Testing Laboratory 1190

FCC RADIO TEST REPORT

FCC ID	:	2AWNEKDE20105
Equipment	:	Home Entertainment Hub
Brand Name	:	E1 by Ericsson
Model Name	:	KDE20105
Applicant	:	Ericsson AB 21-23 Torshamnsgatan Stockholm, 16480 Sweden
Manufacturer	:	CyberTAN Technology Inc. No. 99, Park Avenue III Science-based Industrial Park Hsinchu Taiwan 308
Standard	:	47 CFR FCC Part 15.247

The product was received on Jan. 14, 2021, and testing was started from Jan. 14, 2021 and completed on Feb. 18, 2021. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications 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. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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Appendix H. Test Results of Radiated Emission Co-location

Appendix I. Test Photos

Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR031609-03AC	01	Initial issue of report	Feb. 26, 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

For WLAN 2.4GHz / WLAN 5GHz / Bluetooth / Zigbee function:

Ant.	Port		Brand	Model Name	Type	Connector	Gain (dBi)		
	WLAN 2.4GHz	WLAN 5GHz B1,B2					WLAN 2.4GHz	WLAN 5GHz B1	WLAN 5GHz B2
1	1	1	Airgain	N2420DSRP	PCB	I-PEX	1.7	3.5	3.4
2	2	2	Airgain	N2420DSRL	PCB	I-PEX	2.0	3.6	3.7
Ant.	Port		Brand	Model Name	Type	Connector	Gain (dBi)		
	WLAN 5GHz B3,B4	Zigbee					WLAN 5GHz B3	WLAN 5GHz B4	Zigbee
3	1	1	Airgain	N2420DSRK	PCB	I-PEX	4.1	4.1	1.8
Ant.	Port		Brand	Model Name	Type	Connector	Gain (dBi)		
	WLAN 5GHz B3,B4	BT					WLAN 5GHz B3	WLAN 5GHz B4	BT
4	2	1	Airgain	N2420DSRK	PCB	I-PEX	4.7	3.9	1.5

Note1: B1 means band 1, B2 means band 2, B3 means band 3, B4 means band 4 and BT means Bluetooth.
Note2: The above information was declared by manufacturer.
Note3: For WLAN 2.4GHz function (2TX/2RX):
The WLAN 2.4GHz supports the b, g, n, VHT.
Port 1 and Port 2 could transmit/receive simultaneously.
Note4: For WLAN 5GHz Band 1, Band 2 function (2TX/2RX):

The WLAN 5GHz Band 1, Band 2 supports the a, n, ac.
Port 1 and Port 2 could transmit/receive simultaneously.
Note5: For WLAN 5GHz Band 3, Band 4 function (2TX/2RX):
The WLAN 5GHz Band 3, Band 4 supports the a, n, ac.
Port 1 and Port 2 could transmit/receive simultaneously.
Note6: For Zigbee function (1TX/1RX):
Only Port 1 can be used as transmitting/receiving.
Note7: For Bluetooth function (1TX/1RX):
Only Port 1 can be used as transmitting/receiving.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	0.483	3.16	2.898m	1k
BT-EDR(2Mbps)	0.484	3.15	2.91m	1k
BT-EDR(3Mbps)	0.498	3.03	2.905m	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	CSR BlueSuite 2.6.9 (Version 2.6.9.1584)

1.1.5 Table for WWAN Module Information

The EUT was installed certified WWAN module, the WWAN module information and its correspond model name as below table:

WWAN Module	Brand Name	Model Name	FCC ID	Bands
1	Sierra	EM9190	N7NEM91	4G Band (LTE): 2,4,5,7,12,13,14,17,25,26,30,38,41,42,48,66,71 5G Band (NR): n2,n5,n41,n66,n71 5G Band (EN-DC): EN-DC_5A_n2A,EN-DC_12A_n2A,EN-DC_2A_n5A,EN-DC_7A_n5A,EN-DC_30A_n5A,EN-DC_66A_n5A,EN-DC_2A_n41A,EN-DC_66A_n41A,EN-DC_5A_n66A,EN-DC_12A_n66A,EN-DC_13A_n66A,EN-DC_2A_n71A,EN-DC_7A_n71A,EN-DC_66A_n71A
2	Sierra	EM9191	N7NEM91	

Note: The above information was declared by manufacturer.

1.1.6 Table for EUT Supports Functions

Function	Support Type
AP	Master
Mesh	Master

Note: After evaluating, the “AP Mode” have been selected to test and recorded in the test report.

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			
☐	HWA YA	ADD :	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)
		TEL :	886-3-327-3456 FAX : 886-3-327-0973
☒	JHUBEI	ADD :	No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302, Taiwan (R.O.C.)
		TEL :	886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Serway Li	21.2-23.2 / 54-57	Jan. 27, 2021~ Feb. 04, 2021
Radiated (Co-Location)	03CH05-CB	Kevin Huang	22.6-23.6 / 54-57	Feb. 03, 2021
Radiated (Below 1GHz)	03CH03-CB	Kevin Huang	21.5-22.9 / 55-57	Feb. 06, 2021
Radiated (Above 1GHz)	03CH03-CB	Kevin Huang	21.8-22.8 / 55-58	Jan. 14, 2021~ Feb. 03, 2021
AC Conduction	CO01-CB	Ryo Fan	18~19 / 61~62	Jan. 21, 2021~ Feb. 18, 2021

Test site Designation No. TW0006 with FCC.
Test site registered number IC 4086D with Industry Canada.

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	63
2440MHz	63
2480MHz	63
BT-EDR(2Mbps)	-
2402MHz	63
2440MHz	63
2480MHz	63
BT-EDR(3Mbps)	-
2402MHz	63
2440MHz	63
2480MHz	63

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	Normal link-EUT with WWAN module 1-LTE link Band 2 + Adapter with US cable
2	Normal link-EUT with WWAN module 1-5G EN-DC_2A_n41A + Adapter with US cable
Mode 1 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	Normal link-EUT with WWAN module 2-LTE link Band 2 + Adapter with US cable
For operating mode 1 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	WLAN 2.4GHz + Adapter with US cable
2	WLAN 5GHz Band 1, 2 + Adapter with US cable
3	WLAN 5GHz Band 3, 4 + Adapter with US cable
4	Bluetooth + Adapter with US cable
5	Zigbee + Adapter with US cable
For operating mode 3 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 - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
The Operating Mode of Radiated Emission Co-location as below: 1. WLAN 2.4GHz + WLAN 5GHz Band 1, 2 2. WLAN 5GHz Band 3, 4 + Bluetooth + Zigbee After evaluating, the full function generated the worst case, thus the measurement will follow this same test configuration.	
1	WLAN 2.4GHz + WLAN 5GHz Band 1, 2 + WLAN 5GHz Band 3, 4 + Bluetooth + Zigbee
Refer to Appendix H for Radiated Emission Co-location.	

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 Band 1, 2 + WLAN 5GHz Band 3, 4 + Bluetooth + Zigbee + 4G LTE
2	WLAN 2.4GHz + WLAN 5GHz Band 1, 2 + WLAN 5GHz Band 3, 4 + Bluetooth + Zigbee + 5G NR
Refer to Sporton Test Report No.: FA031609-03 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used Z axis.

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**	**DC Power cable length**
Adapter	FSP	FSP100-A1AR3	INPUT: 100-240V~50-60Hz, 1.4A OUTPUT: 5V, 3A / 9V, 3A 12V, 3A / 15V, 3A 20V, 5.0A 100W MAX.	Non-Shielded 1.6m
Others				
HDMI cable*1: Shielded, 1.5m				
USB-C to USB-A cable*1: Shielded, 0.1m				
Power cable*1: Non-shielded, 1m				

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	TV	ASUS	VP28U	N/A
B	Micro SD Card	Transcend	TS16GUSDHC10	N/A
C	SIM Card	N/A	N/A	N/A
D	LAN NB	DELL	E6430	N/A
E	WAN NB	DELL	E6430	N/A
F	2.4G NB	DELL	E6430	N/A
G	5G-1 NB	DELL	E6430	N/A
H	5G-2 NB	DELL	E6430	N/A
I	Bluetooth Speaker	MARUS	MSK06C-RD	N/A
J	Zigbee Device	N/A	N/A	N/A
K	LTE+5G NR Base station	Anritsu	MT8821C	N/A
L	Air Mouse	HENGCHUANGYU	HCY-57B	2AOBUHCY-57B

For Radiated (below 1GHz):

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

For Radiated (above 1GHz):

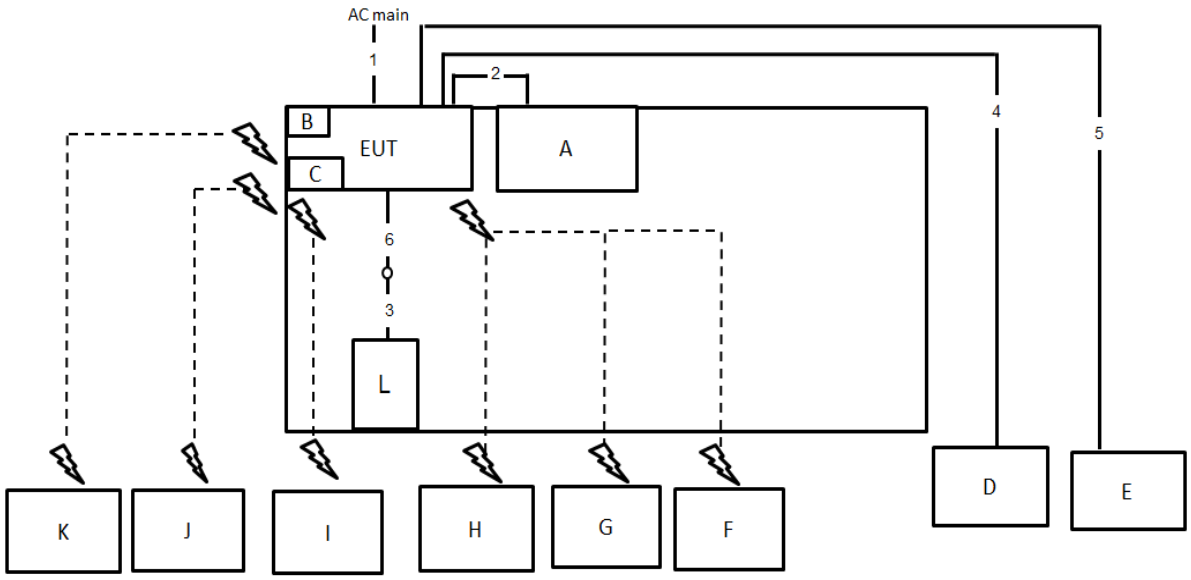
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LCD Monitor	DELL	1704FPTt	N/A
B	USB Hub	IOTNPCI	HB-16	N/A
C	Keyboard	iCooky	SK068	N/A
D	Mouse	Logitech	M-U0026	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
B	USB Hub	IOTNPCI	HB-16	N/A
C	LCD Monitor	DELL	1704FPTt	N/A
D	Keyboard	iCooky	SK068	N/A
E	Mouse	Logitech	M-U0026	N/A

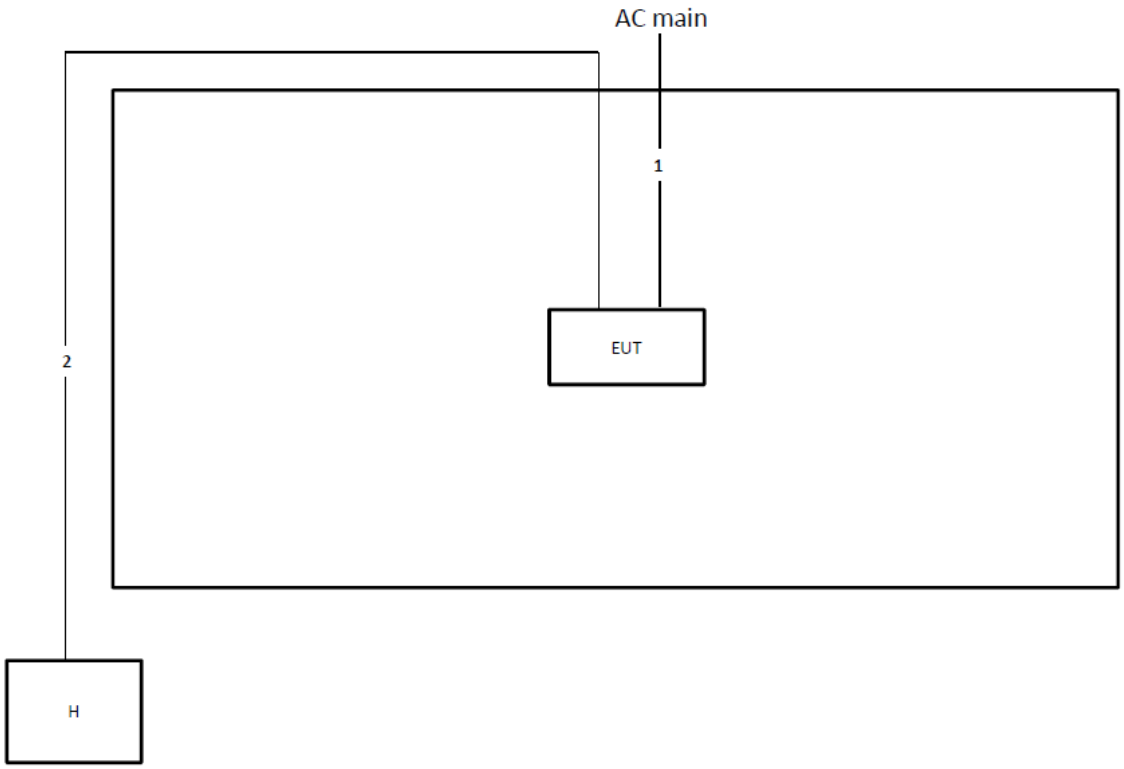
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



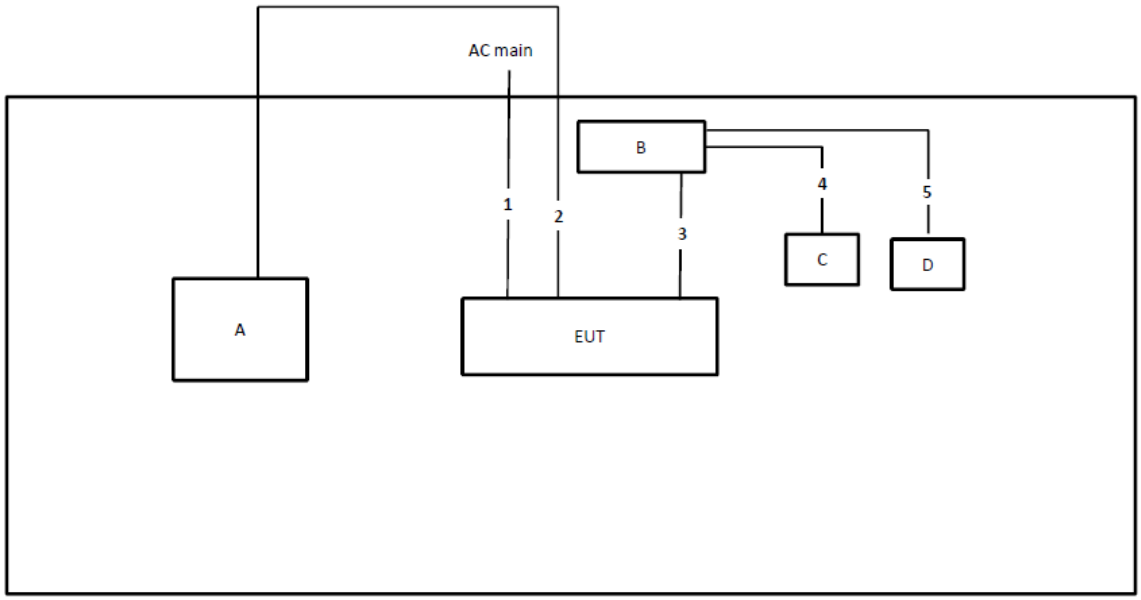
Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	HDMI cable	Yes	1.5m
3	USB Cable	Yes	0.9m
4	RJ-45 cable	No	10m
5	RJ-45 cable	No	10m
6	USB-C to USB-A cable	Yes	0.1m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	HDMI cable	Yes	1m
3	USB-C to USB-A cable	Yes	0.1m
4	USB cable	Yes	1.8m
5	USB cable	Yes	1.8m

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

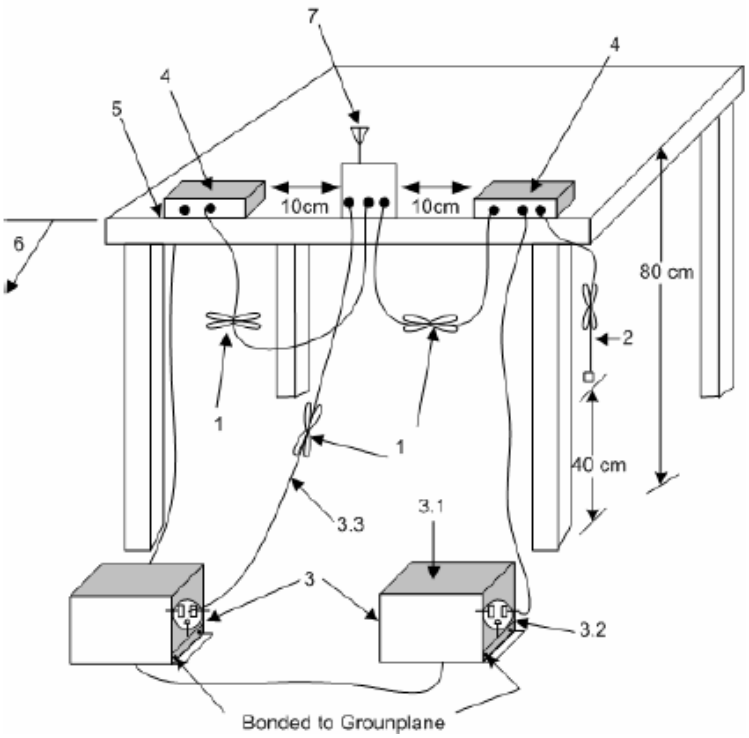
Refer a test equipment and calibration data table in this test report.

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

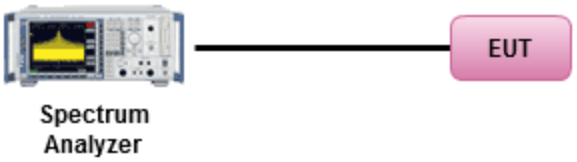
3.2.2 Measuring Instruments

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

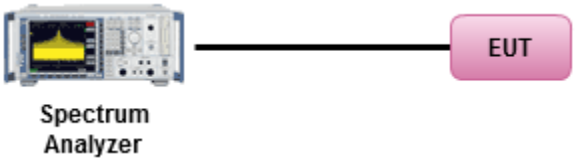
3.4.3 Measuring Instruments

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

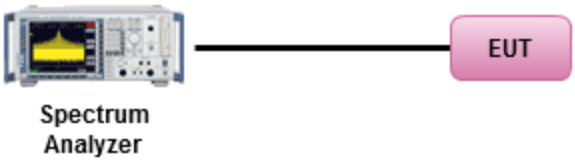
3.5.2 Measuring Instruments

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.	

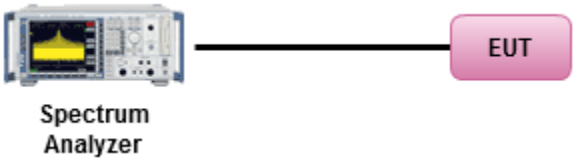
3.6.2 Measuring Instruments

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.

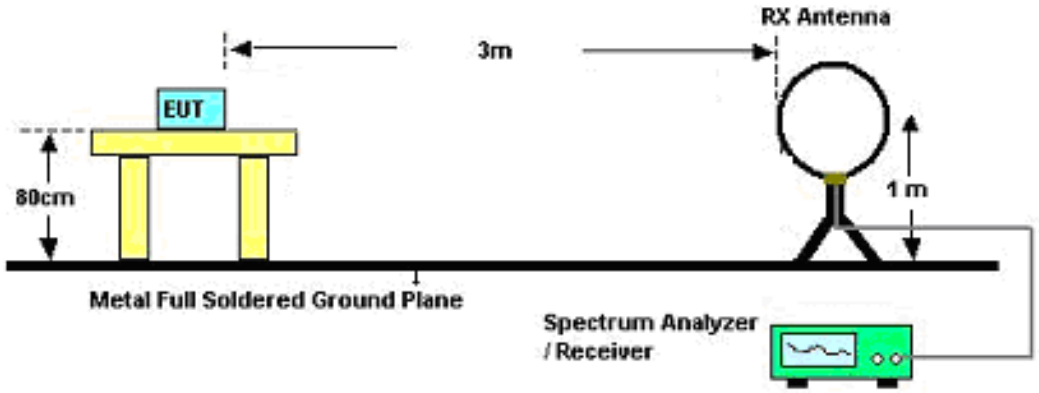
3.7.3 Test Procedures

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.

