	43.55	-2.28	Peak	167	293
3	4960.00	12.06	54.00	-41.94	12.78	-0.72	Average	100	241
4	4960.00	42.16	74.00	-31.84	42.88	-0.72	Peak	100	241
5	7440.00	17.11	54.00	-36.89	12.22	4.89	Average	100	226
6	7440.00	47.21	74.00	-26.79	42.32	4.89	Peak	100	226

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

Modulation	8DPSK	**Test Freq. (MHz)**	2480
Polarization	Vertical		

Test By :Akun Chung- Temperature(℃):24 Humidity(%):66

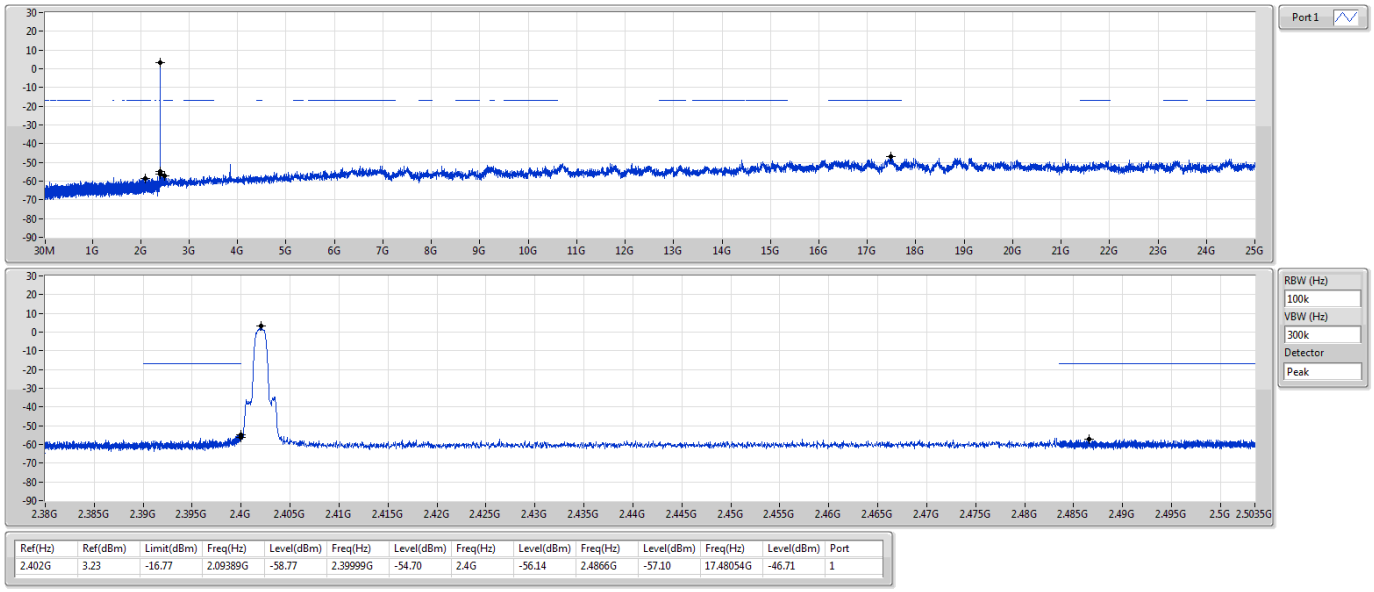


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3921.20	10.48	54.00	-43.52	12.76	-2.28	Average	107	186
2	3921.20	40.58	74.00	-33.42	42.86	-2.28	Peak	107	186
3	4960.00	11.22	54.00	-42.78	11.94	-0.72	Average	100	153
4	4960.00	41.32	74.00	-32.68	42.04	-0.72	Peak	100	153
5	7440.00	16.88	54.00	-37.12	11.99	4.89	Average	100	129
6	7440.00	46.98	74.00	-27.02	42.09	4.89	Peak	100	129

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: When average value is calculated not measured, no SA reading and factor value are listed.

BT-EDR(2Mbps) **CSENdB-FS**

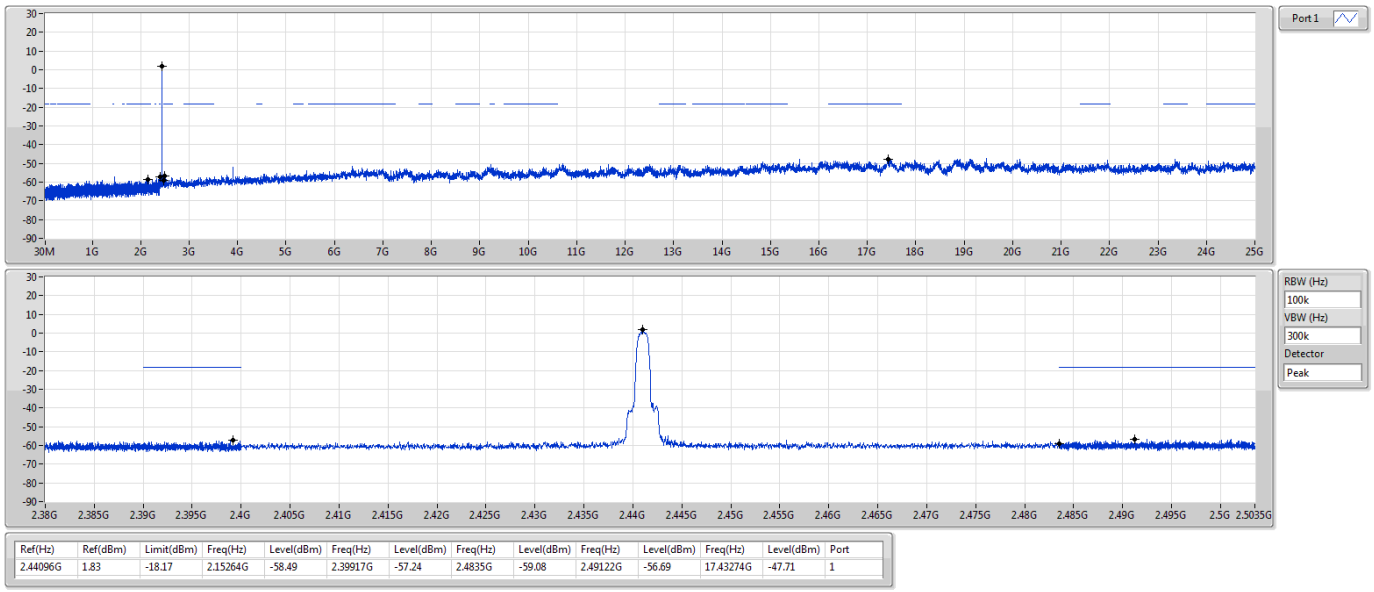
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	3.23	-16.77	2.09389G	-58.77	2.39999G	-54.70	2.4G	-56.14	2.4866G	-57.10	17.48054G	-46.71	1

