

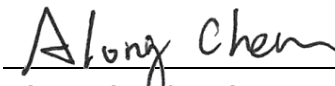
FCC Test Report

FCC ID : SQG-SONAIF513
Equipment : Sona IF513 802.11ax Wi-Fi 6E Module with Bluetooth 5.4
Model No. : Sona IF513
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 : Jun. 06, 2024
Tested Date : Oct. 04 ~ Oct. 25, 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

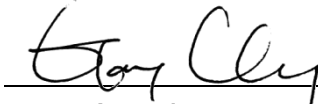

Gary Chang / Manager

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Appendix A. Unwanted Emissions into Restricted Frequency Bands

Appendix B. Unwanted Emissions into Non-Restricted Frequency Bands

Appendix C. Conducted Output Power

Appendix D. Number of Hopping Frequency

Appendix E. 20dB and Occupied Bandwidth

Appendix F. Channel Separation

Appendix G. Number of Dwell Time

Appendix H. AC Power Line Conducted Emissions

Release Record

Report No.	Version	Description	Issued Date
FR460601AD	Rev. 01	Initial issue	Nov. 25, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.404MHz 21.59 (Margin -26.18dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 450.01MHz 42.76 (Margin -3.24dB) - QP	Pass
15.247(d)	Band Edge	Meet the requirement of limit	Pass
15.247(b)(1)	Conducted Output Power	Power [dBm]: 7.06	Pass
15.247(a)(1)(iii)	Number of Hopping Channels	Meet the requirement of limit	Pass
15.247(a)(1)	Hopping Channel Separation	Meet the requirement of limit	Pass
15.247(a)(1)(iii)	Dwell Time	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Product Details

The four configurations of the EUT are shown on the following:

Model Name	Part No.	Description
Sona IF513	453-00184	Module, Sona IF513, MHF4L
	453-00185	Module, Sona IF513, Trace Pin
	453-00193	Module, Sona IF513, Antenna Diversity, MHF4L
	453-00194	Module, Sona IF513, Antenna Diversity, Trace Pin
	453-00186	Module, Sona IF513, M.2, Key E, SDIO, UART
	453-00195	Module, Sona IF513, Antenna Diversity, M.2, Key E, SDIO, UART
	453-00213	Module, Sona IF513, M.2, Key E, SDIO, UART, Ext. OSC
	453-00214	Module, Sona IF513, Antenna Diversity, M.2, Key E, SDIO, UART, Ext. OSC

1.1.2 Specification of the Equipment under Test (EUT)

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

1.1.3 Antenna Details

Ant. No.	Manufacturer	Model	Part Number	Type	Connector	Gain (dBi)
1	Joymax Inc.	TWX-100BRS3B	NA	Dipole	RP-SMA	2.6
2	Ezurio	FlexMIMO 6E	EFD2471A3S-10MH4L	PIFA	MHF4L	2.2
3	Ezurio	Mini NanoBlade Flex 6 GHz	EMF2471A3S-10MH4L	PCB Dipole	MHF4L	2.4
4	Ezurio	FlexPIFA 6E	EFB2471A3S-10MH4L	PIFA	MHF4L	2.2

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host
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1.1.5 Channel List

Frequency band (MHz)				2400~2483.5			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Tera Term, V4.74 Bluetooth Simulator, Brand: R&S, Model: CMW270	
Modulation Mode	Duty Cycle Of Test Signal (%)	Duty Factor (dB)
DH5	74.30%	1.29
2DH5	74.30%	1.29
3DH5	74.40%	1.28

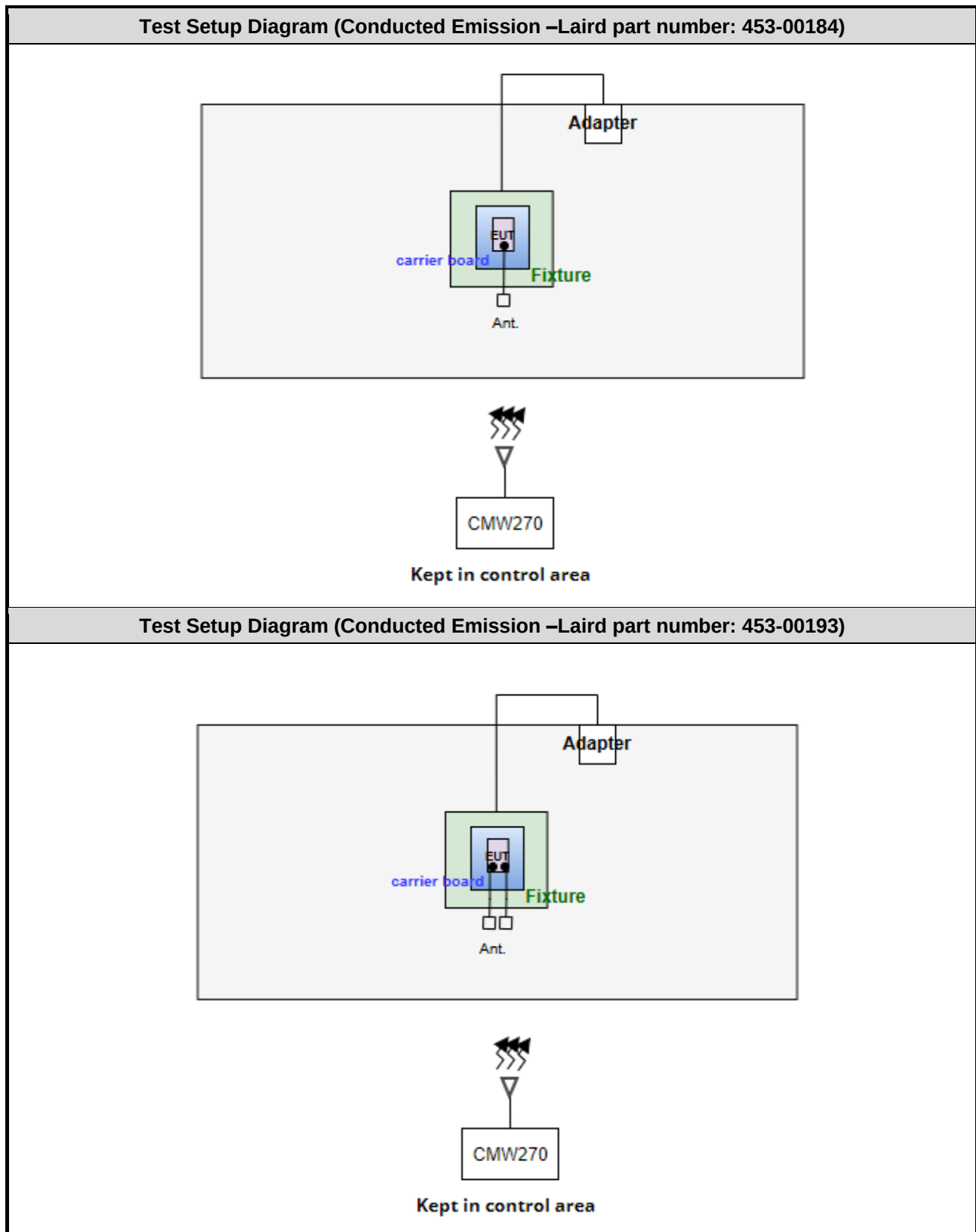
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)		
	2402	2441	2480
GFSK/1Mbps	default	default	default
$\pi/4$ -DQPSK /2Mbps	default	default	default
8DPSK/3Mbps	default	default	default

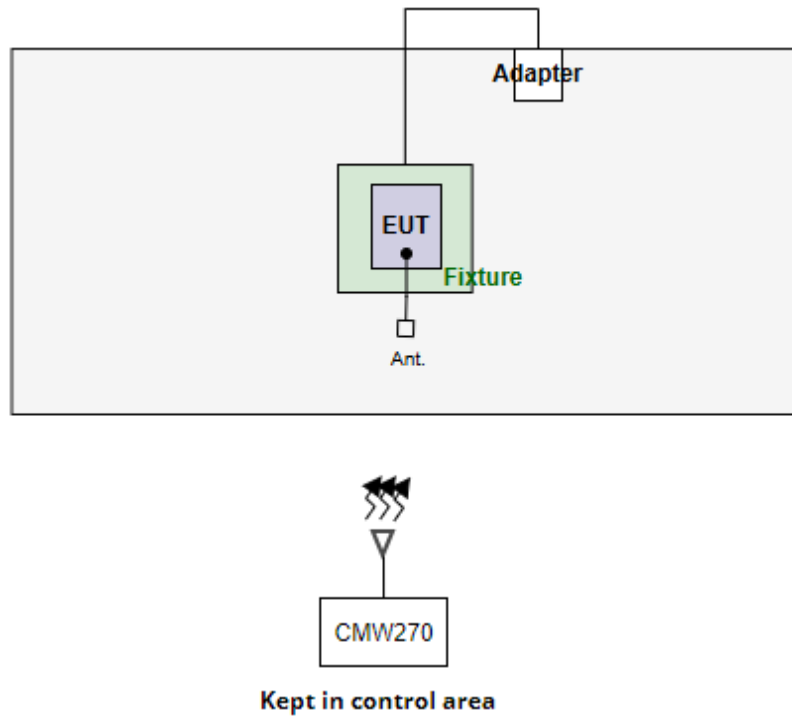
1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Laptop	DELL	Latitude 5400	DoC	---
2	Fixture	Ezurio	750-00001-2-0	---	Provided by applicant.
3	Fixture's adapter	Chenzhou Frecom Electronics Co.	F36L7-120300S PACP	---	Provided by applicant.
4	50Ω terminator	Woken	WTER-18S2	---	---

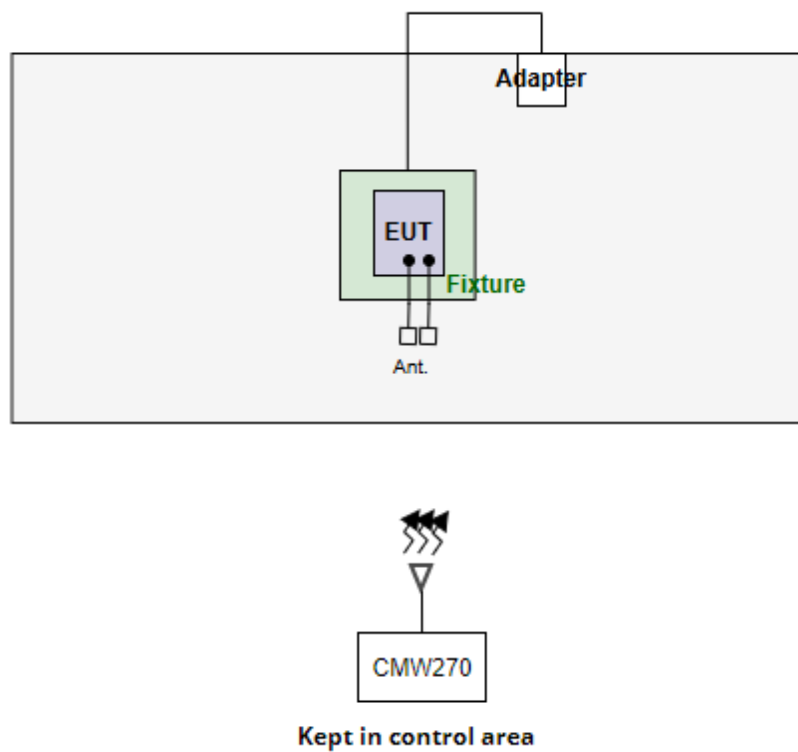
1.3 Test Setup Chart



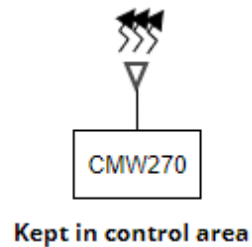
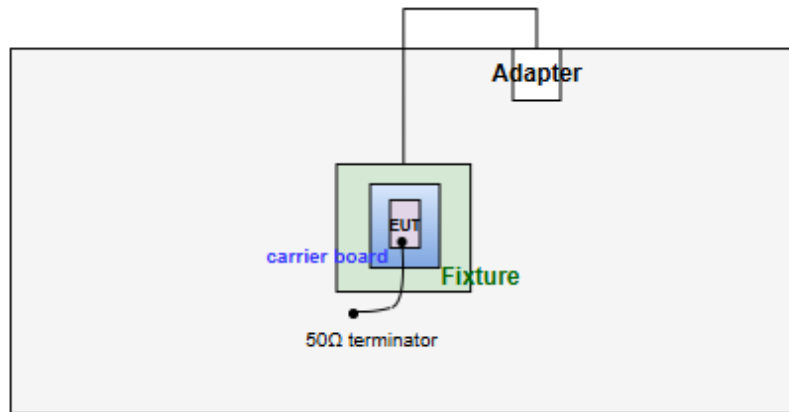
Test Setup Diagram (Conducted Emission –Laird part number: 453-00213)



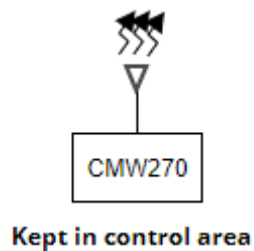
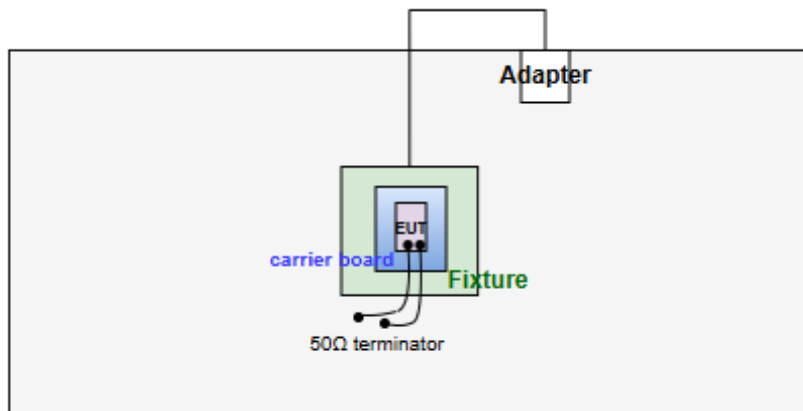
Test Setup Diagram (Conducted Emission – Laird part number: 453-00214)



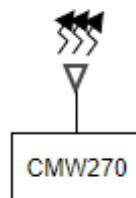
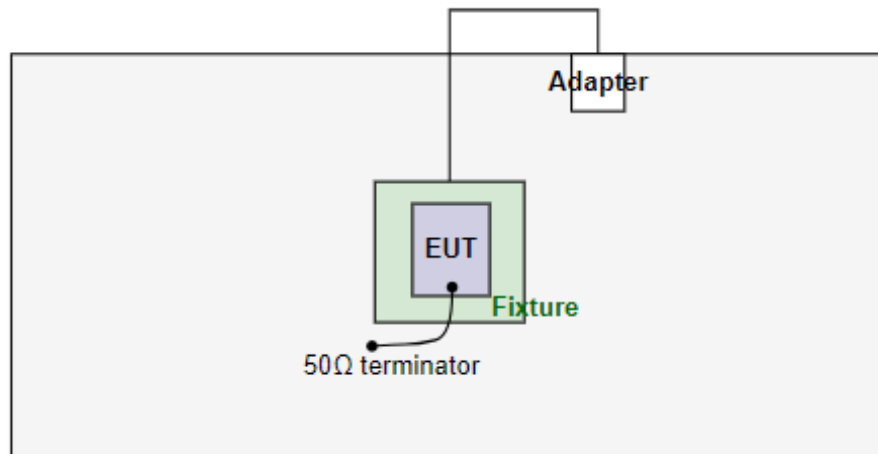
Test Setup Diagram (Radiated Emission – Laird part number: 453-00184)



Test Setup Diagram (Radiated Emission –Laird part number: 453-00193)

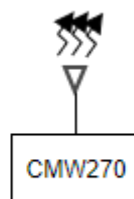
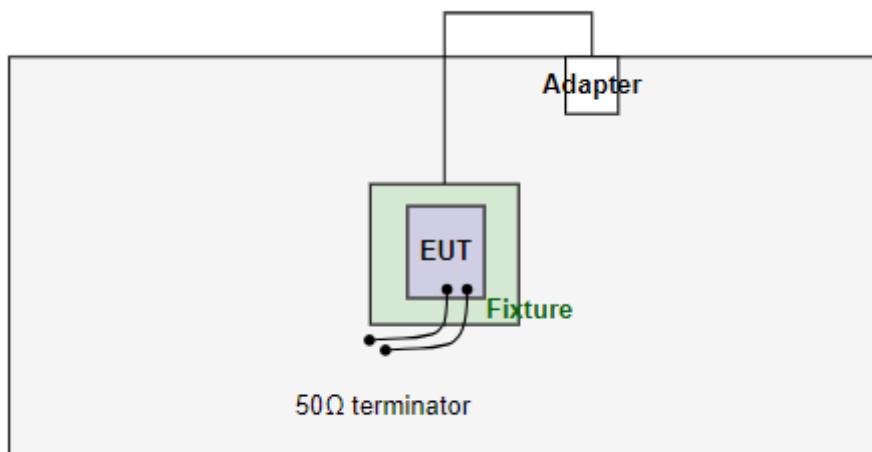


Test Setup Diagram (Radiated Emission – Laird part number: 453-00213)



Kept in control area

Test Setup Diagram (Radiated Emission –Laird part number: 453-00214)



Kept in control area

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Oct. 21, 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
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 07, 2024	Oct. 08, 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	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Oct. 04 ~ Oct. 25, 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
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 02, 2024	Oct. 01, 2025
LOWPASS FILTER	WI	WLKS1100-12SS	2	Oct. 02, 2024	Oct. 01, 2025
Measurement Software	Sporton	SENSE-15247_DTS	V5.11	NA	NA
Wireless connectivity tester	R&S	CMW270	100856	Nov. 14, 2023	Nov. 13, 2024
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Oct. 07 ~ Oct. 14, 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. 23, 2023	Nov. 22, 2024
Loop Antenna	R&S	HFH2-Z2	100330	Oct. 31, 2023	Oct. 30, 2024
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 9170517	Oct. 30, 2023	Oct. 29, 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_DTS	V5.11	NA	NA
Measurement Software	Sporton	SENSE-EMI	V5.11	NA	NA
Wireless connectivity tester	R&S	CMW270	100856	Nov. 14, 2023	Nov. 13, 2024

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

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

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

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

2 Test Configuration

2.1 Testing Facility

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

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

2.2 The Worst Test Modes and Channel Details

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

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Z-plane** result was found as the worst case and was shown in this report.
2. The 50Ω terminator is connected to antenna port of EUT for radiated emission measurement.
3. Test configurations are listed as below:
 Configuration 1: Laird part number: 453-00184
 Configuration 2: Laird part number: 453-00193
 Configuration 3: Laird part number: 453-00213
 Configuration 4: Laird part number: 453-00214

3 Transmitter Test Results

3.1 Unwanted Emissions into Restricted Frequency Bands

3.1.1 Limit of Unwanted Emissions into Restricted Frequency Bands

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

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9~90 kHz, 110~490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.1.2 Test Procedures

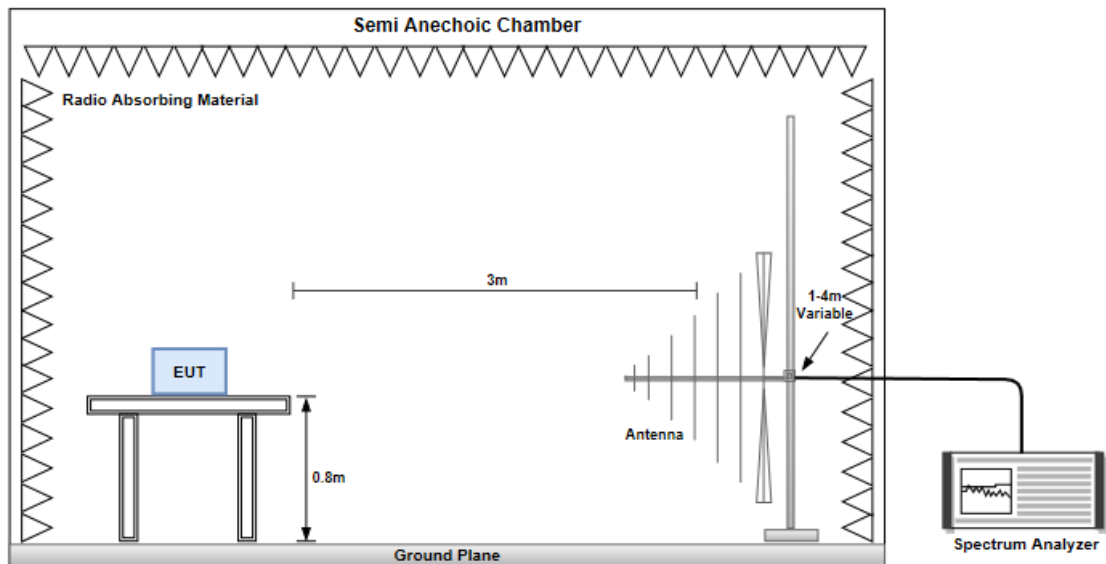
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Note:

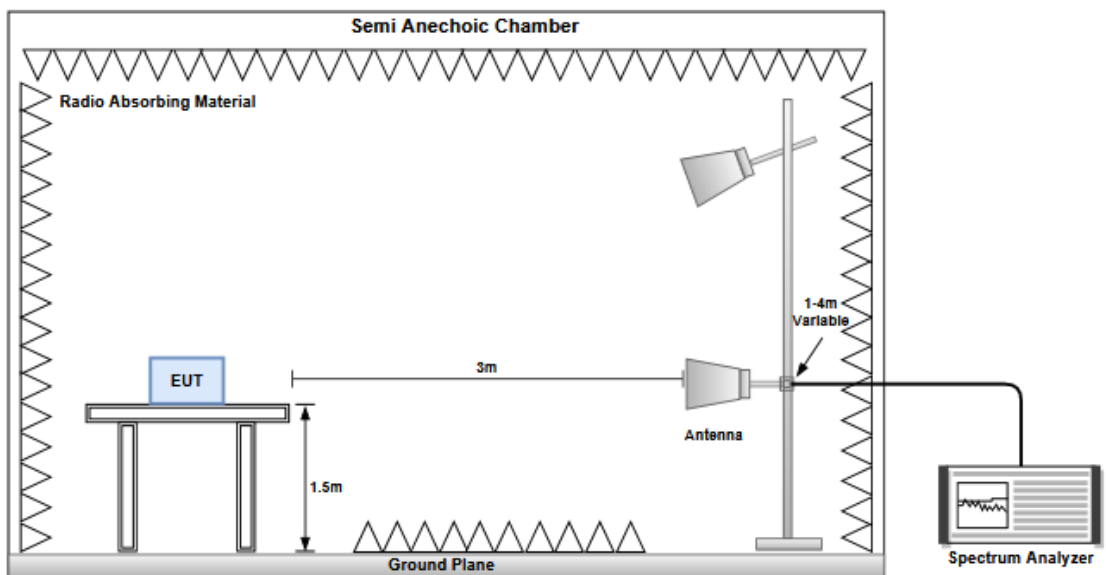
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. Radiated emission above 1GHz / Peak value
RBW=1MHz, VBW=3MHz and Peak detector
Radiated emission above 1GHz / Average value for harmonics
The average value is: Average = Peak value + 20log(Duty cycle) Where the duty factor is calculated from following formula for DH5 packet type which has worst duty factor:
3.
$$20\log (\text{Duty cycle}) = 20\log \frac{1\text{s} / 1600 * 5}{100 \text{ ms}} = -30.1\text{dB}$$
4. Radiated emission above 1GHz / Average value for other emissions
RBW=1MHz, VBW=1/T and Peak detector

3.1.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.1.4 Test Results

Refer to Appendix A.

3.2 Unwanted Emissions into Non-Restricted Frequency Bands

3.2.1 Limit of Unwanted Emissions into Non-Restricted Frequency Bands

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

3.2.2 Test Procedures

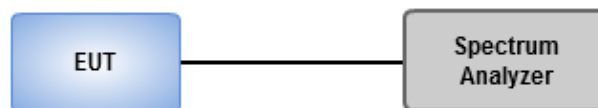
Reference level measurement

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

Emission level measurement

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

3.2.3 Test Setup



3.2.4 Test Results

Ambient Condition	24-25°C / 62%	Tested By	Roger Lu
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Refer to Appendix B.

3.3 Conducted Output Power

3.3.1 Limit of Conducted Output Power

- ☐ 1 Watt
For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band.
- ☒ 0.125 Watt
For all other frequency hopping systems in the 2400–2483.5 MHz band.
- ☐ 0.125 Watt
For Frequency hopping systems operating in the 2400–2483.5 MHz band have hopping channel carrier frequencies that are separated by two-thirds of the 20 dB bandwidth of the hopping channel.

3.3.2 Test Procedures

1. A wideband power meter is used for power measurement. Bandwidth of power sensor and meter is 50MHz
2. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	24-25°C / 62%	Tested By	Roger Lu
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Refer to Appendix C.

3.4 Number of Hopping Frequency

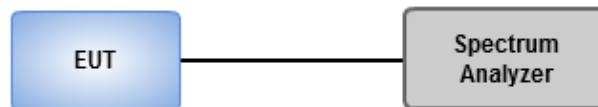
3.4.1 Limit of Number of Hopping Frequency

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

3.4.2 Test Procedures

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

3.4.3 Test Setup



3.4.4 Test Results

Ambient Condition	24-25°C / 62%	Tested By	Roger Lu
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Refer to Appendix D.

3.5 20dB and Occupied Bandwidth

3.5.1 Test Procedures

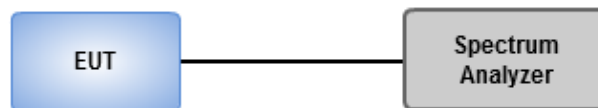
20dB Bandwidth

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

Occupied Bandwidth

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

3.5.2 Test Setup



3.5.3 Test Results

Ambient Condition	24-25°C / 62%	Tested By	Roger Lu
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Refer to Appendix E.

3.6 Channel Separation

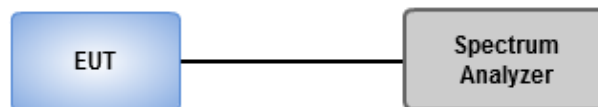
3.6.1 Limit of Channel Separation

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

3.6.2 Test Procedures

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

3.6.3 Test Setup



3.6.4 Test Results

Ambient Condition	24-25°C / 62%	Tested By	Roger Lu
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Refer to Appendix F.

3.7 Number of Dwell Time

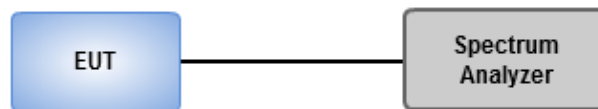
3.7.1 Limit of Dwell time

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

3.7.2 Test Procedures

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

3.7.3 Test Setup



3.7.4 Test Results

Ambient Condition	24-25°C / 62%	Tested By	Roger Lu
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Refer to Appendix G.

3.8 AC Power Line Conducted Emissions

3.8.1 Limit of AC Power Line Conducted Emissions

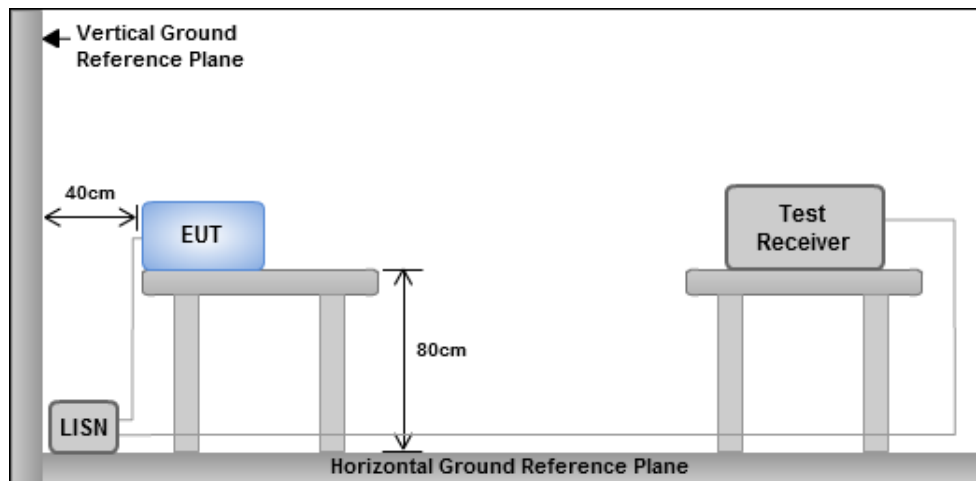
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.8.2 Test Procedures

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

3.8.3 Test Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.8.4 Test Results

Refer to Appendix H.

