Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	2AYRA-03639
Equipment	:	Velop AX5400 WiFi 6 System
Brand Name	:	LINKSYS
Model Name	:	MX5500, MX55EC, MX55MS, MX55WH
Applicant	:	Linksys USA, Inc. 12045 East Waterfront Drive Playa Vista, CA 90094, United States.
Standard	:	47 CFR FCC Part 15.247

The product was received on Feb. 03, 2021, and testing was started from Feb. 03, 2021 and completed on May 11, 2021. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Cliff Chang

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

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Appendix H. Test Photos

Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR122657AC	01	Initial issue of report	May 27, 2021
FR122657AC	02	Revise the test photo for below 1GHz emissions in restricted frequency bands.	May 28, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	20dB Bandwidth	PASS	-
3.2	15.247(a)	Carrier Frequency Separation	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(a)	Number of Hopping Frequencies and Hopping Band edge	PASS	-
3.5	15.247(a)	Time of Occupancy (Dwell Time)	PASS	-
3.6	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.7	15.247(d)	Emissions in Restricted Frequency Bands	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.

Reviewed by: Sam Chen
Report Producer: Vicky Huang

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Version	Ch. Frequency (MHz)	Channel Number
2400-2483.5	BR / EDR	2402-2480	0-78 [79]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-BR(1Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(2Mbps)	1	1TX
2.4-2.4835GHz	BT-EDR(3Mbps)	1	1TX

Note:
- Bluetooth BR uses a GFSK (1Mbps).
- Bluetooth EDR uses a combination of π/4-DQPSK (2Mbps) and 8DPSK (3Mbps).
- Bluetooth BR/EDR uses as a system using FHSS modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port			Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	2.4GHz	5GHz	Bluetooth					
1	2	1	-	Galtronics	02102140-07315-1	PCB	U.FL	Note
2	1	2	-	Galtronics	02102140-07315-2	PCB	U.FL	
3	-	3	-	Galtronics	02102142-07315-1	PCB	U.FL	
4	-	4	-	Galtronics	02102142-07315-2	PCB	U.FL	
5	-	-	1	Galtronics	02036073-07315	PCBA Launched	N/A	

Note:
<Antenna Gain>

Ant.	Port	WLAN Gain (dBi)		
		2.4 GHz	5GHz Band 1	5GHz Band 4
1	1	1.67	2.85	2.84
2	2	1.67	2.85	2.84
3	3	-	4.90	4.60
4	4	-	4.90	4.60

Ant.	Bluetooth Gain (dBi)
5	5.3

< Directional Gain>

Ant.	Port	Gain (dBi)			
		4T1S		4T4S	
		5GHz Band 1	5GHz Band 4	5GHz Band 1	5GHz Band 4
1	1	5.48	5.5	1.58	2.03
2	2				
3	3				
4	4				

Note: The above information was declared by manufacturer.

For 2.4GHz function:

For IEEE 802.11b/g/n/VHT/ax (2TX/2RX):

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n/ac/ax (4TX/4RX):

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

For Bluetooth Function:

For Bluetooth mode (1TX/1RX)

Only Port 1 can be use as transmit and receive antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	0.741	1.3	2.886m	1k
BT-EDR(2Mbps)	0.784	1.057	2.888m	1k
BT-EDR(3Mbps)	0.742	1.3	2.891m	1k

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter
Test Software Version	QSPR V5.0-00196

1.1.5 Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

Brand Name	Model Name	Description
LINKSYS	MX5500	All the models are identical, the difference model served as marketing strategy.
	MX55EC	
	MX55MS	
	MX55WH	

Note 1: From the above models, model: MX5500 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 558074 D01 v05r02
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information	
Test Lab.：Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Serway Li	21.2-23.2 / 54-57	Feb. 03, 2021~ Mar. 10, 2021
Radiated (Below 1GHz)	03CH06-CB	Eason Chen	20.1-21.3 / 56-58	Feb. 26, 2021~ May 07, 2021
Radiated (Above 1GHz)	03CH01-CB	Eason Chen	21-22.2 / 55-57	Feb. 26, 2021~ May 07, 2021
AC Conduction	CO02-CB	Wei Li	23~24 / 57~60	Mar. 26, 2021~ May 11, 2021

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.0 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.9 dB	Confidence levels of 95%
Conducted Emission	2.8 dB	Confidence levels of 95%
Output Power Measurement	1.4 dB	Confidence levels of 95%
Power Density Measurement	2.8 dB	Confidence levels of 95%
Bandwidth Measurement	0.4%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	7
2440MHz	7
2480MHz	7
BT-EDR(2Mbps)	-
2402MHz	7
2440MHz	7
2480MHz	7
BT-EDR(3Mbps)	-
2402MHz	7
2440MHz	7
2480MHz	7

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	EUT + Adapter 1 + RJ-45 cable 1
2	EUT + Adapter 2 + RJ-45 cable 1
3	EUT + Adapter 3 + RJ-45 cable 1
4	EUT + Adapter 4 + RJ-45 cable 1
For operating mode 2 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	20dB Bandwidth Carrier Frequency Separation Maximum Conducted Output Power Number of Hopping Frequencies Hopping Bandedge Time of Occupancy (Dwell Time) Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	EUT-WLAN 2.4GHz + Adapter 1 + RJ-45 cable 1
2	EUT-WLAN 2.4GHz + Adapter 2 + RJ-45 cable 1
Mode 1 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3~4 will follow this same test mode.	
3	EUT-Bluetooth + Adapter 1 + RJ-45 cable 1
4	EUT-WLAN 5GHz + Adapter 1 + RJ-45 cable 1
Mode 1 has been evaluated to be the worst case between Mode 1~4, thus measurement for Mode 5~6 will follow this same test mode.	
5	EUT-WLAN 2.4GHz + Adapter 3 + RJ-45 cable 1
6	EUT-WLAN 2.4GHz + Adapter 4 + RJ-45 cable 1
Mode 1 has been evaluated to be the worst case between Mode 1~6, thus measurement for Mode 7 will follow this same test mode.	
7	EUT-WLAN 2.4GHz + Adapter 1 + RJ-45 cable 2
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+WLAN 5GHz+Bluetooth
Refer to Sporton Test Report No.: FA122657 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at Z axis position.

2.3 EUT Operation during Test

For CTX Mode:
The EUT was programmed to be in continuously transmitting mode.

For Normal Link:
During the test, the EUT operation to normal function.

2.4 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
Adapter 1 (Fixed plug)	Ktec	KSA-24W-120200HU	INPUT: 100-240V~50/60Hz, 0.6A OUTPUT: 12V, 2.0A
Adapter 2 (Fixed plug)	APD	WB-24J12FU	INPUT: 100-240V~50-60Hz, 0.7A Max. OUTPUT: 12V, 2A
Adapter 3 (Removable plug)	Ktec	KSA-24W-120200D5	INPUT: 100-240V~50/60Hz, 0.6A OUTPUT: 12.0V, 2.0A 24.0W
Adapter 4 (Removable plug)	APD	WB-24J12R	INPUT: 100-240V~50-60Hz, 0.7A Max. OUTPUT: 12.0V, 2.0A 24.0W
Other			
US plug*2 (for adapter 3 and adapter 4 use)			
RJ-45 cable 1*1, non-shielded, 1.8m, Type: flat wire			
RJ-45 cable 2*1, non-shielded, 1.8m, Type:round wire			

2.5 Support Equipment

For AC Conduction:

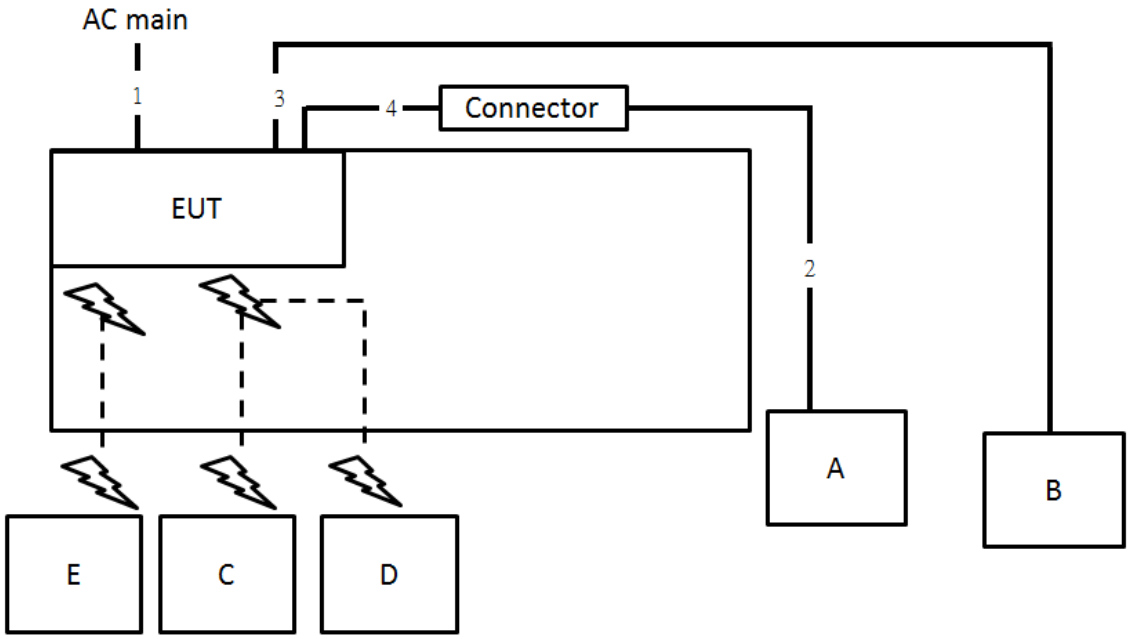
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	WAN NB	DELL	E6430	N/A
B	LAN NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A
E	iPad	Apple	A1430	N/A

For Radiated and RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A

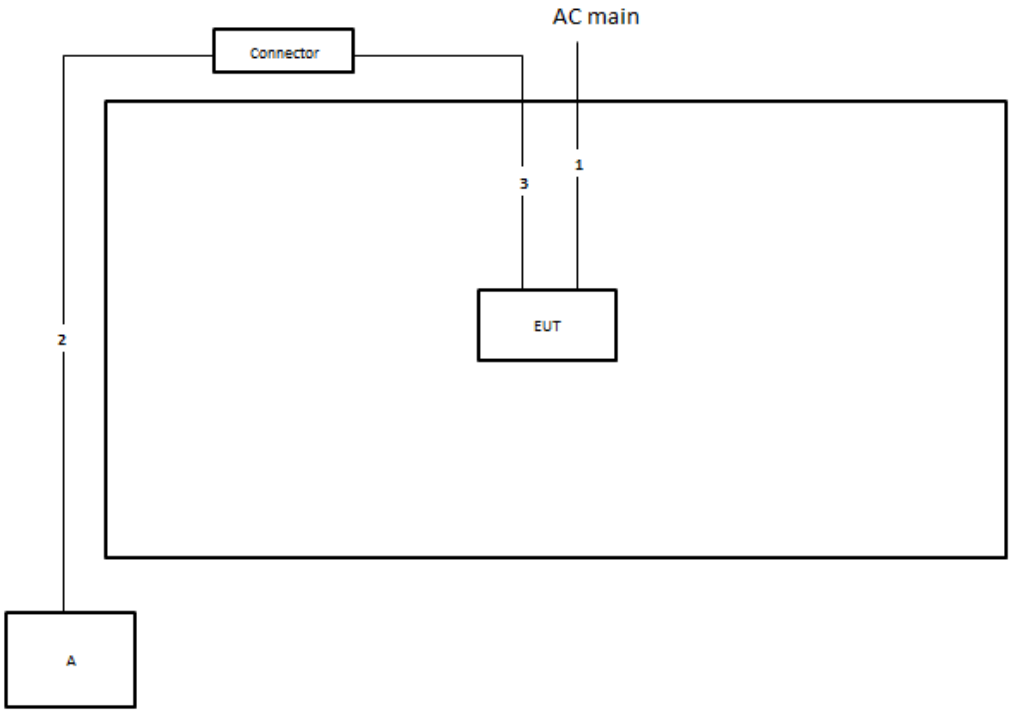
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



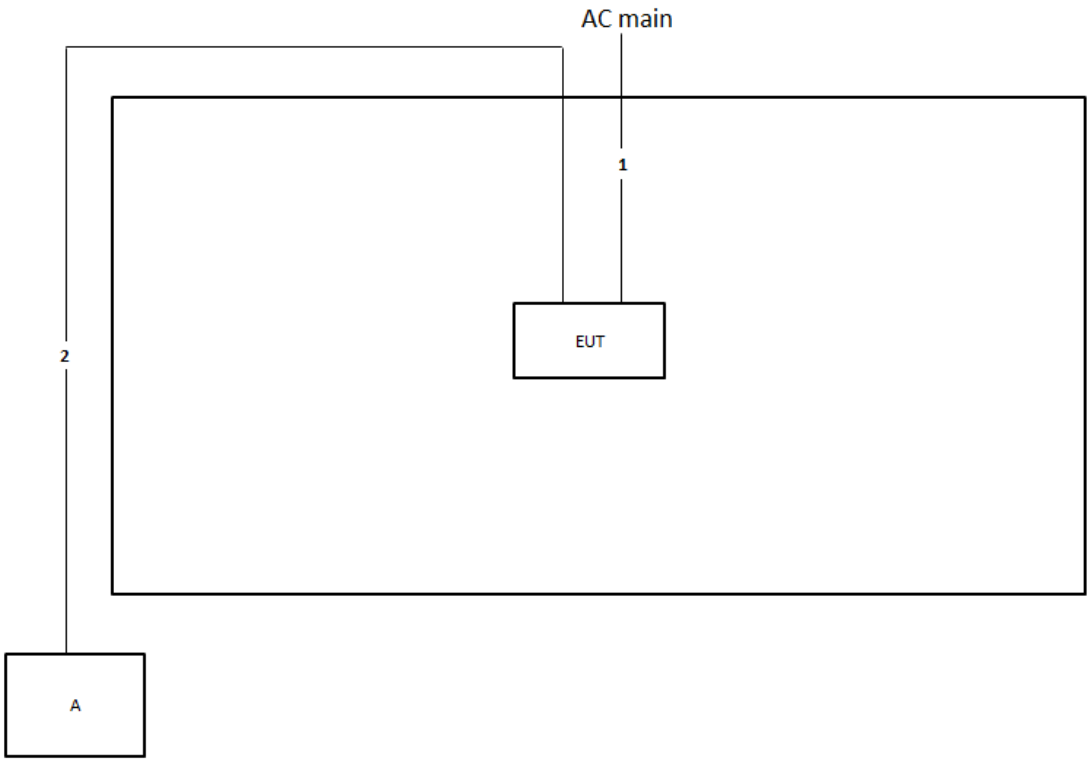
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1.8m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.8m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line 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.		

3.1.2 Measuring Instruments

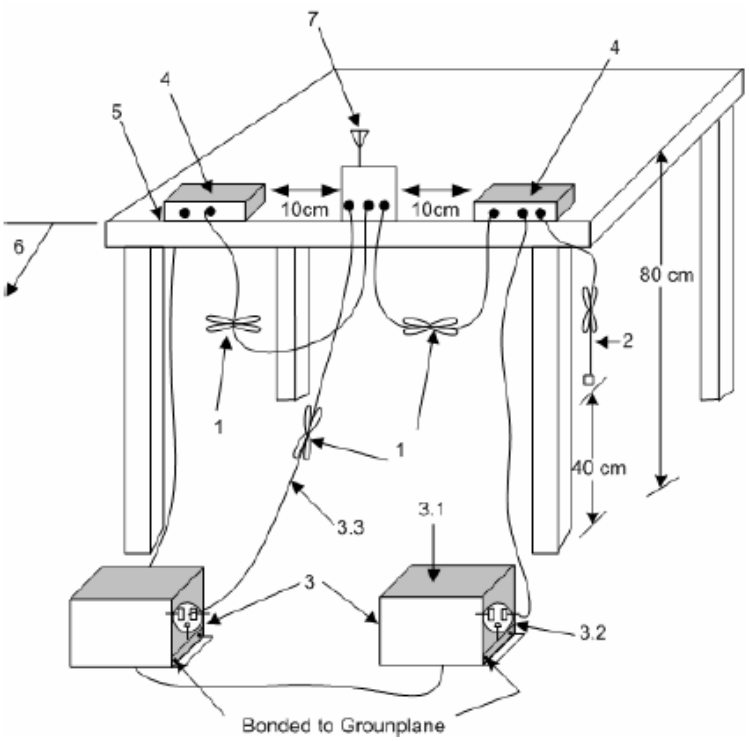
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

1.1.1. Measurement Results Calculation

The measured Level is calculated using:

a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level

b. Margin = -Limit + Level

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 20dB Bandwidth and Carrier Frequency Separation

3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems
▪ 902-928 MHz Band:
▪ N ≥50 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 250 kHz.
▪ 50 >N≥25 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth>250 kHz.
▪ 2400-2483.5 MHz Band:
▪ N ≥75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz).
▪ 75>N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz).
▪ 5725-5850 MHz Band:
▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 1 MHz.
N:Number of Hopping Frequencies; **ChS**: Hopping Channel Separation

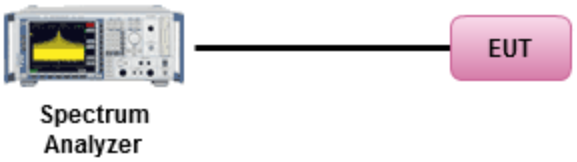
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.9.1 for 20 dB bandwidth measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.

3.2.4 Test Setup

20dB Bandwidth and Carrier Frequency Separation


3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit
▪ 902-928 MHz Band:
▪ N ≥50; Power 30dBm; EIRP 36dBm
▪ 50 >N≥ 25; Power 23.98dBm; EIRP 29.98dBm
▪ 2400-2483.5 MHz Band:
▪ N ≥ 75; Power 30dBm; EIRP 36dBm
▪ 75 >N ≥ 15; Power 21dBm; EIRP 27dBm
▪ 5725-5850 MHz Band:
▪ N ≥ 75; Power 30dBm; EIRP 36dBm
N:Number of Hopping Frequencies

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement.

3.3.4 Test Setup

Maximum Conducted Output Power (Peak Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Number of Hopping Frequencies and Hopping Bandedge

3.4.1 Number of Hopping Frequencies Limit

Number of Hopping Frequencies Limit
▪ 902-928 MHz Band:
▪ N ≥50 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 250 kHz.
▪ 50 >N≥ 25 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth>250 kHz.
▪ 2400-2483.5 MHz Band:
▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz).
▪ 75 >N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz).
▪ 5725-5850 MHz Band:
▪ N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz); 20 dB bandwidth≤ 1 MHz.
N:Number of Hopping Frequencies; **ChS** : Hopping Channel Separation

3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

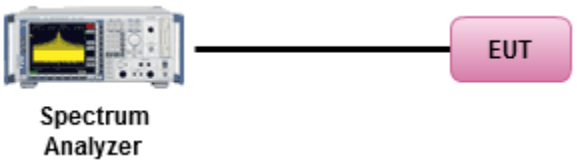
3.4.3 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.4 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.

3.4.5 Test Setup

Number of Hopping Frequencies and Hopping Frequencies Bandedge


3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

3.5 Time of Occupancy (Dwell Time)

3.5.1 Time of Occupancy (Dwell Time) Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems
▪ 902-928 MHz Band:
▪ N ≥50; 0.4s in 20s period
▪ 50 >N≥ 25; 0.4s in 10s period
▪ 2400-2483.5 MHz Band:
▪ N ≥ 75; 0.4s in N x 0.4 period
▪ 75 >N ≥ 15; 0.4s in N x 0.4 period
▪ 5725-5850 MHz Band:
▪ N ≥ 75; 0.4s in 30s period
N:Number of Hopping Frequencies

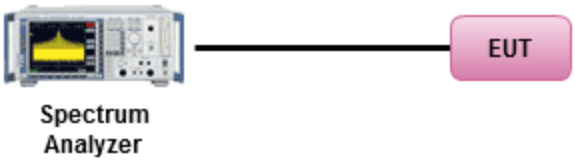
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.
▪ Bluetooth ACL packets can be 1, 3, or 5 time slots. Following as dwell time. Operate DH5 at maximum dwell time and maximum duty cycle.
▪ The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is 5/1600 seconds, or 3.125ms.DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel.

3.5.4 Test Setup

Time of Occupancy (Dwell Time)


3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

3.6 Emissions in Non-restricted Frequency Bands

3.6.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dBc)**
Peak output power procedure	20
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.	

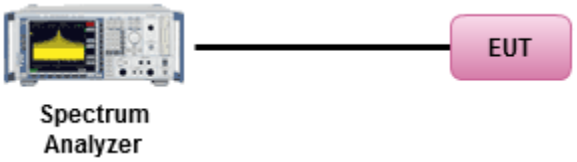
3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.