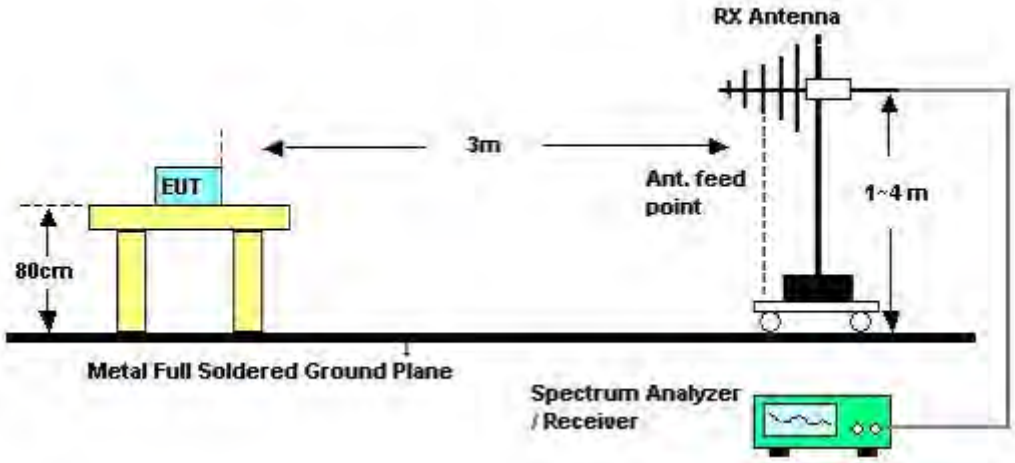
3.7.4 Test Setup

Emissions in Restricted Frequency Bands

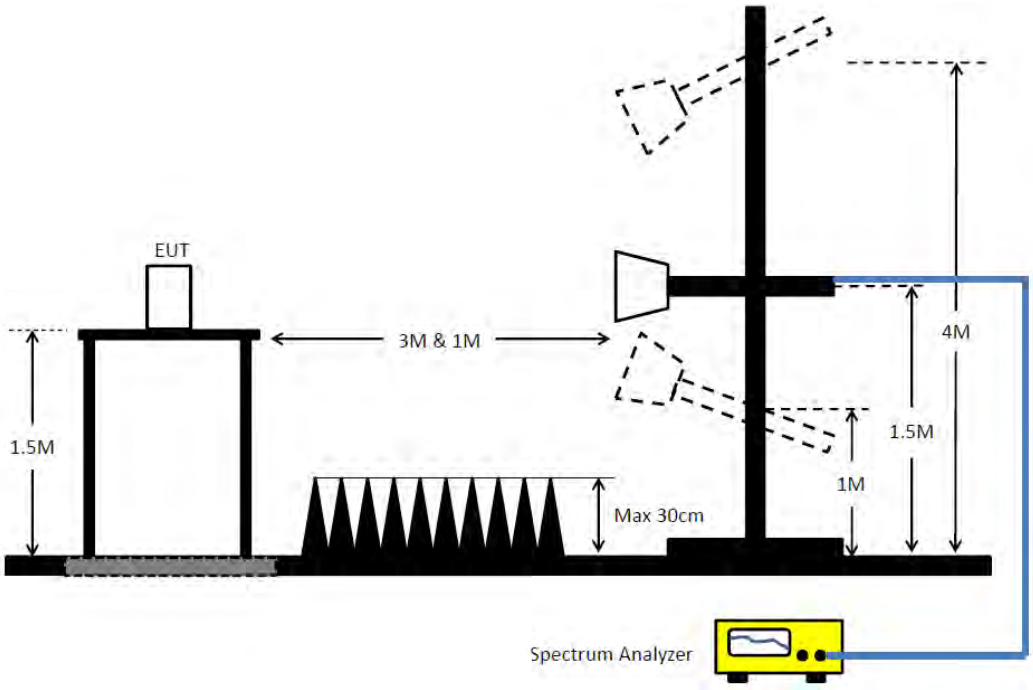
9kHz ~30MHz



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
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Jan. 06, 2021	Jan. 05, 2022	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Feb. 25, 2020	Feb. 24, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 31, 2020	Jan. 30, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 30, 2021	Jan. 29, 2022	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 20, 2020	May 19, 2021	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH03-CB	30 MHz ~ 1 GHz	Jan. 27, 2021	Jan. 26, 2022	Radiation (03CH03-CB)
Bilog Antenna with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	2928 & AT-N0608	20MHz ~ 2GHz	Feb. 28, 2020	Feb. 27, 2021	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8447D	2944A10259	9kHz ~ 1.3GHz	Jan. 11, 2021	Jan. 10, 2022	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 09, 2020	Jun. 08, 2021	Radiation (03CH03-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH03-CB)
RF Cable-low	Woken	RG402	Low Cable-02+29	30MHz ~ 1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH03-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH03-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 28, 2020	May 27, 2021	Radiation (03CH03-CB)
Horn Antenna	COM-POWER	AH-118	071028	1GHz ~ 18GHz	Jun. 09, 2020	Jun. 08, 2021	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH03-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 03, 2020	Jun. 02, 2021	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 08, 2020	Nov. 07, 2021	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Sep. 05, 2020	Sep. 04, 2021	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 03, 2020	Jul. 02, 2021	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 05, 2020	May 04, 2021	Conducted (TH01-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 07, 2020	Feb. 06, 2021	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 07, 2020	Feb. 06, 2021	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

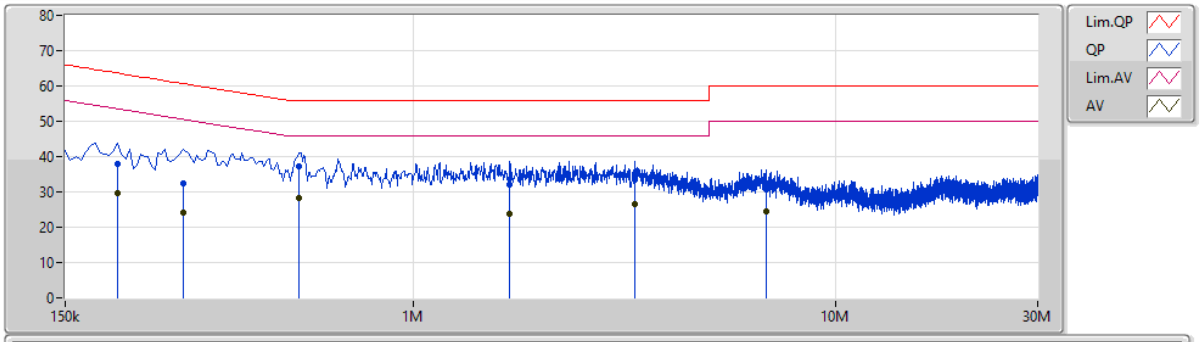
Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

Summary

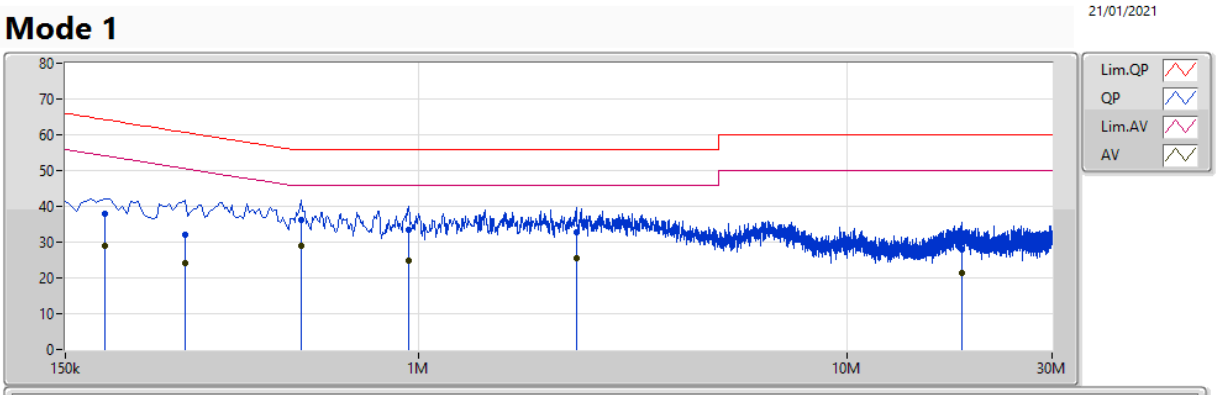
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	532.5k	28.85	46.00	-17.15	Neutral

Mode 1

21/01/2021



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	199.5k	37.89	63.63	-25.74	9.89	Line	-	28.00	0.04	0.03	9.82
AV	199.5k	29.67	53.63	-23.96	9.89	Line	-	19.78	0.04	0.03	9.82
QP	285k	32.47	60.67	-28.20	9.90	Line	-	22.57	0.04	0.03	9.83
AV	285k	24.10	50.67	-26.57	9.90	Line	-	14.20	0.04	0.03	9.83
QP	537k	37.29	56.00	-18.71	9.90	Line	-	27.39	0.04	0.03	9.83
AV	537k	28.26	46.00	-17.74	9.90	Line	"Worst"	18.36	0.04	0.03	9.83
QP	1.689M	32.08	56.00	-23.92	9.97	Line	-	22.11	0.06	0.06	9.85
AV	1.689M	23.72	46.00	-22.28	9.97	Line	-	13.75	0.06	0.06	9.85
QP	3.336M	33.32	56.00	-22.68	10.04	Line	-	23.28	0.08	0.11	9.85
AV	3.336M	26.70	46.00	-19.30	10.04	Line	-	16.66	0.08	0.11	9.85
QP	6.842M	30.75	60.00	-29.25	10.16	Line	-	20.59	0.14	0.14	9.88
AV	6.842M	24.39	50.00	-25.61	10.16	Line	-	14.23	0.14	0.14	9.88



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	186k	37.94	64.20	-26.26	9.89	Neutral	-	28.05	0.04	0.03	9.82
AV	186k	29.03	54.20	-25.17	9.89	Neutral	-	19.14	0.04	0.03	9.82
QP	285k	32.23	60.67	-28.44	9.90	Neutral	-	22.33	0.04	0.03	9.83
AV	285k	23.98	50.67	-26.69	9.90	Neutral	-	14.08	0.04	0.03	9.83
QP	532.5k	36.09	56.00	-19.91	9.91	Neutral	-	26.18	0.05	0.03	9.83
AV	532.5k	28.85	46.00	-17.15	9.91	Neutral	"Worst"	18.94	0.05	0.03	9.83
QP	946.5k	33.47	56.00	-22.53	9.93	Neutral	-	23.54	0.06	0.04	9.83
AV	946.5k	24.97	46.00	-21.03	9.93	Neutral	-	15.04	0.06	0.04	9.83
QP	2.328M	32.85	56.00	-23.15	10.01	Neutral	-	22.84	0.07	0.08	9.86
AV	2.328M	25.39	46.00	-20.61	10.01	Neutral	-	15.38	0.07	0.08	9.86
QP	18.434M	27.94	60.00	-32.06	10.48	Neutral	-	17.46	0.21	0.30	9.97
AV	18.434M	21.28	50.00	-28.72	10.48	Neutral	-	10.80	0.21	0.30	9.97

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)	920k	877.061k	877KF1D	916.25k	869.565k
BT-EDR(2Mbps)	1.313M	1.191M	1M19G1D	1.258M	1.186M
BT-EDR(3Mbps)	1.266M	1.214M	1M21G1D	1.249M	1.191M

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

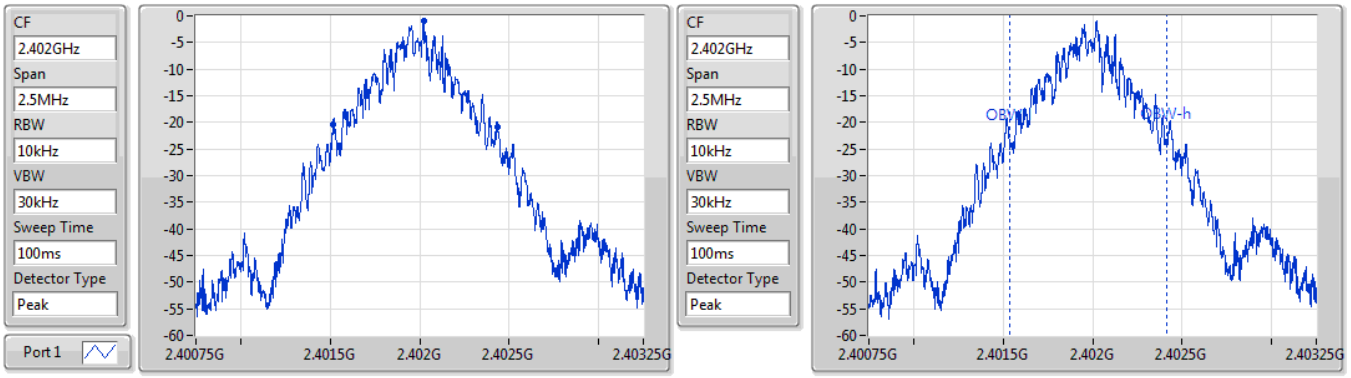
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	918.75k	877.061k
2440MHz	Pass	Inf	920k	869.565k
2480MHz	Pass	Inf	916.25k	869.565k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.258M	1.186M
2440MHz	Pass	Inf	1.304M	1.189M
2480MHz	Pass	Inf	1.313M	1.191M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.249M	1.191M
2440MHz	Pass	Inf	1.266M	1.201M
2480MHz	Pass	Inf	1.26M	1.214M

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

BT-BR(1Mbps) EBW

2402MHz

04/02/2021

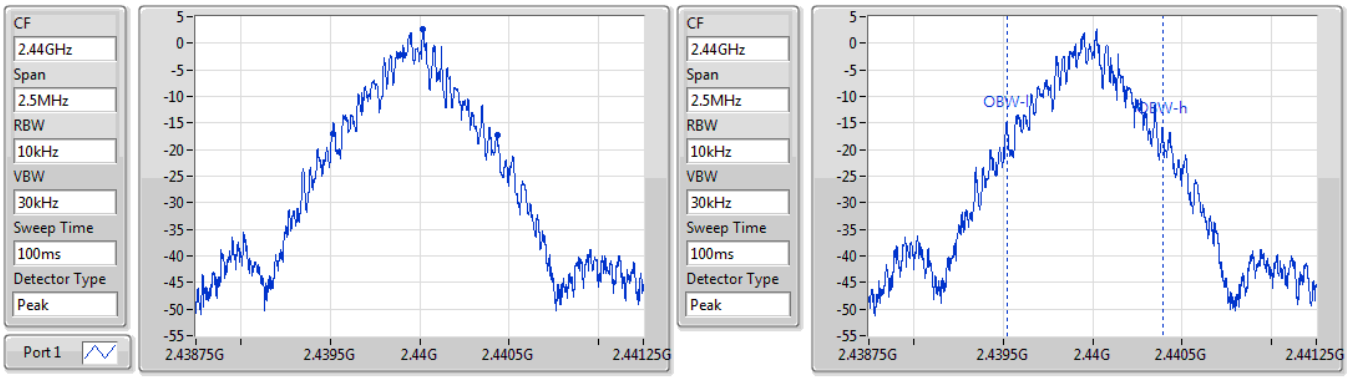


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
918.75k	2.401518G	2.402436G	877.061k	2.401534G	2.402411G	Inf	1

BT-BR(1Mbps) EBW

2440MHz

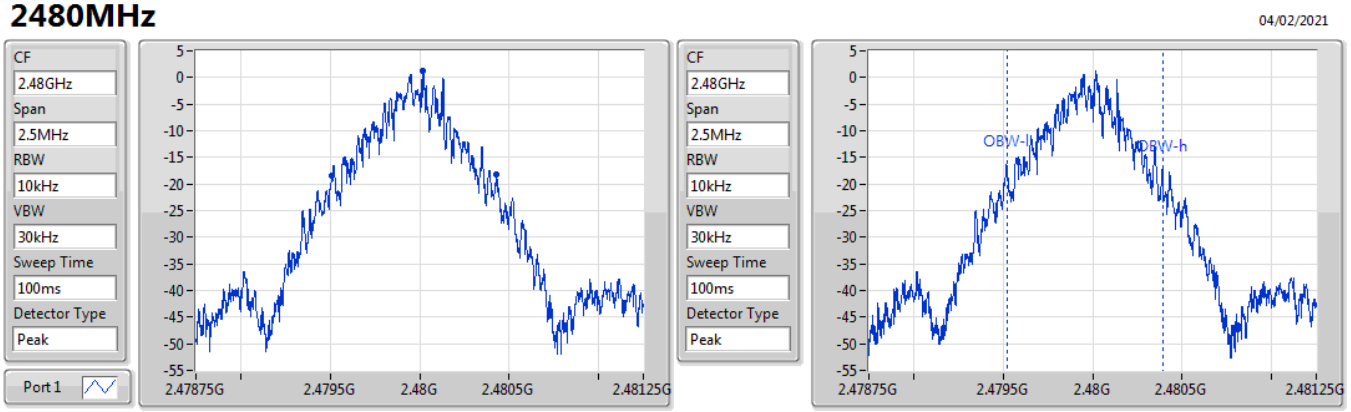
04/02/2021



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
920k	2.439514G	2.440434G	869.565k	2.439524G	2.440394G	Inf	1

BT-BR(1Mbps) EBW

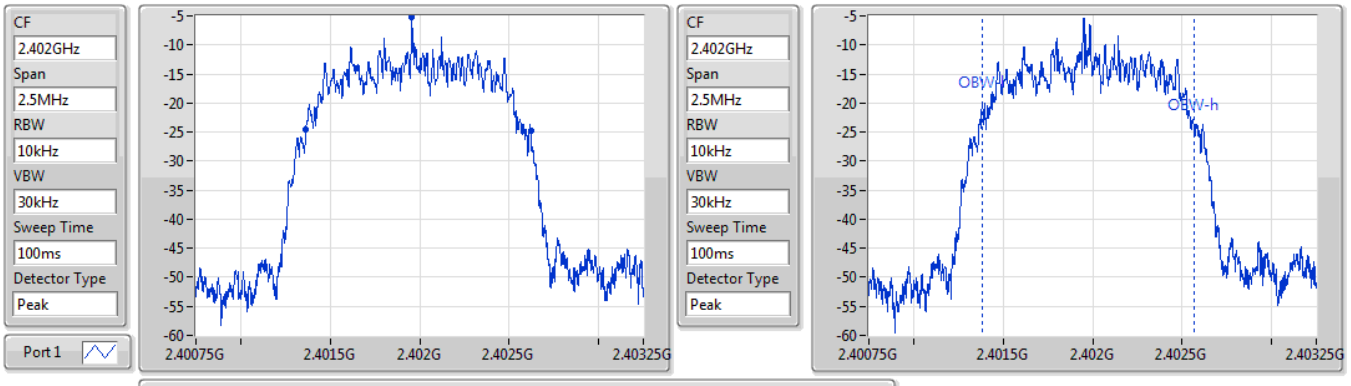
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
916.25k	2.479513G	2.480429G	869.565k	2.479521G	2.480391G	Inf	1

BT-EDR(2Mbps) EBW

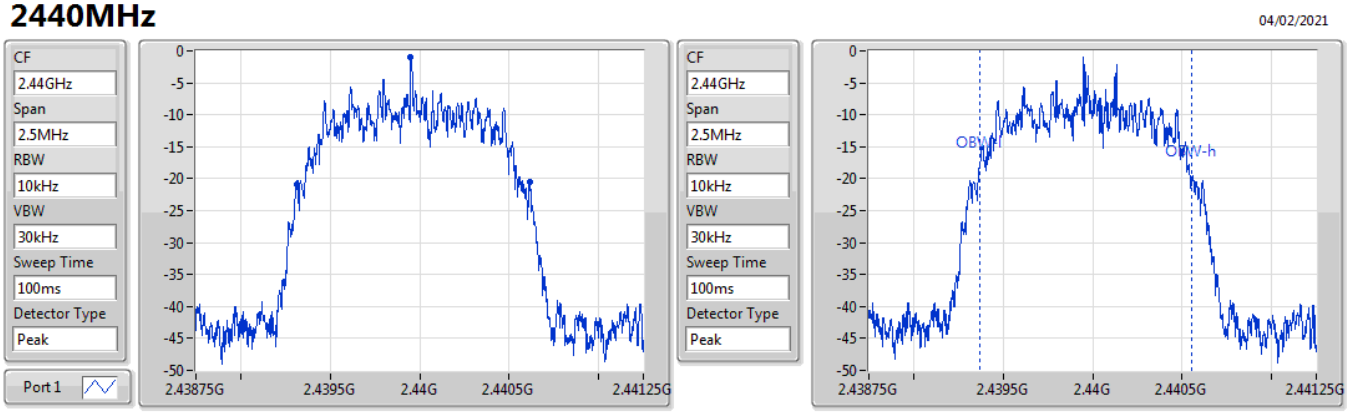
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.258M	2.401364G	2.402621G	1.186M	2.401382G	2.402567G	Inf	1

BT-EDR(2Mbps) EBW

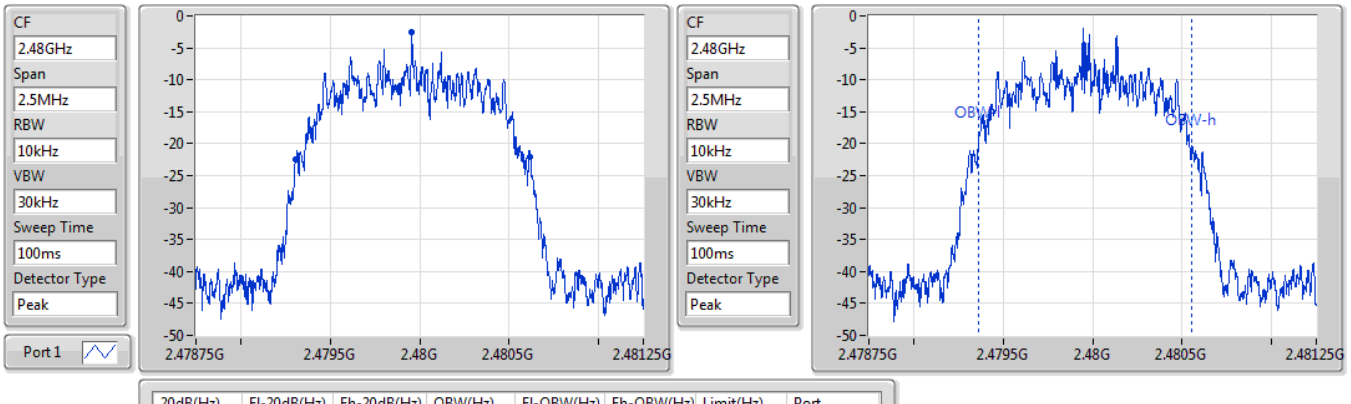
2440MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.304M	2.439313G	2.440616G	1.189M	2.439367G	2.440556G	Inf	1

