Testing Laboratory
1190

FCC RADIO TEST REPORT

FCC ID	:	Q87-03564
Equipment	:	Linksys Tri-Band Wireless-AC Router
Brand Name	:	Linksys
Model Name	:	MR8300 V1.1/ MR8250 V1.1
Applicant	:	Linksys LLC 121 Theory Drive Irvine, CA 92617, United States
Standard	:	47 CFR FCC Part 15.247

The product was received on Mar. 06, 2020, and testing was started from Mar. 06, 2020 and completed on Apr. 07, 2020. 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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 Photos

Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR710901-06AC	01	Initial issue of report	Jun. 15, 2020

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:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. 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: Viola 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	1	1
2.4-2.4835GHz	BT-EDR	1	1

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	P/N	Antenna Type	Connector	Gain (dBi)
1	1	FIT	ANEP5M2-CCG05-EH	Dipole Antenna	I-PEX	Note1
2	2	FIT	ANEP5M2-CCG06-EH	Dipole Antenna	I-PEX	
3	1	FIT	ANEP5M2-CCG07-EH	Dipole Antenna	I-PEX	
4	2	FIT	ANEP5M2-CCG08-EH	Dipole Antenna	I-PEX	
5	1	PSA	RFMTA271200NNAB003	PIFA Antenna	N/A	

Note 1:

Ant.	Port	Gain (dBi)					
		WLAN 2.4GHz	WLAN 5GHz Band 1	WLAN 5GHz Band 2	WLAN 5GHz Band 3	WLAN 5GHz Band 4	Bluetooth
1	1	2.81	2.54	2.87	-	-	-
2	2	2.35	2.75	2.41	-	-	-
3	1	-	-	-	3.15	2.89	-
4	2	-	-	-	3.35	2.97	-
5	1	-	-	-	-	-	3.28

Note 2: The above information was declared by manufacturer.
Note 3:

For 2.4GHz function:

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

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

Ant. 1 (Port 1) and Ant. 2 (Port 2) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n/ac (2TX/2RX):

Band 1~Band 2

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

Ant. 1 (Port 1) and Ant. 2 (Port 2) could transmit/receive simultaneously.

Band 3~Band 4

Ant. 3 (Port 1) and Ant. 4 (Port 2) can be used as transmitting/receiving antenna.

Ant. 3 (Port 1) and Ant. 4 (Port 2) could transmit/receive simultaneously.

For Bluetooth function (1TX/1RX)::

Only Ant. 5 (Port 1) can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	0.773	1.12	2.899m	1k
BT-EDR(2Mbps)	0.747	1.27	2.906m	1k
BT-EDR(3Mbps)	0.789	1.03	2.908m	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	BtCLI & Blue Test3

1.1.5 Table for Multiple Listing

Model Name	Software Versions	Equip Adapter	LED Design	Support Function	Description
MR8300 V1.1	WLAN: 2.0.0.200811 Bluetooth: OpenWrt Chaos Calmer 15.05.1 r35193 / LuCI branch (git-16.190.28508-c9d9415)	Adapter 1~3	Please refer to the photographs of EUT	Master (AP Router, Repeater, Bridge)	All models are identical; different models serve as marketing strategy.
MR8250 V1.1		Adapter 1~3	Same as above		

Note: From the above models, model: MR8300 V1.1 was selected as representative model for the test and it's data was recorded in this report.

Note: Only AP Router mode has been selected to test and recorded in the test report from manufacturer requirement.

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, Lane 724, Bo-ai St., Jhubei 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	Test Date
RF Conducted	TH02-CB	Jay Luo	20.9~22.3°C / 47~48%	Mar. 19, 2020 ~ Mar. 27, 2020
Radiated below 1GHz	03CH05-CB	Cola Fan	21.3~23.2°C / 46~49%	Mar. 13, 2020 ~ Apr. 07, 2020
Radiated above 1GHz	03CH01-CB	Cola Fan	20~21.5°C / 46~50%	Mar. 06, 2020 ~ Apr. 07, 2020
AC Conduction	CO01-CB	Peter Wu	23~24°C / 55~58%	Mar. 14, 2020