3.6.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F

3.7 Emissions in Restricted Frequency Bands

3.7.1 Emissions in Restricted Frequency Bands Limit

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: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

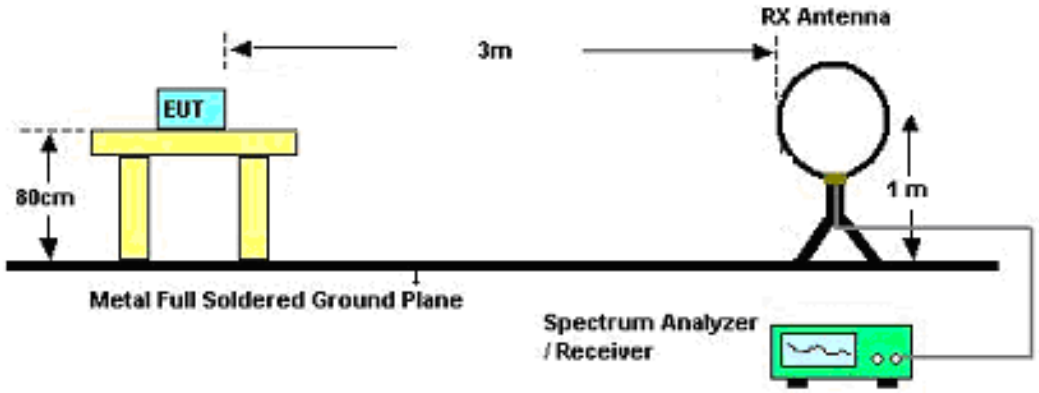
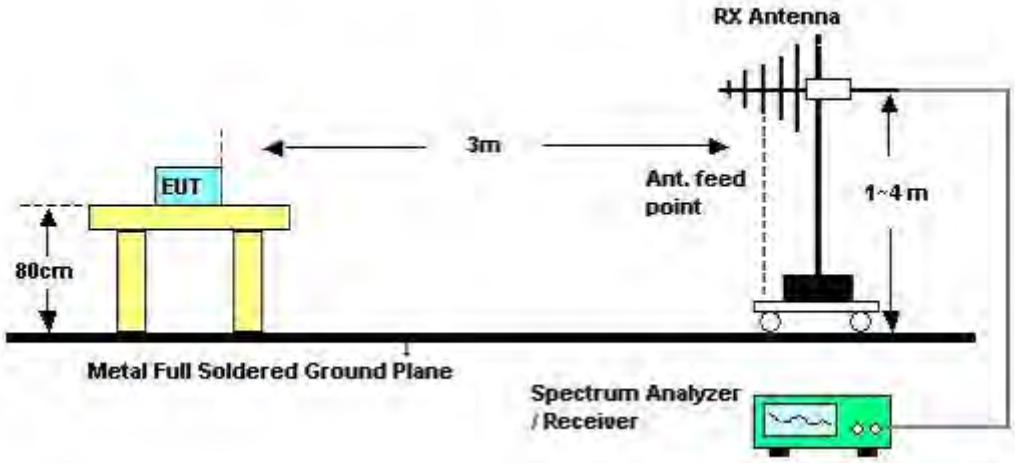
3.7.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

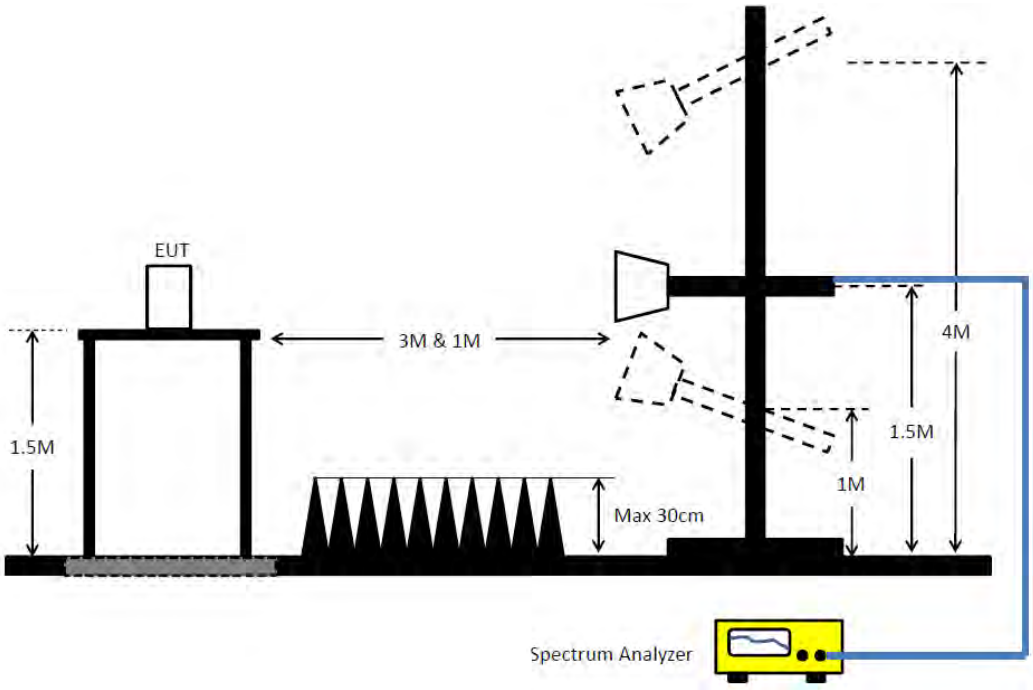
3.7.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [hopping duty factor].	
▪ Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.

3.7.4 Test Setup

Emissions in Restricted Frequency Bands
9kHz ~30MHz

30MHz~1GHz


Above 1GHz



3.7.5 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

3.7.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Dec. 04, 2020	Dec. 03, 2021	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 20, 2020	Nov. 19, 2021	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 03, 2021	Mar. 02, 2022	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz~30MHz	Oct. 20, 2020	Oct. 19, 2021	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 18, 2021	Mar. 17, 2022	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 10, 2020	Aug. 09. 2021	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Aug. 02, 2020	Aug. 01, 2021	Radiation (03CH06-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH06-CB)
Loop Antenna	Teseq	HLA 6120	31244	9kHz - 30 MHz	Mar. 16, 2021	Mar. 15, 2022	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 05, 2020	Nov. 04, 2021	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 15, 2020	Dec. 14, 2021	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 29, 2020	May 28, 2021	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz~18GHz	Nov. 06, 2020	Nov. 05, 2021	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 07, 2021	Jan. 06, 2022	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Apr. 16, 2020	Apr. 15, 2021	Radiation (03CH01-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 05, 2020	May 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz–26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	1339408	300MHz~40GHz	Sep. 02, 2020	Sep. 01, 2021	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1517009	300MHz~40GHz	Sep. 02, 2020	Sep. 01, 2021	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

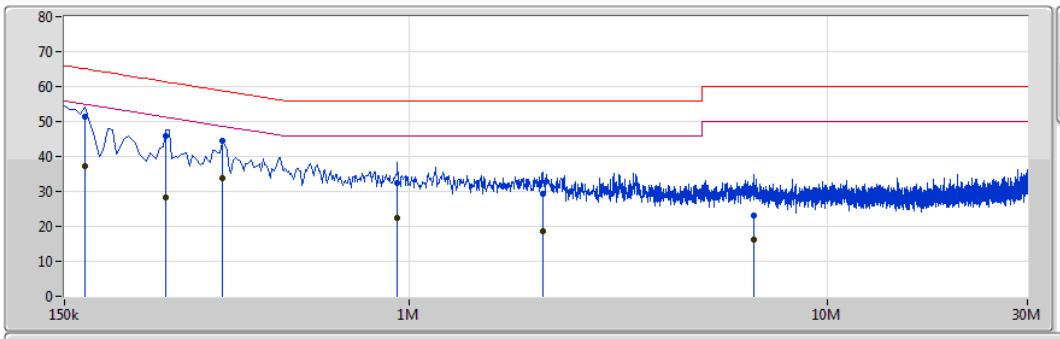
Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

Summary

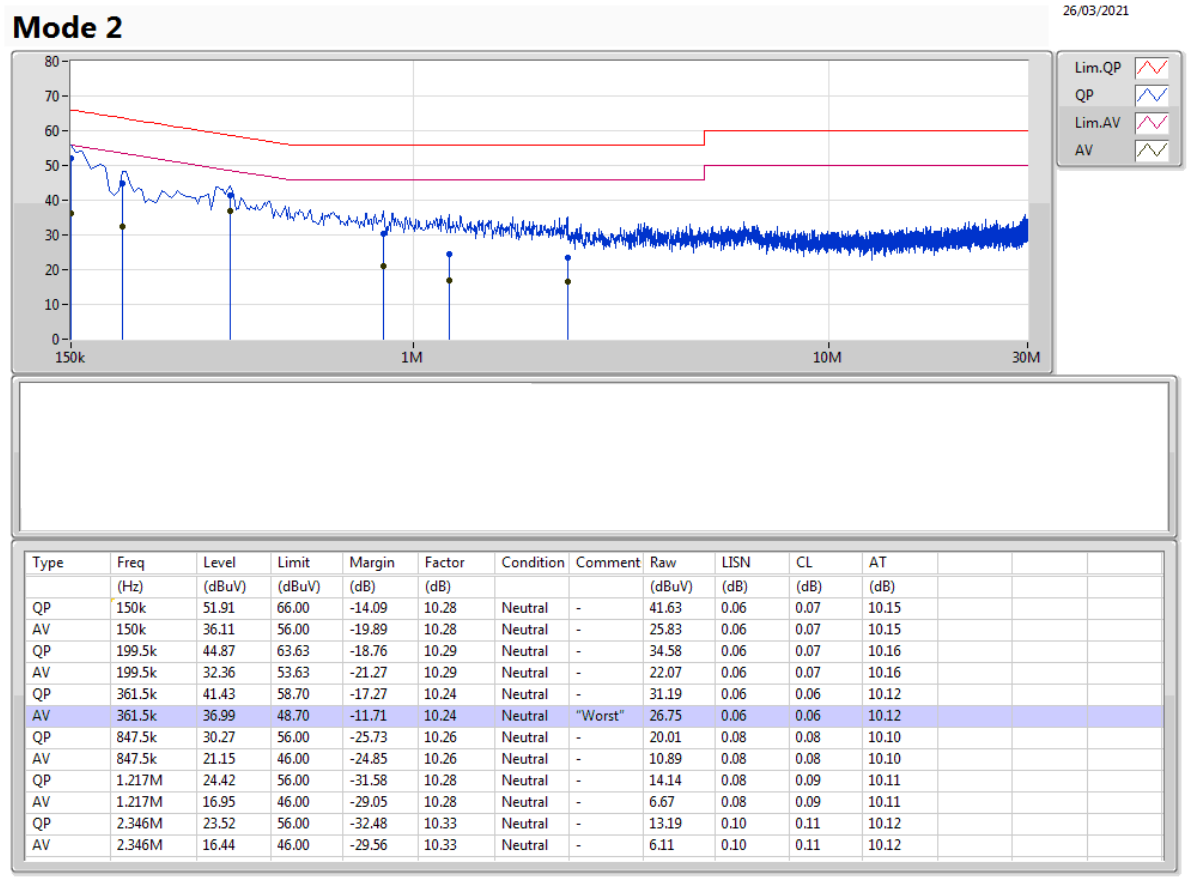
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	361.5k	36.99	48.70	-11.71	Neutral

Mode 2

26/03/2021



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	168k	51.51	65.06	-13.55	10.29	Line	"Worst"	41.22	0.07	0.07	10.15
AV	168k	37.07	55.06	-17.99	10.29	Line	-	26.78	0.07	0.07	10.15
QP	262.5k	45.73	61.35	-15.62	10.28	Line	-	35.45	0.07	0.07	10.14
AV	262.5k	28.31	51.35	-23.04	10.28	Line	-	18.03	0.07	0.07	10.14
QP	357k	44.36	58.79	-14.43	10.26	Line	-	34.10	0.08	0.06	10.12
AV	357k	33.63	48.79	-15.16	10.26	Line	-	23.37	0.08	0.06	10.12
QP	937.5k	32.31	56.00	-23.69	10.27	Line	-	22.04	0.09	0.08	10.10
AV	937.5k	22.47	46.00	-23.53	10.27	Line	-	12.20	0.09	0.08	10.10
QP	2.081M	29.40	56.00	-26.60	10.34	Line	-	19.06	0.11	0.10	10.13
AV	2.081M	18.72	46.00	-27.28	10.34	Line	-	8.38	0.11	0.10	10.13
QP	6.653M	23.25	60.00	-36.75	10.50	Line	-	12.75	0.21	0.18	10.11
AV	6.653M	16.36	50.00	-33.64	10.50	Line	-	5.86	0.21	0.18	10.11



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	51.91	66.00	-14.09	10.28	Neutral	-	41.63	0.06	0.07	10.15
AV	150k	36.11	56.00	-19.89	10.28	Neutral	-	25.83	0.06	0.07	10.15
QP	199.5k	44.87	63.63	-18.76	10.29	Neutral	-	34.58	0.06	0.07	10.16
AV	199.5k	32.36	53.63	-21.27	10.29	Neutral	-	22.07	0.06	0.07	10.16
QP	361.5k	41.43	58.70	-17.27	10.24	Neutral	-	31.19	0.06	0.06	10.12
AV	361.5k	36.99	48.70	-11.71	10.24	Neutral	"Worst"	26.75	0.06	0.06	10.12
QP	847.5k	30.27	56.00	-25.73	10.26	Neutral	-	20.01	0.08	0.08	10.10
AV	847.5k	21.15	46.00	-24.85	10.26	Neutral	-	10.89	0.08	0.08	10.10
QP	1.217M	24.42	56.00	-31.58	10.28	Neutral	-	14.14	0.08	0.09	10.11
AV	1.217M	16.95	46.00	-29.05	10.28	Neutral	-	6.67	0.08	0.09	10.11
QP	2.346M	23.52	56.00	-32.48	10.33	Neutral	-	13.19	0.10	0.11	10.12
AV	2.346M	16.44	46.00	-29.56	10.33	Neutral	-	6.11	0.10	0.11	10.12

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)	825k	823.338k	823KF1D	825k	822.089k
BT-EDR(2Mbps)	1.255M	1.178M	1M18G1D	1.219M	1.177M
BT-EDR(3Mbps)	1.256M	1.186M	1M19G1D	1.25M	1.183M

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

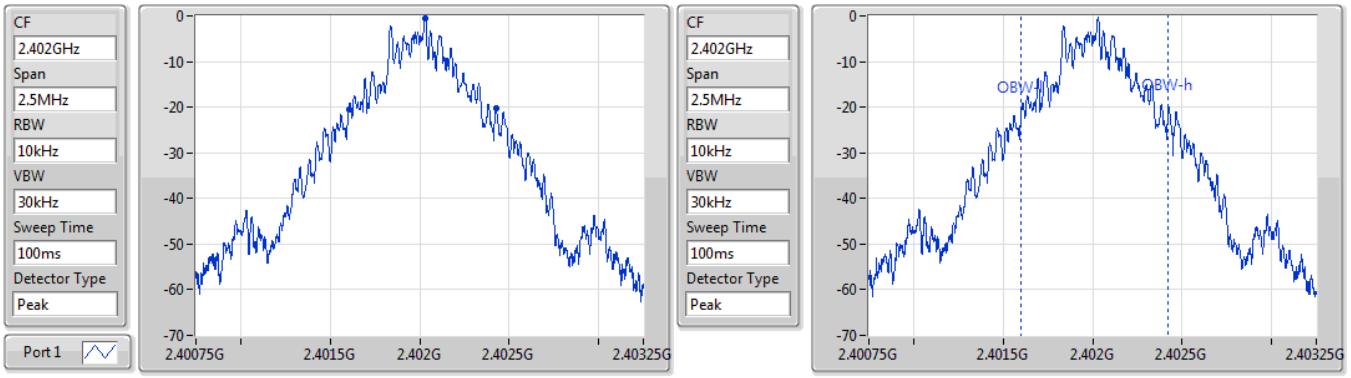
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	825k	822.089k
2440MHz	Pass	Inf	825k	822.089k
2480MHz	Pass	Inf	825k	823.338k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.219M	1.178M
2440MHz	Pass	Inf	1.255M	1.177M
2480MHz	Pass	Inf	1.253M	1.178M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.256M	1.186M
2440MHz	Pass	Inf	1.25M	1.183M
2480MHz	Pass	Inf	1.25M	1.184M

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

BT-BR(1Mbps) EBW

2402MHz

09/03/2021

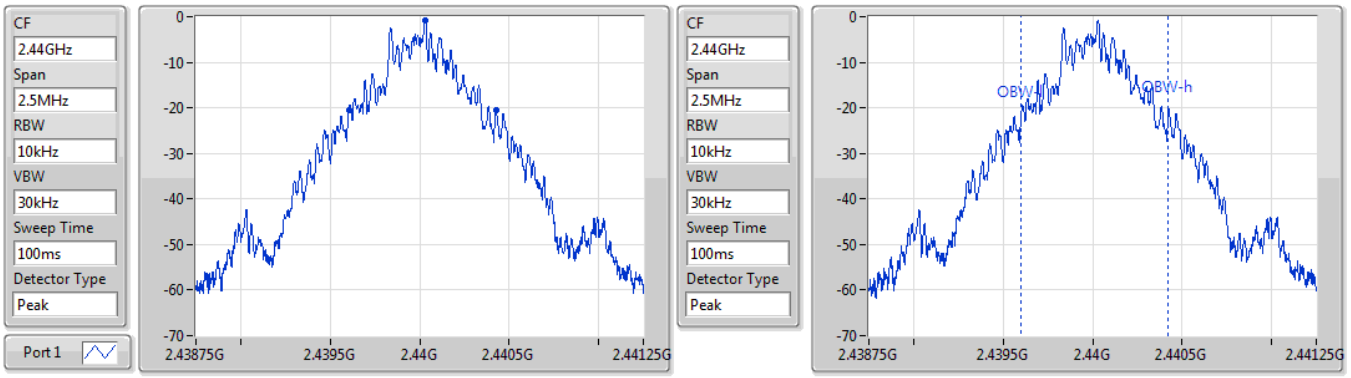


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
825k	2.401604G	2.402429G	822.089k	2.4016G	2.402422G	Inf	1

BT-BR(1Mbps) EBW

2440MHz

09/03/2021

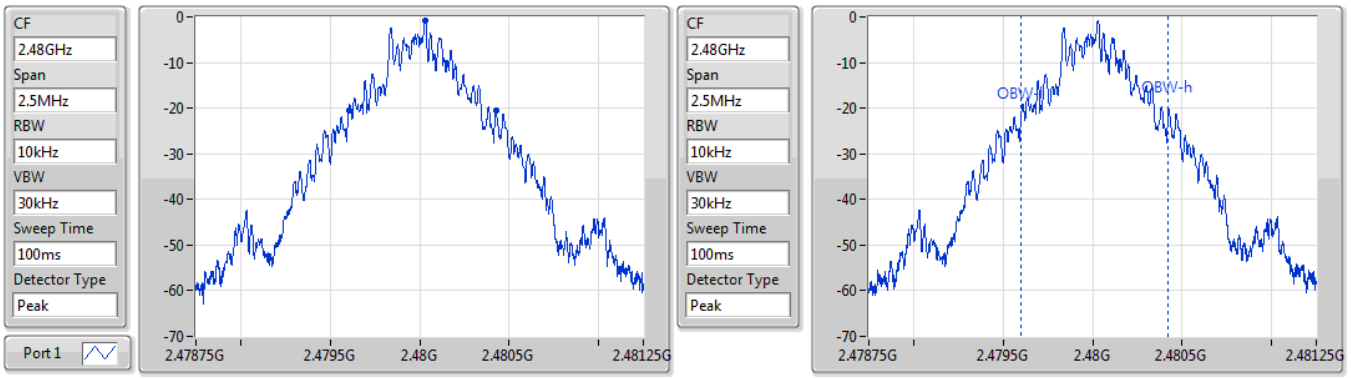


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
825k	2.439604G	2.440429G	822.089k	2.4396G	2.440422G	Inf	1

BT-BR(1Mbps) EBW

2480MHz

09/03/2021

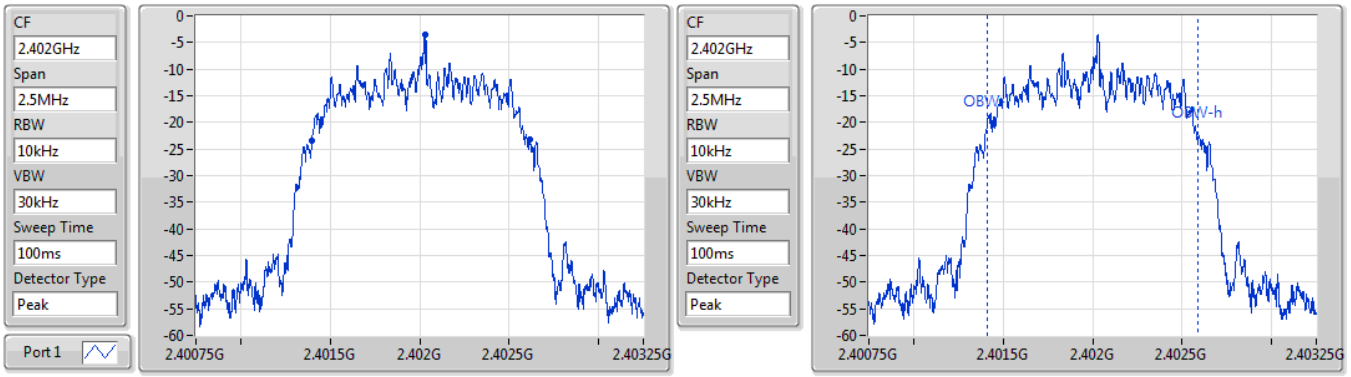


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
825k	2.479604G	2.480429G	823.338k	2.479599G	2.480422G	Inf	1

BT-EDR(2Mbps) EBW

2402MHz

09/03/2021

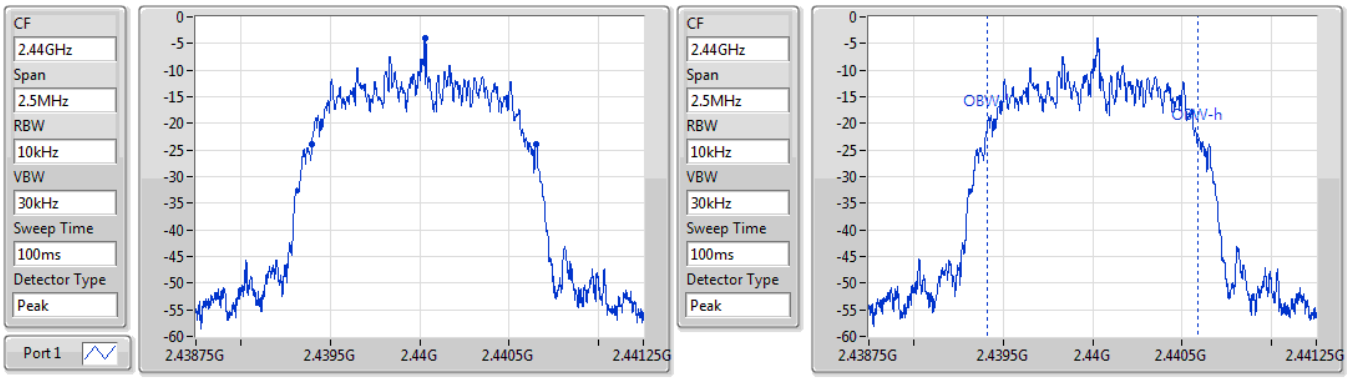


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.219M	2.401398G	2.402616G	1.178M	2.401412G	2.40259G	Inf	1