BT-EDR(2Mbps) EBW

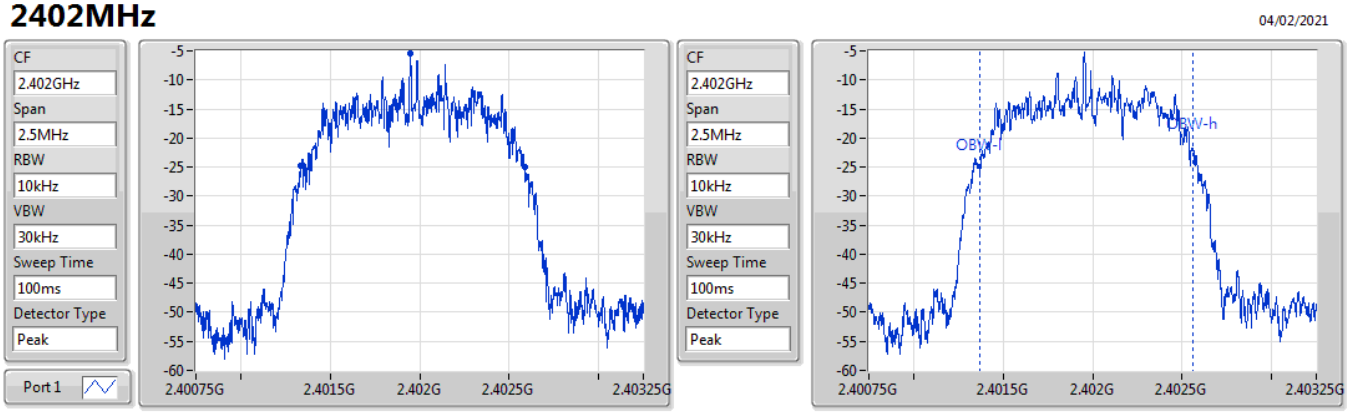
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.313M	2.479306G	2.480619G	1.191M	2.479365G	2.480556G	Inf	1

BT-EDR(3Mbps) EBW

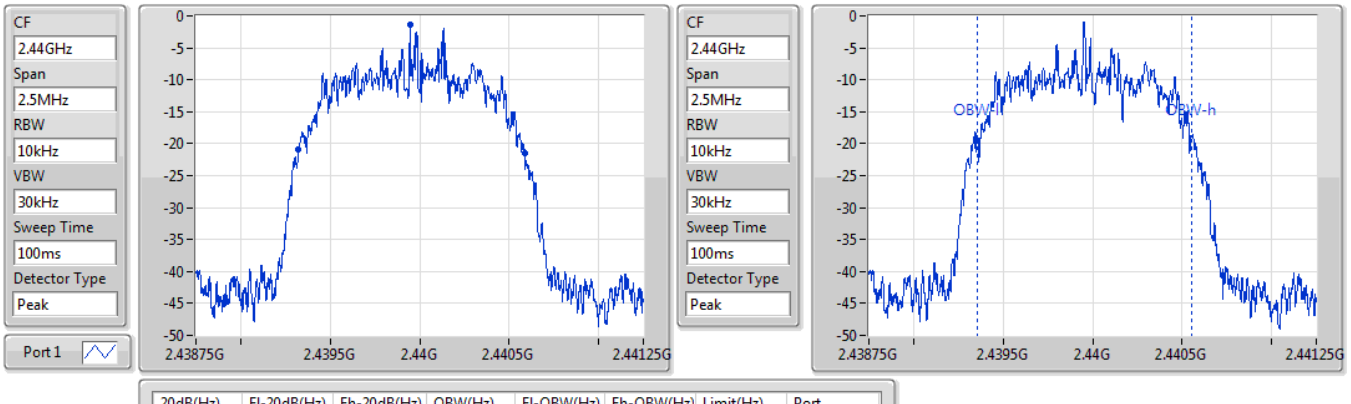
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.249M	2.401336G	2.402585G	1.191M	2.401373G	2.402563G	Inf	1

BT-EDR(3Mbps) EBW

2440MHz

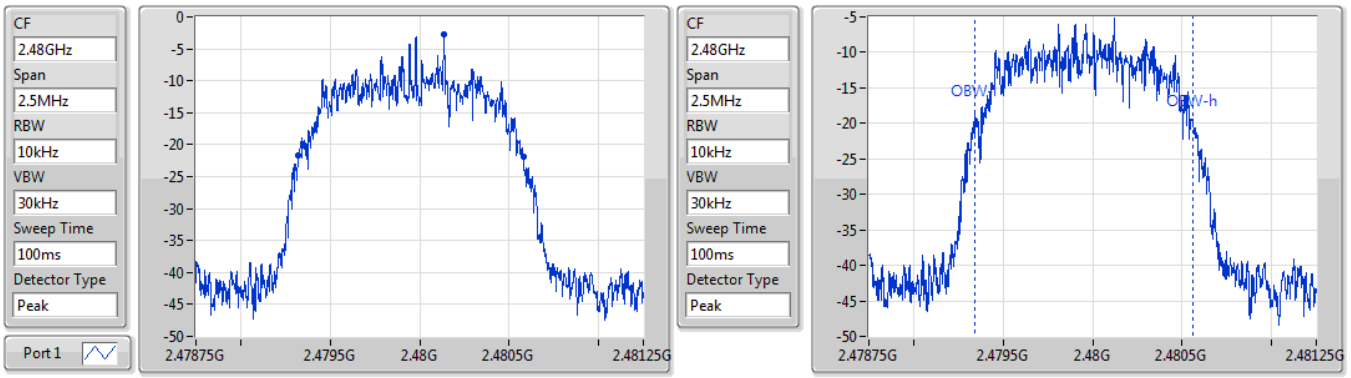


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.266M	2.439323G	2.440589G	1.201M	2.439353G	2.440553G	Inf	1

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

2480MHz

04/02/2021



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.26M	2.479321G	2.480581G	1.214M	2.479345G	2.48056G	Inf	1

Summary

Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	999k
BT-EDR(2Mbps)	1.002M	997.5k
BT-EDR(3Mbps)	999k	997.5k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402131G	2.40313G	999k	611.8875k
2440MHz	Pass	2.440128G	2.441127G	999k	612.72k
2480MHz	Pass	2.479128G	2.48013G	1.002M	610.2225k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401968G	2.40297G	1.002M	837.828k
2440MHz	Pass	2.439966G	2.440968G	1.002M	868.464k
2480MHz	Pass	2.478968G	2.479965G	997.5k	874.458k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402131G	2.403129G	997.5k	831.834k
2440MHz	Pass	2.440128G	2.441127G	999k	843.156k
2480MHz	Pass	2.479128G	2.480127G	999k	839.16k

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

2.402G/2.403GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402131G	2.40313G	999k	611.8875k

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

2.44G/2.441GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440128G	2.441127G	999k	612.72k

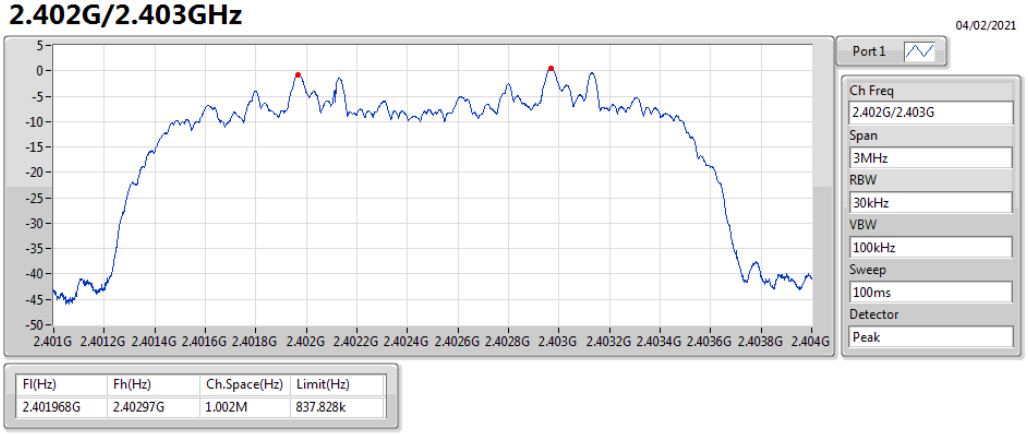
BT-BR(1Mbps) **Channel Separation**

2.48G/2.479GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479128G	2.48013G	1.002M	610.2225k

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

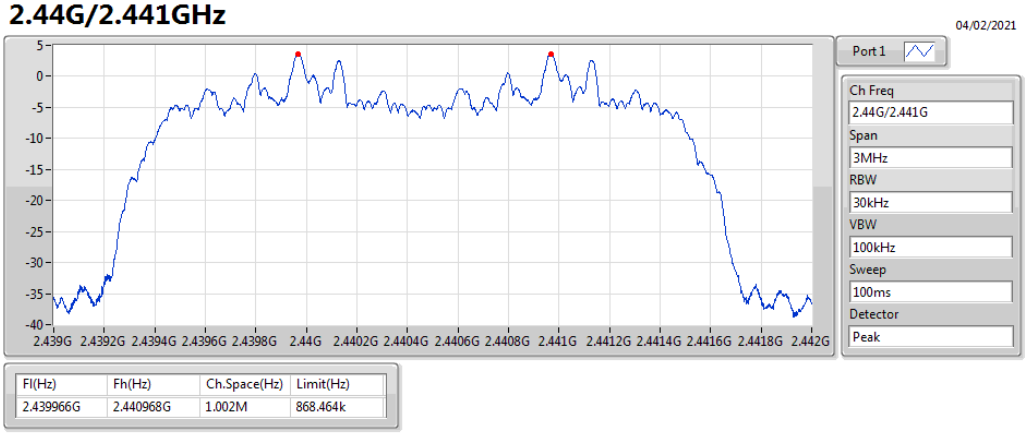
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401968G	2.40297G	1.002M	837.828k

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

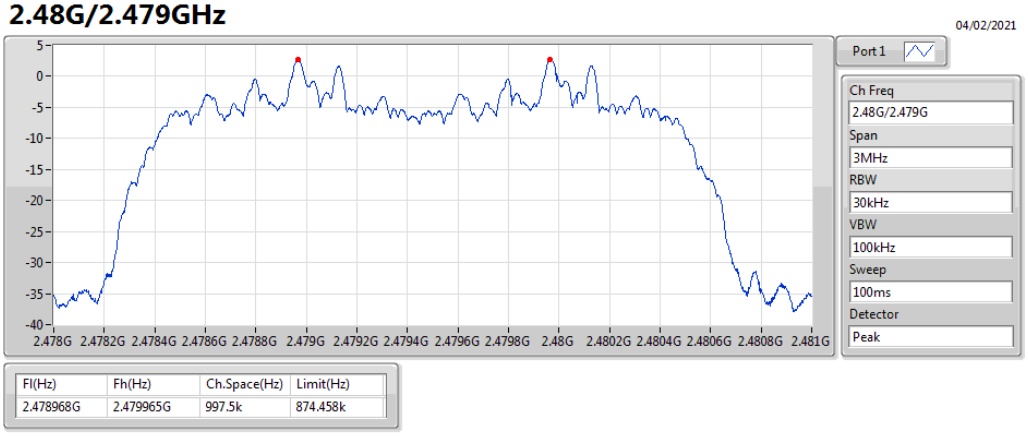
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439966G	2.440968G	1.002M	868.464k

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

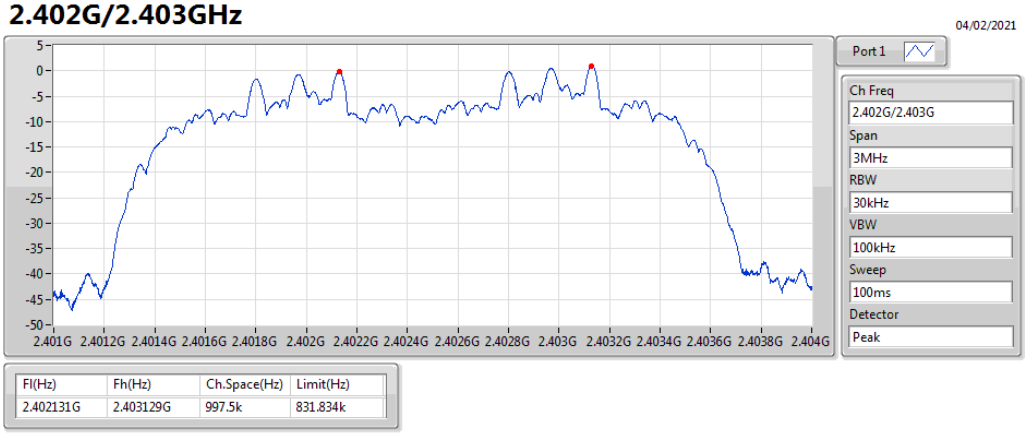
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478968G	2.479965G	997.5k	874.458k

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

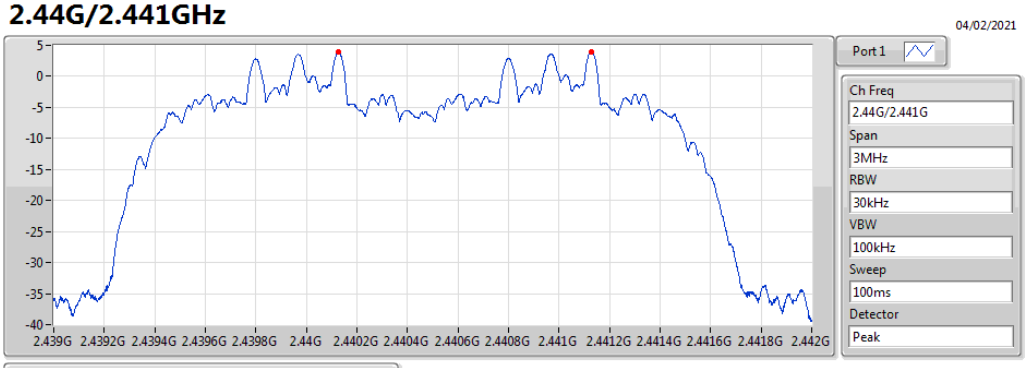
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402131G	2.403129G	997.5k	831.834k

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

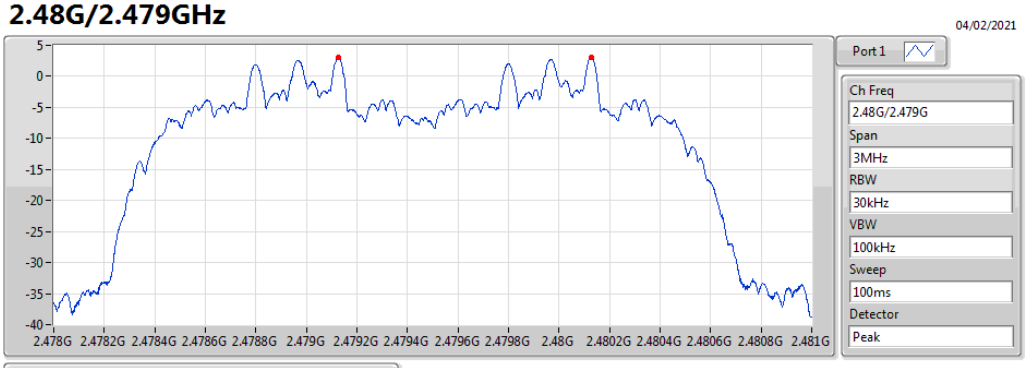
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440128G	2.441127G	999k	843.156k

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

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479128G	2.480127G	999k	839.16k

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	8.64	0.00731
BT-EDR(2Mbps)	6.67	0.00465
BT-EDR(3Mbps)	6.81	0.00480

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	1.50	5.22	21.00
2440MHz	Pass	1.50	8.64	21.00
2480MHz	Pass	1.50	7.19	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	1.50	2.71	21.00
2440MHz	Pass	1.50	6.67	21.00
2480MHz	Pass	1.50	5.73	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	1.50	2.86	21.00
2440MHz	Pass	1.50	6.81	21.00
2480MHz	Pass	1.50	5.85	21.00

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

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	8.43	0.00697
BT-EDR(2Mbps)	5.54	0.00358
BT-EDR(3Mbps)	5.56	0.00360

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	1.50	4.87	21.00
2440MHz	Pass	1.50	8.43	21.00
2480MHz	Pass	1.50	7.01	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	1.50	1.32	21.00
2440MHz	Pass	1.50	5.54	21.00
2480MHz	Pass	1.50	4.69	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	1.50	1.35	21.00
2440MHz	Pass	1.50	5.56	21.00
2480MHz	Pass	1.50	4.70	21.00

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

Summary

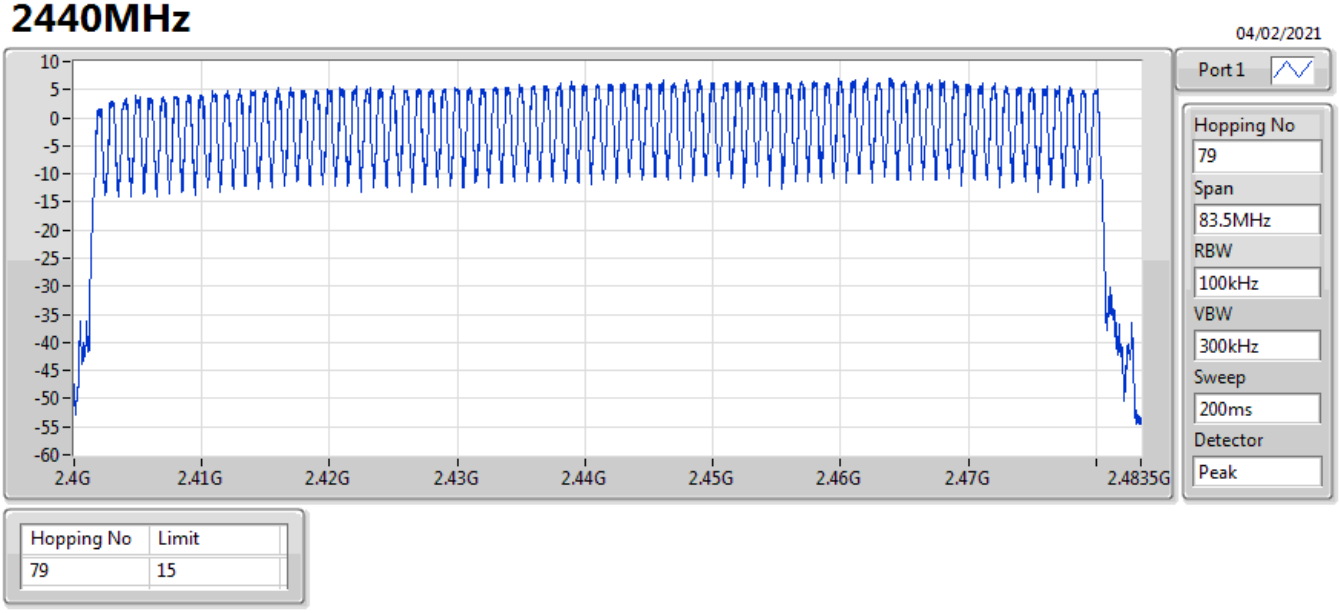
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