BT-EDR(2Mbps) **CSENdB-FS**

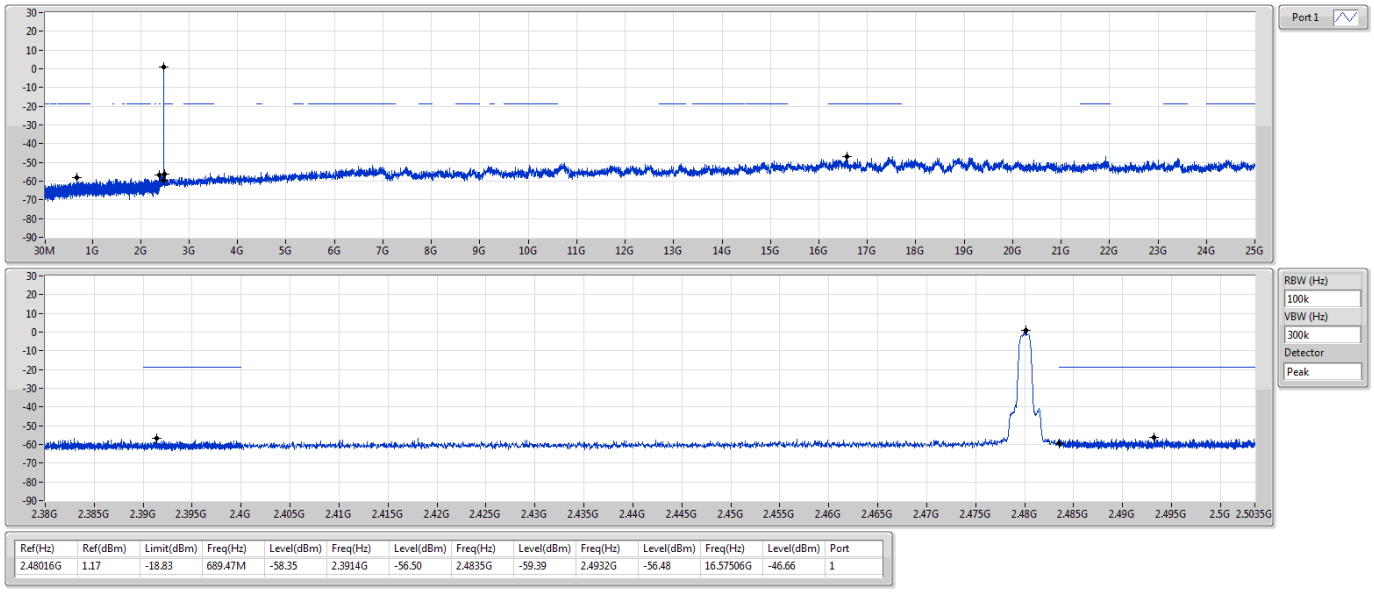
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44096G	1.83	-18.17	2.15264G	-58.49	2.39917G	-57.24	2.4835G	-59.08	2.49122G	-56.69	17.43274G	-47.71	1

BT-EDR(2Mbps) **CSENdB-FS**

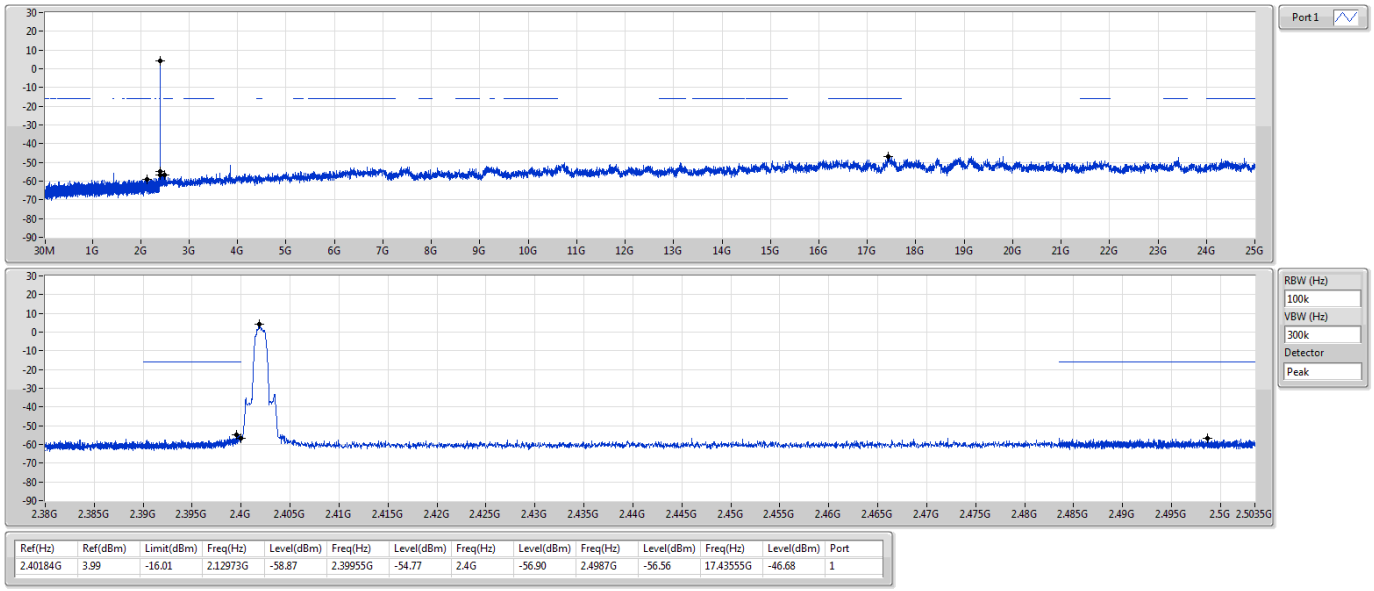
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48016G	1.17	-18.83	689.47M	-58.35	2.3914G	-56.50	2.4835G	-59.39	2.4932G	-56.48	16.57506G	-46.66	1

BT-EDR(3Mbps) **CSENdB-FS**

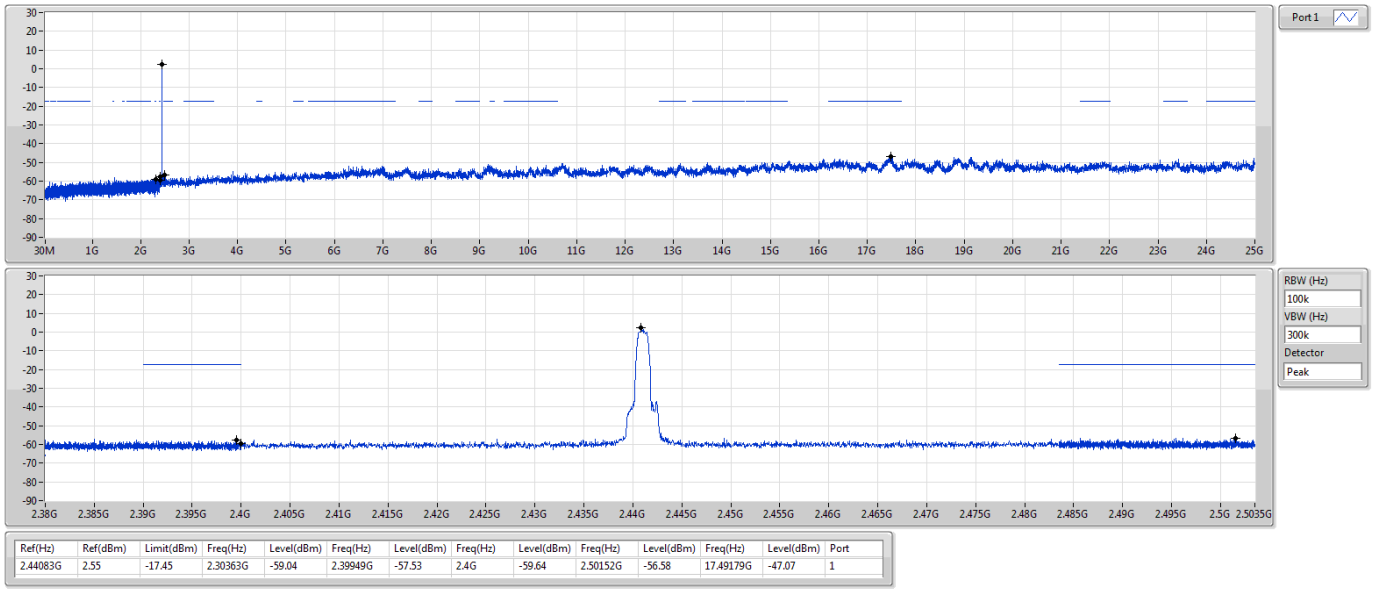
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40184G	3.99	-16.01	2.12973G	-58.87	2.39955G	-54.77	2.4G	-56.90	2.4987G	-56.56	17.43555G	-46.68	1