BT-EDR(2Mbps) EBW

2440MHz

09/03/2021

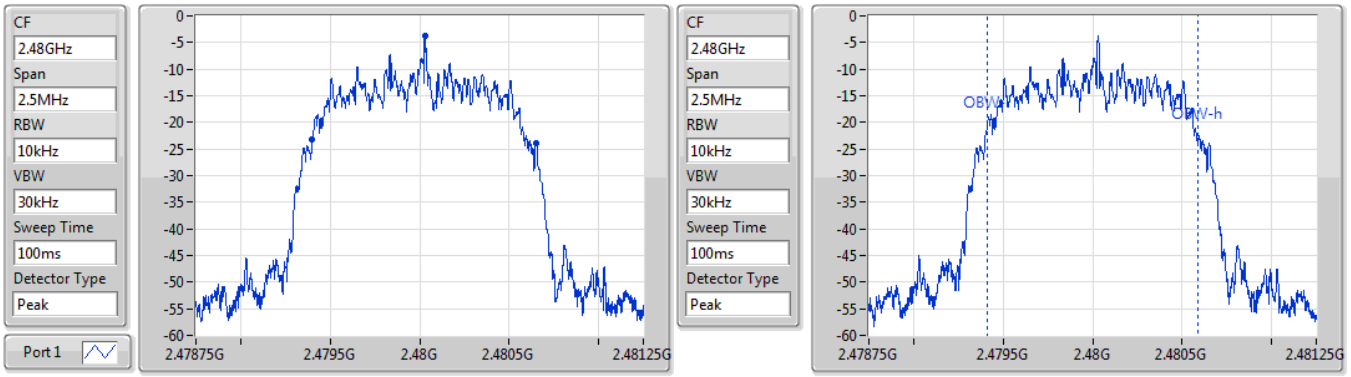


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.255M	2.439398G	2.440653G	1.177M	2.439413G	2.44059G	Inf	1

BT-EDR(2Mbps) EBW

2480MHz

09/03/2021

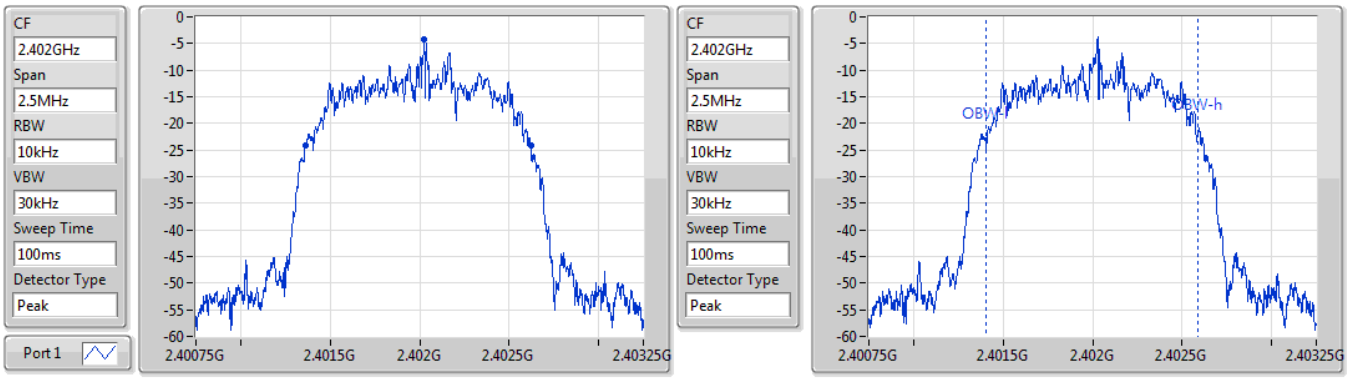


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.253M	2.479399G	2.480651G	1.178M	2.479412G	2.48059G	Inf	1

BT-EDR(3Mbps) EBW

2402MHz

09/03/2021

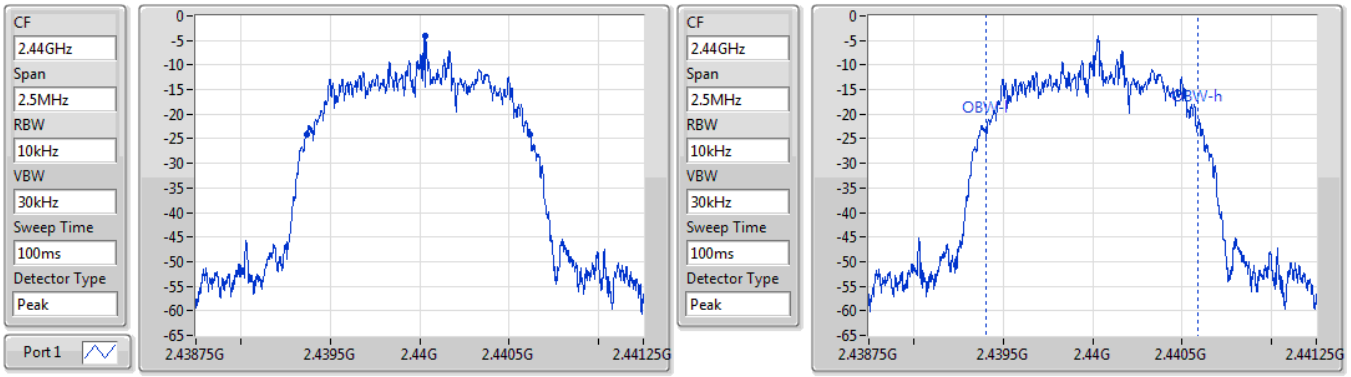


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.256M	2.401364G	2.40262G	1.186M	2.401403G	2.402588G	Inf	1

BT-EDR(3Mbps) EBW

2440MHz

09/03/2021

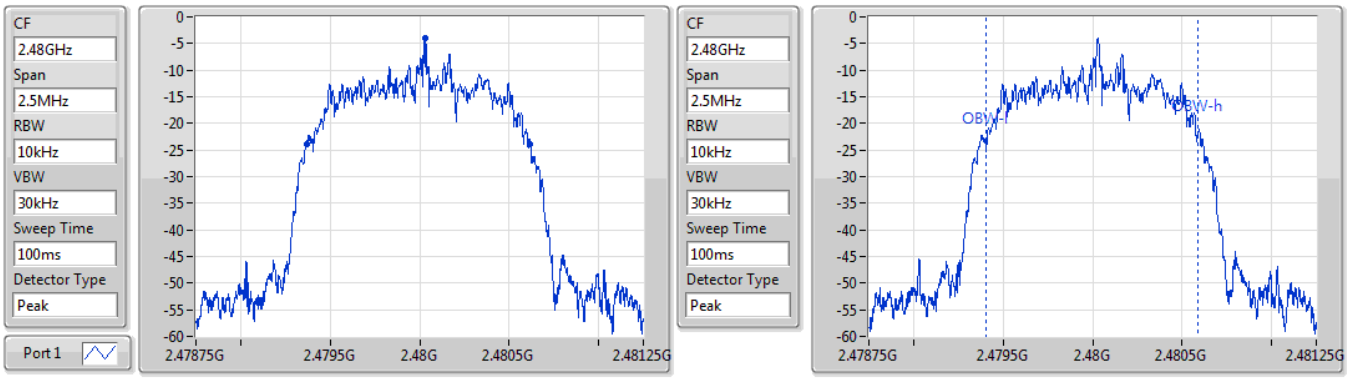


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.25M	2.439369G	2.440619G	1.183M	2.439404G	2.440587G	Inf	1

BT-EDR(3Mbps) **EBW**

2480MHz

09/03/2021



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.25M	2.479369G	2.480619G	1.184M	2.479404G	2.480588G	Inf	1

Summary

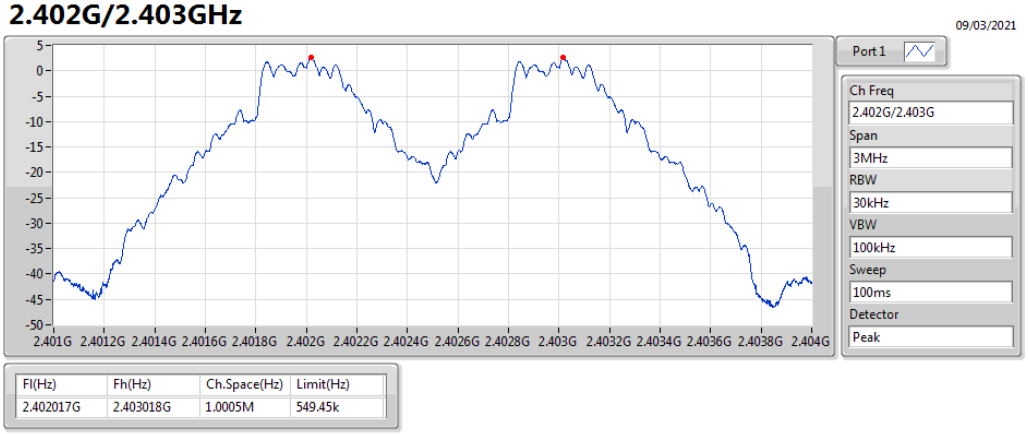
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.0005M	1.0005M
BT-EDR(2Mbps)	1.002M	999k
BT-EDR(3Mbps)	1.002M	999k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402017G	2.403018G	1.0005M	549.45k
2440MHz	Pass	2.440017G	2.441018G	1.0005M	549.45k
2480MHz	Pass	2.479017G	2.480018G	1.0005M	549.45k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402017G	2.403019G	1.002M	811.854k
2440MHz	Pass	2.440019G	2.441018G	999k	835.83k
2480MHz	Pass	2.479017G	2.480019G	1.002M	834.498k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402019G	2.403018G	999k	836.496k
2440MHz	Pass	2.440017G	2.441019G	1.002M	832.5k
2480MHz	Pass	2.479017G	2.480018G	1.0005M	832.5k

BT-BR(1Mbps) **Channel Separation**

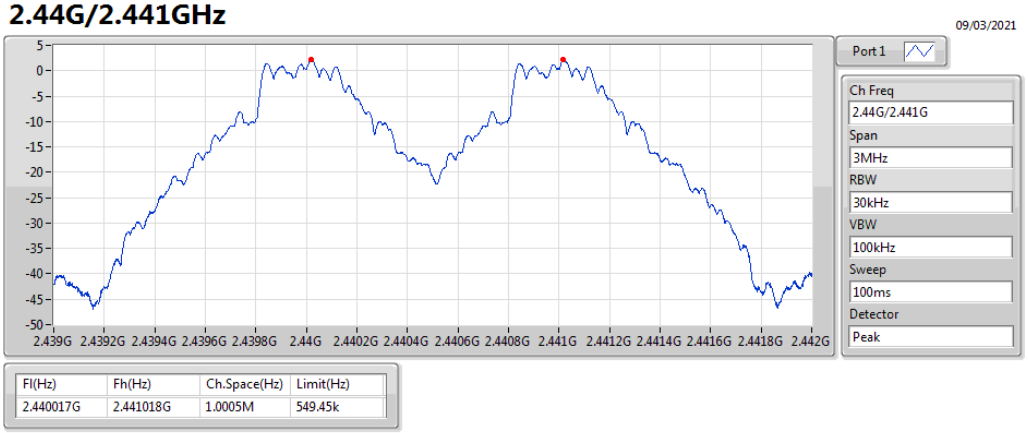
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402017G	2.403018G	1.0005M	549.45k

BT-BR(1Mbps) **Channel Separation**

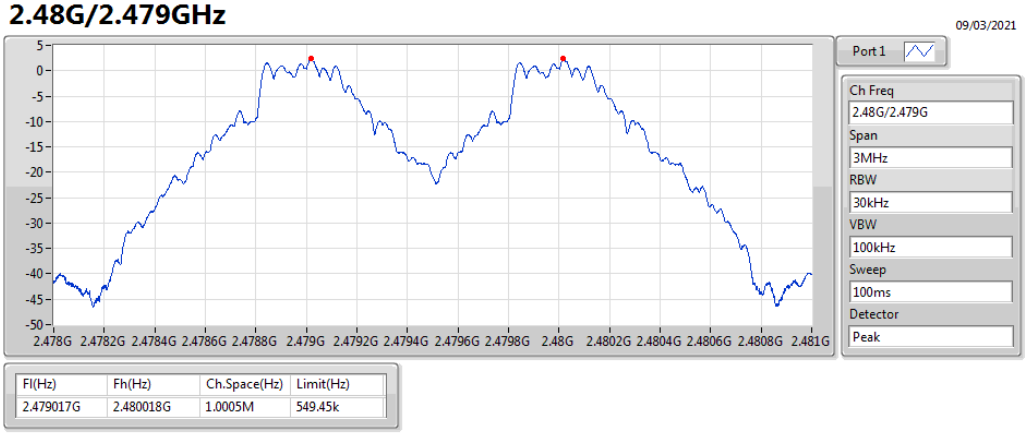
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440017G	2.441018G	1.0005M	549.45k

BT-BR(1Mbps) **Channel Separation**

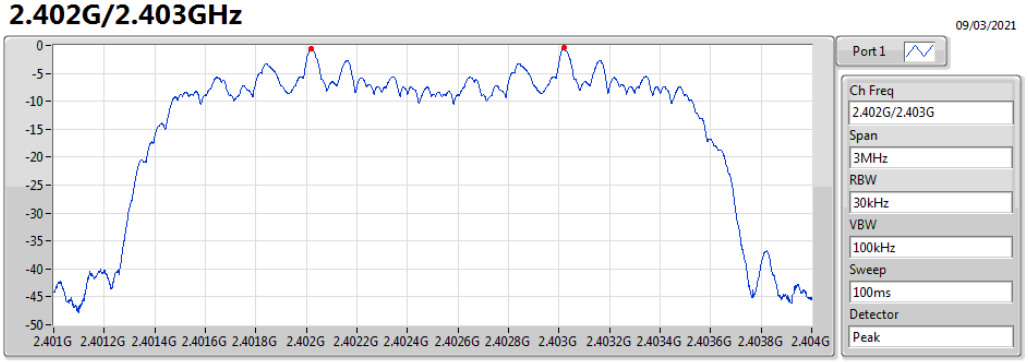
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479017G	2.480018G	1.0005M	549.45k

BT-EDR(2Mbps) **Channel Separation**

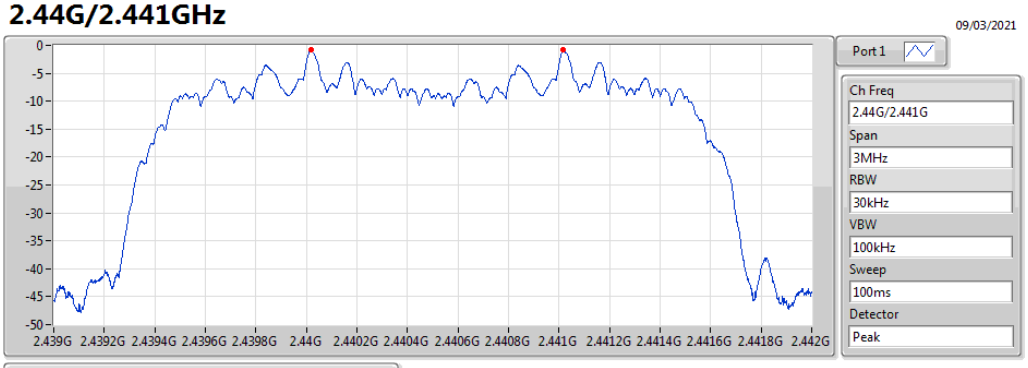
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402017G	2.403019G	1.002M	811.854k

BT-EDR(2Mbps) **Channel Separation**

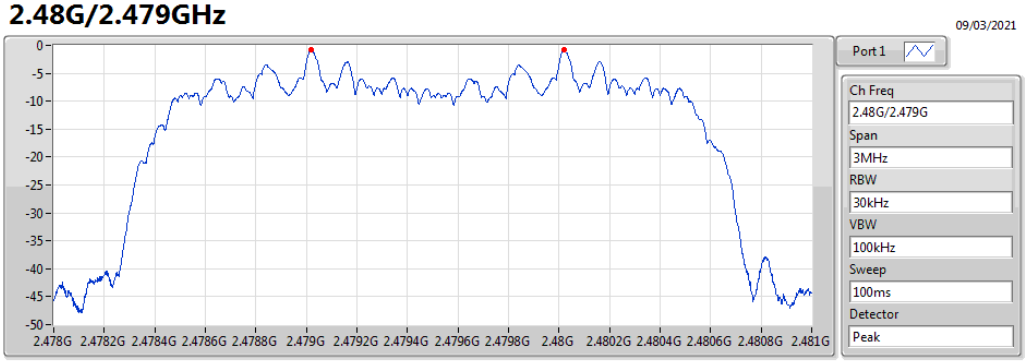
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440019G	2.441018G	999k	835.83k

BT-EDR(2Mbps) **Channel Separation**

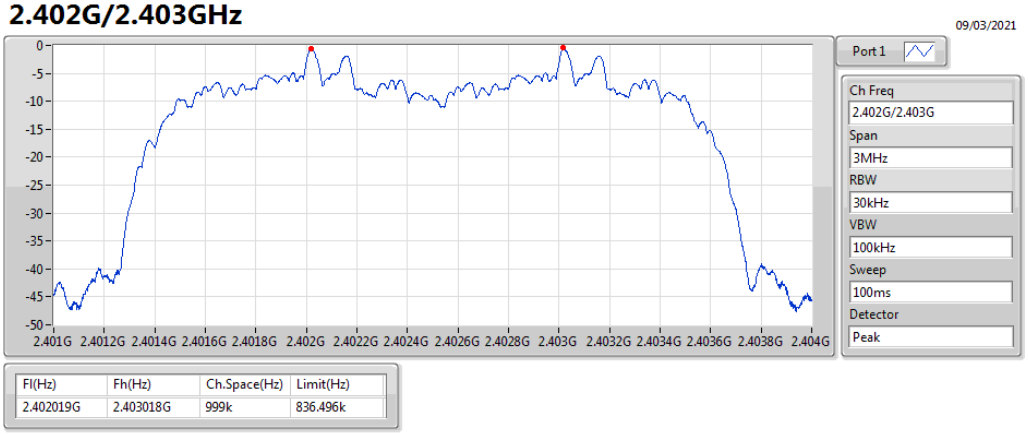
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479017G	2.480019G	1.002M	834.498k

BT-EDR(3Mbps) **Channel Separation**

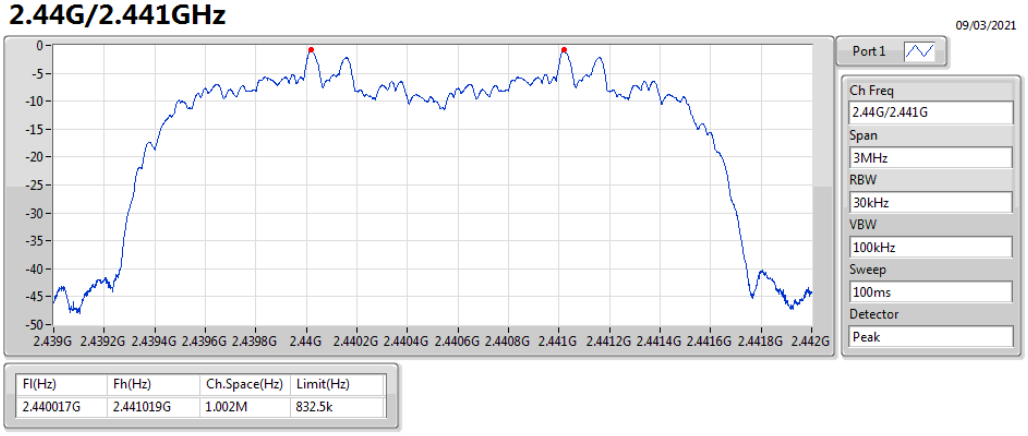
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402019G	2.403018G	999k	836.496k

BT-EDR(3Mbps) **Channel Separation**

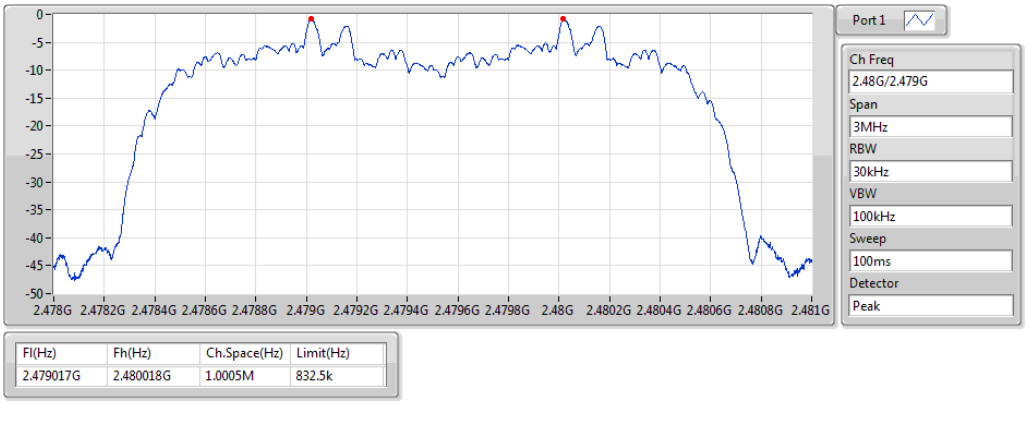
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440017G	2.441019G	1.002M	832.5k