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

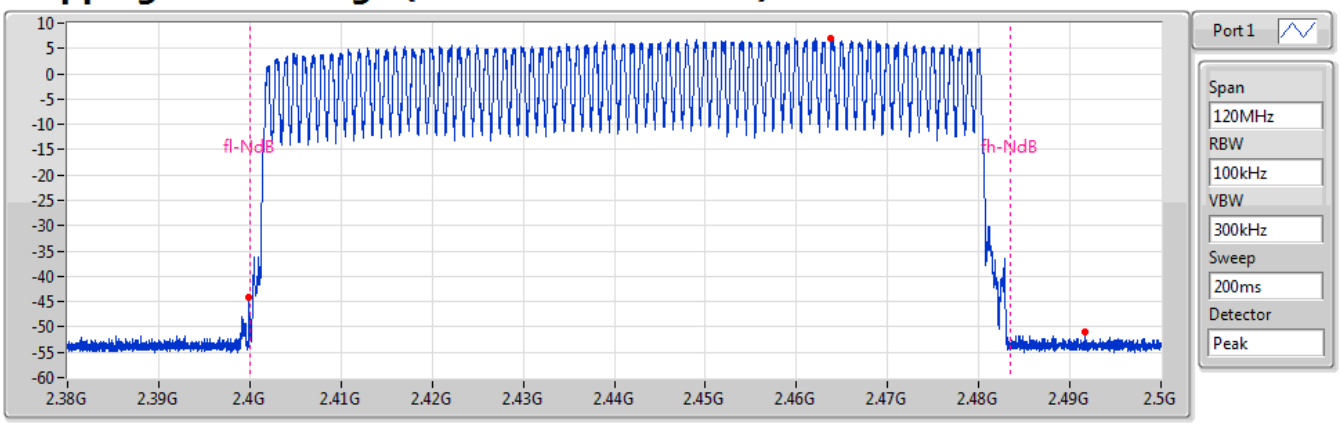


Hopping No	Limit
79	15

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

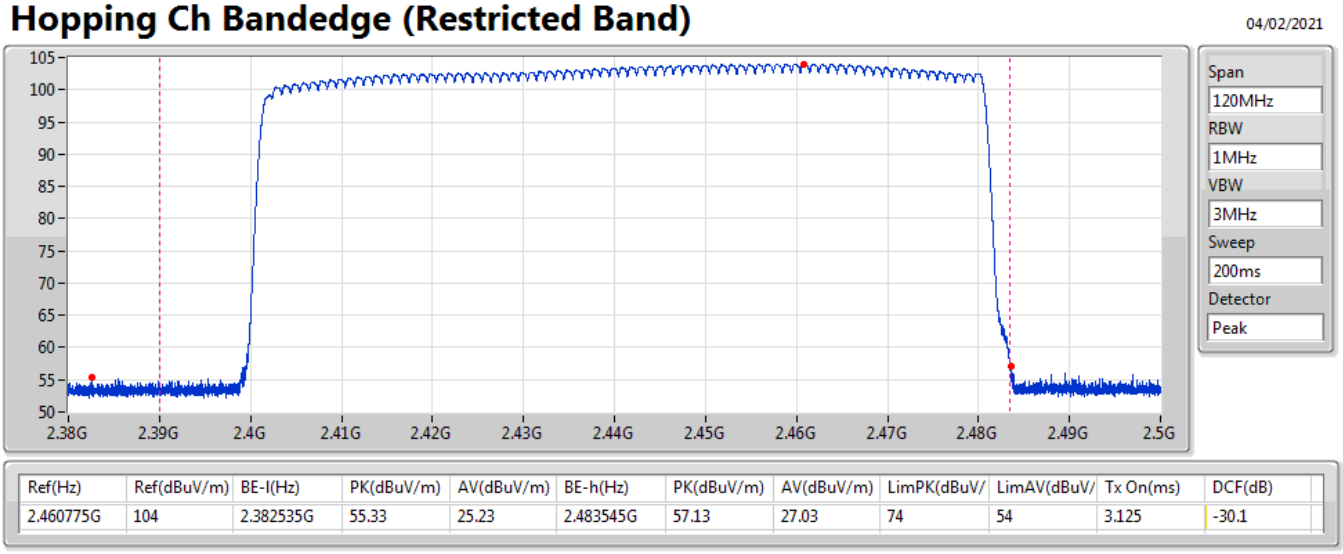


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-12.91	2.46379G	7.09	2.39992G	-44.12	2.491675G	-51.05

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

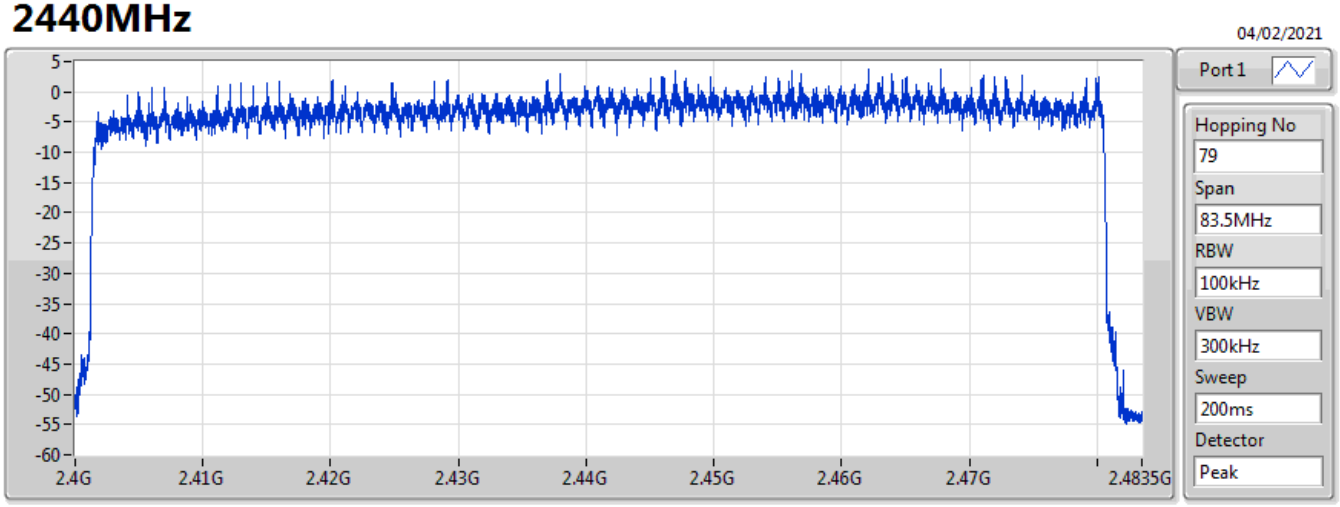


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.460775G	104	2.382535G	55.33	25.23	2.483545G	57.13	27.03	74	54	3.125	-30.1

BT-EDR(2Mbps)

2440MHz

Hopping Ch

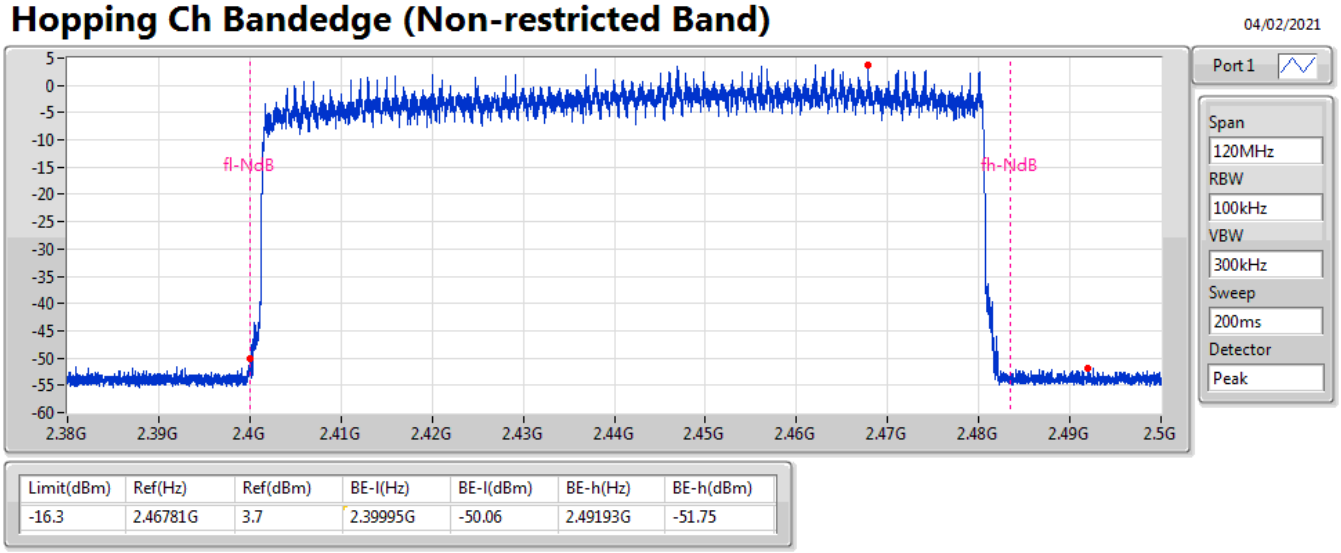


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

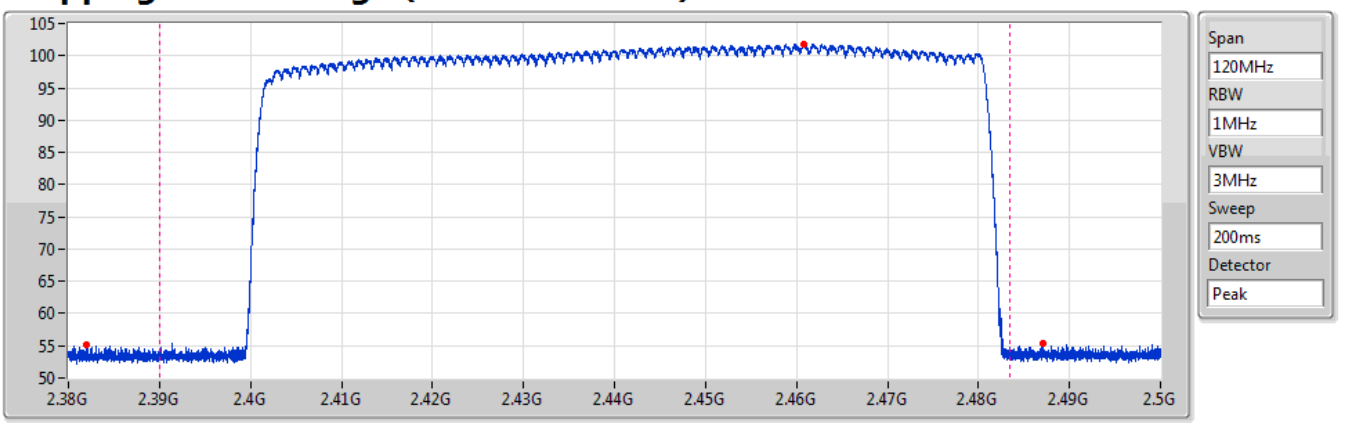


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-16.3	2.46781G	3.7	2.39995G	-50.06	2.49193G	-51.75

BT-EDR(2Mbps)

2440MHz

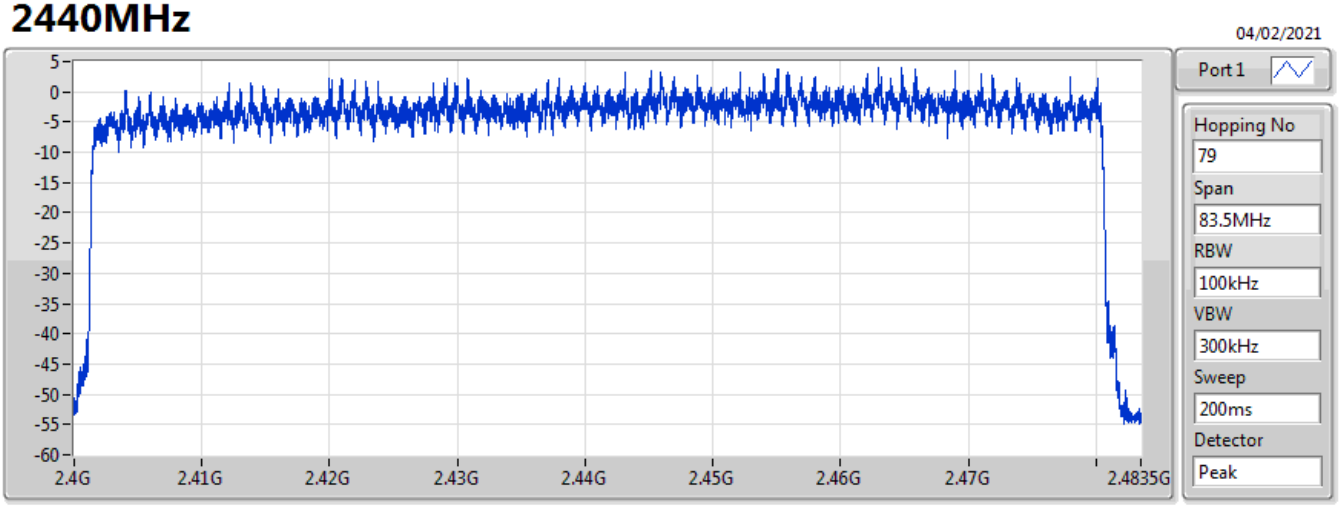
Hopping Ch Bandedge (Restricted Band)



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)
2.460775G	101.74	2.38198G	55.16	25.06	2.487085G	55.41	25.31	74	54	3.125	-30.1

BT-EDR(3Mbps) **Hopping Ch**

2440MHz

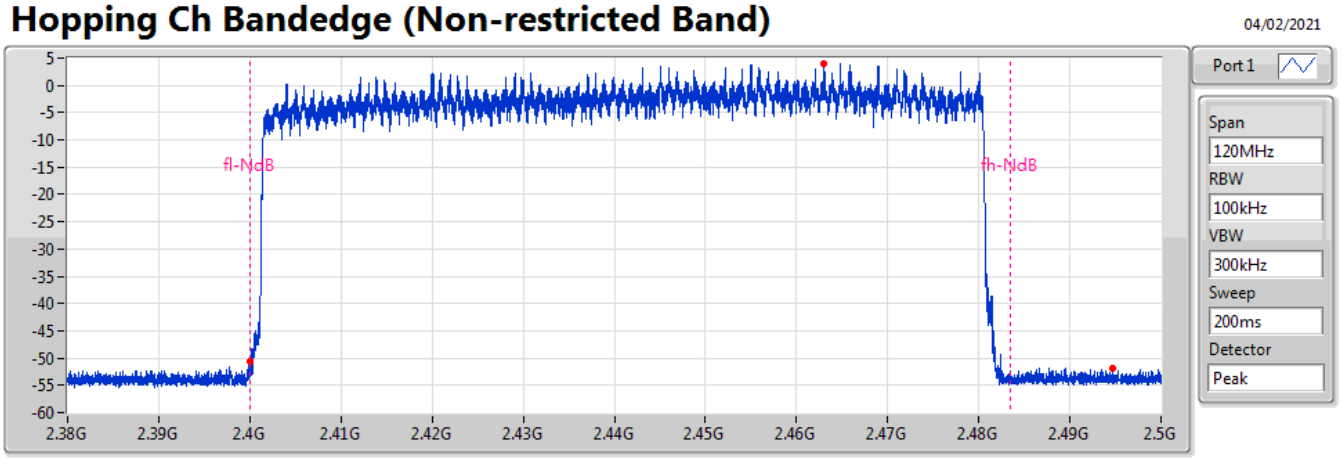


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

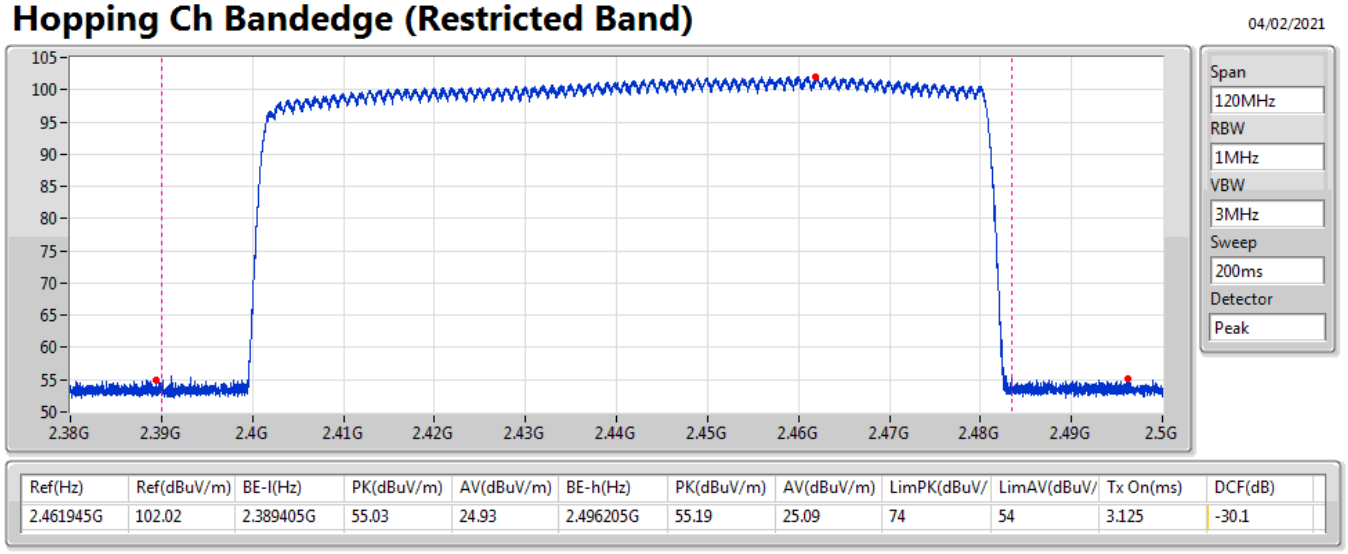


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-16.08	2.462965G	3.92	2.399995G	-50.67	2.49466G	-51.75

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)
2.461945G	102.02	2.389405G	55.03	24.93	2.496205G	55.19	25.09	74	54	3.125	-30.1

Summary

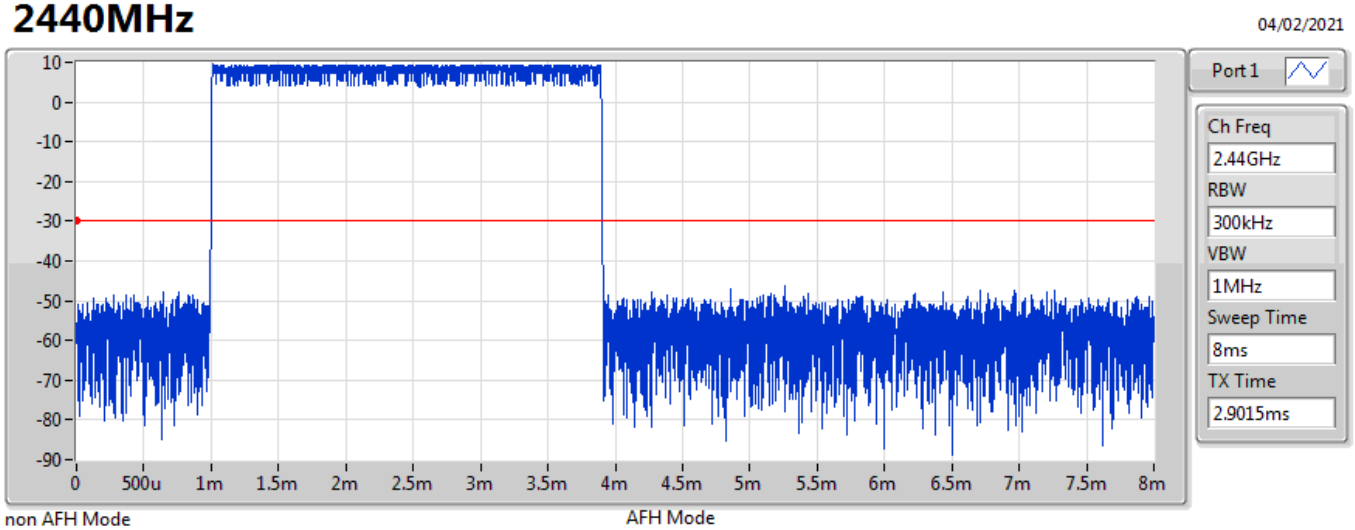
Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	309.2999m
BT-EDR(2Mbps)	310.23265m
BT-EDR(3Mbps)	310.3659m

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	309.2999m	400m	2.9015m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	310.23265m	400m	2.91025m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	310.3659m	400m	2.9115m

BT-BR(1Mbps) Dwell

2440MHz



non AFH Mode

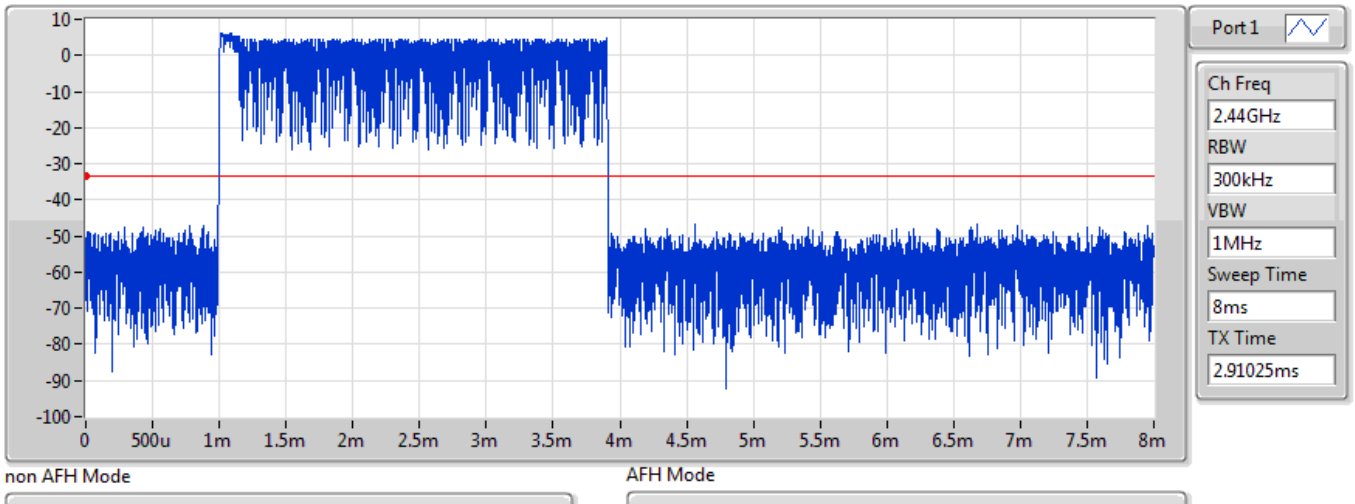
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	309.2999m	400m	2.9015m

