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
FR2D3001-1	Rev. 01	Initial issue	Jul. 05, 2023

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emissions	[dBuV]: 0.538MHz 30.90 (Margin -15.10dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 2483.50MHz 72.30 (Margin -1.70dB) - PK	Pass
15.247(b)(3)	Conducted Output Power	Power [dBm]: 19.89	Pass
15.247(a)(2)	6dB Bandwidth	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	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 Conducted (Average) 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 (dB)
					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: 453-00142, 10dBm mode, DTS

Modulation Mode	**Test Frequency (MHz)**			
	2402	**2440**	**2478**	**2480**
BT-LE(Coding rate 125kbps)	10 dBm	10 dBm	10 dBm	10 dBm
BT-LE(Coding rate 500kbps)	10 dBm	10 dBm	10 dBm	10 dBm
BT-LE(Symbol rate 1Mbps)	10 dBm	10 dBm	10 dBm	10 dBm
Modulation Mode	**2404**	**2440**	**2478**	**---**
BT-LE(Symbol rate 2Mbps)	10 dBm	10 dBm	10 dBm	---

Laird part number: 453-00145, 20dBm mode, DTS

Modulation Mode	**Test Frequency (MHz)**			
	2402	**2440**	**2478**	**2480**
BT-LE(Coding rate 125kbps)	13 dBm	13 dBm	13 dBm	13 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
Modulation Mode	**2404**	**2440**	**2478**	---
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.

Modulation Mode	**Test Frequency (MHz)**			
	2402	**2440**	**2478**	**2480**
BT-LE(Coding rate 125kbps)	10 dBm	10 dBm	10 dBm	10 dBm
BT-LE(Coding rate 500kbps)	10 dBm	10 dBm	10 dBm	10 dBm
BT-LE(Symbol rate 1Mbps)	10 dBm	10 dBm	10 dBm	10 dBm
Modulation Mode	**2404**	**2440**	**2478**	**---**
BT-LE(Symbol rate 2Mbps)	10 dBm	10 dBm	10 dBm	---

Laird part number: 453-00148, 20dBm mode, DTS

Modulation Mode	Test Frequency (MHz)			
	2402	**2440**	**2478**	**2480**
BT-LE(Coding rate 125kbps)	12dBm	12dBm	12dBm	12dBm
BT-LE(Coding rate 500kbps)	20dBm	20dBm	18dBm	15dBm
BT-LE(Symbol rate 1Mbps)	20dBm	20dBm	18dBm	15dBm
Modulation Mode	**2404**	**2440**	**2478**	**---**
BT-LE(Symbol rate 2Mbps)	20dBm	20dBm	17dBm	---

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.

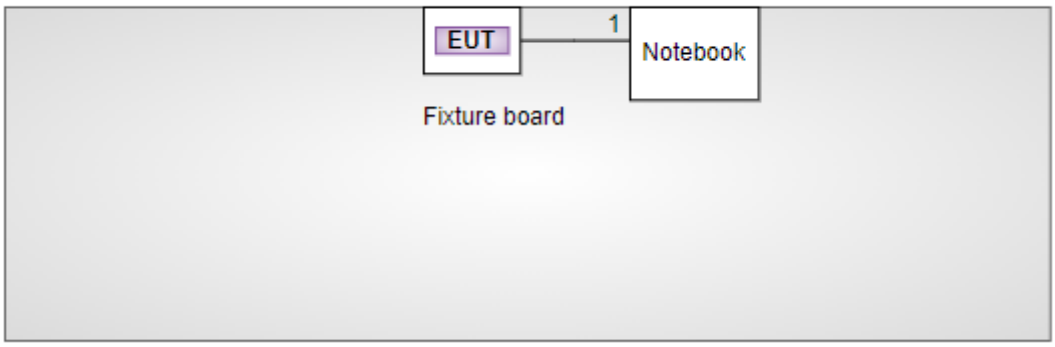
Modulation Mode	Test Frequency (MHz)			
	2402	**2440**	**2478**	**2480**
BT-LE(Coding rate 125kbps)	10 dBm	10 dBm	10 dBm	10 dBm
BT-LE(Coding rate 500kbps)	10 dBm	10 dBm	10 dBm	10 dBm
BT-LE(Symbol rate 1Mbps)	10 dBm	10 dBm	10 dBm	10 dBm
Modulation Mode	**2404**	**2440**	**2478**	**---**
BT-LE(Symbol rate 2Mbps)	10 dBm	10 dBm	10 dBm	---

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	---	---

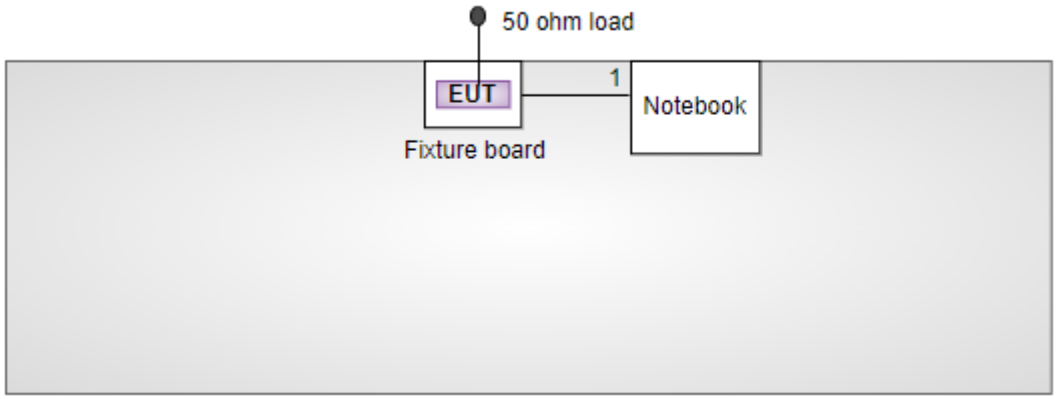
1.3 Test Setup Chart

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 Test Equipment List and Calibration Data

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	V5.10.7	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

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

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.130 Hz
Conducted power	±0.808 dB
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Unwanted Emission ≤ 1GHz	±3.96 dB
Unwanted Emission > 1GHz	±4.51 dB

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, 3
Unwanted Emissions ≤ 1GHz	Symbol rate 1Mbps	2402	TX	Radiated	1, 2, 3
Unwanted Emissions > 1GHz	Coding rate 125kbps	2402, 2440, 2478, 2480	TX	Radiated	2, 3
	Coding rate 500kbps	2402, 2440, 2478, 2480	TX	Radiated	2, 3
	Symbol rate 1Mbps	2402, 2440, 2478, 2480	TX	Radiated	1, 2, 3
	Symbol rate 2Mbps	2404, 2440, 2478	TX	Radiated	1, 2, 3
Unwanted Emissions ≤ 1GHz	Symbol rate 1Mbps	2402	TX	Conducted	3
Unwanted Emissions > 1GHz	Coding rate 125kbps Coding rate 500kbps Symbol rate 1Mbps	2402, 2440, 2478, 2480	TX	Conducted	3
Unwanted Emissions > 1GHz	Symbol rate 2Mbps	2404, 2440, 2478	TX	Conducted	3
Conducted Output Power	Coding rate 125kbps Coding rate 500kbps Symbol rate 1Mbps	2402, 2440, 2478, 2480	TX	Conducted	1, 2, 3, 4, 5
	Symbol rate 2Mbps	2404, 2440, 2478	TX	Conducted	1, 2, 3, 4, 5
6dB bandwidth Power spectral density	Coding rate 125kbps Coding rate 500kbps Symbol rate 1Mbps	2402, 2440, 2478, 2480	TX	Conducted	1, 2, 3
	Symbol rate 2Mbps	2404, 2440, 2478	TX	Conducted	1, 2, 3

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: 453-00142, 10dBm, Integrated Antenna
   2) Configuration 2: Laird part number: 453-00145, 20dBm, Integrated Antenna
   3) Configuration 3: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)
   4) Configuration 4: Laird part number: 453-00145, 10dBm, Integrated Antenna
   5) Configuration 5: Laird part number: 453-00148, 10dBm, 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 6dB and Occupied Bandwidth

3.1.1 Limit of 6dB Bandwidth

The minimum 6dB bandwidth shall be at least 500 kHz.

3.1.2 Test Procedures

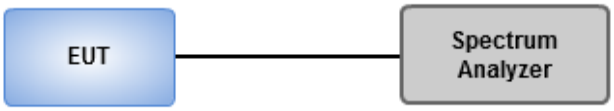
6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. 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 6dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Sample, Trace mode = max hold.
3 Sweep = auto couple, Allow the trace to stabilize.
4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.1.3 Test Setup



3.1.4 Test Results

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

Refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Limit of Conducted Output Power

Conducted power shall not exceed 1Watt.

Antenna gain <= 6dBi, no any corresponding reduction is in output power limit.

3.2.2 Test Procedures

A broadband RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. 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.

3.2.3 Test Setup

3.2.4 Test Results

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

Refer to Appendix B.

3.3 Power Spectral Density

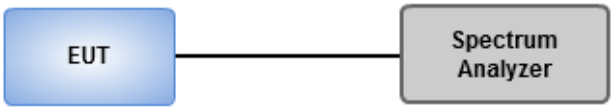
3.3.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.3.2 Test Procedures

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = Peak, Sweep time = auto couple.
3. Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

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 Unwanted Emissions in Restricted Frequency Bands

3.4.1 Limit of Unwanted Emissions in 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.

3.4.2 Test Procedures

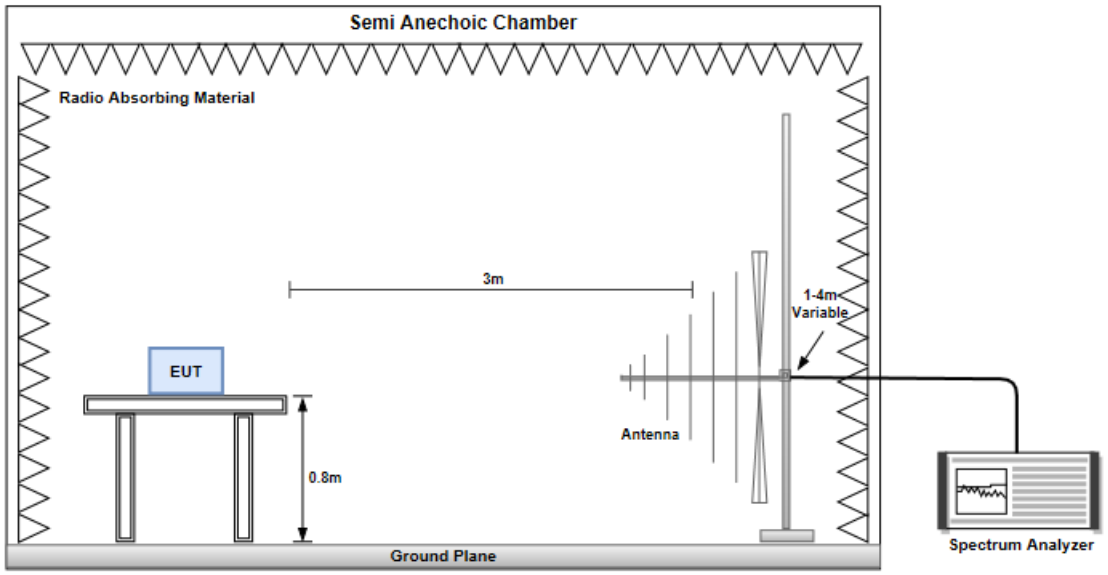
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

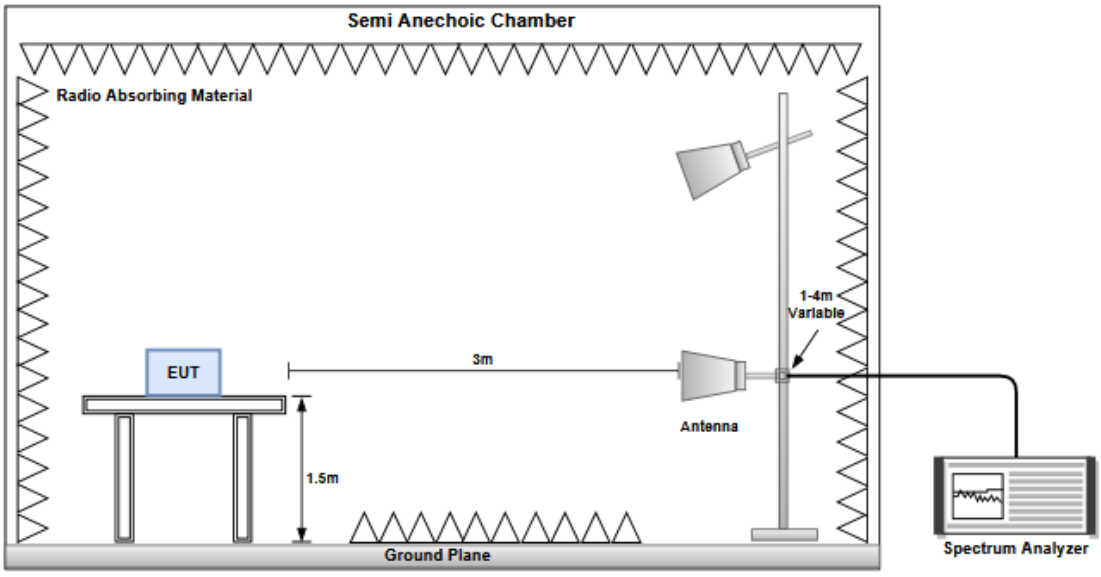
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.4.3 Test Setup

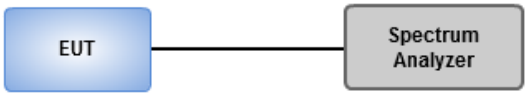
Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



Transmitter Conducted Unwanted Emissions (30MHz~40GHz)



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3.4.4 Test Results

Refer to Appendix D.

3.5 Emissions in non-restricted Frequency Bands

3.5.1 Emissions in non-restricted frequency bands limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.5.2 Test Procedures

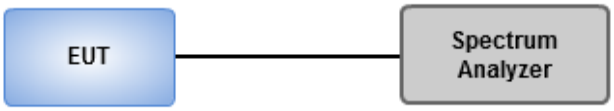
Reference level measurement

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

3.5.3 Test Setup



3.5.4 Test Results

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

Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

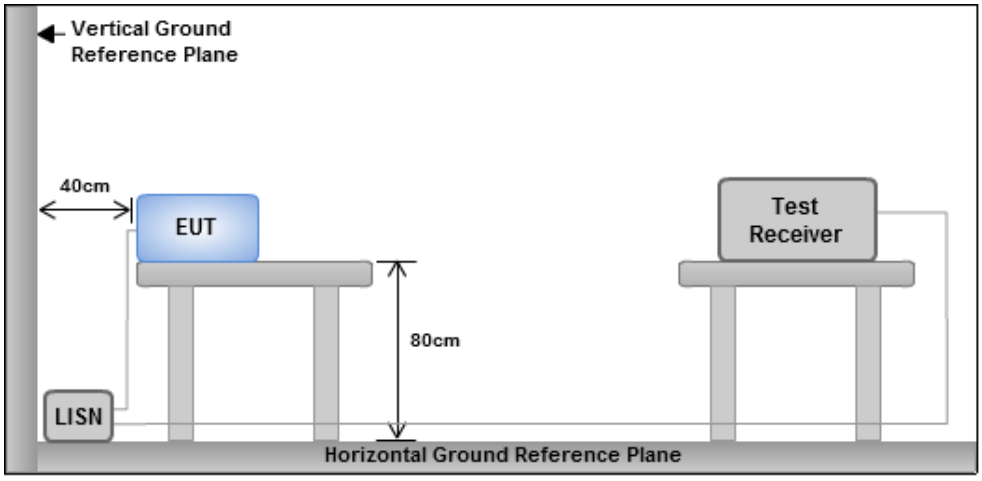
3.6.1 Limit of AC Power Line Conducted Emissions

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.		

3.6.2 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

3.6.3 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

3.6.4 Test Results

Refer to Appendix F.

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: 886-3-318-0155
Email: ICC_Service@icertifi.com.tw

==END==

1) Configuration 1: Laird part number: 453-00142, 10dBm, 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)	695.652k	1.06M	1M06F1D	615.942k	1.056M
BT-LE(Coding rate 500kbps)	673.913k	1.024M	1M02F1D	652.174k	1.02M
BT-LE(Symbol rate 1Mbps)	670.29k	1.024M	1M02F1D	644.928k	1.02M
BT-LE(Symbol rate 2Mbps)	1.196M	2.091M	2M09F1D	1.072M	2.077M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

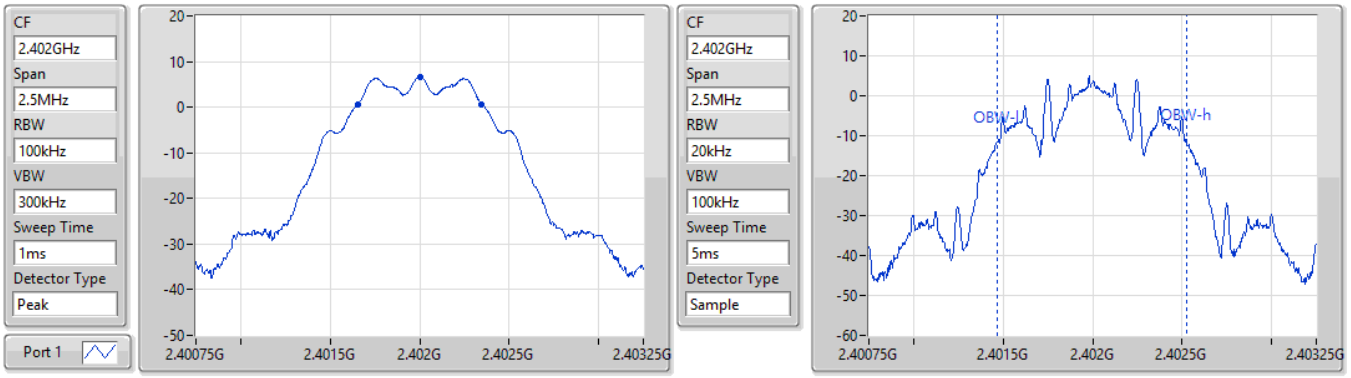
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	500k	695.652k	1.056M
2440MHz	Pass	500k	626.812k	1.06M
2478MHz	Pass	500k	615.942k	1.056M
2480MHz	Pass	500k	688.406k	1.06M
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	500k	673.913k	1.02M
2440MHz	Pass	500k	655.797k	1.024M
2478MHz	Pass	500k	655.797k	1.02M
2480MHz	Pass	500k	652.174k	1.02M
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	500k	670.29k	1.02M
2440MHz	Pass	500k	644.928k	1.02M
2478MHz	Pass	500k	652.174k	1.024M
2480MHz	Pass	500k	652.174k	1.024M
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.072M	2.077M
2440MHz	Pass	500k	1.109M	2.084M
2478MHz	Pass	500k	1.196M	2.091M

Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(125kbps) **EBW-DTS**

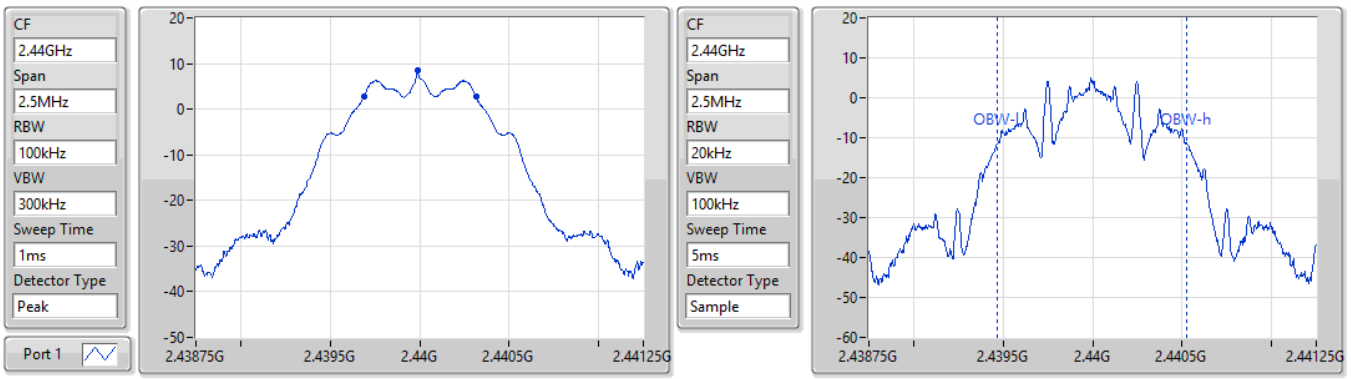
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
695.652k	2.401652G	2.402348G	1.056M	2.401468G	2.402525G	500k	1

BT-LE(125kbps) **EBW-DTS**

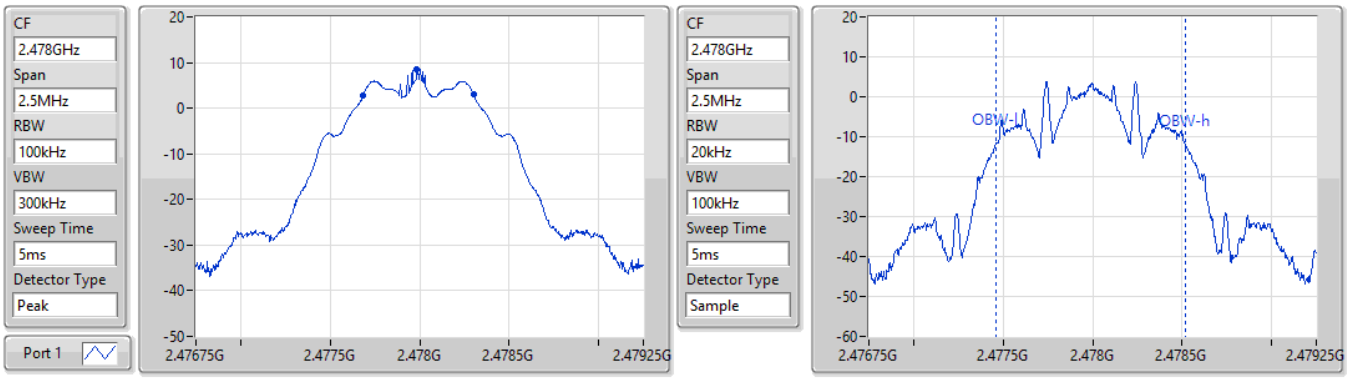
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
626.812k	2.439688G	2.440315G	1.06M	2.439468G	2.440528G	500k	1

BT-LE(125kbps) **EBW-DTS**

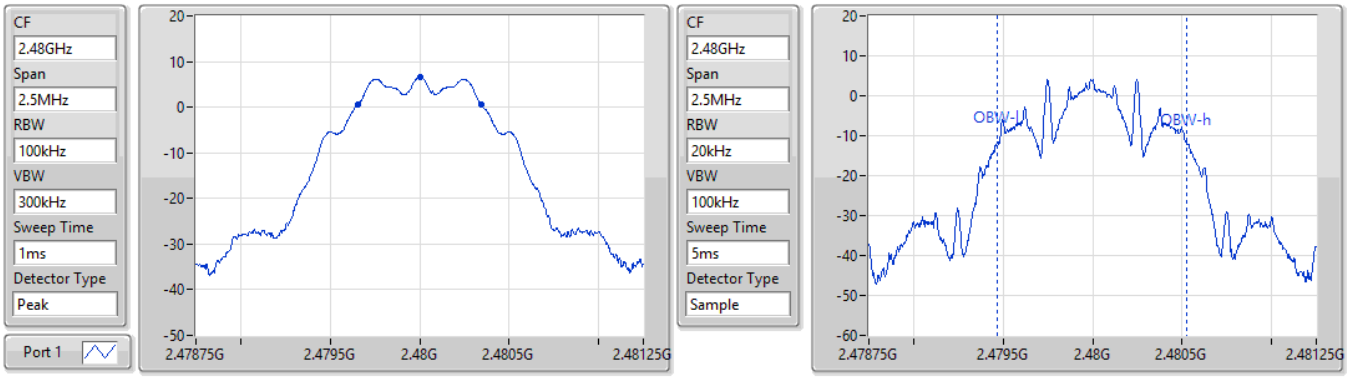
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
615.942k	2.477685G	2.478301G	1.056M	2.477461G	2.478517G	500k	1

BT-LE(125kbps) **EBW-DTS**

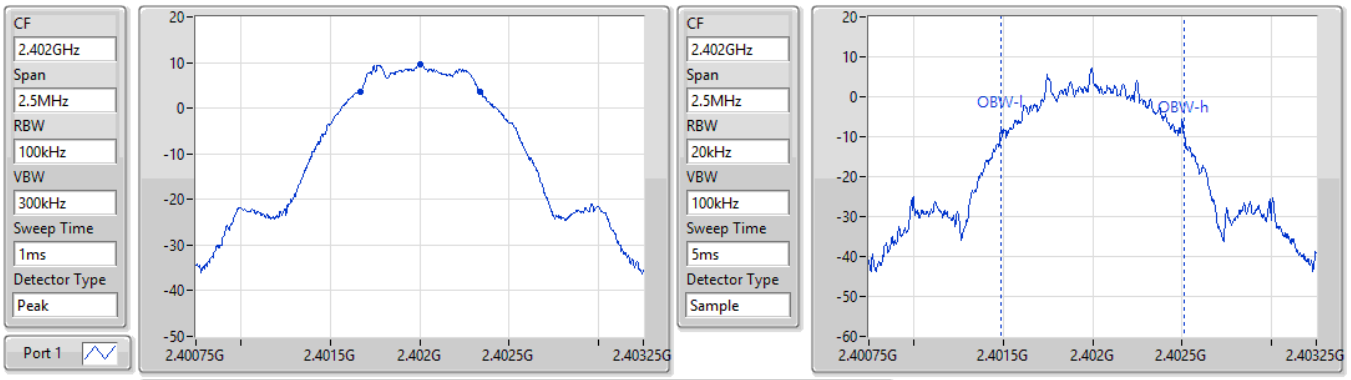
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
688.406k	2.479656G	2.480344G	1.06M	2.479468G	2.480528G	500k	1

BT-LE(500kbps) **EBW-DTS**

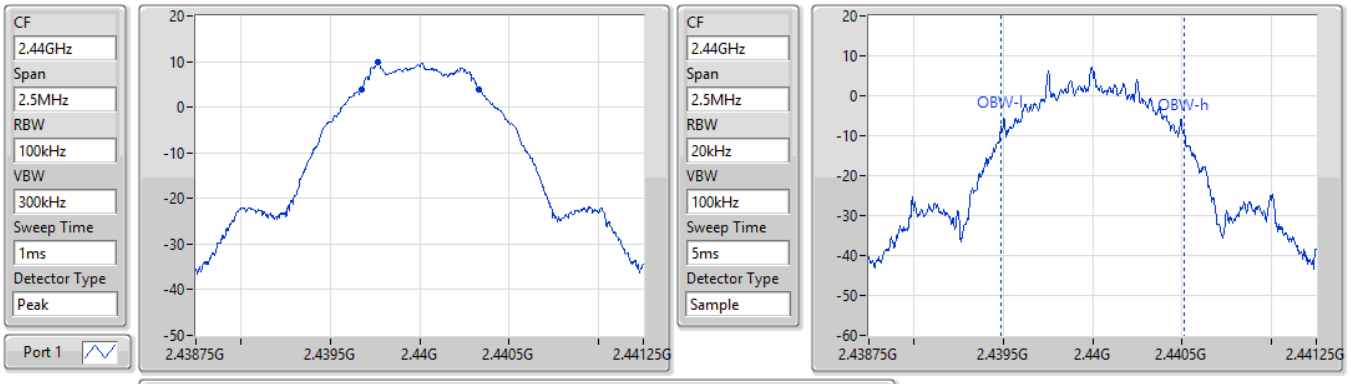
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
673.913k	2.401667G	2.402341G	1.02M	2.40149G	2.40251G	500k	1

BT-LE(500kbps) **EBW-DTS**

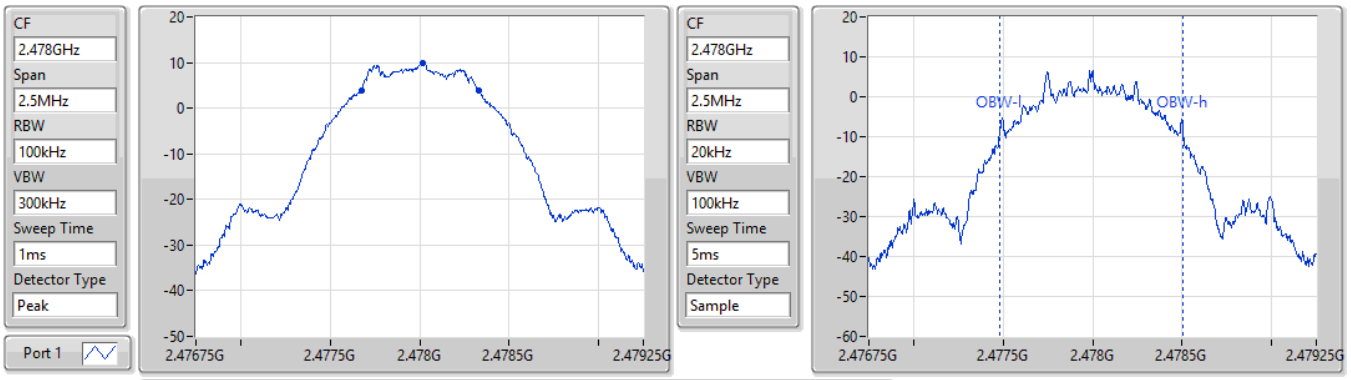
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
655.797k	2.439678G	2.440333G	1.024M	2.439486G	2.44051G	500k	1

BT-LE(500kbps) **EBW-DTS**

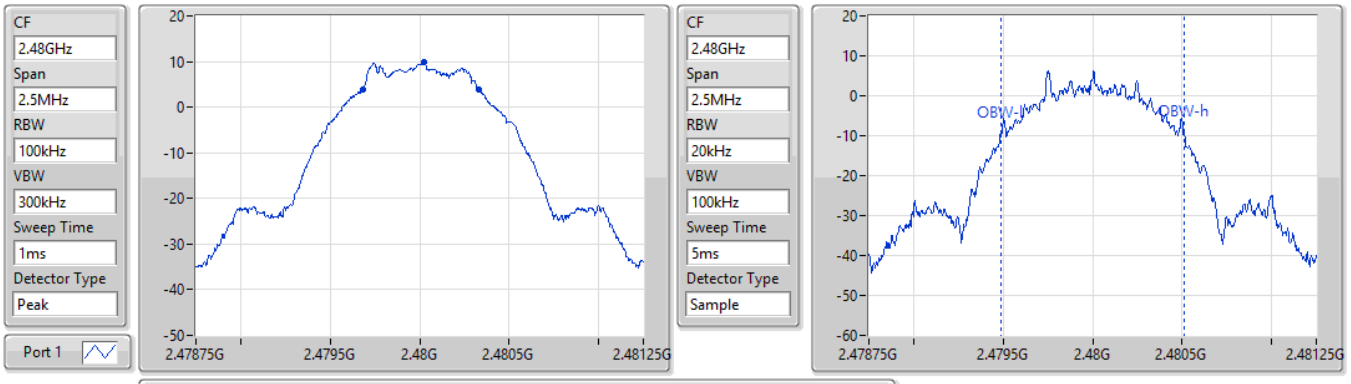
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
655.797k	2.477674G	2.47833G	1.02M	2.477483G	2.478503G	500k	1

BT-LE(500kbps) **EBW-DTS**

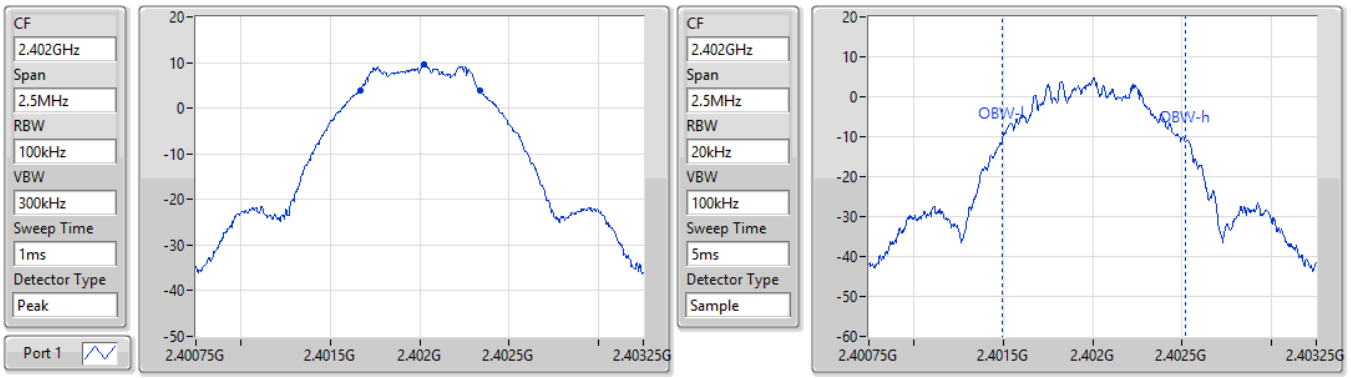
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
652.174k	2.479681G	2.480333G	1.02M	2.47949G	2.48051G	500k	1

BT-LE(1Mbps) **EBW-DTS**

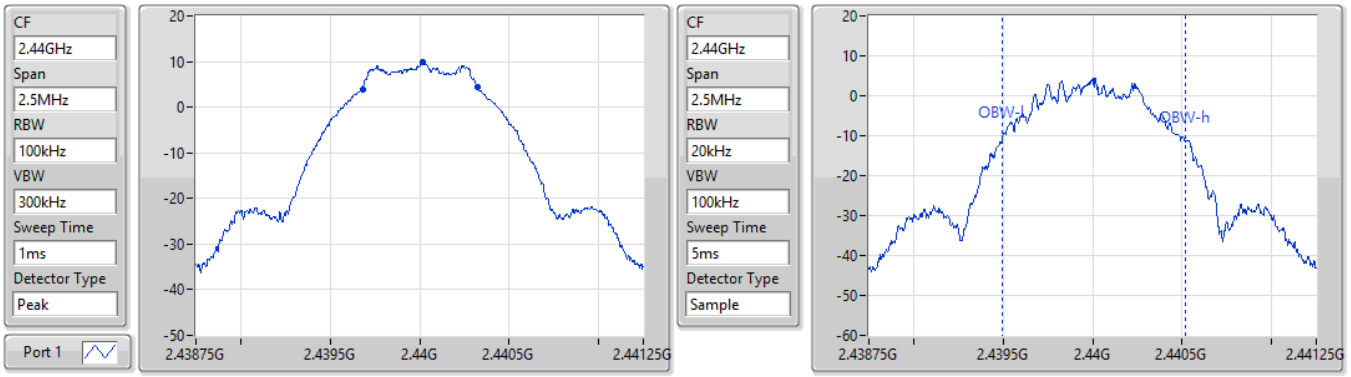
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
670.29k	2.401667G	2.402337G	1.02M	2.401497G	2.402517G	500k	1

