

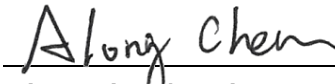
FCC Test Report

FCC ID : SQG-BL54H20
Equipment : Multi-core Bluetooth LE + 802.15.4 + NFC module
Model No. : BL54H20
Brand Name : Ezurio
Applicant : Ezurio LLC
Address : W66N220 Commerce Court, Cedarburg, WI 53012 United States Of America
Standard : 47 CFR FCC Part 15.247
Received Date : Nov. 12, 2024
Tested Date : Nov. 12 ~ Nov. 18, 2024

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

Reviewed by:

Approved by:


Along Chen / Assistant Manager

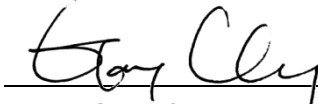

Gary Chang / Manager

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Appendix A. 6dB and Occupied Bandwidth

Appendix B. Conducted Output Power

Appendix C. Power Spectral Density

Appendix D. Unwanted Emissions into Restricted Frequency Bands

Appendix E. Emissions in Non-Restricted Frequency Bands

Appendix F. AC Power Line Conducted Emissions

Release Record

Report No.	Version	Description	Issued Date
FR4N1402AE	Rev. 01	Initial issue	Jan. 09, 2025

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emissions	[dBuV]: 24.922MHz 24.67 (Margin -25.33dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 7.44GHz 46.32 (Margin -7.68dB) - AV	Pass
15.247(b)(3)	Conducted Output Power	Power [dBm]: 7.10	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 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	40	125 kbps
				500 kbps
				1 Mbps
		2404-2478	37	2 Mbps
Note: Bluetooth LE (Low energy) uses GFSK modulation.				

1.1.2 Antenna Details

External Antenna list for BL54H20 MHF4 module variant (453-00198)

Ant. No.	Manufacturer	Model	Part Number	Type	Connector	2400-2500 (MHz)	2400-2480 (MHz)
1	Ezurio	NanoBlue	EBL2400A1-10MH4L	PCB Dipole	IPEX MHF4	2 dBi	-
2	Ezurio	FlexPIFA	001-0022	FlexPIFA	IPEX MHF4L	-	2 dBi
3	Mag.Layers	EDA-8709-2G4C1-B27-CY	0600-00057	Dipole	IPEX MHF4	2.32 dBi	-
4	Ezurio	mFlexPIFA	EFA2400A3S-10MH4L	FlexPIFA	IPEX MHF4L	-	2 dBi
5	Ezurio	iFlexPIFA Mini Series	EFG2401A3S-10MH4L	i-FlexPIFA	IPEX MHF4L	-	2 dBi
6	Ezurio	Ezurio NFC	0600-00061	Coiled Inductor	FFC/FPC Connector	-	-

Integrated Antenna BL54H20 Chip antenna module variant (453-00197)

Ant. No.	Manufacturer	Model	Part Number	Type	Connector	2400-2500 (MHz)
1	Ignion	NANO mXTEND	NN02-101	Chip loop	N/A	2.4dBi
2	Ezurio	Ezurio NFC	0600-00061	Coiled Inductor	FFC/FPC Connector	-

Note: The antennas with highest gain was chosen for final test

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	1.8 / 3.3 / 5Vdc from host
--------------------------	----------------------------

Note: Three input voltage (1.8 / 3.3 / 5Vdc) had been covered during the pretest, and found that 5Vdc was the worst case and was selected for final test.

1.1.4 Channel List

Frequency band (MHz)				2402-2480 / BT-LE (125 kbps / 500 kbps / 1Mbps)			
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

Frequency band (MHz)				2404-2478 / BT-LE(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	--	--

1.1.5 Test Tool and Duty Cycle

Test Tool	PuTTY, Version: 0.60	
Modulation Mode	Duty Cycle Of Test Signal (%)	Duty Factor (dB)
BT-LE(125kbps)	100.00%	0.00
BT-LE(500kbps)	100.00%	0.00
BT-LE(1Mbps)	100.00%	0.00
BT-LE(2Mbps)	100.00%	0.00

1.1.6 Power Index of Test Tool

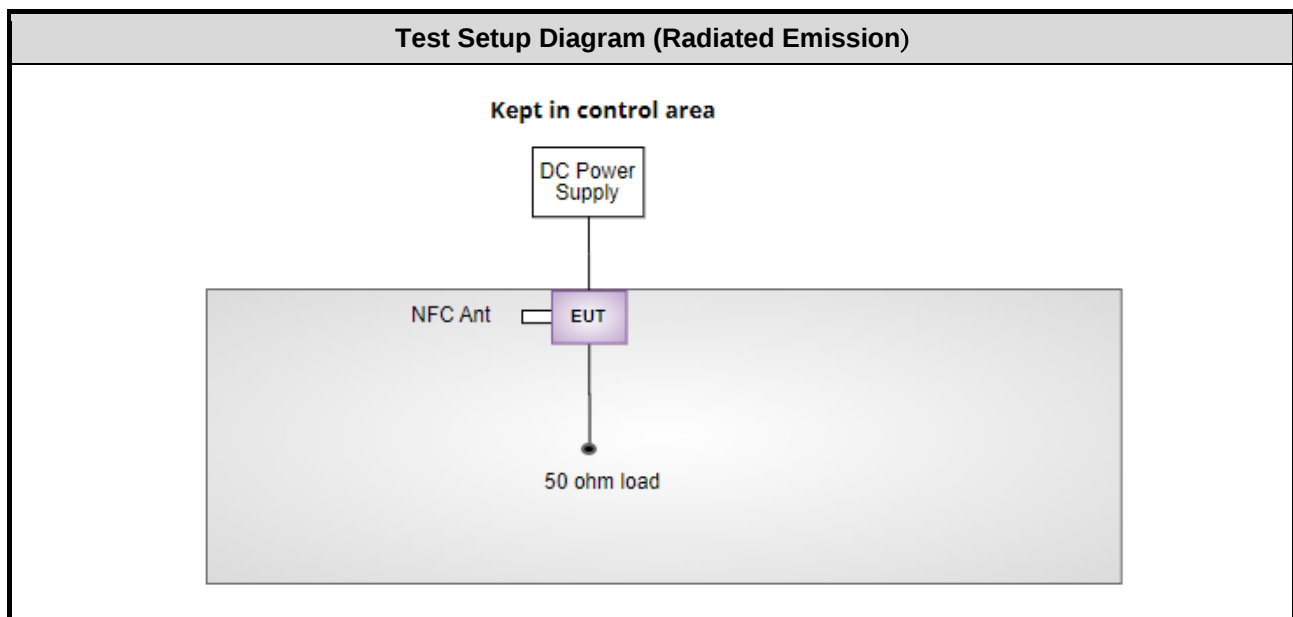
Modulation Mode	Test Frequency (MHz)		
	2402	2440	2480
BT-LE(125kbps)	pos7dBm	pos7dBm	pos7dBm
BT-LE(500kbps)	pos7dBm	pos7dBm	pos7dBm
BT-LE(1Mbps)	pos7dBm	pos7dBm	pos7dBm

Modulation Mode	Test Frequency (MHz)		
	2404	2440	2478
BT-LE(2Mbps)	pos7dBm	pos7dBm	pos7dBm

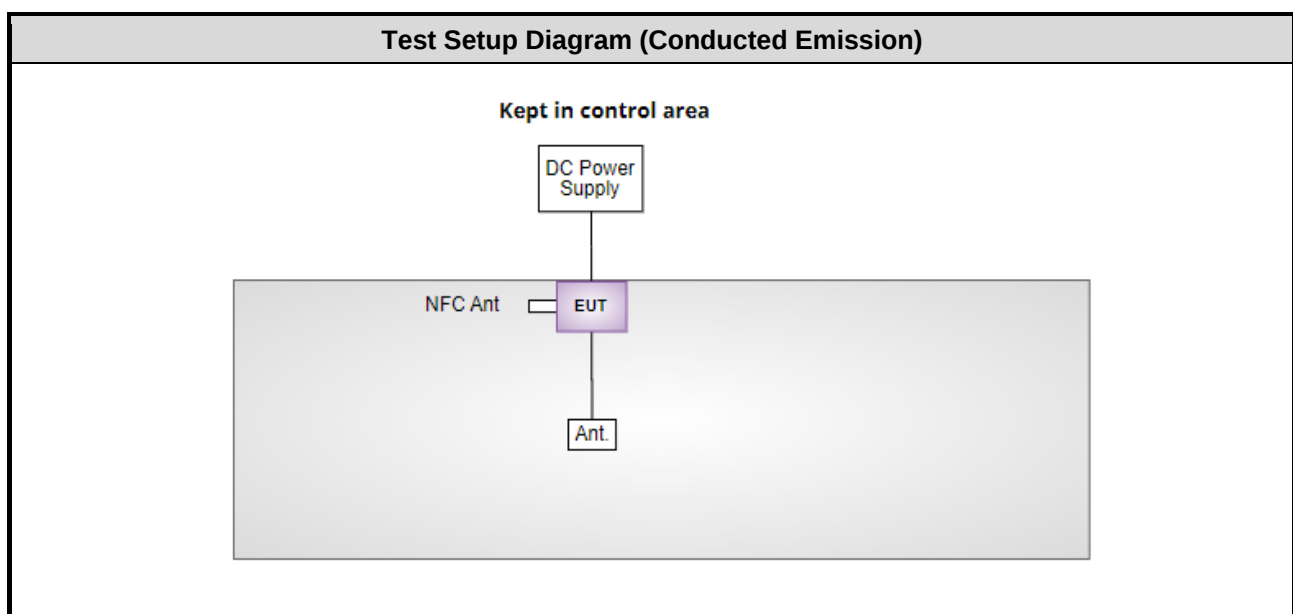
1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	DC Power Supply	GWINSTEK	GPC-60300	---	---
2	50 ohm load	Woken	WTER-18S2	---	---

1.3 Test Setup Chart



Note: The support Laptop and USB cable were disconnected from EUT and was removed from test table after sending command from Laptop to control EUT to transmit continuously.



Note: The support Laptop and USB cable were disconnected from EUT and was removed from test table after sending command from Laptop to control EUT to transmit continuously.

1.4 Test Equipment List and Calibration Data

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Nov. 18, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Feb. 23, 2024	Feb. 22, 2025
LISN	R&S	ENV216	101579	May 09, 2024	May 08, 2025
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127667	Jan. 10, 2024	Jan. 09, 2025
DC POWER SOURCE	GW INSTEK	GPC-6030D	GES855395	Nov. 06, 2024	Nov. 05, 2025
50 ohm terminal	NA	50	01	Jun. 19, 2024	Jun. 18, 2025
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	Nov. 12 ~ Nov. 15, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 05, 2024	Mar. 04, 2025
Spectrum Analyzer	R&S	FSV40	101498	Nov. 12, 2024	Nov. 11, 2025
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 05, 2024	Nov. 04, 2025
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 09, 2024	Aug. 08, 2025
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Nov. 27, 2023	Nov. 26, 2024
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170508	Dec. 28, 2023	Dec. 27, 2024
Preamplifier	EMC	EMC02325	980225	Jun. 17, 2024	Jun. 16, 2025
Preamplifier	EMC	EMC118A45SE	980898	Jul. 05, 2024	Jul. 04, 2025
Preamplifier	EMC	EMC184045SE	980903	Jul. 30, 2024	Jul. 29, 2025
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 02, 2024	Oct. 01, 2025
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 02, 2024	Oct. 01, 2025
LF cable 11M	EMC	EMCCFD400-NW-N W-11000	200801	Oct. 02, 2024	Oct. 01, 2025
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M-3000	210922	Oct. 02, 2024	Oct. 01, 2025
Attenuator	Pasternack	PE7005-10	10-1	Oct. 02, 2024	Oct. 01, 2025
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 02, 2024	Oct. 01, 2025
Measurement Software	Sporton	SENSE-15247_FS	V5. 11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Nov. 15, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2024	Apr. 17, 2025
Power Meter	Anritsu	ML2495A	1241002	Nov. 21, 2023	Nov. 20, 2024
Power Sensor	Anritsu	MA2411B	1207366	Nov. 21, 2023	Nov. 20, 2024
Attenuator	Pasternack	PE7005-10	10-2	Oct. 04, 2024	Oct. 03, 2025
Measurement Software	Sporton	SENSE-15247_FS	V5.11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

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

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

2 Test Configuration

2.1 Testing Facility

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

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

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Conducted / Radiated measurement	Test Configuration
AC Power Line Conducted Emissions	BT-LE(1Mbps)	2402	Conducted	---
Unwanted Emissions ≤ 1GHz	BT-LE(1Mbps)	2402	Conducted	---
			Radiated	
Unwanted Emissions > 1GHz	BT-LE(1Mbps) BT-LE(2Mbps)	2402, 2440, 2480 2404, 2440, 2478	Conducted	---
			Radiated	
Conducted Output Power 6dB bandwidth Power spectral density	BT-LE(125kbps) BT-LE(500kbps) BT-LE(1Mbps) BT-LE(2Mbps)	2402, 2440, 2480 2402, 2440, 2480 2402, 2440, 2480 2404, 2440, 2478	Conducted	---
NOTE: - The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. - The 50Ω terminator is connected to antenna port of EUT for radiated emission measurement.				

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

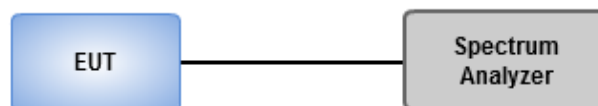
6dB Bandwidth

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	22°C / 66%	Tested By	Roger Lu
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Refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Limit of Conducted Output Power

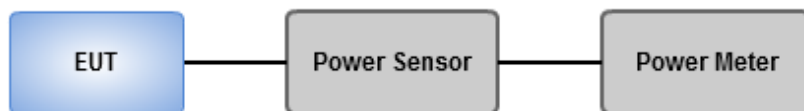
Conducted power shall not exceed 1Watt.

Antenna gain $\leq 6\text{dBi}$, 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	22°C / 66%	Tested By	Roger Lu
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Refer to Appendix B.

3.3 Power Spectral Density

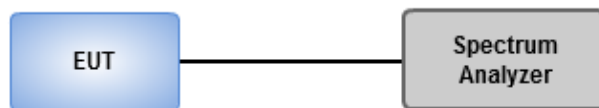
3.3.1 Limit of Power Spectral Density

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	22°C / 66%	Tested By	Roger Lu
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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:
Quasi-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

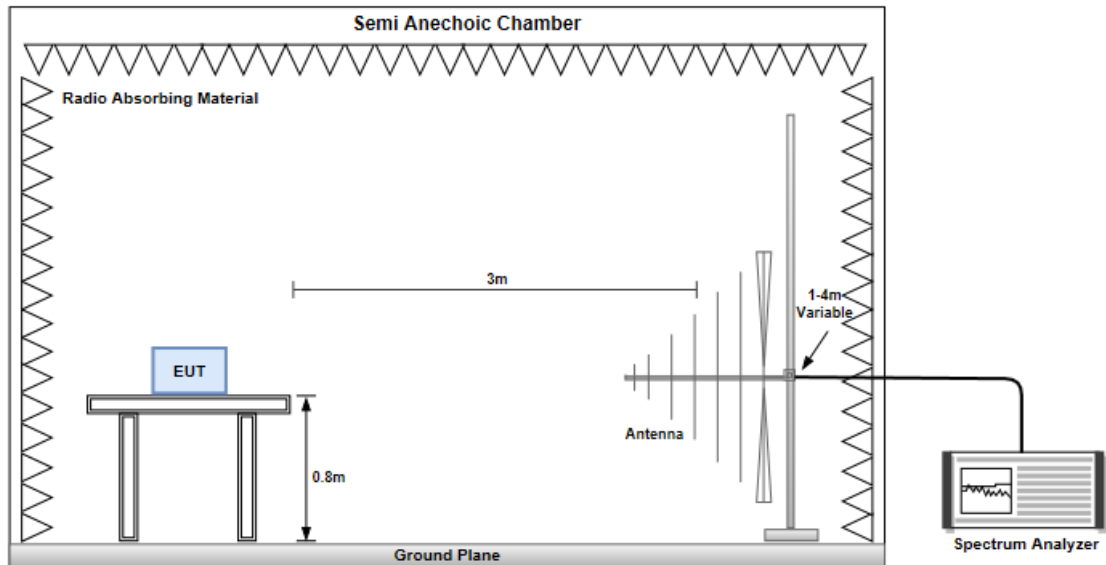
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

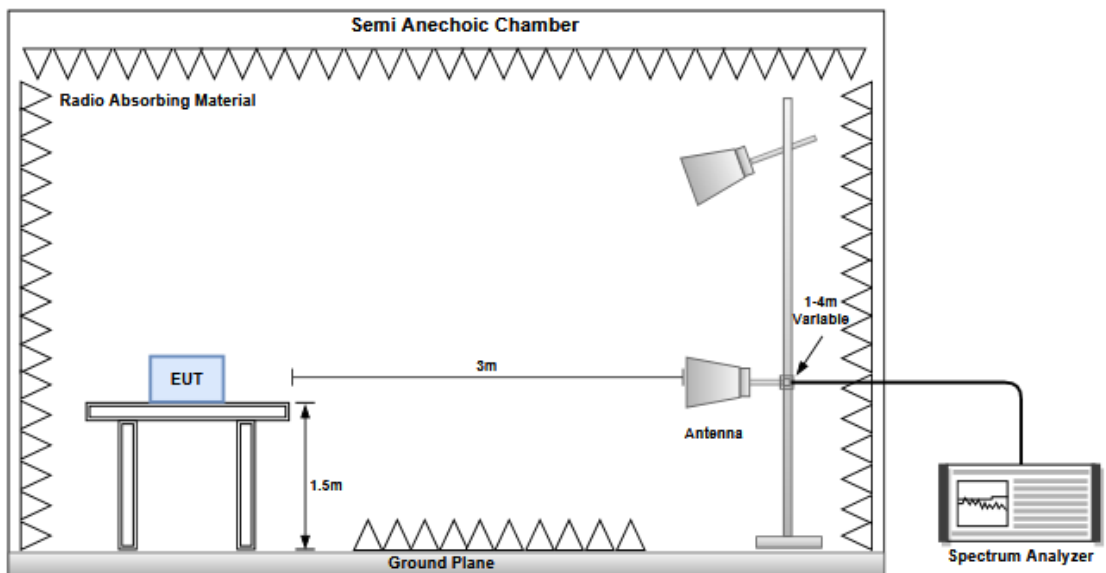
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.4.3 Test Setup

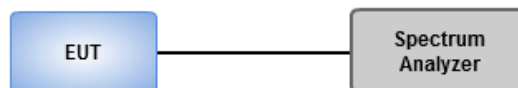
Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



Transmitter Conducted Unwanted Emissions (30MHz~40GHz)



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 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.5.2 Test Procedures

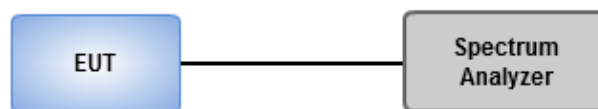
Reference level measurement

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	22°C / 66%	Tested By	Roger Lu
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Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

3.6.1 Limit of AC Power Line Conducted Emissions

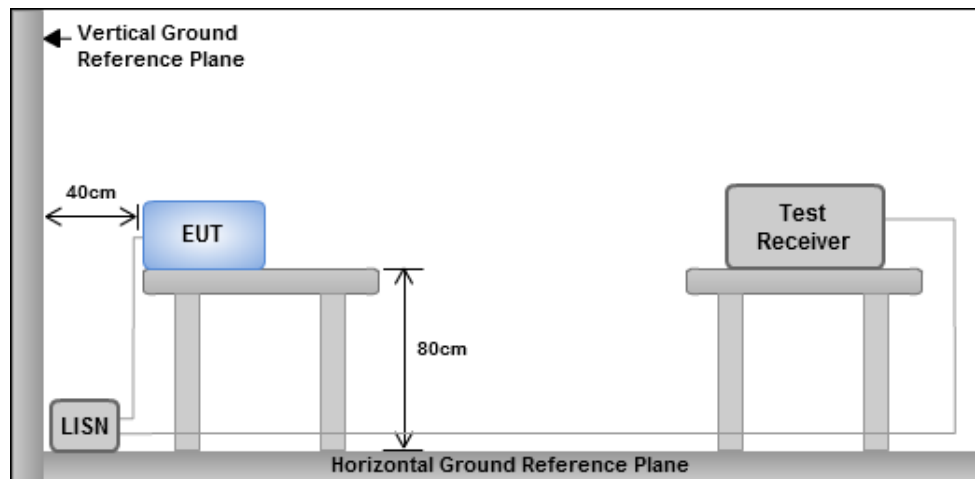
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

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==

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(125kbps)	678.75k	1.082M	1M08F1D	660k	1.079M
BT-LE(500kbps)	712.5k	1.057M	1M06F1D	692.5k	1.051M
BT-LE(1Mbps)	717.5k	1.078M	1M08F1D	701.25k	1.077M
BT-LE(2Mbps)	1.35M	2.159M	2M16F1D	1.255M	2.131M

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(125kbps)	-	-	-	-
2402MHz	Pass	500k	678.75k	1.082M
2440MHz	Pass	500k	660k	1.079M
2480MHz	Pass	500k	671.25k	1.082M
BT-LE(500kbps)	-	-	-	-
2402MHz	Pass	500k	712.5k	1.054M
2440MHz	Pass	500k	692.5k	1.057M
2480MHz	Pass	500k	692.5k	1.051M
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	702.5k	1.078M
2440MHz	Pass	500k	717.5k	1.077M
2480MHz	Pass	500k	701.25k	1.077M
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	500k	1.35M	2.159M
2440MHz	Pass	500k	1.34M	2.146M
2478MHz	Pass	500k	1.255M	2.131M

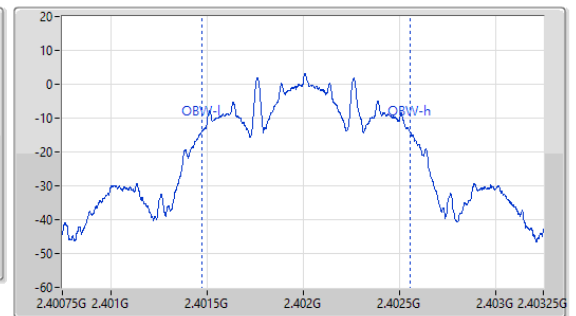
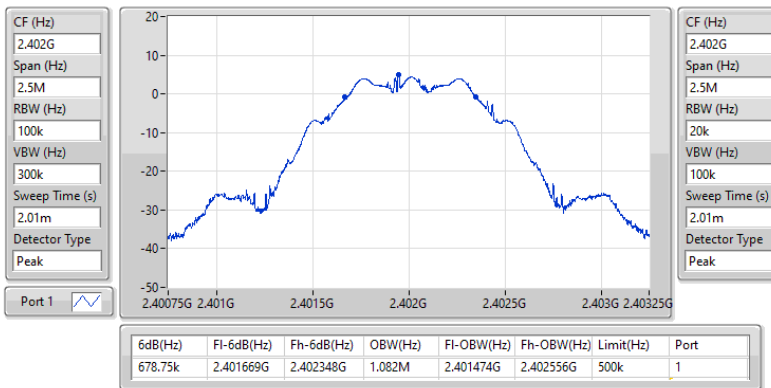
Port X-N dB = Port X 6dB down bandwidth;

Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

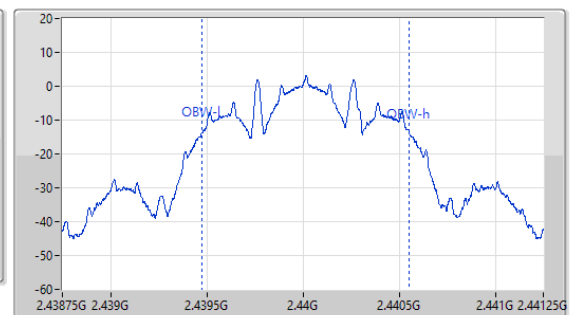
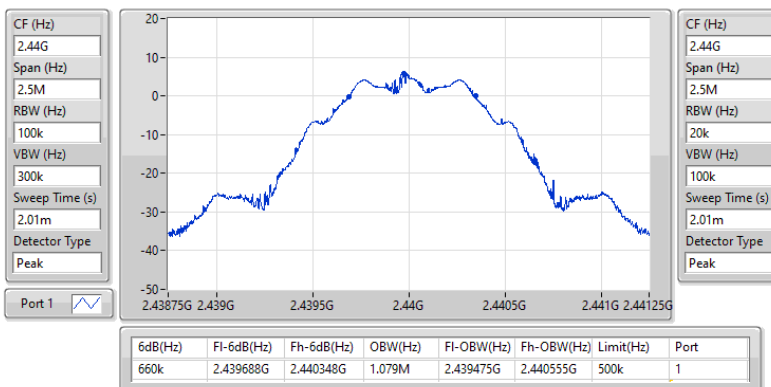
2402MHz



2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

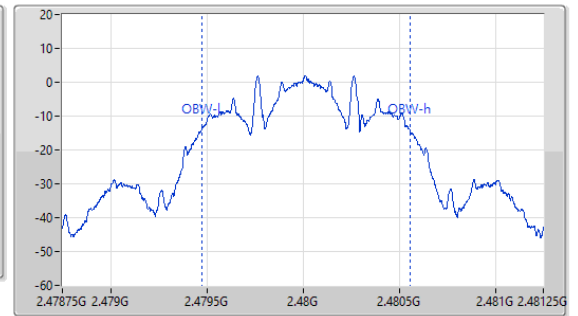
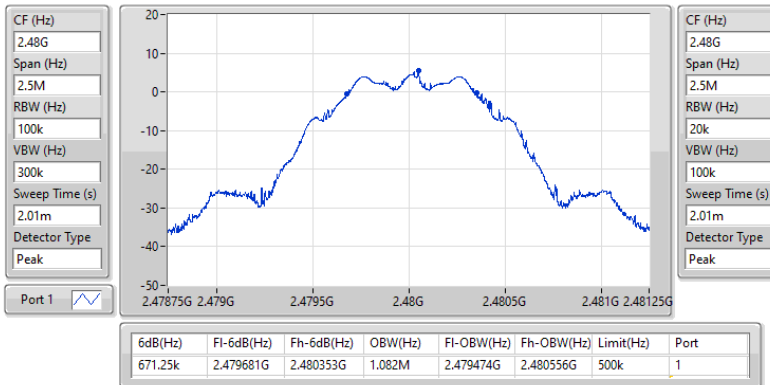
2440MHz



2.4-2.4835GHz_BT-LE(125kbps)

EBW-DTS

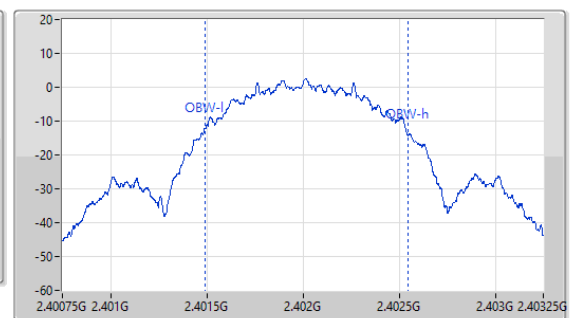
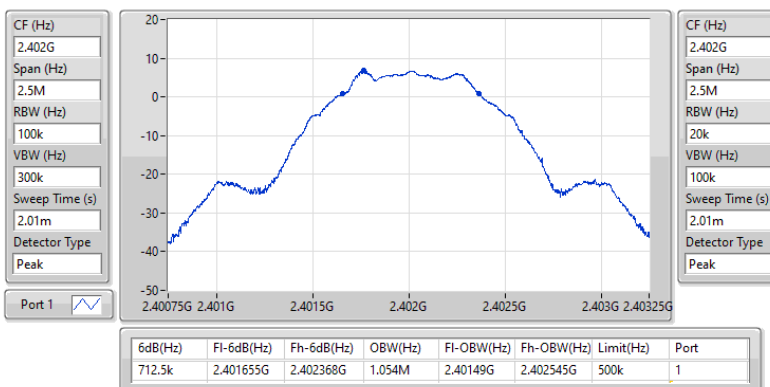
2480MHz



2.4-2.4835GHz_BT-LE(500kbps)

EBW-DTS

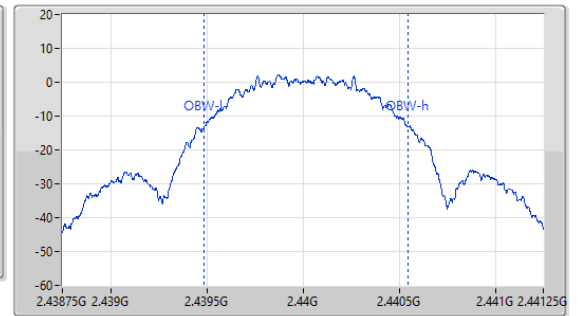
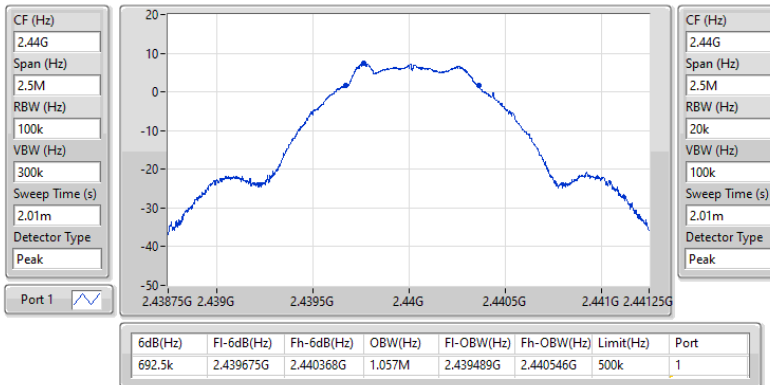
2402MHz



2.4-2.4835GHz_BT-LE(500kbps)

EBW-DTS

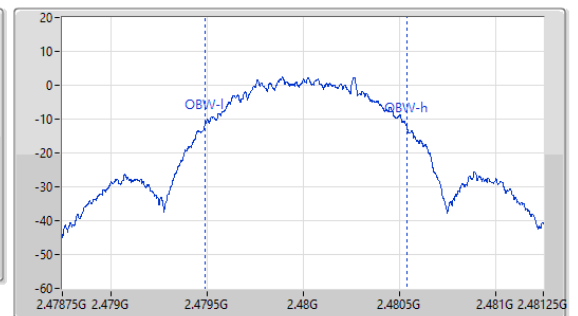
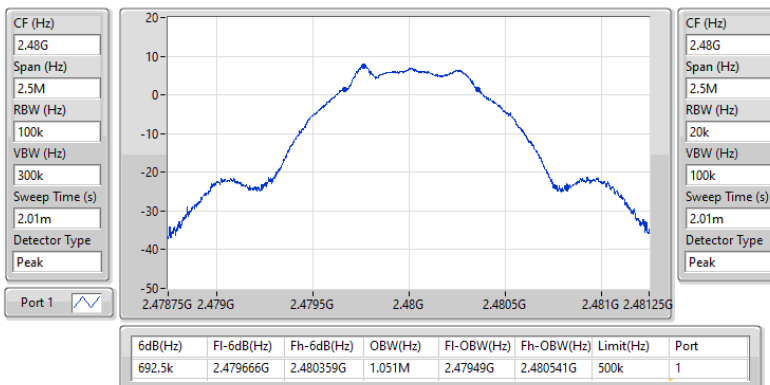
2440MHz



2.4-2.4835GHz_BT-LE(500kbps)

EBW-DTS

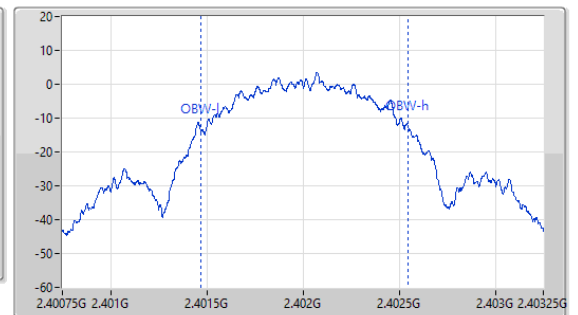
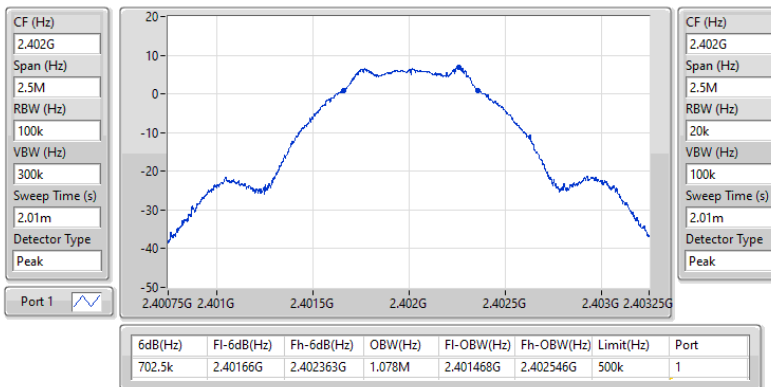
2480MHz



2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

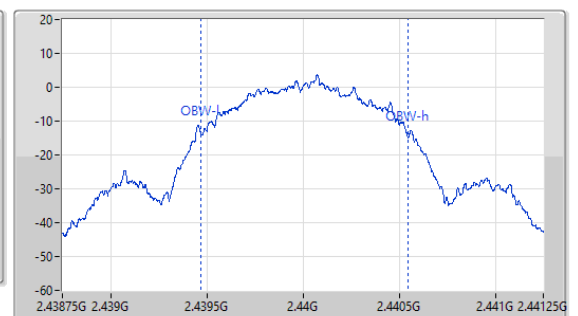
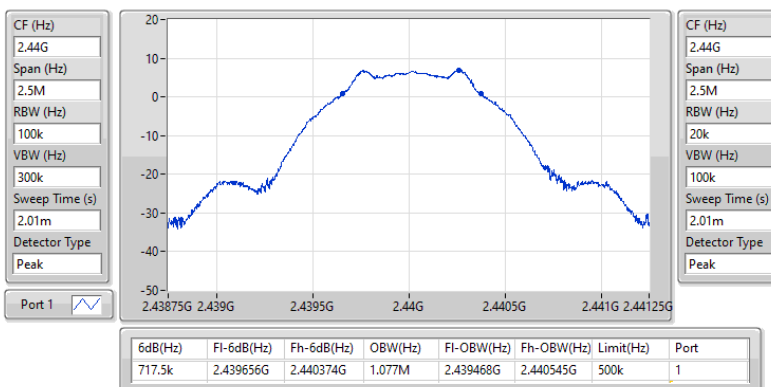
2402MHz



2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

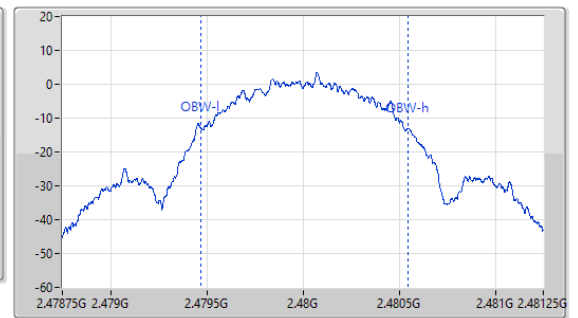
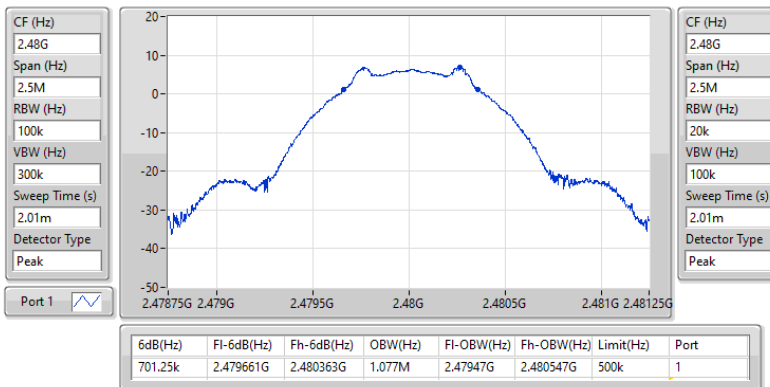
2440MHz



2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

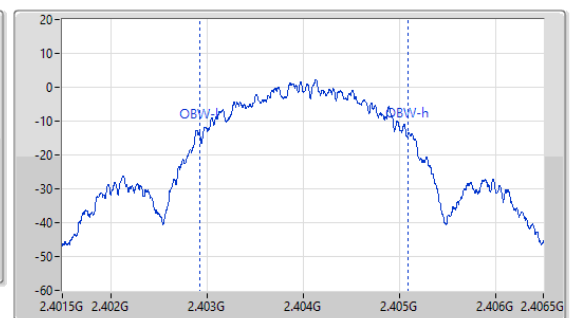
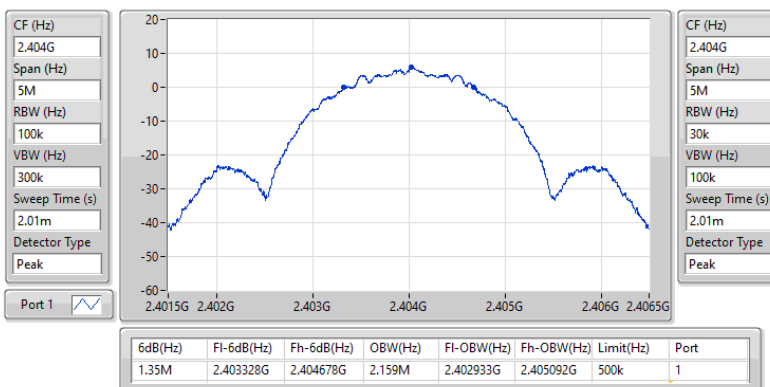
2480MHz



2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

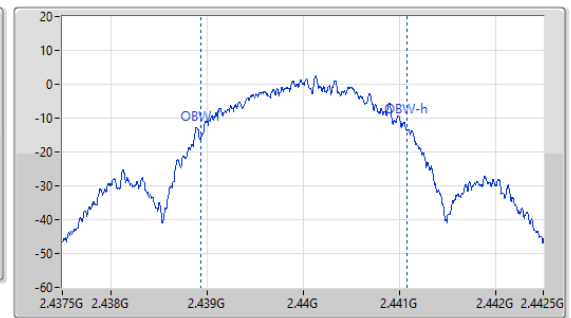
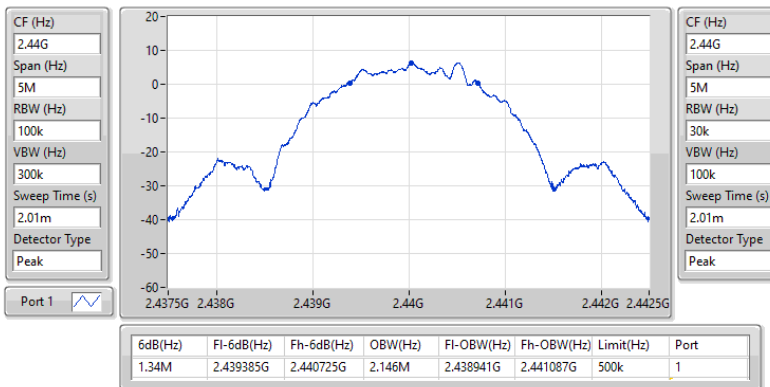
2404MHz



2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

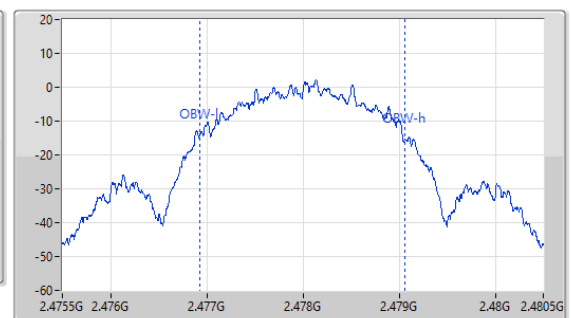
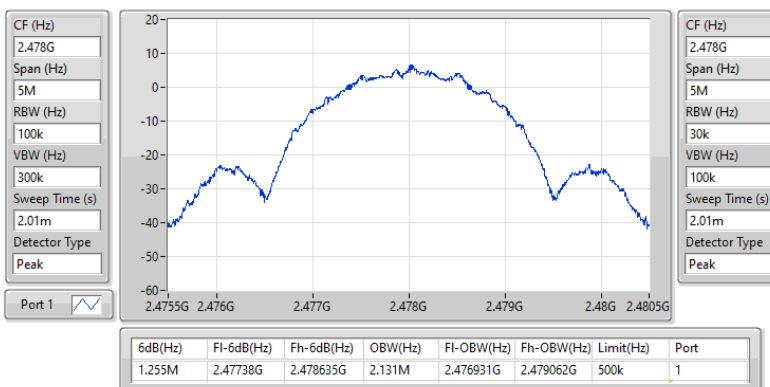
2440MHz



2.4-2.4835GHz_BT-LE(2Mbps)

EBW-DTS

2478MHz



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(125kbps)	7.08	0.00511
BT-LE(500kbps)	7.08	0.00511
BT-LE(1Mbps)	7.10	0.00513
BT-LE(2Mbps)	7.09	0.00512

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-LE(125kbps)	-	-	-	-	-	-
2402MHz	Pass	2.40	7.08	30.00	9.48	36.00
2440MHz	Pass	2.40	6.98	30.00	9.38	36.00
2480MHz	Pass	2.40	6.90	30.00	9.30	36.00
BT-LE(500kbps)	-	-	-	-	-	-
2402MHz	Pass	2.40	7.08	30.00	9.48	36.00
2440MHz	Pass	2.40	6.97	30.00	9.37	36.00
2480MHz	Pass	2.40	6.89	30.00	9.29	36.00
BT-LE(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.40	7.10	30.00	9.50	36.00
2440MHz	Pass	2.40	7.00	30.00	9.40	36.00
2480MHz	Pass	2.40	6.92	30.00	9.32	36.00
BT-LE(2Mbps)	-	-	-	-	-	-
2404MHz	Pass	2.40	7.09	30.00	9.49	36.00
2440MHz	Pass	2.40	6.99	30.00	9.39	36.00
2478MHz	Pass	2.40	6.91	30.00	9.31	36.00

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(125kbps)	6.95	0.00495
BT-LE(500kbps)	6.94	0.00494
BT-LE(1Mbps)	6.97	0.00498
BT-LE(2Mbps)	6.96	0.00497

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-LE(125kbps)	-	-	-	-	-	-
2402MHz	Pass	2.40	6.95	-	9.35	-
2440MHz	Pass	2.40	6.85	-	9.25	-
2480MHz	Pass	2.40	6.78	-	9.18	-
BT-LE(500kbps)	-	-	-	-	-	-
2402MHz	Pass	2.40	6.94	-	9.34	-
2440MHz	Pass	2.40	6.84	-	9.24	-
2480MHz	Pass	2.40	6.77	-	9.17	-
BT-LE(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.40	6.97	-	9.37	-
2440MHz	Pass	2.40	6.87	-	9.27	-
2480MHz	Pass	2.40	6.80	-	9.20	-
BT-LE(2Mbps)	-	-	-	-	-	-
2404MHz	Pass	2.40	6.96	-	9.36	-
2440MHz	Pass	2.40	6.86	-	9.26	-
2478MHz	Pass	2.40	6.79	-	9.19	-

Note: Average power is for reference only.

