FCC Test Report

FCC ID	:	**SQG-LYRA24P**
Equipment	:	**Lyra 24P Series - Bluetooth 5.3 PCB module** **(Please refer to section 1.1.1 for more details)**
Model No.	:	**Lyra 24P**
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	:	**Dec. 30, 2022**
Tested Date	:	**Jan. 12 ~ May 15, 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**

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FR2D3001	Rev. 01	Initial issue	Jul. 05, 2023

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.546MHz 30.61 (Margin -15.39dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 2483.50MHz 72.01 (Margin -1.99dB) - PK	Pass
15.247(d)	Band Edge	Meet the requirement of limit	Pass
15.247(b)(1)	Conducted Output Power	Power [dBm]: 19.95	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

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Laird part number
Laird Connectivity	Lyra 24P	Lyra 24P Series - Bluetooth v5.3 PCB Module (20dBm) with integrated antenna	453-00145
Laird Connectivity	Lyra 24P	Lyra 24P Series - Bluetooth v5.3 PCB Module (20dBm) with RF Trace Pad	453-00148
Laird Connectivity	Lyra 24P	Lyra 24P Series - Bluetooth v5.3 PCB Module (10dBm) with integrated antenna	453-00142

1.1.2 Specification of the Equipment under Test (EUT)

RF General Information				
Frequency Range (MHz)	**Bluetooth Mode**	**Ch. Freq. (MHz)**	**Channel Number**	**Data Rate**
2400-2483.5	LE	2402-2480	0-39 [40]	Coding rate 125kbps
				Coding rate 500kbps
				Symbol rate 1Mbps
		2404-2478	37	Symbol rate 2Mbps
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: Bluetooth LE (Low energy) uses GFSK modulation.				

1.1.3 Antenna Details

Ant. No.	Brand	Model	Type	Connector	2400-2500MHz	Cable loss
					Gain (dBi)	
1	Laird	NanoBlue	PCB Dipole	IPEX MHF4	2	N/A
2	Laird	FlexPIFA	PCB Dipole	IPEX MHF4	2	N/A
3	Mag.Layers	EDA-8709-2G4C1-B27-CY	Dipole	IPEX MHF4	2.32	0.7
4	Laird	mFlexPIFA	PIFA	IPEX MHF4	2	N/A
5	Laird	Lyra 24P PCB Trace Antenna	PCB Trace	---	1.82	N/A

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host

1.1.5 Accessories

N/A

1.1.6 Channel List

BT-LE(Coding rate 125 kbps / Coding rate 500 kbps / Symbol rate 1 Mbps)							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
37	2402	9	2422	18	2442	28	2462
0	2404	10	2424	19	2444	29	2464
1	2406	38	2426	20	2446	30	2466
2	2408	11	2428	21	2448	31	2468
3	2410	12	2430	22	2450	32	2470
4	2412	13	2432	23	2452	33	2472
5	2414	14	2434	24	2454	34	2474
6	2416	15	2436	25	2456	35	2476
7	2418	16	2438	26	2458	36	2478
8	2420	17	2440	27	2460	39	2480

BT-LE(Symbol rate 2Mbps)							
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
0	2404	10	2424	20	2446	30	2466
1	2406	11	2428	21	2448	31	2468
2	2408	12	2430	22	2450	32	2470
3	2410	13	2432	23	2452	33	2472
4	2412	14	2434	24	2454	34	2474
5	2414	15	2436	25	2456	35	2476
6	2416	16	2438	26	2458	36	2478
7	2418	17	2440	27	2460	--	--
8	2420	18	2442	28	2462	--	--
9	2422	19	2444	29	2464	--	--

1.1.7 Test Tool and Duty Cycle

Test Tool	Simplicity Studio, SV5.6.0.0	
Modulation Mode	**Duty Cycle Of Test Signal (%)**	**Duty Factor (dB)**
BT-LE(Coding rate 125kbps)	98.35%	0.07
BT-LE(Coding rate 500kbps)	92.64%	0.33
BT-LE(Symbol rate 1Mbps)	86.46%	0.63
BT-LE(Symbol rate 2Mbps)	59.05%	2.29

1.1.8 Power Index of Test Tool

Laird part number: 453-00145, 20dBm, FHSS

Modulation Mode	Test Frequency (MHz)			
	2402	**2440**	**2478**	**2480**
BT-LE(Coding rate 125kbps)	20 dBm	20 dBm	20 dBm	20 dBm
BT-LE(Coding rate 500kbps)	20 dBm	20 dBm	20 dBm	20 dBm
BT-LE(Symbol rate 1Mbps)	20 dBm	20 dBm	20 dBm	20 dBm
BT-LE(Symbol rate 2Mbps)	20 dBm	20 dBm	20 dBm	---

Note: Laird hard-coded 19.7dBm for all channels at all data rates, except for 1Mbps, which has 17.4dBm hard-coded for 2480MHz, even if “Test Tool Power Index” of 20dBm is used.

Laird part number: 453-00148, 20dBm, FHSS

Modulation Mode	Test Frequency (MHz)			
	2402	**2440**	**2478**	**2480**
BT-LE(Coding rate 125kbps)	20 dBm	20 dBm	18 dBm	15 dBm
BT-LE(Coding rate 500kbps)	20 dBm	20 dBm	18 dBm	15 dBm
BT-LE(Symbol rate 1Mbps)	20 dBm	20 dBm	18 dBm	15 dBm
BT-LE(Symbol rate 2Mbps)	20 dBm	20 dBm	17 dBm	---

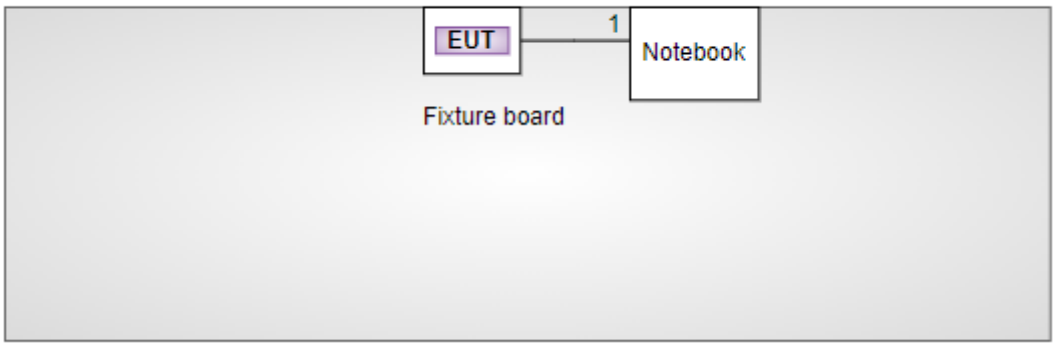
Note: Laird hard-coded 19.7dBm for all channels at all data rates, except for 1Mbps, which has 17.4dBm hard-coded for 2480MHz, even if “Test Tool Power Index” of 20dBm is used.

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5400	DoC	---
2	Fixture board	Laird	DVK-Lyra 24P	---	Provided by applicant.
3	50 ohm load	Woken	WTER-18S2	---	---

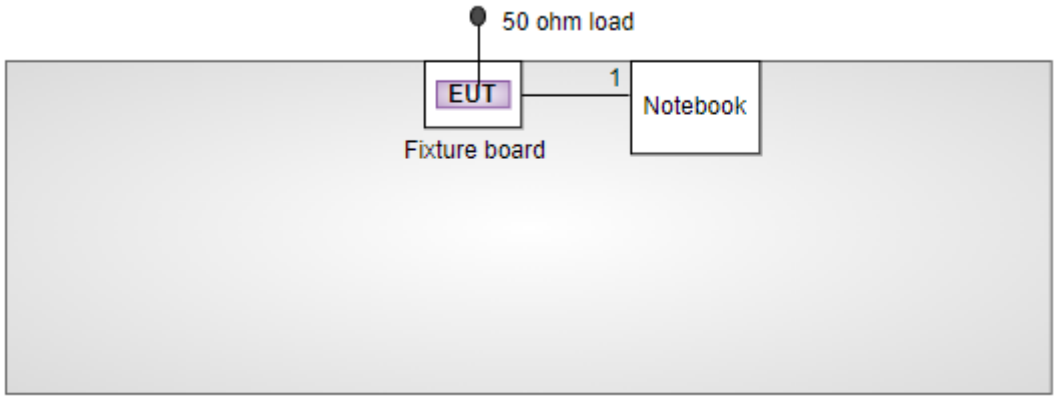
1.3 Test Setup Chart

Test Setup Diagram (Lyra 24P Chip antenna power=20dBm, FHSS)



No.	Signal cable / Length (m)
1	USB, 1m shielded without core

Test Setup Diagram (Lyra 24P RF trace pin power=20dBm, FHSS)



No.	Signal cable / Length (m)
1	USB, 1m shielded without core

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	May 10, 2023				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101658	Feb. 17, 2023	Feb. 16, 2024
LISN	R&S	ENV216	101295	Jan. 31, 2023	Jan. 30, 2024
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127667	Jan .03, 2023	Jan .02, 2024
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 17, 2022	Oct. 16, 2023
50 ohm terminal (Support Unit)	NA	50	03	Jun. 08, 2022	Jun. 07, 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 chamber3 / (03CH03-WS)				
Tested Date	Jan. 12 ~ Feb. 15, 2023				
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	101499	Mar. 08, 2022	Mar. 07, 2023
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 01, 2022	Oct. 31, 2023
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Jun. 28, 2022	Jun. 27, 2023
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 15, 2022	Dec. 14, 2023
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 27, 2022	Oct. 26, 2023
Preamplifier	EMC	EMC02325	980187	Jul. 16, 2022	Jul. 15, 2023
Preamplifier	EMC	EMC184045SE	980897	Aug. 01, 2022	Jul. 31, 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-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800 -001	Sep. 23, 2022	Sep. 22, 2023
LF cable-3M	EMC	EMC8D-NM-NM-300 0	131103	Sep. 23, 2022	Sep. 22, 2023
LF cable-13M	EMC	EMC8D-NM-NM-130 00	131104	Sep. 23, 2022	Sep. 22, 2023
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 23, 2022	Sep. 22, 2023
RF cable-8M	EMC	EMC104-SM-SM-80 00	181107	Sep. 23, 2022	Sep. 22, 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	Apr. 17 ~ May 15, 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. 23, 2022	Nov. 22, 2023
Power Sensor	Anritsu	MA2411B	1207366	Nov. 23, 2022	Nov. 22, 2023
Measurement Software	Sporton	SENSE-15247_FS	V5.10.8	NA	NA
Vector Signal Generator	R&S	SMW200A	109619	Jul. 26, 2022	Jul. 25, 2023
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	±3.96 dB
Unwanted Emission > 1GHz	±4.51 dB
Time	±0.1%

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-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.)
Test Site	03CH03-WS
Address of Test Site	No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807C
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	TX/RX	Test method	Test Configuration
AC Power Line Conducted Emissions	Symbol rate 1Mbps	2402	TX	Conducted	1, 2
Unwanted Emissions ≤ 1GHz	Symbol rate 1Mbps	2402	TX	Radiated	1, 2
Unwanted Emissions > 1GHz	Coding rate 125kbps Symbol rate 1Mbps Symbol rate 2Mbps	2402, 2440, 2478, 2480 2402, 2440, 2478, 2480 2402, 2440, 2478, 2478	TX	Radiated	1, 2
Unwanted Emissions > 1GHz	Symbol rate 2Mbps	2404, 2440, 2478	TX	Radiated	1, 2
Unwanted Emissions ≤ 1GHz	Symbol rate 1Mbps	2402	TX	Conducted	2
Unwanted Emissions > 1GHz	Coding rate 125kbps Symbol rate 1Mbps	2402, 2440, 2478, 2480 2402, 2440, 2478, 2480	TX	Conducted	2
Unwanted Emissions > 1GHz	Symbol rate 2Mbps	2404, 2440, 2478	TX	Conducted	2
Conducted Output Power	Coding rate 125kbps Coding rate 500kbps Symbol rate 1Mbps	2402, 2440, 2478, 2480 2402, 2440, 2478, 2480 2402, 2440, 2478, 2480	TX	Conducted	1, 2
	Symbol rate 2Mbps	2404, 2440, 2478	TX	Conducted	1, 2
Number of Hopping Channels	Coding rate 125kbps Symbol rate 1Mbps Symbol rate 2Mbps	2440	TX	Conducted	1, 2
Hopping Channel Separation 20dB and Occupied bandwidth	Coding rate 125kbps Symbol rate 1Mbps	2402, 2440, 2478, 2480 2402, 2440, 2478, 2480	TX	Conducted	1, 2
	Symbol rate 2Mbps	2404, 2440, 2478			
Dwell Time	Coding rate 125kbps Symbol rate 1Mbps Symbol rate 2Mbps	2440 2450	TX	Conducted	1, 2

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **X-plane** results were found as the worst case and were shown in this report.
2. The test configurations are listed as follows:
   1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna
   2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)
3. 50Ω terminator was connected to antenna port of EUT for radiated emission measurement.
4. Chipset DCDC Bypass mode Mode A: DCDC OFF (LDO ON)
   Chipset DCDC Regulation mode Mode B: DCDC ON
   Mode B is the worst case

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

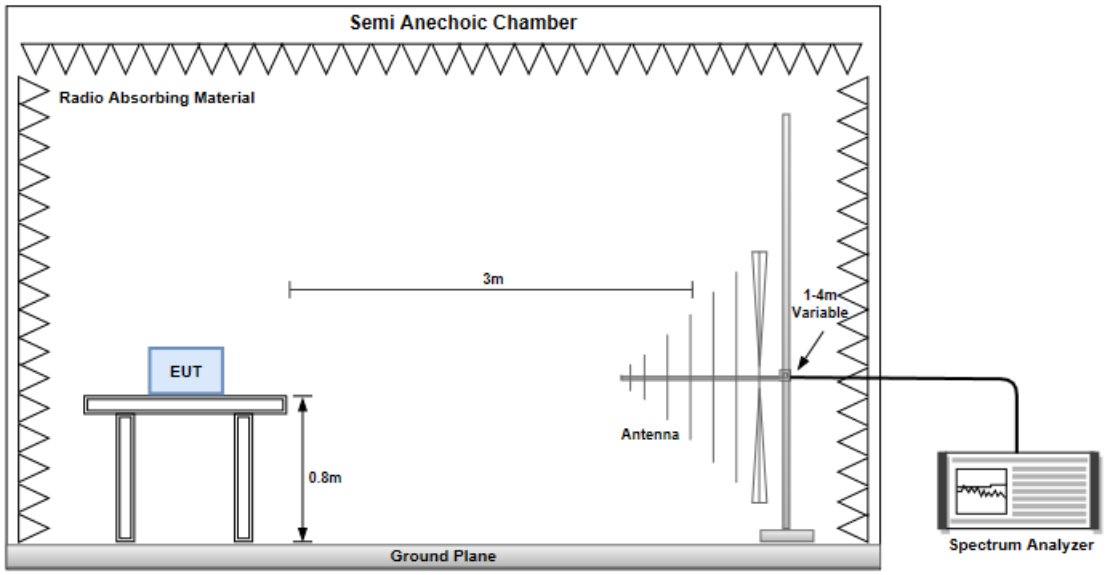
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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:

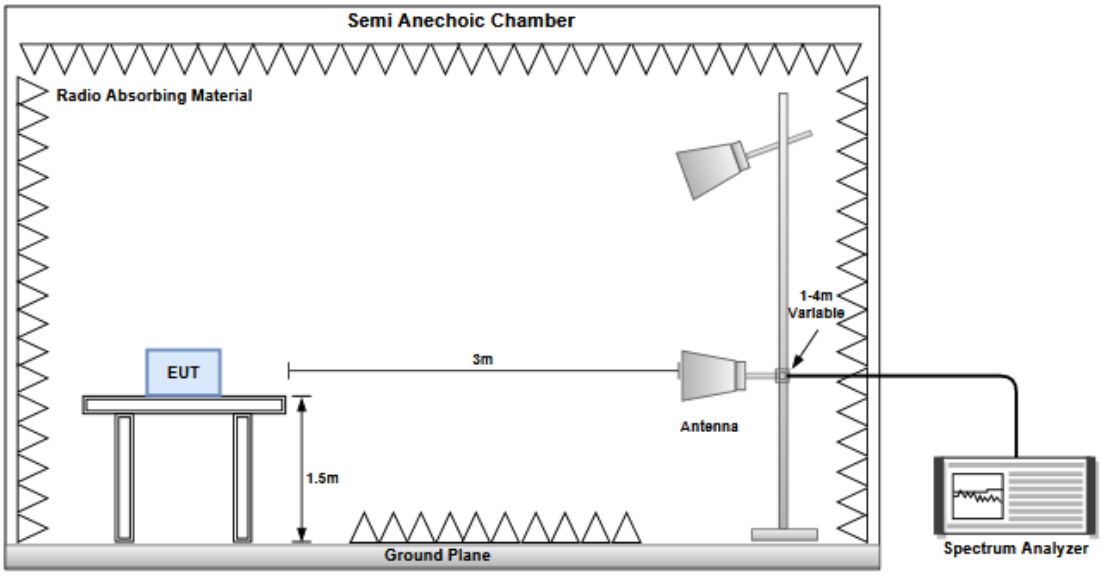
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.1.3 Test Setup

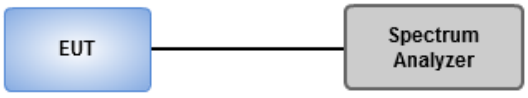
Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



Transmitter Conducted Unwanted Emissions (30MHz~40GHz)



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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

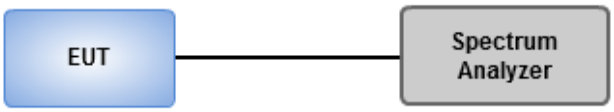
Reference level measurement

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	24-25°C / 62-65%	**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	24-25°C / 62-65%	**Tested By**	Roger Lu

Refer to Appendix C.

3.4 Number of Hopping Frequency

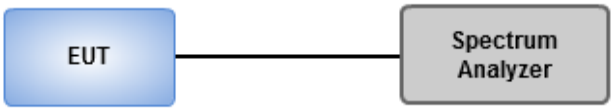
3.4.1 Limit of Number of Hopping Frequency

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	24-25°C / 62-65%	**Tested By**	Roger Lu

Refer to Appendix D.

3.5 20dB and Occupied Bandwidth

3.5.1 Test Procedures

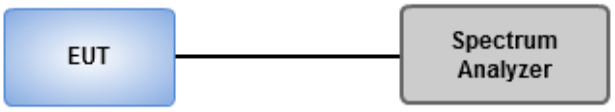
20dB Bandwidth

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	24-25°C / 62-65%	**Tested By**	Roger Lu

Refer to Appendix E.

3.6 Channel Separation

3.6.1 Limit of Channel Separation

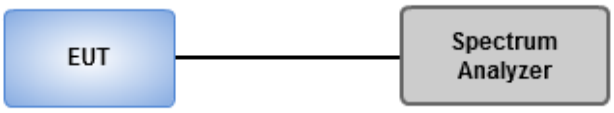
☐ Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

☒ 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	24-25°C / 62-65%	Tested By	Roger Lu

Refer to Appendix F.

3.7 Number of Dwell Time

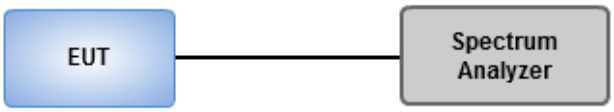
3.7.1 Limit of Dwell time

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	24-25°C / 62-65%	**Tested By**	Roger Lu

Refer to Appendix G.

3.8 AC Power Line Conducted Emissions

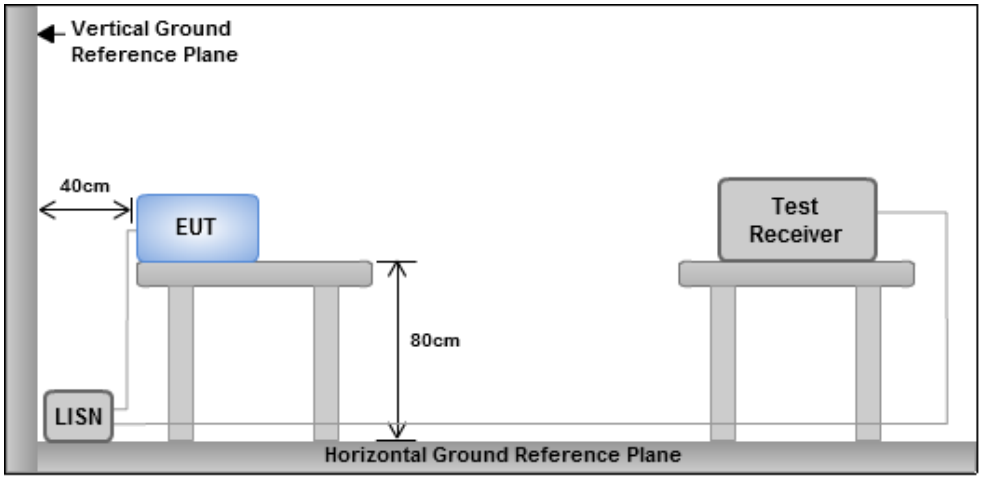
3.8.1 Limit of AC Power Line Conducted Emissions

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 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

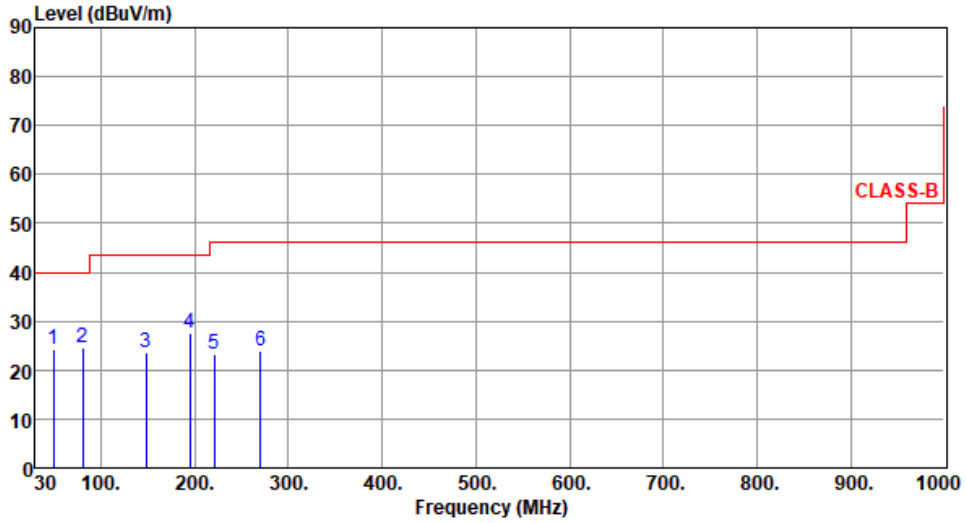
==END==

Test configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Unwanted Emissions (Below 1GHz)

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

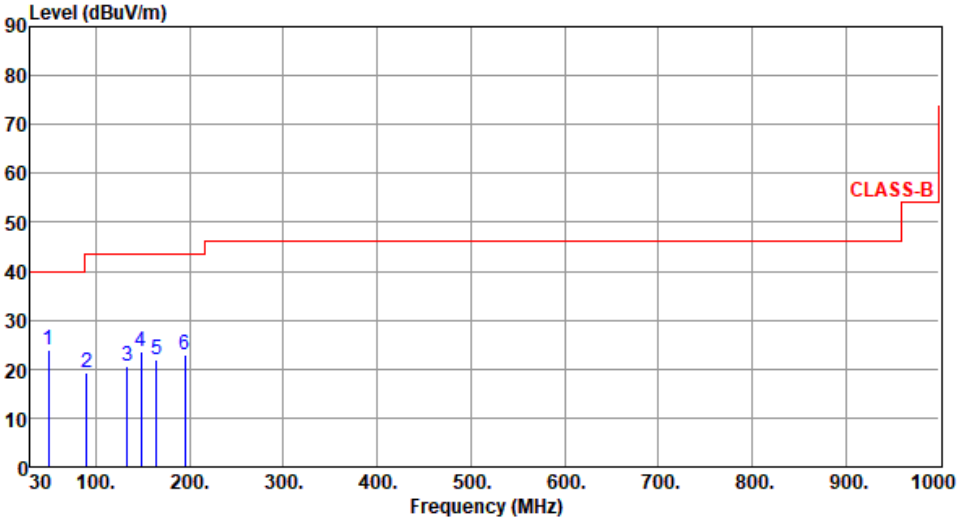


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	49.40	24.11	40.00	-15.89	32.40	-8.29	Peak	---	---
2	80.44	24.68	40.00	-15.32	38.44	-13.76	Peak	---	---
3	148.34	23.67	43.50	-19.83	32.29	-8.62	Peak	---	---
4	194.90	27.67	43.50	-15.83	39.17	-11.50	Peak	---	---
5	221.09	23.37	46.00	-22.63	35.18	-11.81	Peak	---	---
6	270.56	23.99	46.00	-22.01	32.78	-8.79	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	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63



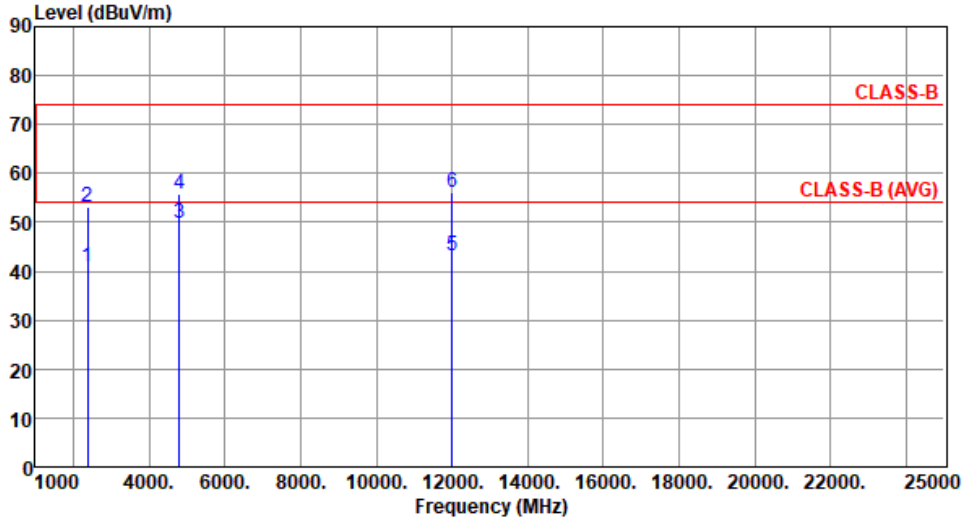
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	49.40	23.94	40.00	-16.06	32.23	-8.29	Peak	---	---
2	90.14	19.29	43.50	-24.21	33.86	-14.57	Peak	---	---
3	133.79	20.54	43.50	-22.96	30.28	-9.74	Peak	---	---
4	148.34	23.69	43.50	-19.81	32.31	-8.62	Peak	---	---
5	164.83	21.92	43.50	-21.58	30.60	-8.68	Peak	---	---
6	194.90	22.77	43.50	-20.73	34.27	-11.50	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.

Unwanted Emissions (Above 1GHz)

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):22 Humidity(%):63

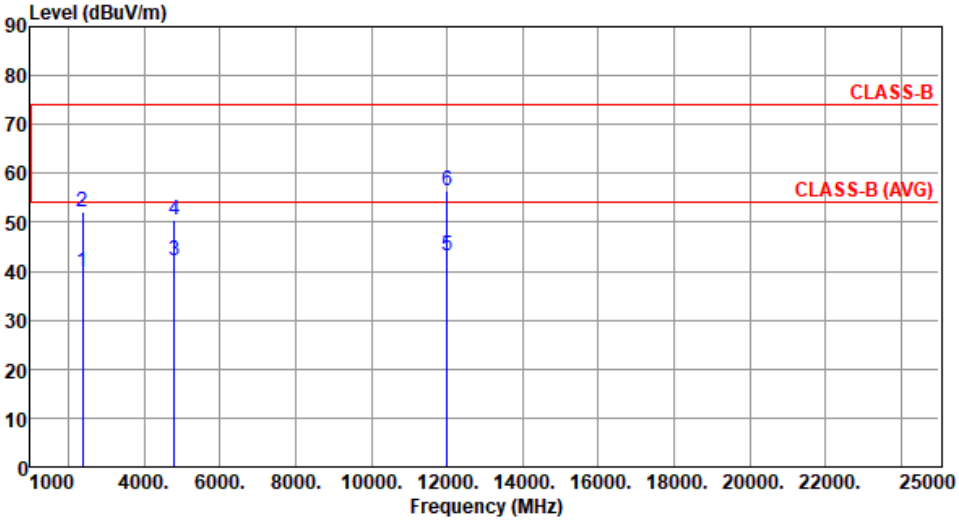


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	40.92	54.00	-13.08	44.71	-3.79	Average	100	326
2	2390.00	53.13	74.00	-20.87	56.92	-3.79	Peak	100	326
3	4804.00	49.84	54.00	-4.16	49.81	0.03	Average	100	351
4	4804.00	55.95	74.00	-18.05	55.92	0.03	Peak	100	351
5	12010.00	43.29	54.00	-10.71	35.53	7.76	Average	100	36
6	12010.00	56.11	74.00	-17.89	48.35	7.76	Peak	100	36

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):22 Humidity(%):63

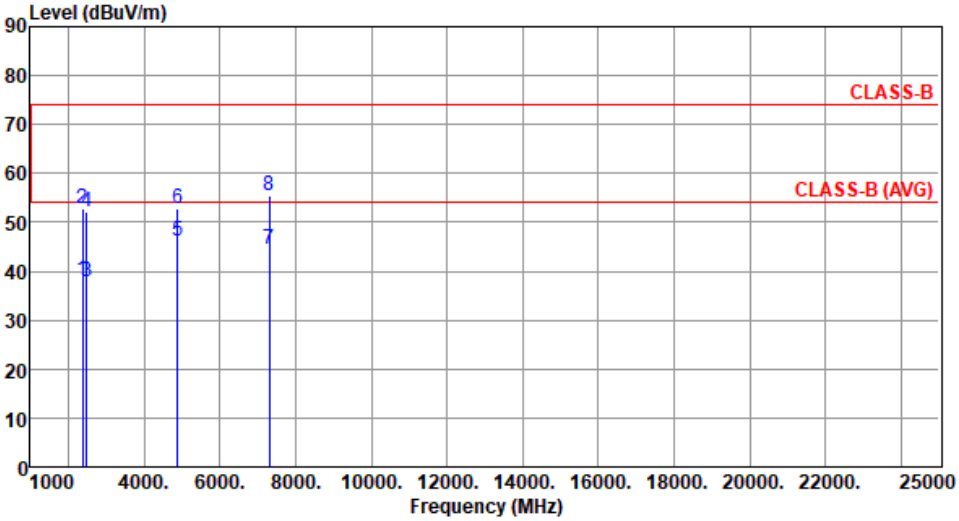


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.95	54.00	-14.05	43.74	-3.79	Average	305	293
2	2390.00	52.14	74.00	-21.86	55.93	-3.79	Peak	305	293
3	4804.00	42.16	54.00	-11.84	42.13	0.03	Average	100	311
4	4804.00	50.46	74.00	-23.54	50.43	0.03	Peak	100	311
5	12010.00	43.24	54.00	-10.76	35.48	7.76	Average	100	61
6	12010.00	56.38	74.00	-17.62	48.62	7.76	Peak	100	61

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):22 Humidity(%):63

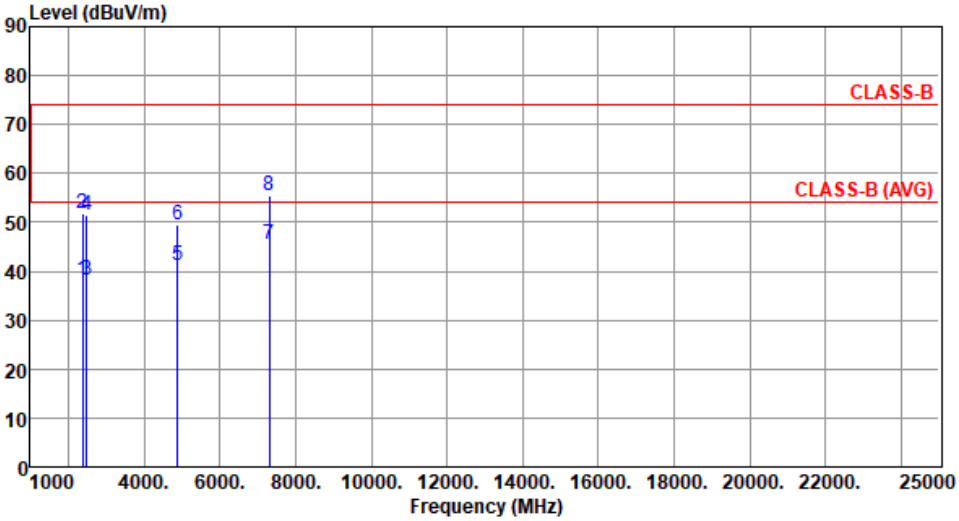


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.26	54.00	-15.74	42.05	-3.79	Average	108	225
2	2390.00	52.71	74.00	-21.29	56.50	-3.79	Peak	108	225
3	2483.50	37.96	54.00	-16.04	42.05	-4.09	Average	108	225
4	2483.50	52.21	74.00	-21.79	56.30	-4.09	Peak	108	225
5	4880.00	46.16	54.00	-7.84	46.06	0.10	Average	100	353
6	4880.00	52.69	74.00	-21.31	52.59	0.10	Peak	100	353
7	7320.00	44.58	54.00	-9.42	38.67	5.91	Average	331	309
8	7320.00	55.61	74.00	-18.39	49.70	5.91	Peak	331	309

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2440
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):22 Humidity(%):63

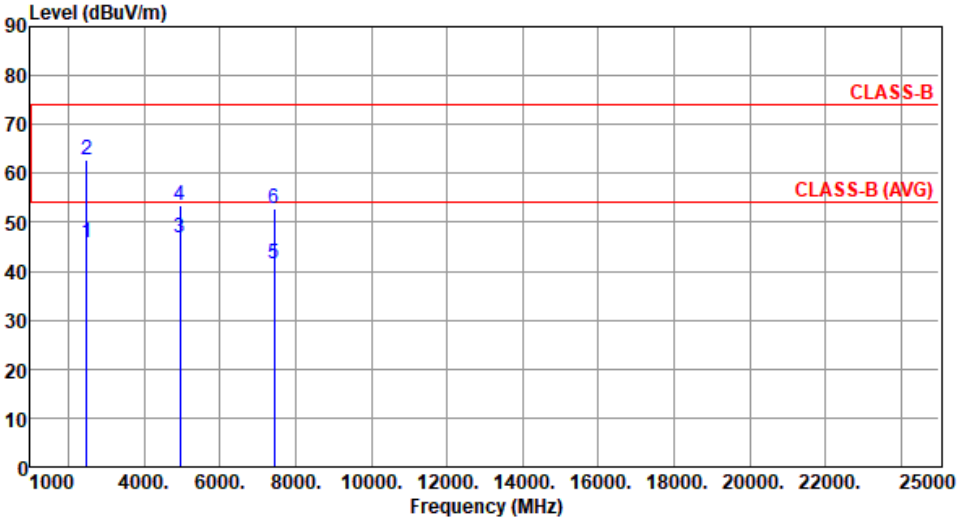


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.14	54.00	-15.86	41.93	-3.79	Average	302	296
2	2390.00	51.82	74.00	-22.18	55.61	-3.79	Peak	302	296
3	2483.50	38.04	54.00	-15.96	42.13	-4.09	Average	302	296
4	2483.50	51.36	74.00	-22.64	55.45	-4.09	Peak	302	296
5	4880.00	41.28	54.00	-12.72	41.18	0.10	Average	100	345
6	4880.00	49.51	74.00	-24.49	49.41	0.10	Peak	100	345
7	7320.00	45.41	54.00	-8.59	39.50	5.91	Average	236	15
8	7320.00	55.62	74.00	-18.38	49.71	5.91	Peak	236	15

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Brad Wu Temperature(°C):22 Humidity(%):63

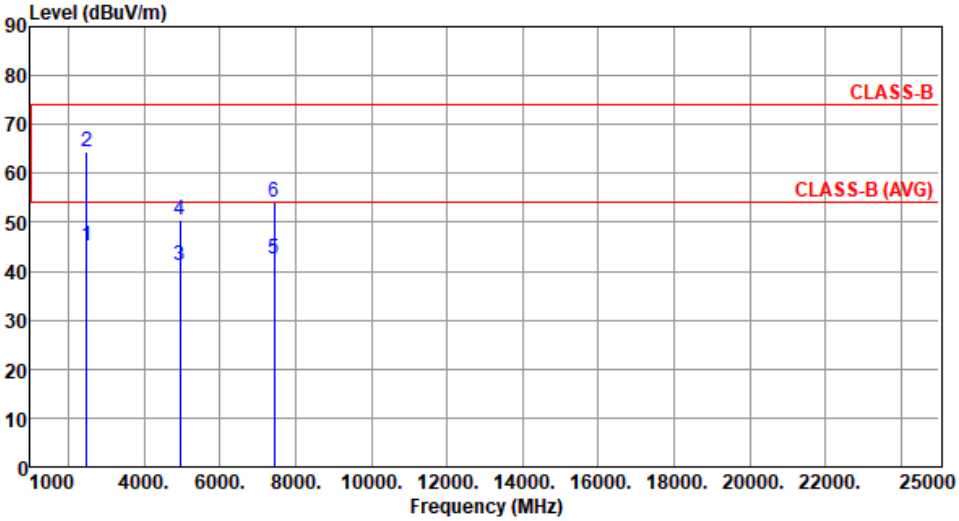


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	45.86	54.00	-8.14	49.95	-4.09	Average	128	184
2	2483.50	62.93	74.00	-11.07	67.02	-4.09	Peak	128	184
3	4956.00	46.78	54.00	-7.22	46.63	0.15	Average	100	18
4	4956.00	53.31	74.00	-20.69	53.16	0.15	Peak	100	18
5	7434.00	41.56	54.00	-12.44	35.60	5.96	Average	335	313
6	7434.00	52.74	74.00	-21.26	46.78	5.96	Peak	335	313

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2478
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):22 Humidity(%):63

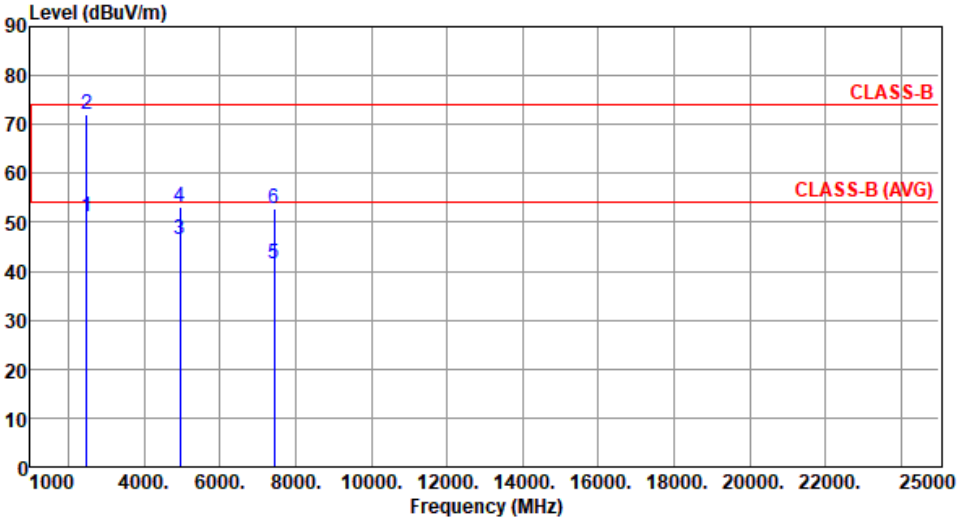


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	45.15	54.00	-8.85	49.24	-4.09	Average	318	257
2	2483.50	64.34	74.00	-9.66	68.43	-4.09	Peak	318	257
3	4956.00	41.32	54.00	-12.68	41.17	0.15	Average	100	349
4	4956.00	50.37	74.00	-23.63	50.22	0.15	Peak	100	349
5	7434.00	42.41	54.00	-11.59	36.45	5.96	Average	235	26
6	7434.00	54.16	74.00	-19.84	48.20	5.96	Peak	235	26

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2480
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):22 Humidity(%):63

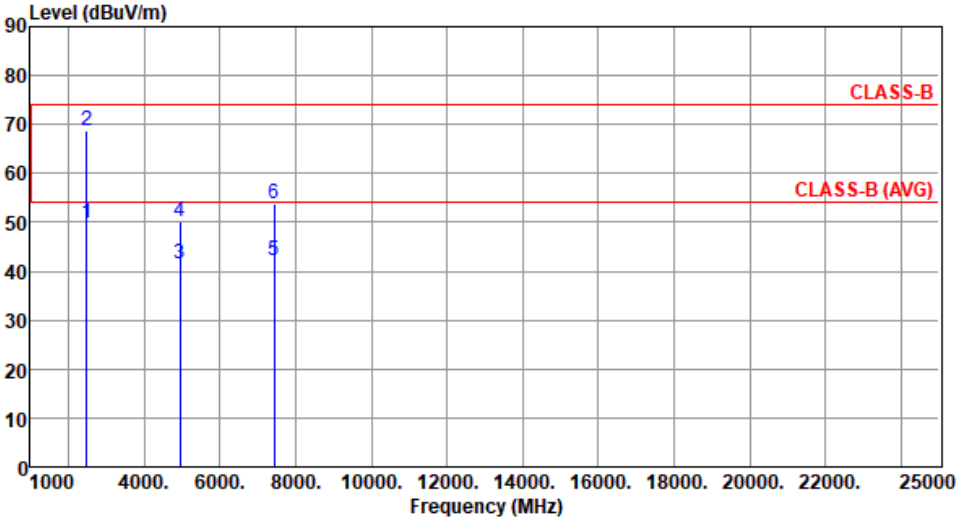


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	51.23	54.00	-2.77	55.32	-4.09	Average	100	322
2	2483.50	72.01	74.00	-1.99	76.10	-4.09	Peak	100	322
3	4960.00	46.35	54.00	-7.65	46.17	0.18	Average	100	16
4	4960.00	52.99	74.00	-21.01	52.81	0.18	Peak	100	16
5	7440.00	41.42	54.00	-12.58	35.46	5.96	Average	331	309
6	7440.00	52.65	74.00	-21.35	46.69	5.96	Peak	331	309

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2480
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):22 Humidity(%):63

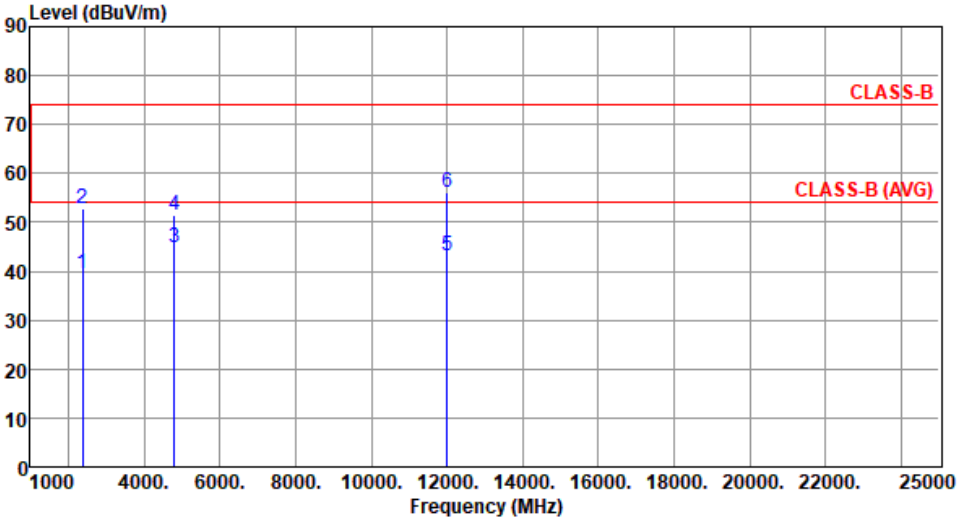


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	49.77	54.00	-4.23	53.86	-4.09	Average	316	262
2	2483.50	68.72	74.00	-5.28	72.81	-4.09	Peak	316	262
3	4960.00	41.58	54.00	-12.42	41.40	0.18	Average	100	352
4	4960.00	50.26	74.00	-23.74	50.08	0.18	Peak	100	352
5	7440.00	42.25	54.00	-11.75	36.29	5.96	Average	233	19
6	7440.00	53.92	74.00	-20.08	47.96	5.96	Peak	233	19

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

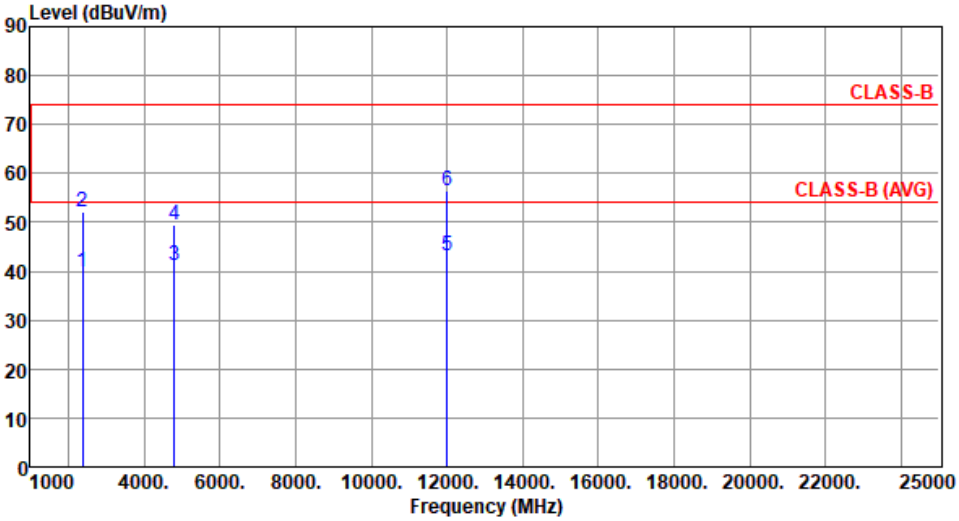


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.53	54.00	-14.47	43.32	-3.79	Average	112	238
2	2390.00	52.82	74.00	-21.18	56.61	-3.79	Peak	112	238
3	4804.00	44.78	54.00	-9.22	44.75	0.03	Average	257	12
4	4804.00	51.36	74.00	-22.64	51.33	0.03	Peak	257	12
5	12010.00	43.23	54.00	-10.77	35.47	7.76	Average	100	31
6	12010.00	56.02	74.00	-17.98	48.26	7.76	Peak	100	31

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

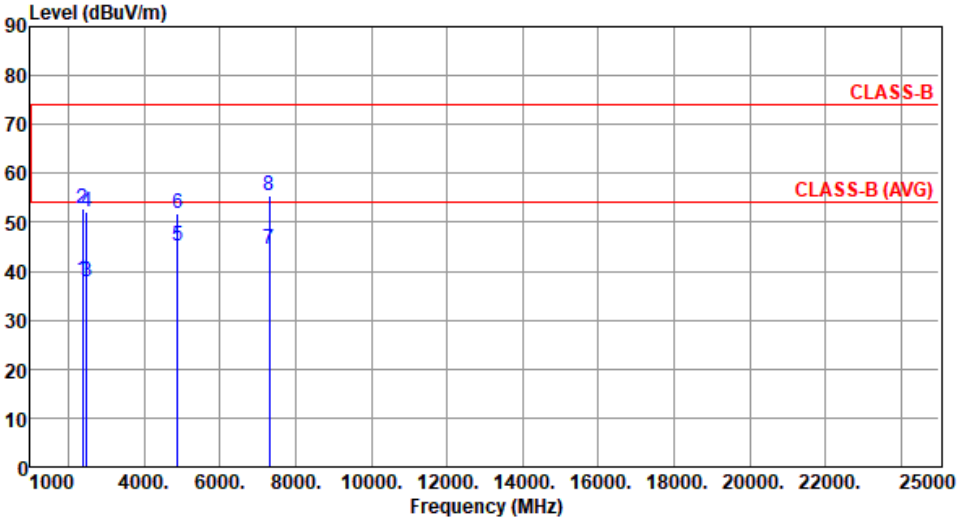


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.83	54.00	-14.17	43.62	-3.79	Average	302	292
2	2390.00	52.06	74.00	-21.94	55.85	-3.79	Peak	302	292
3	4804.00	41.05	54.00	-12.95	41.02	0.03	Average	105	345
4	4804.00	49.36	74.00	-24.64	49.33	0.03	Peak	105	345
5	12010.00	43.19	54.00	-10.81	35.43	7.76	Average	100	58
6	12010.00	56.33	74.00	-17.67	48.57	7.76	Peak	100	58

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

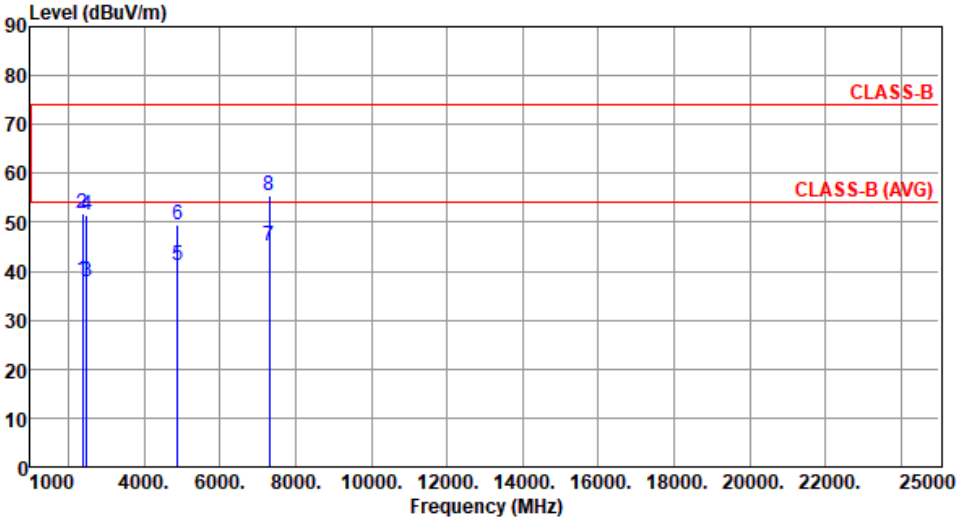


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.19	54.00	-15.81	41.98	-3.79	Average	110	224
2	2390.00	52.66	74.00	-21.34	56.45	-3.79	Peak	110	224
3	2483.50	37.90	54.00	-16.10	41.99	-4.09	Average	110	224
4	2483.50	52.12	74.00	-21.88	56.21	-4.09	Peak	110	224
5	4880.00	45.07	54.00	-8.93	44.97	0.10	Average	241	359
6	4880.00	51.75	74.00	-22.25	51.65	0.10	Peak	241	359
7	7320.00	44.47	54.00	-9.53	38.56	5.91	Average	336	305
8	7320.00	55.44	74.00	-18.56	49.53	5.91	Peak	336	305

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2440
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

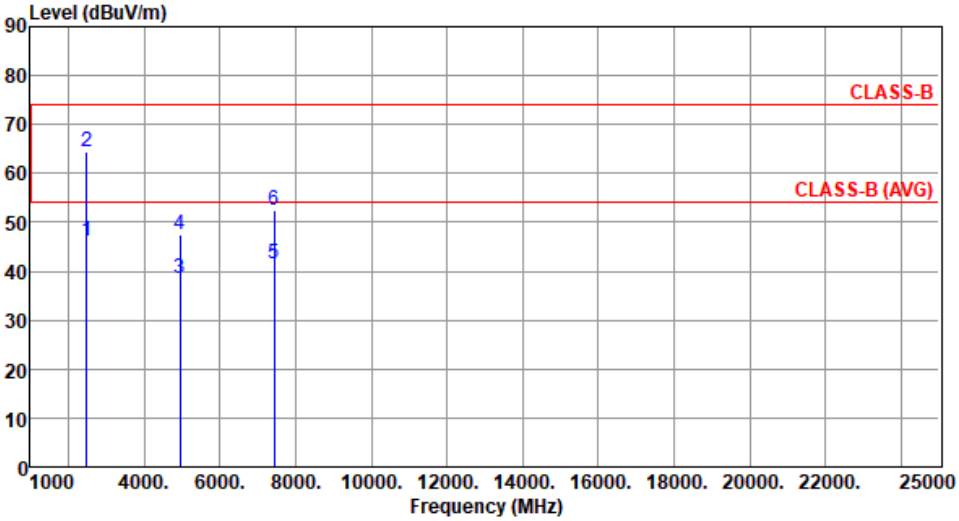


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.06	54.00	-15.94	41.85	-3.79	Average	301	299
2	2390.00	51.77	74.00	-22.23	55.56	-3.79	Peak	301	299
3	2483.50	37.99	54.00	-16.01	42.08	-4.09	Average	301	299
4	2483.50	51.32	74.00	-22.68	55.41	-4.09	Peak	301	299
5	4880.00	41.21	54.00	-12.79	41.11	0.10	Average	100	342
6	4880.00	49.42	74.00	-24.58	49.32	0.10	Peak	100	342
7	7320.00	45.20	54.00	-8.80	39.29	5.91	Average	234	14
8	7320.00	55.52	74.00	-18.48	49.61	5.91	Peak	234	14

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Paul Lin Temperature(℃):23 Humidity(%):63

