FCC Test Report

FCC ID	:	**IPH-04780**
Equipment	:	**IVI Unit**
Model No.	:	**TGWW**
Brand Name	:	**GARMIN**
Applicant	:	**Garmin International, Inc.**
Address	:	**1200 E. 151st Street Olathe, KS 66062 United States**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Dec. 15, 2023**
Tested Date	:	**Dec. 15 ~ Dec. 29, 2023**

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**

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Release Record

Report No.	Version	Description	Issued Date
FR3D1301-2AD	Rev. 01	Initial issue	Jan. 25, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	Note[1]	N/A
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 42.19MHz 33.06 (Margin -6.94dB) - PK	Pass
15.247(d)	Band Edge	Meet the requirement of limit	Pass
15.247(b)(1)	Conducted Output Power	Power [dBm]: 3.27	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

N/A means Not Applicable.
Note[1]: The EUT consumes DC power from battery, so the test is not required.

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

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.	Brand	Model	Type	Connector	Gain (dBi)
1	HARADA	39212	RHCP	R-SMA	3.8

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc

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	Bluetooth Simulator, Brand: R&S, Model: CMW270	
Modulation Mode	**Duty Cycle Of Test Signal (%)**	**Duty Factor (dB)**
DH5	80.00%	0.97
2DH5	79.54%	0.99
3DH5	79.69%	0.99

1.1.7 Power Index of Test Tool

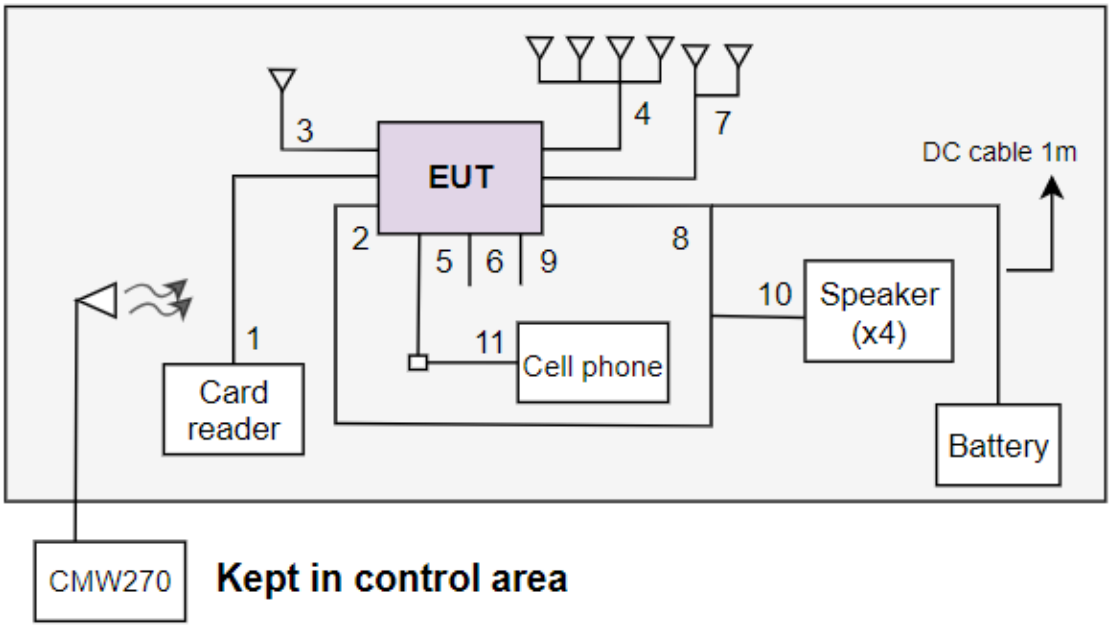
Modulation Mode	Test Frequency (MHz)		
	2402	**2441**	**2480**
GFSK/1Mbps	Default	Default	Default
π/4-DQPSK /2Mbps	Default	Default	Default
8DPSK/3Mbps	Default	Default	Default

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Card reader	TCSTAR	TYC-MF007	---	---
2	12V DC Battery	Hotai Motor Co, Ltd.	S55B24LS	---	---
3	Cell phone	SAMSUNG	A8	---	---
4	Speaker	GARMIN	TG SPK	---	Provided by applicant.
5	Fixture Board	GARMIN	TG_FB	---	Provided by applicant.
6	Laptop	DELL	Latitude E5470	DoC	---

Note: The fixture board and laptop are disconnected from EUT and removed from test table when EUT is set to transmit continuously.

1.3 Test Setup Chart

Test Setup Diagram


No.	Signal cable / Length (m)
1	USB, 1m shielded. (Brand: GARMIN / Model: TG_USB2)
2	IVI cable, 0.81m shielded. (Brand: GARMIN / Model: TG_IVI)
3	Antenna cable, 0.34m shielded. (Brand: GARMIN / Model: TG_BT2)
4	Antenna cable, 2.76m shielded. (Brand: GARMIN / Model: TG_1to4)
5	USB, 0.36m shielded. (Brand: GARMIN / Model: TG_USB1)
6	LVDS cable, 0.56m shielded. (Brand: GARMIN / Model: TG_LVDS)
7	Antenna cable, 2.85m shielded. (Brand: GARMIN / Model: TG_1to2)
8	EAU cable, 0.81m shielded. (Brand: GARMIN / Model: TG_EAU)
9	SXM cable, 0.3m shielded. (Brand: GARMIN / Model: TG_SXM)
10	Audio cable, 0.42m shielded. (Brand: GARMIN / Model: TG SPK)
11	USB, 0.55m shielded. (Brand: GARMIN / Model: 320-01643-0A)

1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Dec. 15 ~ Dec. 25, 2023				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Mar. 03, 2023	Mar. 02, 2024
Spectrum Analyzer	R&S	FSV40	101498	Nov. 23, 2023	Nov. 22, 2024
Loop Antenna	R&S	HFH2-Z2	100330	Oct. 31, 2023	Oct. 30, 2024
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 31, 2023	Jul. 30, 2024
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Nov. 27, 2023	Nov. 26, 2024
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 30, 2023	Oct. 29, 2024
Preamplifier	EMC	EMC02325	980225	Jun. 28, 2023	Jun. 27, 2024
Preamplifier	EMC	EMC118A45SE	980898	Jul. 14, 2023	Jul. 13, 2024
Preamplifier	EMC	EMC184045SE	980903	Jul. 17, 2023	Jul. 16, 2024
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 03, 2023	Oct. 02, 2024
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 03, 2023	Oct. 02, 2024
LF cable 11M	EMC	EMCCFD400-NW-NW-11000	200801	Oct. 03, 2023	Oct. 02, 2024
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 03, 2023	Oct. 02, 2024
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 03, 2023	Oct. 02, 2024
RF Cable	EMC	EMC104-35M-35M-3000	210922	Oct. 03, 2023	Oct. 02, 2024
Attenuator	Pasternack	PE7005-10	10-1	Oct. 05, 2023	Oct. 04, 2024
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 05, 2023	Oct. 04, 2024
Measurement Software	Sporton	SENSE-15247_FS	V5.10.8	NA	NA
Measurement Software	Sporton	SENSE-EMI	V5.10.8	NA	NA
Wireless connectivity tester	R&S	CMW270	100856	Nov. 14, 2023	Nov. 13, 2024
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Dec. 29, 2023				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101910	Apr. 14, 2023	Apr. 13, 2024
Power Meter	Anritsu	ML2495A	1241002	Nov. 21, 2023	Nov. 20, 2024
Power Sensor	Anritsu	MA2411B	1207366	Nov. 21, 2023	Nov. 20, 2024
Attenuator	Pasternack	PE7005-10	10-2	Oct. 05, 2023	Oct. 04, 2024
Measurement Software	Sporton	SENSE-15247_FS	V5.10.8	NA	NA
Wireless connectivity tester	R&S	CMW270	100856	Nov. 14, 2023	Nov. 13, 2024
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
Radiated emission ≤ 1GHz	±3.41 dB
Radiated emission > 1GHz	±4.59 dB
Time	±0.1%

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	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	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps)
Radiated Emissions ≤ 1GHz	8DPSK	2441	3Mbps
Radiated Emissions > 1GHz	GFSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480	1Mbps 3Mbps
Conducted Output Power	GFSK л/4 DQPSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480 2402, 2441, 2480	1Mbps 2Mbps 3Mbps
Number of Hopping Channels	GFSK л/4 DQPSK 8DPSK	2402~2480 2402~2480 2402~2480	1Mbps 2Mbps 3Mbps
Hopping Channel Separation 20dB and Occupied bandwidth	GFSK л/4 DQPSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480 2402, 2441, 2480	1Mbps 2Mbps 3Mbps
Dwell Time	GFSK л/4 DQPSK 8DPSK	2402 2402 2402	1Mbps 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 **Z-plane** results were found as the worst case and were shown in this report.

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:

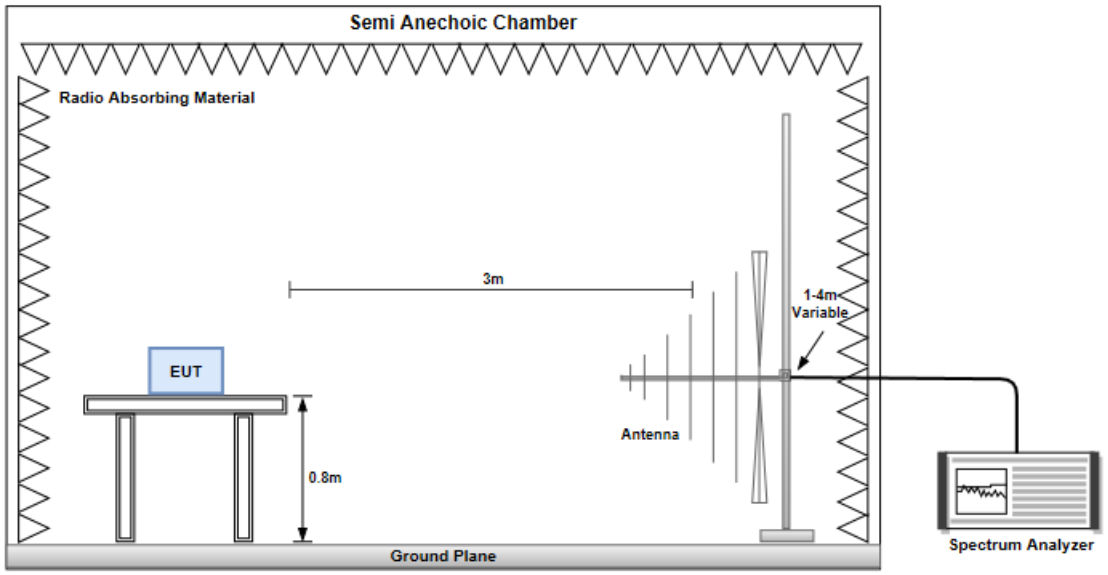
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. Radiated emission above 1GHz / Peak value
   RBW=1MHz, VBW=3MHz and Peak detector
3. Radiated emission above 1GHz / Average value for harmonics
   The average value is: Average = Peak value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

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

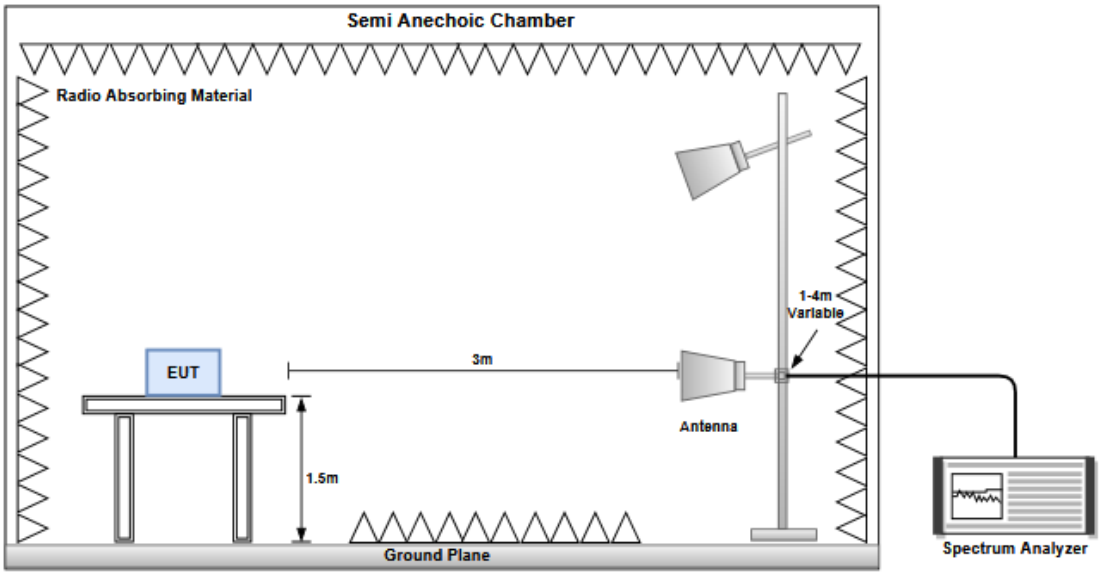
4. Radiated emission above 1GHz / Average value for other emissions
   RBW=1MHz, VBW=1/T and Peak detector

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

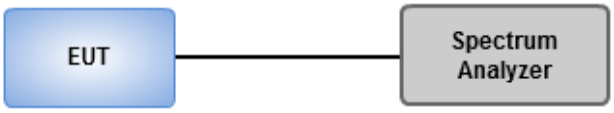
Reference level measurement

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	22°C / 63%	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	22°C / 63%	**Tested By**	Roger Lu

Refer to Appendix C.

3.4 Number of Hopping Frequency

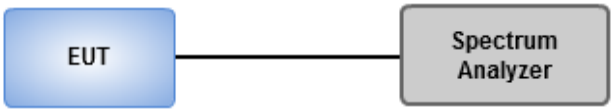
3.4.1 Limit of Number of Hopping Frequency

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	22°C / 63%	**Tested By**	Roger Lu

Refer to Appendix D.

3.5 20dB and Occupied Bandwidth

3.5.1 Test Procedures

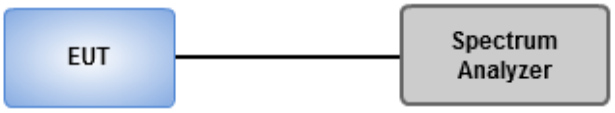
20dB Bandwidth

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	22°C / 63%	**Tested By**	Roger Lu

Refer to Appendix E.

3.6 Channel Separation

3.6.1 Limit of Channel Separation

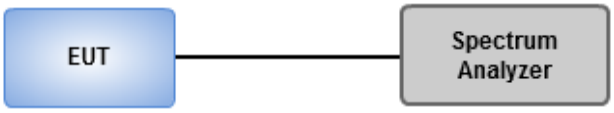
☐ Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

☒ 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	22°C / 63%	Tested By	Roger Lu

Refer to Appendix F.

3.7 Number of Dwell Time

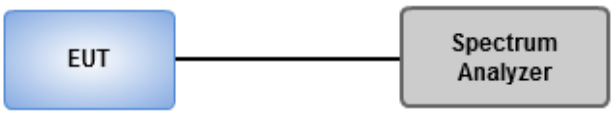
3.7.1 Limit of Dwell time

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	22°C / 63%	**Tested By**	Roger Lu

Refer to Appendix G.

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 33381, Taiwan (R.O.C.)