4 Test laboratory information

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

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

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

Linkou

Tel: 886-2-2601-1640

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

Kwei Shan

Tel: 886-3-271-8666

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

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

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

Tel: 886-3-271-8666

Fax: 886-3-318-0345

Email: ICC_Service@icertifi.com.tw

==END==

Configuration 1: Laird part number: 453-00184



Unwanted Conducted Emissions into Restricted Frequency Bands(30M~1GHz)

Appendix A.1

Summary

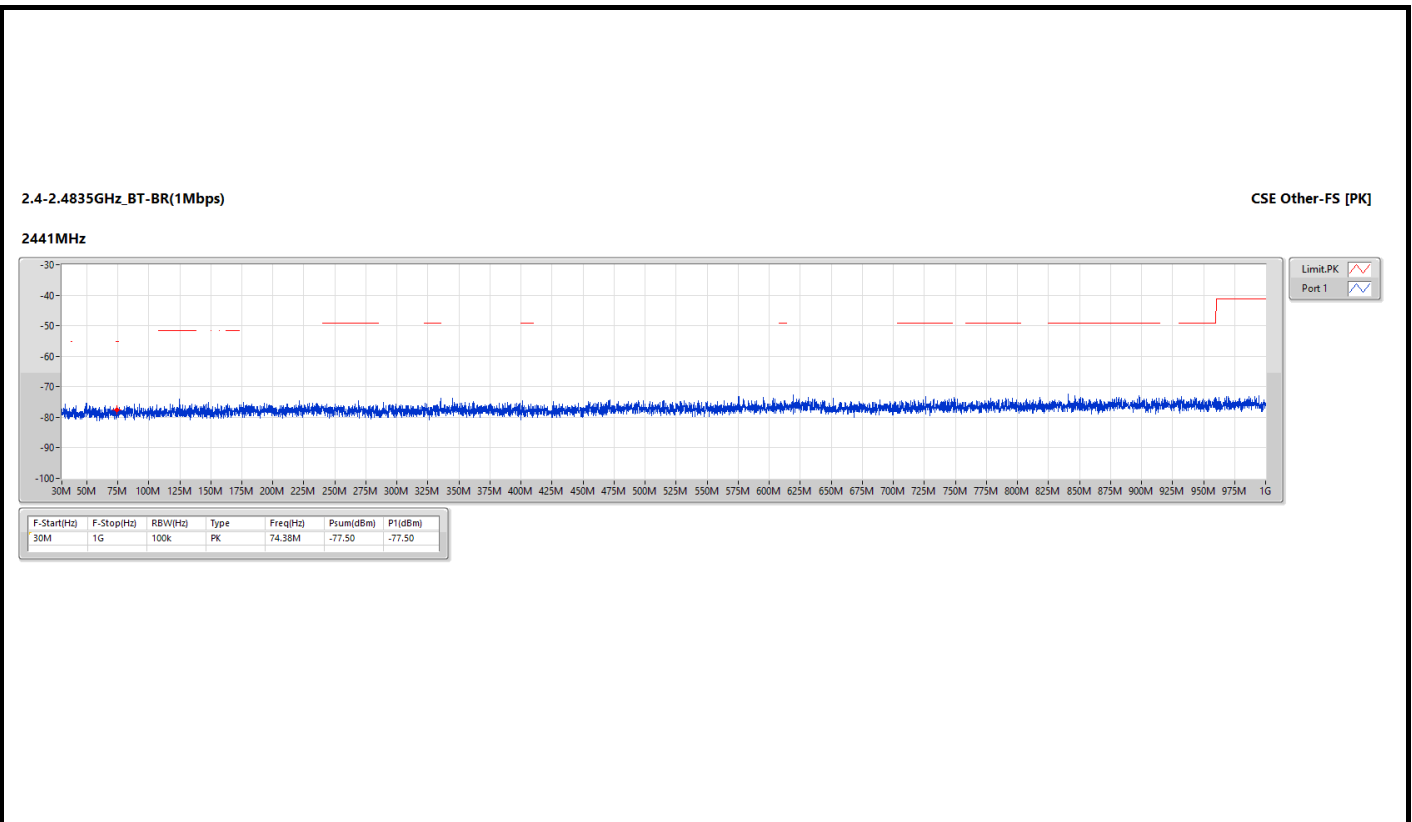
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	30M	1G	PK	74.38M	2.60	-77.50	4.7	-70.20	-55.20	-15.00

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-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2441MHz	Pass	30M	1G	PK	74.38M	2.60	-77.50	4.7	-70.20	-55.20	-15.00

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





**Unwanted Conducted Emissions into Restricted Frequency
Bands (1G~3.1GHz)**

Appendix A.2

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-BR(1Mbps)	Pass	2.4835G	2.5G	AV	2.48355G	2.60	-63.01	-60.41	-41.20	-19.21
BT-EDR(3Mbps)	Pass	2.5G	3.1G	AV	2.80225G	2.60	-63.83	-61.23	-41.20	-20.03

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



Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	1G	2.31G	AV	2.20045G	2.60	-72.08	-69.48	-41.20	-28.28
2402MHz	Pass	2.31G	2.39G	AV	2.389G	2.60	-69.59	-66.99	-41.20	-25.79
2402MHz	Pass	2.4835G	2.5G	AV	2.49794G	2.60	-71.01	-68.41	-41.20	-27.21
2402MHz	Pass	2.5G	3.1G	AV	2.80225G	2.60	-67.01	-64.41	-41.20	-23.21
2402MHz	Pass	1G	2.31G	PK	2.20651G	2.60	-62.06	-59.46	-21.20	-38.26
2402MHz	Pass	2.31G	2.39G	PK	2.38996G	2.60	-58.80	-56.20	-21.20	-35.00
2402MHz	Pass	2.4835G	2.5G	PK	2.48517G	2.60	-60.36	-57.76	-21.20	-36.56
2402MHz	Pass	2.5G	3.1G	PK	2.848G	2.60	-60.76	-58.16	-21.20	-36.96
2441MHz	Pass	1G	2.31G	AV	2.21175G	2.60	-72.01	-69.41	-41.20	-28.21
2441MHz	Pass	2.31G	2.39G	AV	2.38976G	2.60	-71.42	-68.82	-41.20	-27.62
2441MHz	Pass	2.4835G	2.5G	AV	2.48857G	2.60	-70.81	-68.21	-41.20	-27.01
2441MHz	Pass	2.5G	3.1G	AV	2.848G	2.60	-69.41	-66.81	-41.20	-25.61
2441MHz	Pass	1G	2.31G	PK	2.11154G	2.60	-62.07	-59.47	-21.20	-38.27
2441MHz	Pass	2.31G	2.39G	PK	2.3732G	2.60	-60.56	-57.96	-21.20	-36.76
2441MHz	Pass	2.4835G	2.5G	PK	2.48893G	2.60	-60.07	-57.47	-21.20	-36.27
2441MHz	Pass	2.5G	3.1G	PK	2.8684G	2.60	-61.55	-58.95	-21.20	-37.75
2480MHz	Pass	1G	2.31G	AV	2.21044G	2.60	-72.01	-69.41	-41.20	-28.21
2480MHz	Pass	2.31G	2.39G	AV	2.38408G	2.60	-71.44	-68.84	-41.20	-27.64
2480MHz	Pass	2.4835G	2.5G	AV	2.48355G	2.60	-63.01	-60.41	-41.20	-19.21
2480MHz	Pass	2.5G	3.1G	AV	2.5027G	2.60	-70.53	-67.93	-41.20	-26.73
2480MHz	Pass	1G	2.31G	PK	2.20455G	2.60	-61.89	-59.29	-21.20	-38.09
2480MHz	Pass	2.31G	2.39G	PK	2.34716G	2.60	-60.59	-57.99	-21.20	-36.79
2480MHz	Pass	2.4835G	2.5G	PK	2.48352G	2.60	-48.84	-46.24	-21.20	-25.04
2480MHz	Pass	2.5G	3.1G	PK	2.5852G	2.60	-60.79	-58.19	-21.20	-36.99
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	1G	2.31G	AV	2.21715G	2.60	-71.73	-69.13	-41.20	-27.93
2402MHz	Pass	2.31G	2.39G	AV	2.3896G	2.60	-70.68	-68.08	-41.20	-26.88
2402MHz	Pass	2.4835G	2.5G	AV	2.49882G	2.60	-71.50	-68.90	-41.20	-27.70
2402MHz	Pass	2.5G	3.1G	AV	2.80225G	2.60	-63.83	-61.23	-41.20	-20.03
2402MHz	Pass	1G	2.31G	PK	2.16328G	2.60	-61.61	-59.01	-21.20	-37.81
2402MHz	Pass	2.31G	2.39G	PK	2.38944G	2.60	-58.62	-56.02	-21.20	-34.82
2402MHz	Pass	2.4835G	2.5G	PK	2.4921G	2.60	-60.33	-57.73	-21.20	-36.53
2402MHz	Pass	2.5G	3.1G	PK	2.8024G	2.60	-59.89	-57.29	-21.20	-36.09
2441MHz	Pass	1G	2.31G	AV	2.21322G	2.60	-72.01	-69.41	-41.20	-28.21
2441MHz	Pass	2.31G	2.39G	AV	2.36028G	2.60	-71.26	-68.66	-41.20	-27.46
2441MHz	Pass	2.4835G	2.5G	AV	2.49871G	2.60	-71.50	-68.90	-41.20	-27.70
2441MHz	Pass	2.5G	3.1G	AV	2.84785G	2.60	-66.61	-64.01	-41.20	-22.81
2441MHz	Pass	1G	2.31G	PK	1.74605G	2.60	-60.71	-58.11	-21.20	-36.91
2441MHz	Pass	2.31G	2.39G	PK	2.3666G	2.60	-60.08	-57.48	-21.20	-36.28
2441MHz	Pass	2.4835G	2.5G	PK	2.49559G	2.60	-60.17	-57.57	-21.20	-36.37
2441MHz	Pass	2.5G	3.1G	PK	2.848G	2.60	-60.39	-57.79	-21.20	-36.59



Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2480MHz	Pass	1G	2.31G	AV	2.20504G	2.60	-71.76	-69.16	-41.20	-27.96
2480MHz	Pass	2.31G	2.39G	AV	2.38096G	2.60	-71.20	-68.60	-41.20	-27.40
2480MHz	Pass	2.4835G	2.5G	AV	2.48395G	2.60	-67.07	-64.47	-41.20	-23.27
2480MHz	Pass	2.5G	3.1G	AV	2.8933G	2.60	-69.35	-66.75	-41.20	-25.55
2480MHz	Pass	1G	2.31G	PK	2.22485G	2.60	-61.31	-58.71	-21.20	-37.51
2480MHz	Pass	2.31G	2.39G	PK	2.35116G	2.60	-59.94	-57.34	-21.20	-36.14
2480MHz	Pass	2.4835G	2.5G	PK	2.48353G	2.60	-48.73	-46.13	-21.20	-24.93
2480MHz	Pass	2.5G	3.1G	PK	2.5576G	2.60	-61.12	-58.52	-21.20	-37.32

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



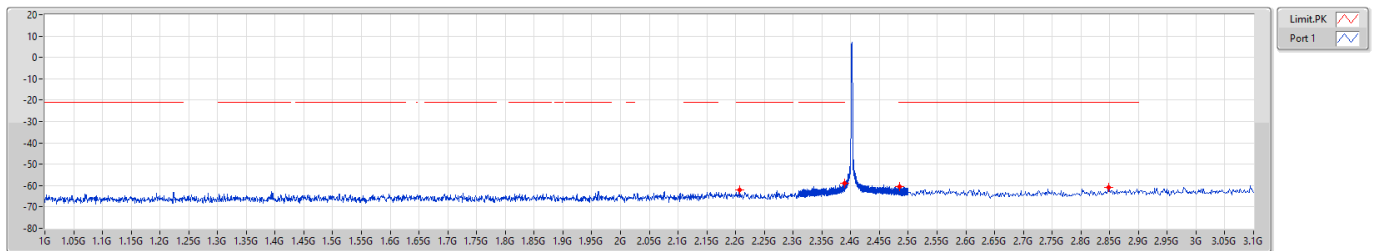
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [PK]

2402MHz

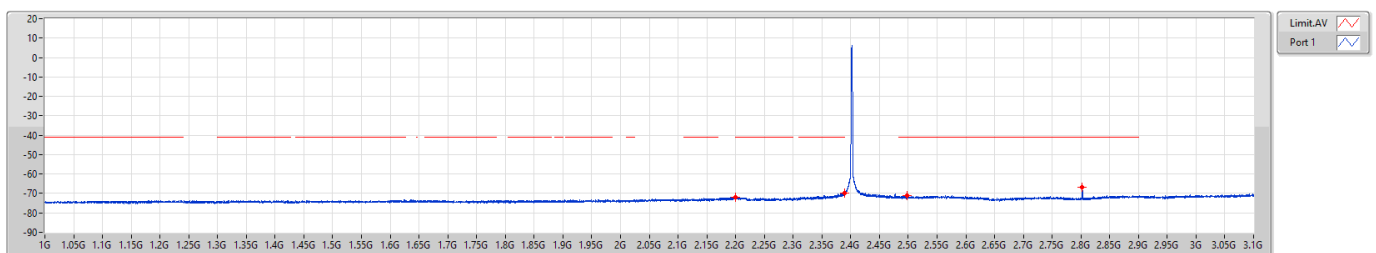


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.20651G	-62.06	-62.06
2.31G	2.39G	1M	PK	2.38996G	-58.80	-58.80
2.4835G	2.5G	1M	PK	2.48517G	-60.36	-60.36
2.5G	3.1G	1M	PK	2.848G	-60.76	-60.76

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [AV]

2402MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.20045G	-72.08	-72.08
2.31G	2.39G	1M	AV	2.389G	-69.59	-69.59
2.4835G	2.5G	1M	AV	2.49794G	-71.01	-71.01
2.5G	3.1G	1M	AV	2.80225G	-67.01	-67.01



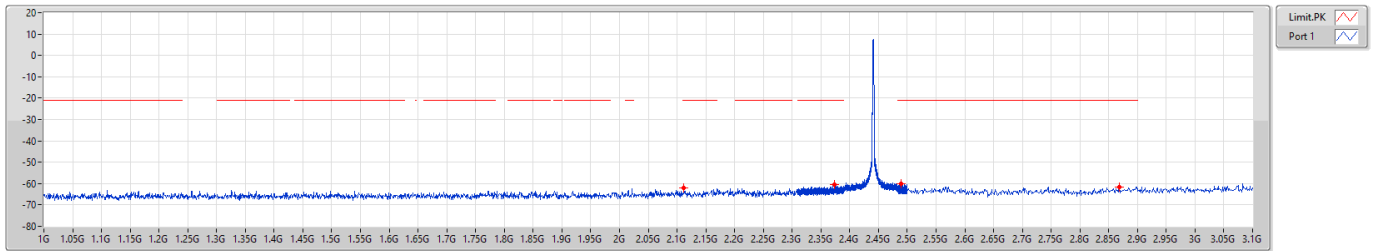
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [PK]

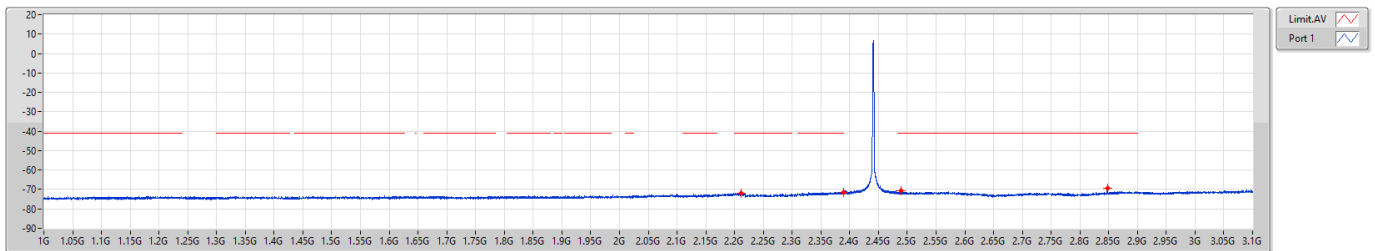
2441MHz



2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [AV]

2441MHz





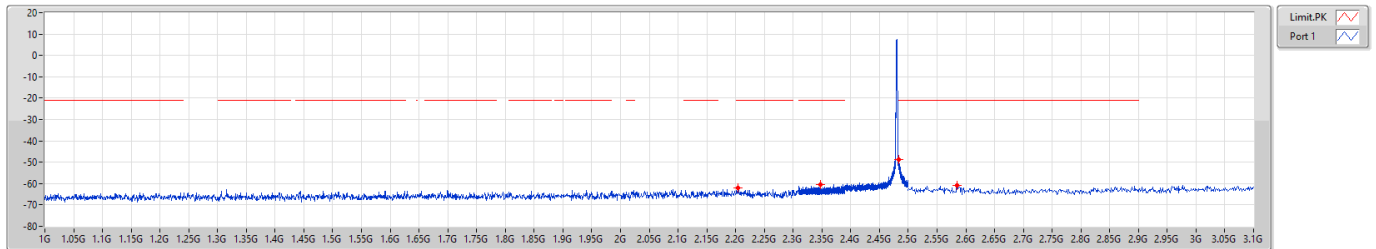
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [PK]

2480MHz

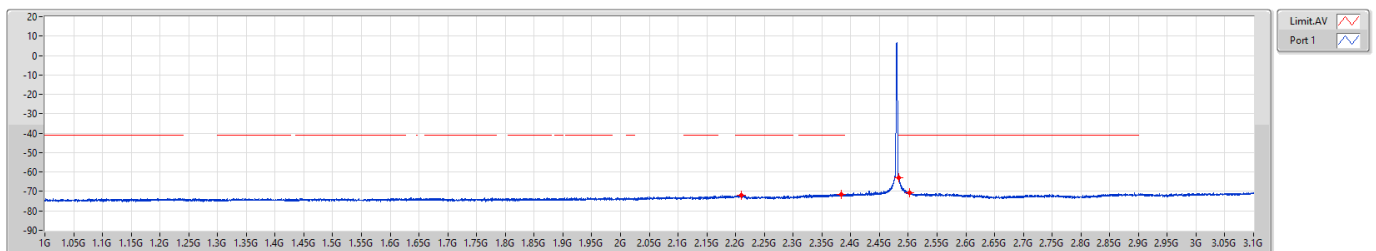


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.20455G	-61.89	-61.89
2.31G	2.39G	1M	PK	2.34716G	-60.59	-60.59
2.4835G	2.5G	1M	PK	2.48352G	-48.84	-48.84
2.5G	3.1G	1M	PK	2.5852G	-60.79	-60.79

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [AV]

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.21044G	-72.01	-72.01
2.31G	2.39G	1M	AV	2.38408G	-71.44	-71.44
2.4835G	2.5G	1M	AV	2.48355G	-63.01	-63.01
2.5G	3.1G	1M	AV	2.5027G	-70.53	-70.53



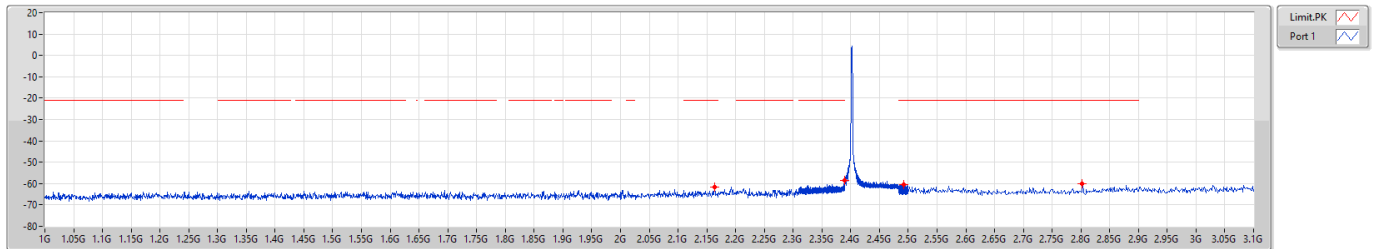
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE Bandedge-FS [PK]

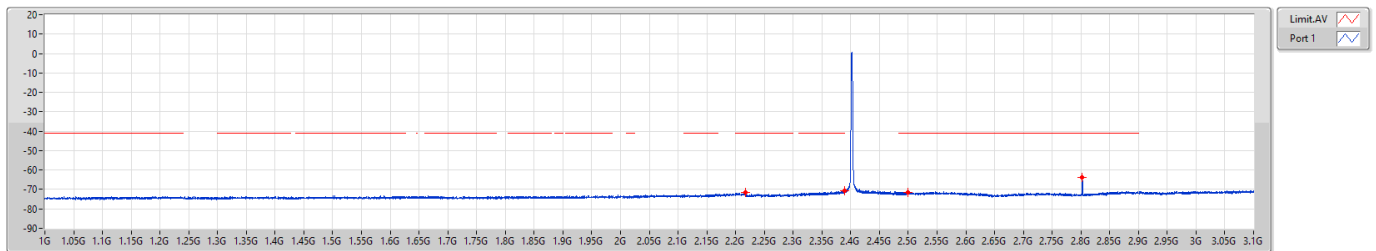
2402MHz



2.4-2.4835GHz_BT-EDR(3Mbps)

CSE Bandedge-FS [AV]

2402MHz





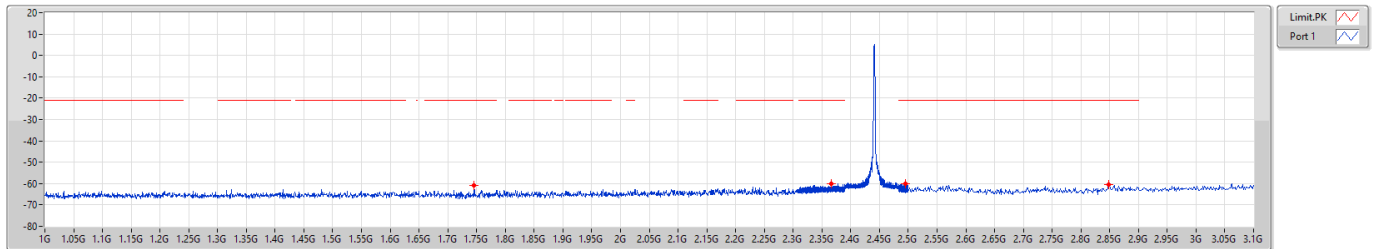
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE Bandedge-FS [PK]

2441MHz

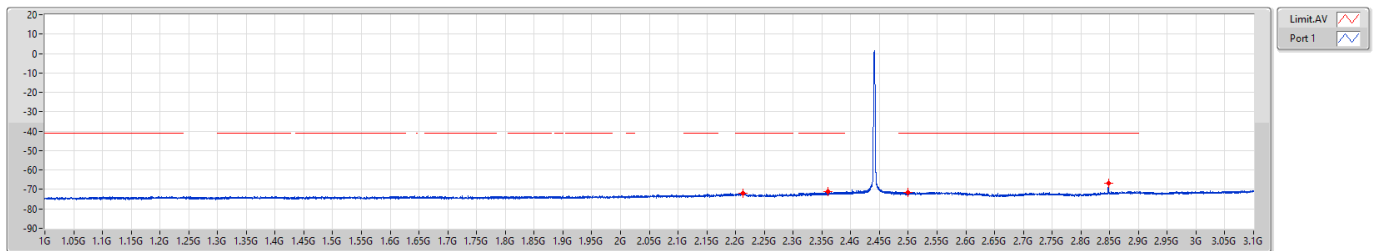


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	1.74605G	-60.71	-60.71
2.31G	2.39G	1M	PK	2.3666G	-60.08	-60.08
2.4835G	2.5G	1M	PK	2.49559G	-60.17	-60.17
2.5G	3.1G	1M	PK	2.848G	-60.39	-60.39

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE Bandedge-FS [AV]

2441MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.21322G	-72.01	-72.01
2.31G	2.39G	1M	AV	2.36028G	-71.26	-71.26
2.4835G	2.5G	1M	AV	2.49871G	-71.50	-71.50
2.5G	3.1G	1M	AV	2.84785G	-66.61	-66.61



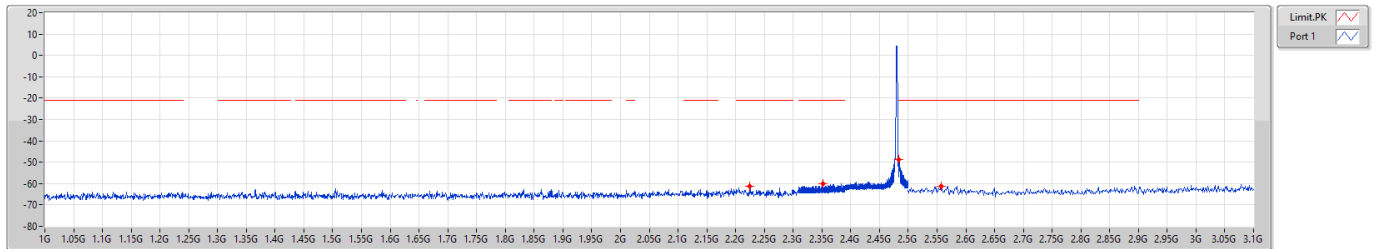
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE Bandedge-FS [PK]

2480MHz

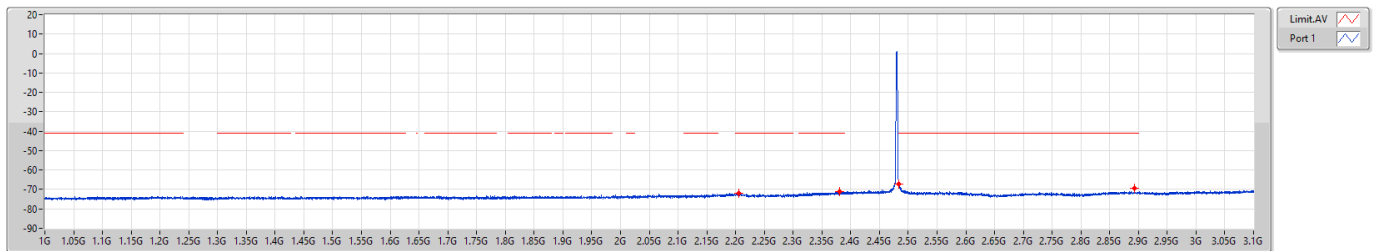


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.22485G	-61.31	-61.31
2.31G	2.39G	1M	PK	2.35116G	-59.94	-59.94
2.4835G	2.5G	1M	PK	2.48353G	-48.73	-48.73
2.5G	3.1G	1M	PK	2.5576G	-61.12	-61.12

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE Bandedge-FS [AV]

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.20504G	-71.76	-71.76
2.31G	2.39G	1M	AV	2.38096G	-71.20	-71.20
2.4835G	2.5G	1M	AV	2.48395G	-67.07	-67.07
2.5G	3.1G	1M	AV	2.8933G	-69.35	-69.35



**Unwanted Conducted Emissions into Restricted Frequency
Bands(3.1G~25GHz)**

Appendix A.3

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-BR(1Mbps)	Pass	8G	25G	PK	15.75147G	2.60	-54.71	-52.11	-21.20	-30.91
BT-EDR(3Mbps)	Pass	8G	25G	PK	15.6585G	2.60	-55.59	-52.99	-21.20	-31.79

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



Unwanted Conducted Emissions into Restricted Frequency Bands(3.1G~25GHz)

Appendix A.3

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	3.1G	4G	PK	3.34638G	2.60	-63.86	-61.26	-21.20	-40.06
2402MHz	Pass	4G	5G	PK	4.59875G	2.60	-63.21	-60.61	-21.20	-39.41
2402MHz	Pass	4G	5G	PK	4.80475G	2.60	-65.65	-63.05	-21.20	-41.85
2402MHz	Pass	5G	7G	PK	5.428G	2.60	-63.12	-60.52	-21.20	-39.32
2402MHz	Pass	7G	8G	PK	7.6905G	2.60	-62.98	-60.38	-21.20	-39.18
2402MHz	Pass	8G	25G	PK	19.37566G	2.60	-55.40	-52.80	-21.20	-31.60
2441MHz	Pass	3.1G	4G	PK	3.79323G	2.60	-64.05	-61.45	-21.20	-40.25
2441MHz	Pass	4G	5G	PK	4.12125G	2.60	-63.44	-60.84	-21.20	-39.64
2441MHz	Pass	4G	5G	PK	4.88225G	2.60	-64.94	-62.34	-21.20	-41.14
2441MHz	Pass	5G	7G	PK	5.209G	2.60	-63.42	-60.82	-21.20	-39.62
2441MHz	Pass	7G	8G	PK	7.74325G	2.60	-62.36	-59.76	-21.20	-38.56
2441MHz	Pass	8G	25G	PK	19.42134G	2.60	-56.17	-53.57	-21.20	-32.37
2480MHz	Pass	3.1G	4G	PK	3.26605G	2.60	-63.07	-60.47	-21.20	-39.27
2480MHz	Pass	4G	5G	PK	4.28525G	2.60	-62.48	-59.88	-21.20	-38.68
2480MHz	Pass	4G	5G	PK	4.96025G	2.60	-64.86	-62.26	-21.20	-41.06
2480MHz	Pass	5G	7G	PK	5.428G	2.60	-63.27	-60.67	-21.20	-39.47
2480MHz	Pass	7G	8G	PK	7.72725G	2.60	-62.81	-60.21	-21.20	-39.01
2480MHz	Pass	8G	25G	PK	15.75147G	2.60	-54.71	-52.11	-21.20	-30.91
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	3.1G	4G	PK	3.56395G	2.60	-63.90	-61.30	-21.20	-40.10
2402MHz	Pass	4G	5G	PK	4.095G	2.60	-63.12	-60.52	-21.20	-39.32
2402MHz	Pass	4G	5G	PK	4.805G	2.60	-65.07	-62.47	-21.20	-41.27
2402MHz	Pass	5G	7G	PK	5.4215G	2.60	-61.66	-59.06	-21.20	-37.86
2402MHz	Pass	7G	8G	PK	7.73275G	2.60	-62.48	-59.88	-21.20	-38.68
2402MHz	Pass	8G	25G	PK	15.6585G	2.60	-55.59	-52.99	-21.20	-31.79
2441MHz	Pass	3.1G	4G	PK	3.26335G	2.60	-63.61	-61.01	-21.20	-39.81
2441MHz	Pass	4G	5G	PK	4.312G	2.60	-62.26	-59.66	-21.20	-38.46
2441MHz	Pass	4G	5G	PK	4.882G	2.60	-65.22	-62.62	-21.20	-41.42
2441MHz	Pass	5G	7G	PK	5.3885G	2.60	-62.31	-59.71	-21.20	-38.51
2441MHz	Pass	7G	8G	PK	7.405G	2.60	-62.50	-59.90	-21.20	-38.70
2441MHz	Pass	8G	25G	PK	19.38416G	2.60	-56.50	-53.90	-21.20	-32.70
2480MHz	Pass	3.1G	4G	PK	3.51378G	2.60	-63.88	-61.28	-21.20	-40.08
2480MHz	Pass	4G	5G	PK	4.9005G	2.60	-61.51	-58.91	-21.20	-37.71
2480MHz	Pass	4G	5G	PK	4.9605G	2.60	-64.95	-62.35	-21.20	-41.15
2480MHz	Pass	5G	7G	PK	5.1695G	2.60	-63.04	-60.44	-21.20	-39.24
2480MHz	Pass	7G	8G	PK	7.7385G	2.60	-63.23	-60.63	-21.20	-39.43
2480MHz	Pass	8G	25G	PK	19.46331G	2.60	-55.66	-53.06	-21.20	-31.86

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

Note: If the PK margin greater than 20 dB, there is no need to get AVG reading.