BT-EDR(3Mbps) **Channel Separation**

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479017G	2.480018G	1.0005M	832.5k

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	4.81	0.00303
BT-EDR(2Mbps)	3.62	0.00230
BT-EDR(3Mbps)	3.98	0.00250

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	5.30	4.81	21.00
2440MHz	Pass	5.30	4.65	21.00
2480MHz	Pass	5.30	4.71	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	5.30	3.62	21.00
2440MHz	Pass	5.30	3.37	21.00
2480MHz	Pass	5.30	3.42	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	5.30	3.98	21.00
2440MHz	Pass	5.30	3.71	21.00
2480MHz	Pass	5.30	3.79	21.00

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

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	4.54	0.00284
BT-EDR(2Mbps)	1.18	0.00131
BT-EDR(3Mbps)	1.21	0.00132

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	5.30	4.54	21.00
2440MHz	Pass	5.30	4.36	21.00
2480MHz	Pass	5.30	4.42	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	5.30	1.18	21.00
2440MHz	Pass	5.30	0.85	21.00
2480MHz	Pass	5.30	0.97	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	5.30	1.21	21.00
2440MHz	Pass	5.30	0.89	21.00
2480MHz	Pass	5.30	0.98	21.00

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

Summary

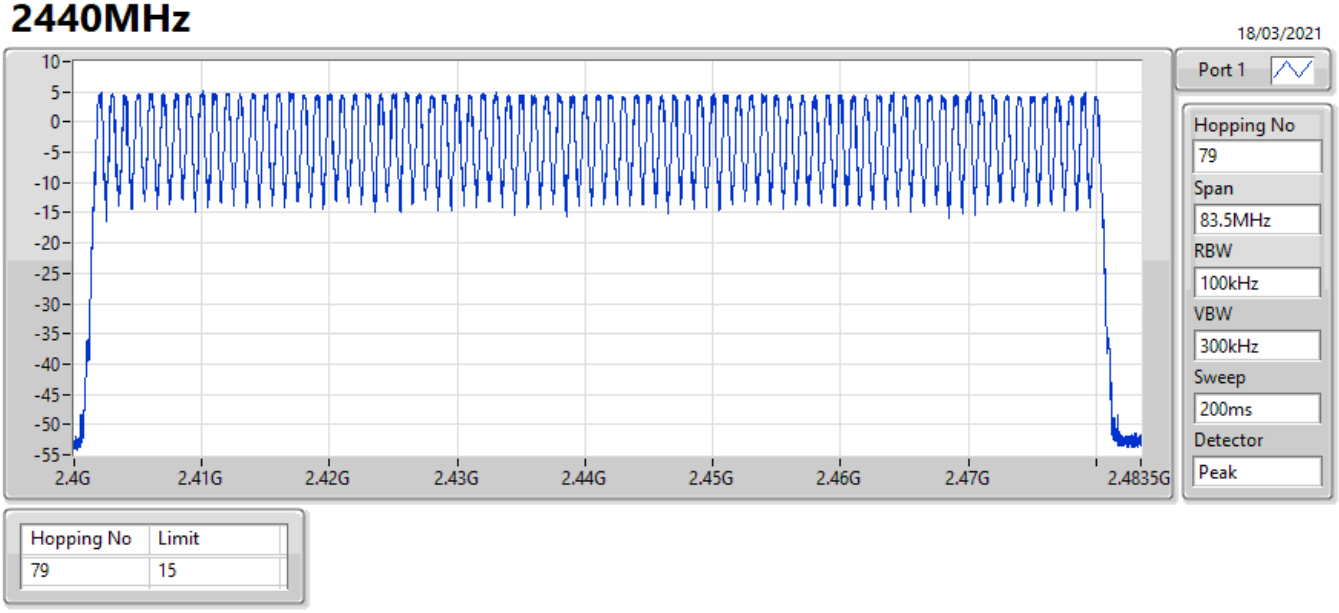
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

Result

Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2440MHz	Pass	79	15

BT-BR(1Mbps) **Hopping Ch**

2440MHz

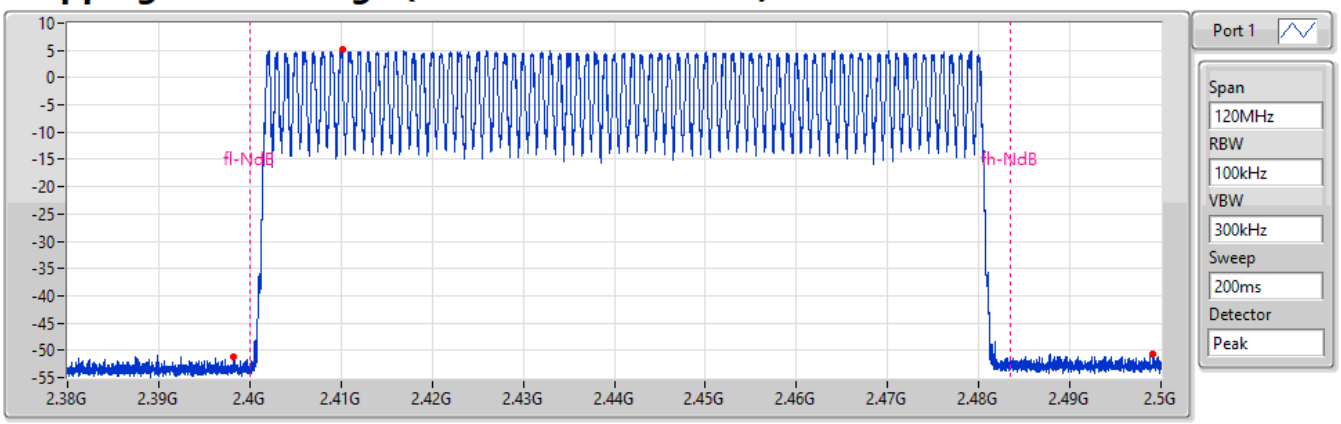


Hopping No	Limit
79	15

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

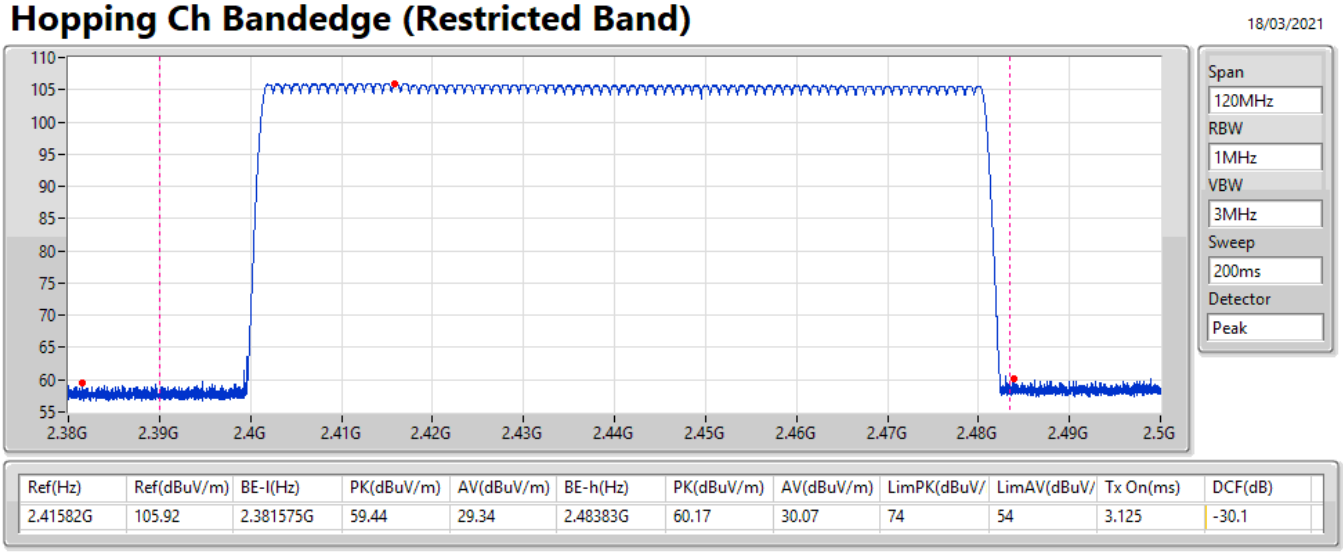


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.74	2.41015G	5.26	2.398195G	-51.15	2.499145G	-50.77

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

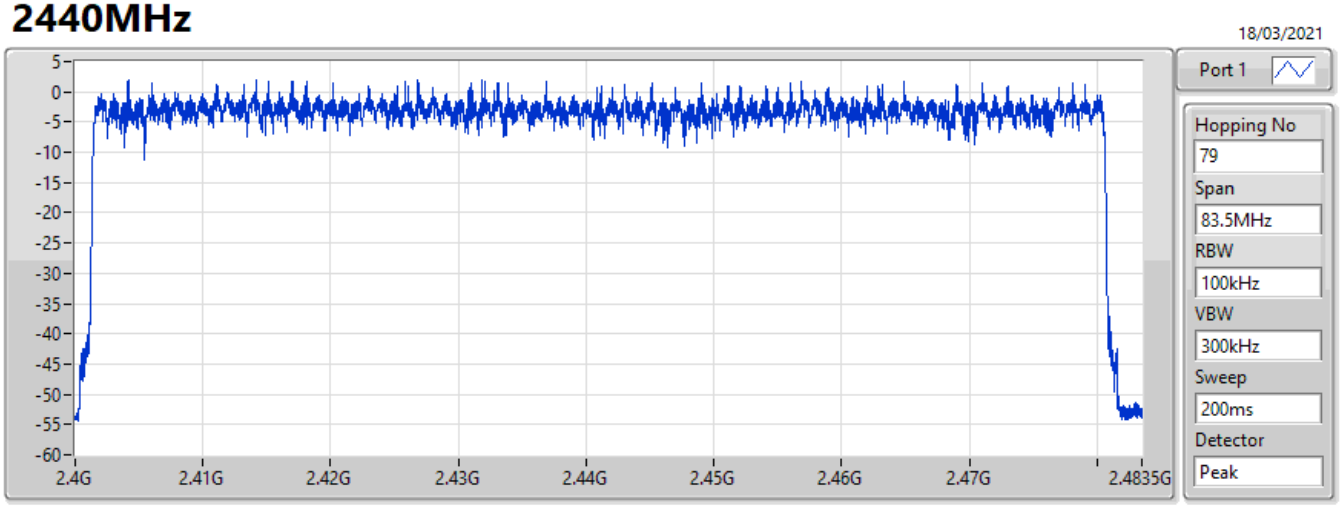


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.41582G	105.92	2.381575G	59.44	29.34	2.48383G	60.17	30.07	74	54	3.125	-30.1

BT-EDR(2Mbps)

2440MHz

Hopping Ch

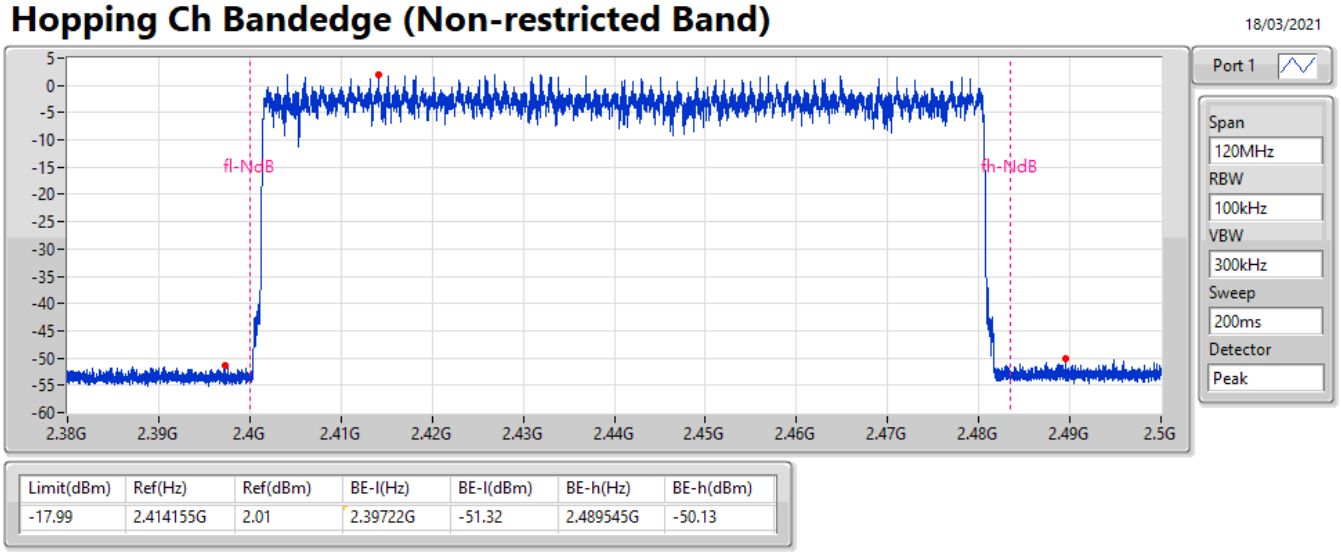


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

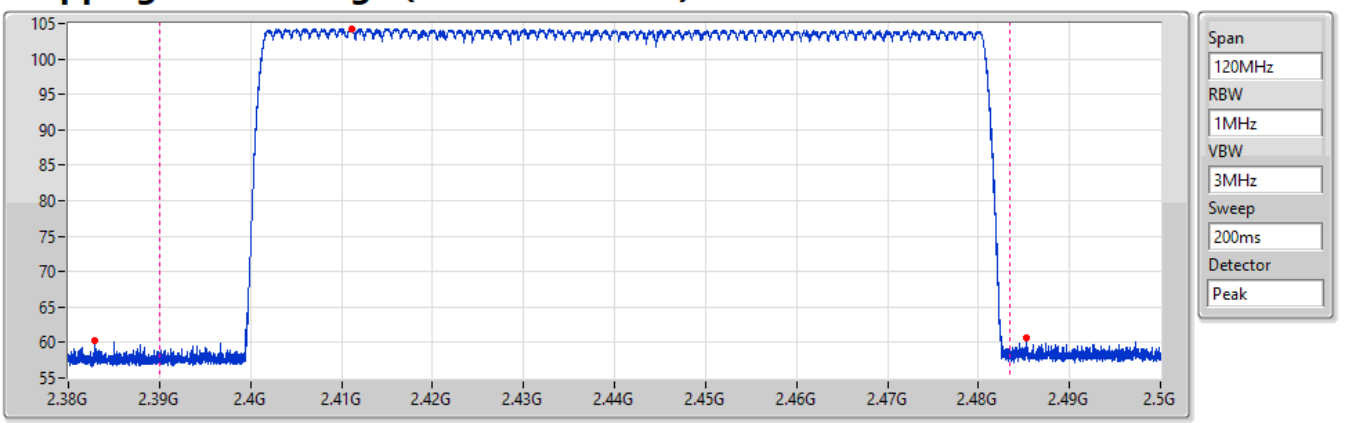


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-17.99	2.414155G	2.01	2.39722G	-51.32	2.489545G	-50.13

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

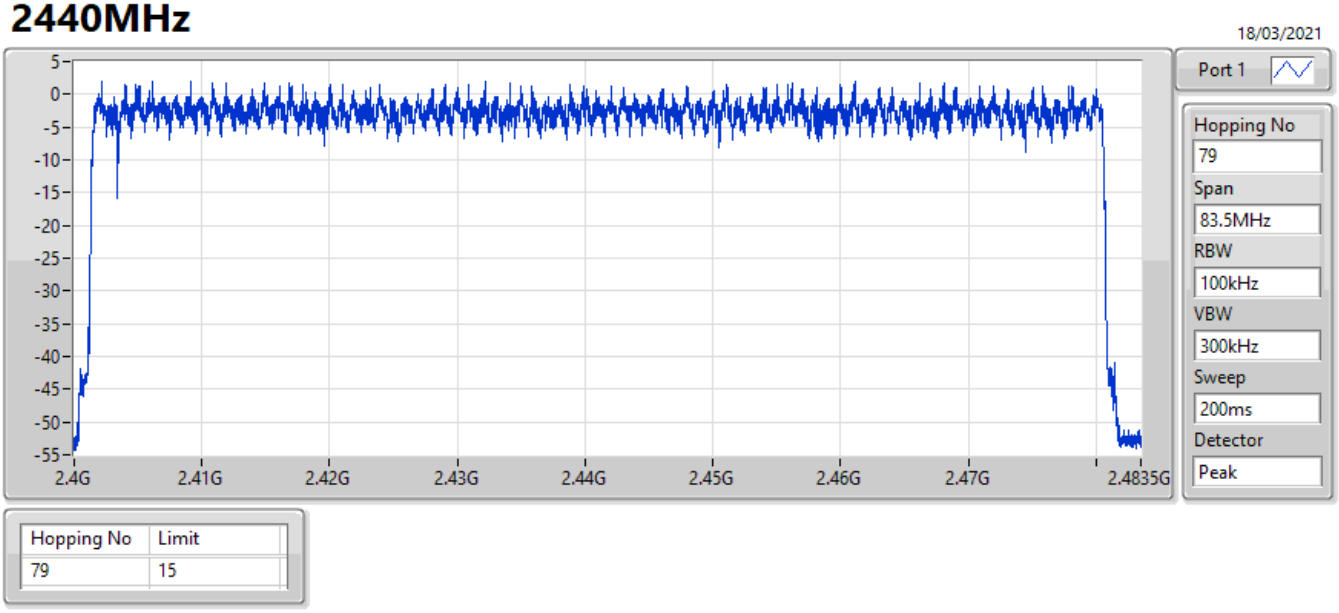


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.41114G	104.25	2.382955G	60.23	30.13	2.485285G	60.62	30.52	74	54	3.125	-30.1

BT-EDR(3Mbps)

2440MHz

Hopping Ch

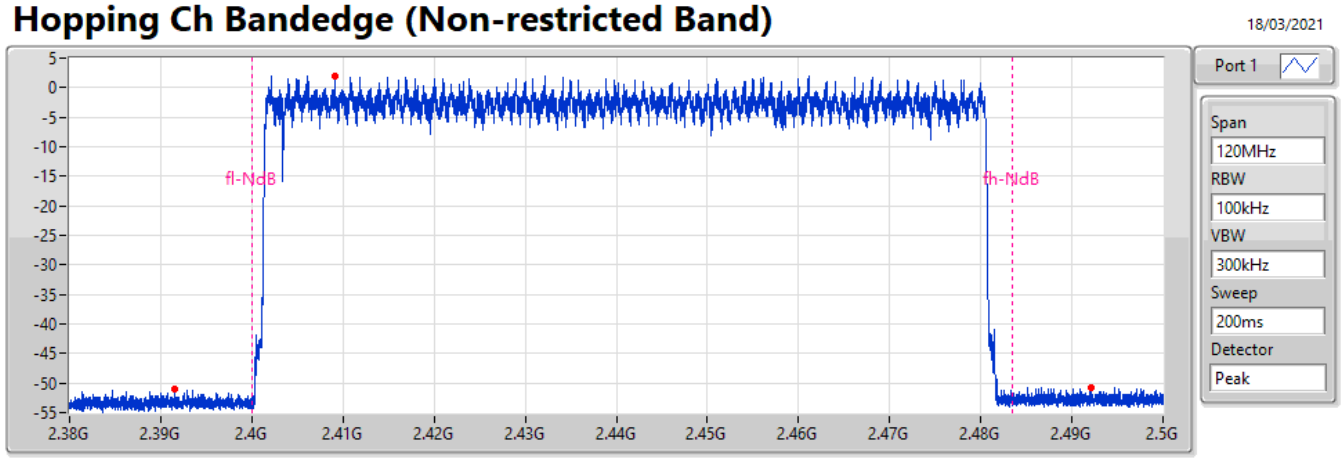


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

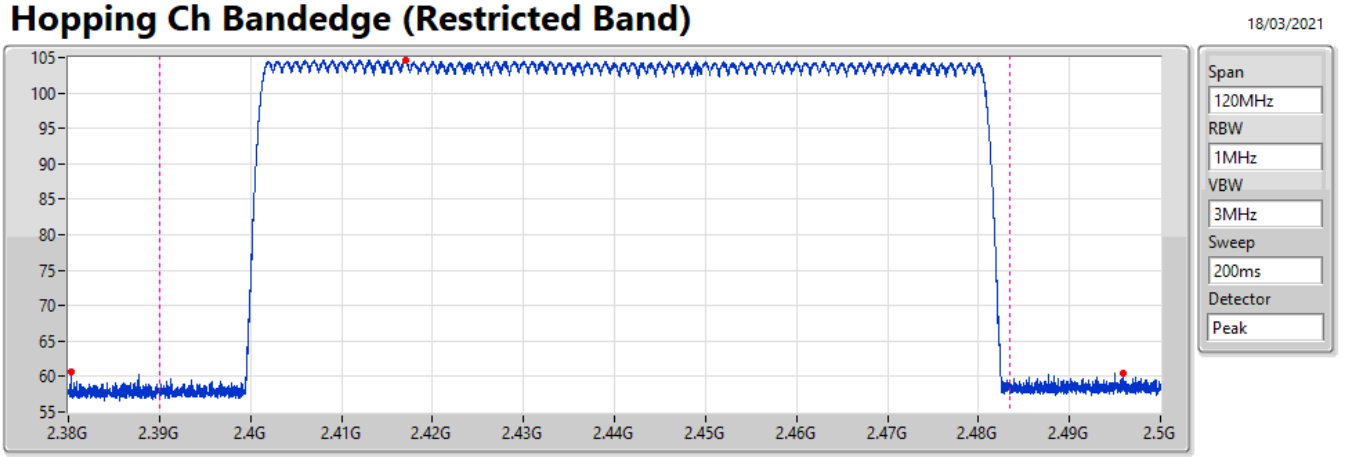


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-17.98	2.40916G	2.02	2.391505G	-51.03	2.49205G	-50.78