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

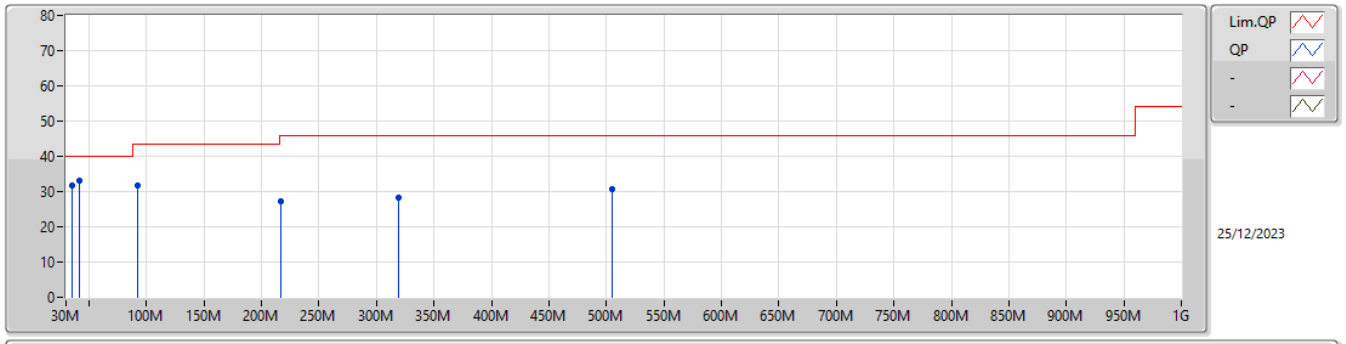
Tel: 886-3-271-8666
Fax: 886-3-318-0345
Email: ICC_Service@icertifi.com.tw

==END==

Summary

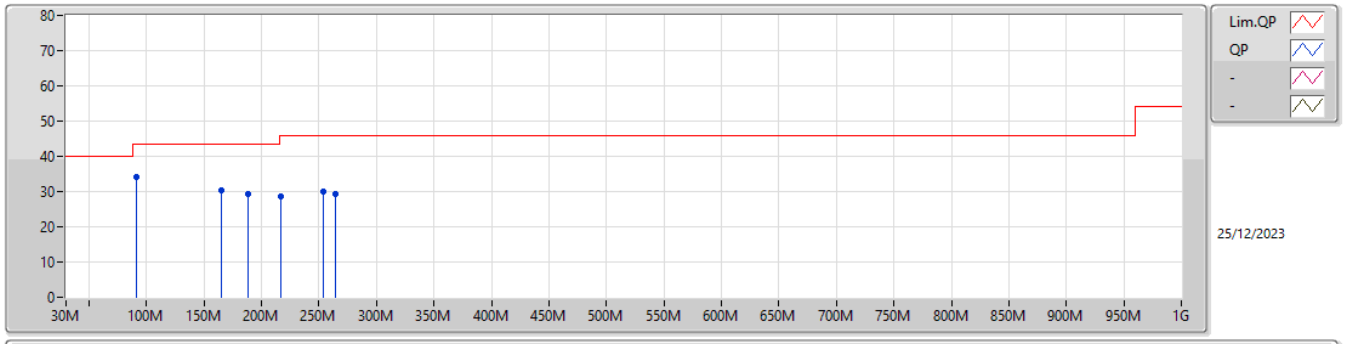
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	42.19M	33.06	40.00	-6.94	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	35.18M	31.86	40.00	-8.14	-9.48	3	Vertical	-	-	-	41.34	17.98	0.54	28.00
PK	41.95M	33.25	40.00	-6.75	-8.47	3	Vertical	-	-	-	41.72	18.98	0.59	28.04
PK	92.27M	31.83	43.50	-11.67	-14.25	3	Vertical	-	-	-	46.08	13.18	0.90	28.33
PK	217.15M	27.29	46.00	-18.71	-11.92	3	Vertical	-	-	-	39.21	15.14	1.38	28.44
PK	319.24M	28.16	46.00	-17.84	-7.43	3	Vertical	-	-	-	35.59	19.28	1.69	28.40
PK	505.18M	30.72	46.00	-15.28	-2.86	3	Vertical	-	-	-	33.58	23.20	2.18	28.24

Mode 1



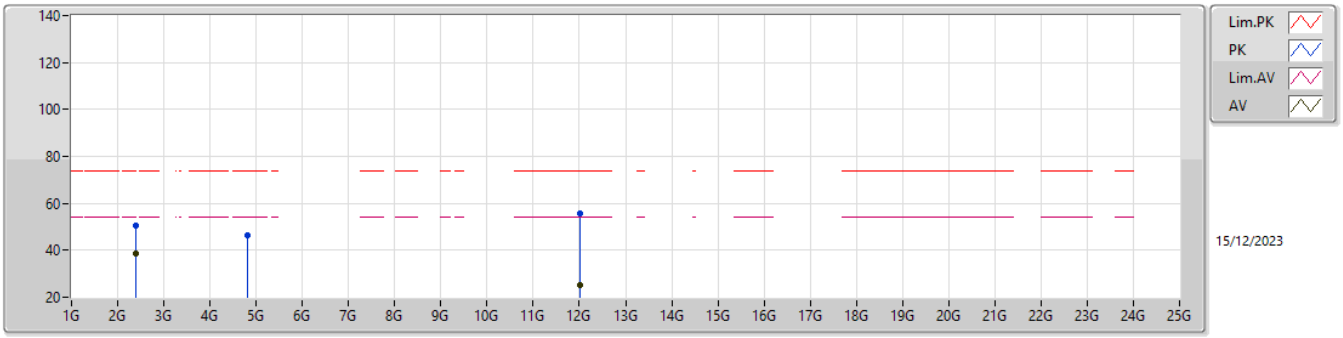
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	91.14M	34.28	43.50	-9.22	-14.42	3	Horizontal	-	-	-	48.70	13.01	0.90	28.33
PK	165.48M	30.19	43.50	-13.31	-9.02	3	Horizontal	-	-	-	39.21	18.20	1.20	28.42
PK	188.14M	29.14	43.50	-14.36	-11.07	3	Horizontal	-	-	-	40.21	16.07	1.29	28.43
PK	217.35M	28.64	46.00	-17.36	-11.91	3	Horizontal	-	-	-	40.55	15.15	1.38	28.44
PK	254.12M	29.83	46.00	-16.17	-9.86	3	Horizontal	-	-	-	39.69	17.08	1.49	28.43
PK	264.18M	29.31	46.00	-16.69	-9.33	3	Horizontal	-	-	-	38.64	17.57	1.53	28.43

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	AV	2.39G	38.90	54.00	-15.10	3	Horizontal	11	1.61	-
BT-EDR(3Mbps)	Pass	AV	2.4835G	38.66	54.00	-15.34	3	Horizontal	9	1.37	-

2.4-2.4835GHz_BT-BR(1Mbps)

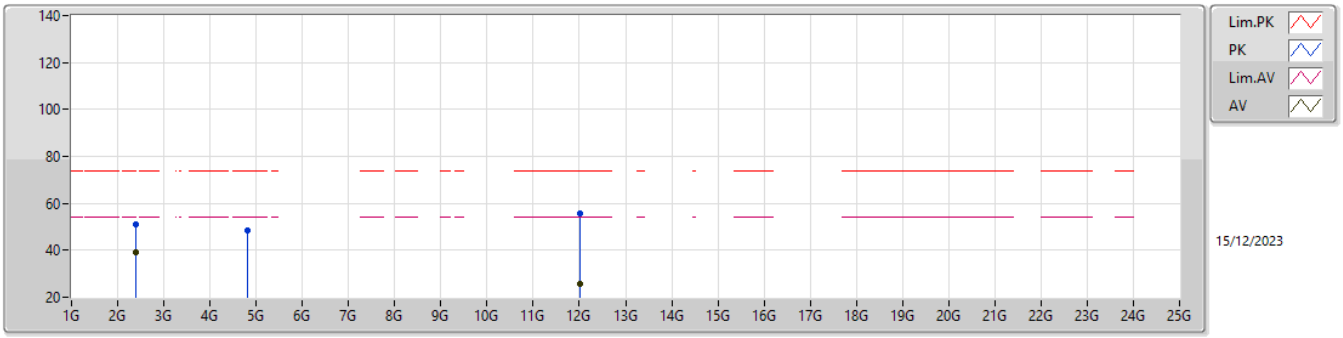
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	50.57	74.00	-23.43	54.95	3	Vertical	15	2.36	-	27.60	4.95	36.93
AV	2.39G	38.58	54.00	-15.42	42.96	3	Vertical	15	2.36	-	27.60	4.95	36.93
PK	4.804G	46.13	74.00	-27.87	46.51	3	Vertical	134	1.42	-	31.29	6.85	38.52
AV	4.804G	16.03	54.00	-37.97	-	3	Vertical	134	1.42	-	-	-	-
PK	12.01G	55.46	74.00	-18.54	49.19	3	Vertical	27	1.00	-	39.20	10.02	42.95
AV	12.01G	25.36	54.00	-28.64	-	3	Vertical	27	1.00	-	-	-	-

2.4-2.4835GHz_BT-BR(1Mbps)

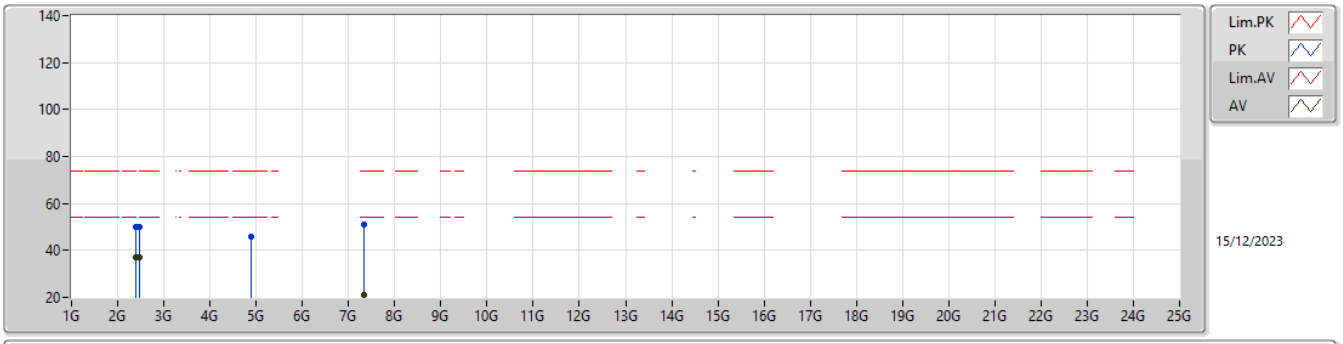
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	51.05	74.00	-22.95	55.43	3	Horizontal	11	1.61	-	27.60	4.95	36.93
AV	2.39G	38.90	54.00	-15.10	43.28	3	Horizontal	11	1.61	-	27.60	4.95	36.93
PK	4.804G	48.24	74.00	-25.76	48.62	3	Horizontal	302	2.05	-	31.29	6.85	38.52
AV	4.804G	18.14	54.00	-35.86	-	3	Horizontal	302	2.05	-	-	-	-
PK	12.01G	55.75	74.00	-18.25	49.48	3	Horizontal	133	1.00	-	39.20	10.02	42.95
AV	12.01G	25.65	54.00	-28.35	-	3	Horizontal	133	1.00	-	-	-	-

2.4-2.4835GHz_BT-BR(1Mbps)

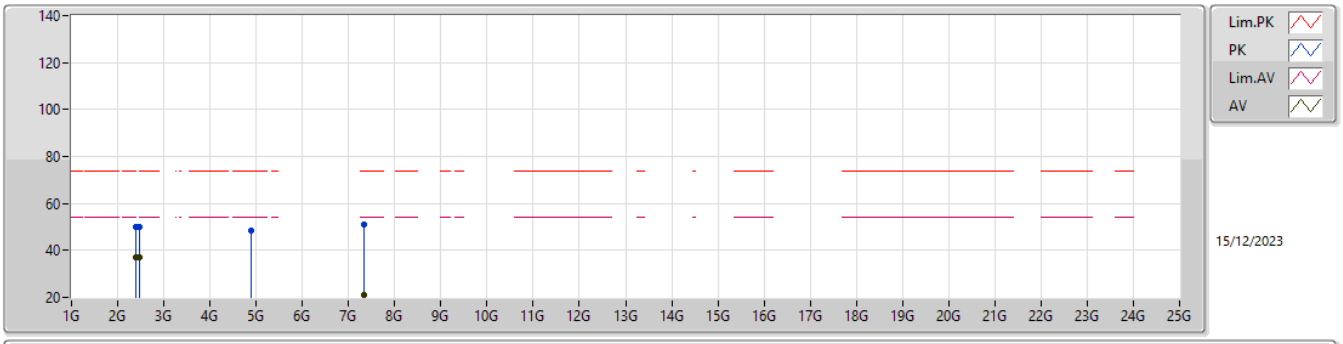
2441MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	50.12	74.00	-23.88	54.50	3	Vertical	15	2.27	-	27.60	4.95	36.93
AV	2.39G	36.97	54.00	-17.03	41.35	3	Vertical	15	2.27	-	27.60	4.95	36.93
PK	2.4835G	50.02	74.00	-23.98	54.77	3	Vertical	15	2.27	-	27.20	5.06	37.01
AV	2.4835G	36.90	54.00	-17.10	41.65	3	Vertical	15	2.27	-	27.20	5.06	37.01
PK	4.882G	46.08	74.00	-27.92	46.59	3	Vertical	131	1.41	-	31.14	6.92	38.57
AV	4.882G	15.98	54.00	-38.02	-	3	Vertical	131	1.41	-	-	-	-
PK	7.323G	51.01	74.00	-22.99	45.89	3	Vertical	125	1.00	-	36.15	8.43	39.46
AV	7.323G	20.91	54.00	-33.09	-	3	Vertical	125	1.00	-	-	-	-

2.4-2.4835GHz_BT-BR(1Mbps)

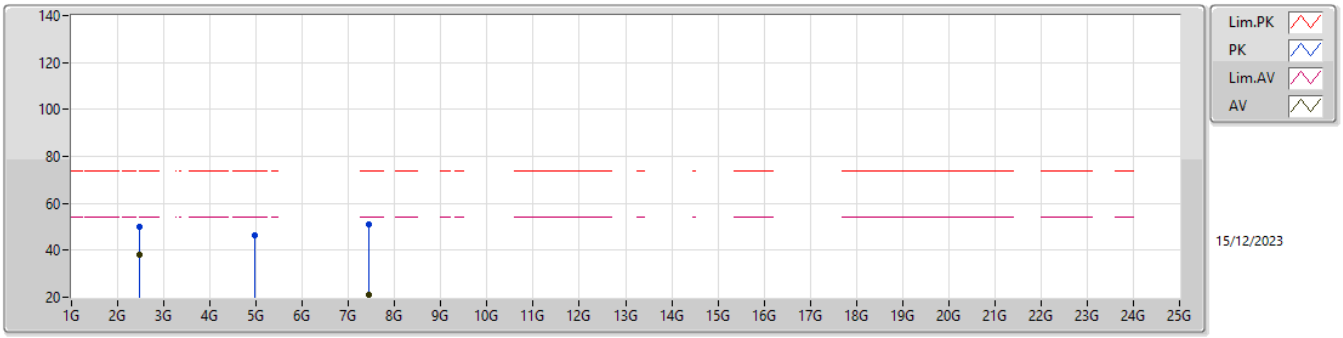
2441MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	50.12	74.00	-23.88	54.50	3	Horizontal	11	1.63	-	27.60	4.95	36.93
AV	2.39G	37.06	54.00	-16.94	41.44	3	Horizontal	11	1.63	-	27.60	4.95	36.93
PK	2.4835G	50.06	74.00	-23.94	54.81	3	Horizontal	11	1.63	-	27.20	5.06	37.01
AV	2.4835G	37.01	54.00	-16.99	41.76	3	Horizontal	11	1.63	-	27.20	5.06	37.01
PK	4.882G	48.43	74.00	-25.57	48.94	3	Horizontal	305	2.05	-	31.14	6.92	38.57
AV	4.882G	18.33	54.00	-35.67	-	3	Horizontal	305	2.05	-	-	-	-
PK	7.323G	51.09	74.00	-22.91	45.97	3	Horizontal	128	1.00	-	36.15	8.43	39.46
AV	7.323G	20.99	54.00	-33.01	-	3	Horizontal	128	1.00	-	-	-	-

2.4-2.4835GHz_BT-BR(1Mbps)