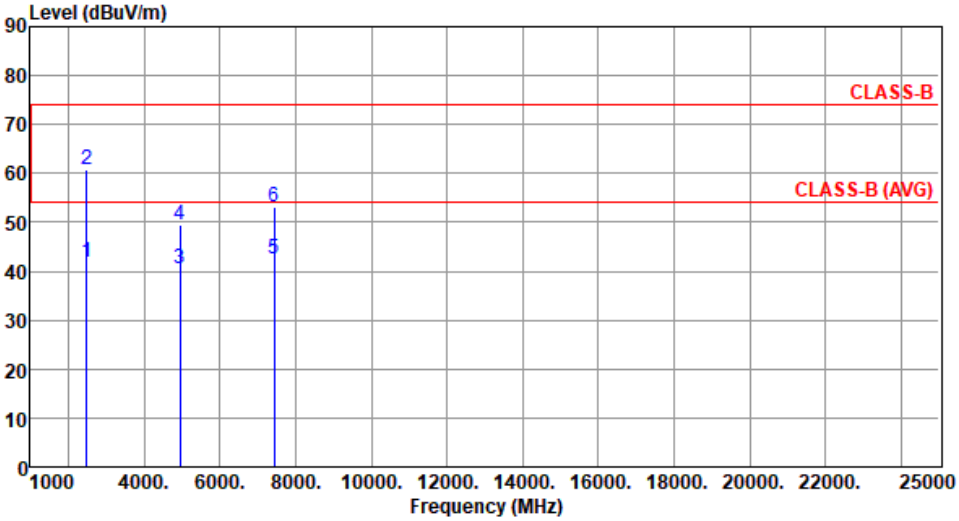


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	46.01	54.00	-7.99	50.10	-4.09	Average	127	181
2	2483.50	64.53	74.00	-9.47	68.62	-4.09	Peak	127	181
3	4956.00	38.51	54.00	-15.49	38.36	0.15	Average	247	349
4	4956.00	47.58	74.00	-26.42	47.43	0.15	Peak	247	349
5	7434.00	41.56	54.00	-12.44	35.60	5.96	Average	337	318
6	7434.00	52.63	74.00	-21.37	46.67	5.96	Peak	337	318

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2478
Polarization	Vertical		

Test By :Paul Lin Temperature(℃):23 Humidity(%):63

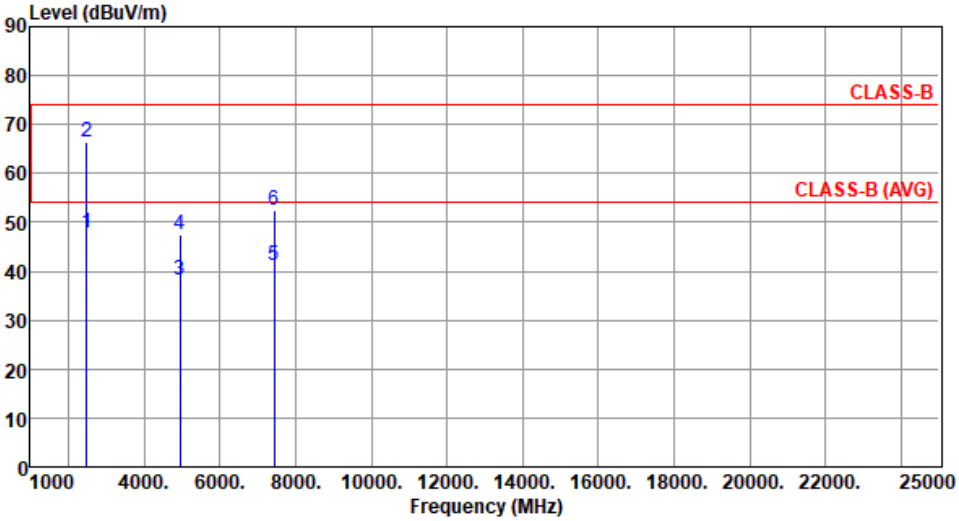


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	42.00	54.00	-12.00	46.09	-4.09	Average	322	99
2	2483.50	60.92	74.00	-13.08	65.01	-4.09	Peak	322	99
3	4956.00	40.61	54.00	-13.39	40.46	0.15	Average	100	345
4	4956.00	49.32	74.00	-24.68	49.17	0.15	Peak	100	345
5	7434.00	42.36	54.00	-11.64	36.40	5.96	Average	242	23
6	7434.00	53.28	74.00	-20.72	47.32	5.96	Peak	242	23

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2480
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

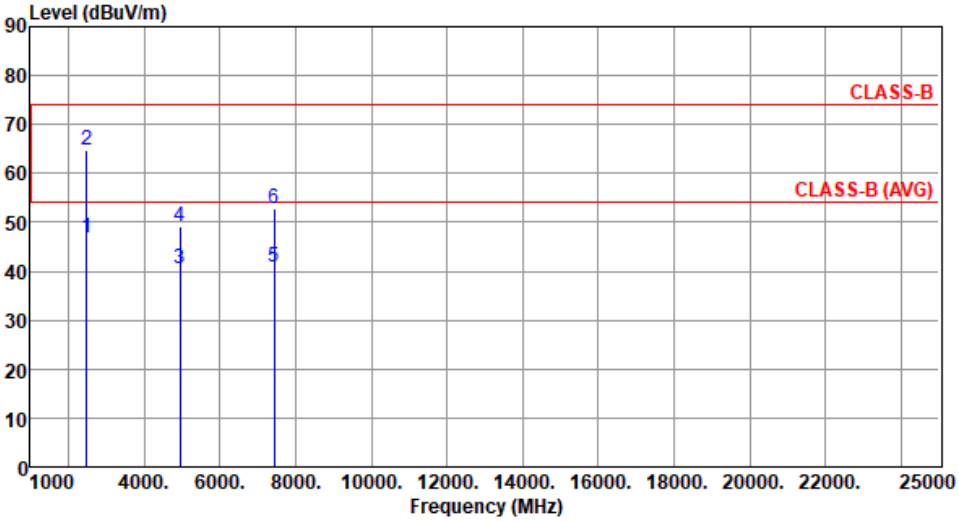


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	47.94	54.00	-6.06	52.03	-4.09	Average	129	228
2	2483.50	66.44	74.00	-7.56	70.53	-4.09	Peak	129	228
3	4960.00	38.18	54.00	-15.82	38.00	0.18	Average	242	358
4	4960.00	47.35	74.00	-26.65	47.17	0.18	Peak	242	358
5	7440.00	41.21	54.00	-12.79	35.25	5.96	Average	335	308
6	7440.00	52.45	74.00	-21.55	46.49	5.96	Peak	335	308

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2480
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

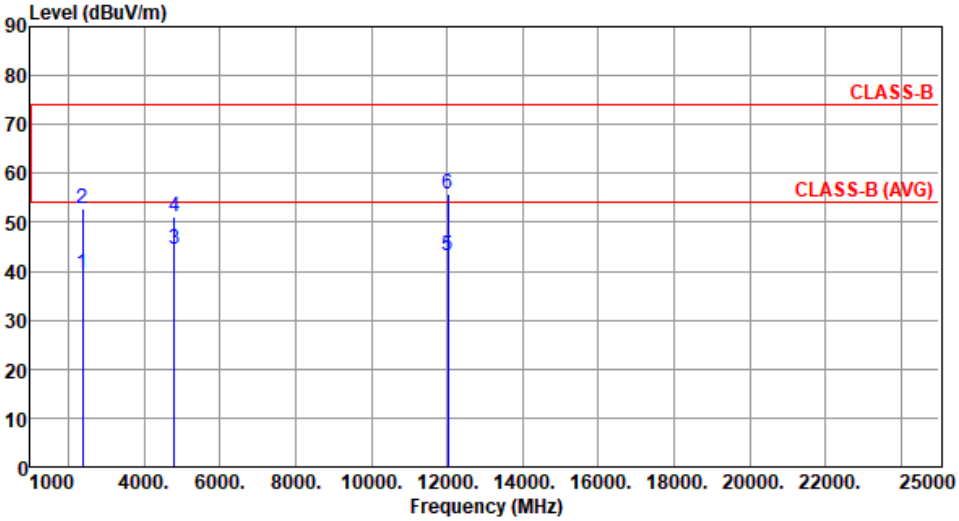


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	46.98	54.00	-7.02	51.07	-4.09	Average	303	280
2	2483.50	64.92	74.00	-9.08	69.01	-4.09	Peak	303	280
3	4960.00	40.38	54.00	-13.62	40.20	0.18	Average	100	358
4	4960.00	49.03	74.00	-24.97	48.85	0.18	Peak	100	358
5	7440.00	41.01	54.00	-12.99	35.05	5.96	Average	236	18
6	7440.00	52.81	74.00	-21.19	46.85	5.96	Peak	236	18

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2404
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

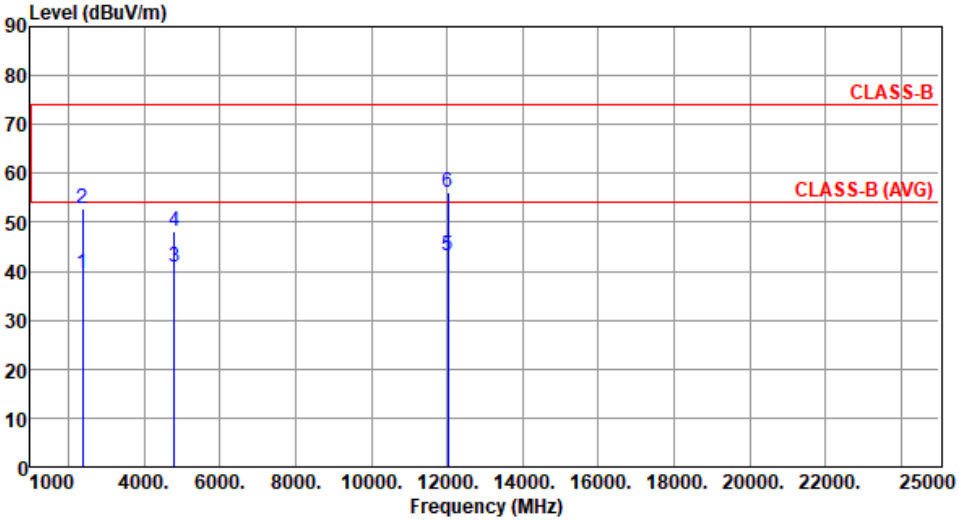


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.62	54.00	-14.38	43.41	-3.79	Average	110	224
2	2390.00	52.83	74.00	-21.17	56.62	-3.79	Peak	110	224
3	4808.00	44.51	54.00	-9.49	44.46	0.05	Average	255	15
4	4808.00	51.22	74.00	-22.78	51.17	0.05	Peak	255	15
5	12020.00	43.14	54.00	-10.86	35.37	7.77	Average	100	39
6	12020.00	55.84	74.00	-18.16	48.07	7.77	Peak	100	39

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2404
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

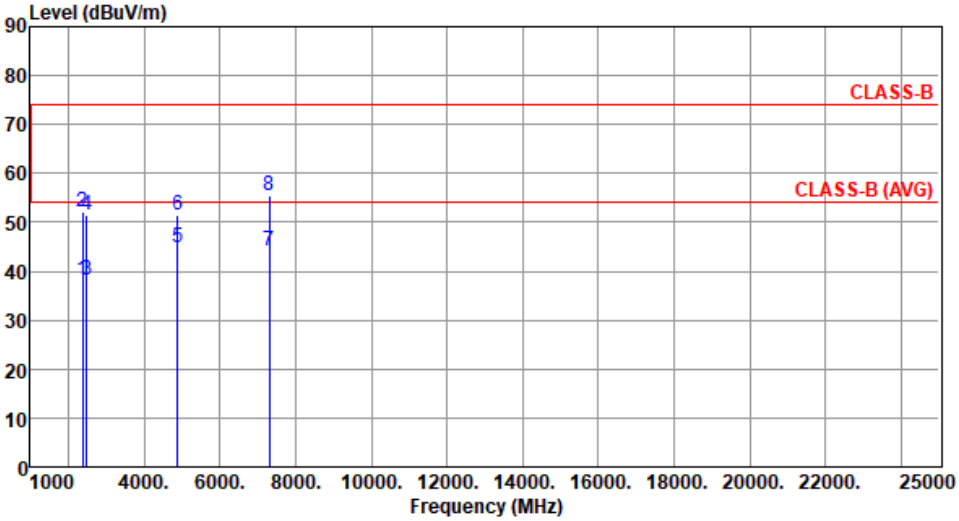


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.54	54.00	-14.46	43.33	-3.79	Average	301	295
2	2390.00	52.76	74.00	-21.24	56.55	-3.79	Peak	301	295
3	4808.00	40.88	54.00	-13.12	40.83	0.05	Average	100	341
4	4808.00	48.25	74.00	-25.75	48.20	0.05	Peak	100	341
5	12020.00	43.12	54.00	-10.88	35.35	7.77	Average	100	61
6	12020.00	56.29	74.00	-17.71	48.52	7.77	Peak	100	61

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

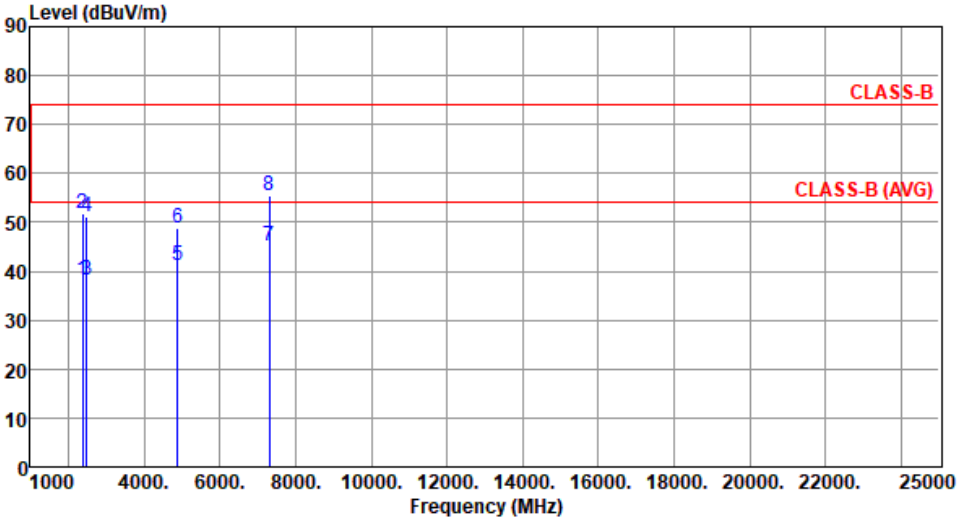


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.19	54.00	-15.81	41.98	-3.79	Average	107	239
2	2390.00	51.98	74.00	-22.02	55.77	-3.79	Peak	107	239
3	2483.50	38.12	54.00	-15.88	42.21	-4.09	Average	107	239
4	2483.50	51.32	74.00	-22.68	55.41	-4.09	Peak	107	239
5	4880.00	44.85	54.00	-9.15	44.75	0.10	Average	244	356
6	4880.00	51.62	74.00	-22.38	51.52	0.10	Peak	244	356
7	7320.00	44.29	54.00	-9.71	38.38	5.91	Average	331	302
8	7320.00	55.36	74.00	-18.64	49.45	5.91	Peak	331	302

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2440
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

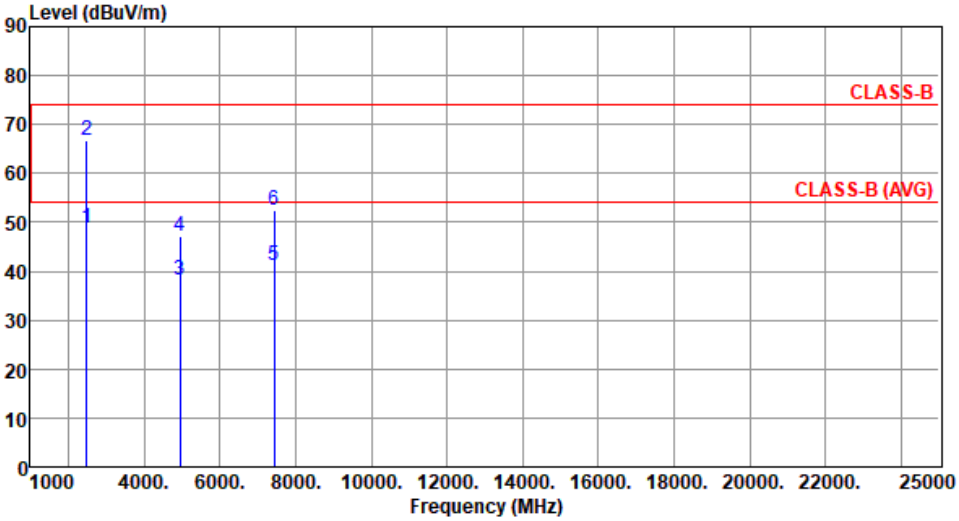


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.12	54.00	-15.88	41.91	-3.79	Average	305	306
2	2390.00	51.84	74.00	-22.16	55.63	-3.79	Peak	305	306
3	2483.50	38.05	54.00	-15.95	42.14	-4.09	Average	305	306
4	2483.50	51.24	74.00	-22.76	55.33	-4.09	Peak	305	306
5	4880.00	41.05	54.00	-12.95	40.95	0.10	Average	100	345
6	4880.00	48.92	74.00	-25.08	48.82	0.10	Peak	100	345
7	7320.00	45.16	54.00	-8.84	39.25	5.91	Average	241	25
8	7320.00	55.39	74.00	-18.61	49.48	5.91	Peak	241	25

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Brad Wu Temperature(°C):23 Humidity(%):63

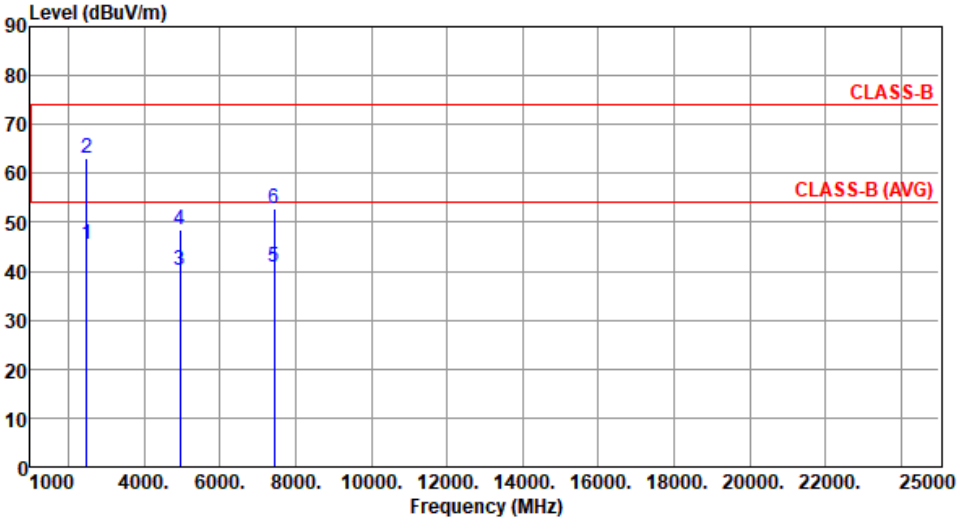


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	48.88	54.00	-5.12	52.97	-4.09	Average	108	239
2	2483.50	66.62	74.00	-7.38	70.71	-4.09	Peak	108	239
3	4956.00	38.04	54.00	-15.96	37.89	0.15	Average	244	355
4	4956.00	47.26	74.00	-26.74	47.11	0.15	Peak	244	355
5	7434.00	41.12	54.00	-12.88	35.16	5.96	Average	339	311
6	7434.00	52.36	74.00	-21.64	46.40	5.96	Peak	339	311

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2478
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):23 Humidity(%):63



	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	2483.50	45.62	54.00	-8.38	49.71	-4.09	Average	304	289
2	2483.50	63.24	74.00	-10.76	67.33	-4.09	Peak	304	289
3	4956.00	40.11	54.00	-13.89	39.96	0.15	Average	100	351
4	4956.00	48.42	74.00	-25.58	48.27	0.15	Peak	100	351
5	7434.00	40.84	54.00	-13.16	34.88	5.96	Average	233	38
6	7434.00	52.66	74.00	-21.34	46.70	5.96	Peak	233	38

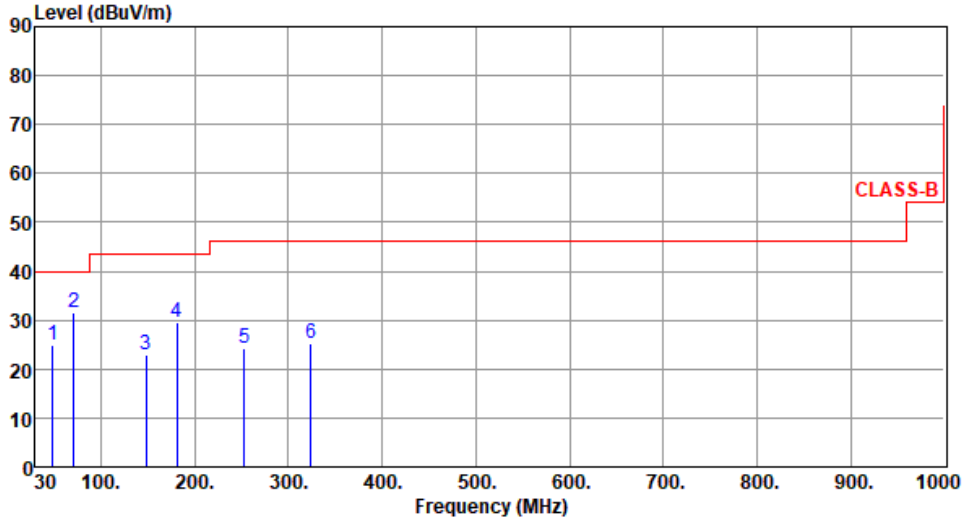
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Test configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Unwanted Emissions (Below 1GHz)

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

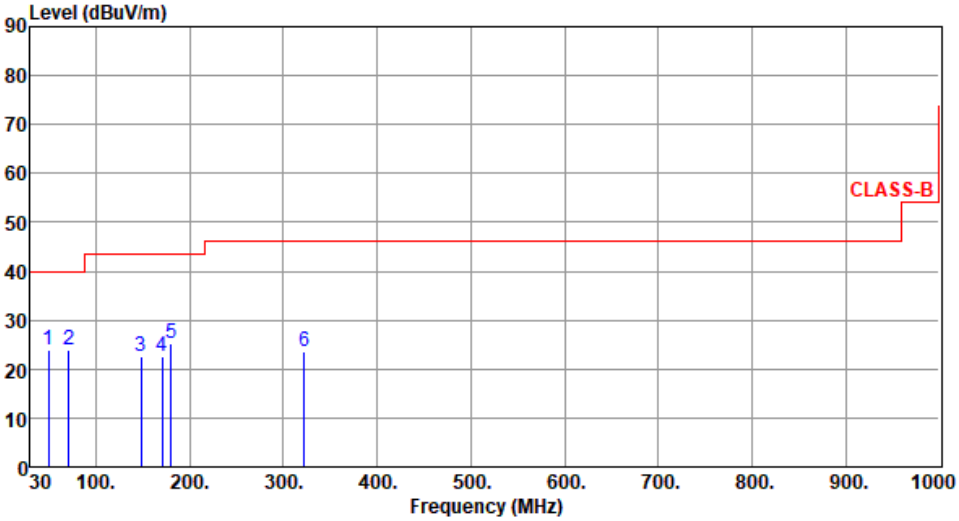


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	48.43	24.75	40.00	-15.25	33.06	-8.31	Peak	---	---
2	70.74	31.67	40.00	-8.33	42.72	-11.05	Peak	---	---
3	148.34	23.04	43.50	-20.46	31.66	-8.62	Peak	---	---
4	181.32	29.62	43.50	-13.88	39.88	-10.26	Peak	---	---
5	253.10	24.35	46.00	-21.65	33.90	-9.55	Peak	---	---
6	323.91	25.12	46.00	-20.88	32.18	-7.06	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	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63



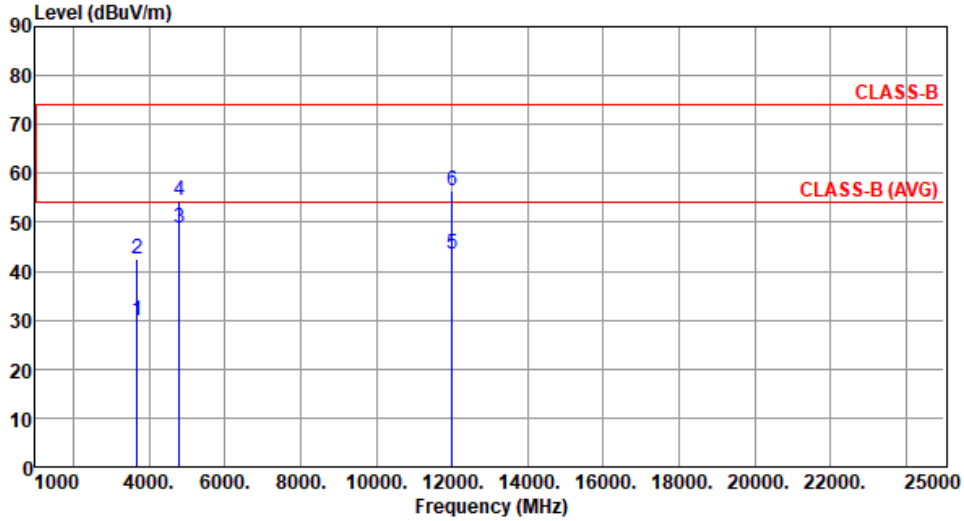
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	49.40	23.77	40.00	-16.23	32.06	-8.29	Peak	---	---
2	70.74	24.00	40.00	-16.00	35.05	-11.05	Peak	---	---
3	148.34	22.66	43.50	-20.84	31.28	-8.62	Peak	---	---
4	170.65	22.72	43.50	-20.78	31.82	-9.10	Peak	---	---
5	180.35	25.20	43.50	-18.30	35.30	-10.10	Peak	---	---
6	321.97	23.44	46.00	-22.56	30.59	-7.15	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.

Unwanted Emissions (Above 1GHz)

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

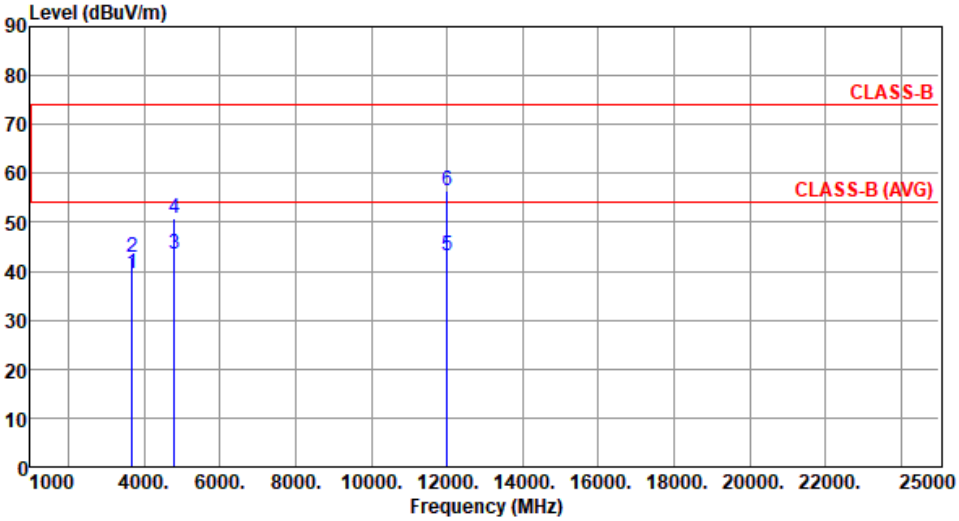


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3688.00	29.79	54.00	-24.21	31.48	-1.69	Average	100	82
2	3688.00	42.44	74.00	-31.56	44.13	-1.69	Peak	100	82
3	4804.00	48.79	54.00	-5.21	48.76	0.03	Average	100	173
4	4804.00	54.36	74.00	-19.64	54.33	0.03	Peak	100	173
5	12010.00	43.34	54.00	-10.66	35.58	7.76	Average	100	55
6	12010.00	56.34	74.00	-17.66	48.58	7.76	Peak	100	55

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

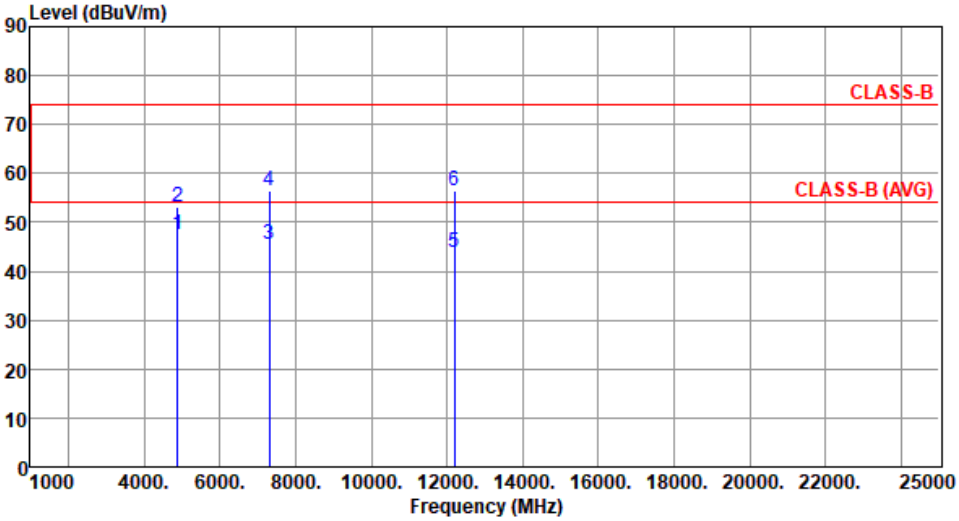


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3688.00	39.58	54.00	-14.42	41.27	-1.69	Average	100	34
2	3688.00	42.76	74.00	-31.24	44.45	-1.69	Peak	100	34
3	4804.00	43.35	54.00	-10.65	43.32	0.03	Average	100	151
4	4804.00	50.92	74.00	-23.08	50.89	0.03	Peak	100	151
5	12010.00	43.12	54.00	-10.88	35.36	7.76	Average	100	47
6	12010.00	56.54	74.00	-17.46	48.78	7.76	Peak	100	47

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

Test By :Brad Wu Temperature(°C):24 Humidity(%):63

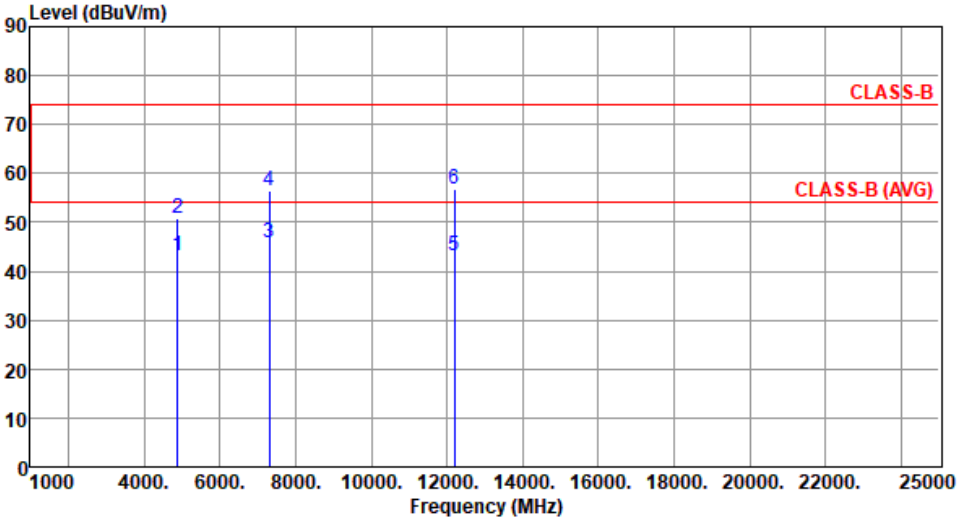


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4880.00	47.56	54.00	-6.44	47.46	0.10	Average	100	186
2	4880.00	53.19	74.00	-20.81	53.09	0.10	Peak	100	186
3	7320.00	45.37	54.00	-8.63	39.46	5.91	Average	100	178
4	7320.00	56.55	74.00	-17.45	50.64	5.91	Peak	100	178
5	12200.00	43.89	54.00	-10.11	36.30	7.59	Average	100	61
6	12200.00	56.37	74.00	-17.63	48.78	7.59	Peak	100	61

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2440
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

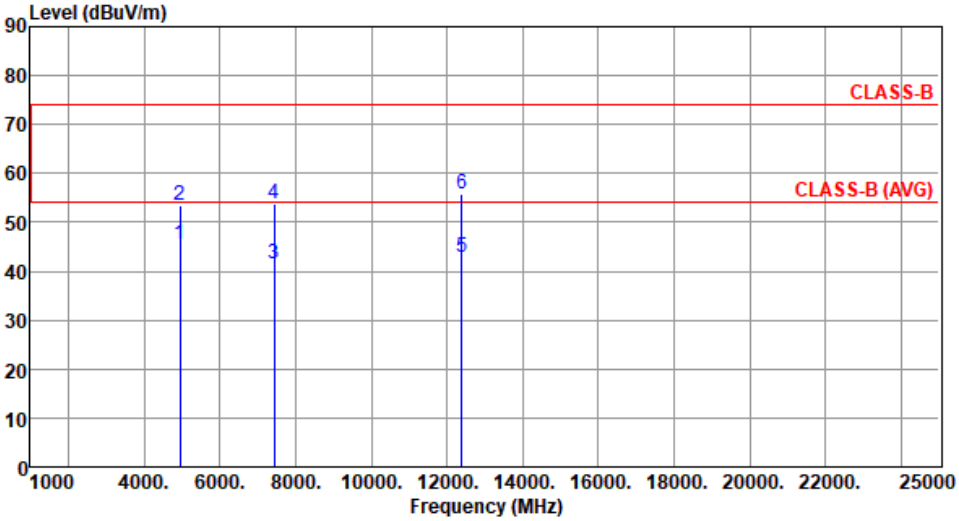


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4880.00	43.15	54.00	-10.85	43.05	0.10	Average	100	142
2	4880.00	50.71	74.00	-23.29	50.61	0.10	Peak	100	142
3	7320.00	45.76	54.00	-8.24	39.85	5.91	Average	100	32
4	7320.00	56.49	74.00	-17.51	50.58	5.91	Peak	100	32
5	12200.00	43.15	54.00	-10.85	35.56	7.59	Average	100	56
6	12200.00	56.81	74.00	-17.19	49.22	7.59	Peak	100	56

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Paul Lin Temperature(℃):24 Humidity(%):63

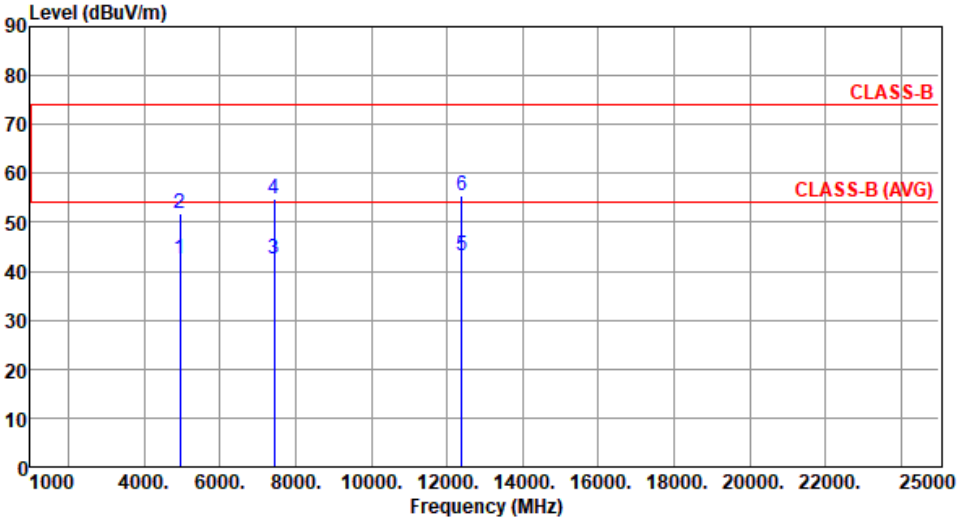


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4956.00	45.37	54.00	-8.63	45.22	0.15	Average	100	168
2	4956.00	53.47	74.00	-20.53	53.32	0.15	Peak	100	168
3	7434.00	41.50	54.00	-12.50	35.54	5.96	Average	100	210
4	7434.00	53.73	74.00	-20.27	47.77	5.96	Peak	100	210
5	12390.00	42.88	54.00	-11.12	35.80	7.08	Average	100	75
6	12390.00	55.67	74.00	-18.33	48.59	7.08	Peak	100	75

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2478
Polarization	Vertical		

Test By :Paul Lin Temperature(℃):24 Humidity(%):63

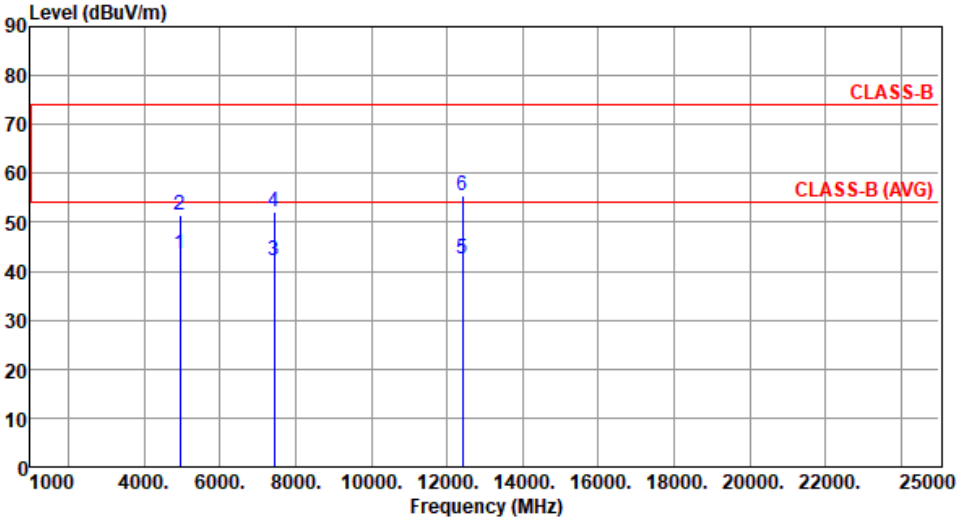


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4956.00	42.55	54.00	-11.45	42.40	0.15	Average	100	136
2	4956.00	51.96	74.00	-22.04	51.81	0.15	Peak	100	136
3	7434.00	42.45	54.00	-11.55	36.49	5.96	Average	100	27
4	7434.00	54.88	74.00	-19.12	48.92	5.96	Peak	100	27
5	12390.00	43.02	54.00	-10.98	35.94	7.08	Average	100	89
6	12390.00	55.34	74.00	-18.66	48.26	7.08	Peak	100	89

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2480
Polarization	Horizontal		

Test By :Brad Wu Temperature(°C):24 Humidity(%):63

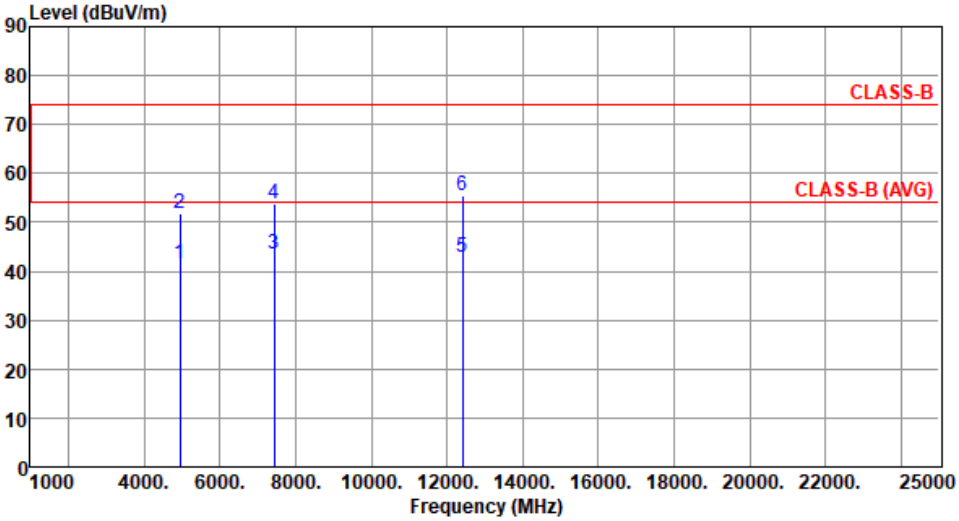


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4960.00	43.35	54.00	-10.65	43.17	0.18	Average	100	166
2	4960.00	51.34	74.00	-22.66	51.16	0.18	Peak	100	166
3	7440.00	42.12	54.00	-11.88	36.16	5.96	Average	100	205
4	7440.00	52.11	74.00	-21.89	46.15	5.96	Peak	100	205
5	12400.00	42.67	54.00	-11.33	35.64	7.03	Average	100	68
6	12400.00	55.30	74.00	-18.70	48.27	7.03	Peak	100	68

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).

Modulation	BT-LE (125kbps)	**Test Freq. (MHz)**	2480
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

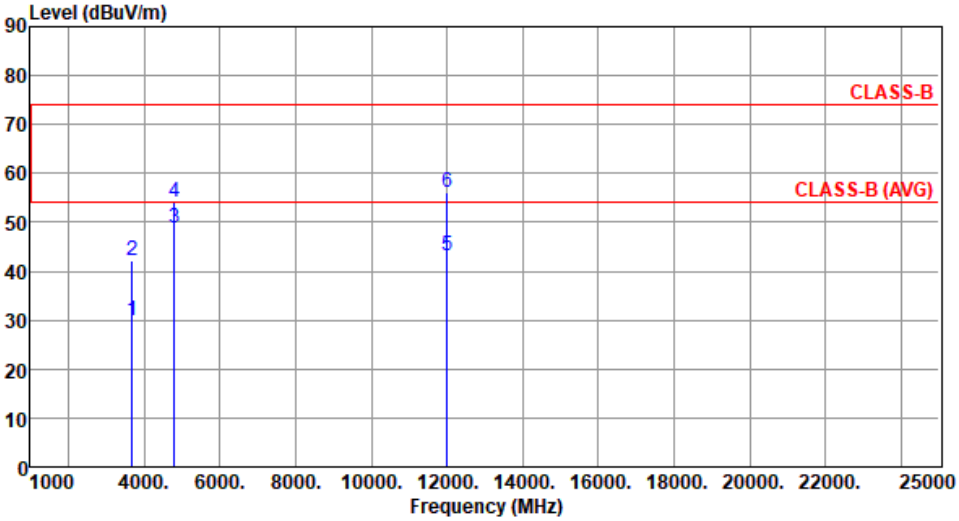


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4960.00	41.46	54.00	-12.54	41.28	0.18	Average	100	127
2	4960.00	51.82	74.00	-22.18	51.64	0.18	Peak	100	127
3	7440.00	43.39	54.00	-10.61	37.43	5.96	Average	100	45
4	7440.00	53.67	74.00	-20.33	47.71	5.96	Peak	100	45
5	12400.00	42.97	54.00	-11.03	35.94	7.03	Average	100	63
6	12400.00	55.54	74.00	-18.46	48.51	7.03	Peak	100	63

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

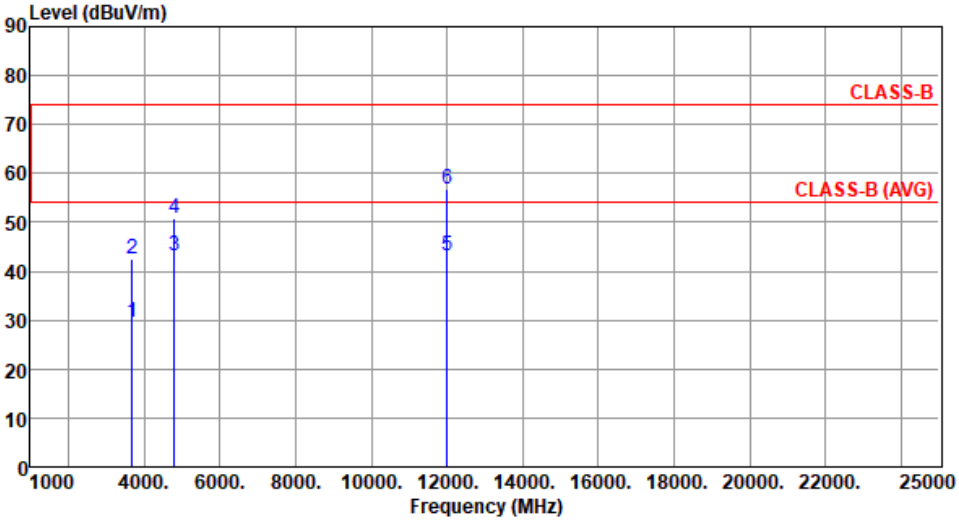


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3688.00	29.83	54.00	-24.17	31.52	-1.69	Average	100	76
2	3688.00	42.23	74.00	-31.77	43.92	-1.69	Peak	100	76
3	4804.00	48.74	54.00	-5.26	48.71	0.03	Average	100	162
4	4804.00	54.27	74.00	-19.73	54.24	0.03	Peak	100	162
5	12010.00	43.21	54.00	-10.79	35.45	7.76	Average	100	48
6	12010.00	56.12	74.00	-17.88	48.36	7.76	Peak	100	48

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

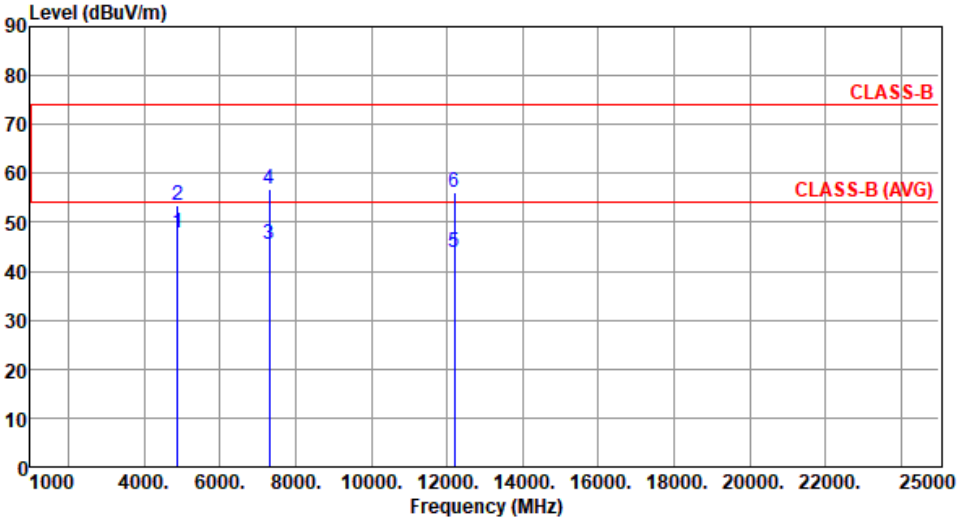


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3688.00	29.45	54.00	-24.55	31.14	-1.69	Average	100	28
2	3688.00	42.66	74.00	-31.34	44.35	-1.69	Peak	100	28
3	4804.00	43.21	54.00	-10.79	43.18	0.03	Average	100	149
4	4804.00	50.78	74.00	-23.22	50.75	0.03	Peak	100	149
5	12010.00	43.19	54.00	-10.81	35.43	7.76	Average	100	53
6	12010.00	56.68	74.00	-17.32	48.92	7.76	Peak	100	53

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

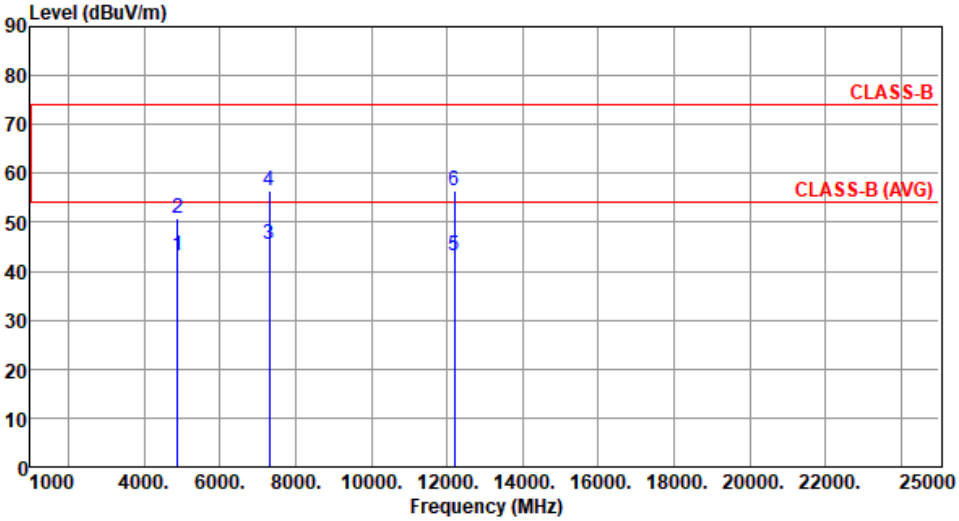


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4880.00	47.88	54.00	-6.12	47.78	0.10	Average	100	162
2	4880.00	53.41	74.00	-20.59	53.31	0.10	Peak	100	162
3	7320.00	45.54	54.00	-8.46	39.63	5.91	Average	100	188
4	7320.00	56.69	74.00	-17.31	50.78	5.91	Peak	100	188
5	12200.00	43.82	54.00	-10.18	36.23	7.59	Average	100	55
6	12200.00	56.16	74.00	-17.84	48.57	7.59	Peak	100	55

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2440
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

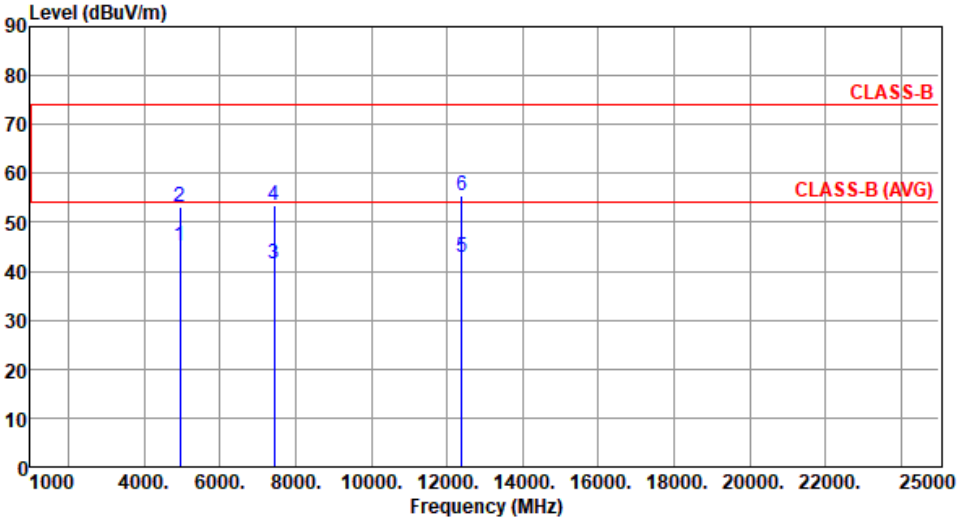


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4880.00	43.07	54.00	-10.93	42.97	0.10	Average	101	143
2	4880.00	50.65	74.00	-23.35	50.55	0.10	Peak	101	143
3	7320.00	45.64	54.00	-8.36	39.73	5.91	Average	100	28
4	7320.00	56.36	74.00	-17.64	50.45	5.91	Peak	100	28
5	12200.00	43.05	54.00	-10.95	35.46	7.59	Average	100	46
6	12200.00	56.51	74.00	-17.49	48.92	7.59	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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Paul Lin Temperature(℃):24 Humidity(%):63

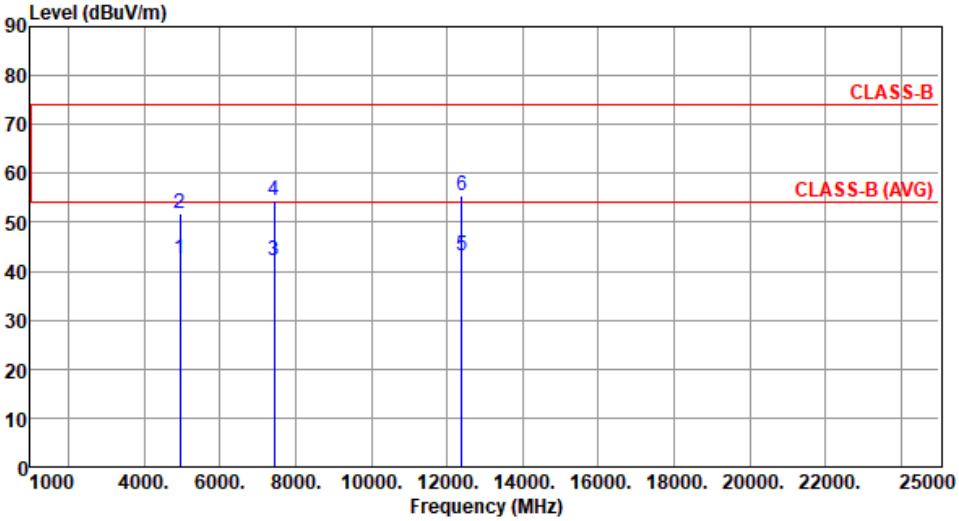


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4956.00	45.23	54.00	-8.77	45.08	0.15	Average	100	164
2	4956.00	53.21	74.00	-20.79	53.06	0.15	Peak	100	164
3	7434.00	41.35	54.00	-12.65	35.39	5.96	Average	100	207
4	7434.00	53.55	74.00	-20.45	47.59	5.96	Peak	100	207
5	12390.00	42.77	54.00	-11.23	35.69	7.08	Average	100	73
6	12390.00	55.47	74.00	-18.53	48.39	7.08	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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2478
Polarization	Vertical		

Test By :Paul Lin Temperature(℃):24 Humidity(%):63

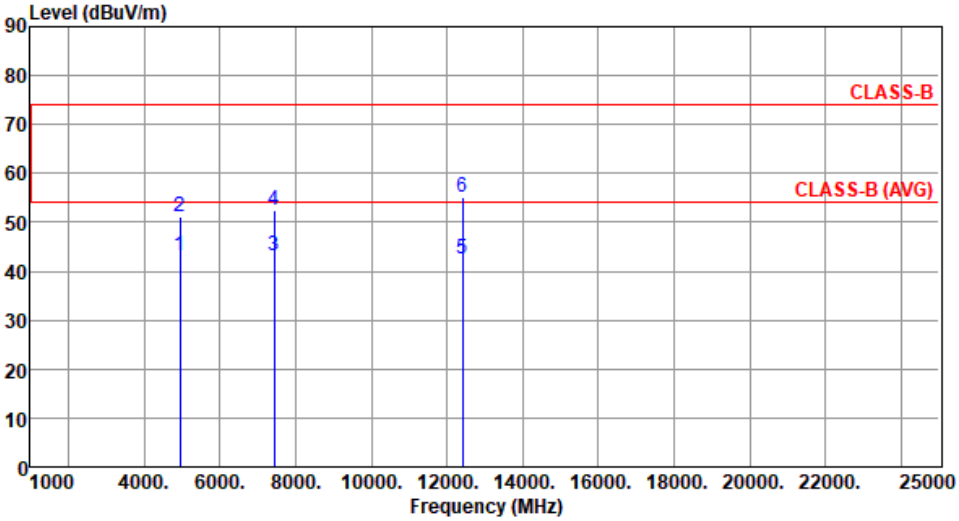


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4956.00	42.47	54.00	-11.53	42.32	0.15	Average	100	128
2	4956.00	51.77	74.00	-22.23	51.62	0.15	Peak	100	128
3	7434.00	42.34	54.00	-11.66	36.38	5.96	Average	100	36
4	7434.00	54.62	74.00	-19.38	48.66	5.96	Peak	100	36
5	12390.00	43.11	54.00	-10.89	36.03	7.08	Average	100	71
6	12390.00	55.49	74.00	-18.51	48.41	7.08	Peak	100	71

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2480
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

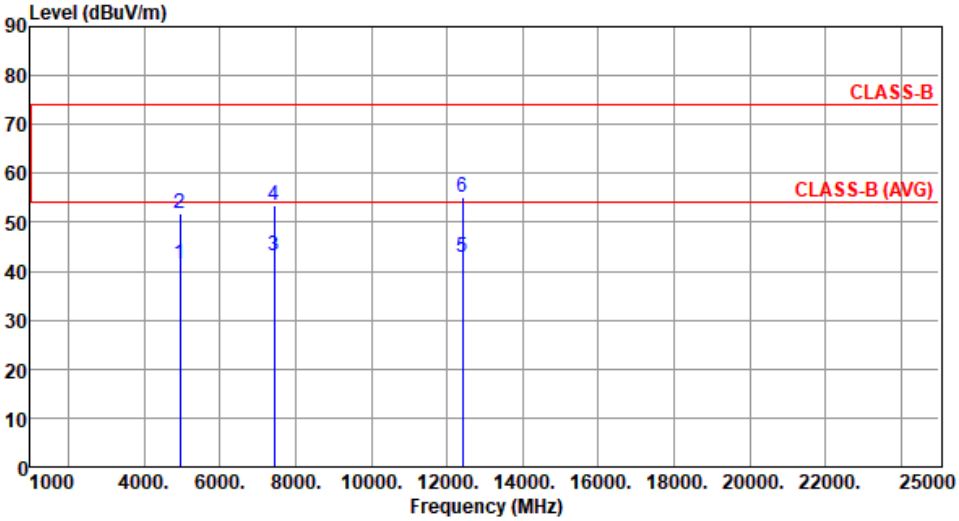


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4960.00	43.19	54.00	-10.81	43.01	0.18	Average	100	156
2	4960.00	51.05	74.00	-22.95	50.87	0.18	Peak	100	156
3	7440.00	43.21	54.00	-10.79	37.25	5.96	Average	100	193
4	7440.00	52.32	74.00	-21.68	46.36	5.96	Peak	100	193
5	12400.00	42.58	54.00	-11.42	35.55	7.03	Average	100	64
6	12400.00	55.11	74.00	-18.89	48.08	7.03	Peak	100	64

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).