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.64995m	400m	2.9015m

BT-EDR(2Mbps) Dwell

2440MHz



non AFH Mode

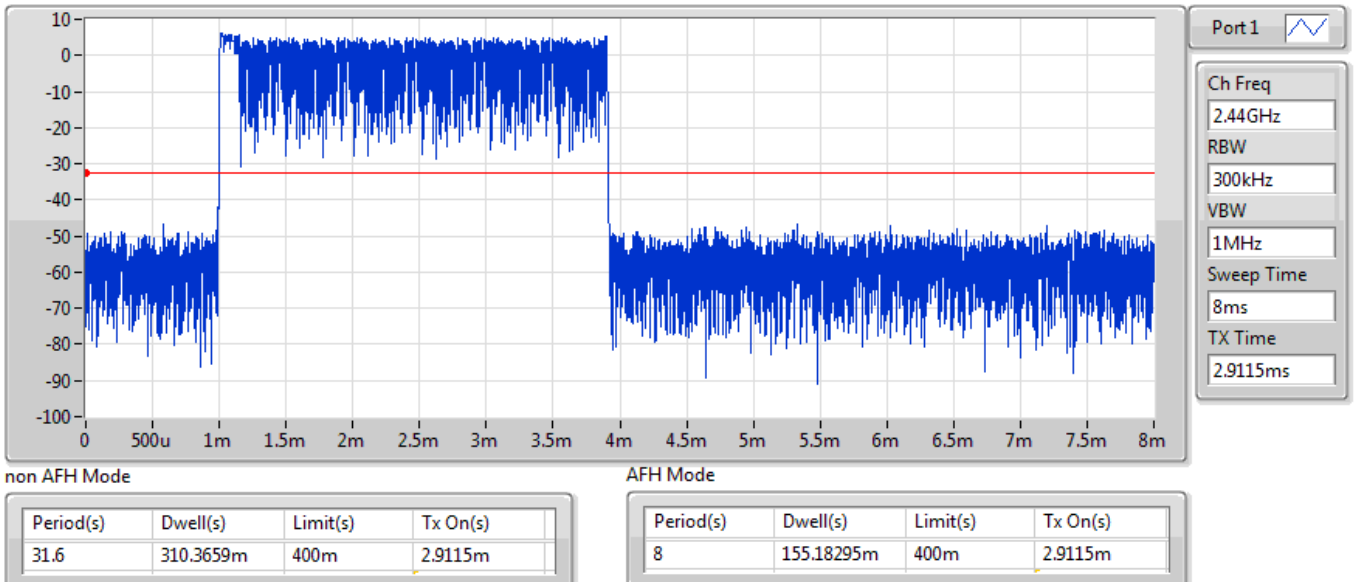
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	310.23265m	400m	2.91025m

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	155.116325m	400m	2.91025m

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

2440MHz



non AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	310.3659m	400m	2.9115m

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	155.18295m	400m	2.9115m

Summary

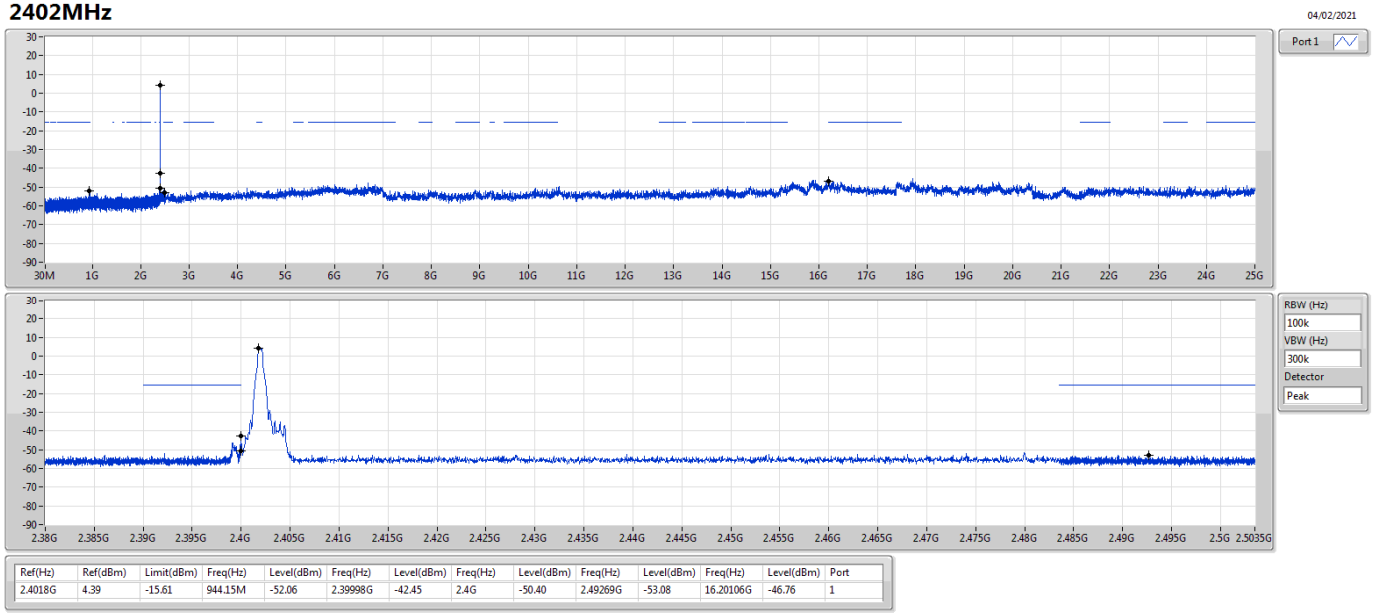
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.4018G	4.39	-15.61	944.15M	-52.06	2.39998G	-42.45	2.4G	-50.40	2.49269G	-53.08	16.20106G	-46.76	1
BT-EDR(2Mbps)	Pass	2.40205G	0.01	-19.99	2.07656G	-52.71	2.39994G	-51.63	2.4G	-50.82	2.48583G	-51.91	17.67739G	-46.80	1
BT-EDR(3Mbps)	Pass	2.40209G	1.48	-18.52	833.41M	-53.61	2.39996G	-49.76	2.4G	-49.12	2.50132G	-52.55	16.26011G	-46.97	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	2.4018G	4.39	-15.61	944.15M	-52.06	2.39998G	-42.45	2.4G	-50.40	2.49269G	-53.08	16.20106G	-46.76	1
2440MHz	Pass	2.43983G	8.02	-11.98	2.12503G	-54.54	2.39067G	-52.60	2.4G	-55.15	2.50309G	-52.26	17.64646G	-46.95	1
2480MHz	Pass	2.47999G	6.87	-13.13	2.00048G	-53.94	2.39147G	-53.25	2.4835G	-53.06	2.49404G	-51.70	16.47945G	-46.33	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40205G	0.01	-19.99	2.07656G	-52.71	2.39994G	-51.63	2.4G	-50.82	2.48583G	-51.91	17.67739G	-46.80	1
2440MHz	Pass	2.44012G	5.62	-14.38	1.8959G	-53.79	2.39715G	-53.10	2.4G	-56.76	2.49978G	-53.01	17.60146G	-46.17	1
2480MHz	Pass	2.48008G	3.32	-16.68	165.71M	-52.58	2.39951G	-52.08	2.4835G	-55.15	2.49509G	-52.52	17.63802G	-46.64	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40209G	1.48	-18.52	833.41M	-53.61	2.39996G	-49.76	2.4G	-49.12	2.50132G	-52.55	16.26011G	-46.97	1
2440MHz	Pass	2.44G	5.62	-14.38	2.16997G	-54.18	2.39382G	-52.35	2.4835G	-54.58	2.48612G	-52.13	16.44571G	-47.19	1
2480MHz	Pass	2.47983G	5.06	-14.94	2.13824G	-53.87	2.39112G	-52.99	2.4835G	-54.17	2.5017G	-52.67	17.64083G	-45.82	1

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

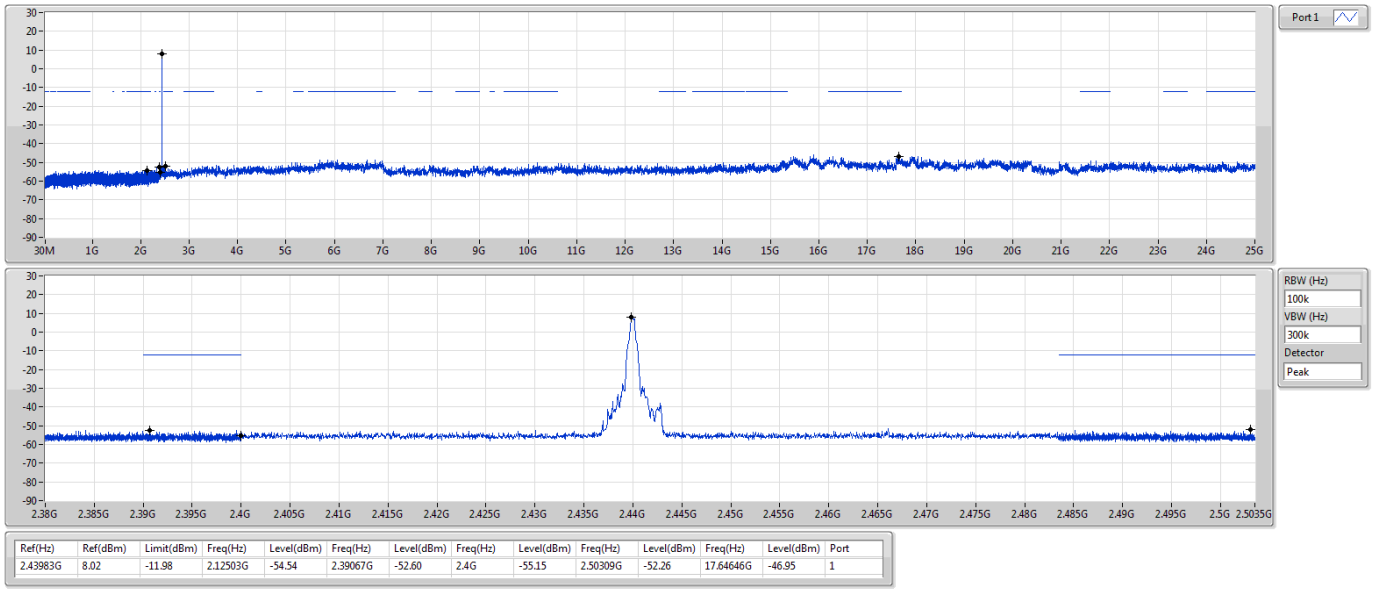
2402MHz



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
2.4018G	4.39	-15.61	944.15M	-52.06	2.39998G	-42.45	2.4G	-50.40	2.49269G	-53.08	16.20106G	-46.76	1

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

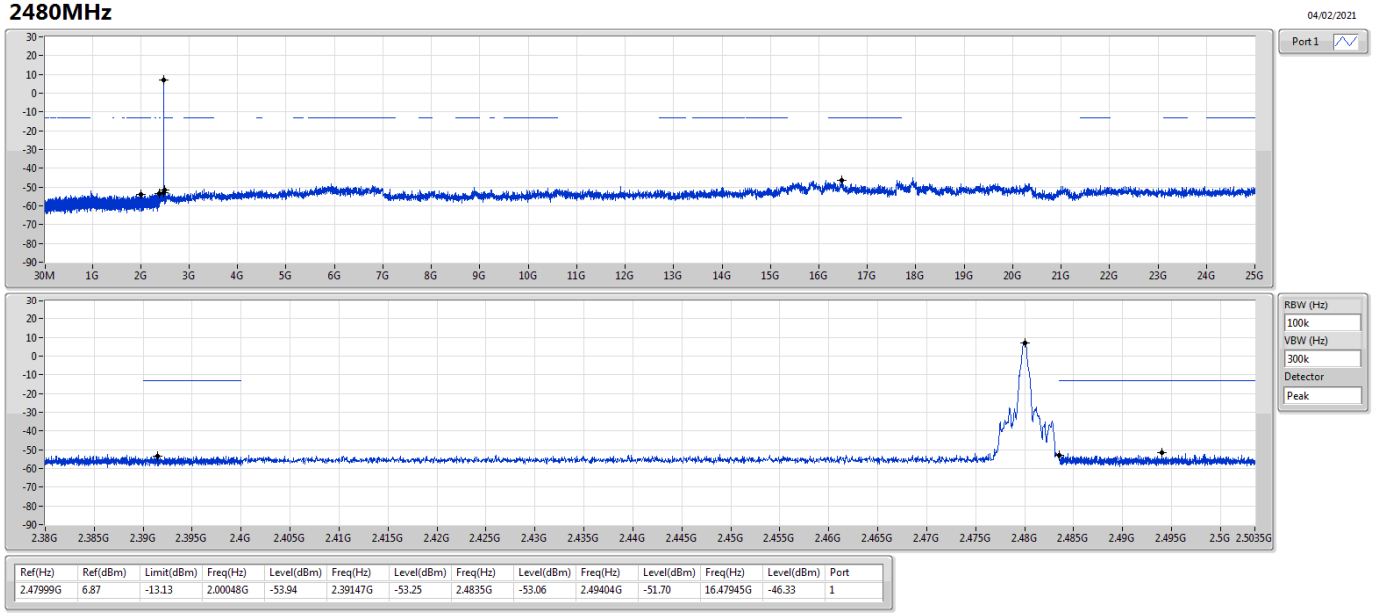
2440MHz



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
2.43983G	8.02	-11.98	2.12503G	-54.54	2.39067G	-52.60	2.4G	-55.15	2.50309G	-52.26	17.64646G	-46.95	1

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

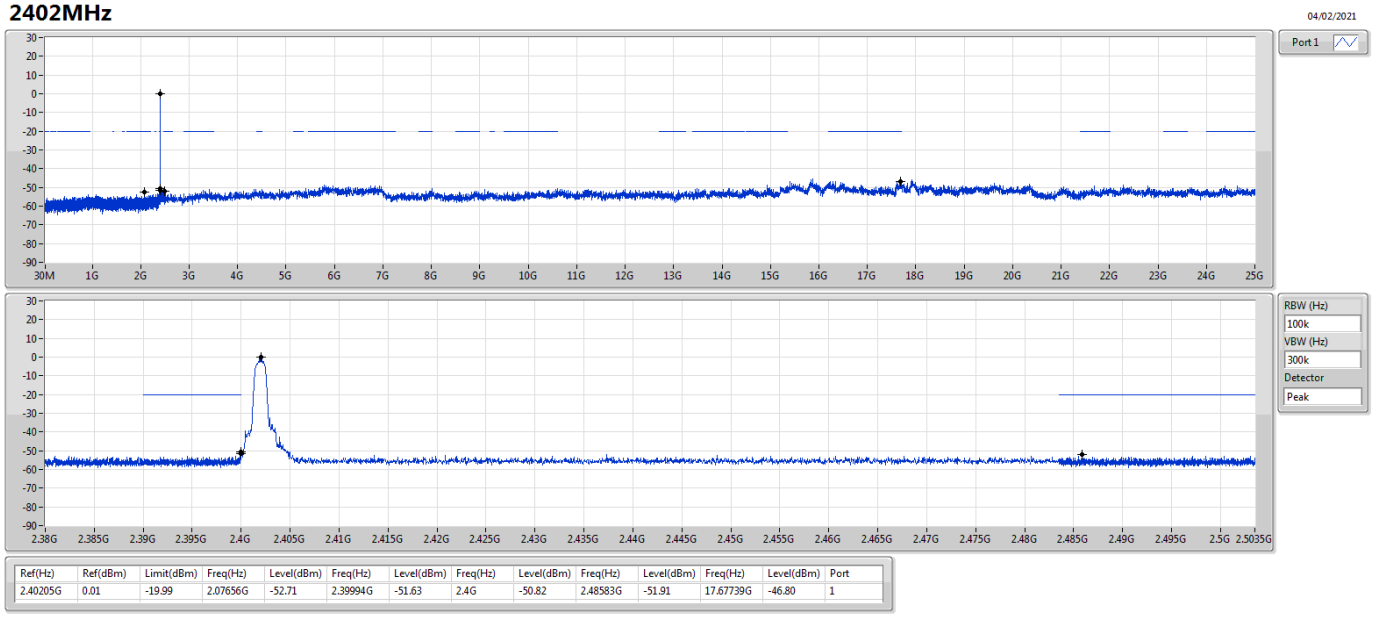
2480MHz



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
2.47999G	6.87	-13.13	2.00048G	-53.94	2.39147G	-53.25	2.4835G	-53.06	2.49404G	-51.70	16.47945G	-46.33	1

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

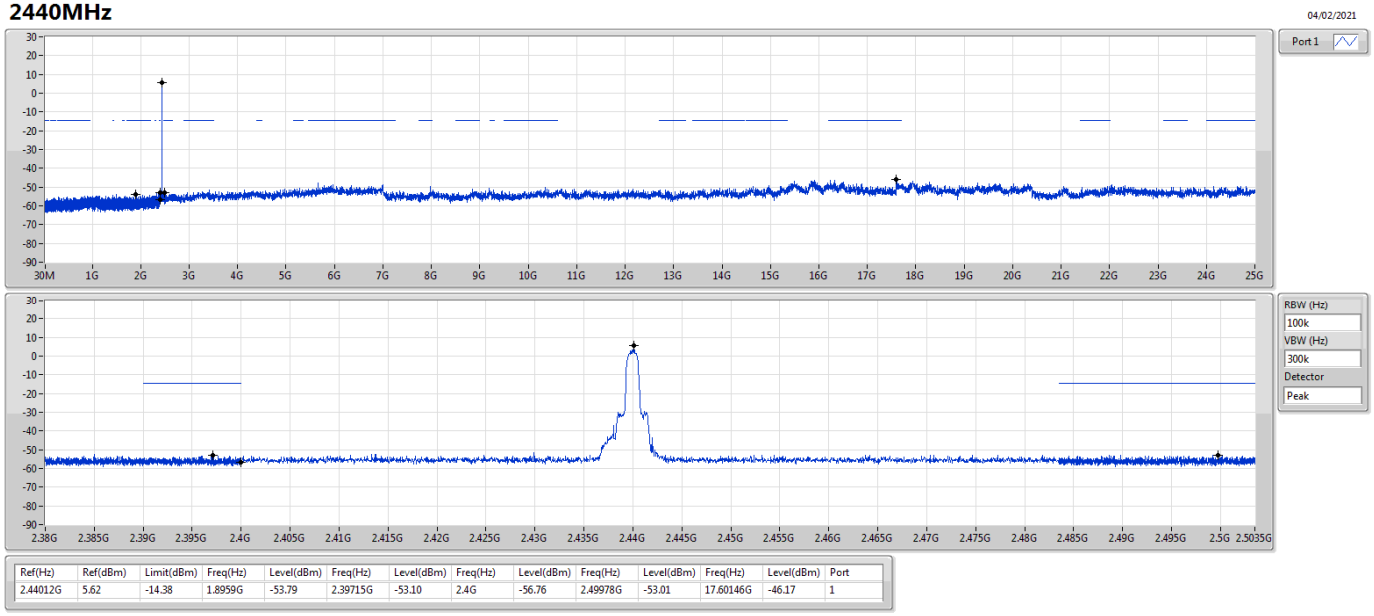
2402MHz



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
2.40205G	0.01	-19.99	2.07656G	-52.71	2.39994G	-51.63	2.4G	-50.82	2.48583G	-51.91	17.67739G	-46.80	1

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

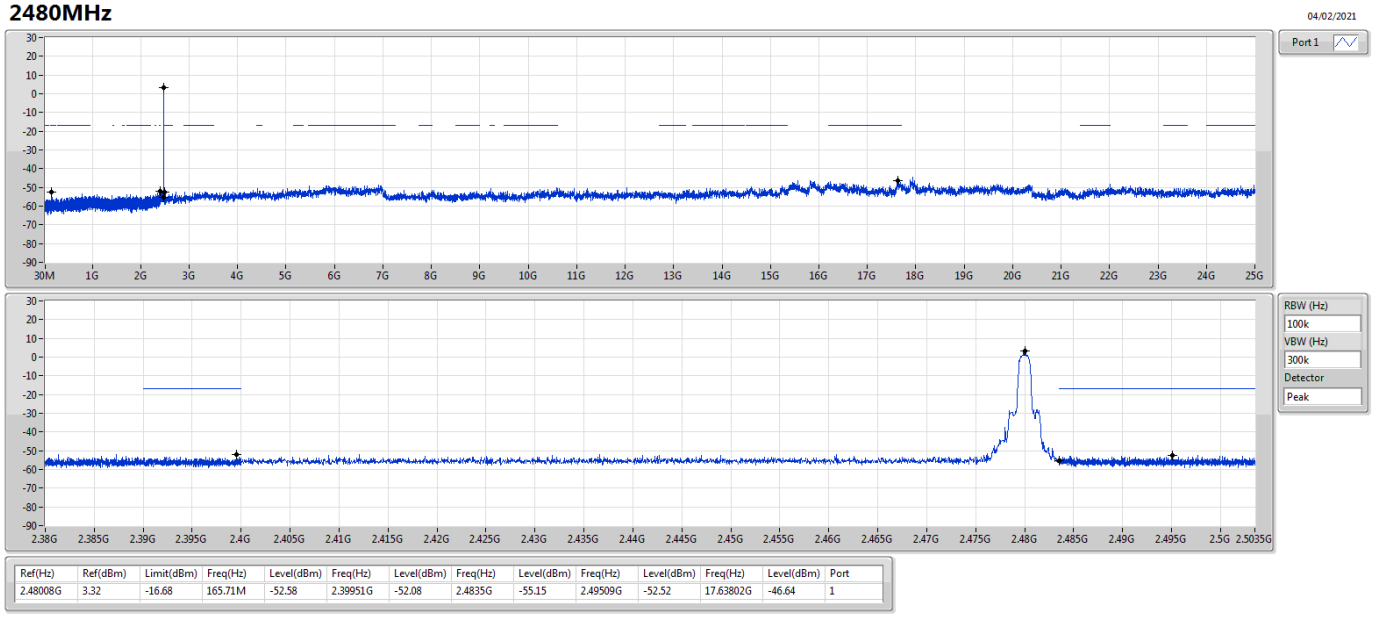
2440MHz



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
2.44012G	5.62	-14.38	1.8959G	-53.79	2.39715G	-53.10	2.4G	-56.76	2.49978G	-53.01	17.60146G	-46.17	1