BT-LE(1Mbps) **EBW-DTS**

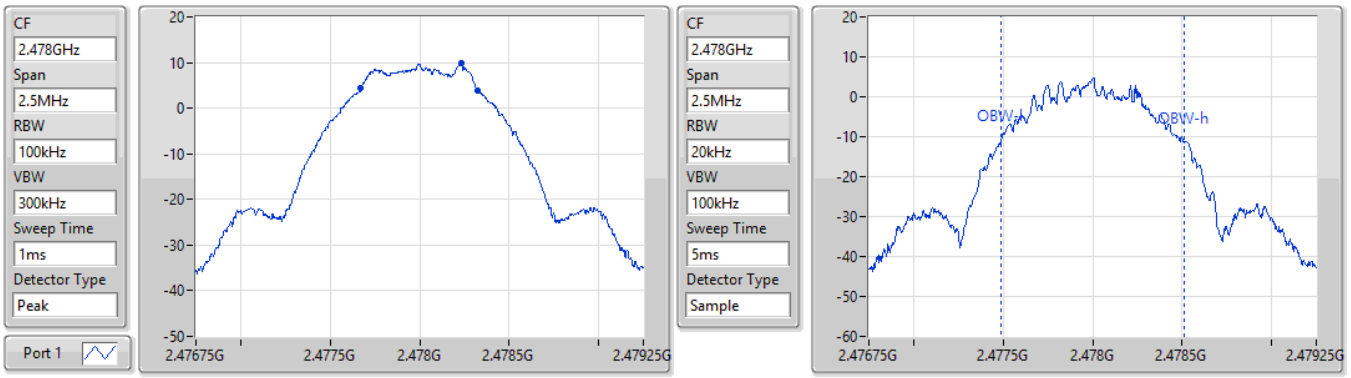
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
644.928k	2.439681G	2.440326G	1.02M	2.439497G	2.440517G	500k	1

BT-LE(1Mbps) **EBW-DTS**

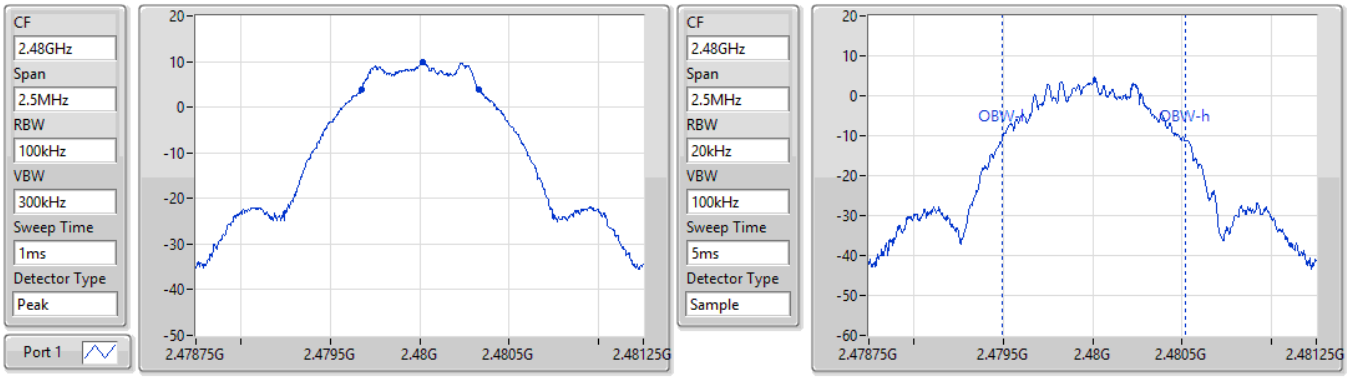
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
652.174k	2.47767G	2.478322G	1.024M	2.47749G	2.478514G	500k	1

BT-LE(1Mbps) **EBW-DTS**

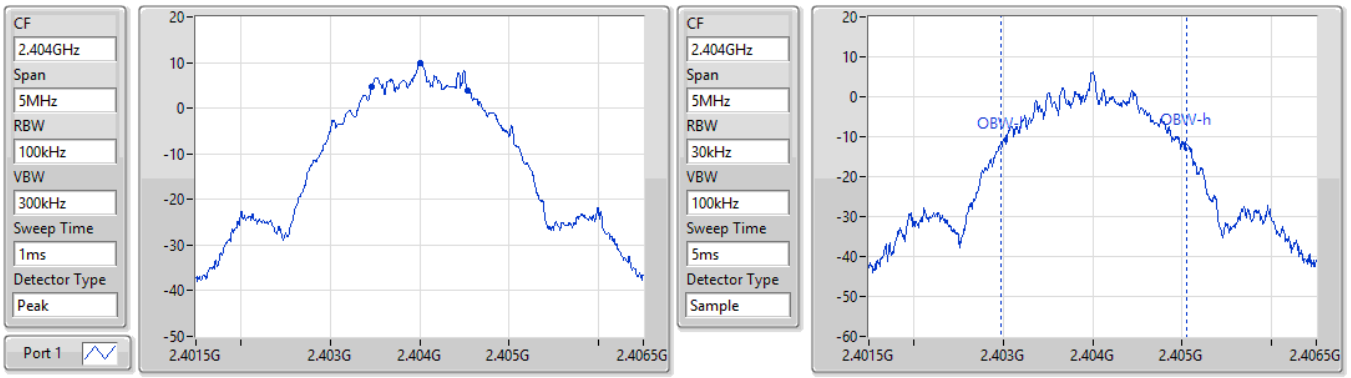
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
652.174k	2.479678G	2.48033G	1.024M	2.479493G	2.480517G	500k	1

BT-LE(2Mbps) **EBW-DTS**

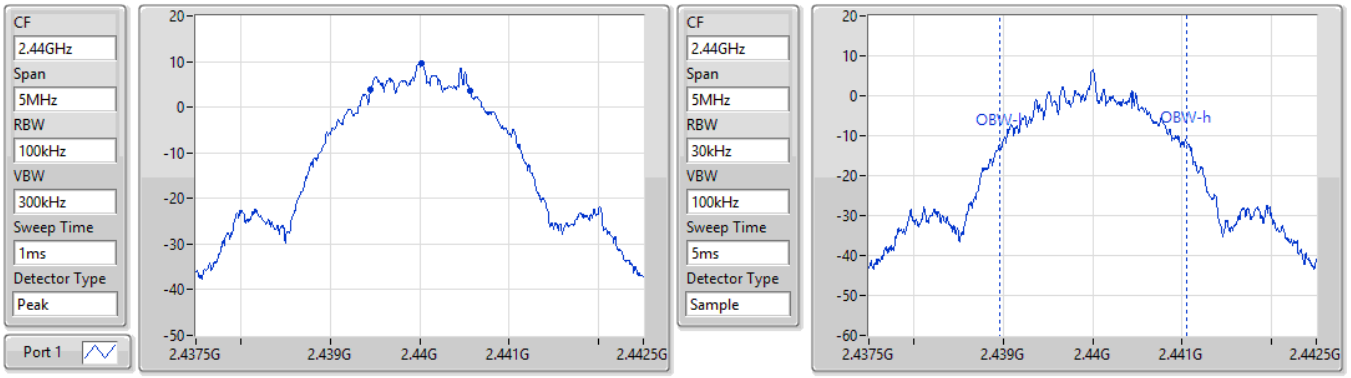
2404MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.072M	2.403464G	2.404536G	2.077M	2.402973G	2.405049G	500k	1

BT-LE(2Mbps) **EBW-DTS**

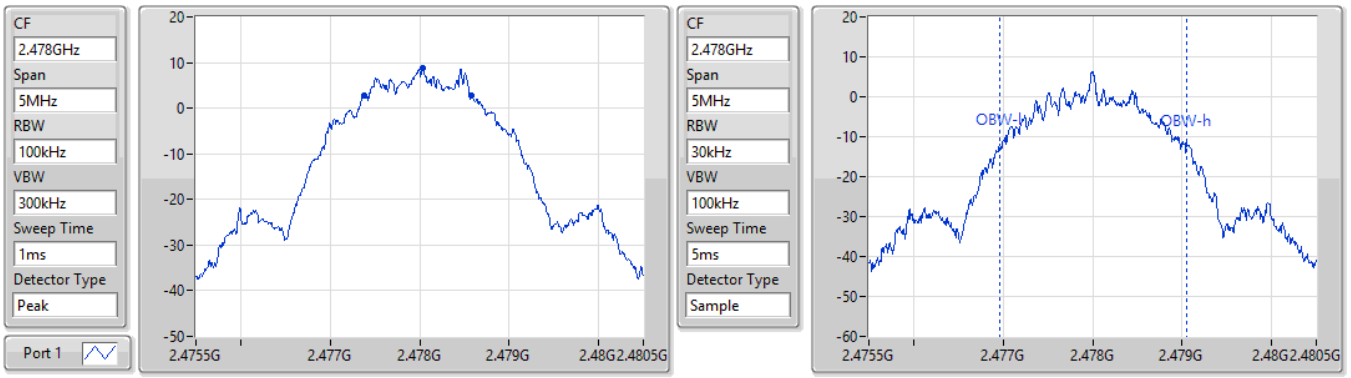
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.109M	2.439457G	2.440565G	2.084M	2.438965G	2.441049G	500k	1

BT-LE(2Mbps) **EBW-DTS**

2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.196M	2.477384G	2.47858G	2.091M	2.476965G	2.479056G	500k	1

2) Configuration 2: 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)	699.275k	1.056M	1M06F1D	626.812k	1.049M
BT-LE(Coding rate 500kbps)	673.913k	1.02M	1M02F1D	659.42k	1.013M
BT-LE(Symbol rate 1Mbps)	659.42k	1.024M	1M02F1D	655.797k	1.02M
BT-LE(Symbol rate 2Mbps)	1.094M	2.084M	2M08F1D	1.087M	2.069M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

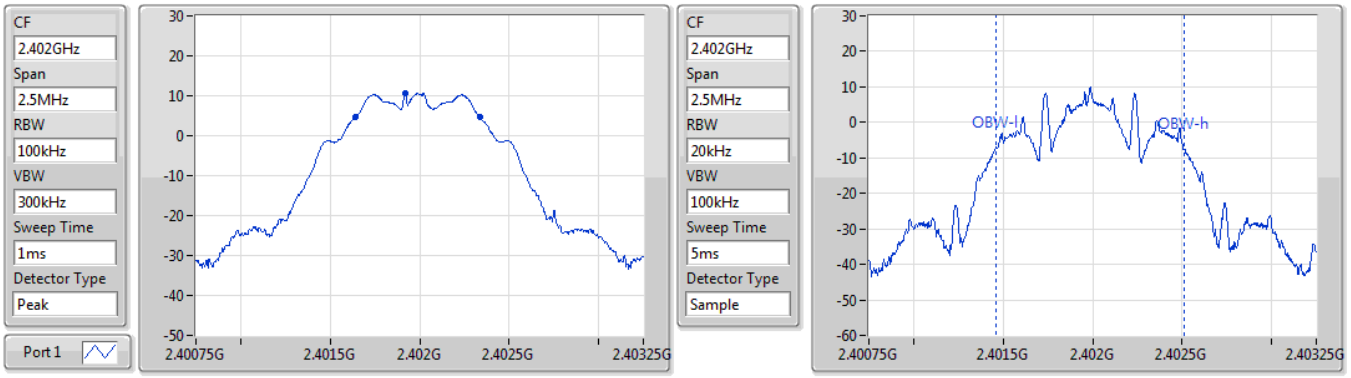
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	500k	695.652k	1.053M
2440MHz	Pass	500k	699.275k	1.049M
2478MHz	Pass	500k	652.174k	1.056M
2480MHz	Pass	500k	626.812k	1.053M
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	500k	673.913k	1.02M
2440MHz	Pass	500k	659.42k	1.02M
2478MHz	Pass	500k	670.29k	1.017M
2480MHz	Pass	500k	670.29k	1.013M
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	500k	655.797k	1.024M
2440MHz	Pass	500k	659.42k	1.024M
2478MHz	Pass	500k	659.42k	1.02M
2480MHz	Pass	500k	659.42k	1.02M
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.087M	2.069M
2440MHz	Pass	500k	1.087M	2.084M
2478MHz	Pass	500k	1.094M	2.084M

Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(125kbps) **EBW-DTS**

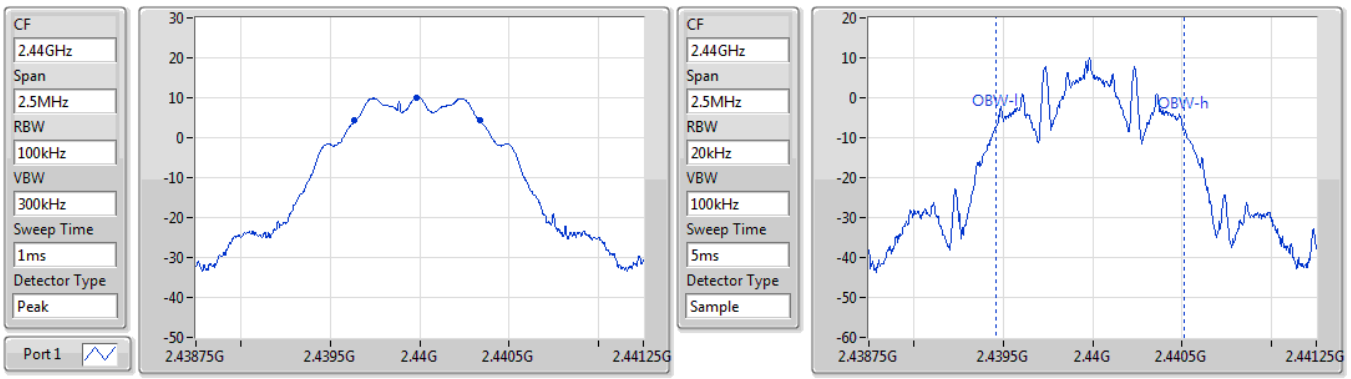
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
695.652k	2.401641G	2.402337G	1.053M	2.401461G	2.402514G	500k	1

BT-LE(125kbps) **EBW-DTS**

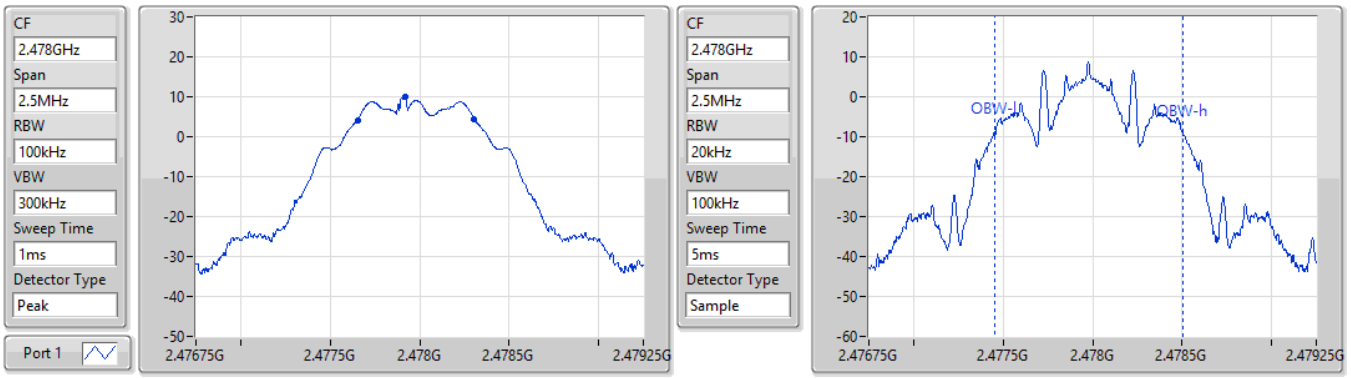
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
699.275k	2.439638G	2.440337G	1.049M	2.439461G	2.44051G	500k	1

BT-LE(125kbps) **EBW-DTS**

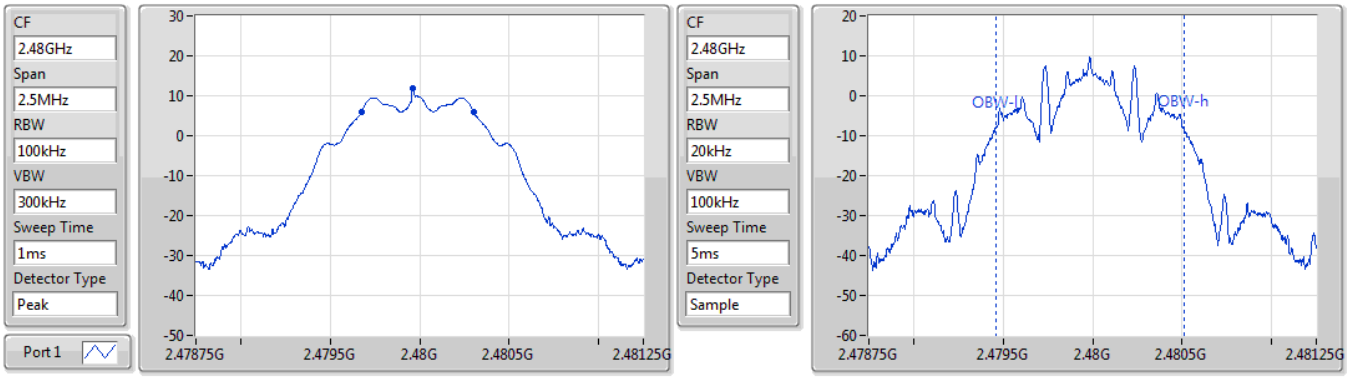
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
652.174k	2.477652G	2.478304G	1.056M	2.47745G	2.478507G	500k	1

BT-LE(125kbps) **EBW-DTS**

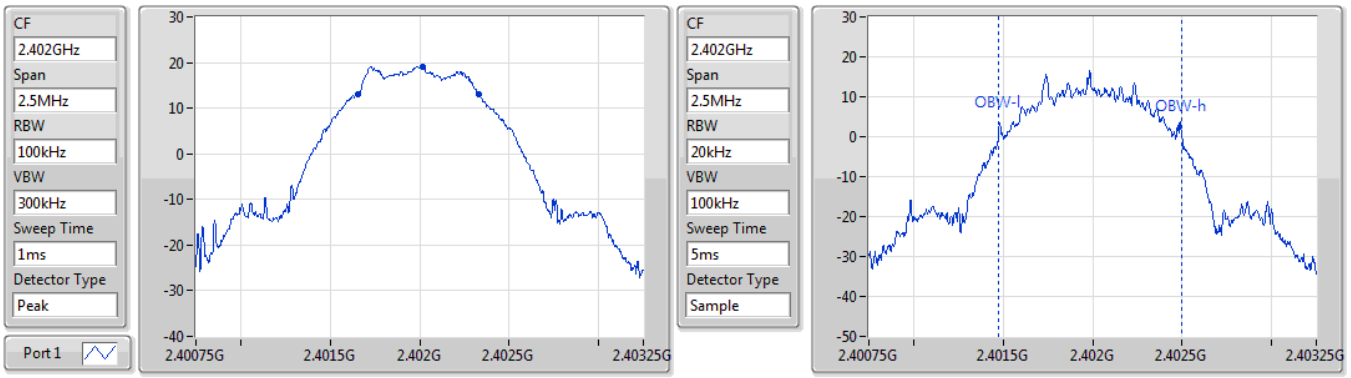
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
626.812k	2.479674G	2.480301G	1.053M	2.479457G	2.48051G	500k	1

BT-LE(500kbps) **EBW-DTS**

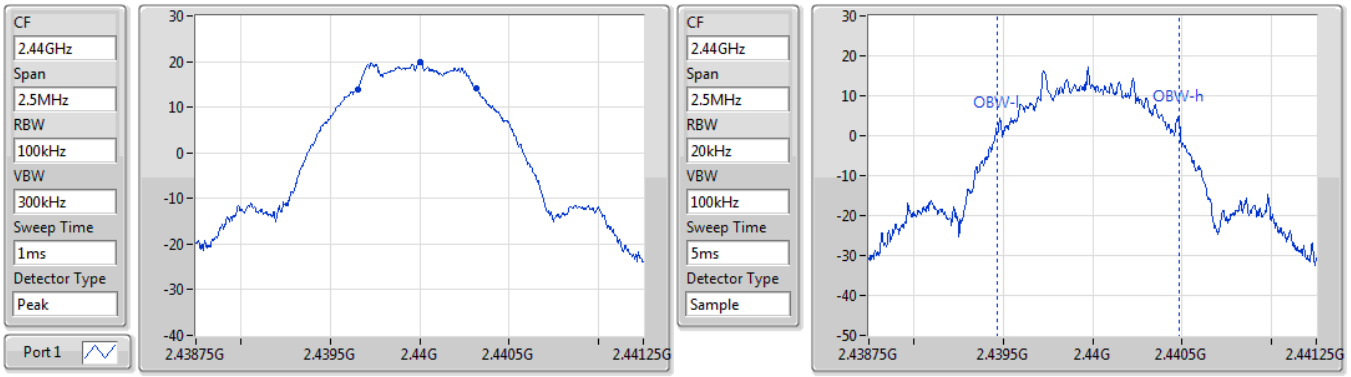
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
673.913k	2.401656G	2.40233G	1.02M	2.401475G	2.402496G	500k	1

BT-LE(500kbps) **EBW-DTS**

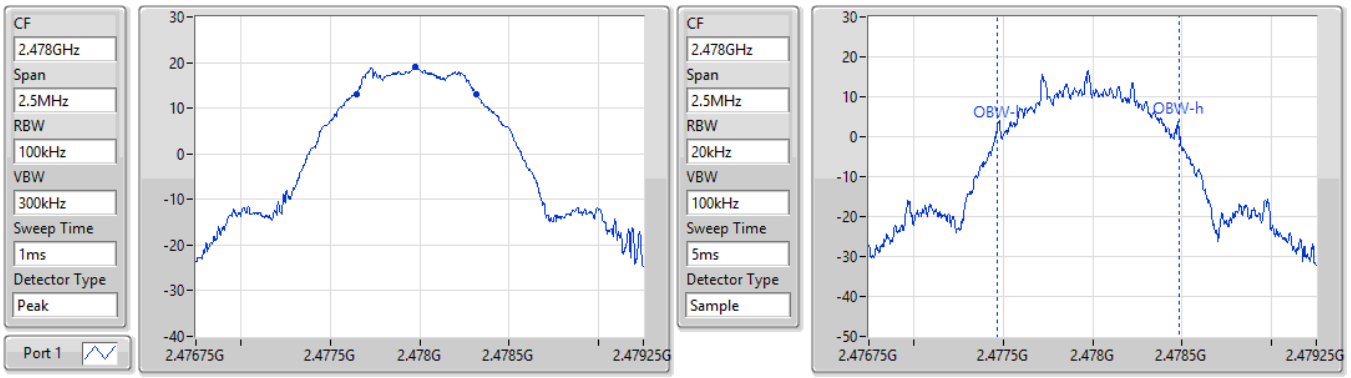
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
659.42k	2.439656G	2.440315G	1.02M	2.439465G	2.440485G	500k	1

BT-LE(500kbps) **EBW-DTS**

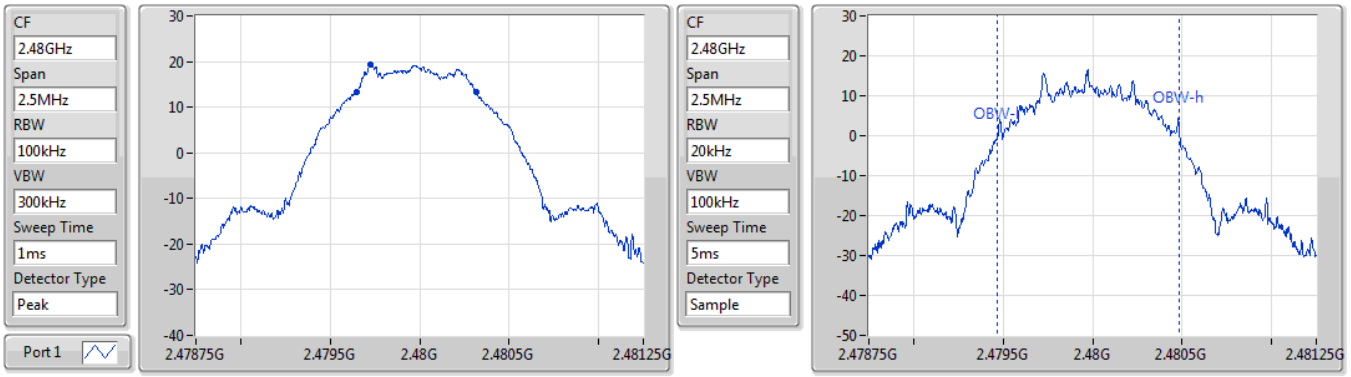
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
670.29k	2.477649G	2.478319G	1.017M	2.477465G	2.478481G	500k	1

BT-LE(500kbps) **EBW-DTS**

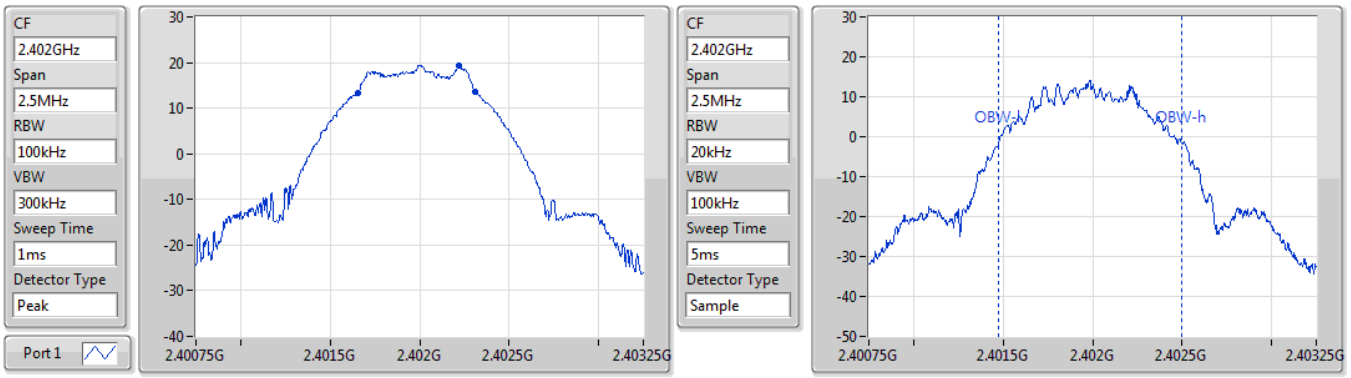
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
670.29k	2.479649G	2.480319G	1.013M	2.479468G	2.480481G	500k	1

BT-LE(1Mbps) **EBW-DTS**

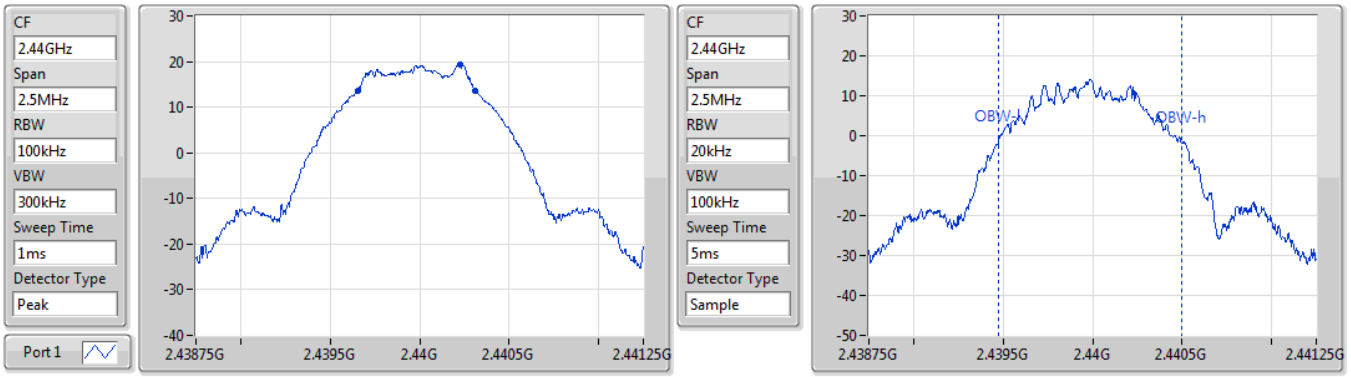
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
655.797k	2.401656G	2.402312G	1.024M	2.401475G	2.402499G	500k	1

BT-LE(1Mbps) **EBW-DTS**

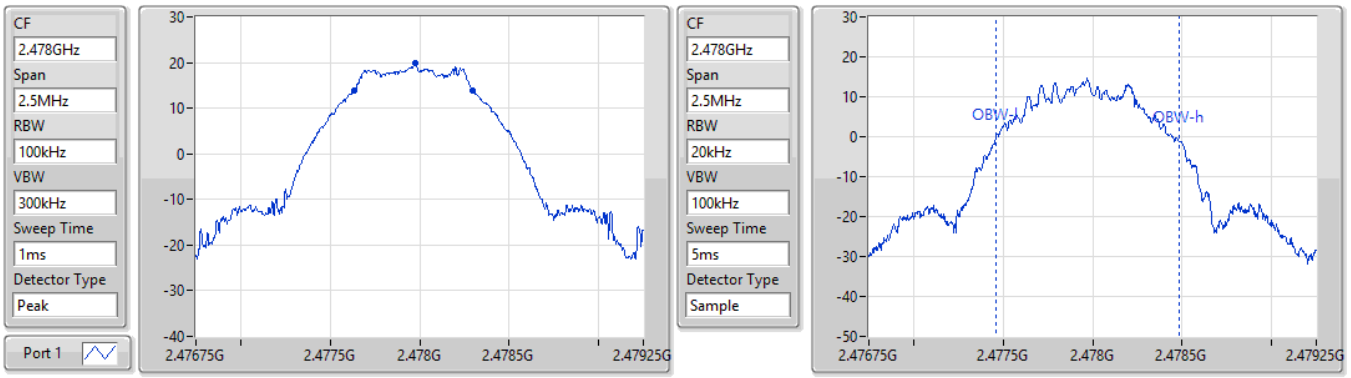
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
659.42k	2.439652G	2.440312G	1.024M	2.439475G	2.440499G	500k	1

BT-LE(1Mbps) **EBW-DTS**

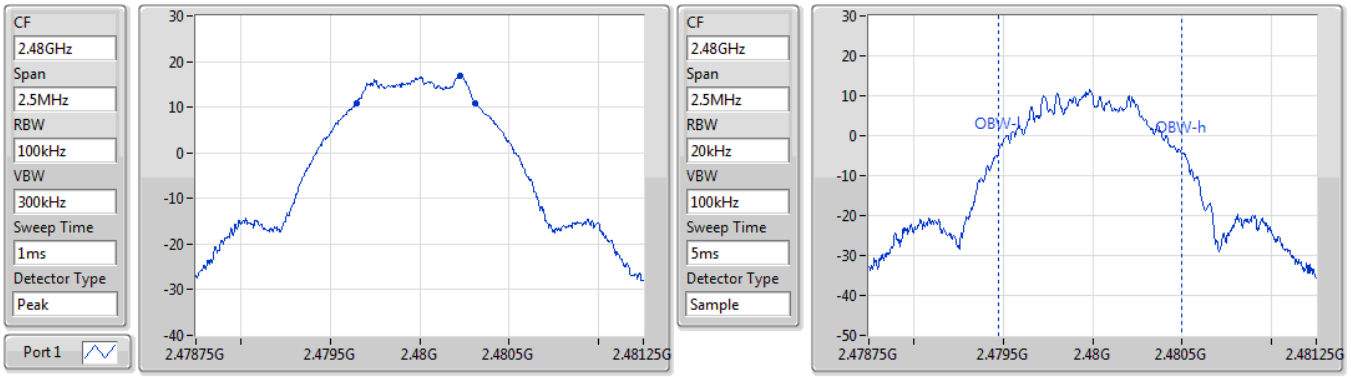
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
659.42k	2.477634G	2.478293G	1.02M	2.477461G	2.478481G	500k	1

BT-LE(1Mbps) **EBW-DTS**

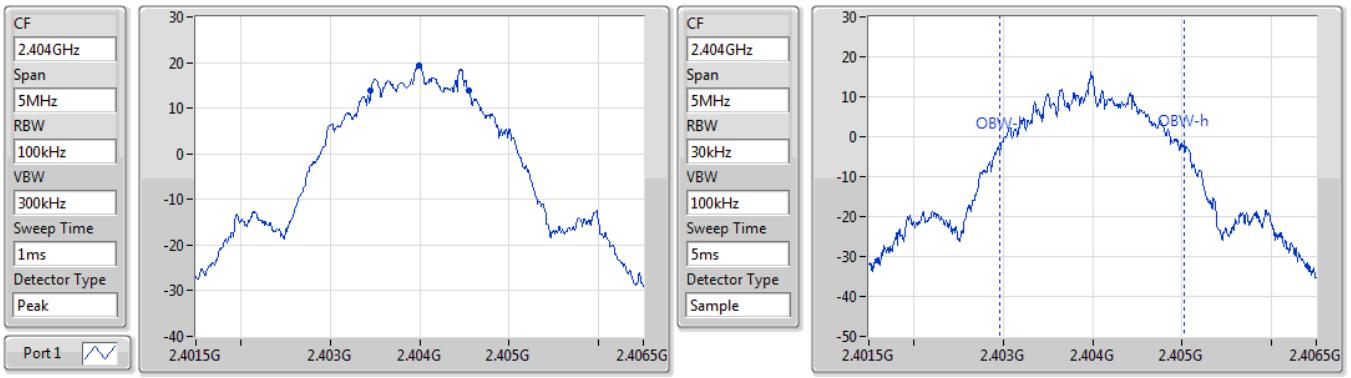
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
659.42k	2.479649G	2.480308G	1.02M	2.479475G	2.480496G	500k	1

BT-LE(2Mbps) **EBW-DTS**

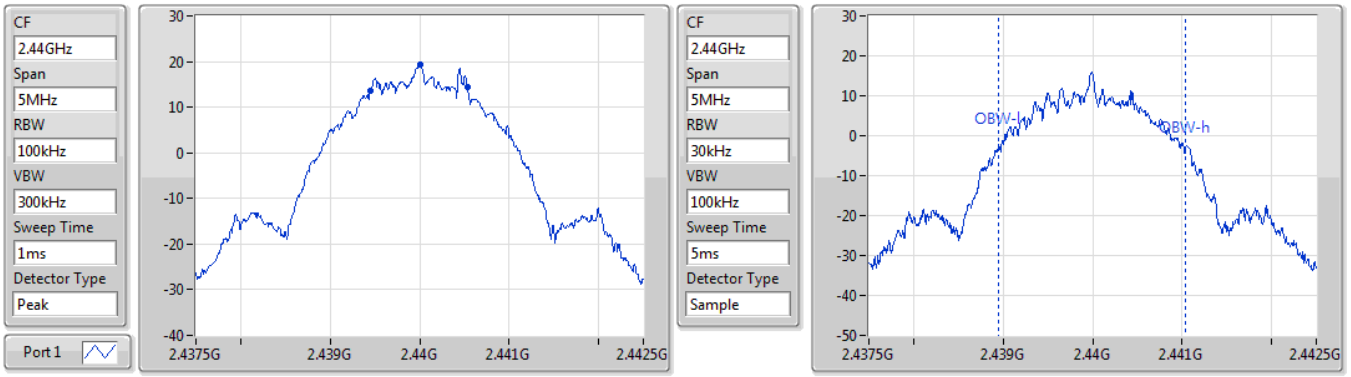
2404MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.087M	2.403457G	2.404543G	2.069M	2.402958G	2.405027G	500k	1