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)



Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.417005G	104.62	2.38033G	60.6	30.5	2.49595G	60.53	30.43	74	54	3.125	-30.1

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	308.074m
BT-EDR(2Mbps)	308.26055m
BT-EDR(3Mbps)	308.52705m

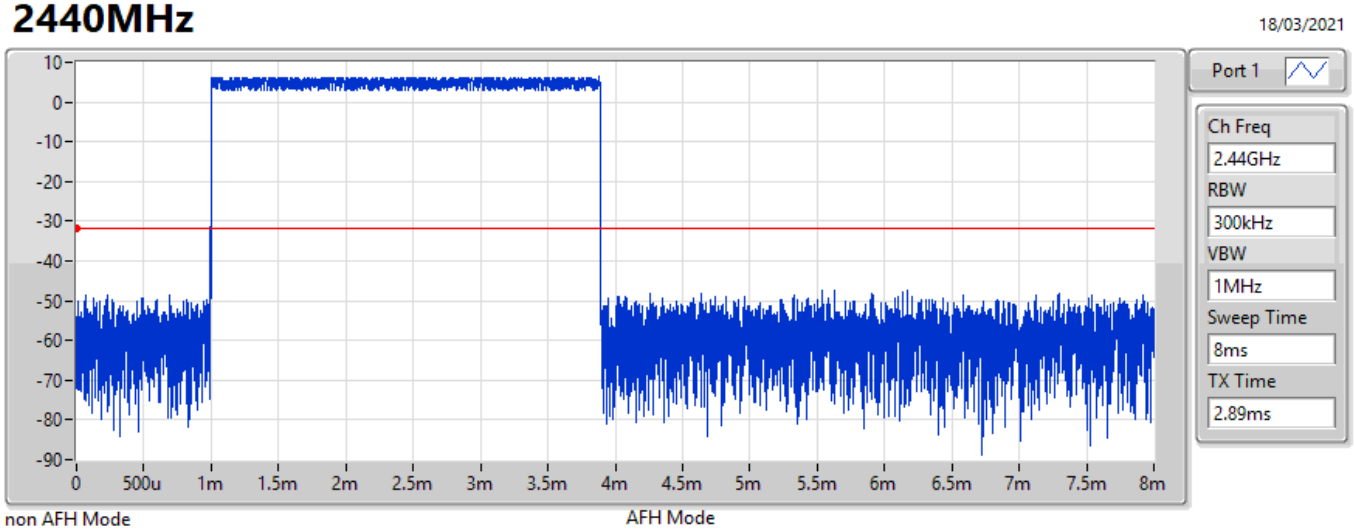
Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.074m	400m	2.89m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.26055m	400m	2.89175m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.52705m	400m	2.89425m

BT-BR(1Mbps)

Dwell

2440MHz



non AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.074m	400m	2.89m

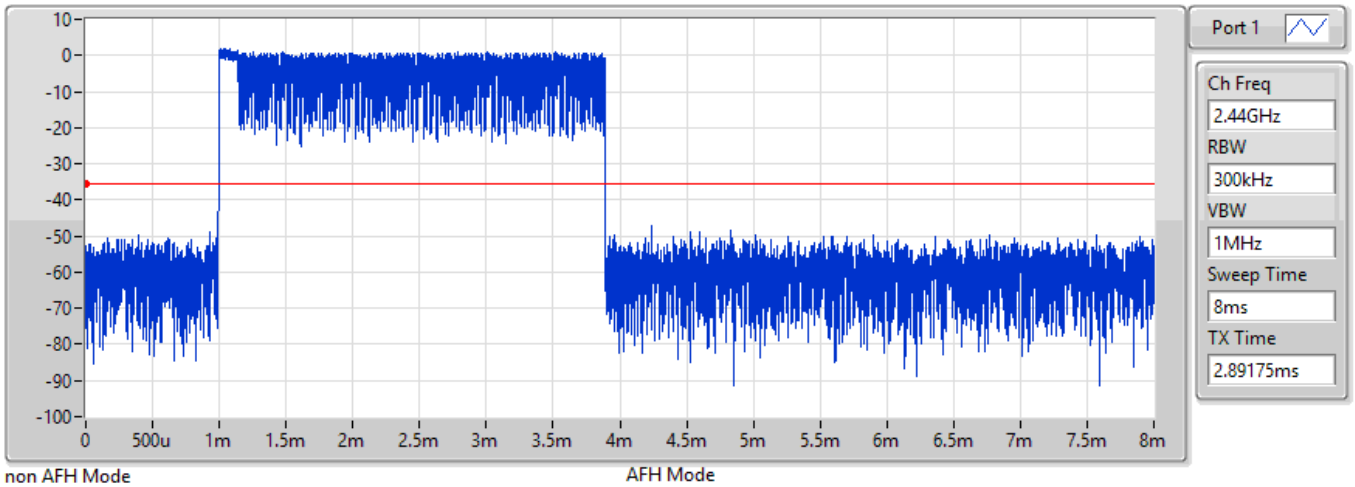
AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.037m	400m	2.89m

BT-EDR(2Mbps)

Dwell

2440MHz



non AFH Mode

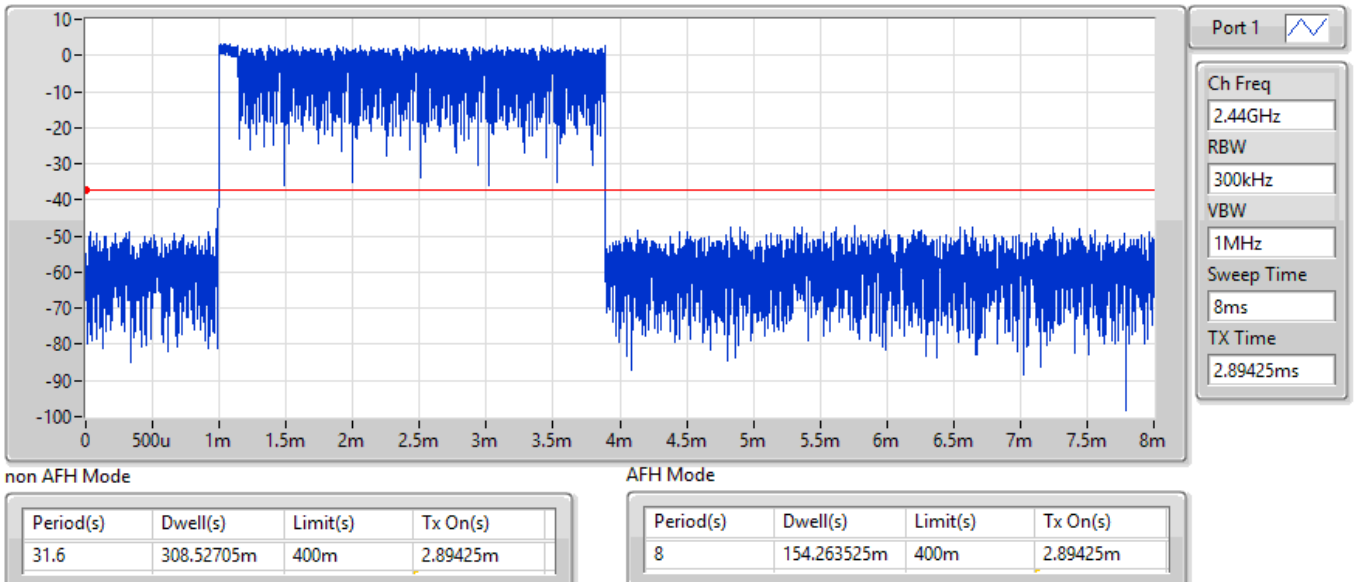
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.26055m	400m	2.89175m

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.130275m	400m	2.89175m

BT-EDR(3Mbps) **Dwell**

2440MHz



non AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.52705m	400m	2.89425m

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.263525m	400m	2.89425m

Summary

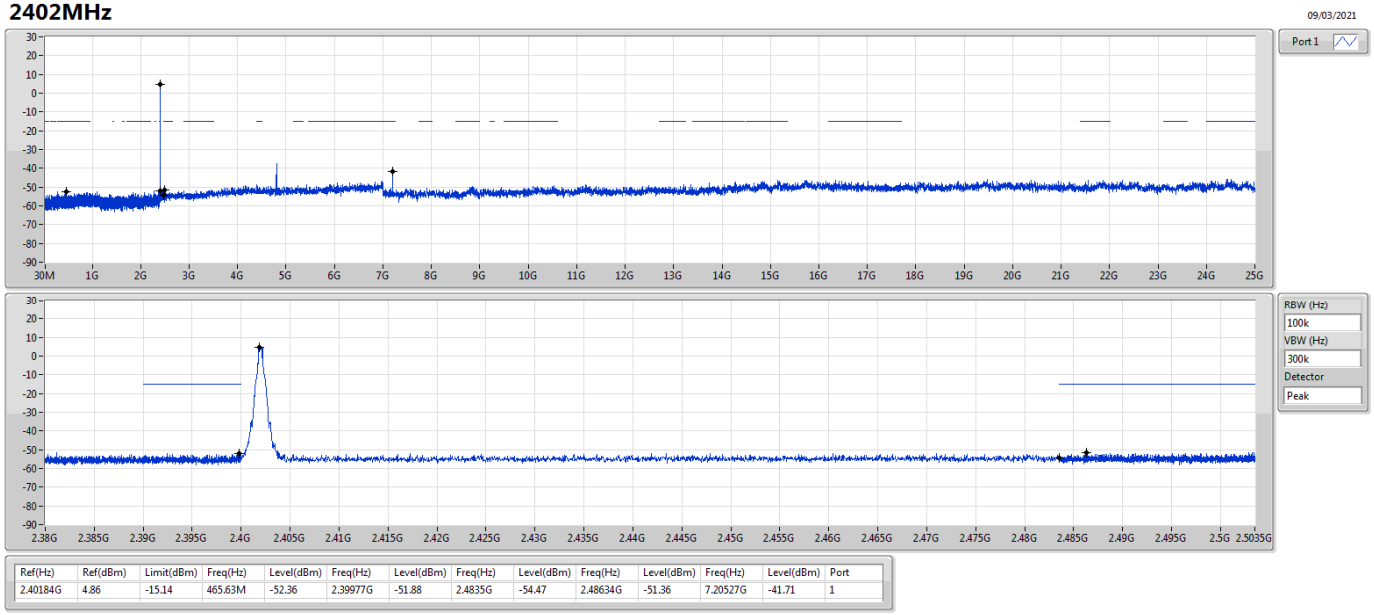
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.48016G	4.37	-15.63	287.91M	-51.96	2.39924G	-52.29	2.4835G	-53.56	2.49542G	-50.59	24.38697G	-45.40	1
BT-EDR(2Mbps)	Pass	2.40196G	1.15	-18.85	287.91M	-49.43	2.39727G	-52.34	2.4G	-54.90	2.49499G	-51.67	6.97749G	-45.77	1
BT-EDR(3Mbps)	Pass	2.48003G	1.16	-18.84	287.91M	-51.41	2.39348G	-52.07	2.4835G	-53.53	2.50233G	-50.76	24.79753G	-44.91	1

Result

Mode	Result	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
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	4.86	-15.14	465.63M	-52.36	2.39977G	-51.88	2.4835G	-54.47	2.48634G	-51.36	7.20527G	-41.71	1
2440MHz	Pass	2.44016G	4.32	-15.68	287.91M	-51.45	2.39888G	-51.44	2.4835G	-54.53	2.48683G	-50.81	21.81675G	-45.24	1
2480MHz	Pass	2.48016G	4.37	-15.63	287.91M	-51.96	2.39924G	-52.29	2.4835G	-53.56	2.49542G	-50.59	24.38697G	-45.40	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	1.15	-18.85	287.91M	-49.43	2.39727G	-52.34	2.4G	-54.90	2.49499G	-51.67	6.97749G	-45.77	1
2440MHz	Pass	2.44016G	1.32	-18.68	892.45M	-52.06	2.39311G	-52.35	2.4G	-55.01	2.48726G	-51.58	24.49102G	-45.33	1
2480MHz	Pass	2.48008G	0.40	-19.60	789.05M	-52.61	2.39553G	-52.13	2.4G	-55.59	2.50222G	-51.27	6.30822G	-45.41	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	1.54	-18.46	287.91M	-52.57	2.39899G	-52.43	2.4G	-53.68	2.49866G	-51.60	23.44212G	-45.65	1
2440MHz	Pass	2.44016G	1.20	-18.80	550.82M	-51.88	2.39194G	-52.50	2.4835G	-55.34	2.48619G	-50.86	24.49664G	-45.67	1
2480MHz	Pass	2.48003G	1.16	-18.84	287.91M	-51.41	2.39348G	-52.07	2.4835G	-53.53	2.50233G	-50.76	24.79753G	-44.91	1

BT-BR(1Mbps) **CSE NdB**

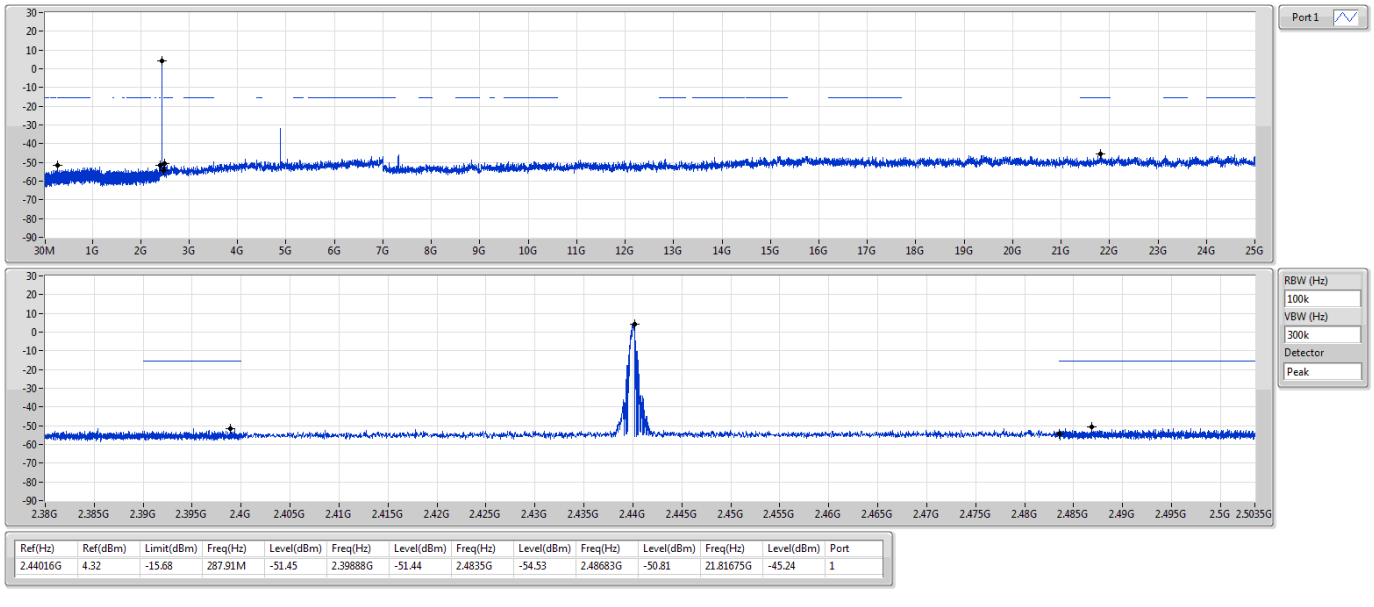
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40184G	4.86	-15.14	465.63M	-52.36	2.39977G	-51.88	2.4835G	-54.47	2.48634G	-51.36	7.20527G	-41.71	1

BT-BR(1Mbps) **CSE NdB**

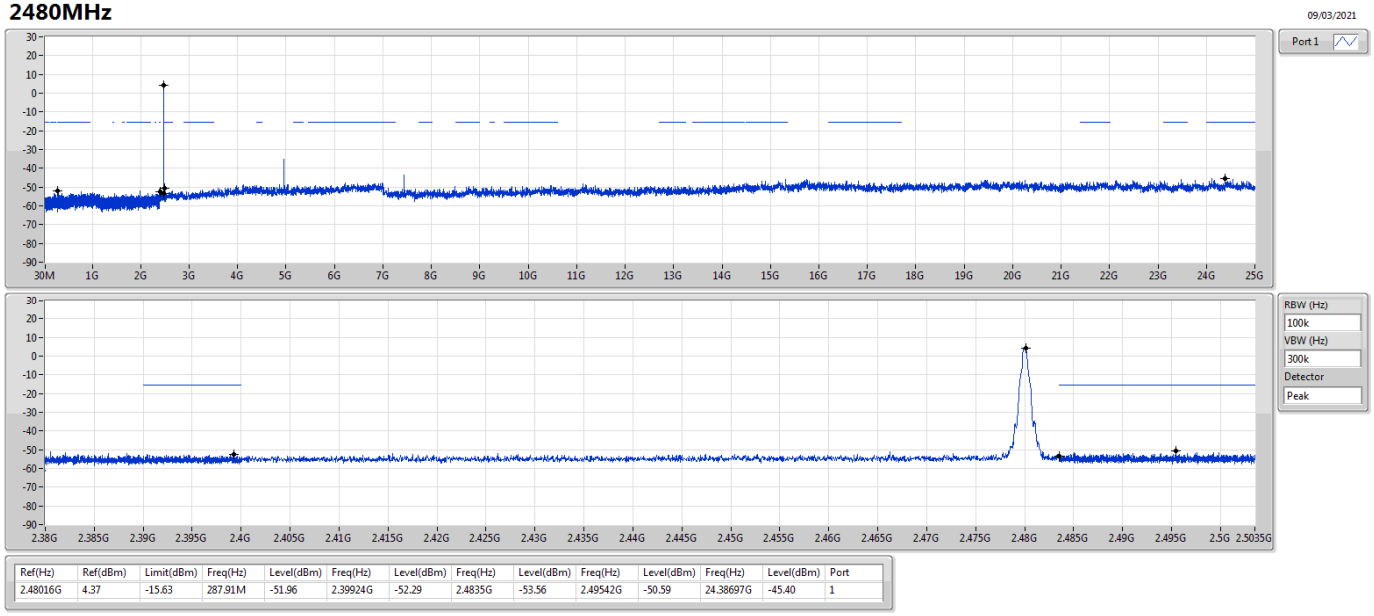
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44016G	4.32	-15.68	287.91M	-51.45	2.39888G	-51.44	2.4835G	-54.53	2.48683G	-50.81	21.81675G	-45.24	1

BT-BR(1Mbps) **CSE NdB**

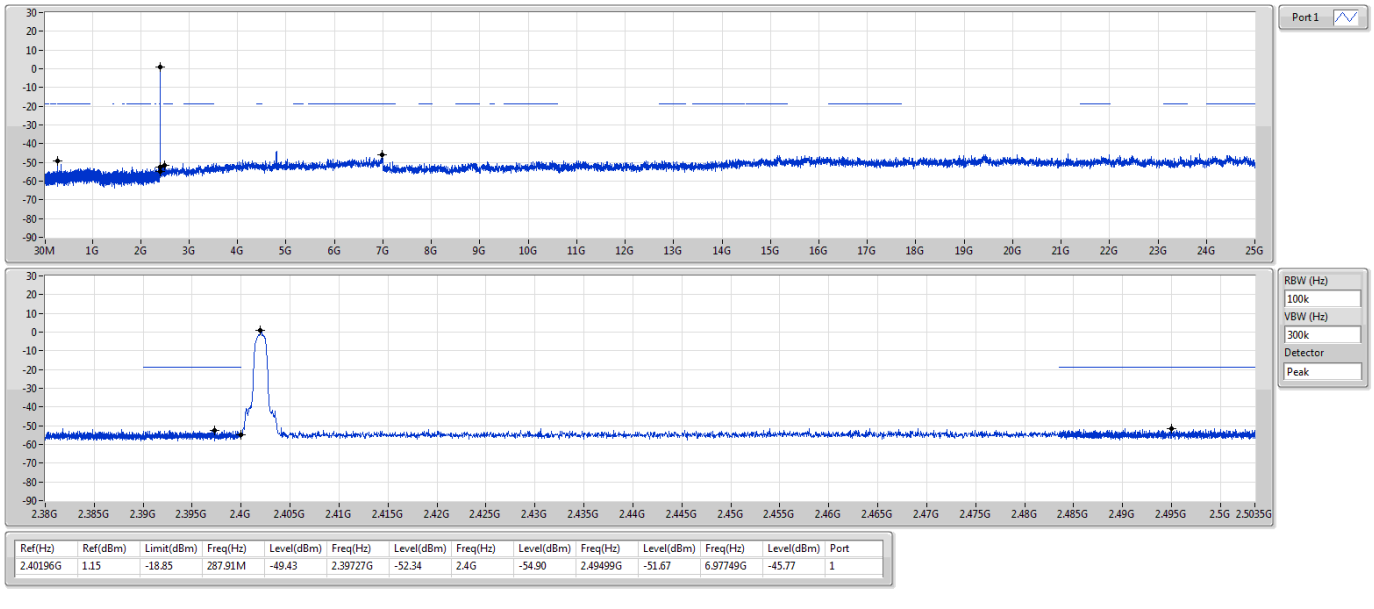
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48016G	4.37	-15.63	287.91M	-51.96	2.39924G	-52.29	2.4835G	-53.56	2.49542G	-50.59	24.38697G	-45.40	1