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

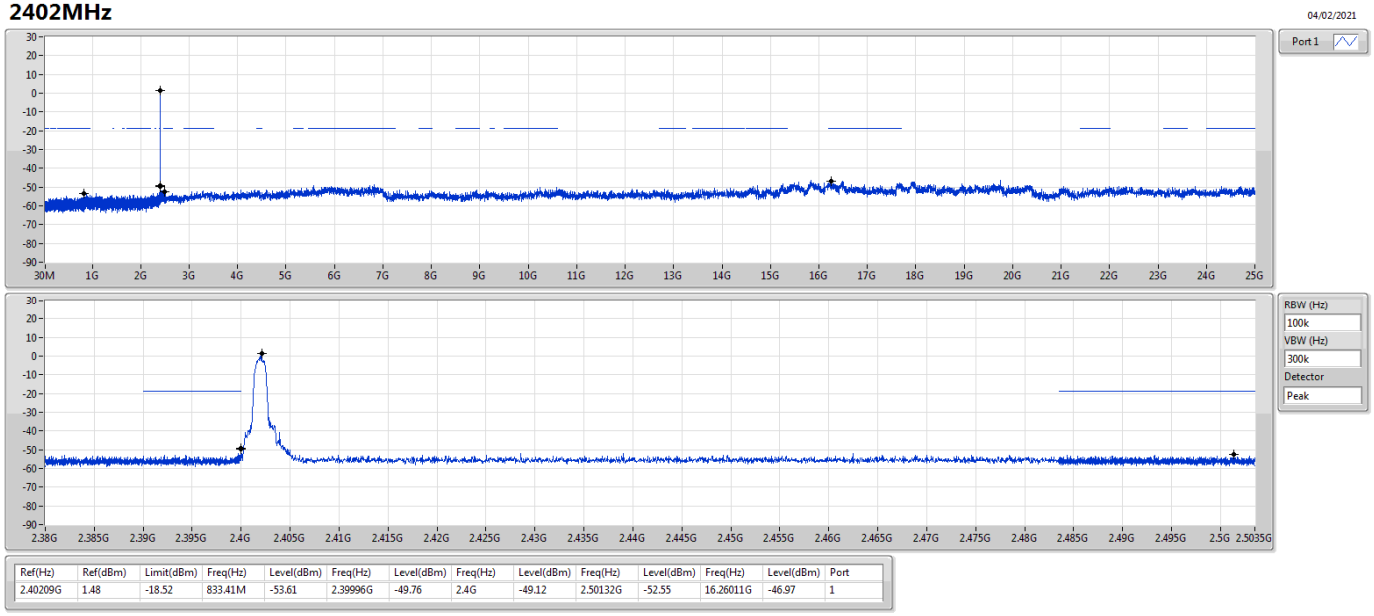
2480MHz



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	3.32	-16.68	165.71M	-52.58	2.39951G	-52.08	2.4835G	-55.15	2.49509G	-52.52	17.63802G	-46.64	1

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

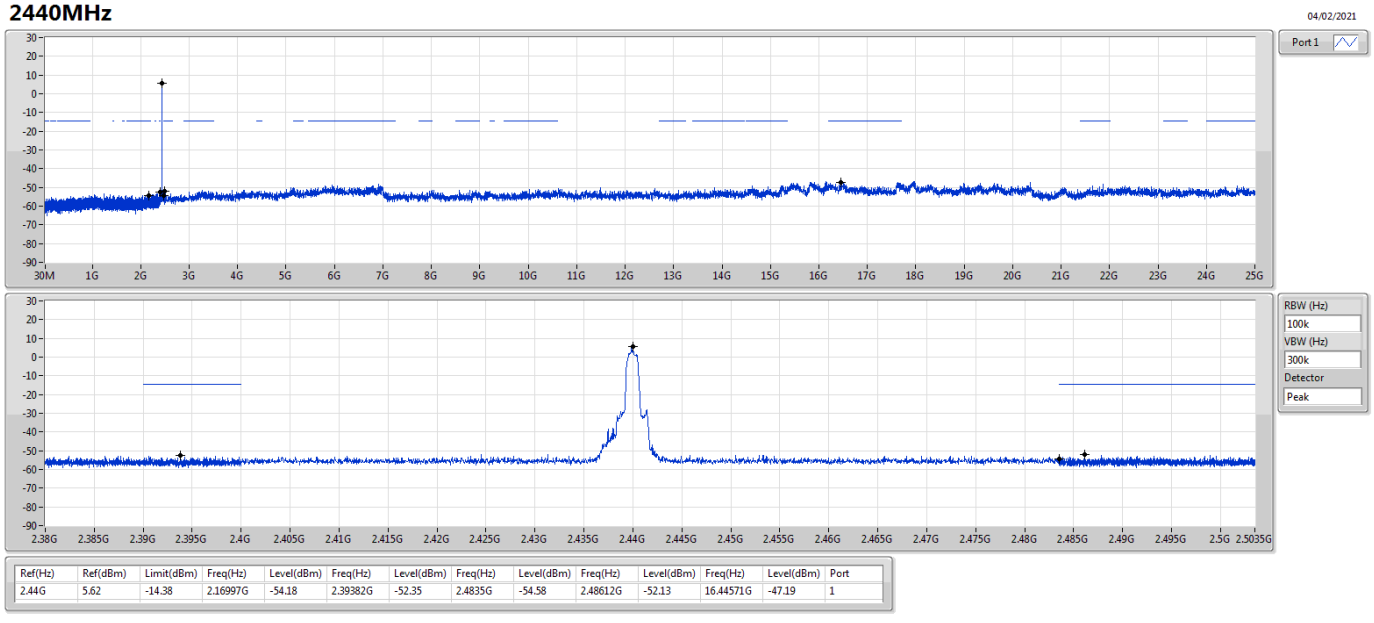
2402MHz



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
2.40209G	1.48	-18.52	833.41M	-53.61	2.39996G	-49.76	2.4G	-49.12	2.50132G	-52.55	16.26011G	-46.97	1

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

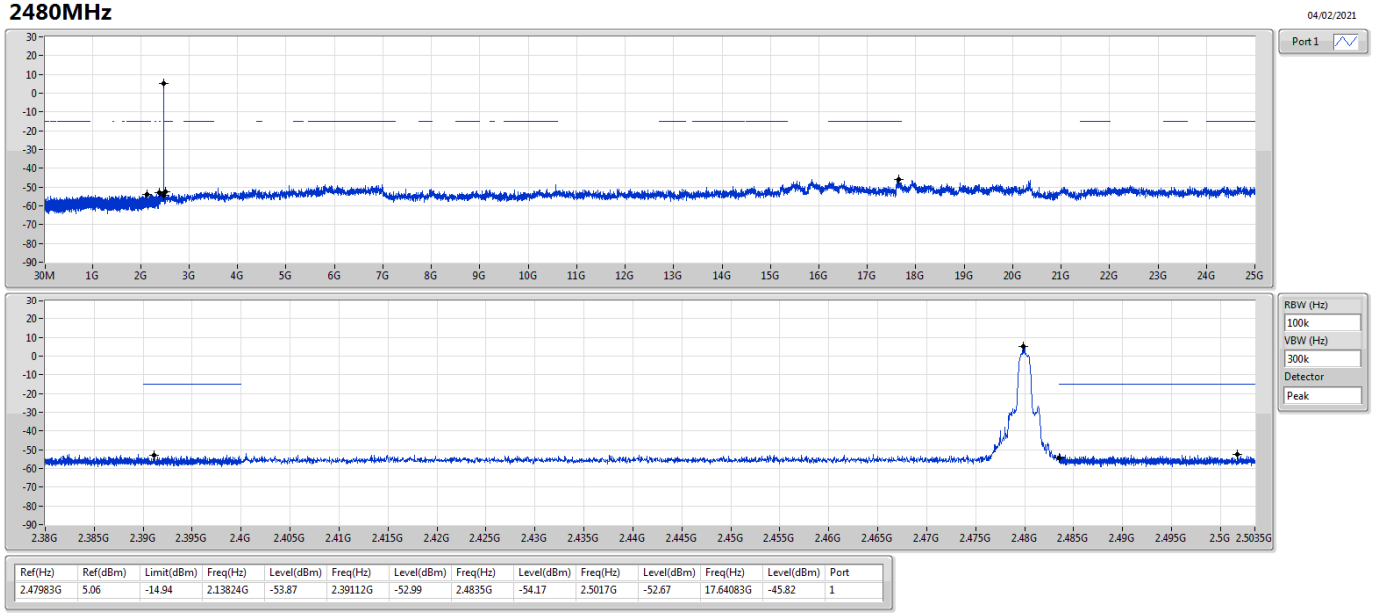
2440MHz



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
2.44G	5.62	-14.38	2.16997G	-54.18	2.39382G	-52.35	2.4835G	-54.58	2.48612G	-52.13	16.44571G	-47.19	1

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

2480MHz



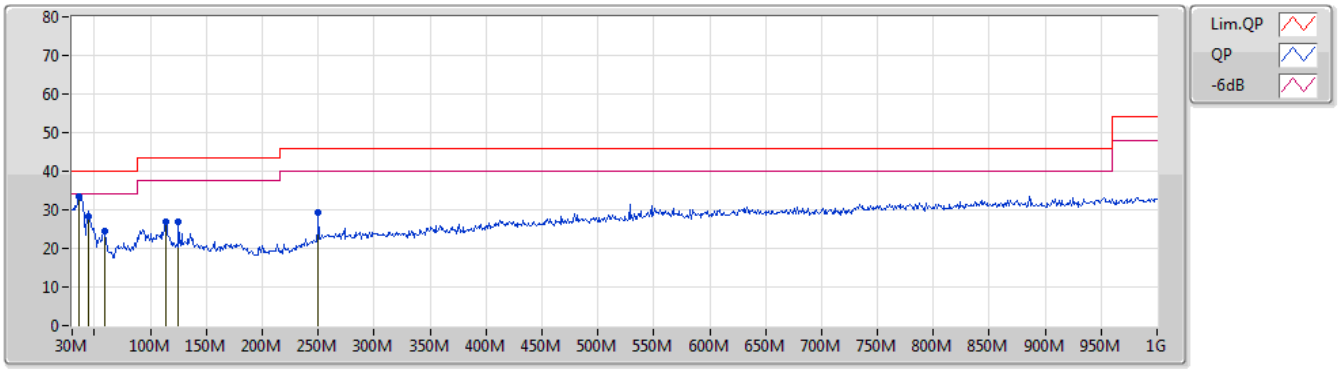
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47983G	5.06	-14.94	2.13824G	-53.87	2.39112G	-52.99	2.4835G	-54.17	2.5017G	-52.67	17.64083G	-45.82	1

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 3	Pass	PK	35.82M	33.54	40.00	-6.46	Vertical

Mode 3

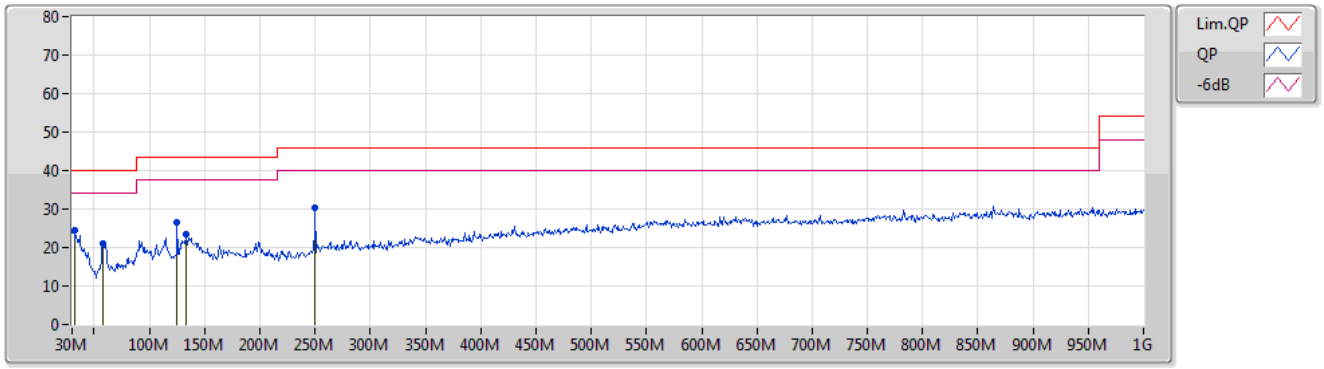
06/02/2021



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	35.82M	33.54	40.00	-6.46	-6.92	3	Vertical	360	1.25	"Worst"	40.46	21.34	0.22	28.48
PK	44.55M	28.30	40.00	-11.70	-11.12	3	Vertical	360	1.25	-	39.42	16.97	0.39	28.48
PK	59.1M	24.57	40.00	-15.43	-15.33	3	Vertical	278	1.00	-	39.90	12.67	0.48	28.48
PK	113.42M	26.91	43.50	-16.59	-9.77	3	Vertical	210	1.00	-	36.68	17.78	0.83	28.38
PK	125.06M	26.86	43.50	-16.64	-9.48	3	Vertical	154	1.00	-	36.34	17.91	0.95	28.34
PK	250.19M	29.40	46.00	-16.60	-7.83	3	Vertical	167	2.00	-	37.23	18.46	1.50	27.79

Mode 3

06/02/2021



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	31.94M	24.61	40.00	-15.39	-4.86	3	Horizontal	352	2.00	"Worst"	29.47	23.43	0.20	28.49
PK	58.13M	21.20	40.00	-18.80	-15.37	3	Horizontal	292	2.00	-	36.57	12.65	0.46	28.48
PK	125.06M	26.44	43.50	-17.06	-9.48	3	Horizontal	112	2.00	-	35.92	17.91	0.95	28.34
PK	133.79M	23.47	43.50	-20.03	-9.72	3	Horizontal	272	2.00	-	33.19	17.55	1.04	28.31
PK	250.19M	30.22	46.00	-15.78	-7.83	3	Horizontal	109	1.00	-	38.05	18.46	1.50	27.79
PK	250.19M	30.22	46.00	-15.78	-7.83	3	Horizontal	109	1.00	-	38.05	18.46	1.50	27.79

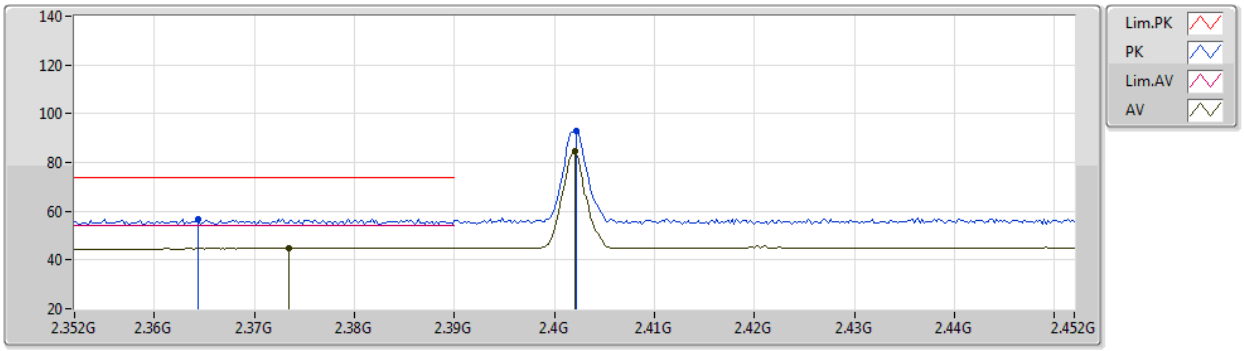
Summary

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	2.4835G	49.45	54.00	-4.55	3	Vertical	161	1.80	-

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



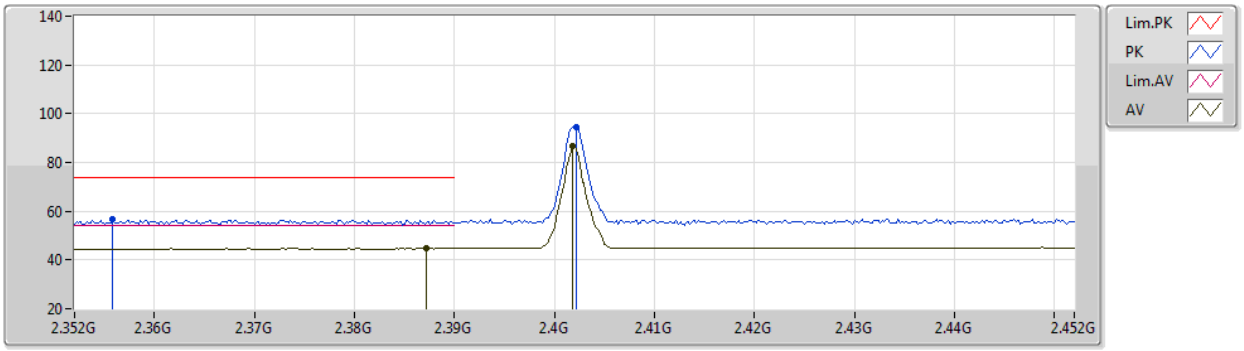
EUT Z_1TX
Setting 63
03-F-K-4

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	2.3644G	56.93	74.00	-17.07	24.21	3	Vertical	306	2.44	-	29.26	3.46	-
AV	2.3734G	44.90	54.00	-9.10	12.14	3	Vertical	306	2.44	-	29.29	3.47	-
PK	2.4022G	92.97	Inf	-Inf	60.07	3	Vertical	306	2.44	-	29.40	3.50	-
AV	2.402G	84.73	Inf	-Inf	51.83	3	Vertical	306	2.44	-	29.40	3.50	-

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



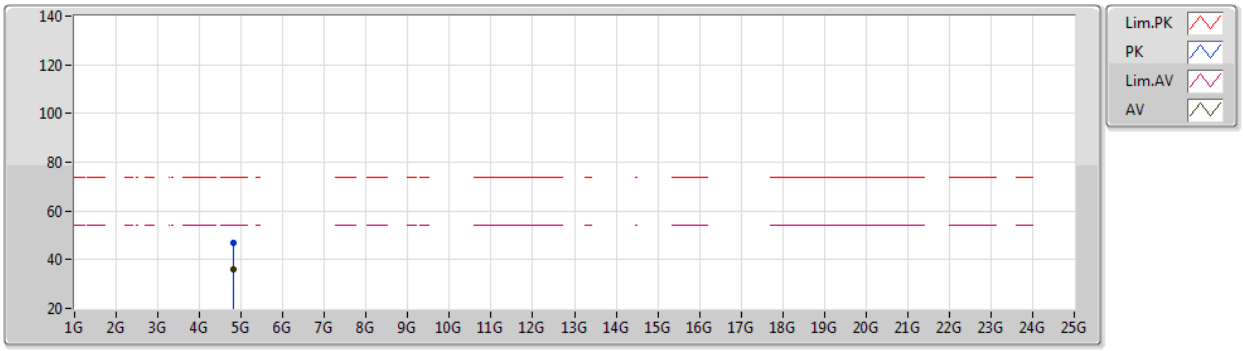
EUT Z_1TX
Setting 63
03-F-K-4

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	2.3558G	56.70	74.00	-17.30	24.02	3	Horizontal	211	3.00	-	29.22	3.46	-
AV	2.3872G	44.67	54.00	-9.33	11.83	3	Horizontal	211	3.00	-	29.35	3.49	-
PK	2.4022G	94.68	Inf	-Inf	61.78	3	Horizontal	211	3.00	-	29.40	3.50	-
AV	2.4018G	86.61	Inf	-Inf	53.71	3	Horizontal	211	3.00	-	29.40	3.50	-

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



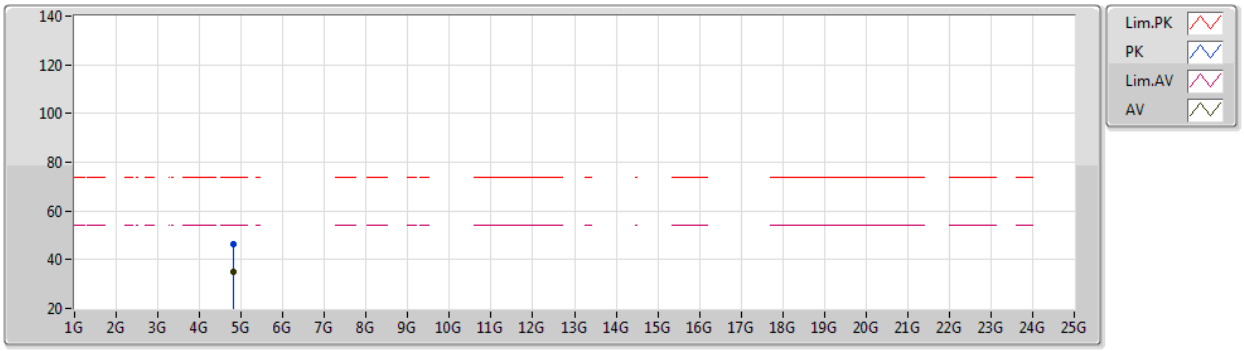
EUT Z_1TX
Setting 63
03-F-K-4

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	4.80415G	46.98	74.00	-27.02	42.63	3	Vertical	133	1.39	-	33.42	6.21	35.28
AV	4.80391G	36.23	54.00	-17.77	31.88	3	Vertical	133	1.39	-	33.42	6.21	35.28

BT-BR(1Mbps)