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 (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	35
2440MHz	5
2480MHz	13
BT-EDR(2Mbps)	-
2402MHz	57
2440MHz	55
2480MHz	50
BT-EDR(3Mbps)	-
2402MHz	57
2440MHz	55
2480MHz	50

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	AP Router mode: EUT + Adapter 1
2	AP Router mode: EUT + Adapter 2 + US plug
3	AP Router mode: EUT + Adapter 3
For operating mode 3 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
WLAN 2.4GHz: The EUT was performed at Y axis and Z axis position for Emissions in Restricted Frequency Bands above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration. WLAN 5GHz/Bluetooth: The EUT was performed at Y axis and Z axis position for Emissions in Restricted Frequency Bands above 1GHz test, and the worst case was found at Z axis. So the measurement will follow this same test configuration.	
1	WLAN 2.4GHz: EUT in Y axis + Adapter 1
2	WLAN 2.4GHz: EUT in Y axis + Adapter 2 + US plug
3	WLAN 2.4GHz: EUT in Y axis + Adapter 3
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~6 will follow this same test mode.	
4	WLAN 5GHz: EUT in Z axis + Adapter 1
5	Bluetooth BR+EDR: EUT in Z axis + Adapter 1
6	Bluetooth LE: EUT in Z axis + Adapter 1
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at Y axis and Z axis position, and the worst case was found at Z axis. So the measurement will follow this same test configuration.	
1	EUT in Z axis

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
Refer to Sporton Test Report No.: FA710901-06 for Co-location RF Exposure Evaluation.	

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 (Interchangeable plug)	Ktec	KSA-24W-120200D5	Input: 100-240V, 50/60Hz, 0.6A Output: 12V, 2.0A
Adapter 3 (Fixed plug)	APD	WB-24J12FU	Input: 100-240V, 50-60Hz, 0.7A Max. Output: 12V, 2A
Others			
US plug*1 (for adapter 2 use only)			
RJ-45 cable*1, Non-shielded, 0.9m			

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN1 NB	DELL	E6430	N/A
B	WAN NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G-1 NB	Apple	A1278	N/A
E	5G-2 NB	DELL	E6430	N/A
F	Smart phone	Samsung	Galaxy J2	N/A
G	Flash disk3.0	Transcend	JetFlash-700	N/A

For Radiated:

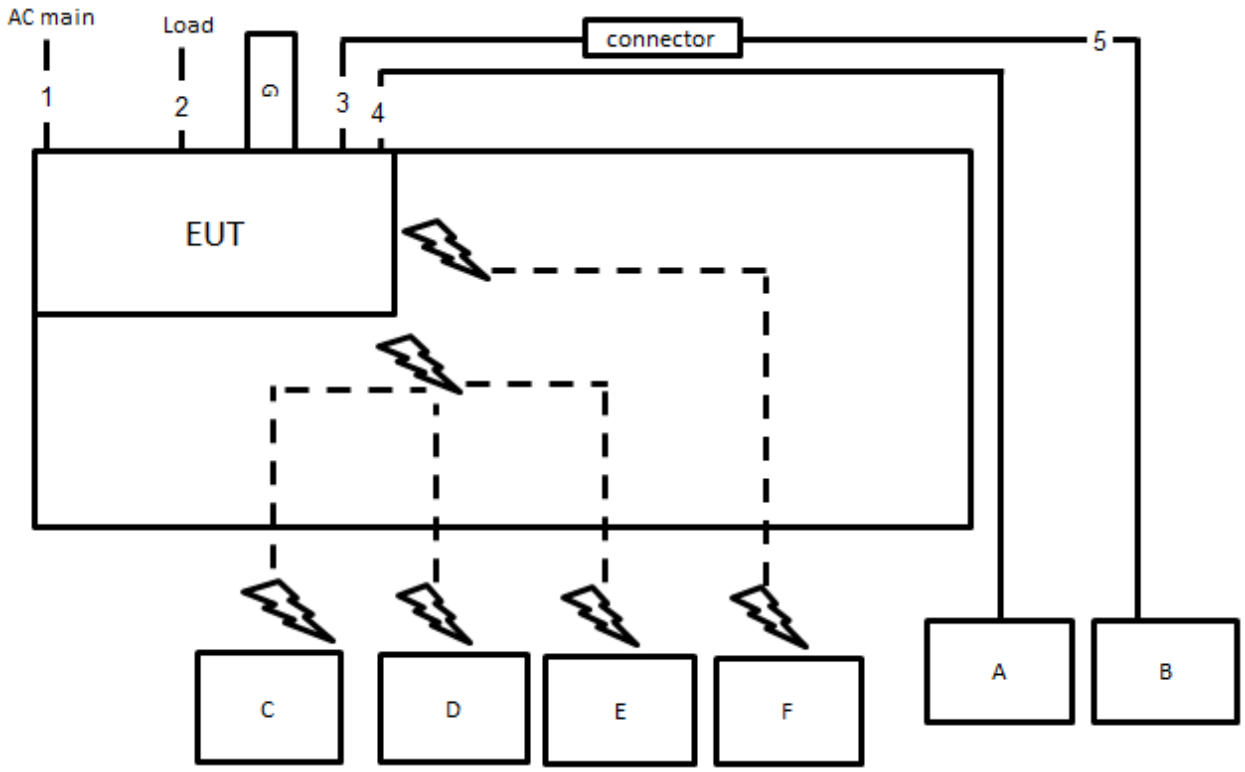
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	M4800	N/A