BT-LE(2Mbps) **EBW-DTS**

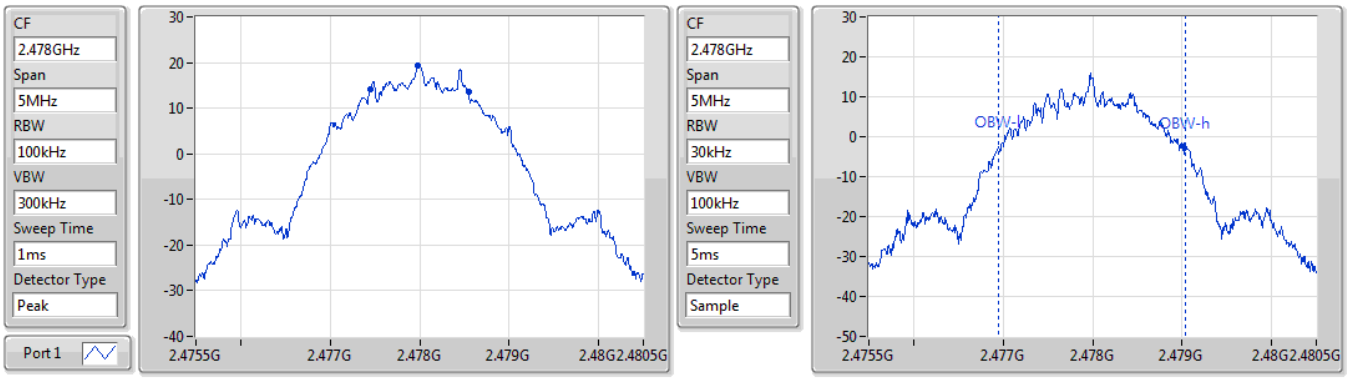
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.087M	2.439449G	2.440536G	2.084M	2.438951G	2.441035G	500k	1

BT-LE(2Mbps) **EBW-DTS**

2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.094M	2.477449G	2.478543G	2.084M	2.476951G	2.479035G	500k	1

3) Configuration 3: 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)	630.435k	1.067M	1M07F1D	597.826k	1.056M
BT-LE(Coding rate 500kbps)	659.42k	1.024M	1M02F1D	652.174k	1.017M
BT-LE(Symbol rate 1Mbps)	666.667k	1.027M	1M03F1D	641.304k	1.024M
BT-LE(Symbol rate 2Mbps)	1.116M	2.084M	2M08F1D	1.094M	2.069M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

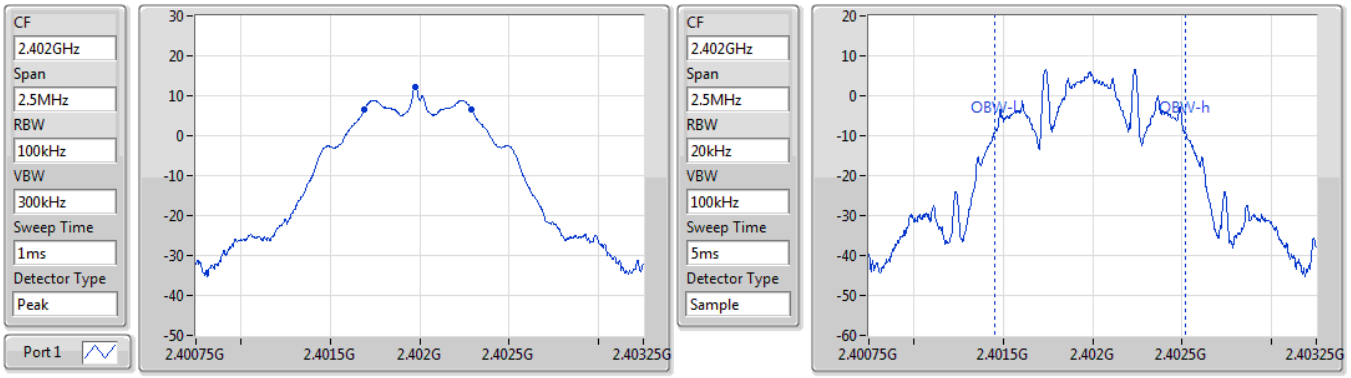
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	500k	601.449k	1.067M
2440MHz	Pass	500k	597.826k	1.056M
2478MHz	Pass	500k	601.449k	1.056M
2480MHz	Pass	500k	630.435k	1.06M
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	500k	659.42k	1.024M
2440MHz	Pass	500k	652.174k	1.02M
2478MHz	Pass	500k	655.797k	1.02M
2480MHz	Pass	500k	655.797k	1.017M
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	500k	666.667k	1.024M
2440MHz	Pass	500k	641.304k	1.024M
2478MHz	Pass	500k	659.42k	1.024M
2480MHz	Pass	500k	666.667k	1.027M
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.101M	2.069M
2440MHz	Pass	500k	1.094M	2.069M
2478MHz	Pass	500k	1.116M	2.084M

Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(125kbps) **EBW-DTS**

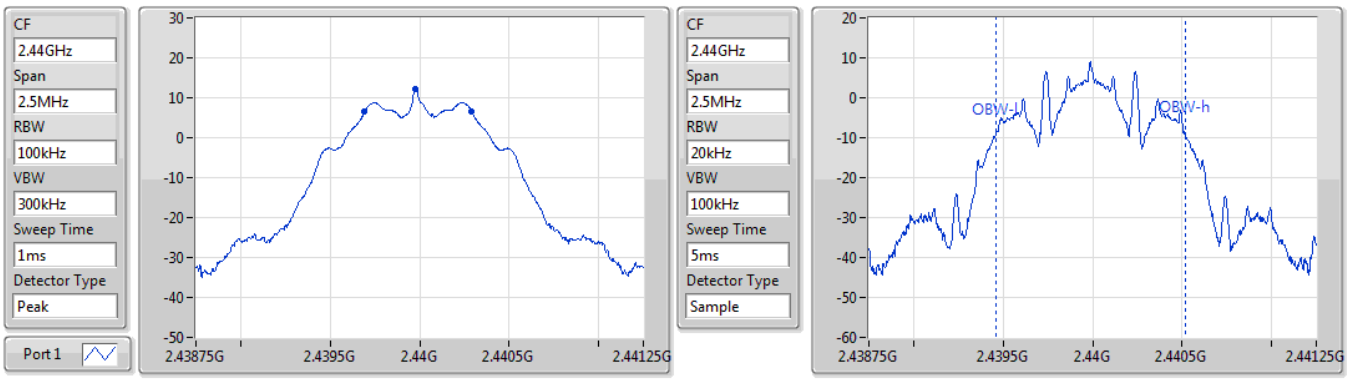
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
601.449k	2.401688G	2.40229G	1.067M	2.401454G	2.402521G	500k	1

BT-LE(125kbps) **EBW-DTS**

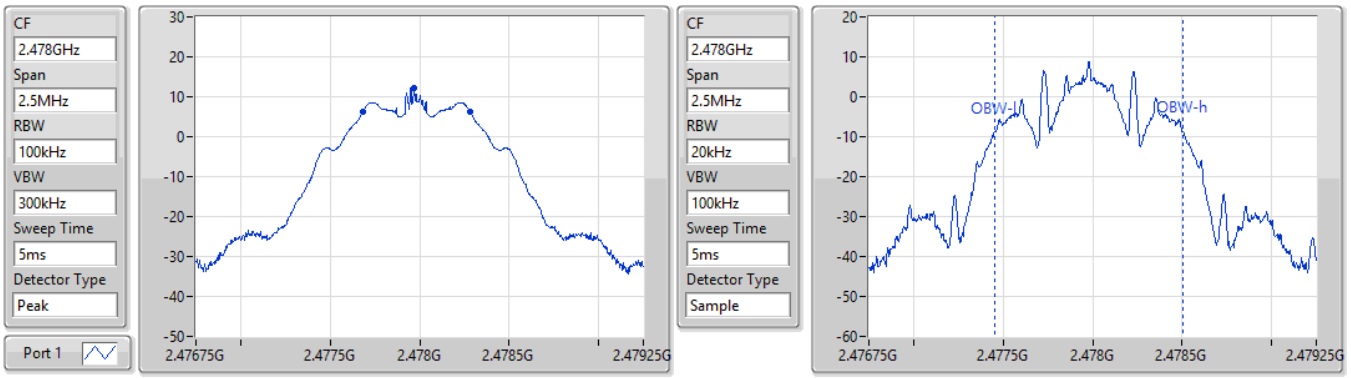
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
597.826k	2.439692G	2.44029G	1.056M	2.439461G	2.440517G	500k	1

BT-LE(125kbps) **EBW-DTS**

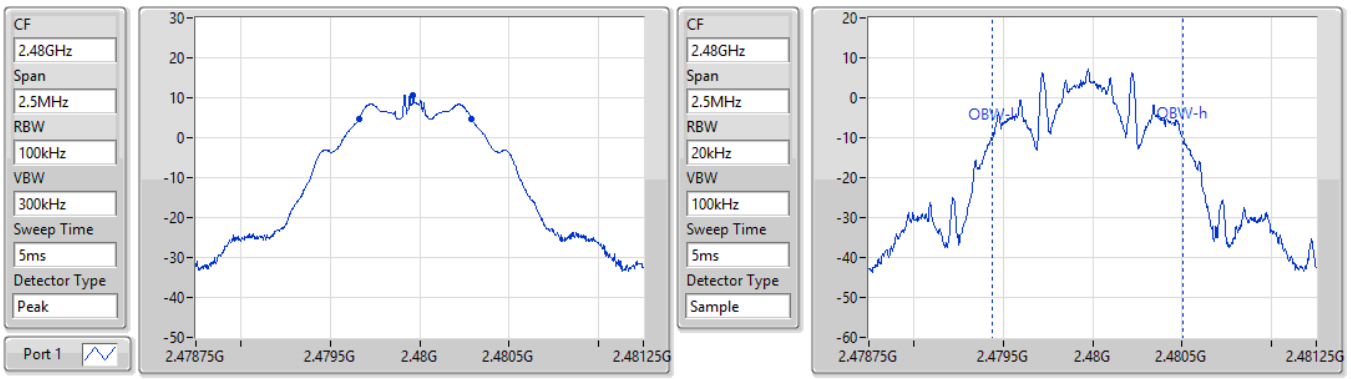
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
601.449k	2.477681G	2.478283G	1.056M	2.47745G	2.478507G	500k	1

BT-LE(125kbps) **EBW-DTS**

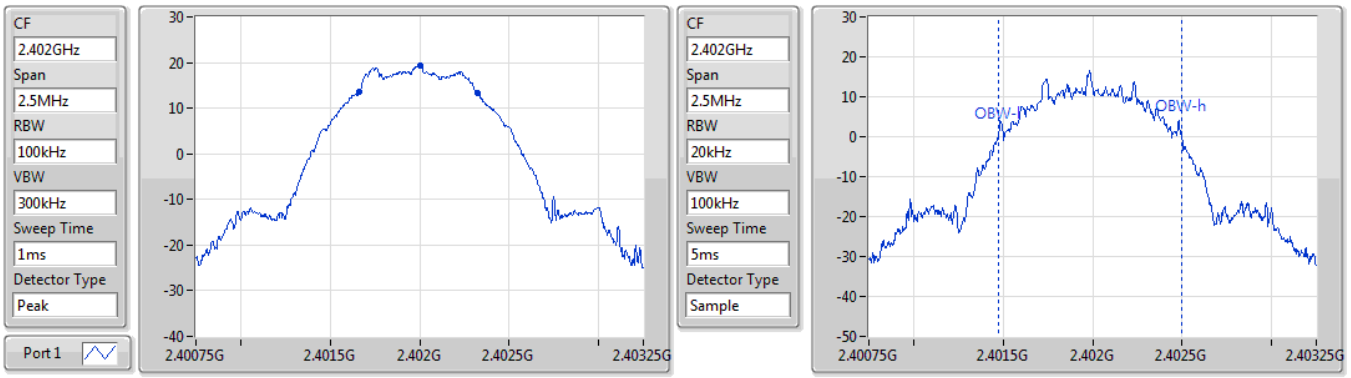
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
630.435k	2.479659G	2.48029G	1.06M	2.479443G	2.480503G	500k	1

BT-LE(500kbps) **EBW-DTS**

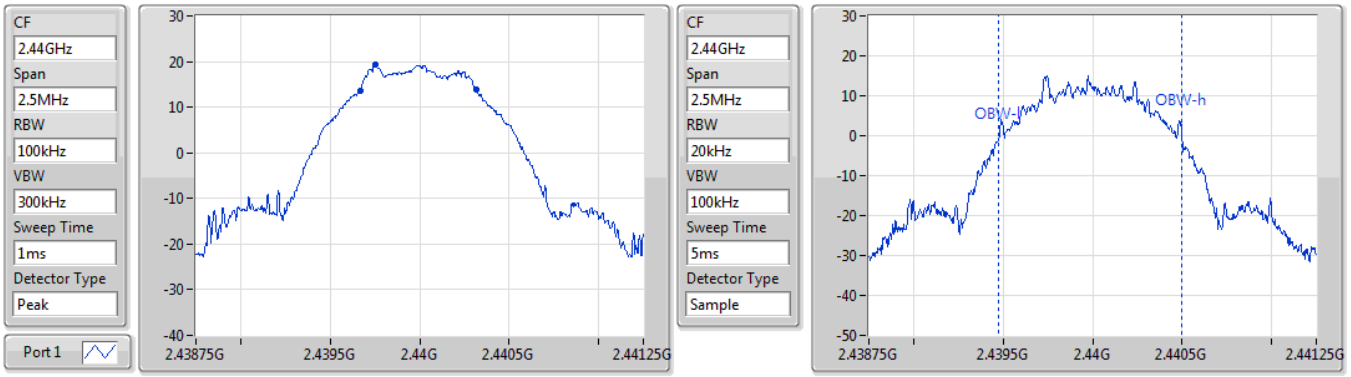
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
659.42k	2.401663G	2.402322G	1.024M	2.401472G	2.402496G	500k	1

BT-LE(500kbps) **EBW-DTS**

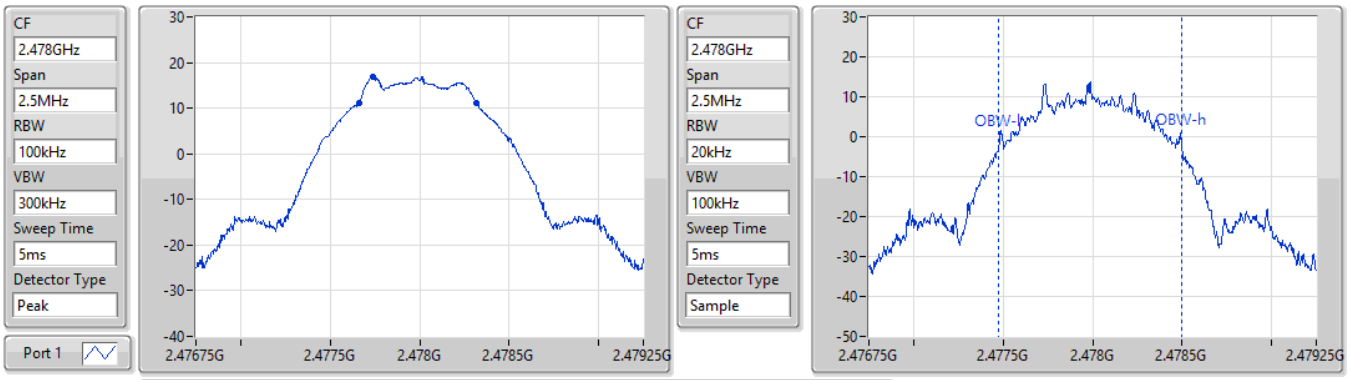
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
652.174k	2.439667G	2.440319G	1.02M	2.439475G	2.440496G	500k	1

BT-LE(500kbps) **EBW-DTS**

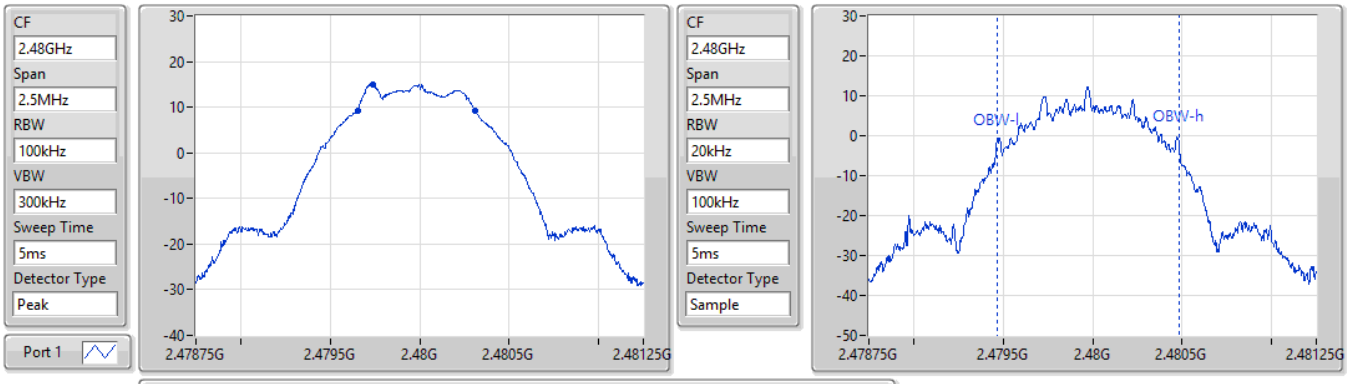
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
655.797k	2.477663G	2.478319G	1.02M	2.477475G	2.478496G	500k	1

BT-LE(500kbps) **EBW-DTS**

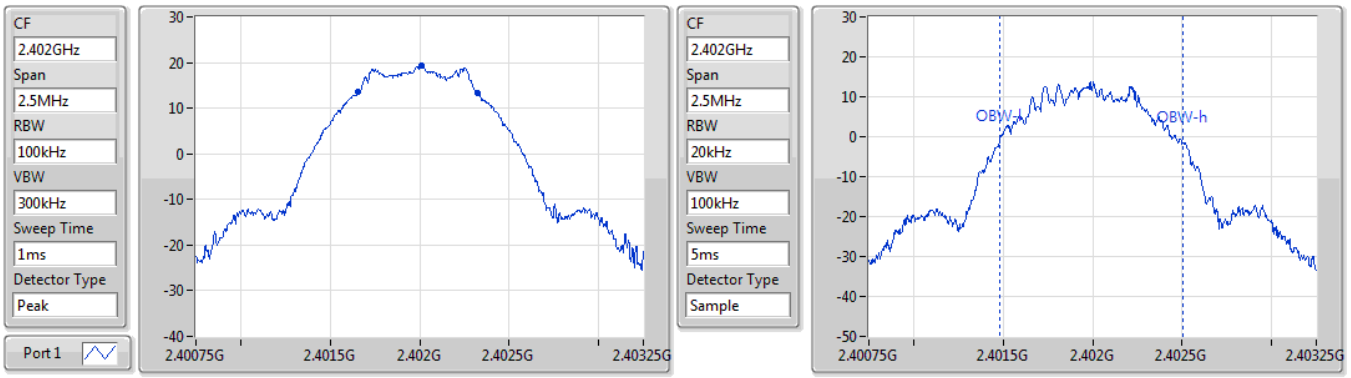
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
655.797k	2.479652G	2.480308G	1.017M	2.479465G	2.480481G	500k	1

BT-LE(1Mbps) **EBW-DTS**

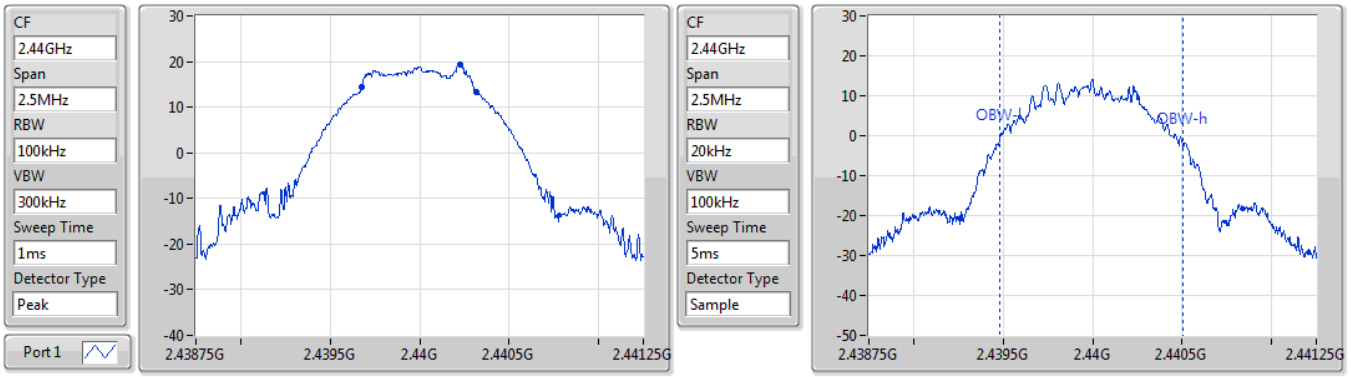
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
666.667k	2.401656G	2.402322G	1.024M	2.401479G	2.402503G	500k	1

BT-LE(1Mbps) **EBW-DTS**

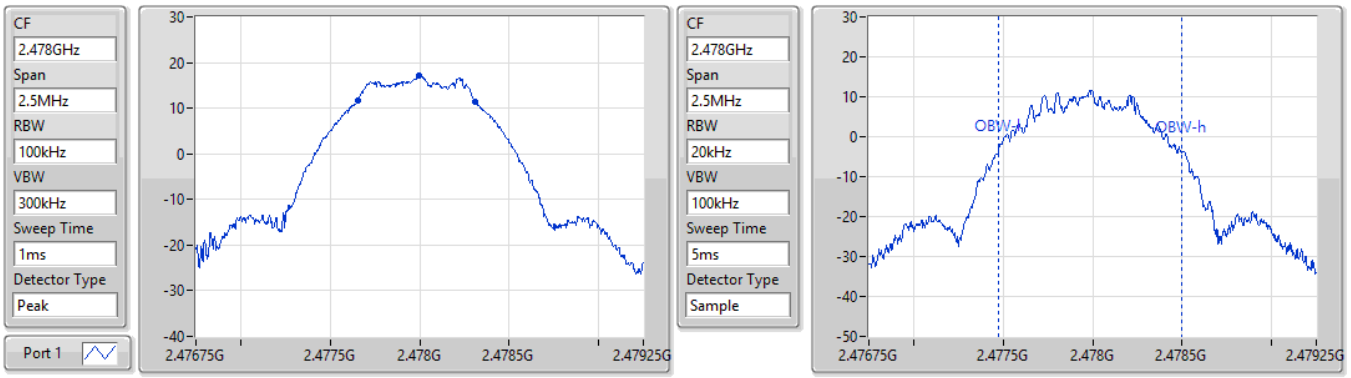
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
641.304k	2.439674G	2.440315G	1.024M	2.439479G	2.440503G	500k	1

BT-LE(1Mbps) **EBW-DTS**

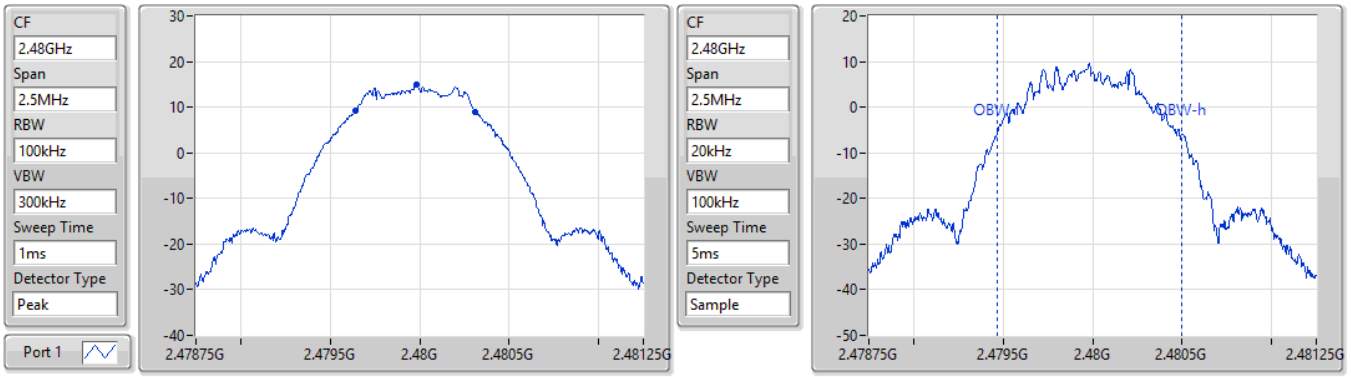
2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
659.42k	2.477652G	2.478312G	1.024M	2.477475G	2.478499G	500k	1

BT-LE(1Mbps) **EBW-DTS**

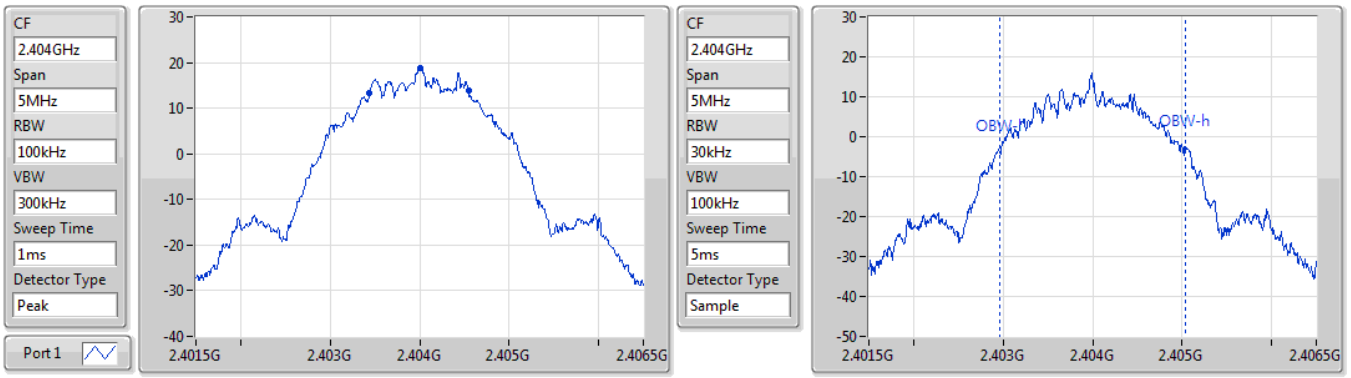
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
666.667k	2.479641G	2.480308G	1.027M	2.479468G	2.480496G	500k	1

BT-LE(2Mbps) **EBW-DTS**

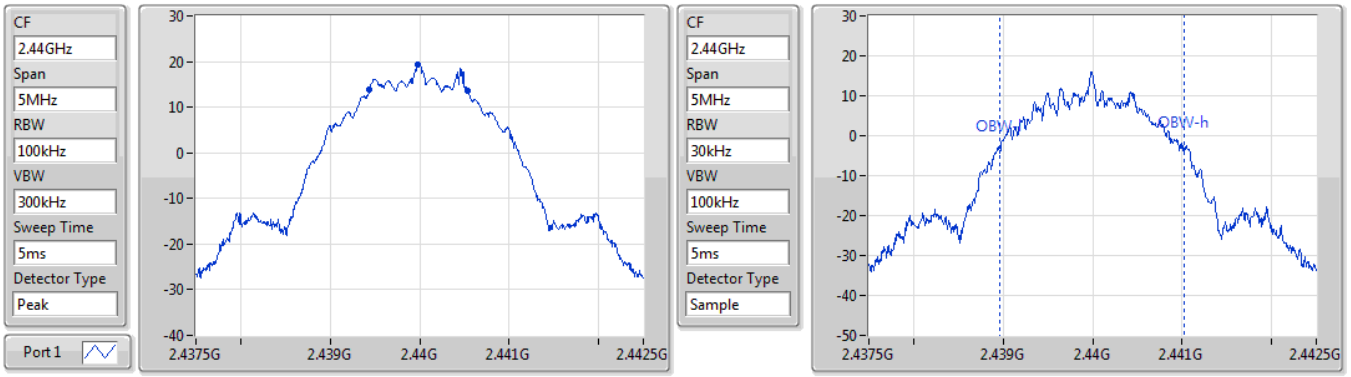
2404MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.101M	2.403442G	2.404543G	2.069M	2.402965G	2.405035G	500k	1

BT-LE(2Mbps) **EBW-DTS**

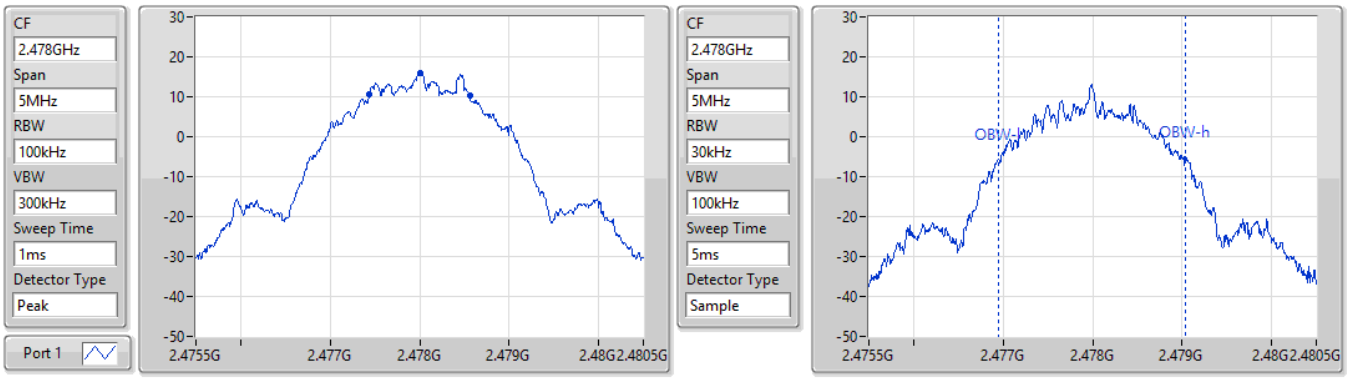
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.094M	2.439442G	2.440536G	2.069M	2.438958G	2.441027G	500k	1

BT-LE(2Mbps) **EBW-DTS**

2478MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.116M	2.477442G	2.478558G	2.084M	2.476951G	2.479035G	500k	1

1) Configuration 1: Laird part number: 453-00142, 10dBm, Integrated Antenna

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	9.89	0.00975
BT-LE(Coding rate 500kbps)	9.89	0.00975
BT-LE(Symbol rate 1Mbps)	**9.91**	**0.00979**
BT-LE(Symbol rate 2Mbps)	9.90	0.00977

Result

Mode	Result	Antenna Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	1.82	9.89	30.00
2440MHz	Pass	1.82	9.80	30.00
2478MHz	Pass	1.82	9.75	30.00
2480MHz	Pass	1.82	9.73	30.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	1.82	9.89	30.00
2440MHz	Pass	1.82	9.79	30.00
2478MHz	Pass	1.82	9.76	30.00
2480MHz	Pass	1.82	9.72	30.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	**Pass**	**1.82**	**9.91**	**30.00**
2440MHz	Pass	1.82	9.81	30.00
2478MHz	Pass	1.82	9.77	30.00
2480MHz	Pass	1.82	9.74	30.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	1.82	9.90	30.00
2440MHz	Pass	1.82	9.81	30.00
2478MHz	Pass	1.82	9.74	30.00

2) Configuration 2: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	13.16	0.02070
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)	Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	1.82	13.16	30.00
2440MHz	Pass	1.82	12.91	30.00
2478MHz	Pass	1.82	12.90	30.00
2480MHz	Pass	1.82	12.89	30.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	1.82	19.54	30.00
2440MHz	Pass	1.82	19.39	30.00
2478MHz	Pass	1.82	19.27	30.00
2480MHz	Pass	1.82	19.15	30.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	**Pass**	**1.82**	**19.56**	**30.00**
2440MHz	Pass	1.82	19.42	30.00
2478MHz	Pass	1.82	19.30	30.00
2480MHz	Pass	1.82	17.05	30.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	1.82	19.55	30.00
2440MHz	Pass	1.82	19.40	30.00
2478MHz	Pass	1.82	19.39	30.00

3) Configuration 3: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	12.79	0.01901
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)	Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	2.00	12.79	30.00
2440MHz	Pass	2.00	12.65	30.00
2478MHz	Pass	2.00	12.58	30.00
2480MHz	Pass	2.00	12.55	30.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	2.00	19.86	30.00
2440MHz	Pass	2.00	19.83	30.00
2478MHz	Pass	2.00	18.01	30.00
2480MHz	Pass	2.00	15.45	30.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	**Pass**	**2.00**	**19.89**	**30.00**
2440MHz	Pass	2.00	19.87	30.00
2478MHz	Pass	2.00	18.03	30.00
2480MHz	Pass	2.00	15.47	30.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	2.00	19.88	30.00
2440MHz	Pass	2.00	19.86	30.00
2478MHz	Pass	2.00	17.15	30.00

4) Configuration 4: Laird part number: 453-00145, 10dBm, Integrated Antenna

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	9.81	0.00957
BT-LE(Coding rate 500kbps)	9.79	0.00953
BT-LE(Symbol rate 1Mbps)	9.83	0.00962
BT-LE(Symbol rate 2Mbps)	9.82	0.00959

Result

Mode	Result	Antenna Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	1.82	9.81	30.00
2440MHz	Pass	1.82	9.56	30.00
2478MHz	Pass	1.82	9.47	30.00
2480MHz	Pass	1.82	9.47	30.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	1.82	9.79	30.00
2440MHz	Pass	1.82	9.56	30.00
2478MHz	Pass	1.82	9.46	30.00
2480MHz	Pass	1.82	9.28	30.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	1.82	9.83	30.00
2440MHz	Pass	1.82	9.58	30.00
2478MHz	Pass	1.82	9.48	30.00
2480MHz	Pass	1.82	9.31	30.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	1.82	9.82	30.00
2440MHz	Pass	1.82	9.57	30.00
2478MHz	Pass	1.82	9.30	30.00

5) Configuration 5: Laird part number: 453-00148, 10dBm, RF Trace Pad (External antenna)

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(Coding rate125kbps)	10.32	0.01076
BT-LE(Coding rate 500kbps)	10.30	0.01072
BT-LE(Symbol rate 1Mbps)	10.29	0.01069
BT-LE(Symbol rate 2Mbps)	10.31	0.01074

Result

Mode	Result	Antenna Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	2.00	10.30	30.00
2440MHz	Pass	2.00	10.17	30.00
2478MHz	Pass	2.00	10.02	30.00
2480MHz	Pass	2.00	10.01	30.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	2.00	10.29	30.00
2440MHz	Pass	2.00	10.16	30.00
2478MHz	Pass	2.00	10.02	30.00
2480MHz	Pass	2.00	10.01	30.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	2.00	10.32	30.00
2440MHz	Pass	2.00	10.18	30.00
2478MHz	Pass	2.00	10.05	30.00
2480MHz	Pass	2.00	10.02	30.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	2.00	10.31	30.00
2440MHz	Pass	2.00	10.17	30.00
2478MHz	Pass	2.00	10.03	30.00