Modulation	BT-LE (1Mbps)	**Test Freq. (MHz)**	2480
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

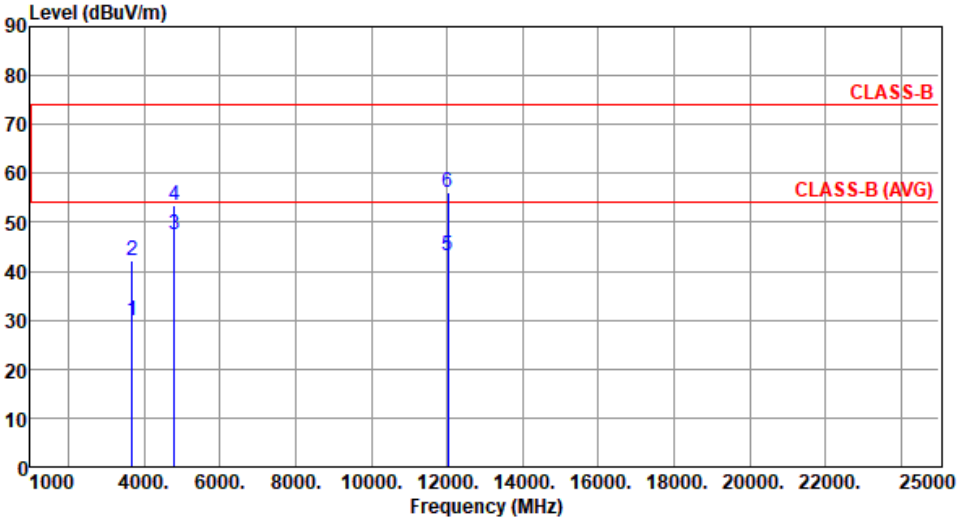


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4960.00	41.35	54.00	-12.65	41.17	0.18	Average	100	122
2	4960.00	51.66	74.00	-22.34	51.48	0.18	Peak	100	122
3	7440.00	43.21	54.00	-10.79	37.25	5.96	Average	100	31
4	7440.00	53.42	74.00	-20.58	47.46	5.96	Peak	100	31
5	12400.00	42.85	54.00	-11.15	35.82	7.03	Average	100	59
6	12400.00	55.27	74.00	-18.73	48.24	7.03	Peak	100	59

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2404
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

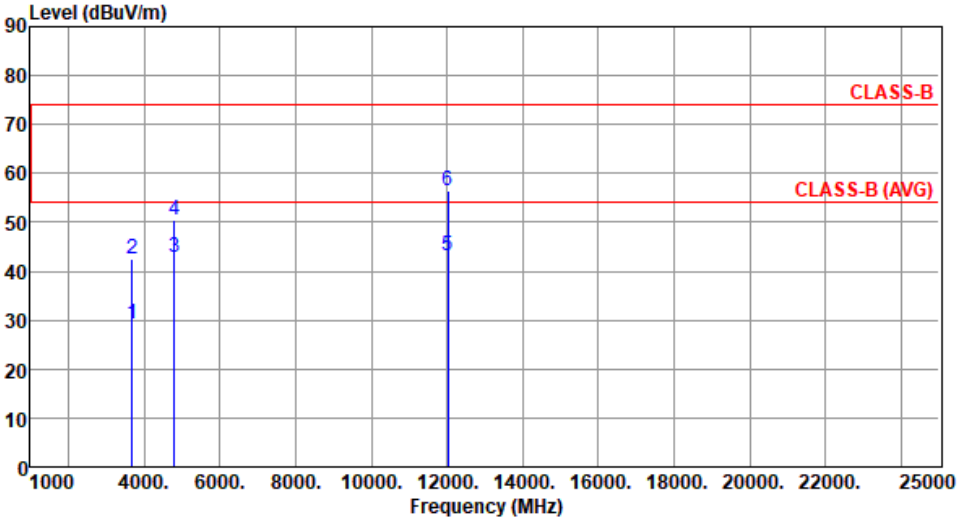


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3688.00	29.75	54.00	-24.25	31.44	-1.69	Average	100	82
2	3688.00	42.15	74.00	-31.85	43.84	-1.69	Peak	100	82
3	4808.00	47.65	54.00	-6.35	47.60	0.05	Average	100	168
4	4808.00	53.44	74.00	-20.56	53.39	0.05	Peak	100	168
5	12020.00	43.14	54.00	-10.86	35.37	7.77	Average	100	53
6	12020.00	56.08	74.00	-17.92	48.31	7.77	Peak	100	53

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2404
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

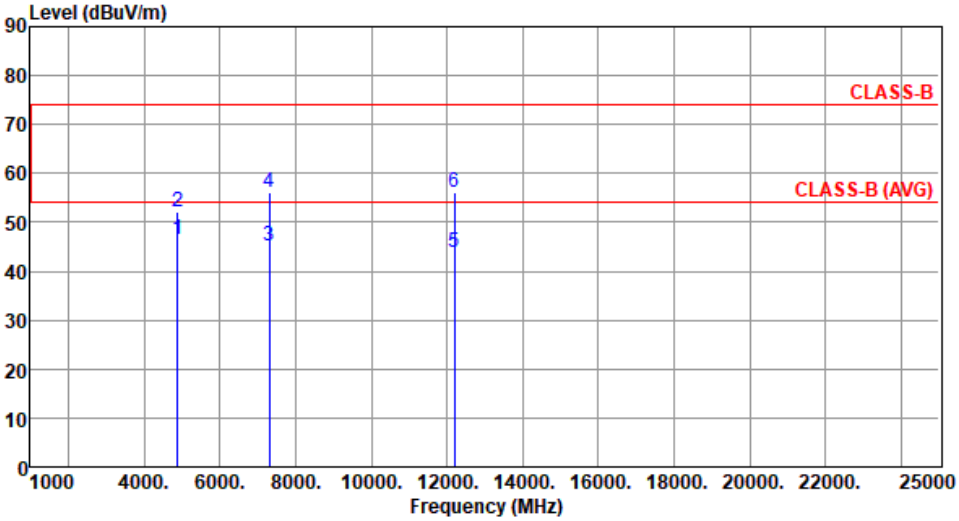


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	3688.00	29.31	54.00	-24.69	31.00	-1.69	Average	100	35
2	3688.00	42.54	74.00	-31.46	44.23	-1.69	Peak	100	35
3	4808.00	42.82	54.00	-11.18	42.77	0.05	Average	100	156
4	4808.00	50.41	74.00	-23.59	50.36	0.05	Peak	100	156
5	12020.00	43.05	54.00	-10.95	35.28	7.77	Average	100	47
6	12020.00	56.51	74.00	-17.49	48.74	7.77	Peak	100	47

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

Test By :Brad Wu Temperature(°C):24 Humidity(%):63

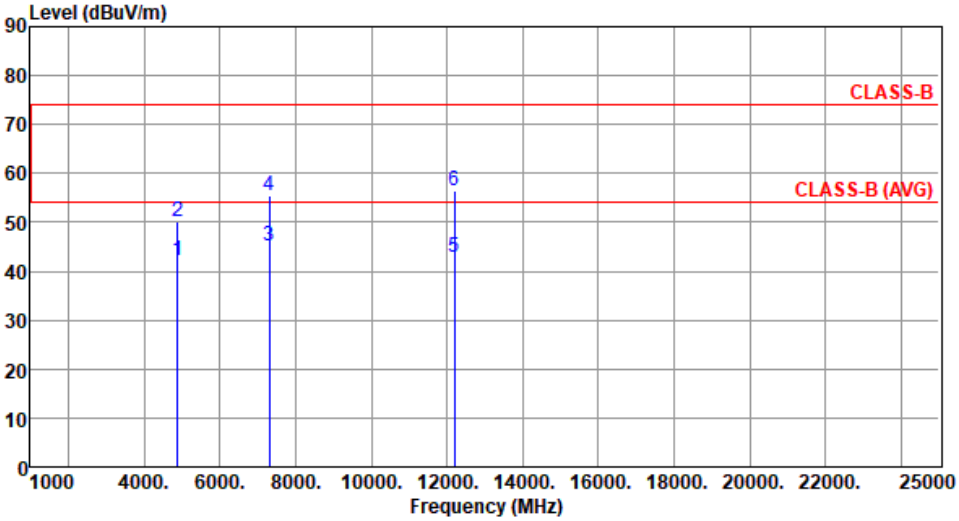


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4880.00	46.52	54.00	-7.48	46.42	0.10	Average	100	155
2	4880.00	52.29	74.00	-21.71	52.19	0.10	Peak	100	155
3	7320.00	45.03	54.00	-8.97	39.12	5.91	Average	100	192
4	7320.00	56.15	74.00	-17.85	50.24	5.91	Peak	100	192
5	12200.00	43.68	54.00	-10.32	36.09	7.59	Average	100	44
6	12200.00	56.02	74.00	-17.98	48.43	7.59	Peak	100	44

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2440
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

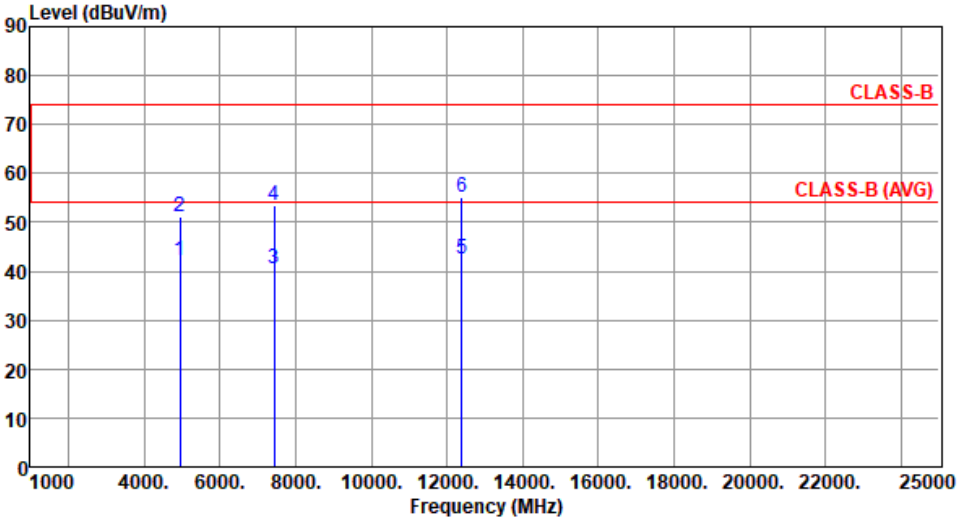


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4880.00	42.24	54.00	-11.76	42.14	0.10	Average	100	151
2	4880.00	50.11	74.00	-23.89	50.01	0.10	Peak	100	151
3	7320.00	45.08	54.00	-8.92	39.17	5.91	Average	100	39
4	7320.00	55.62	74.00	-18.38	49.71	5.91	Peak	100	39
5	12200.00	42.87	54.00	-11.13	35.28	7.59	Average	100	59
6	12200.00	56.44	74.00	-17.56	48.85	7.59	Peak	100	59

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

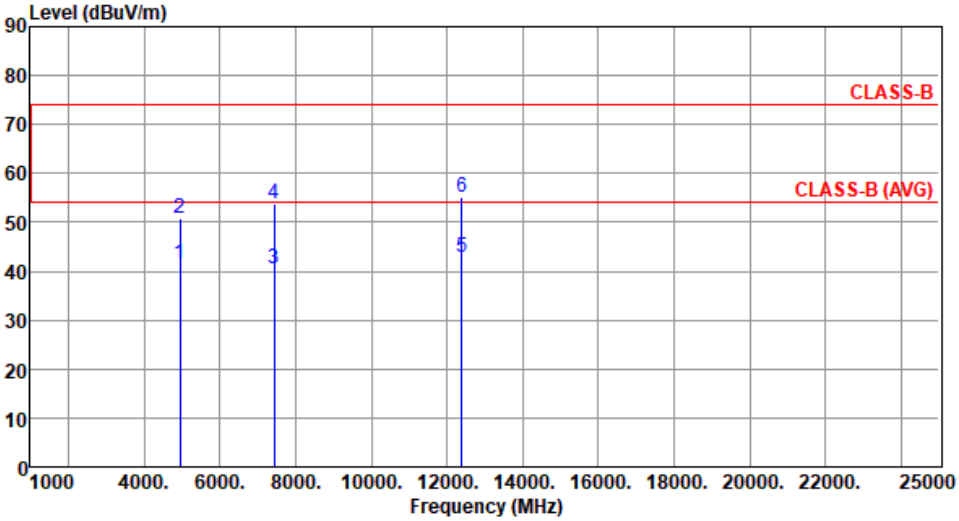


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	4956.00	42.34	54.00	-11.66	42.19	0.15	Average	100	152
2	4956.00	51.21	74.00	-22.79	51.06	0.15	Peak	100	152
3	7434.00	40.36	54.00	-13.64	34.40	5.96	Average	100	189
4	7434.00	53.48	74.00	-20.52	47.52	5.96	Peak	100	189
5	12390.00	42.46	54.00	-11.54	35.38	7.08	Average	100	57
6	12390.00	55.19	74.00	-18.81	48.11	7.08	Peak	100	57

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).

Modulation	BT-LE (2Mbps)	**Test Freq. (MHz)**	2478
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63



	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	4956.00	41.48	54.00	-12.52	41.33	0.15	Average	100	125
2	4956.00	50.77	74.00	-23.23	50.62	0.15	Peak	100	125
3	7434.00	40.45	54.00	-13.55	34.49	5.96	Average	100	46
4	7434.00	53.64	74.00	-20.36	47.68	5.96	Peak	100	46
5	12390.00	42.76	54.00	-11.24	35.68	7.08	Average	100	14
6	12390.00	55.18	74.00	-18.82	48.10	7.08	Peak	100	14

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).

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Transmitter Conducted Unwanted Emissions (30MHz ~ 1GHz)

Summary

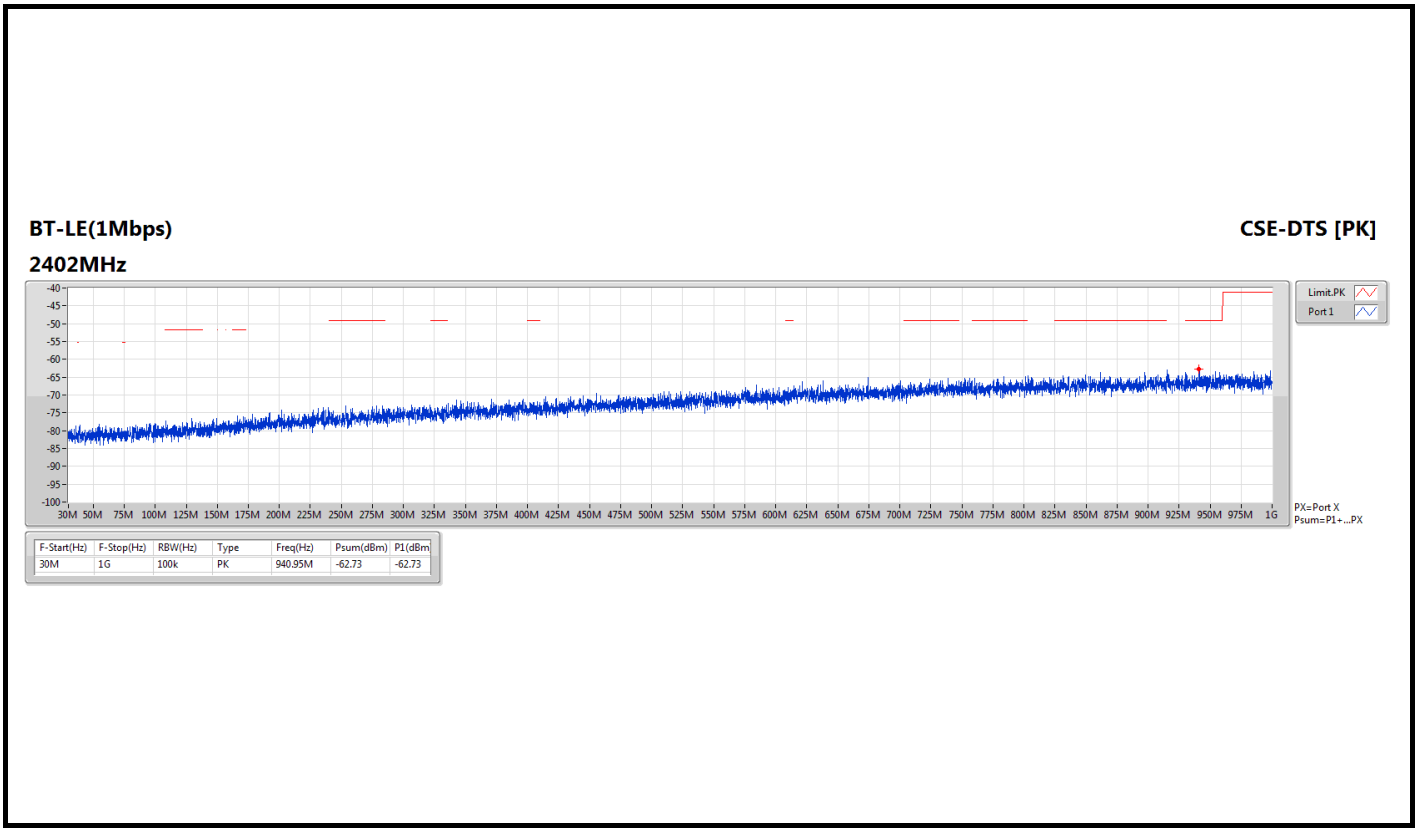
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-		-	-	-
BT-LE(Symbol rate 1Mbps)	Pass	30M	1G	PK	940.95M	2.00	-62.73	4.7	-56.03	-49.20	-6.83

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-	-	-		-	-	-
2402MHz	Pass	30M	1G	PK	940.95M	2.00	-62.73	4.7	-56.03	-49.20	-6.83

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX



2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Transmitter Conducted Unwanted Emissions (1GHz ~ 3.1GHz)

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(Coding rate125kbps)	Pass	2.4835G	2.5G	AV	2.48358G	2.00	-44.23	-42.23	-41.20	-1.03
BT-LE(Symbol rate 1Mbps)	Pass	2.4835G	2.5G	AV	2.4835G	2.00	-44.28	-42.28	-41.20	-1.08
BT-LE(Symbol rate 2Mbps)	Pass	2.4835G	2.5G	AV	2.48352G	2.00	-44.32	-42.32	-41.20	-1.12

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-LE(Coding rate125kbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	1G	2.31G	AV	1.47717G	2.00	-59.66	-57.66	-41.20	-16.46
2402MHz	Pass	2.31G	2.39G	AV	2.39G	2.00	-54.34	-52.34	-41.20	-11.14
2402MHz	Pass	2.4835G	2.5G	AV	2.49767G	2.00	-61.92	-59.92	-41.20	-18.72
2402MHz	Pass	2.5G	3.1G	AV	2.8474G	2.00	-61.20	-59.20	-41.20	-18.00
2402MHz	Pass	1G	2.31G	PK	1.6026G	2.00	-49.09	-47.09	-21.20	-25.89
2402MHz	Pass	2.31G	2.39G	PK	2.38988G	2.00	-43.75	-41.75	-21.20	-20.55
2402MHz	Pass	2.4835G	2.5G	PK	2.48735G	2.00	-50.18	-48.18	-21.20	-26.98
2402MHz	Pass	2.5G	3.1G	PK	2.8261G	2.00	-50.37	-48.37	-21.20	-27.17
2440MHz	Pass	1G	2.31G	AV	1.52416G	2.00	-59.07	-57.07	-41.20	-15.87
2440MHz	Pass	2.31G	2.39G	AV	2.38776G	2.00	-61.68	-59.68	-41.20	-18.48
2440MHz	Pass	2.4835G	2.5G	AV	2.48585G	2.00	-60.85	-58.85	-41.20	-17.65
2440MHz	Pass	2.5G	3.1G	AV	2.8729G	2.00	-61.16	-59.16	-41.20	-17.96
2440MHz	Pass	1G	2.31G	PK	1.31833G	2.00	-48.19	-46.19	-21.20	-24.99
2440MHz	Pass	2.31G	2.39G	PK	2.37584G	2.00	-50.47	-48.47	-21.20	-27.27
2440MHz	Pass	2.4835G	2.5G	PK	2.48451G	2.00	-49.35	-47.35	-21.20	-26.15
2440MHz	Pass	2.5G	3.1G	PK	2.8387G	2.00	-49.83	-47.83	-21.20	-26.63
2478MHz	Pass	1G	2.31G	AV	1.81335G	2.00	-61.57	-59.57	-41.20	-18.37
2478MHz	Pass	2.31G	2.39G	AV	2.31696G	2.00	-61.95	-59.95	-41.20	-18.75
2478MHz	Pass	2.4835G	2.5G	AV	2.48353G	2.00	-44.61	-42.61	-41.20	-1.41
2478MHz	Pass	2.5G	3.1G	AV	2.5G	2.00	-59.71	-57.71	-41.20	-16.51
2478MHz	Pass	1G	2.31G	PK	1.84364G	2.00	-50.51	-48.51	-21.20	-27.31
2478MHz	Pass	2.31G	2.39G	PK	2.38876G	2.00	-50.94	-48.94	-21.20	-27.74
2478MHz	Pass	2.4835G	2.5G	PK	2.48395G	2.00	-32.40	-30.40	-21.20	-9.20
2478MHz	Pass	2.5G	3.1G	PK	2.503G	2.00	-50.01	-48.01	-21.20	-26.81
2480MHz	Pass	1G	2.31G	AV	2.13659G	2.00	-62.22	-60.22	-41.20	-19.02
2480MHz	Pass	2.31G	2.39G	AV	2.32108G	2.00	-62.70	-60.70	-41.20	-19.50
2480MHz	Pass	2.4835G	2.5G	AV	2.48358G	2.00	-44.23	-42.23	-41.20	-1.03
2480MHz	Pass	2.5G	3.1G	AV	2.5003G	2.00	-60.77	-58.77	-41.20	-17.57
2480MHz	Pass	1G	2.31G	PK	2.12595G	2.00	-50.88	-48.88	-21.20	-27.68
2480MHz	Pass	2.31G	2.39G	PK	2.33868G	2.00	-51.03	-49.03	-21.20	-27.83
2480MHz	Pass	2.4835G	2.5G	PK	2.48385G	2.00	-30.55	-28.55	-21.20	-7.35
2480MHz	Pass	2.5G	3.1G	PK	2.8837G	2.00	-50.32	-48.32	-21.20	-27.12
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	1G	2.31G	AV	1.5037G	2.00	-59.48	-57.48	-41.20	-16.28
2402MHz	Pass	2.31G	2.39G	AV	2.3898G	2.00	-53.45	-51.45	-41.20	-10.25
2402MHz	Pass	2.4835G	2.5G	AV	2.49851G	2.00	-61.60	-59.60	-41.20	-18.40
2402MHz	Pass	2.5G	3.1G	AV	2.82475G	2.00	-60.69	-58.69	-41.20	-17.49
2402MHz	Pass	1G	2.31G	PK	1.75129G	2.00	-48.91	-46.91	-21.20	-25.71
2402MHz	Pass	2.31G	2.39G	PK	2.38836G	2.00	-42.30	-40.30	-21.20	-19.10

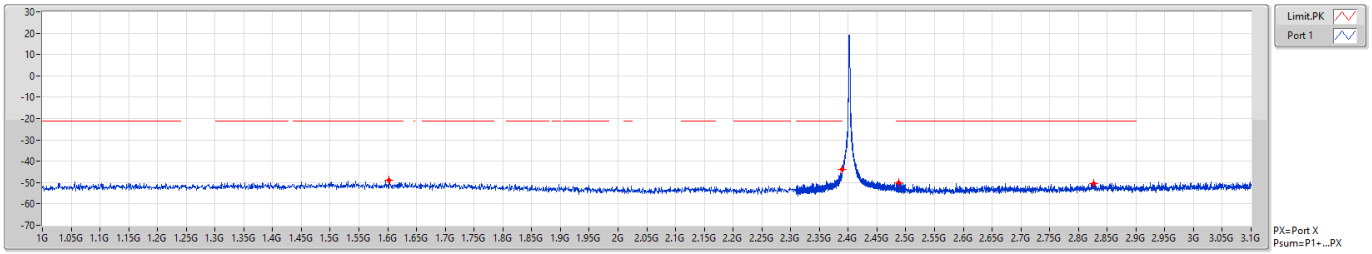
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2402MHz	Pass	2.4835G	2.5G	PK	2.49064G	2.00	-49.58	-47.58	-21.20	-26.38
2402MHz	Pass	2.5G	3.1G	PK	2.7532G	2.00	-49.83	-47.83	-21.20	-26.63
2440MHz	Pass	1G	2.31G	AV	1.53841G	2.00	-59.53	-57.53	-41.20	-16.33
2440MHz	Pass	2.31G	2.39G	AV	2.38624G	2.00	-61.48	-59.48	-41.20	-18.28
2440MHz	Pass	2.4835G	2.5G	AV	2.48866G	2.00	-60.74	-58.74	-41.20	-17.54
2440MHz	Pass	2.5G	3.1G	AV	2.82295G	2.00	-61.36	-59.36	-41.20	-18.16
2440MHz	Pass	1G	2.31G	PK	1.58885G	2.00	-48.38	-46.38	-21.20	-25.18
2440MHz	Pass	2.31G	2.39G	PK	2.323G	2.00	-49.54	-47.54	-21.20	-26.34
2440MHz	Pass	2.4835G	2.5G	PK	2.49G	2.00	-47.73	-45.73	-21.20	-24.53
2440MHz	Pass	2.5G	3.1G	PK	2.8789G	2.00	-49.84	-47.84	-21.20	-26.64
2478MHz	Pass	1G	2.31G	AV	1.77781G	2.00	-61.53	-59.53	-41.20	-18.33
2478MHz	Pass	2.31G	2.39G	AV	2.31176G	2.00	-62.09	-60.09	-41.20	-18.89
2478MHz	Pass	2.4835G	2.5G	AV	2.48352G	2.00	-44.76	-42.76	-41.20	-1.56
2478MHz	Pass	2.5G	3.1G	AV	2.5009G	2.00	-59.71	-57.71	-41.20	-16.51
2478MHz	Pass	1G	2.31G	PK	1.47029G	2.00	-50.34	-48.34	-21.20	-27.14
2478MHz	Pass	2.31G	2.39G	PK	2.32204G	2.00	-49.37	-47.37	-21.20	-26.17
2478MHz	Pass	2.4835G	2.5G	PK	2.48372G	2.00	-30.34	-28.34	-21.20	-7.14
2478MHz	Pass	2.5G	3.1G	PK	2.5003G	2.00	-48.64	-46.64	-21.20	-25.44
2480MHz	Pass	1G	2.31G	AV	2.13741G	2.00	-62.41	-60.41	-41.20	-19.21
2480MHz	Pass	2.31G	2.39G	AV	2.33584G	2.00	-62.78	-60.78	-41.20	-19.58
2480MHz	Pass	2.4835G	2.5G	AV	2.4835G	2.00	-44.28	-42.28	-41.20	-1.08
2480MHz	Pass	2.5G	3.1G	AV	2.5003G	2.00	-60.77	-58.77	-41.20	-17.57
2480MHz	Pass	1G	2.31G	PK	2.12726G	2.00	-51.88	-49.88	-21.20	-28.68
2480MHz	Pass	2.31G	2.39G	PK	2.3126G	2.00	-51.46	-49.46	-21.20	-28.26
2480MHz	Pass	2.4835G	2.5G	PK	2.48366G	2.00	-28.51	-26.51	-21.20	-5.31
2480MHz	Pass	2.5G	3.1G	PK	2.8825G	2.00	-50.37	-48.37	-21.20	-27.17
BT-LE(Symbol rate 2Mbps)	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	1G	2.31G	AV	1.60915G	2.00	-60.26	-58.26	-41.20	-17.06
2404MHz	Pass	2.31G	2.39G	AV	2.36564G	2.00	-54.09	-52.09	-41.20	-10.89
2404MHz	Pass	2.4835G	2.5G	AV	2.49915G	2.00	-61.60	-59.60	-41.20	-18.40
2404MHz	Pass	2.5G	3.1G	AV	2.86255G	2.00	-61.11	-59.11	-41.20	-17.91
2404MHz	Pass	1G	2.31G	PK	1.61963G	2.00	-49.38	-47.38	-21.20	-26.18
2404MHz	Pass	2.31G	2.39G	PK	2.38988G	2.00	-43.73	-41.73	-21.20	-20.53
2404MHz	Pass	2.4835G	2.5G	PK	2.48577G	2.00	-49.68	-47.68	-21.20	-26.48
2404MHz	Pass	2.5G	3.1G	PK	2.5603G	2.00	-49.09	-47.09	-21.20	-25.89
2440MHz	Pass	1G	2.31G	AV	1.46063G	2.00	-60.08	-58.08	-41.20	-16.88
2440MHz	Pass	2.31G	2.39G	AV	2.38952G	2.00	-61.79	-59.79	-41.20	-18.59
2440MHz	Pass	2.4835G	2.5G	AV	2.48619G	2.00	-60.91	-58.91	-41.20	-17.71
2440MHz	Pass	2.5G	3.1G	AV	2.88325G	2.00	-61.48	-59.48	-41.20	-18.28
2440MHz	Pass	1G	2.31G	PK	1.57902G	2.00	-48.84	-46.84	-21.20	-25.64
2440MHz	Pass	2.31G	2.39G	PK	2.34204G	2.00	-49.97	-47.97	-21.20	-26.77
2440MHz	Pass	2.4835G	2.5G	PK	2.48386G	2.00	-48.96	-46.96	-21.20	-25.76

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2440MHz	Pass	2.5G	3.1G	PK	2.7094G	2.00	-49.55	-47.55	-21.20	-26.35
2478MHz	Pass	1G	2.31G	AV	2.14412G	2.00	-62.26	-60.26	-41.20	-19.06
2478MHz	Pass	2.31G	2.39G	AV	2.31344G	2.00	-62.66	-60.66	-41.20	-19.46
2478MHz	Pass	2.4835G	2.5G	AV	2.48352G	2.00	-44.32	-42.32	-41.20	-1.12
2478MHz	Pass	2.5G	3.1G	AV	2.5174G	2.00	-58.86	-56.86	-41.20	-15.66
2478MHz	Pass	1G	2.31G	PK	2.14036G	2.00	-50.28	-48.28	-21.20	-27.08
2478MHz	Pass	2.31G	2.39G	PK	2.36848G	2.00	-51.33	-49.33	-21.20	-28.13
2478MHz	Pass	2.4835G	2.5G	PK	2.48373G	2.00	-32.37	-30.37	-21.20	-9.17
2478MHz	Pass	2.5G	3.1G	PK	2.5171G	2.00	-48.60	-46.60	-21.20	-25.40

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

BT-LE(125kbps) **CSE-DTS [PK]**

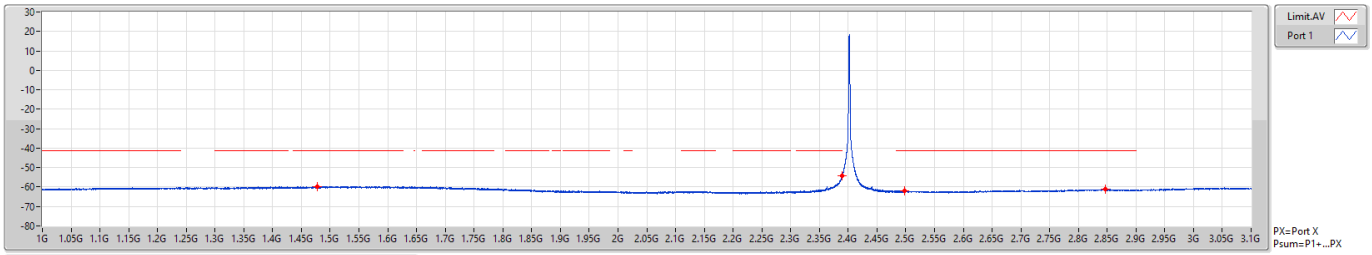
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.6026G	-49.09	-49.09
2.31G	2.39G	1M	PK	2.38988G	-43.75	-43.75
2.4835G	2.5G	1M	PK	2.48735G	-50.18	-50.18
2.5G	3.1G	1M	PK	2.8261G	-50.37	-50.37

BT-LE(125kbps) **CSE-DTS [AV]**

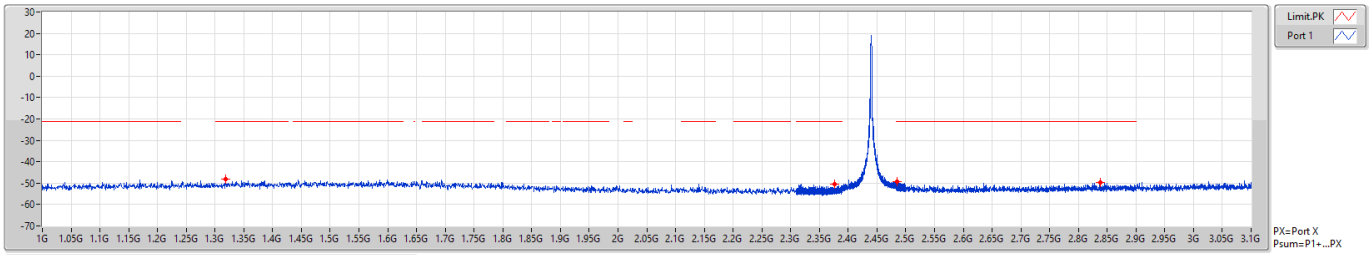
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.47717G	-59.66	-59.66
2.31G	2.39G	1M	AV	2.39G	-54.34	-54.34
2.4835G	2.5G	1M	AV	2.49767G	-61.92	-61.92
2.5G	3.1G	1M	AV	2.8474G	-61.20	-61.20

BT-LE(125kbps) **CSE-DTS [PK]**

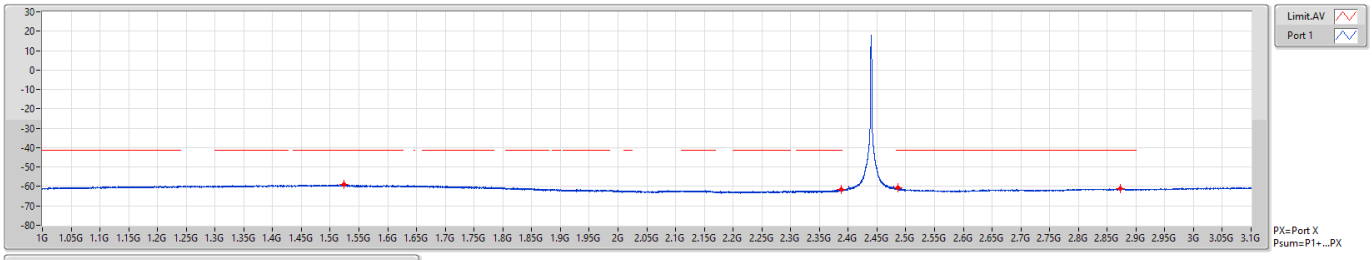
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.31833G	-48.19	-48.19
2.31G	2.39G	1M	PK	2.37584G	-50.47	-50.47
2.4835G	2.5G	1M	PK	2.48451G	-49.35	-49.35
2.5G	3.1G	1M	PK	2.8387G	-49.83	-49.83

BT-LE(125kbps) **CSE-DTS [AV]**

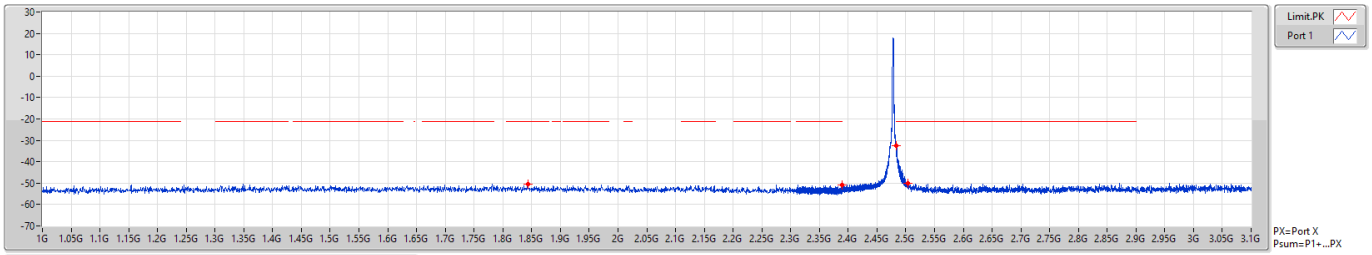
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.52416G	-59.07	-59.07
2.31G	2.39G	1M	AV	2.38776G	-61.68	-61.68
2.4835G	2.5G	1M	AV	2.48585G	-60.85	-60.85
2.5G	3.1G	1M	AV	2.8729G	-61.16	-61.16

BT-LE(125kbps) **CSE-DTS [PK]**

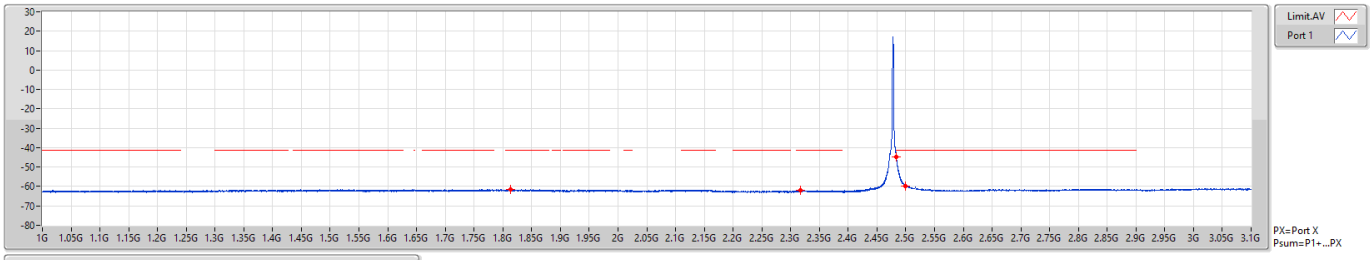
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.84364G	-50.51	-50.51
2.31G	2.39G	1M	PK	2.38876G	-50.94	-50.94
2.4835G	2.5G	1M	PK	2.48395G	-32.40	-32.40
2.5G	3.1G	1M	PK	2.503G	-50.01	-50.01

BT-LE(125kbps) **CSE-DTS [AV]**

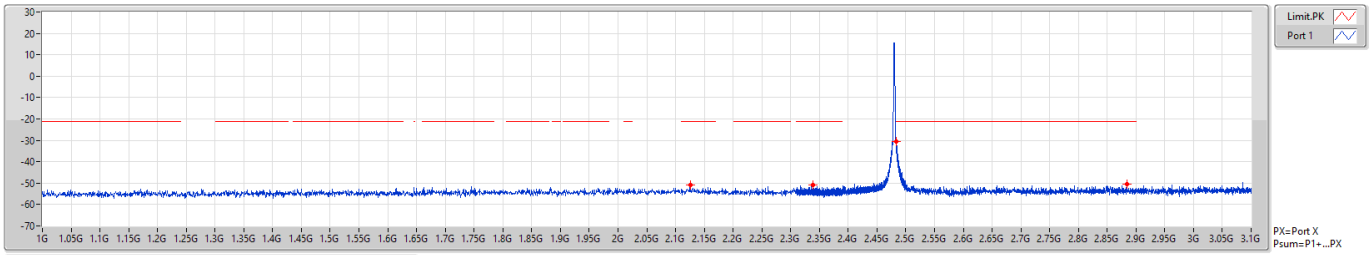
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.81335G	-61.57	-61.57
2.31G	2.39G	1M	AV	2.31696G	-61.95	-61.95
2.4835G	2.5G	1M	AV	2.48353G	-44.61	-44.61
2.5G	3.1G	1M	AV	2.5G	-59.71	-59.71

BT-LE(125kbps) **CSE-DTS [PK]**

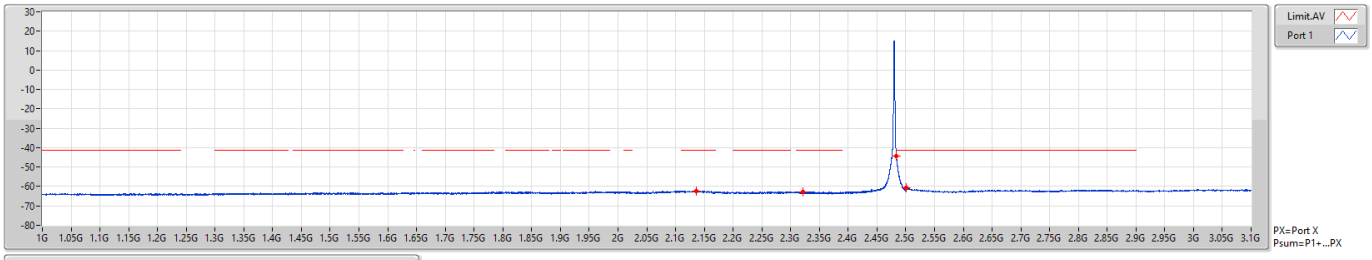
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	2.12595G	-50.88	-50.88
2.31G	2.39G	1M	PK	2.33868G	-51.03	-51.03
2.4835G	2.5G	1M	PK	2.48385G	-30.55	-30.55
2.5G	3.1G	1M	PK	2.8837G	-50.32	-50.32

BT-LE(125kbps) **CSE-DTS [AV]**

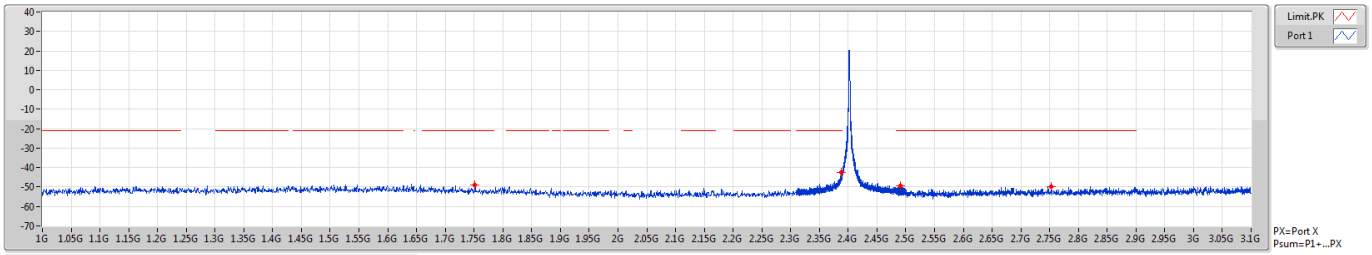
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	2.13659G	-62.22	-62.22
2.31G	2.39G	1M	AV	2.32108G	-62.70	-62.70
2.4835G	2.5G	1M	AV	2.48358G	-44.23	-44.23
2.5G	3.1G	1M	AV	2.5003G	-60.77	-60.77

BT-LE(1Mbps) **CSE-DTS [PK]**

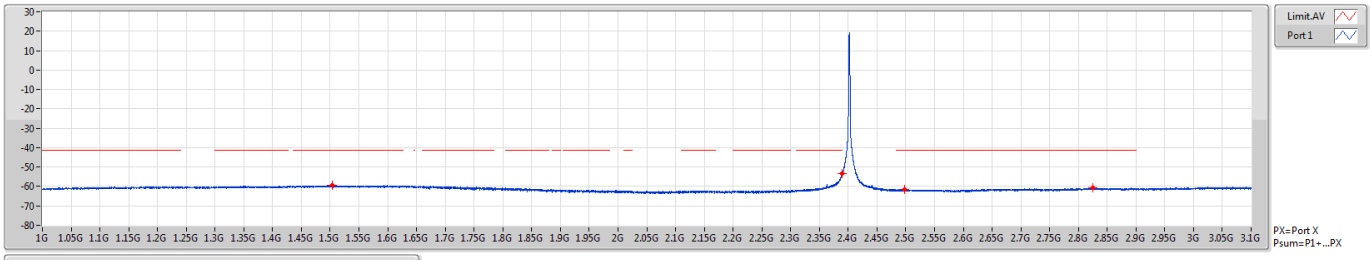
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.75129G	-48.91	-48.91
2.31G	2.39G	1M	PK	2.38836G	-42.30	-42.30
2.4835G	2.5G	1M	PK	2.49064G	-49.58	-49.58
2.5G	3.1G	1M	PK	2.7532G	-49.83	-49.83

BT-LE(1Mbps) **CSE-DTS [AV]**

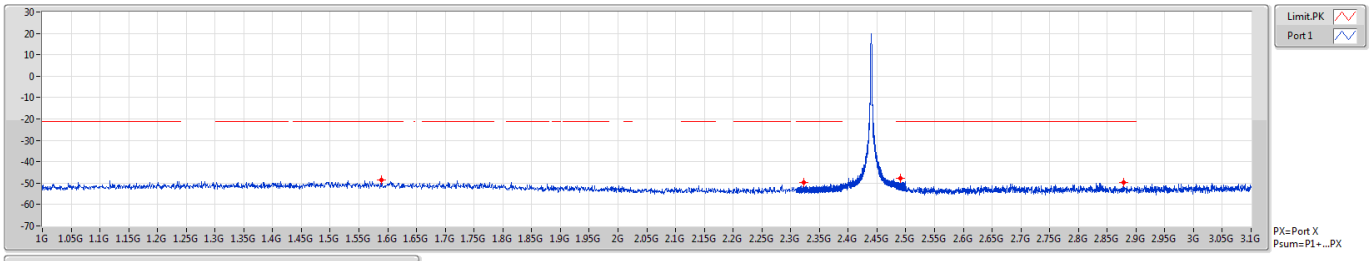
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.5037G	-59.48	-59.48
2.31G	2.39G	1M	AV	2.3898G	-53.45	-53.45
2.4835G	2.5G	1M	AV	2.49851G	-61.60	-61.60
2.5G	3.1G	1M	AV	2.82475G	-60.69	-60.69

BT-LE(1Mbps) **CSE-DTS [PK]**

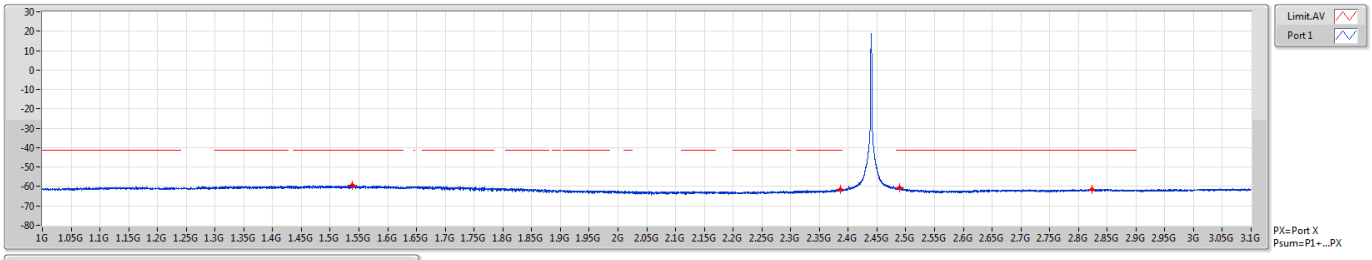
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.58885G	-48.38	-48.38
2.31G	2.39G	1M	PK	2.323G	-49.54	-49.54
2.4835G	2.5G	1M	PK	2.49G	-47.73	-47.73
2.5G	3.1G	1M	PK	2.8789G	-49.84	-49.84

BT-LE(1Mbps) **CSE-DTS [AV]**

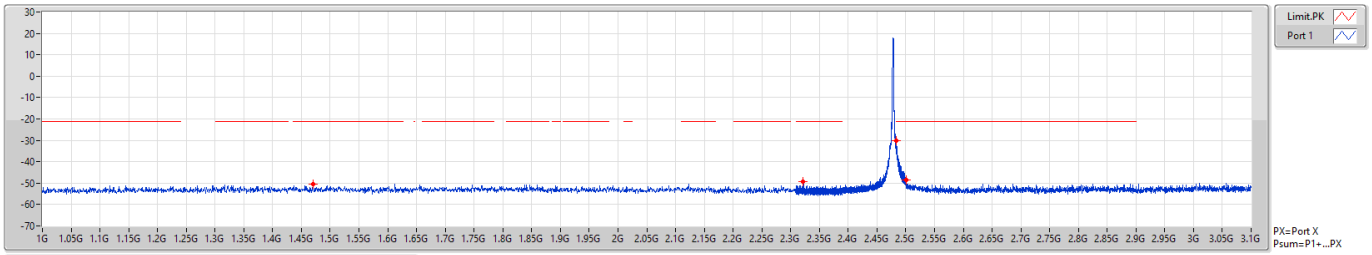
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.53841G	-59.53	-59.53
2.31G	2.39G	1M	AV	2.38624G	-61.48	-61.48
2.4835G	2.5G	1M	AV	2.48866G	-60.74	-60.74
2.5G	3.1G	1M	AV	2.82295G	-61.36	-61.36