Summary

Mode	PD (dBm/3kHz)
2.4-2.4835GHz	-
BT-LE(125kbps)	1.67
BT-LE(500kbps)	1.40
BT-LE(1Mbps)	-3.75
BT-LE(2Mbps)	-8.21

Result

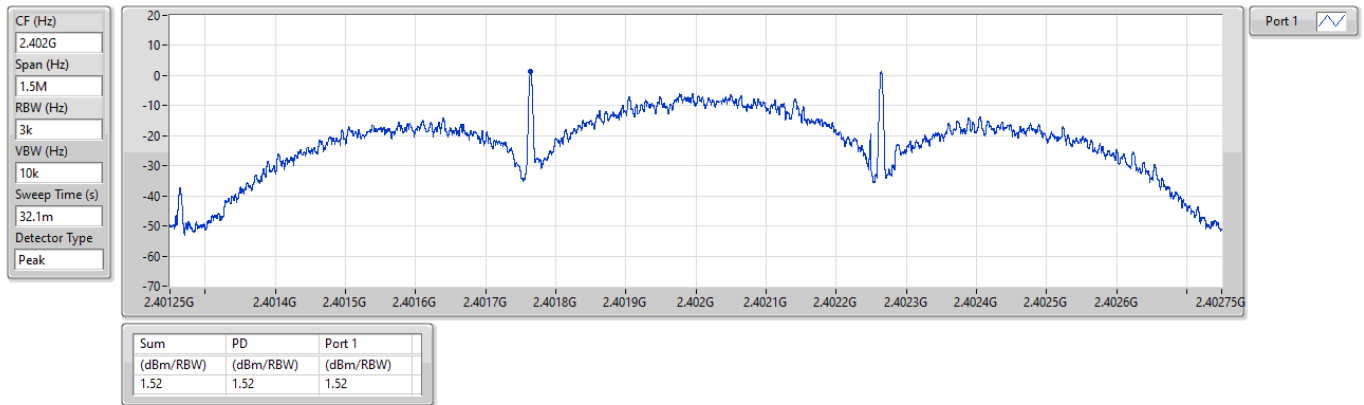
Mode	Result	Antenna Gain (dBi)	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
BT-LE(125kbps)	-	-	-	-
2402MHz	Pass	2.40	1.52	8.00
2440MHz	Pass	2.40	1.67	8.00
2480MHz	Pass	2.40	1.53	8.00
BT-LE(500kbps)	-	-	-	-
2402MHz	Pass	2.40	0.62	8.00
2440MHz	Pass	2.40	1.40	8.00
2480MHz	Pass	2.40	1.14	8.00
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.40	-5.91	8.00
2440MHz	Pass	2.40	-4.55	8.00
2480MHz	Pass	2.40	-3.75	8.00
BT-LE(2Mbps)	-	-	-	-
2404MHz	Pass	2.40	-9.00	8.00
2440MHz	Pass	2.40	-8.74	8.00
2478MHz	Pass	2.40	-8.21	8.00



2.4-2.4835GHz_BT-LE(125kbps)

PSD

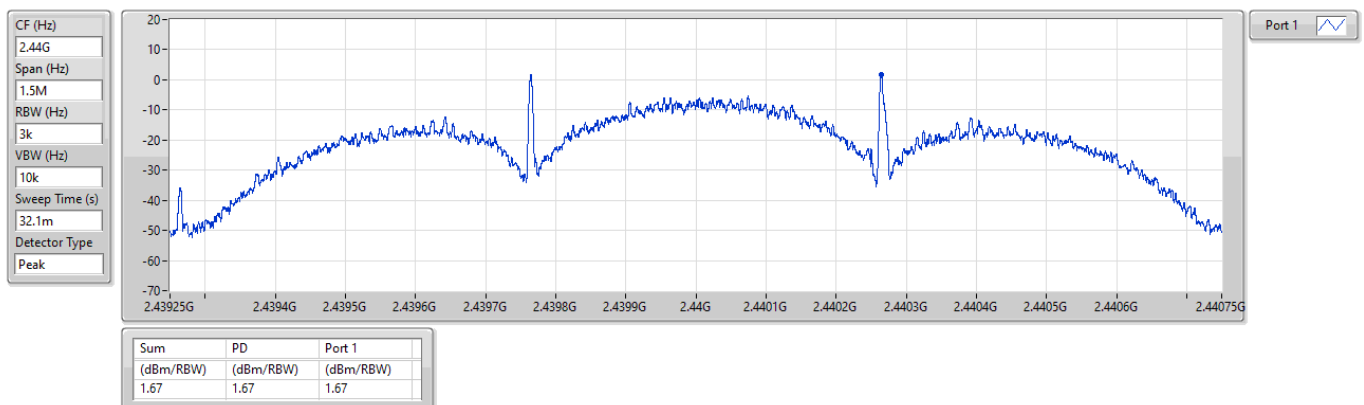
2402MHz



2.4-2.4835GHz_BT-LE(125kbps)

PSD

2440MHz

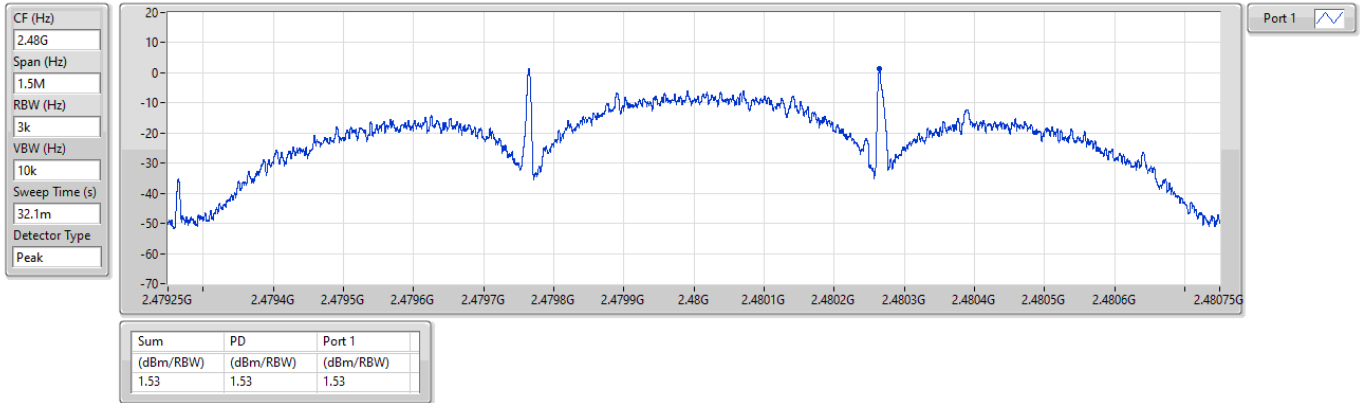




2.4-2.4835GHz_BT-LE(125kbps)

PSD

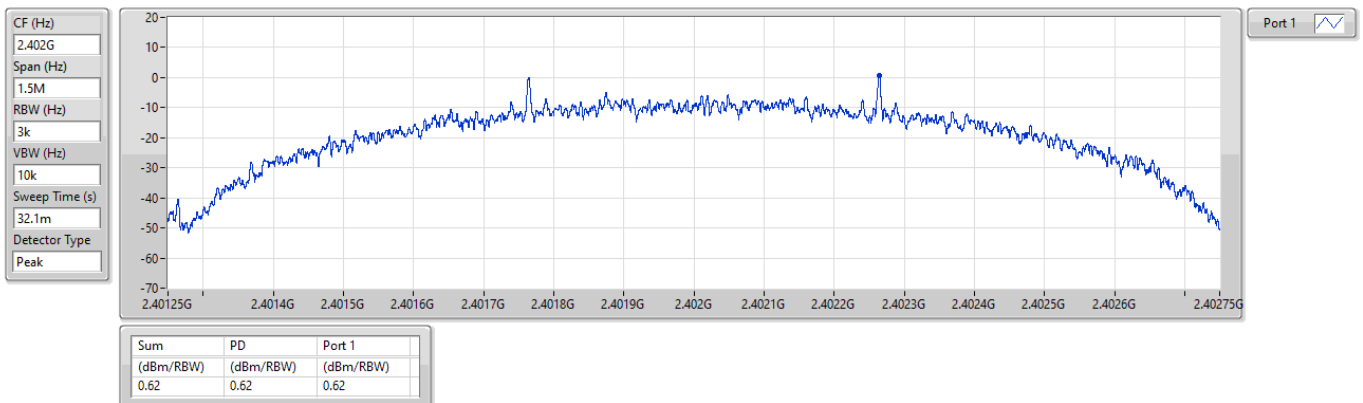
2480MHz



2.4-2.4835GHz_BT-LE(500kbps)

PSD

2402MHz

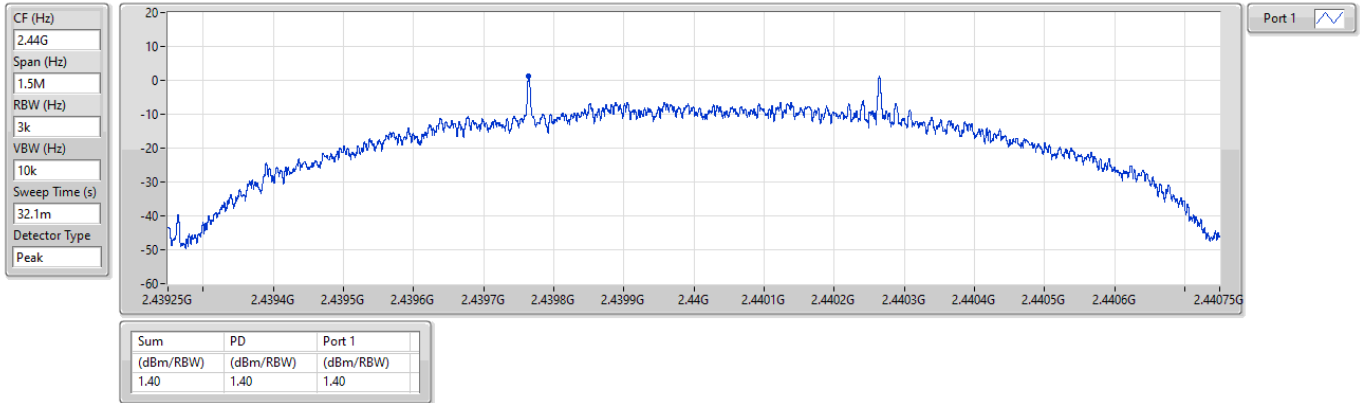




2.4-2.4835GHz_BT-LE(500kbps)

PSD

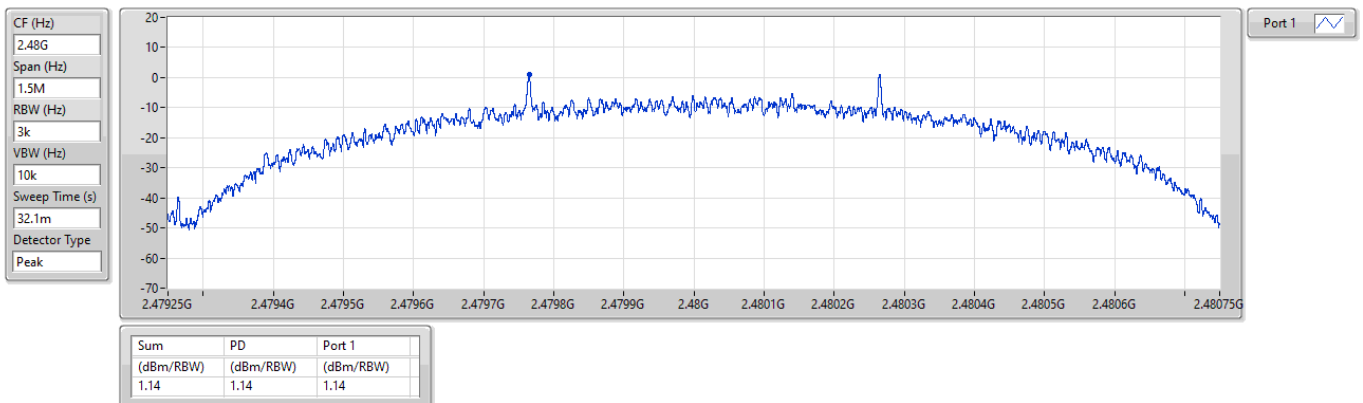
2440MHz



2.4-2.4835GHz_BT-LE(500kbps)

PSD

2480MHz

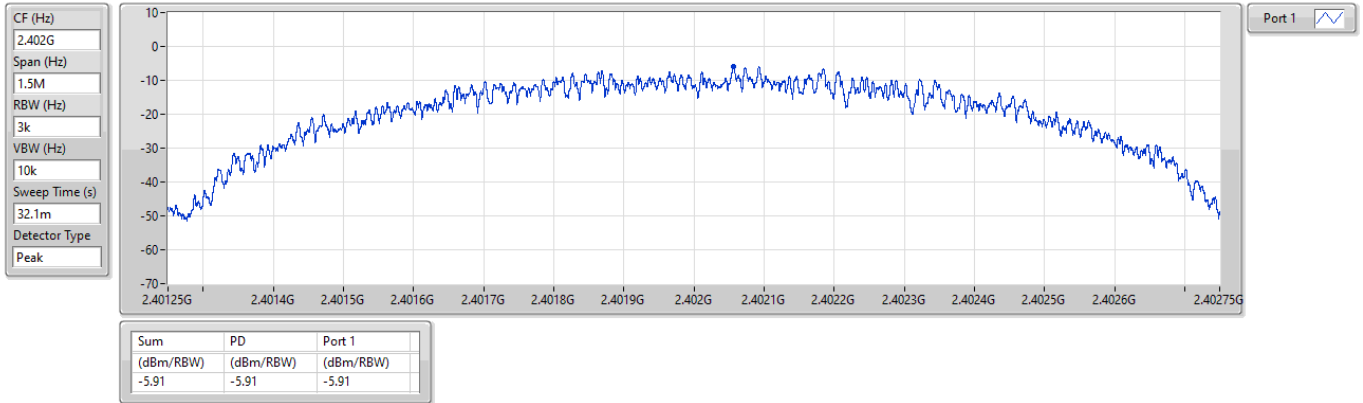




2.4-2.4835GHz_BT-LE(1Mbps)

PSD

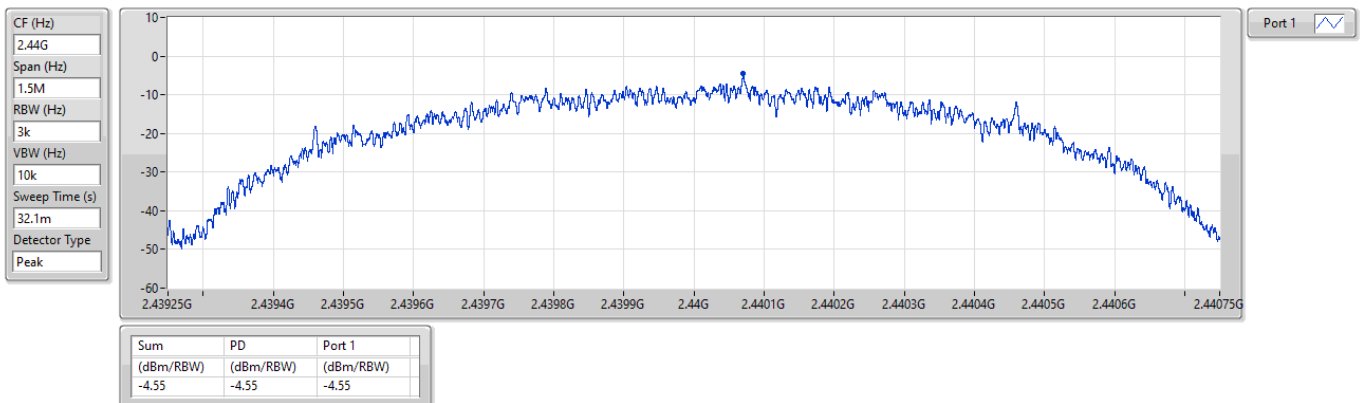
2402MHz



2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2440MHz

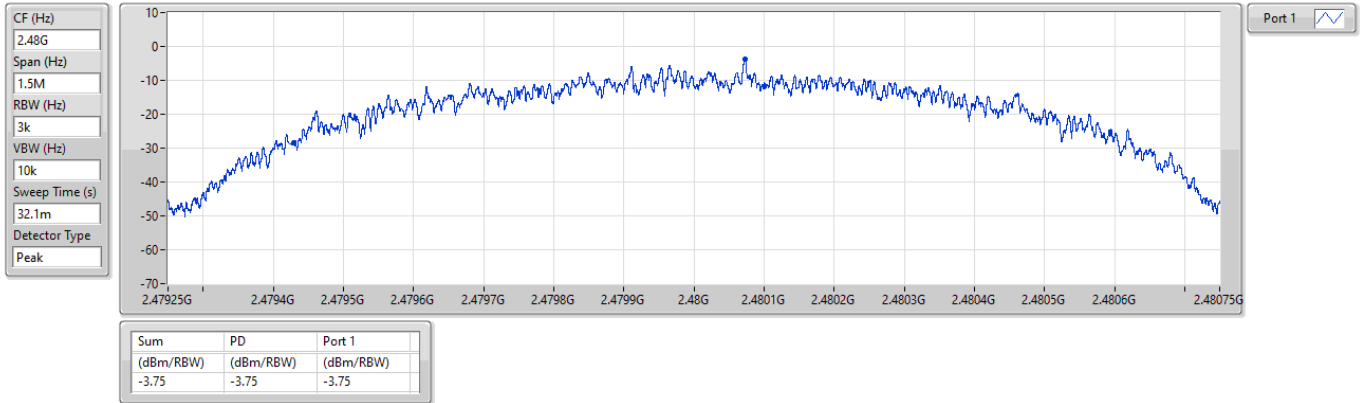




2.4-2.4835GHz_BT-LE(1Mbps)

PSD

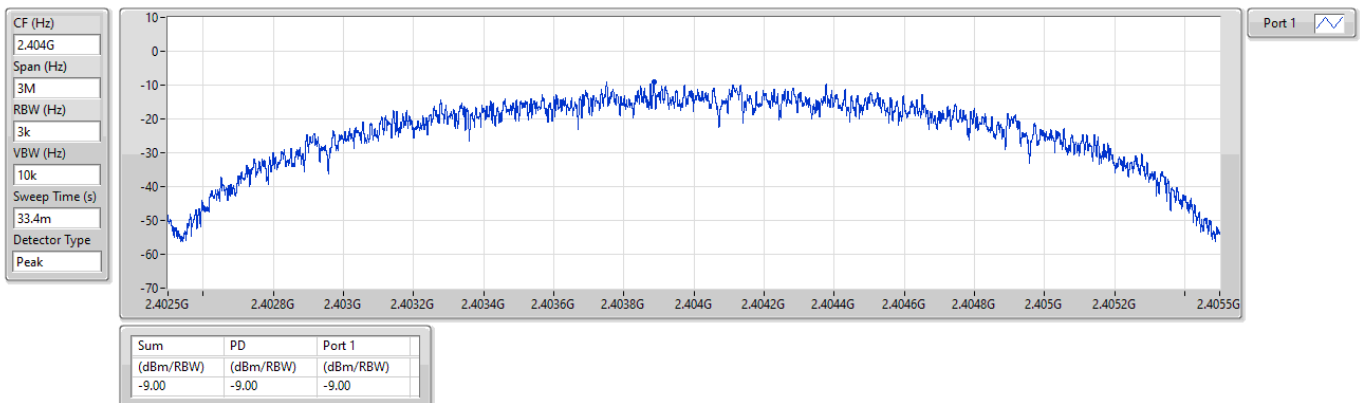
2480MHz



2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2404MHz

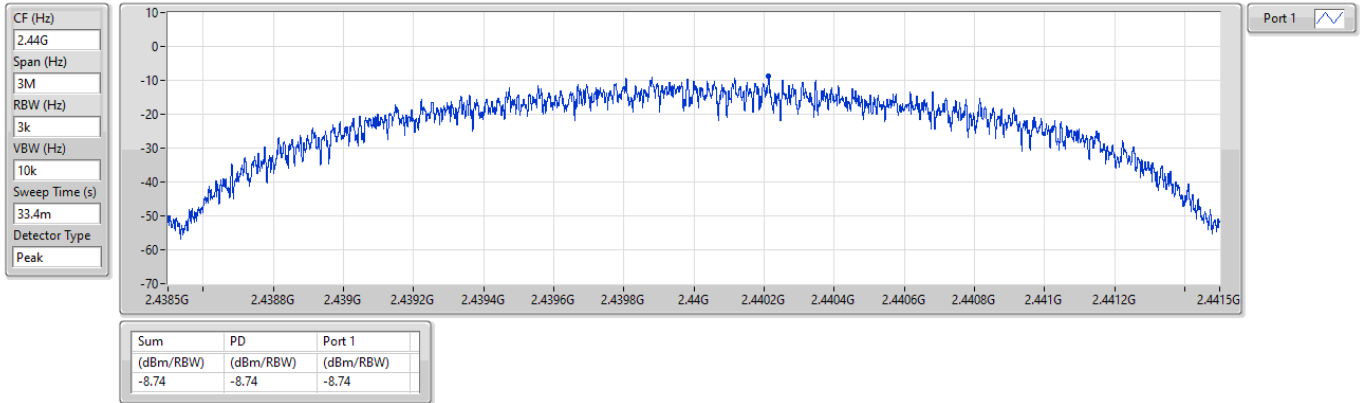




2.4-2.4835GHz_BT-LE(2Mbps)

PSD

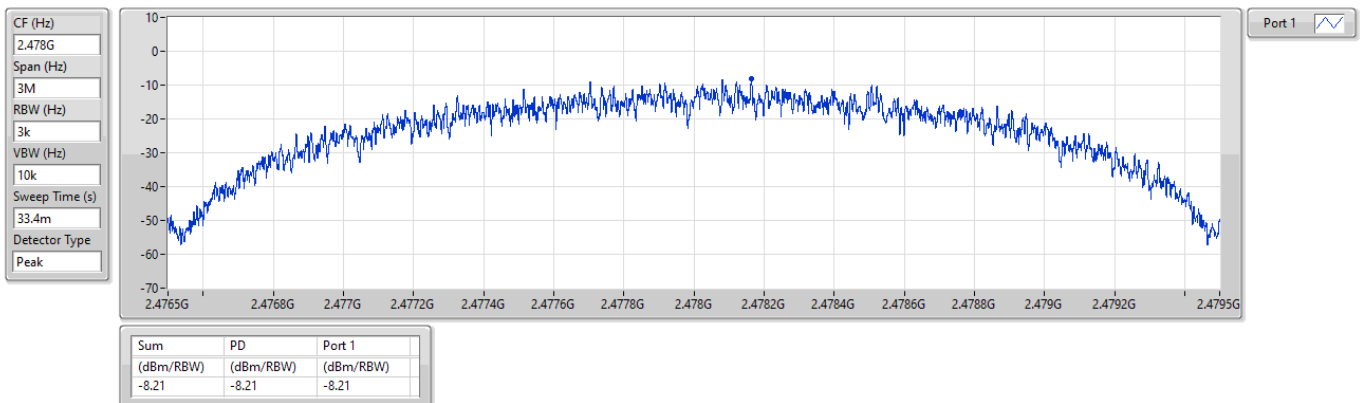
2440MHz



2.4-2.4835GHz_BT-LE(2Mbps)

PSD

2478MHz





Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.1

Summary

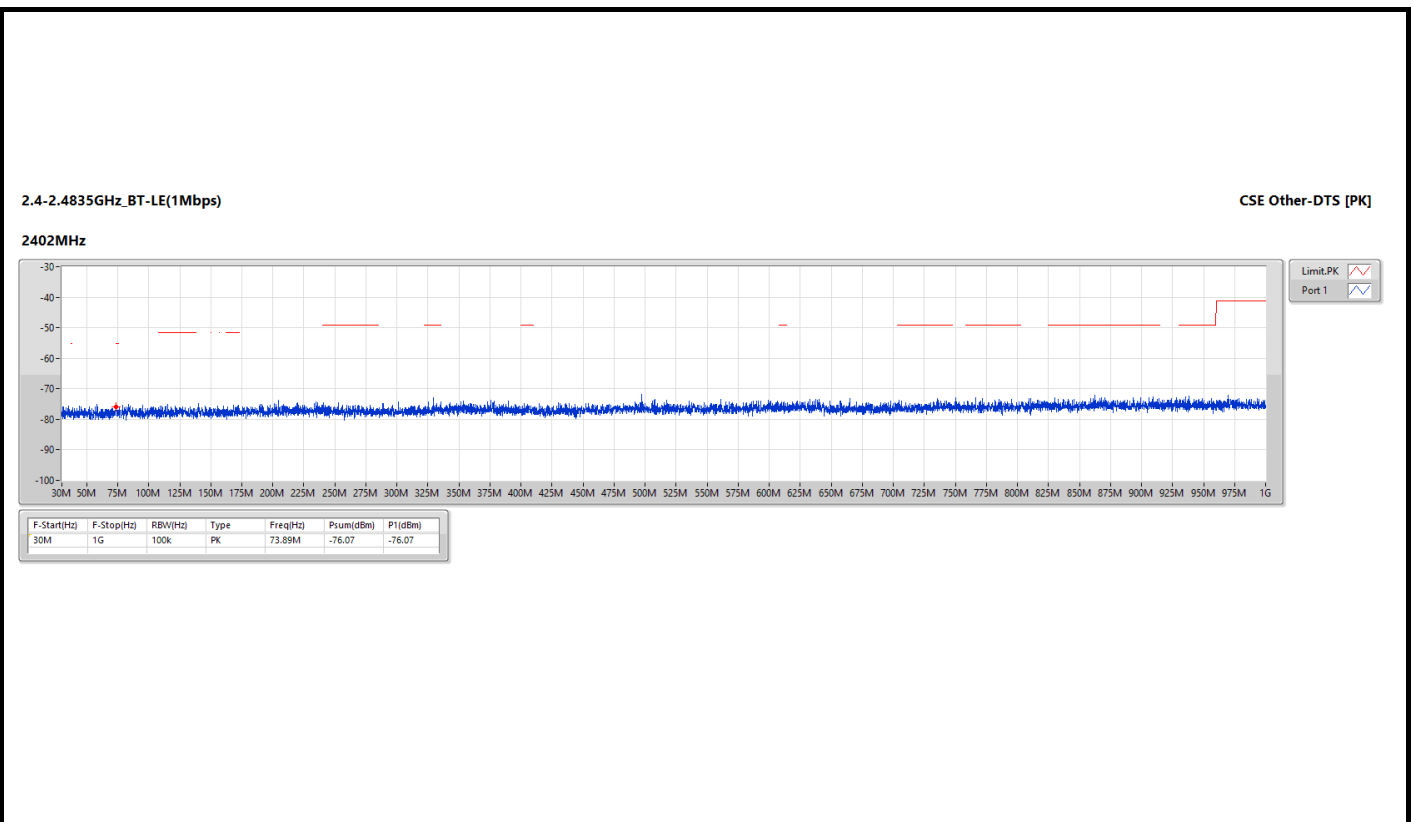
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	30M	1G	PK	73.89M	2.40	-76.07	4.7	-68.97	-55.20	-13.77