1) Configuration 1: Laird part number: 453-00142, 10dBm, Integrated Antenna

Summary

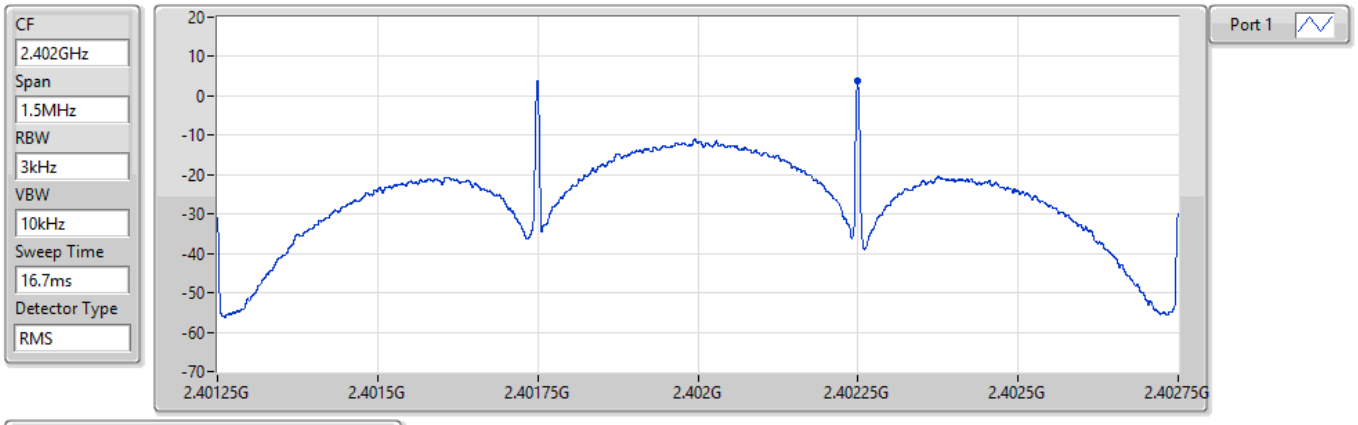
Mode	PD (dBm/3kHz)
2.4-2.4835GHz	-
BT-LE(Coding rate125kbps)	3.86
BT-LE(Coding rate 500kbps)	-7.12
BT-LE(Symbol rate 1Mbps)	-10.16
BT-LE(Symbol rate 2Mbps)	-8.24

Result

Mode	Result	Antenna Gain (dBi)	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	1.82	3.86	8.00
2440MHz	Pass	1.82	3.74	8.00
2478MHz	Pass	1.82	3.71	8.00
2480MHz	Pass	1.82	3.70	8.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	1.82	-7.16	8.00
2440MHz	Pass	1.82	-8.08	8.00
2478MHz	Pass	1.82	-7.12	8.00
2480MHz	Pass	1.82	-7.44	8.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	1.82	-10.55	8.00
2440MHz	Pass	1.82	-10.47	8.00
2478MHz	Pass	1.82	-10.16	8.00
2480MHz	Pass	1.82	-10.19	8.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	1.82	-8.24	8.00
2440MHz	Pass	1.82	-8.85	8.00
2478MHz	Pass	1.82	-9.32	8.00

BT-LE(125kbps) **PSD**

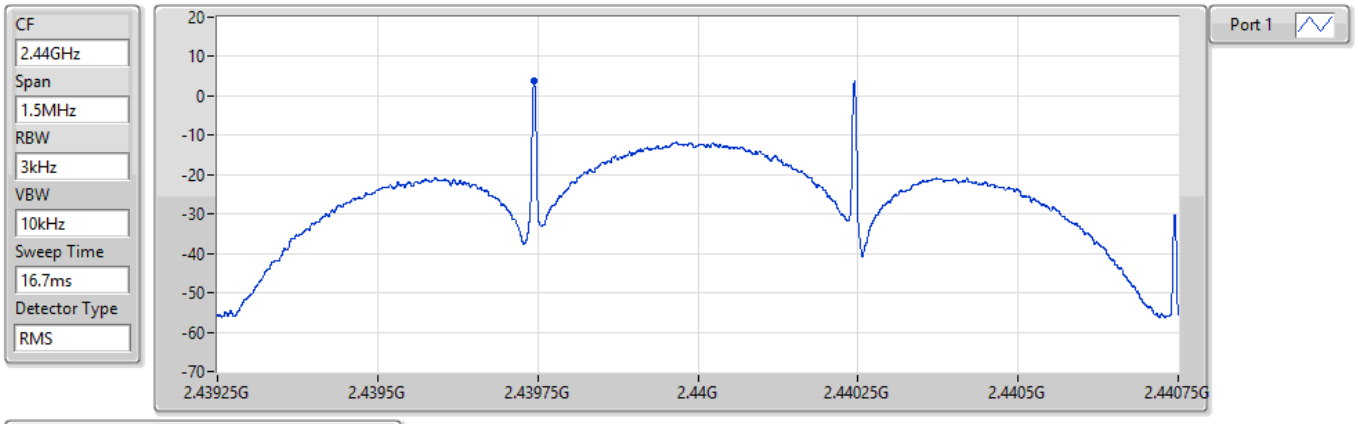
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.86	3.86	3.86

BT-LE(125kbps) **PSD**

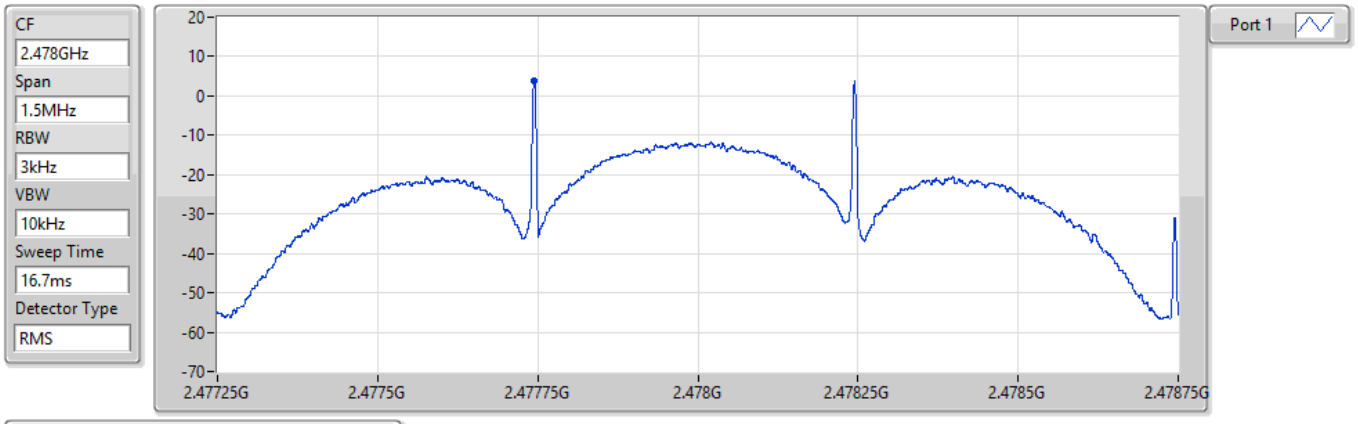
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.74	3.74	3.74

BT-LE(125kbps) **PSD**

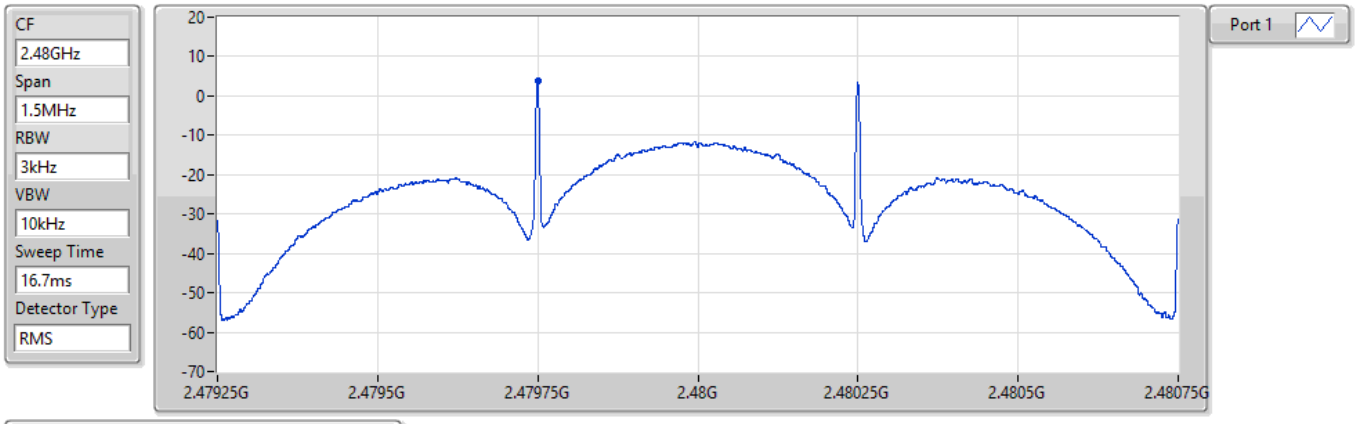
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.71	3.71	3.71

BT-LE(125kbps) **PSD**

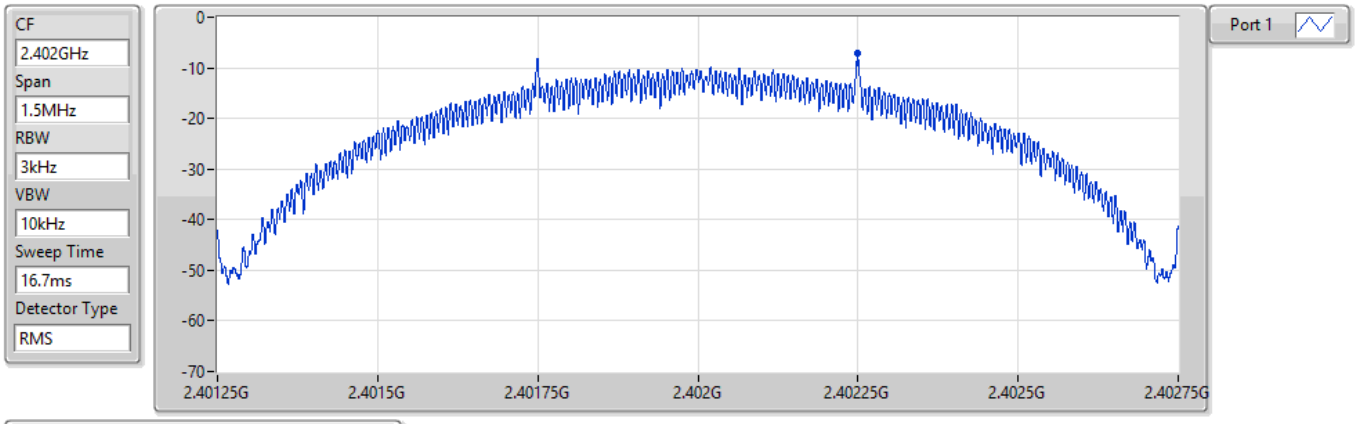
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.70	3.70	3.70

BT-LE(500kbps) **PSD**

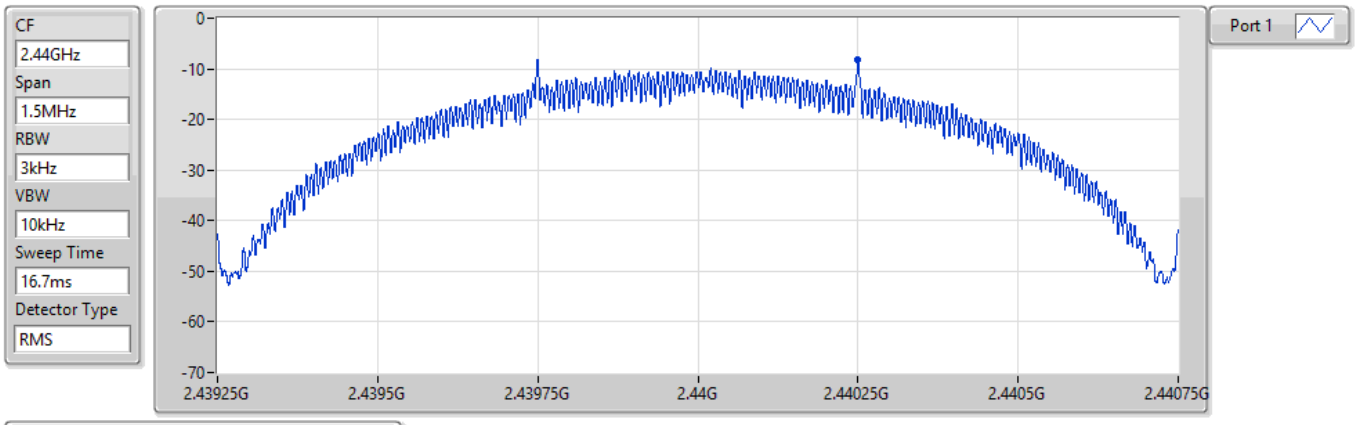
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.16	-7.16	-7.16

BT-LE(500kbps) **PSD**

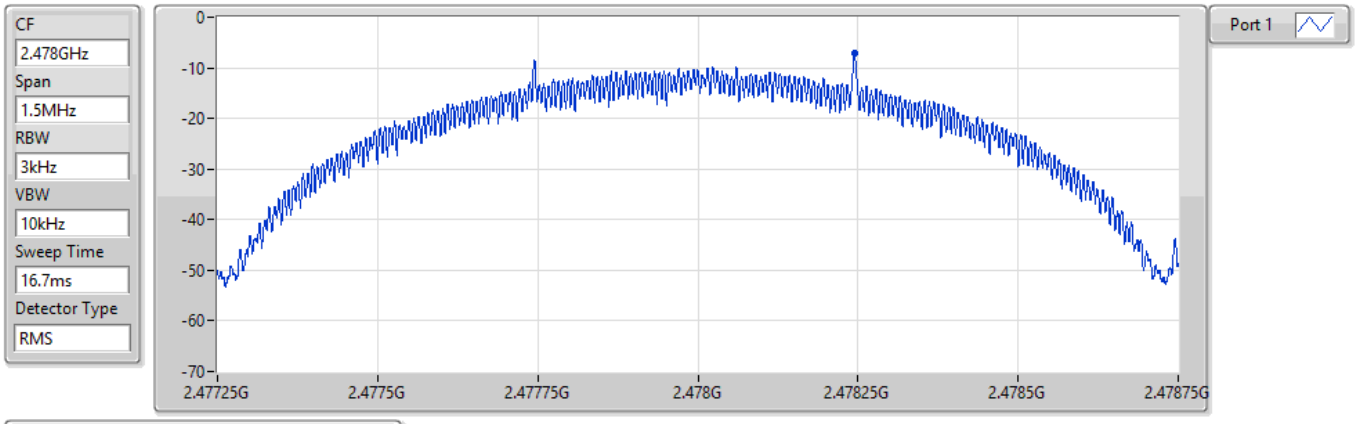
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.08	-8.08	-8.08

BT-LE(500kbps) **PSD**

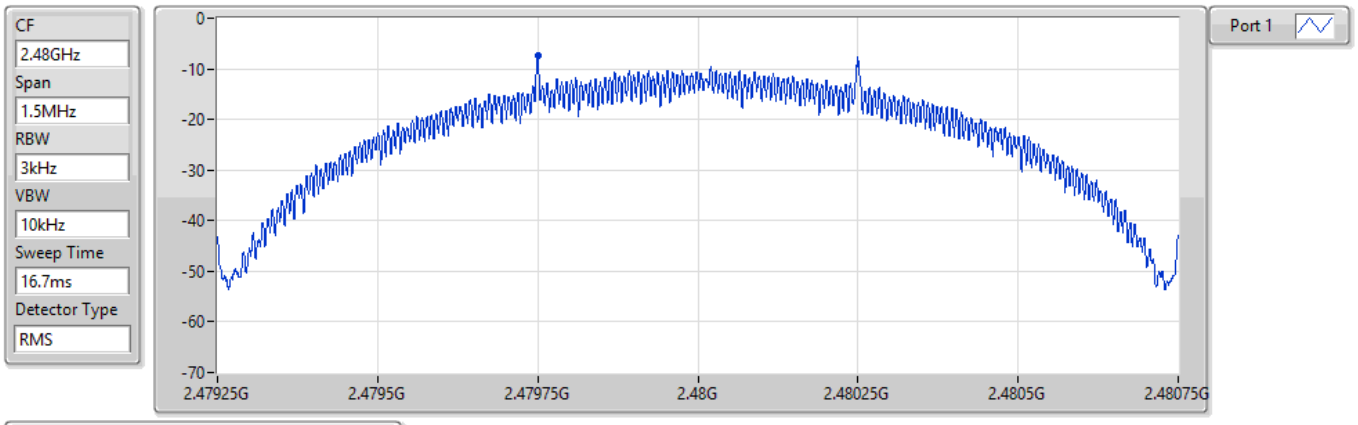
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.12	-7.12	-7.12

BT-LE(500kbps) **PSD**

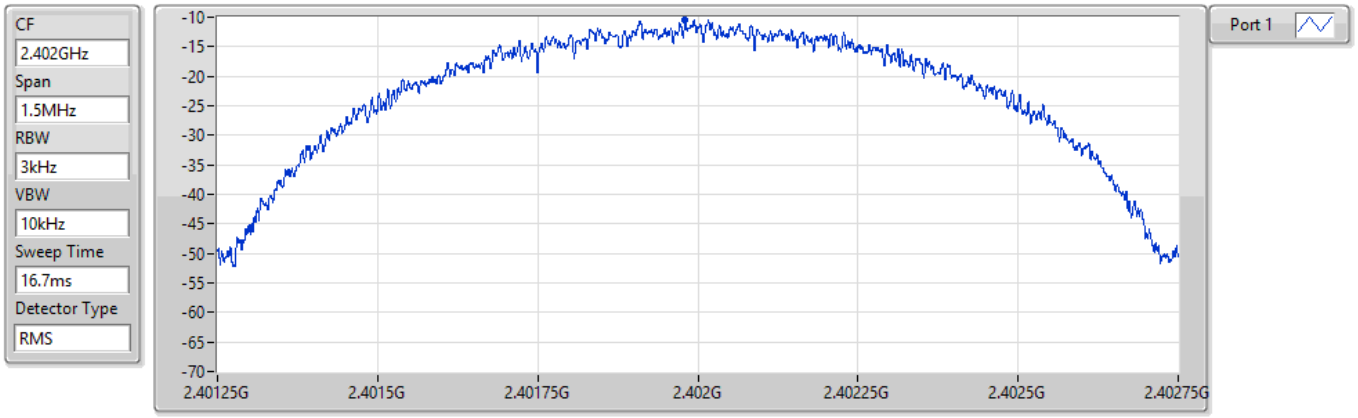
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.44	-7.44	-7.44

BT-LE(1Mbps) **PSD**

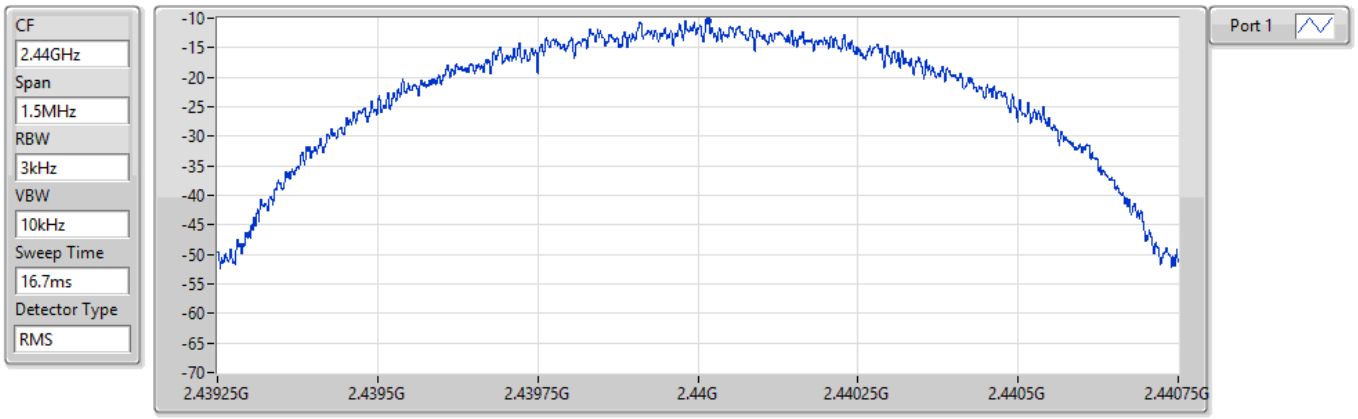
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.55	-10.55	-10.55

BT-LE(1Mbps) **PSD**

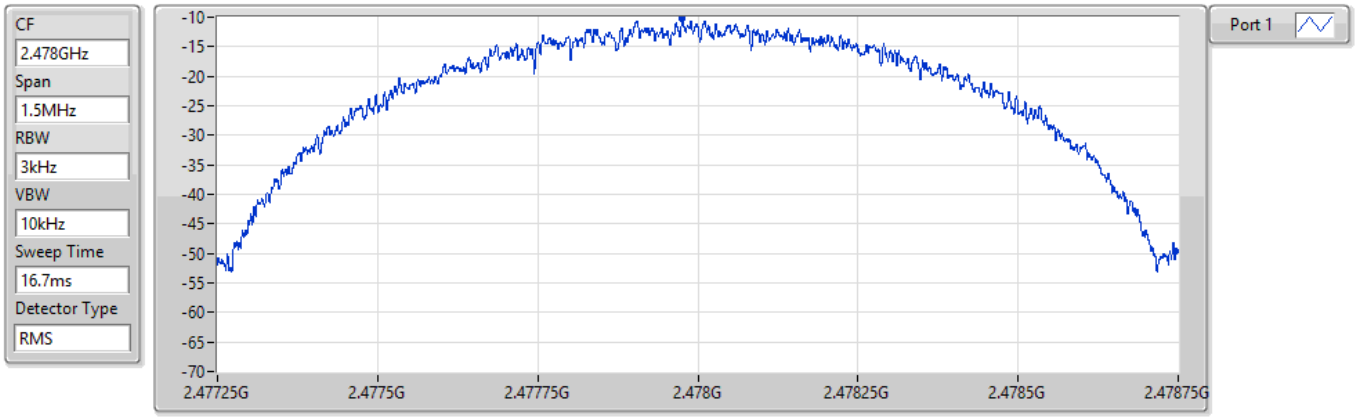
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.47	-10.47	-10.47

BT-LE(1Mbps) **PSD**

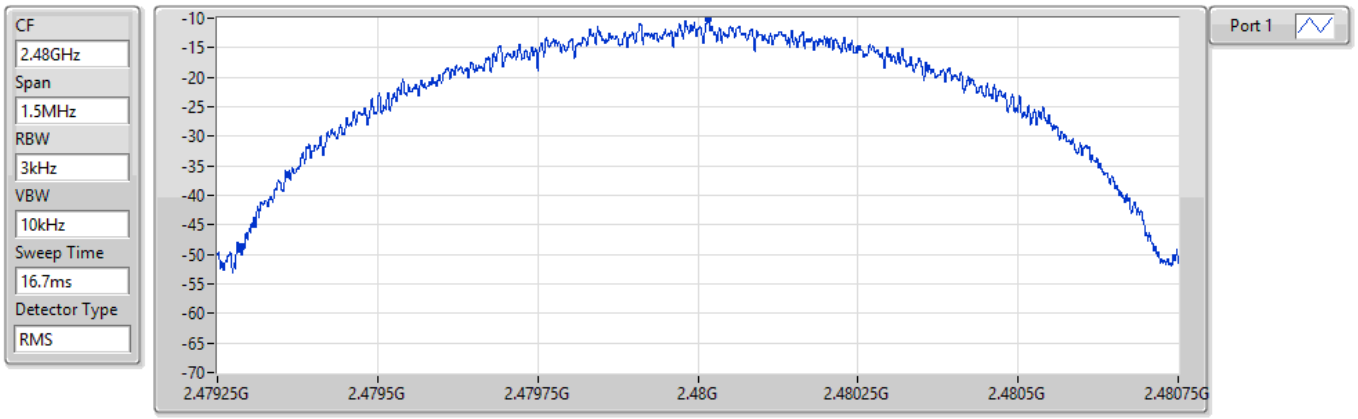
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.16	-10.16	-10.16

BT-LE(1Mbps) **PSD**

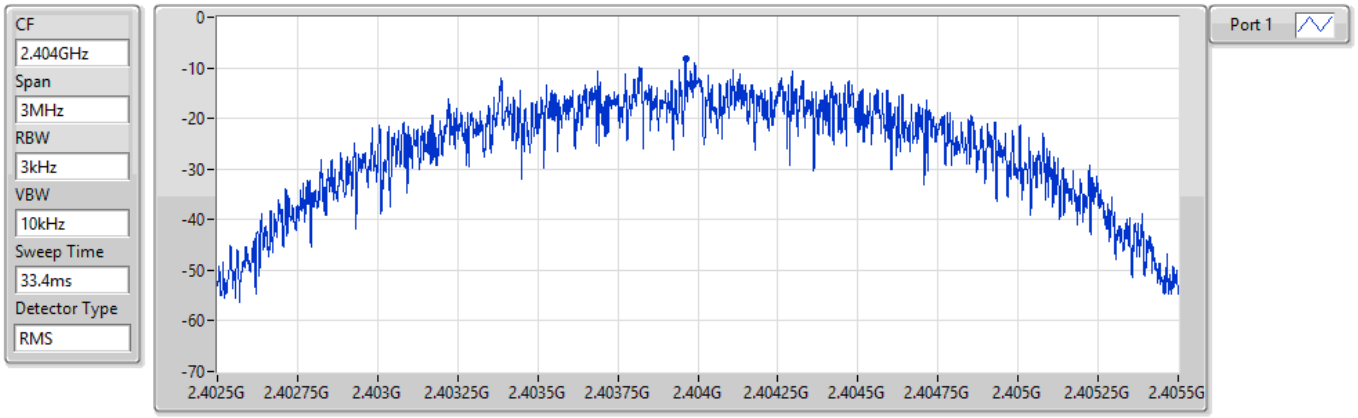
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.19	-10.19	-10.19

BT-LE(2Mbps) **PSD**

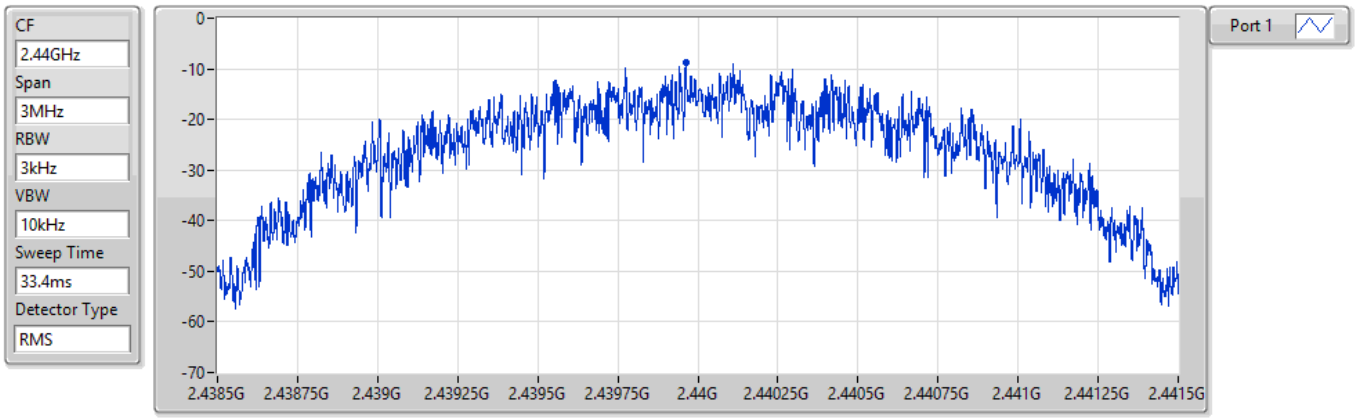
2404MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.24	-8.24	-8.24

BT-LE(2Mbps) **PSD**

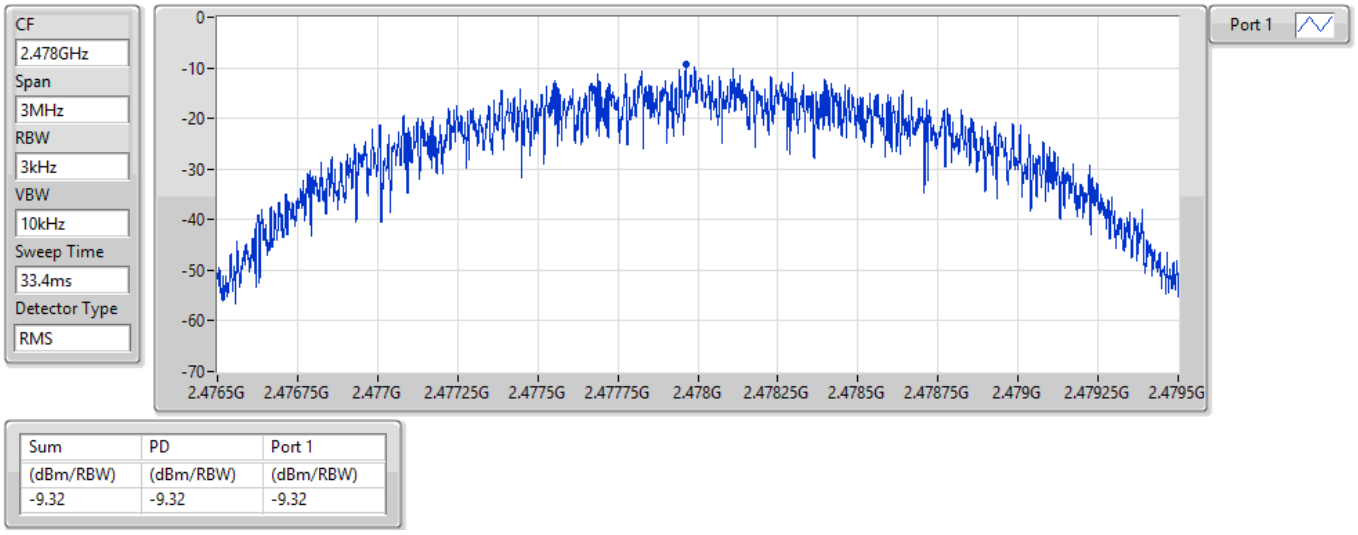
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.85	-8.85	-8.85

BT-LE(2Mbps) **PSD**

2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.32	-9.32	-9.32

2) Configuration 2: Laird part number: 453-00145, 20dBm, Integrated Antenna

Summary

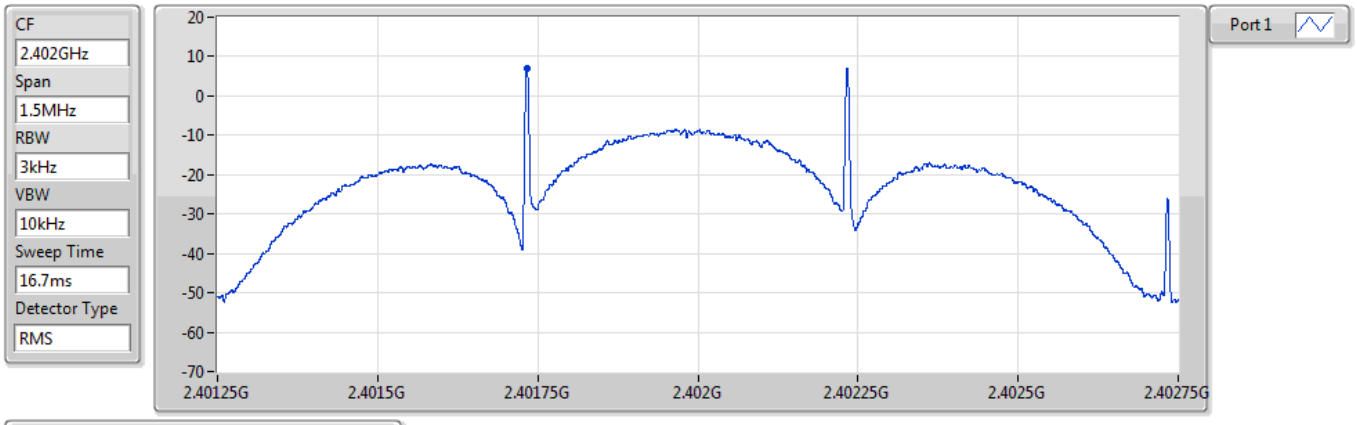
Mode	PD (dBm/3kHz)
2.4-2.4835GHz	-
BT-LE(Coding rate125kbps)	7.15
BT-LE(Coding rate 500kbps)	3.10
BT-LE(Symbol rate 1Mbps)	-0.52
BT-LE(Symbol rate 2Mbps)	1.01

Result

Mode	Result	Antenna Gain (dBi)	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	1.82	7.15	8.00
2440MHz	Pass	1.82	6.88	8.00
2478MHz	Pass	1.82	6.85	8.00
2480MHz	Pass	1.82	6.79	8.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	1.82	3.10	8.00
2440MHz	Pass	1.82	3.03	8.00
2478MHz	Pass	1.82	3.08	8.00
2480MHz	Pass	1.82	3.03	8.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	1.82	-0.68	8.00
2440MHz	Pass	1.82	-0.63	8.00
2478MHz	Pass	1.82	-0.52	8.00
2480MHz	Pass	1.82	-3.74	8.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	1.82	0.97	8.00
2440MHz	Pass	1.82	1.01	8.00
2478MHz	Pass	1.82	0.92	8.00

BT-LE(125kbps) **PSD**

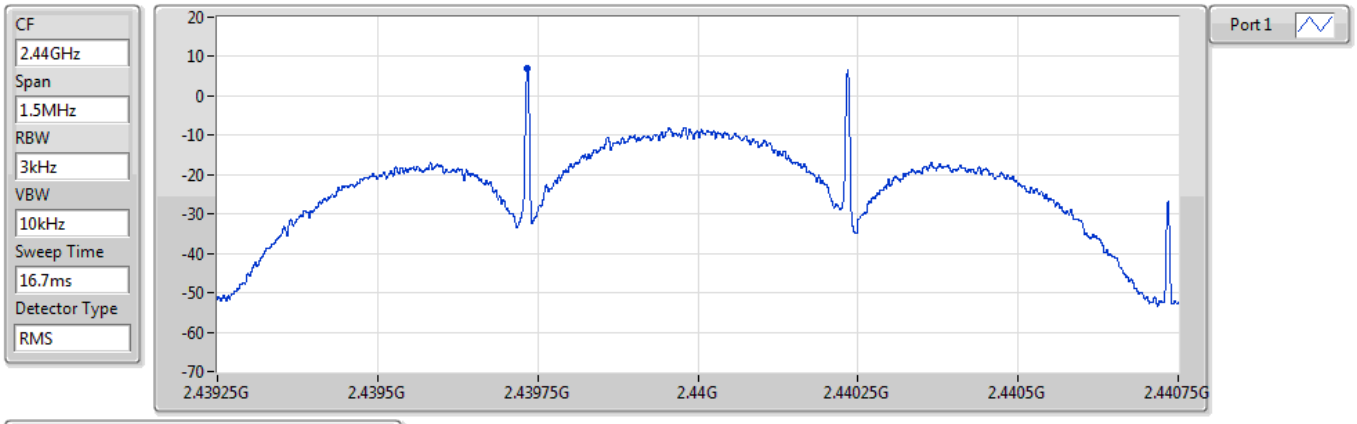
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.15	7.15	7.15