BT-EDR(3Mbps) **CSENdB-FS**

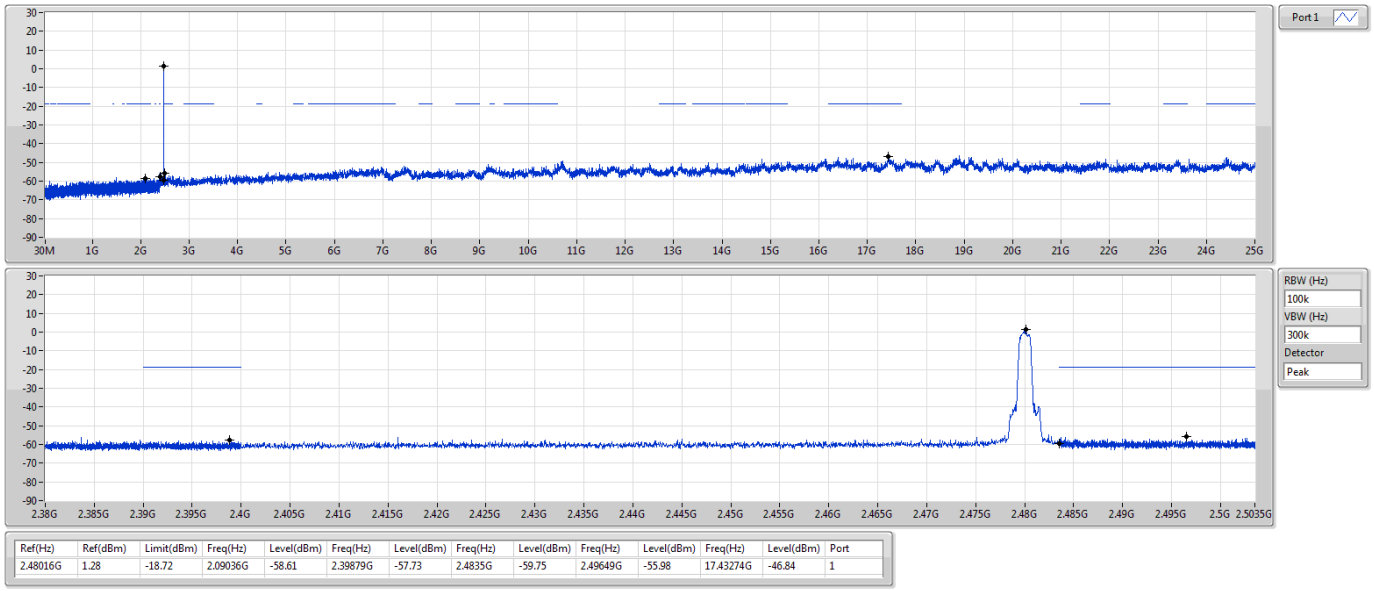
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44083G	2.55	-17.45	2.30363G	-59.04	2.39949G	-57.53	2.4G	-59.64	2.50152G	-56.58	17.49179G	-47.07	1

BT-EDR(3Mbps) **CSENdB-FS**

2480MHz

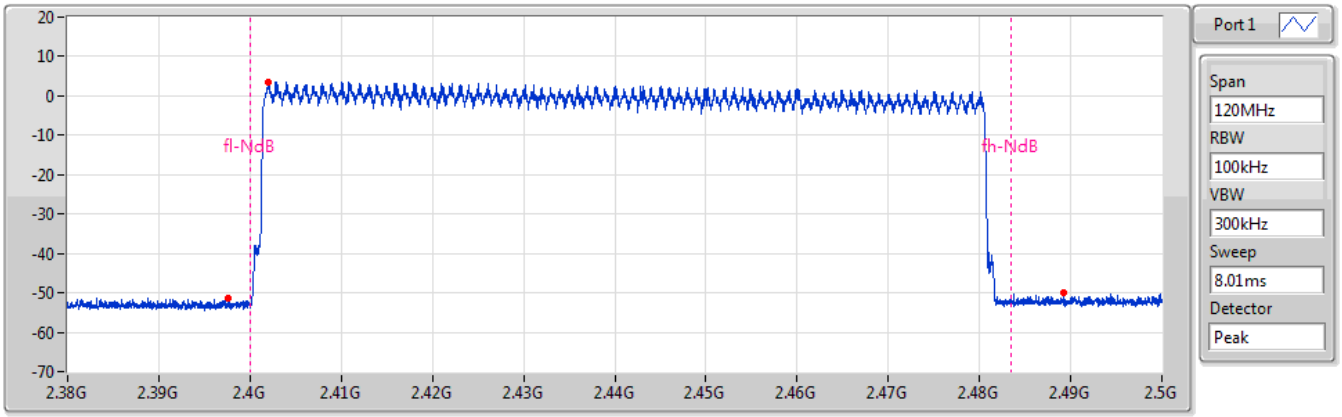


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48016G	1.28	-18.72	2.09036G	-58.61	2.39879G	-57.73	2.4835G	-59.75	2.49649G	-55.98	17.43274G	-46.84	1

BT-EDR(2Mbps)

2402MHz

Hopping Ch Bandedge (Non-restricted Band)

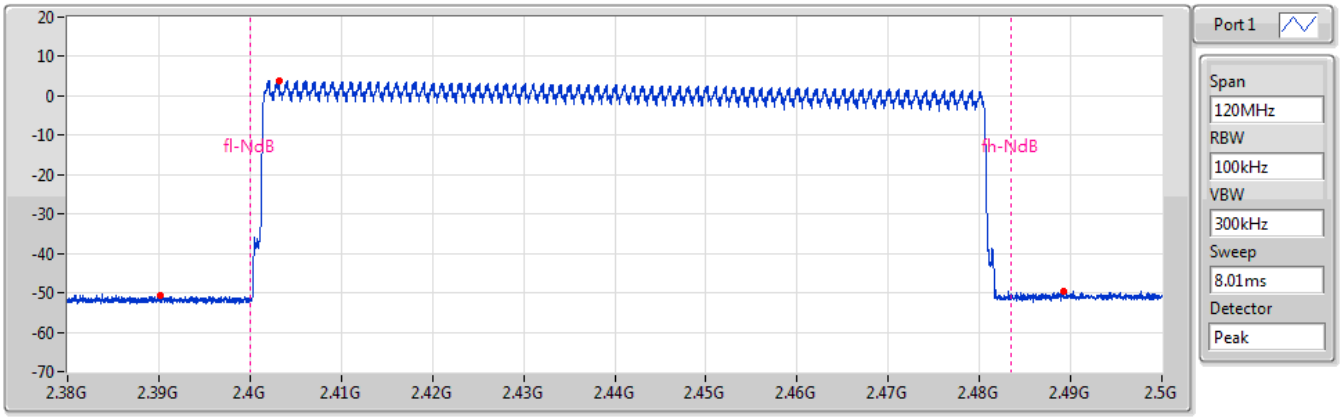


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-16.43	2.402005G	3.57	2.39767G	-51.45	2.48926G	-50.04

BT-EDR(3Mbps)

2402MHz

Hopping Ch Bandedge (Non-restricted Band)



Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-16.23	2.40316G	3.77	2.390215G	-50.58	2.48917G	-49.6

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.60	0.00575
BT-EDR(2Mbps)	7.08	0.00511
BT-EDR(3Mbps)	7.52	0.00565

Result

Mode	Result	Antenna Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	1.00	7.60	21.00
2441MHz	Pass	1.00	7.02	21.00
2480MHz	Pass	1.00	6.31	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	1.00	7.08	21.00
2441MHz	Pass	1.00	6.11	21.00
2480MHz	Pass	1.00	4.77	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	1.00	7.52	21.00
2441MHz	Pass	1.00	6.11	21.00
2480MHz	Pass	1.00	4.80	21.00

DG = Directional Gain; Port X = Port X output power

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.48	0.00560
BT-EDR(2Mbps)	4.66	0.00292
BT-EDR(3Mbps)	4.65	0.00292

Result

Mode	Result	Antenna Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	1.00	7.48	-
2441MHz	Pass	1.00	6.91	-
2480MHz	Pass	1.00	5.94	-
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	1.00	4.66	-
2441MHz	Pass	1.00	3.56	-
2480MHz	Pass	1.00	2.15	-
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	1.00	4.65	-
2441MHz	Pass	1.00	3.58	-
2480MHz	Pass	1.00	2.21	-

Note: Average power is for reference only.