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

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	30M	1G	PK	73.89M	2.40	-76.07	4.7	-68.97	-55.20	-13.77

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





Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.4835G	2.5G	AV	2.48357G	2.40	-48.40	-46.00	-41.20	-4.80
BT-LE(2Mbps)	Pass	2.4835G	2.5G	AV	2.48376G	2.40	-51.16	-48.76	-41.20	-7.56

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



Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.2

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	1G	2.31G	AV	2.21011G	2.40	-65.77	-63.37	-41.20	-22.17
2402MHz	Pass	2.31G	2.39G	AV	2.3896G	2.40	-54.55	-52.15	-41.20	-10.95
2402MHz	Pass	2.4835G	2.5G	AV	2.49808G	2.40	-64.71	-62.31	-41.20	-21.11
2402MHz	Pass	2.5G	3.1G	AV	2.8852G	2.40	-65.01	-62.61	-41.20	-21.41
2402MHz	Pass	1G	2.31G	PK	2.21044G	2.40	-55.42	-53.02	-21.20	-31.82
2402MHz	Pass	2.31G	2.39G	PK	2.38904G	2.40	-44.98	-42.58	-21.20	-21.38
2402MHz	Pass	2.4835G	2.5G	PK	2.49872G	2.40	-53.46	-51.06	-21.20	-29.86
2402MHz	Pass	2.5G	3.1G	PK	2.8516G	2.40	-55.17	-52.77	-21.20	-31.57
2440MHz	Pass	1G	2.31G	AV	2.21486G	2.40	-66.04	-63.64	-41.20	-22.44
2440MHz	Pass	2.31G	2.39G	AV	2.34404G	2.40	-65.18	-62.78	-41.20	-21.58
2440MHz	Pass	2.4835G	2.5G	AV	2.49076G	2.40	-65.45	-63.05	-41.20	-21.85
2440MHz	Pass	2.5G	3.1G	AV	2.88325G	2.40	-65.01	-62.61	-41.20	-21.41
2440MHz	Pass	1G	2.31G	PK	2.29232G	2.40	-56.85	-54.45	-21.20	-33.25
2440MHz	Pass	2.31G	2.39G	PK	2.35716G	2.40	-54.32	-51.92	-21.20	-30.72
2440MHz	Pass	2.4835G	2.5G	PK	2.49107G	2.40	-54.26	-51.86	-21.20	-30.66
2440MHz	Pass	2.5G	3.1G	PK	2.7784G	2.40	-55.27	-52.87	-21.20	-31.67
2480MHz	Pass	1G	2.31G	AV	2.21126G	2.40	-66.31	-63.91	-41.20	-22.71
2480MHz	Pass	2.31G	2.39G	AV	2.38416G	2.40	-65.46	-63.06	-41.20	-21.86
2480MHz	Pass	2.4835G	2.5G	AV	2.48357G	2.40	-48.40	-46.00	-41.20	-4.80
2480MHz	Pass	2.5G	3.1G	AV	2.512G	2.40	-59.42	-57.02	-41.20	-15.82
2480MHz	Pass	1G	2.31G	PK	2.20979G	2.40	-57.19	-54.79	-21.20	-33.59
2480MHz	Pass	2.31G	2.39G	PK	2.36024G	2.40	-53.73	-51.33	-21.20	-30.13
2480MHz	Pass	2.4835G	2.5G	PK	2.48389G	2.40	-33.68	-31.28	-21.20	-10.08
2480MHz	Pass	2.5G	3.1G	PK	2.5G	2.40	-53.21	-50.81	-21.20	-29.61
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	1G	2.31G	AV	2.21208G	2.40	-66.31	-63.91	-41.20	-22.71
2404MHz	Pass	2.31G	2.39G	AV	2.38912G	2.40	-54.48	-52.08	-41.20	-10.88
2404MHz	Pass	2.4835G	2.5G	AV	2.49978G	2.40	-64.70	-62.30	-41.20	-21.10
2404MHz	Pass	2.5G	3.1G	AV	2.8867G	2.40	-65.01	-62.61	-41.20	-21.41
2404MHz	Pass	1G	2.31G	PK	2.21503G	2.40	-56.36	-53.96	-21.20	-32.76
2404MHz	Pass	2.31G	2.39G	PK	2.3886G	2.40	-45.07	-42.67	-21.20	-21.47
2404MHz	Pass	2.4835G	2.5G	PK	2.49559G	2.40	-53.97	-51.57	-21.20	-30.37
2404MHz	Pass	2.5G	3.1G	PK	2.5348G	2.40	-54.82	-52.42	-21.20	-31.22
2440MHz	Pass	1G	2.31G	AV	2.21257G	2.40	-66.31	-63.91	-41.20	-22.71
2440MHz	Pass	2.31G	2.39G	AV	2.34468G	2.40	-65.65	-63.25	-41.20	-22.05
2440MHz	Pass	2.4835G	2.5G	AV	2.48897G	2.40	-65.22	-62.82	-41.20	-21.62
2440MHz	Pass	2.5G	3.1G	AV	2.87725G	2.40	-65.04	-62.64	-41.20	-21.44
2440MHz	Pass	1G	2.31G	PK	2.11678G	2.40	-55.68	-53.28	-21.20	-32.08
2440MHz	Pass	2.31G	2.39G	PK	2.35676G	2.40	-53.51	-51.11	-21.20	-29.91
2440MHz	Pass	2.4835G	2.5G	PK	2.48563G	2.40	-54.49	-52.09	-21.20	-30.89
2440MHz	Pass	2.5G	3.1G	PK	2.5948G	2.40	-55.30	-52.90	-21.20	-31.70



Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.2

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2478MHz	Pass	1G	2.31G	AV	2.21503G	2.40	-66.32	-63.92	-41.20	-22.72
2478MHz	Pass	2.31G	2.39G	AV	2.38216G	2.40	-65.71	-63.31	-41.20	-22.11
2478MHz	Pass	2.4835G	2.5G	AV	2.48376G	2.40	-51.16	-48.76	-41.20	-7.56
2478MHz	Pass	2.5G	3.1G	AV	2.5099G	2.40	-59.32	-56.92	-41.20	-15.72
2478MHz	Pass	1G	2.31G	PK	2.21241G	2.40	-56.72	-54.32	-21.20	-33.12
2478MHz	Pass	2.31G	2.39G	PK	2.31968G	2.40	-54.87	-52.47	-21.20	-31.27
2478MHz	Pass	2.4835G	2.5G	PK	2.4839G	2.40	-39.21	-36.81	-21.20	-15.61
2478MHz	Pass	2.5G	3.1G	PK	2.5096G	2.40	-53.21	-50.81	-21.20	-29.61

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



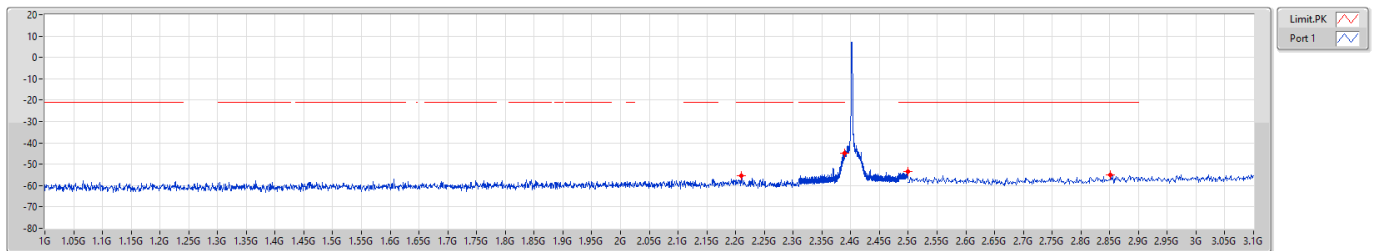
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.2

2.4-2.4835GHz_BT-LE(1Mbps)

CSE Bandedge-DTS [PK]

2402MHz

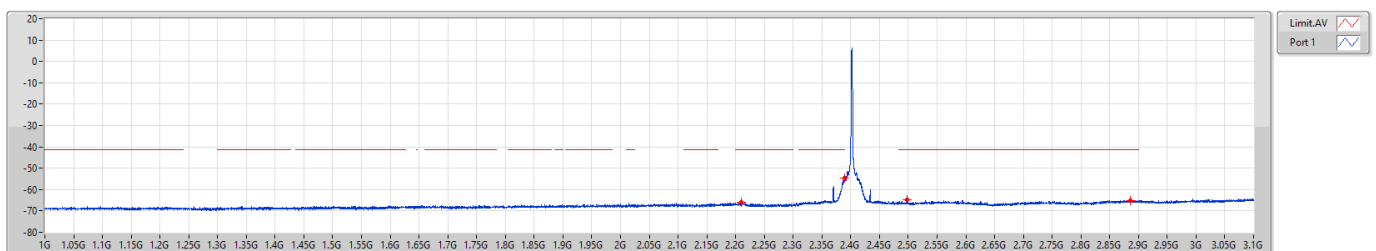


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.21044G	-55.42	-55.42
2.31G	2.39G	1M	PK	2.38904G	-44.98	-44.98
2.4835G	2.5G	1M	PK	2.49872G	-53.46	-53.46
2.5G	3.1G	1M	PK	2.8516G	-55.17	-55.17

2.4-2.4835GHz_BT-LE(1Mbps)

CSE Bandedge-DTS [AV]

2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.21011G	-65.77	-65.77
2.31G	2.39G	1M	AV	2.3896G	-54.55	-54.55
2.4835G	2.5G	1M	AV	2.49808G	-64.71	-64.71
2.5G	3.1G	1M	AV	2.8852G	-65.01	-65.01



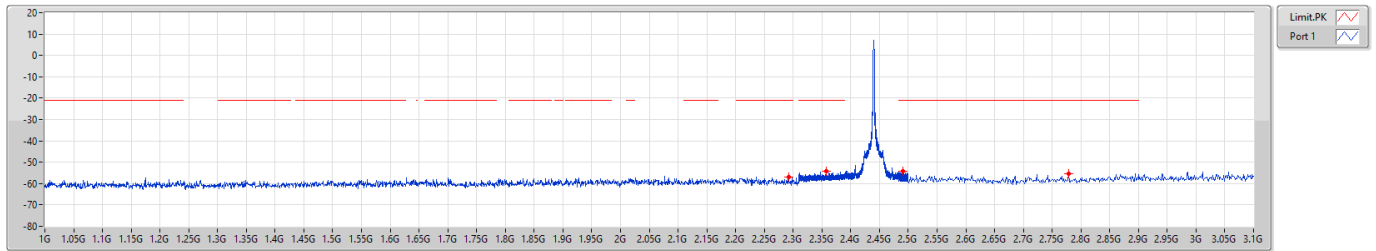
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.2

2.4-2.4835GHz_BT-LE(1Mbps)

CSE Bandedge-DTS [PK]

2440MHz

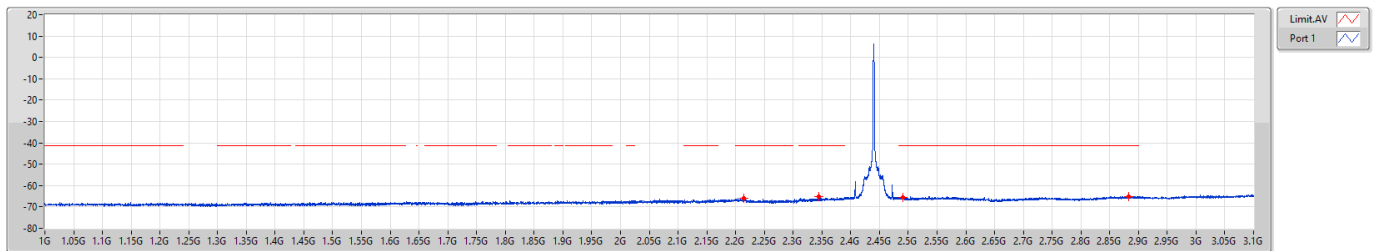


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.29232G	-56.85	-56.85
2.31G	2.39G	1M	PK	2.35716G	-54.32	-54.32
2.4835G	2.5G	1M	PK	2.49107G	-54.26	-54.26
2.5G	3.1G	1M	PK	2.7784G	-55.27	-55.27

2.4-2.4835GHz_BT-LE(1Mbps)

CSE Bandedge-DTS [AV]

2440MHz



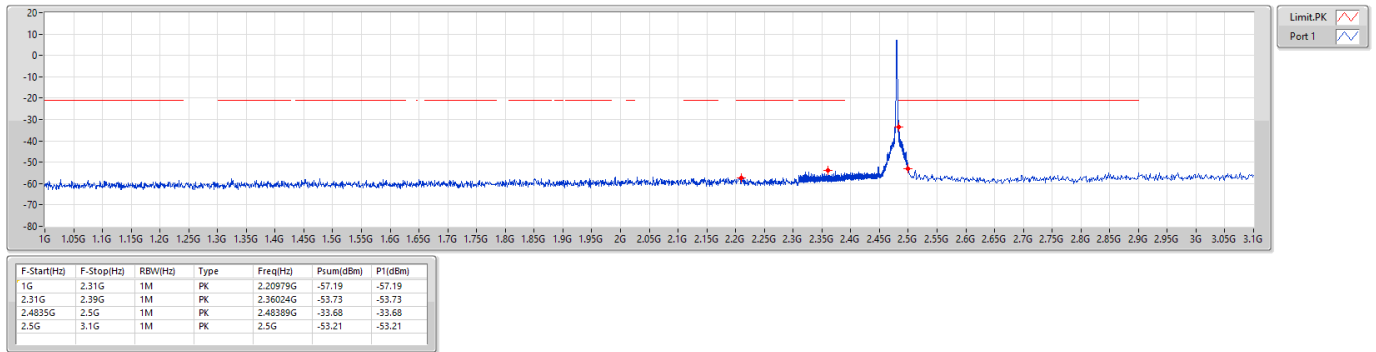
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.21486G	-66.04	-66.04
2.31G	2.39G	1M	AV	2.34404G	-65.18	-65.18
2.4835G	2.5G	1M	AV	2.49076G	-65.45	-65.45
2.5G	3.1G	1M	AV	2.88325G	-65.01	-65.01



2.4-2.4835GHz_BT-LE(1Mbps)

CSE Bandedge-DTS [PK]

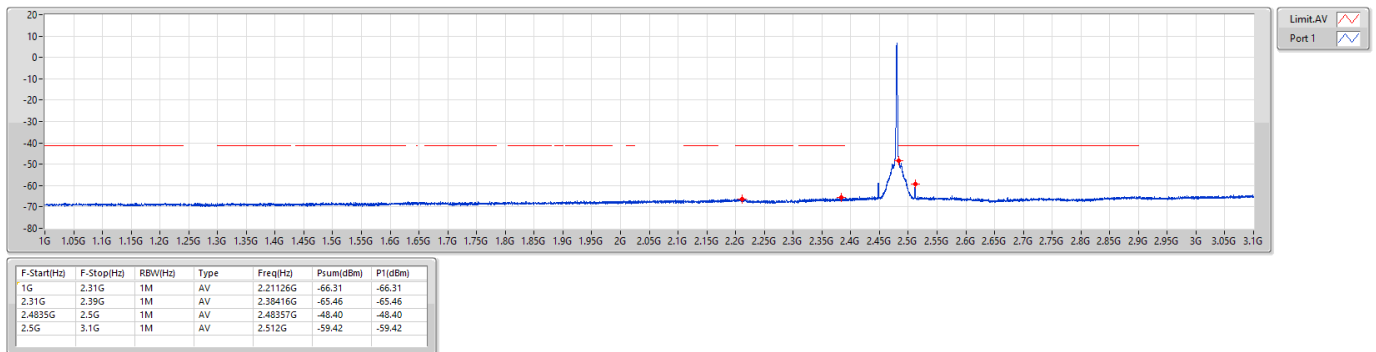
2480MHz



2.4-2.4835GHz_BT-LE(1Mbps)

CSE Bandedge-DTS [AV]

2480MHz





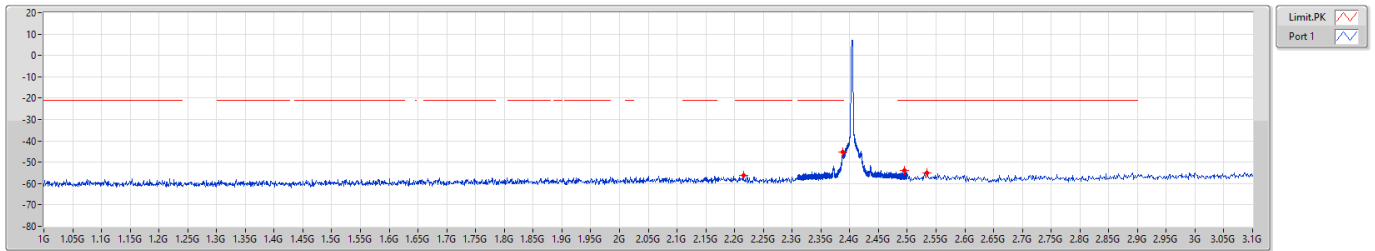
Unwanted Conducted Emissions into Restricted Frequency Bands

Appendix D.2

2.4-2.4835GHz_BT-LE(2Mbps)

CSE Bandedge-DTS [PK]

2404MHz

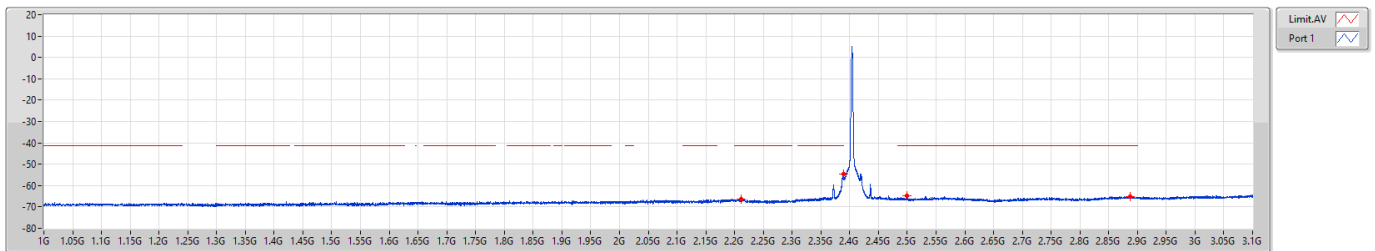


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.21503G	-56.36	-56.36
2.31G	2.39G	1M	PK	2.3886G	-45.07	-45.07
2.4835G	2.5G	1M	PK	2.49559G	-53.97	-53.97
2.5G	3.1G	1M	PK	2.5348G	-54.82	-54.82

2.4-2.4835GHz_BT-LE(2Mbps)

CSE Bandedge-DTS [AV]

2404MHz



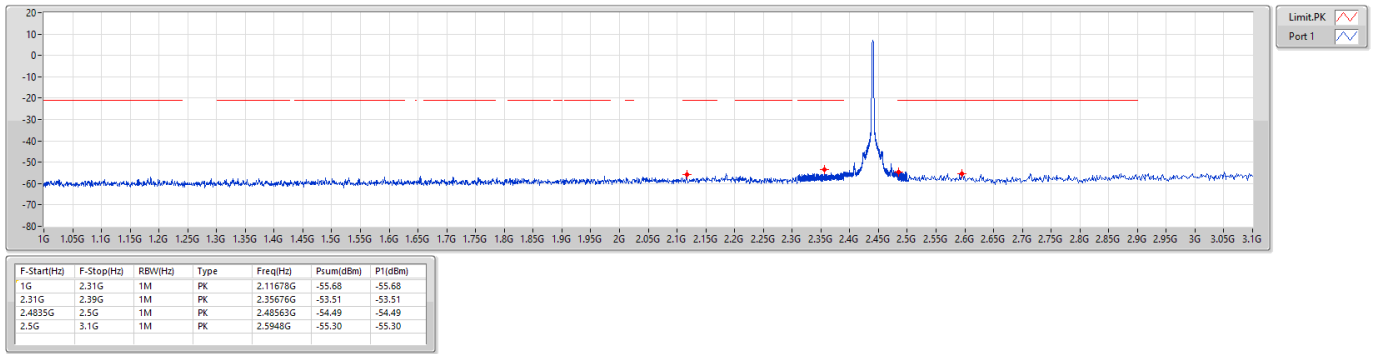
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.21208G	-66.31	-66.31
2.31G	2.39G	1M	AV	2.38912G	-54.48	-54.48
2.4835G	2.5G	1M	AV	2.49978G	-64.70	-64.70
2.5G	3.1G	1M	AV	2.8867G	-65.01	-65.01



2.4-2.4835GHz_BT-LE(2Mbps)

CSE Bandedge-DTS [PK]

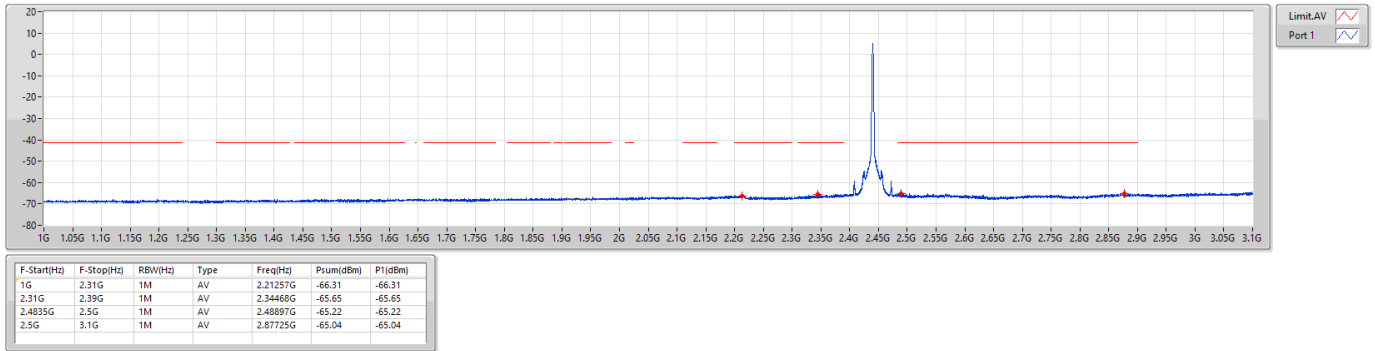
2440MHz



2.4-2.4835GHz_BT-LE(2Mbps)