2402MHz_TX

02/02/2021



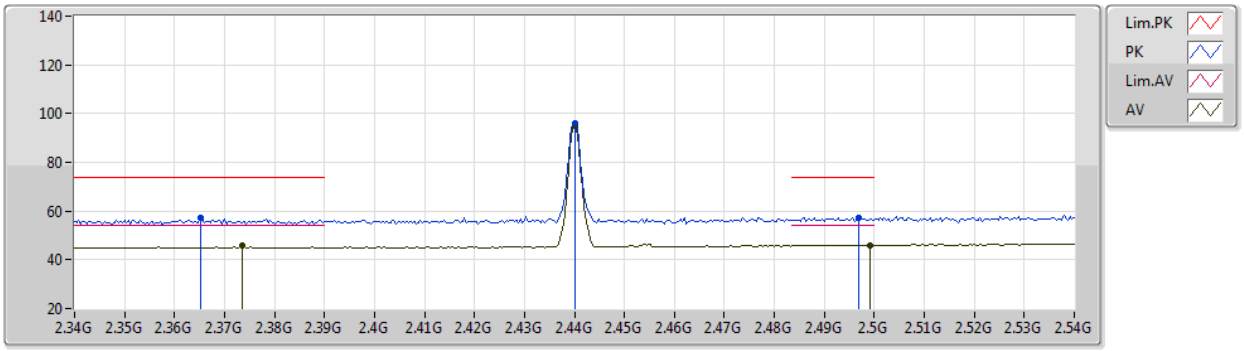
EUT Z_1TX
Setting 63
03-F-K-4

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	4.80366G	46.39	74.00	-27.61	42.04	3	Horizontal	271	1.00	-	33.42	6.21	35.28
AV	4.80393G	35.04	54.00	-18.96	30.69	3	Horizontal	271	1.00	-	33.42	6.21	35.28

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



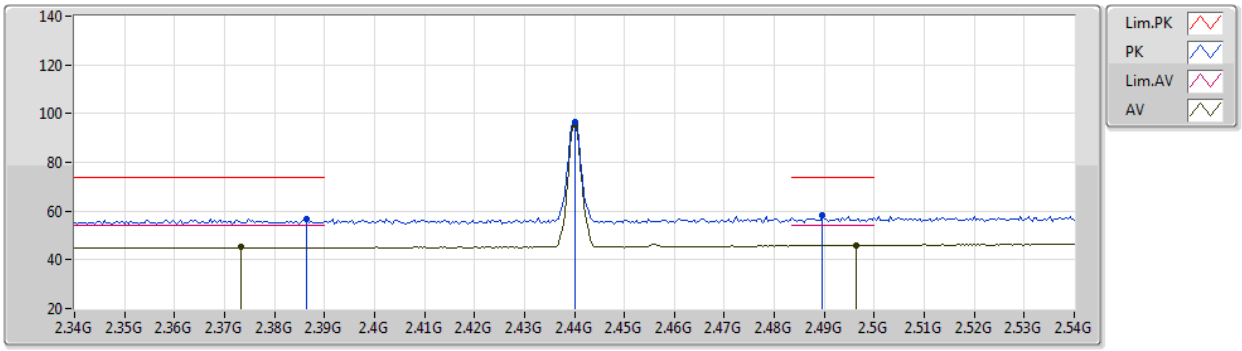
EUT Z_1TX
Setting 63
03-F-K-4

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	2.3652G	57.18	74.00	-16.82	24.45	3	Vertical	142	2.61	-	29.26	3.47	-
AV	2.3736G	45.67	54.00	-8.33	12.91	3	Vertical	142	2.61	-	29.29	3.47	-
PK	2.44G	96.06	Inf	-Inf	63.04	3	Vertical	142	2.61	-	29.48	3.54	-
AV	2.44G	95.20	Inf	-Inf	62.18	3	Vertical	142	2.61	-	29.48	3.54	-
PK	2.4968G	57.35	74.00	-16.65	23.59	3	Vertical	142	2.61	-	30.16	3.60	-
AV	2.4992G	46.11	54.00	-7.89	12.32	3	Vertical	142	2.61	-	30.19	3.60	-

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



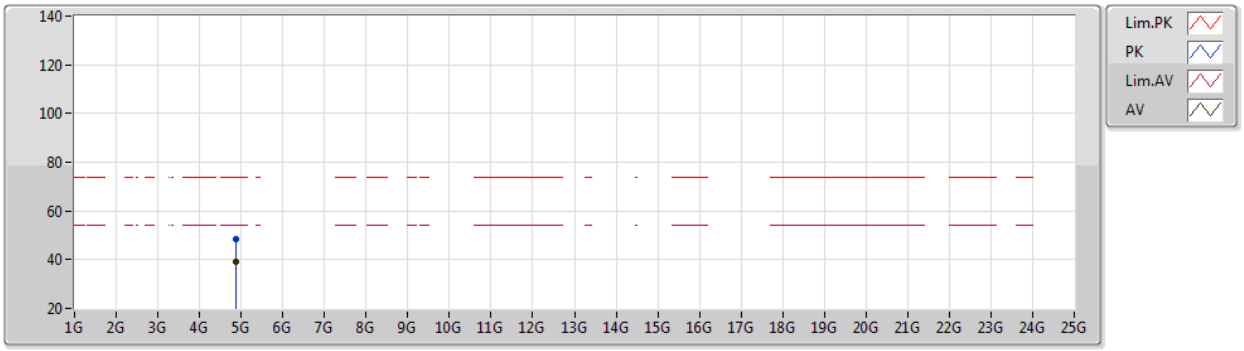
EUT Z_1TX
Setting 63
03-F-K-4

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	2.3864G	56.87	74.00	-17.13	24.03	3	Horizontal	360	1.00	-	29.35	3.49	-
AV	2.3732G	45.17	54.00	-8.83	12.41	3	Horizontal	360	1.00	-	29.29	3.47	-
PK	2.44G	96.59	Inf	-Inf	63.57	3	Horizontal	360	1.00	-	29.48	3.54	-
AV	2.44G	95.70	Inf	-Inf	62.68	3	Horizontal	360	1.00	-	29.48	3.54	-
PK	2.4896G	58.26	74.00	-15.74	24.62	3	Horizontal	360	1.00	-	30.05	3.59	-
AV	2.4964G	45.97	54.00	-8.03	12.22	3	Horizontal	360	1.00	-	30.15	3.60	-

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



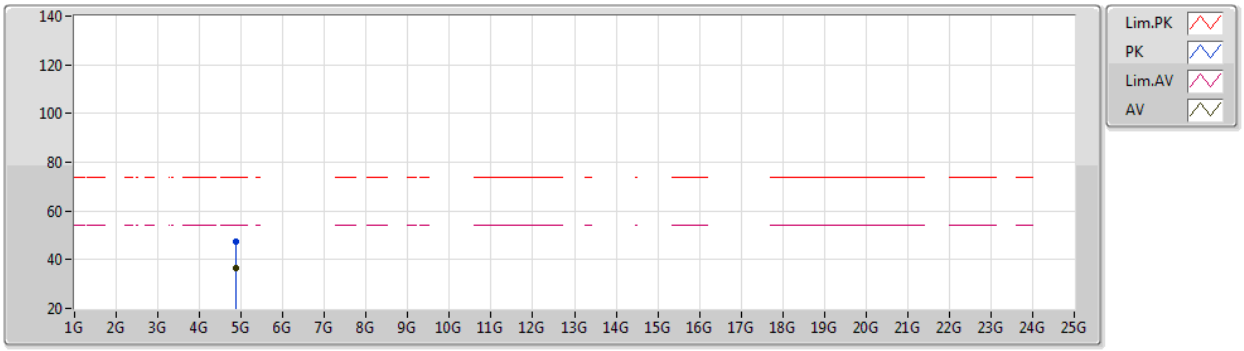
EUT Z_1TX
Setting 63
03-F-K-4

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	4.87961G	48.62	74.00	-25.38	43.84	3	Vertical	133	1.25	-	33.82	6.32	35.36
AV	4.87993G	39.19	54.00	-14.81	34.41	3	Vertical	133	1.25	-	33.82	6.32	35.36

BT-BR(1Mbps)

2440MHz_TX

02/02/2021



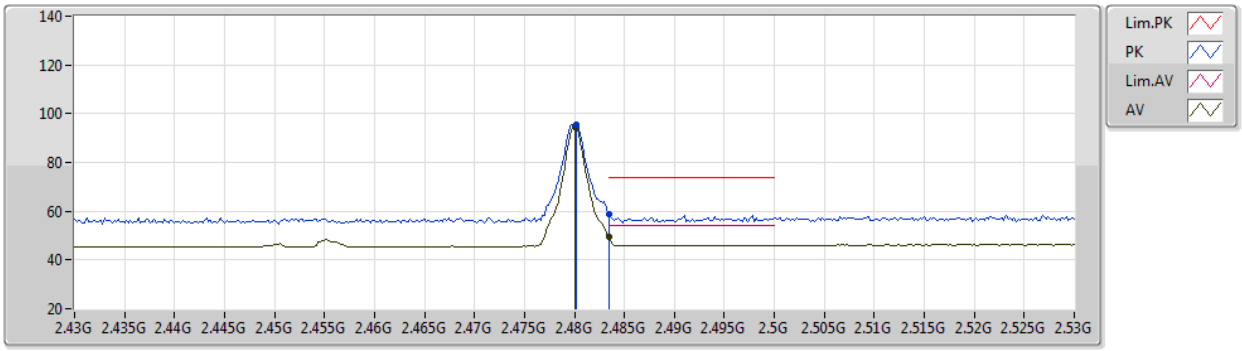
EUT Z_1TX
Setting 63
03-F-K-4

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	4.87973G	47.56	74.00	-26.44	42.78	3	Horizontal	272	1.70	-	33.82	6.32	35.36
AV	4.87996G	36.43	54.00	-17.57	31.65	3	Horizontal	272	1.70	-	33.82	6.32	35.36

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



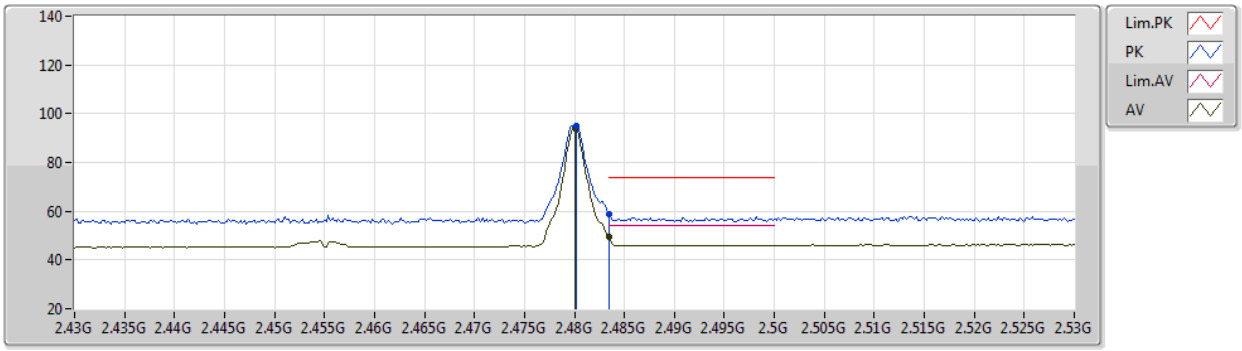
EUT Z_1TX
Setting 63
03-F-K-4

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	2.4802G	95.50	Inf	-Inf	62.00	3	Vertical	161	1.80	-	29.92	3.58	-
AV	2.48G	94.62	Inf	-Inf	61.12	3	Vertical	161	1.80	-	29.92	3.58	-
PK	2.4835G	59.04	74.00	-14.96	25.49	3	Vertical	161	1.80	-	29.97	3.58	-
AV	2.4835G	49.45	54.00	-4.55	15.90	3	Vertical	161	1.80	-	29.97	3.58	-

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



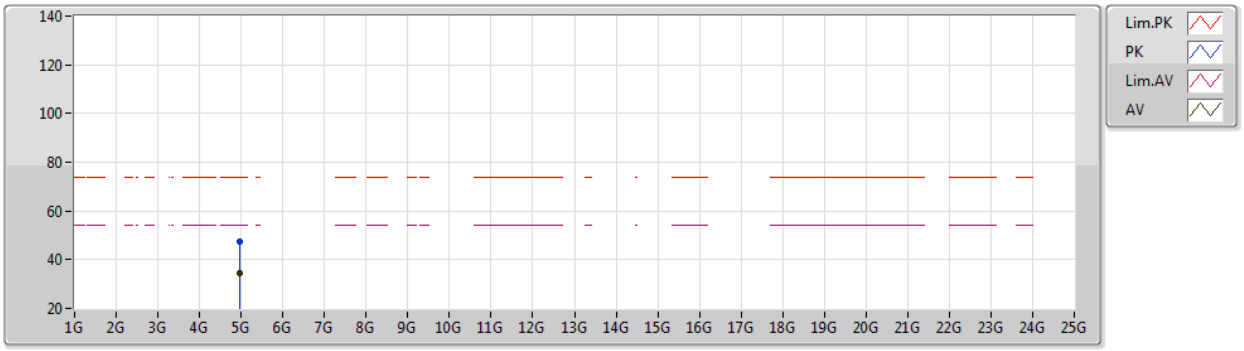
EUT Z_1TX
Setting 63
03-F-K-4

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	2.4802G	95.06	Inf	-Inf	61.56	3	Horizontal	360	1.68	-	29.92	3.58	-
AV	2.48G	94.11	Inf	-Inf	60.61	3	Horizontal	360	1.68	-	29.92	3.58	-
PK	2.4835G	58.70	74.00	-15.30	25.15	3	Horizontal	360	1.68	-	29.97	3.58	-
AV	2.4835G	49.40	54.00	-4.60	15.85	3	Horizontal	360	1.68	-	29.97	3.58	-

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



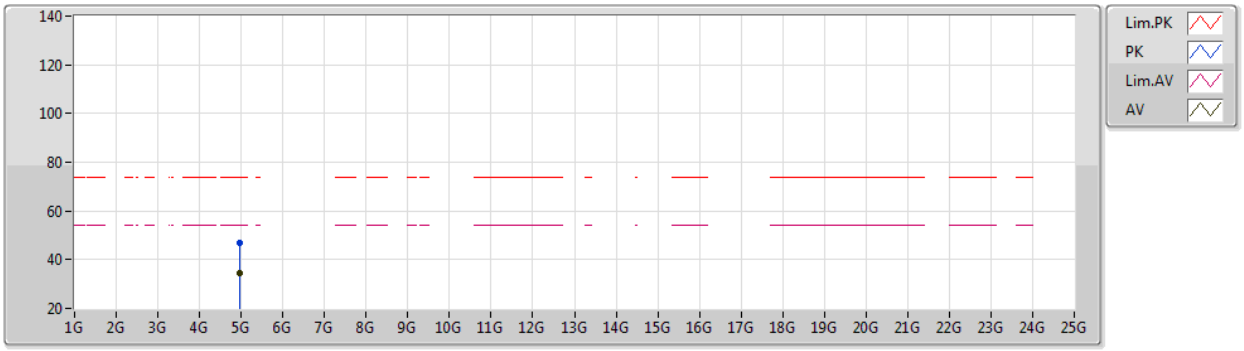
EUT Z_1TX
Setting 63
03-F-K-4

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	4.96028G	47.39	74.00	-26.61	42.40	3	Vertical	19	1.58	-	34.00	6.44	35.45
AV	4.9601G	34.73	54.00	-19.27	29.74	3	Vertical	19	1.58	-	34.00	6.44	35.45

BT-BR(1Mbps)

2480MHz_TX

02/02/2021



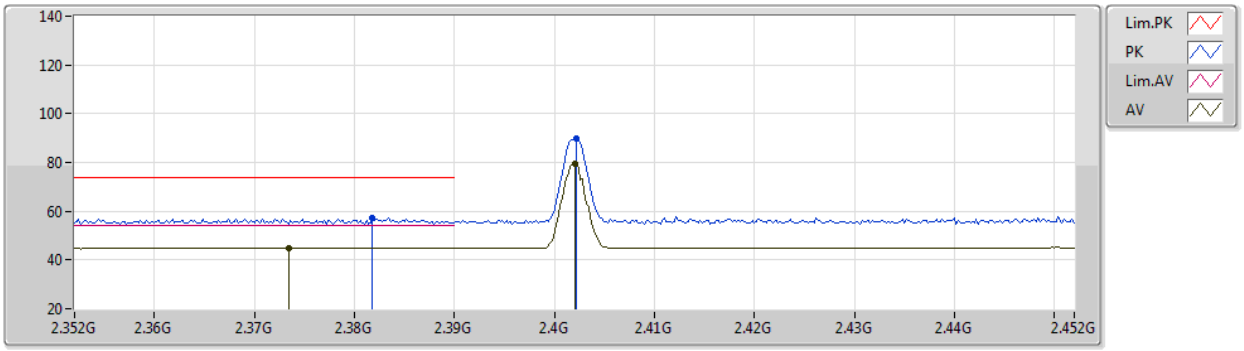
EUT Z_1TX
Setting 63
03-F-K-4

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	4.95985G	46.68	74.00	-27.32	41.69	3	Horizontal	112	1.18	-	34.00	6.44	35.45
AV	4.96009G	34.26	54.00	-19.74	29.27	3	Horizontal	112	1.18	-	34.00	6.44	35.45

BT-EDR(3Mbps)

02/02/2021

2402MHz_TX



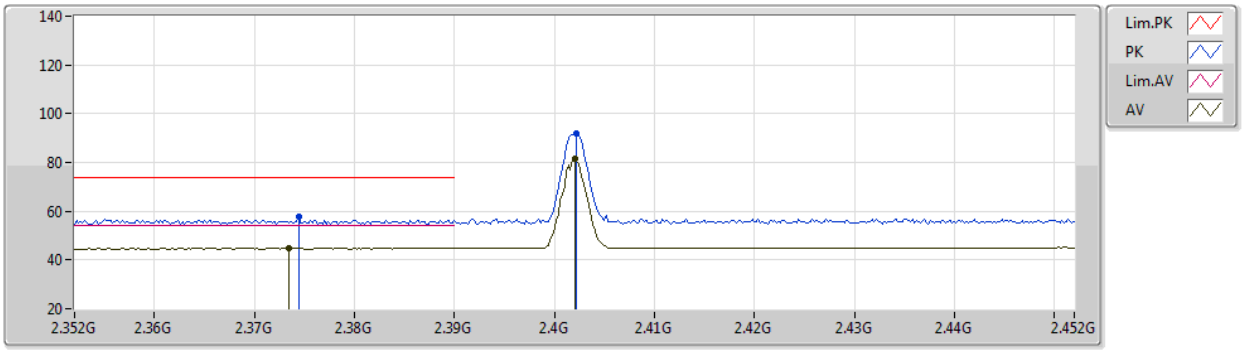
EUT Z_1TX
Setting 63
03-F-K-4

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	2.3818G	57.34	74.00	-16.66	24.53	3	Vertical	309	1.41	-	29.33	3.48	-
AV	2.3734G	44.90	54.00	-9.10	12.14	3	Vertical	309	1.41	-	29.29	3.47	-
PK	2.4022G	89.88	Inf	-Inf	56.98	3	Vertical	309	1.41	-	29.40	3.50	-
AV	2.402G	79.27	Inf	-Inf	46.37	3	Vertical	309	1.41	-	29.40	3.50	-

BT-EDR(3Mbps)

2402MHz_TX

02/02/2021



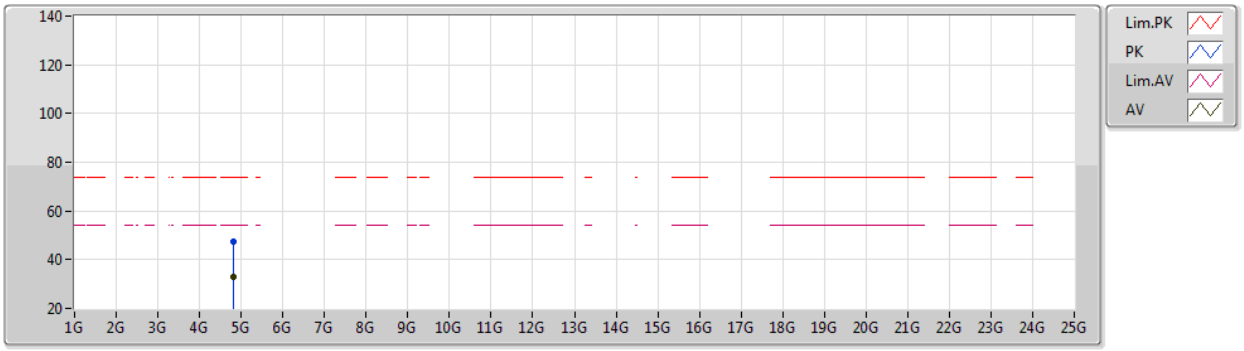
EUT Z_1TX
Setting 63
03-F-K-4

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	2.3744G	57.52	74.00	-16.48	24.75	3	Horizontal	212	3.00	-	29.30	3.47	-
AV	2.3734G	44.81	54.00	-9.19	12.05	3	Horizontal	212	3.00	-	29.29	3.47	-
PK	2.4022G	91.73	Inf	-Inf	58.83	3	Horizontal	212	3.00	-	29.40	3.50	-
AV	2.402G	81.46	Inf	-Inf	48.56	3	Horizontal	212	3.00	-	29.40	3.50	-

BT-EDR(3Mbps)