BT-LE(1Mbps) **CSE-DTS [PK]**

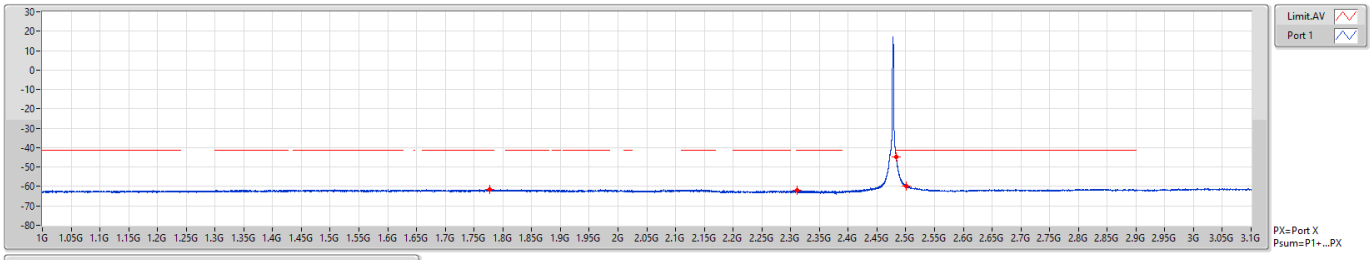
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.47029G	-50.34	-50.34
2.31G	2.39G	1M	PK	2.32204G	-49.37	-49.37
2.4835G	2.5G	1M	PK	2.48372G	-30.34	-30.34
2.5G	3.1G	1M	PK	2.5003G	-48.64	-48.64

BT-LE(1Mbps) **CSE-DTS [AV]**

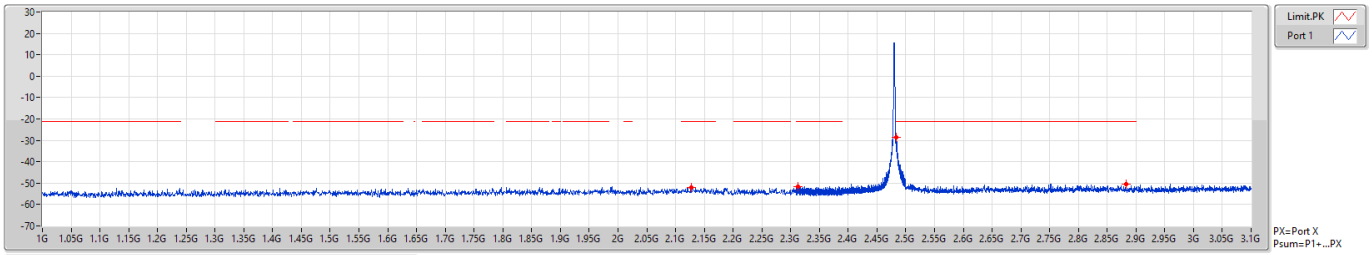
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.77781G	-61.53	-61.53
2.31G	2.39G	1M	AV	2.31176G	-62.09	-62.09
2.4835G	2.5G	1M	AV	2.48352G	-44.76	-44.76
2.5G	3.1G	1M	AV	2.5009G	-59.71	-59.71

BT-LE(1Mbps) **CSE-DTS [PK]**

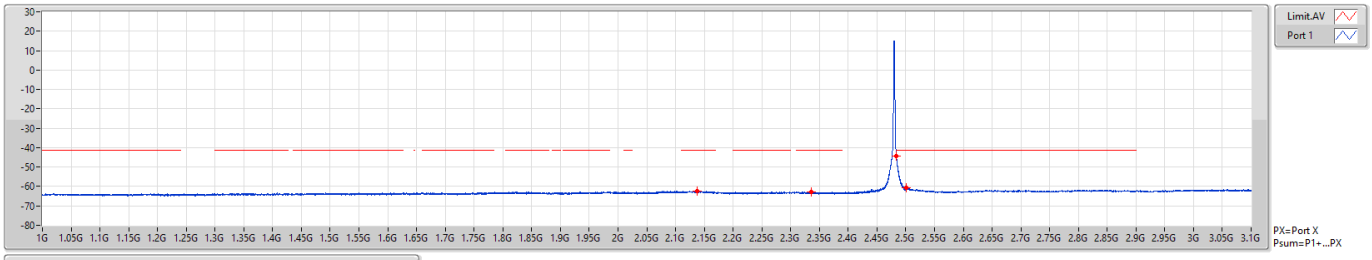
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	2.12726G	-51.88	-51.88
2.31G	2.39G	1M	PK	2.3126G	-51.46	-51.46
2.4835G	2.5G	1M	PK	2.48366G	-28.51	-28.51
2.5G	3.1G	1M	PK	2.8825G	-50.37	-50.37

BT-LE(1Mbps) **CSE-DTS [AV]**

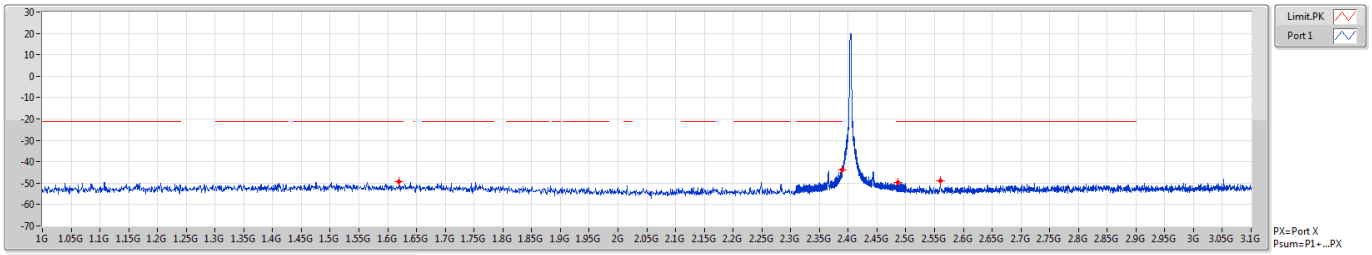
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	2.13741G	-62.41	-62.41
2.31G	2.39G	1M	AV	2.33584G	-62.78	-62.78
2.4835G	2.5G	1M	AV	2.4835G	-44.28	-44.28
2.5G	3.1G	1M	AV	2.5003G	-60.77	-60.77

BT-LE(2Mbps) **CSE-DTS [PK]**

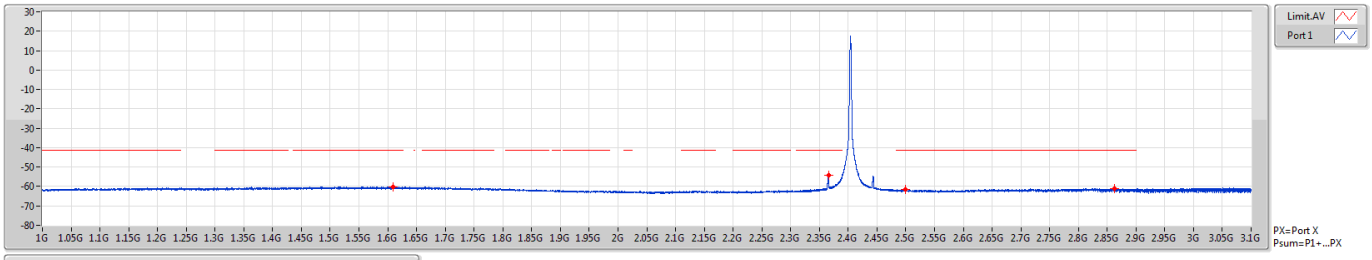
2404MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.61963G	-49.38	-49.38
2.31G	2.39G	1M	PK	2.38988G	-43.73	-43.73
2.4835G	2.5G	1M	PK	2.48577G	-49.68	-49.68
2.5G	3.1G	1M	PK	2.5603G	-49.09	-49.09

BT-LE(2Mbps) **CSE-DTS [AV]**

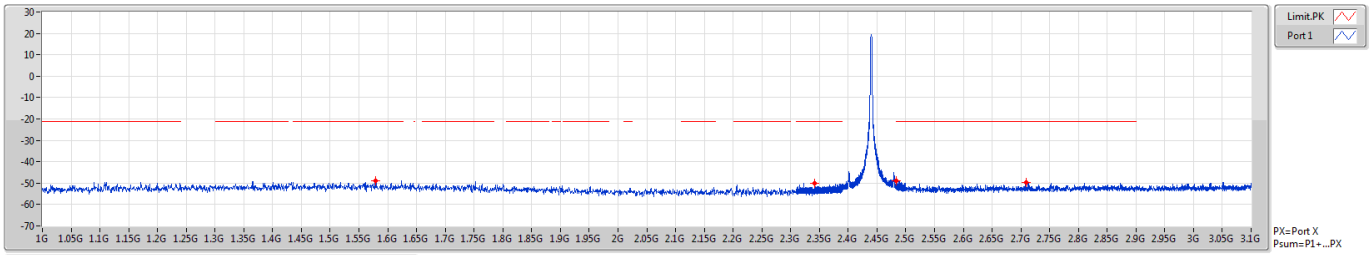
2404MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.60915G	-60.26	-60.26
2.31G	2.39G	1M	AV	2.36564G	-54.09	-54.09
2.4835G	2.5G	1M	AV	2.49915G	-61.60	-61.60
2.5G	3.1G	1M	AV	2.86255G	-61.11	-61.11

BT-LE(2Mbps) **CSE-DTS [PK]**

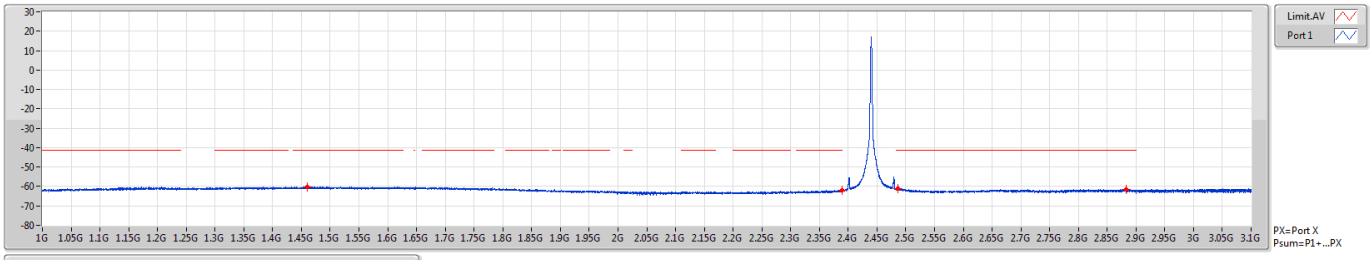
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	1.57902G	-48.84	-48.84
2.31G	2.39G	1M	PK	2.34204G	-49.97	-49.97
2.4835G	2.5G	1M	PK	2.48386G	-48.96	-48.96
2.5G	3.1G	1M	PK	2.7094G	-49.55	-49.55

BT-LE(2Mbps) **CSE-DTS [AV]**

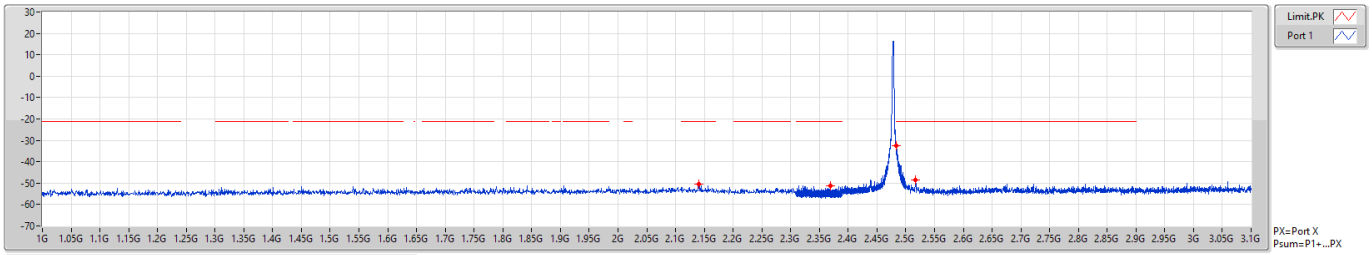
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	1.46063G	-60.08	-60.08
2.31G	2.39G	1M	AV	2.38952G	-61.79	-61.79
2.4835G	2.5G	1M	AV	2.48619G	-60.91	-60.91
2.5G	3.1G	1M	AV	2.88325G	-61.48	-61.48

BT-LE(2Mbps) **CSE-DTS [PK]**

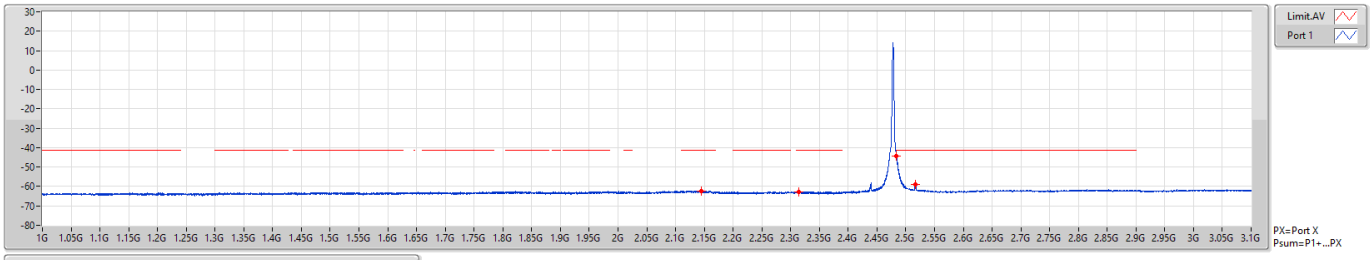
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	PK	2.14036G	-50.28	-50.28
2.31G	2.39G	1M	PK	2.36848G	-51.33	-51.33
2.4835G	2.5G	1M	PK	2.48373G	-32.37	-32.37
2.5G	3.1G	1M	PK	2.5171G	-48.60	-48.60

BT-LE(2Mbps) **CSE-DTS [AV]**

2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
1G	2.31G	1M	AV	2.14412G	-62.26	-62.26
2.31G	2.39G	1M	AV	2.31344G	-62.66	-62.66
2.4835G	2.5G	1M	AV	2.48352G	-44.32	-44.32
2.5G	3.1G	1M	AV	2.5174G	-58.86	-58.86

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Transmitter Conducted Unwanted Emissions (3.1GHz ~ 25GHz)

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(Coding rate125kbps)	Pass	8G	25G	AV	16.09731G	2.00	-64.14	-62.14	-41.20	-20.94
BT-LE(Symbol rate 1Mbps)	Pass	8G	25G	AV	19.86759G	2.00	-63.33	-61.33	-41.20	-20.13
BT-LE(Symbol rate 2Mbps)	Pass	8G	25G	AV	16.09784G	2.00	-64.13	-62.13	-41.20	-20.93

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-LE(Coding rate125kbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	3.1G	4G	AV	3.26358G	2.00	-67.29	-65.29	-41.20	-24.09
2402MHz	Pass	4G	5G	AV	4.80375G	2.00	-65.64	-63.64	-41.20	-22.44
2402MHz	Pass	5G	7G	AV	5.1995G	2.00	-74.54	-72.54	-41.20	-31.34
2402MHz	Pass	7G	8G	AV	7.47875G	2.00	-71.87	-69.87	-41.20	-28.67
2402MHz	Pass	8G	25G	AV	16.09731G	2.00	-64.14	-62.14	-41.20	-20.94
2402MHz	Pass	3.1G	4G	PK	3.26133G	2.00	-57.08	-55.08	-21.20	-33.88
2402MHz	Pass	4G	5G	PK	4.8045G	2.00	-58.73	-56.73	-21.20	-35.53
2402MHz	Pass	5G	7G	PK	5.224G	2.00	-64.72	-62.72	-21.20	-41.52
2402MHz	Pass	7G	8G	PK	7.47475G	2.00	-62.41	-60.41	-21.20	-39.21
2402MHz	Pass	8G	25G	PK	16.10581G	2.00	-55.35	-53.35	-21.20	-32.15
2440MHz	Pass	3.1G	4G	AV	3.26088G	2.00	-66.89	-64.89	-41.20	-23.69
2440MHz	Pass	4G	5G	AV	4.88025G	2.00	-67.98	-65.98	-41.20	-24.78
2440MHz	Pass	5G	7G	AV	5.219G	2.00	-74.52	-72.52	-41.20	-31.32
2440MHz	Pass	7G	8G	AV	7.494G	2.00	-71.93	-69.93	-41.20	-28.73
2440MHz	Pass	8G	25G	AV	16.09891G	2.00	-64.26	-62.26	-41.20	-21.06
2440MHz	Pass	3.1G	4G	PK	3.26043G	2.00	-57.43	-55.43	-21.20	-34.23
2440MHz	Pass	4G	5G	PK	4.8805G	2.00	-60.25	-58.25	-21.20	-37.05
2440MHz	Pass	5G	7G	PK	5.205G	2.00	-64.73	-62.73	-21.20	-41.53
2440MHz	Pass	7G	8G	PK	7.458G	2.00	-62.40	-60.40	-21.20	-39.20
2440MHz	Pass	8G	25G	PK	16.08828G	2.00	-54.40	-52.40	-21.20	-31.20
2478MHz	Pass	3.1G	4G	AV	3.2647G	2.00	-70.45	-68.45	-41.20	-27.25
2478MHz	Pass	4G	5G	AV	4.956G	2.00	-73.32	-71.32	-41.20	-30.12
2478MHz	Pass	5G	7G	AV	5.21G	2.00	-74.53	-72.53	-41.20	-31.33
2478MHz	Pass	7G	8G	AV	7.50925G	2.00	-71.75	-69.75	-41.20	-28.55
2478MHz	Pass	8G	25G	AV	16.08669G	2.00	-64.43	-62.43	-41.20	-21.23
2478MHz	Pass	3.1G	4G	PK	3.26695G	2.00	-60.59	-58.59	-21.20	-37.39
2478MHz	Pass	4G	5G	PK	4.632G	2.00	-64.62	-62.62	-21.20	-41.42
2478MHz	Pass	5G	7G	PK	5.223G	2.00	-65.13	-63.13	-21.20	-41.93
2478MHz	Pass	7G	8G	PK	7.47125G	2.00	-62.24	-60.24	-21.20	-39.04
2478MHz	Pass	8G	25G	PK	19.12969G	2.00	-55.44	-53.44	-21.20	-32.24
2480MHz	Pass	3.1G	4G	AV	3.26223G	2.00	-73.44	-71.44	-41.20	-30.24
2480MHz	Pass	4G	5G	AV	4.96025G	2.00	-74.27	-72.27	-41.20	-31.07
2480MHz	Pass	5G	7G	AV	5.1995G	2.00	-74.54	-72.54	-41.20	-31.34
2480MHz	Pass	7G	8G	AV	7.496G	2.00	-71.78	-69.78	-41.20	-28.58
2480MHz	Pass	8G	25G	AV	16.08244G	2.00	-64.32	-62.32	-41.20	-21.12
2480MHz	Pass	3.1G	4G	PK	3.26335G	2.00	-63.48	-61.48	-21.20	-40.28
2480MHz	Pass	4G	5G	PK	4.74375G	2.00	-64.71	-62.71	-21.20	-41.51
2480MHz	Pass	5G	7G	PK	5.2105G	2.00	-64.68	-62.68	-21.20	-41.48
2480MHz	Pass	7G	8G	PK	7.434G	2.00	-61.75	-59.75	-21.20	-38.55
2480MHz	Pass	8G	25G	PK	16.12813G	2.00	-54.61	-52.61	-21.20	-31.41

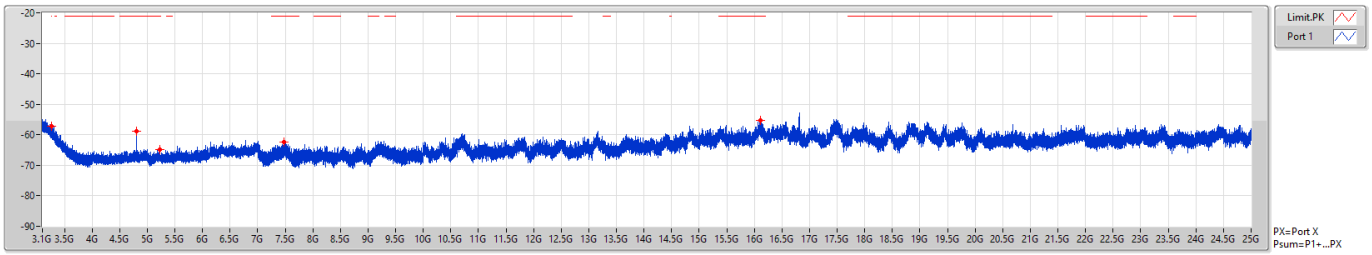
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	3.1G	4G	AV	3.262G	2.00	-67.00	-65.00	-41.20	-23.80
2402MHz	Pass	4G	5G	AV	4.804G	2.00	-64.28	-62.28	-41.20	-21.08
2402MHz	Pass	5G	7G	AV	5.2065G	2.00	-74.53	-72.53	-41.20	-31.33
2402MHz	Pass	7G	8G	AV	7.5035G	2.00	-71.75	-69.75	-41.20	-28.55
2402MHz	Pass	8G	25G	AV	16.08988G	2.00	-64.30	-62.30	-41.20	-21.10
2402MHz	Pass	3.1G	4G	PK	3.2647G	2.00	-57.39	-55.39	-21.20	-34.19
2402MHz	Pass	4G	5G	PK	4.8045G	2.00	-59.15	-57.15	-21.20	-35.95
2402MHz	Pass	5G	7G	PK	5.22G	2.00	-64.23	-62.23	-21.20	-41.03
2402MHz	Pass	7G	8G	PK	7.497G	2.00	-61.92	-59.92	-21.20	-38.72
2402MHz	Pass	8G	25G	PK	19.12703G	2.00	-55.75	-53.75	-21.20	-32.55
2440MHz	Pass	3.1G	4G	AV	3.26448G	2.00	-66.80	-64.80	-41.20	-23.60
2440MHz	Pass	4G	5G	AV	4.88025G	2.00	-67.90	-65.90	-41.20	-24.70
2440MHz	Pass	5G	7G	AV	5.239G	2.00	-73.94	-71.94	-41.20	-30.74
2440MHz	Pass	7G	8G	AV	7.3195G	2.00	-72.65	-70.65	-41.20	-29.45
2440MHz	Pass	8G	25G	AV	19.86759G	2.00	-63.33	-61.33	-41.20	-20.13
2440MHz	Pass	3.1G	4G	PK	3.26628G	2.00	-56.71	-54.71	-21.20	-33.51
2440MHz	Pass	4G	5G	PK	4.88025G	2.00	-61.47	-59.47	-21.20	-38.27
2440MHz	Pass	5G	7G	PK	5.1785G	2.00	-63.85	-61.85	-21.20	-40.65
2440MHz	Pass	7G	8G	PK	7.647G	2.00	-63.59	-61.59	-21.20	-40.39
2440MHz	Pass	8G	25G	PK	19.86441G	2.00	-53.60	-51.60	-21.20	-30.40
2478MHz	Pass	3.1G	4G	AV	3.26403G	2.00	-70.72	-68.72	-41.20	-27.52
2478MHz	Pass	4G	5G	AV	4.95625G	2.00	-72.73	-70.73	-41.20	-29.53
2478MHz	Pass	5G	7G	AV	5.1935G	2.00	-74.41	-72.41	-41.20	-31.21
2478MHz	Pass	7G	8G	AV	7.47725G	2.00	-72.02	-70.02	-41.20	-28.82
2478MHz	Pass	8G	25G	AV	16.05641G	2.00	-64.30	-62.30	-41.20	-21.10
2478MHz	Pass	3.1G	4G	PK	3.26448G	2.00	-60.63	-58.63	-21.20	-37.43
2478MHz	Pass	4G	5G	PK	4.956G	2.00	-63.84	-61.84	-21.20	-40.64
2478MHz	Pass	5G	7G	PK	5.1315G	2.00	-64.56	-62.56	-21.20	-41.36
2478MHz	Pass	7G	8G	PK	7.46225G	2.00	-62.24	-60.24	-21.20	-39.04
2478MHz	Pass	8G	25G	PK	19.118G	2.00	-54.97	-52.97	-21.20	-31.77
2480MHz	Pass	3.1G	4G	AV	3.26515G	2.00	-73.67	-71.67	-41.20	-30.47
2480MHz	Pass	4G	5G	AV	4.96025G	2.00	-74.44	-72.44	-41.20	-31.24
2480MHz	Pass	5G	7G	AV	5.189G	2.00	-74.46	-72.46	-41.20	-31.26
2480MHz	Pass	7G	8G	AV	7.5005G	2.00	-71.60	-69.60	-41.20	-28.40
2480MHz	Pass	8G	25G	AV	16.09838G	2.00	-64.39	-62.39	-41.20	-21.19
2480MHz	Pass	3.1G	4G	PK	3.2602G	2.00	-64.53	-62.53	-21.20	-41.33
2480MHz	Pass	4G	5G	PK	4.96G	2.00	-64.06	-62.06	-21.20	-40.86
2480MHz	Pass	5G	7G	PK	5.359G	2.00	-64.20	-62.20	-21.20	-41.00
2480MHz	Pass	7G	8G	PK	7.4895G	2.00	-61.18	-59.18	-21.20	-37.98
2480MHz	Pass	8G	25G	PK	19.13288G	2.00	-54.99	-52.99	-21.20	-31.79
BT-LE(Symbol	-	-	-	-	-	-	-	-	-	-

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
rate 2Mbps)										
2404MHz	Pass	3.1G	4G	AV	3.26673G	2.00	-67.17	-65.17	-41.20	-23.97
2404MHz	Pass	4G	5G	AV	4.80775G	2.00	-66.47	-64.47	-41.20	-23.27
2404MHz	Pass	5G	7G	AV	5.366G	2.00	-73.87	-71.87	-41.20	-30.67
2404MHz	Pass	7G	8G	AV	7.74325G	2.00	-73.27	-71.27	-41.20	-30.07
2404MHz	Pass	8G	25G	AV	19.05106G	2.00	-66.21	-64.21	-41.20	-23.01
2404MHz	Pass	3.1G	4G	PK	3.26335G	2.00	-58.30	-56.30	-21.20	-35.10
2404MHz	Pass	4G	5G	PK	4.80725G	2.00	-58.92	-56.92	-21.20	-35.72
2404MHz	Pass	5G	7G	PK	5.235G	2.00	-63.20	-61.20	-21.20	-40.00
2404MHz	Pass	7G	8G	PK	7.74525G	2.00	-62.43	-60.43	-21.20	-39.23
2404MHz	Pass	8G	25G	PK	15.77431G	2.00	-56.13	-54.13	-21.20	-32.93
2440MHz	Pass	3.1G	4G	AV	3.26605G	2.00	-67.21	-65.21	-41.20	-24.01
2440MHz	Pass	4G	5G	AV	4.879G	2.00	-69.17	-67.17	-41.20	-25.97
2440MHz	Pass	5G	7G	AV	5.2035G	2.00	-74.34	-72.34	-41.20	-31.14
2440MHz	Pass	7G	8G	AV	7.489G	2.00	-71.81	-69.81	-41.20	-28.61
2440MHz	Pass	8G	25G	AV	16.07766G	2.00	-64.34	-62.34	-41.20	-21.14
2440MHz	Pass	3.1G	4G	PK	3.26313G	2.00	-57.86	-55.86	-21.20	-34.66
2440MHz	Pass	4G	5G	PK	4.87925G	2.00	-61.99	-59.99	-21.20	-38.79
2440MHz	Pass	5G	7G	PK	5.206G	2.00	-64.31	-62.31	-21.20	-41.11
2440MHz	Pass	7G	8G	PK	7.4875G	2.00	-61.97	-59.97	-21.20	-38.77
2440MHz	Pass	8G	25G	PK	18.81678G	2.00	-55.19	-53.19	-21.20	-31.99
2478MHz	Pass	3.1G	4G	AV	3.26403G	2.00	-72.28	-70.28	-41.20	-29.08
2478MHz	Pass	4G	5G	AV	4.957G	2.00	-74.81	-72.81	-41.20	-31.61
2478MHz	Pass	5G	7G	AV	5.1885G	2.00	-74.66	-72.66	-41.20	-31.46
2478MHz	Pass	7G	8G	AV	7.48825G	2.00	-71.53	-69.53	-41.20	-28.33
2478MHz	Pass	8G	25G	AV	16.09784G	2.00	-64.13	-62.13	-41.20	-20.93
2478MHz	Pass	3.1G	4G	PK	3.26133G	2.00	-62.56	-60.56	-21.20	-39.36
2478MHz	Pass	4G	5G	PK	4.9575G	2.00	-64.50	-62.50	-21.20	-41.30
2478MHz	Pass	5G	7G	PK	5.1685G	2.00	-64.63	-62.63	-21.20	-41.43
2478MHz	Pass	7G	8G	PK	7.46775G	2.00	-62.64	-60.64	-21.20	-39.44
2478MHz	Pass	8G	25G	PK	19.16953G	2.00	-54.92	-52.92	-21.20	-31.72

DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

BT-LE(125kbps) **CSE-DTS [PK]**

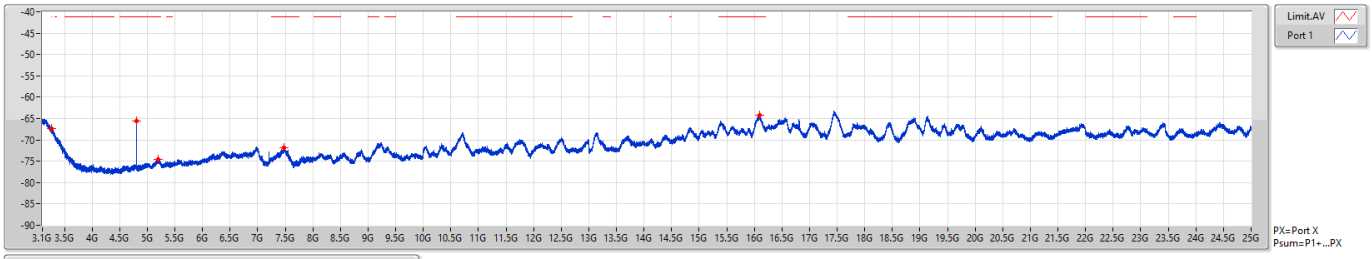
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26133G	-57.08	-57.08
4G	5G	1M	PK	4.8045G	-58.73	-58.73
5G	7G	1M	PK	5.224G	-64.72	-64.72
7G	8G	1M	PK	7.47475G	-62.41	-62.41
8G	25G	1M	PK	16.10581G	-55.35	-55.35

BT-LE(125kbps) **CSE-DTS [AV]**

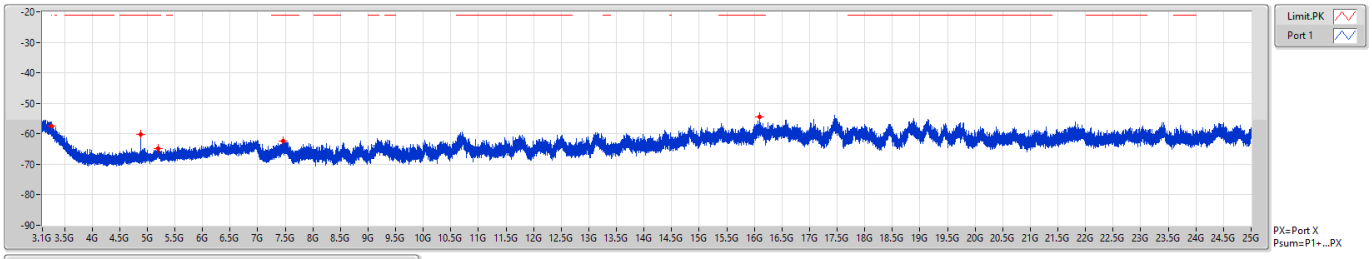
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26358G	-67.29	-67.29
4G	5G	1M	AV	4.80375G	-65.64	-65.64
5G	7G	1M	AV	5.1995G	-74.54	-74.54
7G	8G	1M	AV	7.47875G	-71.87	-71.87
8G	25G	1M	AV	16.09731G	-64.14	-64.14

BT-LE(125kbps) **CSE-DTS [PK]**

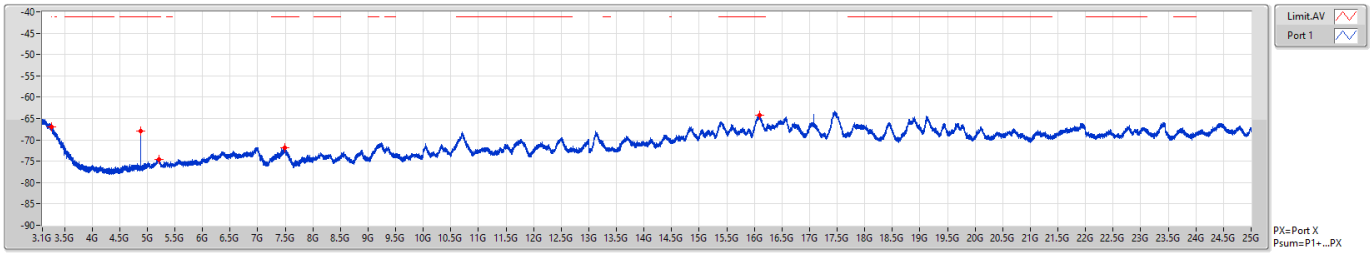
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26043G	-57.43	-57.43
4G	5G	1M	PK	4.8805G	-60.25	-60.25
5G	7G	1M	PK	5.205G	-64.73	-64.73
7G	8G	1M	PK	7.458G	-62.40	-62.40
8G	25G	1M	PK	16.08828G	-54.40	-54.40

BT-LE(125kbps) **CSE-DTS [AV]**

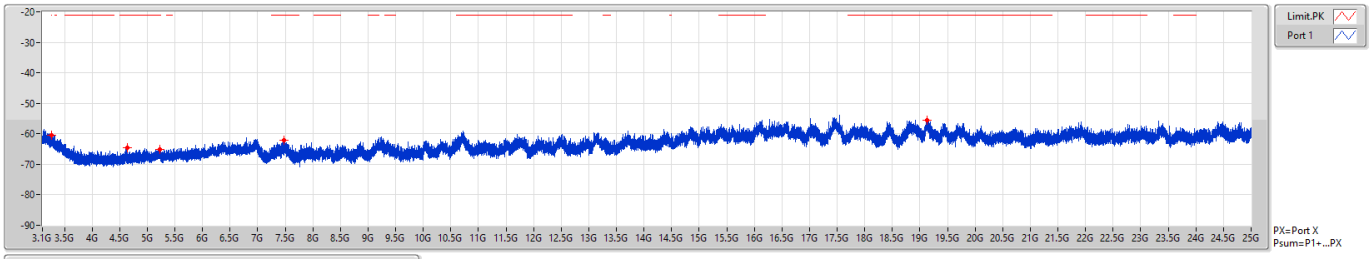
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26088G	-66.89	-66.89
4G	5G	1M	AV	4.88025G	-67.98	-67.98
5G	7G	1M	AV	5.219G	-74.52	-74.52
7G	8G	1M	AV	7.494G	-71.93	-71.93
8G	25G	1M	AV	16.09891G	-64.26	-64.26

BT-LE(125kbps) **CSE-DTS [PK]**

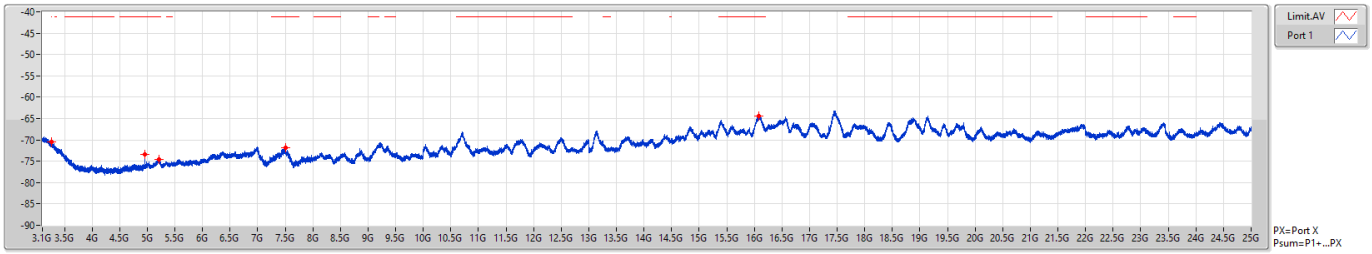
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26695G	-60.59	-60.59
4G	5G	1M	PK	4.632G	-64.62	-64.62
5G	7G	1M	PK	5.223G	-65.13	-65.13
7G	8G	1M	PK	7.47125G	-62.24	-62.24
8G	25G	1M	PK	19.12969G	-55.44	-55.44

BT-LE(125kbps) **CSE-DTS [AV]**

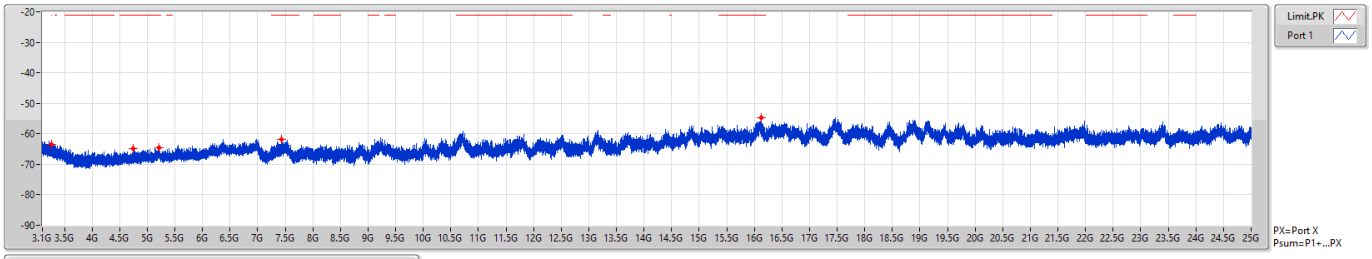
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.2647G	-70.45	-70.45
4G	5G	1M	AV	4.956G	-73.32	-73.32
5G	7G	1M	AV	5.21G	-74.53	-74.53
7G	8G	1M	AV	7.50925G	-71.75	-71.75
8G	25G	1M	AV	16.08669G	-64.43	-64.43

BT-LE(125kbps) **CSE-DTS [PK]**

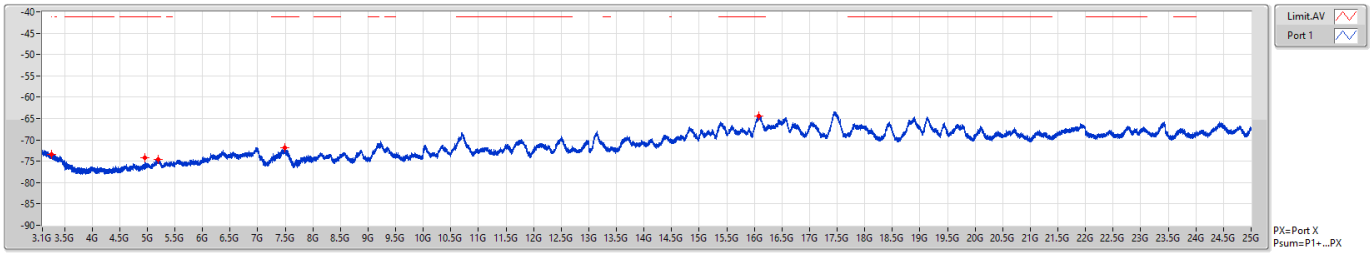
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26335G	-63.48	-63.48
4G	5G	1M	PK	4.74375G	-64.71	-64.71
5G	7G	1M	PK	5.2105G	-64.68	-64.68
7G	8G	1M	PK	7.434G	-61.75	-61.75
8G	25G	1M	PK	16.12813G	-54.61	-54.61

BT-LE(125kbps) **CSE-DTS [AV]**

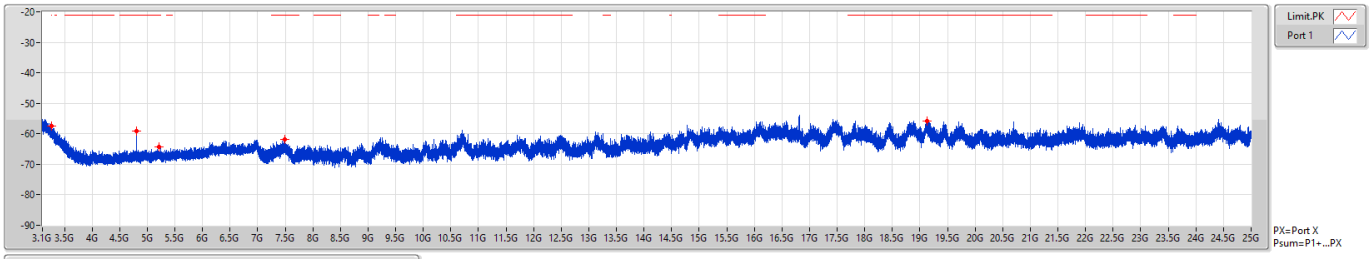
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26223G	-73.44	-73.44
4G	5G	1M	AV	4.96025G	-74.27	-74.27
5G	7G	1M	AV	5.1995G	-74.54	-74.54
7G	8G	1M	AV	7.496G	-71.78	-71.78
8G	25G	1M	AV	16.08244G	-64.32	-64.32

BT-LE(1Mbps) **CSE-DTS [PK]**

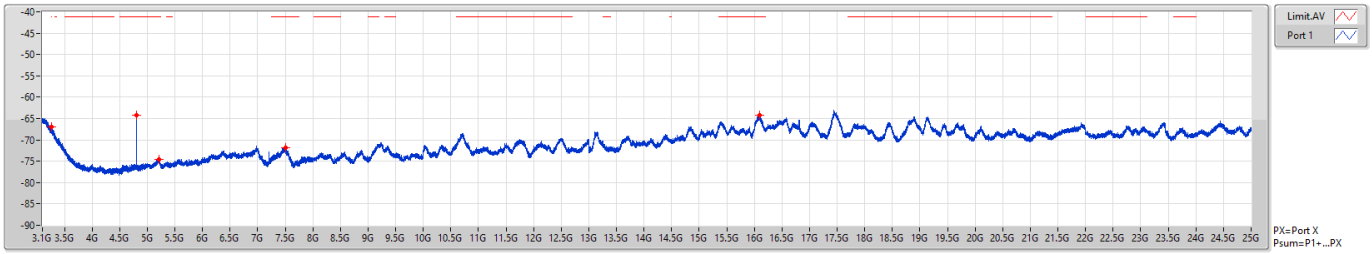
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.2647G	-57.39	-57.39
4G	5G	1M	PK	4.8045G	-59.15	-59.15
5G	7G	1M	PK	5.22G	-64.23	-64.23
7G	8G	1M	PK	7.497G	-61.92	-61.92
8G	25G	1M	PK	19.12703G	-55.75	-55.75

BT-LE(1Mbps) **CSE-DTS [AV]**

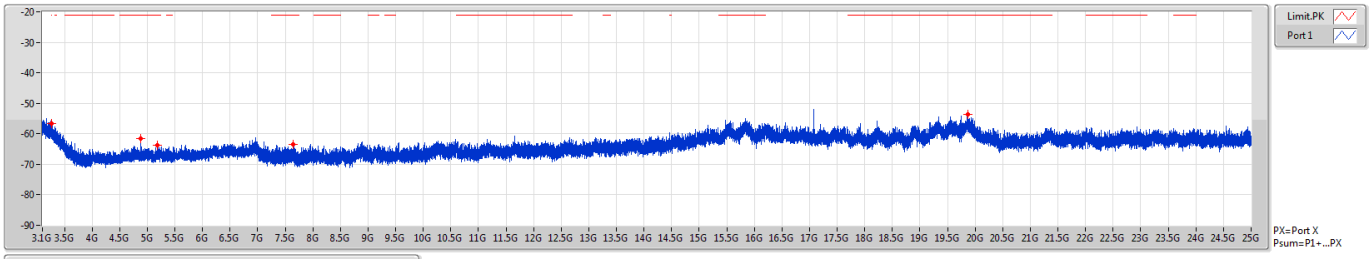
2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.262G	-67.00	-67.00
4G	5G	1M	AV	4.804G	-64.28	-64.28
5G	7G	1M	AV	5.2065G	-74.53	-74.53
7G	8G	1M	AV	7.5035G	-71.75	-71.75
8G	25G	1M	AV	16.08988G	-64.30	-64.30

BT-LE(1Mbps) **CSE-DTS [PK]**

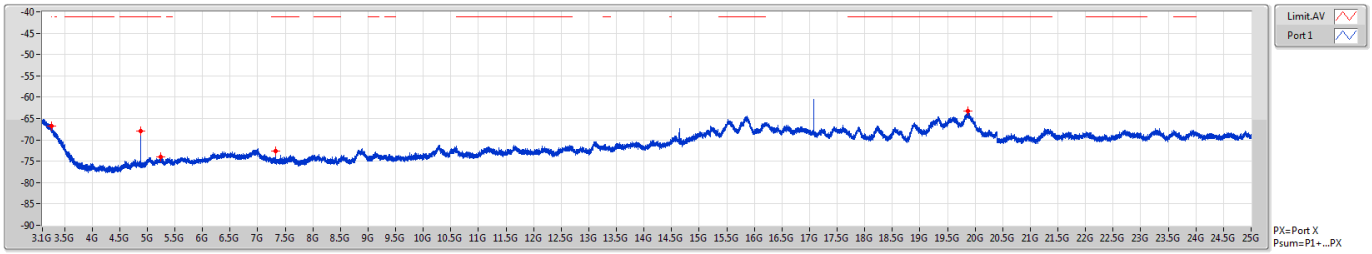
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26628G	-56.71	-56.71
4G	5G	1M	PK	4.88025G	-61.47	-61.47
5G	7G	1M	PK	5.1785G	-63.85	-63.85
7G	8G	1M	PK	7.647G	-63.59	-63.59
8G	25G	1M	PK	19.86441G	-53.60	-53.60

BT-LE(1Mbps) **CSE-DTS [AV]**

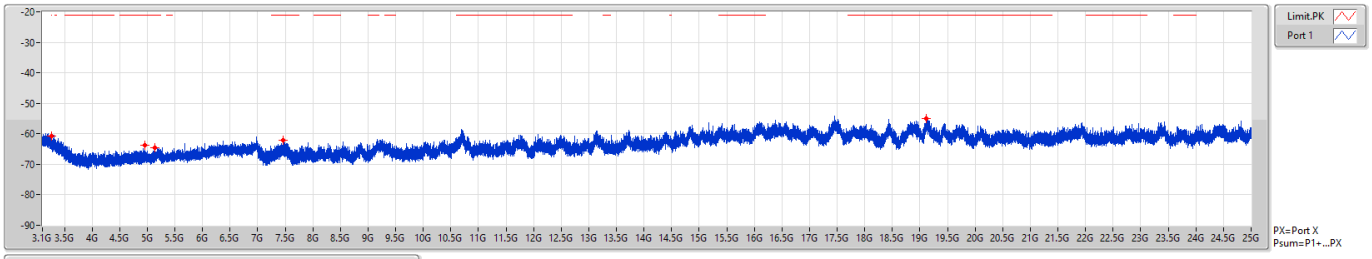
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26448G	-66.80	-66.80
4G	5G	1M	AV	4.88025G	-67.90	-67.90
5G	7G	1M	AV	5.239G	-73.94	-73.94
7G	8G	1M	AV	7.3195G	-72.65	-72.65
8G	25G	1M	AV	19.86759G	-63.33	-63.33

BT-LE(1Mbps) **CSE-DTS [PK]**

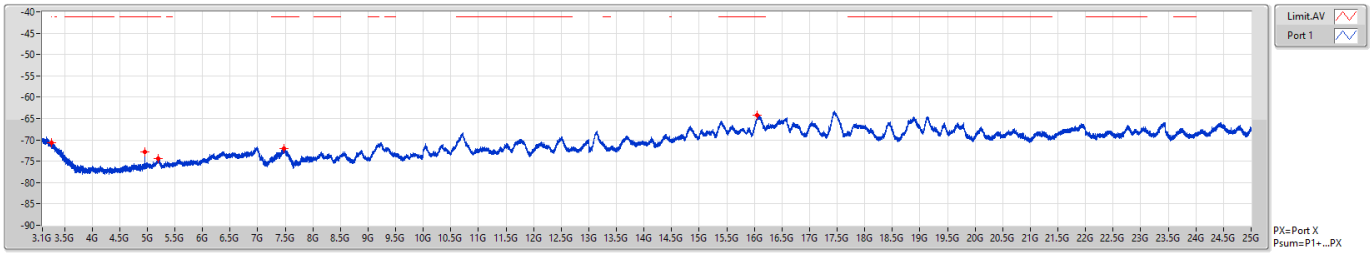
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26448G	-60.63	-60.63
4G	5G	1M	PK	4.956G	-63.84	-63.84
5G	7G	1M	PK	5.1315G	-64.56	-64.56
7G	8G	1M	PK	7.46225G	-62.24	-62.24
8G	25G	1M	PK	19.118G	-54.97	-54.97

BT-LE(1Mbps) **CSE-DTS [AV]**

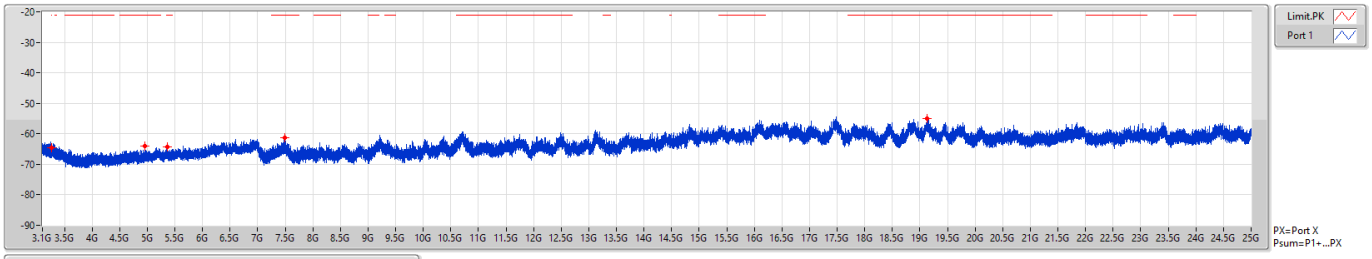
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26403G	-70.72	-70.72
4G	5G	1M	AV	4.95625G	-72.73	-72.73
5G	7G	1M	AV	5.1935G	-74.41	-74.41
7G	8G	1M	AV	7.47725G	-72.02	-72.02
8G	25G	1M	AV	16.05641G	-64.30	-64.30

BT-LE(1Mbps) **CSE-DTS [PK]**

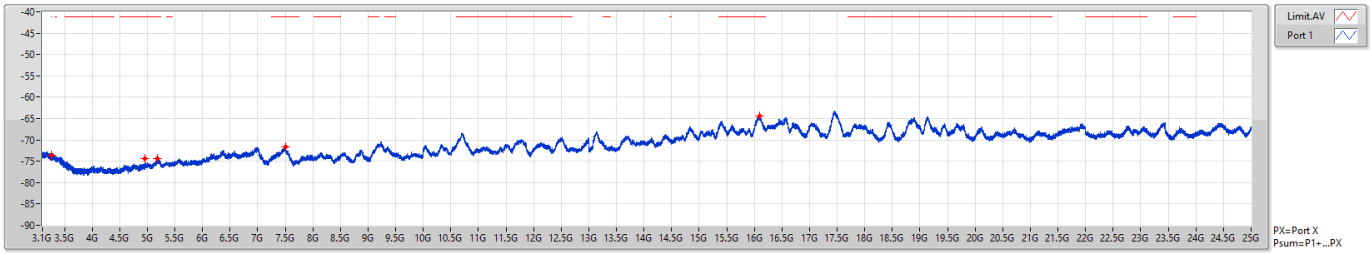
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.2602G	-64.53	-64.53
4G	5G	1M	PK	4.96G	-64.06	-64.06
5G	7G	1M	PK	5.359G	-64.20	-64.20
7G	8G	1M	PK	7.4895G	-61.18	-61.18
8G	25G	1M	PK	19.13288G	-54.99	-54.99

BT-LE(1Mbps) **CSE-DTS [AV]**

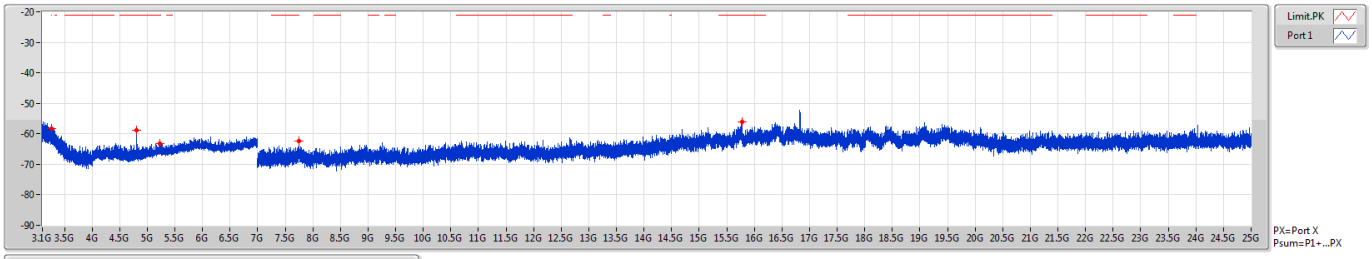
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26515G	-73.67	-73.67
4G	5G	1M	AV	4.96025G	-74.44	-74.44
5G	7G	1M	AV	5.189G	-74.46	-74.46
7G	8G	1M	AV	7.5005G	-71.60	-71.60
8G	25G	1M	AV	16.09838G	-64.39	-64.39