BT-EDR(2Mbps) **CSE NdB**

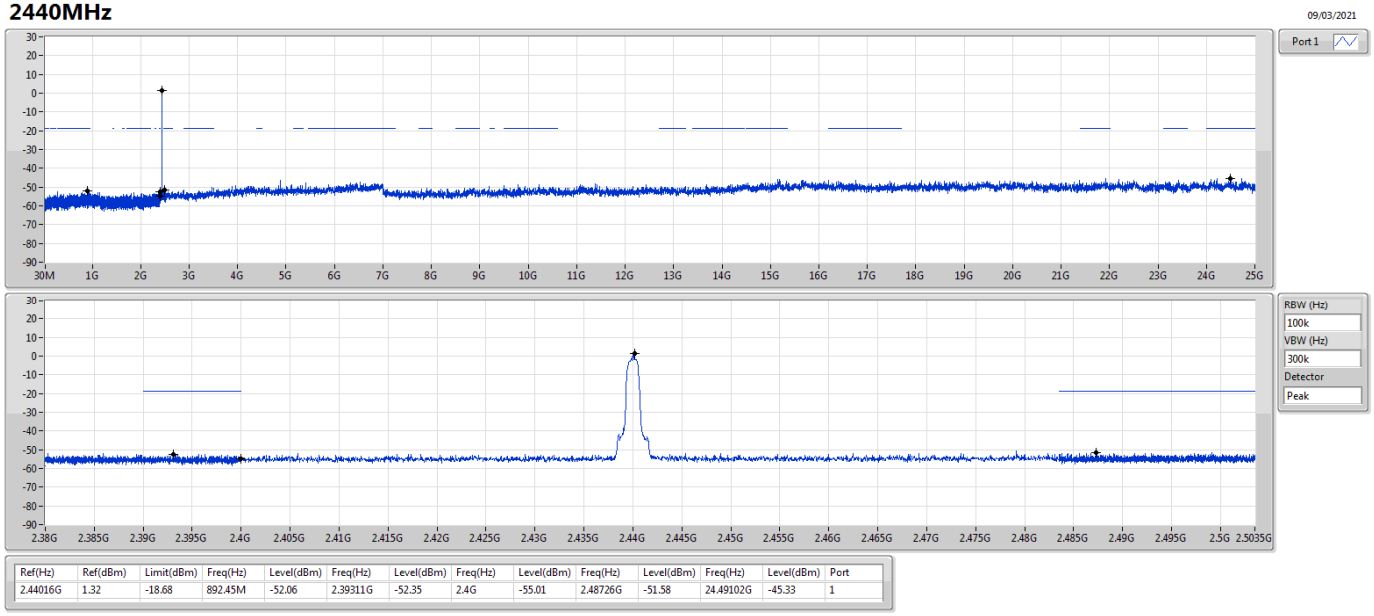
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40196G	1.15	-18.85	287.91M	-49.43	2.39727G	-52.34	2.4G	-54.90	2.49499G	-51.67	6.97749G	-45.77	1

BT-EDR(2Mbps) **CSE NdB**

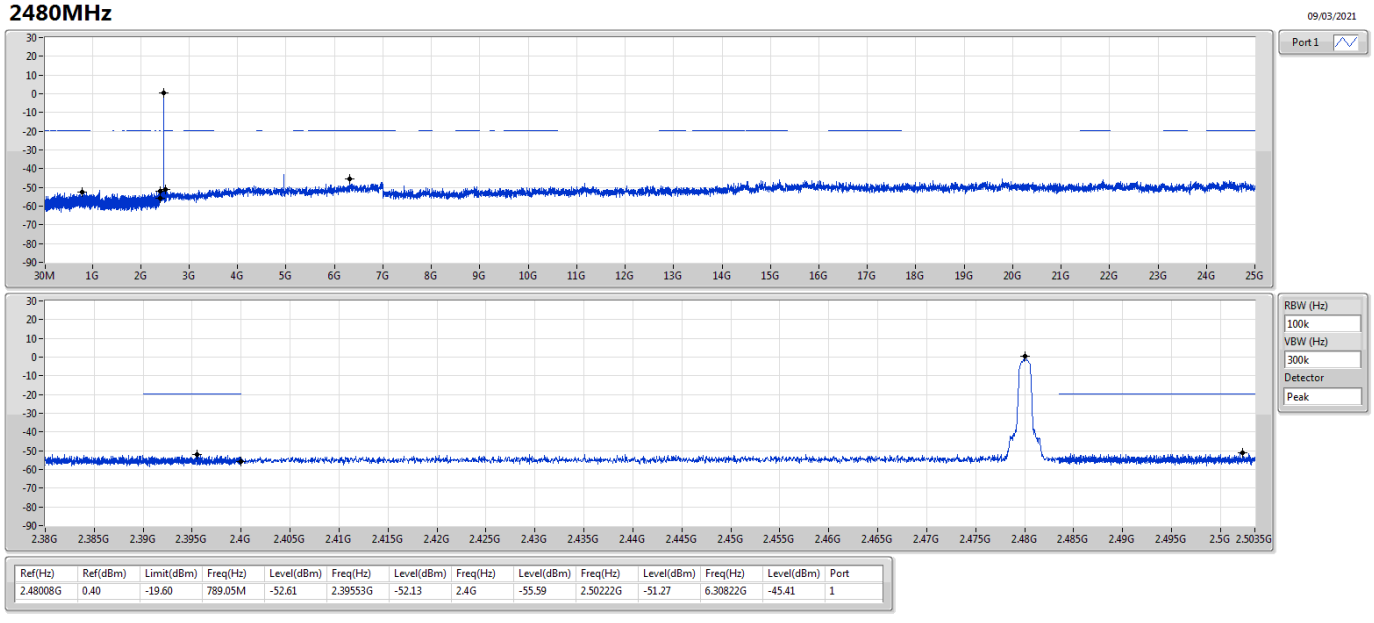
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44016G	1.32	-18.68	892.45M	-52.06	2.39311G	-52.35	2.4G	-55.01	2.48726G	-51.58	24.49102G	-45.33	1

BT-EDR(2Mbps) **CSE NdB**

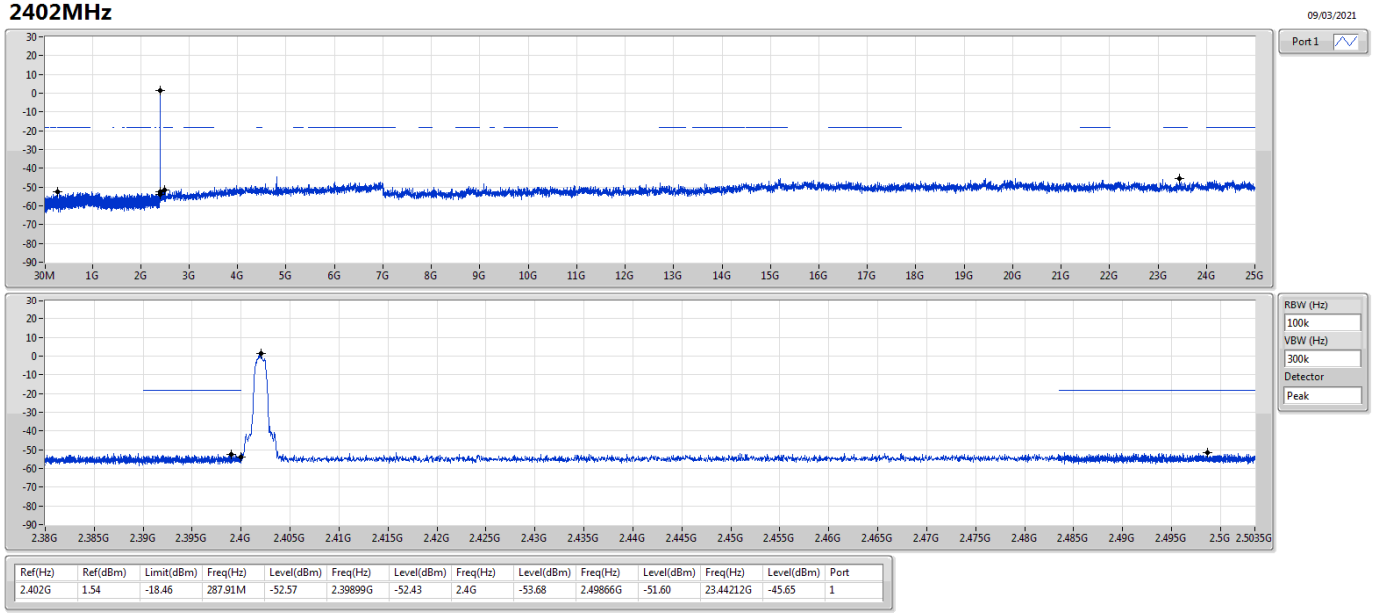
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48008G	0.40	-19.60	789.05M	-52.61	2.39553G	-52.13	2.4G	-55.59	2.50222G	-51.27	6.30822G	-45.41	1

BT-EDR(3Mbps) **CSE NdB**

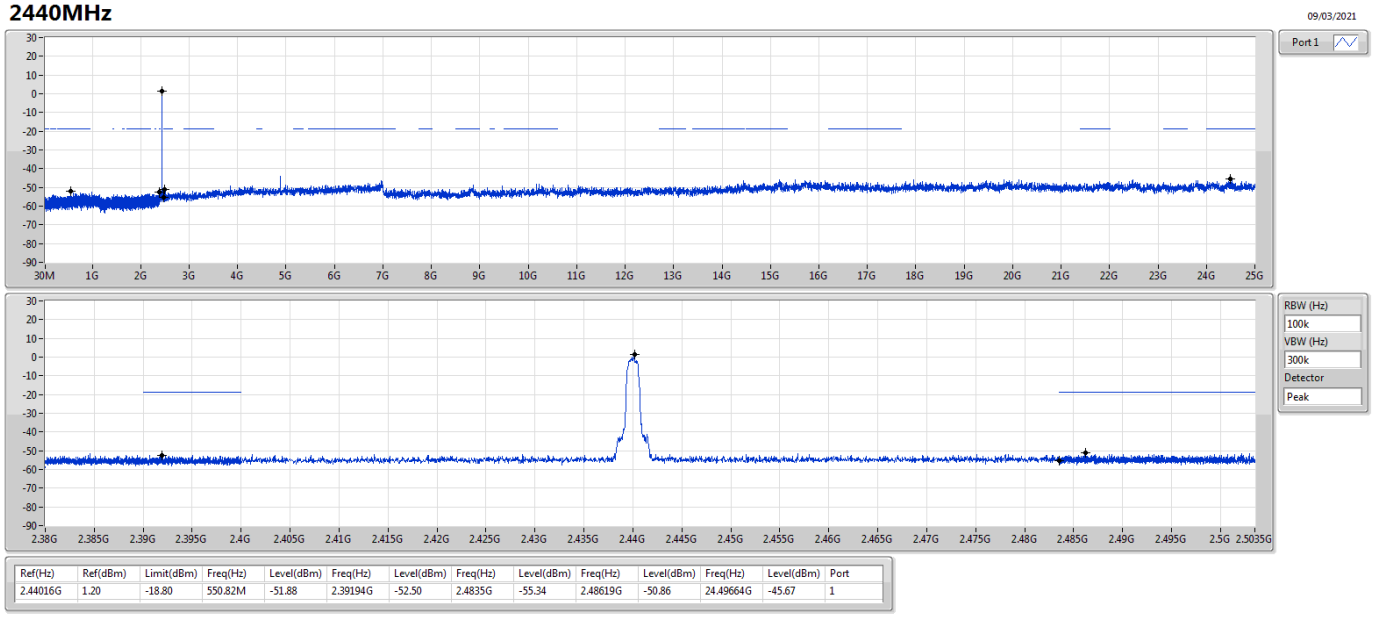
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	1.54	-18.46	287.91M	-52.57	2.39899G	-52.43	2.4G	-53.68	2.49866G	-51.60	23.44212G	-45.65	1

BT-EDR(3Mbps) **CSE NdB**

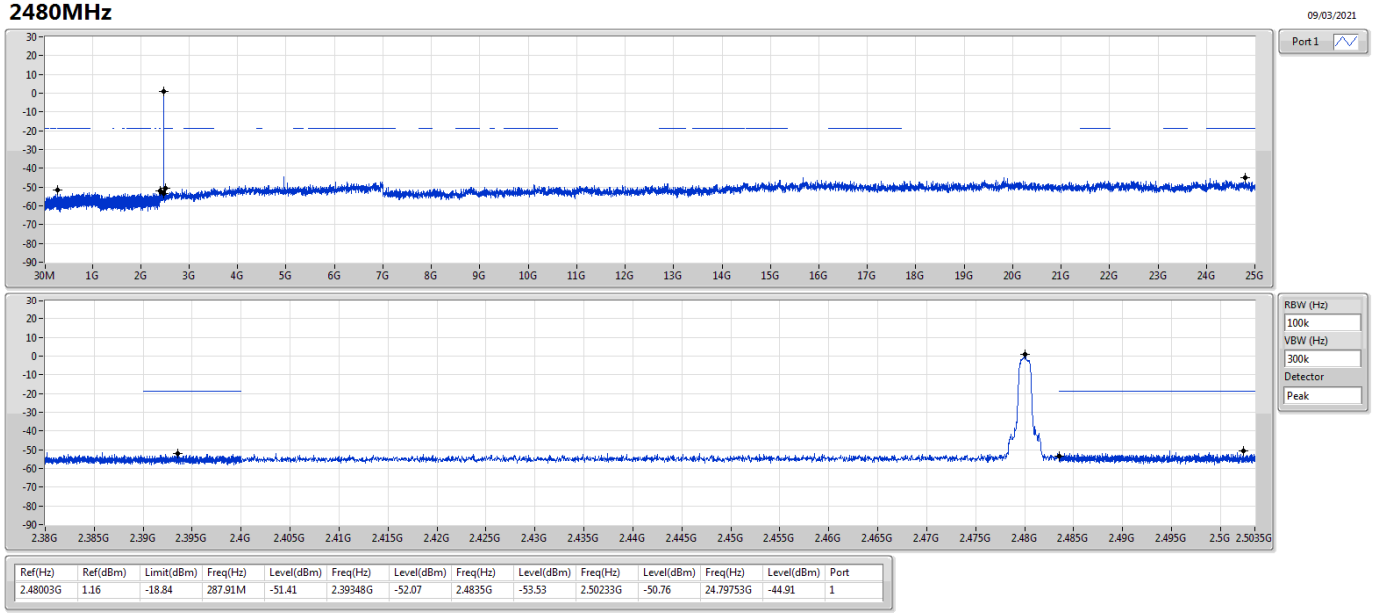
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44016G	1.20	-18.80	550.82M	-51.88	2.39194G	-52.50	2.4835G	-55.34	2.48619G	-50.86	24.49664G	-45.67	1

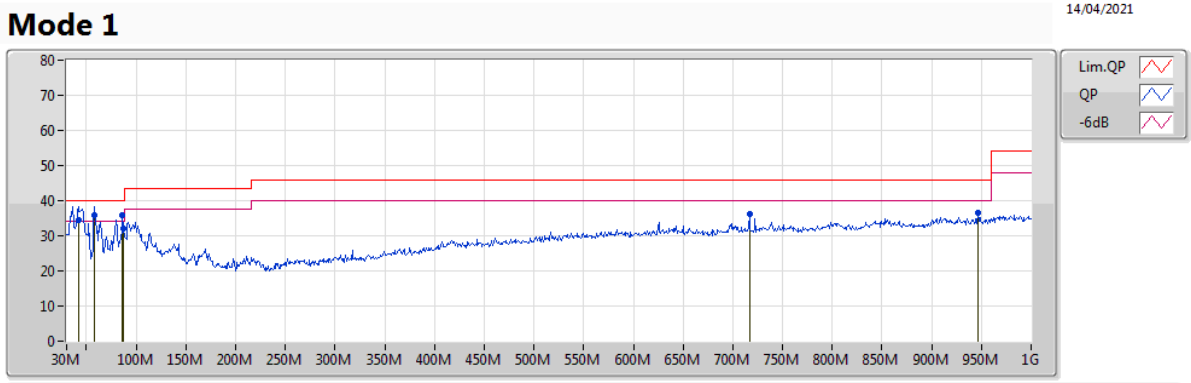
BT-EDR(3Mbps) **CSE NdB**

2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48003G	1.16	-18.84	287.91M	-51.41	2.39348G	-52.07	2.4835G	-53.53	2.50233G	-50.76	24.79753G	-44.91	1

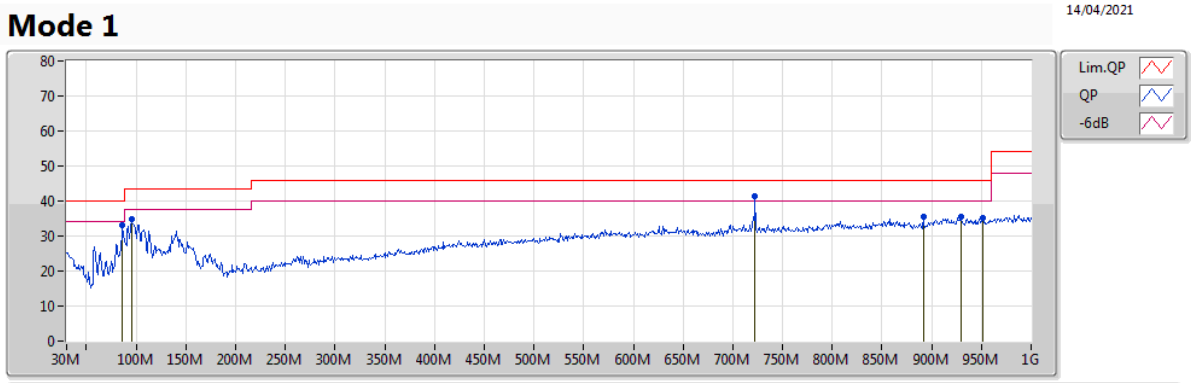
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	CTX		



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
QP	41.64M	34.50	40.00	-5.50	-13.80	3	Vertical	357	1.00	''	48.30	17.47	1.10	32.37
QP	58.13M	35.73	40.00	-4.27	-18.57	3	Vertical	209	1.00	"Worst"	54.30	12.45	1.36	32.38
PK	86.26M	35.71	40.00	-4.29	-16.76	3	Vertical	127	1.00	-	52.47	13.94	1.63	32.33
PK	87.23M	32.14	40.00	-7.86	-16.48	3	Vertical	189	1.25	-	48.62	14.21	1.64	32.33
PK	716.76M	36.13	46.00	-9.87	-1.24	3	Vertical	211	1.25	-	37.37	25.53	5.20	31.97
PK	946.65M	36.41	46.00	-9.59	1.91	3	Vertical	310	3.00	-	34.50	26.72	6.09	30.90

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	CTX		



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	86.26M	33.05	40.00	-6.95	-16.76	3	Horizontal	270	2.00	-	49.81	13.94	1.63	32.33
PK	94.99M	34.68	43.50	-8.82	-14.68	3	Horizontal	259	3.00	-	49.36	15.93	1.70	32.31
PK	722.58M	41.25	46.00	-4.75	-1.14	3	Horizontal	32	2.00	"Worst"	42.39	25.58	5.24	31.96
PK	891.36M	35.48	46.00	-10.52	0.95	3	Horizontal	221	1.25	-	34.53	26.42	5.87	31.34
PK	929.19M	35.56	46.00	-10.44	1.56	3	Horizontal	65	1.25	-	34.00	26.59	6.02	31.05
PK	951.5M	35.07	46.00	-10.93	2.00	3	Horizontal	289	1.00	-	33.07	26.75	6.11	30.86

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

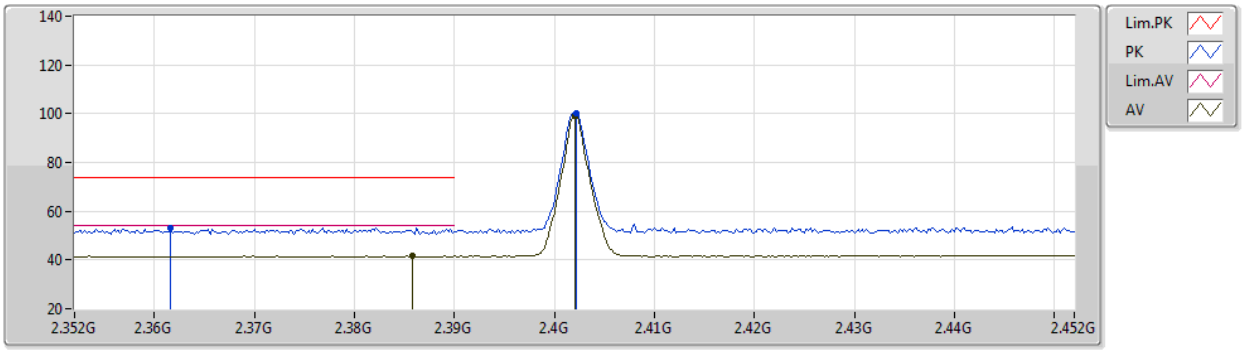
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	AV	4.80402G	51.37	54.00	-2.63	3	Vertical	0	1.65	-