Summary

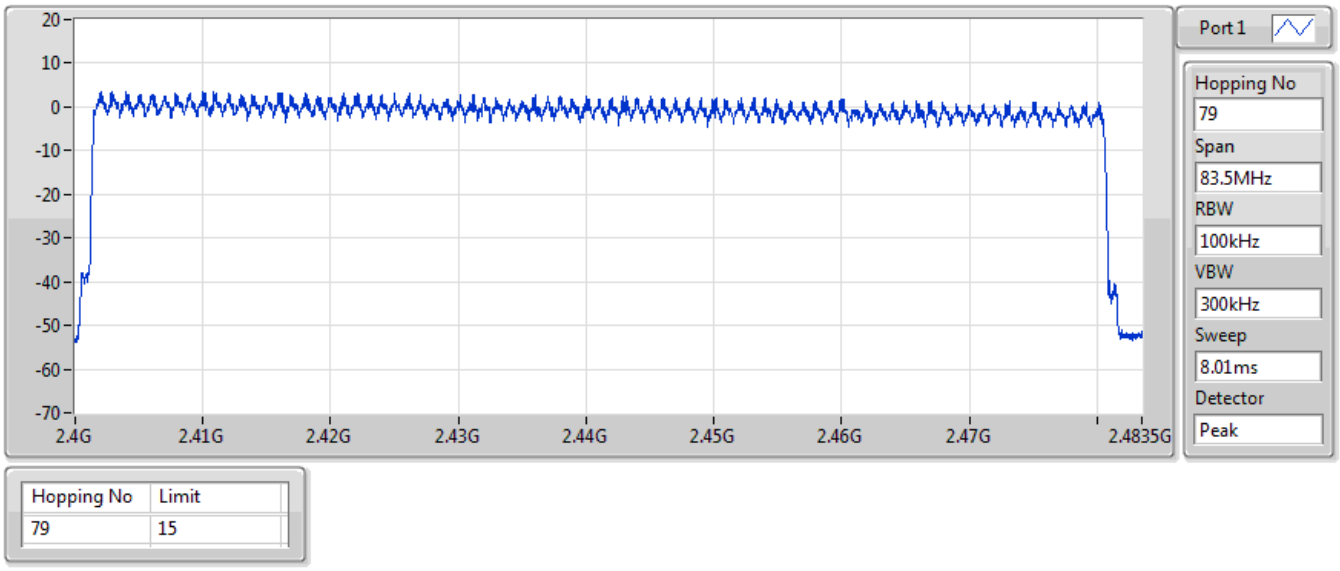
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

Result

Mode	Result	Hopping No	Limit
BT-EDR(2Mbps)	-	-	-
2402MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2402MHz	Pass	79	15

BT-EDR(2Mbps) **Hopping-FS**

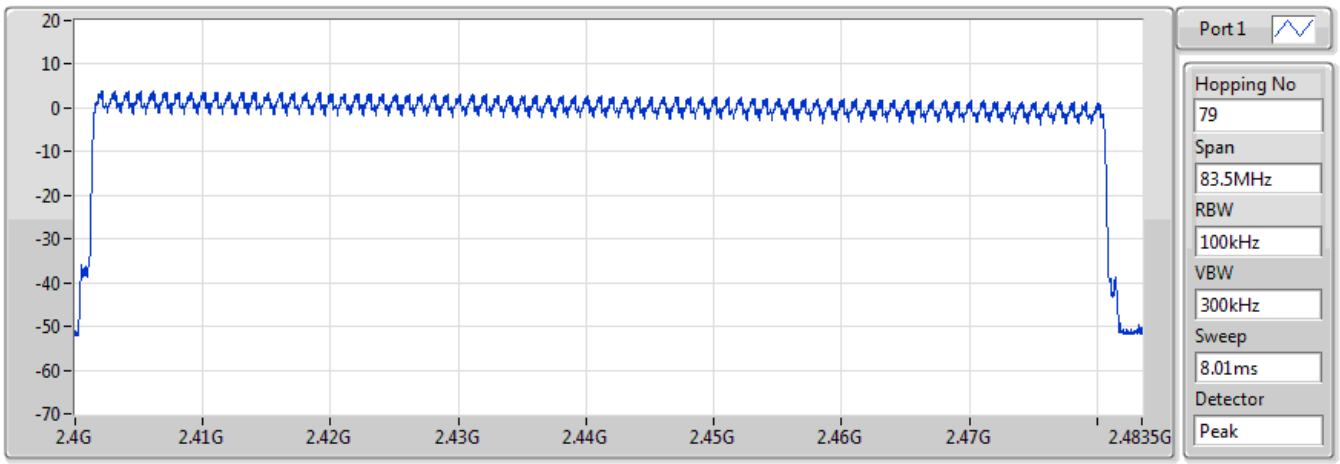
2402MHz



Hopping No	Limit
79	15

BT-EDR(3Mbps) **Hopping-FS**

2402MHz



Hopping No	Limit
79	15

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-EDR(2Mbps)	1.33M	1.208M	1M21G1D	1.326M	1.201M
BT-EDR(3Mbps)	1.315M	1.208M	1M21G1D	1.297M	1.205M

Max-N dB = Maximum 20dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 20dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

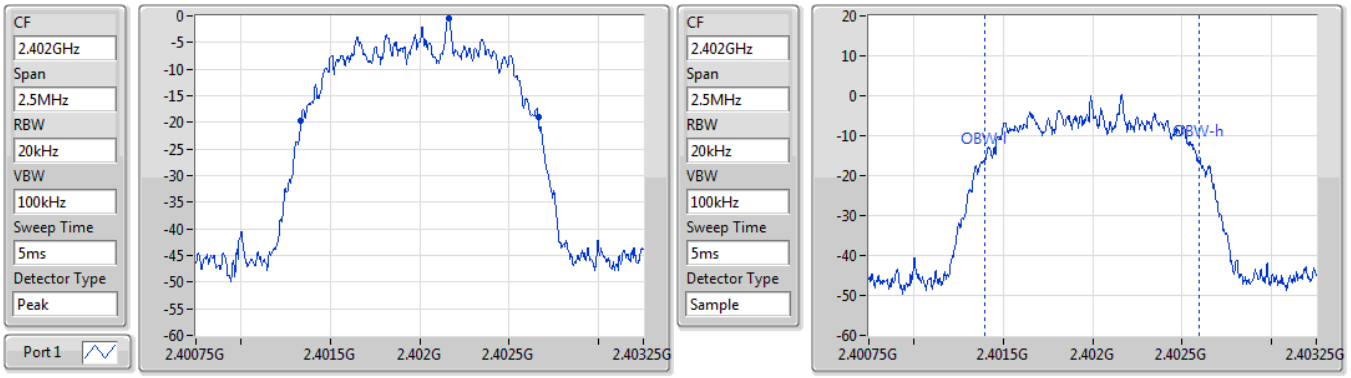
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.326M	1.201M
2441MHz	Pass	Inf	1.33M	1.201M
2480MHz	Pass	Inf	1.326M	1.208M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.297M	1.205M
2441MHz	Pass	Inf	1.315M	1.208M
2480MHz	Pass	Inf	1.312M	1.205M

Port X-N dB = Port X 20dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-EDR(2Mbps) **EBW-FS**