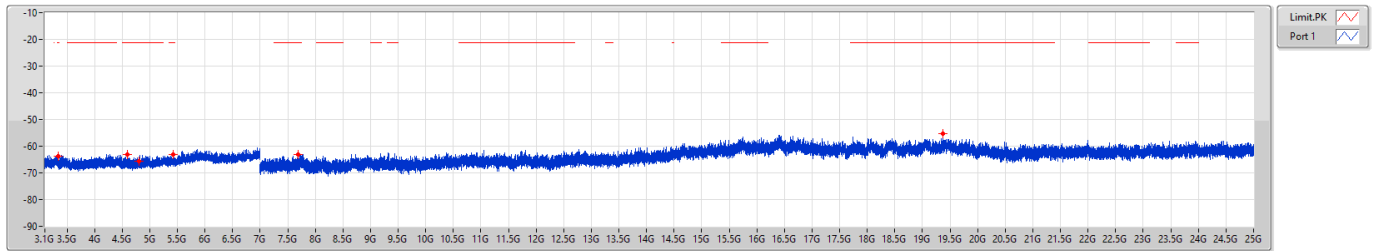
Unwanted Conducted Emissions into Restricted Frequency Bands(3.1G~25GHz)

Appendix A.3

2.4-2.4835GHz_BT-BR(1Mbps)

CSE-FS [PK]

2402MHz

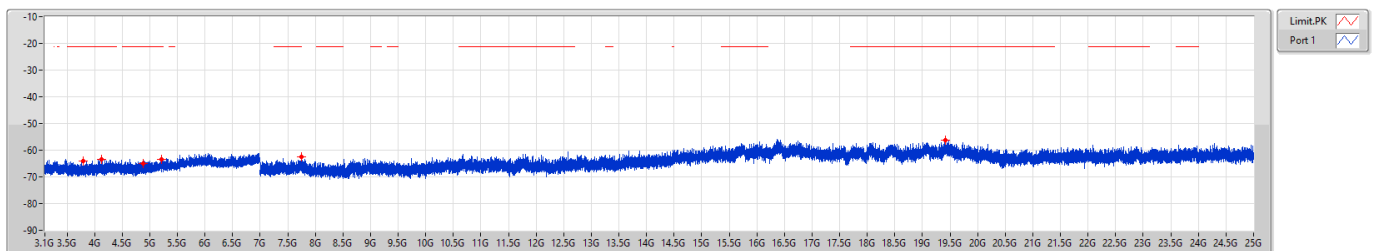


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.34638G	-63.86	-63.86
4G	5G	1M	PK	4.59875G	-63.21	-63.21
4G	5G	1M	PK	4.80475G	-65.65	-65.65
5G	7G	1M	PK	5.426G	-63.12	-63.12
7G	8G	1M	PK	7.6905G	-62.98	-62.98
8G	25G	1M	PK	19.37566G	-55.40	-55.40

2.4-2.4835GHz_BT-BR(1Mbps)

CSE-FS [PK]

2441MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.79323G	-64.05	-64.05
4G	5G	1M	PK	4.12125G	-63.44	-63.44
4G	5G	1M	PK	4.88225G	-64.94	-64.94
5G	7G	1M	PK	5.209G	-63.42	-63.42
7G	8G	1M	PK	7.74325G	-62.36	-62.36
8G	25G	1M	PK	19.42134G	-56.17	-56.17



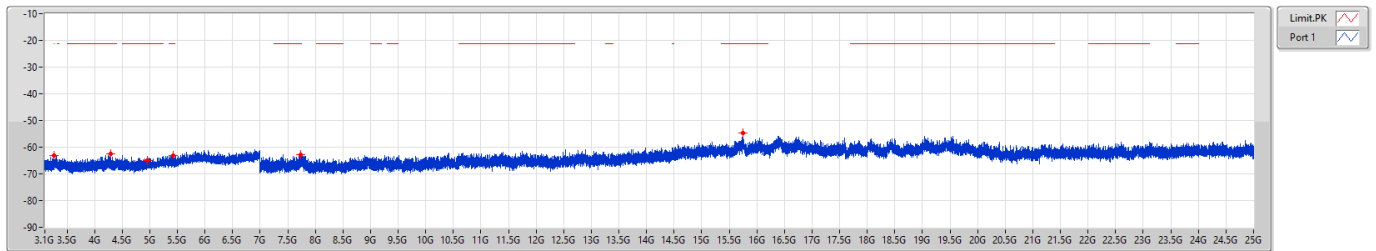
Unwanted Conducted Emissions into Restricted Frequency Bands(3.1G~25GHz)

Appendix A.3

2.4-2.4835GHz_BT-BR(1Mbps)

CSE-FS [PK]

2480MHz

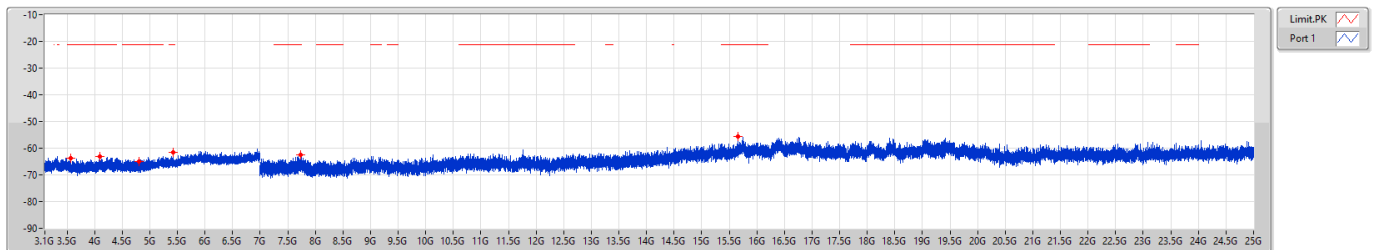


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.26605G	-63.07	-63.07
4G	5G	1M	PK	4.28525G	-62.48	-62.48
4G	5G	1M	PK	4.96025G	-64.86	-64.86
5G	7G	1M	PK	5.428G	-63.27	-63.27
7G	8G	1M	PK	7.72725G	-62.81	-62.81
8G	25G	1M	PK	15.75147G	-54.71	-54.71

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE-FS [PK]

2402MHz



F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.56395G	-63.90	-63.90
4G	5G	1M	PK	4.095G	-63.12	-63.12
4G	5G	1M	PK	4.805G	-65.07	-65.07
5G	7G	1M	PK	5.4215G	-61.66	-61.66
7G	8G	1M	PK	7.73275G	-62.48	-62.48
8G	25G	1M	PK	15.6985G	-55.59	-55.59



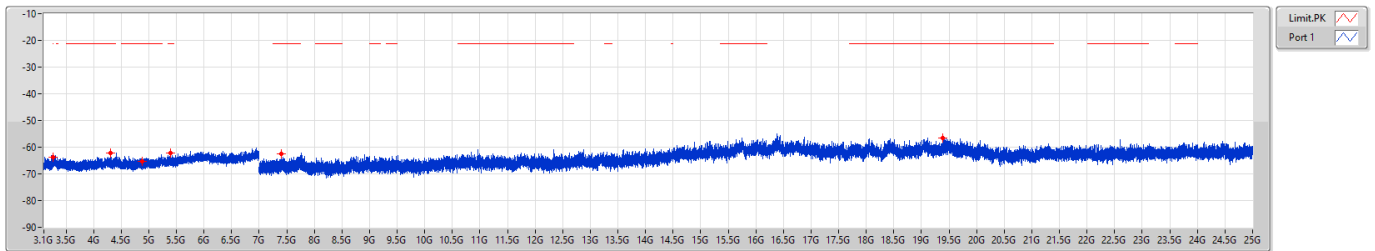
Unwanted Conducted Emissions into Restricted Frequency Bands(3.1G~25GHz)

Appendix A.3

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE-FS [PK]

2441MHz

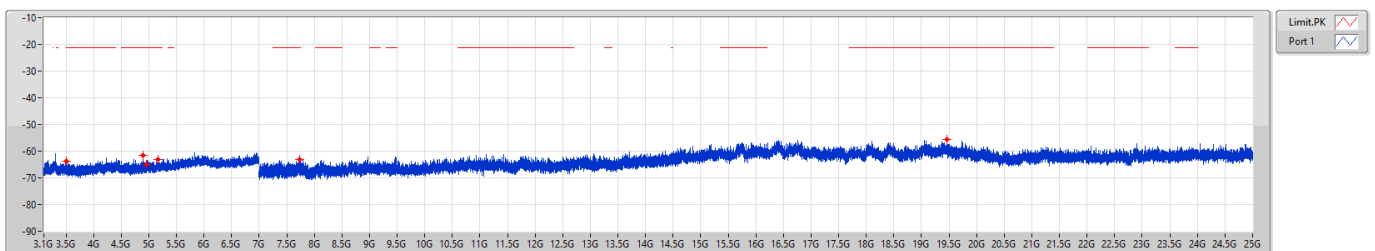


F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.26335G	-63.61	-63.61
4G	5G	1M	PK	4.312G	-62.26	-62.26
4G	5G	1M	PK	4.882G	-65.22	-65.22
5G	7G	1M	PK	5.3885G	-62.31	-62.31
7G	8G	1M	PK	7.405G	-62.50	-62.50
8G	25G	1M	PK	19.38416G	-56.50	-56.50

2.4-2.4835GHz_BT-EDR(3Mbps)

CSE-FS [PK]

2480MHz



F.Start(Hz)	F.Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
3.1G	4G	1M	PK	3.51378G	-63.88	-63.88
4G	5G	1M	PK	4.9005G	-61.51	-61.51
4G	5G	1M	PK	4.9605G	-64.95	-64.95
5G	7G	1M	PK	5.1695G	-63.04	-63.04
7G	8G	1M	PK	7.7385G	-63.23	-63.23
8G	25G	1M	PK	19.46331G	-55.66	-55.66



Summary

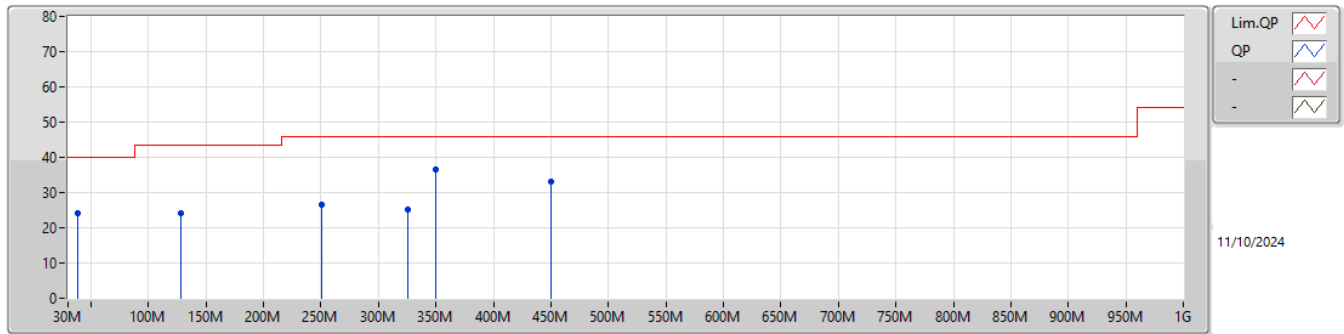
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	450.01M	42.76	46.00	-3.24	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.4

Mode 1



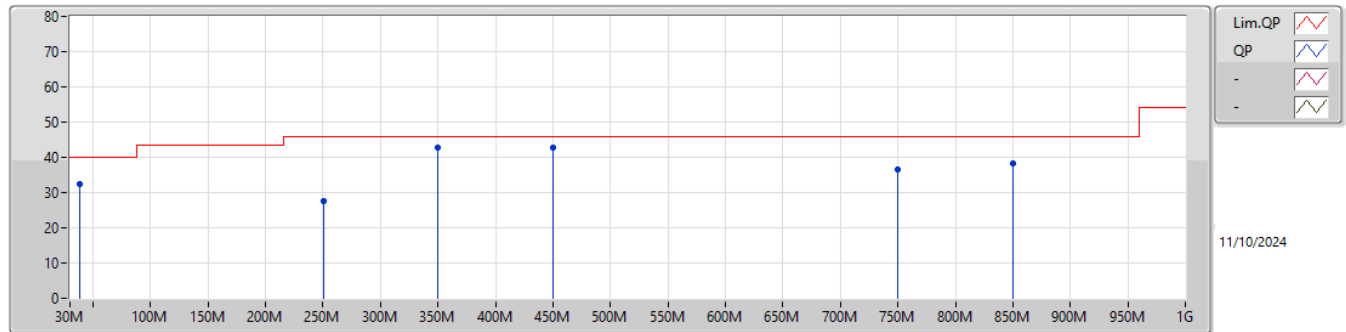
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	38.59M	24.16	40.00	-15.84	-9.17	3	Horizontal	-	-	-	33.33	18.36	0.58	28.11		
PK	128.68M	24.11	43.50	-19.39	-10.25	3	Horizontal	-	-	-	34.36	16.87	1.12	28.24		
PK	250.19M	26.57	46.00	-19.43	-9.77	3	Horizontal	-	-	-	36.34	16.91	1.57	28.25		
PK	325.17M	25.23	46.00	-20.77	-7.20	3	Horizontal	-	-	-	32.43	19.20	1.81	28.21		
PK	350.11M	36.57	46.00	-9.43	-6.88	3	Horizontal	-	-	-	43.45	19.50	1.82	28.20		
PK	450.01M	33.27	46.00	-12.73	-4.11	3	Horizontal	-	-	-	37.38	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.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	38.68M	32.44	40.00	-7.56	-9.16	3	Vertical	-	-	-	41.60	18.37	0.58	28.11		
PK	250.19M	27.51	46.00	-18.49	-9.77	3	Vertical	-	-	-	37.28	16.91	1.57	28.25		
QP	350.1M	42.61	46.00	-3.39	-6.88	3	Vertical	107	1.31	-	49.49	19.50	1.82	28.20		
QP	450.01M	42.76	46.00	-3.24	-4.11	3	Vertical	214	1.00	-	46.87	22.10	1.98	28.19		
PK	749.74M	36.55	46.00	-9.45	1.81	3	Vertical	-	-	-	34.74	26.99	2.75	27.93		
PK	849.65M	38.13	46.00	-7.87	3.12	3	Vertical	-	-	-	35.01	27.99	2.89	27.76		



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

Appendix A.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-BR(1Mbps)	Pass	PK	12.01G	55.81	74.00	-18.19	3	Horizontal	177	1.00	-
BT-EDR(3Mbps)	Pass	PK	12.01G	55.60	74.00	-18.40	3	Vertical	221	1.00	-

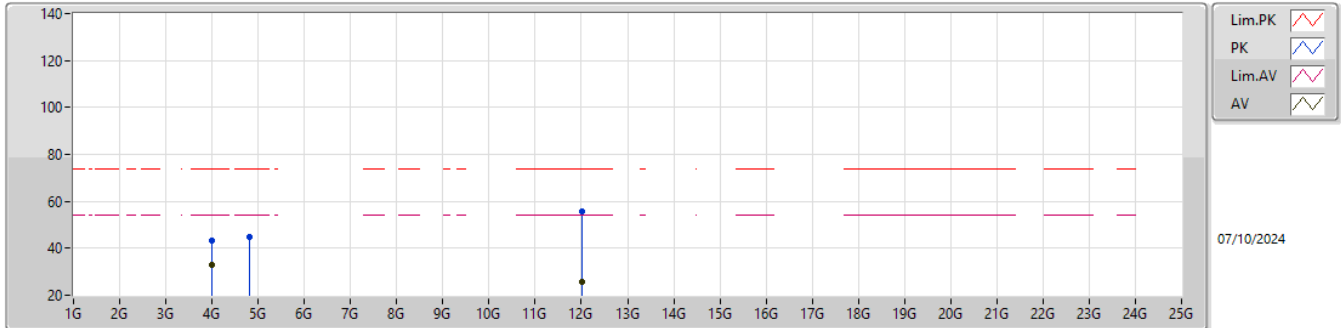


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-BR(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	4G	33.17	54.00	-20.83	35.19	3	Horizontal	194	1.72	-	29.70	6.28	38.00				
PK	4G	43.26	74.00	-30.74	45.28	3	Horizontal	194	1.72	-	29.70	6.28	38.00				
AV	4.804G	14.78	54.00	-39.22	-	3	Horizontal	-	-	-	-	-	-				
PK	4.804G	44.88	74.00	-29.12	45.26	3	Horizontal	208	1.00	-	31.29	6.85	38.52				
AV	12.01G	25.71	54.00	-28.29	-	3	Horizontal	-	-	-	-	-	-				
PK	12.01G	55.81	74.00	-18.19	49.54	3	Horizontal	177	1.00	-	39.20	10.02	42.95				

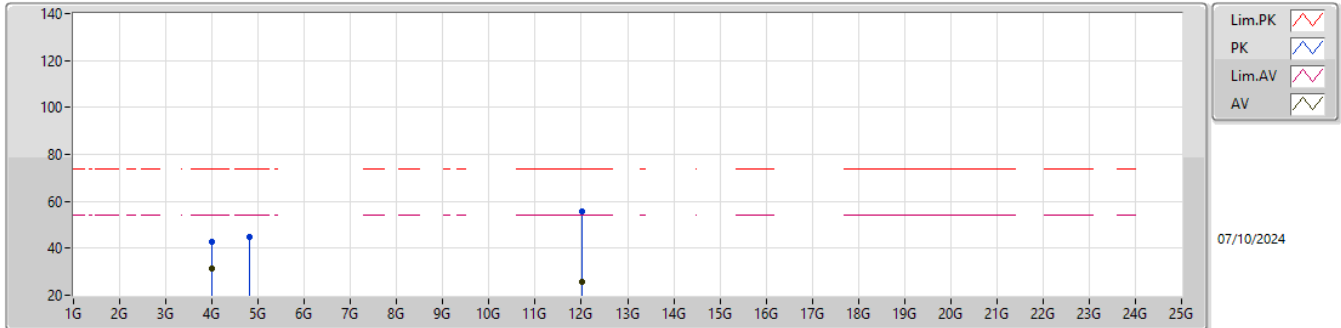


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-BR(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	4G	31.55	54.00	-22.45	33.57	3	Vertical	194	1.88	-	29.70	6.28	38.00			
PK	4G	42.82	74.00	-31.18	44.84	3	Vertical	194	1.88	-	29.70	6.28	38.00			
AV	4.804G	14.89	54.00	-39.11	-	3	Vertical	-	-	-	-	-	-			
PK	4.804G	44.99	74.00	-29.01	45.37	3	Vertical	215	1.00	-	31.29	6.85	38.52			
AV	12.01G	25.65	54.00	-28.35	-	3	Vertical	-	-	-	-	-	-			
PK	12.01G	55.75	74.00	-18.25	49.48	3	Vertical	186	1.00	-	39.20	10.02	42.95			

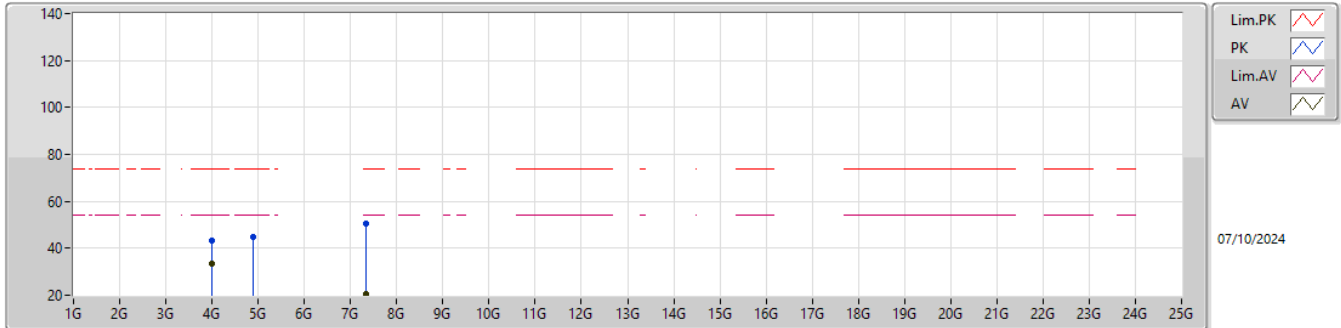


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-BR(1Mbps)

2441MHz_TX

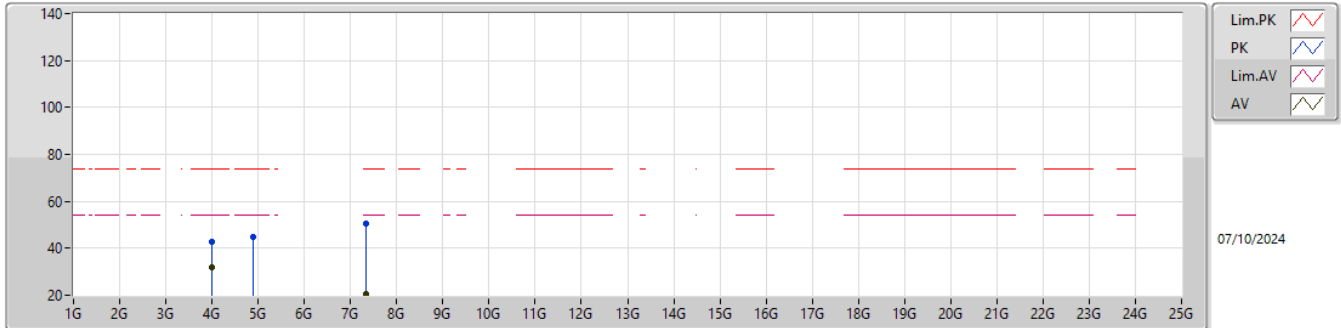


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	33.19	54.00	-20.81	35.46	3	Horizontal	198	1.68	-	29.70	6.02	37.99				
PK	4G	43.21	74.00	-30.79	45.48	3	Horizontal	198	1.68	-	29.70	6.02	37.99				
AV	4.882G	14.74	54.00	-39.26	-	3	Horizontal	-	-	-	-	-	-				
PK	4.882G	44.84	74.00	-29.16	45.50	3	Horizontal	126	1.00	-	31.14	6.77	38.57				
AV	7.323G	20.48	54.00	-33.52	-	3	Horizontal	-	-	-	-	-	-				
PK	7.323G	50.58	74.00	-23.42	45.20	3	Horizontal	208	1.00	-	36.15	8.63	39.40				



2.4-2.4835GHz_BT-BR(1Mbps)

2441MHz_TX

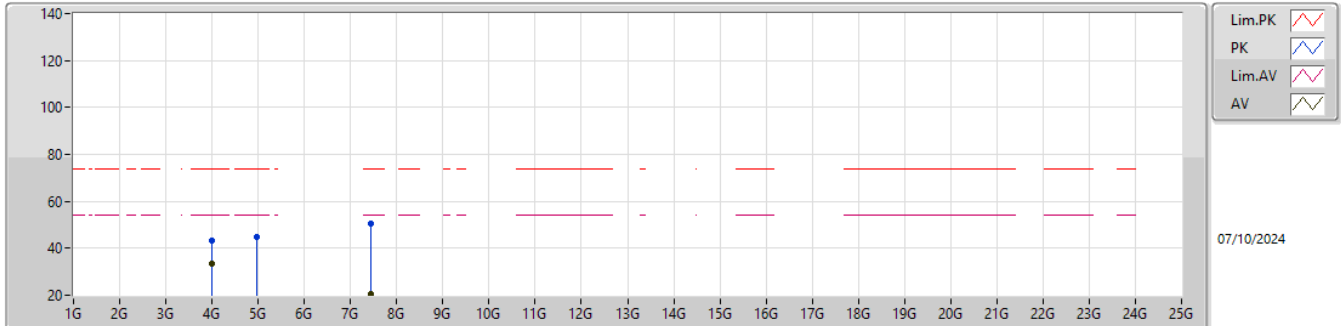


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)			
AV	4G	31.66	54.00	-22.34	33.93	3	Vertical	188	1.94	-	29.70	6.02	37.99			
PK	4G	42.87	74.00	-31.13	45.14	3	Vertical	188	1.94	-	29.70	6.02	37.99			
AV	4.882G	14.77	54.00	-39.23	-	3	Vertical	-	-	-	-	-	-			
PK	4.882G	44.87	74.00	-29.13	45.53	3	Vertical	156	1.00	-	31.14	6.77	38.57			
AV	7.323G	20.58	54.00	-33.42	-	3	Vertical	-	-	-	-	-	-			
PK	7.323G	50.68	74.00	-23.32	45.30	3	Vertical	250	1.00	-	36.15	8.63	39.40			



2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

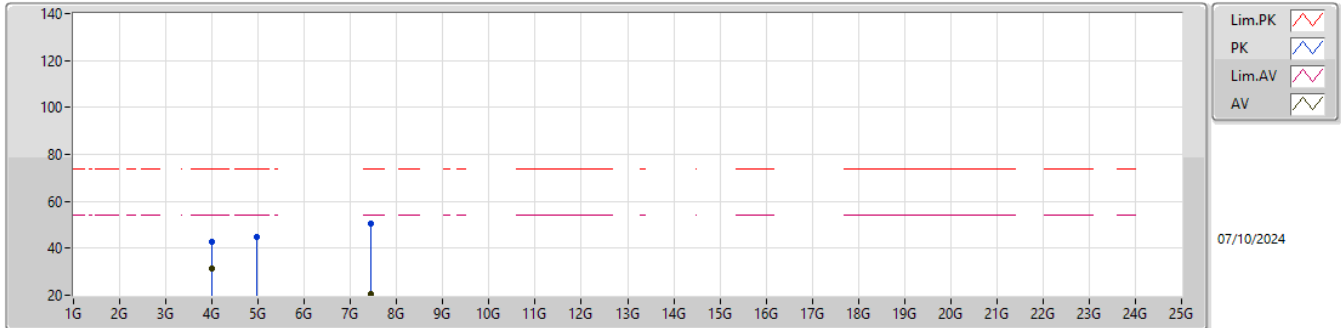


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	33.24	54.00	-20.76	35.51	3	Horizontal	201	1.69	-	29.70	6.02	37.99				
PK	4G	43.44	74.00	-30.56	45.71	3	Horizontal	201	1.69	-	29.70	6.02	37.99				
AV	4.96G	14.94	54.00	-39.06	-	3	Horizontal	-	-	-	-	-	-				
PK	4.96G	45.04	74.00	-28.96	45.44	3	Horizontal	133	1.00	-	31.36	6.86	38.62				
AV	7.44G	20.64	54.00	-33.36	-	3	Horizontal	-	-	-	-	-	-				
PK	7.44G	50.74	74.00	-23.26	45.28	3	Horizontal	206	1.00	-	36.34	8.66	39.54				



2.4-2.4835GHz_BT-BR(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	4G	31.54	54.00	-22.46	33.81	3	Vertical	190	1.98	-	29.70	6.02	37.99			
PK	4G	42.90	74.00	-31.10	45.17	3	Vertical	190	1.98	-	29.70	6.02	37.99			
AV	4.96G	14.91	54.00	-39.09	-	3	Vertical	-	-	-	-	-	-			
PK	4.96G	45.01	74.00	-28.99	45.41	3	Vertical	146	1.00	-	31.36	6.86	38.62			
AV	7.44G	20.56	54.00	-33.44	-	3	Vertical	-	-	-	-	-	-			
PK	7.44G	50.66	74.00	-23.34	45.20	3	Vertical	243	1.00	-	36.34	8.66	39.54			

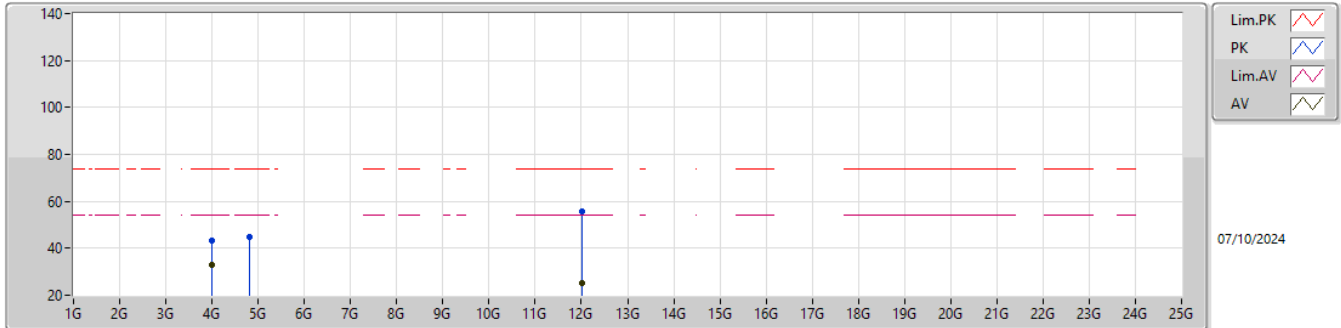


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

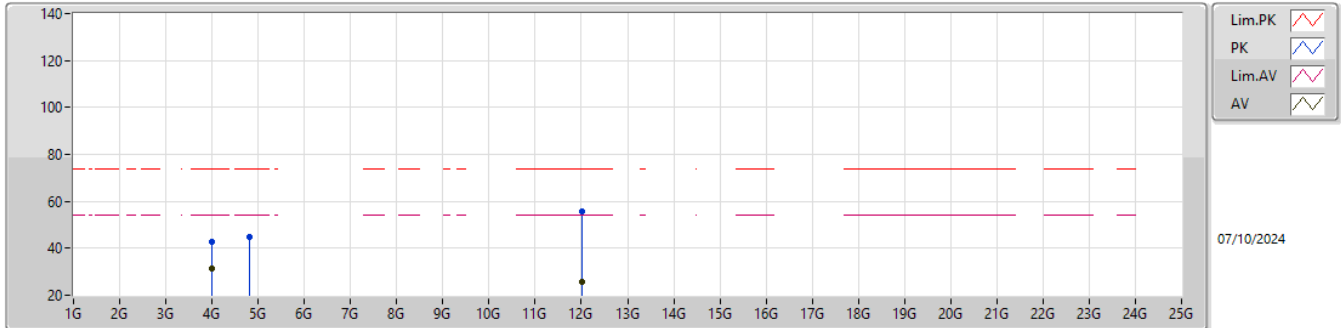


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	33.17	54.00	-20.83	35.44	3	Horizontal	201	1.66	-	29.70	6.02	37.99				
PK	4G	43.24	74.00	-30.76	45.51	3	Horizontal	201	1.66	-	29.70	6.02	37.99				
AV	4.804G	14.79	54.00	-39.21	-	3	Horizontal	-	-	-	-	-	-				
PK	4.804G	44.89	74.00	-29.11	45.44	3	Horizontal	208	1.00	-	31.29	6.68	38.52				
AV	12.01G	25.38	54.00	-28.62	-	3	Horizontal	-	-	-	-	-	-				
PK	12.01G	55.48	74.00	-18.52	48.95	3	Horizontal	194	1.00	-	39.20	10.23	42.90				



2.4-2.4835GHz_BT-EDR(3Mbps)

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	4G	31.41	54.00	-22.59	33.68	3	Vertical	190	1.89	-	29.70	6.02	37.99			
PK	4G	42.77	74.00	-31.23	45.04	3	Vertical	190	1.89	-	29.70	6.02	37.99			
AV	4.804G	14.91	54.00	-39.09	-	3	Vertical	-	-	-	-	-	-			
PK	4.804G	45.01	74.00	-28.99	45.56	3	Vertical	208	1.00	-	31.29	6.68	38.52			
AV	12.01G	25.50	54.00	-28.50	-	3	Vertical	-	-	-	-	-	-			
PK	12.01G	55.60	74.00	-18.40	49.07	3	Vertical	221	1.00	-	39.20	10.23	42.90			

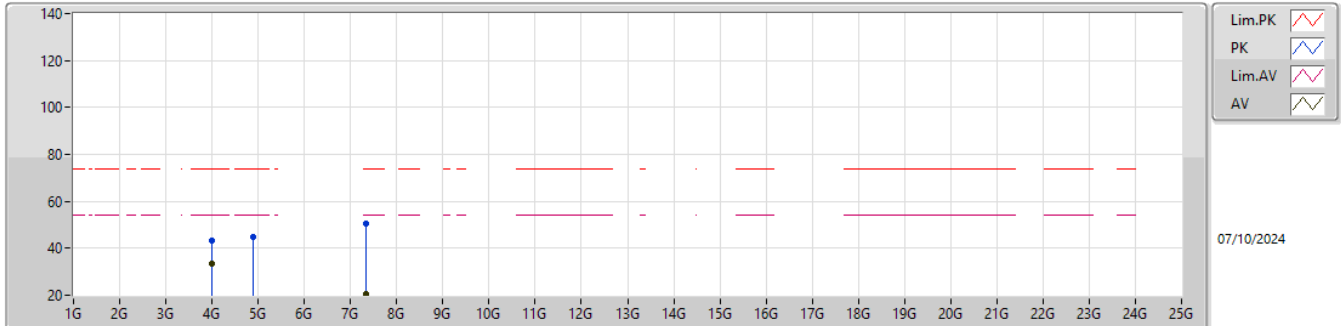


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-EDR(3Mbps)