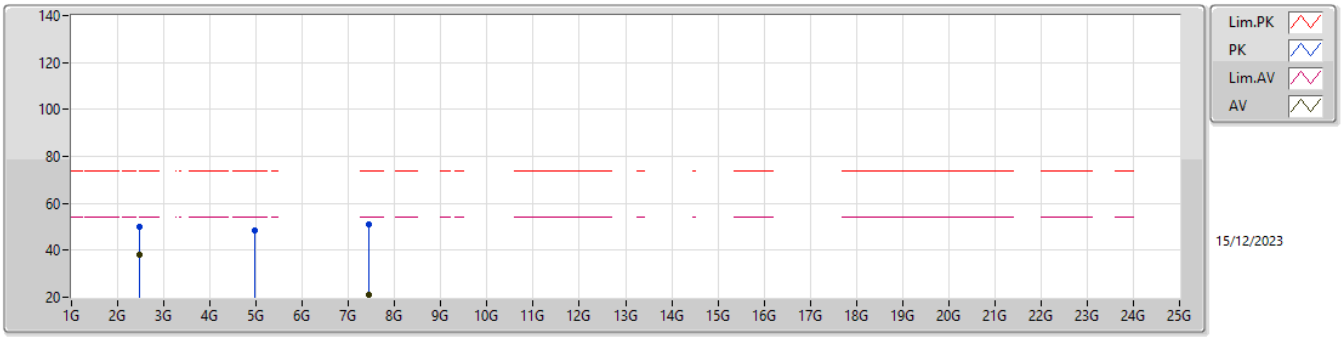
2480MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4835G	50.08	74.00	-23.92	54.83	3	Vertical	22	2.44	-	27.20	5.06	37.01
AV	2.4835G	37.88	54.00	-16.12	42.63	3	Vertical	22	2.44	-	27.20	5.06	37.01
PK	4.96G	46.36	74.00	-27.64	46.63	3	Vertical	127	1.42	-	31.36	6.99	38.62
AV	4.96G	16.26	54.00	-37.74	-	3	Vertical	127	1.42	-	-	-	-
PK	7.44G	50.97	74.00	-23.03	45.74	3	Vertical	137	1.00	-	36.34	8.50	39.61
AV	7.44G	20.87	54.00	-33.13	-	3	Vertical	137	1.00	-	-	-	-

2.4-2.4835GHz_BT-BR(1Mbps)

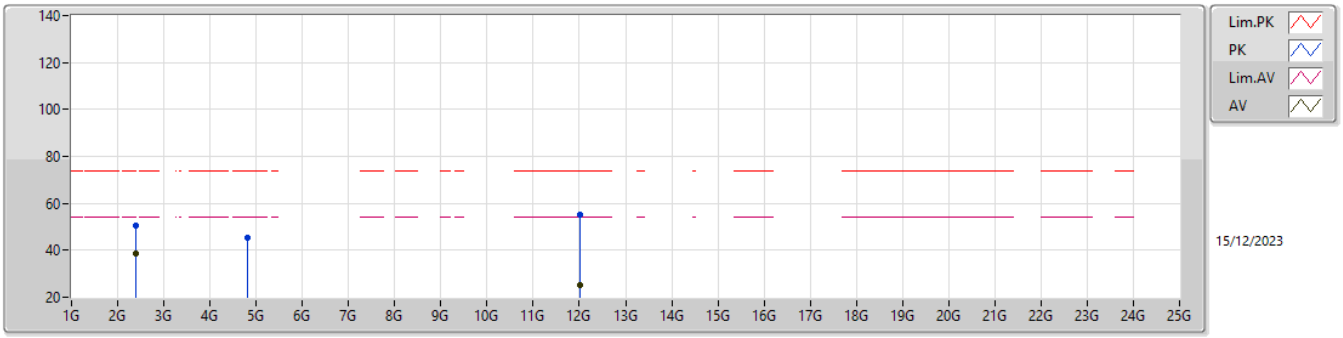
2480MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4835G	50.23	74.00	-23.77	54.98	3	Horizontal	10	1.38	-	27.20	5.06	37.01
AV	2.4835G	38.21	54.00	-15.79	42.96	3	Horizontal	10	1.38	-	27.20	5.06	37.01
PK	4.96G	48.32	74.00	-25.68	48.59	3	Horizontal	311	2.08	-	31.36	6.99	38.62
AV	4.96G	18.22	54.00	-35.78	-	3	Horizontal	311	2.08	-	-	-	-
PK	7.44G	50.96	74.00	-23.04	45.73	3	Horizontal	145	1.00	-	36.34	8.50	39.61
AV	7.44G	20.86	54.00	-33.14	-	3	Horizontal	145	1.00	-	-	-	-

2.4-2.4835GHz_BT-EDR(3Mbps)

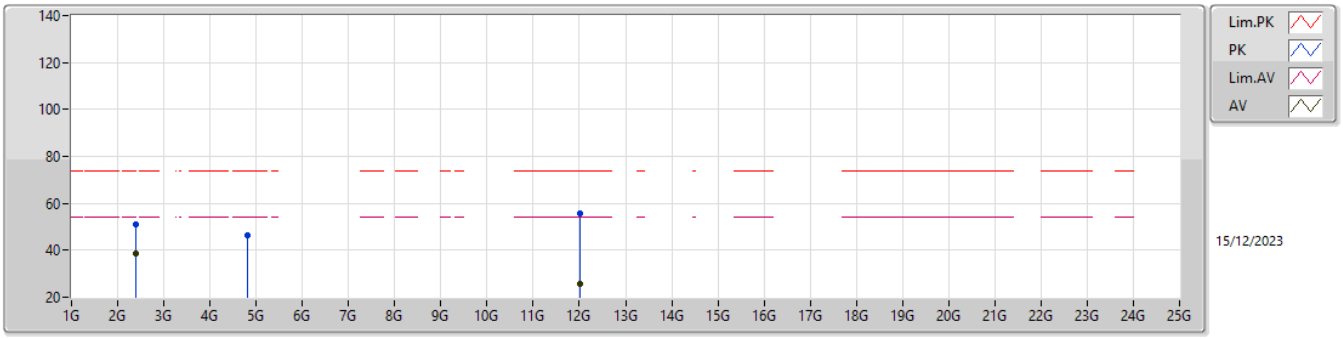
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	50.57	74.00	-23.43	54.95	3	Vertical	18	2.34	-	27.60	4.95	36.93
AV	2.39G	38.41	54.00	-15.59	42.79	3	Vertical	18	2.34	-	27.60	4.95	36.93
PK	4.804G	45.31	74.00	-28.69	45.69	3	Vertical	112	1.00	-	31.29	6.85	38.52
AV	4.804G	15.21	54.00	-38.79	-	3	Vertical	112	1.00	-	-	-	-
PK	12.01G	55.38	74.00	-18.62	49.11	3	Vertical	208	1.00	-	39.20	10.02	42.95
AV	12.01G	25.28	54.00	-28.72	-	3	Vertical	208	1.00	-	-	-	-

2.4-2.4835GHz_BT-EDR(3Mbps)

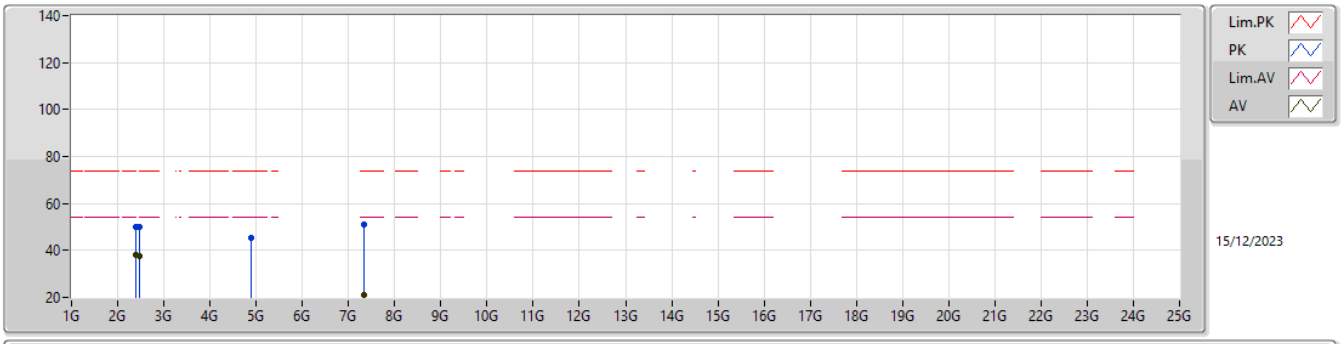
2402MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	50.97	74.00	-23.03	55.35	3	Horizontal	358	1.55	-	27.60	4.95	36.93
AV	2.39G	38.49	54.00	-15.51	42.87	3	Horizontal	358	1.55	-	27.60	4.95	36.93
PK	4.804G	46.24	74.00	-27.76	46.62	3	Horizontal	303	2.08	-	31.29	6.85	38.52
AV	4.804G	16.14	54.00	-37.86	-	3	Horizontal	303	2.08	-	-	-	-
PK	12.01G	55.63	74.00	-18.37	49.36	3	Horizontal	135	1.00	-	39.20	10.02	42.95
AV	12.01G	25.53	54.00	-28.47	-	3	Horizontal	135	1.00	-	-	-	-

2.4-2.4835GHz_BT-EDR(3Mbps)

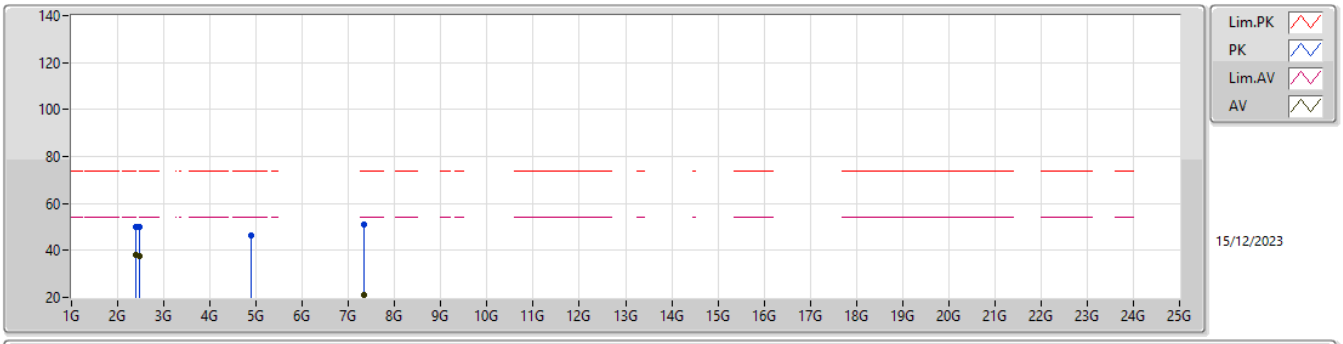
2441MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	50.11	74.00	-23.89	54.49	3	Vertical	17	2.26	-	27.60	4.95	36.93
AV	2.39G	37.98	54.00	-16.02	42.36	3	Vertical	17	2.26	-	27.60	4.95	36.93
PK	2.4835G	50.00	74.00	-24.00	54.75	3	Vertical	17	2.26	-	27.20	5.06	37.01
AV	2.4835G	37.84	54.00	-16.16	42.59	3	Vertical	17	2.26	-	27.20	5.06	37.01
PK	4.882G	45.34	74.00	-28.66	45.85	3	Vertical	162	1.00	-	31.14	6.92	38.57
AV	4.882G	15.24	54.00	-38.76	-	3	Vertical	162	1.00	-	-	-	-
PK	7.323G	51.03	74.00	-22.97	45.91	3	Vertical	203	1.00	-	36.15	8.43	39.46
AV	7.323G	20.93	54.00	-33.07	-	3	Vertical	203	1.00	-	-	-	-

2.4-2.4835GHz_BT-EDR(3Mbps)

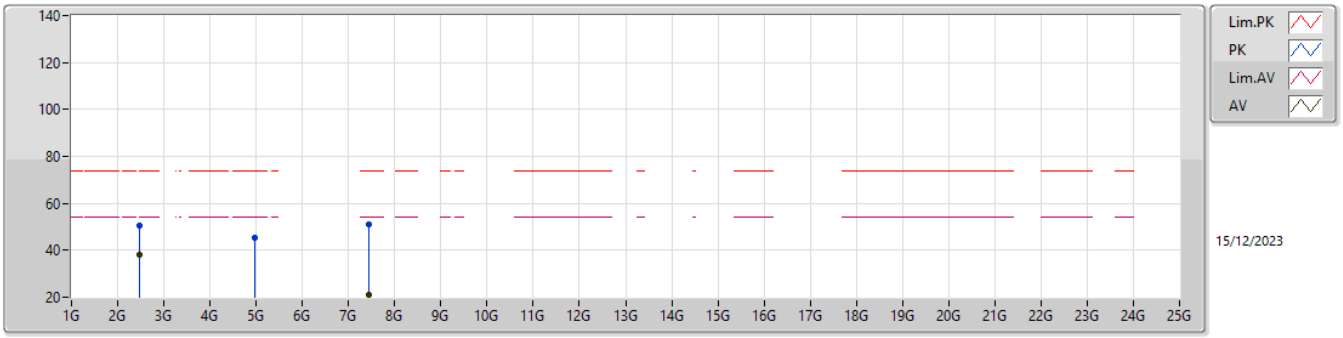
2441MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.39G	50.11	74.00	-23.89	54.49	3	Horizontal	12	1.37	-	27.60	4.95	36.93
AV	2.39G	38.07	54.00	-15.93	42.45	3	Horizontal	12	1.37	-	27.60	4.95	36.93
PK	2.4835G	49.97	74.00	-24.03	54.72	3	Horizontal	12	1.37	-	27.20	5.06	37.01
AV	2.4835G	37.83	54.00	-16.17	42.58	3	Horizontal	12	1.37	-	27.20	5.06	37.01
PK	4.882G	46.32	74.00	-27.68	46.83	3	Horizontal	302	2.02	-	31.14	6.92	38.57
AV	4.882G	16.22	54.00	-37.78	-	3	Horizontal	302	2.02	-	-	-	-
PK	7.323G	51.01	74.00	-22.99	45.89	3	Horizontal	175	1.00	-	36.15	8.43	39.46
AV	7.323G	20.91	54.00	-33.09	-	3	Horizontal	175	1.00	-	-	-	-

2.4-2.4835GHz_BT-EDR(3Mbps)

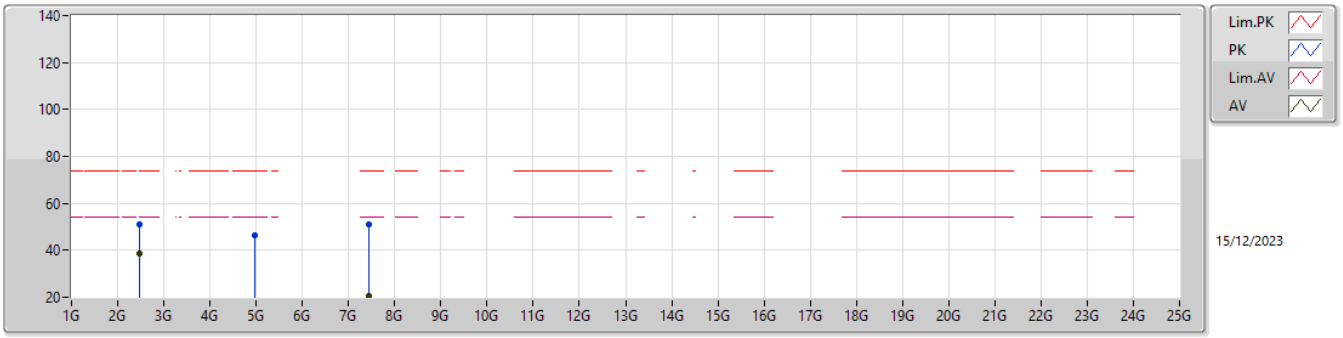
2480MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4835G	50.31	74.00	-23.69	55.06	3	Vertical	23	2.44	-	27.20	5.06	37.01
AV	2.4835G	38.29	54.00	-15.71	43.04	3	Vertical	23	2.44	-	27.20	5.06	37.01
PK	4.96G	45.46	74.00	-28.54	45.73	3	Vertical	126	1.00	-	31.36	6.99	38.62
AV	4.96G	15.36	54.00	-38.64	-	3	Vertical	126	1.00	-	-	-	-
PK	7.44G	51.08	74.00	-22.92	45.85	3	Vertical	271	1.00	-	36.34	8.50	39.61
AV	7.44G	20.98	54.00	-33.02	-	3	Vertical	271	1.00	-	-	-	-

2.4-2.4835GHz_BT-EDR(3Mbps)