CSE Bandedge-DTS [AV]

2440MHz





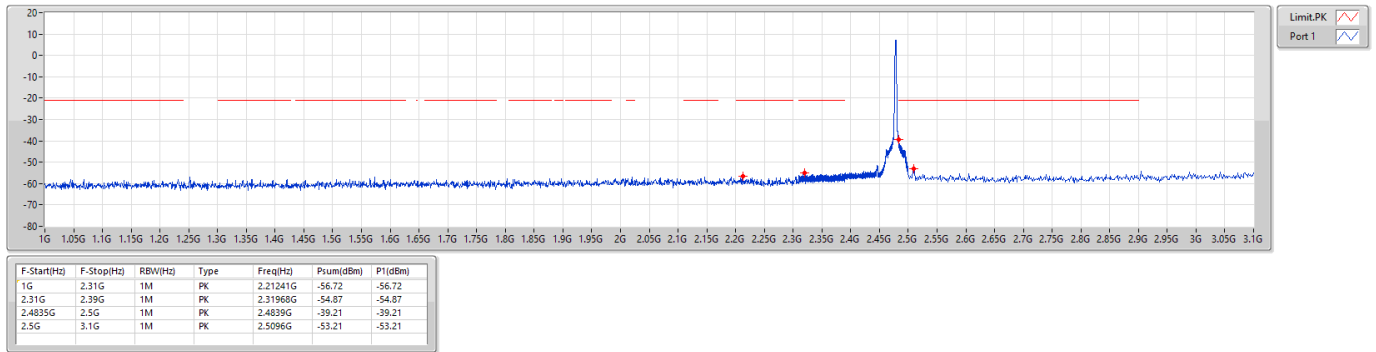
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.2

2.4-2.4835GHz_BT-LE(2Mbps)

CSE Bandedge-DTS [PK]

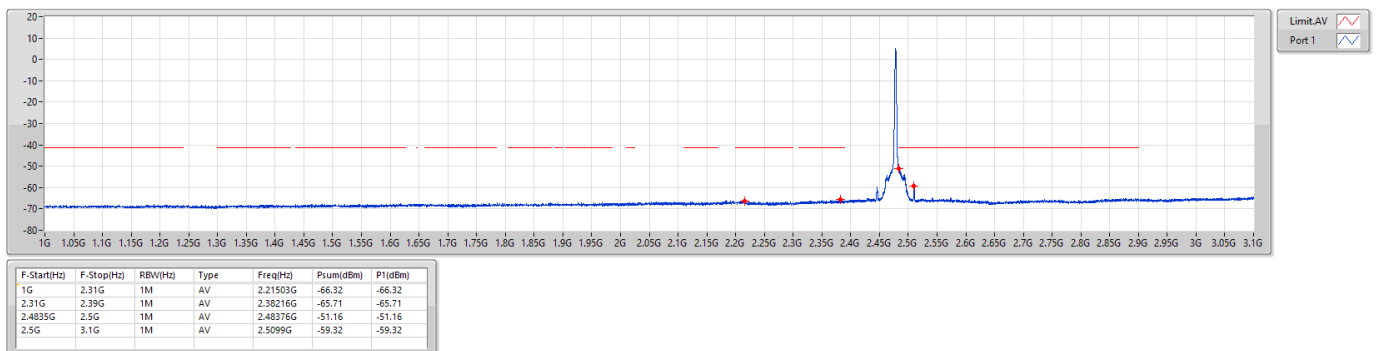
2478MHz



2.4-2.4835GHz_BT-LE(2Mbps)

CSE Bandedge-DTS [AV]

2478MHz





Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	8G	25G	AV	19.21416G	2.40	-55.95	-53.55	-41.20	-12.35
BT-LE(2Mbps)	Pass	8G	25G	AV	19.2285G	2.40	-56.93	-54.53	-41.20	-13.33

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



Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.3

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	3.1G	4G	AV	3.2665G	2.40	-73.51	-71.11	-41.20	-29.91
2402MHz	Pass	4G	5G	AV	4.804G	2.40	-59.91	-57.51	-41.20	-16.31
2402MHz	Pass	5G	7G	AV	5.2445G	2.40	-72.88	-70.48	-41.20	-29.28
2402MHz	Pass	7G	8G	AV	7.73975G	2.40	-72.13	-69.73	-41.20	-28.53
2402MHz	Pass	8G	25G	AV	19.21416G	2.40	-55.95	-53.55	-41.20	-12.35
2402MHz	Pass	3.1G	4G	PK	3.69985G	2.40	-63.46	-61.06	-21.20	-39.86
2402MHz	Pass	4G	5G	PK	4.80375G	2.40	-54.93	-52.53	-21.20	-31.33
2402MHz	Pass	5G	7G	PK	5.1985G	2.40	-62.35	-59.95	-21.20	-38.75
2402MHz	Pass	7G	8G	PK	7.397G	2.40	-62.78	-60.38	-21.20	-39.18
2402MHz	Pass	8G	25G	PK	19.21841G	2.40	-48.48	-46.08	-21.20	-24.88
2440MHz	Pass	3.1G	4G	AV	3.26223G	2.40	-73.61	-71.21	-41.20	-30.01
2440MHz	Pass	4G	5G	AV	4.88025G	2.40	-62.21	-59.81	-41.20	-18.61
2440MHz	Pass	5G	7G	AV	5.1995G	2.40	-72.82	-70.42	-41.20	-29.22
2440MHz	Pass	7G	8G	AV	7.73675G	2.40	-72.18	-69.78	-41.20	-28.58
2440MHz	Pass	8G	25G	AV	19.51856G	2.40	-57.18	-54.78	-41.20	-13.58
2440MHz	Pass	3.1G	4G	PK	3.94533G	2.40	-63.10	-60.70	-21.20	-39.50
2440MHz	Pass	4G	5G	PK	4.88G	2.40	-56.71	-54.31	-21.20	-33.11
2440MHz	Pass	4G	5G	PK	4.88075G	2.40	-56.71	-54.31	-21.20	-33.11
2440MHz	Pass	5G	7G	PK	5.4165G	2.40	-62.12	-59.72	-21.20	-38.52
2440MHz	Pass	7G	8G	PK	7.65075G	2.40	-62.91	-60.51	-21.20	-39.31
2440MHz	Pass	8G	25G	PK	19.52228G	2.40	-49.68	-47.28	-21.20	-26.08
2480MHz	Pass	3.1G	4G	AV	3.26628G	2.40	-73.52	-71.12	-41.20	-29.92
2480MHz	Pass	4G	5G	AV	4.96025G	2.40	-61.61	-59.21	-41.20	-18.01
2480MHz	Pass	5G	7G	AV	5.201G	2.40	-72.81	-70.41	-41.20	-29.21
2480MHz	Pass	7G	8G	AV	7.44075G	2.40	-69.75	-67.35	-41.20	-26.15
2480MHz	Pass	8G	25G	AV	19.83838G	2.40	-61.30	-58.90	-41.20	-17.70
2480MHz	Pass	3.1G	4G	PK	3.51333G	2.40	-63.60	-61.20	-21.20	-40.00
2480MHz	Pass	4G	5G	PK	4.95975G	2.40	-56.97	-54.57	-21.20	-33.37
2480MHz	Pass	5G	7G	PK	5.1665G	2.40	-62.78	-60.38	-21.20	-39.18
2480MHz	Pass	7G	8G	PK	7.441G	2.40	-61.20	-58.80	-21.20	-37.60
2480MHz	Pass	8G	25G	PK	19.84209G	2.40	-54.18	-51.78	-21.20	-30.58
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-
2404MHz	Pass	3.1G	4G	AV	3.2647G	2.40	-73.55	-71.15	-41.20	-29.95
2404MHz	Pass	4G	5G	AV	4.809G	2.40	-61.88	-59.48	-41.20	-18.28
2404MHz	Pass	5G	7G	AV	5.2G	2.40	-72.81	-70.41	-41.20	-29.21
2404MHz	Pass	7G	8G	AV	7.74G	2.40	-71.79	-69.39	-41.20	-28.19
2404MHz	Pass	8G	25G	AV	19.2285G	2.40	-56.93	-54.53	-41.20	-13.33
2404MHz	Pass	3.1G	4G	PK	3.87445G	2.40	-62.77	-60.37	-21.20	-39.17
2404MHz	Pass	4G	5G	PK	4.80925G	2.40	-55.65	-53.25	-21.20	-32.05
2404MHz	Pass	5G	7G	PK	5.454G	2.40	-62.60	-60.20	-21.20	-39.00
2404MHz	Pass	7G	8G	PK	7.73225G	2.40	-62.61	-60.21	-21.20	-39.01

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2404MHz	Pass	8G	25G	PK	19.2285G	2.40	-49.14	-46.74	-21.20	-25.54
2440MHz	Pass	3.1G	4G	AV	3.26178G	2.40	-73.35	-70.95	-41.20	-29.75
2440MHz	Pass	4G	5G	AV	4.881G	2.40	-64.05	-61.65	-41.20	-20.45
2440MHz	Pass	5G	7G	AV	5.244G	2.40	-72.62	-70.22	-41.20	-29.02
2440MHz	Pass	7G	8G	AV	7.74975G	2.40	-72.20	-69.80	-41.20	-28.60
2440MHz	Pass	8G	25G	AV	19.52388G	2.40	-58.19	-55.79	-41.20	-14.59
2440MHz	Pass	3.1G	4G	PK	3.9055G	2.40	-62.76	-60.36	-21.20	-39.16
2440MHz	Pass	4G	5G	PK	4.87925G	2.40	-57.43	-55.03	-21.20	-33.83
2440MHz	Pass	5G	7G	PK	5.4555G	2.40	-61.85	-59.45	-21.20	-38.25
2440MHz	Pass	7G	8G	PK	7.446G	2.40	-62.74	-60.34	-21.20	-39.14
2440MHz	Pass	8G	25G	PK	19.51644G	2.40	-51.13	-48.73	-21.20	-27.53
2478MHz	Pass	3.1G	4G	AV	3.26695G	2.40	-73.50	-71.10	-41.20	-29.90
2478MHz	Pass	4G	5G	AV	4.957G	2.40	-64.18	-61.78	-41.20	-20.58
2478MHz	Pass	5G	7G	AV	5.209G	2.40	-72.75	-70.35	-41.20	-29.15
2478MHz	Pass	7G	8G	AV	7.74825G	2.40	-72.21	-69.81	-41.20	-28.61
2478MHz	Pass	8G	25G	AV	19.82031G	2.40	-62.92	-60.52	-41.20	-19.32
2478MHz	Pass	3.1G	4G	PK	3.93543G	2.40	-62.99	-60.59	-21.20	-39.39
2478MHz	Pass	4G	5G	PK	4.95725G	2.40	-56.55	-54.15	-21.20	-32.95
2478MHz	Pass	5G	7G	PK	5.4225G	2.40	-62.92	-60.52	-21.20	-39.32
2478MHz	Pass	7G	8G	PK	7.75G	2.40	-62.06	-59.66	-21.20	-38.46
2478MHz	Pass	8G	25G	PK	19.82031G	2.40	-53.35	-50.95	-21.20	-29.75

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



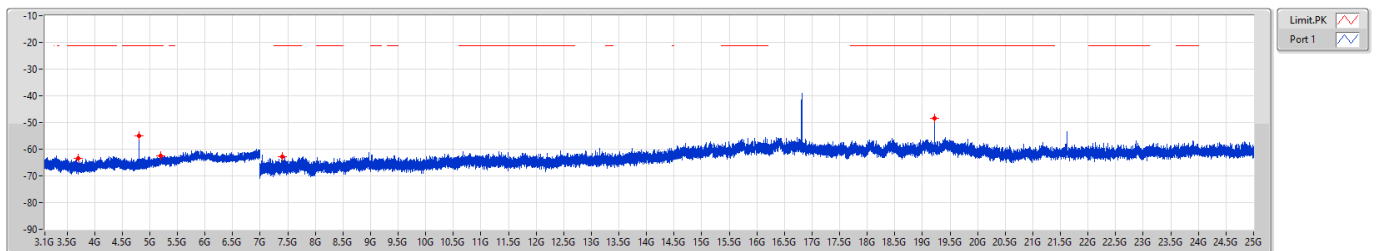
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.3

2.4-2.4835GHz_BT-LE(1Mbps)

CSE-DTS [PK]

2402MHz

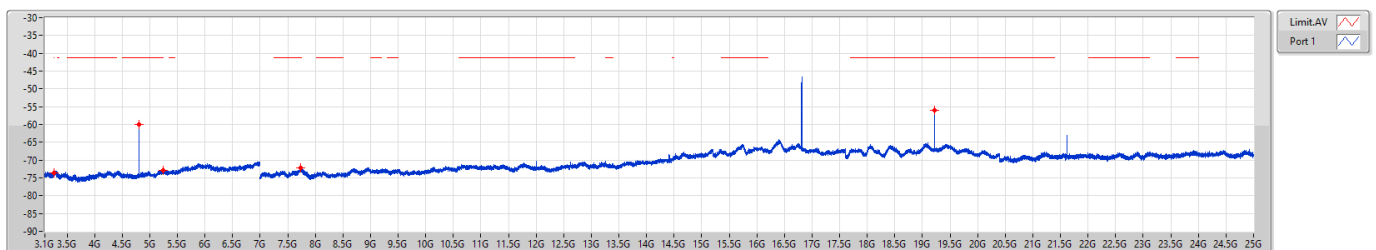


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.69985G	-63.46	-63.46
4G	5G	1M	PK	4.80375G	-54.93	-54.93
5G	7G	1M	PK	5.1985G	-62.35	-62.35
7G	8G	1M	PK	7.397G	-62.78	-62.78
8G	25G	1M	PK	19.21841G	-48.48	-48.48

2.4-2.4835GHz_BT-LE(1Mbps)

CSE-DTS [AV]

2402MHz



F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.2665G	-73.51	-73.51
4G	5G	1M	AV	4.804G	-59.91	-59.91
5G	7G	1M	AV	5.2445G	-72.88	-72.88
7G	8G	1M	AV	7.73975G	-72.13	-72.13
8G	25G	1M	AV	19.21416G	-55.95	-55.95



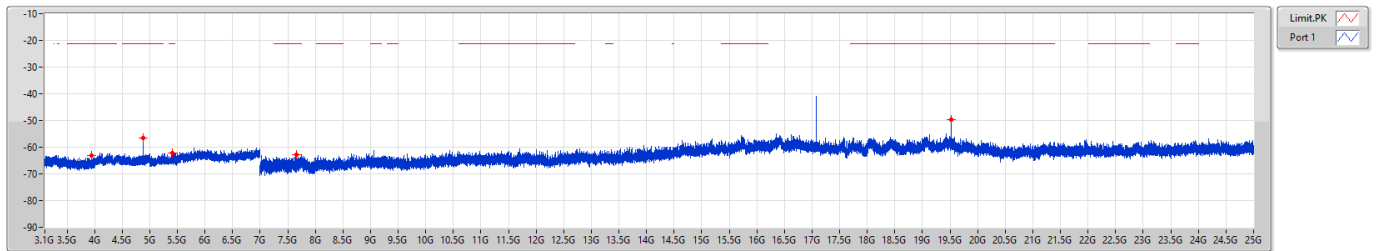
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.3

2.4-2.4835GHz_BT-LE(1Mbps)

CSE-DTS [PK]

2440MHz

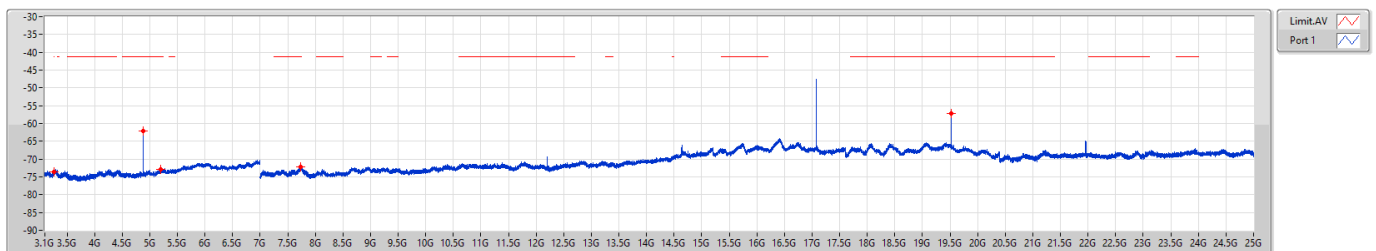


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.94533G	-63.10	-63.10
4G	5G	1M	PK	4.88G	-56.71	-56.71
4G	5G	1M	PK	4.88075G	-56.71	-56.71
5G	7G	1M	PK	5.4165G	-62.12	-62.12
7G	8G	1M	PK	7.65075G	-62.91	-62.91
8G	25G	1M	PK	19.52228G	-49.68	-49.68

2.4-2.4835GHz_BT-LE(1Mbps)

CSE-DTS [AV]

2440MHz



F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.26223G	-73.61	-73.61
4G	5G	1M	AV	4.88025G	-62.21	-62.21
5G	7G	1M	AV	5.1995G	-72.82	-72.82
7G	8G	1M	AV	7.73675G	-72.18	-72.18
8G	25G	1M	AV	19.51856G	-57.18	-57.18



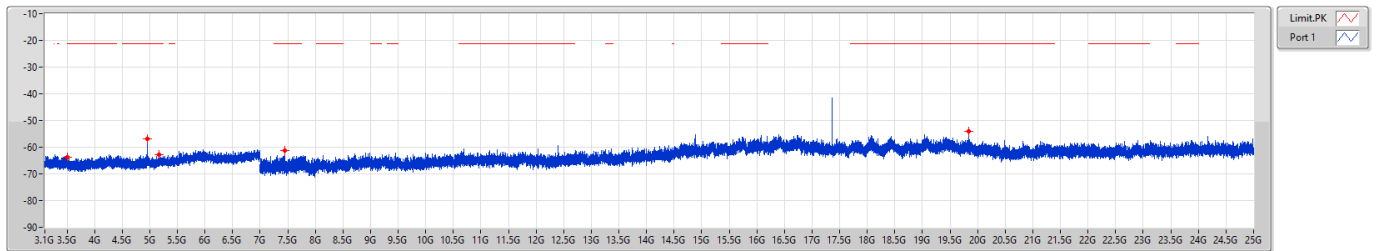
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.3

2.4-2.4835GHz_BT-LE(1Mbps)

CSE-DTS [PK]

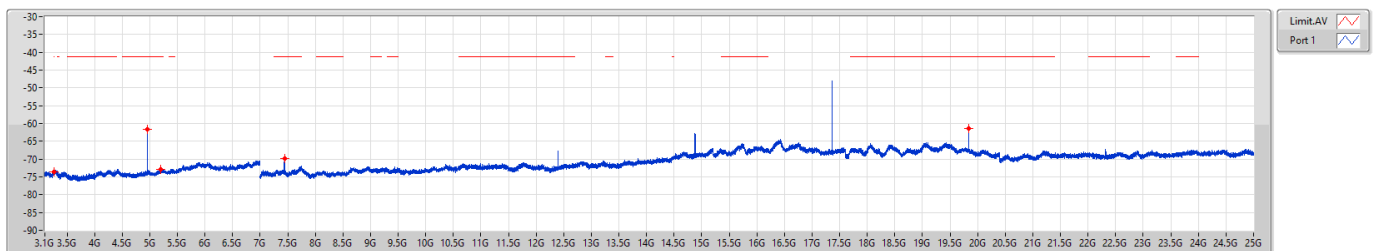
2480MHz



2.4-2.4835GHz_BT-LE(1Mbps)

CSE-DTS [AV]

2480MHz





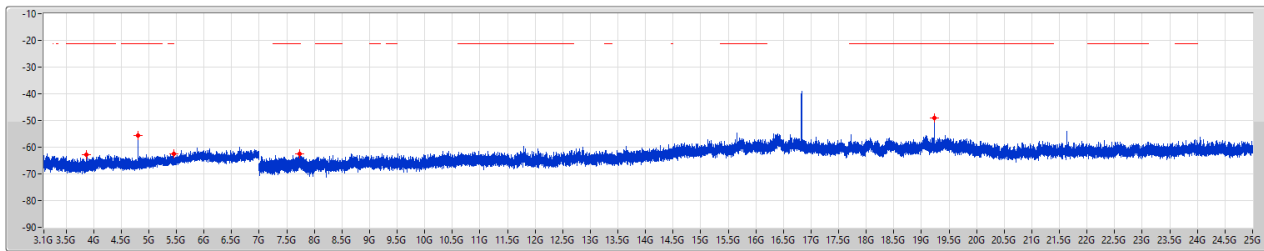
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.3

2.4-2.4835GHz_BT-LE(2Mbps)

CSE-DTS [PK]

2404MHz

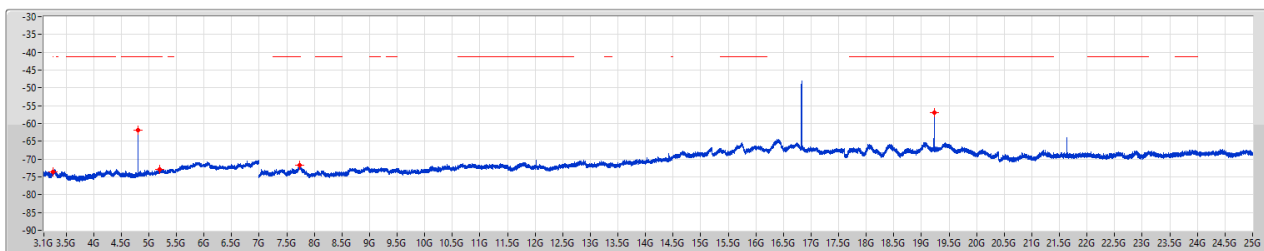


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.87445G	-62.77	-62.77
4G	5G	1M	PK	4.80925G	-55.65	-55.65
5G	7G	1M	PK	5.454G	-62.60	-62.60
7G	8G	1M	PK	7.73225G	-62.61	-62.61
8G	25G	1M	PK	19.2285G	-49.14	-49.14

2.4-2.4835GHz_BT-LE(2Mbps)

CSE-DTS [AV]

2404MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.2647G	-73.55	-73.55
4G	5G	1M	AV	4.809G	-61.88	-61.88
5G	7G	1M	AV	5.2G	-72.81	-72.81
7G	8G	1M	AV	7.74G	-71.79	-71.79
8G	25G	1M	AV	19.2285G	-56.93	-56.93