2441MHz_TX

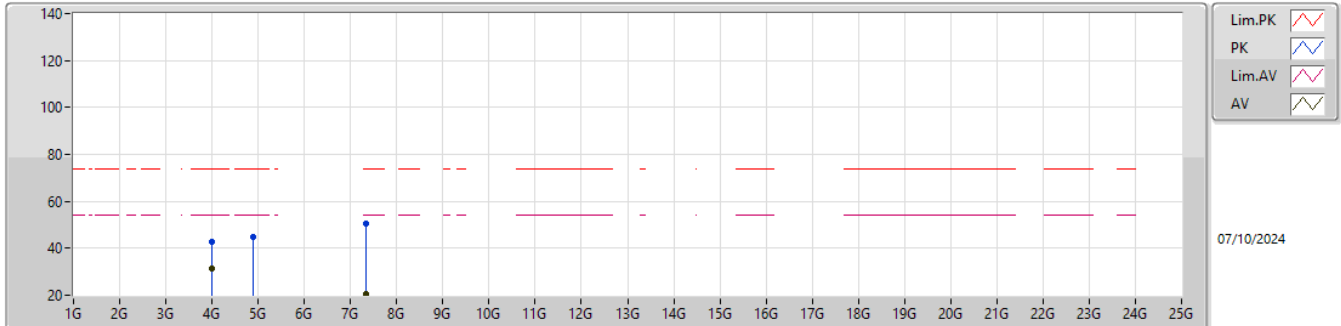


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	33.25	54.00	-20.75	35.52	3	Horizontal	192	1.68	-	29.70	6.02	37.99				
PK	4G	43.40	74.00	-30.60	45.67	3	Horizontal	192	1.68	-	29.70	6.02	37.99				
AV	4.882G	14.76	54.00	-39.24	-	3	Horizontal	-	-	-	-	-	-				
PK	4.882G	44.86	74.00	-29.14	45.52	3	Horizontal	123	1.00	-	31.14	6.77	38.57				
AV	7.323G	20.51	54.00	-33.49	-	3	Horizontal	-	-	-	-	-	-				
PK	7.323G	50.61	74.00	-23.39	45.23	3	Horizontal	258	1.00	-	36.15	8.63	39.40				



2.4-2.4835GHz_BT-EDR(3Mbps)

2441MHz_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	4G	31.49	54.00	-22.51	33.76	3	Vertical	186	1.99	-	29.70	6.02	37.99			
PK	4G	43.01	74.00	-30.99	45.28	3	Vertical	186	1.99	-	29.70	6.02	37.99			
AV	4.882G	14.70	54.00	-39.30	-	3	Vertical	-	-	-	-	-	-			
PK	4.882G	44.80	74.00	-29.20	45.46	3	Vertical	216	1.00	-	31.14	6.77	38.57			
AV	7.323G	20.54	54.00	-33.46	-	3	Vertical	-	-	-	-	-	-			
PK	7.323G	50.64	74.00	-23.36	45.26	3	Vertical	154	1.00	-	36.15	8.63	39.40			

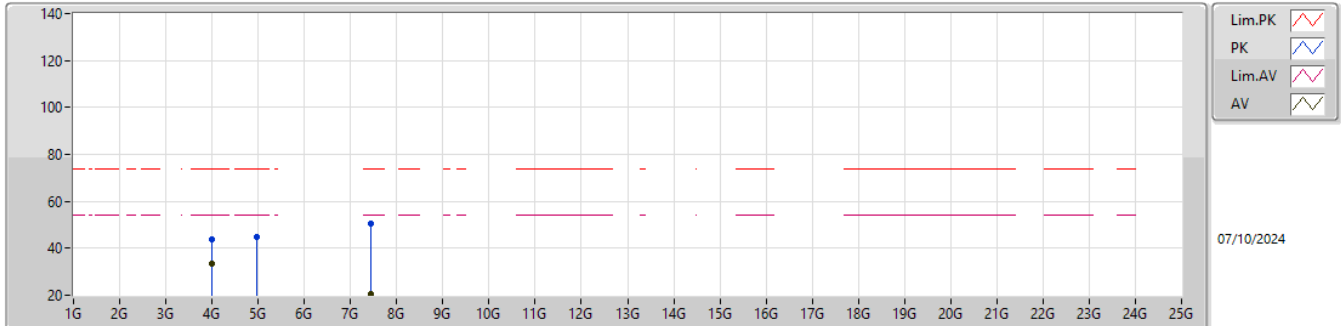


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-EDR(3Mbps)

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	4G	33.40	54.00	-20.60	35.67	3	Horizontal	203	1.71	-	29.70	6.02	37.99				
PK	4G	43.57	74.00	-30.43	45.84	3	Horizontal	203	1.71	-	29.70	6.02	37.99				
AV	4.96G	14.92	54.00	-39.08	-	3	Horizontal	-	-	-	-	-	-				
PK	4.96G	45.02	74.00	-28.98	45.42	3	Horizontal	135	1.00	-	31.36	6.86	38.62				
AV	7.44G	20.54	54.00	-33.46	-	3	Horizontal	-	-	-	-	-	-				
PK	7.44G	50.64	74.00	-23.36	45.18	3	Horizontal	216	1.00	-	36.34	8.66	39.54				

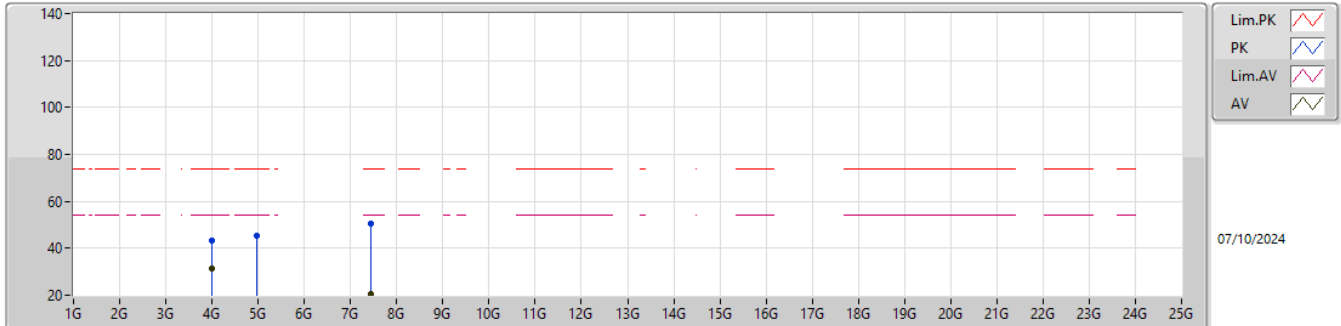


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX



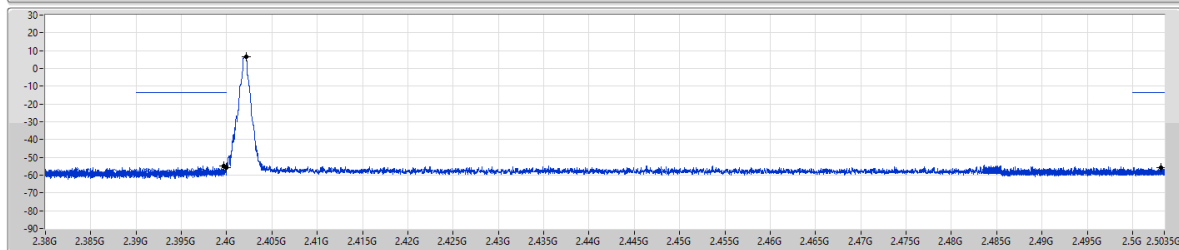
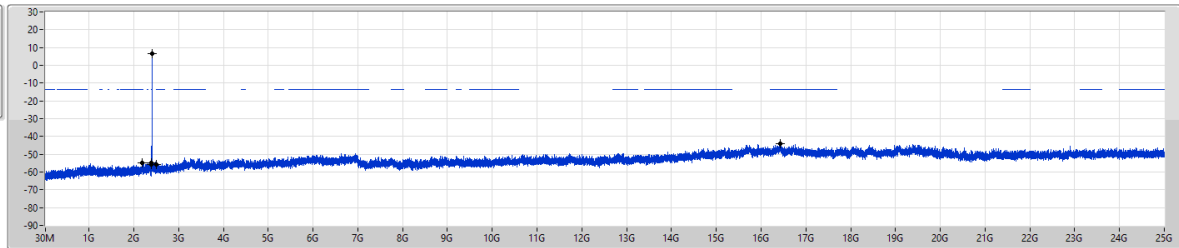
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB/m)	CL (dB)	PA (dB)				
AV	4G	31.59	54.00	-22.41	33.86	3	Vertical	192	2.02	-	29.70	6.02	37.99				
PK	4G	43.11	74.00	-30.89	45.38	3	Vertical	192	2.02	-	29.70	6.02	37.99				
AV	4.96G	15.01	54.00	-38.99	-	3	Vertical	-	-	-	-	-	-				
PK	4.96G	45.11	74.00	-28.89	45.51	3	Vertical	164	1.00	-	31.36	6.86	38.62				
AV	7.44G	20.63	54.00	-33.37	-	3	Vertical	-	-	-	-	-	-				
PK	7.44G	50.73	74.00	-23.27	45.27	3	Vertical	207	1.00	-	36.34	8.66	39.54				

2.4-2.4835GHz_BT-BR(1Mbps)

CSEndB-FS

2402MHz

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



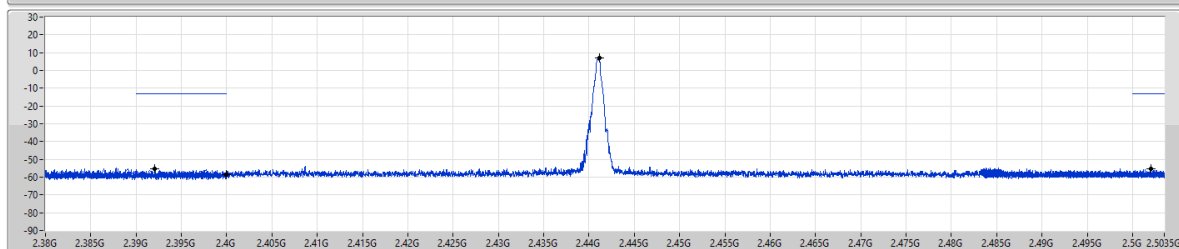
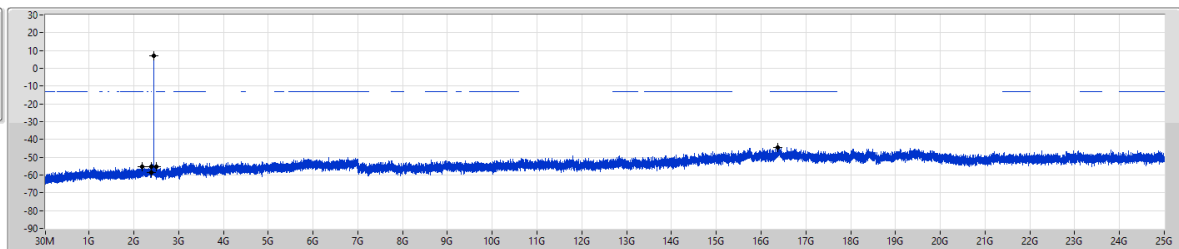
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40217G	6.58	-13.42	2.19287G	-54.96	2.39968G	-54.74	2.4G	-55.56	2.50316G	-55.56	16.42391G	-43.96	1

2.4-2.4835GHz_BT-BR(1Mbps)

CSEndB-FS

2441MHz

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
2.44117G	6.86	-13.14	2.18666G	-55.43	2.39209G	-55.19	2.4G	-58.73	2.50202G	-55.35	16.37259G	-44.31	1

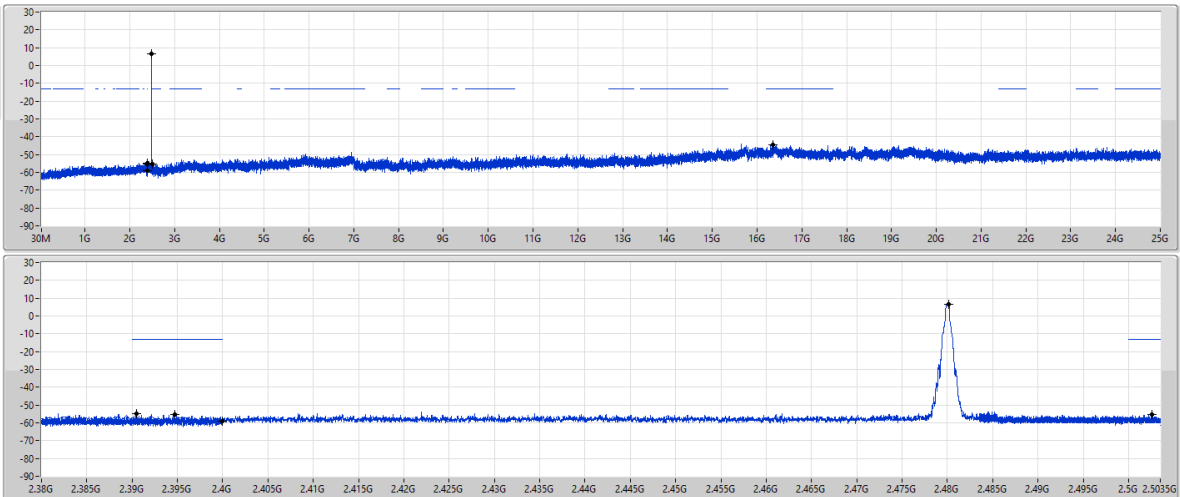


2.4-2.4835GHz_BT-BR(1Mbps)

CSEndB-FS

2480MHz

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



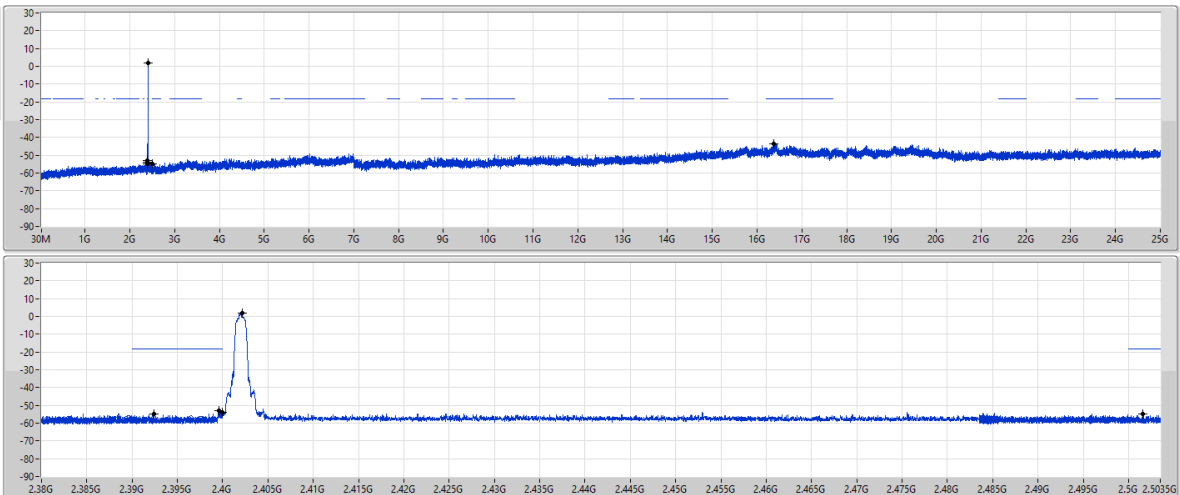
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48016G	6.79	-13.21	2.39474G	-55.25	2.39049G	-54.99	2.4G	-59.09	2.50256G	-55.35	16.36205G	-44.59	1

2.4-2.4835GHz_BT-EDR(2Mbps)

CSEndB-FS

2402MHz

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



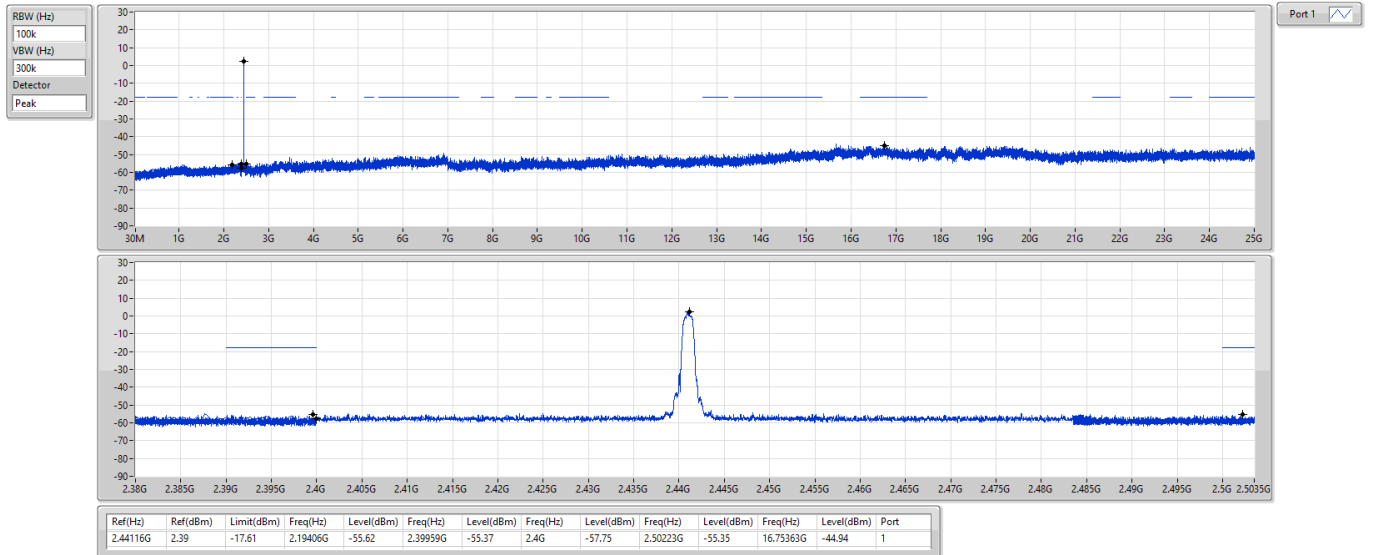
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40217G	1.92	-18.08	2.39238G	-55.02	2.39959G	-52.76	2.4G	-54.02	2.50161G	-54.72	16.37892G	-43.81	1



2.4-2.4835GHz_BT-EDR(2Mbps)

CSEndB-FS

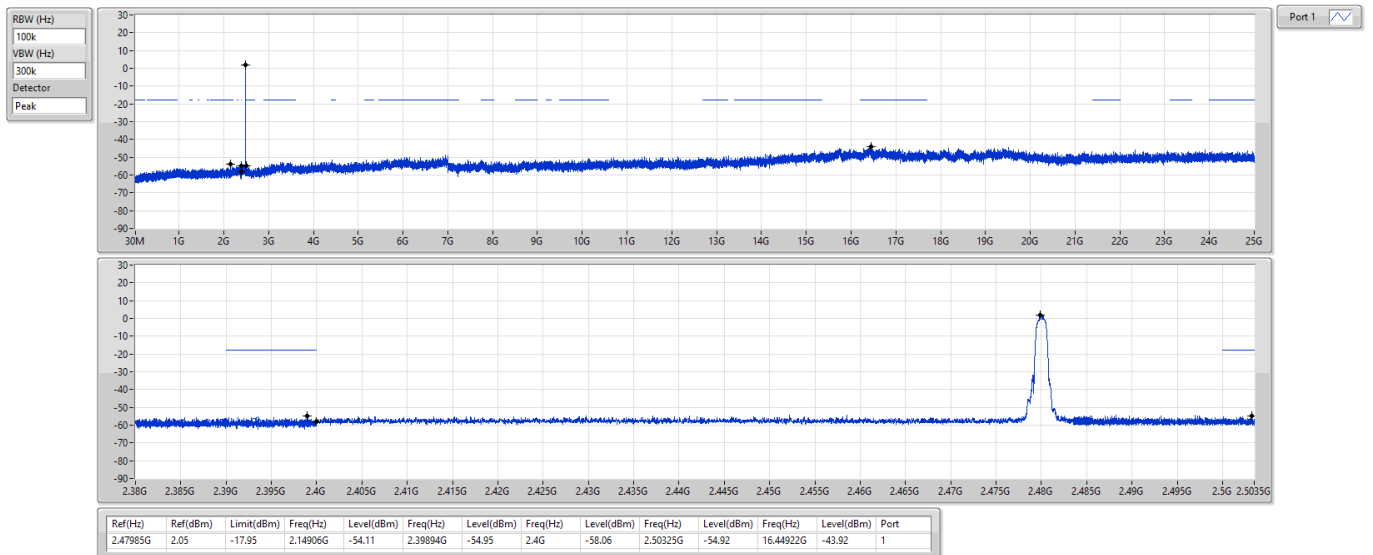
2441MHz



2.4-2.4835GHz_BT-EDR(2Mbps)

CSEndB-FS

2480MHz

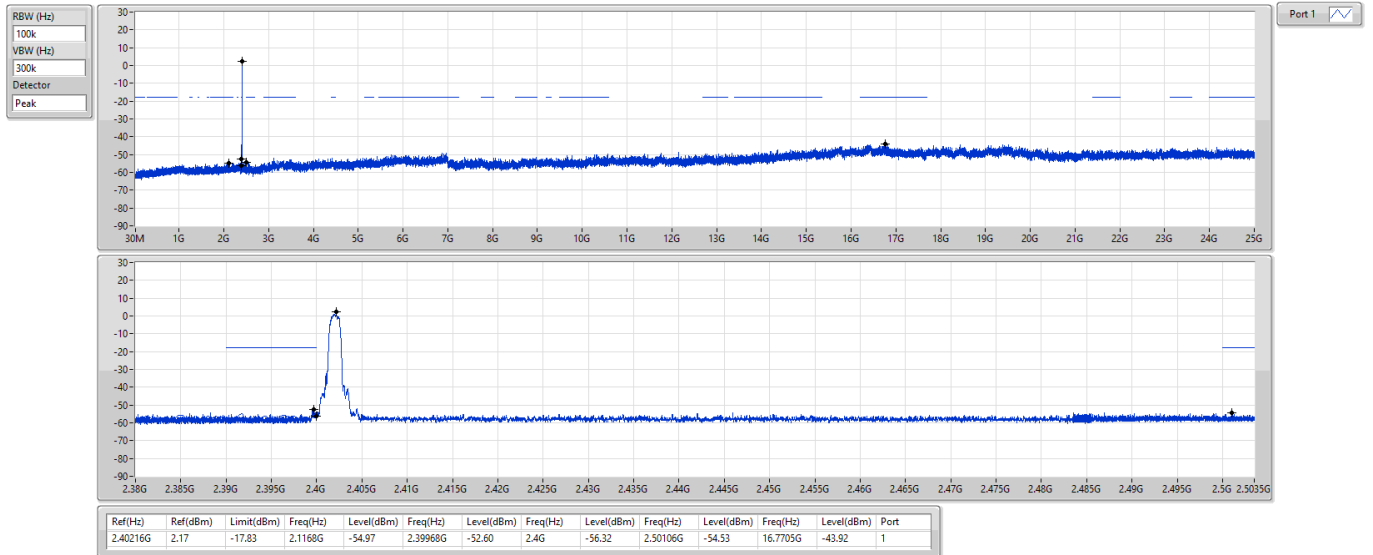




2.4-2.4835GHz_BT-EDR(3Mbps)

CSEndB-FS

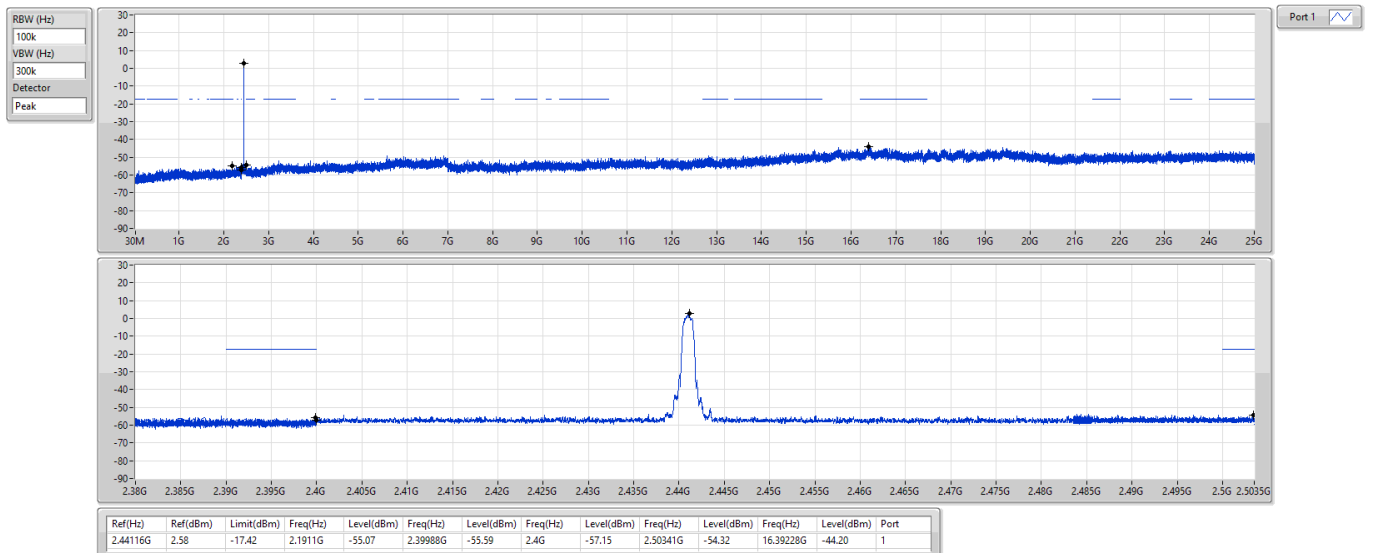
2402MHz



2.4-2.4835GHz_BT-EDR(3Mbps)

CSEndB-FS

2441MHz



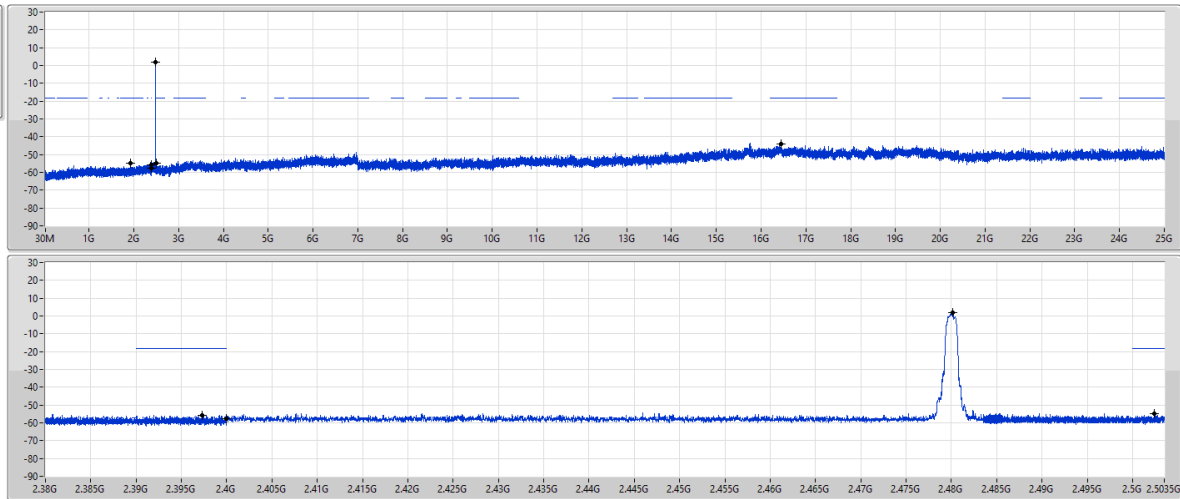


2.4-2.4835GHz_BT-EDR(3Mbps)

CSEndB-FS

2480MHz

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

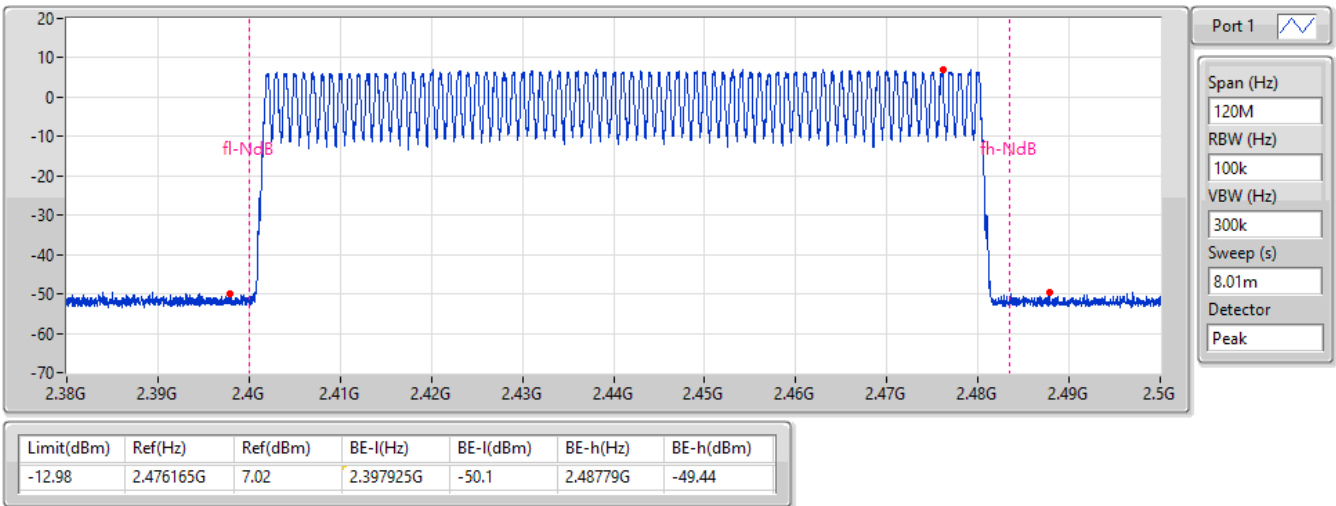


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48015G	1.90	-18.10	1.91818G	-54.79	2.39728G	-55.60	2.4G	-57.44	2.50244G	-54.92	16.44149G	-43.93	1

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz

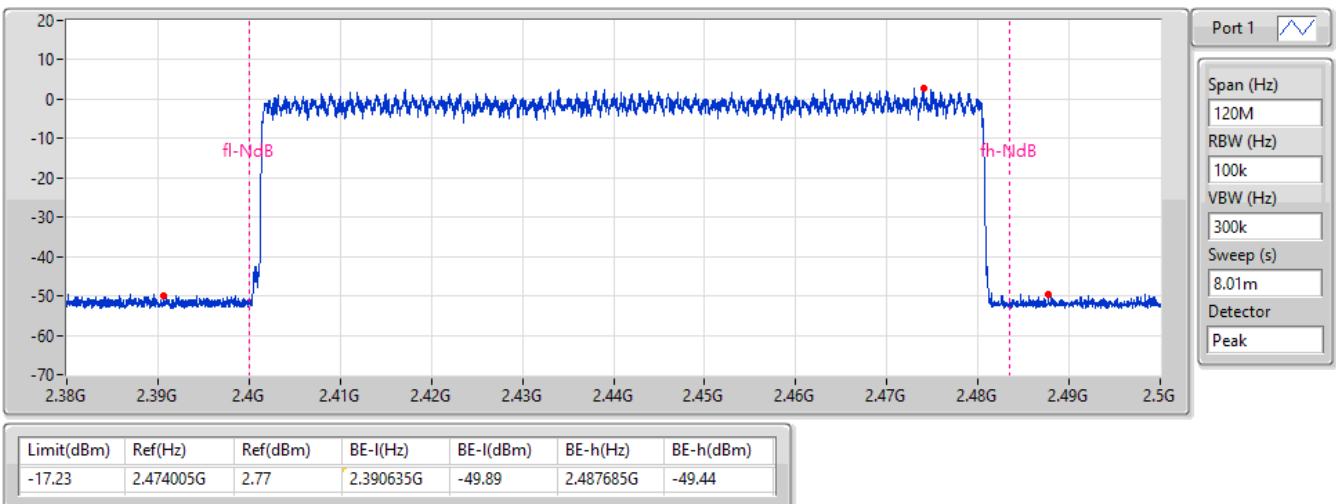
Hopping Ch Bandedge (Non-restricted Band)



2.4-2.4835GHz_BT-EDR(2Mbps)

2402MHz

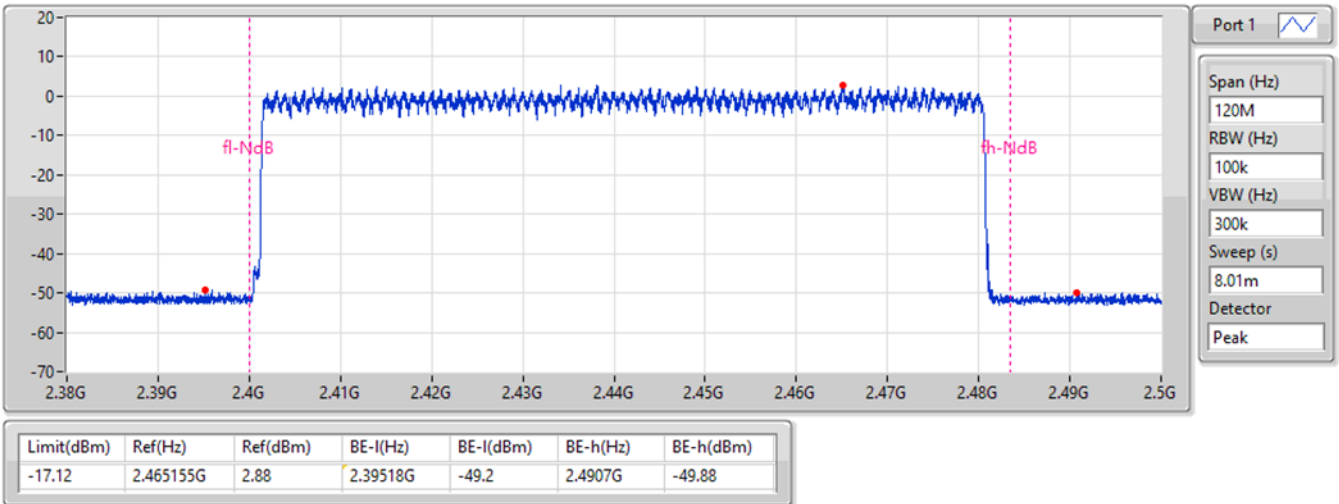
Hopping Ch Bandedge (Non-restricted Band)



2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz

Hopping Ch Bandedge (Non-restricted Band)



**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.06	0.00508
BT-EDR(2Mbps)	5.42	0.00348
BT-EDR(3Mbps)	5.72	0.00373

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.92	21.00	9.52	27.00
2441MHz	Pass	2.60	7.06	21.00	9.66	27.00
2480MHz	Pass	2.60	7.02	21.00	9.62	27.00
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.22	21.00	7.82	27.00
2441MHz	Pass	2.60	5.42	21.00	8.02	27.00
2480MHz	Pass	2.60	5.02	21.00	7.62	27.00
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.61	21.00	8.21	27.00
2441MHz	Pass	2.60	5.72	21.00	8.32	27.00
2480MHz	Pass	2.60	5.41	21.00	8.01	27.00

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



Conducted Output Power (Average)

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.76	0.00474
BT-EDR(2Mbps)	2.68	0.00185
BT-EDR(3Mbps)	2.71	0.00187

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.63	-	9.23	-
2441MHz	Pass	2.60	6.76	-	9.36	-
2480MHz	Pass	2.60	6.73	-	9.33	-
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.48	-	5.08	-
2441MHz	Pass	2.60	2.68	-	5.28	-
2480MHz	Pass	2.60	2.37	-	4.97	-
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.49	-	5.09	-
2441MHz	Pass	2.60	2.71	-	5.31	-
2480MHz	Pass	2.60	2.41	-	5.01	-

Note: Average power is for reference only.