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



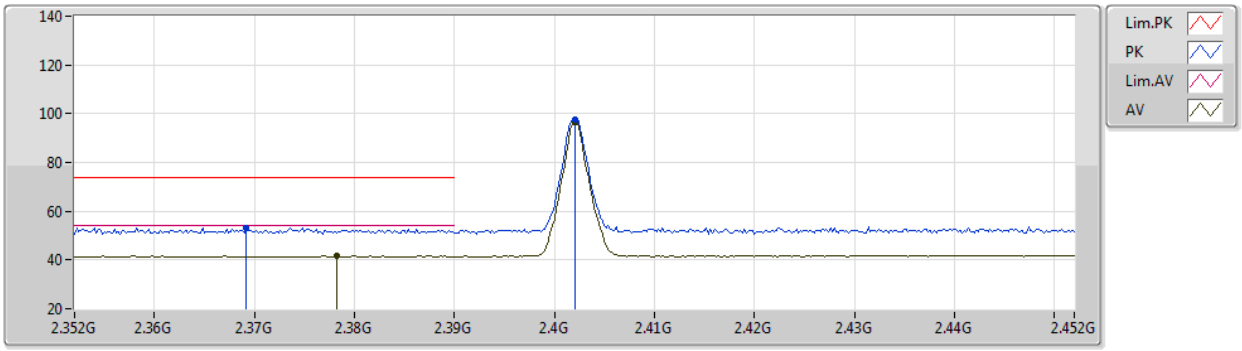
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3616G	53.36	74.00	-20.64	23.88	3	Vertical	33	2.75	-	27.32	2.16	-
AV	2.3858G	41.62	54.00	-12.38	12.06	3	Vertical	33	2.75	-	27.37	2.19	-
PK	2.4022G	100.13	Inf	-Inf	70.53	3	Vertical	33	2.75	-	27.40	2.20	-
AV	2.402G	99.22	Inf	-Inf	69.62	3	Vertical	33	2.75	-	27.40	2.20	-

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



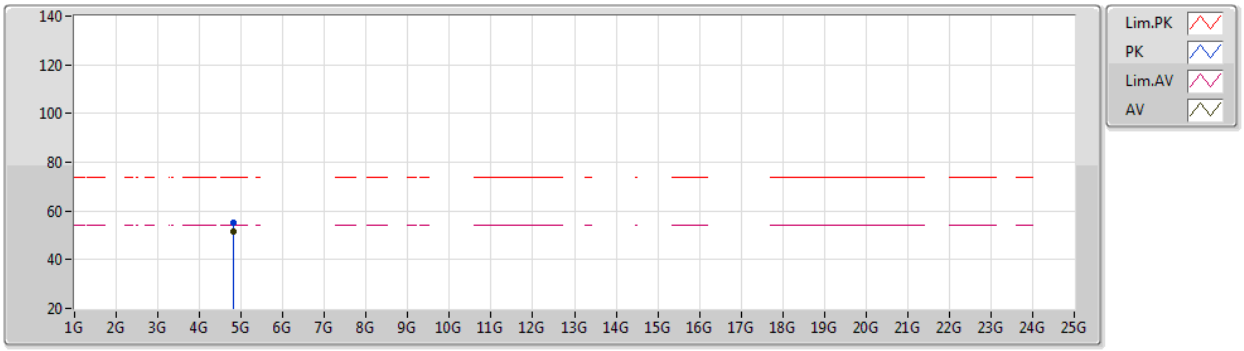
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3692G	53.36	74.00	-20.64	23.85	3	Horizontal	270	2.83	-	27.34	2.17	-
AV	2.3782G	41.57	54.00	-12.43	12.03	3	Horizontal	270	2.83	-	27.36	2.18	-
PK	2.402G	97.56	Inf	-Inf	67.96	3	Horizontal	270	2.83	-	27.40	2.20	-
AV	2.402G	96.73	Inf	-Inf	67.13	3	Horizontal	270	2.83	-	27.40	2.20	-

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



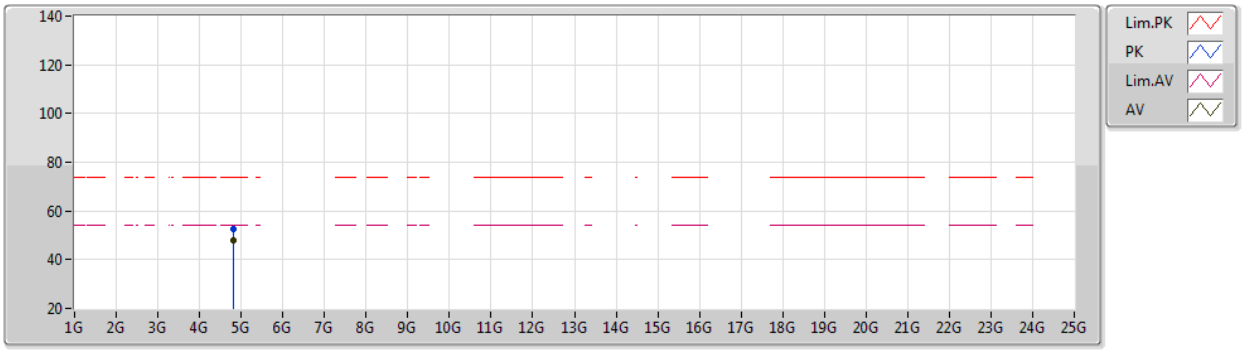
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80426G	55.41	74.00	-18.59	52.84	3	Vertical	0	1.65	-	32.13	5.00	34.56
AV	4.80402G	51.37	54.00	-2.63	48.81	3	Vertical	0	1.65	-	32.12	5.00	34.56

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



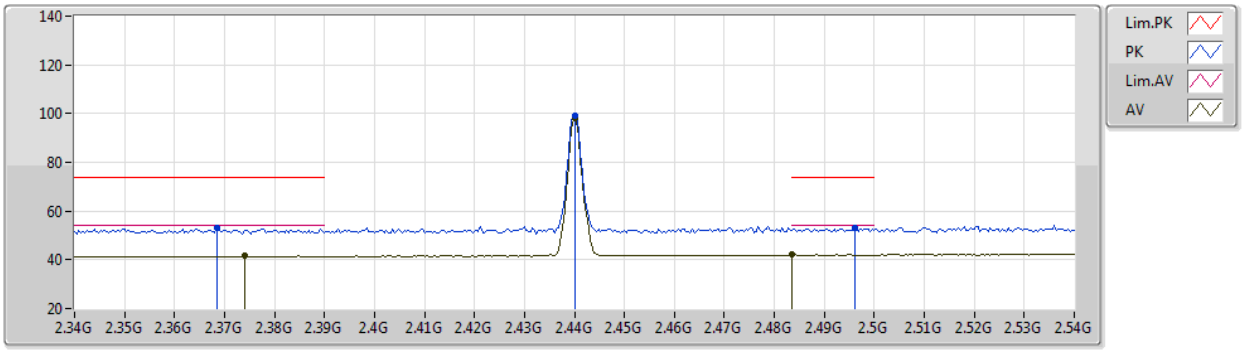
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80427G	52.51	74.00	-21.49	49.94	3	Horizontal	132	2.05	-	32.13	5.00	34.56
AV	4.80397G	48.16	54.00	-5.84	45.60	3	Horizontal	132	2.05	-	32.12	5.00	34.56

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



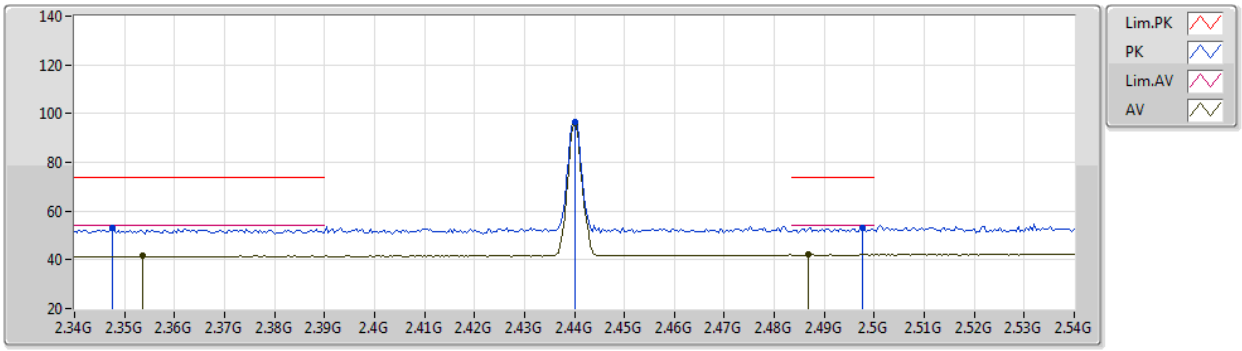
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3684G	52.99	74.00	-21.01	23.48	3	Vertical	12	3.00	-	27.34	2.17	-
AV	2.374G	41.58	54.00	-12.42	12.06	3	Vertical	12	3.00	-	27.35	2.17	-
PK	2.44G	99.17	Inf	-Inf	69.45	3	Vertical	12	3.00	-	27.48	2.24	-
AV	2.44G	98.26	Inf	-Inf	68.54	3	Vertical	12	3.00	-	27.48	2.24	-
PK	2.496G	52.85	74.00	-21.15	22.77	3	Vertical	12	3.00	-	27.78	2.30	-
AV	2.4835G	42.07	54.00	-11.93	12.09	3	Vertical	12	3.00	-	27.70	2.28	-

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



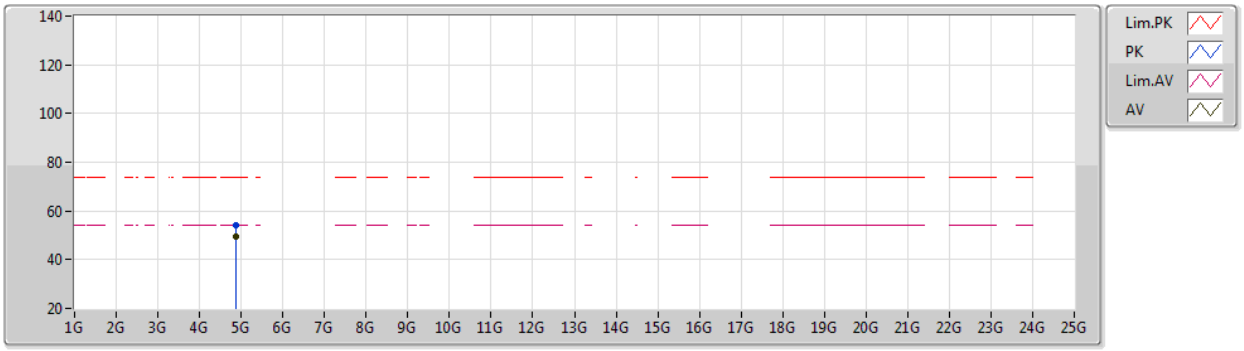
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3476G	53.26	74.00	-20.74	23.81	3	Horizontal	251	2.78	-	27.30	2.15	-
AV	2.3536G	41.59	54.00	-12.41	12.13	3	Horizontal	251	2.78	-	27.31	2.15	-
PK	2.44G	96.80	Inf	-Inf	67.08	3	Horizontal	251	2.78	-	27.48	2.24	-
AV	2.44G	95.97	Inf	-Inf	66.25	3	Horizontal	251	2.78	-	27.48	2.24	-
PK	2.4976G	53.21	74.00	-20.79	23.12	3	Horizontal	251	2.78	-	27.79	2.30	-
AV	2.4868G	42.15	54.00	-11.85	12.14	3	Horizontal	251	2.78	-	27.72	2.29	-

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



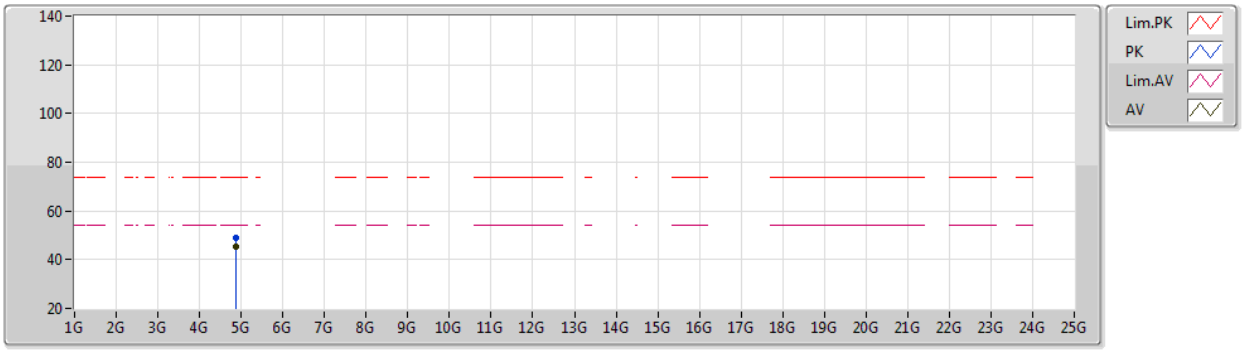
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.88031G	53.90	74.00	-20.10	50.92	3	Vertical	35	1.73	-	32.46	5.04	34.52
AV	4.87999G	49.63	54.00	-4.37	46.65	3	Vertical	35	1.73	-	32.46	5.04	34.52

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



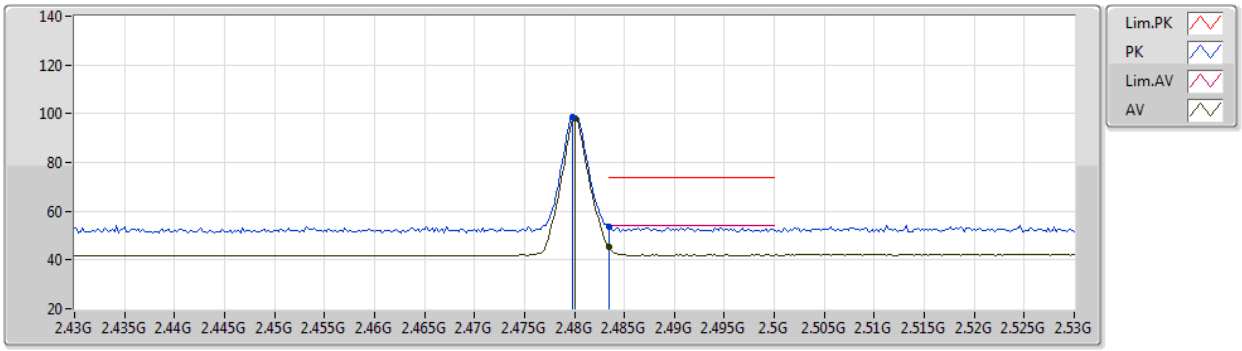
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.8846G	49.07	74.00	-24.93	46.08	3	Horizontal	322	2.03	-	32.47	5.04	34.52
AV	4.8722G	45.15	54.00	-8.85	42.20	3	Horizontal	322	2.03	-	32.44	5.04	34.53

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



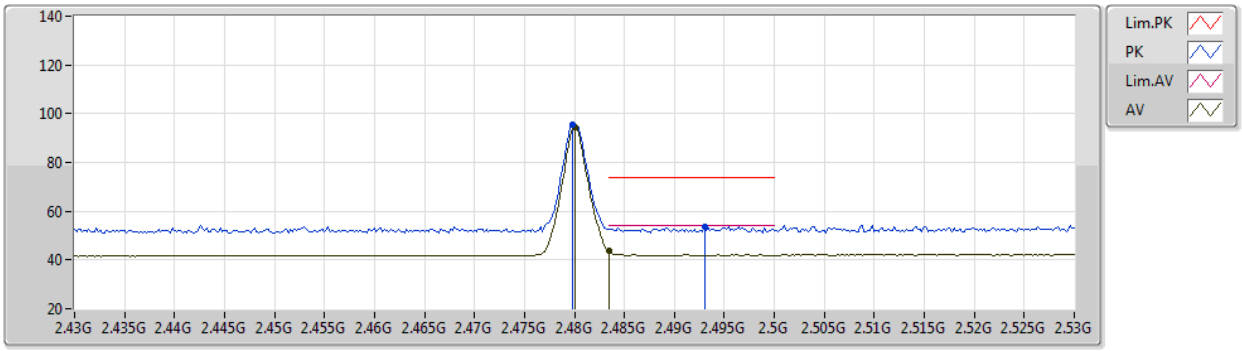
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4798G	98.72	Inf	-Inf	68.76	3	Vertical	45	2.95	-	27.68	2.28	-
AV	2.48G	97.86	Inf	-Inf	67.90	3	Vertical	45	2.95	-	27.68	2.28	-
PK	2.4835G	53.72	74.00	-20.28	23.74	3	Vertical	45	2.95	-	27.70	2.28	-
AV	2.4835G	45.19	54.00	-8.81	15.21	3	Vertical	45	2.95	-	27.70	2.28	-

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



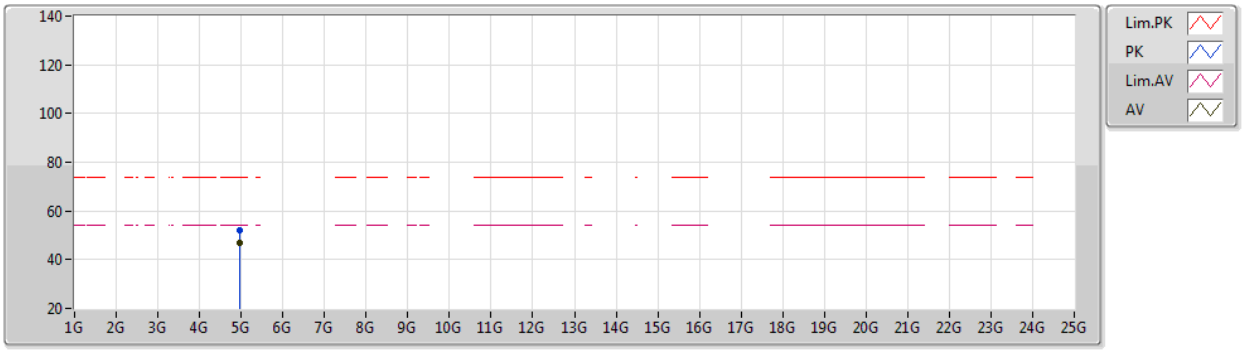
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4798G	95.44	Inf	-Inf	65.48	3	Horizontal	266	3.00	-	27.68	2.28	-
AV	2.48G	94.55	Inf	-Inf	64.59	3	Horizontal	266	3.00	-	27.68	2.28	-
PK	2.493G	53.59	74.00	-20.41	23.54	3	Horizontal	266	3.00	-	27.76	2.29	-
AV	2.4835G	43.54	54.00	-10.46	13.56	3	Horizontal	266	3.00	-	27.70	2.28	-

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



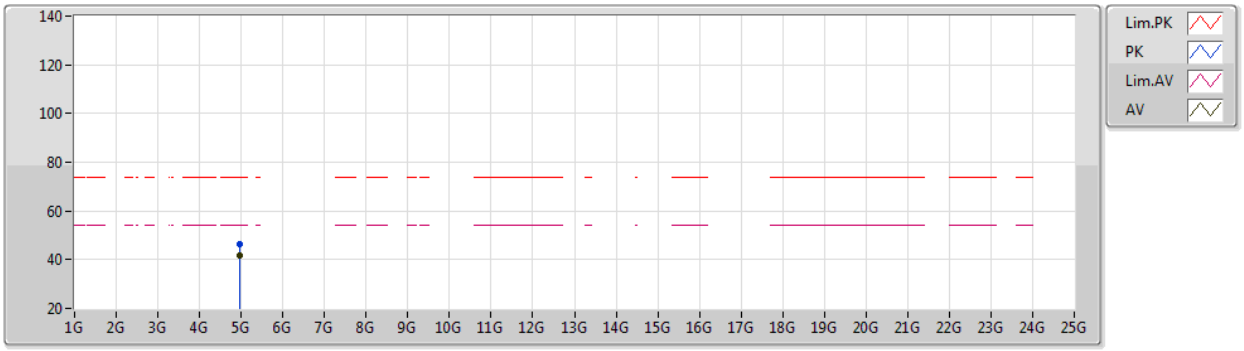
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96023G	51.99	74.00	-22.01	48.62	3	Vertical	58	1.68	-	32.78	5.08	34.49
AV	4.96003G	47.09	54.00	-6.91	43.72	3	Vertical	58	1.68	-	32.78	5.08	34.49

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



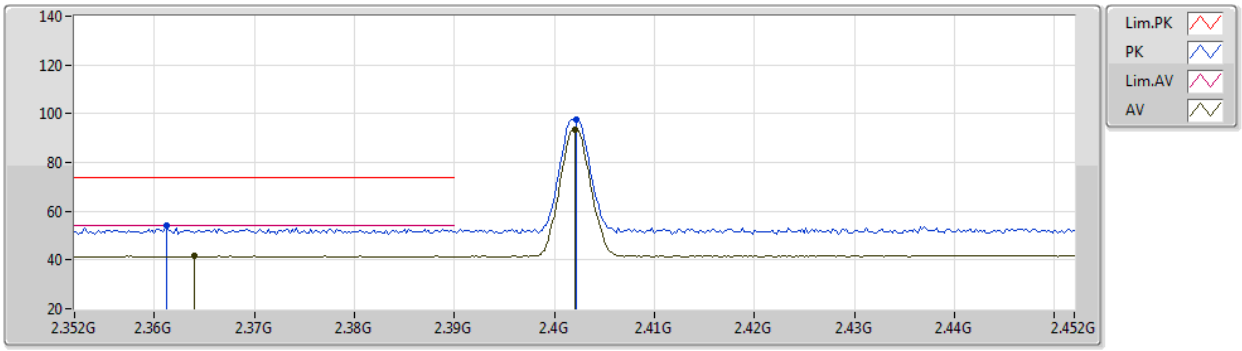
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96516G	46.45	74.00	-27.55	43.09	3	Horizontal	281	2.46	-	32.77	5.08	34.49
AV	4.95108G	41.73	54.00	-12.27	38.34	3	Horizontal	281	2.46	-	32.80	5.08	34.49

BT-EDR(3Mbps)