BT-LE(125kbps) **PSD**

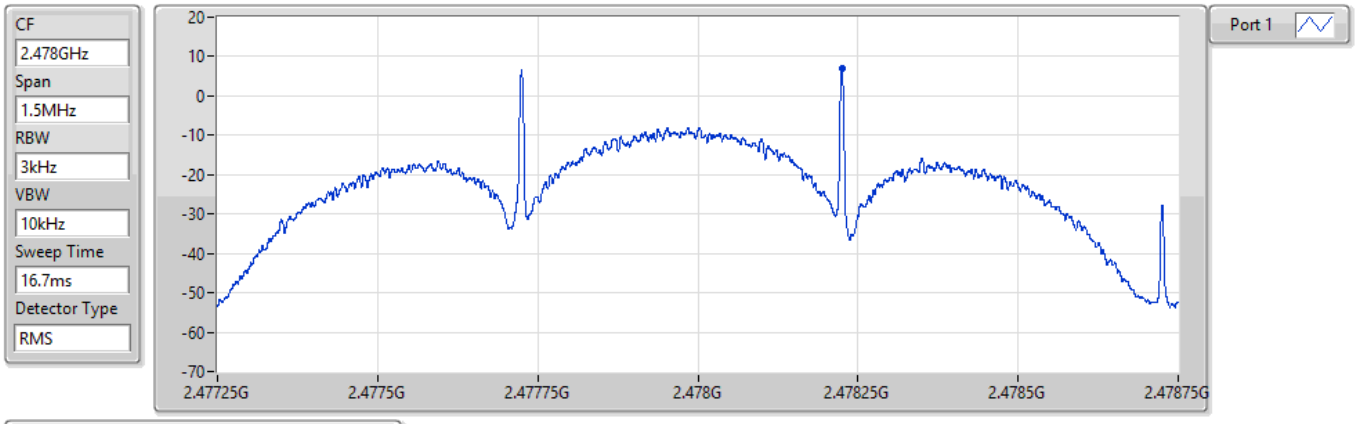
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.88	6.88	6.88

BT-LE(125kbps) **PSD**

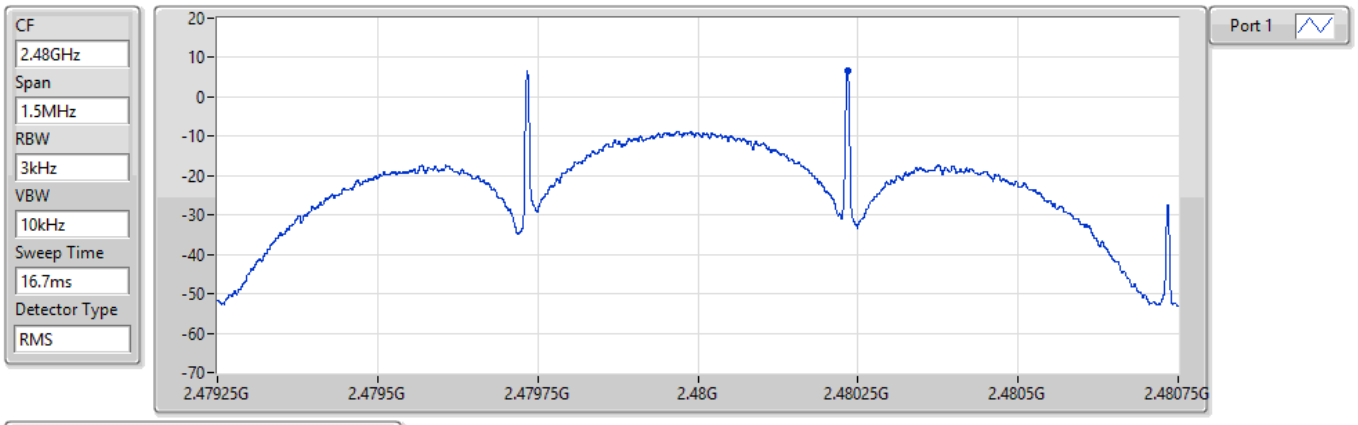
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.85	6.85	6.85

BT-LE(125kbps) **PSD**

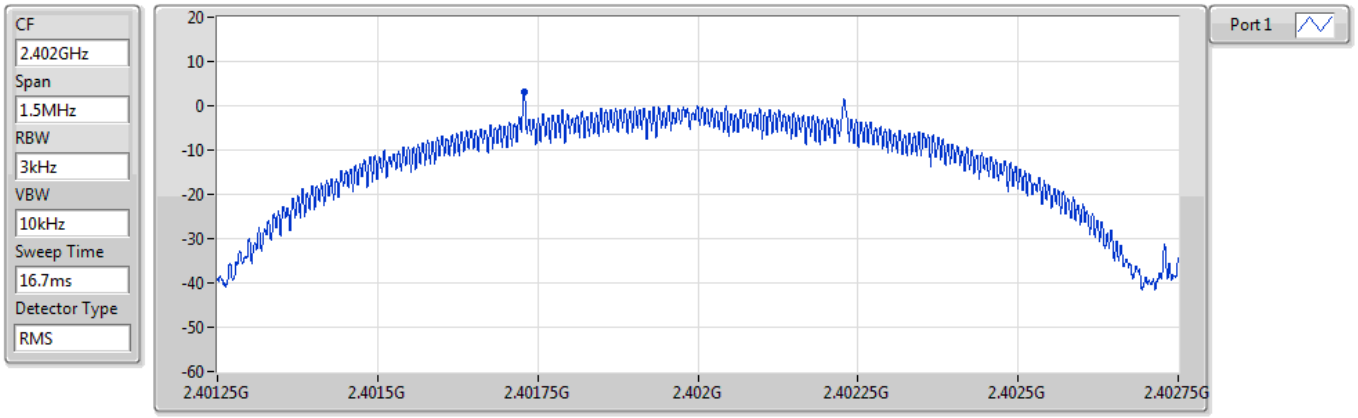
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.79	6.79	6.79

BT-LE(500kbps) **PSD**

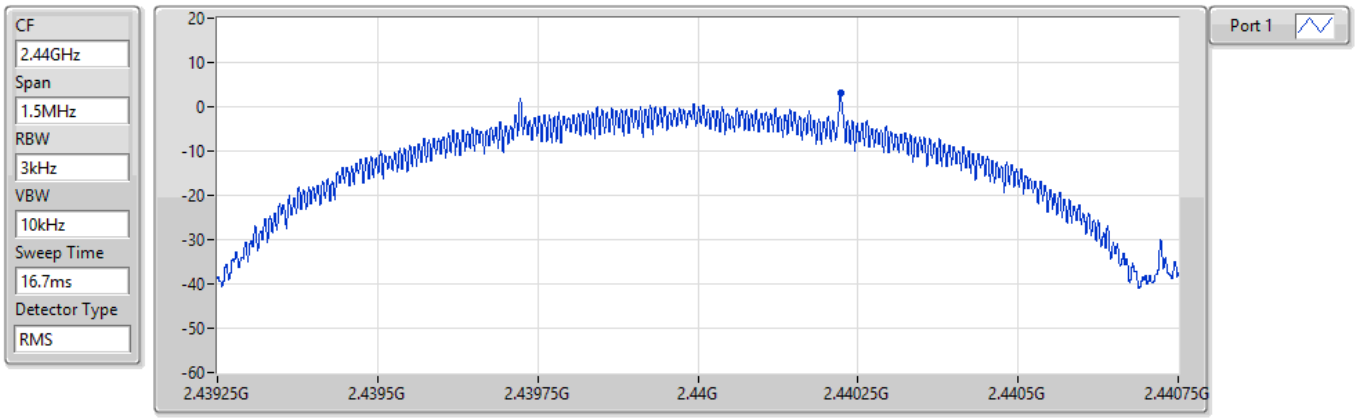
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.10	3.10	3.10

BT-LE(500kbps) **PSD**

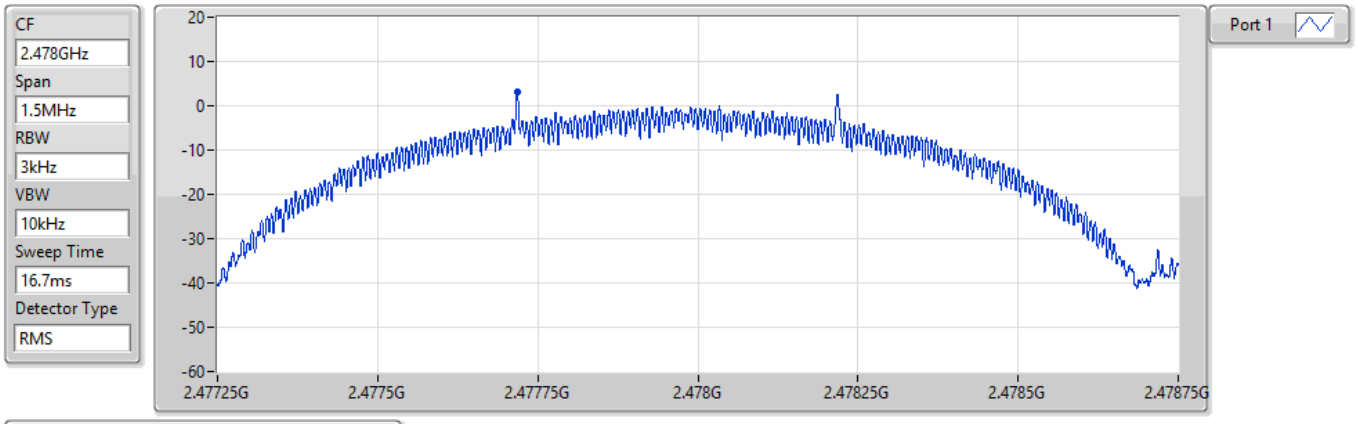
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.03	3.03	3.03

BT-LE(500kbps) **PSD**

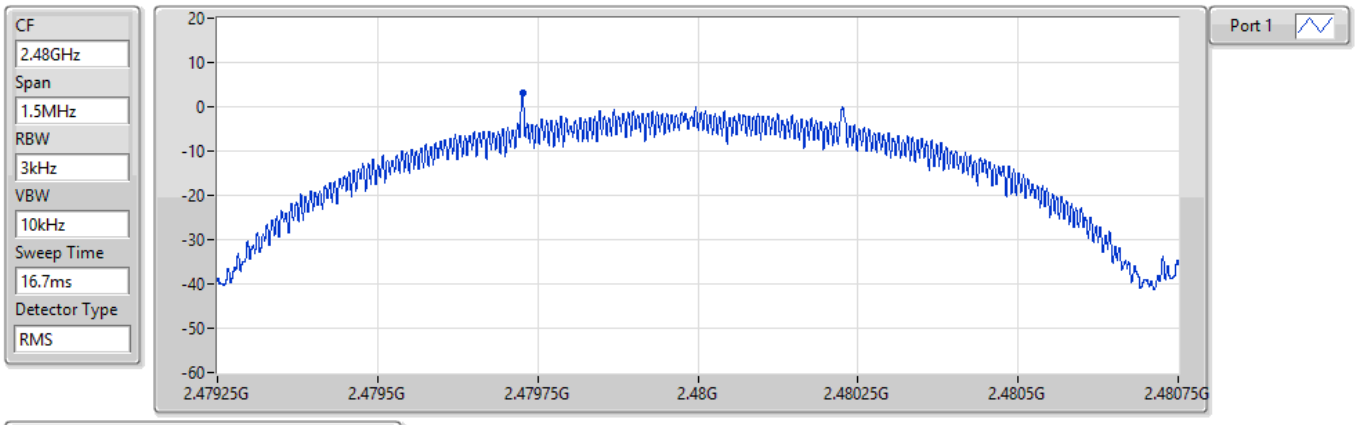
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.08	3.08	3.08

BT-LE(500kbps) **PSD**

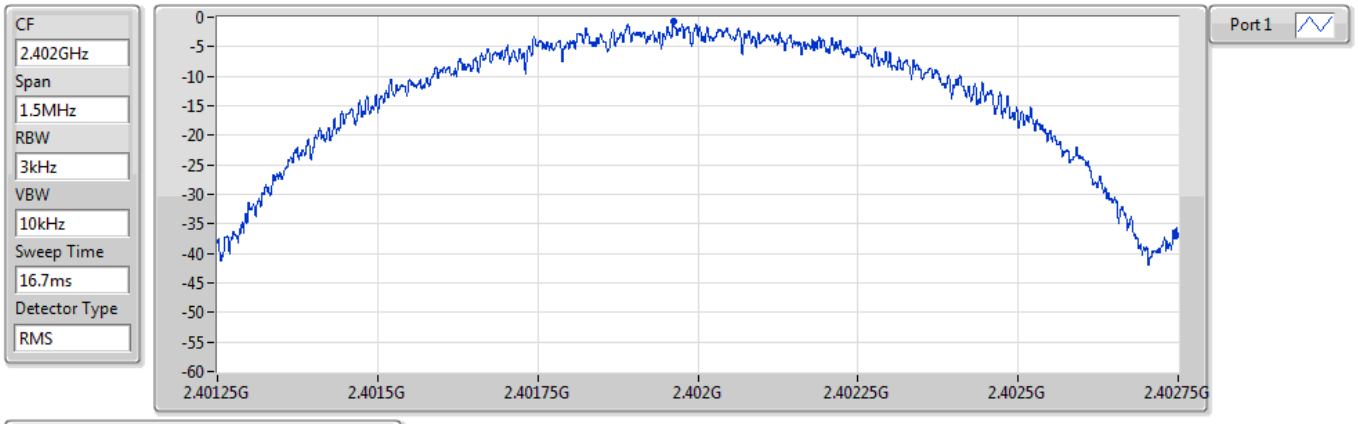
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.03	3.03	3.03

BT-LE(1Mbps) **PSD**

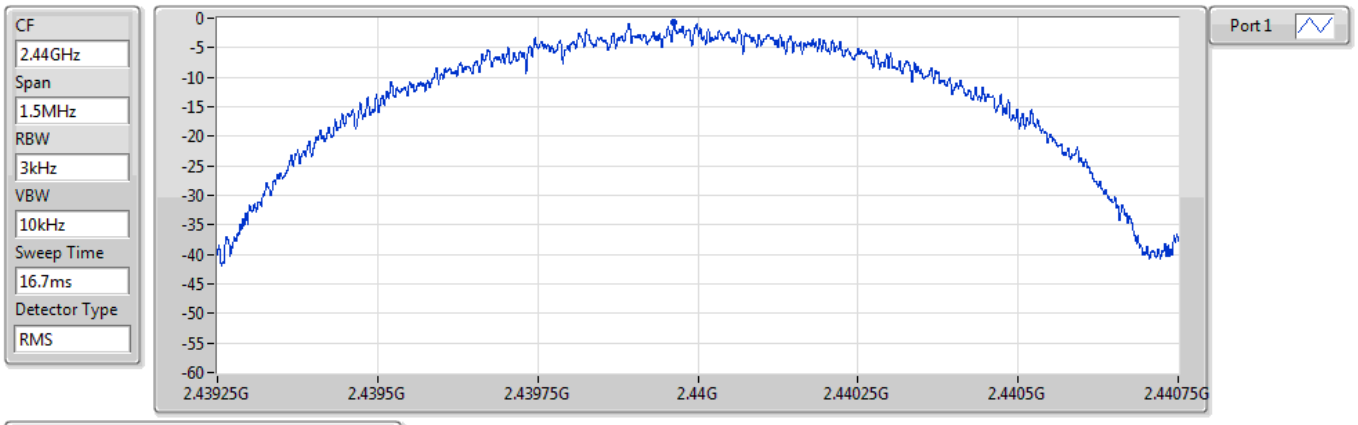
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.68	-0.68	-0.68

BT-LE(1Mbps) **PSD**

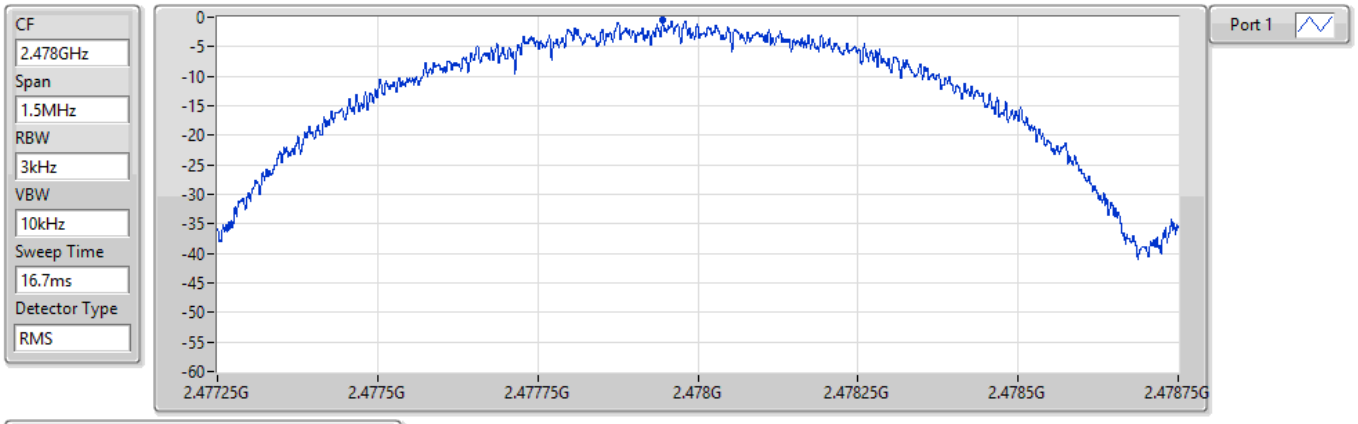
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.63	-0.63	-0.63

BT-LE(1Mbps) **PSD**

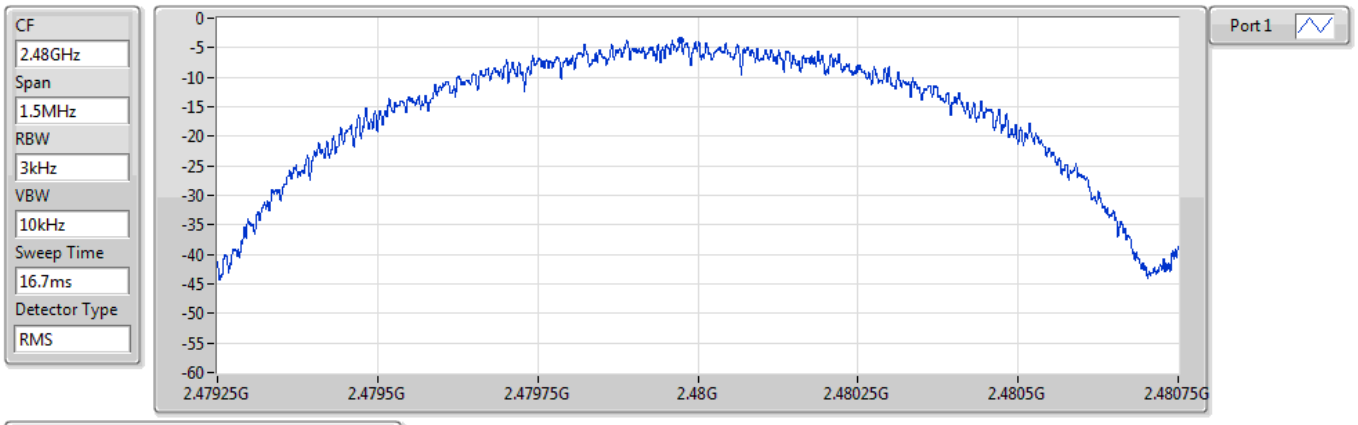
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.52	-0.52	-0.52

BT-LE(1Mbps) **PSD**

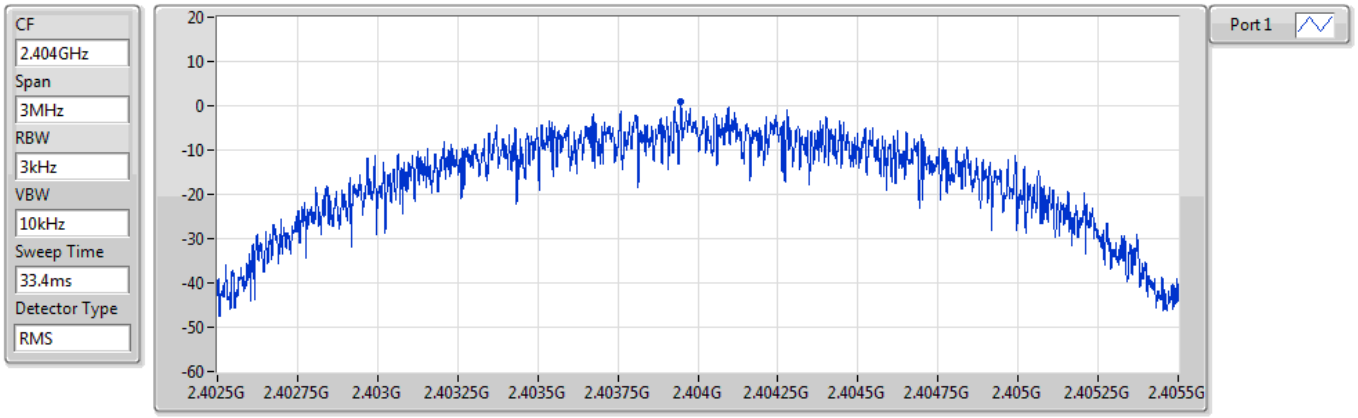
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.74	-3.74	-3.74

BT-LE(2Mbps) **PSD**

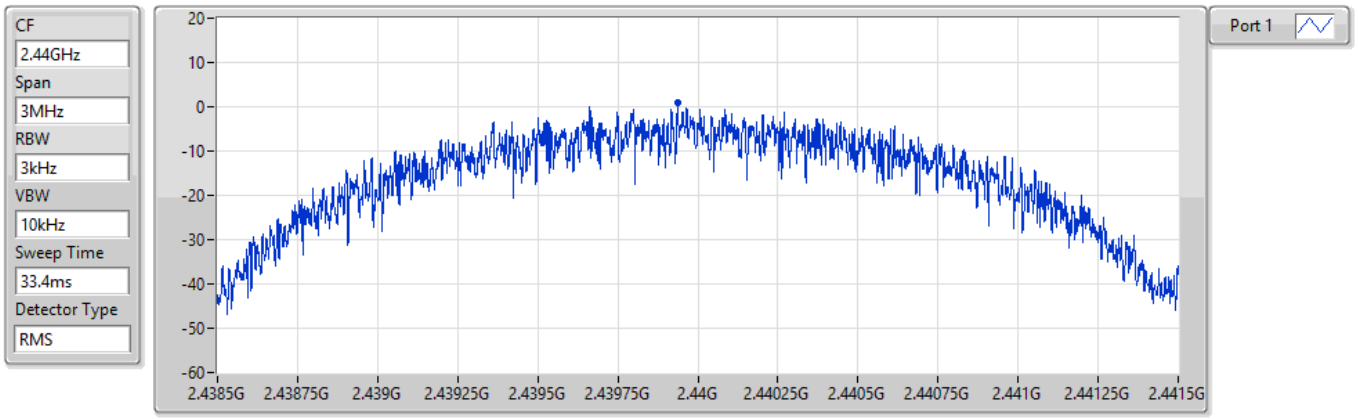
2404MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.97	0.97	0.97

BT-LE(2Mbps) **PSD**

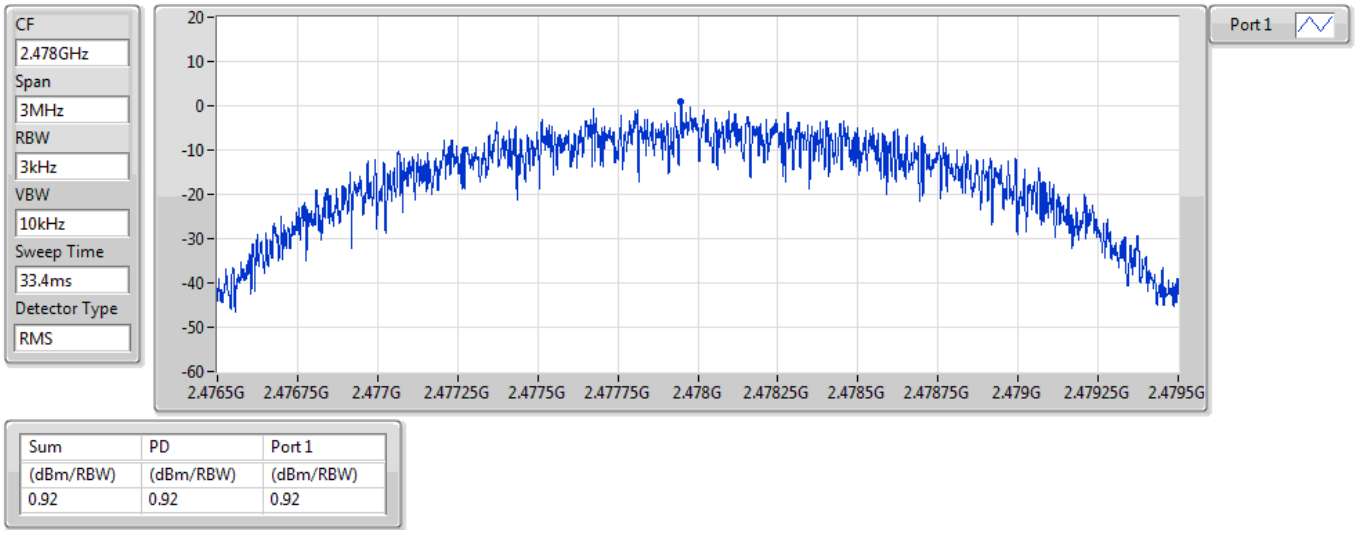
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.01	1.01	1.01

BT-LE(2Mbps) **PSD**

2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.92	0.92	0.92

3) Configuration 3: Laird part number: 453-00148, 20dBm, RF Trace Pad (External antenna)

Summary

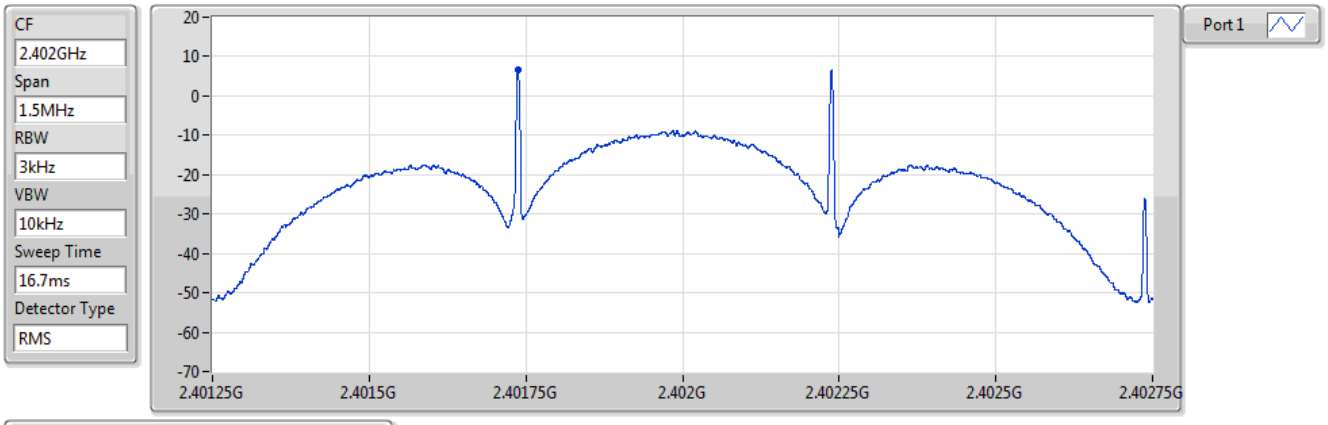
Mode	PD (dBm/3kHz)
2.4-2.4835GHz	-
BT-LE(Coding rate125kbps)	6.73
BT-LE(Coding rate 500kbps)	1.87
BT-LE(Symbol rate 1Mbps)	-0.72
BT-LE(Symbol rate 2Mbps)	0.57

Result

Mode	Result	Antenna Gain (dBi)	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
BT-LE(Coding rate125kbps)	-	-	-	-
2402MHz	Pass	2.00	6.73	8.00
2440MHz	Pass	2.00	6.53	8.00
2478MHz	Pass	2.00	6.52	8.00
2480MHz	Pass	2.00	6.49	8.00
BT-LE(Coding rate 500kbps)	-	-	-	-
2402MHz	Pass	2.00	1.87	8.00
2440MHz	Pass	2.00	1.75	8.00
2478MHz	Pass	2.00	-0.73	8.00
2480MHz	Pass	2.00	-3.74	8.00
BT-LE(Symbol rate 1Mbps)	-	-	-	-
2402MHz	Pass	2.00	-0.72	8.00
2440MHz	Pass	2.00	-0.96	8.00
2478MHz	Pass	2.00	-2.83	8.00
2480MHz	Pass	2.00	-5.21	8.00
BT-LE(Symbol rate 2Mbps)	-	-	-	-
2404MHz	Pass	2.00	0.38	8.00
2440MHz	Pass	2.00	0.57	8.00
2478MHz	Pass	2.00	-2.31	8.00

BT-LE(125kbps) **PSD**

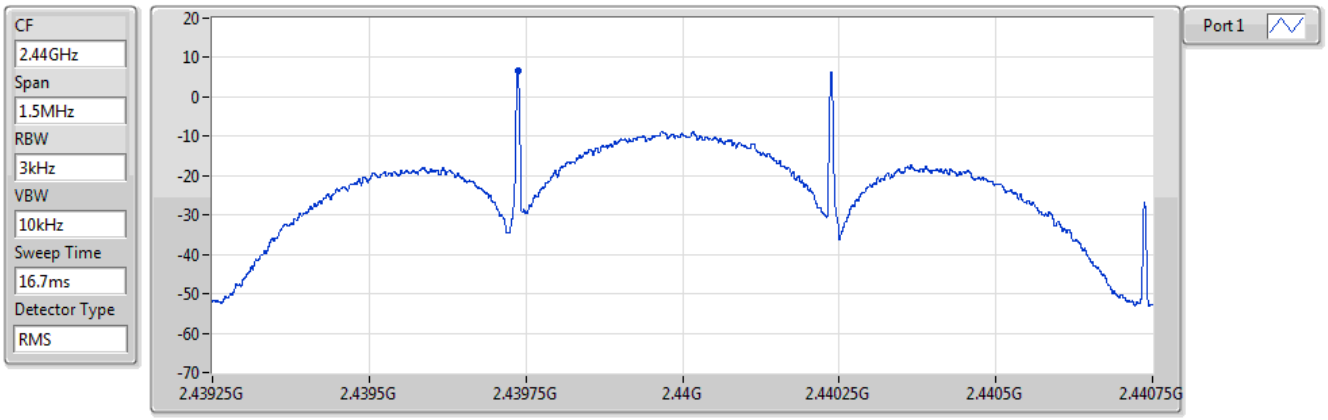
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.73	6.73	6.73

BT-LE(125kbps) **PSD**

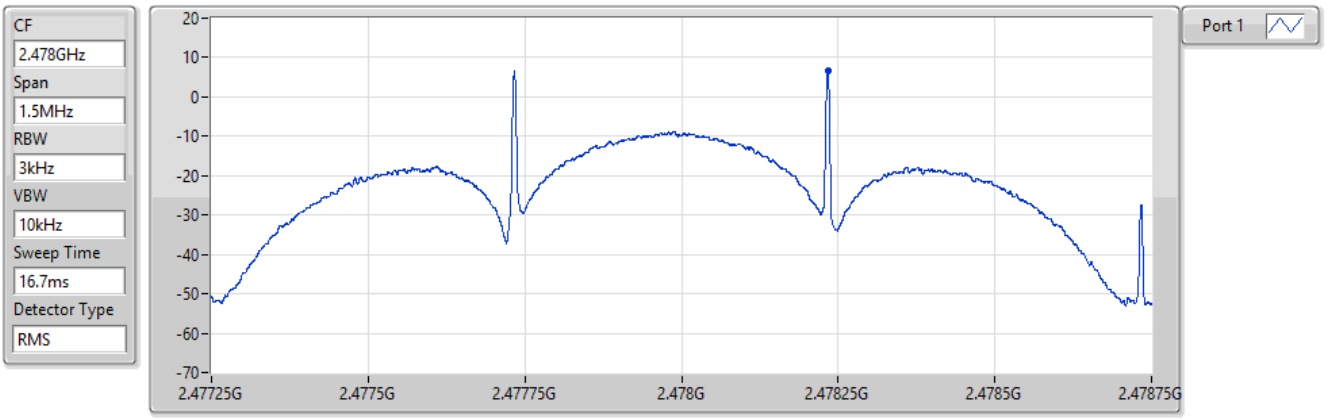
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.53	6.53	6.53

BT-LE(125kbps) **PSD**

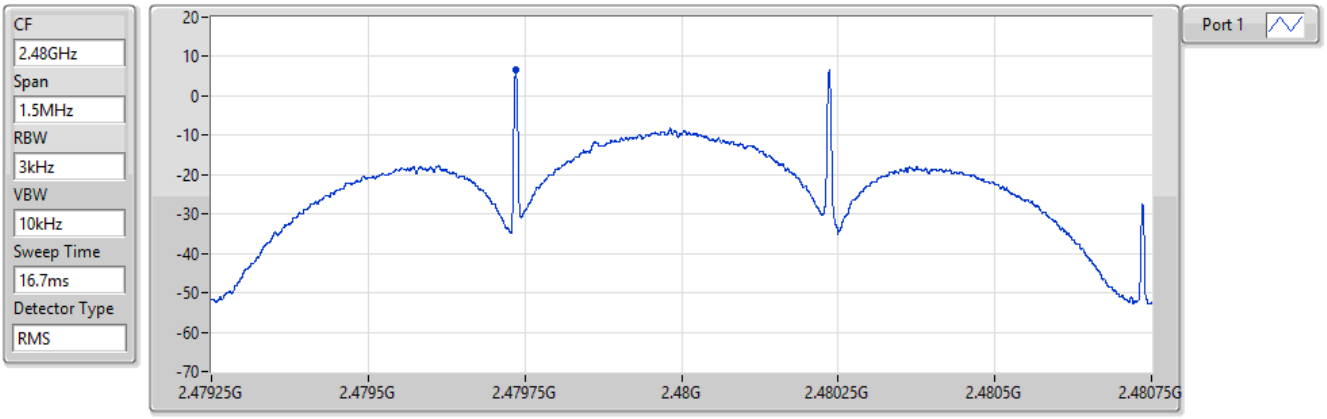
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.52	6.52	6.52

BT-LE(125kbps) **PSD**

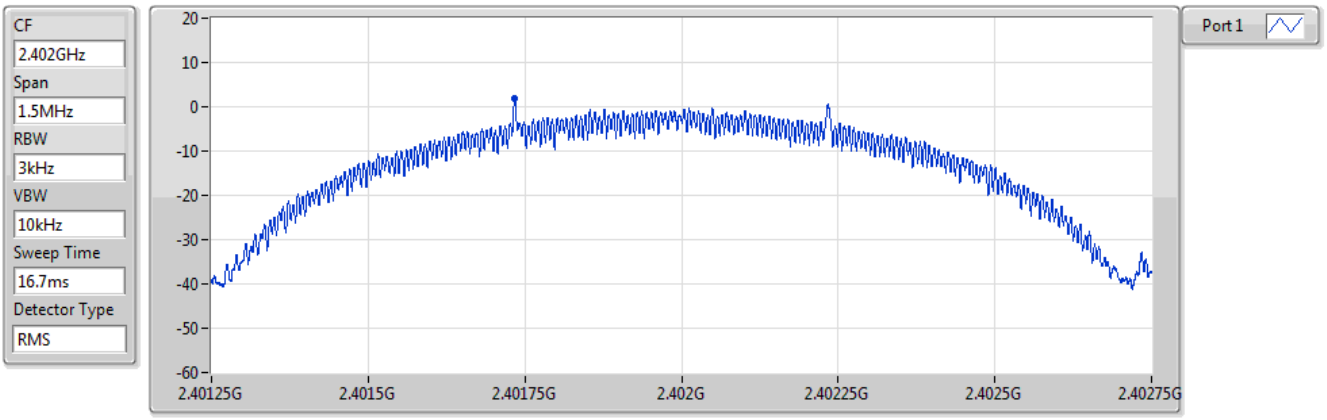
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.49	6.49	6.49