**Summary**

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

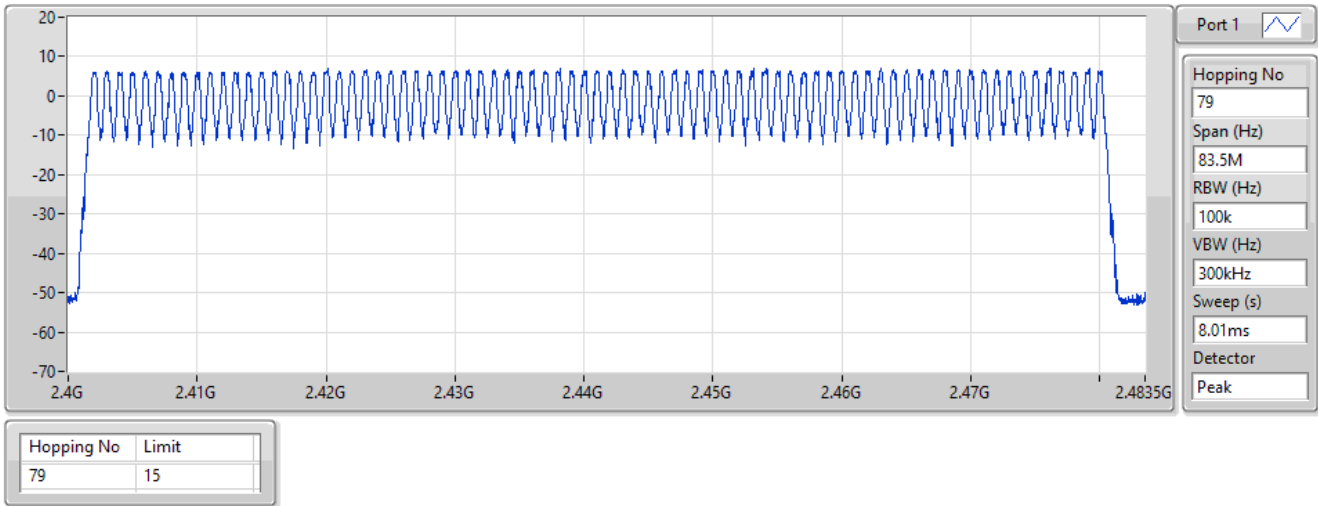
Result

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

2.4-2.4835GHz_BT-BR(1Mbps)

Hopping-FS

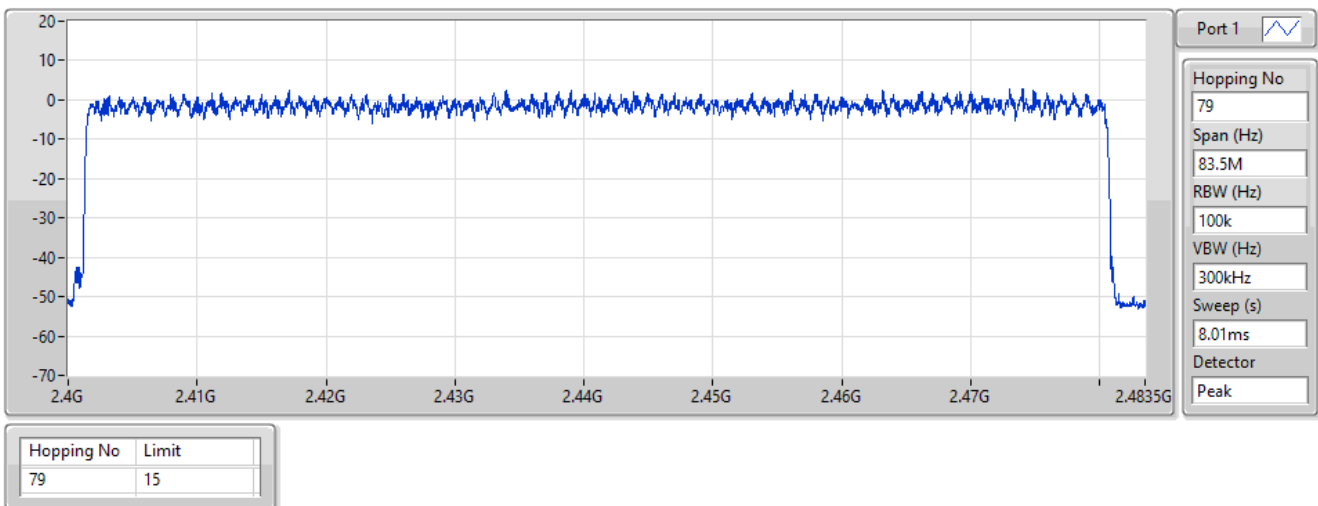
2402MHz



2.4-2.4835GHz_BT-EDR(2Mbps)

Hopping-FS

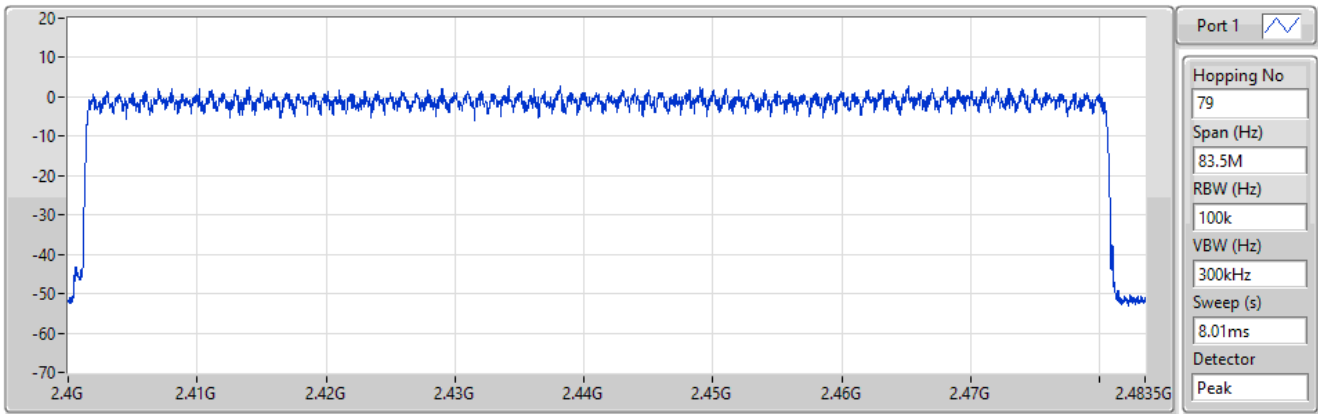
2402MHz



2.4-2.4835GHz_BT-EDR(3Mbps)

Hopping-FS

2402MHz



Hopping No	Limit
79	15

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	918.5k	873.313k	873KF1D	918.5k	870.815k
BT-EDR(2Mbps)	1.334M	1.194M	1M19G1D	1.328M	1.193M
BT-EDR(3Mbps)	1.32M	1.202M	1M20G1D	1.315M	1.199M

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

Result

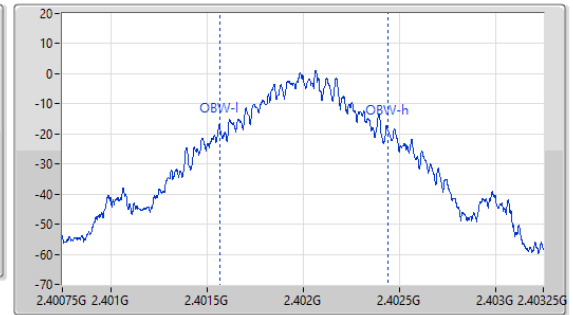
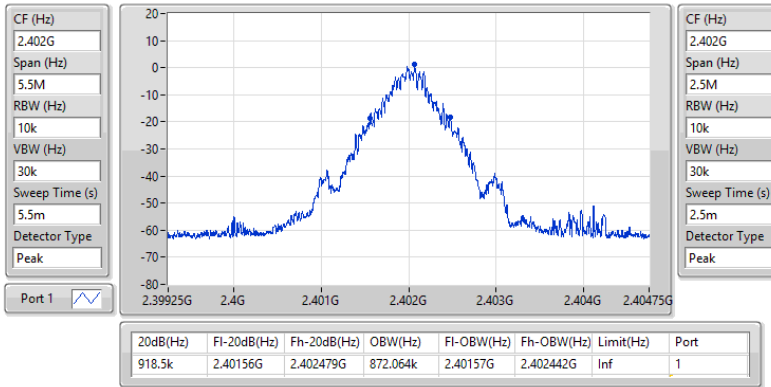
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	918.5k	872.064k
2441MHz	Pass	Inf	918.5k	873.313k
2480MHz	Pass	Inf	918.5k	870.815k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.328M	1.193M
2441MHz	Pass	Inf	1.331M	1.193M
2480MHz	Pass	Inf	1.334M	1.194M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.32M	1.199M
2441MHz	Pass	Inf	1.317M	1.201M
2480MHz	Pass	Inf	1.315M	1.202M

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

2.4-2.4835GHz_BT-BR(1Mbps)

EBW-FS

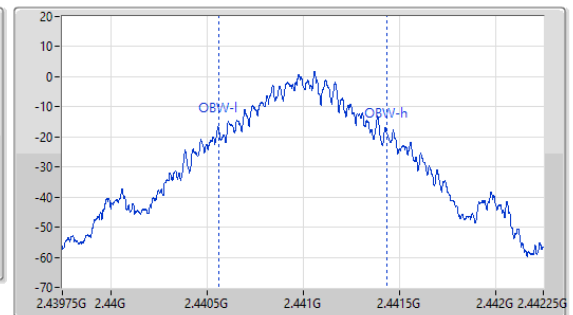
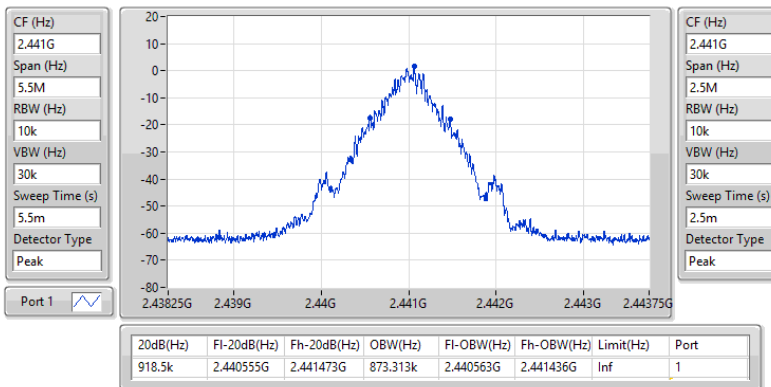
2402MHz



2.4-2.4835GHz_BT-BR(1Mbps)

EBW-FS

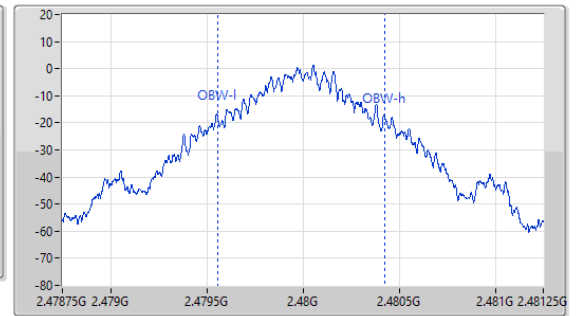
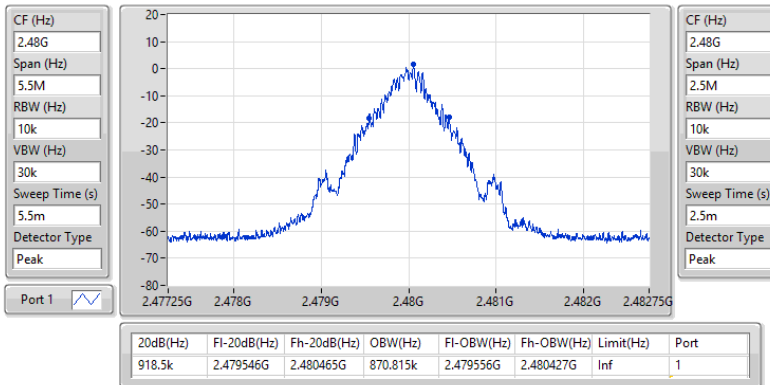
2441MHz



2.4-2.4835GHz_BT-BR(1Mbps)

EBW-FS

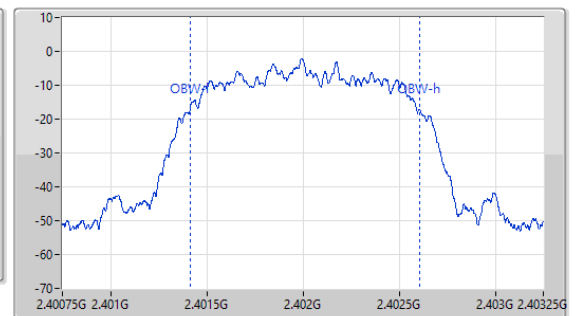
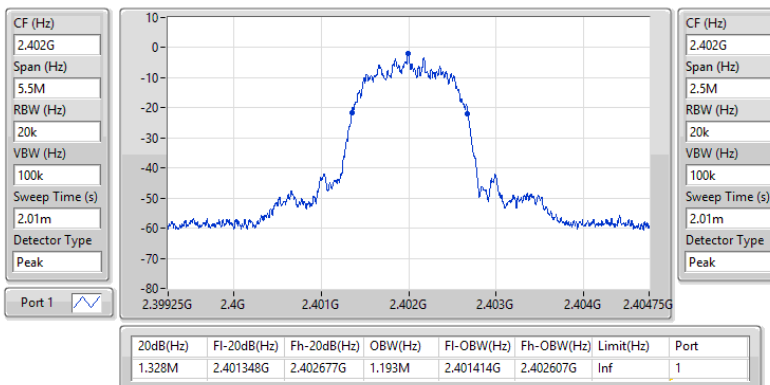
2480MHz



2.4-2.4835GHz_BT-EDR(2Mbps)

EBW-FS

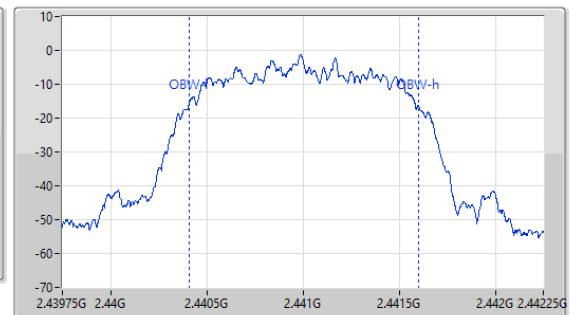
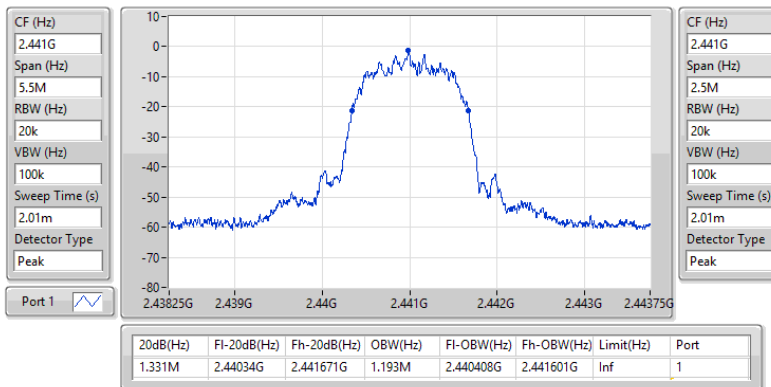
2402MHz



2.4-2.4835GHz_BT-EDR(2Mbps)

EBW-FS

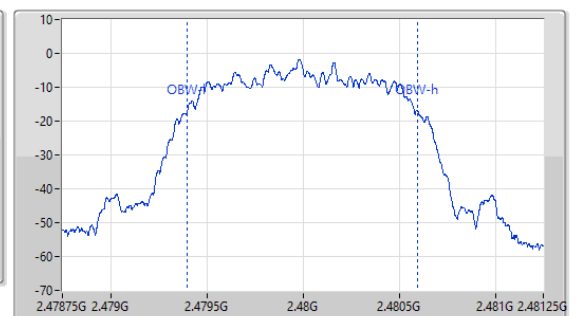
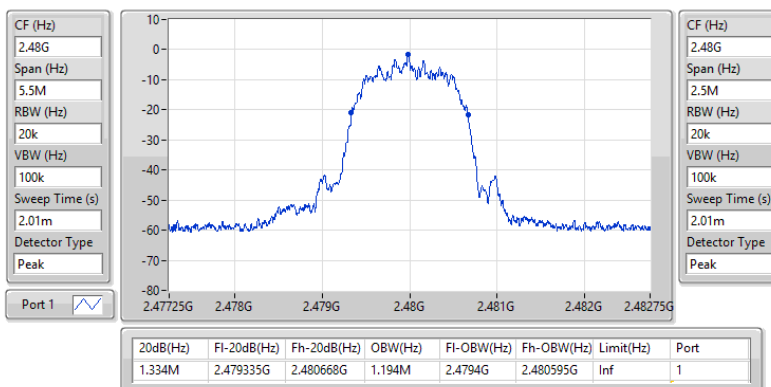
2441MHz



2.4-2.4835GHz_BT-EDR(2Mbps)

EBW-FS

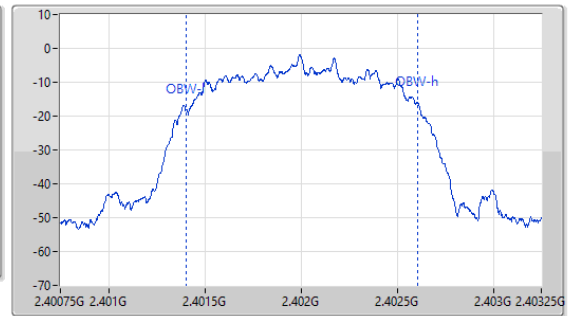
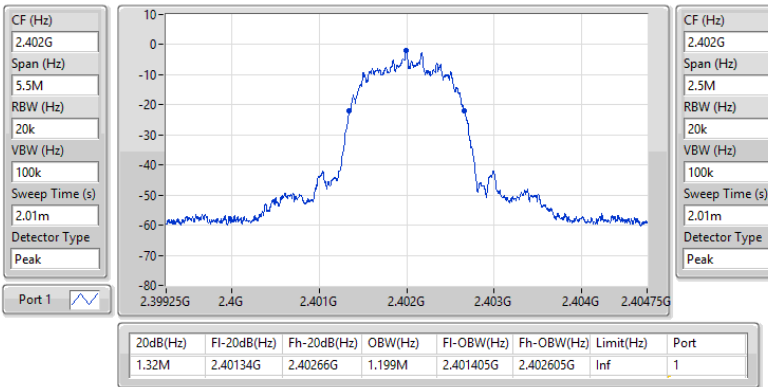
2480MHz



2.4-2.4835GHz_BT-EDR(3Mbps)

EBW-FS

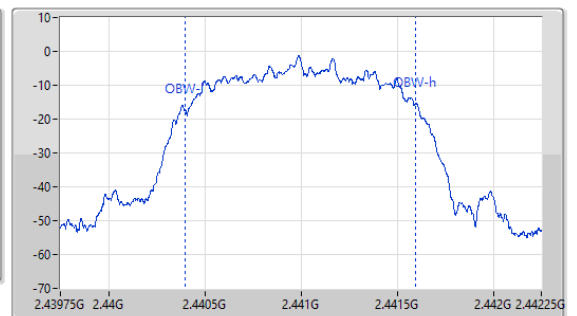
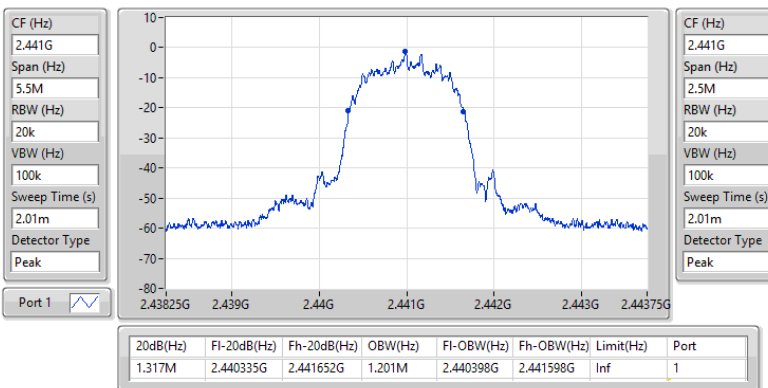
2402MHz



2.4-2.4835GHz_BT-EDR(3Mbps)

EBW-FS

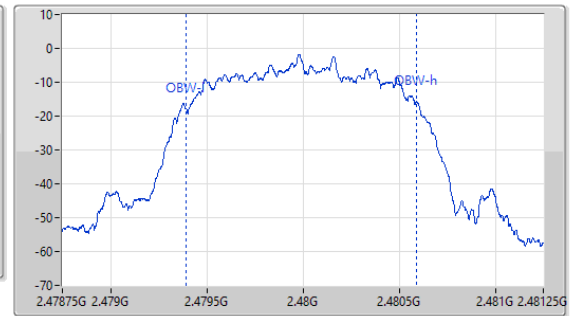
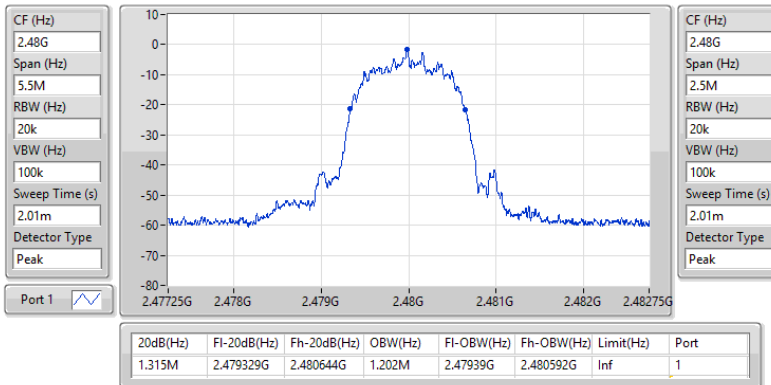
2441MHz



2.4-2.4835GHz_BT-EDR(3Mbps)

EBW-FS

2480MHz



Summary

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

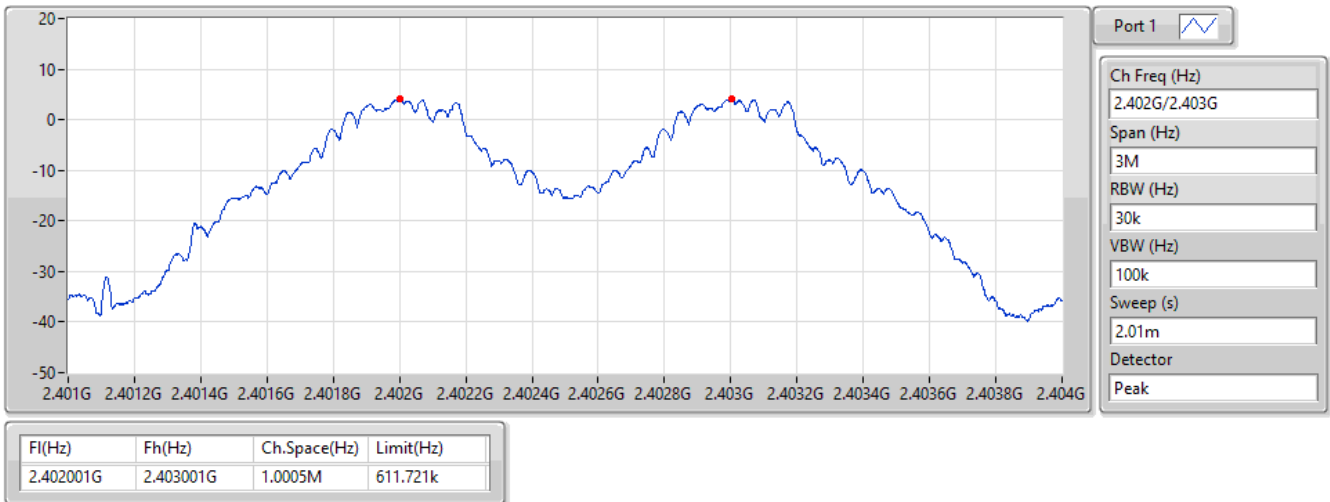
Result

Mode	Result	Fi (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402001G	2.403001G	1.0005M	611.721k
2441MHz	Pass	2.440995G	2.441995G	1.0005M	611.721k
2480MHz	Pass	2.478986G	2.479986G	1.0005M	611.721k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401999G	2.403G	1.0005M	884.448k
2441MHz	Pass	2.44099G	2.441992G	1.002M	886.446k
2480MHz	Pass	2.478986G	2.479986G	1.0005M	888.444k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402001G	2.403001G	1.0005M	879.12k
2441MHz	Pass	2.440993G	2.441994G	1.0005M	877.122k
2480MHz	Pass	2.478986G	2.479986G	1.0005M	875.79k

2.4-2.4835GHz_BT-BR(1Mbps)

Channel Separation-FS

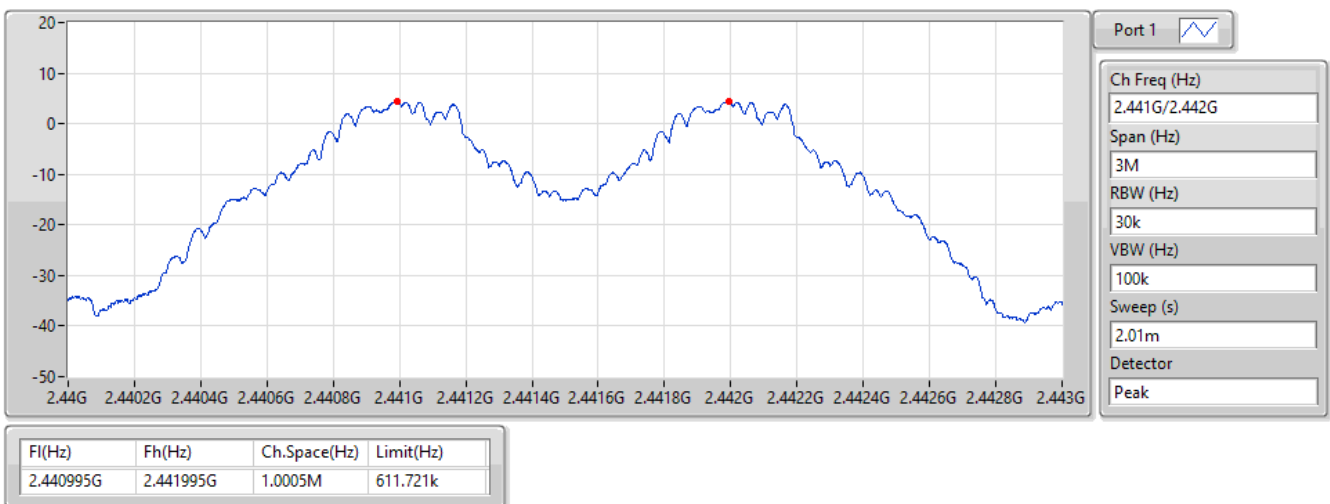
2.402G/2.403GHz



2.4-2.4835GHz_BT-BR(1Mbps)

Channel Separation-FS

2.441G/2.442GHz



2.4-2.4835GHz_BT-BR(1Mbps)