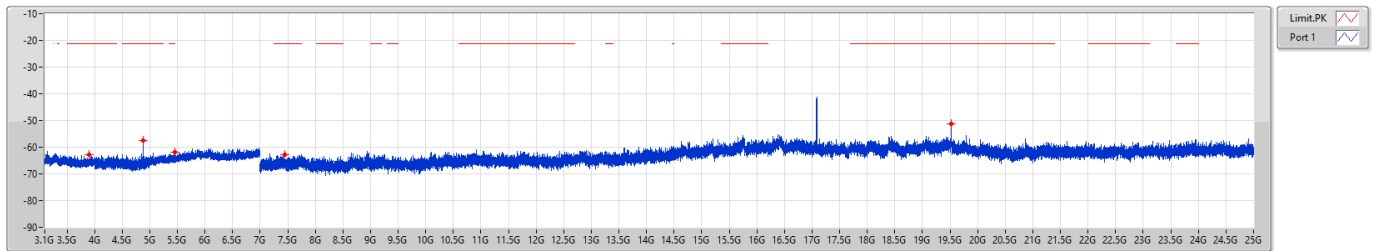
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.3

2.4-2.4835GHz_BT-LE(2Mbps)

CSE-DTS [PK]

2440MHz

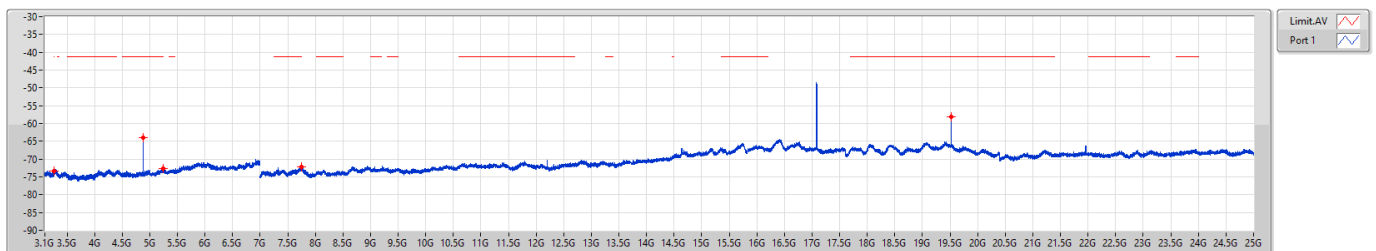


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.9055G	-62.76	-62.76
4G	5G	1M	PK	4.87925G	-57.43	-57.43
5G	7G	1M	PK	5.4555G	-61.85	-61.85
7G	8G	1M	PK	7.446G	-62.74	-62.74
8G	25G	1M	PK	19.51644G	-51.13	-51.13

2.4-2.4835GHz_BT-LE(2Mbps)

CSE-DTS [AV]

2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	AV	3.26178G	-73.35	-73.35
4G	5G	1M	AV	4.881G	-64.05	-64.05
5G	7G	1M	AV	5.244G	-72.62	-72.62
7G	8G	1M	AV	7.74975G	-72.20	-72.20
8G	25G	1M	AV	19.52388G	-58.19	-58.19



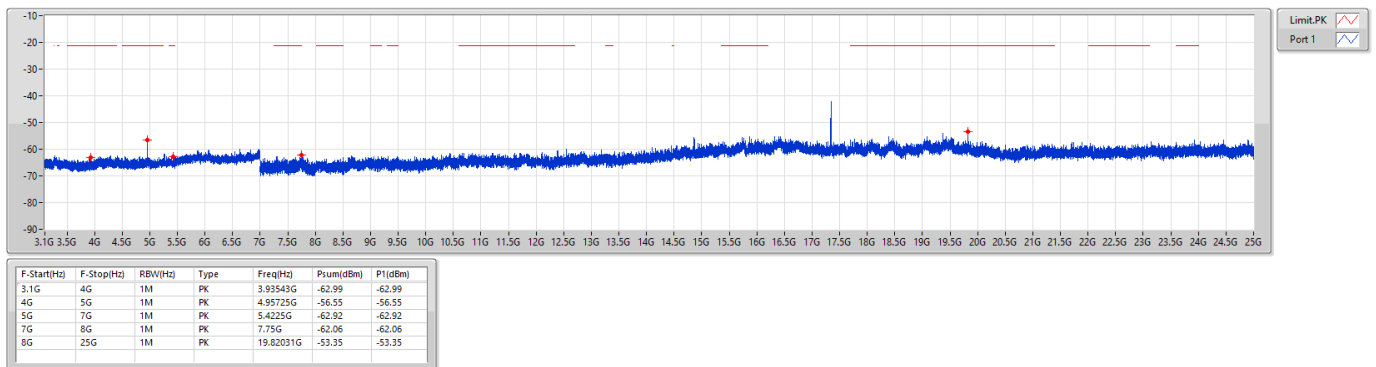
Unwanted Conducted Emissions into Restricted Frequency Bands

AppendixD.3

2.4-2.4835GHz_BT-LE(2Mbps)

CSE-DTS [PK]

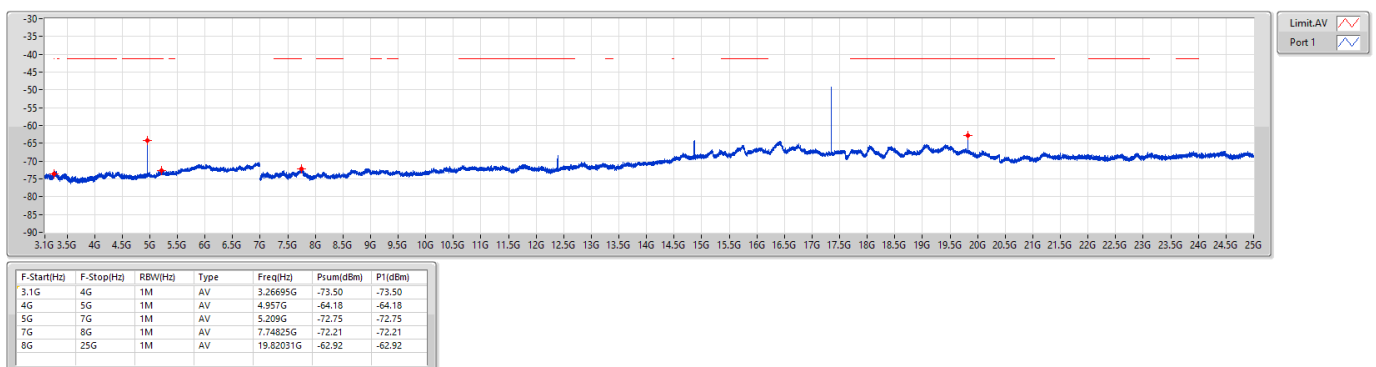
2478MHz



2.4-2.4835GHz_BT-LE(2Mbps)

CSE-DTS [AV]

2478MHz





Summary

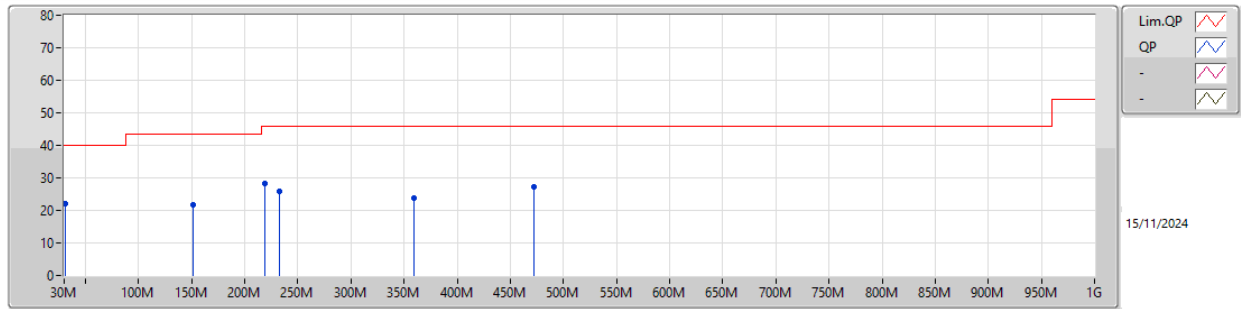
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	32.2M	27.95	40.00	-12.05	Vertical



Unwanted Radiated Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



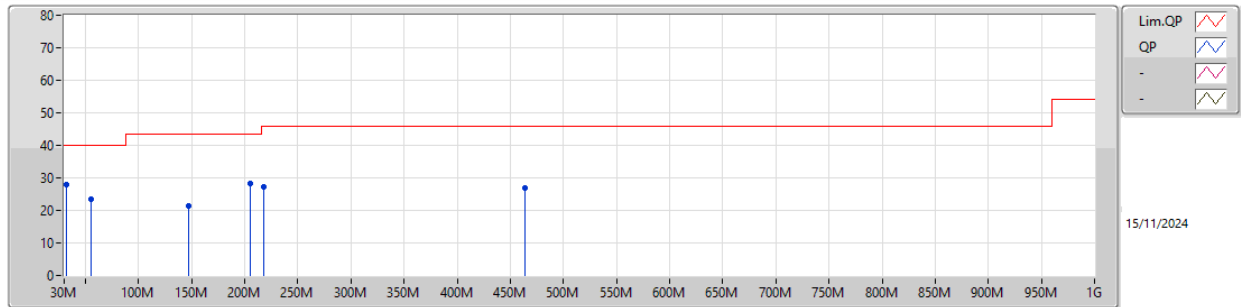
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	31.5M	22.09	40.00	-17.91	-9.74	3	Horizontal	0	0.00	-	31.83	17.80	0.54	28.08		
PK	151.8M	21.69	43.50	-21.81	-8.64	3	Horizontal	0	0.00	-	30.33	18.40	1.22	28.26		
PK	219M	28.32	46.00	-17.68	-11.70	3	Horizontal	0	0.00	-	40.02	15.10	1.47	28.27		
PK	232.2M	25.87	46.00	-20.13	-11.20	3	Horizontal	0	0.00	-	37.07	15.55	1.51	28.26		
PK	359.1M	23.80	46.00	-22.20	-6.58	3	Horizontal	0	0.00	-	30.38	19.78	1.83	28.19		
PK	472.1M	27.17	46.00	-18.83	-3.84	3	Horizontal	0	0.00	-	31.01	22.34	2.01	28.19		



Unwanted Radiated Emissions into Restricted Frequency Bands Below 1GHz

Appendix D.4

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	32.2M	27.95	40.00	-12.05	-9.71	3	Vertical	0	0.00	-	37.66	17.84	0.54	28.09		
PK	55.2M	23.54	40.00	-16.46	-8.50	3	Vertical	0	0.00	-	32.04	18.90	0.75	28.15		
PK	146.8M	21.40	43.50	-22.10	-8.69	3	Vertical	0	0.00	-	30.09	18.36	1.20	28.25		
PK	205M	28.38	43.50	-15.12	-11.65	3	Vertical	0	0.00	-	40.03	15.20	1.43	28.28		
PK	218.3M	27.34	46.00	-18.66	-11.70	3	Vertical	0	0.00	-	39.04	15.10	1.47	28.27		
PK	463.6M	26.94	46.00	-19.06	-3.92	3	Vertical	0	0.00	-	30.86	22.27	2.00	28.19		



**Unwanted Radiated Emissions into Restricted Frequency
Bands Above 1GHz**

Appendix D.5

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	7.44G	46.32	54.00	-7.68	3	Vertical	339	1.00	-
BT-LE(2Mbps)	Pass	AV	7.434G	46.15	54.00	-7.85	3	Vertical	331	1.00	-

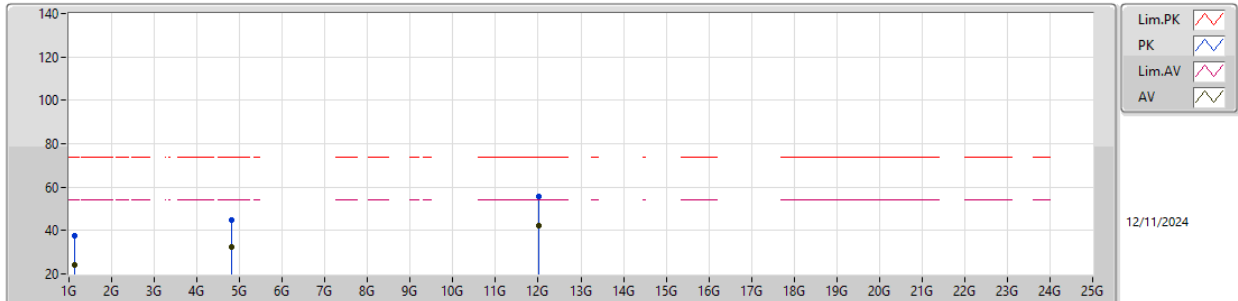


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	1.119G	24.35	54.00	-29.65	31.82	3	Horizontal	29	1.00	-	25.29	3.11	35.87				
PK	1.119G	37.81	74.00	-36.19	45.28	3	Horizontal	29	1.00	-	25.29	3.11	35.87				
AV	4.804G	32.60	54.00	-21.40	33.15	3	Horizontal	345	2.06	-	31.29	6.68	38.52				
PK	4.804G	44.79	74.00	-29.21	45.34	3	Horizontal	345	2.06	-	31.29	6.68	38.52				
AV	12.01G	42.35	54.00	-11.65	35.82	3	Horizontal	61	1.00	-	39.20	10.23	42.90				
PK	12.01G	55.67	74.00	-18.33	49.14	3	Horizontal	61	1.00	-	39.20	10.23	42.90				

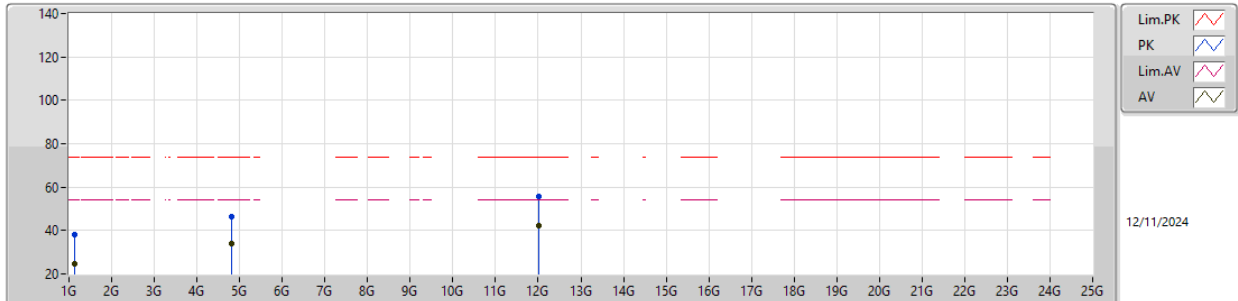


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	1.119G	24.56	54.00	-29.44	32.03	3	Vertical	21	1.00	-	25.29	3.11	35.87				
PK	1.119G	38.02	74.00	-35.98	45.49	3	Vertical	21	1.00	-	25.29	3.11	35.87				
AV	4.804G	33.82	54.00	-20.18	34.37	3	Vertical	44	1.00	-	31.29	6.68	38.52				
PK	4.804G	46.14	74.00	-27.86	46.69	3	Vertical	44	1.00	-	31.29	6.68	38.52				
AV	12.01G	42.21	54.00	-11.79	35.68	3	Vertical	28	1.00	-	39.20	10.23	42.90				
PK	12.01G	55.53	74.00	-18.47	49.00	3	Vertical	28	1.00	-	39.20	10.23	42.90				

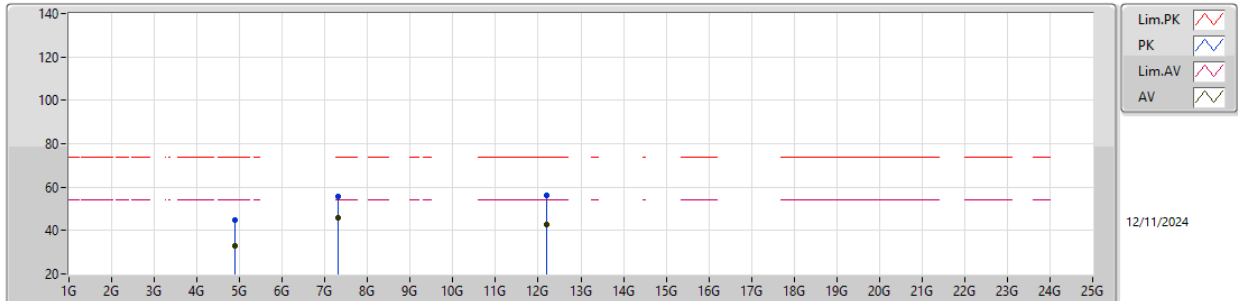


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4.88G	32.79	54.00	-21.21	33.45	3	Horizontal	186	1.00	-	31.14	6.77	38.57				
PK	4.88G	45.03	74.00	-28.97	45.69	3	Horizontal	186	1.00	-	31.14	6.77	38.57				
AV	7.32G	45.90	54.00	-8.10	40.50	3	Horizontal	342	2.27	-	36.16	8.63	39.39				
PK	7.32G	55.72	74.00	-18.28	50.32	3	Horizontal	342	2.27	-	36.16	8.63	39.39				
AV	12.2G	42.74	54.00	-11.26	35.65	3	Horizontal	44	1.00	-	39.50	10.27	42.68				
PK	12.2G	56.15	74.00	-17.85	49.06	3	Horizontal	44	1.00	-	39.50	10.27	42.68				

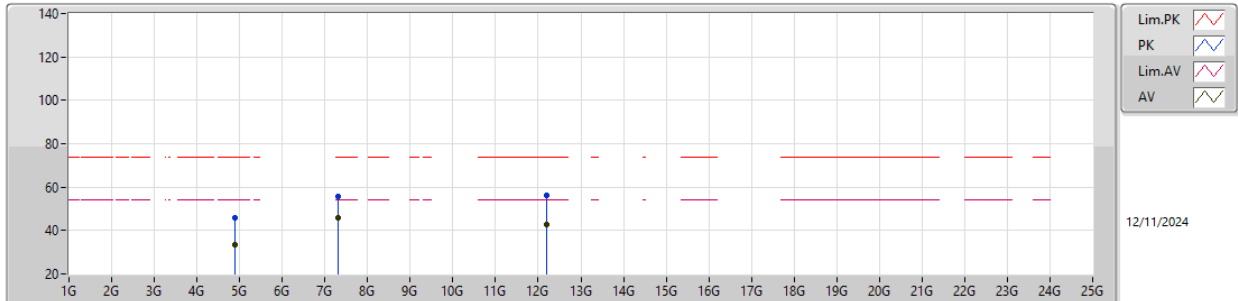


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4.88G	33.45	54.00	-20.55	34.11	3	Vertical	52	1.00	-	31.14	6.77	38.57			
PK	4.88G	46.02	74.00	-27.98	46.68	3	Vertical	52	1.00	-	31.14	6.77	38.57			
AV	7.32G	45.75	54.00	-8.25	40.35	3	Vertical	336	1.00	-	36.16	8.63	39.39			
PK	7.32G	55.56	74.00	-18.44	50.16	3	Vertical	336	1.00	-	36.16	8.63	39.39			
AV	12.2G	42.78	54.00	-11.22	35.69	3	Vertical	21	1.00	-	39.50	10.27	42.68			
PK	12.2G	56.33	74.00	-17.67	49.24	3	Vertical	21	1.00	-	39.50	10.27	42.68			

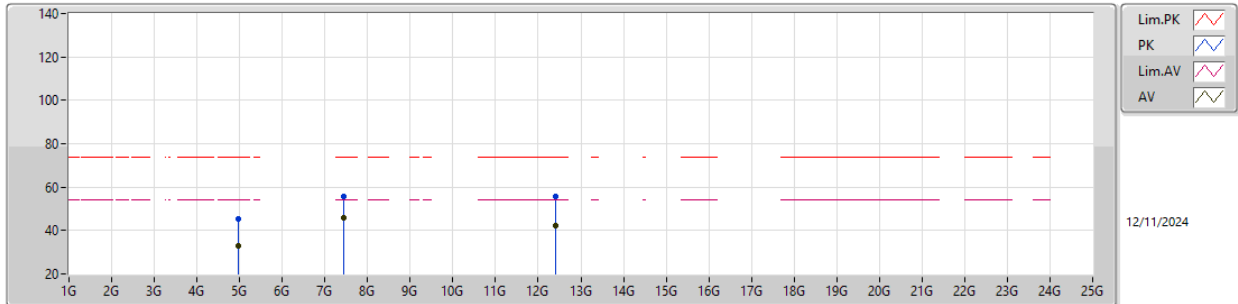


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4.96G	33.16	54.00	-20.84	33.56	3	Horizontal	179	1.00	-	31.36	6.86	38.62				
PK	4.96G	45.44	74.00	-28.56	45.84	3	Horizontal	179	1.00	-	31.36	6.86	38.62				
AV	7.44G	46.08	54.00	-7.92	40.62	3	Horizontal	346	2.21	-	36.34	8.66	39.54				
PK	7.44G	55.91	74.00	-18.09	50.45	3	Horizontal	346	2.21	-	36.34	8.66	39.54				
AV	12.4G	42.33	54.00	-11.67	35.76	3	Horizontal	51	1.00	-	38.70	10.32	42.45				
PK	12.4G	55.79	74.00	-18.21	49.22	3	Horizontal	51	1.00	-	38.70	10.32	42.45				

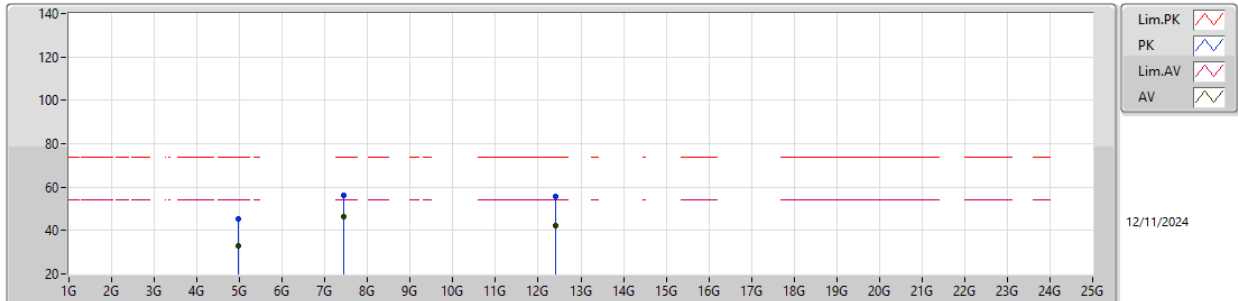


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(1Mbps)