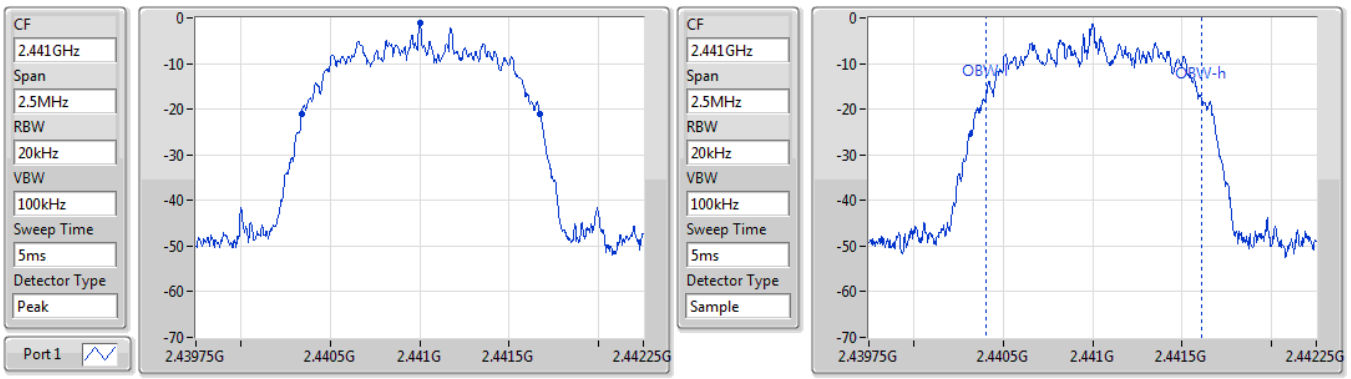
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.326M	2.401337G	2.402663G	1.201M	2.401396G	2.402597G	Inf	1

BT-EDR(2Mbps) **EBW-FS**

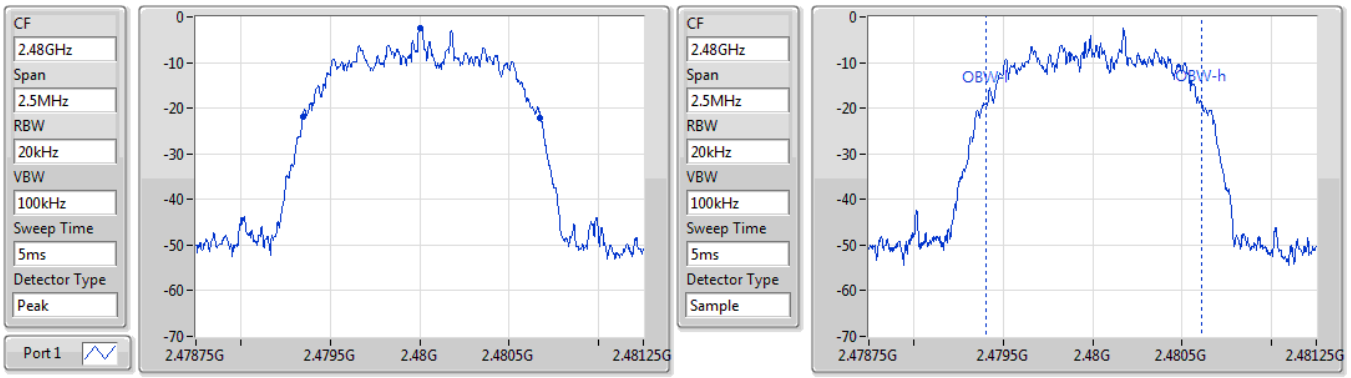
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.33M	2.440341G	2.44167G	1.201M	2.440407G	2.441608G	Inf	1

BT-EDR(2Mbps) **EBW-FS**

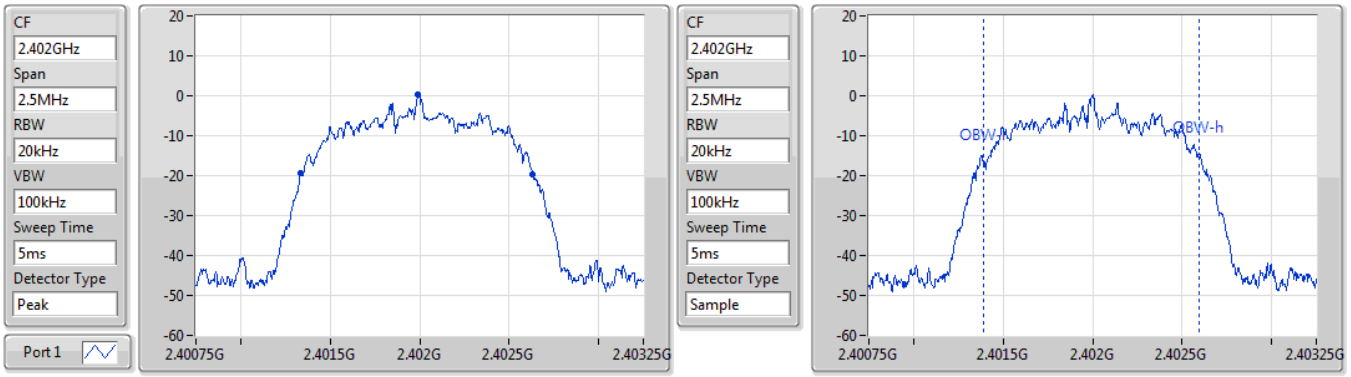
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.326M	2.479348G	2.480674G	1.208M	2.479403G	2.480611G	Inf	1

BT-EDR(3Mbps) **EBW-FS**

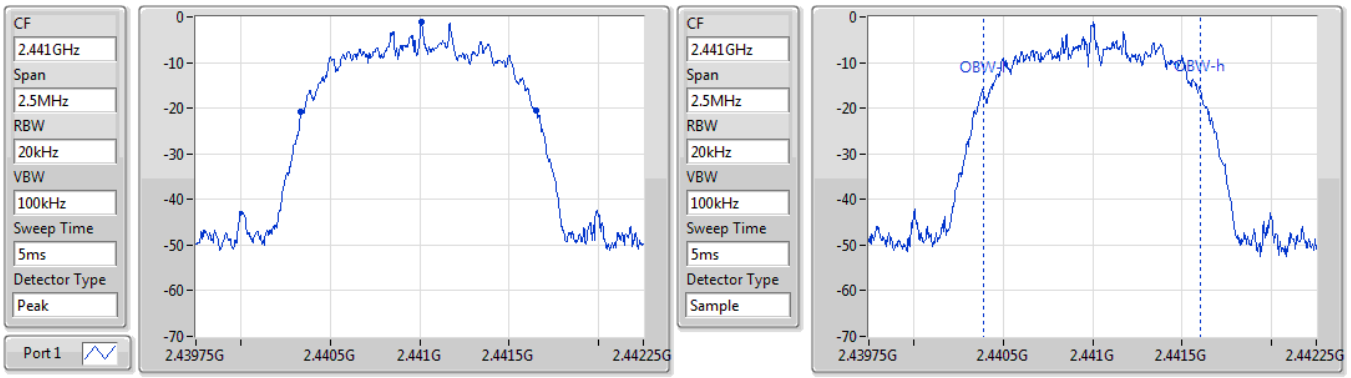
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.297M	2.401333G	2.40263G	1.205M	2.401392G	2.402597G	Inf	1

BT-EDR(3Mbps) **EBW-FS**

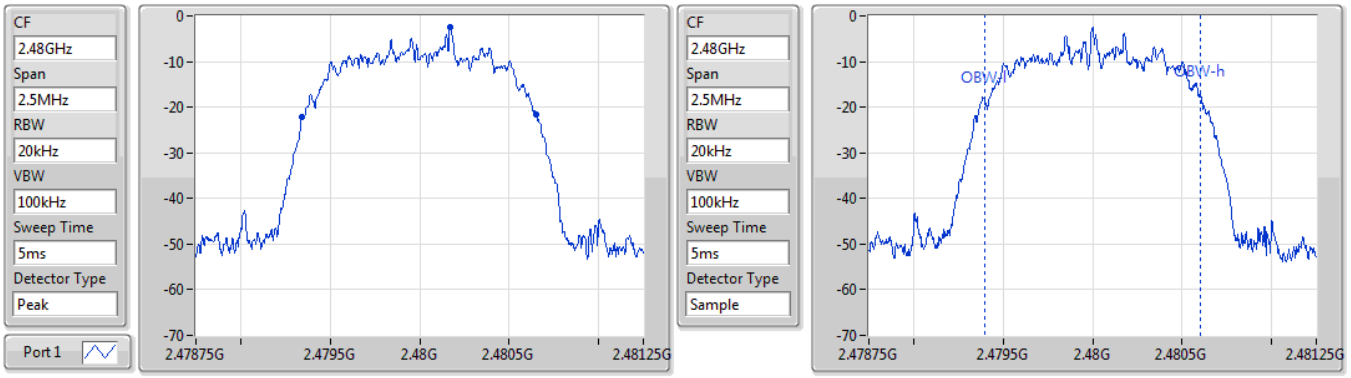
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.315M	2.440337G	2.441652G	1.208M	2.440392G	2.441601G	Inf	1