For RF Conducted:

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

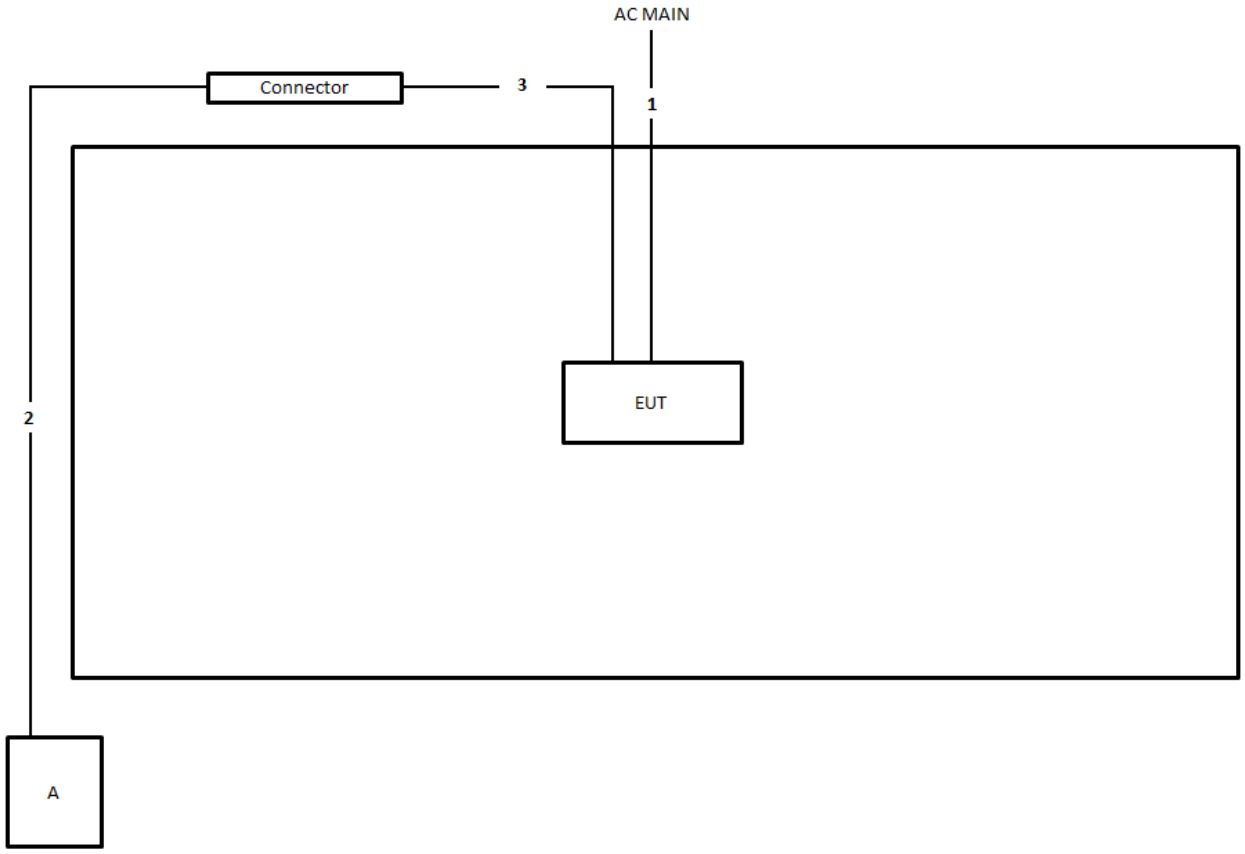
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