2402MHz_TX

02/02/2021



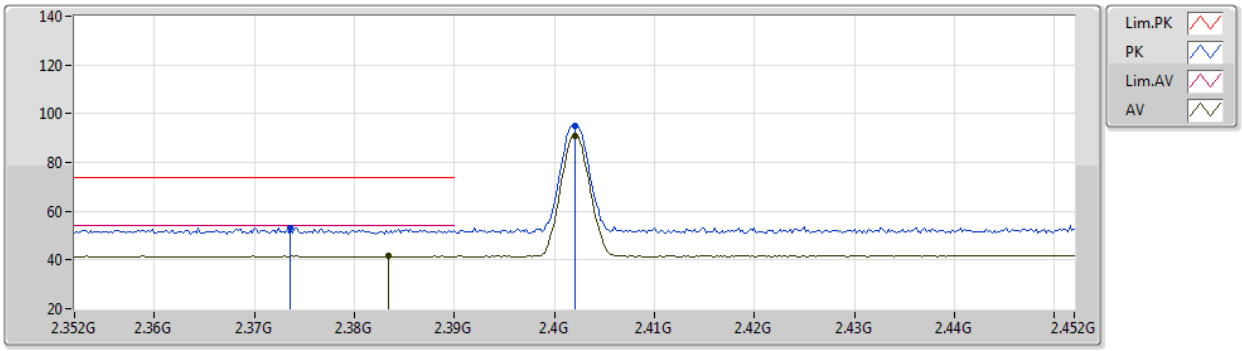
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3612G	54.11	74.00	-19.89	24.63	3	Vertical	20	2.71	-	27.32	2.16	-
AV	2.364G	41.61	54.00	-12.39	12.12	3	Vertical	20	2.71	-	27.33	2.16	-
PK	2.4022G	97.79	Inf	-Inf	68.19	3	Vertical	20	2.71	-	27.40	2.20	-
AV	2.402G	93.63	Inf	-Inf	64.03	3	Vertical	20	2.71	-	27.40	2.20	-

BT-EDR(3Mbps)

2402MHz_TX

02/02/2021



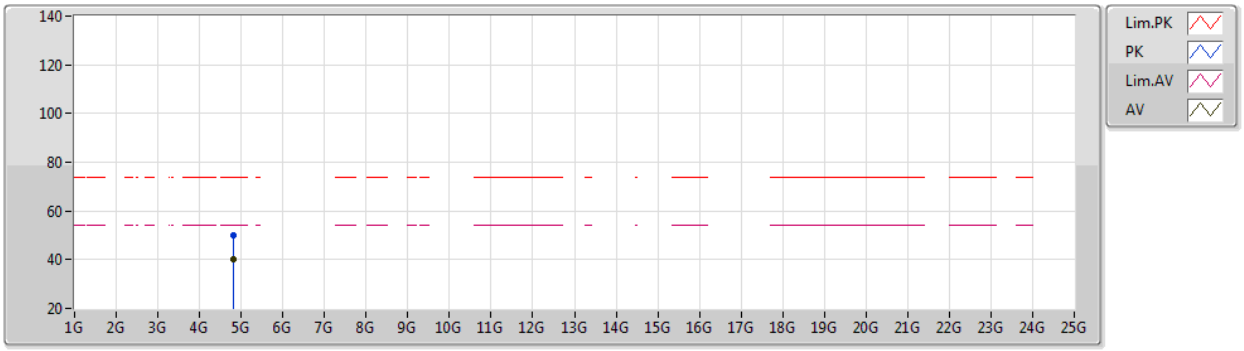
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3736G	53.35	74.00	-20.65	23.83	3	Horizontal	272	2.83	-	27.35	2.17	-
AV	2.3834G	41.54	54.00	-12.46	11.99	3	Horizontal	272	2.83	-	27.37	2.18	-
PK	2.402G	95.09	Inf	-Inf	65.49	3	Horizontal	272	2.83	-	27.40	2.20	-
AV	2.402G	90.85	Inf	-Inf	61.25	3	Horizontal	272	2.83	-	27.40	2.20	-

BT-EDR(3Mbps)

02/02/2021

2402MHz_TX



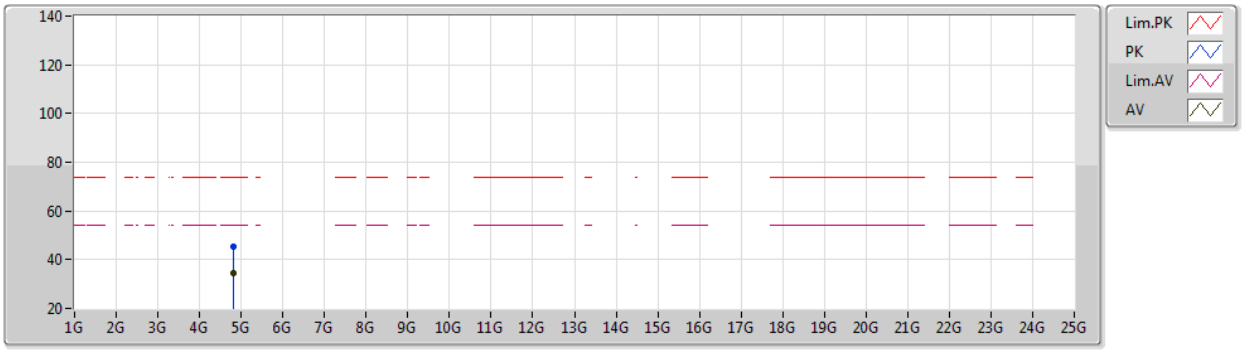
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.8038G	49.76	74.00	-24.24	47.20	3	Vertical	34	1.53	-	32.12	5.00	34.56
AV	4.80404G	40.26	54.00	-13.74	37.70	3	Vertical	34	1.53	-	32.12	5.00	34.56

BT-EDR(3Mbps)

2402MHz_TX

02/02/2021



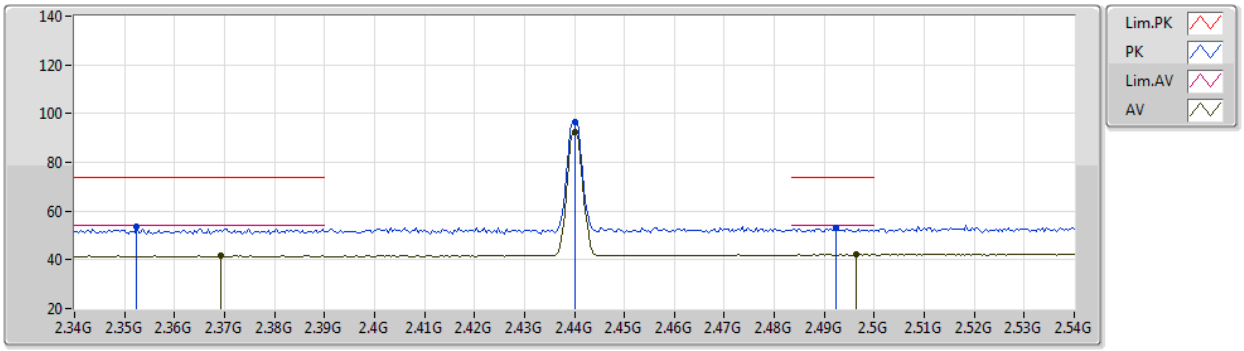
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.8036G	45.14	74.00	-28.86	42.58	3	Horizontal	210	1.84	-	32.12	5.00	34.56
AV	4.80388G	34.59	54.00	-19.41	32.03	3	Horizontal	210	1.84	-	32.12	5.00	34.56

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



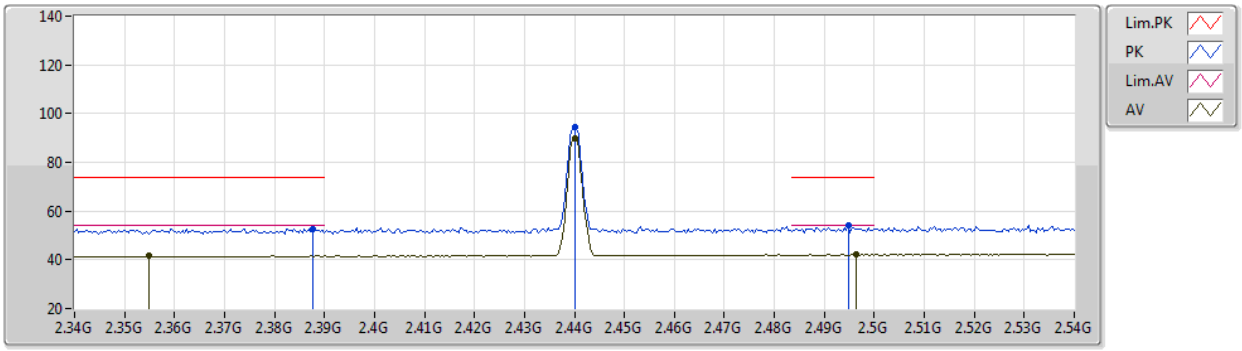
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3524G	53.60	74.00	-20.40	24.15	3	Vertical	13	3.00	-	27.30	2.15	-
AV	2.3692G	41.64	54.00	-12.36	12.13	3	Vertical	13	3.00	-	27.34	2.17	-
PK	2.44G	96.71	Inf	-Inf	66.99	3	Vertical	13	3.00	-	27.48	2.24	-
AV	2.44G	92.50	Inf	-Inf	62.78	3	Vertical	13	3.00	-	27.48	2.24	-
PK	2.4924G	52.88	74.00	-21.12	22.84	3	Vertical	13	3.00	-	27.75	2.29	-
AV	2.4964G	42.12	54.00	-11.88	12.04	3	Vertical	13	3.00	-	27.78	2.30	-

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



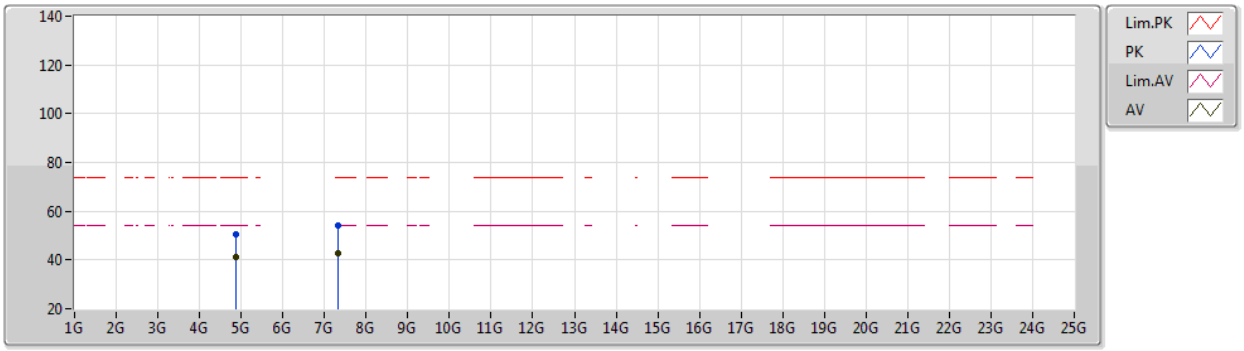
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3876G	52.80	74.00	-21.20	23.23	3	Horizontal	269	2.71	-	27.38	2.19	-
AV	2.3548G	41.59	54.00	-12.41	12.13	3	Horizontal	269	2.71	-	27.31	2.15	-
PK	2.44G	94.29	Inf	-Inf	64.57	3	Horizontal	269	2.71	-	27.48	2.24	-
AV	2.44G	89.98	Inf	-Inf	60.26	3	Horizontal	269	2.71	-	27.48	2.24	-
PK	2.4948G	53.97	74.00	-20.03	23.91	3	Horizontal	269	2.71	-	27.77	2.29	-
AV	2.4964G	42.16	54.00	-11.84	12.08	3	Horizontal	269	2.71	-	27.78	2.30	-

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



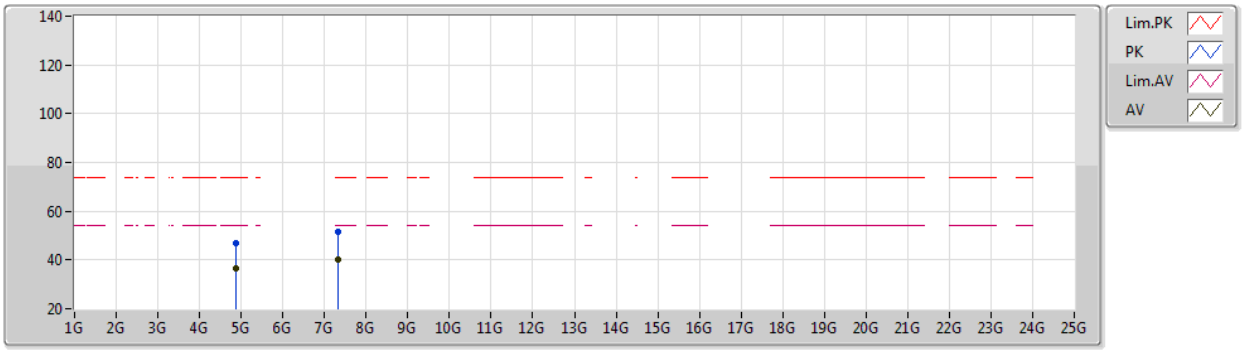
EUT Y_1TX
Setting 7
01-F-S-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.88008G	50.45	74.00	-23.55	47.47	3	Vertical	52	1.74	-	32.46	5.04	34.52
AV	4.88G	41.46	54.00	-12.54	38.48	3	Vertical	52	1.74	-	32.46	5.04	34.52
PK	7.31984G	54.27	74.00	-19.73	45.42	3	Vertical	340	1.80	-	37.18	6.32	34.65
AV	7.32004G	42.77	54.00	-11.23	33.92	3	Vertical	340	1.80	-	37.18	6.32	34.65

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



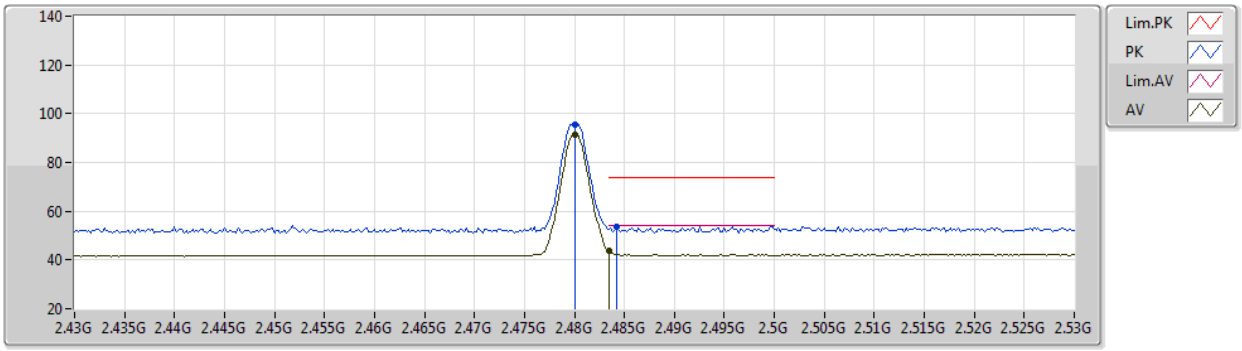
EUT Y_1TX
Setting 7
01-F-S-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.88016G	46.67	74.00	-27.33	43.69	3	Horizontal	136	1.94	-	32.46	5.04	34.52
AV	4.88G	36.53	54.00	-17.47	33.55	3	Horizontal	136	1.94	-	32.46	5.04	34.52
PK	7.31988G	51.57	74.00	-22.43	42.72	3	Horizontal	67	1.80	-	37.18	6.32	34.65
AV	7.32012G	40.01	54.00	-13.99	31.16	3	Horizontal	67	1.80	-	37.18	6.32	34.65

BT-EDR(3Mbps)

2480MHz_TX

02/02/2021



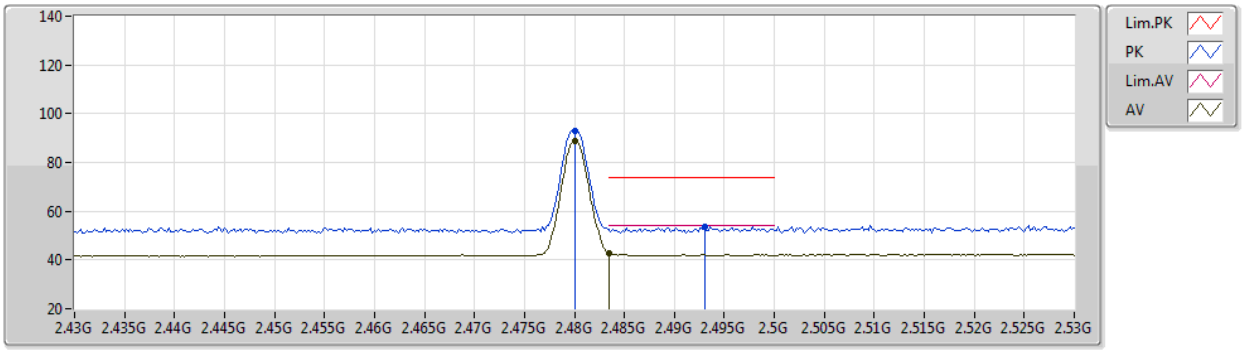
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.48G	95.76	Inf	-Inf	65.80	3	Vertical	42	2.63	-	27.68	2.28	-
AV	2.48G	91.45	Inf	-Inf	61.49	3	Vertical	42	2.63	-	27.68	2.28	-
PK	2.4842G	53.81	74.00	-20.19	23.82	3	Vertical	42	2.63	-	27.71	2.28	-
AV	2.4835G	43.57	54.00	-10.43	13.59	3	Vertical	42	2.63	-	27.70	2.28	-

BT-EDR(3Mbps)

2480MHz_TX

02/02/2021



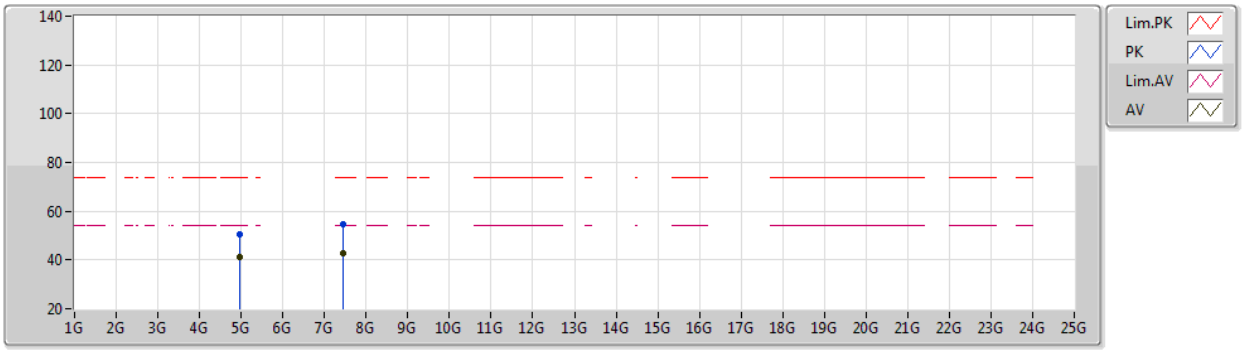
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.48G	92.83	Inf	-Inf	62.87	3	Horizontal	266	3.00	-	27.68	2.28	-
AV	2.48G	88.55	Inf	-Inf	58.59	3	Horizontal	266	3.00	-	27.68	2.28	-
PK	2.493G	53.86	74.00	-20.14	23.81	3	Horizontal	266	3.00	-	27.76	2.29	-
AV	2.4835G	42.97	54.00	-11.03	12.99	3	Horizontal	266	3.00	-	27.70	2.28	-

BT-EDR(3Mbps)

2480MHz_TX

02/02/2021



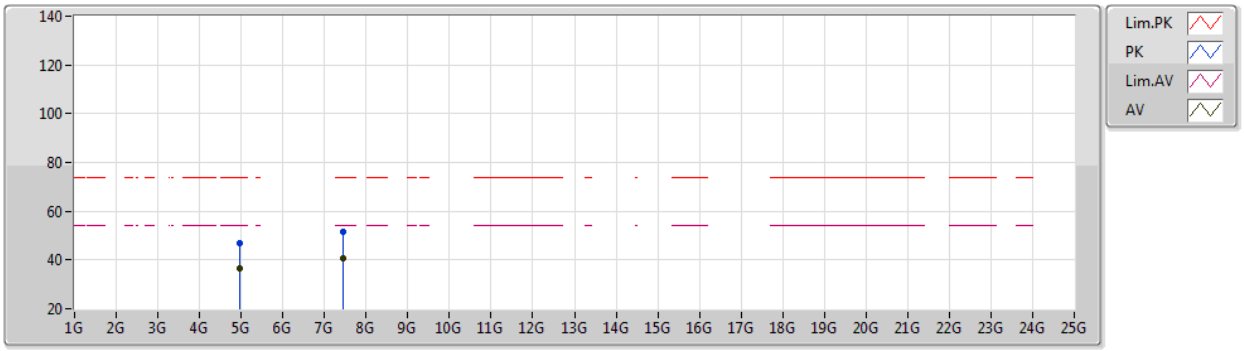
EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96428G	50.73	74.00	-23.27	47.37	3	Vertical	138	2.72	-	32.77	5.08	34.49
AV	4.9562G	41.38	54.00	-12.62	38.00	3	Vertical	138	2.72	-	32.79	5.08	34.49
PK	7.44152G	54.86	74.00	-19.14	45.92	3	Vertical	324	2.87	-	37.22	6.38	34.66
AV	7.4452G	42.79	54.00	-11.21	33.86	3	Vertical	324	2.87	-	37.21	6.38	34.66

BT-EDR(3Mbps)

2480MHz_TX

02/02/2021



EUT Y_1TX
Setting 7
01-F-N-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96712G	46.82	74.00	-27.18	43.45	3	Horizontal	42	2.34	-	32.77	5.08	34.48
AV	4.95112G	36.58	54.00	-17.42	33.19	3	Horizontal	42	2.34	-	32.80	5.08	34.49
PK	7.434G	51.79	74.00	-22.21	42.84	3	Horizontal	289	1.20	-	37.23	6.38	34.66
AV	7.43536G	40.81	54.00	-13.19	31.86	3	Horizontal	289	1.20	-	37.23	6.38	34.66