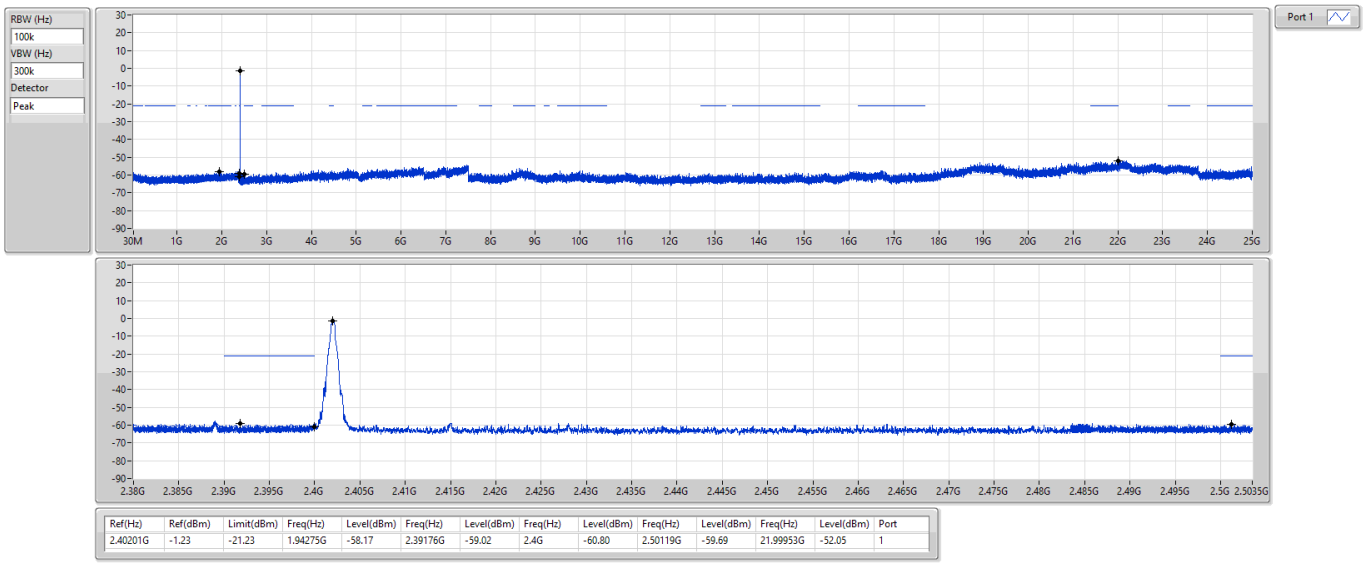
2480MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4835G	50.78	74.00	-23.22	55.53	3	Horizontal	9	1.37	-	27.20	5.06	37.01
AV	2.4835G	38.66	54.00	-15.34	43.41	3	Horizontal	9	1.37	-	27.20	5.06	37.01
PK	4.96G	46.21	74.00	-27.79	46.48	3	Horizontal	308	2.11	-	31.36	6.99	38.62
AV	4.96G	16.11	54.00	-37.89	-	3	Horizontal	308	2.11	-	-	-	-
PK	7.44G	50.79	74.00	-23.21	45.56	3	Horizontal	125	1.00	-	36.34	8.50	39.61
AV	7.44G	20.69	54.00	-33.31	-	3	Horizontal	125	1.00	-	-	-	-

2.4-2.4835GHz_BT-BR(1Mbps) **CSENdB-FS**

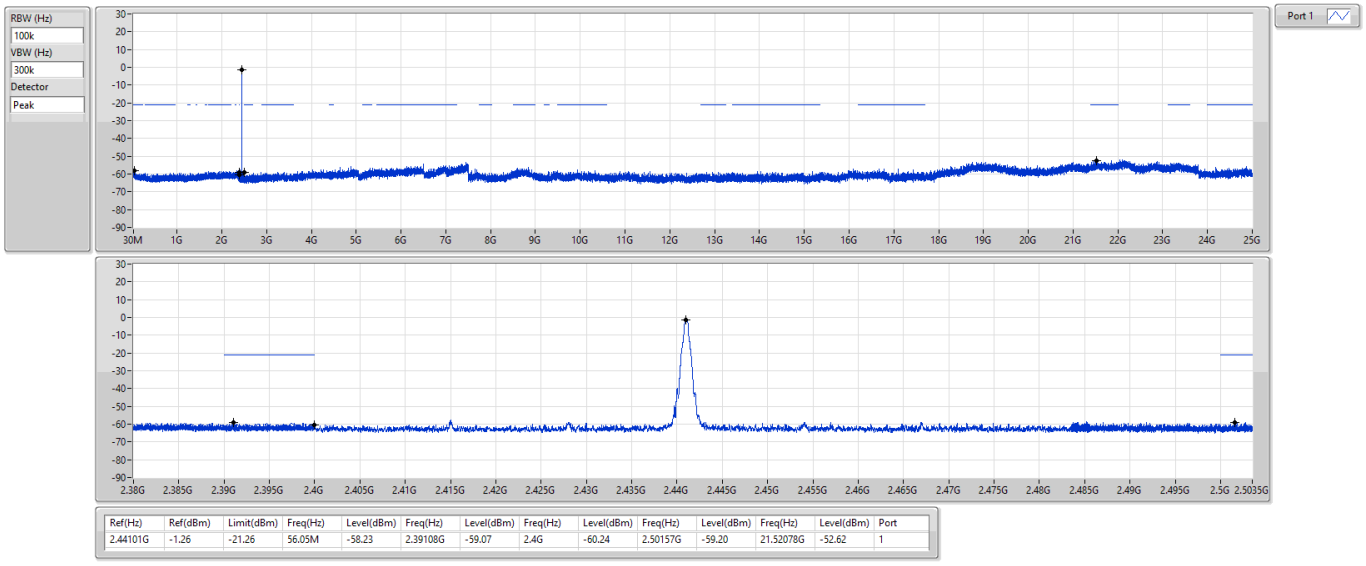
2402MHz



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
2.40201G	-1.23	-21.23	1.94275G	-58.17	2.39176G	-59.02	2.4G	-60.80	2.50119G	-59.69	21.99953G	-52.05	1

2.4-2.4835GHz_BT-BR(1Mbps) **CSENdB-FS**

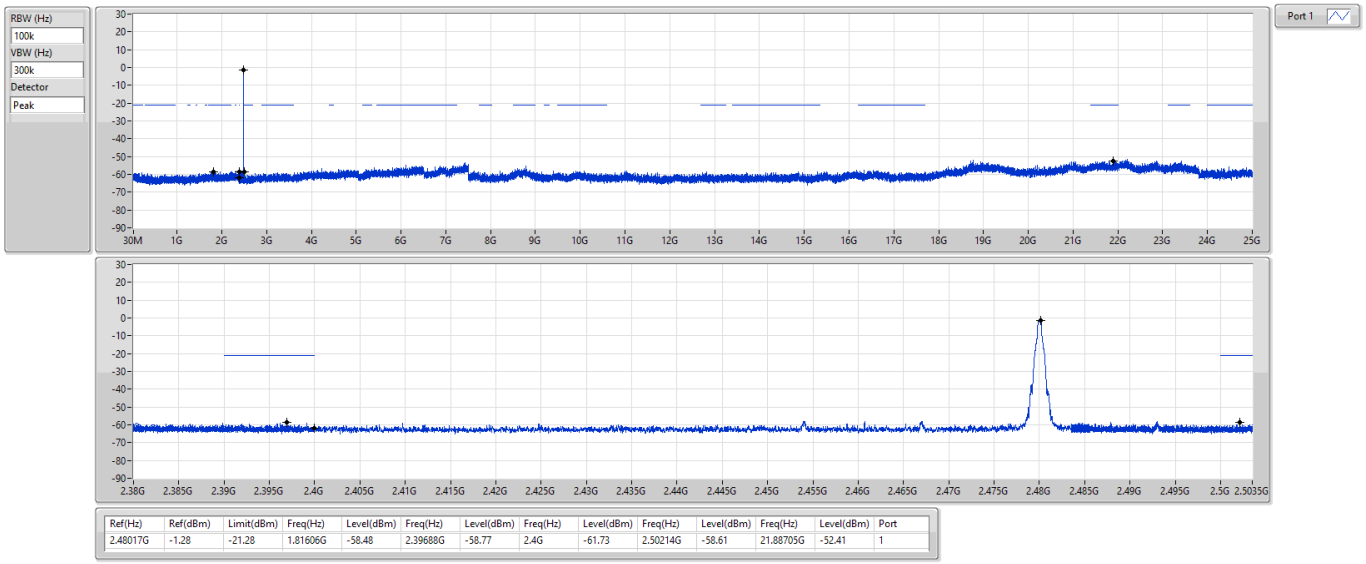
2441MHz



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
2.44101G	-1.26	-21.26	56.05M	-58.23	2.39108G	-59.07	2.4G	-60.24	2.50157G	-59.20	21.52078G	-52.62	1

2.4-2.4835GHz_BT-BR(1Mbps) **CSENdB-FS**

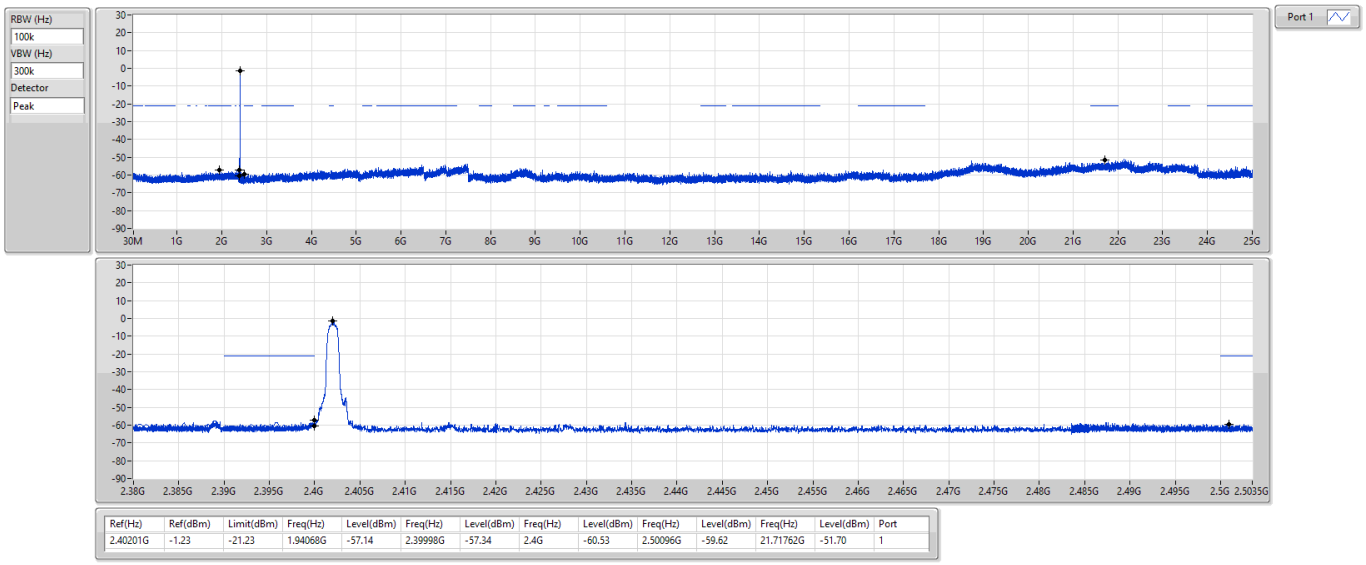
2480MHz



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
2.48017G	-1.28	-21.28	1.81606G	-58.48	2.39688G	-58.77	2.4G	-61.73	2.50214G	-58.61	21.88705G	-52.41	1

2.4-2.4835GHz_BT-EDR(2Mbps) **CSENdB-FS**

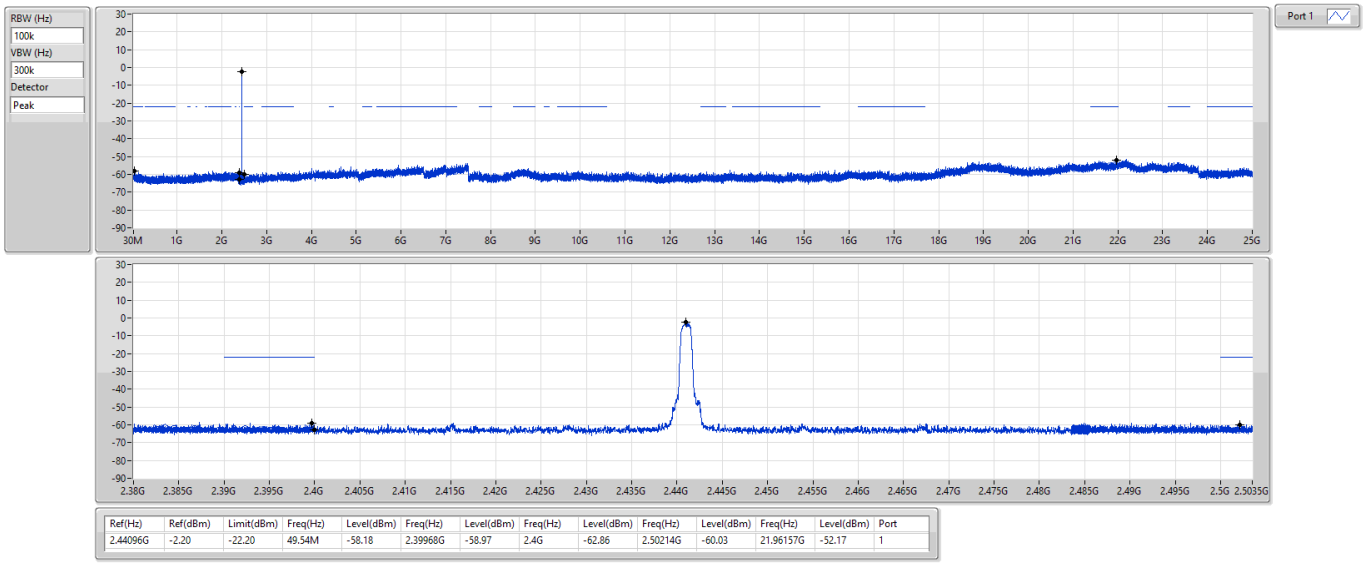
2402MHz



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
2.40201G	-1.23	-21.23	1.94068G	-57.14	2.39998G	-57.34	2.4G	-60.53	2.50096G	-59.62	21.71762G	-51.70	1

2.4-2.4835GHz_BT-EDR(2Mbps) **CSENdB-FS**

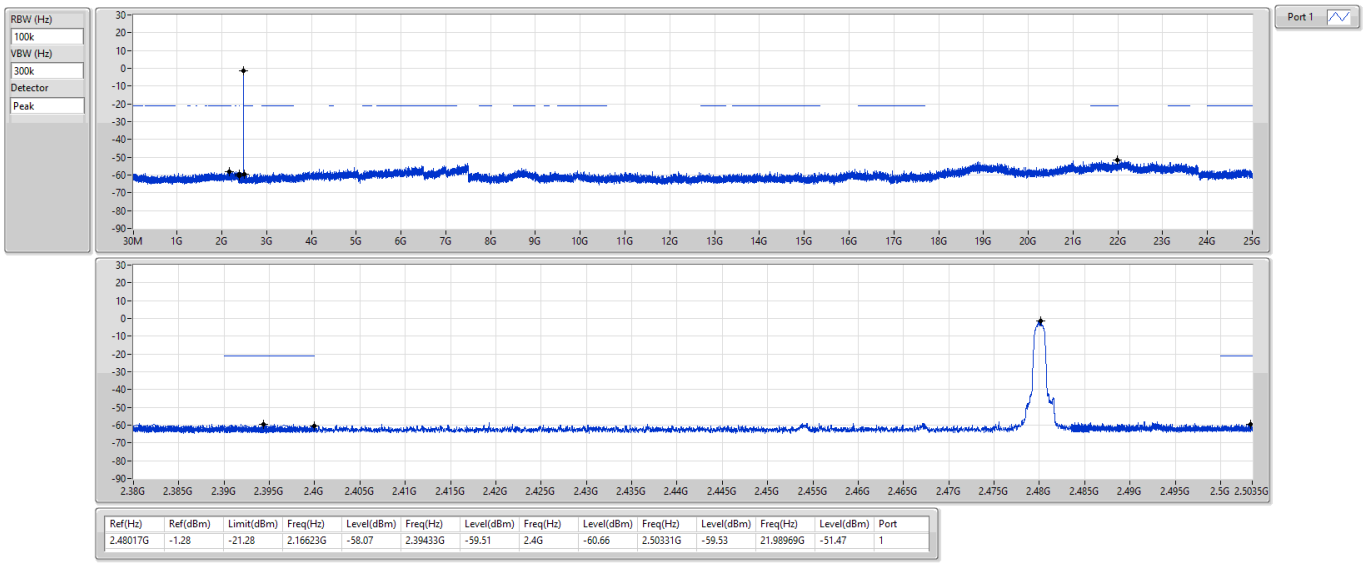
2441MHz



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	-2.20	-22.20	49.54M	-58.18	2.39968G	-58.97	2.4G	-62.86	2.50214G	-60.03	21.96157G	-52.17	1