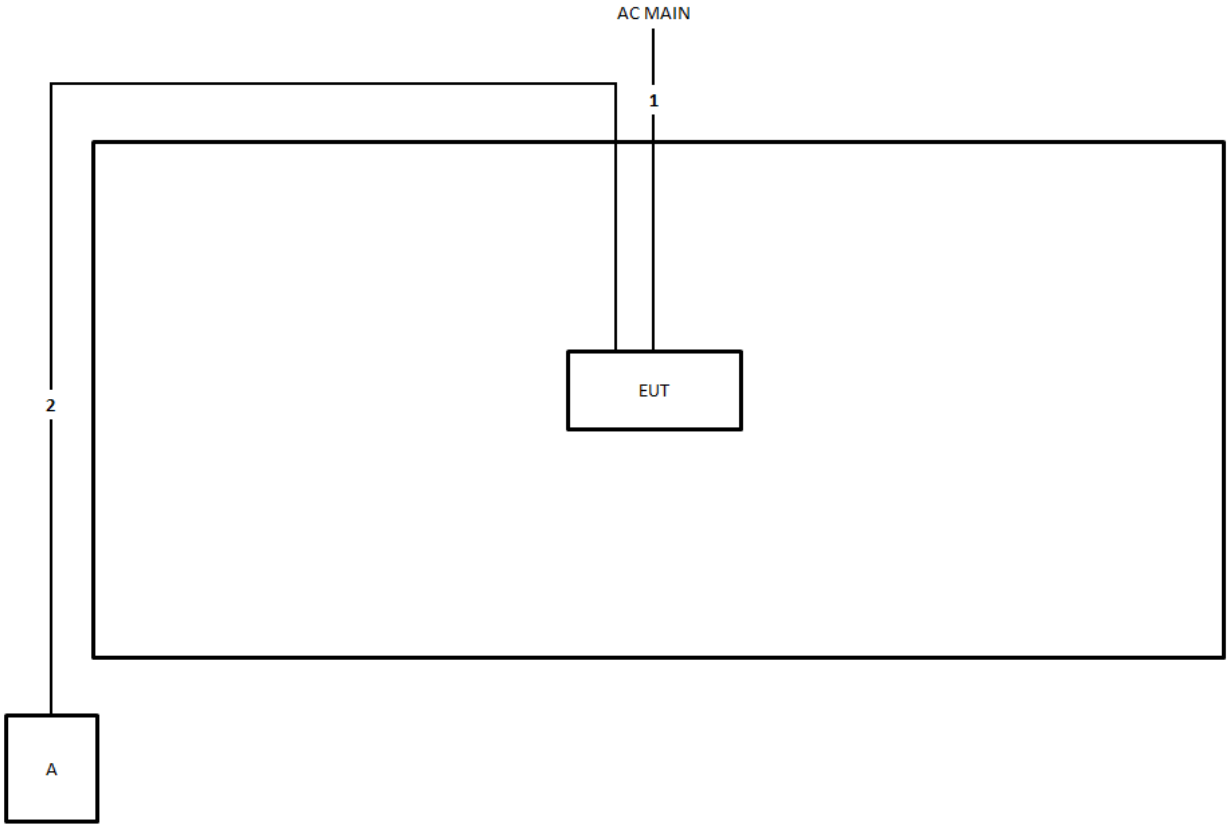
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable*3	No	1.5m
3	RJ-45 cable	No	0.9m
4	RJ-45 cable	No	10m
5	RJ-45 cable	No	10m