BT-EDR(3Mbps) **EBW-FS**

2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.312M	2.479341G	2.480652G	1.205M	2.479399G	2.480604G	Inf	1

Summary

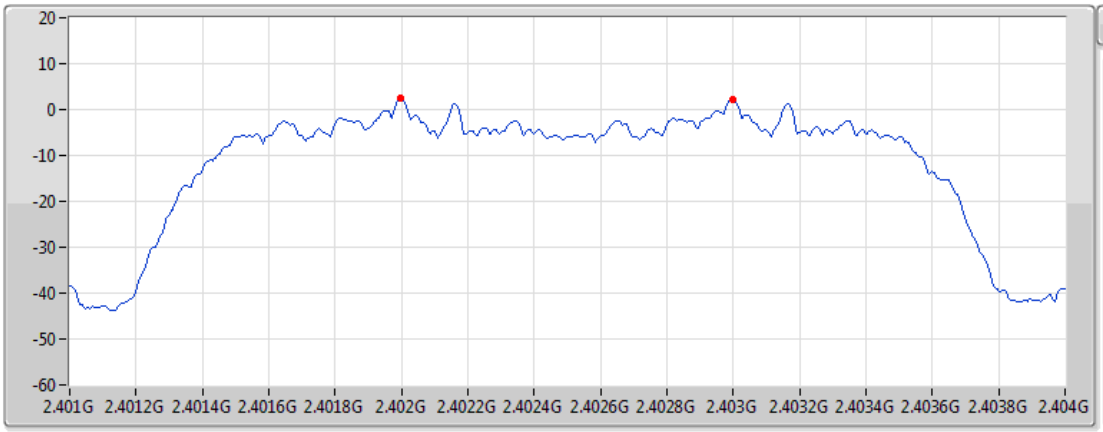
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-EDR(2Mbps)	1.004348M	1M
BT-EDR(3Mbps)	1.004348M	1M

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401996G	2.403G	1.004348M	883.116k
2441MHz	Pass	2.441G	2.442G	1M	885.78k
2480MHz	Pass	2.479004G	2.480009G	1.004348M	883.116k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402157G	2.403157G	1M	863.802k
2441MHz	Pass	2.441161G	2.442165G	1.004348M	875.79k
2480MHz	Pass	2.479165G	2.480165G	1M	873.792k

BT-EDR(2Mbps) **Channel Separation-FS**

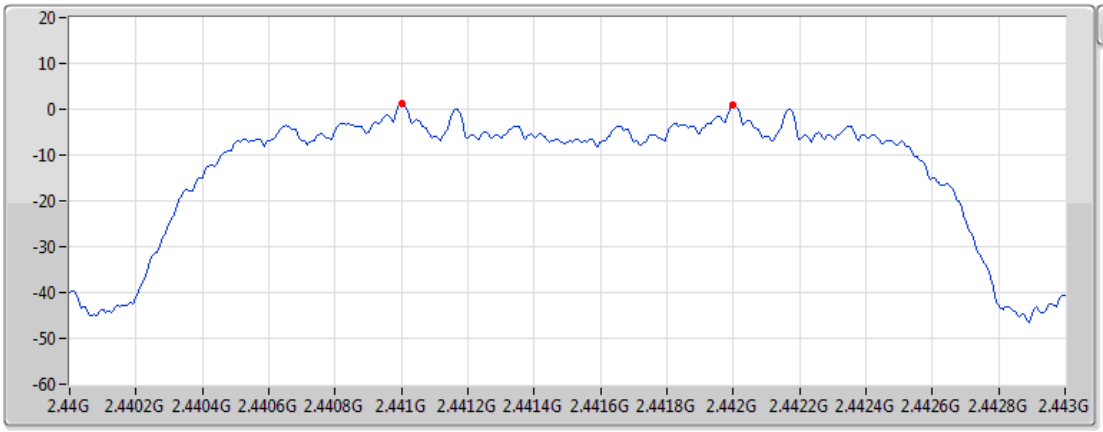
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401996G	2.403G	1.004348M	883.116k

BT-EDR(2Mbps) **Channel Separation-FS**

2.441G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441G	2.442G	1M	885.78k

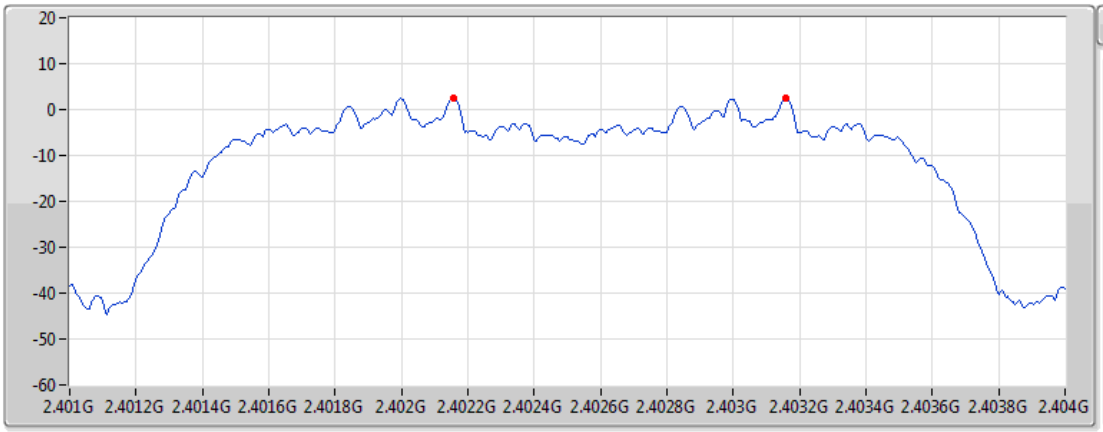
BT-EDR(2Mbps) **Channel Separation-FS**

2.48G/2.479GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479004G	2.480009G	1.004348M	883.116k

BT-EDR(3Mbps) **Channel Separation-FS**

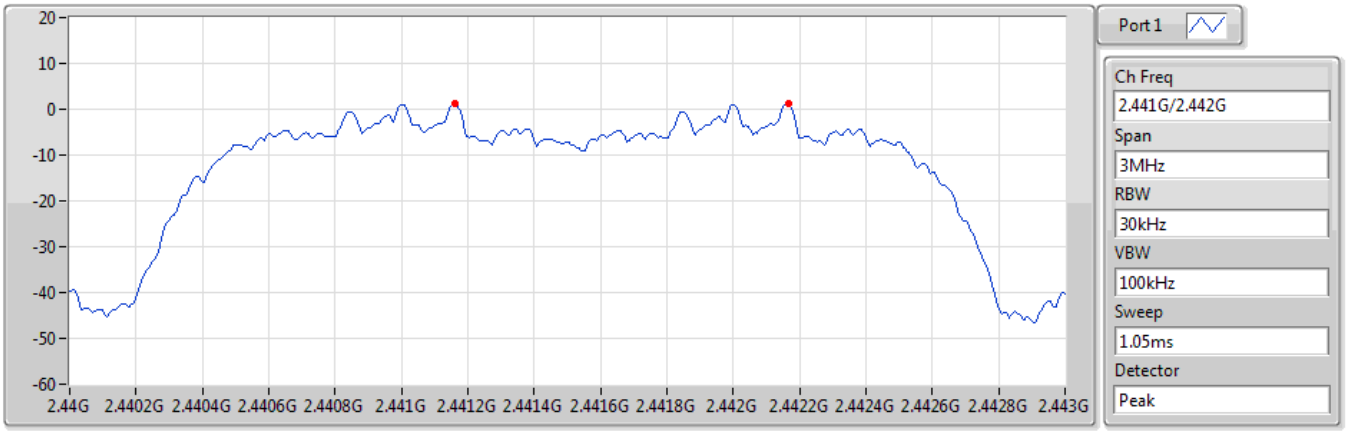
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402157G	2.403157G	1M	863.802k