BT-LE(500kbps) **PSD**

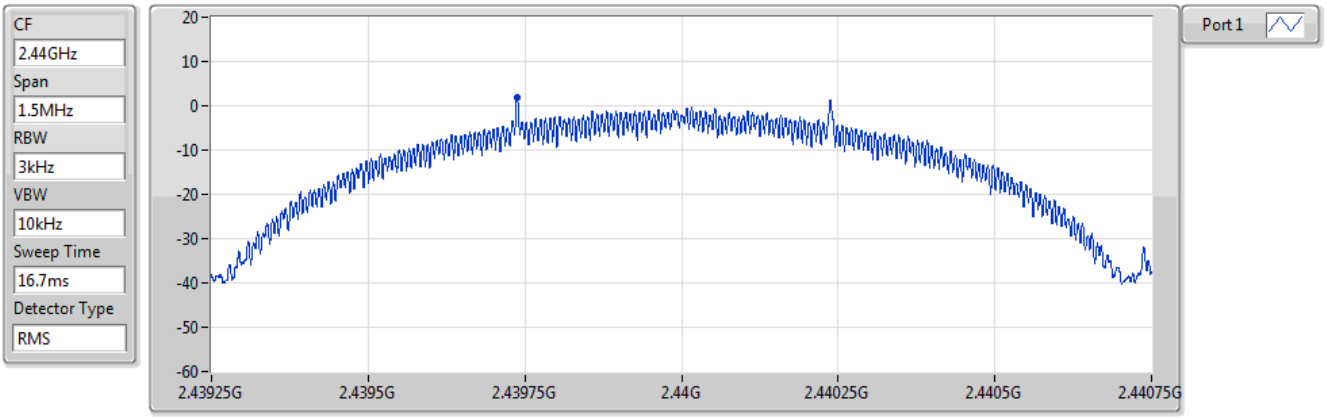
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.87	1.87	1.87

BT-LE(500kbps) **PSD**

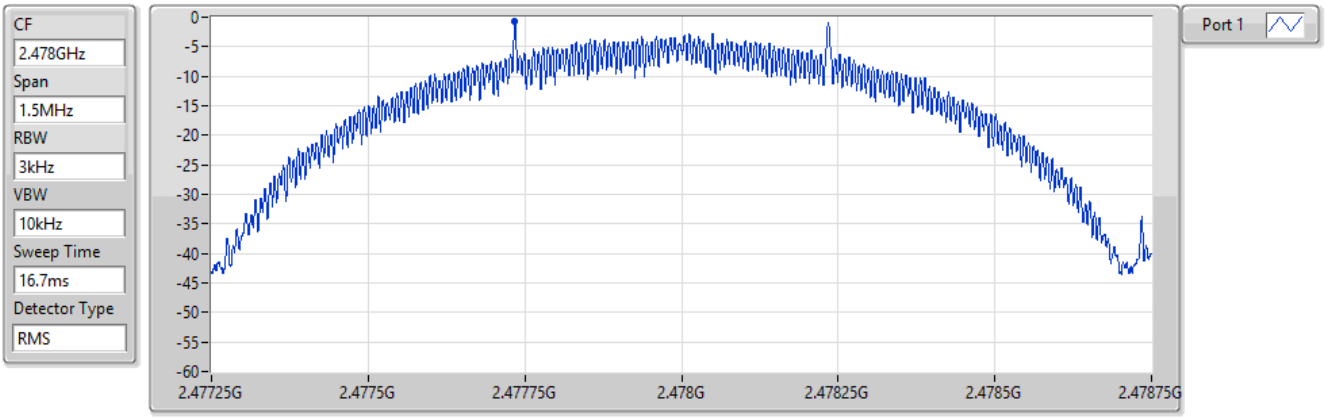
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.75	1.75	1.75

BT-LE(500kbps) **PSD**

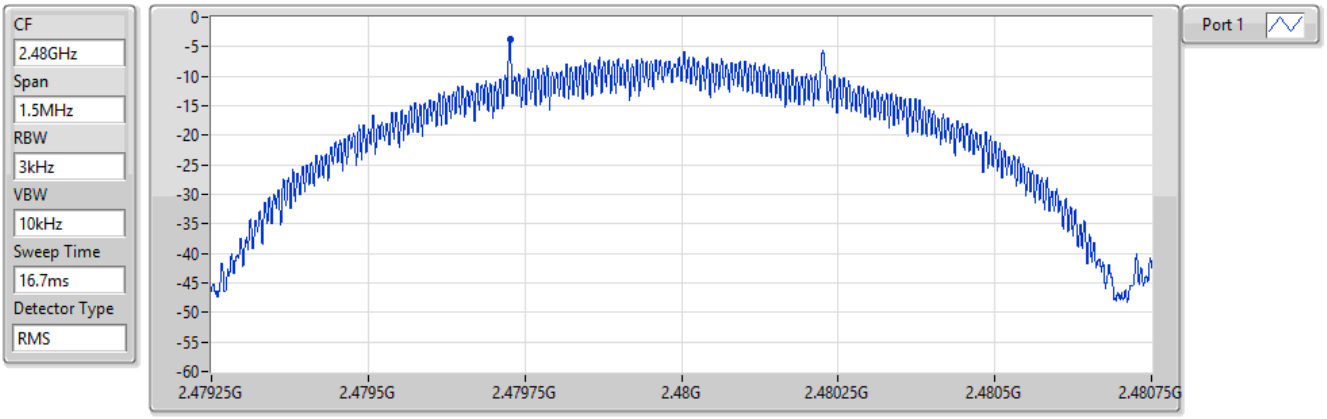
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.73	-0.73	-0.73

BT-LE(500kbps) **PSD**

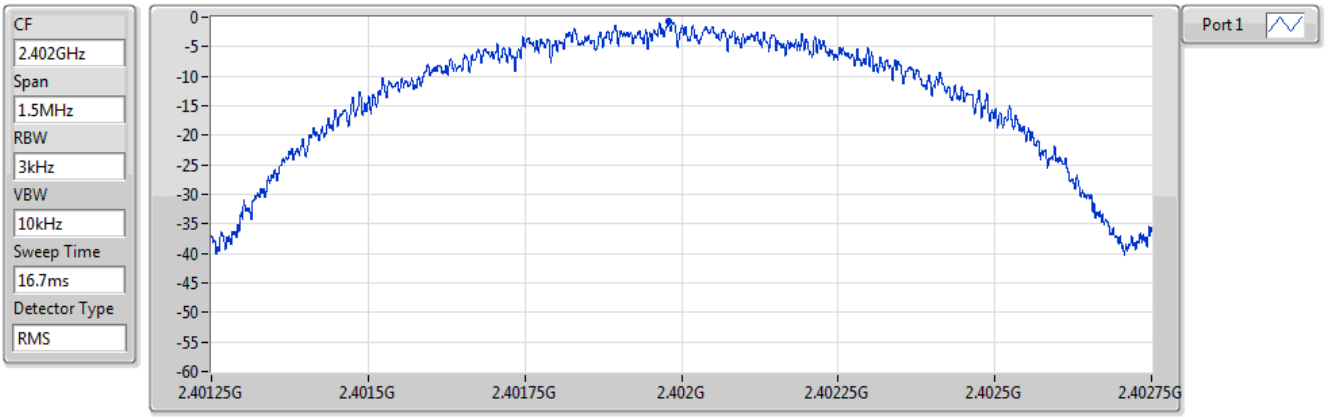
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.74	-3.74	-3.74

BT-LE(1Mbps) **PSD**

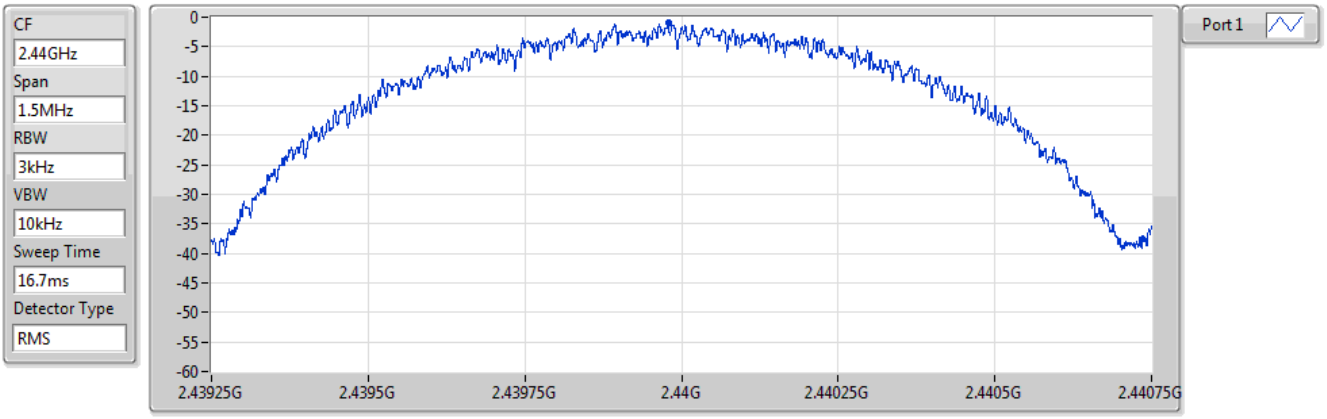
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.72	-0.72	-0.72

BT-LE(1Mbps) **PSD**

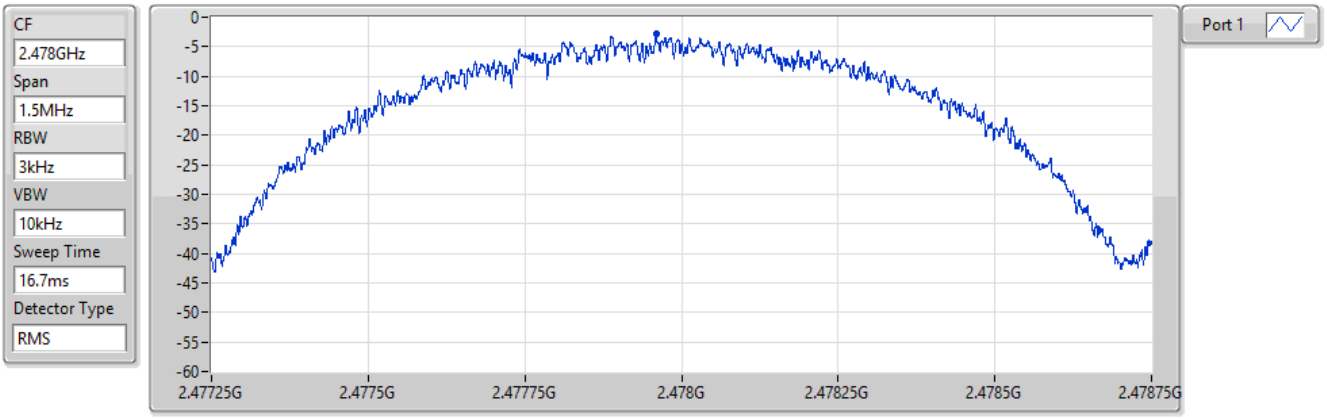
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.96	-0.96	-0.96

BT-LE(1Mbps) **PSD**

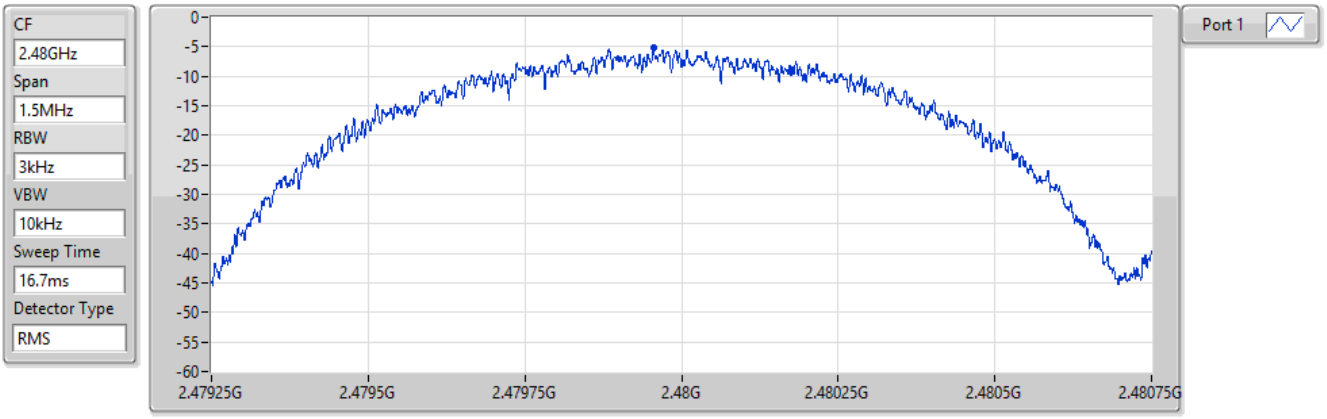
2478MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.83	-2.83	-2.83

BT-LE(1Mbps) **PSD**

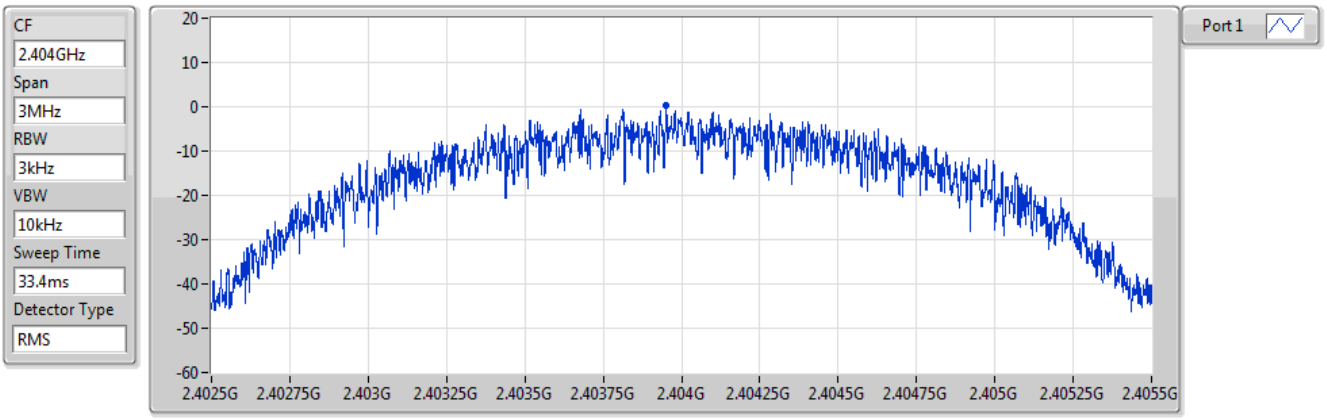
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.21	-5.21	-5.21

BT-LE(2Mbps) **PSD**

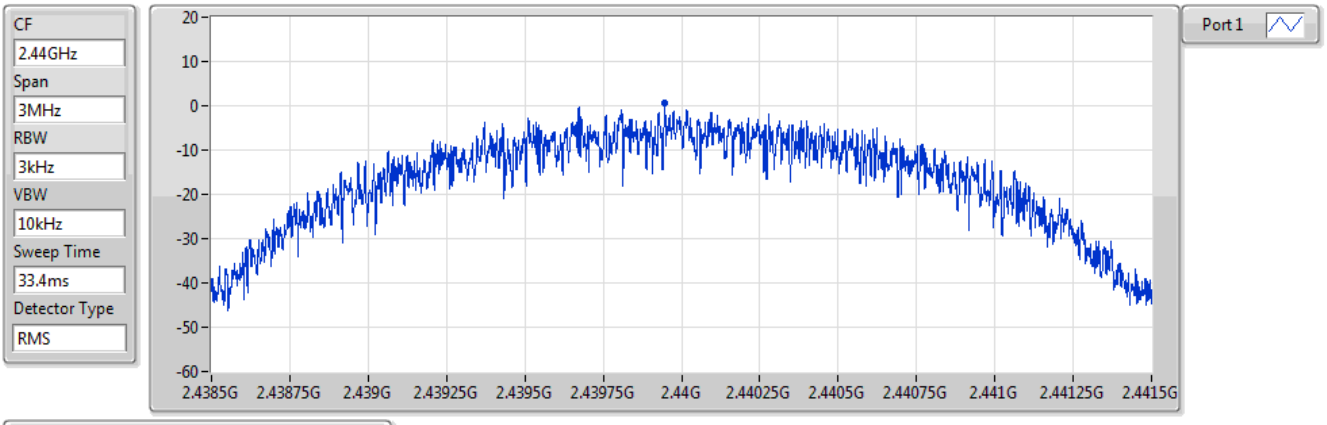
2404MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.38	0.38	0.38

BT-LE(2Mbps) **PSD**

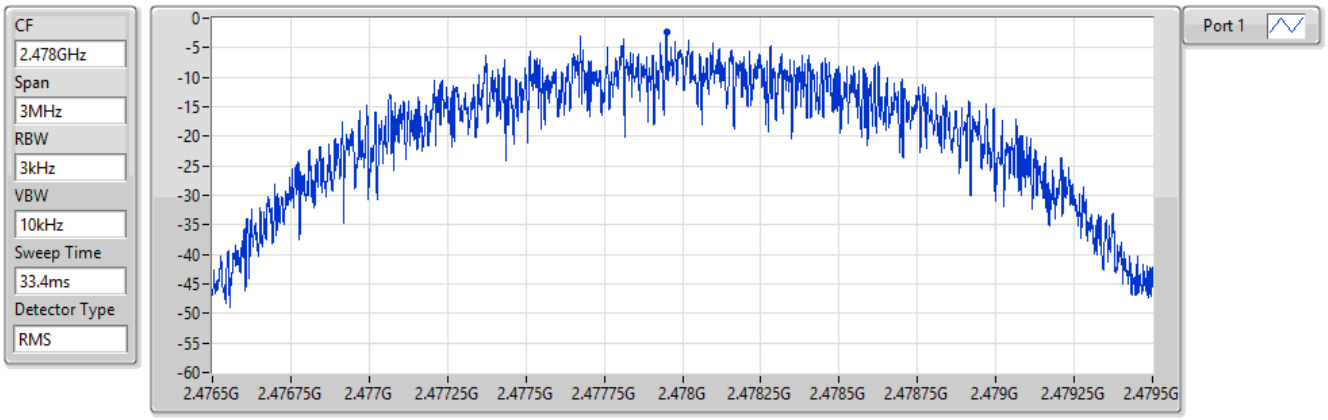
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.57	0.57	0.57

BT-LE(2Mbps) **PSD**

2478MHz



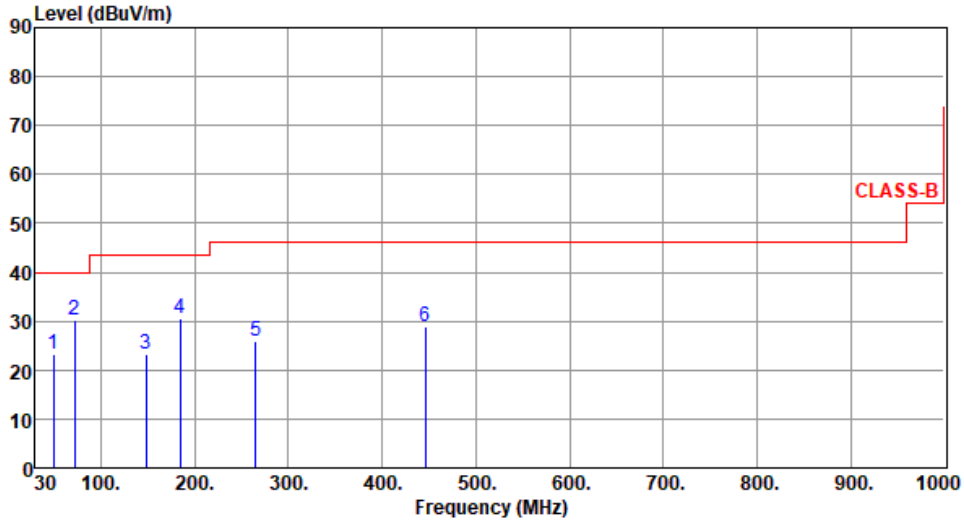
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.31	-2.31	-2.31

Test configuration 1: Laird part number: 453-00142, 10dBm, DTS

Unwanted Emissions (Below 1GHz)

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

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

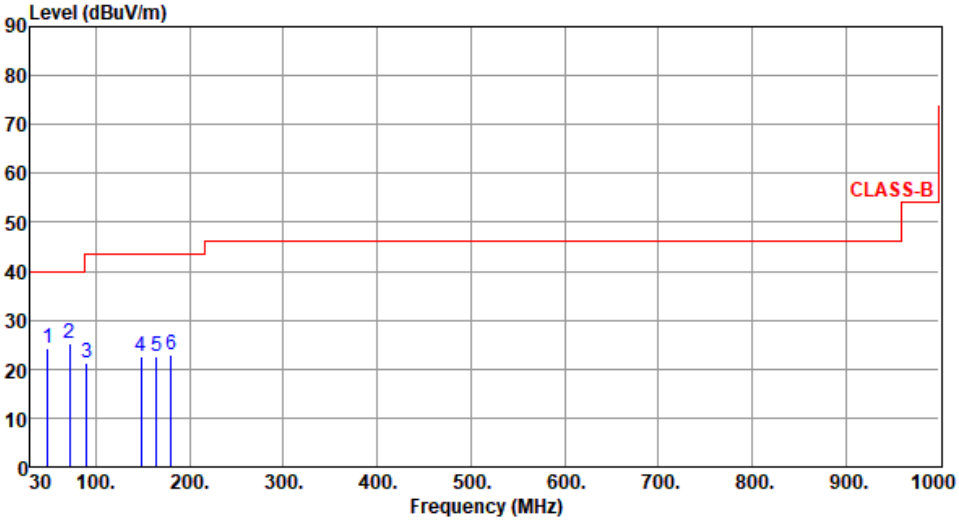


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	49.40	23.32	40.00	-16.68	31.61	-8.29	Peak	---	---
2	71.71	30.10	40.00	-9.90	41.25	-11.15	Peak	---	---
3	148.34	23.36	43.50	-20.14	31.98	-8.62	Peak	---	---
4	184.23	30.67	43.50	-12.83	41.22	-10.55	Peak	---	---
5	264.74	25.90	46.00	-20.10	34.86	-8.96	Peak	---	---
6	446.13	28.94	46.00	-17.06	32.42	-3.48	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



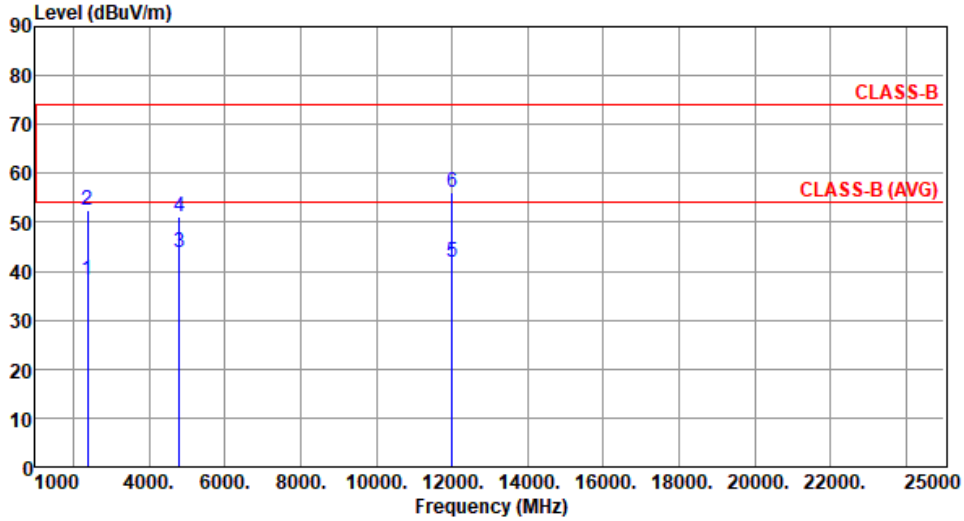
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	48.43	24.13	40.00	-15.87	32.44	-8.31	Peak	---	---
2	71.71	25.21	40.00	-14.79	36.36	-11.15	Peak	---	---
3	90.14	21.26	43.50	-22.24	35.83	-14.57	Peak	---	---
4	148.34	22.56	43.50	-20.94	31.18	-8.62	Peak	---	---
5	164.83	22.44	43.50	-21.06	31.12	-8.68	Peak	---	---
6	180.35	22.86	43.50	-20.64	32.96	-10.10	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 (1Mbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

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

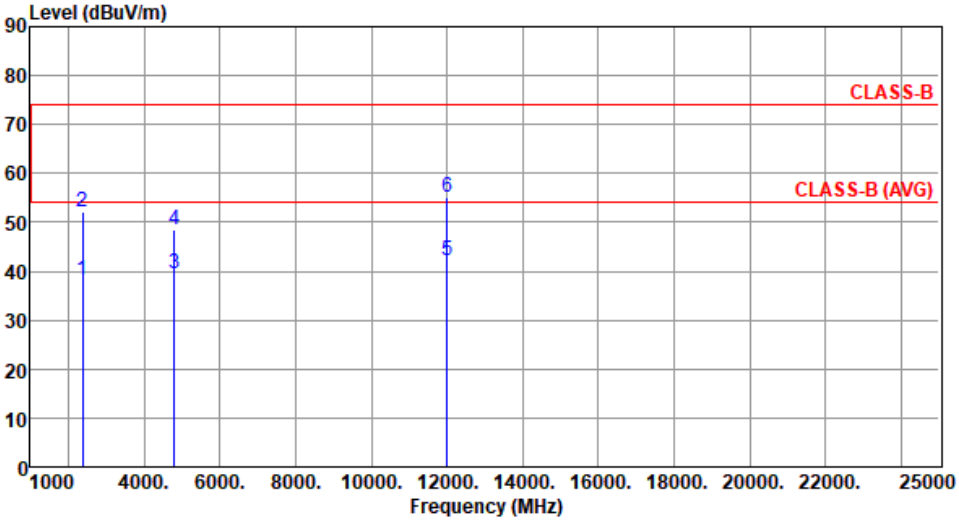


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.24	54.00	-15.76	42.03	-3.79	Average	129	201
2	2390.00	52.53	74.00	-21.47	56.32	-3.79	Peak	129	201
3	4804.00	43.79	54.00	-10.21	43.76	0.03	Average	100	225
4	4804.00	51.13	74.00	-22.87	51.10	0.03	Peak	100	225
5	12010.00	41.79	54.00	-12.21	34.03	7.76	Average	100	19
6	12010.00	56.15	74.00	-17.85	48.39	7.76	Peak	100	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	Vertical		

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

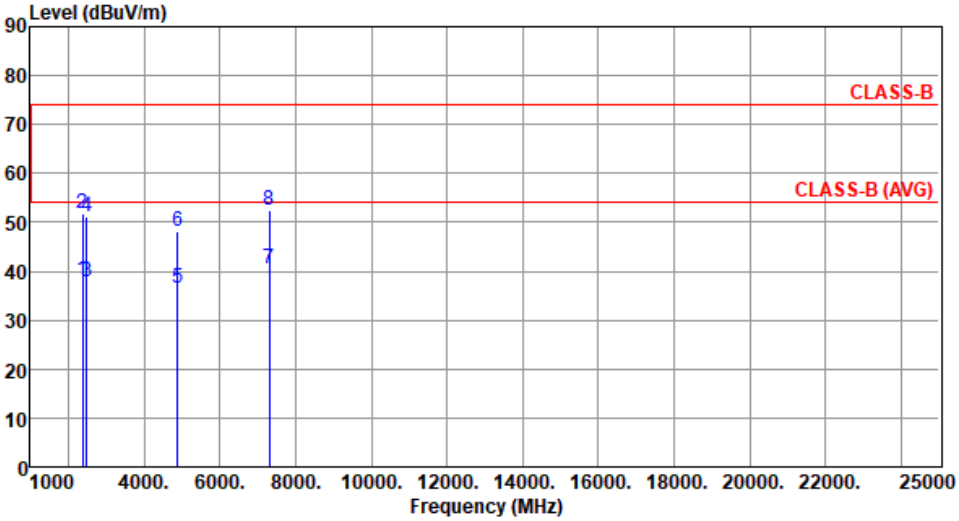


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.05	54.00	-15.95	41.84	-3.79	Average	310	64
2	2390.00	52.21	74.00	-21.79	56.00	-3.79	Peak	310	64
3	4804.00	39.65	54.00	-14.35	39.62	0.03	Average	100	196
4	4804.00	48.39	74.00	-25.61	48.36	0.03	Peak	100	196
5	12010.00	42.29	54.00	-11.71	34.53	7.76	Average	100	44
6	12010.00	55.29	74.00	-18.71	47.53	7.76	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 (1Mbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

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

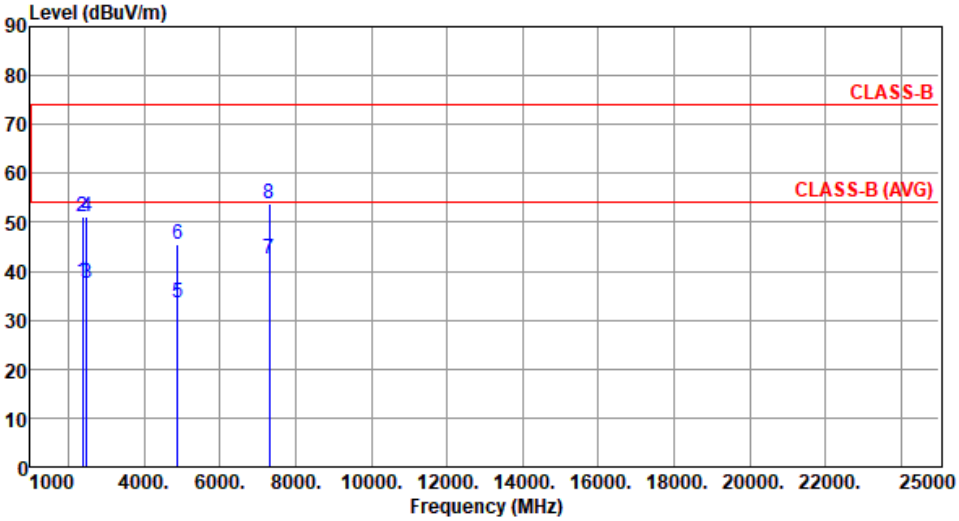


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.07	54.00	-15.93	41.86	-3.79	Average	116	247
2	2390.00	51.70	74.00	-22.30	55.49	-3.79	Peak	116	247
3	2483.50	37.84	54.00	-16.16	41.93	-4.09	Average	116	247
4	2483.50	51.12	74.00	-22.88	55.21	-4.09	Peak	116	247
5	4880.00	36.65	54.00	-17.35	36.55	0.10	Average	234	159
6	4880.00	48.19	74.00	-25.81	48.09	0.10	Peak	234	159
7	7320.00	40.39	54.00	-13.61	34.48	5.91	Average	100	342
8	7320.00	52.52	74.00	-21.48	46.61	5.91	Peak	100	342

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

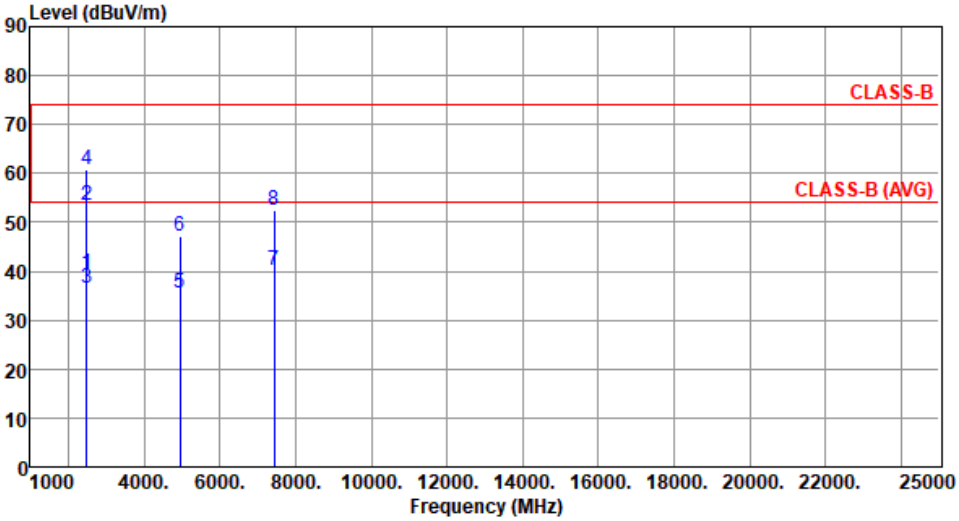


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	37.90	54.00	-16.10	41.69	-3.79	Average	309	69
2	2390.00	51.09	74.00	-22.91	54.88	-3.79	Peak	309	69
3	2483.50	37.65	54.00	-16.35	41.74	-4.09	Average	309	69
4	2483.50	51.02	74.00	-22.98	55.11	-4.09	Peak	309	69
5	4880.00	33.66	54.00	-20.34	33.56	0.10	Average	101	195
6	4880.00	45.62	74.00	-28.38	45.52	0.10	Peak	101	195
7	7320.00	42.46	54.00	-11.54	36.55	5.91	Average	100	2
8	7320.00	53.80	74.00	-20.20	47.89	5.91	Peak	100	2

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

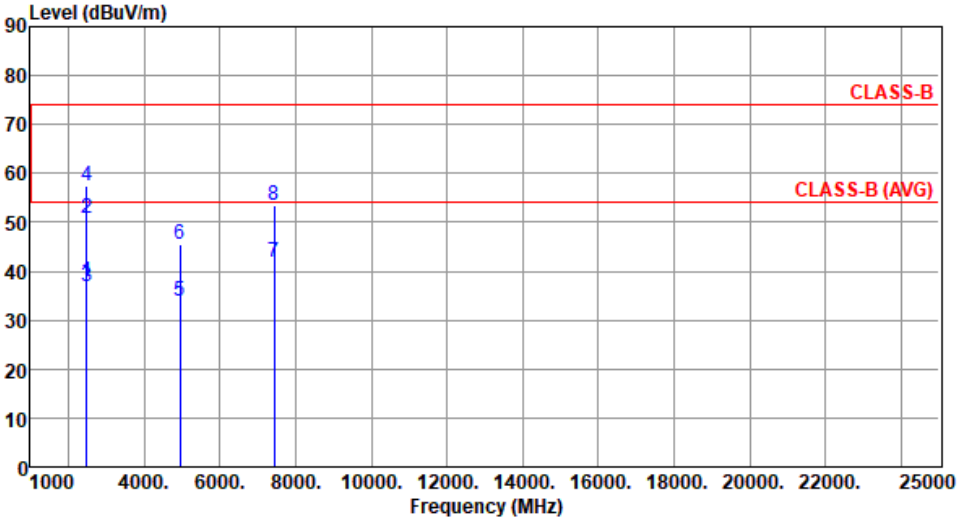


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	39.36	54.00	-14.64	43.45	-4.09	Average	113	152
2	2483.50	53.57	74.00	-20.43	57.66	-4.09	Peak	113	152
3	2488.00	36.69	54.00	-17.31	40.80	-4.11	Average	113	152
4	2488.00	60.66	74.00	-13.34	64.77	-4.11	Peak	113	152
5	4956.00	35.61	54.00	-18.39	35.46	0.15	Average	233	148
6	4956.00	47.23	74.00	-26.77	47.08	0.15	Peak	233	148
7	7434.00	40.25	54.00	-13.75	34.29	5.96	Average	100	341
8	7434.00	52.41	74.00	-21.59	46.45	5.96	Peak	100	339