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	0.9m

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

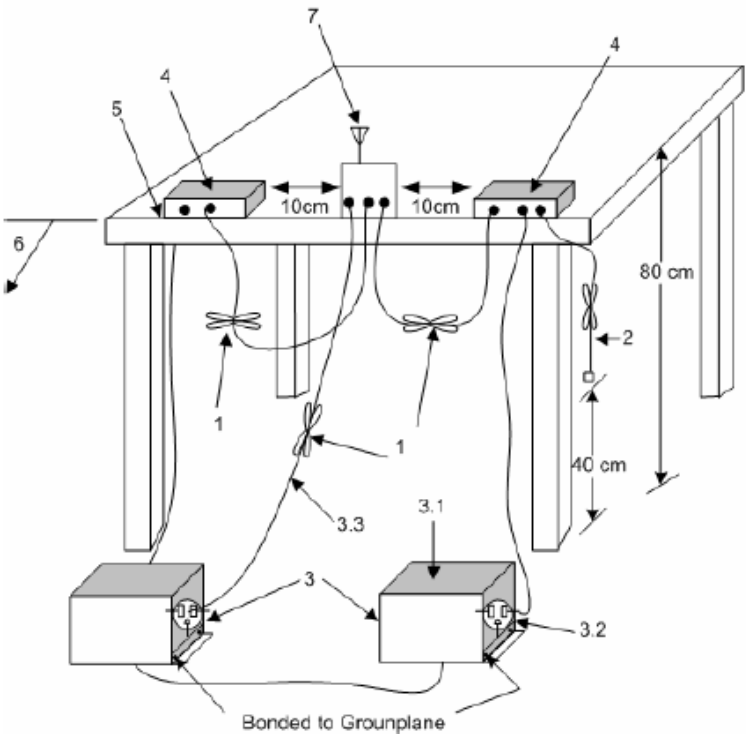
Refer a test equipment and calibration data table in this test report.

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.

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

a. Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level

b. Margin = - Limit + (Read Level + LISN Factor + Cable Loss)

3.1.6 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

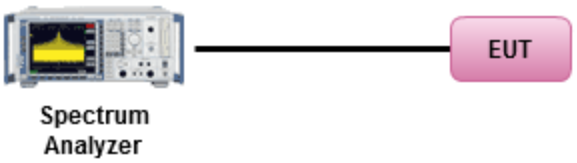
3.2.2 Measuring Instruments

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 24dBm; EIRP 30dBm
▪ 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

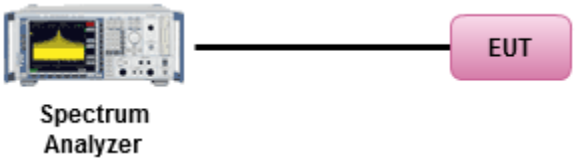
3.4.3 Measuring Instruments

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

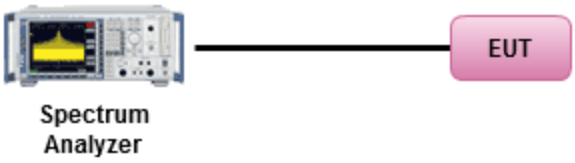
3.5.2 Measuring Instruments

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.	

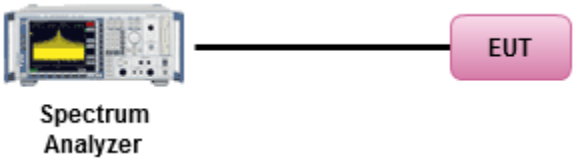
3.6.2 Measuring Instruments

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.