2.4-2.4835GHz_BT-EDR(2Mbps) **CSENdB-FS**

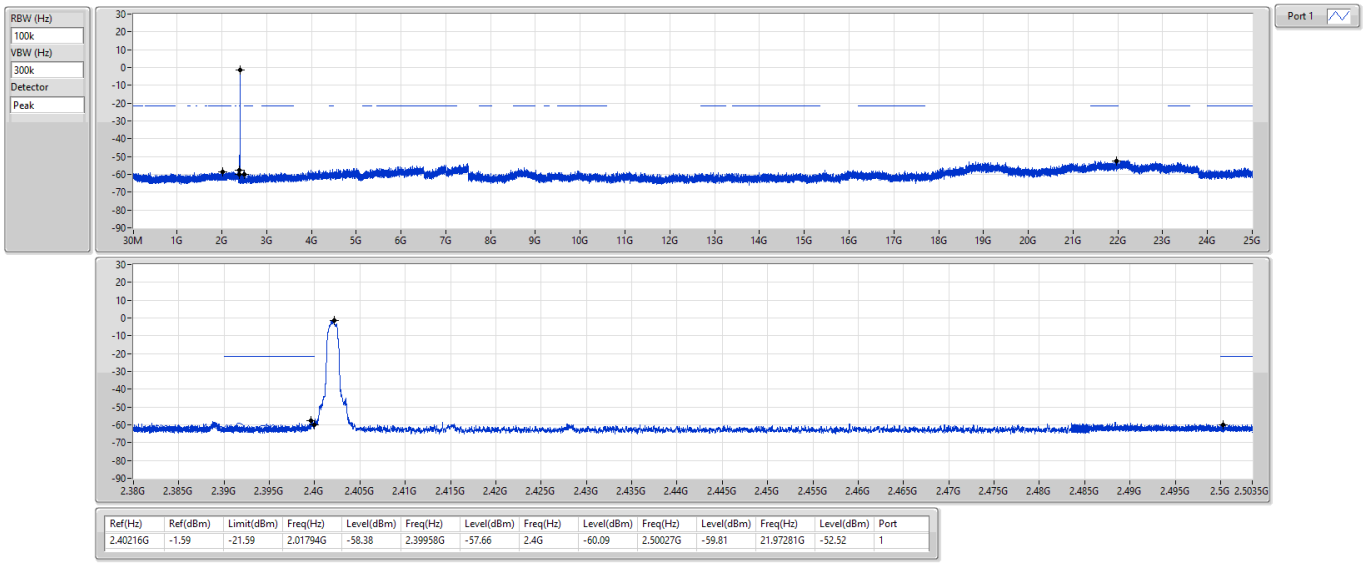
2480MHz



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
2.48017G	-1.28	-21.28	2.16623G	-58.07	2.39433G	-59.51	2.4G	-60.66	2.50331G	-59.53	21.98969G	-51.47	1

2.4-2.4835GHz_BT-EDR(3Mbps) **CSENdB-FS**

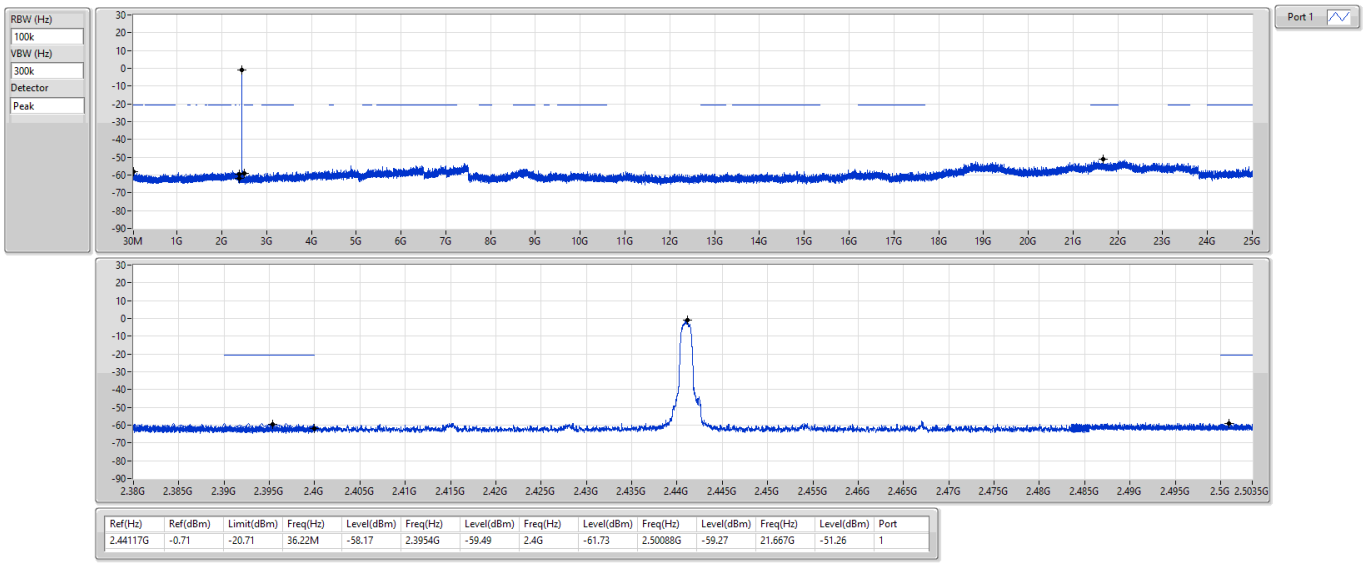
2402MHz



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
2.40216G	-1.59	-21.59	2.01794G	-58.38	2.39958G	-57.66	2.4G	-60.09	2.50027G	-59.81	21.97281G	-52.52	1

2.4-2.4835GHz_BT-EDR(3Mbps) **CSENdB-FS**

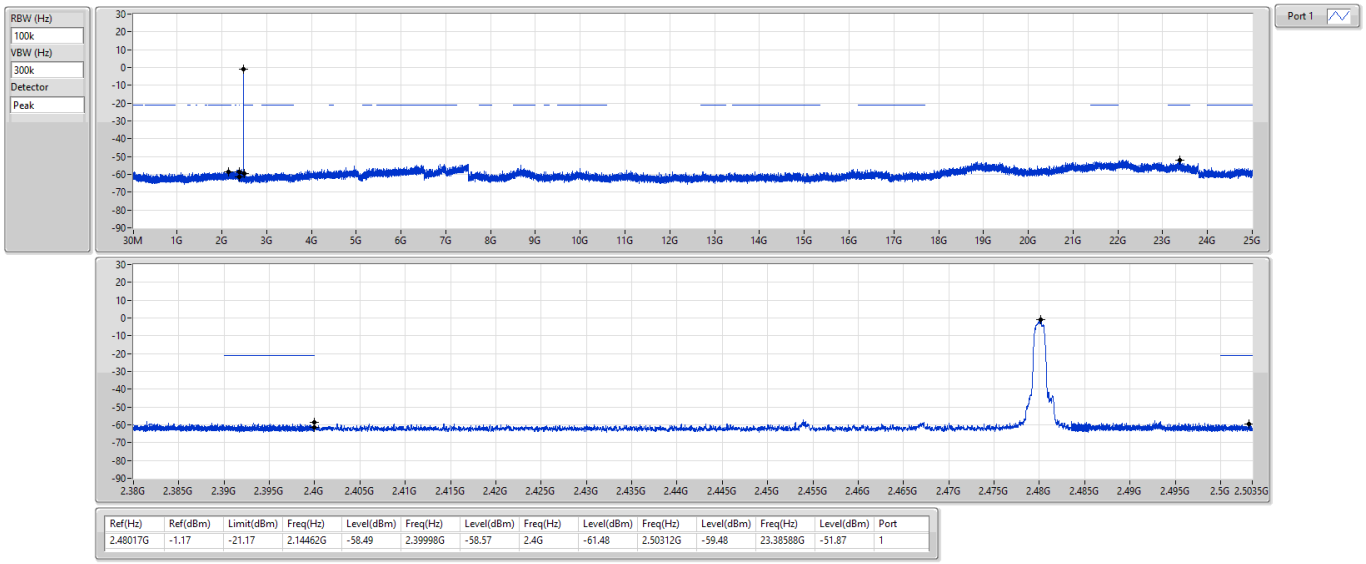
2441MHz



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
2.44117G	-0.71	-20.71	36.22M	-58.17	2.3954G	-59.49	2.4G	-61.73	2.50088G	-59.27	21.667G	-51.26	1

2.4-2.4835GHz_BT-EDR(3Mbps) **CSENdB-FS**

2480MHz

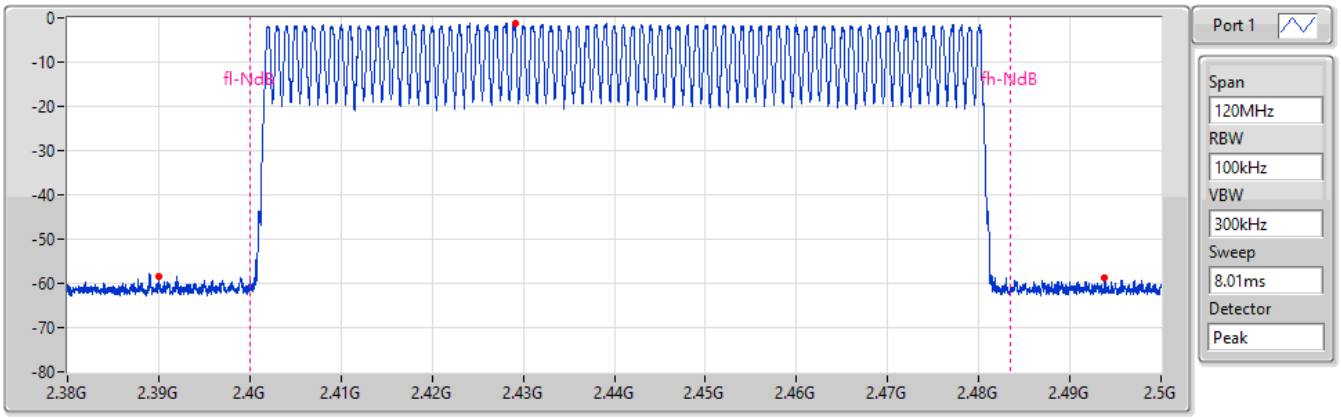


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48017G	-1.17	-21.17	2.14462G	-58.49	2.39998G	-58.57	2.4G	-61.48	2.50312G	-59.48	23.38588G	-51.87	1

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz

Hopping Ch Bandedge (Non-restricted Band)

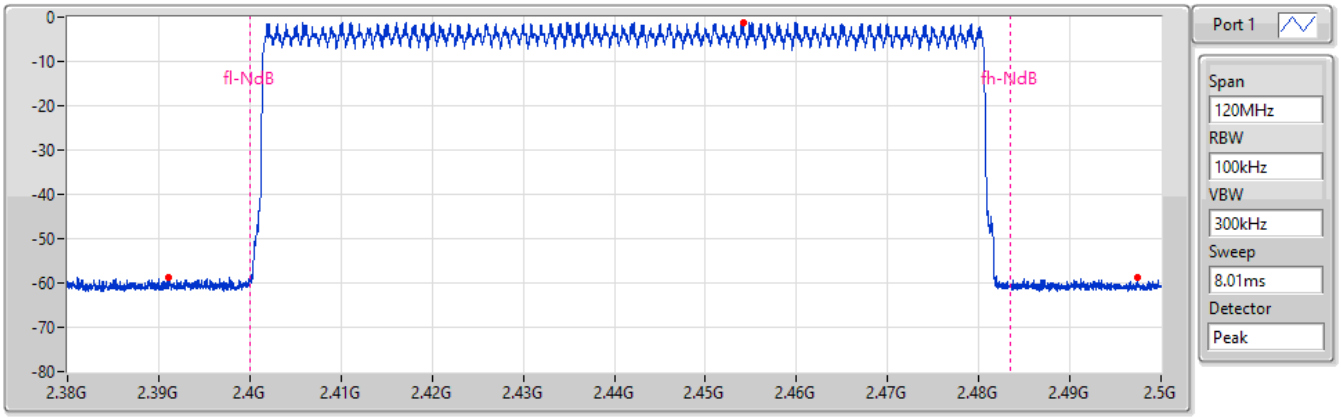


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-21.19	2.429155G	-1.19	2.390005G	-58.42	2.49385G	-58.87

2.4-2.4835GHz_BT-EDR(2Mbps)

2402MHz

Hopping Ch Bandedge (Non-restricted Band)

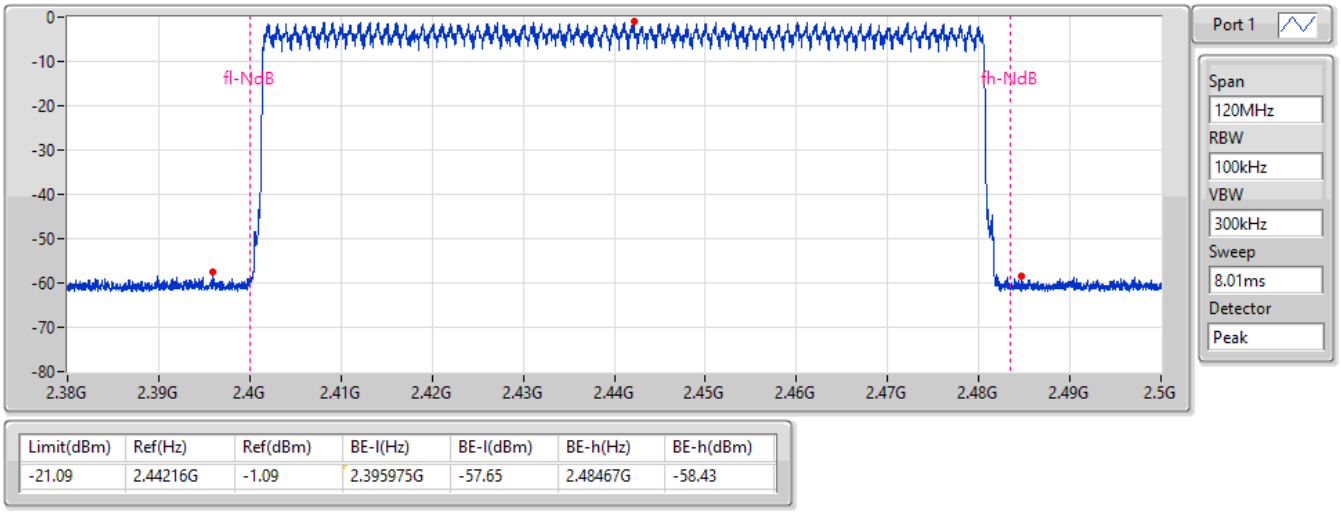


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-21.28	2.45416G	-1.28	2.39101G	-58.62	2.49745G	-58.78

2.4-2.4835GHz_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)
-21.09	2.44216G	-1.09	2.395975G	-57.65	2.48467G	-58.43

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	-0.02	0.00100
BT-EDR(2Mbps)	2.65	0.00184
BT-EDR(3Mbps)	3.27	0.00212

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.80	-0.21	21.00	3.59	27.00
2441MHz	Pass	3.80	-0.02	21.00	3.78	27.00
2480MHz	Pass	3.80	-0.43	21.00	3.37	27.00
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.80	2.49	21.00	6.29	27.00
2441MHz	Pass	3.80	2.65	21.00	6.45	27.00
2480MHz	Pass	3.80	2.27	21.00	6.07	27.00
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.80	3.07	21.00	6.87	27.00
2441MHz	Pass	3.80	3.27	21.00	7.07	27.00
2480MHz	Pass	3.80	2.89	21.00	6.69	27.00

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

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	-0.30	0.00093
BT-EDR(2Mbps)	-0.12	0.00097
BT-EDR(3Mbps)	-0.11	0.00097