BT-LE(2Mbps) **CSE-DTS [PK]**

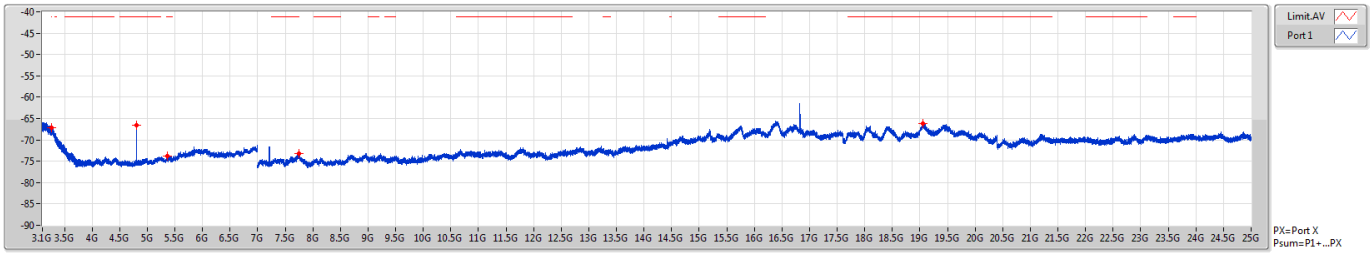
2404MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26335G	-58.30	-58.30
4G	5G	1M	PK	4.80725G	-58.92	-58.92
5G	7G	1M	PK	5.235G	-63.20	-63.20
7G	8G	1M	PK	7.74525G	-62.43	-62.43
8G	25G	1M	PK	15.77431G	-56.13	-56.13

BT-LE(2Mbps) **CSE-DTS [AV]**

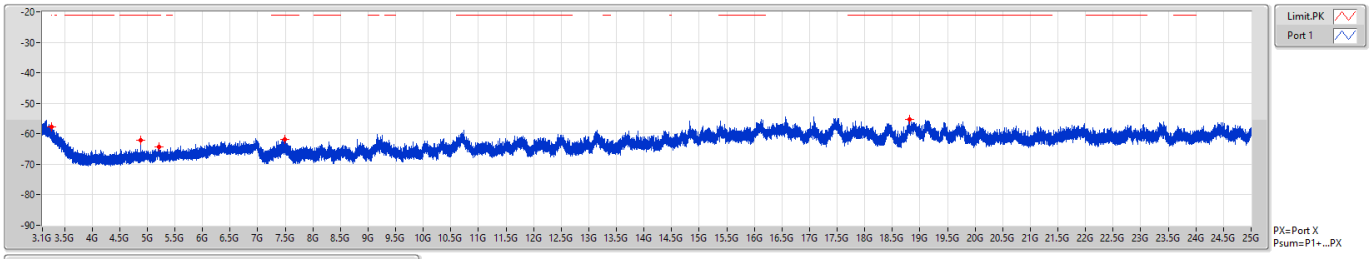
2404MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26673G	-67.17	-67.17
4G	5G	1M	AV	4.80775G	-66.47	-66.47
5G	7G	1M	AV	5.366G	-73.87	-73.87
7G	8G	1M	AV	7.74325G	-73.27	-73.27
8G	25G	1M	AV	19.05106G	-66.21	-66.21

BT-LE(2Mbps) **CSE-DTS [PK]**

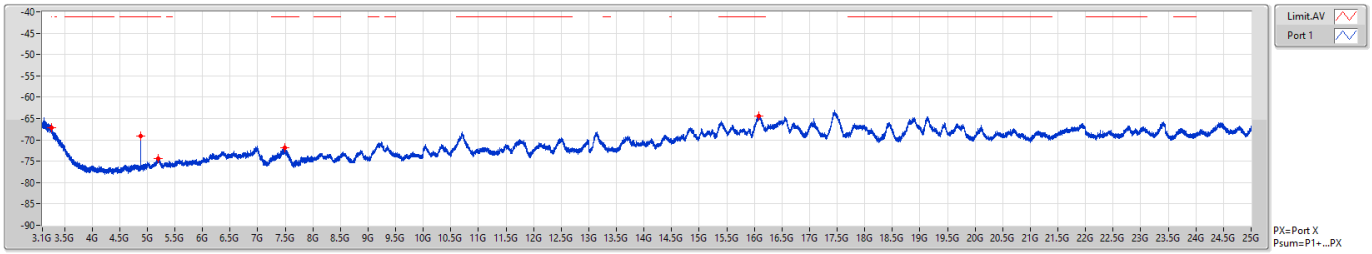
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26313G	-57.86	-57.86
4G	5G	1M	PK	4.87925G	-61.99	-61.99
5G	7G	1M	PK	5.206G	-64.31	-64.31
7G	8G	1M	PK	7.4875G	-61.97	-61.97
8G	25G	1M	PK	18.81678G	-55.19	-55.19

BT-LE(2Mbps) **CSE-DTS [AV]**

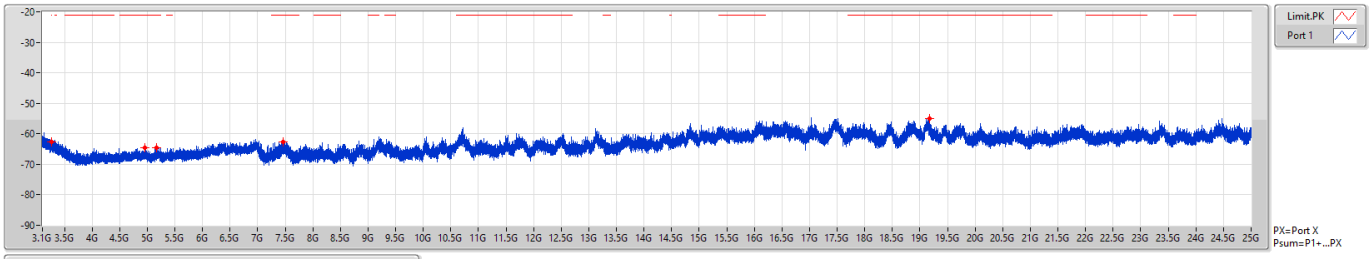
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26605G	-67.21	-67.21
4G	5G	1M	AV	4.879G	-69.17	-69.17
5G	7G	1M	AV	5.2035G	-74.34	-74.34
7G	8G	1M	AV	7.489G	-71.81	-71.81
8G	25G	1M	AV	16.07766G	-64.34	-64.34

BT-LE(2Mbps) **CSE-DTS [PK]**

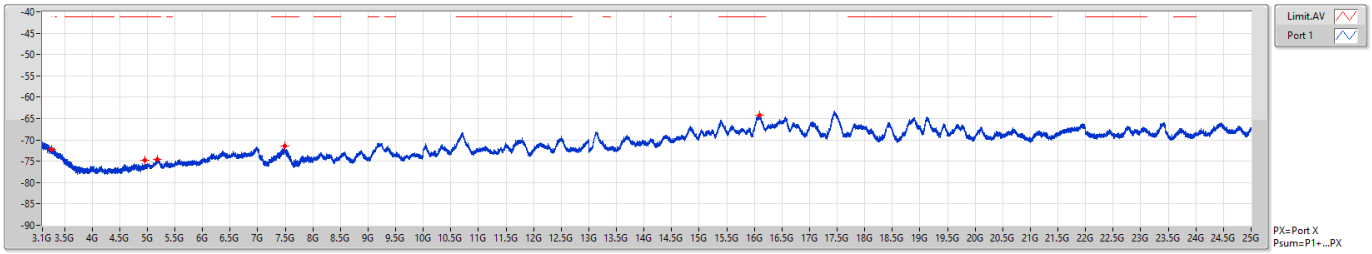
2478MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	PK	3.26133G	-62.56	-62.56
4G	5G	1M	PK	4.9575G	-64.50	-64.50
5G	7G	1M	PK	5.1685G	-64.63	-64.63
7G	8G	1M	PK	7.46775G	-62.64	-62.64
8G	25G	1M	PK	19.16953G	-54.92	-54.92

BT-LE(2Mbps) **CSE-DTS [AV]**

2478MHz

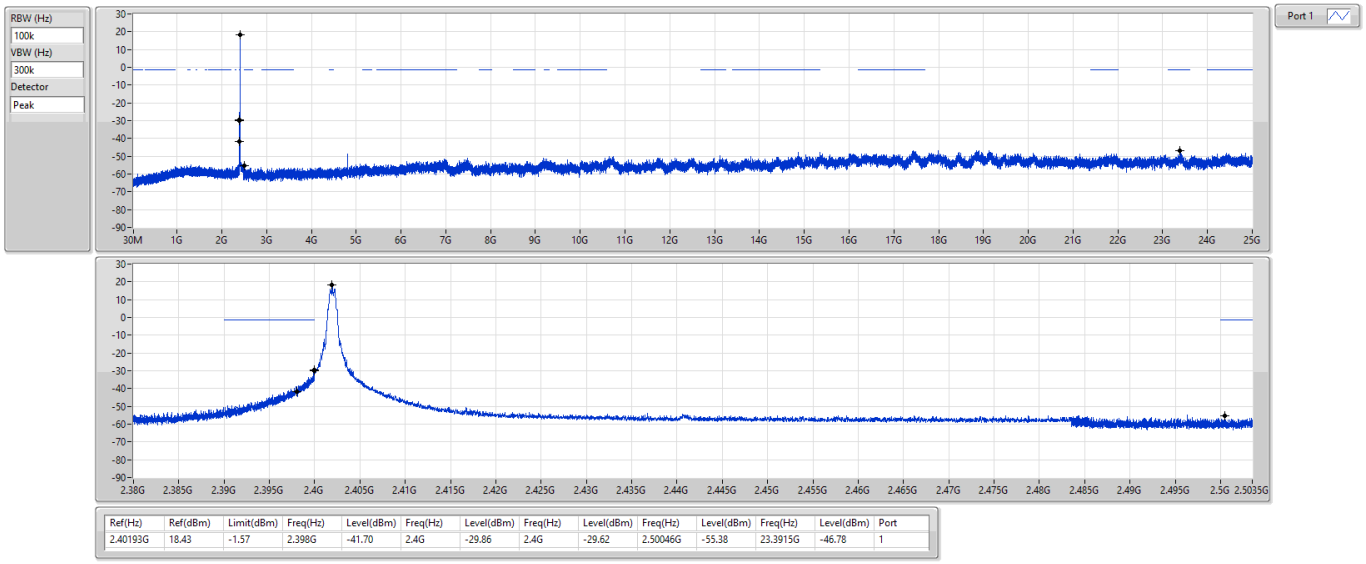


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm
3.1G	4G	1M	AV	3.26403G	-72.28	-72.28
4G	5G	1M	AV	4.957G	-74.81	-74.81
5G	7G	1M	AV	5.1885G	-74.66	-74.66
7G	8G	1M	AV	7.48825G	-71.53	-71.53
8G	25G	1M	AV	16.09784G	-64.13	-64.13

1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

2.4-2.4835GHz_BT-LE(125kbps) **CSENdB-FS**

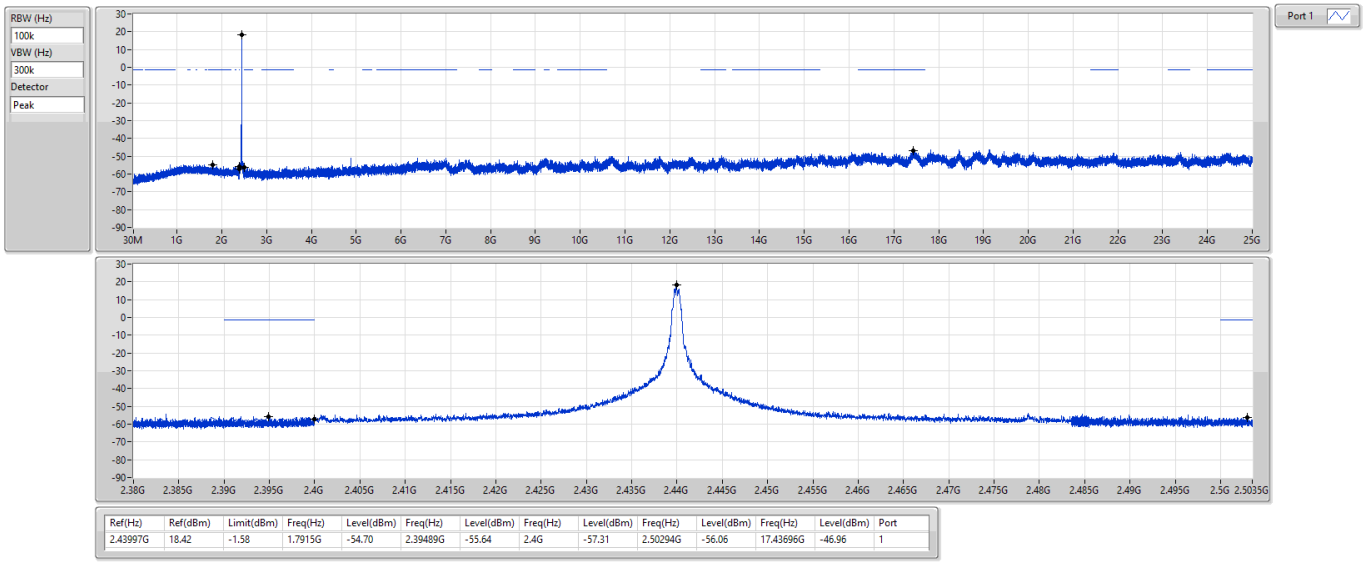
2402MHz



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
2.40193G	18.43	-1.57	2.398G	-41.70	2.4G	-29.86	2.4G	-29.62	2.50046G	-55.38	23.3915G	-46.78	1

2.4-2.4835GHz_BT-LE(125kbps) **CSENdB-FS**

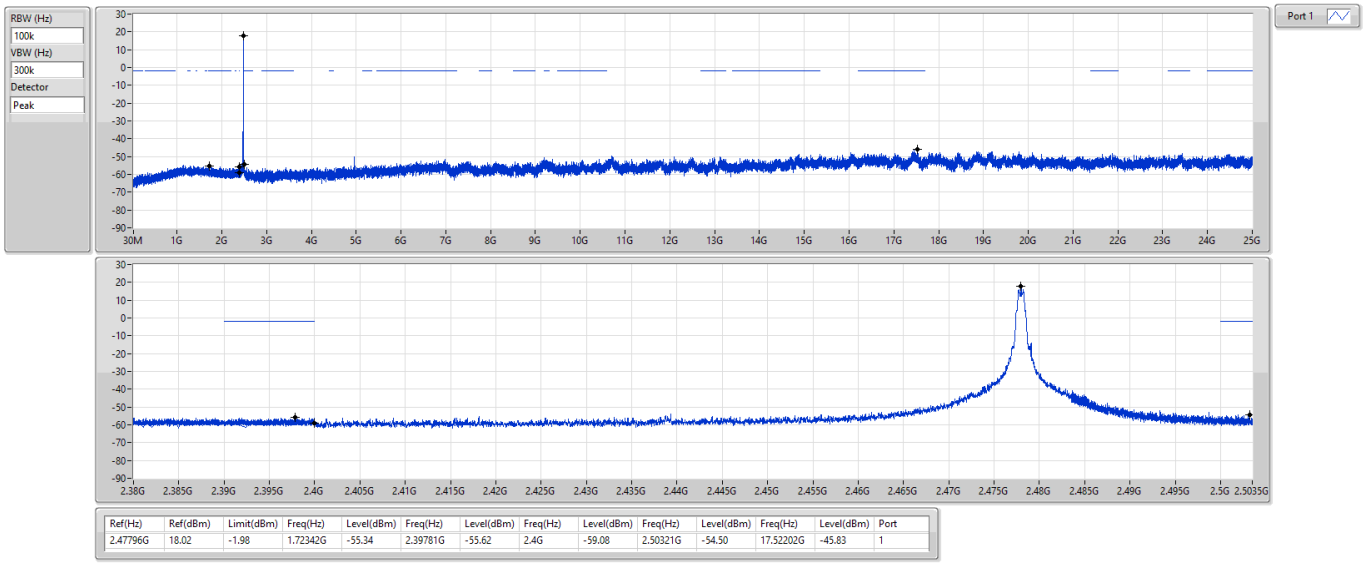
2440MHz



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
2.43997G	18.42	-1.58	1.7915G	-54.70	2.39489G	-55.64	2.4G	-57.31	2.50294G	-56.06	17.43696G	-46.96	1

2.4-2.4835GHz_BT-LE(125kbps) **CSENdB-FS**

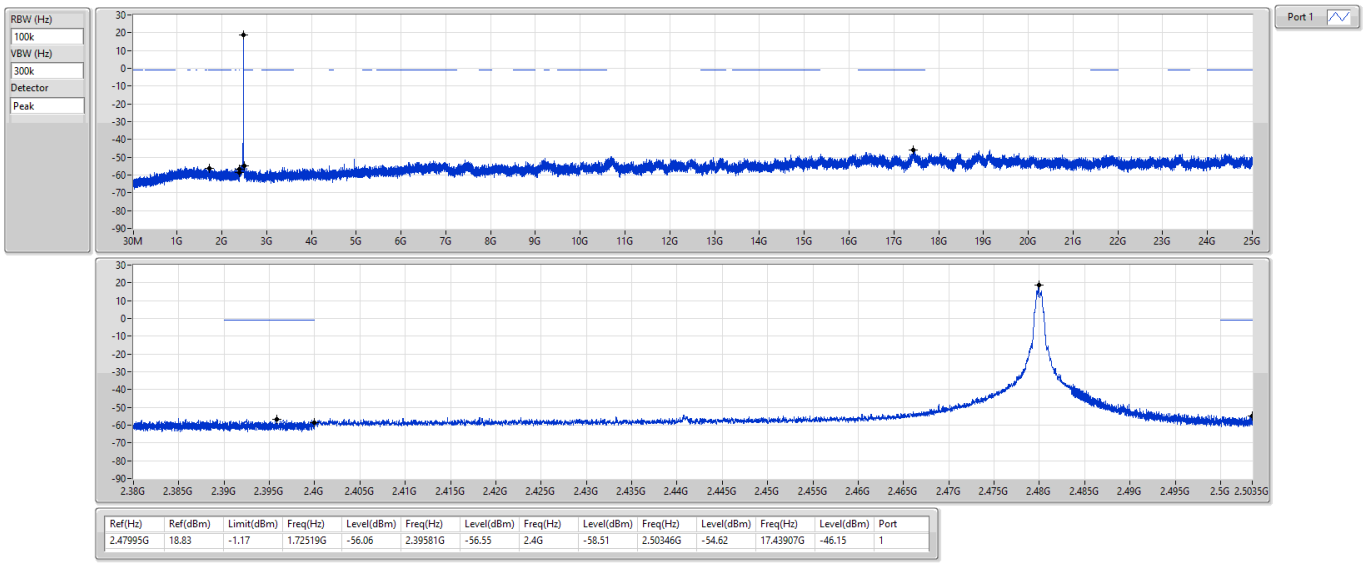
2478MHz



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
2.47796G	18.02	-1.98	1.72342G	-55.34	2.39781G	-55.62	2.4G	-59.08	2.50321G	-54.50	17.52202G	-45.83	1

2.4-2.4835GHz_BT-LE(125kbps) **CSENdB-FS**

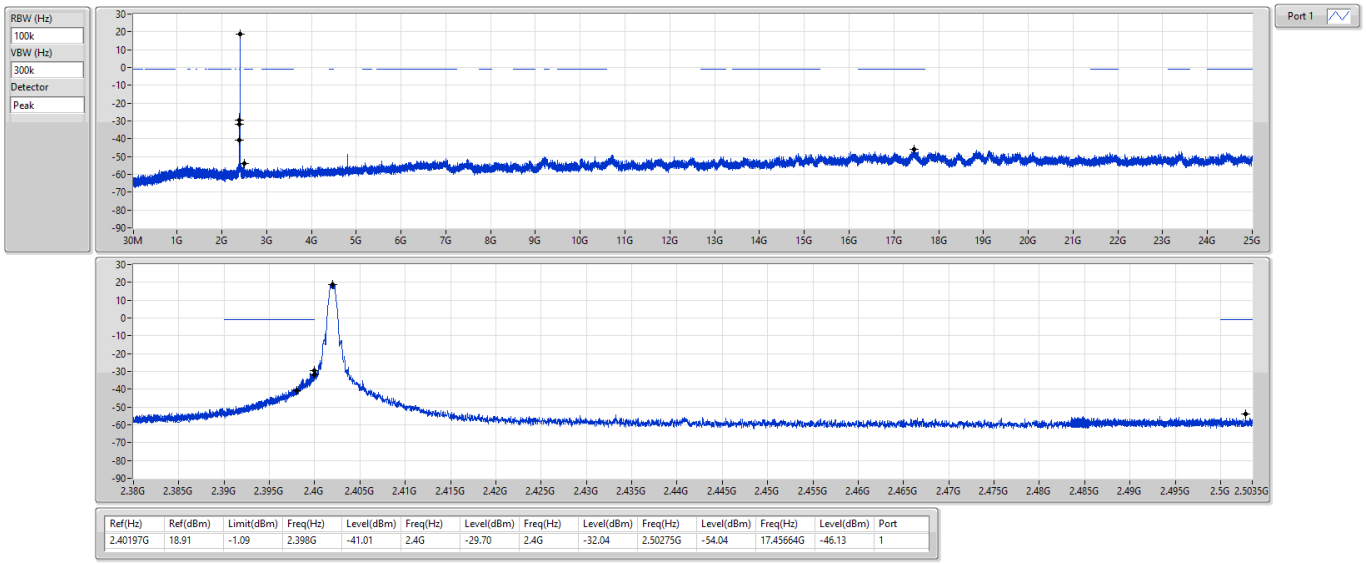
2480MHz



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
2.47995G	18.83	-1.17	1.72519G	-56.06	2.39581G	-56.55	2.4G	-58.51	2.50346G	-54.62	17.43907G	-46.15	1

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

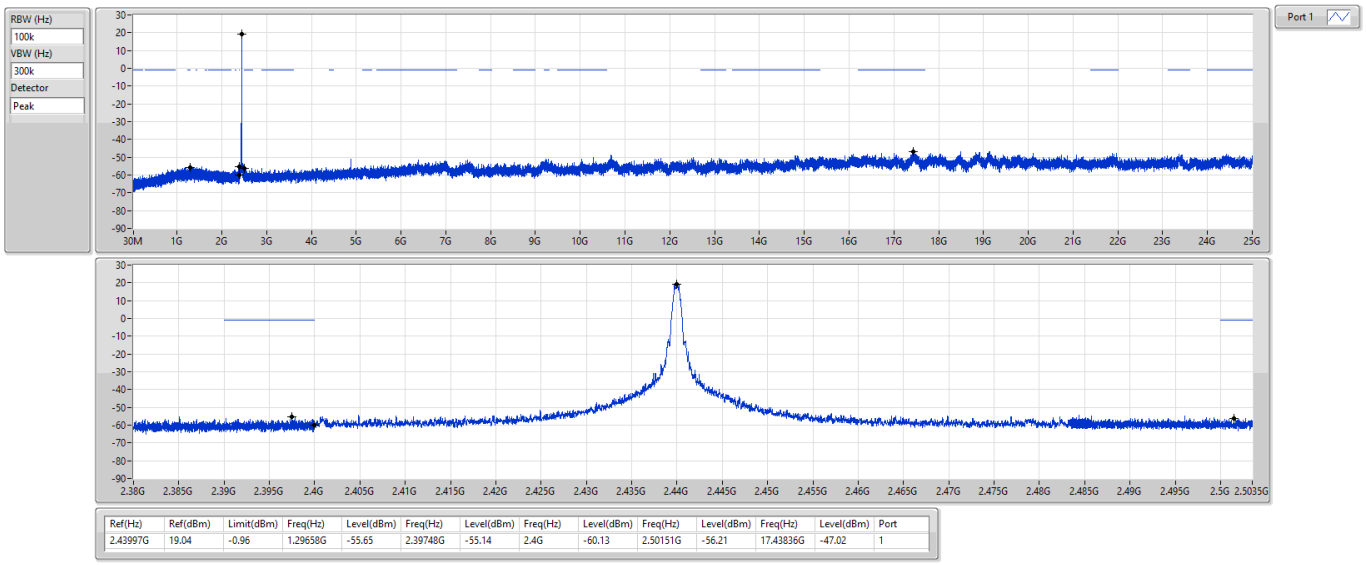
2402MHz



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
2.40197G	18.91	-1.09	2.398G	-41.01	2.4G	-29.70	2.4G	-32.04	2.50275G	-54.04	17.45664G	-46.13	1

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

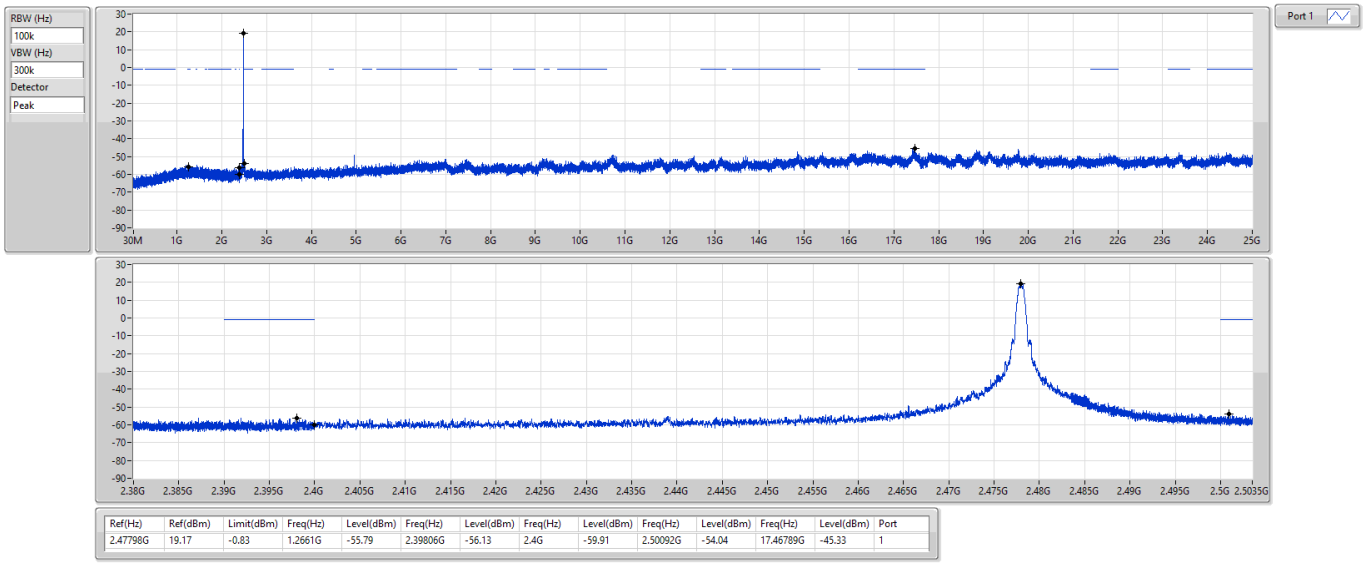
2440MHz



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
2.43997G	19.04	-0.96	1.29658G	-55.65	2.39748G	-55.14	2.4G	-60.13	2.50151G	-56.21	17.43836G	-47.02	1

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

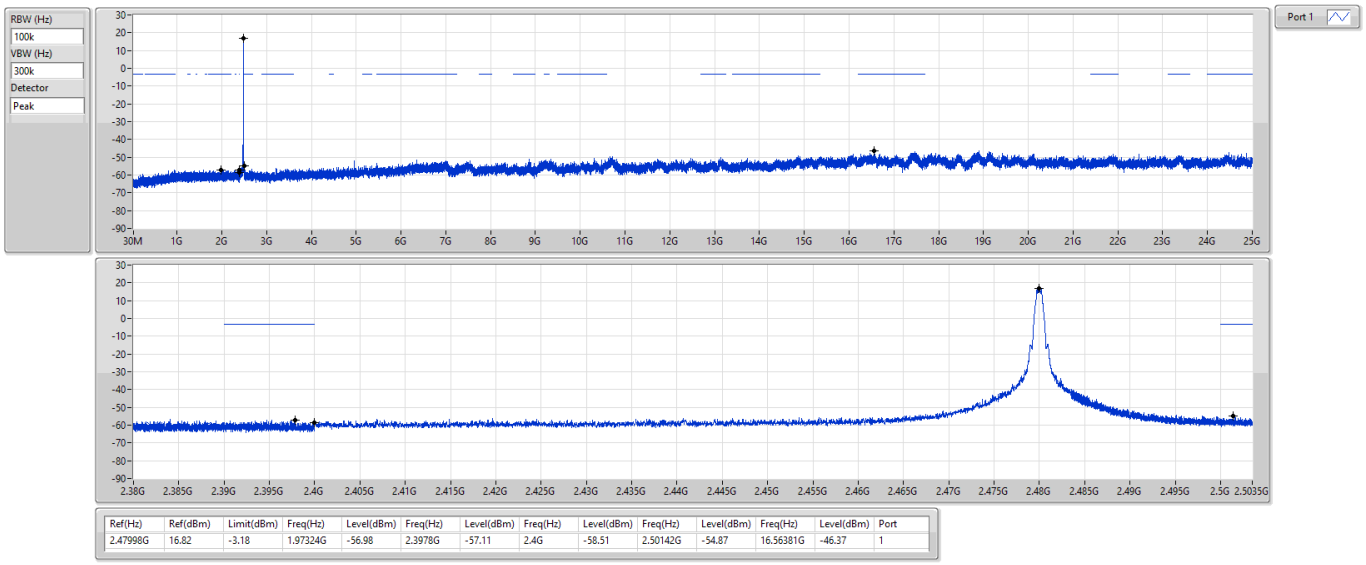
2478MHz



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
2.47798G	19.17	-0.83	1.2661G	-55.79	2.39806G	-56.13	2.4G	-59.91	2.50092G	-54.04	17.46789G	-45.33	1

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

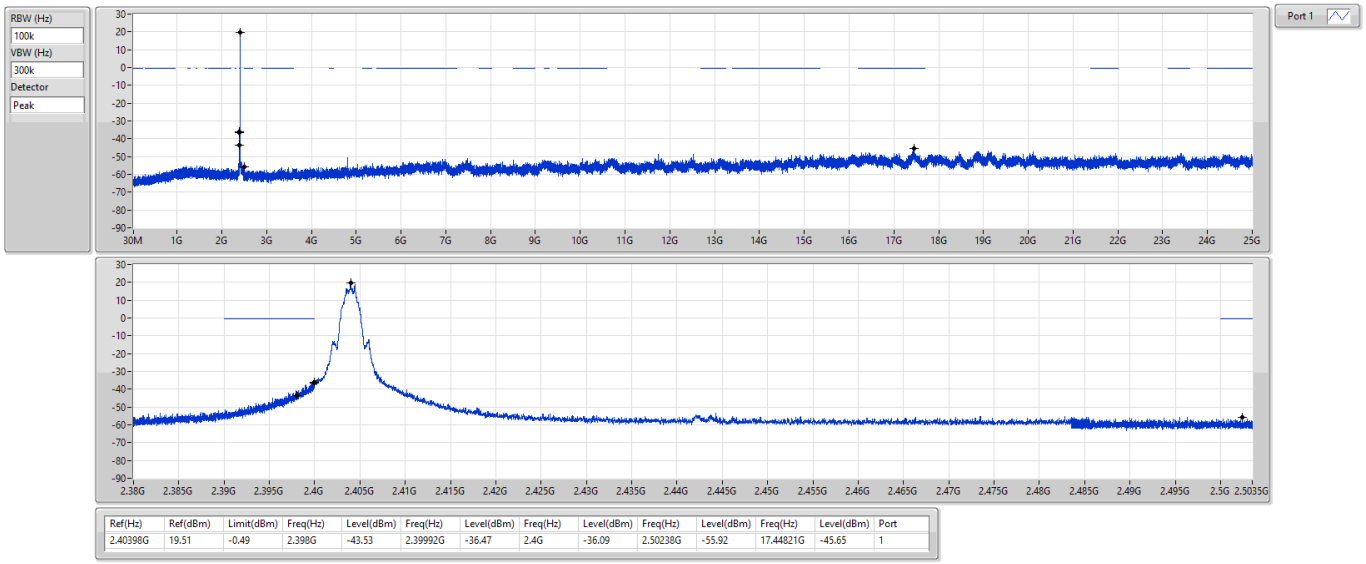
2480MHz



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
2.47998G	16.82	-3.18	1.97324G	-56.98	2.3978G	-57.11	2.4G	-58.51	2.50142G	-54.87	16.56381G	-46.37	1

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

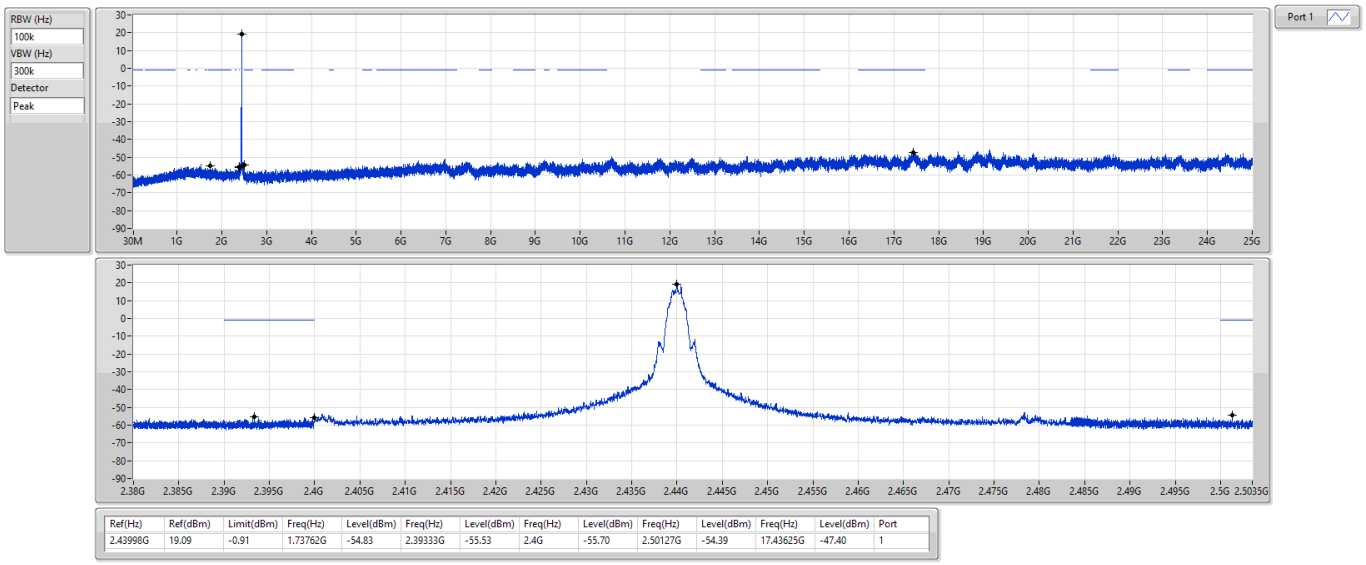
2404MHz



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
2.40398G	19.51	-0.49	2.398G	-43.53	2.39992G	-36.47	2.4G	-36.09	2.50238G	-55.92	17.44821G	-45.65	1

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

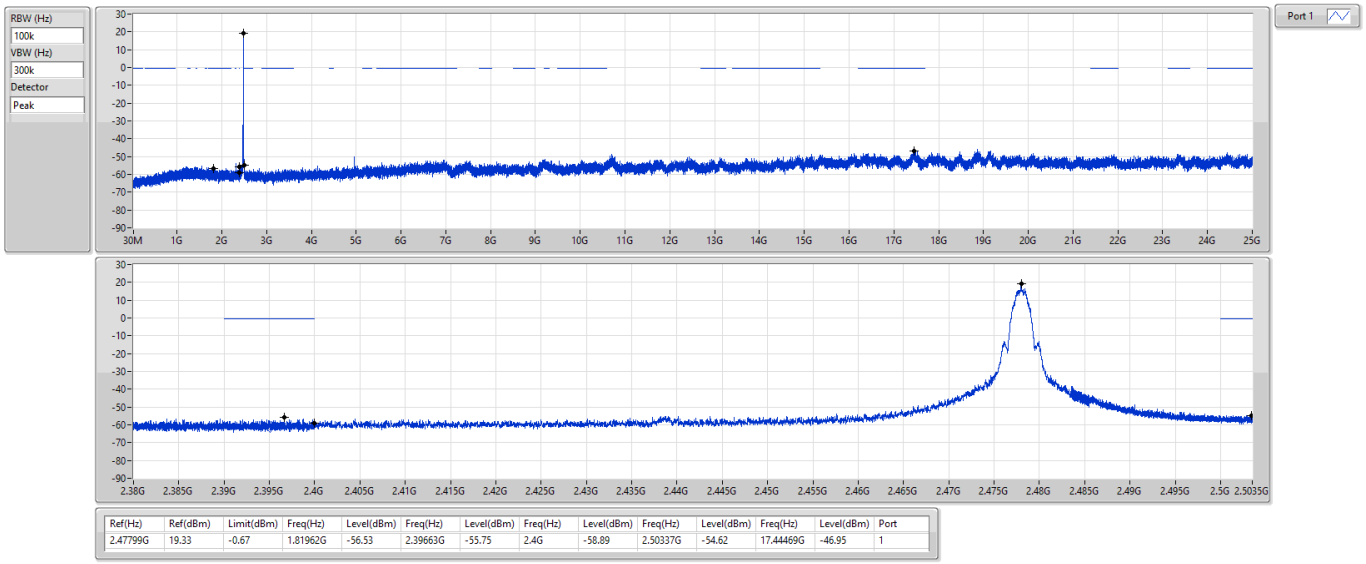
2440MHz



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
2.43998G	19.09	-0.91	1.73762G	-54.83	2.39333G	-55.53	2.4G	-55.70	2.50127G	-54.39	17.43625G	-47.40	1

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

2478MHz

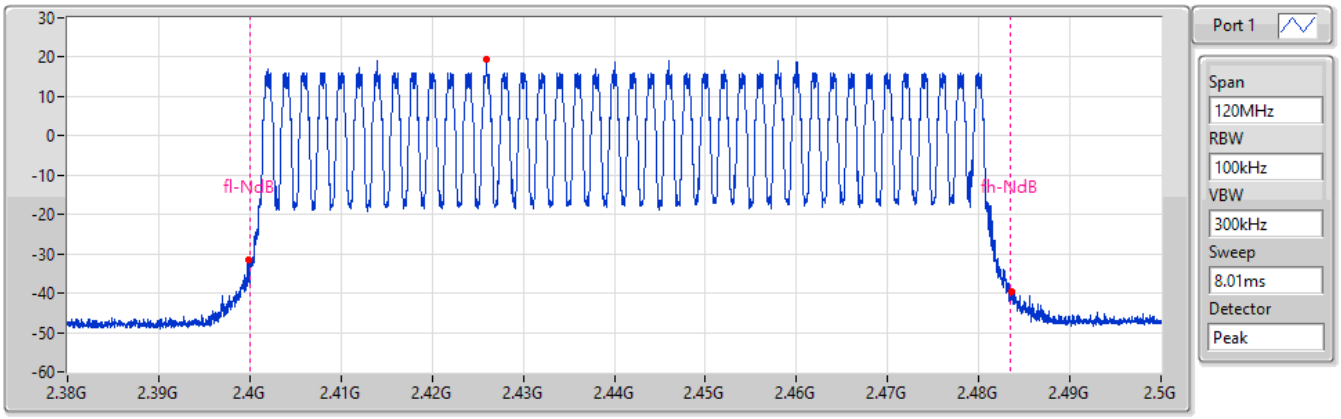


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47799G	19.33	-0.67	1.81962G	-56.53	2.39663G	-55.75	2.4G	-58.89	2.50337G	-54.62	17.44469G	-46.95	1

2.4-2.4835GHz_BT-LE(125kbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

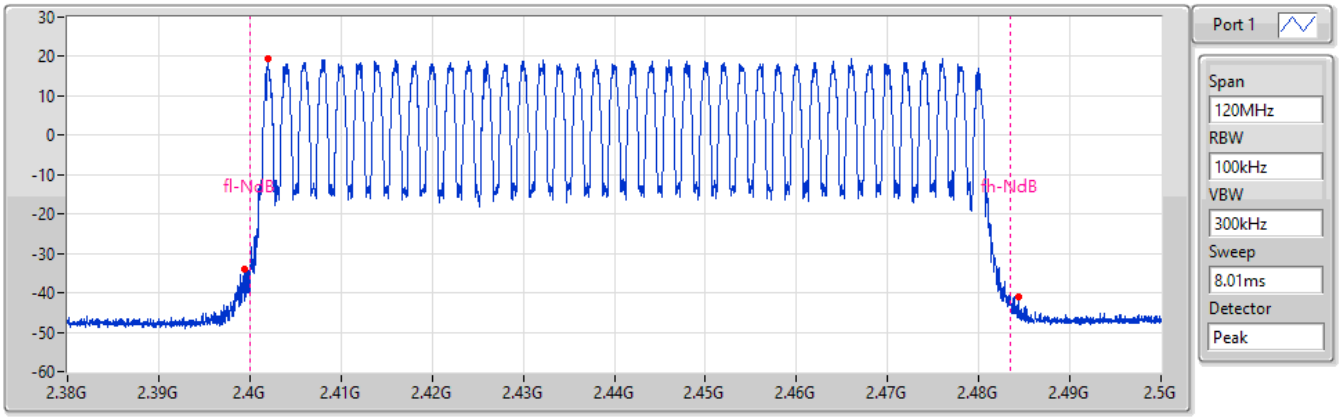


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-0.7	2.425975G	19.3	2.399815G	-31.56	2.483545G	-39.69

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

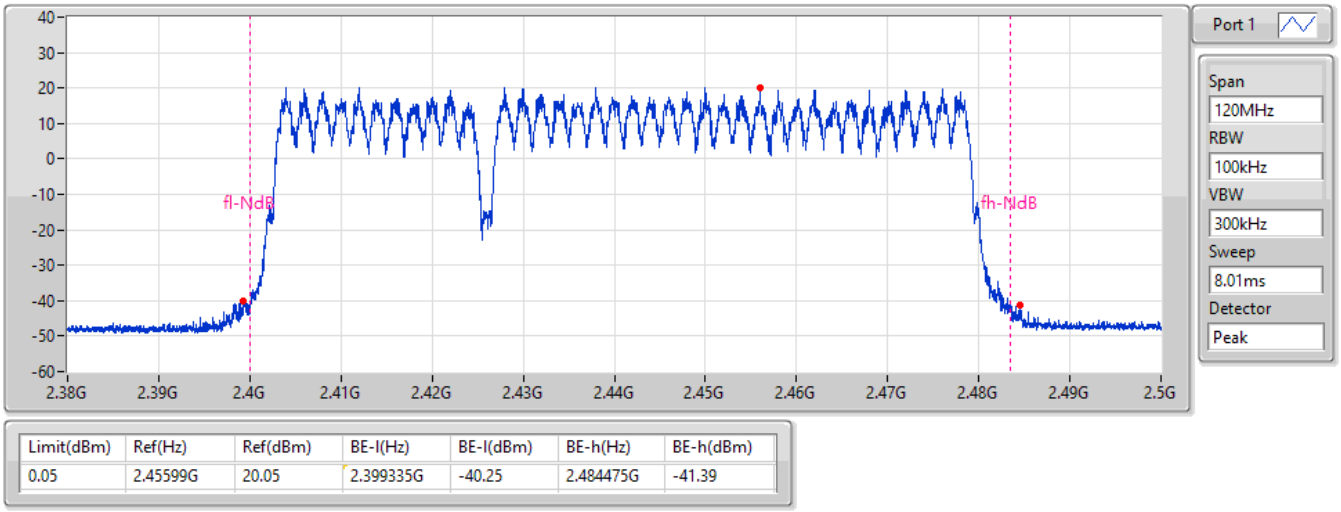


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-0.59	2.401975G	19.41	2.39938G	-33.96	2.484385G	-41.05

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

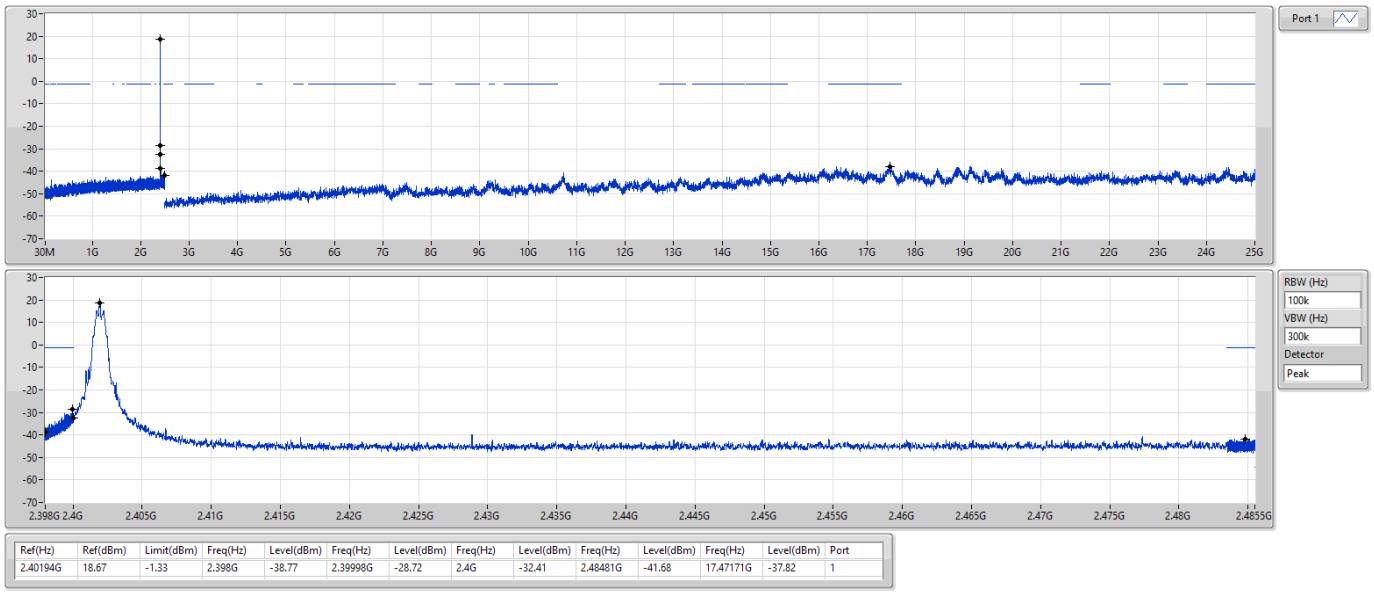


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
0.05	2.45599G	20.05	2.399335G	-40.25	2.484475G	-41.39

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

BT-LE(125kbps) **CSENdB-FS**

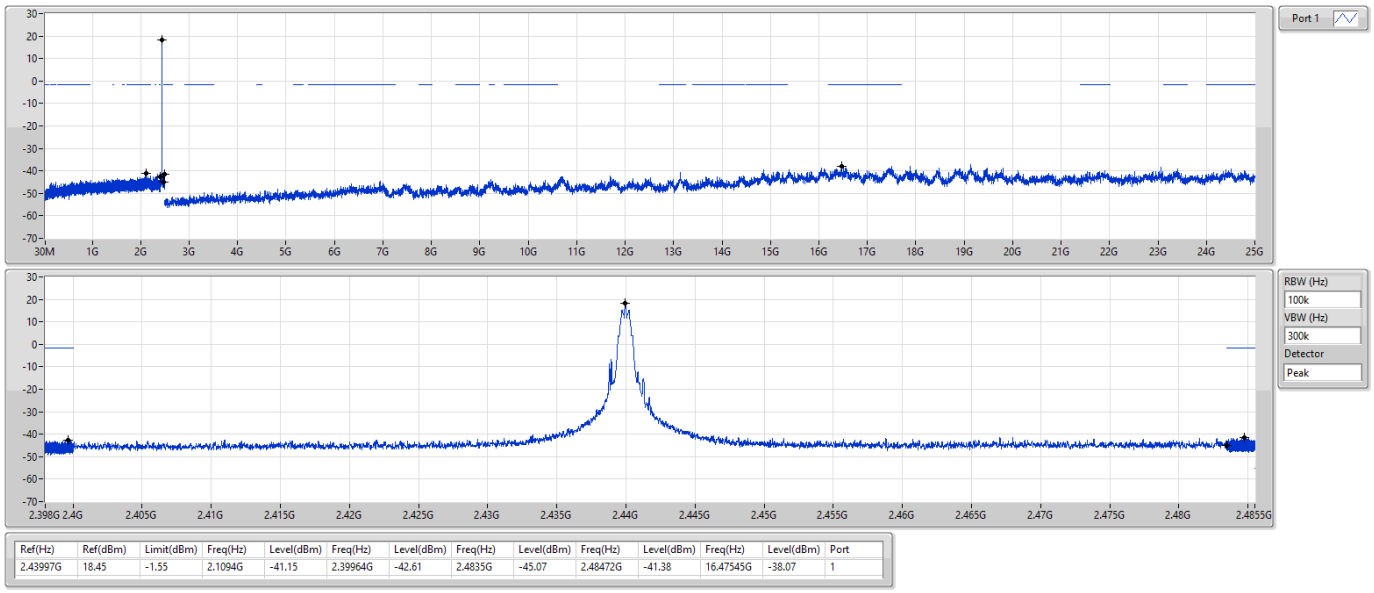
2402MHz



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
2.40194G	18.67	-1.33	2.398G	-38.77	2.39998G	-28.72	2.4G	-32.41	2.48481G	-41.68	17.47171G	-37.82	1

BT-LE(125kbps) **CSENdB-FS**

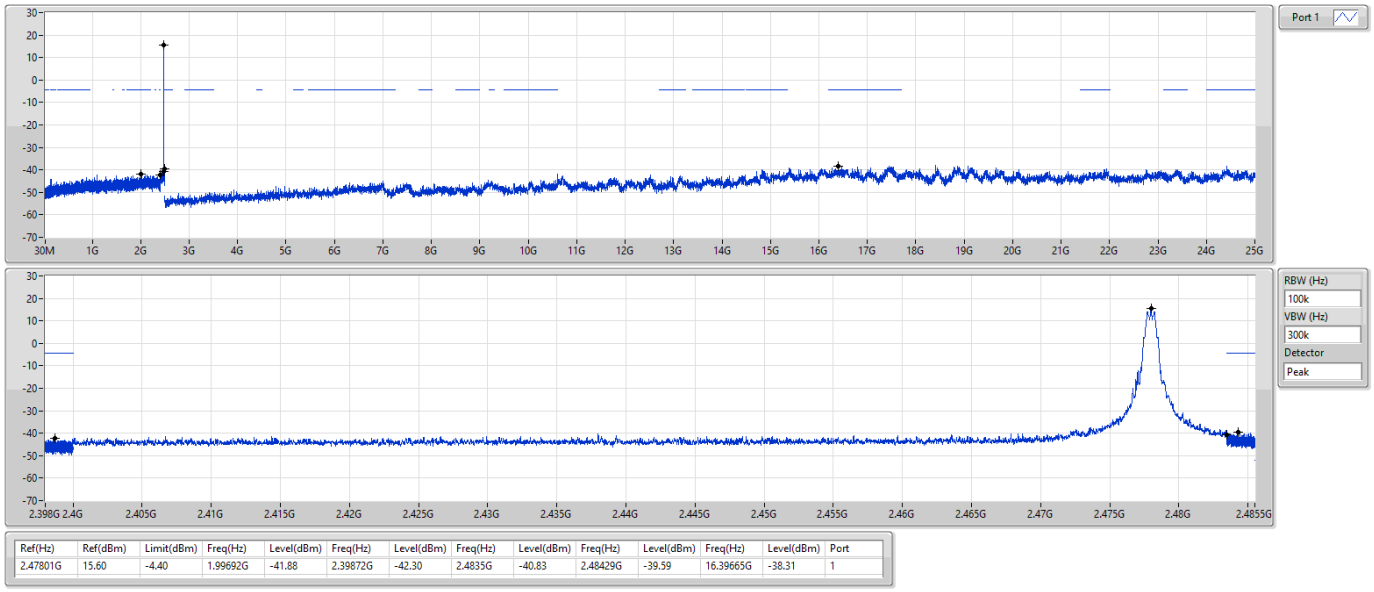
2440MHz



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
2.43997G	18.45	-1.55	2.1094G	-41.15	2.39964G	-42.61	2.4835G	-45.07	2.48472G	-41.38	16.47545G	-38.07	1

BT-LE(125kbps) **CSENdB-FS**

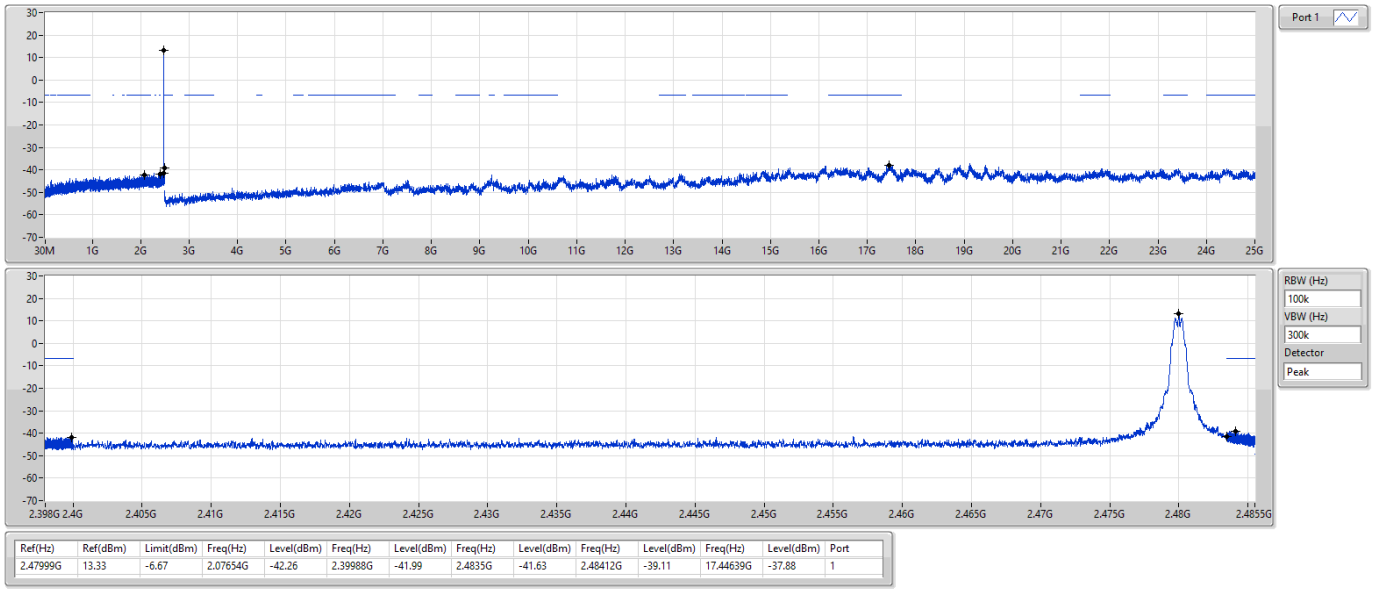
2478MHz



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
2.47801G	15.60	-4.40	1.99692G	-41.88	2.39872G	-42.30	2.4835G	-40.83	2.48429G	-39.59	16.39665G	-38.31	1