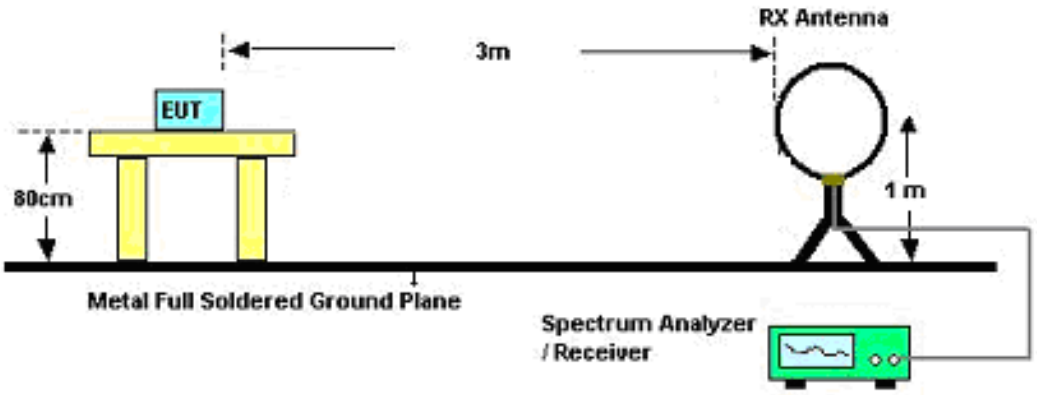
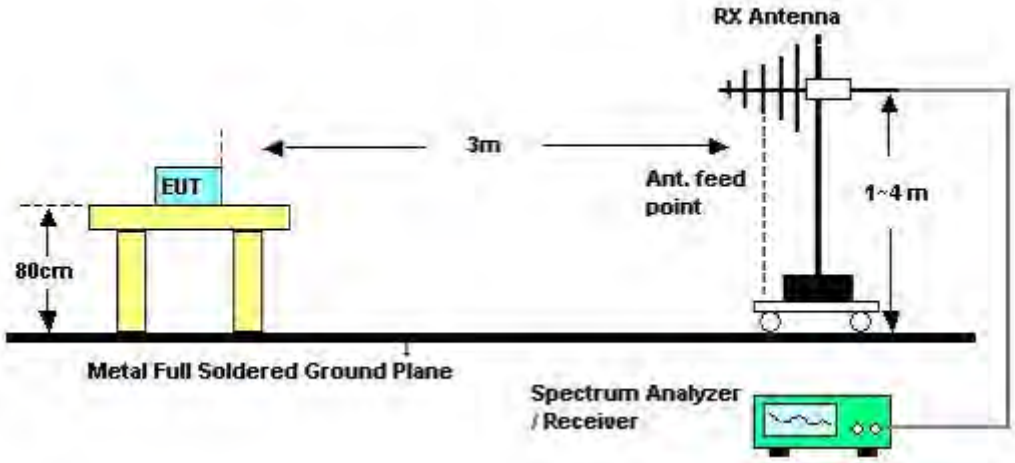
3.7.2 Measuring Instruments