Channel Separation-FS

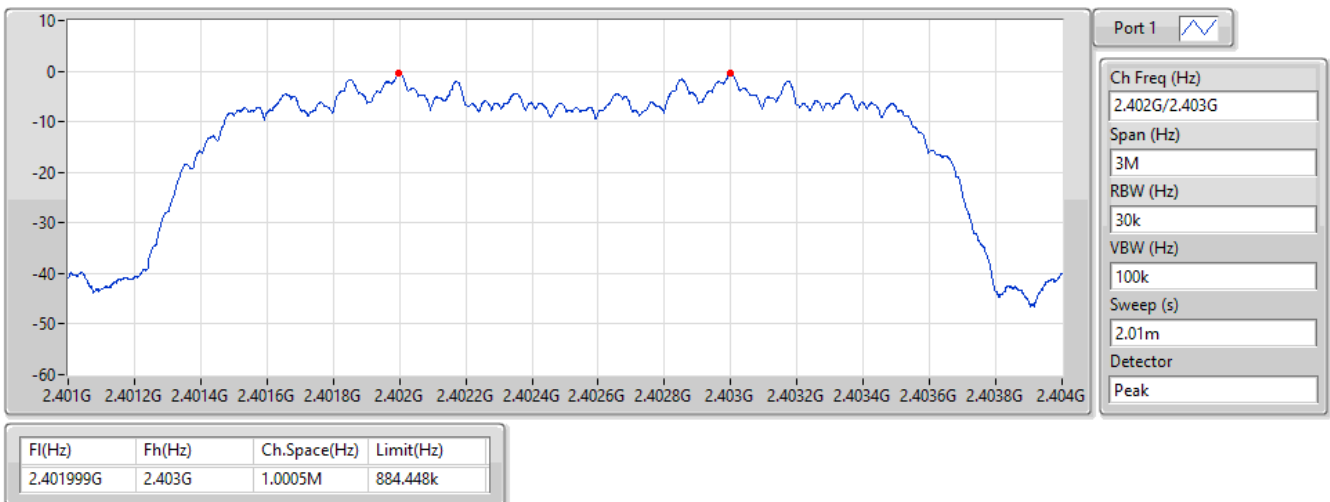
2.48G/2.479GHz



2.4-2.4835GHz_BT-EDR(2Mbps)

Channel Separation-FS

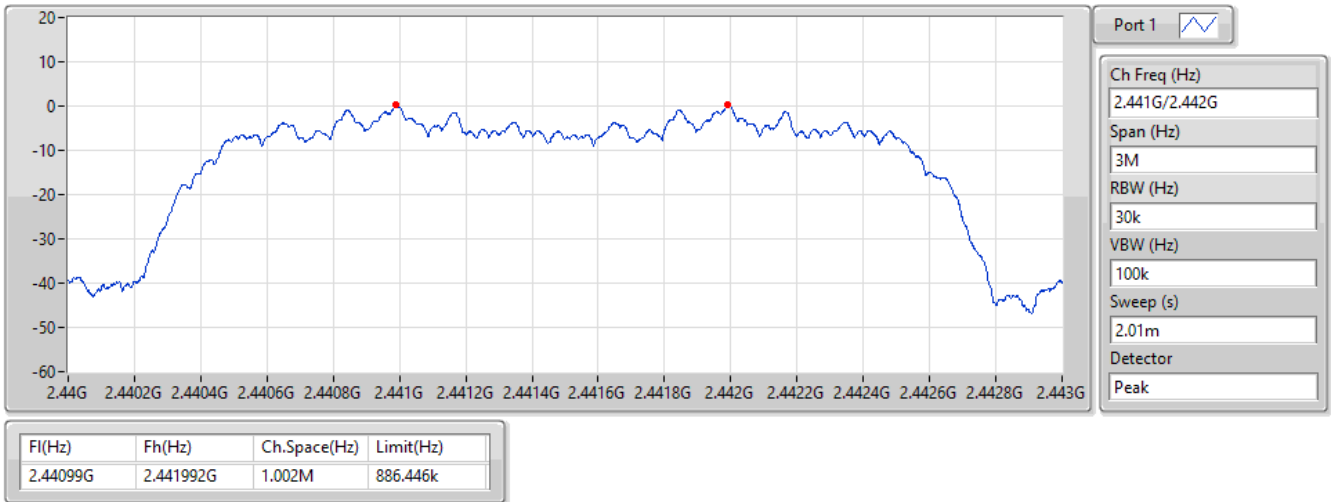
2.402G/2.403GHz



2.4-2.4835GHz_BT-EDR(2Mbps)

Channel Separation-FS

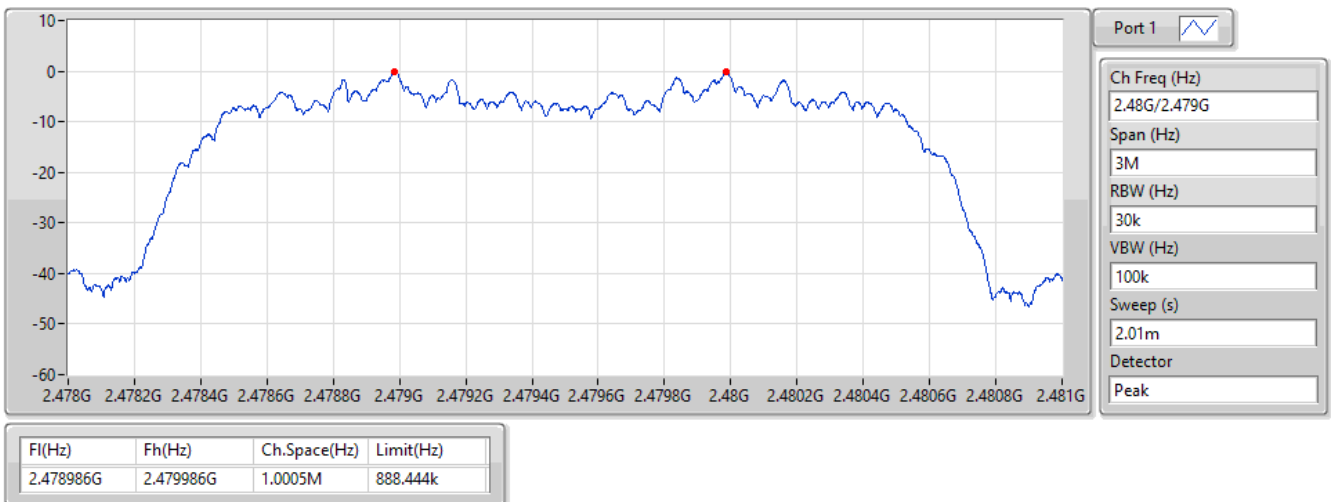
2.441G/2.442GHz



2.4-2.4835GHz_BT-EDR(2Mbps)

Channel Separation-FS

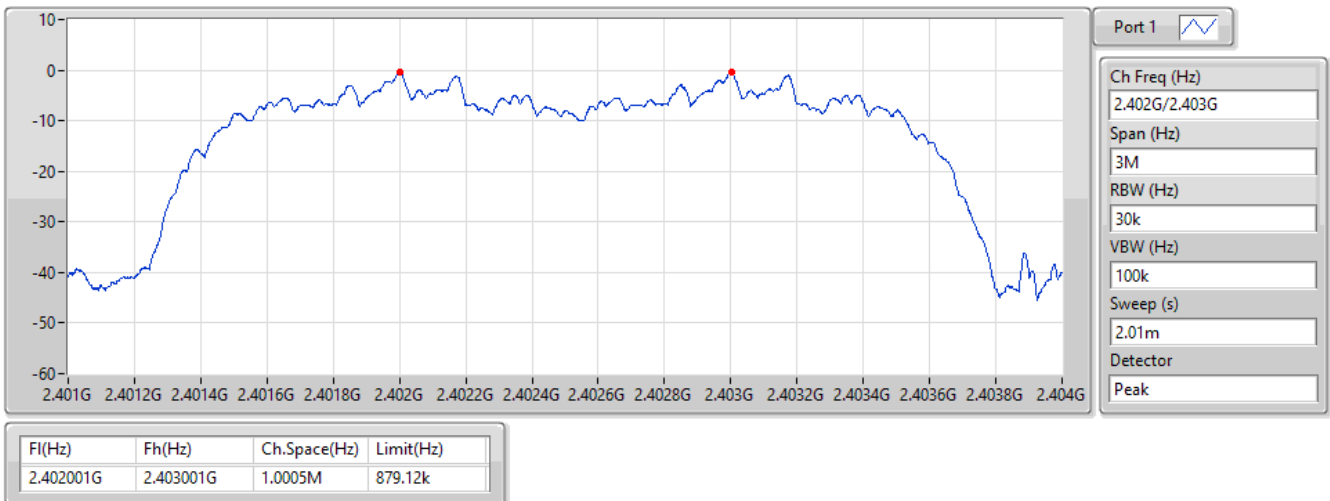
2.48G/2.479GHz



2.4-2.4835GHz_BT-EDR(3Mbps)

Channel Separation-FS

2.402G/2.403GHz



2.4-2.4835GHz_BT-EDR(3Mbps)

Channel Separation-FS

2.441G/2.442GHz





2.4-2.4835GHz_BT-EDR(3Mbps)

Channel Separation-FS

2.48G/2.479GHz



Summary

2.4-2.4835GHz	-
BT-BR-AFH(1Mbps)	288.65m_DH5-AFH
BT-BR-Non AFH(1Mbps)	310.17928m_DH5
BT-EDR-AFH(2Mbps)	312.066m_DH5-AFH
BT-EDR-Non AFH(2Mbps)	347.39144m_DH5
BT-EDR-AFH(3Mbps)	312.282m_DH5-AFH
BT-EDR-Non AFH(3Mbps)	347.15128m_DH5

Result/ Non AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in a 5 s
BT-BR-Non AFH(1Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.31018	0.4	2.88700	17
BT-EDR-Non AFH(2Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.34739	0.4	2.89300	19
BT-EDR-Non AFH(3Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	31.6	0.34715	0.4	2.89100	19

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

Note 2: DH5 was the worst mode.

Result/ AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (ms)	Number of transmission in a 2 s
BT-BR-AFH(1Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.28865	0.4	2.88650	25
BT-EDR-AFH(2Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.31207	0.4	2.88950	27
BT-EDR-AFH(3Mbps)	-	-	-	-	-	-
2402MHz_DH5	PASS	8	0.31228	0.4	2.89150	27

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

Note 2: DH5 was the worst mode.

2.4-2.4835GHz_BT-BR-AFH(1Mbps)

Dwell-FS

2402MHz

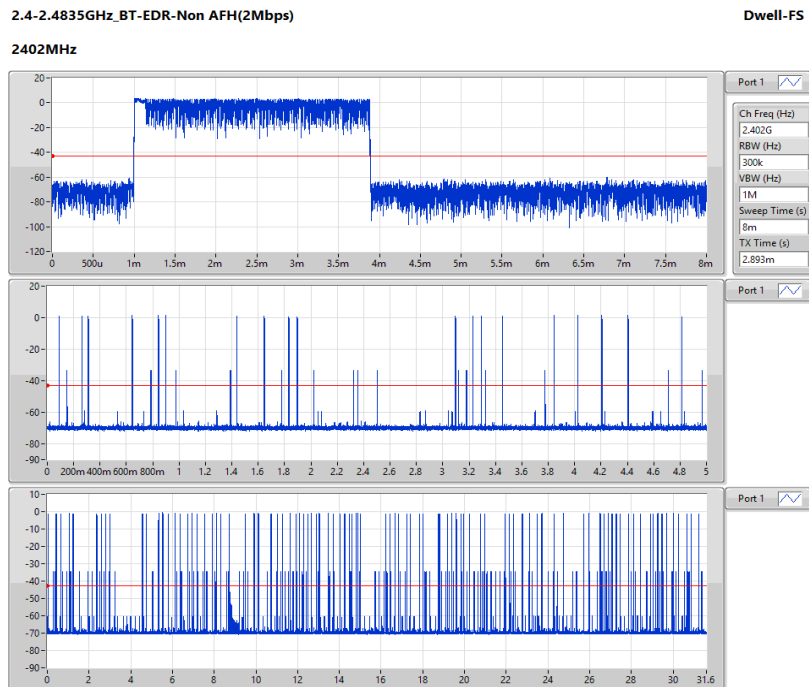
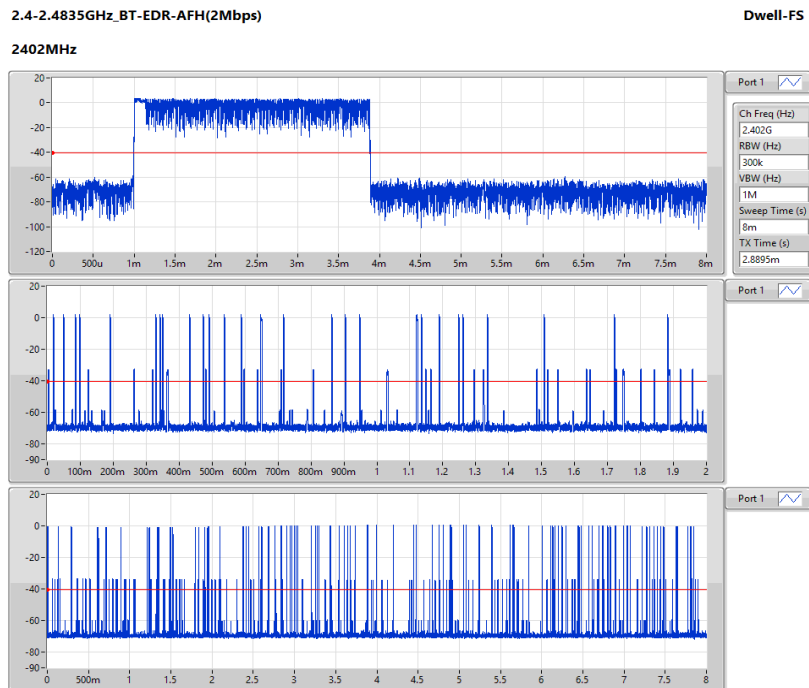


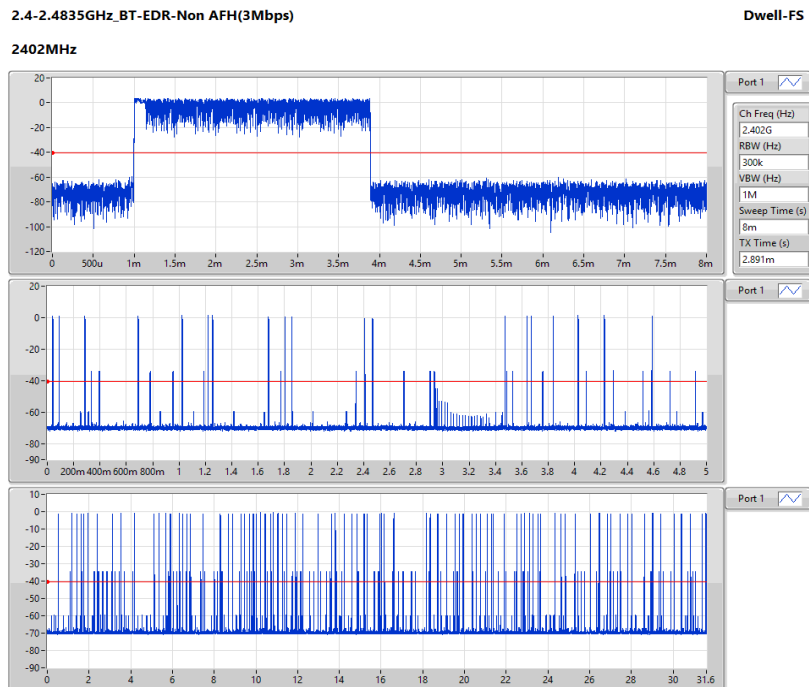
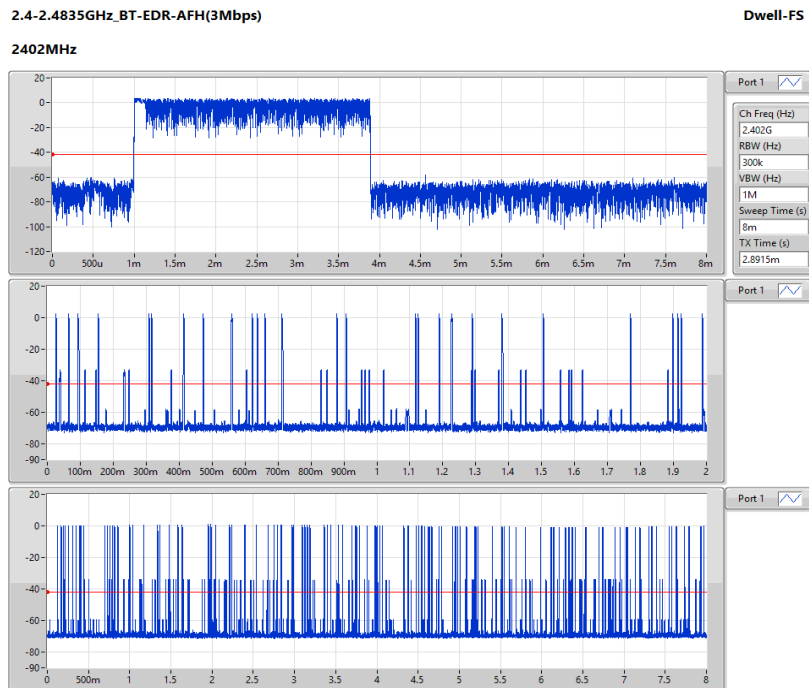
2.4-2.4835GHz_BT-BR-Non AFH(1Mbps)

Dwell-FS

2402MHz





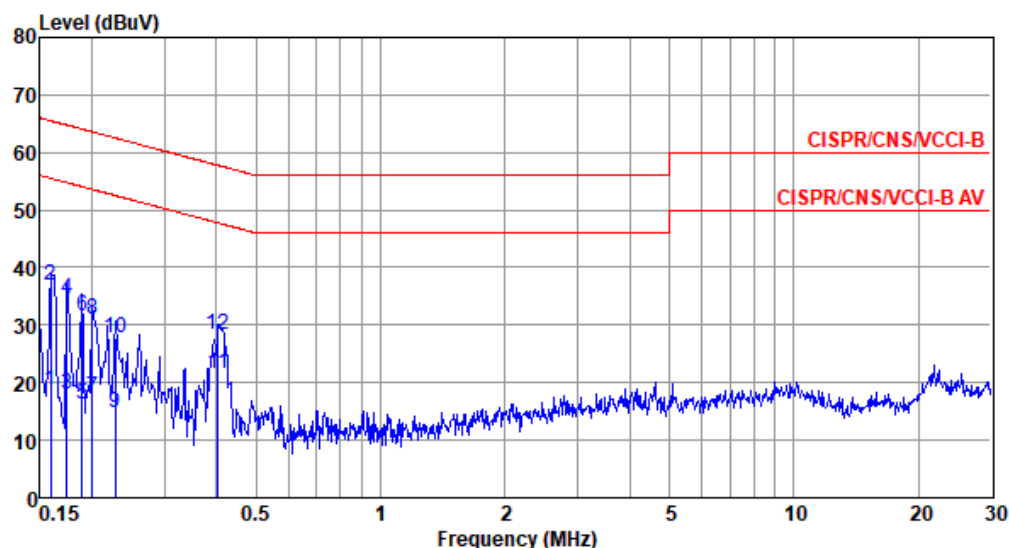


Modulation	GFSK	Test Freq. (MHz)	2441
Power Phase	Line		

Test by : Sean Yu

Temperature: 23°C

Humidity: 65%



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.159	18.67	55.52	-36.85	8.73	9.65	0.08	0.21	Average
2	0.159	36.98	65.52	-28.54	27.04	9.65	0.08	0.21	QP
3	0.174	17.86	54.77	-36.91	7.90	9.65	0.08	0.23	Average
4	0.174	34.61	64.77	-30.16	24.65	9.65	0.08	0.23	QP
5	0.189	16.36	54.06	-37.70	6.39	9.65	0.08	0.24	Average
6	0.189	31.46	64.06	-32.60	21.49	9.65	0.08	0.24	QP
7	0.201	17.51	53.58	-36.07	7.53	9.65	0.08	0.25	Average
8	0.201	30.89	63.58	-32.69	20.91	9.65	0.08	0.25	QP
9	0.228	14.81	52.52	-37.71	4.82	9.65	0.08	0.26	Average
10	0.228	27.74	62.52	-34.78	17.75	9.65	0.08	0.26	QP
11*	0.404	21.59	47.77	-26.18	11.53	9.64	0.09	0.33	Average
12	0.404	28.36	57.77	-29.41	18.30	9.64	0.09	0.33	QP

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

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

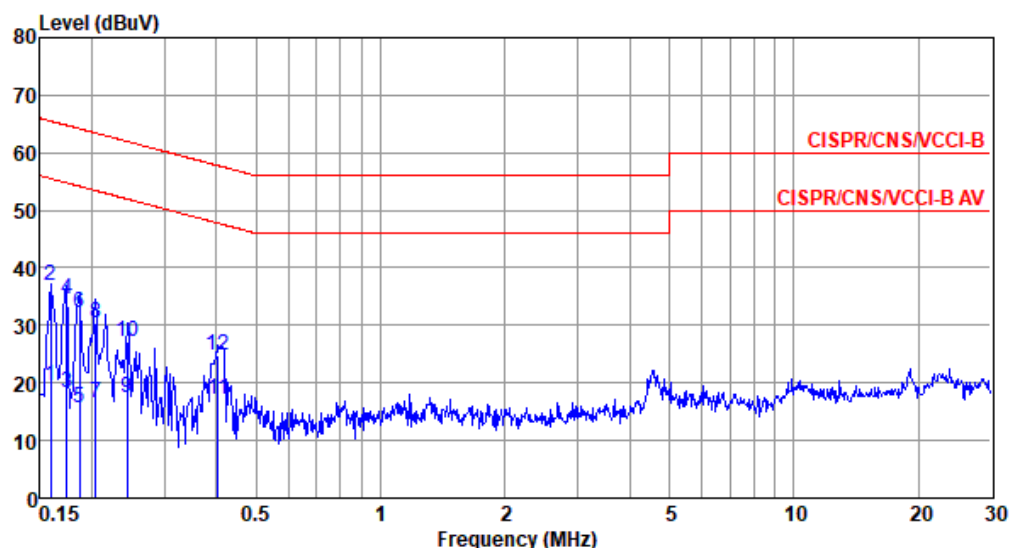


Modulation	GFSK	Test Freq. (MHz)	2441
Power Phase	Neutral		

Test by : Sean Yu

Temperature: 23°C

Humidity: 65%



	Freq MHz	Level dBUV	Limit Line dBUV	Over Limit dB	Read Level dBUV	Factor dB	Cable loss dB	Aux dB	Remark
1	0.159	19.45	55.52	-36.07	9.58	9.66	0.08	0.13	Average
2*	0.159	37.00	65.52	-28.52	27.13	9.66	0.08	0.13	QP
3	0.174	18.35	54.77	-36.42	8.47	9.65	0.08	0.15	Average
4	0.174	34.39	64.77	-30.38	24.51	9.65	0.08	0.15	QP
5	0.186	15.50	54.20	-38.70	5.61	9.65	0.08	0.16	Average
6	0.186	32.13	64.20	-32.07	22.24	9.65	0.08	0.16	QP
7	0.204	16.66	53.45	-36.79	6.76	9.65	0.08	0.17	Average
8	0.204	30.30	63.45	-33.15	20.40	9.65	0.08	0.17	QP
9	0.243	17.42	52.00	-34.58	7.50	9.65	0.08	0.19	Average
10	0.243	27.10	62.00	-34.90	17.18	9.65	0.08	0.19	QP
11	0.404	17.21	47.77	-30.56	7.23	9.64	0.09	0.25	Average
12	0.404	24.91	57.77	-32.86	14.93	9.64	0.09	0.25	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).

Configuration 2: Laird part number: 453-00193



Unwanted Conducted Emissions into Restricted Frequency Bands(30M~1GHz)

Appendix A.1

Summary

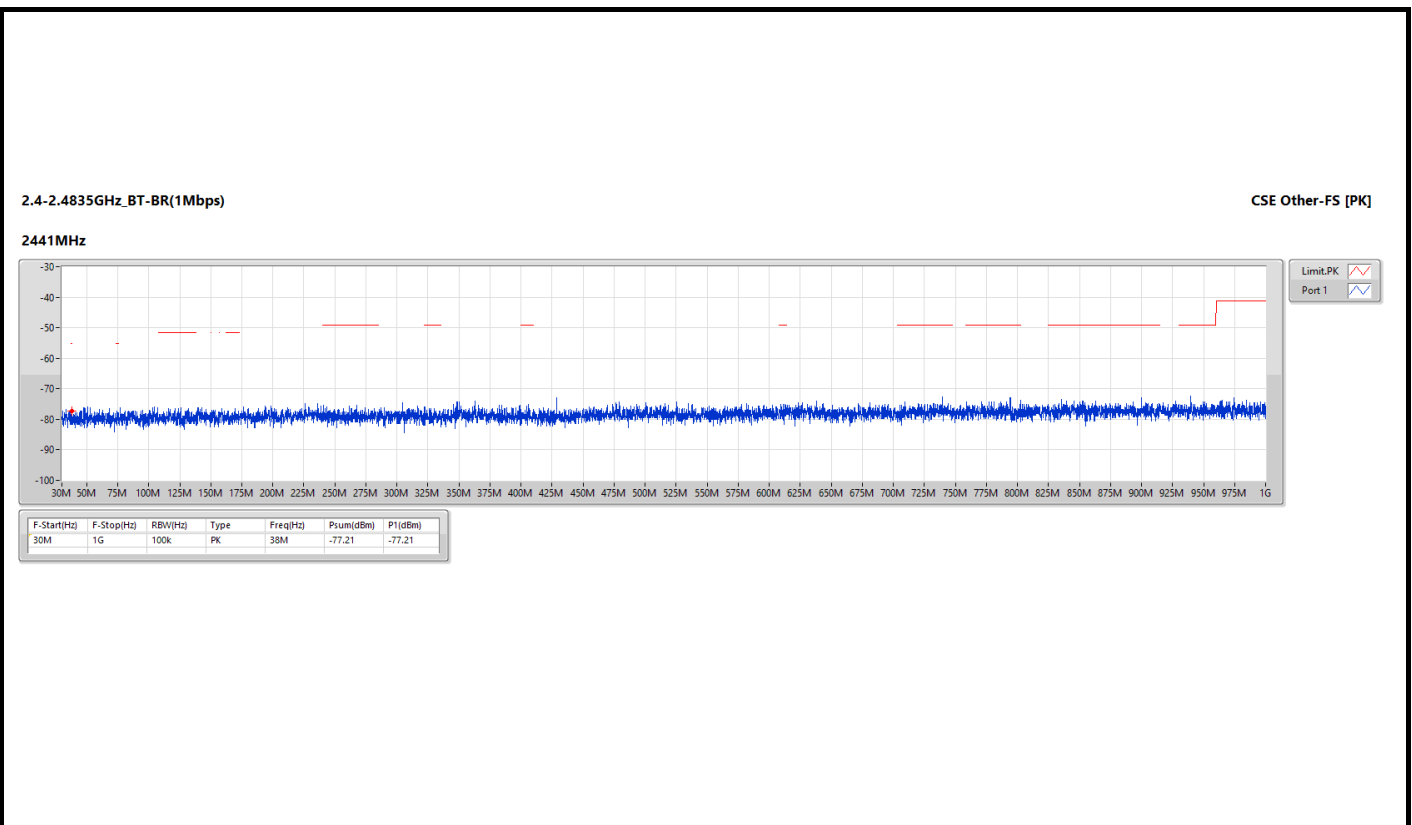
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	30M	1G	PK	38M	2.60	-77.21	4.7	-69.91	-55.20	-14.71

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-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2441MHz	Pass	30M	1G	PK	38M	2.60	-77.21	4.7	-69.91	-55.20	-14.71

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





Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

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-BR(1Mbps)	Pass	2.4835G	2.5G	AV	2.48352G	2.60	-63.53	-60.93	-41.20	-19.73

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

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2480MHz	Pass	1G	2.31G	AV	2.20012G	2.60	-71.60	-69.00	-41.20	-27.80
2480MHz	Pass	2.31G	2.39G	AV	2.35748G	2.60	-71.04	-68.44	-41.20	-27.24
2480MHz	Pass	2.4835G	2.5G	AV	2.48352G	2.60	-63.53	-60.93	-41.20	-19.73
2480MHz	Pass	2.5G	3.1G	AV	2.89345G	2.60	-69.08	-66.48	-41.20	-25.28
2480MHz	Pass	1G	2.31G	PK	1.94517G	2.60	-60.82	-58.22	-21.20	-37.02
2480MHz	Pass	2.31G	2.39G	PK	2.38816G	2.60	-60.86	-58.26	-21.20	-37.06
2480MHz	Pass	2.4835G	2.5G	PK	2.4839G	2.60	-52.34	-49.74	-21.20	-28.54
2480MHz	Pass	2.5G	3.1G	PK	2.8768G	2.60	-60.43	-57.83	-21.20	-36.63

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



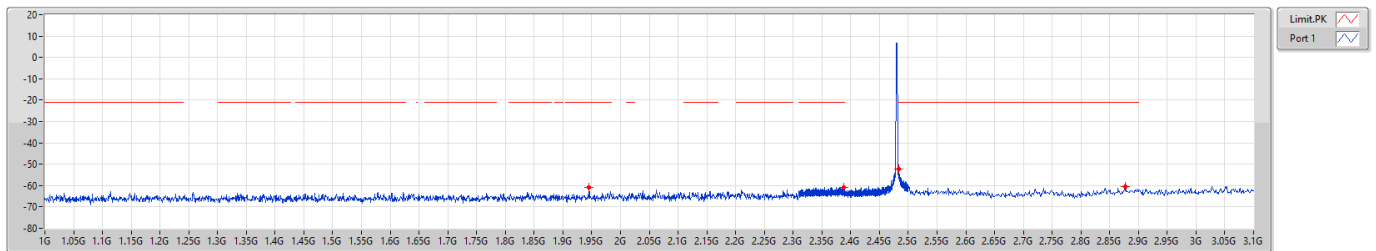
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [PK]

2480MHz

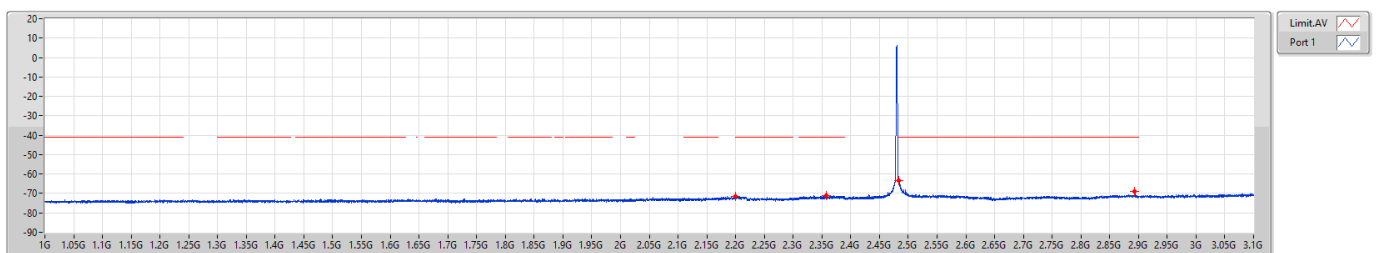


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	1.94517G	-60.82	-60.82
2.31G	2.39G	1M	PK	2.38816G	-60.86	-60.86
2.4835G	2.5G	1M	PK	2.4839G	-52.34	-52.34
2.5G	3.1G	1M	PK	2.8768G	-60.43	-60.43