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.80	-0.54	-	3.26	-
2441MHz	Pass	3.80	-0.30	-	3.50	-
2480MHz	Pass	3.80	-0.78	-	3.02	-
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.80	-0.32	-	3.48	-
2441MHz	Pass	3.80	-0.12	-	3.68	-
2480MHz	Pass	3.80	-0.53	-	3.27	-
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.80	-0.31	-	3.49	-
2441MHz	Pass	3.80	-0.11	-	3.69	-
2480MHz	Pass	3.80	-0.52	-	3.28	-

Note: Average power is for reference only

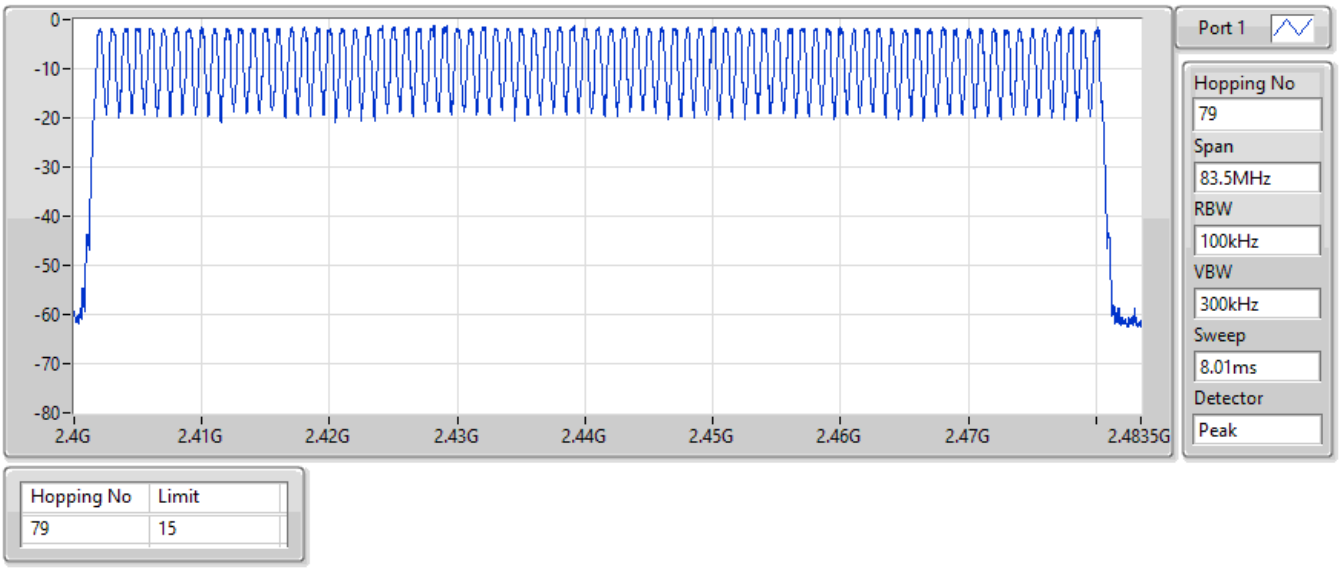
Summary

Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

Result

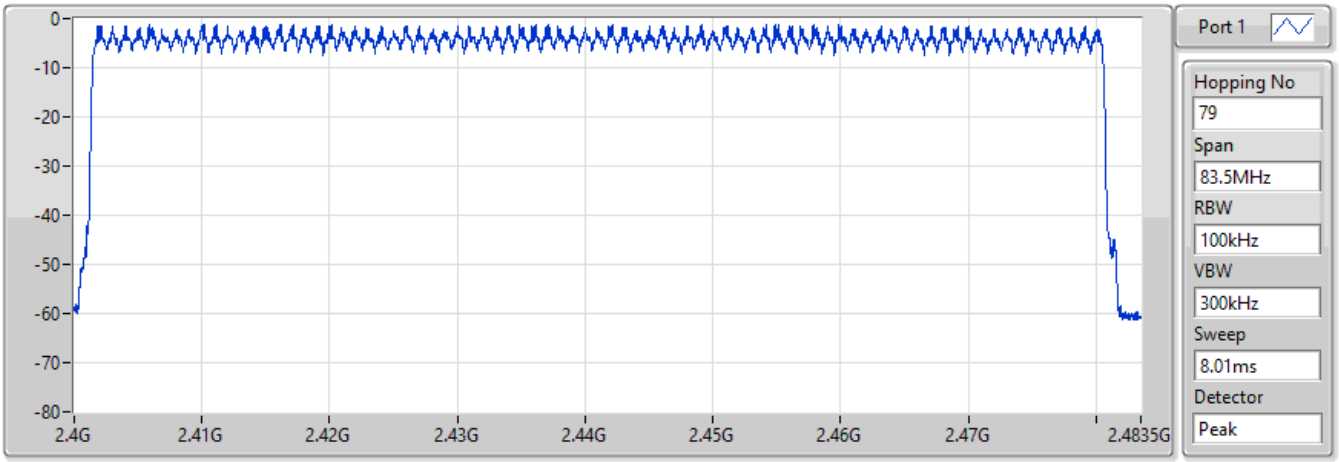
Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2402MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2402MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2402MHz	Pass	79	15

2.4-2.4835GHz_BT-BR(1Mbps) Hopping-FS
2402MHz



Hopping No	Limit
79	15

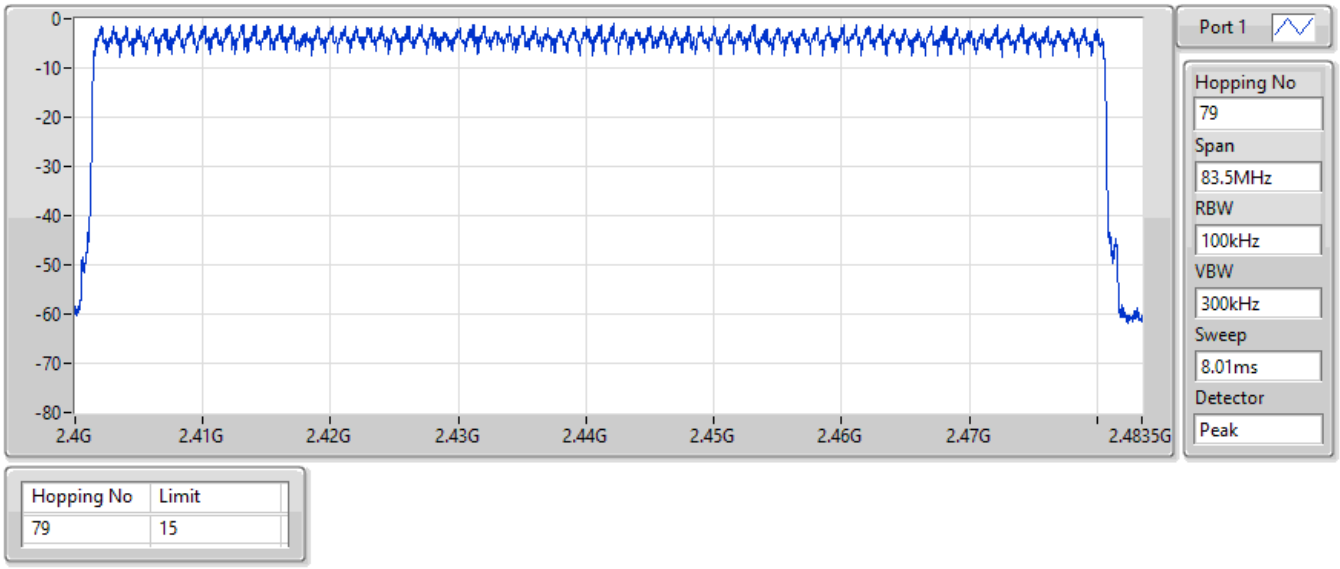
2.4-2.4835GHz_BT-EDR(2Mbps) Hopping-FS
2402MHz



Hopping No	Limit
79	15

2.4-2.4835GHz_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-BR(1Mbps)	979k	840.049k	840KF1D	970.75k	839.049k
BT-EDR(2Mbps)	1.317M	1.167M	1M17G1D	1.317M	1.166M
BT-EDR(3Mbps)	1.301M	1.167M	1M17G1D	1.298M	1.166M

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

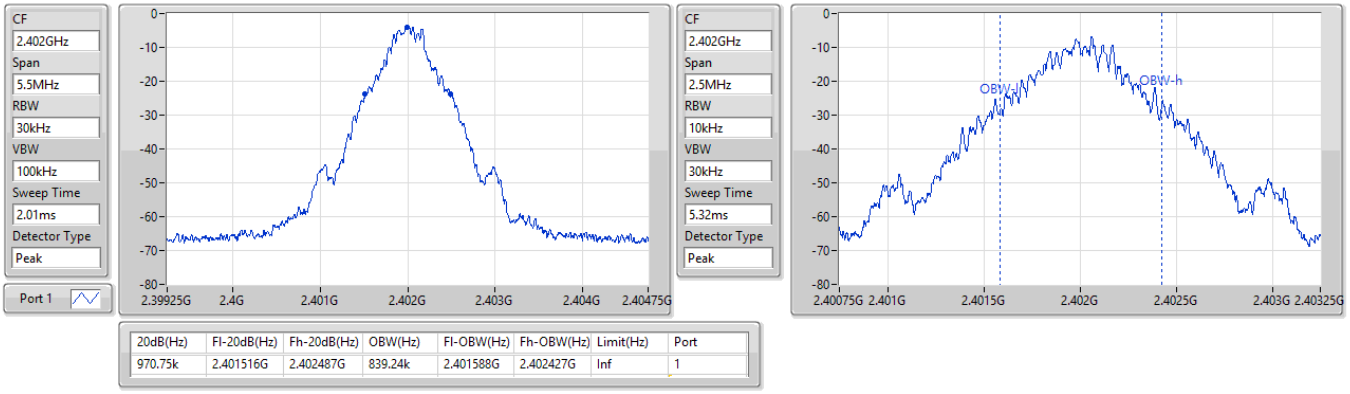
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	970.75k	839.24k
2441MHz	Pass	Inf	979k	840.049k
2480MHz	Pass	Inf	976.25k	839.049k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.317M	1.166M
2441MHz	Pass	Inf	1.317M	1.166M
2480MHz	Pass	Inf	1.317M	1.167M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.301M	1.166M
2441MHz	Pass	Inf	1.298M	1.166M
2480MHz	Pass	Inf	1.298M	1.167M

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

2.4-2.4835GHz_BT-BR(1Mbps) **EBW-FS**

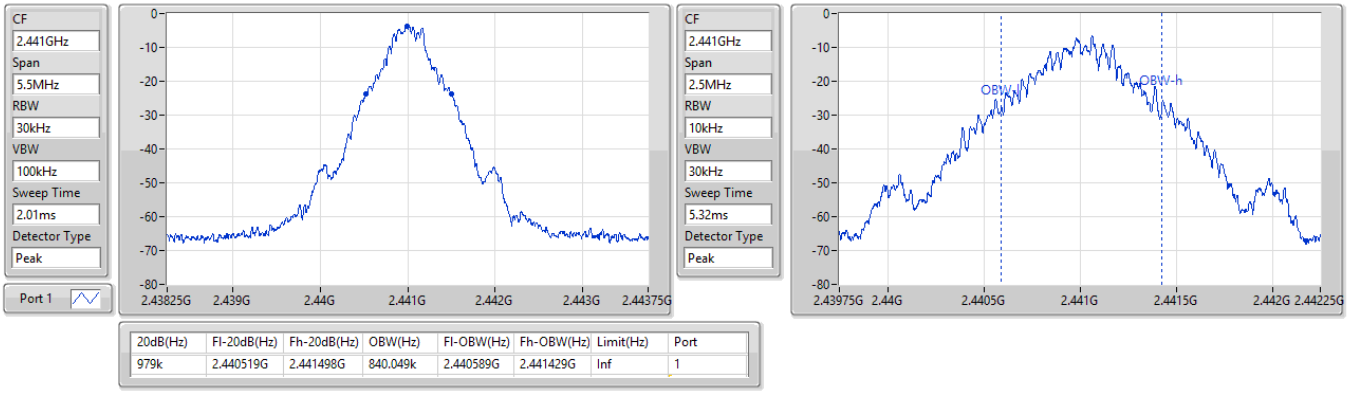
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
970.75k	2.401516G	2.402487G	839.24k	2.401588G	2.402427G	Inf	1

2.4-2.4835GHz_BT-BR(1Mbps) **EBW-FS**

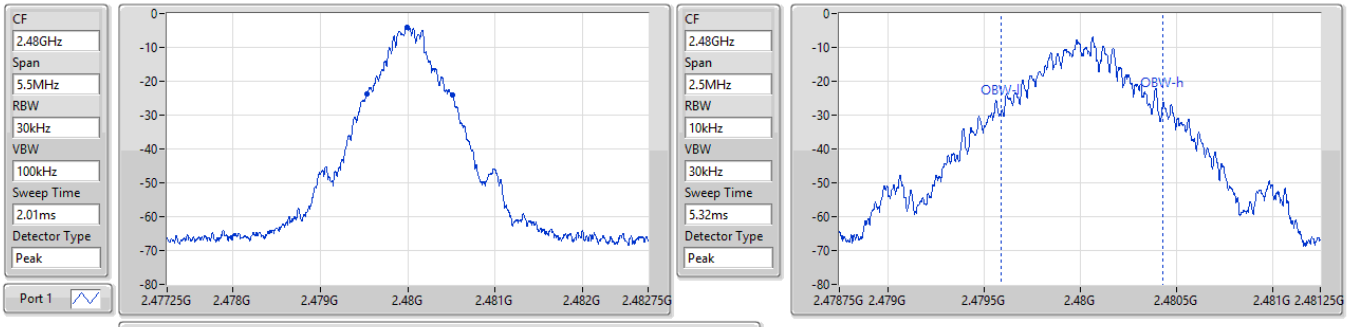
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
979k	2.440519G	2.441498G	840.049k	2.440589G	2.441429G	Inf	1

2.4-2.4835GHz_BT-BR(1Mbps) **EBW-FS**

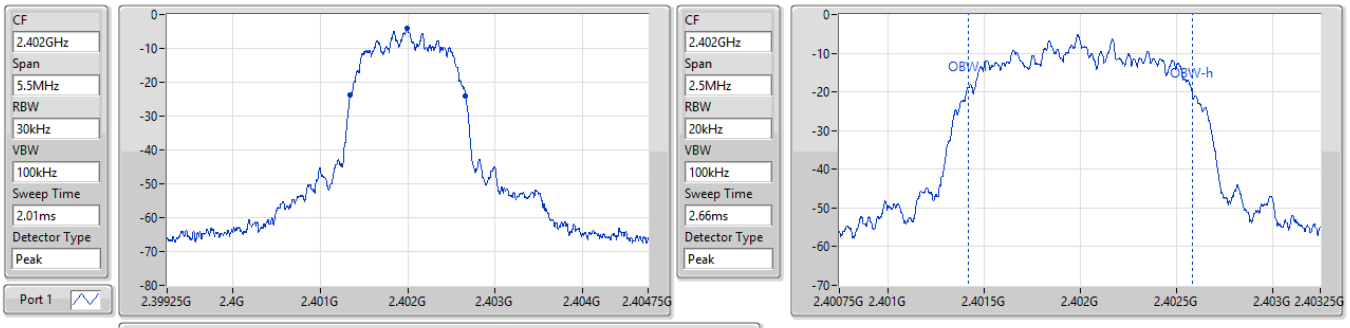
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
976.25k	2.479533G	2.480509G	839.049k	2.479592G	2.480431G	Inf	1

2.4-2.4835GHz_BT-EDR(2Mbps) **EBW-FS**

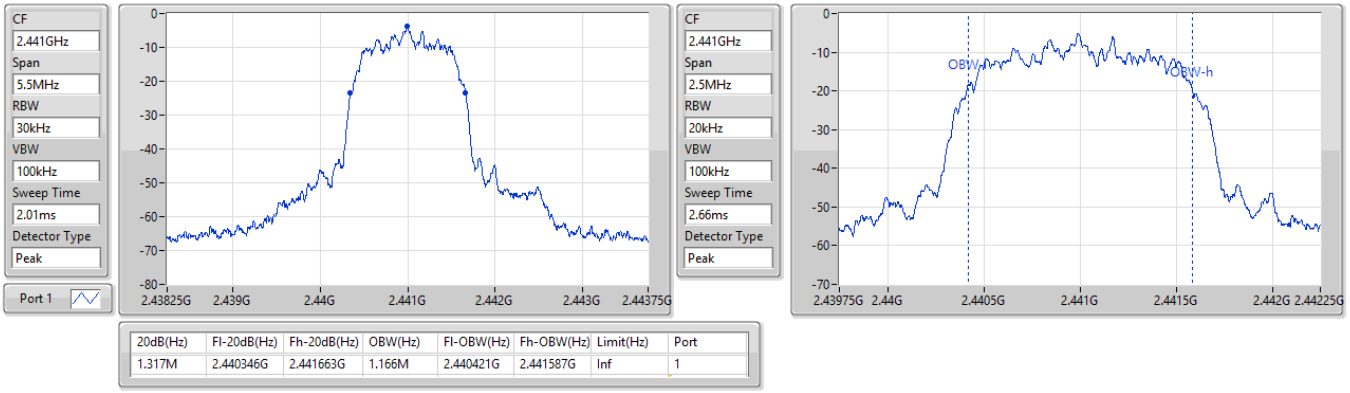
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.317M	2.401346G	2.402663G	1.166M	2.401419G	2.402585G	Inf	1