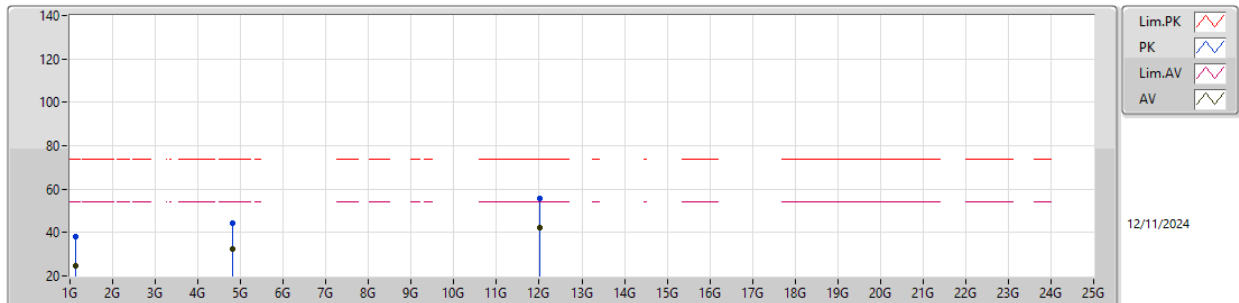
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4.96G	33.02	54.00	-20.98	33.42	3	Vertical	41	1.00	-	31.36	6.86	38.62				
PK	4.96G	45.28	74.00	-28.72	45.68	3	Vertical	41	1.00	-	31.36	6.86	38.62				
AV	7.44G	46.32	54.00	-7.68	40.86	3	Vertical	339	1.00	-	36.34	8.66	39.54				
PK	7.44G	56.14	74.00	-17.86	50.68	3	Vertical	339	1.00	-	36.34	8.66	39.54				
AV	12.4G	42.45	54.00	-11.55	35.88	3	Vertical	24	1.00	-	38.70	10.32	42.45				
PK	12.4G	55.86	74.00	-18.14	49.29	3	Vertical	24	1.00	-	38.70	10.32	42.45				

2.4-2.4835GHz_BT-LE(2Mbps)

2404MHz_TX



Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB/m)	(dB)	(dB)				
AV	1.119G	24.49	54.00	-29.51	31.96	3	Horizontal	31	1.00	-	25.29	3.11	35.87				
PK	1.119G	38.05	74.00	-35.95	45.52	3	Horizontal	31	1.00	-	25.29	3.11	35.87				
AV	4.808G	32.41	54.00	-21.59	32.96	3	Horizontal	326	1.94	-	31.28	6.69	38.52				
PK	4.808G	44.56	74.00	-29.44	45.11	3	Horizontal	326	1.94	-	31.28	6.69	38.52				
AV	12.02G	42.28	54.00	-11.72	35.74	3	Horizontal	45	1.00	-	39.20	10.23	42.89				
PK	12.02G	55.61	74.00	-18.39	49.07	3	Horizontal	45	1.00	-	39.20	10.23	42.89				

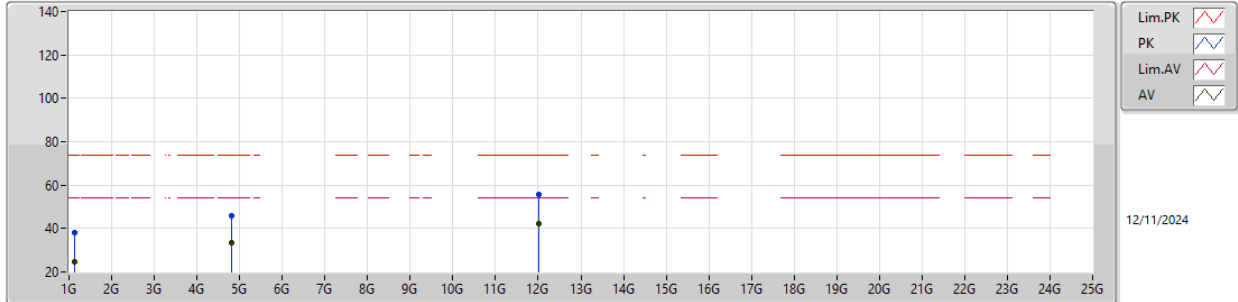


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(2Mbps)

2404MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	1.119G	24.55	54.00	-29.45	32.02	3	Vertical	26	1.00	-	25.29	3.11	35.87				
PK	1.119G	38.16	74.00	-35.84	45.63	3	Vertical	26	1.00	-	25.29	3.11	35.87				
AV	4.808G	33.69	54.00	-20.31	34.24	3	Vertical	35	1.00	-	31.28	6.69	38.52				
PK	4.808G	46.01	74.00	-27.99	46.56	3	Vertical	35	1.00	-	31.28	6.69	38.52				
AV	12.02G	42.14	54.00	-11.86	35.60	3	Vertical	43	1.00	-	39.20	10.23	42.89				
PK	12.02G	55.49	74.00	-18.51	48.95	3	Vertical	43	1.00	-	39.20	10.23	42.89				

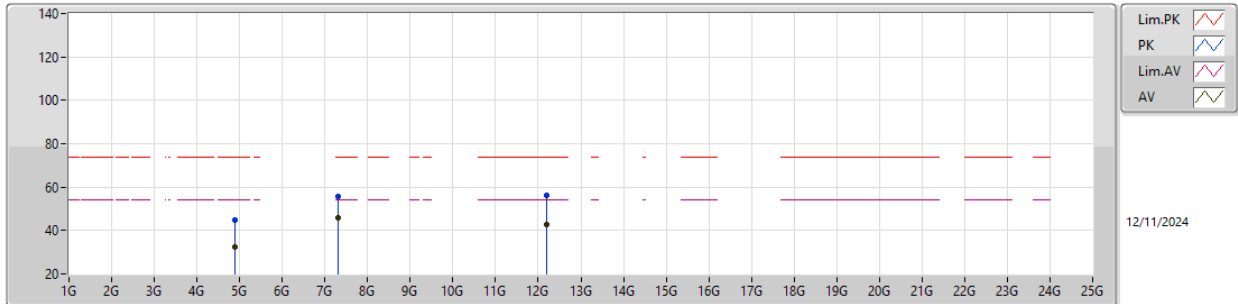


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4.88G	32.65	54.00	-21.35	33.31	3	Horizontal	177	1.00	-	31.14	6.77	38.57				
PK	4.88G	44.81	74.00	-29.19	45.47	3	Horizontal	177	1.00	-	31.14	6.77	38.57				
AV	7.32G	45.64	54.00	-8.36	40.24	3	Horizontal	351	2.22	-	36.16	8.63	39.39				
PK	7.32G	55.48	74.00	-18.52	50.08	3	Horizontal	351	2.22	-	36.16	8.63	39.39				
AV	12.2G	42.61	54.00	-11.39	35.52	3	Horizontal	29	1.00	-	39.50	10.27	42.68				
PK	12.2G	56.02	74.00	-17.98	48.93	3	Horizontal	29	1.00	-	39.50	10.27	42.68				

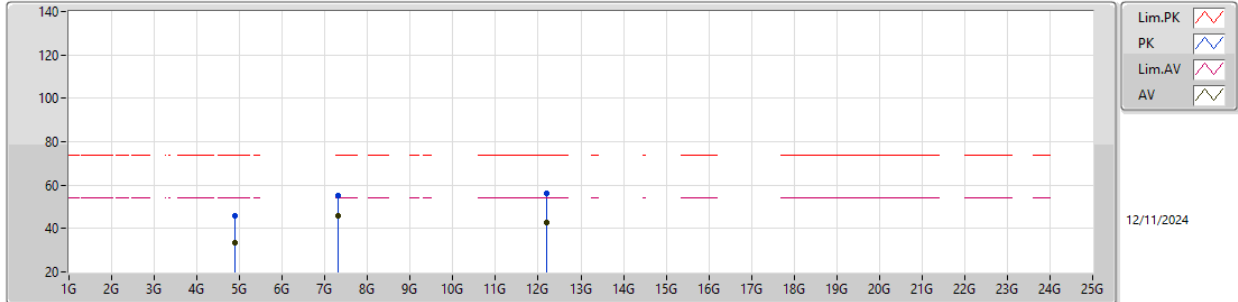


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4.88G	33.29	54.00	-20.71	33.95	3	Vertical	49	1.00	-	31.14	6.77	38.57				
PK	4.88G	45.86	74.00	-28.14	46.52	3	Vertical	49	1.00	-	31.14	6.77	38.57				
AV	7.32G	45.62	54.00	-8.38	40.22	3	Vertical	331	1.00	-	36.16	8.63	39.39				
PK	7.32G	55.43	74.00	-18.57	50.03	3	Vertical	331	1.00	-	36.16	8.63	39.39				
AV	12.2G	42.65	54.00	-11.35	35.56	3	Vertical	25	1.00	-	39.50	10.27	42.68				
PK	12.2G	56.01	74.00	-17.99	48.92	3	Vertical	25	1.00	-	39.50	10.27	42.68				

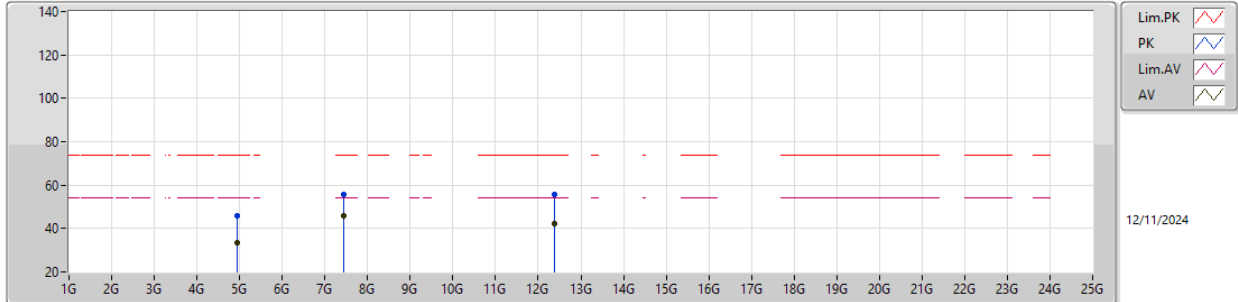


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(2Mbps)

2478MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4.956G	33.29	54.00	-20.71	33.71	3	Horizontal	165	1.00	-	31.34	6.86	38.62				
PK	4.956G	45.61	74.00	-28.39	46.03	3	Horizontal	165	1.00	-	31.34	6.86	38.62				
AV	7.434G	45.86	54.00	-8.14	40.44	3	Horizontal	332	2.35	-	36.30	8.66	39.54				
PK	7.434G	55.72	74.00	-18.28	50.30	3	Horizontal	332	2.35	-	36.30	8.66	39.54				
AV	12.39G	42.21	54.00	-11.79	35.60	3	Horizontal	48	1.00	-	38.76	10.32	42.47				
PK	12.39G	55.64	74.00	-18.36	49.03	3	Horizontal	48	1.00	-	38.76	10.32	42.47				

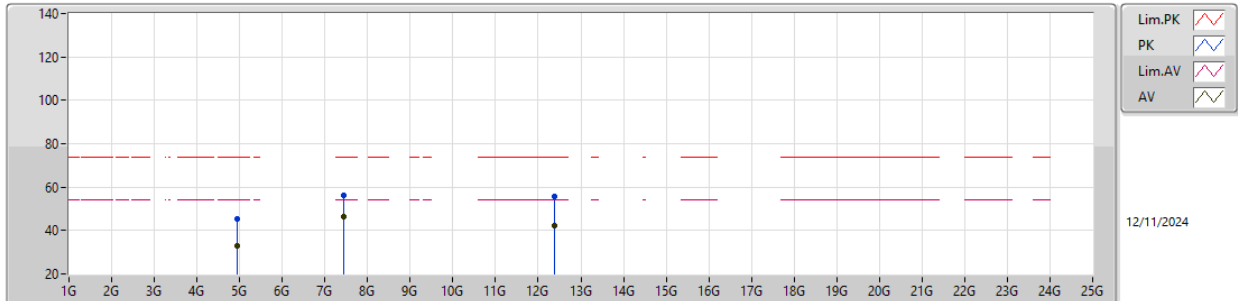


Unwanted Radiated Emissions into Restricted Frequency Bands Above 1GHz

Appendix D.5

2.4-2.4835GHz_BT-LE(2Mbps)

2478MHz_TX



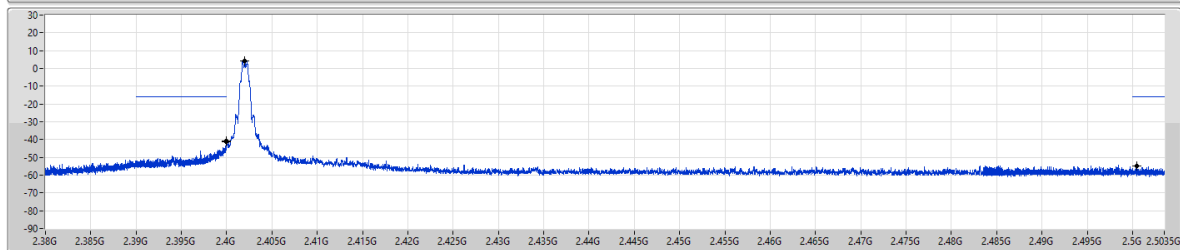
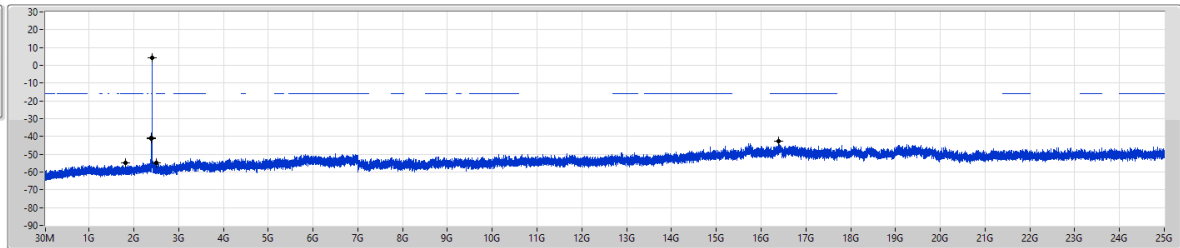
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4.956G	32.85	54.00	-21.15	33.27	3	Vertical	29	1.00	-	31.34	6.86	38.62				
PK	4.956G	45.16	74.00	-28.84	45.58	3	Vertical	29	1.00	-	31.34	6.86	38.62				
AV	7.434G	46.15	54.00	-7.85	40.73	3	Vertical	331	1.00	-	36.30	8.66	39.54				
PK	7.434G	56.08	74.00	-17.92	50.66	3	Vertical	331	1.00	-	36.30	8.66	39.54				
AV	12.39G	42.39	54.00	-11.61	35.78	3	Vertical	42	1.00	-	38.76	10.32	42.47				
PK	12.39G	55.71	74.00	-18.29	49.10	3	Vertical	42	1.00	-	38.76	10.32	42.47				

2.4-2.4835GHz_BT-LE(125kbps)

CSEndB-DTS

2402MHz

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak



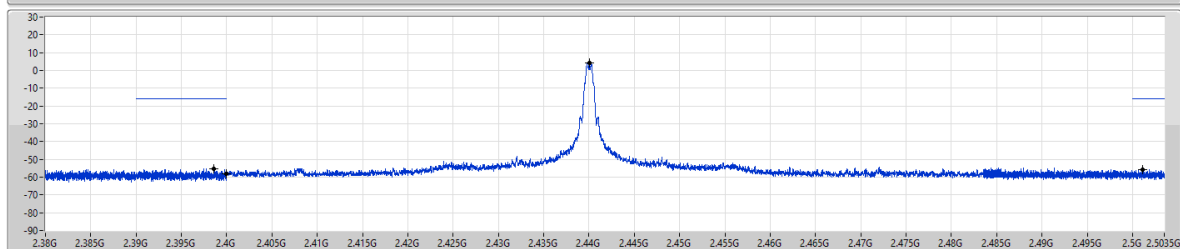
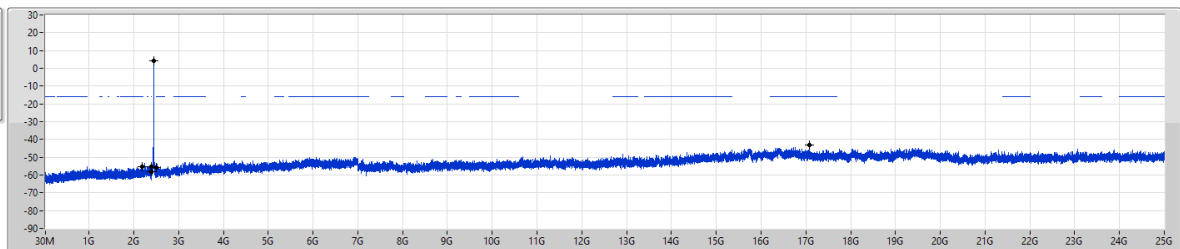
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40201G	4.26	-15.74	1.8207G	-55.05	2.39999G	-40.95	2.4G	-41.06	2.50048G	-55.04	16.40071G	-42.68	1

2.4-2.4835GHz_BT-LE(125kbps)

CSEndB-DTS

2440MHz

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

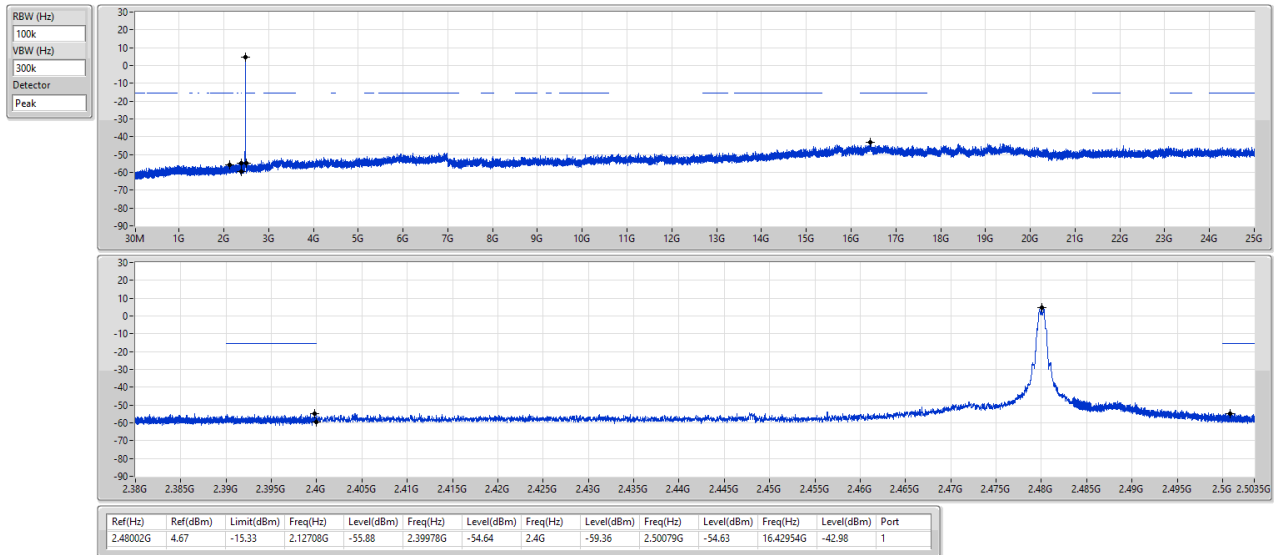


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44002G	4.21	-15.79	2.18965G	-55.33	2.39855G	-55.28	2.4G	-57.97	2.50113G	-55.70	17.08194G	-43.35	1

2.4-2.4835GHz_BT-LE(125kbps)

CSEndB-DTS

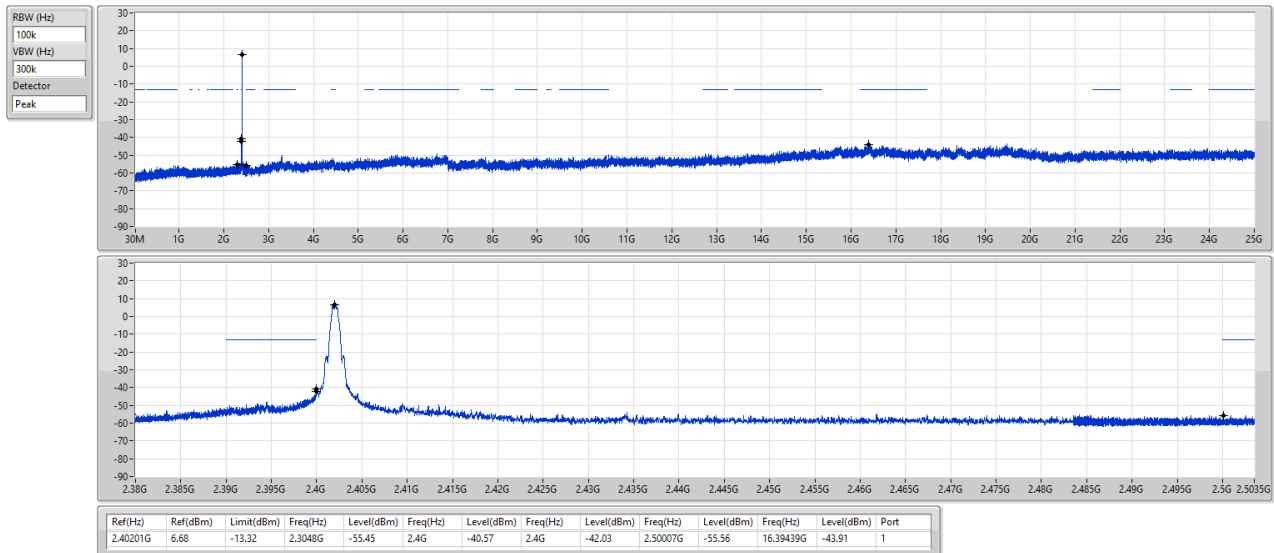
2480MHz



2.4-2.4835GHz_BT-LE(500kbps)

CSEndB-DTS

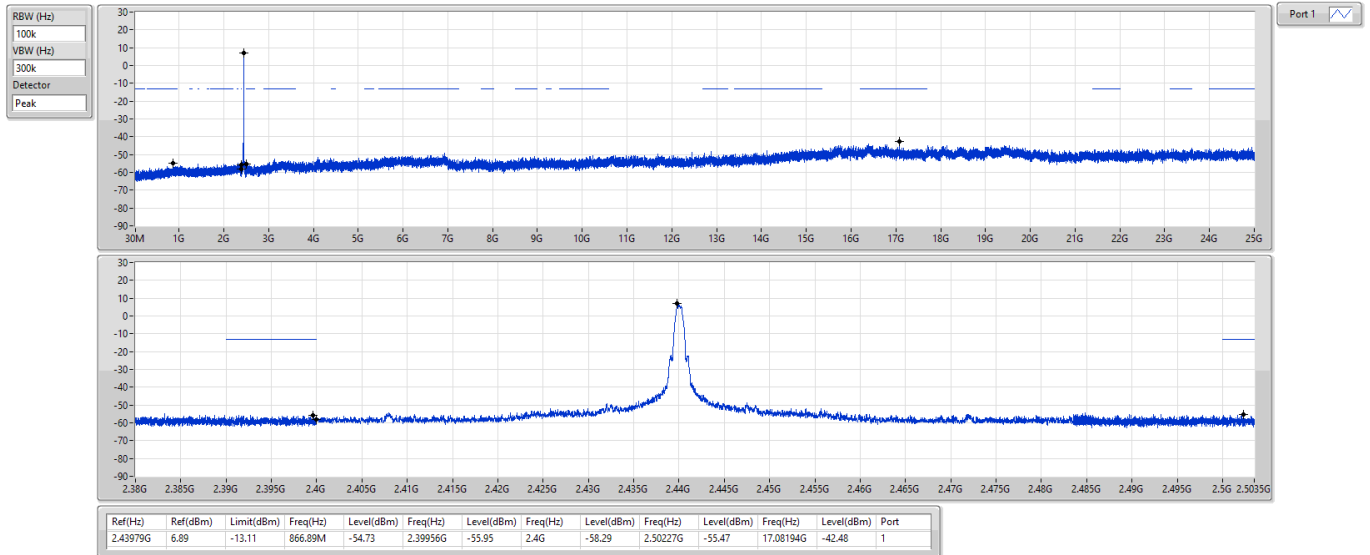
2402MHz



2.4-2.4835GHz_BT-LE(500kbps)