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [AV]

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.20012G	-71.60	-71.60
2.31G	2.39G	1M	AV	2.35748G	-71.04	-71.04
2.4835G	2.5G	1M	AV	2.48352G	-63.53	-63.53
2.5G	3.1G	1M	AV	2.89345G	-69.08	-69.08



Unwanted Conducted Emissions into Restricted Frequency Bands(3.1G~25GHz)

Appendix A.3

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-BR(1Mbps)	Pass	8G	25G	PK	18.36097G	2.60	-54.56	-51.96	-21.20	-30.76

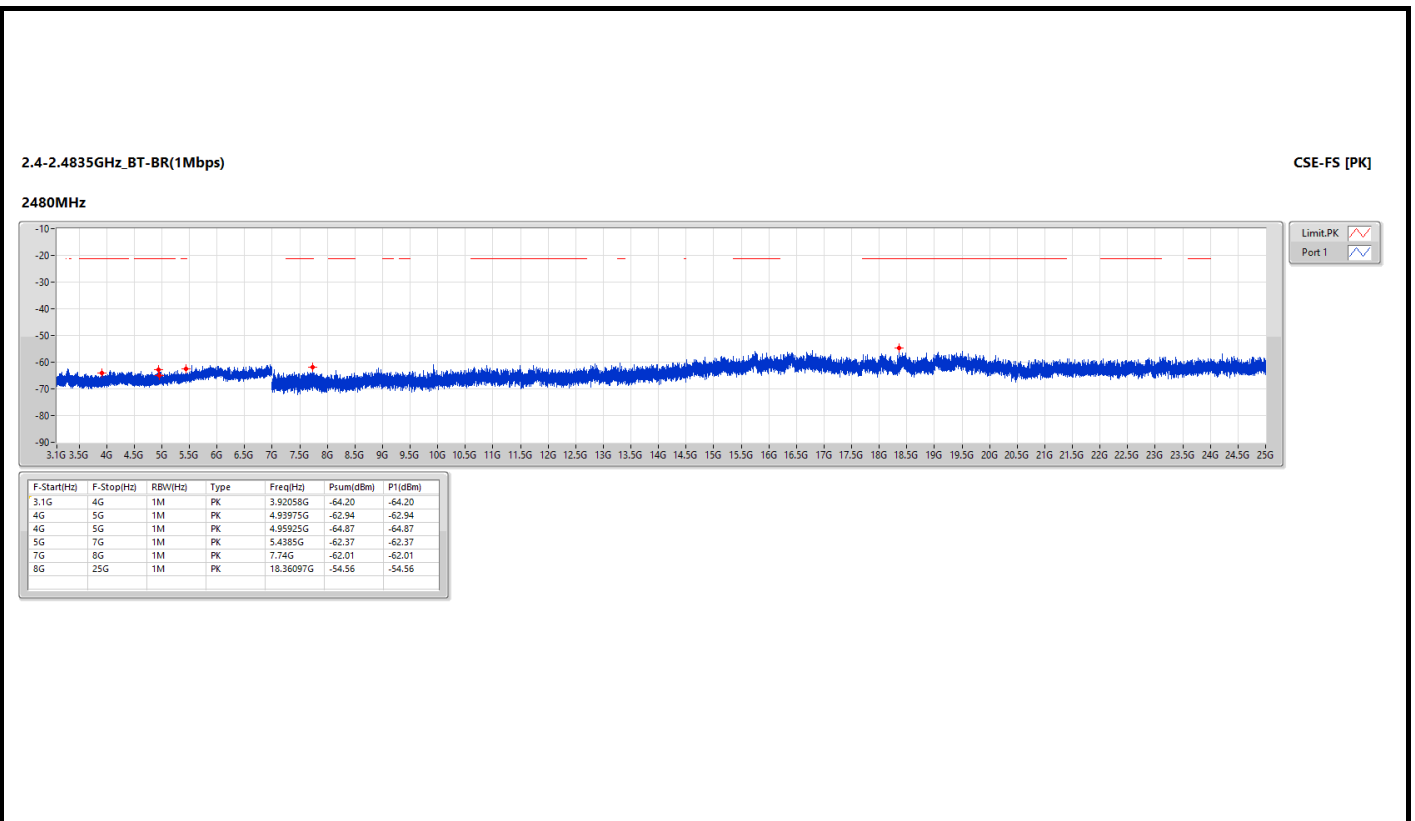
DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2480MHz	Pass	3.1G	4G	PK	3.92058G	2.60	-64.20	-61.60	-21.20	-40.40
2480MHz	Pass	4G	5G	PK	4.93975G	2.60	-62.94	-60.34	-21.20	-39.14
2480MHz	Pass	4G	5G	PK	4.95925G	2.60	-64.87	-62.27	-21.20	-41.07
2480MHz	Pass	5G	7G	PK	5.4385G	2.60	-62.37	-59.77	-21.20	-38.57
2480MHz	Pass	7G	8G	PK	7.74G	2.60	-62.01	-59.41	-21.20	-38.21
2480MHz	Pass	8G	25G	PK	18.36097G	2.60	-54.56	-51.96	-21.20	-30.76

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

Note: If the PK margin greater than 20 dB, there is no need to get AVG reading.





Summary

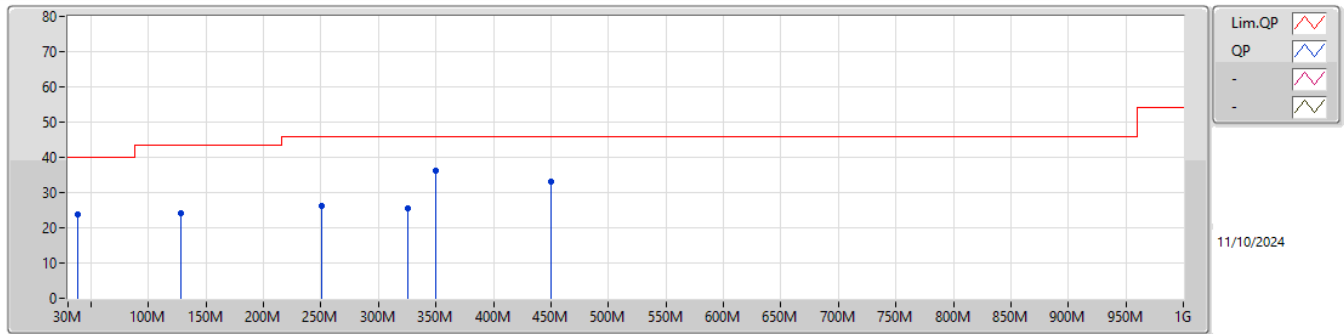
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	450.01M	42.66	46.00	-3.34	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.4

Mode 1



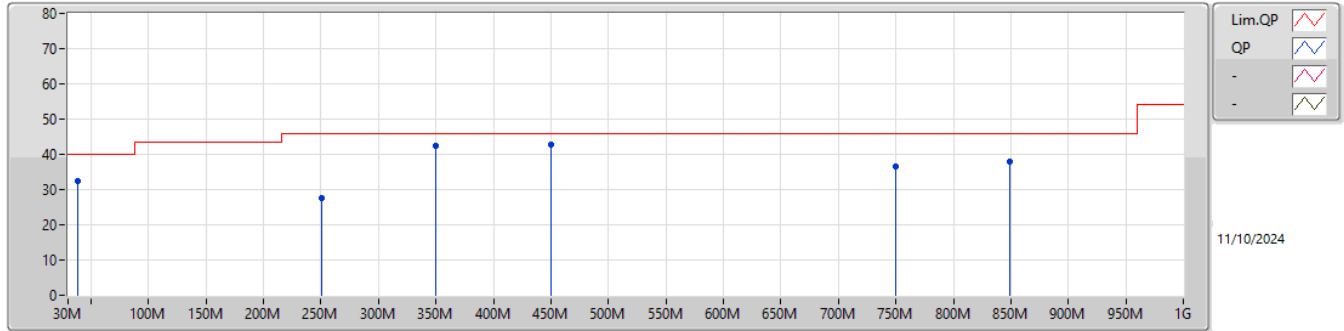
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	38.64M	23.86	40.00	-16.14	-9.17	3	Horizontal	-	-	-	33.03	18.36	0.58	28.11		
PK	128.24M	24.28	43.50	-19.22	-10.30	3	Horizontal	-	-	-	34.58	16.82	1.12	28.24		
PK	250.11M	26.33	46.00	-19.67	-9.78	3	Horizontal	-	-	-	36.11	16.90	1.57	28.25		
PK	325.28M	25.64	46.00	-20.36	-7.19	3	Horizontal	-	-	-	32.83	19.21	1.81	28.21		
PK	350.1M	36.34	46.00	-9.66	-6.88	3	Horizontal	-	-	-	43.22	19.50	1.82	28.20		
PK	450.01M	33.18	46.00	-12.82	-4.11	3	Horizontal	-	-	-	37.29	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.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	38.27M	32.29	40.00	-7.71	-9.19	3	Vertical	-	-	-	41.48	18.33	0.58	28.10		
PK	250.23M	27.44	46.00	-18.56	-9.77	3	Vertical	-	-	-	37.21	16.91	1.57	28.25		
QP	350.1M	42.51	46.00	-3.49	-6.88	3	Vertical	106	1.28	-	49.39	19.50	1.82	28.20		
QP	450.01M	42.66	46.00	-3.34	-4.11	3	Vertical	211	1.00	-	46.77	22.10	1.98	28.19		
PK	750.11M	36.48	46.00	-9.52	1.83	3	Vertical	-	-	-	34.65	27.00	2.75	27.92		
PK	849.47M	38.02	46.00	-7.98	3.12	3	Vertical	-	-	-	34.90	27.99	2.89	27.76		



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

Appendix A.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-BR(1Mbps)	Pass	PK	12.01G	55.67	74.00	-18.33	3	Horizontal	186	1.00	-

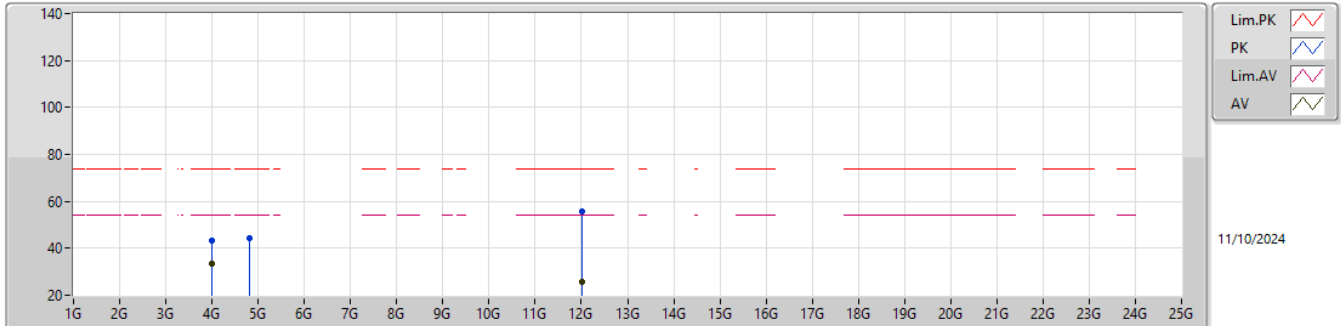


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-BR(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)	CL (dB)	PA (dB)			
AV	4G	33.20	54.00	-20.80	35.47	3	Horizontal	188	1.69	-	29.70	6.02	37.99			
PK	4G	43.37	74.00	-30.63	45.64	3	Horizontal	188	1.69	-	29.70	6.02	37.99			
AV	4.804G	14.46	54.00	-39.54	15.01	3	Horizontal	-	-	-	31.29	6.68	38.52			
PK	4.804G	44.56	74.00	-29.44	45.11	3	Horizontal	203	1.00	-	31.29	6.68	38.52			
AV	12.01G	25.57	54.00	-28.43	19.04	3	Horizontal	-	-	-	39.20	10.23	42.90			
PK	12.01G	55.67	74.00	-18.33	49.14	3	Horizontal	186	1.00	-	39.20	10.23	42.90			

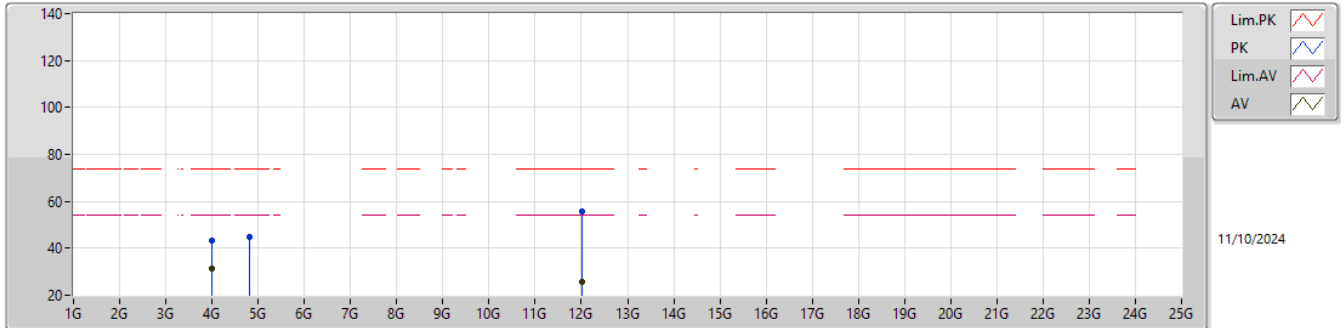


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-BR(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)	CL (dB)	PA (dB)			
AV	4G	31.46	54.00	-22.54	33.73	3	Vertical	188	1.89	-	29.70	6.02	37.99			
PK	4G	43.11	74.00	-30.89	45.38	3	Vertical	188	1.89	-	29.70	6.02	37.99			
AV	4.804G	14.73	54.00	-39.27	15.28	3	Vertical	-	-	-	31.29	6.68	38.52			
PK	4.804G	44.83	74.00	-29.17	45.38	3	Vertical	208	1.00	-	31.29	6.68	38.52			
AV	12.01G	25.52	54.00	-28.48	18.99	3	Vertical	-	-	-	39.20	10.23	42.90			
PK	12.01G	55.62	74.00	-18.38	49.09	3	Vertical	187	1.00	-	39.20	10.23	42.90			

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.93	0.00493
BT-EDR(2Mbps)	5.29	0.00338
BT-EDR(3Mbps)	5.59	0.00362

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.62	21.00	9.22	27.00
2441MHz	Pass	2.60	6.93	21.00	9.53	27.00
2480MHz	Pass	2.60	6.91	21.00	9.51	27.00
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.08	21.00	7.68	27.00
2441MHz	Pass	2.60	5.29	21.00	7.89	27.00
2480MHz	Pass	2.60	4.90	21.00	7.50	27.00
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.49	21.00	8.09	27.00
2441MHz	Pass	2.60	5.59	21.00	8.19	27.00
2480MHz	Pass	2.60	5.28	21.00	7.88	27.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.63	0.00460
BT-EDR(2Mbps)	2.56	0.00180
BT-EDR(3Mbps)	2.58	0.00181

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.42	-	9.02	-
2441MHz	Pass	2.60	6.63	-	9.23	-
2480MHz	Pass	2.60	6.61	-	9.21	-
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.36	-	4.96	-
2441MHz	Pass	2.60	2.56	-	5.16	-
2480MHz	Pass	2.60	2.26	-	4.86	-
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.37	-	4.97	-
2441MHz	Pass	2.60	2.58	-	5.18	-
2480MHz	Pass	2.60	2.29	-	4.89	-

Configuration 3: Laird part number: 453-00213



Unwanted Conducted Emissions into Restricted Frequency Bands(30M~1GHz)

Appendix A.1

Summary

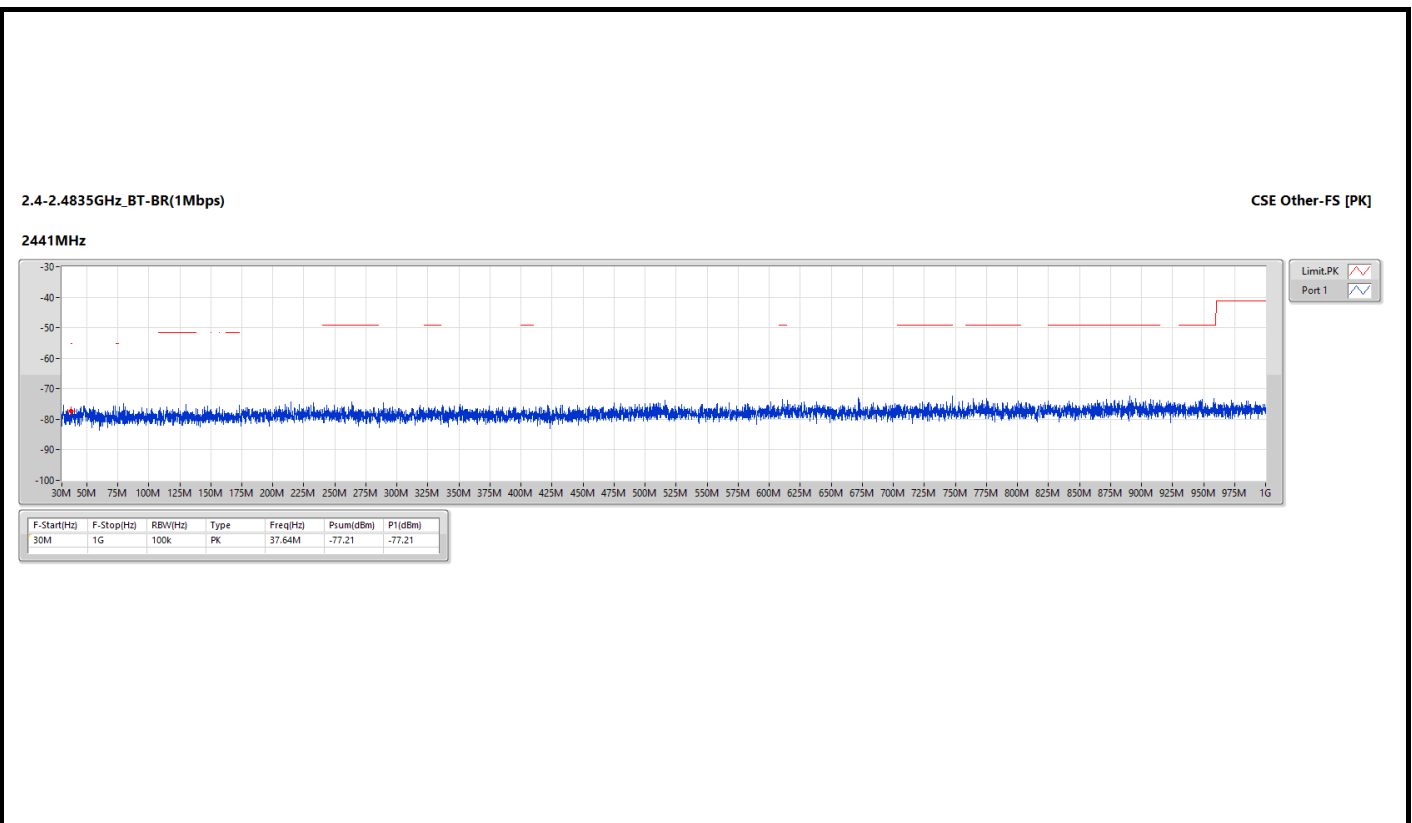
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	30M	1G	PK	37.64M	2.60	-77.21	4.7	-69.91	-55.20	-14.71

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-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2441MHz	Pass	30M	1G	PK	37.64M	2.60	-77.21	4.7	-69.91	-55.20	-14.71

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





Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

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-BR(1Mbps)	Pass	2.4835G	2.5G	AV	2.48362G	2.60	-63.32	-60.72	-41.20	-19.52

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

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2480MHz	Pass	1G	2.31G	AV	2.20749G	2.60	-71.54	-68.94	-41.20	-27.74
2480MHz	Pass	2.31G	2.39G	AV	2.38984G	2.60	-70.93	-68.33	-41.20	-27.13
2480MHz	Pass	2.4835G	2.5G	AV	2.48362G	2.60	-63.32	-60.72	-41.20	-19.52
2480MHz	Pass	2.5G	3.1G	AV	2.89345G	2.60	-69.99	-67.39	-41.20	-26.19
2480MHz	Pass	1G	2.31G	PK	2.21699G	2.60	-61.83	-59.23	-21.20	-38.03
2480MHz	Pass	2.31G	2.39G	PK	2.38992G	2.60	-60.09	-57.49	-21.20	-36.29
2480MHz	Pass	2.4835G	2.5G	PK	2.48352G	2.60	-52.61	-50.01	-21.20	-28.81
2480MHz	Pass	2.5G	3.1G	PK	2.506G	2.60	-60.74	-58.14	-21.20	-36.94

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



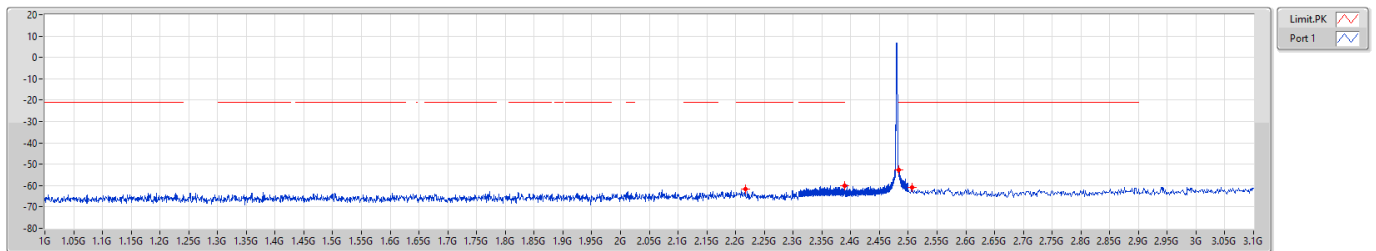
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [PK]

2480MHz

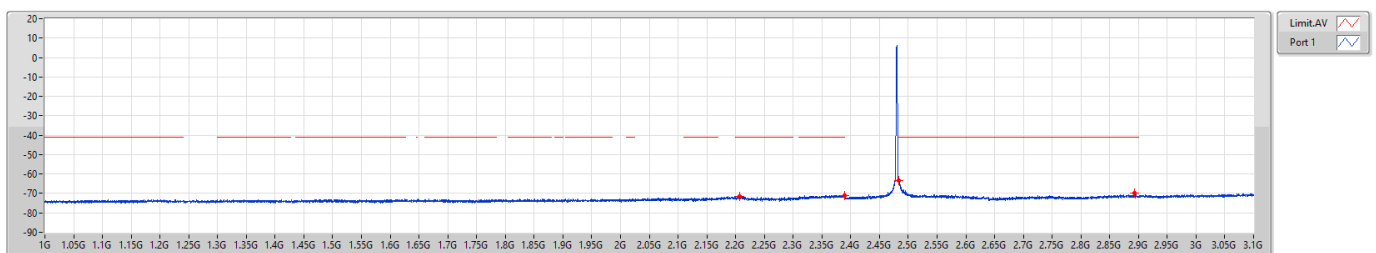


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.21699G	-61.83	-61.83
2.31G	2.39G	1M	PK	2.38992G	-60.09	-60.09
2.4835G	2.5G	1M	PK	2.48352G	-52.61	-52.61
2.5G	3.1G	1M	PK	2.506G	-60.74	-60.74

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [AV]

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.20749G	-71.54	-71.54
2.31G	2.39G	1M	AV	2.38984G	-70.93	-70.93
2.4835G	2.5G	1M	AV	2.48362G	-63.32	-63.32
2.5G	3.1G	1M	AV	2.89345G	-69.99	-69.99



Unwanted Conducted Emissions into Restricted Frequency Bands(3.1G~25GHz)

Appendix A.3

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-BR(1Mbps)	Pass	8G	25G	PK	19.40753G	2.60	-55.69	-53.09	-21.20	-31.89

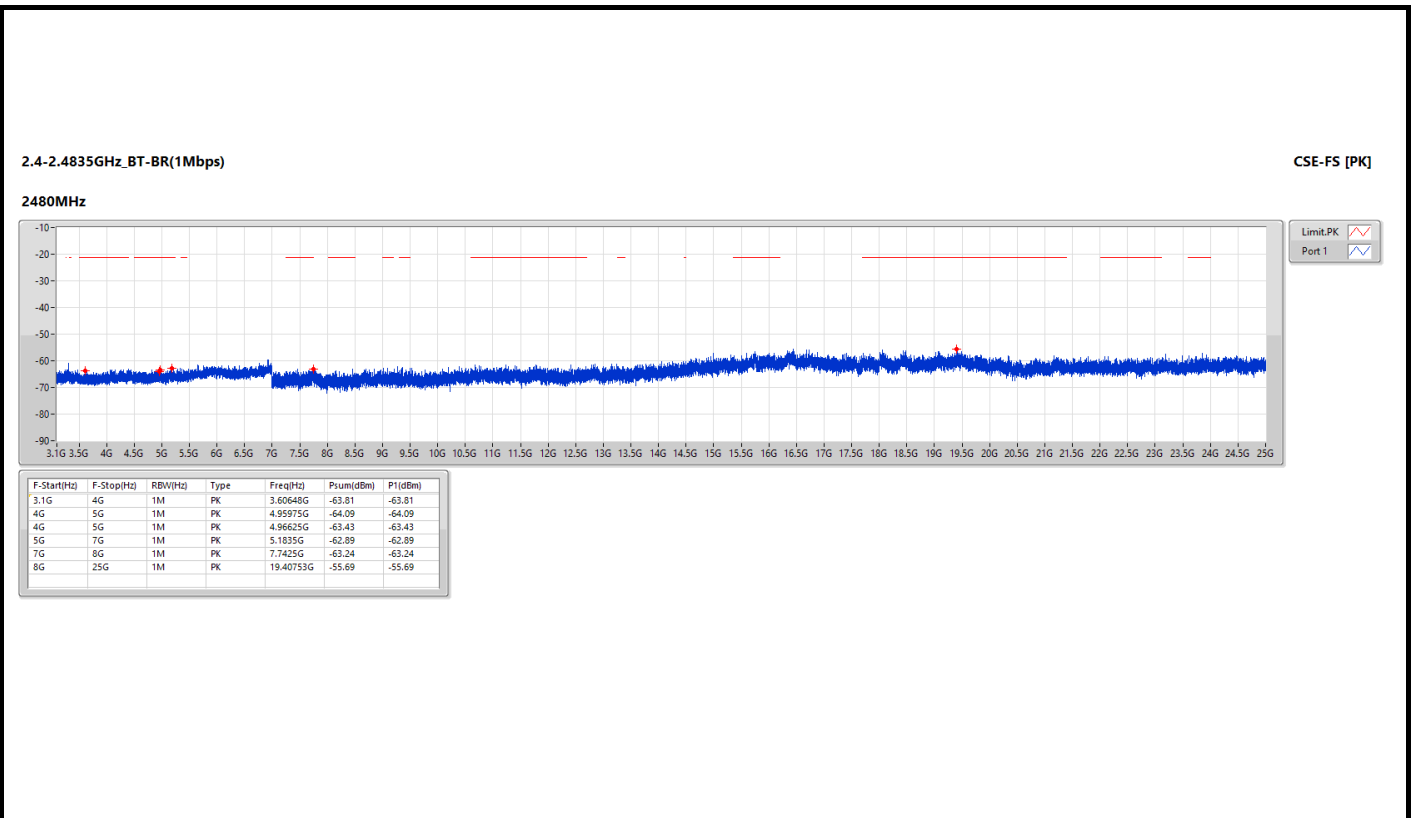
DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2480MHz	Pass	3.1G	4G	PK	3.60648G	2.60	-63.81	-61.21	-21.20	-40.01
2480MHz	Pass	4G	5G	PK	4.95975G	2.60	-64.09	-61.49	-21.20	-40.29
2480MHz	Pass	4G	5G	PK	4.96625G	2.60	-63.43	-60.83	-21.20	-39.63
2480MHz	Pass	5G	7G	PK	5.1835G	2.60	-62.89	-60.29	-21.20	-39.09
2480MHz	Pass	7G	8G	PK	7.7425G	2.60	-63.24	-60.64	-21.20	-39.44
2480MHz	Pass	8G	25G	PK	19.40753G	2.60	-55.69	-53.09	-21.20	-31.89

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

Note: If the PK margin greater than 20 dB, there is no need to get AVG reading.