BT-EDR(3Mbps) **Channel Separation-FS**

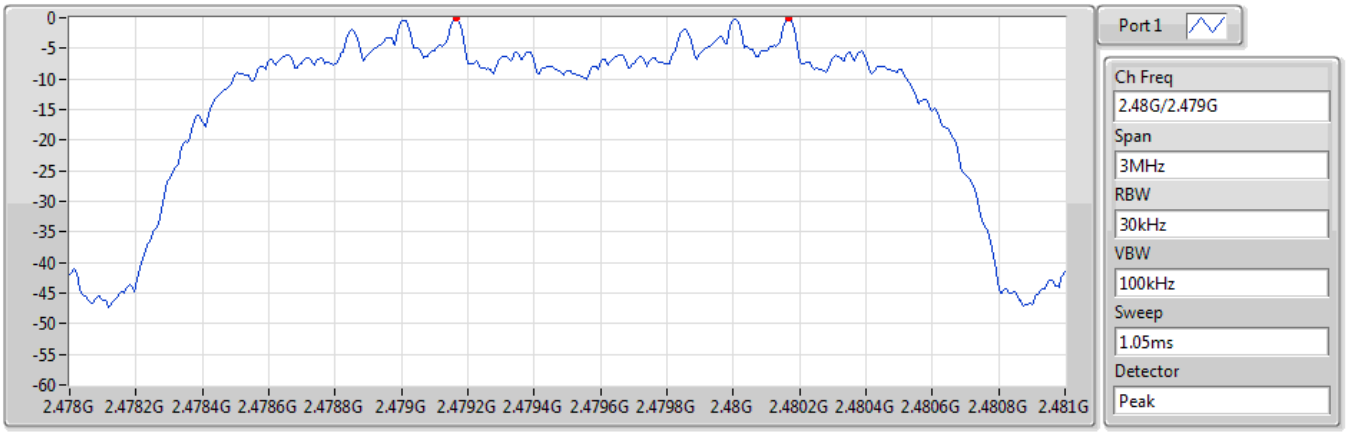
2.441G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441161G	2.442165G	1.004348M	875.79k

BT-EDR(3Mbps) **Channel Separation-FS**

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479165G	2.480165G	1M	873.792k

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-EDR(2Mbps)	332.71956m_DH5
BT-EDR(3Mbps)	333.00396m_DH5
BT-EDR-AFH(2Mbps)	304.096m_DH5-AFH
BT-EDR-AFH(3Mbps)	292.675m_DH5-AFH

Result/ Non AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in a 5 s
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.33272	0.4	2.92475	18
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.33300	0.4	2.92725	18

Note 1: Dwell time =Number of transmission in a 5 second x Tx On Time x 6.32

Note 2: DH5 was the worst mode.

Result/ AFH mode

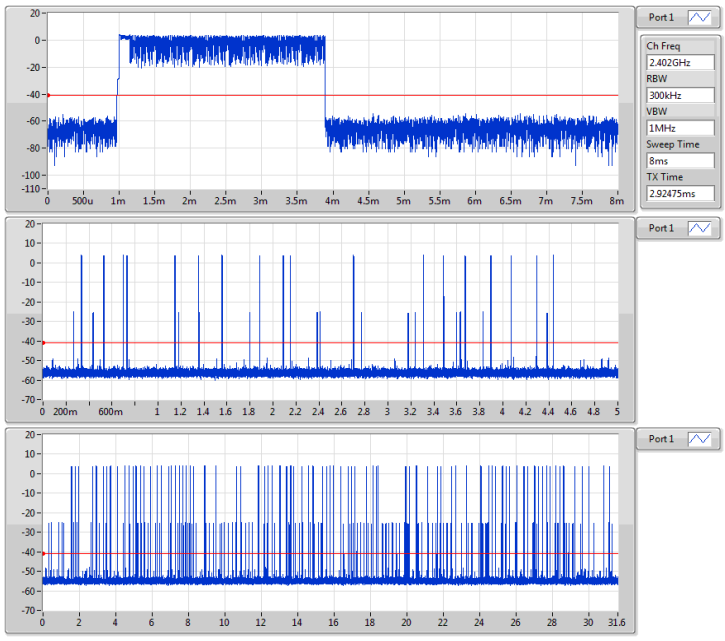
Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in a 2 s
BT-EDR-AFH(2Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.30410	0.4	2.92400	26
BT-EDR-AFH(3Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.29268	0.4	2.92675	25

Note 1: Dwell time =Number of transmission in a 2 second x Tx On Time x 4

Note 2: DH5 was the worst mode.