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

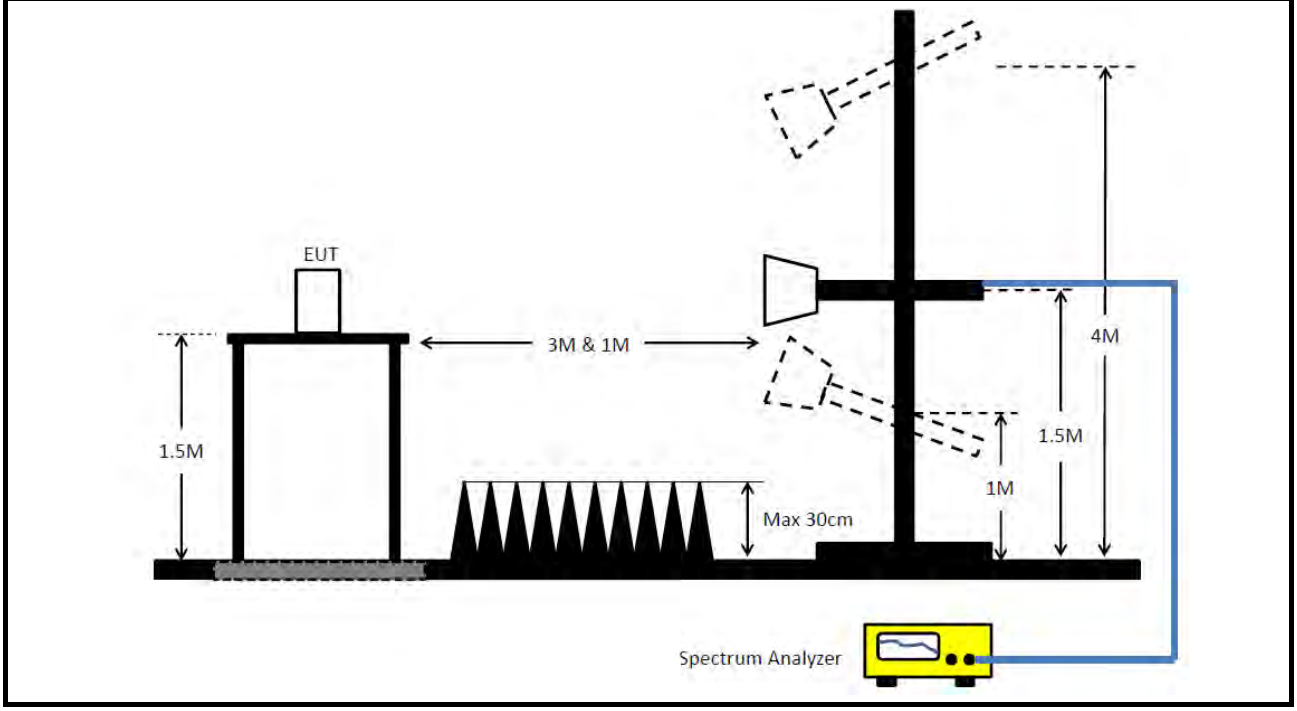
3.7.3 Test Procedures

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 + Cable Loss + Read Level - Preamp Factor (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 10 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	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50 -16-2	04083	150kHz ~ 100MHz	Dec. 25, 2019	Dec. 24, 2020	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Feb. 25, 2020	Feb. 24, 2021	Conduction (CO01-CB)
Impedance Stabilization Network	Teseq	ISN T800	24557	150kHz ~ 230MHz	Nov. 25, 2019	Nov. 24, 2020	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 21, 2019	May 20, 2020	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Bilog Antenna with 6dB Attenuator	Schaffner & EMCI	CBL6112 & N-6-06	2888 & AT-N0611	30MHz ~ 1GHz	Oct. 12, 2019	Oct. 11, 2020	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	31244	9kHz - 30 MHz	Mar. 16, 2020	Mar. 15, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 01, 2019	Apr. 30, 2020	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 04, 2019	Nov. 03, 2020	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 08, 2020	Jan. 07, 2021	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 19, 2019	Jun. 18, 2020	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 02, 2019	Jul. 01, 2020	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-3	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)

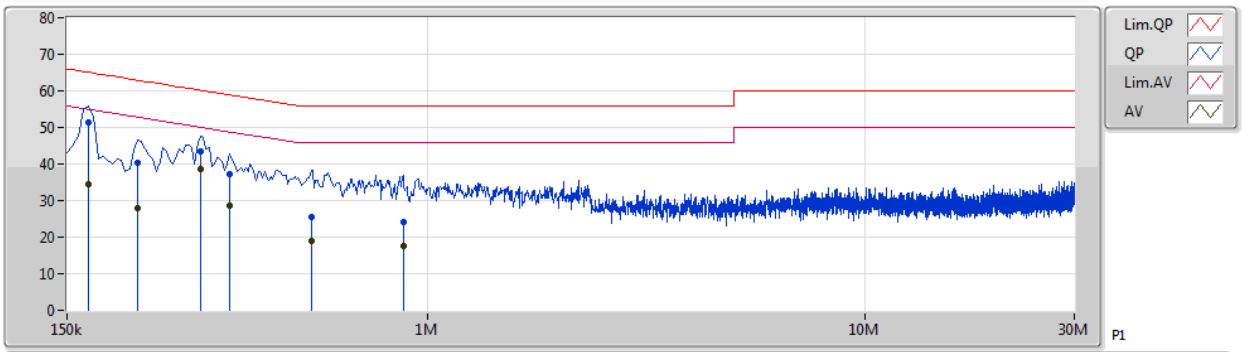
Note: Calibration Interval of instruments listed above is one year.

N.C.R. means Non-Calibration required.