Summary

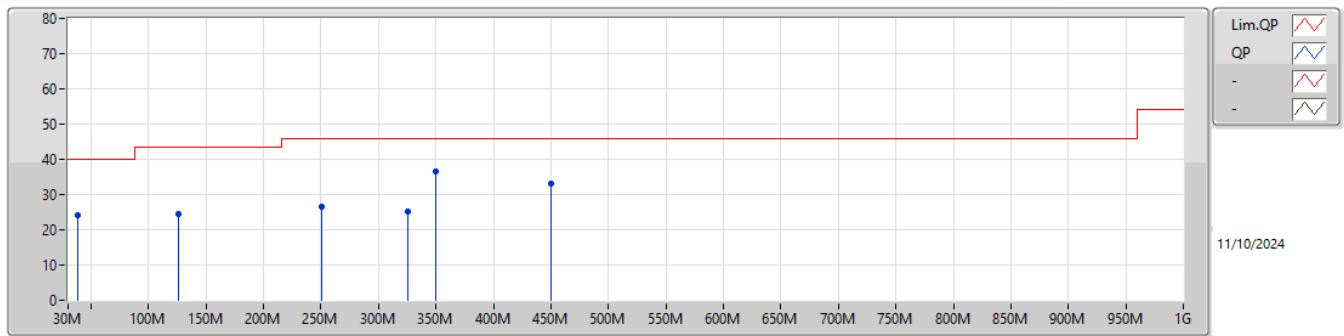
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	450.01M	42.57	46.00	-3.43	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.4

Mode 1



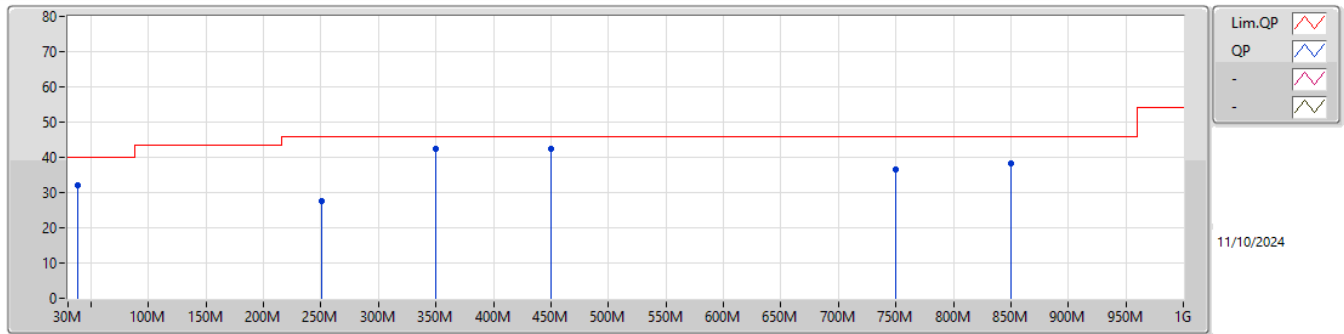
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	38.66M	24.13	40.00	-15.87	-9.16	3	Horizontal	-	-	-	33.29	18.37	0.58	28.11		
PK	126.33M	24.51	43.50	-18.99	-10.39	3	Horizontal	-	-	-	34.90	16.73	1.12	28.24		
PK	250.22M	26.48	46.00	-19.52	-9.77	3	Horizontal	-	-	-	36.25	16.91	1.57	28.25		
PK	325.12M	25.26	46.00	-20.74	-7.20	3	Horizontal	-	-	-	32.46	19.20	1.81	28.21		
PK	350.11M	36.48	46.00	-9.52	-6.88	3	Horizontal	-	-	-	43.36	19.50	1.82	28.20		
PK	450.01M	33.12	46.00	-12.88	-4.11	3	Horizontal	-	-	-	37.23	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.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	38.73M	32.16	40.00	-7.84	-9.16	3	Vertical	-	-	-	41.32	18.37	0.58	28.11		
PK	250.19M	27.44	46.00	-18.56	-9.77	3	Vertical	-	-	-	37.21	16.91	1.57	28.25		
QP	350.1M	42.38	46.00	-3.62	-6.88	3	Vertical	106	1.32	-	49.26	19.50	1.82	28.20		
QP	450.01M	42.57	46.00	-3.43	-4.11	3	Vertical	218	1.00	-	46.68	22.10	1.98	28.19		
PK	749.88M	36.48	46.00	-9.52	1.82	3	Vertical	-	-	-	34.66	27.00	2.75	27.93		
PK	849.83M	38.26	46.00	-7.74	3.13	3	Vertical	-	-	-	35.13	28.00	2.89	27.76		



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

Appendix A.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-BR(1Mbps)	Pass	PK	12.01G	55.75	74.00	-18.25	3	Horizontal	186	1.00	-

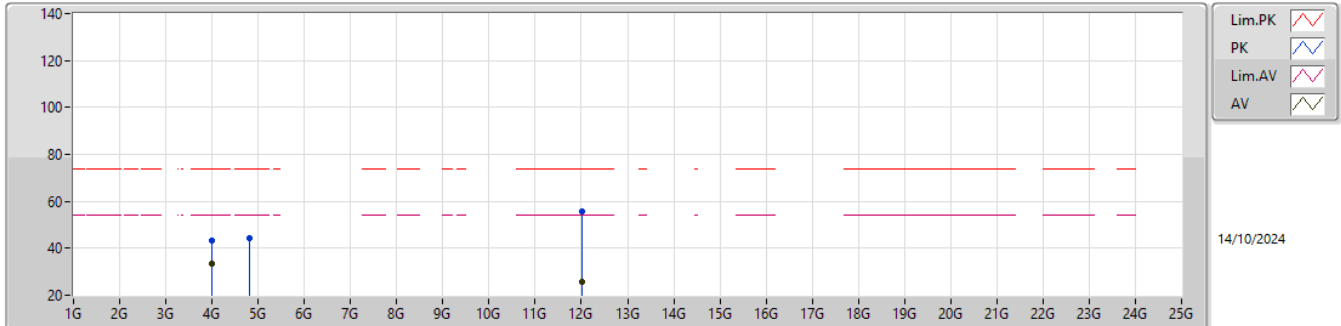


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-BR(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)	CL (dB)	PA (dB)				
AV	4G	33.29	54.00	-20.71	35.56	3	Horizontal	188	1.69	-	29.70	6.02	37.99				
PK	4G	43.42	74.00	-30.58	45.69	3	Horizontal	188	1.69	-	29.70	6.02	37.99				
AV	4.804G	14.38	54.00	-39.62	-	3	Horizontal	-	-	-	-	-	-				
PK	4.804G	44.48	74.00	-29.52	45.03	3	Horizontal	203	1.00	-	31.29	6.68	38.52				
AV	12.01G	25.65	54.00	-28.35	-	3	Horizontal	-	-	-	-	-	-				
PK	12.01G	55.75	74.00	-18.25	49.22	3	Horizontal	186	1.00	-	39.20	10.23	42.90				

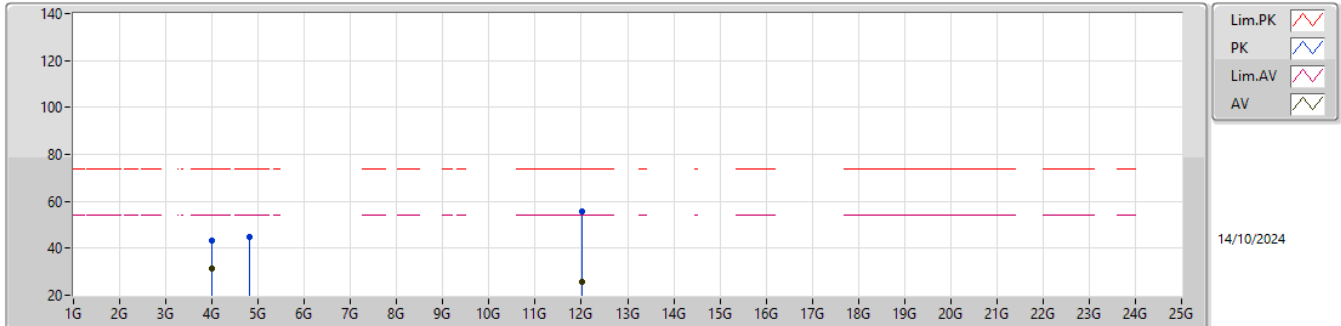


Unwanted Emissions into Restricted Frequency Bands Above 1GHz

Appendix A.5

2.4-2.4835GHz_BT-BR(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)	CL (dB)	PA (dB)			
AV	4G	31.29	54.00	-22.71	33.56	3	Vertical	183	1.85	-	29.70	6.02	37.99			
PK	4G	43.08	74.00	-30.92	45.35	3	Vertical	183	1.85	-	29.70	6.02	37.99			
AV	4.804G	14.66	54.00	-39.34	-	3	Vertical	-	-	-	-	-	-			
PK	4.804G	44.76	74.00	-29.24	45.31	3	Vertical	216	1.00	-	31.29	6.68	38.52			
AV	12.01G	25.58	54.00	-28.42	-	3	Vertical	-	-	-	-	-	-			
PK	12.01G	55.68	74.00	-18.32	49.15	3	Vertical	188	1.00	-	39.20	10.23	42.90			



Conducted Output Power (Average)

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.75	0.00473
BT-EDR(2Mbps)	2.65	0.00184
BT-EDR(3Mbps)	2.68	0.00185

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.62	-	9.22	-
2441MHz	Pass	2.60	6.75	-	9.35	-
2480MHz	Pass	2.60	6.71	-	9.31	-
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.46	-	5.06	-
2441MHz	Pass	2.60	2.65	-	5.25	-
2480MHz	Pass	2.60	2.34	-	4.94	-
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.47	-	5.07	-
2441MHz	Pass	2.60	2.68	-	5.28	-
2480MHz	Pass	2.60	2.38	-	4.98	-

Note: Average power is for reference only.

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.02	0.00504
BT-EDR(2Mbps)	5.39	0.00346
BT-EDR(3Mbps)	5.70	0.00372

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.89	21.00	9.49	27.00
2441MHz	Pass	2.60	7.02	21.00	9.62	27.00
2480MHz	Pass	2.60	7.01	21.00	9.61	27.00
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.19	21.00	7.79	27.00
2441MHz	Pass	2.60	5.39	21.00	7.99	27.00
2480MHz	Pass	2.60	5.01	21.00	7.61	27.00
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.59	21.00	8.19	27.00
2441MHz	Pass	2.60	5.70	21.00	8.30	27.00
2480MHz	Pass	2.60	5.39	21.00	7.99	27.00

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

Configuration 4: Laird part number: 453-00214



Unwanted Conducted Emissions into Restricted Frequency Bands(30M~1GHz)

Appendix A.1

Summary

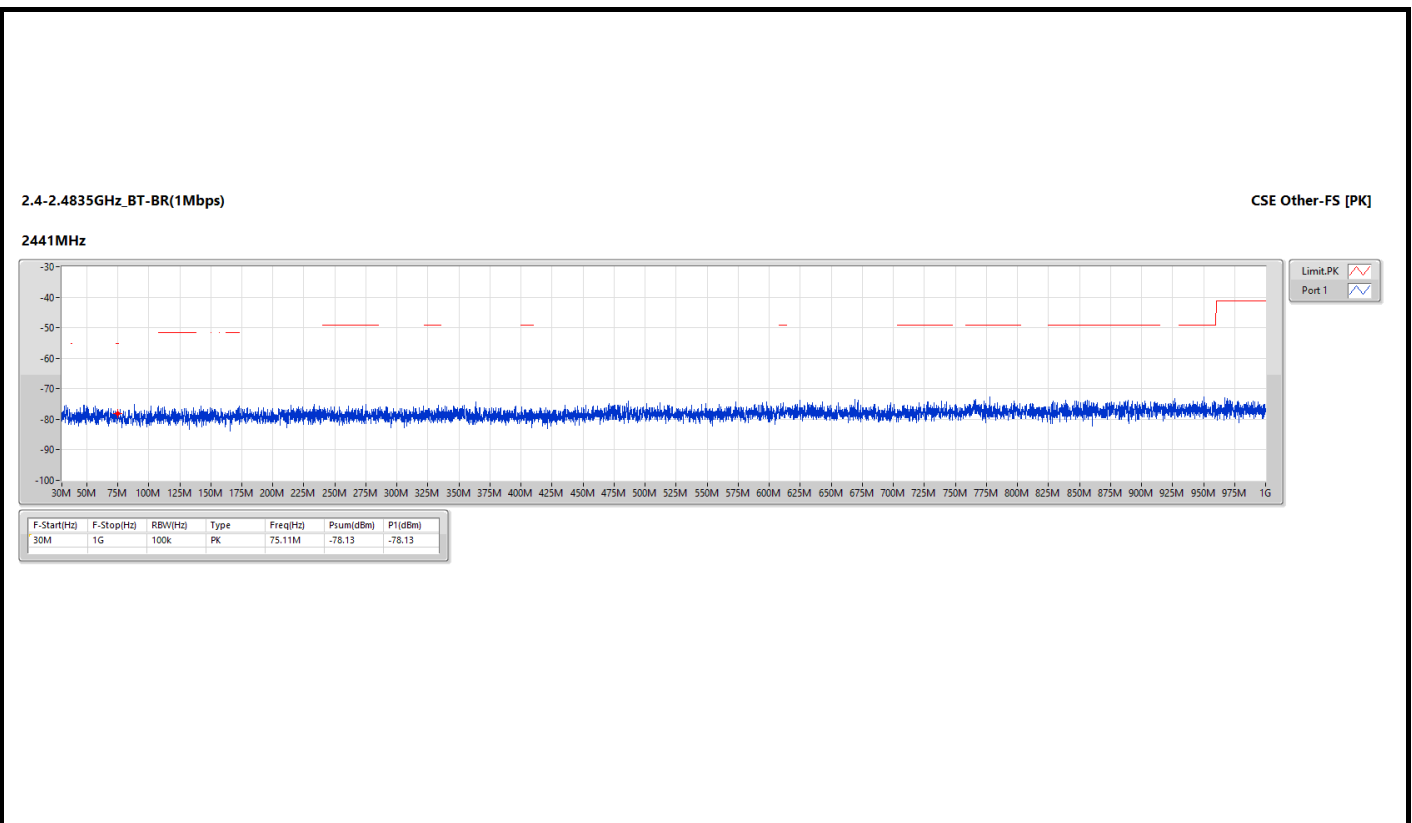
Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	GRF (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-		-	-	-
BT-BR(1Mbps)	Pass	30M	1G	PK	75.11M	2.60	-78.13	4.7	-70.83	-55.20	-15.63

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-BR(1Mbps)	-	-	-	-	-	-	-		-	-	-
2441MHz	Pass	30M	1G	PK	75.11M	2.60	-78.13	4.7	-70.83	-55.20	-15.63

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





Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

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-BR(1Mbps)	Pass	2.4835G	2.5G	AV	2.4835G	2.60	-64.44	-61.84	-41.20	-20.64

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

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2480MHz	Pass	1G	2.31G	AV	2.21028G	2.60	-71.52	-68.92	-41.20	-27.72
2480MHz	Pass	2.31G	2.39G	AV	2.35756G	2.60	-71.04	-68.44	-41.20	-27.24
2480MHz	Pass	2.4835G	2.5G	AV	2.4835G	2.60	-64.44	-61.84	-41.20	-20.64
2480MHz	Pass	2.5G	3.1G	AV	2.89315G	2.60	-70.49	-67.89	-41.20	-26.69
2480MHz	Pass	1G	2.31G	PK	2.16263G	2.60	-62.65	-60.05	-21.20	-38.85
2480MHz	Pass	2.31G	2.39G	PK	2.37428G	2.60	-60.21	-57.61	-21.20	-36.41
2480MHz	Pass	2.4835G	2.5G	PK	2.4835G	2.60	-48.83	-46.23	-21.20	-25.03
2480MHz	Pass	2.5G	3.1G	PK	2.5288G	2.60	-61.05	-58.45	-21.20	-37.25

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



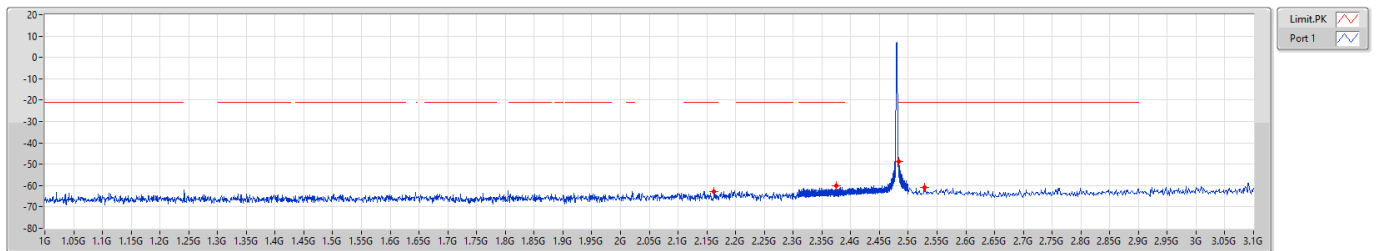
Unwanted Conducted Emissions into Restricted Frequency Bands (1G~3.1GHz)

Appendix A.2

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [PK]

2480MHz

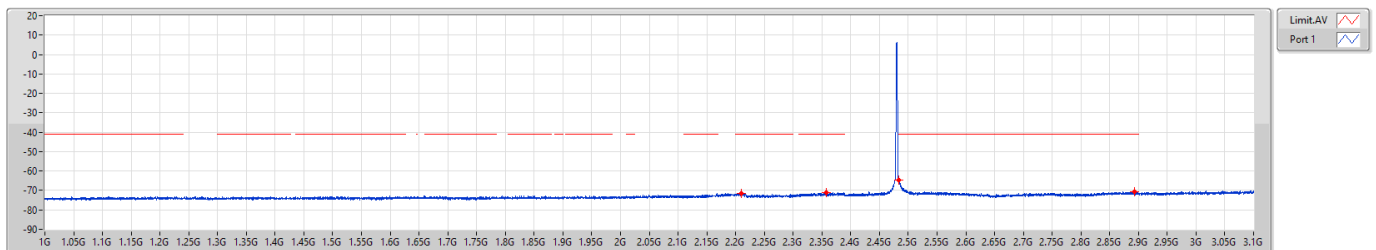


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	PK	2.16263G	-62.65	-62.65
2.31G	2.39G	1M	PK	2.37428G	-60.21	-60.21
2.4835G	2.5G	1M	PK	2.4835G	-48.83	-48.83
2.5G	3.1G	1M	PK	2.5288G	-61.05	-61.05

2.4-2.4835GHz_BT-BR(1Mbps)

CSE Bandedge-FS [AV]

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	Psum(dBm)	P1(dBm)
1G	2.31G	1M	AV	2.21028G	-71.52	-71.52
2.31G	2.39G	1M	AV	2.35756G	-71.04	-71.04
2.4835G	2.5G	1M	AV	2.4835G	-64.44	-64.44
2.5G	3.1G	1M	AV	2.89315G	-70.49	-70.49



Unwanted Conducted Emissions into Restricted Frequency Bands(3.1G~25GHz)

Appendix A.3

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-BR(1Mbps)	Pass	8G	25G	PK	19.40434G	2.60	-54.70	-52.10	-21.20	-30.90

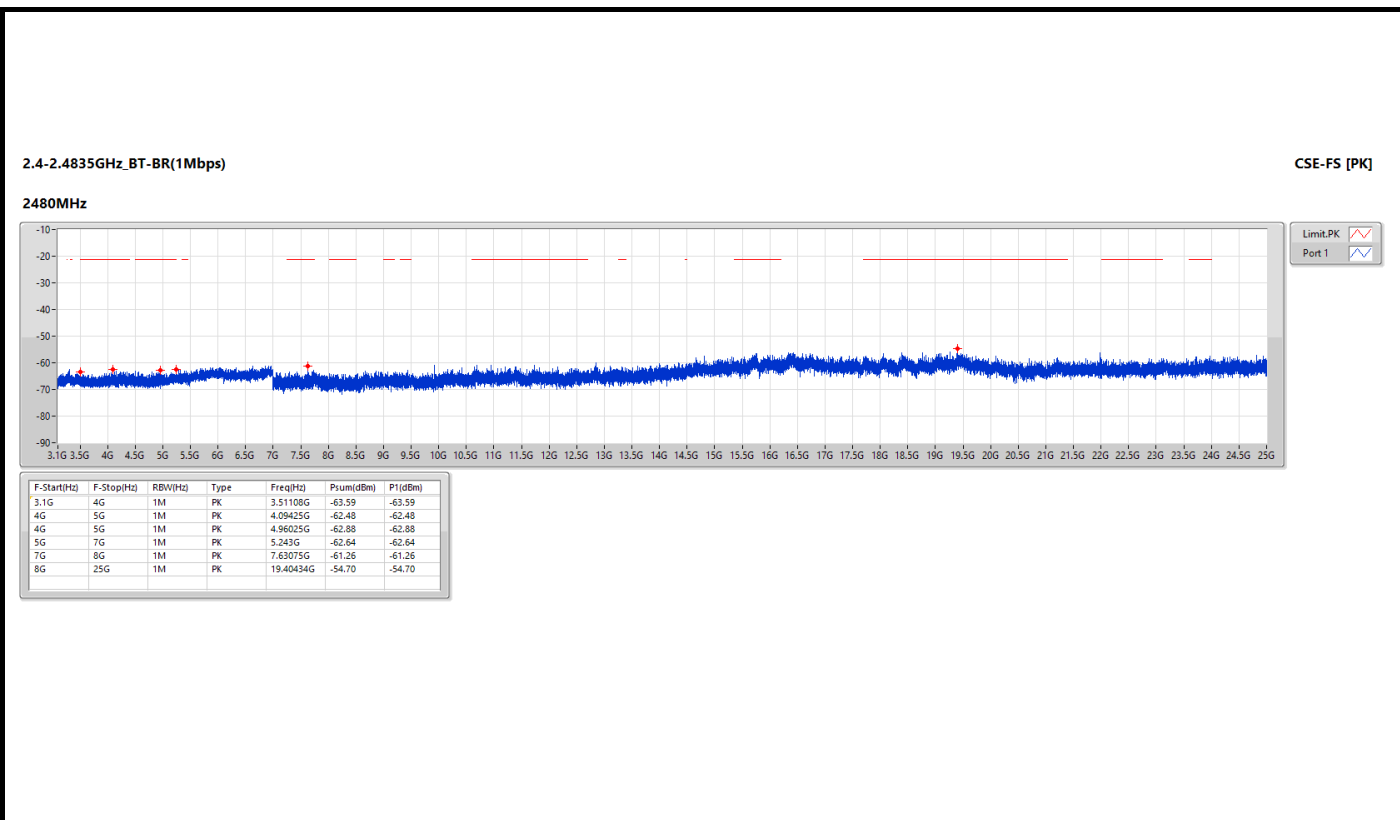
DG = Directional Gain ; PX=Port X; Psum=P1+P2+...PX

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-
2480MHz	Pass	3.1G	4G	PK	3.51108G	2.60	-63.59	-60.99	-21.20	-39.79
2480MHz	Pass	4G	5G	PK	4.09425G	2.60	-62.48	-59.88	-21.20	-38.68
2480MHz	Pass	4G	5G	PK	4.96025G	2.60	-62.88	-60.28	-21.20	-39.08
2480MHz	Pass	5G	7G	PK	5.243G	2.60	-62.64	-60.04	-21.20	-38.84
2480MHz	Pass	7G	8G	PK	7.63075G	2.60	-61.26	-58.66	-21.20	-37.46
2480MHz	Pass	8G	25G	PK	19.40434G	2.60	-54.70	-52.10	-21.20	-30.90

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

Note: If the PK margin greater than 20 dB, there is no need to get AVG reading.





Summary

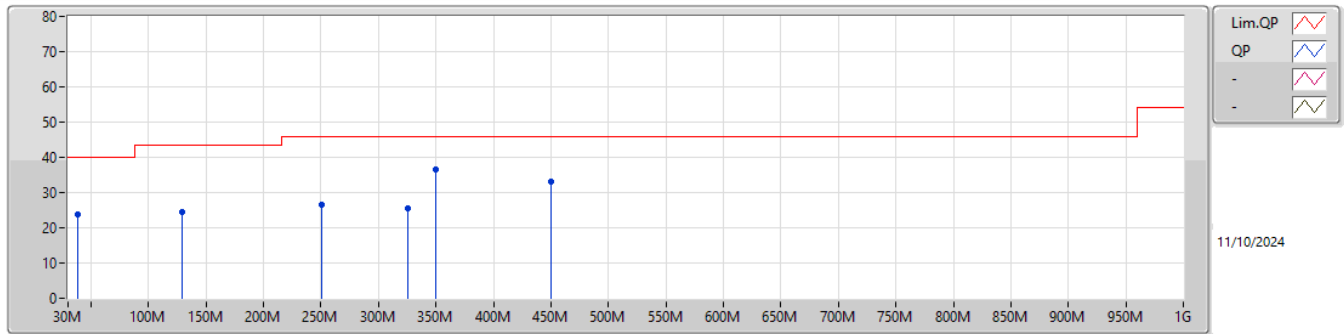
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	350.1M	42.51	46.00	-3.49	Vertical



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.4

Mode 1



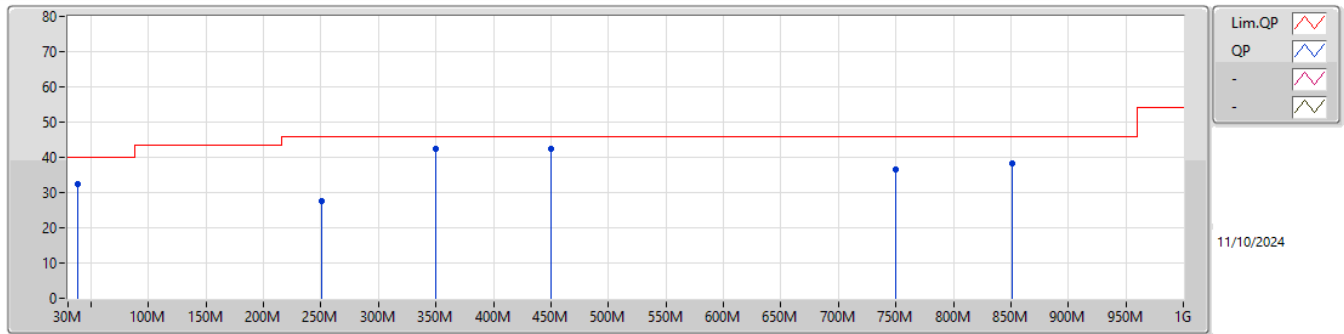
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
PK	38.64M	23.86	40.00	-16.14	-9.17	3	Horizontal	-	-	-	33.03	18.36	0.58	28.11		
PK	129.22M	24.44	43.50	-19.06	-10.17	3	Horizontal	-	-	-	34.61	16.94	1.13	28.24		
PK	250.23M	26.42	46.00	-19.58	-9.77	3	Horizontal	-	-	-	36.19	16.91	1.57	28.25		
PK	325.27M	25.48	46.00	-20.52	-7.19	3	Horizontal	-	-	-	32.67	19.21	1.81	28.21		
PK	350.11M	36.44	46.00	-9.56	-6.88	3	Horizontal	-	-	-	43.32	19.50	1.82	28.20		
PK	450.01M	33.16	46.00	-12.84	-4.11	3	Horizontal	-	-	-	37.27	22.10	1.98	28.19		



Unwanted Emissions into Restricted Frequency Bands Below 1GHz

Appendix A.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	38.96M	32.57	40.00	-7.43	-9.13	3	Vertical	-	-	-	41.70	18.40	0.58	28.11		
PK	250.23M	27.42	46.00	-18.58	-9.77	3	Vertical	-	-	-	37.19	16.91	1.57	28.25		
QP	350.1M	42.51	46.00	-3.49	-6.88	3	Vertical	106	1.24	-	49.39	19.50	1.82	28.20		
QP	450.01M	42.47	46.00	-3.53	-4.11	3	Vertical	218	1.00	-	46.58	22.10	1.98	28.19		
PK	749.84M	36.48	46.00	-9.52	1.82	3	Vertical	-	-	-	34.66	27.00	2.75	27.93		
PK	850.7M	38.26	46.00	-7.74	3.14	3	Vertical	-	-	-	35.12	28.01	2.89	27.76		



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

Appendix D.5

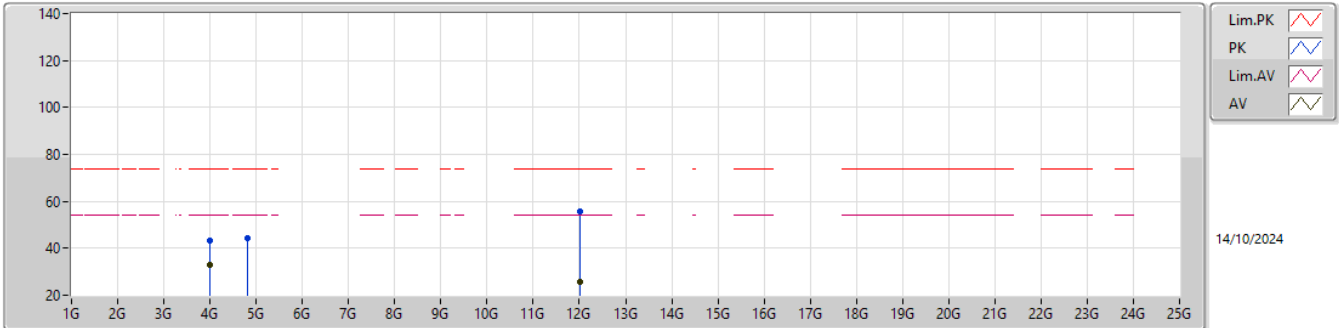
Summary

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-BR(1Mbps)	Pass	PK	12.01G	55.71	74.00	-18.29	3	Vertical	188	1.00	-



2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

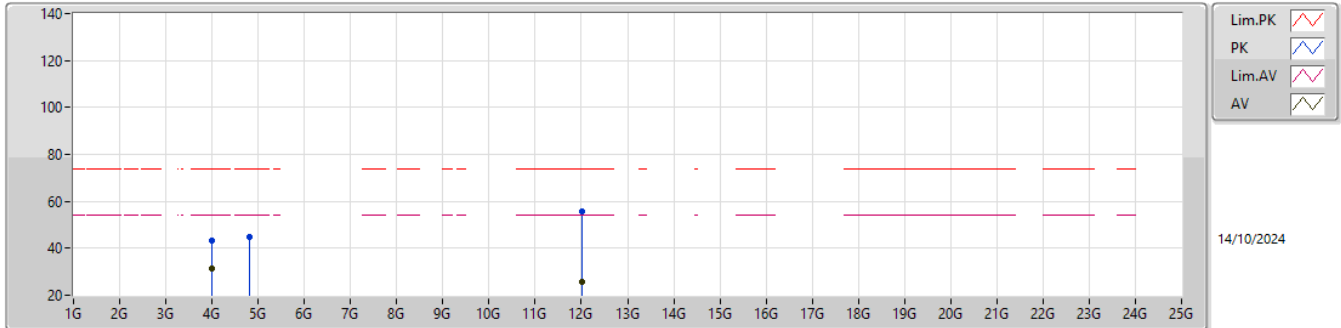


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
AV	4G	33.15	54.00	-20.85	35.42	3	Horizontal	187	1.72	-	29.70	6.02	37.99			
PK	4G	43.41	74.00	-30.59	45.68	3	Horizontal	187	1.72	-	29.70	6.02	37.99			
AV	4.804G	14.36	54.00	-39.64	-	3	Horizontal	-	-	-	-	-	-			
PK	4.804G	44.46	74.00	-29.54	45.01	3	Horizontal	212	1.00	-	31.29	6.68	38.52			
AV	12.01G	25.54	54.00	-28.46	-	3	Horizontal	-	-	-	-	-	-			
PK	12.01G	55.64	74.00	-18.36	49.11	3	Horizontal	188	1.00	-	39.20	10.23	42.90			



2.4-2.4835GHz_BT-BR(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)	CL (dB)	PA (dB)			
AV	4G	31.38	54.00	-22.62	33.65	3	Vertical	186	1.86	-	29.70	6.02	37.99			
PK	4G	43.21	74.00	-30.79	45.48	3	Vertical	186	1.86	-	29.70	6.02	37.99			
AV	4.804G	14.66	54.00	-39.34	-	3	Vertical	-	-	-	-	-	-			
PK	4.804G	44.76	74.00	-29.24	45.31	3	Vertical	213	1.00	-	31.29	6.68	38.52			
AV	12.01G	25.61	54.00	-28.39	-	3	Vertical	-	-	-	-	-	-			
PK	12.01G	55.71	74.00	-18.29	49.18	3	Vertical	188	1.00	-	39.20	10.23	42.90			

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.01	0.00502
BT-EDR(2Mbps)	5.35	0.00343
BT-EDR(3Mbps)	5.67	0.00369

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.86	21.00	9.46	27.00
2441MHz	Pass	2.60	7.01	21.00	9.61	27.00
2480MHz	Pass	2.60	6.95	21.00	9.55	27.00
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.17	21.00	7.77	27.00
2441MHz	Pass	2.60	5.35	21.00	7.95	27.00
2480MHz	Pass	2.60	4.95	21.00	7.55	27.00
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	5.58	21.00	8.18	27.00
2441MHz	Pass	2.60	5.67	21.00	8.27	27.00
2480MHz	Pass	2.60	5.35	21.00	7.95	27.00

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



Conducted Output Power (Average)

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.70	0.00468
BT-EDR(2Mbps)	2.62	0.00183
BT-EDR(3Mbps)	2.67	0.00185

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-BR(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	6.58	-	9.18	-
2441MHz	Pass	2.60	6.70	-	9.30	-
2480MHz	Pass	2.60	6.67	-	9.27	-
BT-EDR(2Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.43	-	5.03	-
2441MHz	Pass	2.60	2.62	-	5.22	-
2480MHz	Pass	2.60	2.32	-	4.92	-
BT-EDR(3Mbps)	-	-	-	-	-	-
2402MHz	Pass	2.60	2.44	-	5.04	-
2441MHz	Pass	2.60	2.67	-	5.27	-
2480MHz	Pass	2.60	2.35	-	4.95	-

Note: Average power is for reference only.