2.4-2.4835GHz_BT-EDR(2Mbps) **EBW-FS**

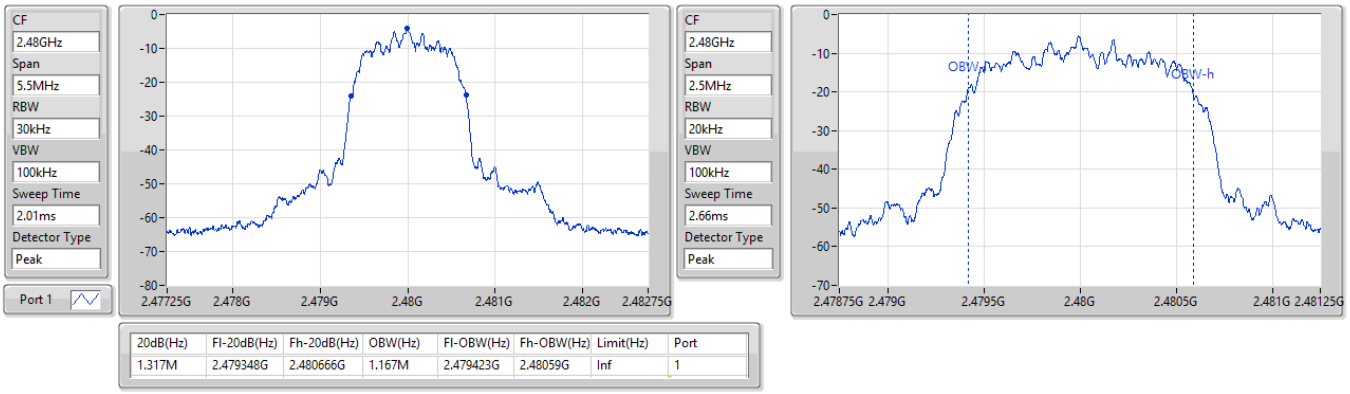
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.317M	2.440346G	2.441663G	1.166M	2.440421G	2.441587G	Inf	1

2.4-2.4835GHz_BT-EDR(2Mbps) **EBW-FS**

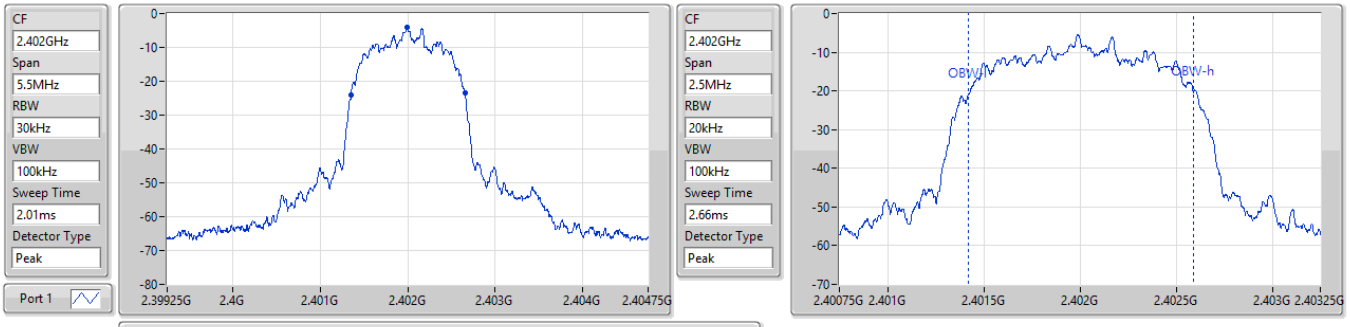
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.317M	2.479348G	2.480666G	1.167M	2.479423G	2.48059G	Inf	1

2.4-2.4835GHz_BT-EDR(3Mbps) **EBW-FS**

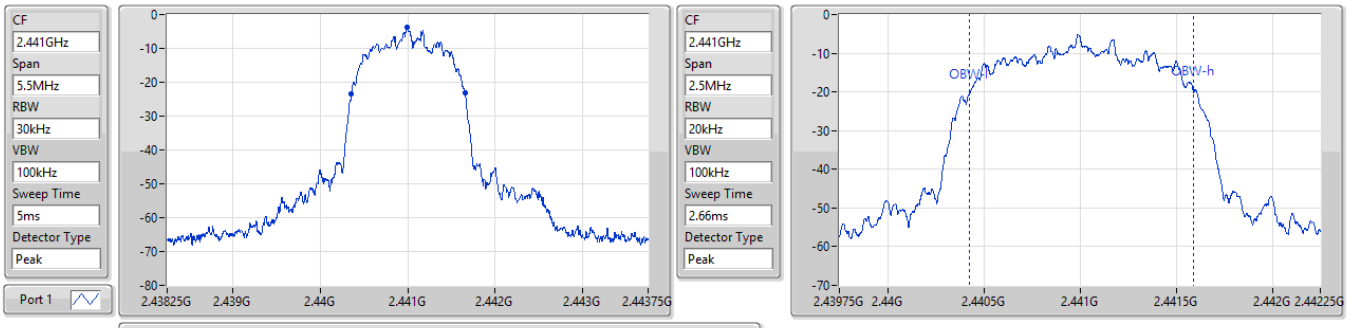
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.301M	2.401354G	2.402655G	1.166M	2.401422G	2.402588G	Inf	1

2.4-2.4835GHz_BT-EDR(3Mbps) **EBW-FS**

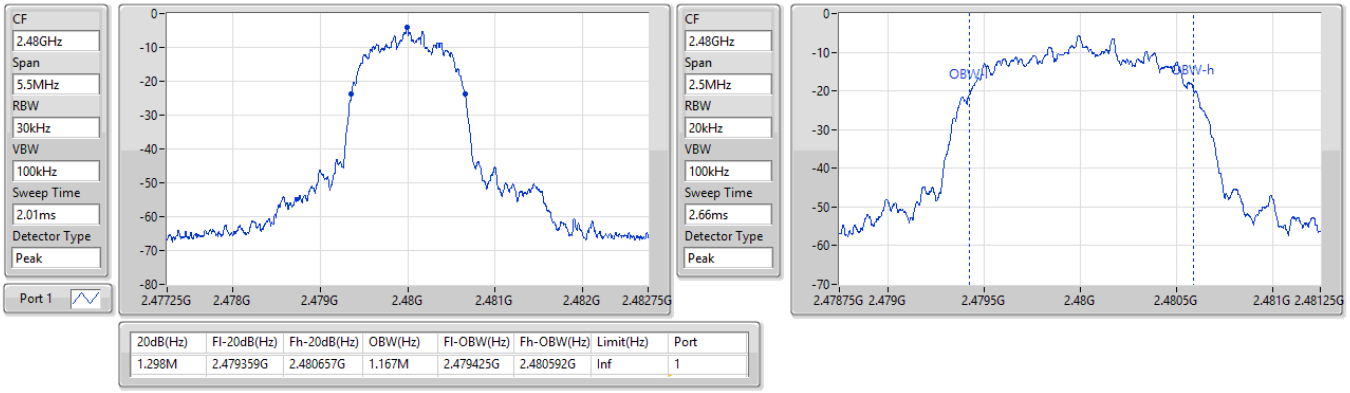
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.298M	2.440357G	2.441655G	1.166M	2.440424G	2.44159G	Inf	1

2.4-2.4835GHz_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
1.298M	2.479359G	2.480657G	1.167M	2.479425G	2.480592G	Inf	1

Summary

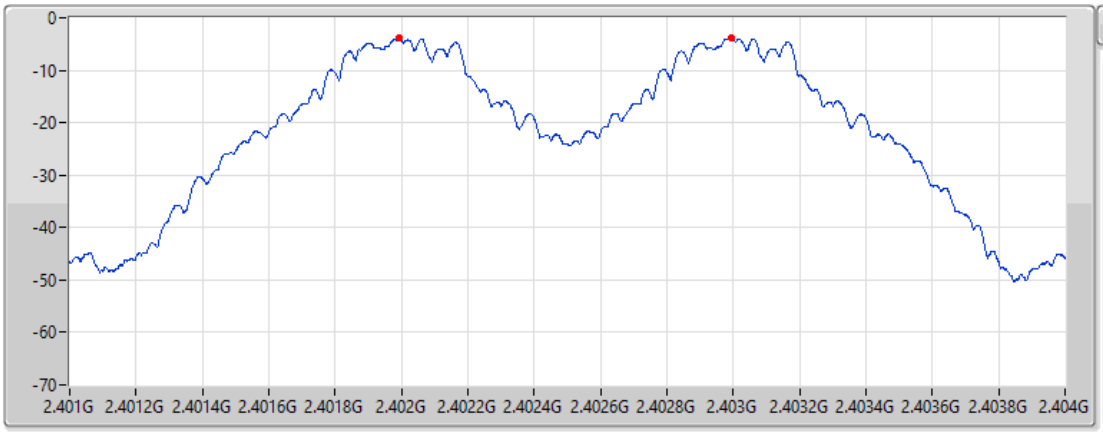
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	1.0005M
BT-EDR(2Mbps)	1.002M	1.0005M
BT-EDR(3Mbps)	1.002M	1.002M

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.401993G	2.402994G	1.0005M	646.5195k
2441MHz	Pass	2.440995G	2.441997G	1.002M	652.014k
2480MHz	Pass	2.478996G	2.479998G	1.002M	650.1825k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401993G	2.402995G	1.002M	877.122k
2441MHz	Pass	2.440995G	2.441995G	1.0005M	877.122k
2480MHz	Pass	2.478996G	2.479997G	1.0005M	877.122k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.401993G	2.402995G	1.002M	866.466k
2441MHz	Pass	2.440996G	2.441998G	1.002M	864.468k
2480MHz	Pass	2.478995G	2.479997G	1.002M	864.468k

2.4-2.4835GHz_BT-BR(1Mbps) Channel Separation-FS

2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401993G	2.402994G	1.0005M	646.5195k

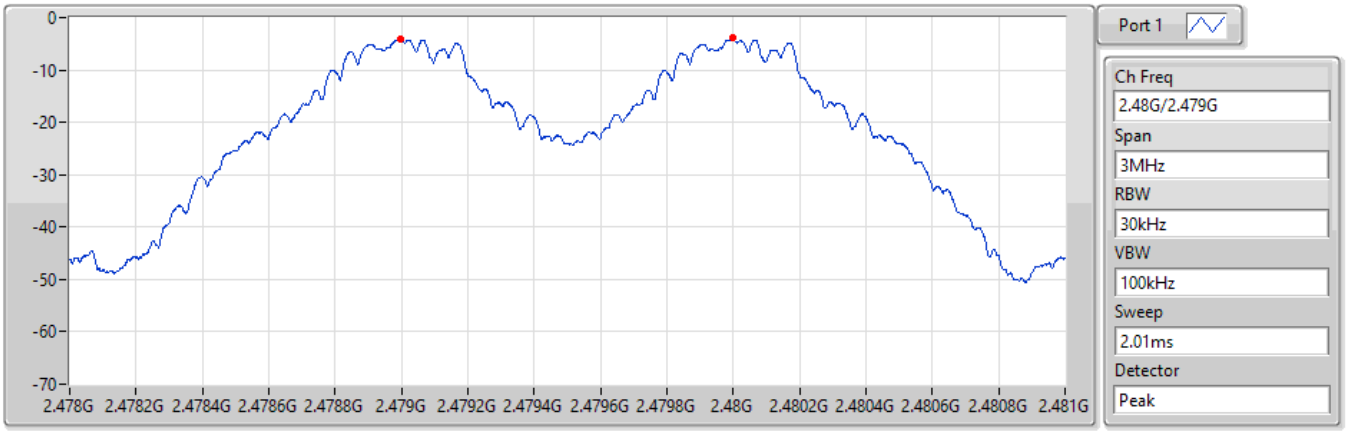
2.4-2.4835GHz_BT-BR(1Mbps) Channel Separation-FS

2.441G/2.442GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440995G	2.441997G	1.002M	652.014k

2.4-2.4835GHz_BT-BR(1Mbps) Channel Separation-FS

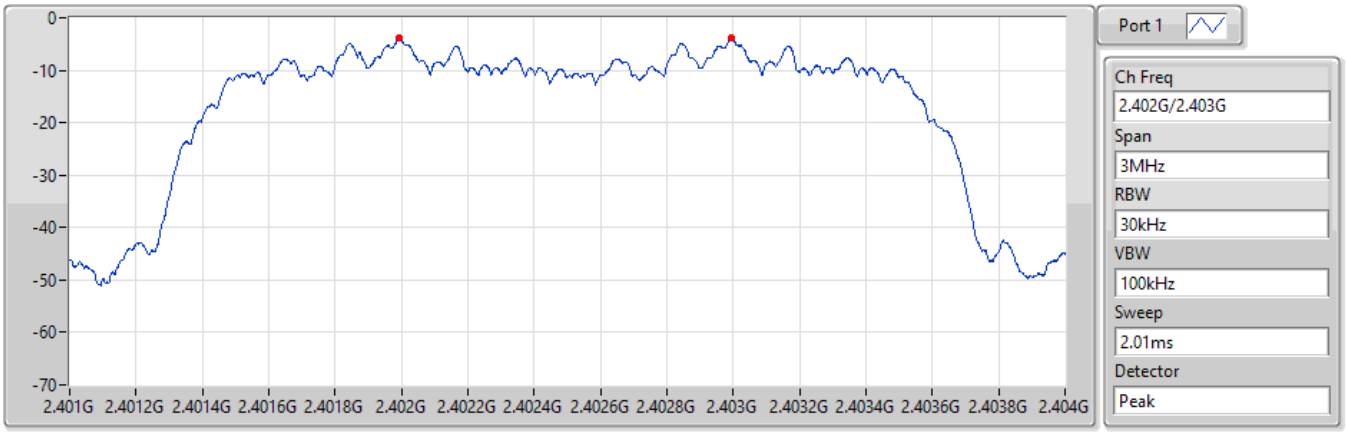
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478996G	2.479998G	1.002M	650.1825k

2.4-2.4835GHz_BT-EDR(2Mbps) Channel Separation-FS

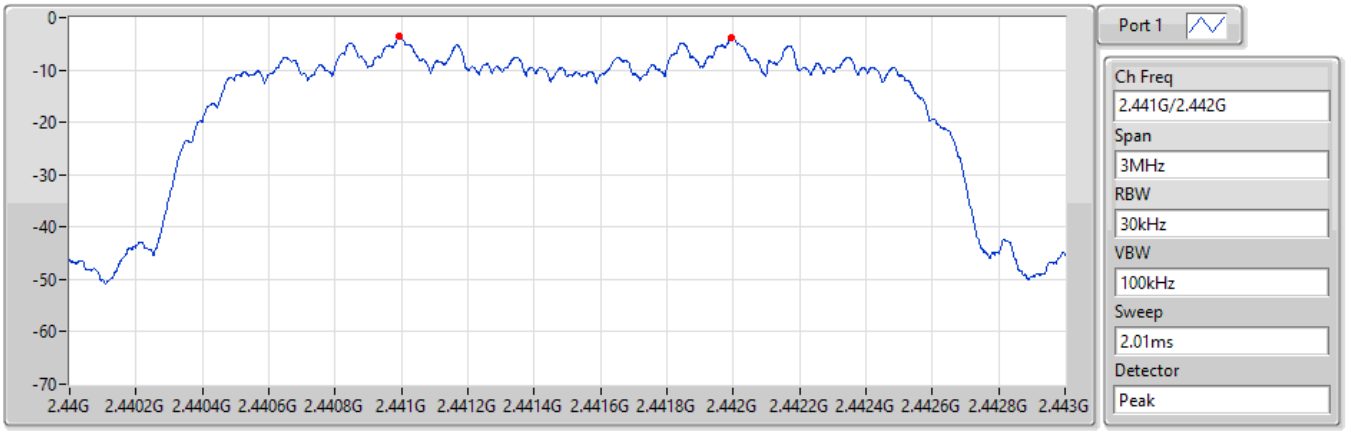
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401993G	2.402995G	1.002M	877.122k