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

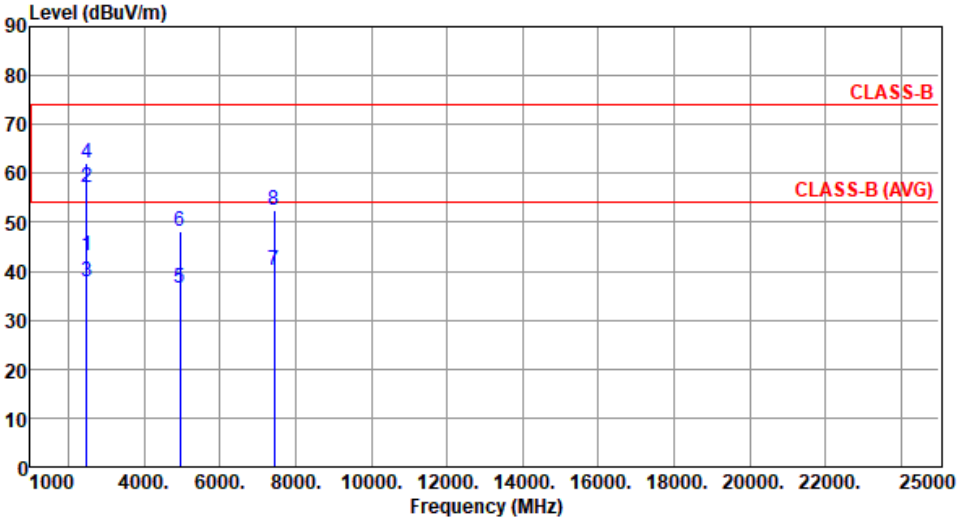


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	37.94	54.00	-16.06	42.03	-4.09	Average	320	93
2	2483.50	50.97	74.00	-23.03	55.06	-4.09	Peak	320	93
3	2488.00	36.95	54.00	-17.05	41.06	-4.11	Average	320	93
4	2488.00	57.49	74.00	-16.51	61.60	-4.11	Peak	320	93
5	4956.00	33.76	54.00	-20.24	33.61	0.15	Average	100	199
6	4956.00	45.61	74.00	-28.39	45.46	0.15	Peak	100	199
7	7434.00	41.70	54.00	-12.30	35.74	5.96	Average	100	9
8	7434.00	53.44	74.00	-20.56	47.48	5.96	Peak	100	9

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

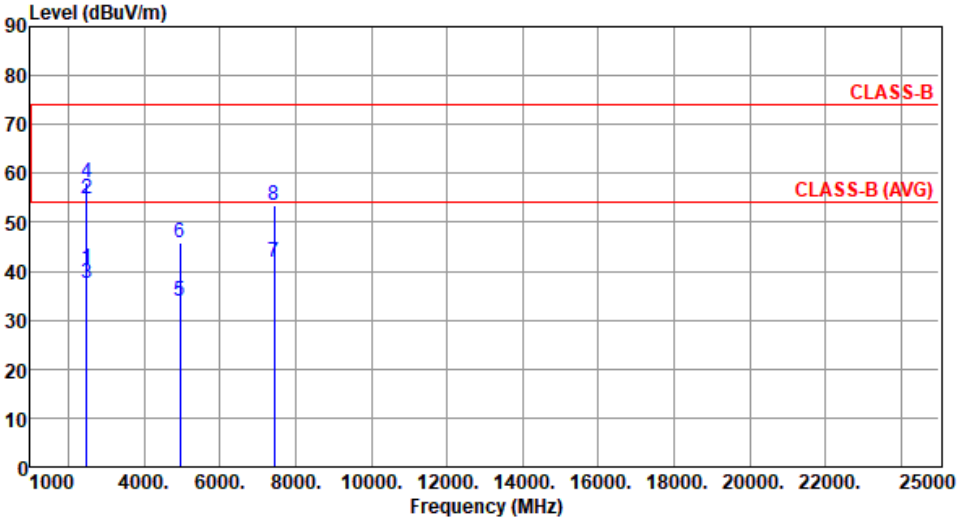


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	43.15	54.00	-10.85	47.24	-4.09	Average	116	131
2	2483.50	57.14	74.00	-16.86	61.23	-4.09	Peak	116	131
3	2490.00	37.76	54.00	-16.24	41.87	-4.11	Average	116	131
4	2490.00	62.08	74.00	-11.92	66.19	-4.11	Peak	116	131
5	4960.00	36.52	54.00	-17.48	36.34	0.18	Average	231	151
6	4960.00	48.11	74.00	-25.89	47.93	0.18	Peak	231	151
7	7440.00	40.32	54.00	-13.68	34.36	5.96	Average	100	339
8	7440.00	52.48	74.00	-21.52	46.52	5.96	Peak	100	339

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

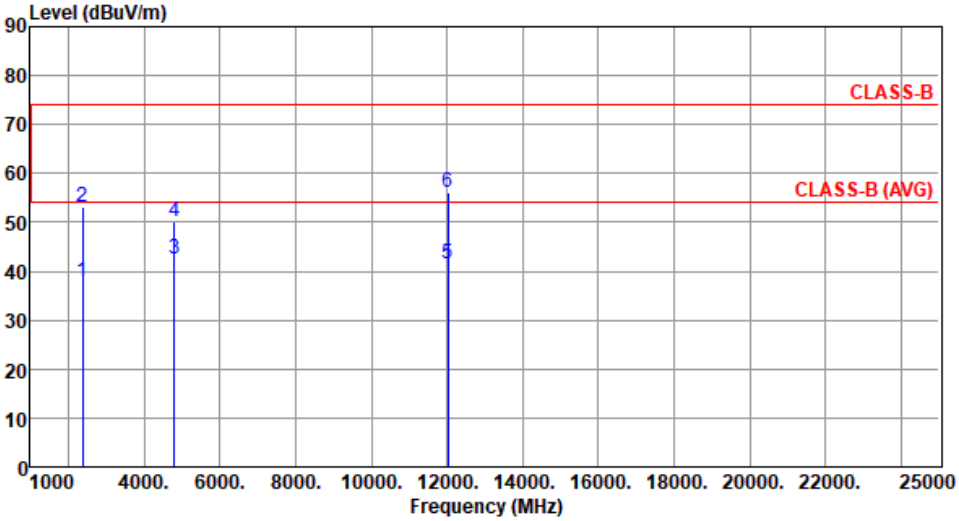


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	40.40	54.00	-13.60	44.49	-4.09	Average	304	46
2	2483.50	54.79	74.00	-19.21	58.88	-4.09	Peak	304	46
3	2490.00	37.51	54.00	-16.49	41.62	-4.11	Average	304	46
4	2490.00	58.19	74.00	-15.81	62.30	-4.11	Peak	304	46
5	4960.00	33.83	54.00	-20.17	33.65	0.18	Average	100	201
6	4960.00	45.69	74.00	-28.31	45.51	0.18	Peak	100	201
7	7440.00	41.82	54.00	-12.18	35.86	5.96	Average	100	359
8	7440.00	53.48	74.00	-20.52	47.52	5.96	Peak	100	359

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

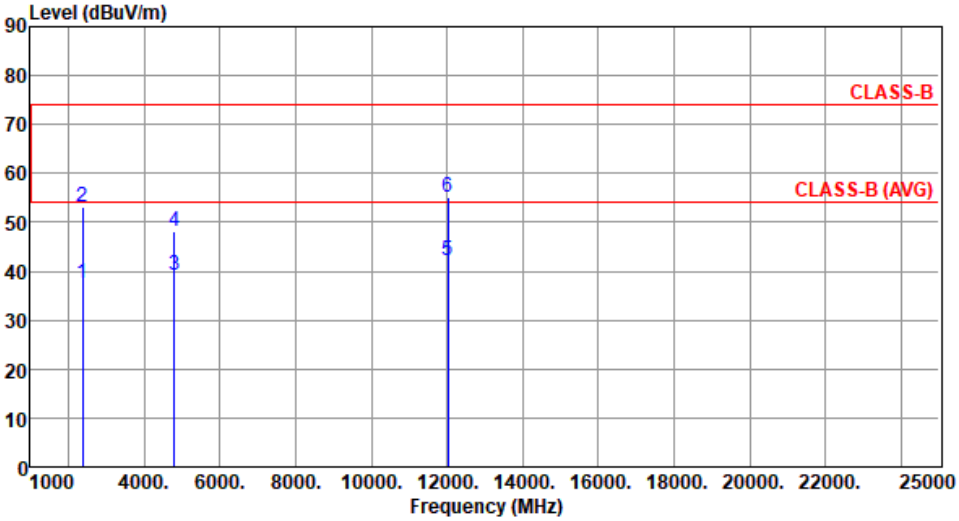


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	37.82	54.00	-16.18	41.61	-3.79	Average	129	196
2	2390.00	53.15	74.00	-20.85	56.94	-3.79	Peak	129	196
3	4808.00	42.54	54.00	-11.46	42.49	0.05	Average	100	221
4	4808.00	50.26	74.00	-23.74	50.21	0.05	Peak	100	221
5	12020.00	41.65	54.00	-12.35	33.88	7.77	Average	100	24
6	12020.00	56.21	74.00	-17.79	48.44	7.77	Peak	100	24

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

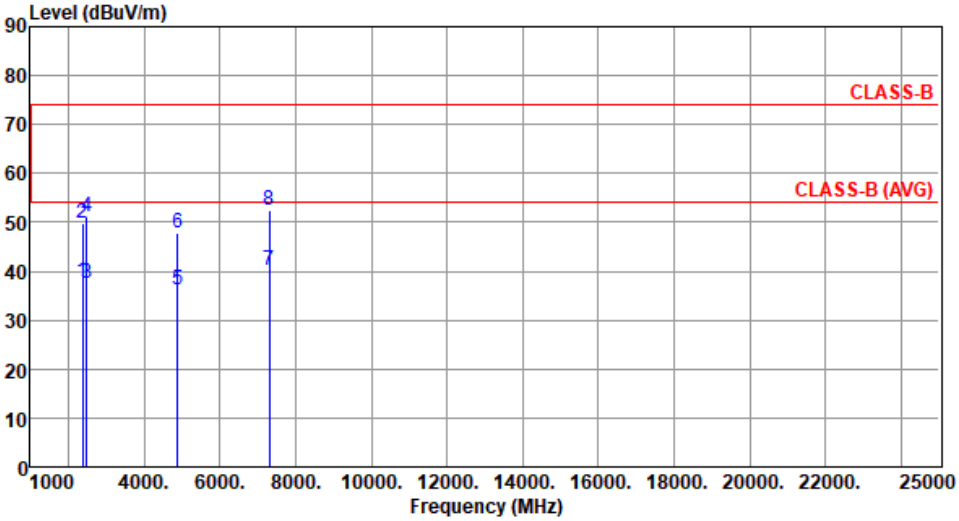


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	37.55	54.00	-16.45	41.34	-3.79	Average	305	68
2	2390.00	53.06	74.00	-20.94	56.85	-3.79	Peak	305	68
3	4808.00	39.25	54.00	-14.75	39.20	0.05	Average	100	192
4	4808.00	48.14	74.00	-25.86	48.09	0.05	Peak	100	192
5	12020.00	42.21	54.00	-11.79	34.44	7.77	Average	100	51
6	12020.00	55.26	74.00	-18.74	47.49	7.77	Peak	100	51

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(℃):24 Humidity(%):63

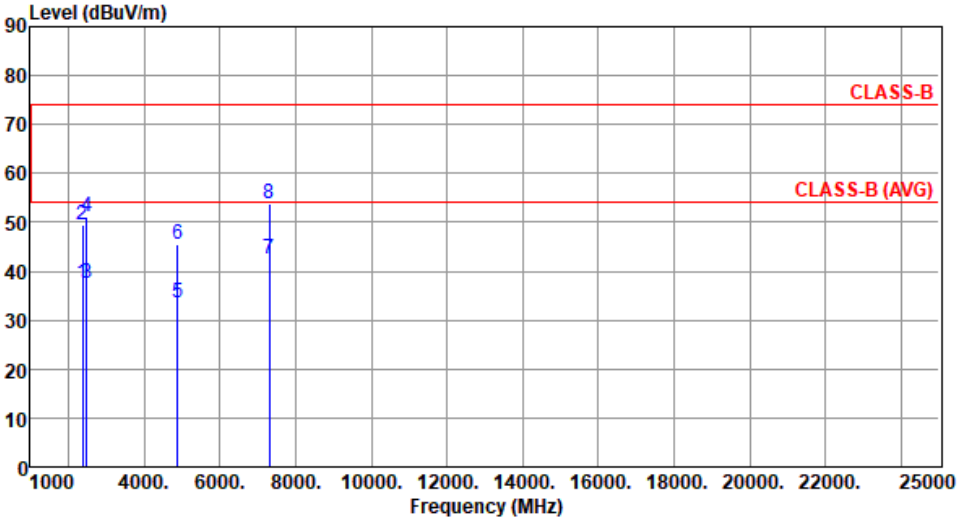


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	37.87	54.00	-16.13	41.66	-3.79	Average	115	240
2	2390.00	49.66	74.00	-24.34	53.45	-3.79	Peak	115	240
3	2483.50	37.66	54.00	-16.34	41.75	-4.09	Average	115	240
4	2483.50	51.12	74.00	-22.88	55.21	-4.09	Peak	115	240
5	4880.00	36.24	54.00	-17.76	36.14	0.10	Average	231	165
6	4880.00	47.91	74.00	-26.09	47.81	0.10	Peak	231	165
7	7320.00	40.16	54.00	-13.84	34.25	5.91	Average	100	341
8	7320.00	52.44	74.00	-21.56	46.53	5.91	Peak	100	341

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

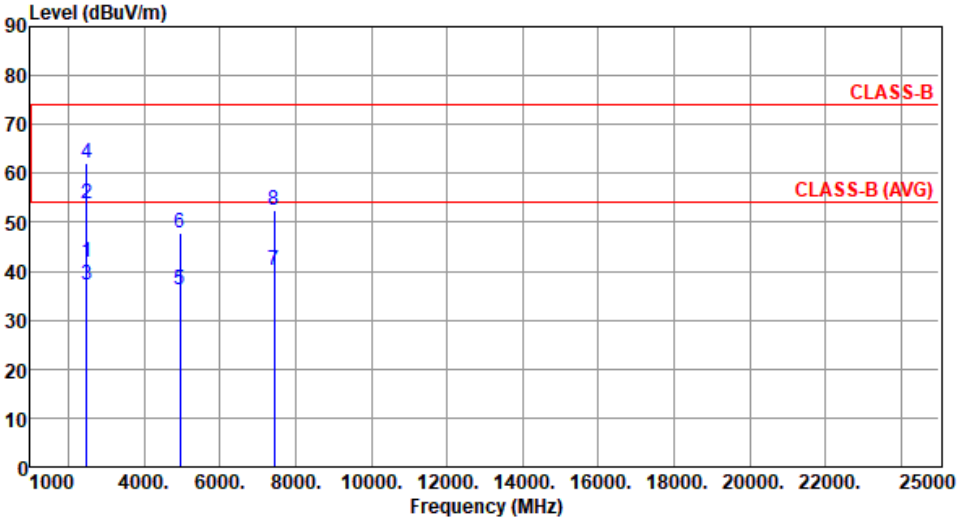


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	37.68	54.00	-16.32	41.47	-3.79	Average	314	61
2	2390.00	49.51	74.00	-24.49	53.30	-3.79	Peak	314	61
3	2483.50	37.55	54.00	-16.45	41.64	-4.09	Average	314	61
4	2483.50	51.04	74.00	-22.96	55.13	-4.09	Peak	314	61
5	4880.00	33.45	54.00	-20.55	33.35	0.10	Average	100	189
6	4880.00	45.34	74.00	-28.66	45.24	0.10	Peak	100	189
7	7320.00	42.35	54.00	-11.65	36.44	5.91	Average	100	6
8	7320.00	53.68	74.00	-20.32	47.77	5.91	Peak	100	6

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

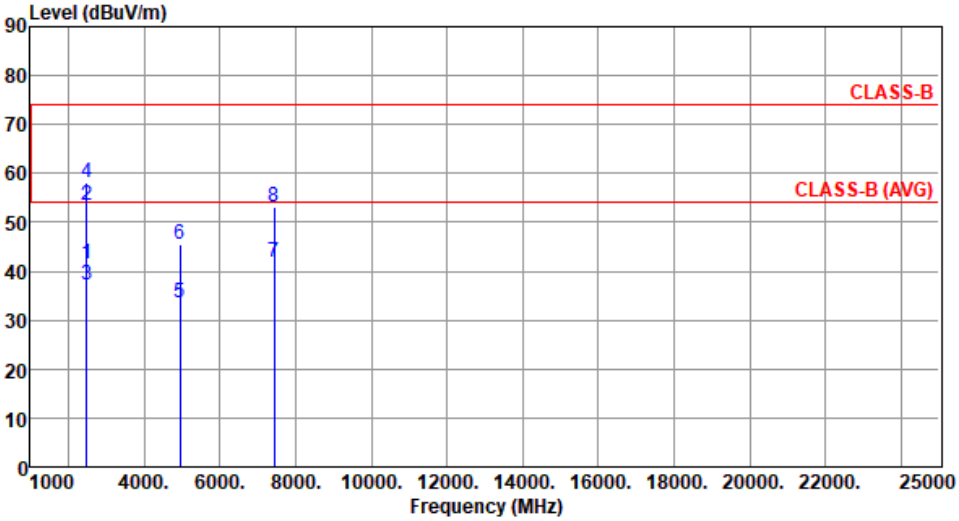


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	41.73	54.00	-12.27	45.82	-4.09	Average	115	119
2	2483.50	53.82	74.00	-20.18	57.91	-4.09	Peak	115	119
3	2490.00	37.31	54.00	-16.69	41.42	-4.11	Average	115	119
4	2490.00	62.01	74.00	-11.99	66.12	-4.11	Peak	115	119
5	4956.00	36.14	54.00	-17.86	35.99	0.15	Average	226	148
6	4956.00	47.82	74.00	-26.18	47.67	0.15	Peak	226	148
7	7434.00	40.27	54.00	-13.73	34.31	5.96	Average	100	341
8	7434.00	52.35	74.00	-21.65	46.39	5.96	Peak	100	341

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	2483.50	41.59	54.00	-12.41	45.68	-4.09	Average	302	54
2	2483.50	53.62	74.00	-20.38	57.71	-4.09	Peak	302	54
3	2490.00	37.25	54.00	-16.75	41.36	-4.11	Average	302	54
4	2490.00	58.14	74.00	-15.86	62.25	-4.11	Peak	302	54
5	4956.00	33.62	54.00	-20.38	33.47	0.15	Average	100	205
6	4956.00	45.54	74.00	-28.46	45.39	0.15	Peak	100	205
7	7434.00	41.77	54.00	-12.23	35.81	5.96	Average	100	354
8	7434.00	53.28	74.00	-20.72	47.32	5.96	Peak	100	354

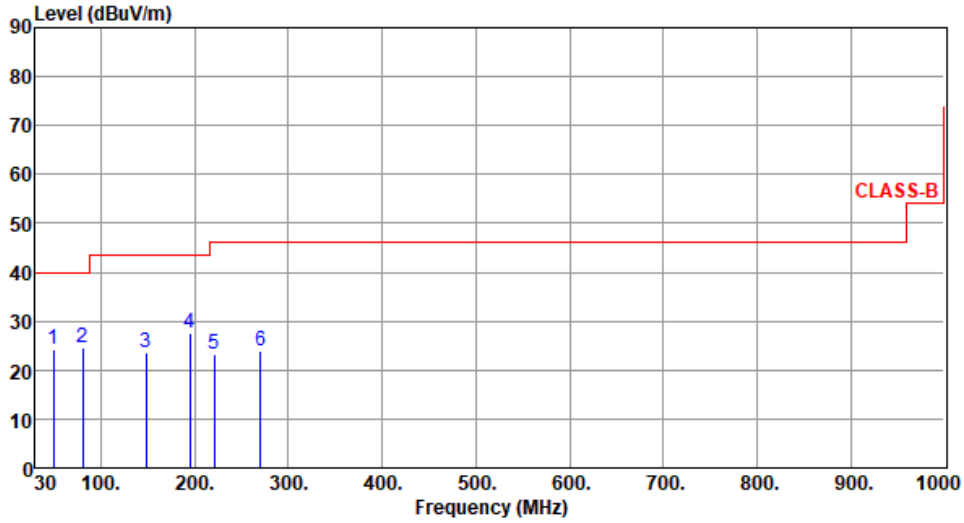
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Test configuration 2: Laird part number: 453-00145, 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

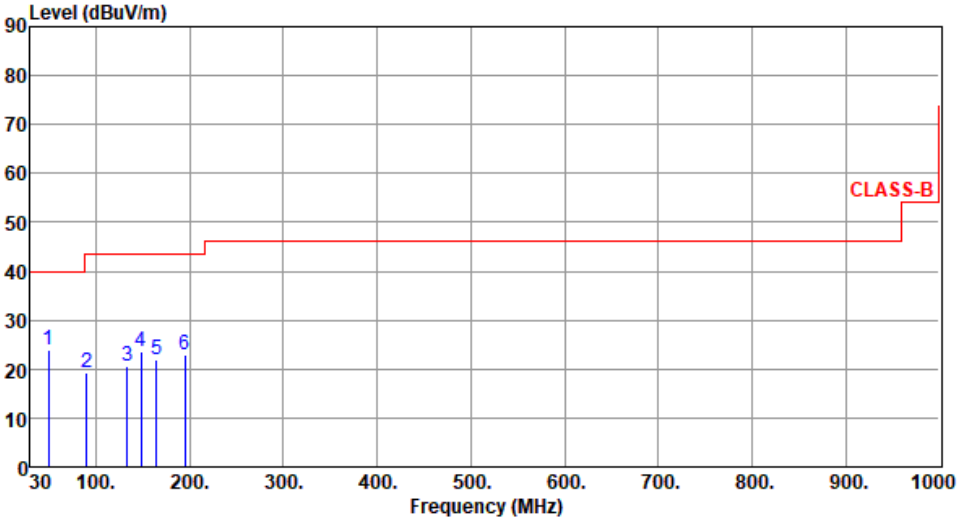


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	49.40	24.11	40.00	-15.89	32.40	-8.29	Peak	---	---
2	80.44	24.68	40.00	-15.32	38.44	-13.76	Peak	---	---
3	148.34	23.67	43.50	-19.83	32.29	-8.62	Peak	---	---
4	194.90	27.67	43.50	-15.83	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



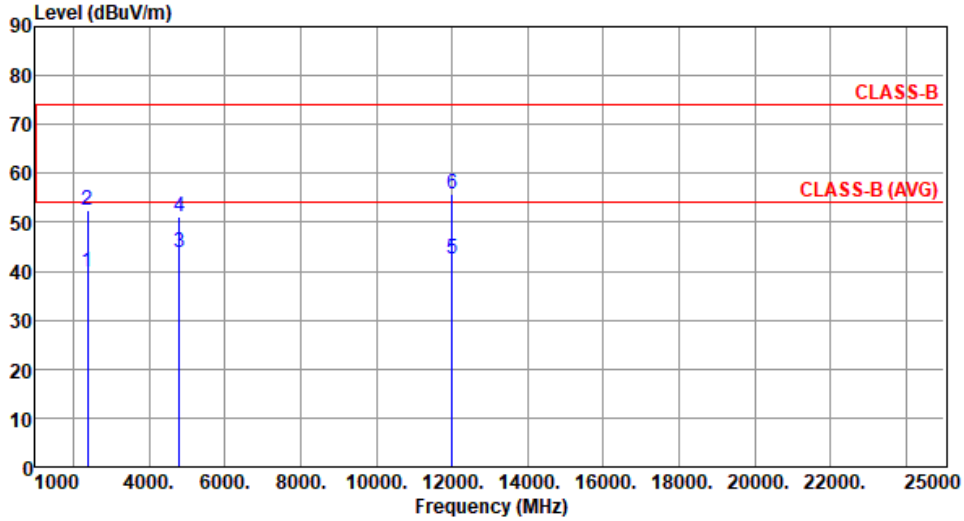
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	49.40	23.94	40.00	-16.06	32.23	-8.29	Peak	---	---
2	90.14	19.29	43.50	-24.21	33.86	-14.57	Peak	---	---
3	133.79	20.54	43.50	-22.96	30.28	-9.74	Peak	---	---
4	148.34	23.69	43.50	-19.81	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

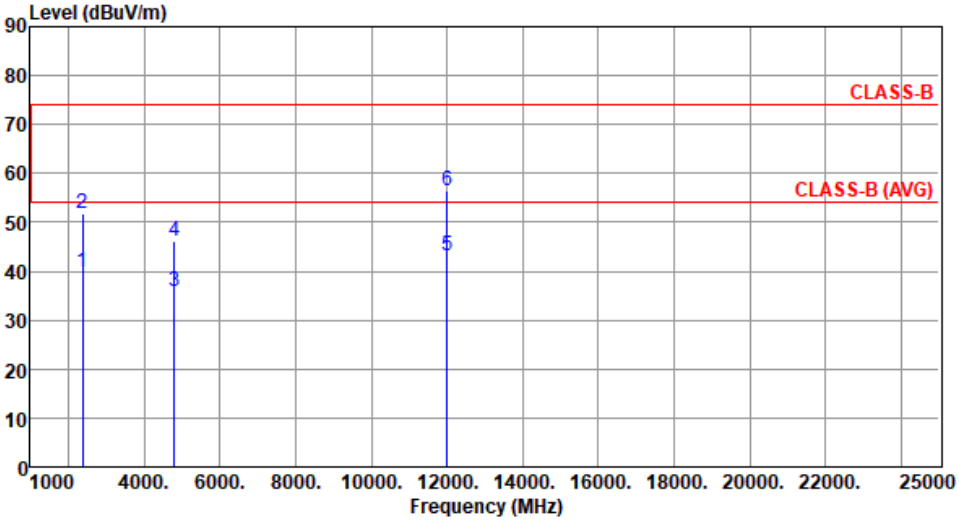


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.88	54.00	-14.12	43.67	-3.79	Average	100	352
2	2390.00	52.57	74.00	-21.43	56.36	-3.79	Peak	100	352
3	4804.00	43.89	54.00	-10.11	43.86	0.03	Average	100	352
4	4804.00	51.27	74.00	-22.73	51.24	0.03	Peak	100	352
5	12010.00	42.42	54.00	-11.58	34.66	7.76	Average	100	65
6	12010.00	55.65	74.00	-18.35	47.89	7.76	Peak	100	65

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

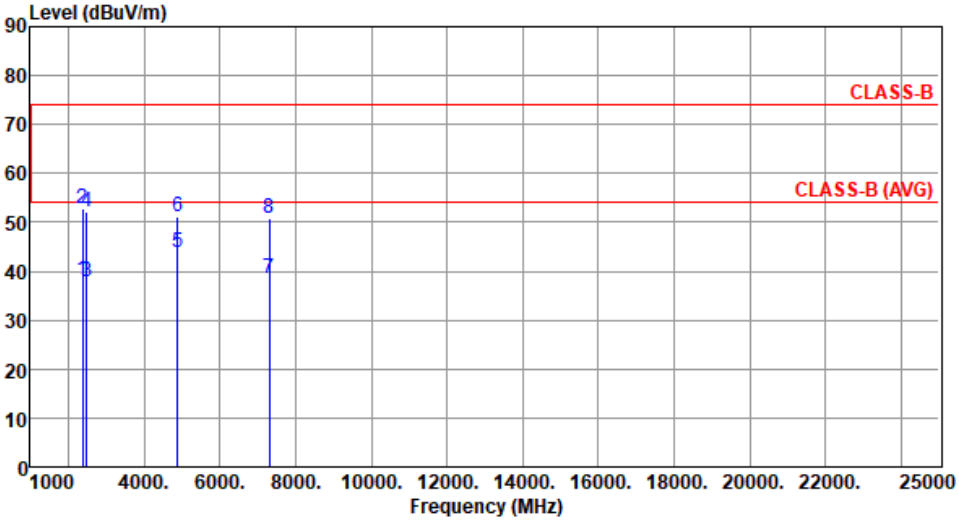


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.84	54.00	-14.16	43.63	-3.79	Average	302	291
2	2390.00	51.86	74.00	-22.14	55.65	-3.79	Peak	302	291
3	4804.00	35.89	54.00	-18.11	35.86	0.03	Average	100	304
4	4804.00	46.28	74.00	-27.72	46.25	0.03	Peak	100	304
5	12010.00	43.04	54.00	-10.96	35.28	7.76	Average	100	55
6	12010.00	56.31	74.00	-17.69	48.55	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)**	2440
Polarization	Horizontal		

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

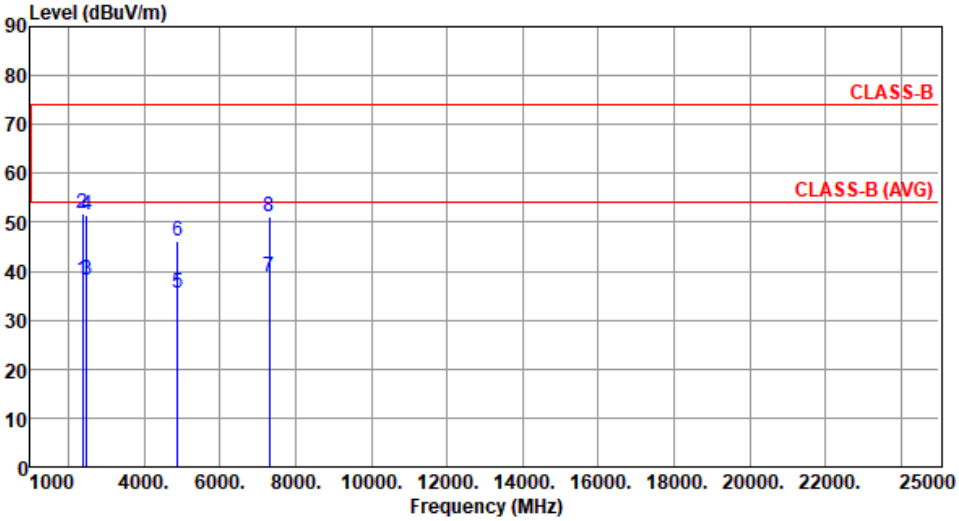


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.15	54.00	-15.85	41.94	-3.79	Average	105	256
2	2390.00	52.68	74.00	-21.32	56.47	-3.79	Peak	105	256
3	2483.50	37.85	54.00	-16.15	41.94	-4.09	Average	105	256
4	2483.50	52.14	74.00	-21.86	56.23	-4.09	Peak	105	256
5	4880.00	43.75	54.00	-10.25	43.65	0.10	Average	100	349
6	4880.00	51.04	74.00	-22.96	50.94	0.10	Peak	100	349
7	7320.00	38.36	54.00	-15.64	32.45	5.91	Average	326	310
8	7320.00	50.77	74.00	-23.23	44.86	5.91	Peak	326	310

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

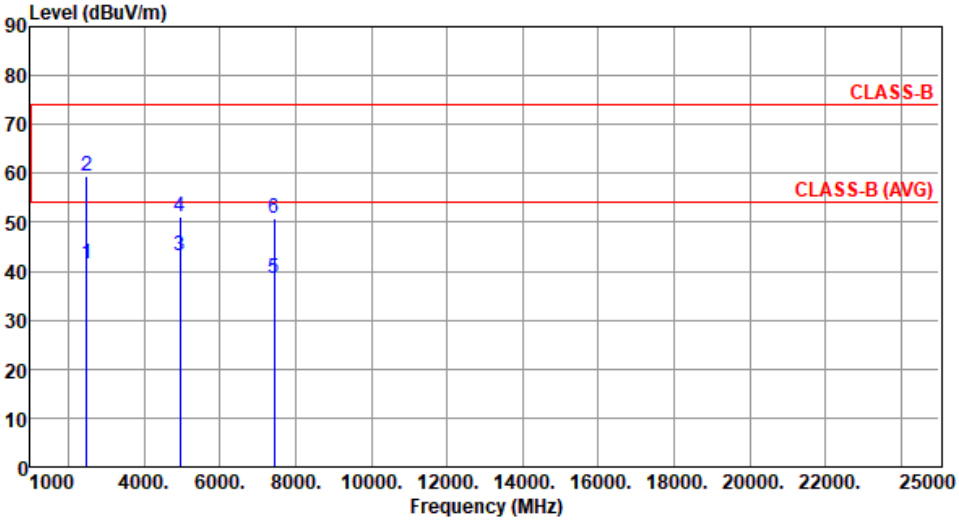


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.21	54.00	-15.79	42.00	-3.79	Average	304	295
2	2390.00	51.76	74.00	-22.24	55.55	-3.79	Peak	304	295
3	2483.50	38.16	54.00	-15.84	42.25	-4.09	Average	304	295
4	2483.50	51.42	74.00	-22.58	55.51	-4.09	Peak	304	295
5	4880.00	35.66	54.00	-18.34	35.56	0.10	Average	100	301
6	4880.00	46.12	74.00	-27.88	46.02	0.10	Peak	100	301
7	7320.00	38.85	54.00	-15.15	32.94	5.91	Average	231	19
8	7320.00	51.17	74.00	-22.83	45.26	5.91	Peak	231	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 (125kbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Paul Lin Temperature(℃):22 Humidity(%):63

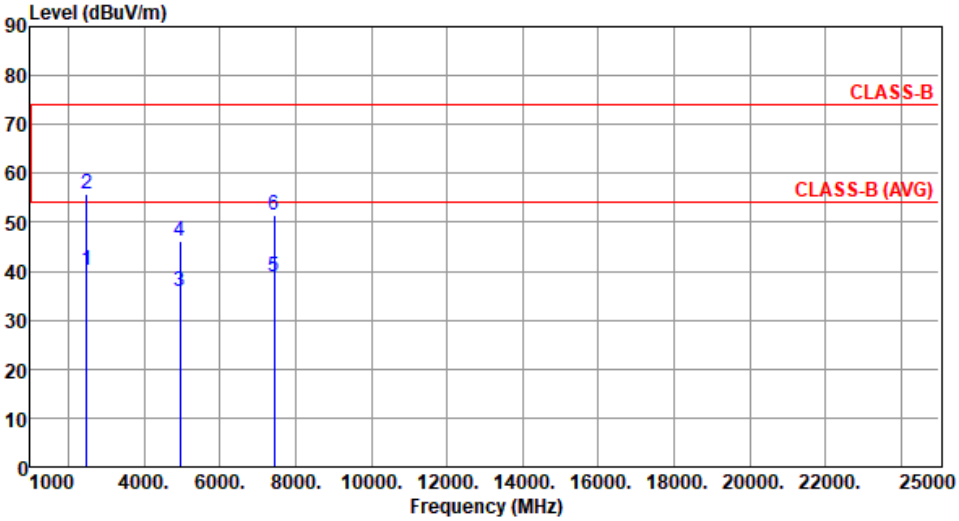


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	41.53	54.00	-12.47	45.62	-4.09	Average	100	330
2	2483.50	59.48	74.00	-14.52	63.57	-4.09	Peak	100	330
3	4956.00	43.17	54.00	-10.83	43.02	0.15	Average	100	342
4	4956.00	51.03	74.00	-22.97	50.88	0.15	Peak	100	342
5	7434.00	38.37	54.00	-15.63	32.41	5.96	Average	318	295
6	7434.00	50.87	74.00	-23.13	44.91	5.96	Peak	318	295