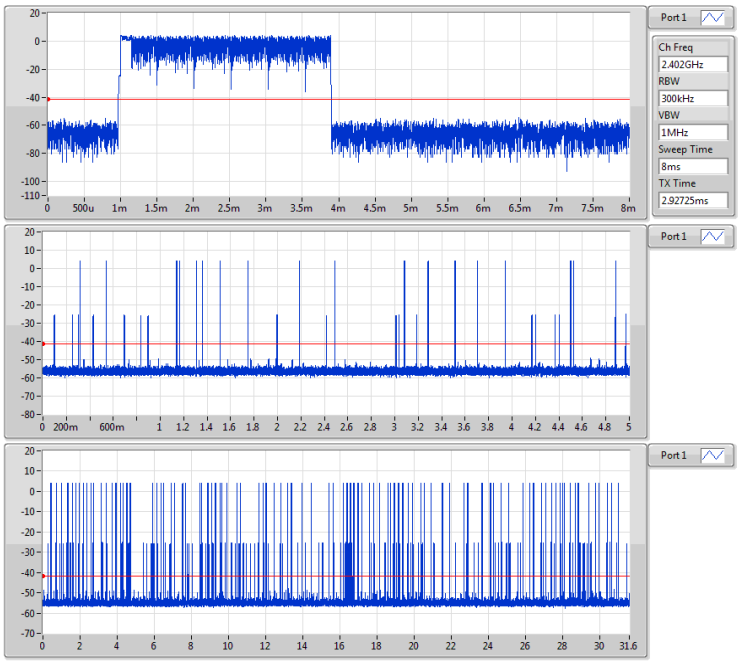
BT-EDR(2Mbps) **Dwell-FS**

2402MHz



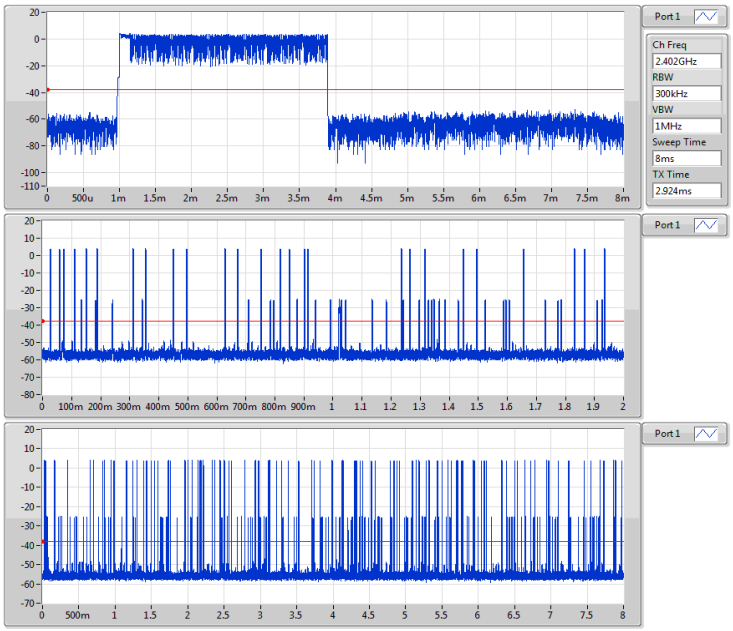
BT-EDR(3Mbps) **Dwell-FS**

2402MHz



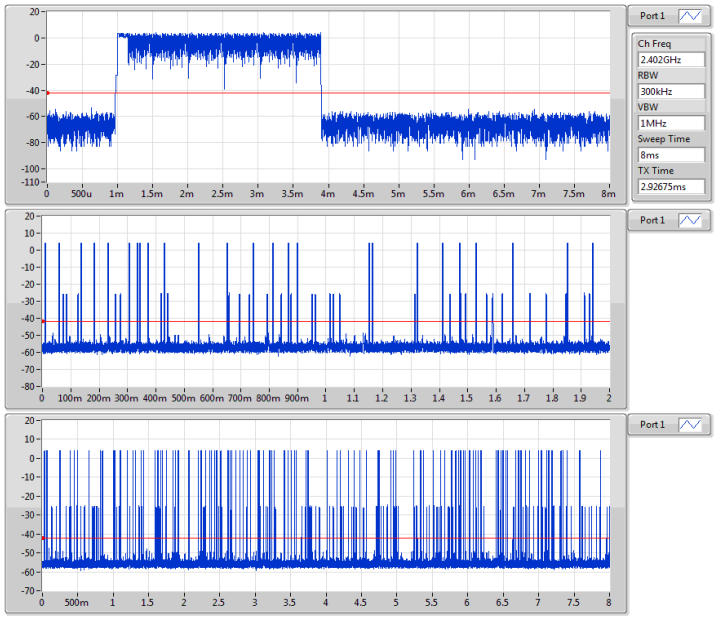
BT-EDR-AFH(2Mbps) **Dwell-FS**

2402MHz



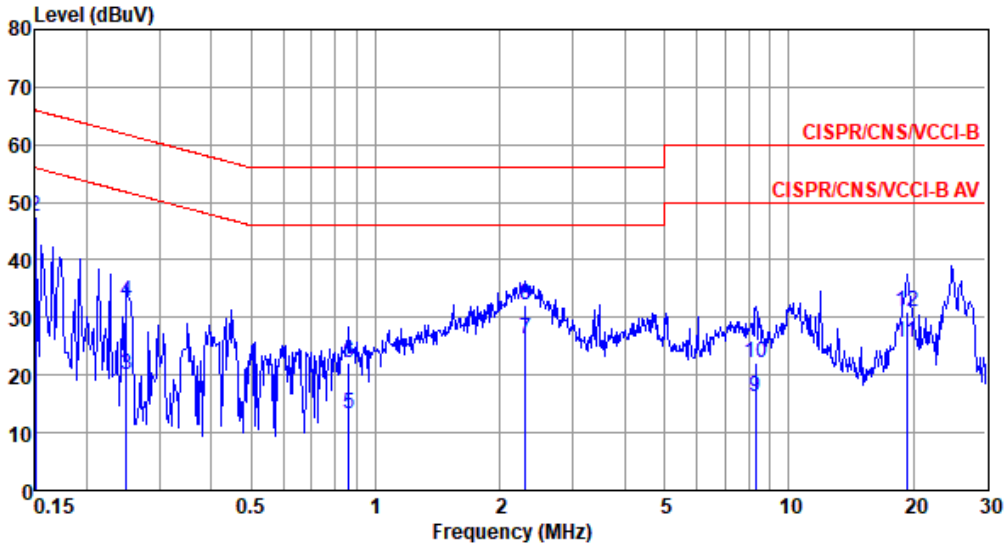
BT-EDR-AFH(3Mbps) **Dwell-FS**

2402MHz



Modulation	GFSK	**Test Freq. (MHz)**	2402
Power Phase	Line		

Test by : Joe Liao Temperature: 26°C Humidity: 57%

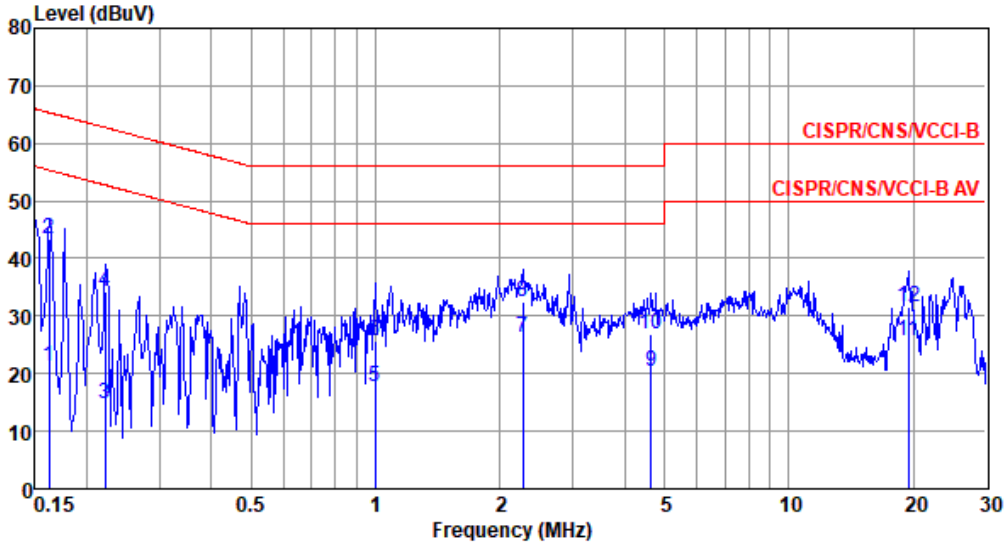


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.150	32.79	56.00	-23.21	22.87	9.68	0.06	0.18	Average
2*	0.150	47.56	66.00	-18.44	37.64	9.68	0.06	0.18	QP
3	0.249	19.95	51.78	-31.83	9.98	9.68	0.06	0.23	Average
4	0.249	32.63	61.78	-29.15	22.66	9.68	0.06	0.23	QP
5	0.862	13.31	46.00	-32.69	3.20	9.68	0.10	0.33	Average
6	0.862	22.06	56.00	-33.94	11.95	9.68	0.10	0.33	QP
7	2.309	26.23	46.00	-19.77	16.03	9.69	0.14	0.37	Average
8	2.309	32.04	56.00	-23.96	21.84	9.69	0.14	0.37	QP
9	8.323	16.16	50.00	-33.84	5.67	9.73	0.32	0.44	Average
10	8.323	22.09	60.00	-37.91	11.60	9.73	0.32	0.44	QP
11	19.326	25.78	50.00	-24.22	15.03	9.73	0.50	0.52	Average
12	19.326	30.99	60.00	-29.01	20.24	9.73	0.50	0.52	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	GFSK	**Test Freq. (MHz)**	2402
Power Phase	Neutral		

Test by : Joe Liao Temperature: 26°C Humidity: 57%



	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.162	21.11	55.34	-34.23	11.26	9.61	0.06	0.18	Average
2	0.162	43.29	65.34	-22.05	33.44	9.61	0.06	0.18	QP
3	0.222	14.87	52.74	-37.87	4.99	9.61	0.06	0.21	Average
4	0.222	34.38	62.74	-28.36	24.50	9.61	0.06	0.21	QP
5	1.000	17.66	46.00	-28.34	7.61	9.61	0.11	0.33	Average
6	1.000	25.70	56.00	-30.30	15.65	9.61	0.11	0.33	QP
7*	2.273	26.31	46.00	-19.69	16.18	9.62	0.14	0.37	Average
8	2.273	32.50	56.00	-23.50	22.37	9.62	0.14	0.37	QP
9	4.647	20.31	46.00	-25.69	10.03	9.65	0.21	0.42	Average
10	4.647	26.86	56.00	-29.14	16.58	9.65	0.21	0.42	QP
11	19.428	25.60	50.00	-24.40	14.79	9.79	0.50	0.52	Average
12	19.428	31.57	60.00	-28.43	20.76	9.79	0.50	0.52	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).