BT-LE(125kbps) **CSENdB-FS**

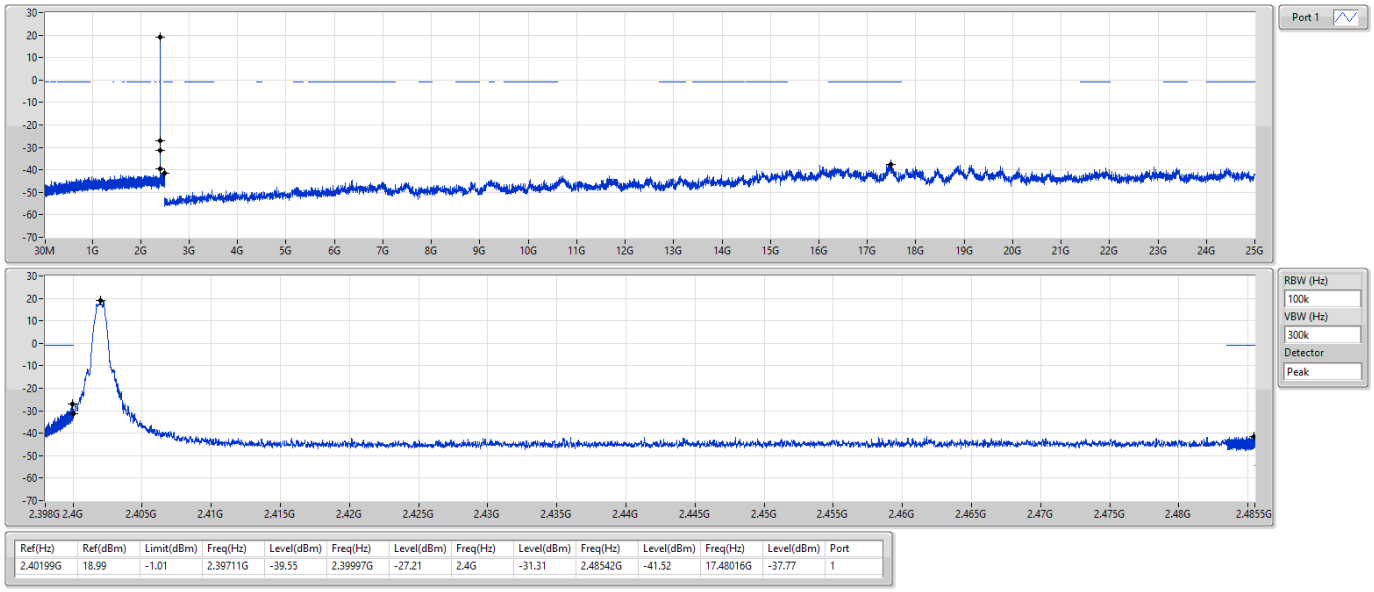
2480MHz



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
2.47999G	13.33	-6.67	2.07654G	-42.26	2.39988G	-41.99	2.4835G	-41.63	2.48412G	-39.11	17.44639G	-37.88	1

BT-LE(1Mbps) **CSENdB-FS**

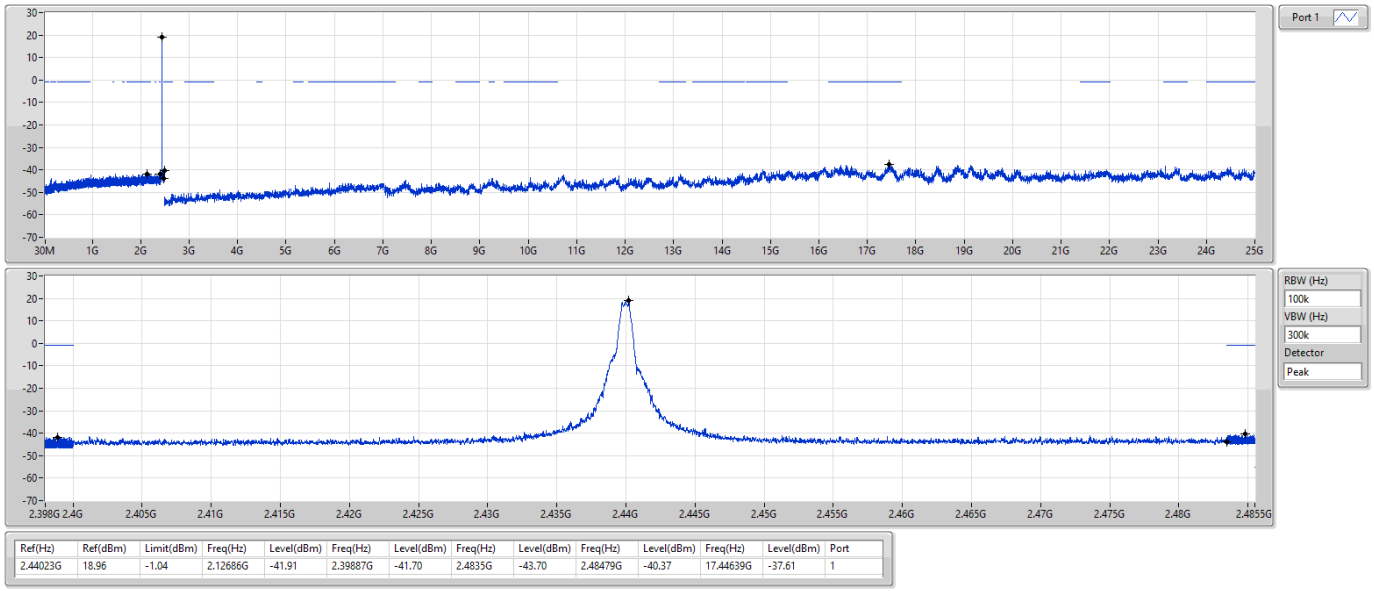
2402MHz



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
2.40199G	18.99	-1.01	2.39711G	-39.55	2.39997G	-27.21	2.4G	-31.31	2.48542G	-41.52	17.48016G	-37.77	1

BT-LE(1Mbps) **CSENdB-FS**

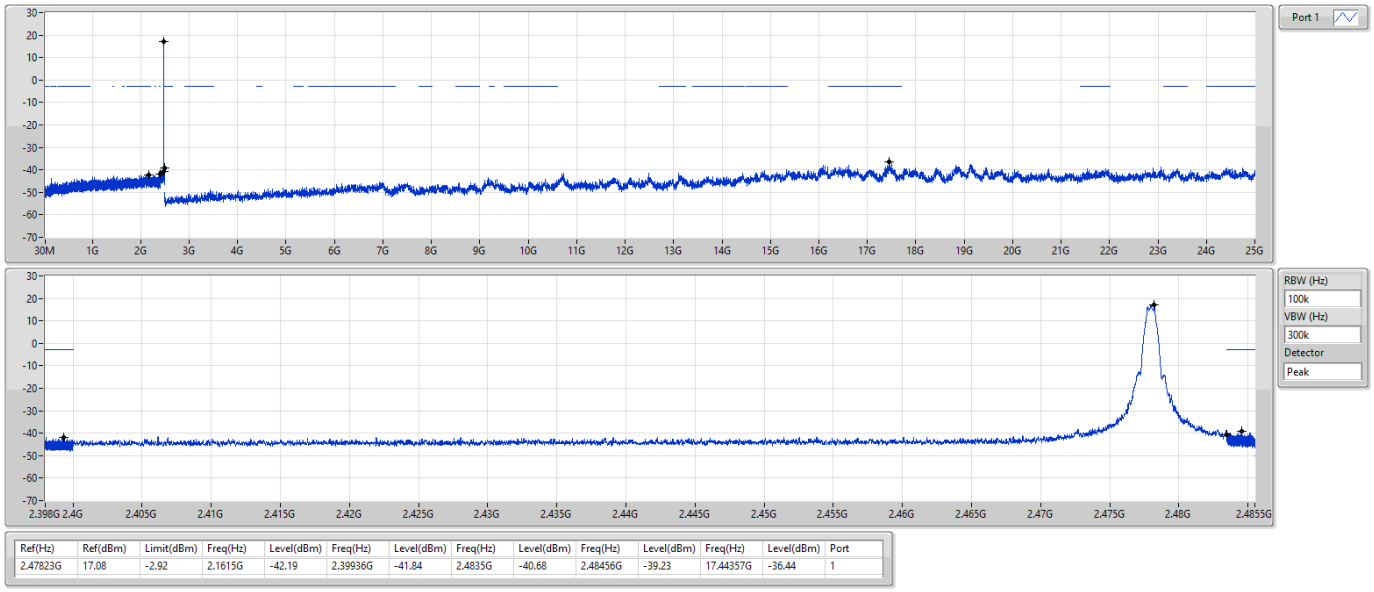
2440MHz



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
2.44023G	18.96	-1.04	2.12686G	-41.91	2.39887G	-41.70	2.4835G	-43.70	2.48479G	-40.37	17.44639G	-37.61	1

BT-LE(1Mbps) **CSENdB-FS**

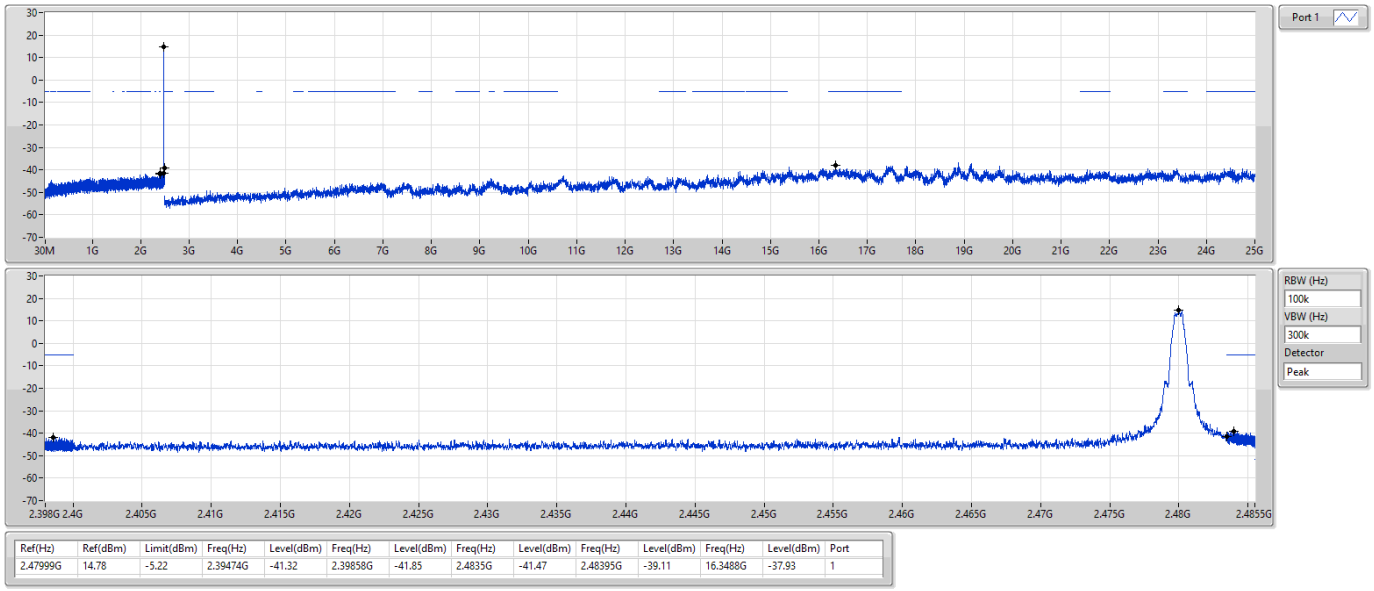
2478MHz



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
2.47823G	17.08	-2.92	2.1615G	-42.19	2.39936G	-41.84	2.4835G	-40.68	2.48456G	-39.23	17.44357G	-36.44	1

BT-LE(1Mbps) **CSENdB-FS**

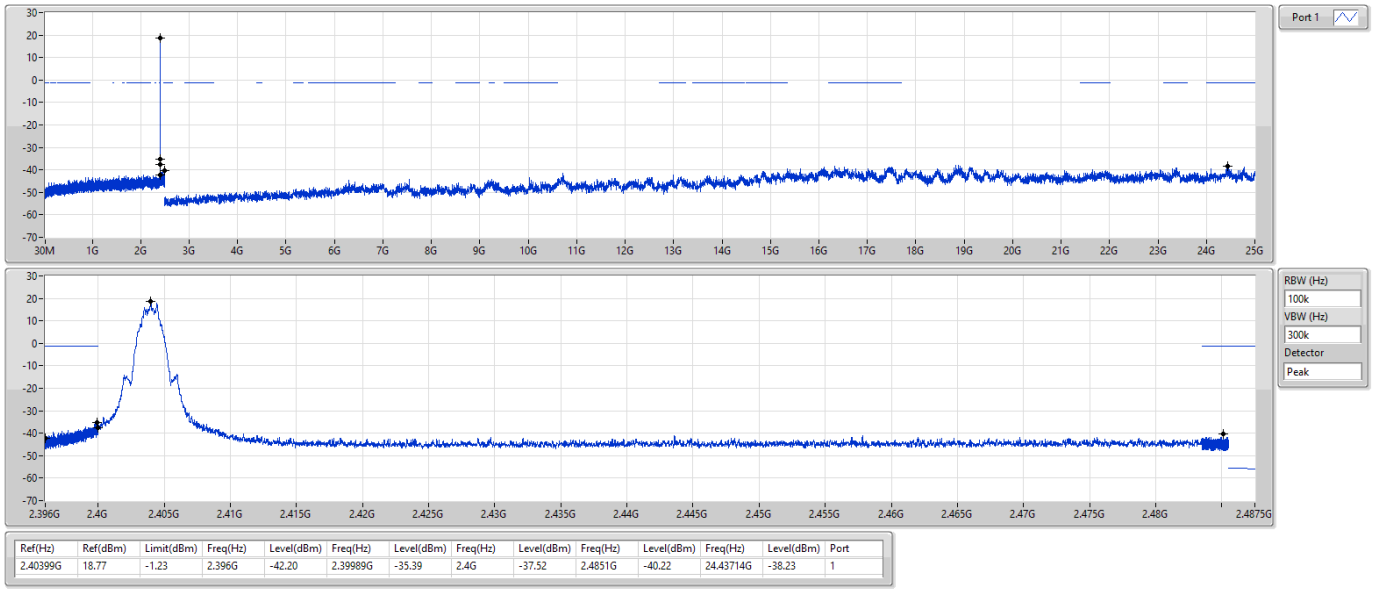
2480MHz



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
2.47999G	14.78	-5.22	2.39474G	-41.32	2.39858G	-41.85	2.4835G	-41.47	2.48395G	-39.11	16.3488G	-37.93	1

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

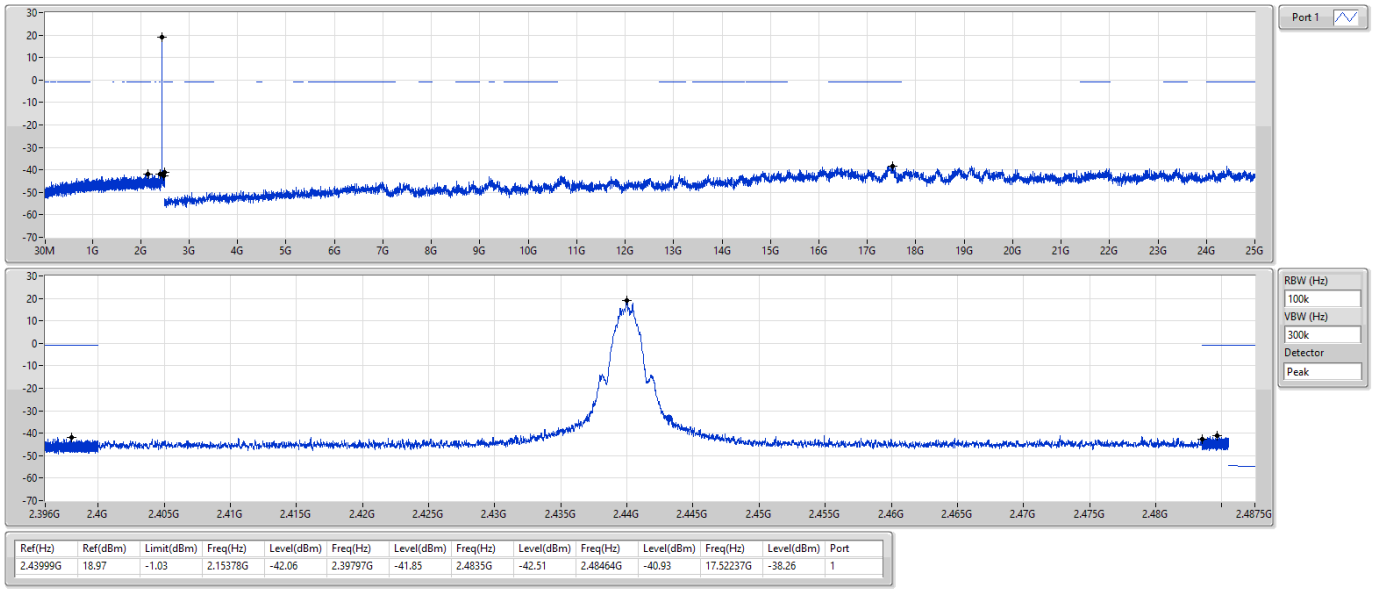
2404MHz



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
2.40399G	18.77	-1.23	2.396G	-42.20	2.39989G	-35.39	2.4G	-37.52	2.4851G	-40.22	24.43714G	-38.23	1

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

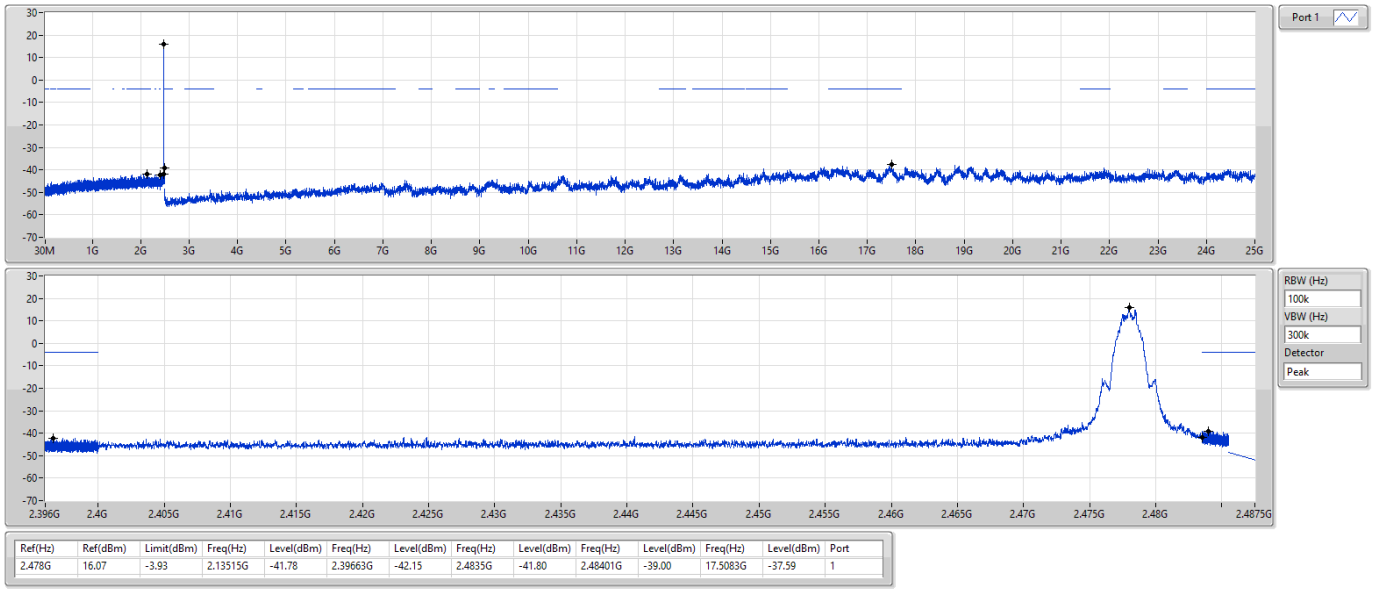
2440MHz



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
2.43999G	18.97	-1.03	2.15378G	-42.06	2.39797G	-41.85	2.4835G	-42.51	2.48464G	-40.93	17.52237G	-38.26	1

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

2478MHz

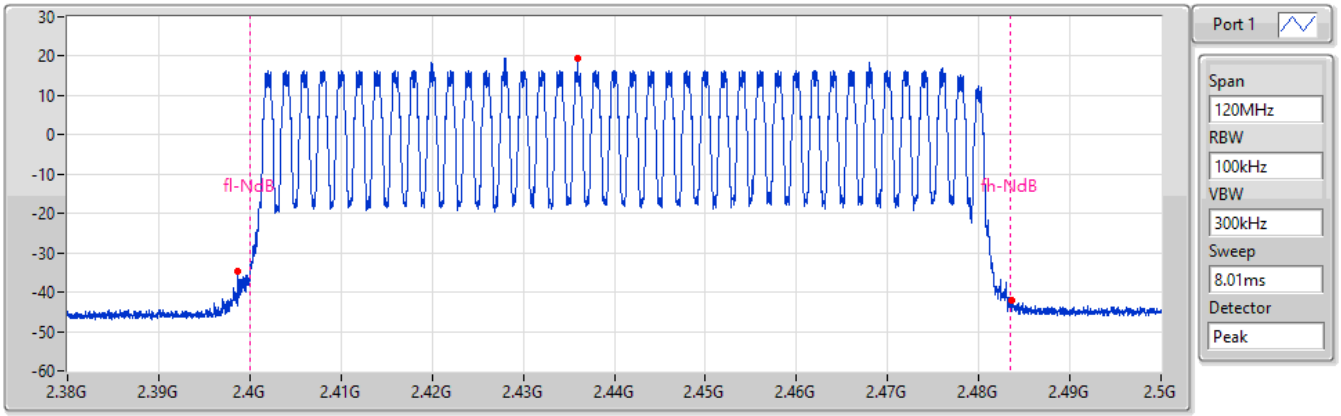


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.478G	16.07	-3.93	2.13515G	-41.78	2.39663G	-42.15	2.4835G	-41.80	2.48401G	-39.00	17.5083G	-37.59	1

2.4-2.4835GHz_BT-LE(125kbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

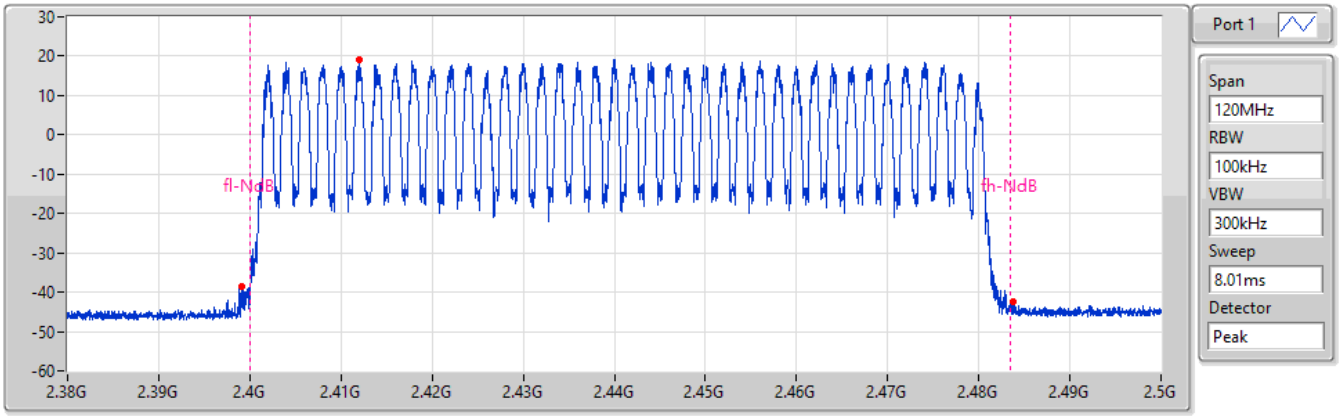


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-0.59	2.43598G	19.41	2.398705G	-34.69	2.483665G	-41.99

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

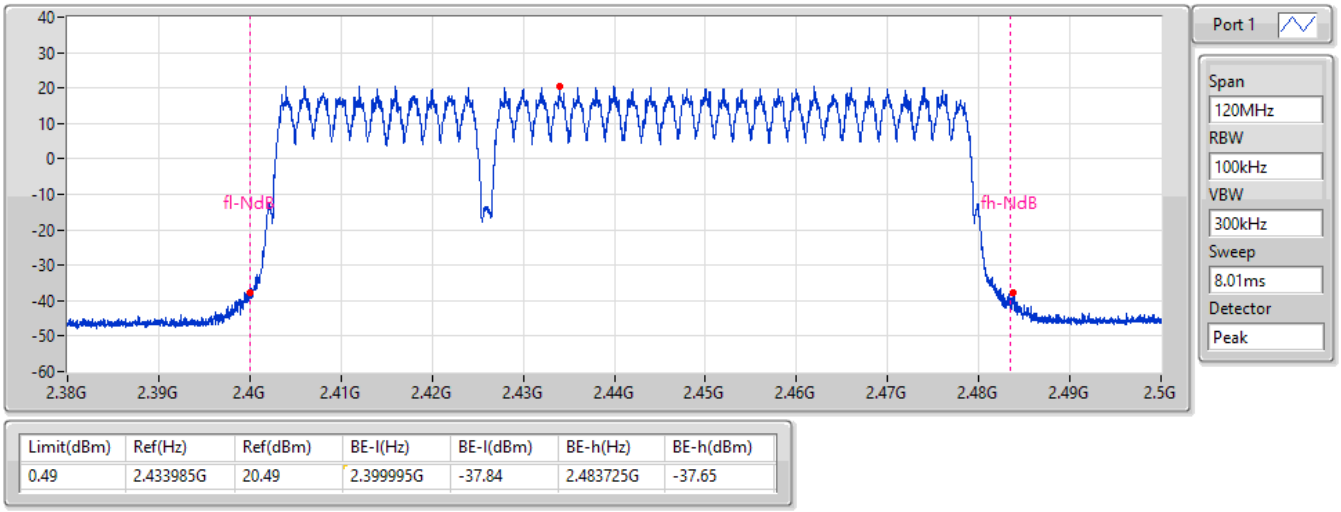


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-0.73	2.41201G	19.27	2.399155G	-38.42	2.4838G	-42.39

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)



Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
0.49	2.433985G	20.49	2.399995G	-37.84	2.483725G	-37.65

1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	19.62	0.09162
BT-LE(Coding rate 500kbps)	19.61	0.09141
BT-LE(Symbol rate 1Mbps)	**19.63**	**0.09183**
BT-LE(Symbol rate 2Mbps)	19.62	0.09162

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	1.82	19.62	21.00
2440MHz	Pass	1.82	19.46	21.00
2478MHz	Pass	1.82	19.34	21.00
2480MHz	Pass	1.82	19.23	21.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	1.82	19.61	21.00
2440MHz	Pass	1.82	19.45	21.00
2478MHz	Pass	1.82	19.33	21.00
2480MHz	Pass	1.82	19.22	21.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	**Pass**	**1.82**	**19.63**	**21.00**
2440MHz	Pass	1.82	19.48	21.00
2478MHz	Pass	1.82	19.36	21.00
2480MHz	Pass	1.82	17.12	21.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	1.82	19.62	21.00
2440MHz	Pass	1.82	19.46	21.00
2478MHz	Pass	1.82	19.45	21.00

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

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	19.94	0.09863
BT-LE(Coding rate 500kbps)	19.93	0.09840
BT-LE(Symbol rate 1Mbps)	**19.95**	**0.09886**
BT-LE(Symbol rate 2Mbps)	19.94	0.09863

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	2.00	19.94	21.00
2440MHz	Pass	2.00	19.91	21.00
2478MHz	Pass	2.00	18.09	21.00
2480MHz	Pass	2.00	15.52	21.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	2.00	19.93	21.00
2440MHz	Pass	2.00	19.90	21.00
2478MHz	Pass	2.00	18.08	21.00
2480MHz	Pass	2.00	15.51	21.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	**Pass**	**2.00**	**19.95**	**21.00**
2440MHz	Pass	2.00	19.93	21.00
2478MHz	Pass	2.00	18.10	21.00
2480MHz	Pass	2.00	15.53	21.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	2.00	19.94	21.00
2440MHz	Pass	2.00	19.92	21.00
2478MHz	Pass	2.00	17.21	21.00

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

1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	19.55	0.09016
BT-LE(Coding rate 500kbps)	19.54	0.08995
BT-LE(Symbol rate 1Mbps)	19.56	0.09036
BT-LE(Symbol rate 2Mbps)	19.55	0.09016

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	1.82	19.55	-
2440MHz	Pass	1.82	19.40	-
2478MHz	Pass	1.82	19.28	-
2480MHz	Pass	1.82	19.16	-
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	1.82	19.54	-
2440MHz	Pass	1.82	19.39	-
2478MHz	Pass	1.82	19.27	-
2480MHz	Pass	1.82	19.15	-
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	1.82	19.56	-
2440MHz	Pass	1.82	19.42	-
2478MHz	Pass	1.82	19.30	-
2480MHz	Pass	1.82	17.05	-
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	1.82	19.55	-
2440MHz	Pass	1.82	19.40	-
2478MHz	Pass	1.82	19.39	-

Note: Average power is for reference only.

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	19.87	0.09705
BT-LE(Coding rate 500kbps)	19.86	0.09683
BT-LE(Symbol rate 1Mbps)	19.89	0.09750
BT-LE(Symbol rate 2Mbps)	19.88	0.09727

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	2.00	19.87	-
2440MHz	Pass	2.00	19.84	-
2478MHz	Pass	2.00	18.02	-
2480MHz	Pass	2.00	15.46	-
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	2.00	19.86	-
2440MHz	Pass	2.00	19.83	-
2478MHz	Pass	2.00	18.01	-
2480MHz	Pass	2.00	15.45	-
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	2.00	19.89	-
2440MHz	Pass	2.00	19.87	-
2478MHz	Pass	2.00	18.03	-
2480MHz	Pass	2.00	15.47	-
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	2.00	19.88	-
2440MHz	Pass	2.00	19.86	-
2478MHz	Pass	2.00	17.15	-

Note: Average power is for reference only.

1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

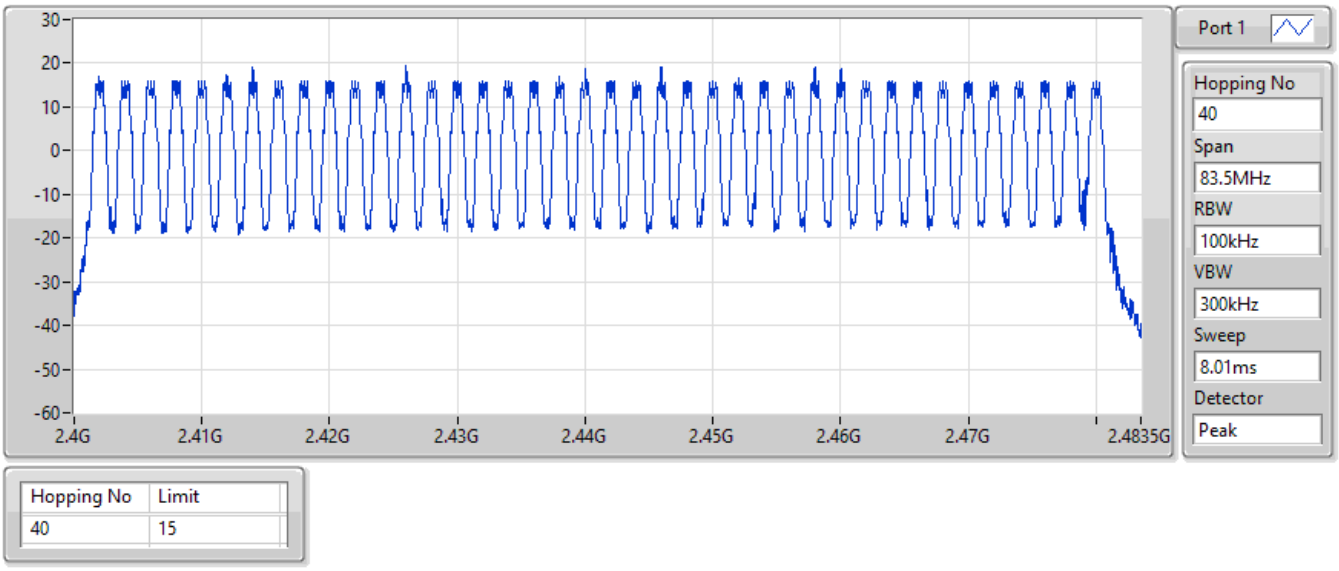
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-LE(Coding rate125kbps)	40
BT-LE(Symbol rate 1Mbps)	40
BT-LE(Symbol rate 2Mbps)	37

Result

Mode	Result	Hopping No	Limit
BT-LE(Coding rate125kbps)	-	-	-
2440MHz	Pass	40	15
BT-LE(Symbol rate 1Mbps)	-	-	-
2440MHz	Pass	40	15
BT-LE(Symbol rate 2Mbps)	-	-	-
2440MHz	Pass	37	15

2.4-2.4835GHz_BT-LE(125kbps) Hopping-FS

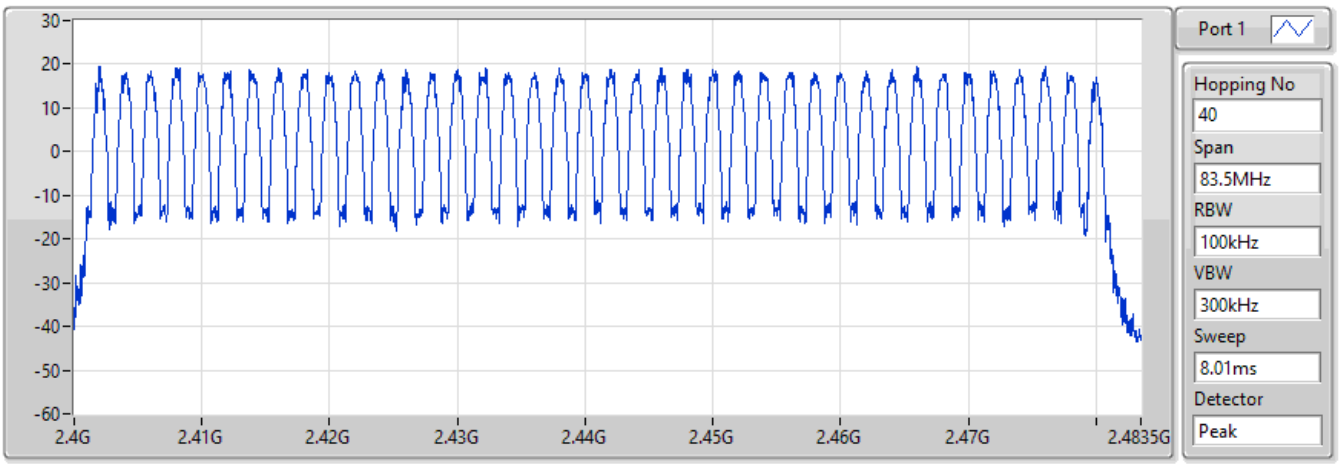
2440MHz



Hopping No	Limit
40	15

2.4-2.4835GHz_BT-LE(1Mbps) Hopping-FS

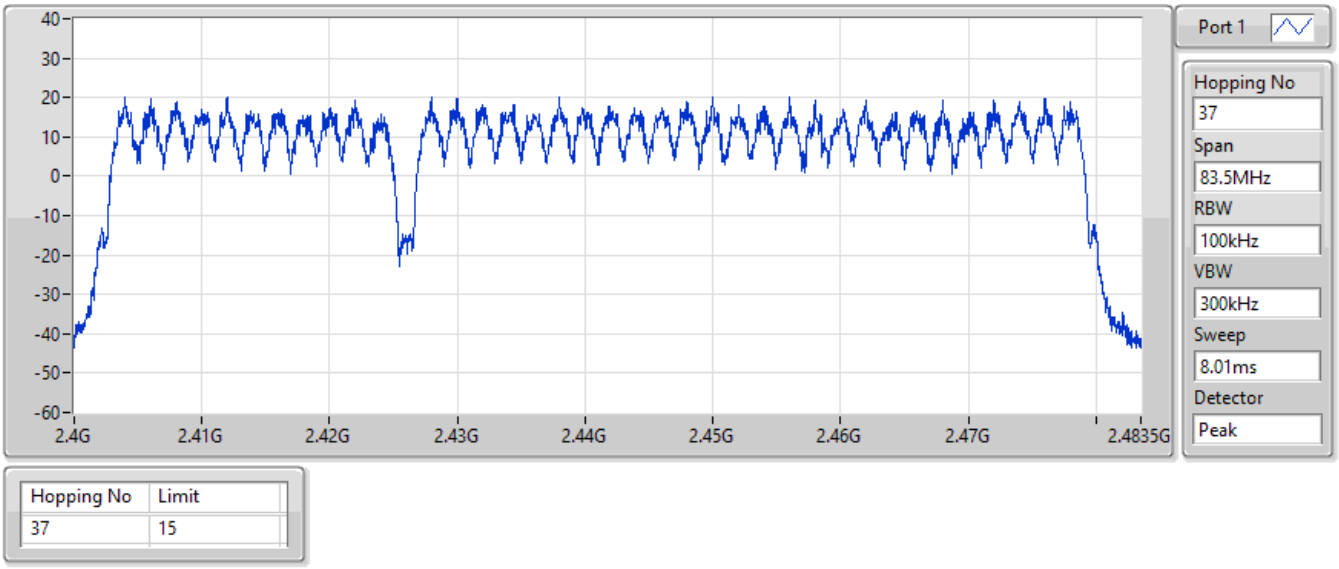
2440MHz



Hopping No	Limit
40	15

2.4-2.4835GHz_BT-LE(2Mbps) **Hopping-FS**

2440MHz



Hopping No	Limit
37	15

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

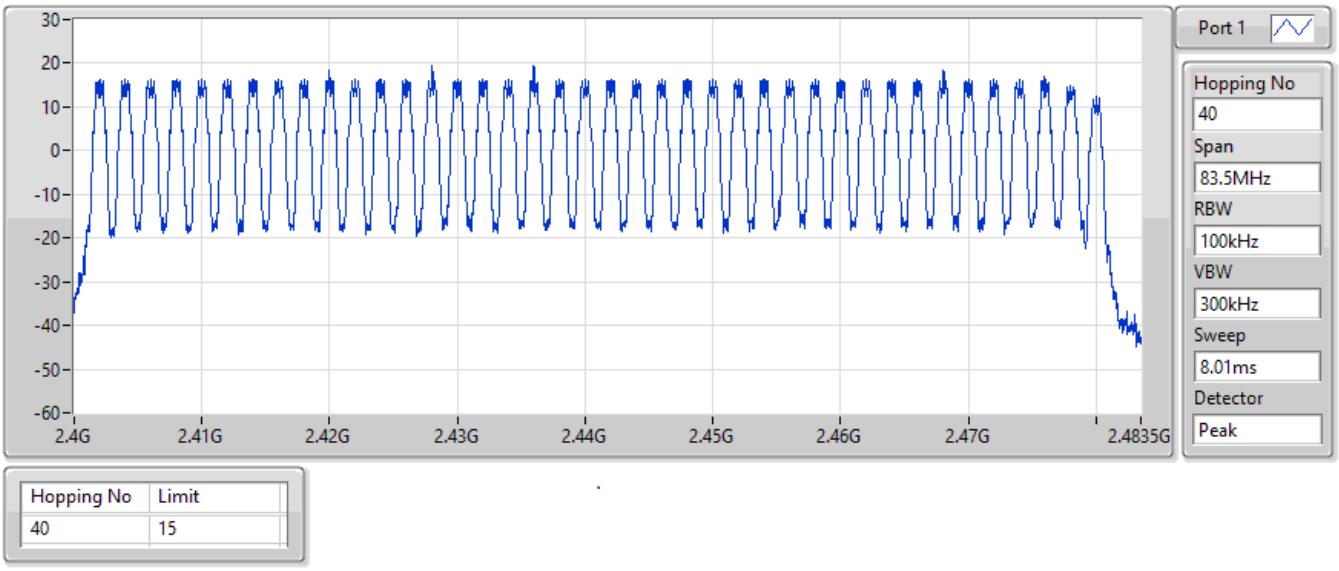
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-LE(Coding rate125kbps)	40
BT-LE(Symbol rate 1Mbps)	40
BT-LE(Symbol rate 2Mbps)	37

Result

Mode	Result	Hopping No	Limit
BT-LE(Coding rate125kbps)	-	-	-
2440MHz	Pass	40	15
BT-LE(Symbol rate 1Mbps)	-	-	-
2440MHz	Pass	40	15
BT-LE(Symbol rate 2Mbps)	-	-	-
2440MHz	Pass	37	15

2.4-2.4835GHz_BT-LE(125kbps) Hopping-FS

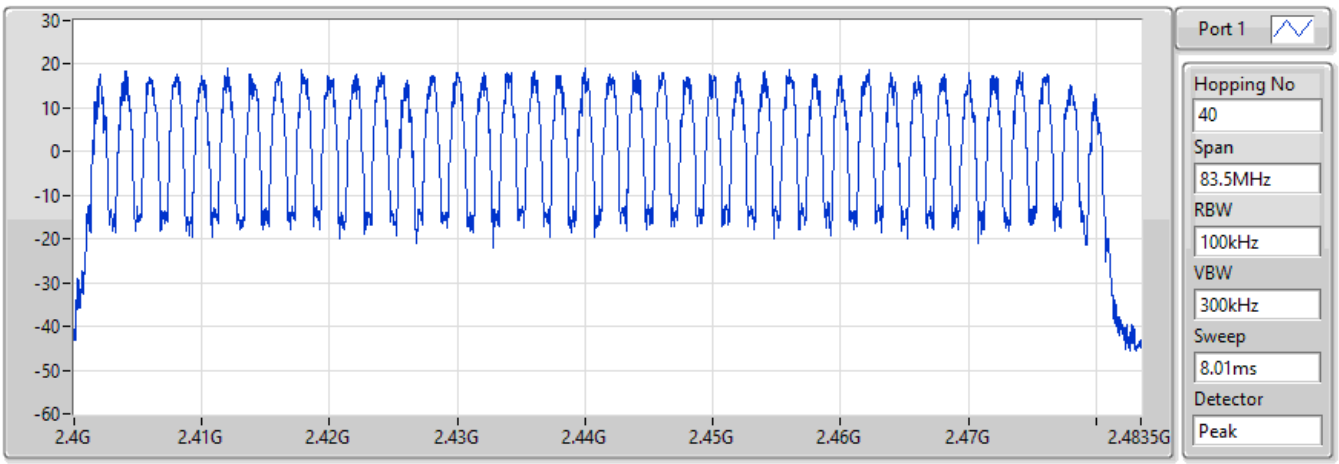
2440MHz



Hopping No	Limit
40	15

2.4-2.4835GHz_BT-LE(1Mbps) Hopping-FS

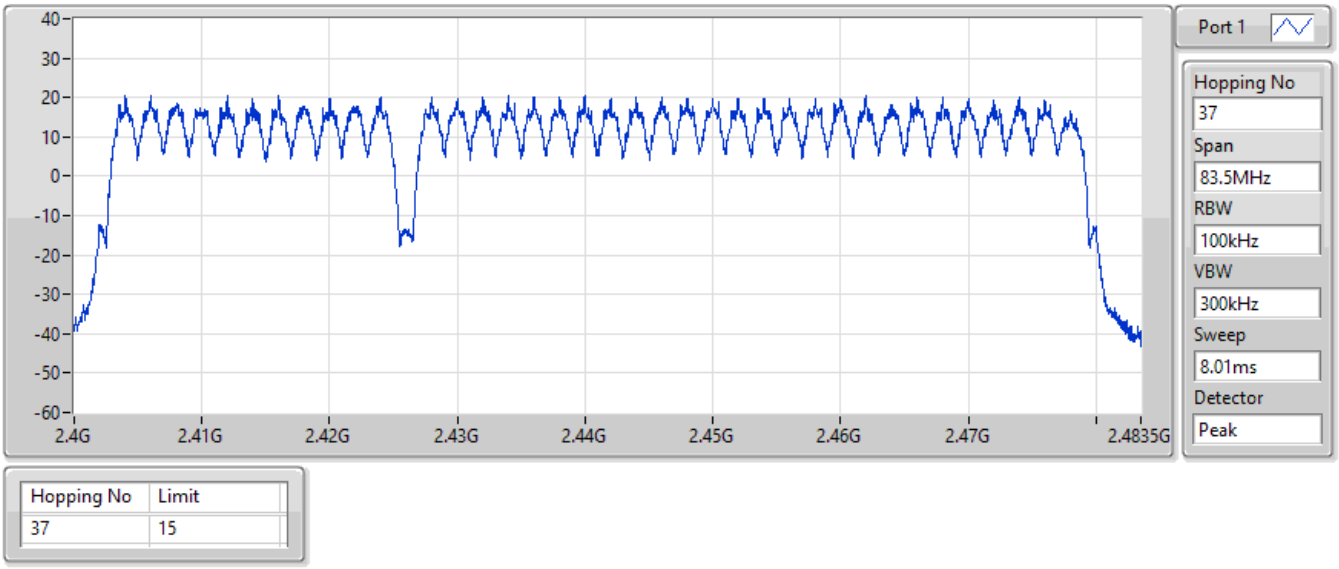
2440MHz



Hopping No	Limit
40	15

2.4-2.4835GHz_BT-LE(2Mbps) **Hopping-FS**

2440MHz



Hopping No	Limit
37	15

1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(Coding rate125kbps)	1.15M	1.064M	1M06F1D	1.1M	1.054M
BT-LE(Symbol rate 1Mbps)	1.15M	1.027M	1M03F1D	1.122M	1.024M
BT-LE(Symbol rate 2Mbps)	2.156M	2.086M	2M09F1D	2.151M	2.071M

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

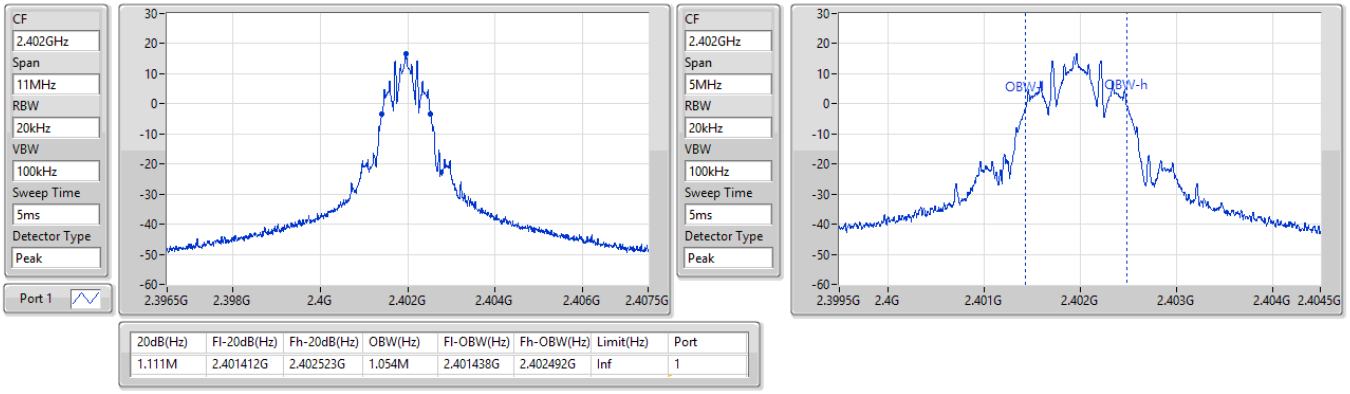
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	Inf	1.111M	1.054M
2440MHz	Pass	Inf	1.1M	1.064M
2478MHz	Pass	Inf	1.1M	1.057M
2480MHz	Pass	Inf	1.15M	1.059M
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.122M	1.024M
2440MHz	Pass	Inf	1.15M	1.024M
2478MHz	Pass	Inf	1.133M	1.027M
2480MHz	Pass	Inf	1.128M	1.024M
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	Inf	2.156M	2.071M
2440MHz	Pass	Inf	2.156M	2.074M
2478MHz	Pass	Inf	2.151M	2.086M

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

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

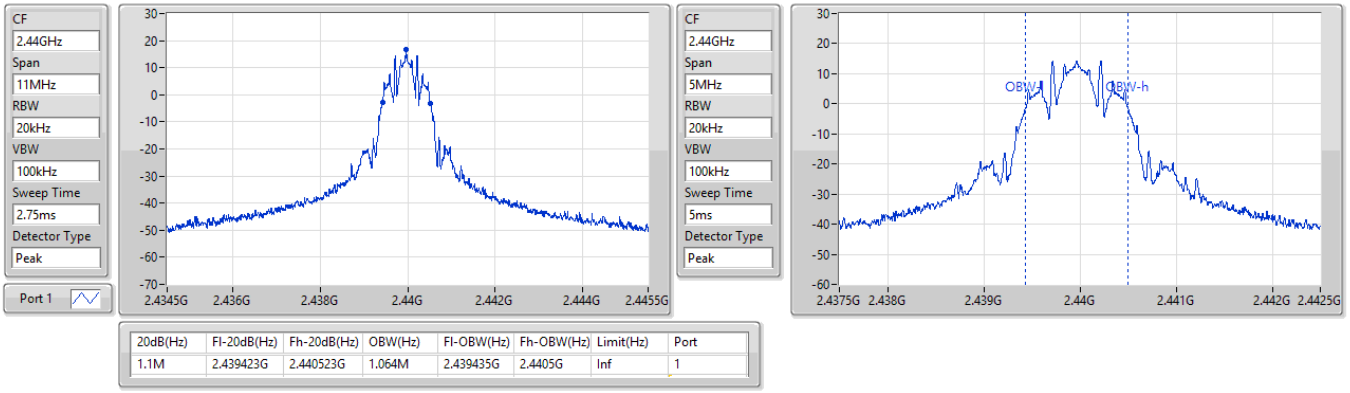
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.111M	2.401412G	2.402523G	1.054M	2.401438G	2.402492G	Inf	1

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

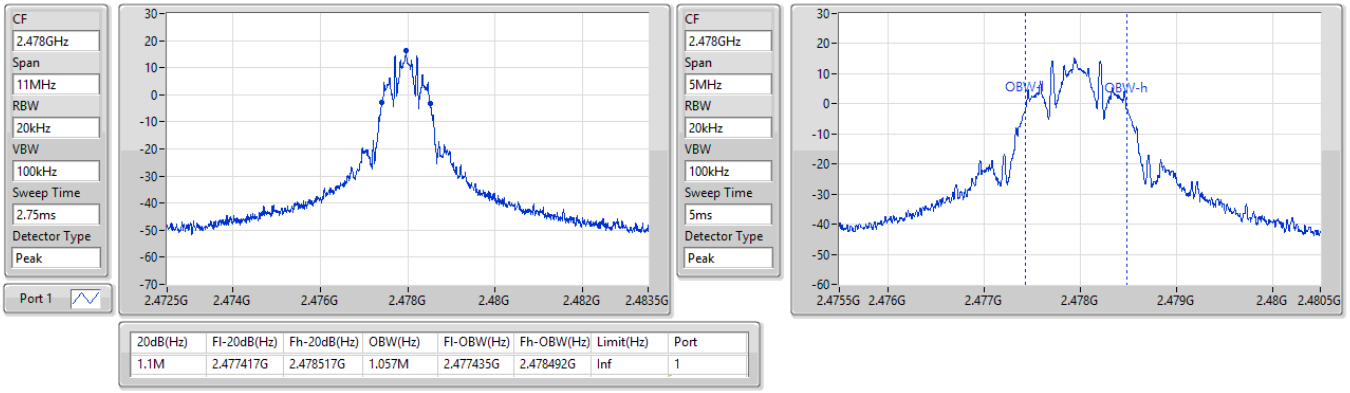
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.1M	2.439423G	2.440523G	1.064M	2.439435G	2.4405G	Inf	1