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(℃):22 Humidity(%):63

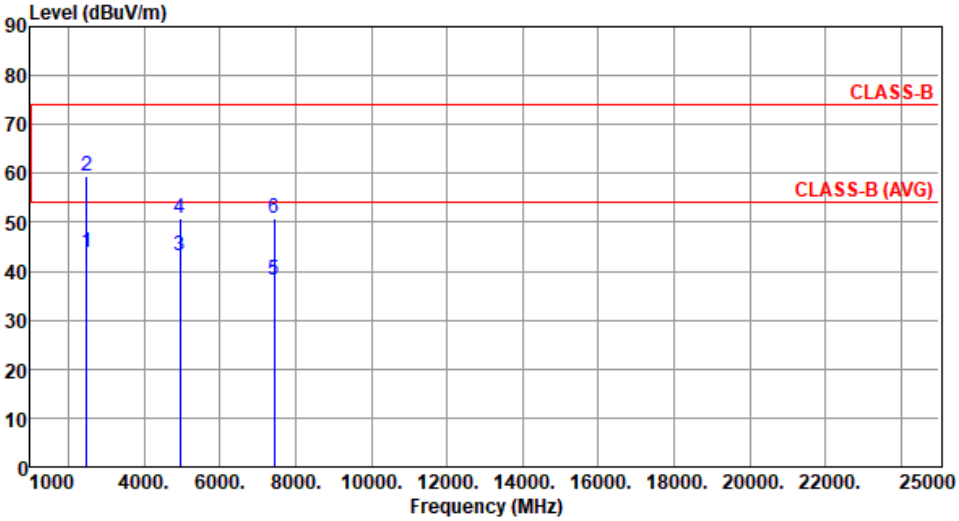


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	40.18	54.00	-13.82	44.27	-4.09	Average	319	270
2	2483.50	55.83	74.00	-18.17	59.92	-4.09	Peak	319	270
3	4956.00	35.80	54.00	-18.20	35.65	0.15	Average	100	309
4	4956.00	46.14	74.00	-27.86	45.99	0.15	Peak	100	309
5	7434.00	38.88	54.00	-15.12	32.92	5.96	Average	237	35
6	7434.00	51.34	74.00	-22.66	45.38	5.96	Peak	237	35

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

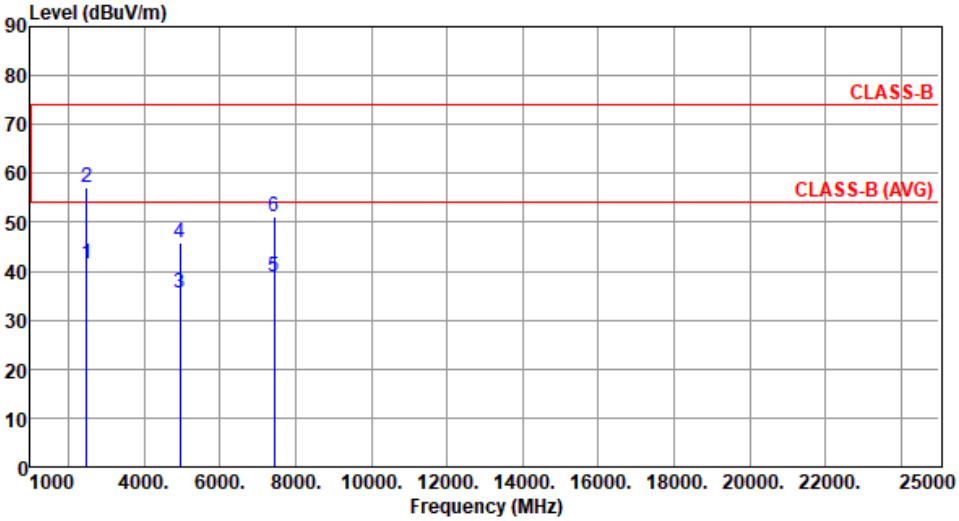


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	43.85	54.00	-10.15	47.94	-4.09	Average	100	323
2	2483.50	59.29	74.00	-14.71	63.38	-4.09	Peak	100	323
3	4960.00	43.24	54.00	-10.76	43.06	0.18	Average	100	348
4	4960.00	50.86	74.00	-23.14	50.68	0.18	Peak	100	348
5	7440.00	38.12	54.00	-15.88	32.16	5.96	Average	321	305
6	7440.00	50.65	74.00	-23.35	44.69	5.96	Peak	321	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 (125kbps)	**Test Freq. (MHz)**	2480
Polarization	Vertical		

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

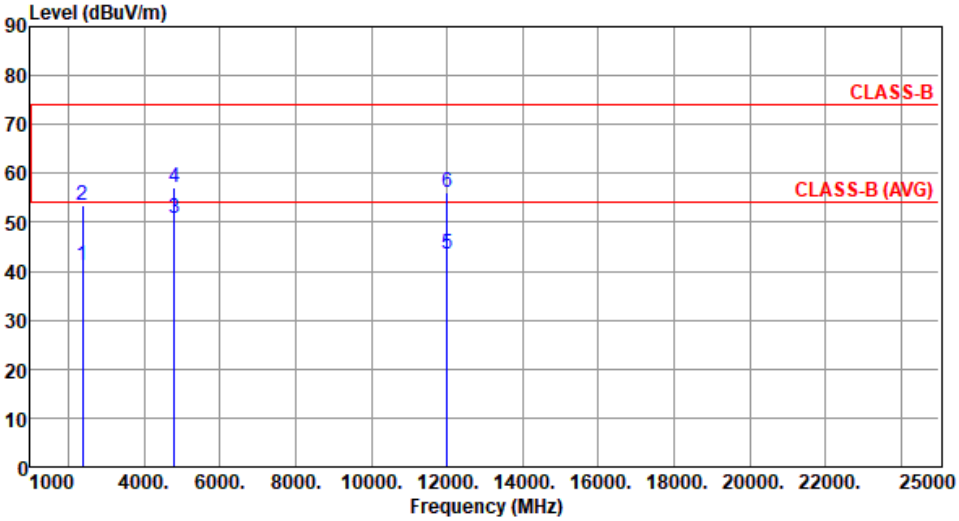


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	41.62	54.00	-12.38	45.71	-4.09	Average	315	264
2	2483.50	56.98	74.00	-17.02	61.07	-4.09	Peak	315	264
3	4960.00	35.42	54.00	-18.58	35.24	0.18	Average	100	305
4	4960.00	45.91	74.00	-28.09	45.73	0.18	Peak	100	305
5	7440.00	38.72	54.00	-15.28	32.76	5.96	Average	236	28
6	7440.00	51.04	74.00	-22.96	45.08	5.96	Peak	236	28

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 (500kbps)	**Test Freq. (MHz)**	2402
Polarization	Horizontal		

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

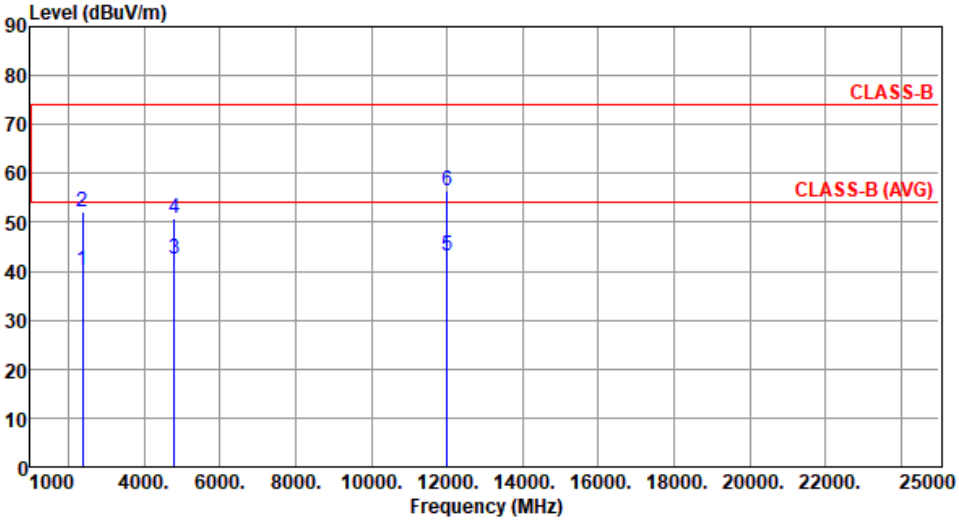


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	41.09	54.00	-12.91	44.88	-3.79	Average	100	328
2	2390.00	53.59	74.00	-20.41	57.38	-3.79	Peak	100	328
3	4804.00	50.79	54.00	-3.21	50.76	0.03	Average	100	358
4	4804.00	57.15	74.00	-16.85	57.12	0.03	Peak	100	358
5	12010.00	43.35	54.00	-10.65	35.59	7.76	Average	100	41
6	12010.00	56.28	74.00	-17.72	48.52	7.76	Peak	100	41

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 (500kbps)	**Test Freq. (MHz)**	2402
Polarization	Vertical		

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

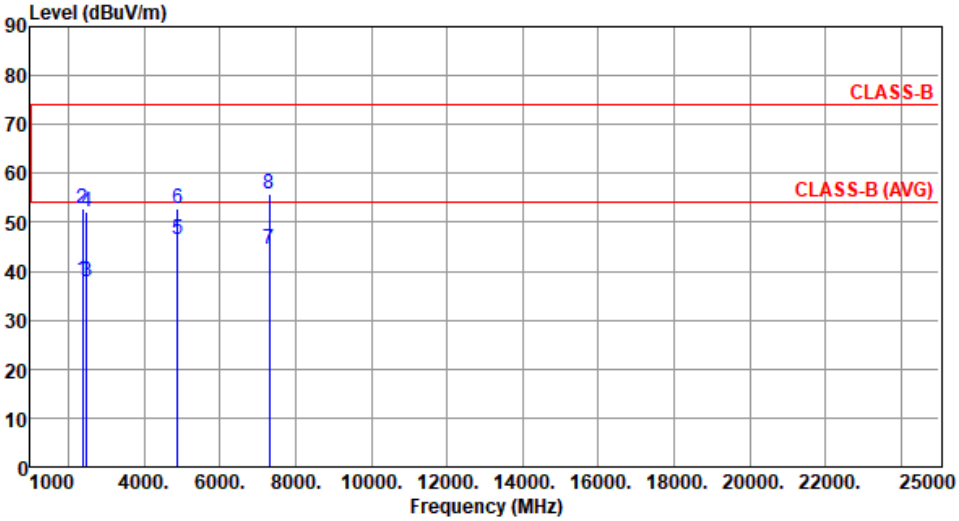


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	40.02	54.00	-13.98	43.81	-3.79	Average	304	295
2	2390.00	52.18	74.00	-21.82	55.97	-3.79	Peak	304	295
3	4804.00	42.55	54.00	-11.45	42.52	0.03	Average	100	316
4	4804.00	50.69	74.00	-23.31	50.66	0.03	Peak	100	316
5	12010.00	43.29	54.00	-10.71	35.53	7.76	Average	100	58
6	12010.00	56.43	74.00	-17.57	48.67	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 (500kbps)	**Test Freq. (MHz)**	2440
Polarization	Horizontal		

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

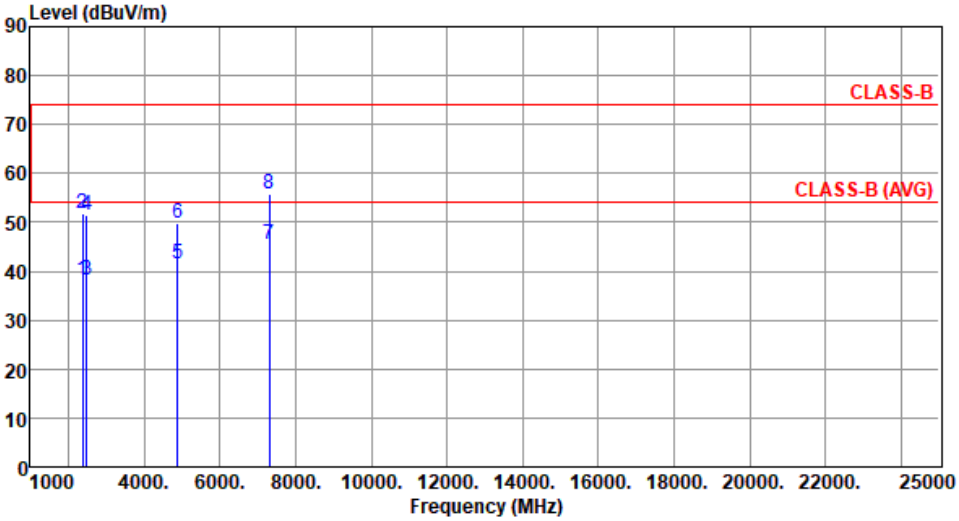


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.29	54.00	-15.71	42.08	-3.79	Average	100	286
2	2390.00	52.75	74.00	-21.25	56.54	-3.79	Peak	100	286
3	2483.50	38.02	54.00	-15.98	42.11	-4.09	Average	100	286
4	2483.50	52.29	74.00	-21.71	56.38	-4.09	Peak	100	286
5	4880.00	46.34	54.00	-7.66	46.24	0.10	Average	100	349
6	4880.00	52.78	74.00	-21.22	52.68	0.10	Peak	100	349
7	7320.00	44.62	54.00	-9.38	38.71	5.91	Average	285	302
8	7320.00	55.74	74.00	-18.26	49.83	5.91	Peak	285	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 (500kbps)	**Test Freq. (MHz)**	2440
Polarization	Vertical		

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

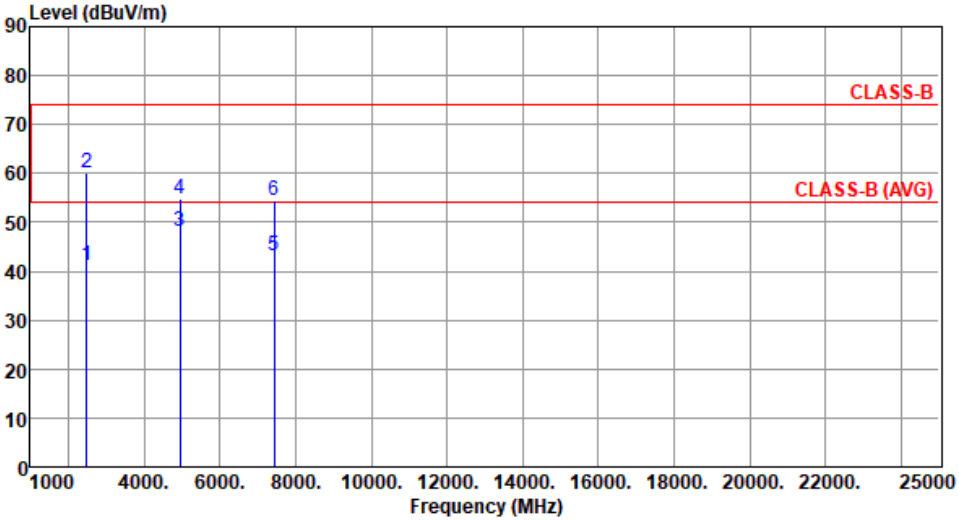


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.12	54.00	-15.88	41.91	-3.79	Average	301	295
2	2390.00	51.76	74.00	-22.24	55.55	-3.79	Peak	301	295
3	2483.50	38.12	54.00	-15.88	42.21	-4.09	Average	301	295
4	2483.50	51.44	74.00	-22.56	55.53	-4.09	Peak	301	295
5	4880.00	41.39	54.00	-12.61	41.29	0.10	Average	100	344
6	4880.00	49.68	74.00	-24.32	49.58	0.10	Peak	100	344
7	7320.00	45.56	54.00	-8.44	39.65	5.91	Average	231	19
8	7320.00	55.71	74.00	-18.29	49.80	5.91	Peak	231	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 (500kbps)	**Test Freq. (MHz)**	2478
Polarization	Horizontal		

Test By :Paul Lin Temperature(℃):22 Humidity(%):63

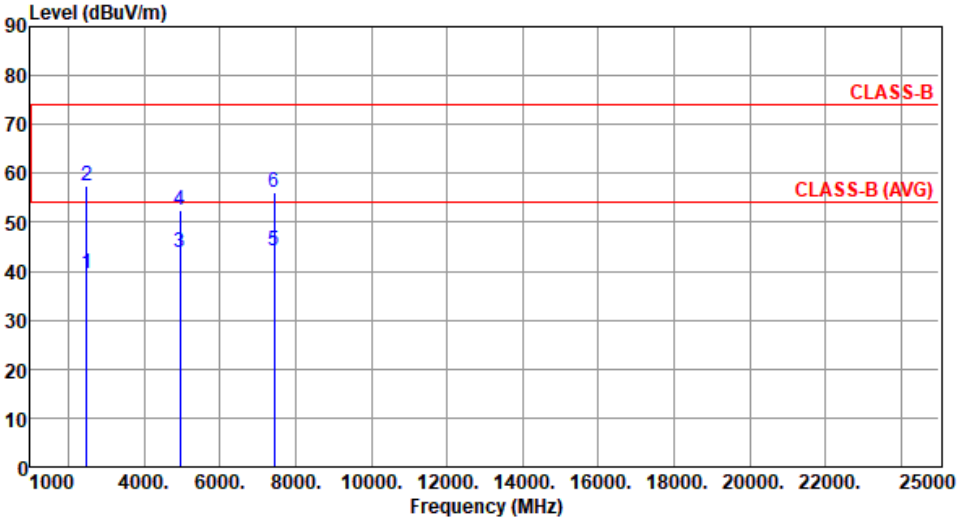


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	41.26	54.00	-12.74	45.35	-4.09	Average	100	316
2	2483.50	60.08	74.00	-13.92	64.17	-4.09	Peak	100	316
3	4956.00	48.27	54.00	-5.73	48.12	0.15	Average	100	26
4	4956.00	54.76	74.00	-19.24	54.61	0.15	Peak	100	26
5	7434.00	43.22	54.00	-10.78	37.26	5.96	Average	317	307
6	7434.00	54.52	74.00	-19.48	48.56	5.96	Peak	317	307

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 (500kbps)	**Test Freq. (MHz)**	2478
Polarization	Vertical		

Test By :Paul Lin Temperature(℃):22 Humidity(%):63

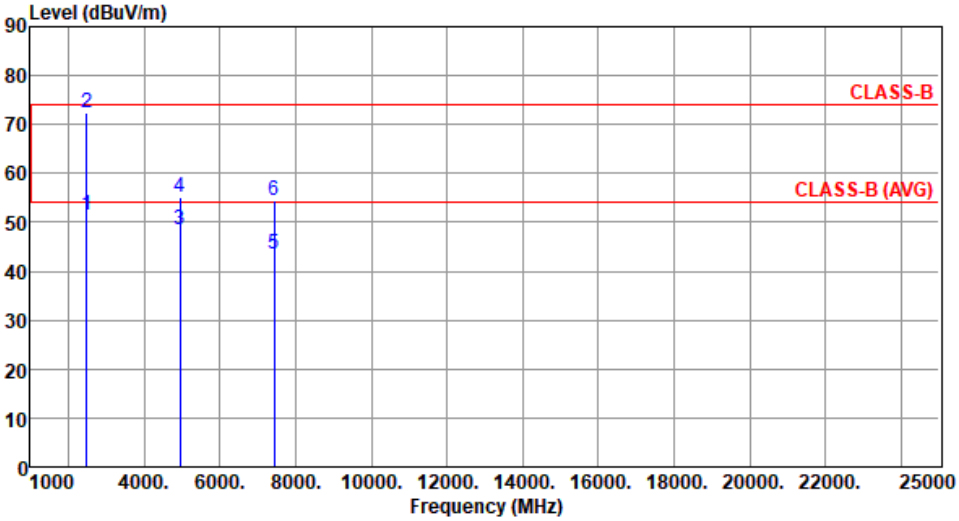


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	39.50	54.00	-14.50	43.59	-4.09	Average	331	271
2	2483.50	57.49	74.00	-16.51	61.58	-4.09	Peak	331	271
3	4956.00	43.68	54.00	-10.32	43.53	0.15	Average	100	357
4	4956.00	52.37	74.00	-21.63	52.22	0.15	Peak	100	357
5	7434.00	44.25	54.00	-9.75	38.29	5.96	Average	236	25
6	7434.00	55.97	74.00	-18.03	50.01	5.96	Peak	236	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 (500kbps)	**Test Freq. (MHz)**	2480
Polarization	Horizontal		

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

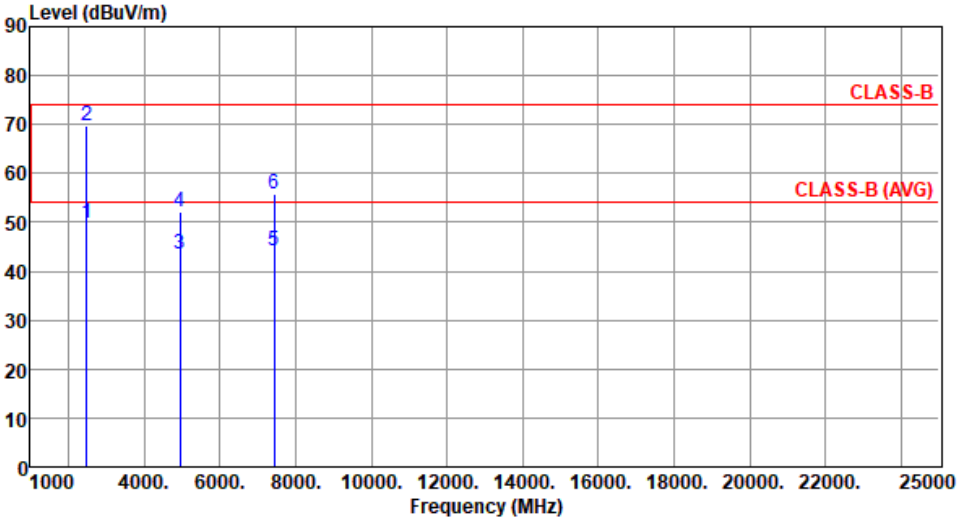


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	51.56	54.00	-2.44	55.65	-4.09	Average	100	324
2	2483.50	72.30	74.00	-1.70	76.39	-4.09	Peak	100	324
3	4960.00	48.42	54.00	-5.58	48.24	0.18	Average	100	19
4	4960.00	55.05	74.00	-18.95	54.87	0.18	Peak	100	19
5	7440.00	43.36	54.00	-10.64	37.40	5.96	Average	322	303
6	7440.00	54.61	74.00	-19.39	48.65	5.96	Peak	322	303

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 (500kbps)	**Test Freq. (MHz)**	2480
Polarization	Vertical		

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

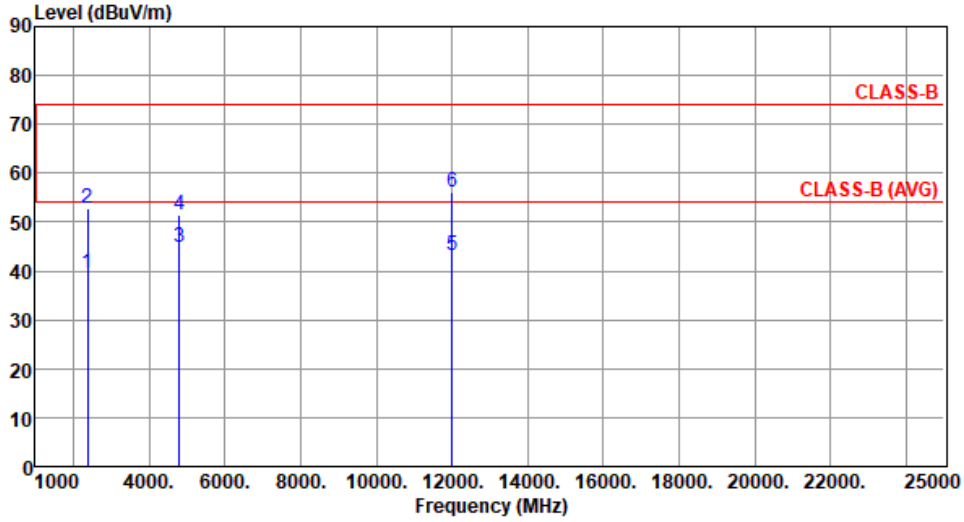


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	49.75	54.00	-4.25	53.84	-4.09	Average	325	262
2	2483.50	69.82	74.00	-4.18	73.91	-4.09	Peak	325	262
3	4960.00	43.52	54.00	-10.48	43.34	0.18	Average	100	354
4	4960.00	52.21	74.00	-21.79	52.03	0.18	Peak	100	354
5	7440.00	44.17	54.00	-9.83	38.21	5.96	Average	231	22
6	7440.00	55.84	74.00	-18.16	49.88	5.96	Peak	231	22

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

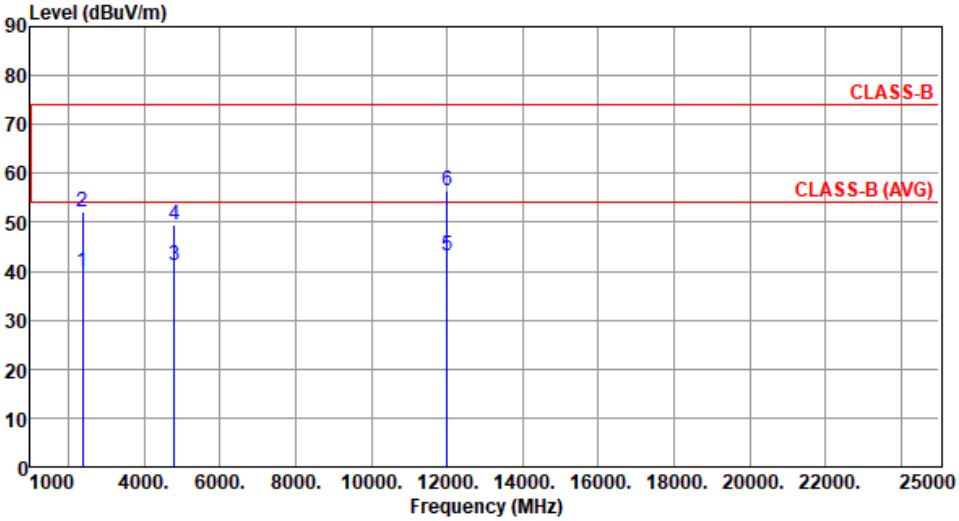


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.53	54.00	-14.47	43.32	-3.79	Average	112	238
2	2390.00	52.82	74.00	-21.18	56.61	-3.79	Peak	112	238
3	4804.00	44.78	54.00	-9.22	44.75	0.03	Average	257	12
4	4804.00	51.36	74.00	-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(°C):23 Humidity(%):63

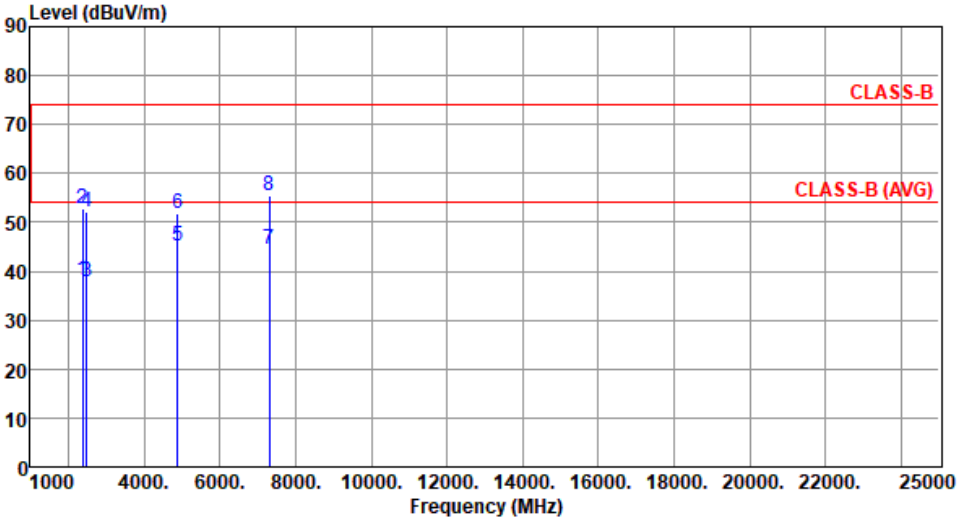


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.83	54.00	-14.17	43.62	-3.79	Average	302	292
2	2390.00	52.06	74.00	-21.94	55.85	-3.79	Peak	302	292
3	4804.00	41.05	54.00	-12.95	41.02	0.03	Average	105	345
4	4804.00	49.36	74.00	-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

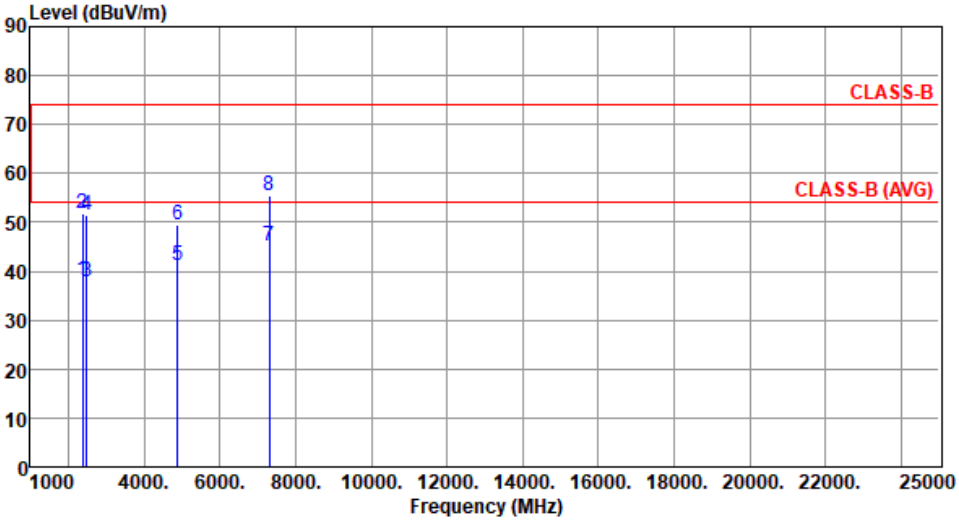


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.19	54.00	-15.81	41.98	-3.79	Average	110	224
2	2390.00	52.66	74.00	-21.34	56.45	-3.79	Peak	110	224
3	2483.50	37.90	54.00	-16.10	41.99	-4.09	Average	110	224
4	2483.50	52.12	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

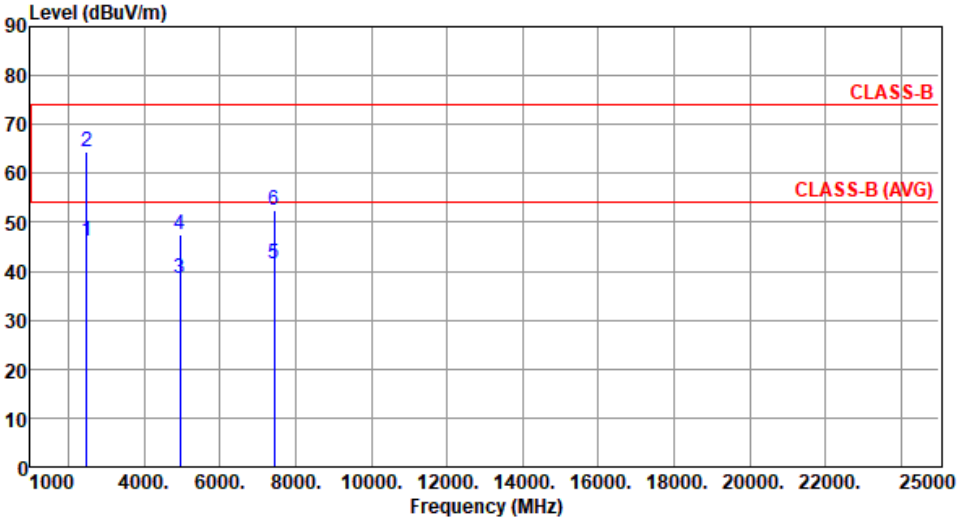


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	38.06	54.00	-15.94	41.85	-3.79	Average	301	299
2	2390.00	51.77	74.00	-22.23	55.56	-3.79	Peak	301	299
3	2483.50	37.99	54.00	-16.01	42.08	-4.09	Average	301	299
4	2483.50	51.32	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

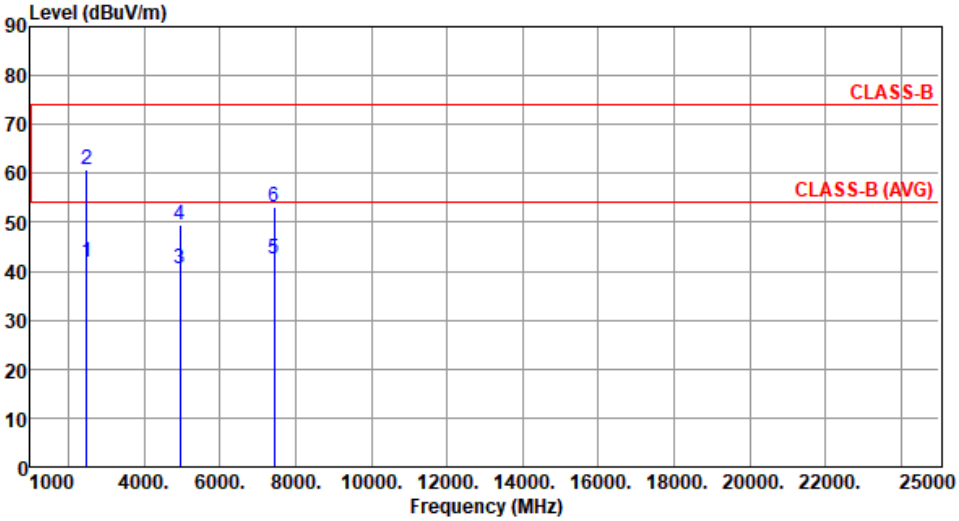


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	46.01	54.00	-7.99	50.10	-4.09	Average	127	181
2	2483.50	64.53	74.00	-9.47	68.62	-4.09	Peak	127	181
3	4956.00	38.51	54.00	-15.49	38.36	0.15	Average	247	349
4	4956.00	47.58	74.00	-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

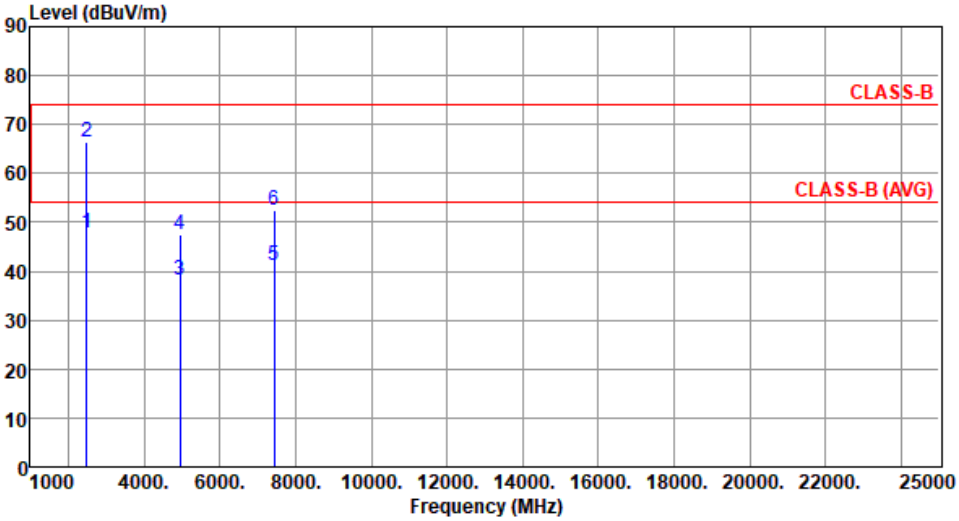


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	42.00	54.00	-12.00	46.09	-4.09	Average	322	99
2	2483.50	60.92	74.00	-13.08	65.01	-4.09	Peak	322	99
3	4956.00	40.61	54.00	-13.39	40.46	0.15	Average	100	345
4	4956.00	49.32	74.00	-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).