2402MHz_TX

02/02/2021



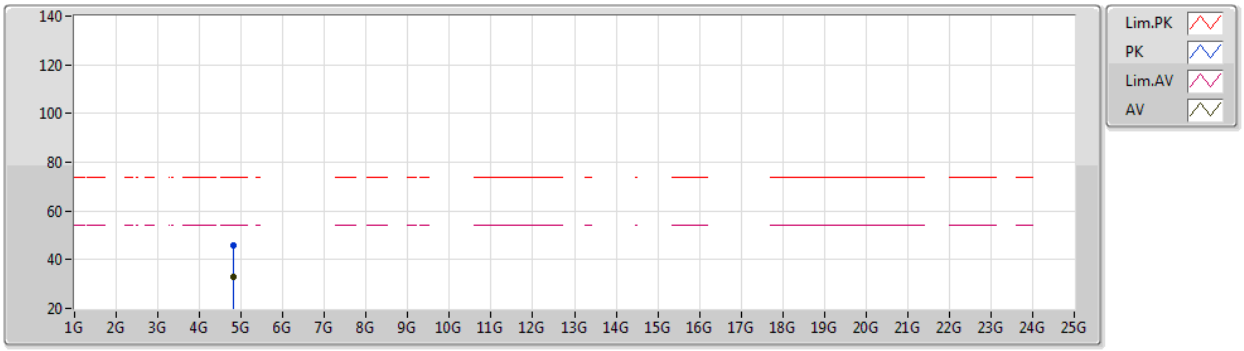
EUT Z_1TX
Setting 63
03-F-K-4

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	4.8044G	47.29	74.00	-26.71	42.93	3	Vertical	297	1.09	-	33.43	6.21	35.28
AV	4.80473G	33.10	54.00	-20.90	28.74	3	Vertical	297	1.09	-	33.43	6.21	35.28

BT-EDR(3Mbps)

2402MHz_TX

02/02/2021



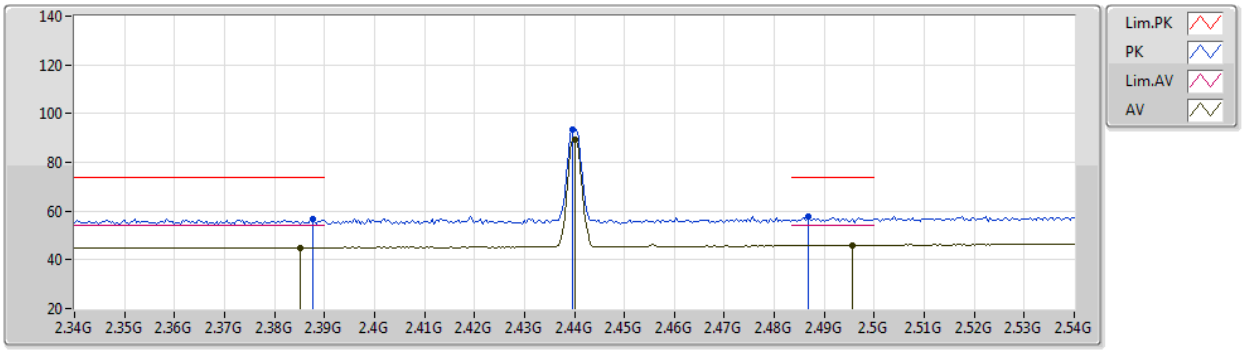
EUT Z_1TX
Setting 63
03-F-K-4

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	4.80238G	45.93	74.00	-28.07	41.60	3	Horizontal	220	2.64	-	33.41	6.20	35.28
AV	4.81714G	33.04	54.00	-20.96	28.61	3	Horizontal	220	2.64	-	33.50	6.23	35.30

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



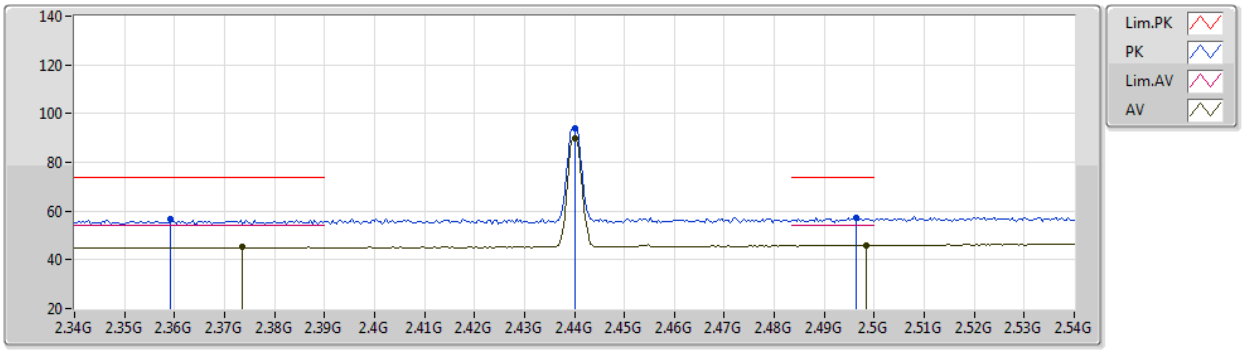
EUT Z_1TX
Setting 63
03-F-K-4

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	56.70	74.00	-17.30	23.86	3	Vertical	343	2.63	-	29.35	3.49	-
AV	2.3852G	45.07	54.00	-8.93	12.24	3	Vertical	343	2.63	-	29.34	3.49	-
PK	2.4396G	93.63	Inf	-Inf	60.61	3	Vertical	343	2.63	-	29.48	3.54	-
AV	2.44G	89.52	Inf	-Inf	56.50	3	Vertical	343	2.63	-	29.48	3.54	-
PK	2.4868G	57.62	74.00	-16.38	24.01	3	Vertical	343	2.63	-	30.02	3.59	-
AV	2.4956G	46.07	54.00	-7.93	12.33	3	Vertical	343	2.63	-	30.14	3.60	-

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



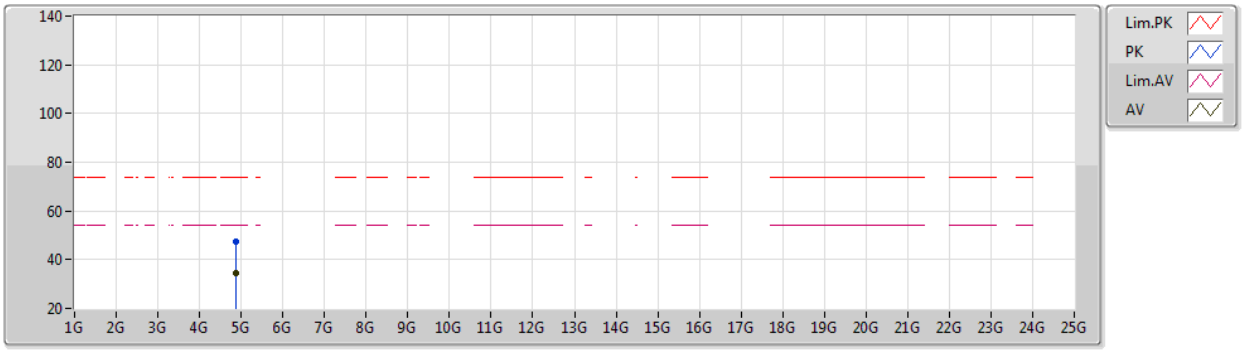
EUT Z_1TX
Setting 63
03-F-K-4

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	2.3592G	56.50	74.00	-17.50	23.80	3	Horizontal	360	1.00	-	29.24	3.46	-
AV	2.3736G	45.27	54.00	-8.73	12.51	3	Horizontal	360	1.00	-	29.29	3.47	-
PK	2.44G	94.08	Inf	-Inf	61.06	3	Horizontal	360	1.00	-	29.48	3.54	-
AV	2.44G	89.99	Inf	-Inf	56.97	3	Horizontal	360	1.00	-	29.48	3.54	-
PK	2.4964G	57.45	74.00	-16.55	23.70	3	Horizontal	360	1.00	-	30.15	3.60	-
AV	2.4984G	46.10	54.00	-7.90	12.32	3	Horizontal	360	1.00	-	30.18	3.60	-

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



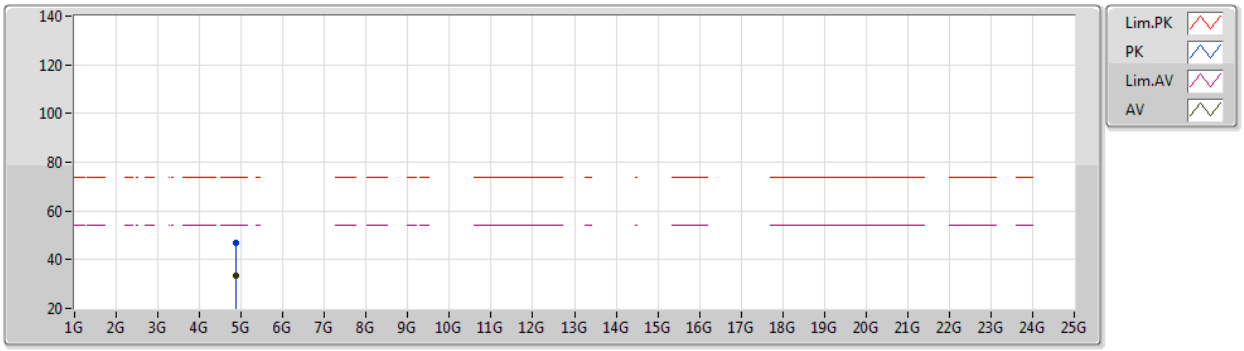
EUT Z_1TX
Setting 63
03-F-K-4

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	4.87959G	47.43	74.00	-26.57	42.65	3	Vertical	134	1.23	-	33.82	6.32	35.36
AV	4.87978G	34.66	54.00	-19.34	29.88	3	Vertical	134	1.23	-	33.82	6.32	35.36

BT-EDR(3Mbps)

2440MHz_TX

02/02/2021



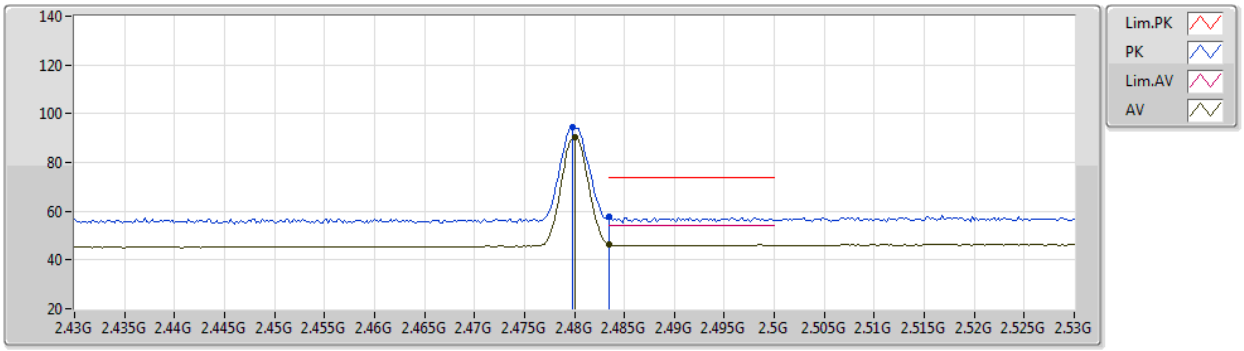
EUT Z_1TX
Setting 63
03-F-K-4

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	4.87957G	46.92	74.00	-27.08	42.14	3	Horizontal	269	1.67	-	33.82	6.32	35.36
AV	4.88013G	33.66	54.00	-20.34	28.88	3	Horizontal	269	1.67	-	33.82	6.32	35.36

BT-EDR(3Mbps)

02/02/2021

2480MHz_TX



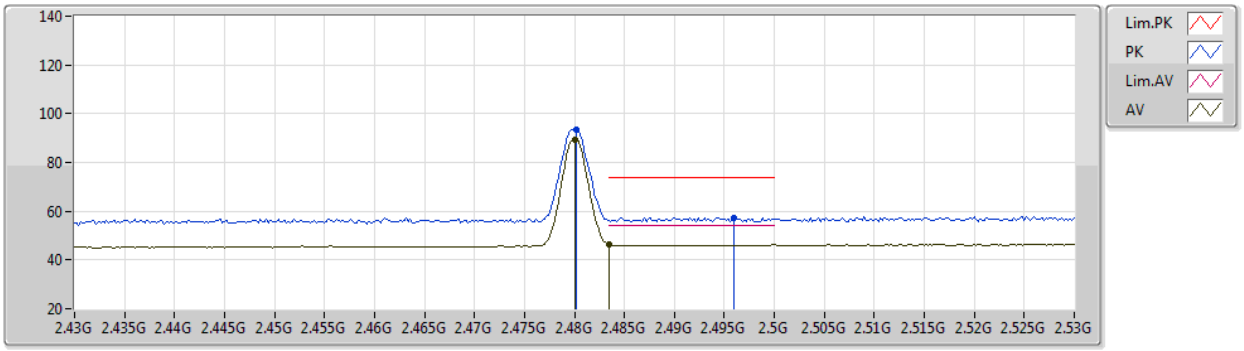
EUT Z_1TX
Setting 63
03-F-K-4

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	94.25	Inf	-Inf	60.75	3	Vertical	161	2.03	-	29.92	3.58	-
AV	2.48G	90.21	Inf	-Inf	56.71	3	Vertical	161	2.03	-	29.92	3.58	-
PK	2.4835G	57.58	74.00	-16.42	24.03	3	Vertical	161	2.03	-	29.97	3.58	-
AV	2.4835G	46.31	54.00	-7.69	12.76	3	Vertical	161	2.03	-	29.97	3.58	-

BT-EDR(3Mbps)

2480MHz_TX

02/02/2021



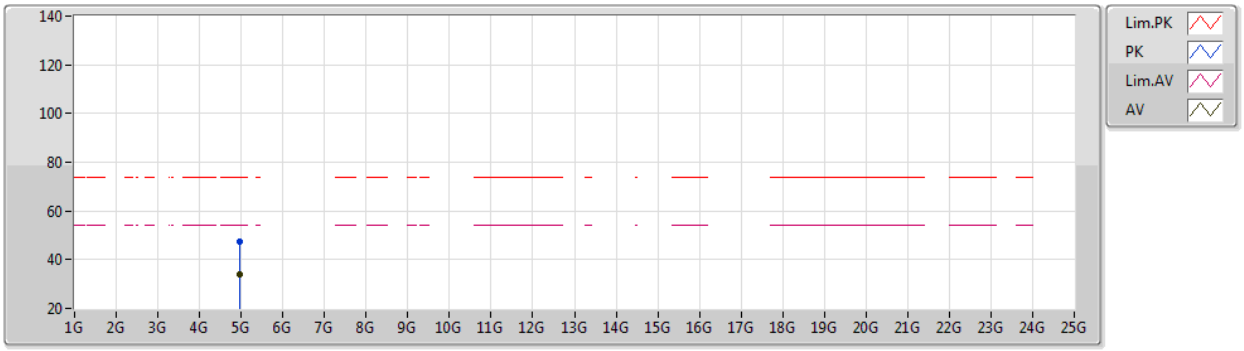
EUT Z_1TX
Setting 63
03-F-K-4

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	2.4802G	93.42	Inf	-Inf	59.92	3	Horizontal	360	1.67	-	29.92	3.58	-
AV	2.48G	89.42	Inf	-Inf	55.92	3	Horizontal	360	1.67	-	29.92	3.58	-
PK	2.496G	57.41	74.00	-16.59	23.67	3	Horizontal	360	1.67	-	30.14	3.60	-
AV	2.4835G	46.35	54.00	-7.65	12.80	3	Horizontal	360	1.67	-	29.97	3.58	-

BT-EDR(3Mbps)

2480MHz_TX

02/02/2021



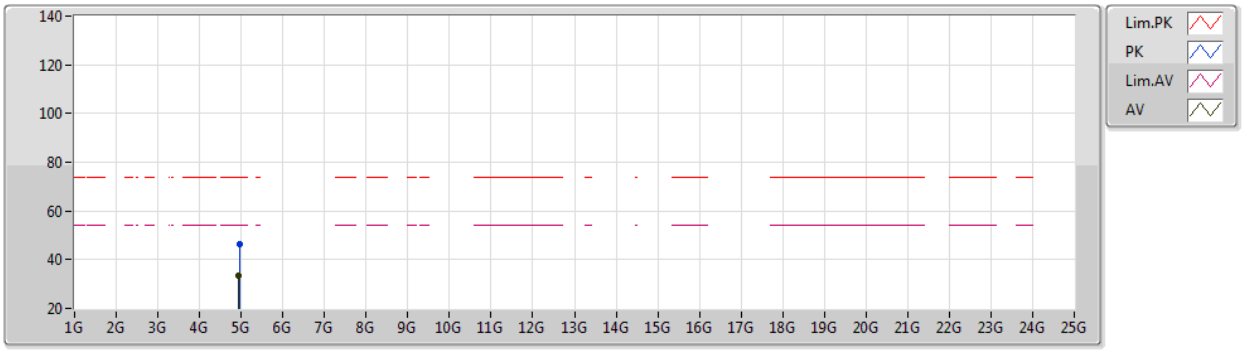
EUT Z_1TX
Setting 63
03-F-K-4

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	4.96406G	47.24	74.00	-26.76	42.24	3	Vertical	20	1.54	-	34.00	6.45	35.45
AV	4.95998G	34.09	54.00	-19.91	29.10	3	Vertical	20	1.54	-	34.00	6.44	35.45

BT-EDR(3Mbps)

2480MHz_TX

02/02/2021



EUT Z_1TX
Setting 63
03-F-K-4

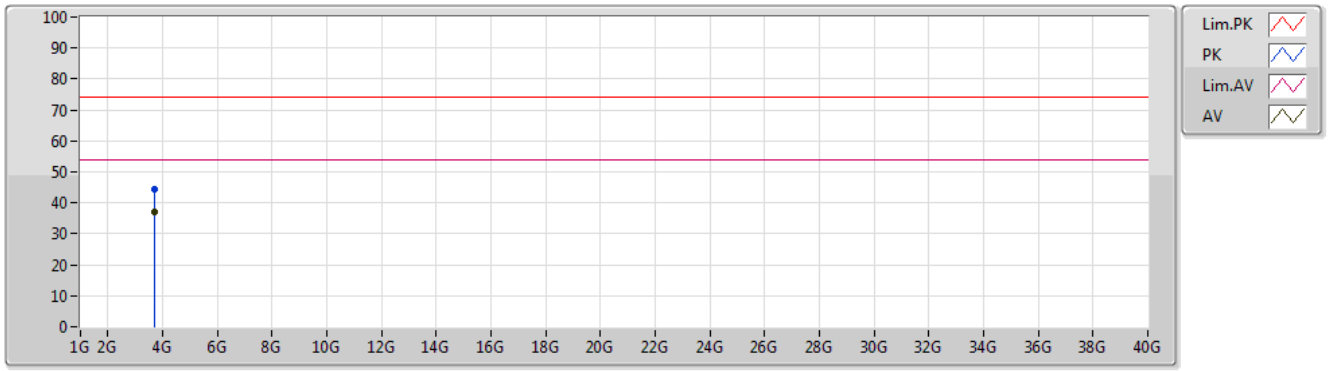
Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.9504G	46.13	74.00	-27.87	41.14	3	Horizontal	243	2.77	-	34.00	6.43	35.44
AV	4.94668G	33.35	54.00	-20.65	28.37	3	Horizontal	243	2.77	-	33.99	6.42	35.43

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	3.68737G	37.12	54.00	-16.88	Vertical

Mode 1

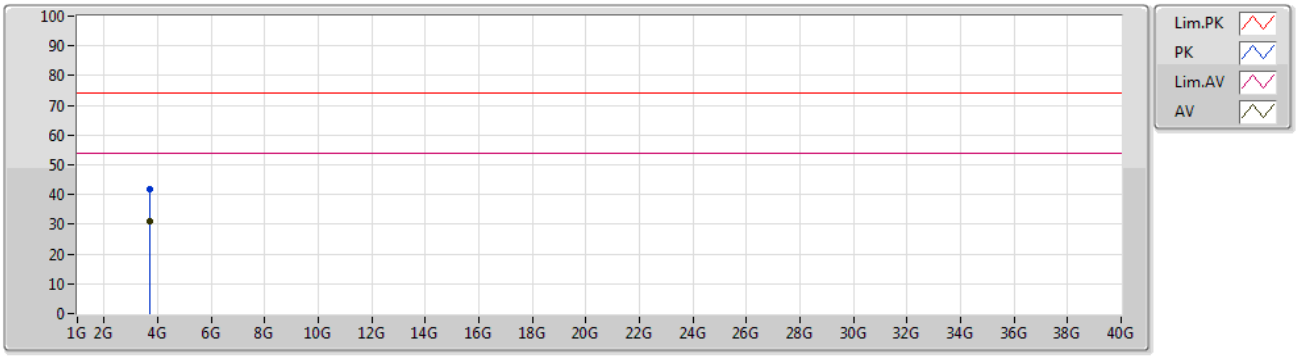
03/02/2021



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)	(dB)	(dB)	(dB)
PK	3.6875G	44.33	74.00	-29.67	-1.68	3	Vertical	337	2.88	-	46.01	29.20	5.13	36.01
AV	3.68737G	37.12	54.00	-16.88	-1.68	3	Vertical	337	2.88	"Worst"	38.80	29.20	5.13	36.01

Mode 1

03/02/2021



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)	(dB)	(dB)	(dB)
PK	3.68779G	41.80	74.00	-32.20	-1.68	3	Horizontal	166	2.72	-	43.48	29.20	5.13	36.01
AV	3.68743G	30.89	54.00	-23.11	-1.68	3	Horizontal	166	2.72	"Worst"	32.57	29.20	5.13	36.01