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

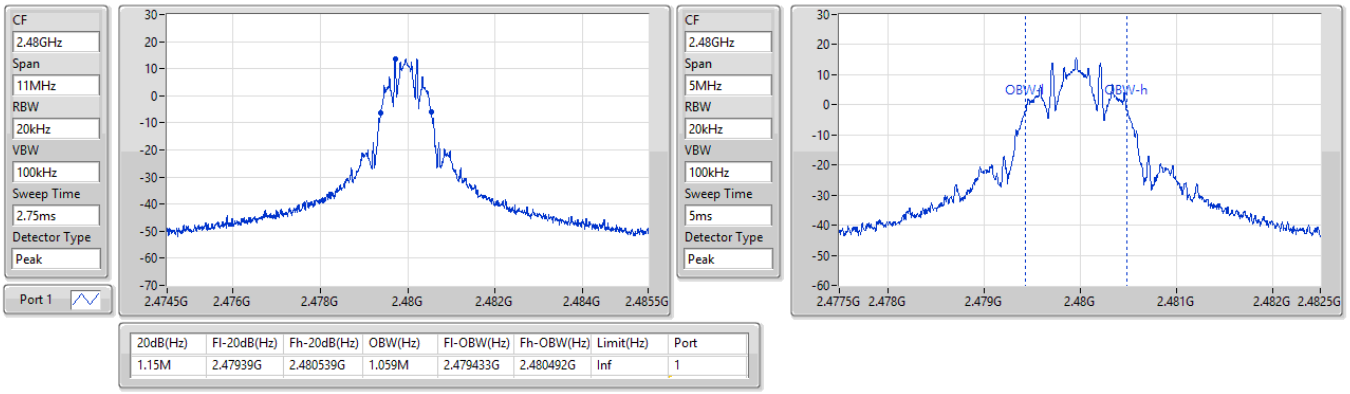
2478MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.1M	2.477417G	2.478517G	1.057M	2.477435G	2.478492G	Inf	1

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

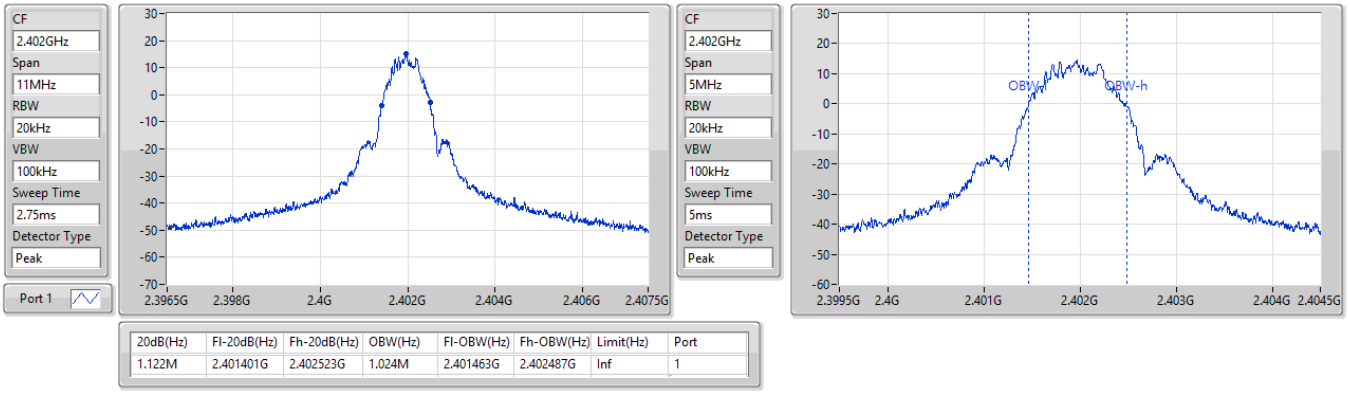
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.15M	2.47939G	2.480539G	1.059M	2.479433G	2.480492G	Inf	1

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

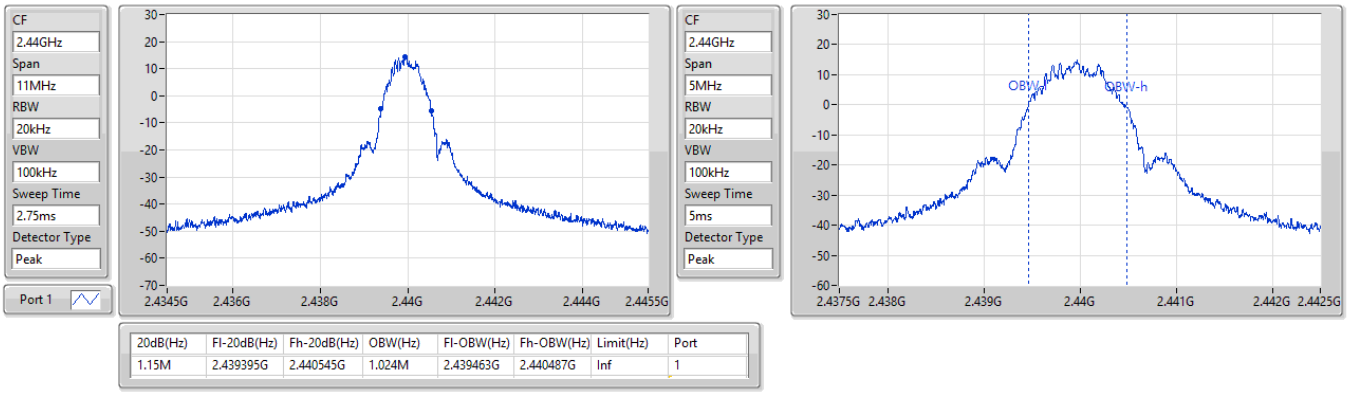
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.122M	2.401401G	2.402523G	1.024M	2.401463G	2.402487G	Inf	1

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

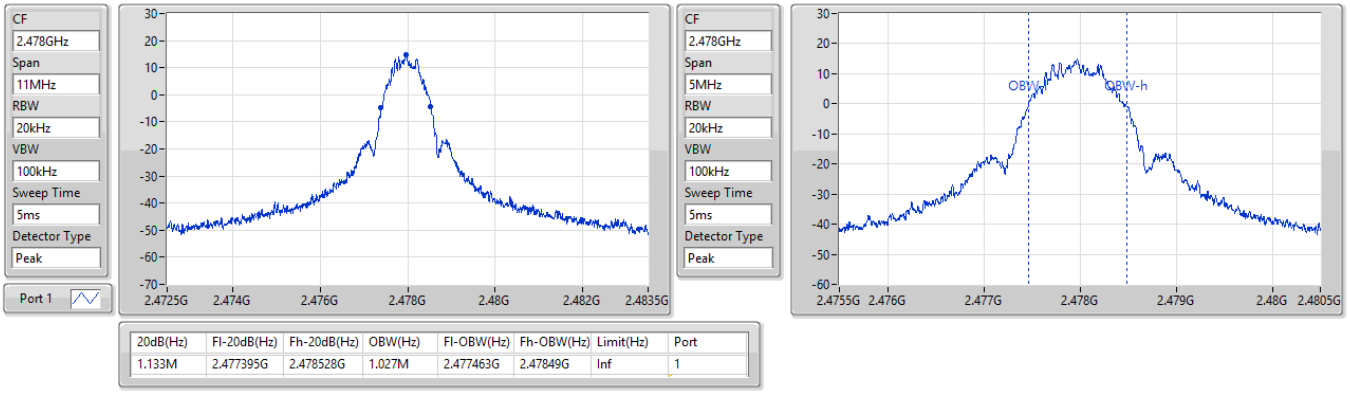
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.15M	2.439395G	2.440545G	1.024M	2.439463G	2.440487G	Inf	1

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

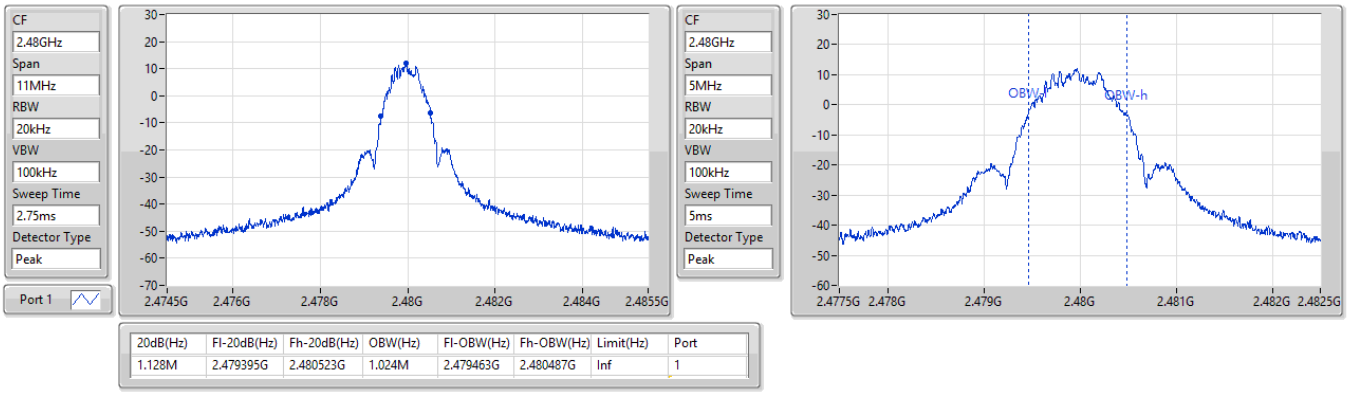
2478MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.133M	2.477395G	2.478528G	1.027M	2.477463G	2.47849G	Inf	1

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

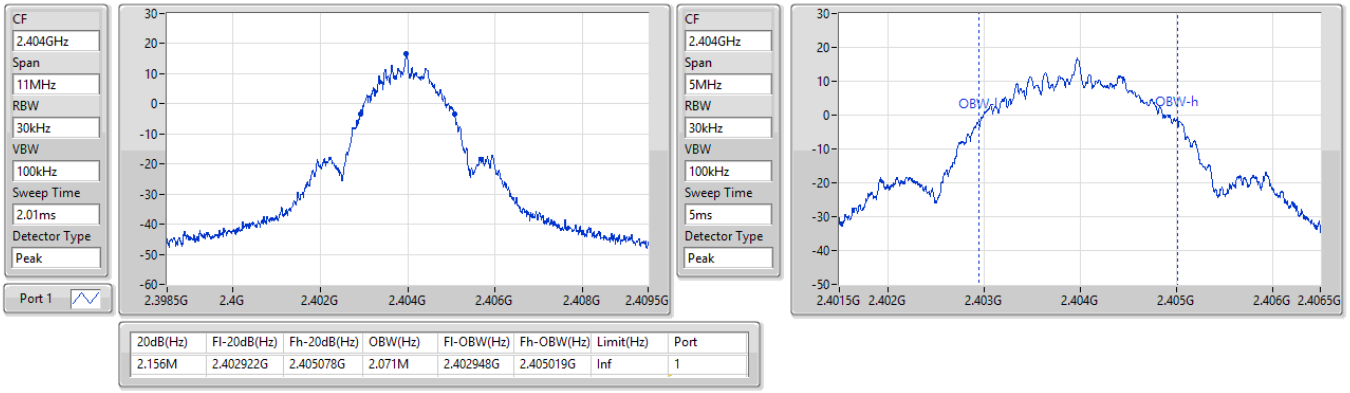
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.128M	2.479395G	2.480523G	1.024M	2.479463G	2.480487G	Inf	1

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

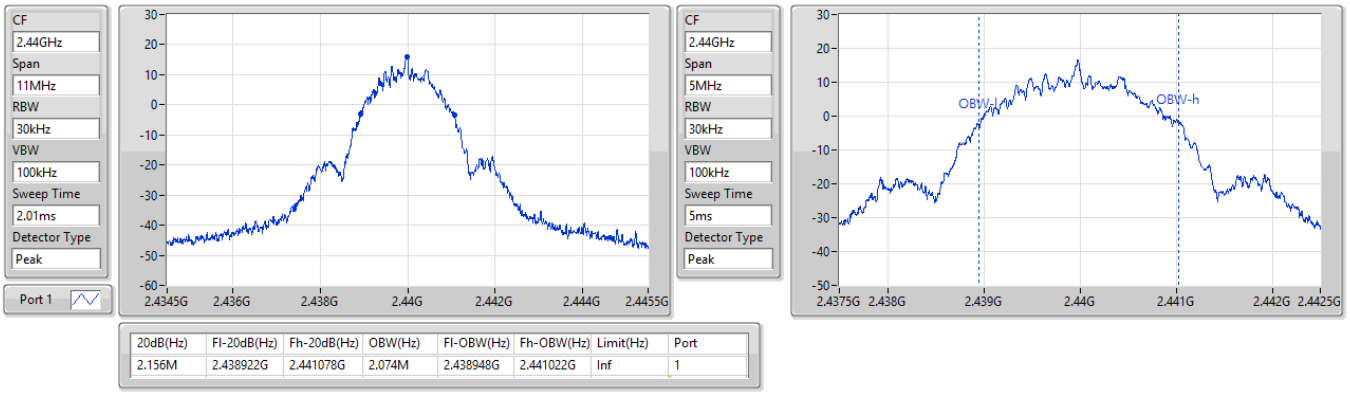
2404MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.156M	2.402922G	2.405078G	2.071M	2.402948G	2.405019G	Inf	1

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

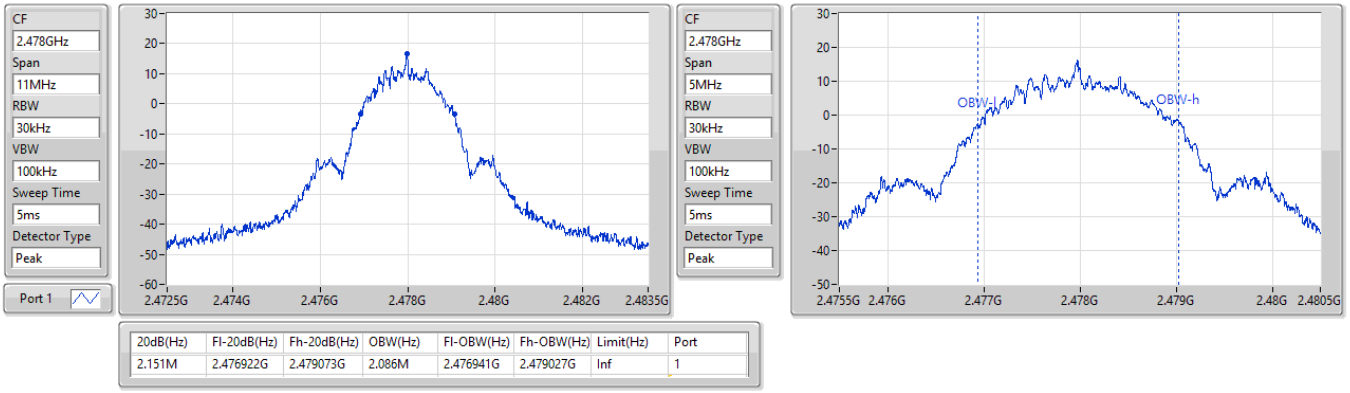
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.156M	2.438922G	2.441078G	2.074M	2.438948G	2.441022G	Inf	1

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

2478MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.151M	2.476922G	2.479073G	2.086M	2.476941G	2.479027G	Inf	1

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(Coding rate125kbps)	1.15M	1.064M	1M06F1D	1.1M	1.059M
BT-LE(Symbol rate 1Mbps)	1.155M	1.032M	1M03F1D	1.128M	1.014M
BT-LE(Symbol rate 2Mbps)	2.189M	2.076M	2M08F1D	2.151M	2.061M

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

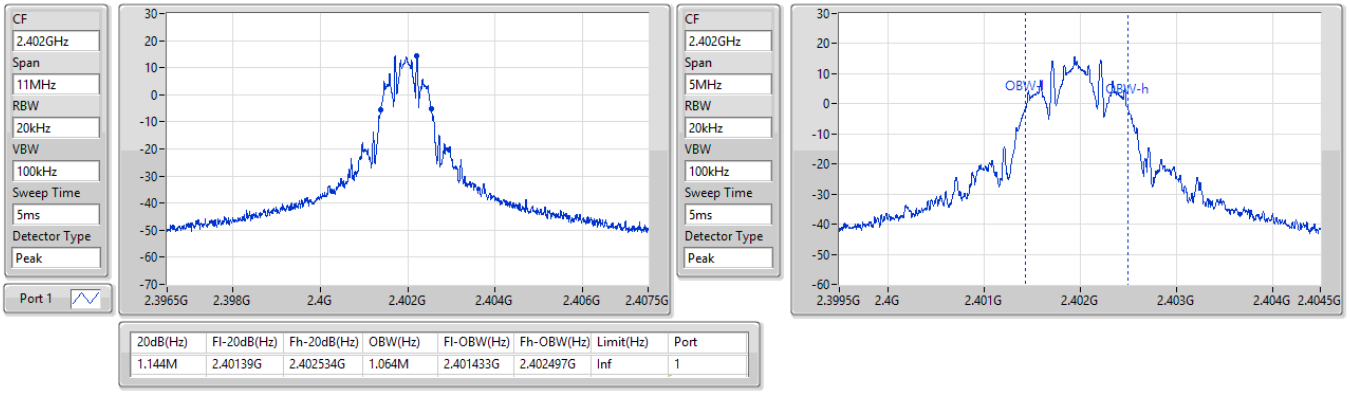
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	Inf	1.144M	1.064M
2440MHz	Pass	Inf	1.111M	1.064M
2478MHz	Pass	Inf	1.15M	1.062M
2480MHz	Pass	Inf	1.1M	1.059M
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.128M	1.024M
2440MHz	Pass	Inf	1.133M	1.032M
2478MHz	Pass	Inf	1.15M	1.014M
2480MHz	Pass	Inf	1.155M	1.022M
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	Inf	2.151M	2.061M
2440MHz	Pass	Inf	2.189M	2.071M
2478MHz	Pass	Inf	2.151M	2.076M

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

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

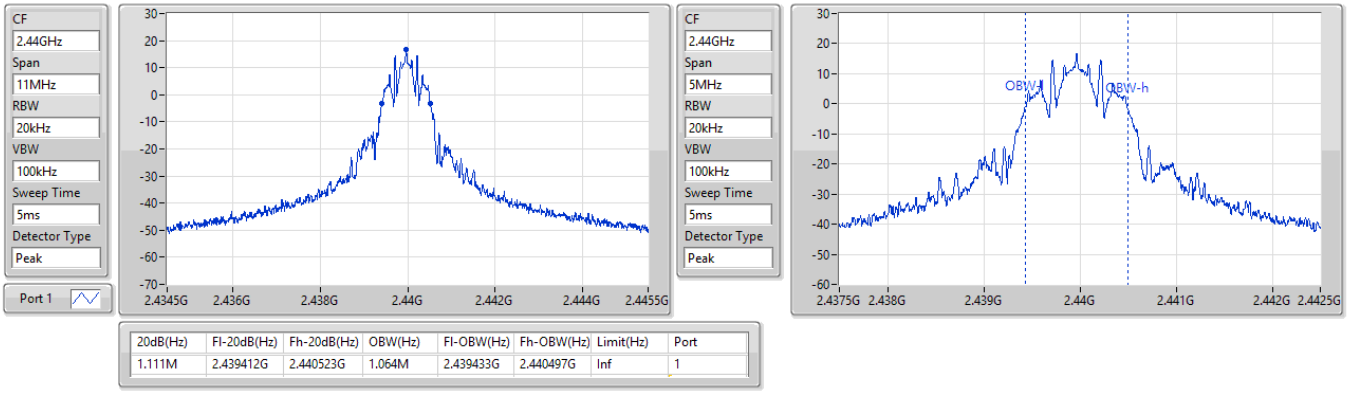
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.144M	2.40139G	2.402534G	1.064M	2.401433G	2.402497G	Inf	1

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

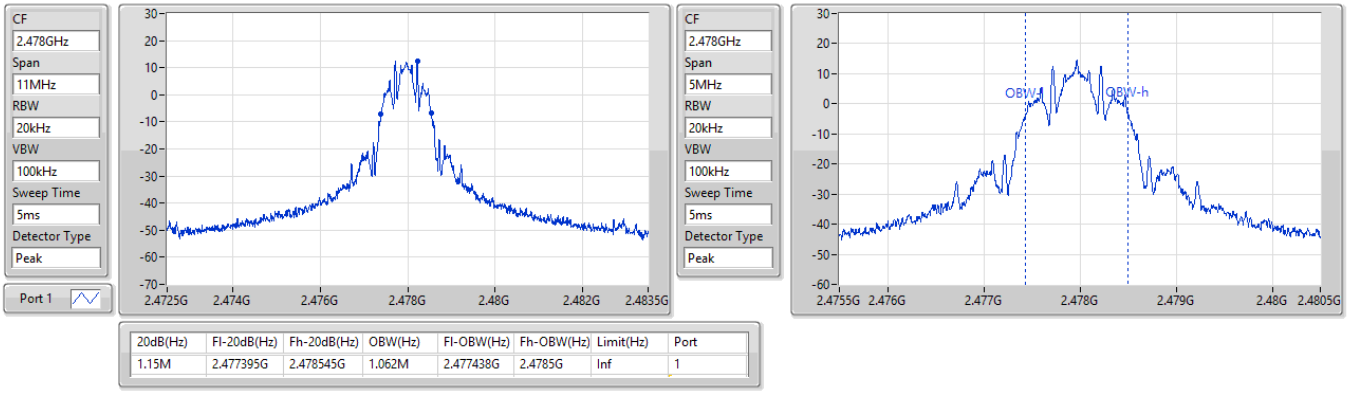
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.111M	2.439412G	2.440523G	1.064M	2.439433G	2.440497G	Inf	1

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

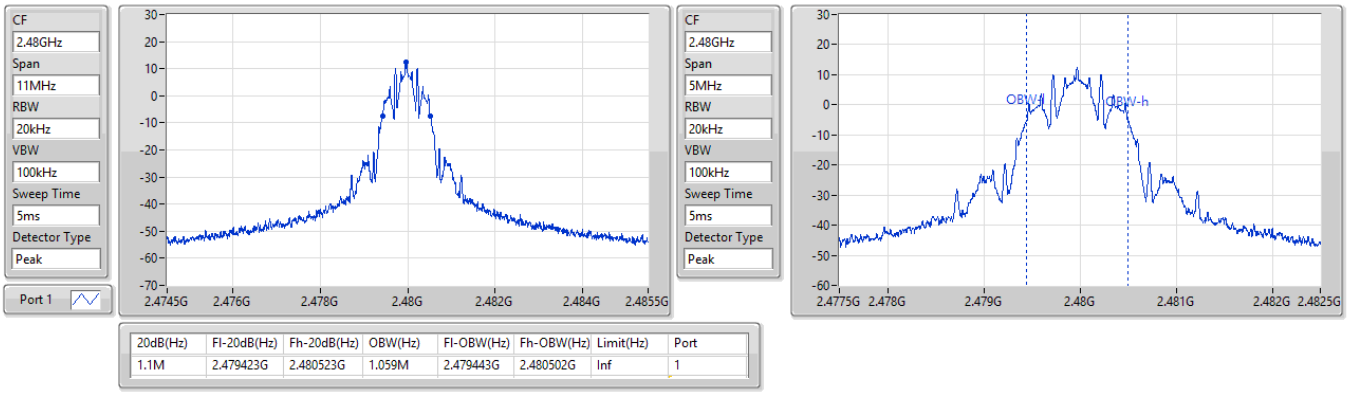
2478MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.15M	2.477395G	2.478545G	1.062M	2.477438G	2.4785G	Inf	1

2.4-2.4835GHz_BT-LE(125kbps) **EBW-FS**

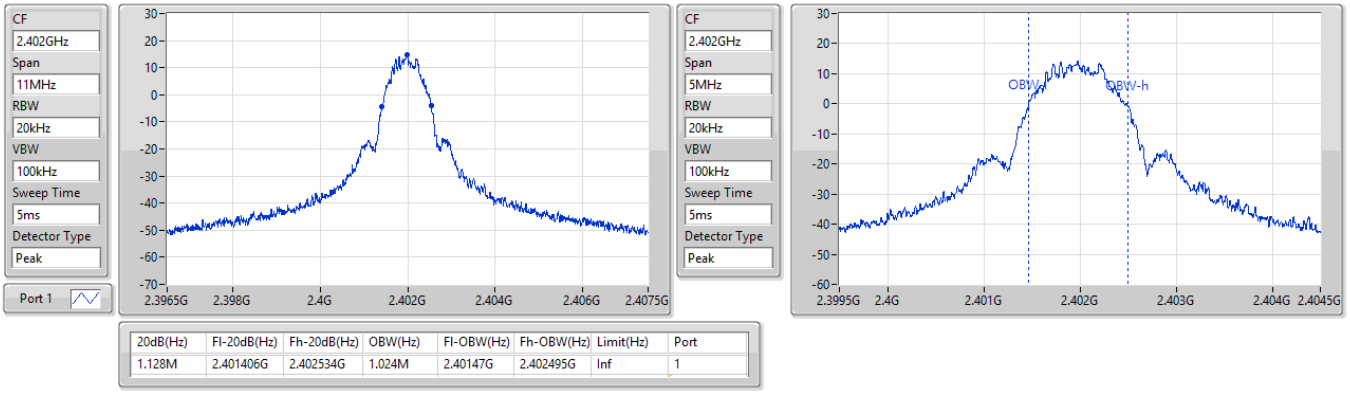
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.1M	2.479423G	2.480523G	1.059M	2.479443G	2.480502G	Inf	1

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

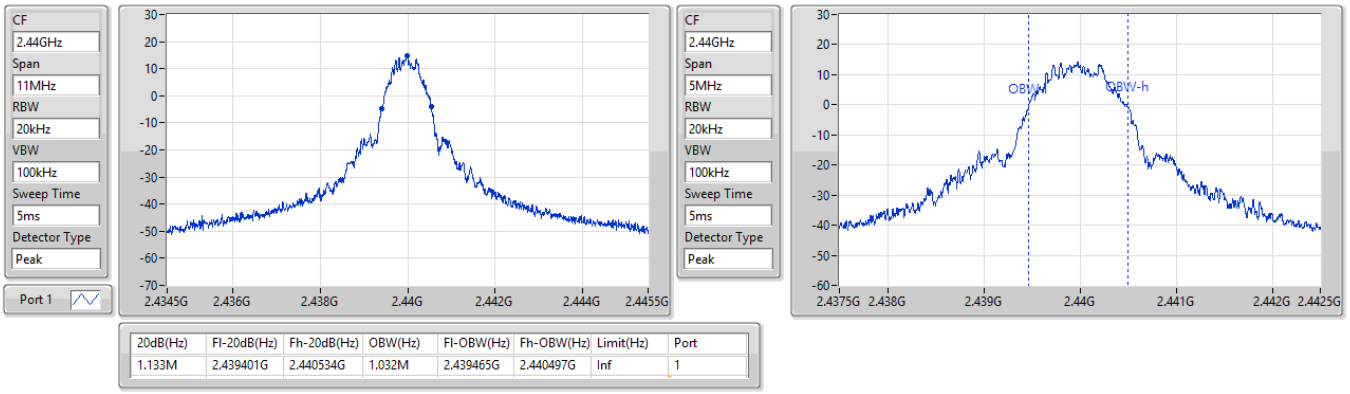
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.128M	2.401406G	2.402534G	1.024M	2.40147G	2.402495G	Inf	1

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

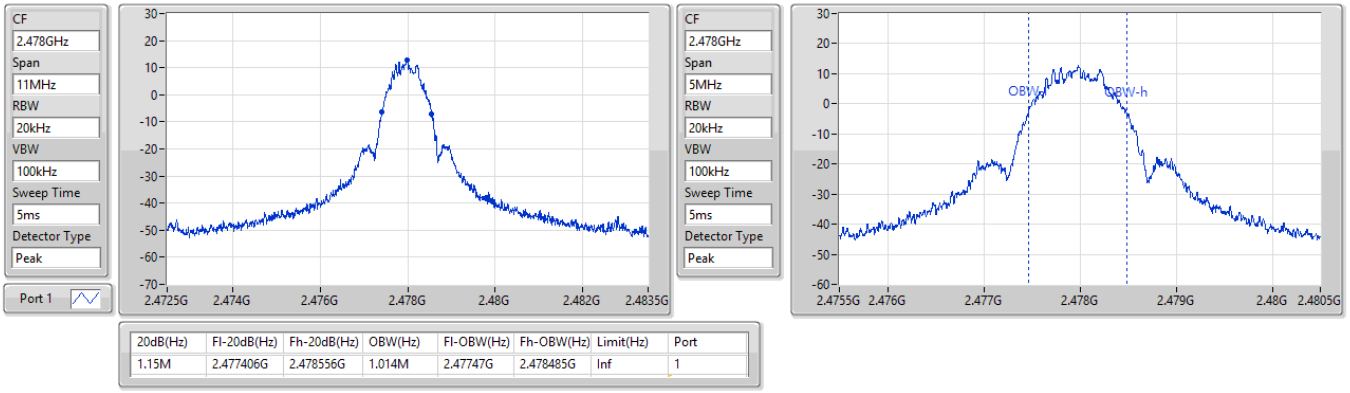
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.133M	2.439401G	2.440534G	1.032M	2.439465G	2.440497G	Inf	1

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

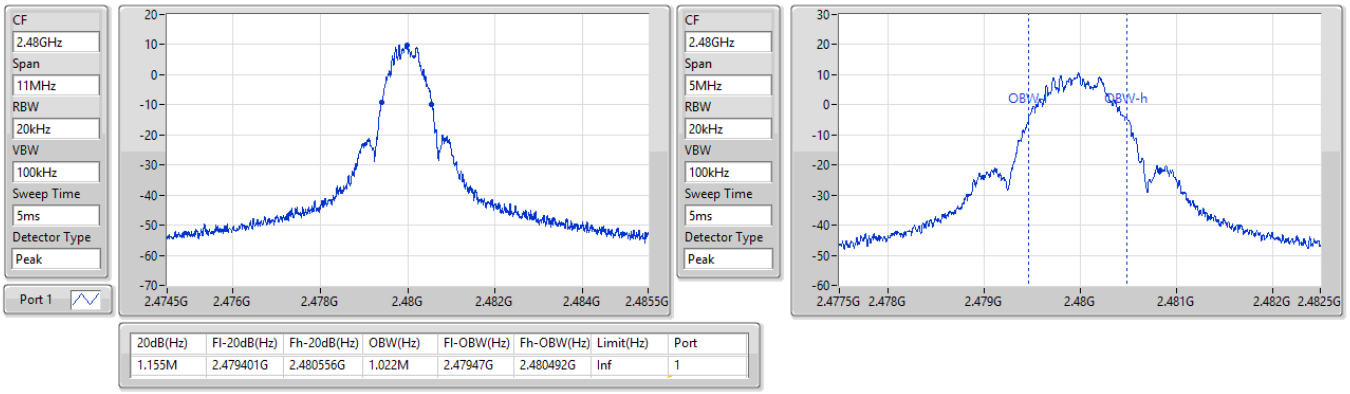
2478MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.15M	2.477406G	2.478556G	1.014M	2.47747G	2.478485G	Inf	1

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

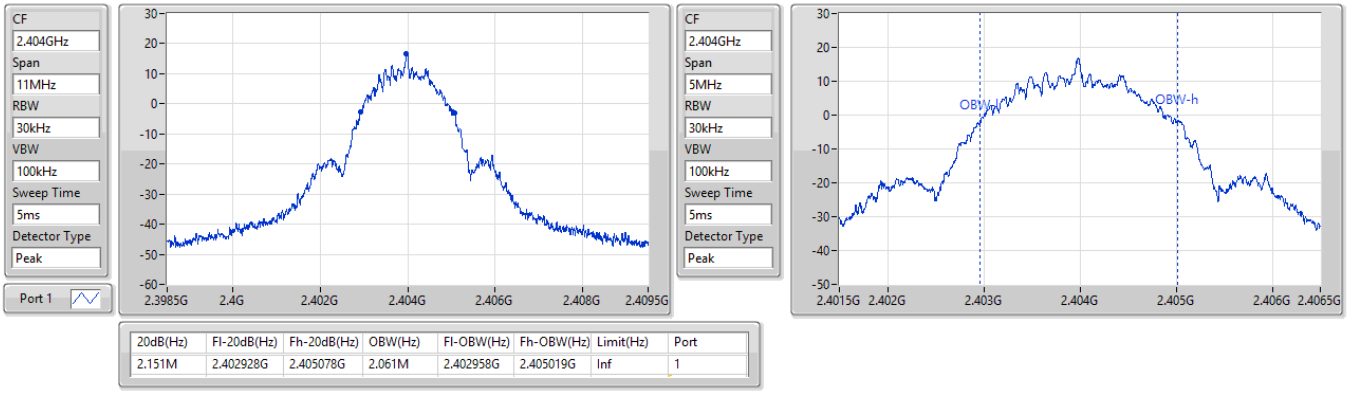
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.155M	2.479401G	2.480556G	1.022M	2.47947G	2.480492G	Inf	1

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

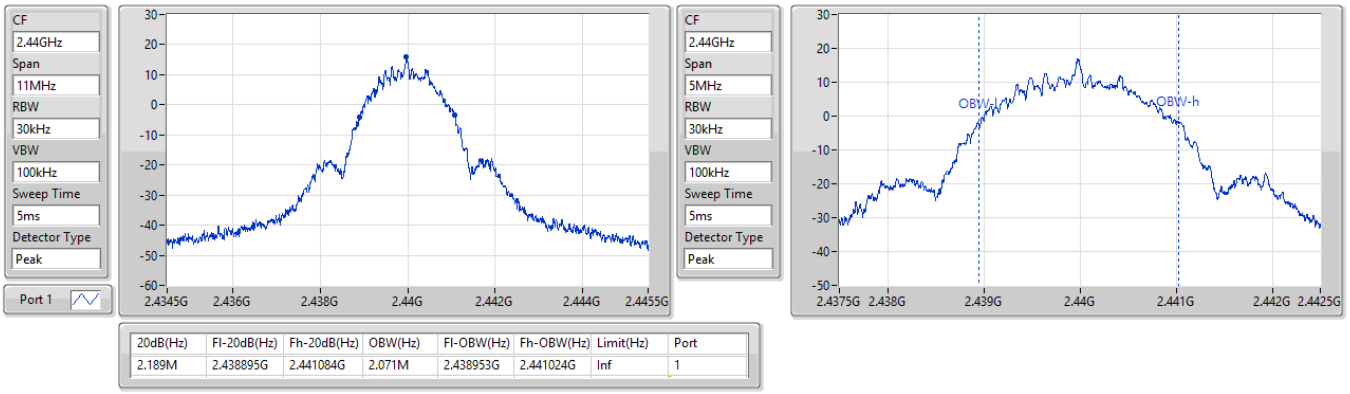
2404MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.151M	2.402928G	2.405078G	2.061M	2.402958G	2.405019G	Inf	1

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

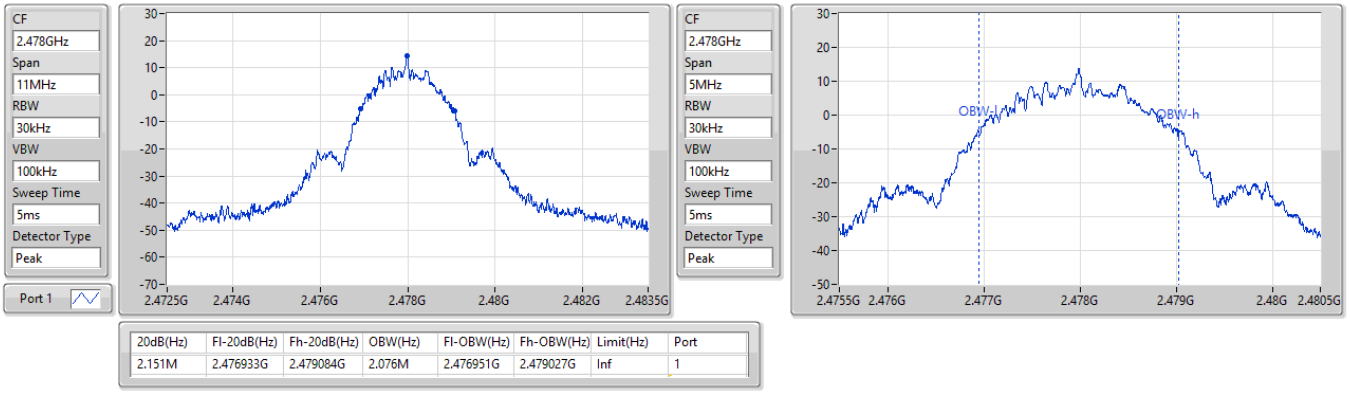
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.189M	2.438895G	2.441084G	2.071M	2.438953G	2.441024G	Inf	1

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

2478MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.151M	2.476933G	2.479084G	2.076M	2.476951G	2.479027G	Inf	1

1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

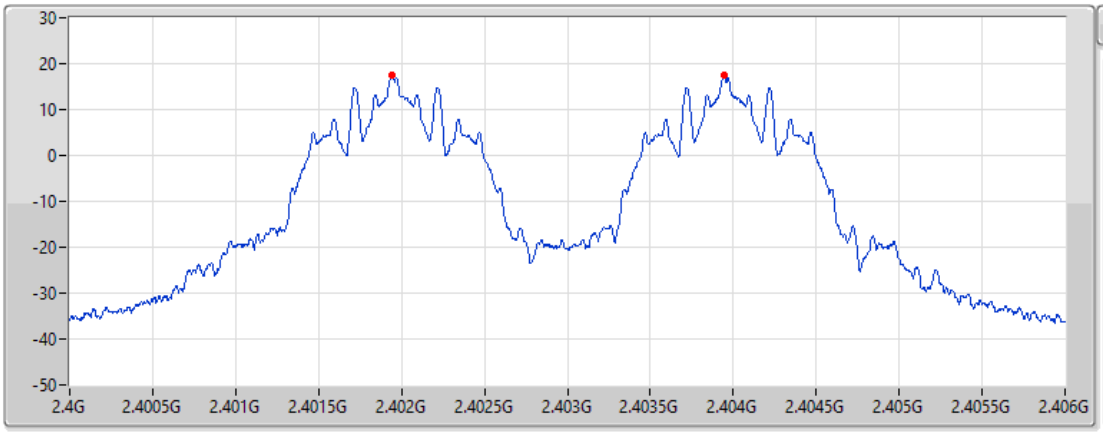
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	2.001M	2.001M
BT-LE(Symbol rate 1Mbps)	2.004M	2.001M
BT-LE(Symbol rate 2Mbps)	2.004M	2.001M

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-LE(Coding rate125kbps)	-	-	-	-	-
2402MHz	Pass	2.401944G	2.403945G	2.001M	739.926k
2440MHz	Pass	2.439944G	2.441945G	2.001M	732.6k
2478MHz	Pass	2.475968G	2.477969G	2.001M	732.6k
2480MHz	Pass	2.477944G	2.479945G	2.001M	765.9k
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-
2402MHz	Pass	2.40198G	2.403981G	2.001M	747.252k
2440MHz	Pass	2.439974G	2.441975G	2.001M	765.9k
2478MHz	Pass	2.475977G	2.477978G	2.001M	754.578k
2480MHz	Pass	2.477977G	2.479981G	2.004M	751.248k
BT-LE(Symbol rate 2Mbps)	-	-	-	-	-
2404MHz	Pass	2.403974G	2.405975G	2.001M	1.435896M
2440MHz	Pass	2.439974G	2.441978G	2.004M	1.435896M
2478MHz	Pass	2.475974G	2.477978G	2.004M	1.432566M

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

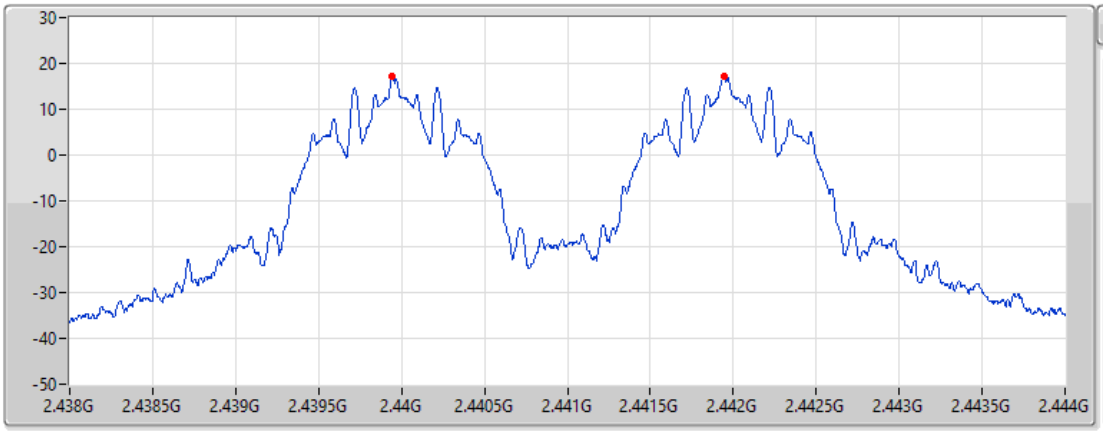
2.402G/2.404GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401944G	2.403945G	2.001M	739.926k

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

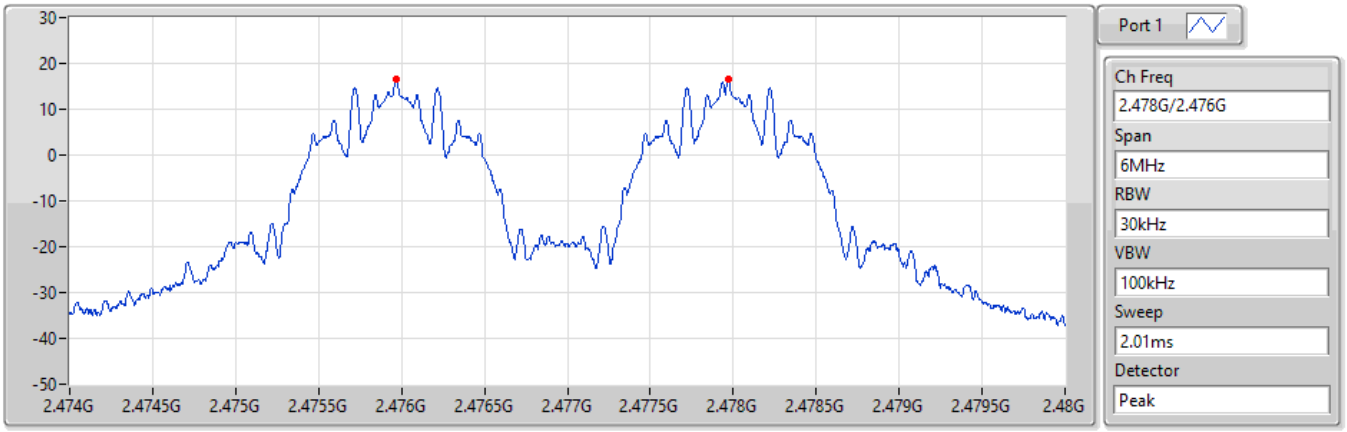
2.44G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439944G	2.441945G	2.001M	732.6k

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

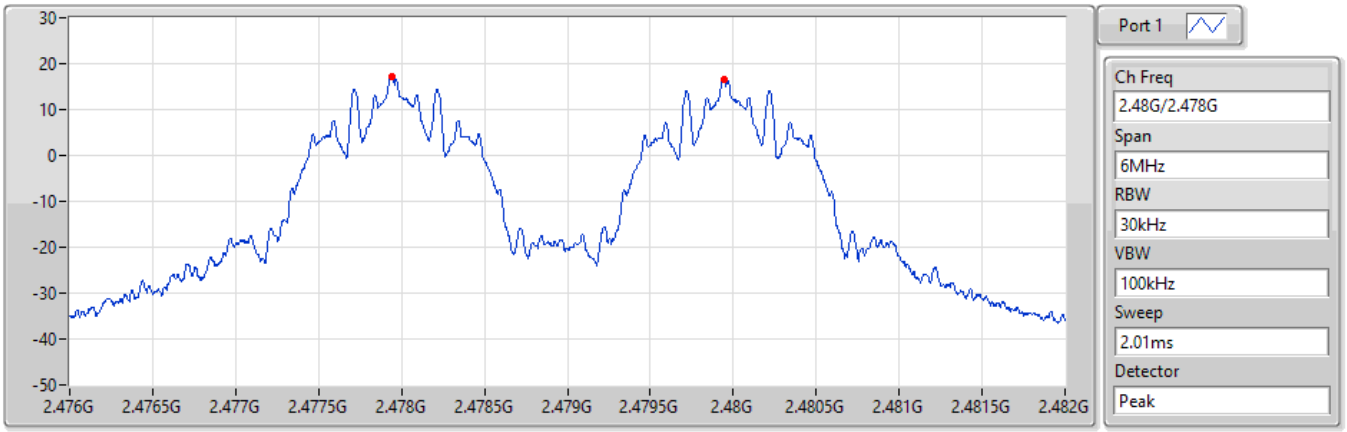
2.478G/2.476GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.475968G	2.477969G	2.001M	732.6k

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

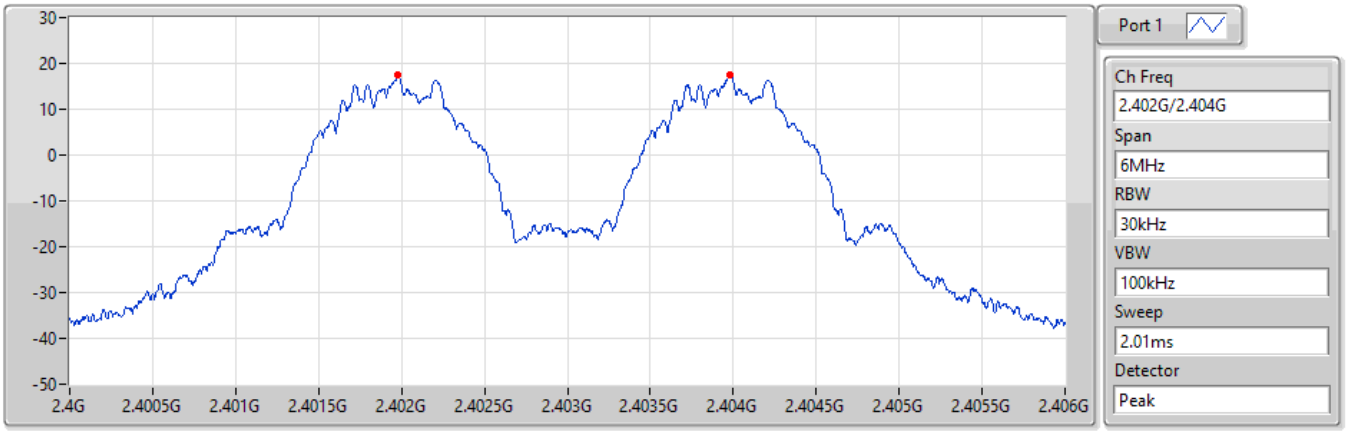
2.48G/2.478GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.477944G	2.479945G	2.001M	765.9k

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

2.402G/2.404GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.40198G	2.403981G	2.001M	747.252k

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

2.44G/2.442GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439974G	2.441975G	2.001M	765.9k

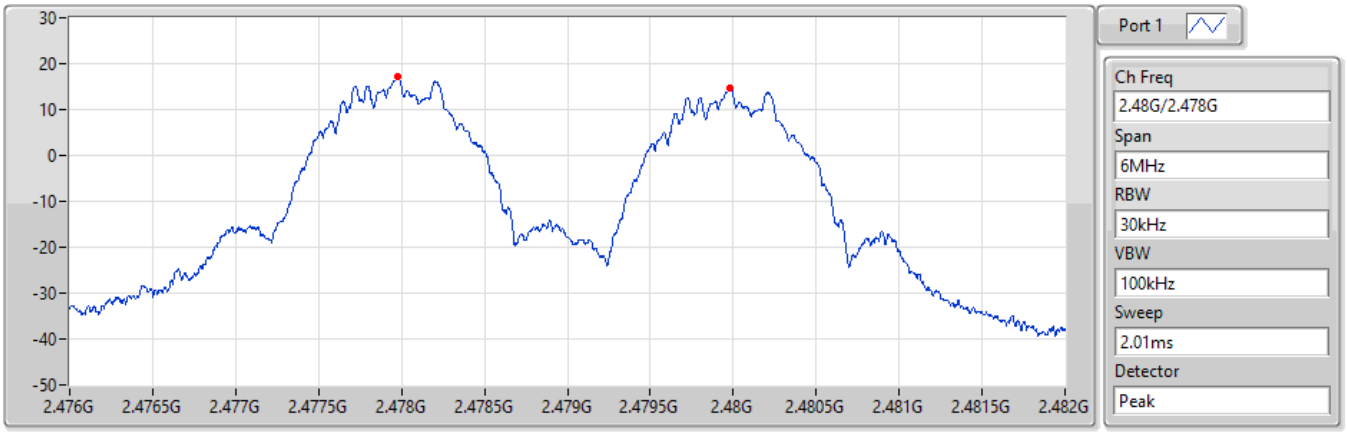
2.4-2.4835GHz_BT-LE(1Mbps) Channel Separation-FS

2.478G/2.476GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.475977G	2.477978G	2.001M	754.578k

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

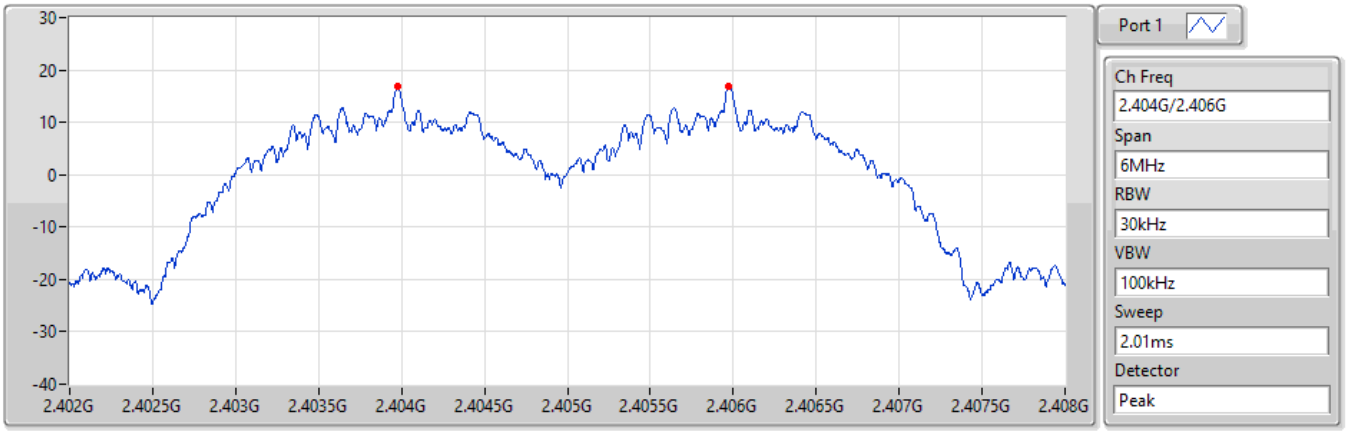
2.48G/2.478GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.477977G	2.479981G	2.004M	751.248k

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

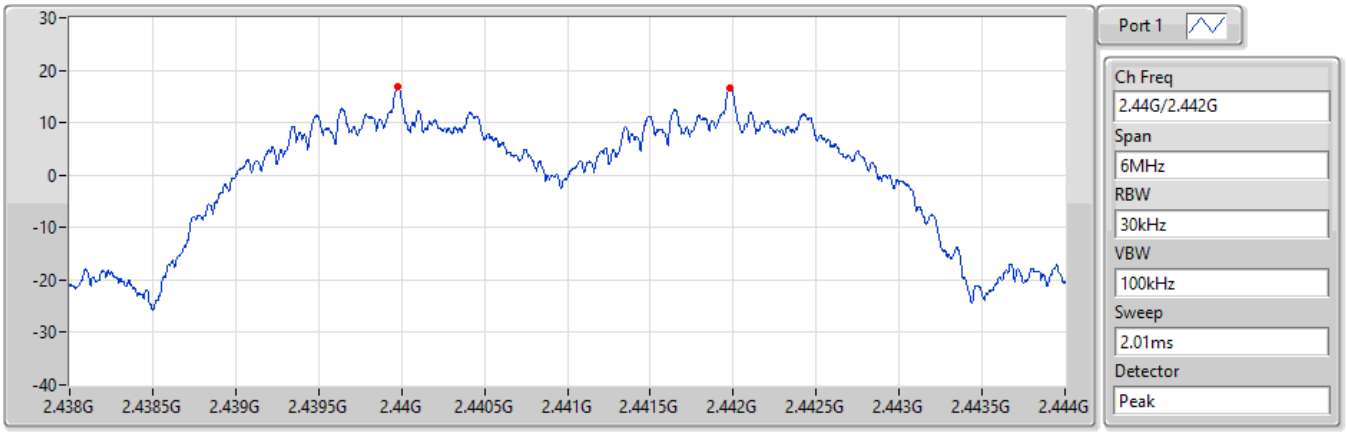
2.404G/2.406GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.403974G	2.405975G	2.001M	1.435896M

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

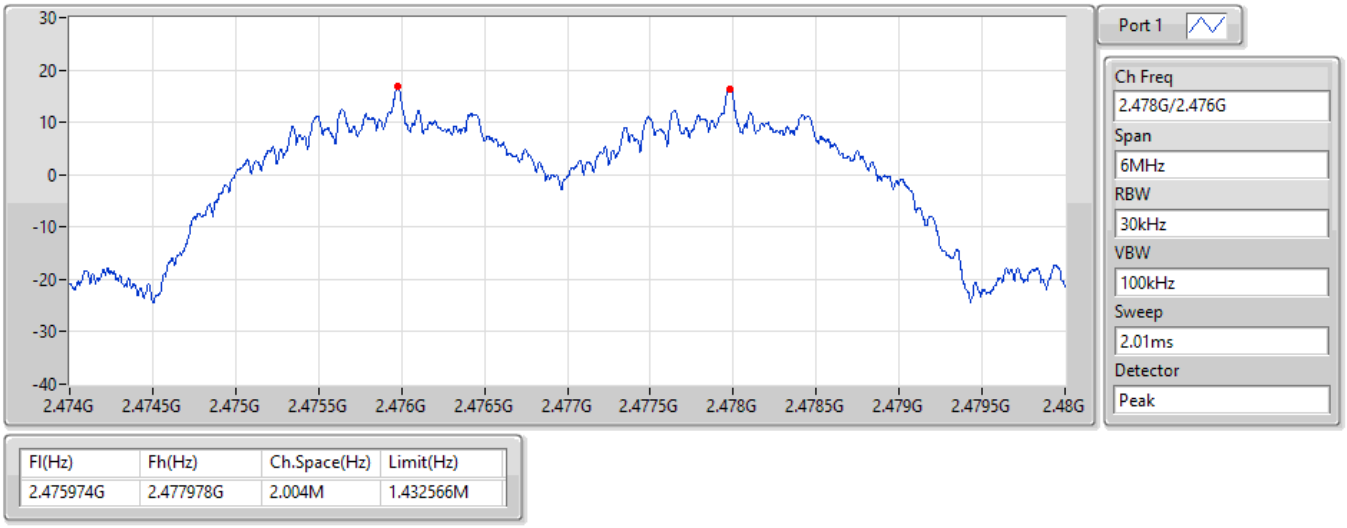
2.44G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439974G	2.441978G	2.004M	1.435896M