2.4-2.4835GHz_BT-EDR(2Mbps) Channel Separation-FS

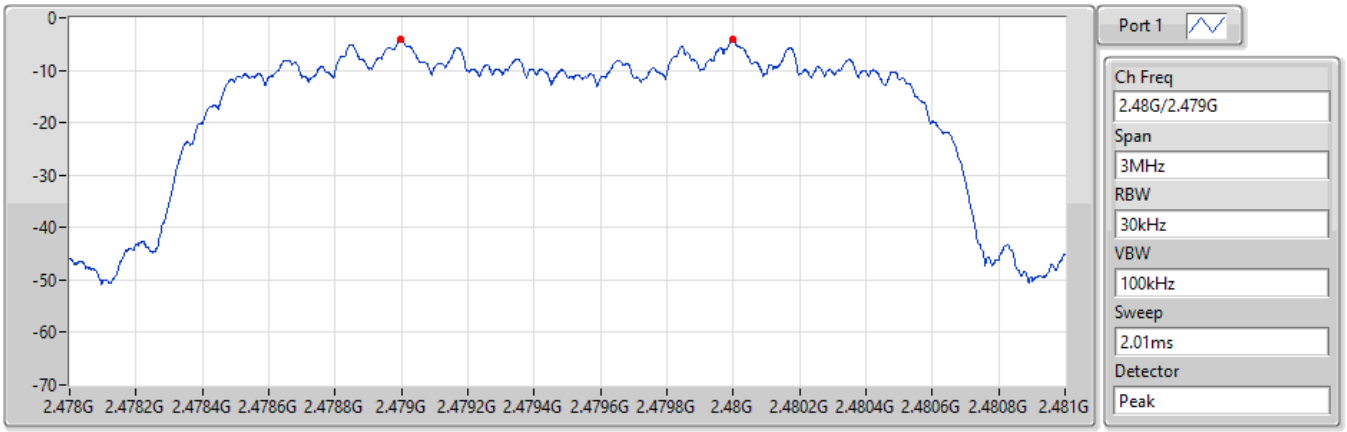
2.441G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440995G	2.441995G	1.0005M	877.122k

2.4-2.4835GHz_BT-EDR(2Mbps) Channel Separation-FS

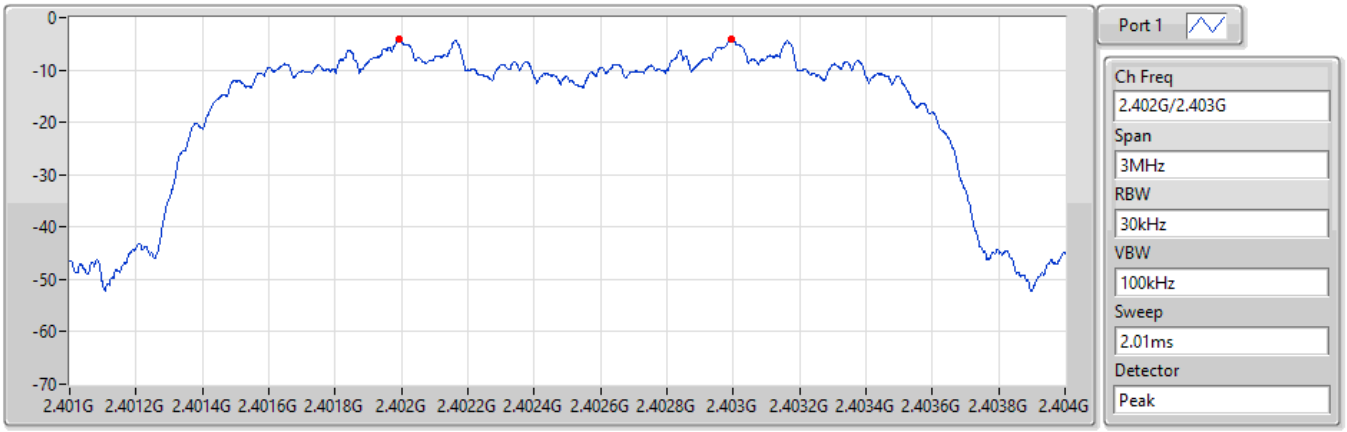
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478996G	2.479997G	1.0005M	877.122k

2.4-2.4835GHz_BT-EDR(3Mbps) Channel Separation-FS

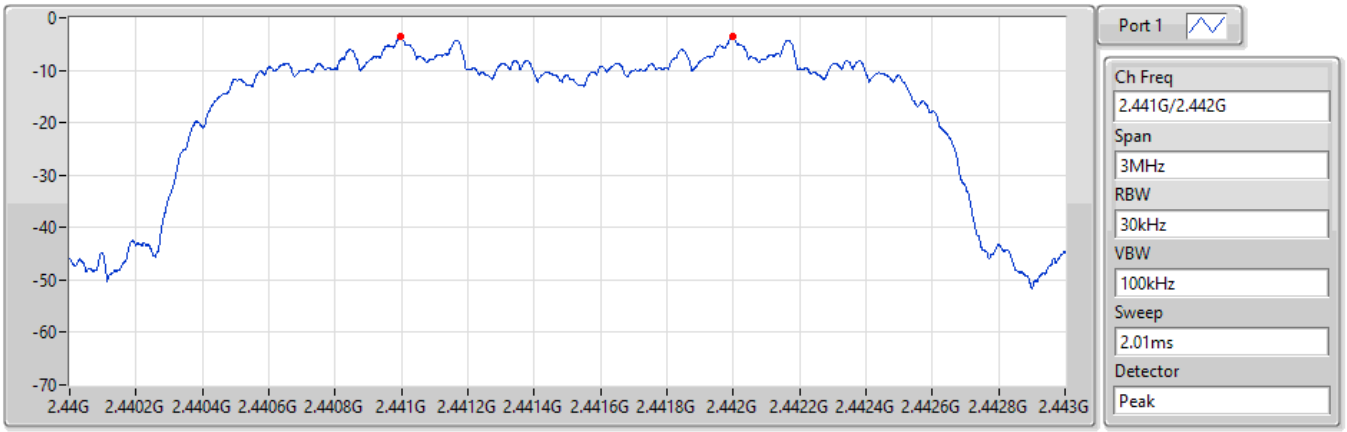
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401993G	2.402995G	1.002M	866.466k

2.4-2.4835GHz_BT-EDR(3Mbps) Channel Separation-FS

2.441G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440996G	2.441998G	1.002M	864.468k

2.4-2.4835GHz_BT-EDR(3Mbps) Channel Separation-FS

2.48G/2.479GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478995G	2.479997G	1.002M	864.468k

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	328.88016m_DH5
BT-BR-AFH(1Mbps)	312.201m_DH5-AFH
BT-EDR(2Mbps)	329.02236m_DH5
BT-EDR-AFH(2Mbps)	293.925m_DH5-AFH
BT-EDR(3Mbps)	316.73312m_DH5
BT-EDR-AFH(3Mbps)	305.786m_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-BR(1Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.32888	0.4	2.89100	18
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.32902	0.4	2.89225	18
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.31673	0.4	2.94800	17

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

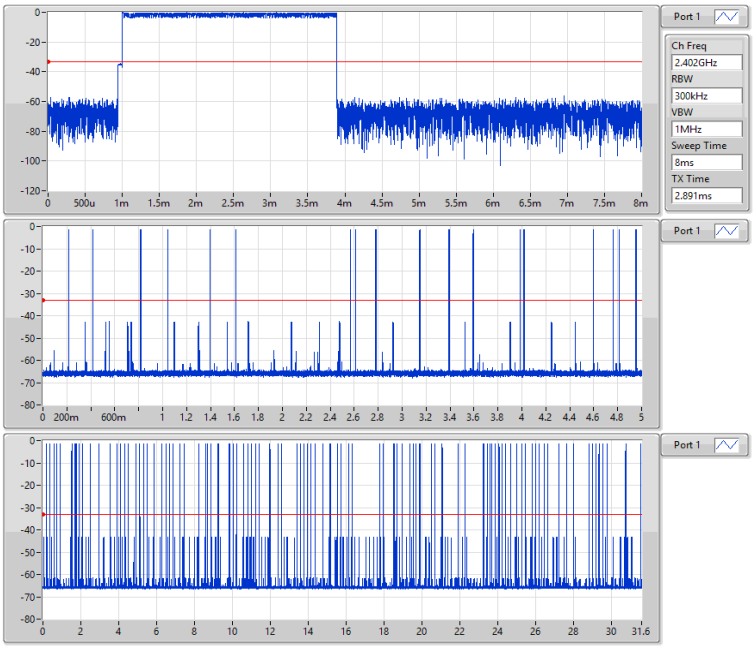
Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in a 2 s
BT-BR-AFH(1Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.31220	0.4	2.89075	27
BT-EDR-AFH(2Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.29393	0.4	2.93925	25
BT-EDR-AFH(3Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.30579	0.4	2.94025	26

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

Note 2: DH5 was the worst mode.

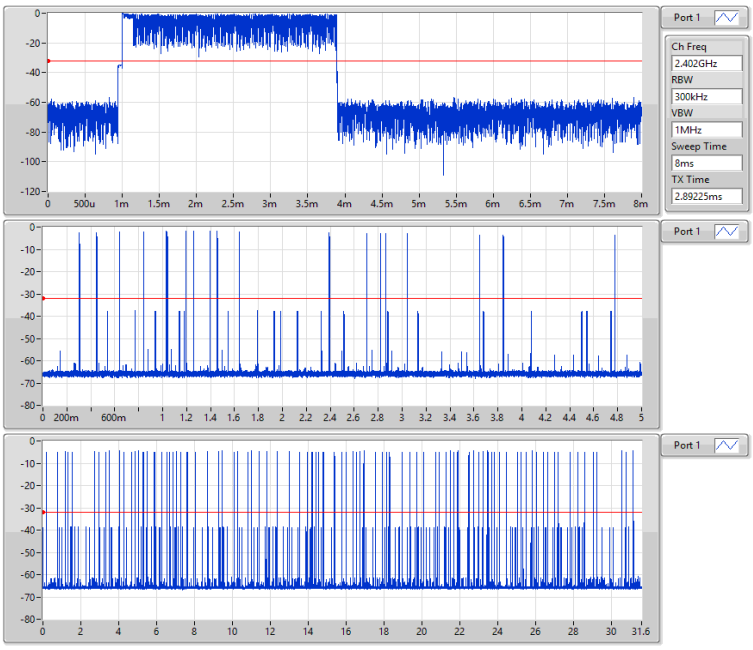
2.4-2.4835GHz_BT-BR(1Mbps) **Dwell-FS**

2402MHz



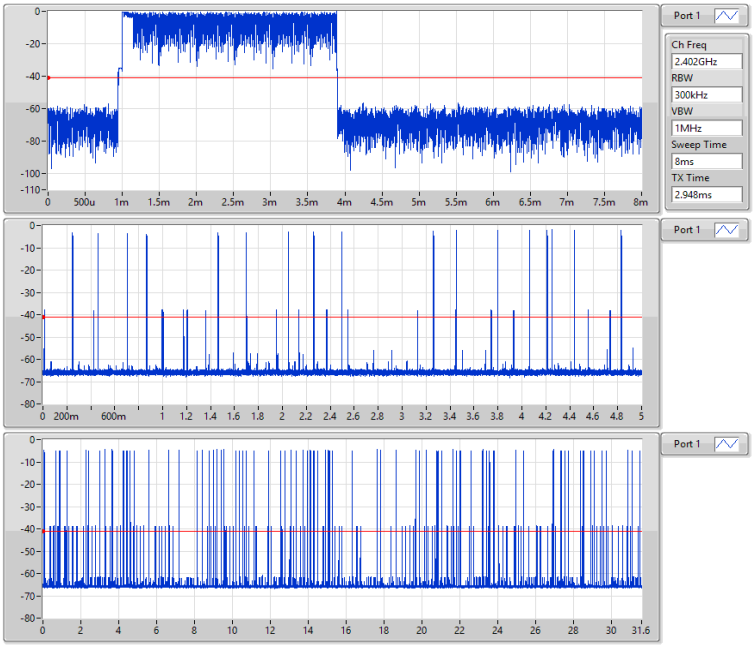
2.4-2.4835GHz_BT-EDR(2Mbps) **Dwell-FS**

2402MHz



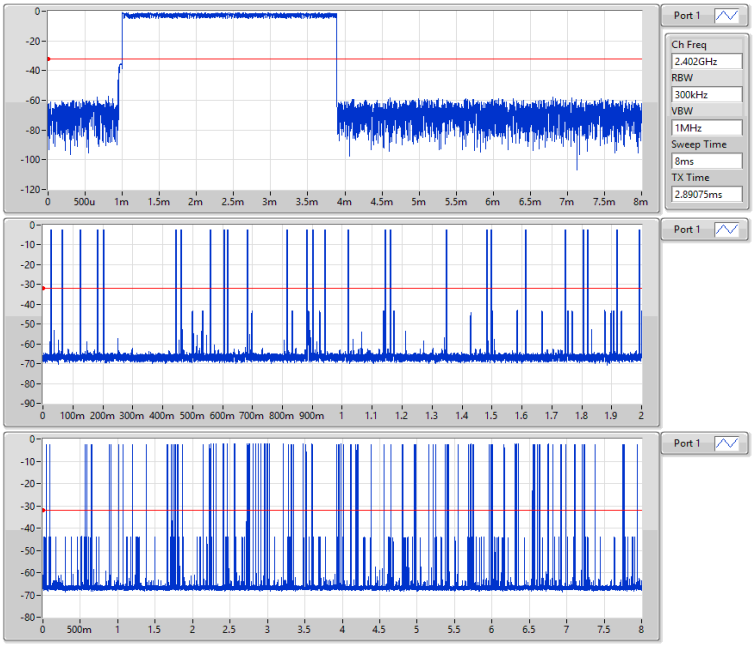
2.4-2.4835GHz_BT-EDR(3Mbps) **Dwell-FS**

2402MHz



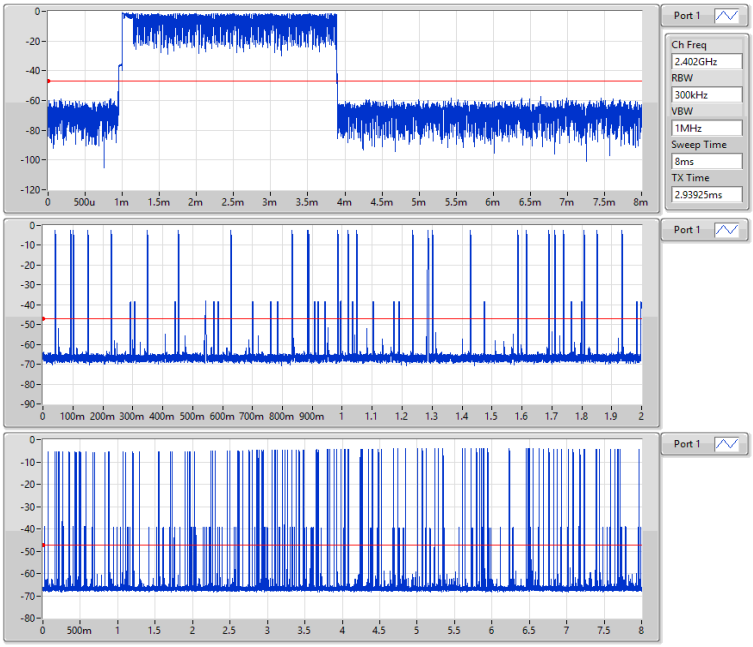
2.4-2.4835GHz_BT-BR-AFH(1Mbps) **Dwell-FS**

2402MHz



2.4-2.4835GHz_BT-EDR-AFH(2Mbps) **Dwell-FS**

2402MHz



2.4-2.4835GHz_BT-EDR-AFH(3Mbps) **Dwell-FS**

2402MHz