CSEndB-DTS

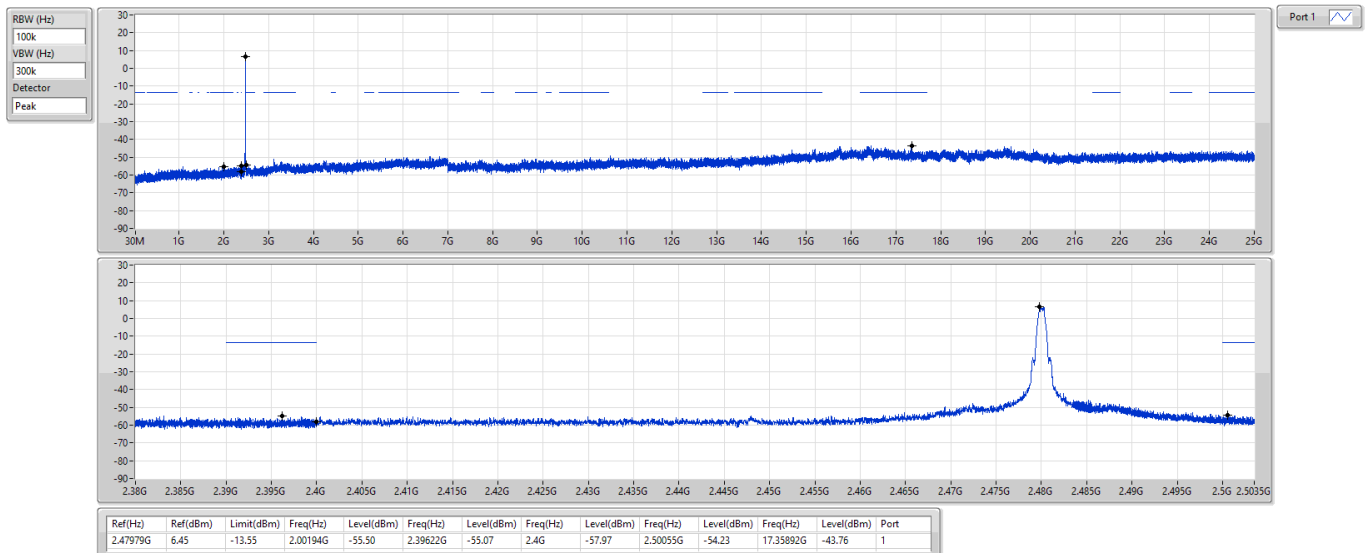
2440MHz



2.4-2.4835GHz_BT-LE(500kbps)

CSEndB-DTS

2480MHz

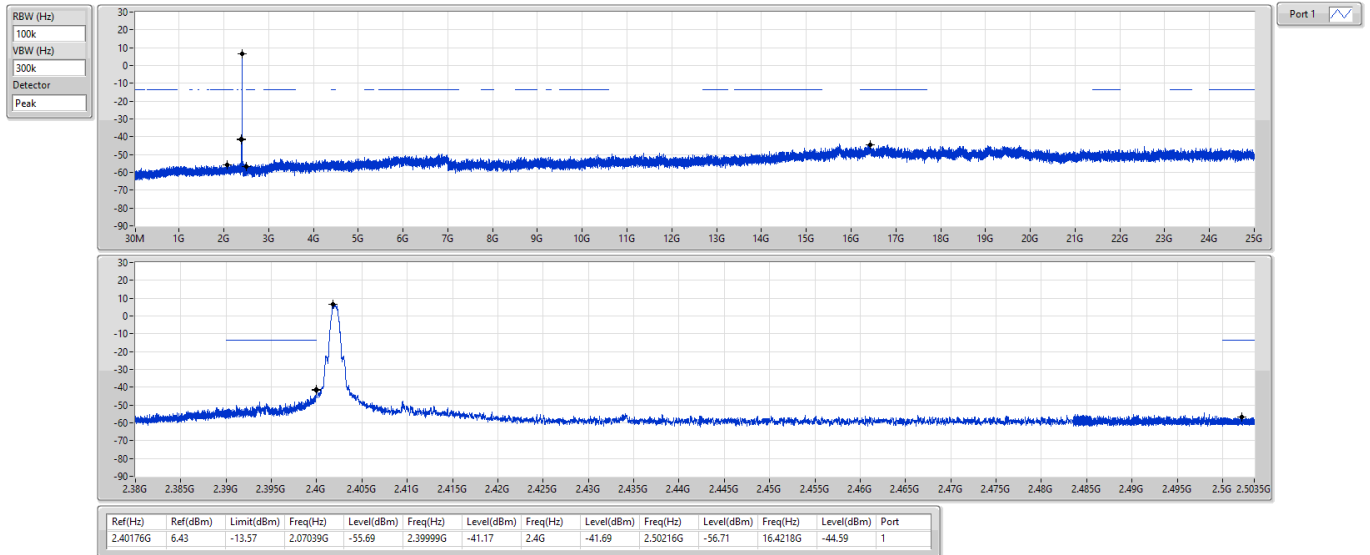




2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

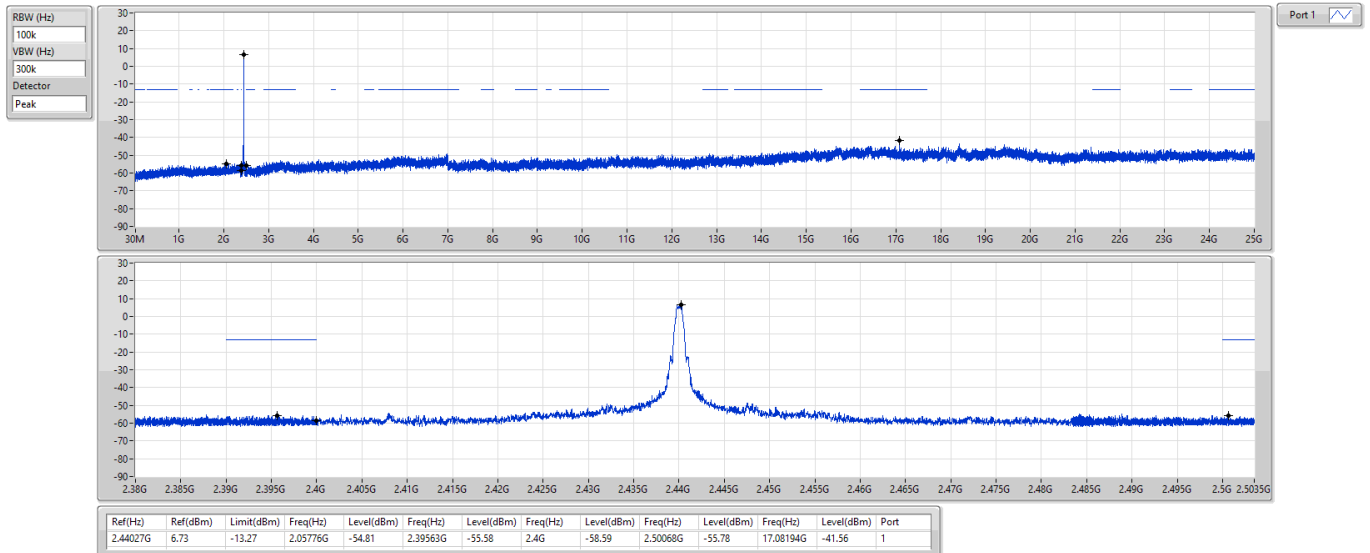
2402MHz



2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2440MHz

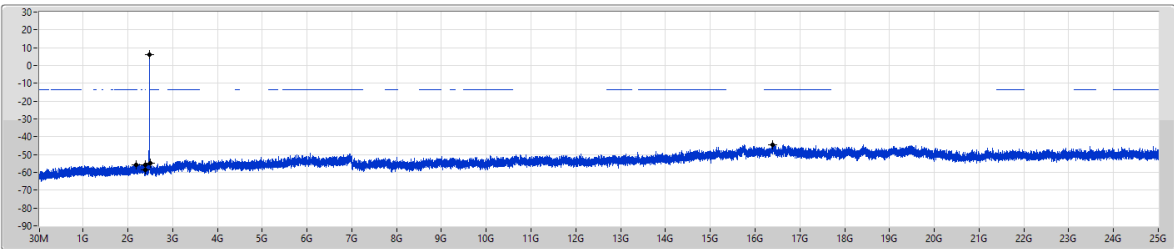


2.4-2.4835GHz_BT-LE(1Mbps)

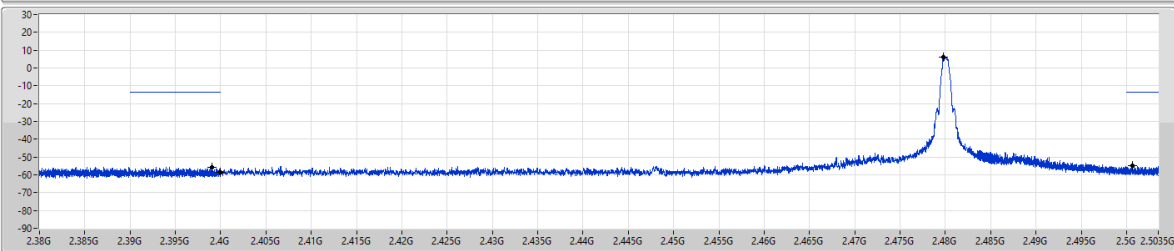
CSEndB-DTS

2480MHz

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak



Port 1



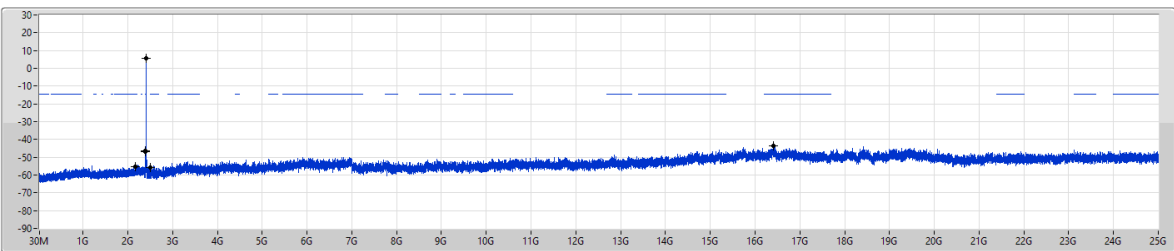
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47978G	6.27	-13.73	2.18877G	-55.62	2.39902G	-55.79	2.4G	-58.59	2.50064G	-54.73	16.38454G	-44.34	1

2.4-2.4835GHz_BT-LE(2Mbps)

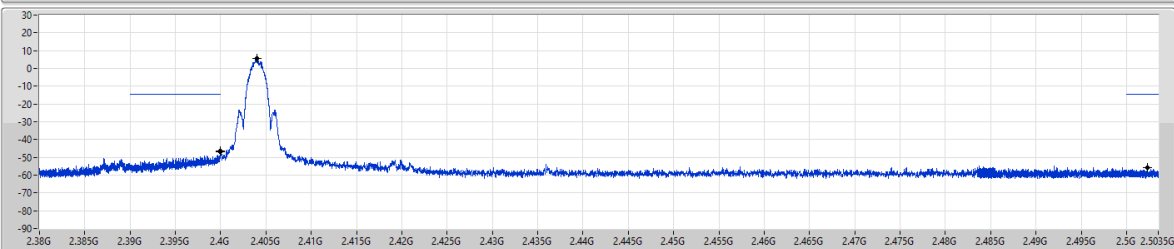
CSEndB-DTS

2404MHz

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak



Port 1



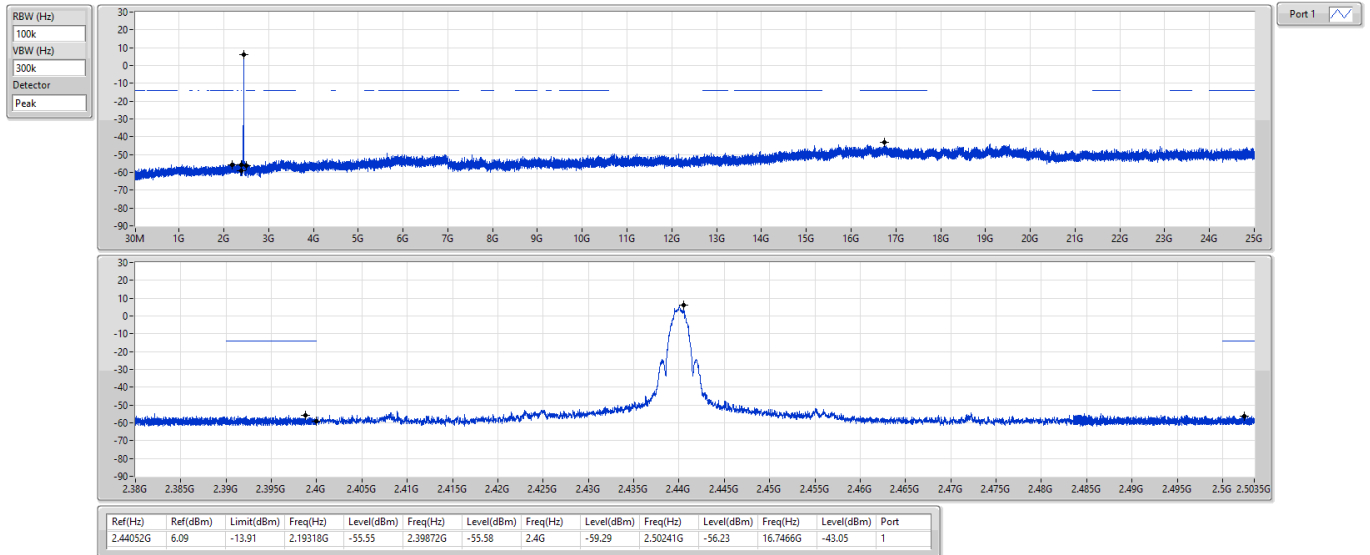
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40402G	5.64	-14.36	2.16321G	-55.13	2.39999G	-46.55	2.4G	-46.72	2.50228G	-55.77	16.41196G	-43.45	1



2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

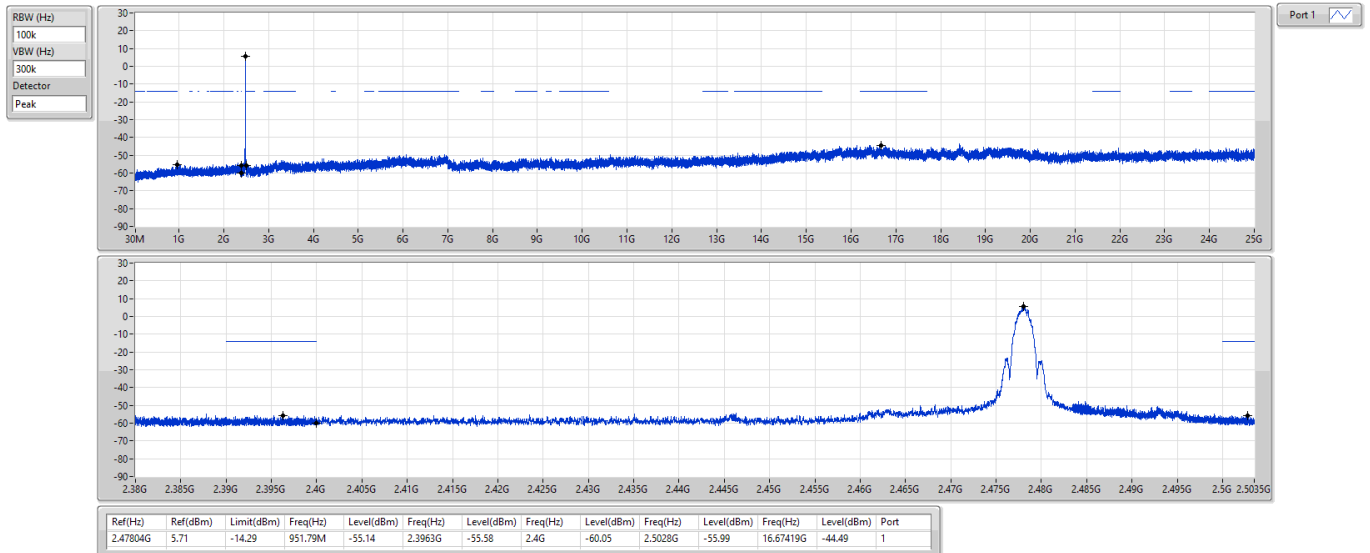
2440MHz



2.4-2.4835GHz_BT-LE(2Mbps)

CSEndB-DTS

2478MHz



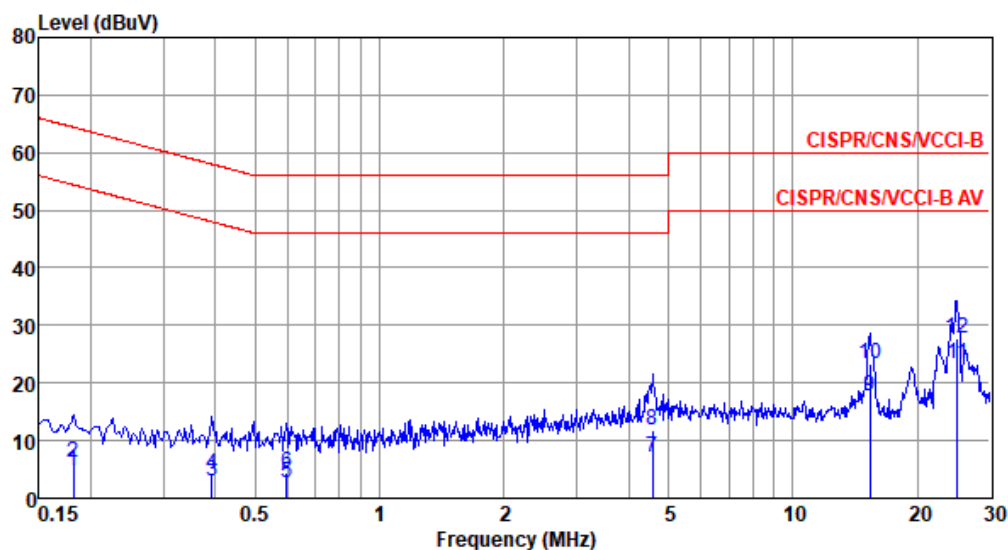


Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2402
Power Phase	Line		

Test by : Brad Wu

Temperature: 22°C

Humidity: 63%



	Freq	Level	Limit	Over	Read	Factor	Cable	Aux	
	MHz	dBuV	Line	Limit	Level	dB	loss	dB	Remark
			dBuV	dB	dBuV		dB		
1	0.182	4.67	54.42	-49.75	-5.06	9.65	0.08	0.00	Average
2	0.182	6.18	64.42	-58.24	-3.55	9.65	0.08	0.00	QP
3	0.393	2.85	47.99	-45.14	-6.88	9.64	0.09	0.00	Average
4	0.393	4.12	57.99	-53.87	-5.61	9.64	0.09	0.00	QP
5	0.595	2.68	46.00	-43.32	-7.05	9.64	0.09	0.00	Average
6	0.595	4.30	56.00	-51.70	-5.43	9.64	0.09	0.00	QP
7	4.574	7.03	46.00	-38.97	-2.88	9.68	0.23	0.00	Average
8	4.574	11.80	56.00	-44.20	1.89	9.68	0.23	0.00	QP
9	15.388	17.59	50.00	-32.41	7.45	9.69	0.45	0.00	Average
10	15.388	23.25	60.00	-36.75	13.11	9.69	0.45	0.00	QP
11*	25.055	23.19	50.00	-26.81	12.90	9.66	0.63	0.00	Average
12	25.055	27.87	60.00	-32.13	17.58	9.66	0.63	0.00	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).

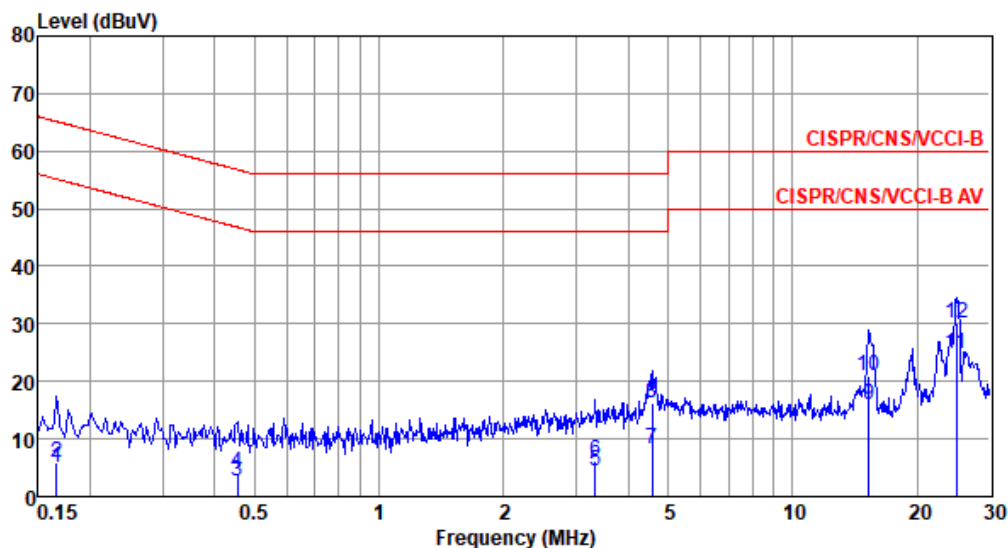


Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2402
Power Phase	Neutral		

Test by : Brad Wu

Temperature: 22°C

Humidity: 63%



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.166	4.99	55.16	-50.17	-4.75	9.66	0.08	0.00	Average
2	0.166	6.02	65.16	-59.14	-3.72	9.66	0.08	0.00	QP
3	0.454	2.74	46.80	-44.06	-6.99	9.64	0.09	0.00	Average
4	0.454	4.26	56.80	-52.54	-5.47	9.64	0.09	0.00	QP
5	3.328	4.54	46.00	-41.46	-5.34	9.67	0.21	0.00	Average
6	3.328	6.10	56.00	-49.90	-3.78	9.67	0.21	0.00	QP
7	4.574	8.23	46.00	-37.77	-1.69	9.69	0.23	0.00	Average
8	4.574	16.37	56.00	-39.63	6.45	9.69	0.23	0.00	QP
9	15.307	15.89	50.00	-34.11	5.64	9.80	0.45	0.00	Average
10	15.307	21.03	60.00	-38.97	10.78	9.80	0.45	0.00	QP
11*	24.922	24.67	50.00	-25.33	14.19	9.85	0.63	0.00	Average
12	24.922	29.97	60.00	-30.03	19.49	9.85	0.63	0.00	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

2: Over Limit (dB) = Level (dBUV) – Limit Line (dBUV).