2.4-2.4835GHz_BT-LE(2Mbps) **Channel Separation-FS**

2.478G/2.476GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.475974G	2.477978G	2.004M	1.432566M

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

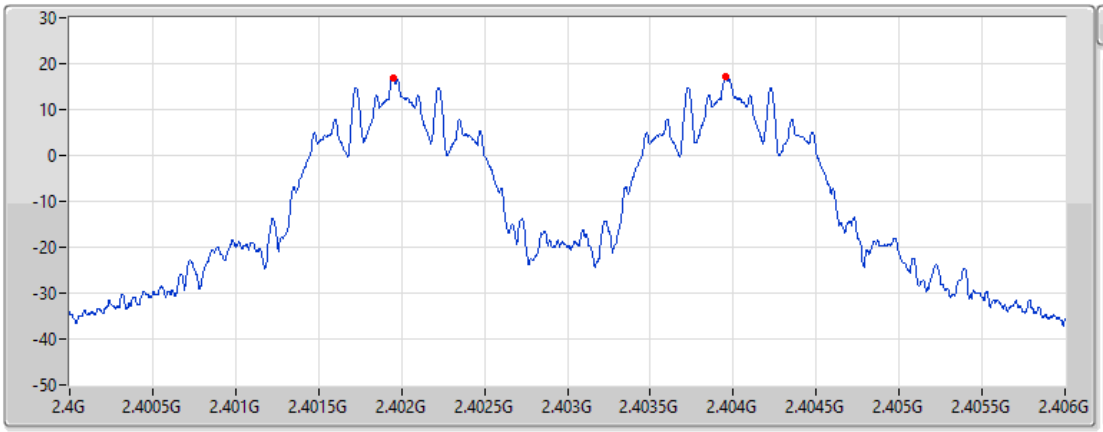
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	2.007M	2.001M
BT-LE(Symbol rate 1Mbps)	2.004M	2.001M
BT-LE(Symbol rate 2Mbps)	2.004M	2.004M

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-LE(Coding rate125kbps)	-	-	-	-	-
2402MHz	Pass	2.401947G	2.403954G	2.007M	761.904k
2440MHz	Pass	2.43995G	2.441957G	2.007M	739.926k
2478MHz	Pass	2.475953G	2.477954G	2.001M	765.9k
2480MHz	Pass	2.477953G	2.479957G	2.004M	732.6k
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-
2402MHz	Pass	2.401989G	2.40399G	2.001M	751.248k
2440MHz	Pass	2.439989G	2.441993G	2.004M	754.578k
2478MHz	Pass	2.475992G	2.477996G	2.004M	765.9k
2480MHz	Pass	2.477992G	2.479993G	2.001M	769.23k
BT-LE(Symbol rate 2Mbps)	-	-	-	-	-
2404MHz	Pass	2.40398G	2.405984G	2.004M	1.432566M
2440MHz	Pass	2.439977G	2.441981G	2.004M	1.457874M
2478MHz	Pass	2.475983G	2.477987G	2.004M	1.432566M

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

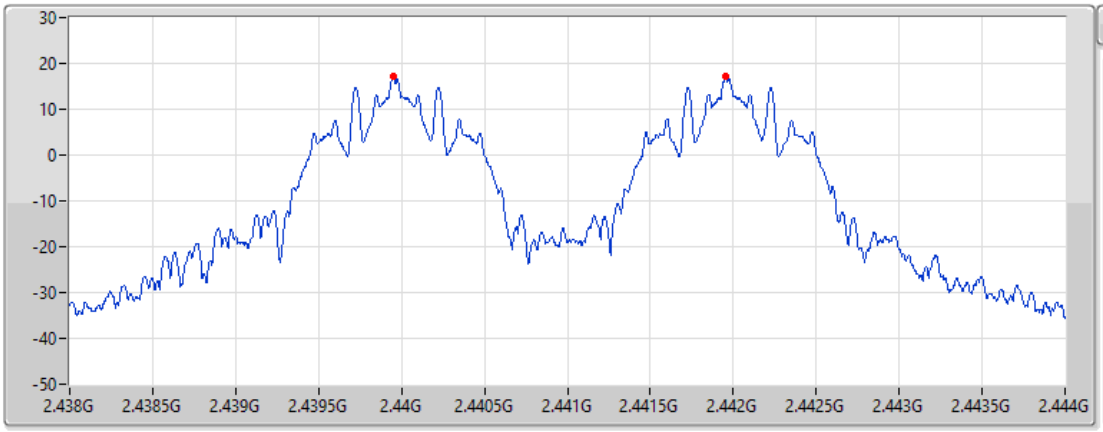
2.402G/2.404GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401947G	2.403954G	2.007M	761.904k

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

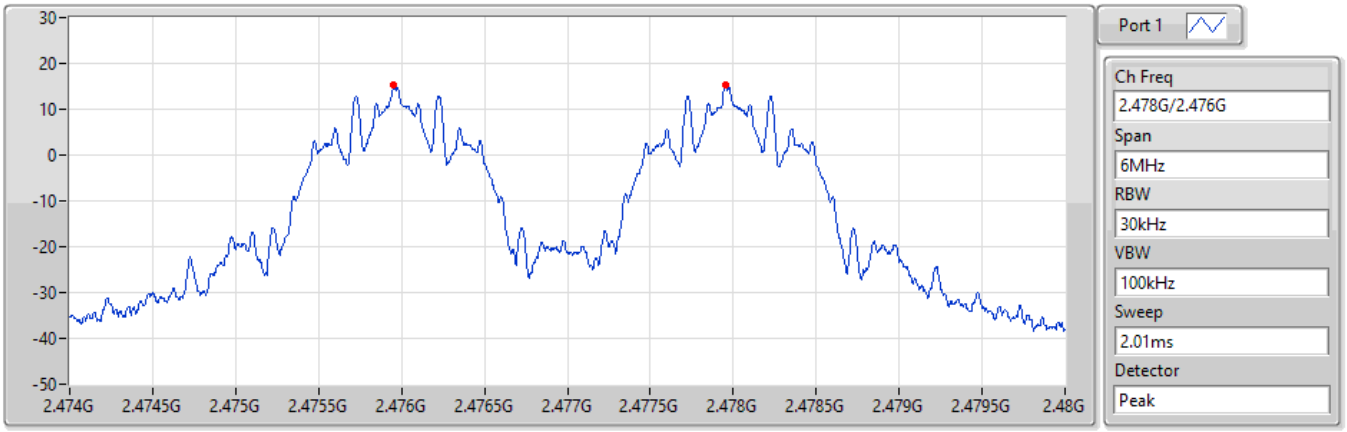
2.44G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.43995G	2.441957G	2.007M	739.926k

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

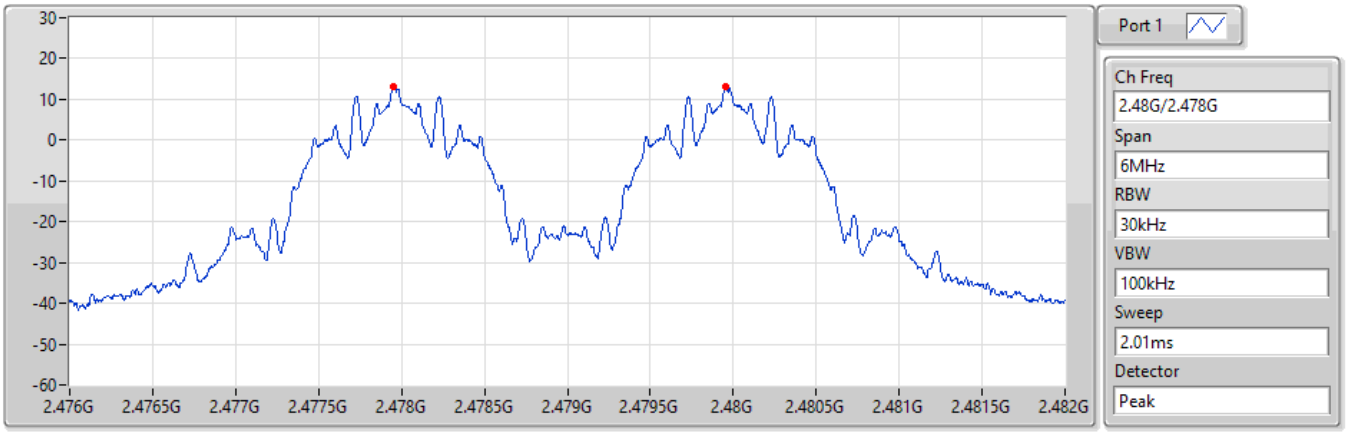
2.478G/2.476GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.475953G	2.477954G	2.001M	765.9k

2.4-2.4835GHz_BT-LE(125kbps) Channel Separation-FS

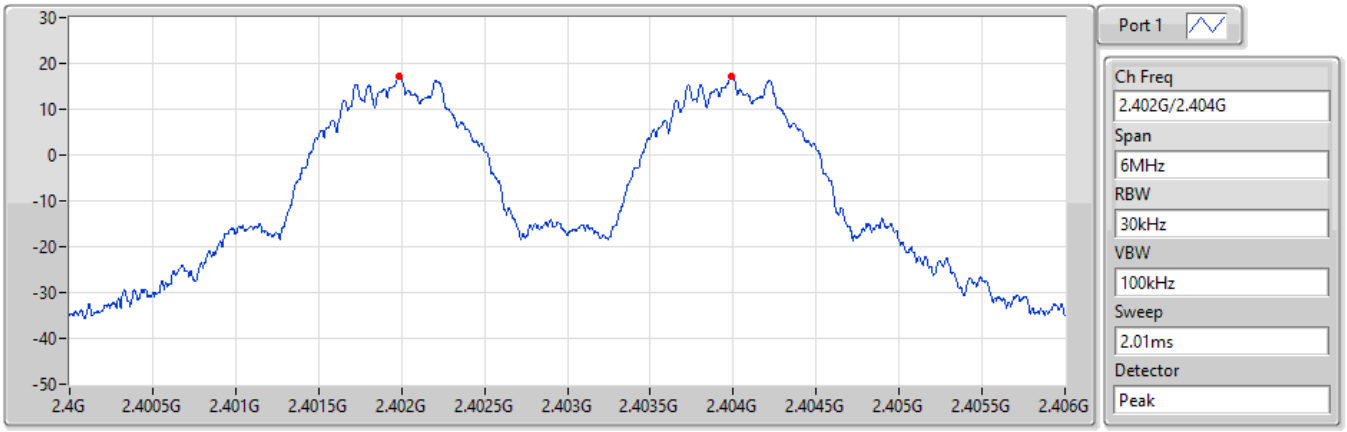
2.48G/2.478GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.477953G	2.479957G	2.004M	732.6k

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

2.402G/2.404GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401989G	2.40399G	2.001M	751.248k

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

2.44G/2.442GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439989G	2.441993G	2.004M	754.578k

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

2.478G/2.476GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.475992G	2.477996G	2.004M	765.9k

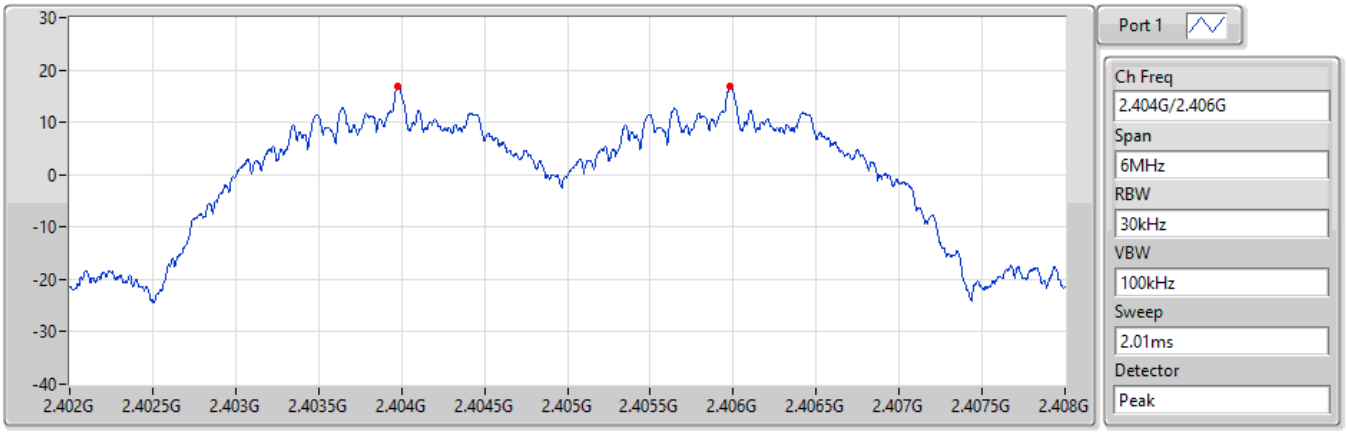
2.4-2.4835GHz_BT-LE(1Mbps) Channel Separation-FS

2.48G/2.478GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.477992G	2.479993G	2.001M	769.23k

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

2.404G/2.406GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.40398G	2.405984G	2.004M	1.432566M

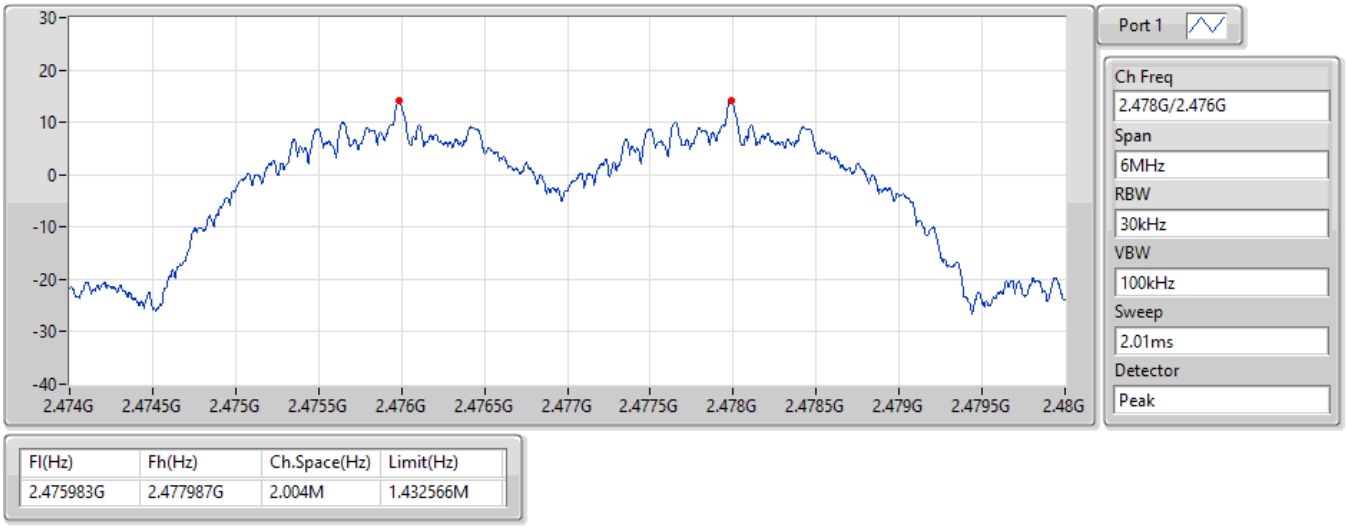
2.4-2.4835GHz_BT-LE(2Mbps) Channel Separation-FS

2.44G/2.442GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439977G	2.441981G	2.004M	1.457874M

2.4-2.4835GHz_BT-LE(2Mbps) **Channel Separation-FS**

2.478G/2.476GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.475983G	2.477987G	2.004M	1.432566M

1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-LE(Coding rate125kbps)	256.040625m_LE0.125
BT-LE(Coding rate125kbps)-AFH	134.515m_BT-LE0.125-AFH
BT-LE(Symbol rate 1Mbps)	34.42m_LE1
BT-LE(Symbol rate 1Mbps)-AFH	16.956m_BT-LE1-AFH
BT-LE(Symbol rate 2Mbps)	16.1775m_LE2
BT-LE(Symbol rate 2Mbps)-AFH	8.63m_BT-LE2-AFH

Result/ Non AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in Period
BT-LE(Coding rate125kbps)	-	-	-	-	-	-
2440MHz	PASS	16	0.25604	0.4	17.06938	15
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-	-
2440MHz	PASS	16	0.03442	0.4	2.15125	16
BT-LE(Symbol rate 2Mbps)	-	-	-	-	-	-
2440MHz	PASS	14.8	0.01618	0.4	1.07850	15

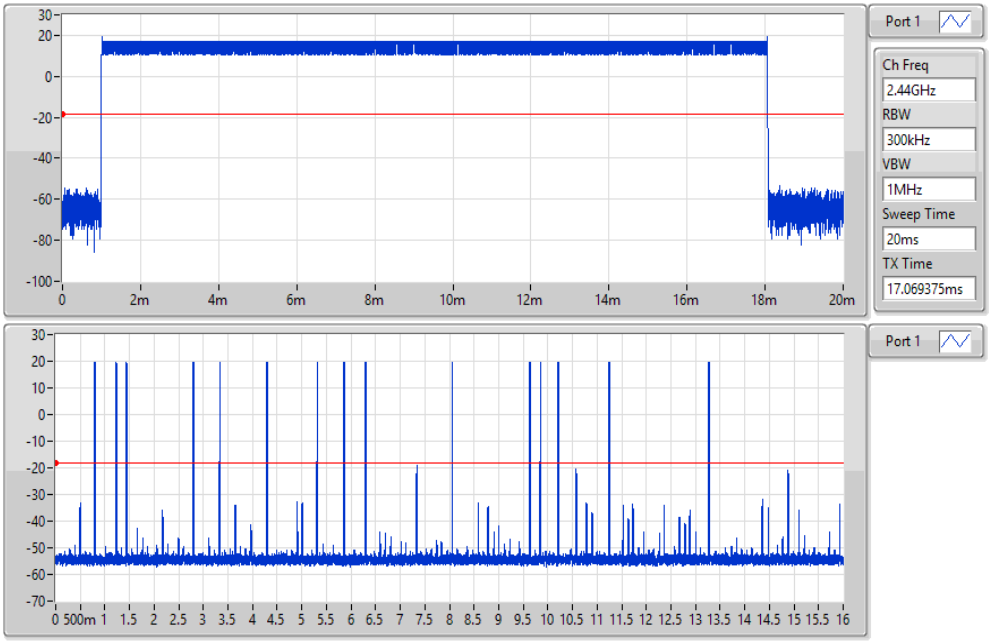
Result/ AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in Period
BT-LE(Coding rate125kbps)	-	-	-	-	-	-
2450MHz	PASS	6	0.13452	0.4	16.81438	8
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-	-
2450MHz	PASS	6	0.01696	0.4	2.11950	8
BT-LE(Symbol rate 2Mbps)	-	-	-	-	-	-
2450MHz	PASS	6	0.00863	0.4	1.07875	8

Note:
1. BLE connection interval: 26.25ms
2. AFH: 480-00267-Rnull.5.0.6
Non-AFH: 480-00263-R24.4.0.1669195240

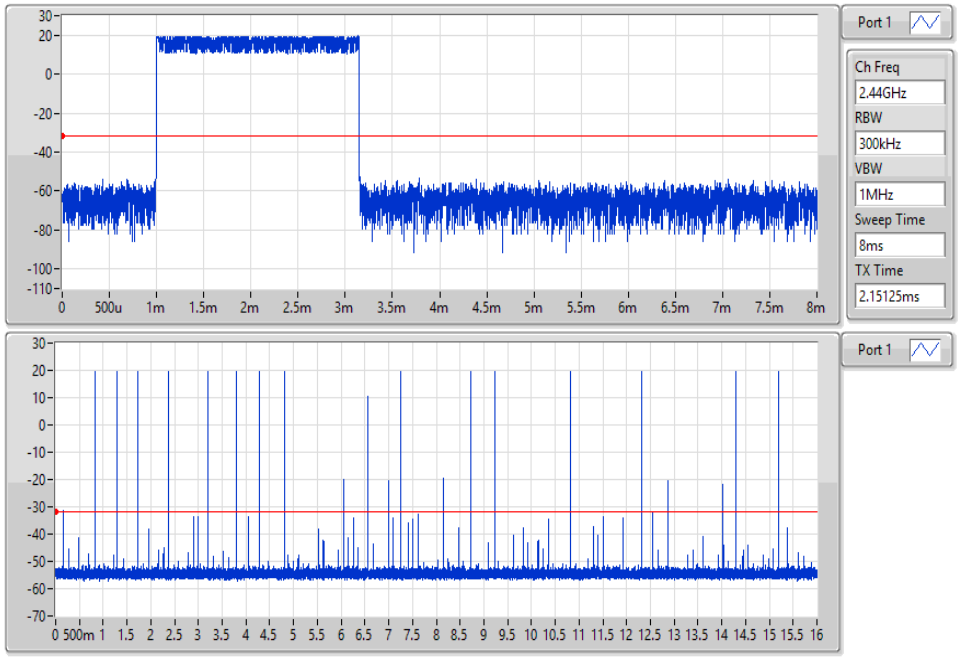
2.4-2.4835GHz_BT-LE(125kbps) **Dwell-FS**

2440MHz



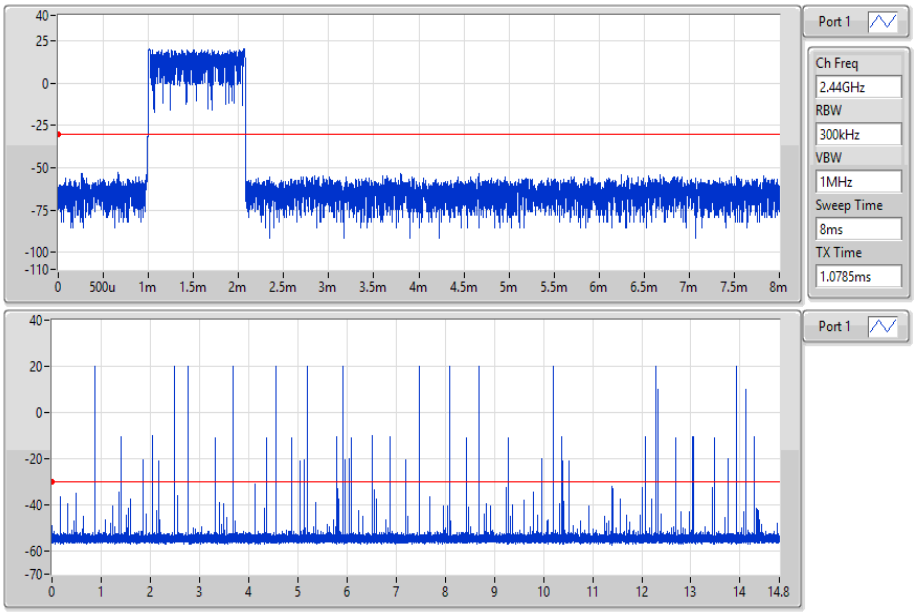
2.4-2.4835GHz_BT-LE(1Mbps) **Dwell-FS**

2440MHz



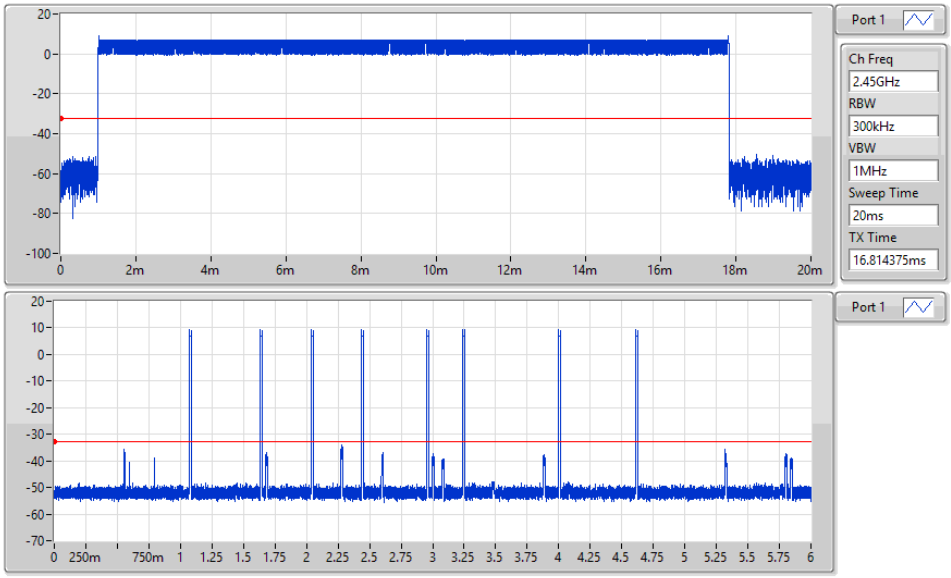
2.4-2.4835GHz_BT-LE(2Mbps) **Dwell-FS**

2440MHz



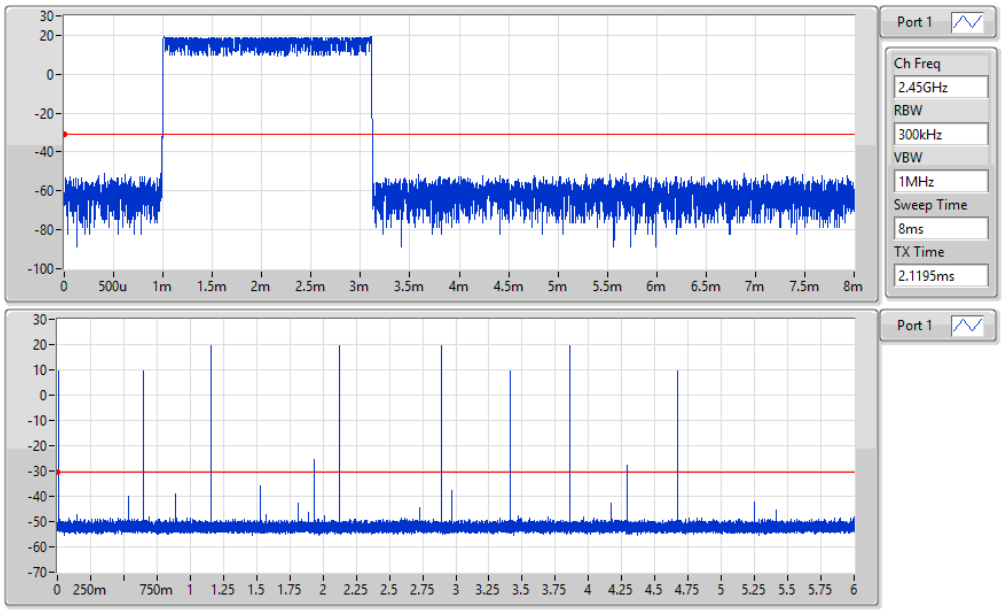
2.4-2.4835GHz_BT-LE(125kbps)-AFH **Dwell-FS**

2450MHz



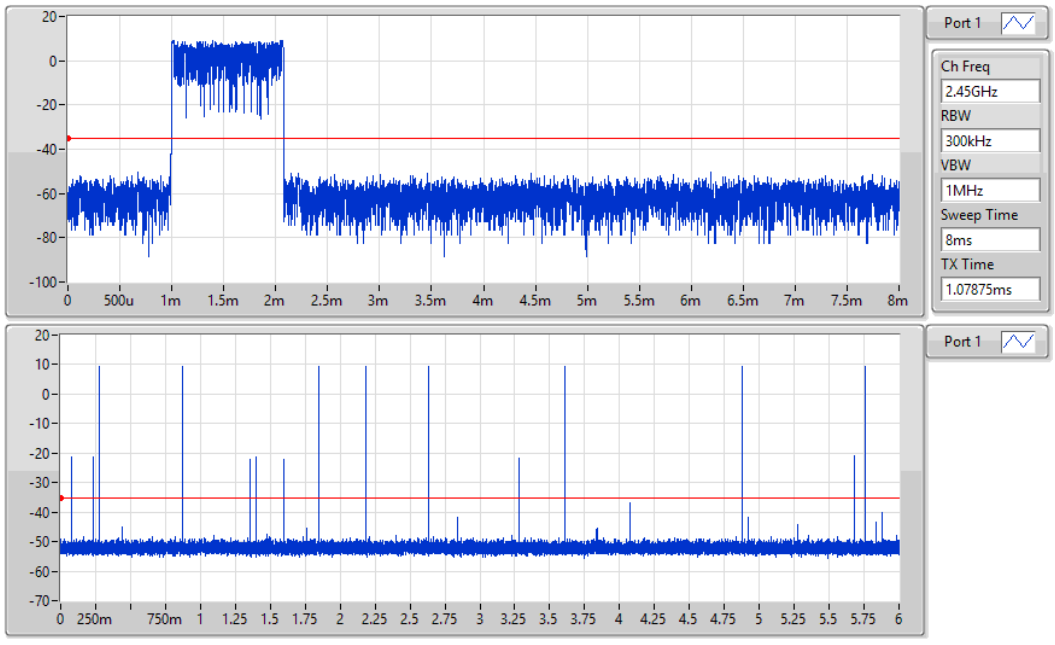
2.4-2.4835GHz_BT-LE(1Mbps)-AFH **Dwell-FS**

2450MHz



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

2450MHz



2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-LE(Coding rate125kbps)	256.040625m_LE0.125
BT-LE(Coding rate125kbps)-AFH	134.515m_BT-LE0.125-AFH
BT-LE(Symbol rate 1Mbps)	32.24625m_LE1
BT-LE(Symbol rate 1Mbps)-AFH	16.93m_BT-LE1-AFH
BT-LE(Symbol rate 2Mbps)	17.252m_LE2
BT-LE(Symbol rate 2Mbps)-AFH	8.622m_BT-LE2-AFH

Result/ Non AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in Period
BT-LE(Coding rate125kbps)	-	-	-	-	-	-
2440MHz	PASS	16	0.25604	0.4	17.06938	15
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-	-
2440MHz	PASS	16	0.03225	0.4	2.14975	15
BT-LE(Symbol rate 2Mbps)	-	-	-	-	-	-
2440MHz	PASS	14.8	0.01725	0.4	1.07825	16

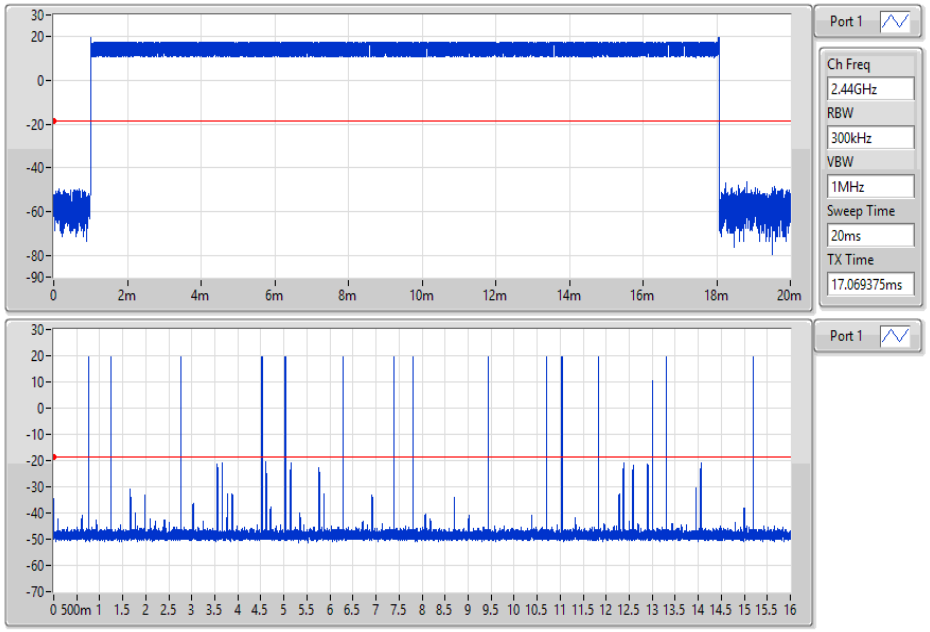
Result/ AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in Period
BT-LE(Coding rate125kbps)	-	-	-	-	-	-
2450MHz	PASS	6	0.13452	0.4	16.81438	8
BT-LE(Symbol rate 1Mbps)	-	-	-	-	-	-
2450MHz	PASS	6	0.01693	0.4	2.11625	8
BT-LE(Symbol rate 2Mbps)	-	-	-	-	-	-
2450MHz	PASS	6	0.00862	0.4	1.07775	8

Note:
1. BLE connection interval: 26.25ms
2. AFH: 480-00298-R24.5.0.5
Non-AFH: 480-00292-R24.4.0.1671533880

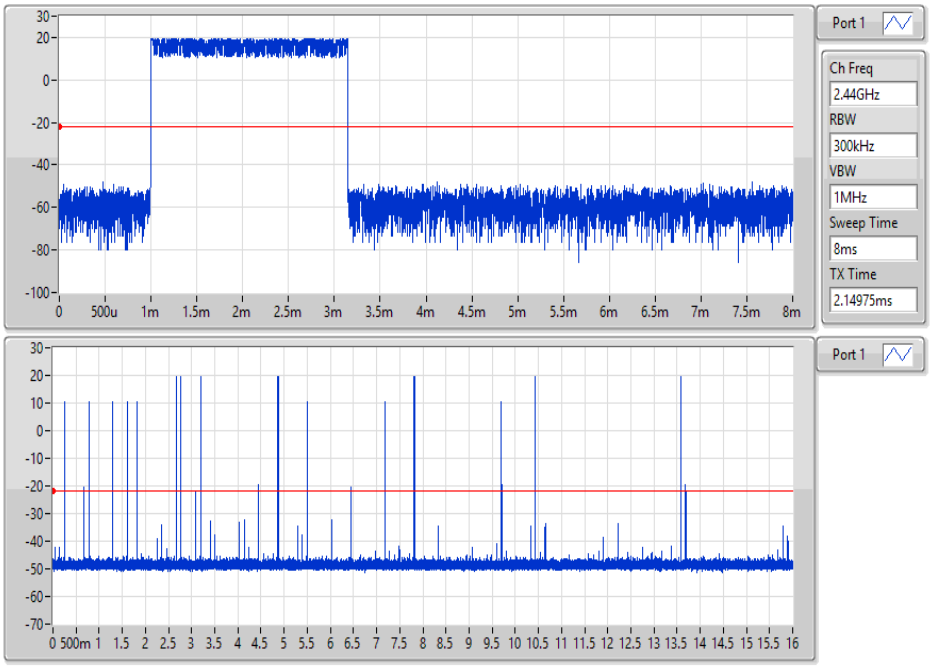
2.4-2.4835GHz_BT-LE(125kbps) **Dwell-FS**

2440MHz



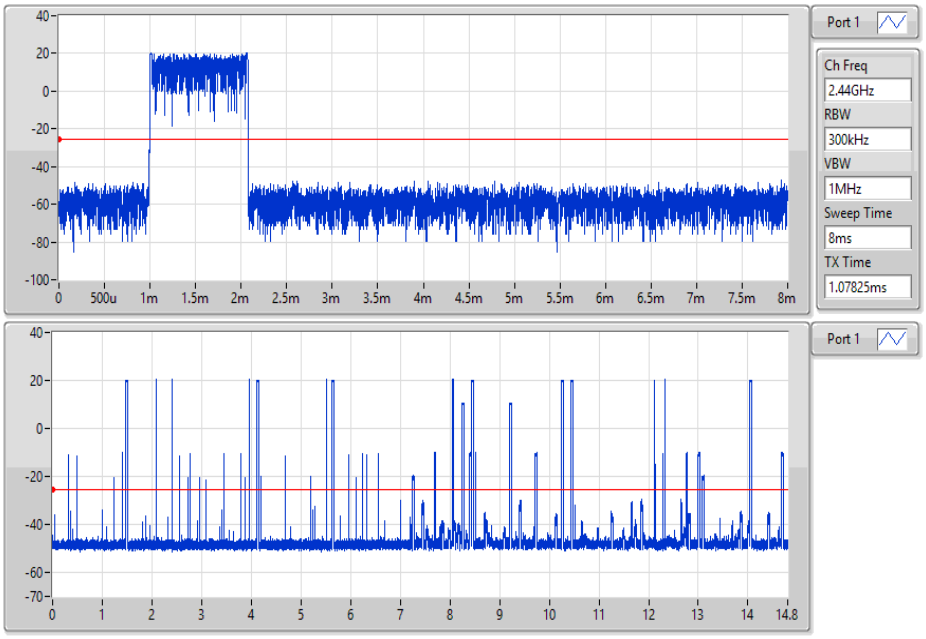
2.4-2.4835GHz_BT-LE(1Mbps) **Dwell-FS**

2440MHz



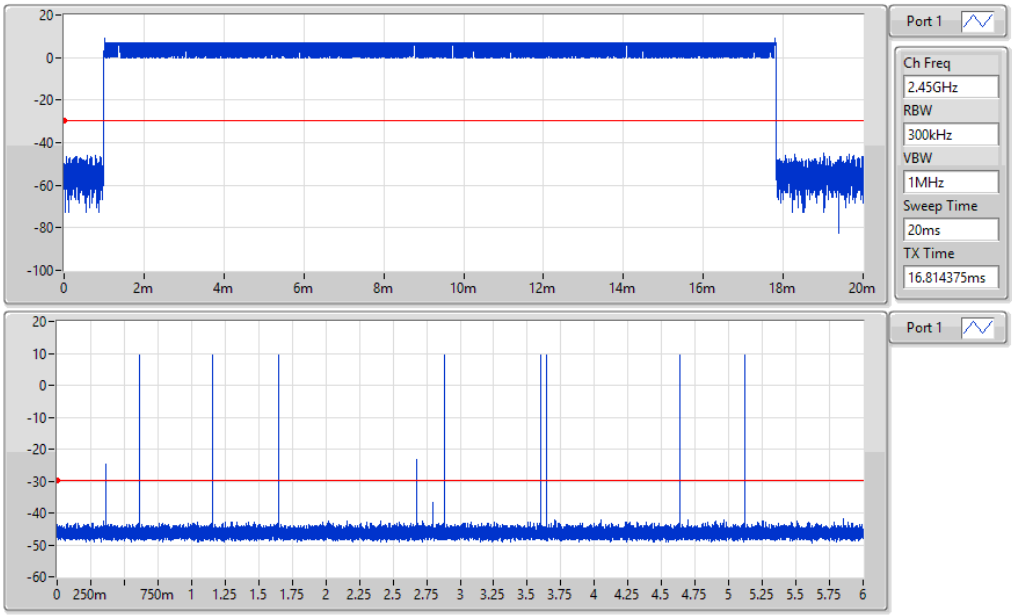
2.4-2.4835GHz_BT-LE(2Mbps) **Dwell-FS**

2440MHz



2.4-2.4835GHz_BT-LE(125kbps)-AFH **Dwell-FS**

2450MHz

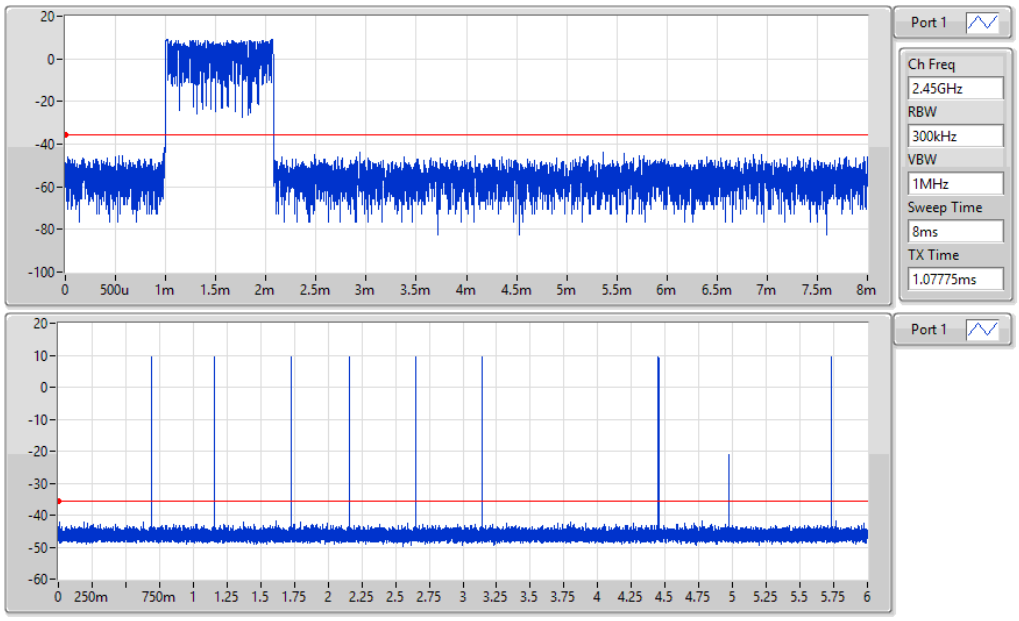


2.4-2.4835GHz_BT-LE(1Mbps)-AFH **Dwell-FS**

2450MHz

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

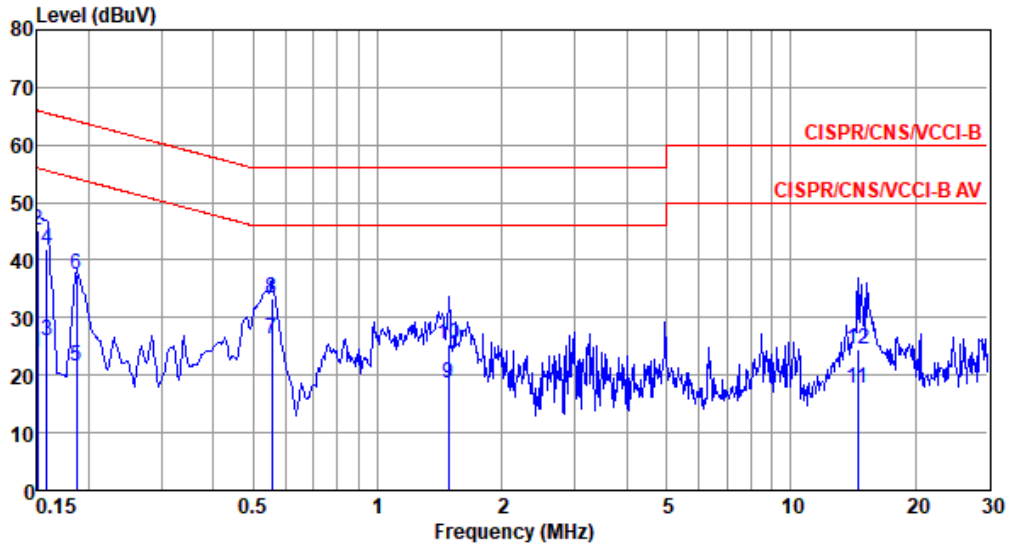
2450MHz



1) Configuration 1: Laird part number: 453-00145, 20dBm, Integrated Antenna

Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2402
Power Phase	Line		

Test by : Joe Liao Temperature: 21°C Humidity: 60%

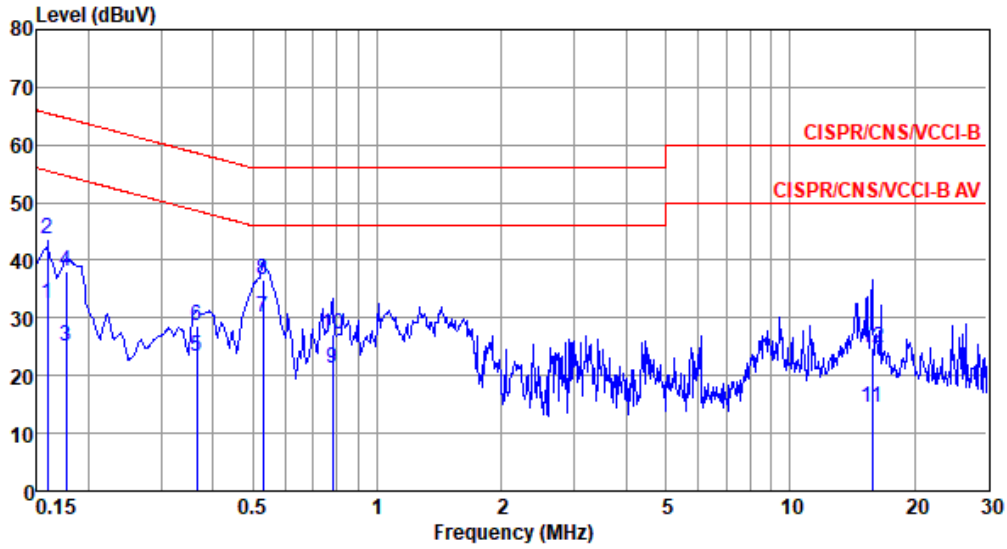


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.150	23.86	56.00	-32.14	14.21	9.59	0.06	0.00	Average
2	0.150	45.12	66.00	-20.88	35.47	9.59	0.06	0.00	QP
3	0.158	25.86	55.56	-29.70	16.21	9.59	0.06	0.00	Average
4	0.158	41.82	65.56	-23.74	32.17	9.59	0.06	0.00	QP
5	0.186	21.57	54.20	-32.63	11.92	9.59	0.06	0.00	Average
6	0.186	37.54	64.20	-26.66	27.89	9.59	0.06	0.00	QP
7*	0.555	26.32	46.00	-19.68	16.65	9.59	0.08	0.00	Average
8	0.555	33.36	56.00	-22.64	23.69	9.59	0.08	0.00	QP
9	1.487	18.66	46.00	-27.34	8.93	9.61	0.12	0.00	Average
10	1.487	25.25	56.00	-30.75	15.52	9.61	0.12	0.00	QP
11	14.517	17.61	50.00	-32.39	7.56	9.62	0.43	0.00	Average
12	14.517	24.52	60.00	-35.48	14.47	9.62	0.43	0.00	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	BT-LE(1Mbps)	**Test Freq. (MHz)**	2402
Power Phase	Neutral		

Test by : Joe Liao Temperature: 21°C Humidity: 60%



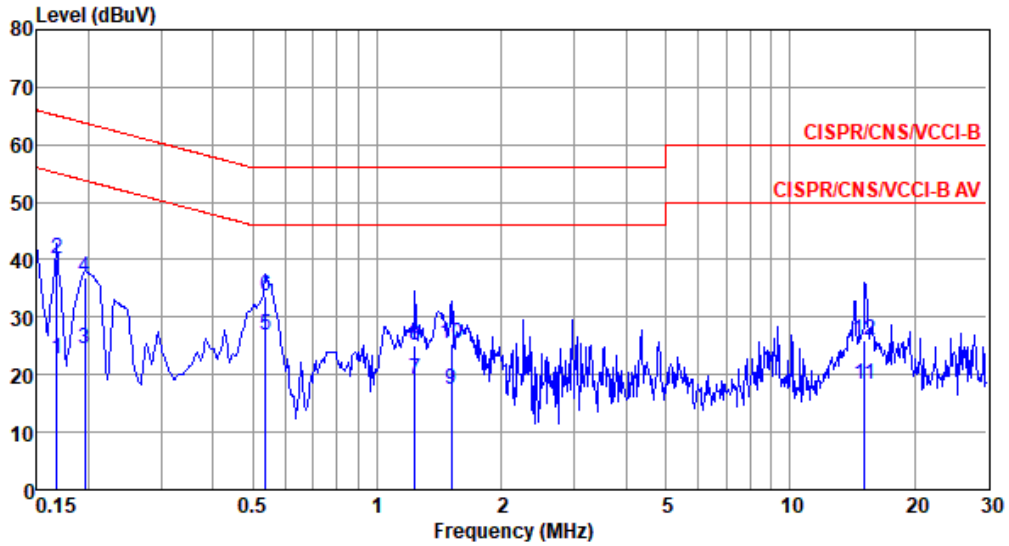
	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.159	32.43	55.52	-23.09	22.77	9.60	0.06	0.00	Average
2	0.159	43.64	65.52	-21.88	33.98	9.60	0.06	0.00	QP
3	0.177	24.97	54.64	-29.67	15.31	9.60	0.06	0.00	Average
4	0.177	38.02	64.64	-26.62	28.36	9.60	0.06	0.00	QP
5	0.365	23.41	48.61	-25.20	13.75	9.60	0.06	0.00	Average
6	0.365	28.72	58.61	-29.89	19.06	9.60	0.06	0.00	QP
7*	0.529	30.13	46.00	-15.87	20.45	9.60	0.08	0.00	Average
8	0.529	36.72	56.00	-19.28	27.04	9.60	0.08	0.00	QP
9	0.779	21.16	46.00	-24.84	11.46	9.60	0.10	0.00	Average
10	0.779	27.13	56.00	-28.87	17.43	9.60	0.10	0.00	QP
11	15.801	14.42	50.00	-35.58	4.30	9.67	0.45	0.00	Average
12	15.801	24.74	60.00	-35.26	14.62	9.67	0.45	0.00	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).

2) Configuration 2: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2402
Power Phase	Line		

Test by : Joe Liao Temperature: 21°C Humidity: 60%

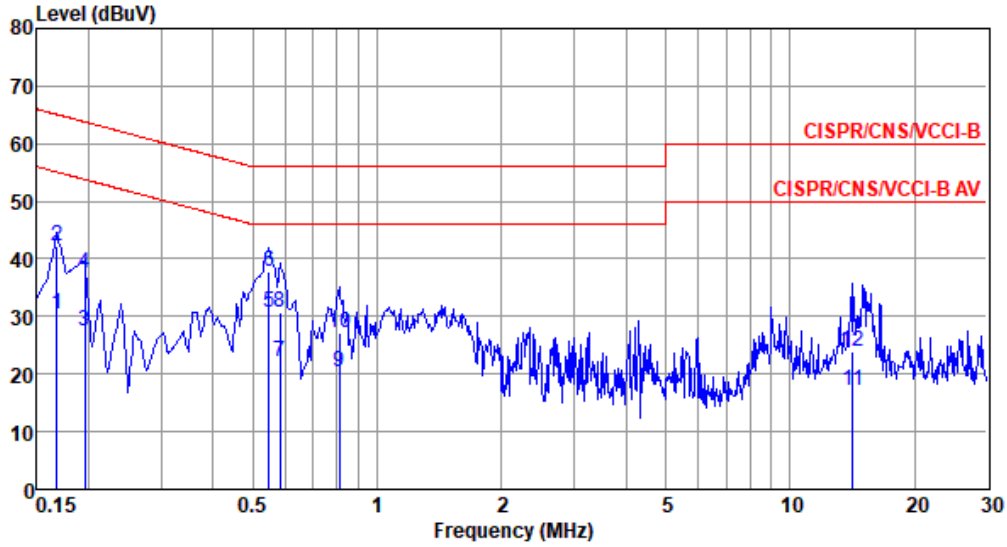


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.168	22.76	55.08	-32.32	13.11	9.59	0.06	0.00	Average
2	0.168	40.01	65.08	-25.07	30.36	9.59	0.06	0.00	QP
3	0.195	24.56	53.80	-29.24	14.91	9.59	0.06	0.00	Average
4	0.195	36.83	63.80	-26.97	27.18	9.59	0.06	0.00	QP
5*	0.538	26.86	46.00	-19.14	17.19	9.59	0.08	0.00	Average
6	0.538	33.67	56.00	-22.33	24.00	9.59	0.08	0.00	QP
7	1.236	19.28	46.00	-26.72	9.56	9.60	0.12	0.00	Average
8	1.236	24.95	56.00	-31.05	15.23	9.60	0.12	0.00	QP
9	1.511	17.39	46.00	-28.61	7.66	9.61	0.12	0.00	Average
10	1.511	25.40	56.00	-30.60	15.67	9.61	0.12	0.00	QP
11	15.146	18.23	50.00	-31.77	8.18	9.61	0.44	0.00	Average
12	15.146	26.05	60.00	-33.95	16.00	9.61	0.44	0.00	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	BT-LE(1Mbps)	**Test Freq. (MHz)**	2402
Power Phase	Neutral		

Test by : Joe Liao Temperature: 21°C Humidity: 60%



	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.168	30.27	55.08	-24.81	20.61	9.60	0.06	0.00	Average
2	0.168	42.13	65.08	-22.95	32.47	9.60	0.06	0.00	QP
3	0.195	27.54	53.80	-26.26	17.88	9.60	0.06	0.00	Average
4	0.195	37.51	63.80	-26.29	27.85	9.60	0.06	0.00	QP
5*	0.546	30.61	46.00	-15.39	20.93	9.60	0.08	0.00	Average
6	0.546	37.85	56.00	-18.15	28.17	9.60	0.08	0.00	QP
7	0.582	22.04	46.00	-23.96	12.36	9.60	0.08	0.00	Average
8	0.582	30.80	56.00	-25.20	21.12	9.60	0.08	0.00	QP
9	0.809	20.48	46.00	-25.52	10.78	9.60	0.10	0.00	Average
10	0.809	27.29	56.00	-28.71	17.59	9.60	0.10	0.00	QP
11	14.213	17.14	50.00	-32.86	7.04	9.67	0.43	0.00	Average
12	14.213	23.81	60.00	-36.19	13.71	9.67	0.43	0.00	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).