Summary

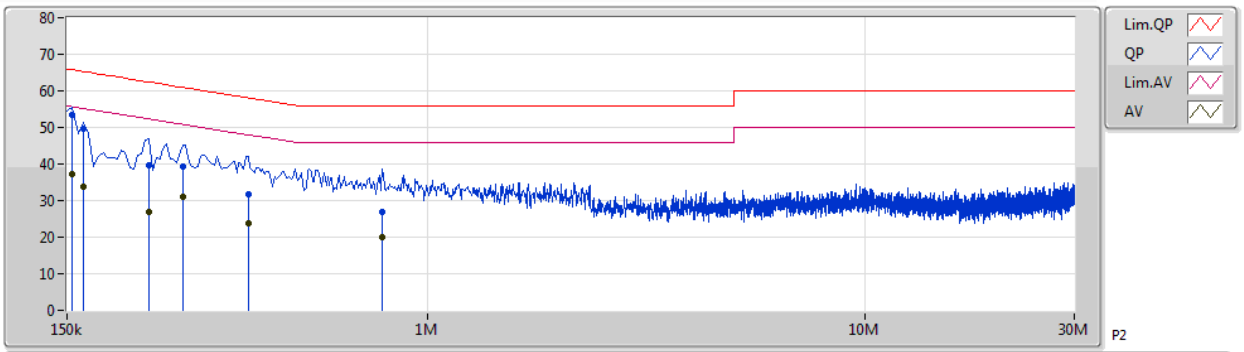
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition
Mode 3	Pass	AV	303k	38.60	50.17	-11.57	10.23	Line

Mode 3



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	168k	51.35	65.06	-13.71	10.21	Line	-	41.14	0.05	0.06	10.10
AV	168k	34.37	55.06	-20.69	10.21	Line	-	24.16	0.05	0.06	10.10
QP	217.5k	40.32	62.92	-22.60	10.22	Line	-	30.10	0.05	0.07	10.10
AV	217.5k	27.87	52.92	-25.05	10.22	Line	-	17.65	0.05	0.07	10.10
QP	303k	43.52	60.17	-16.65	10.23	Line	-	33.29	0.05	0.08	10.10
AV	303k	38.60	50.17	-11.57	10.23	Line	"Worst"	28.37	0.05	0.08	10.10
QP	352.5k	37.19	58.91	-21.72	10.23	Line	-	26.96	0.05	0.08	10.10
AV	352.5k	28.52	48.91	-20.39	10.23	Line	-	18.29	0.05	0.08	10.10
QP	541.5k	25.56	56.00	-30.44	10.24	Line	-	15.32	0.05	0.09	10.10
AV	541.5k	18.93	46.00	-27.07	10.24	Line	-	8.69	0.05	0.09	10.10
QP	879k	24.28	56.00	-31.72	10.27	Line	-	14.01	0.06	0.11	10.10
AV	879k	17.61	46.00	-28.39	10.27	Line	-	7.34	0.06	0.11	10.10

Mode 3



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	53.55	65.75	-12.20	10.21	Neutral	"Worst"	43.34	0.05	0.06	10.10
AV	154.5k	37.37	55.75	-18.38	10.21	Neutral	-	27.16	0.05	0.06	10.10
QP	163.5k	49.80	65.27	-15.47	10.21	Neutral	-	39.59	0.05	0.06	10.10
AV	163.5k	33.69	55.27	-21.58	10.21	Neutral	-	23.48	0.05	0.06	10.10
QP	231k	39.82	62.41	-22.59	10.22	Neutral	-	29.60	0.05	0.07	10.10
AV	231k	26.81	52.41	-25.60	10.22	Neutral	-	16.59	0.05	0.07	10.10
QP	276k	39.38	60.93	-21.55	10.22	Neutral	-	29.16	0.05	0.07	10.10
AV	276k	31.20	50.93	-19.73	10.22	Neutral	-	20.98	0.05	0.07	10.10
QP	388.5k	31.73	58.10	-26.37	10.23	Neutral	-	21.50	0.05	0.08	10.10
AV	388.5k	23.63	48.10	-24.47	10.23	Neutral	-	13.40	0.05	0.08	10.10
QP	789k	26.79	56.00	-29.21	10.27	Neutral	-	16.52	0.06	0.11	10.10
AV	789k	19.86	46.00	-26.14	10.27	Neutral	-	9.59	0.06	0.11	10.10

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	875.812k	876KF1D	920k	869.565k
BT-EDR(2Mbps)	1.3M	1.179M	1M18G1D	1.284M	1.176M
BT-EDR(3Mbps)	1.265M	1.194M	1M19G1D	1.263M	1.192M

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

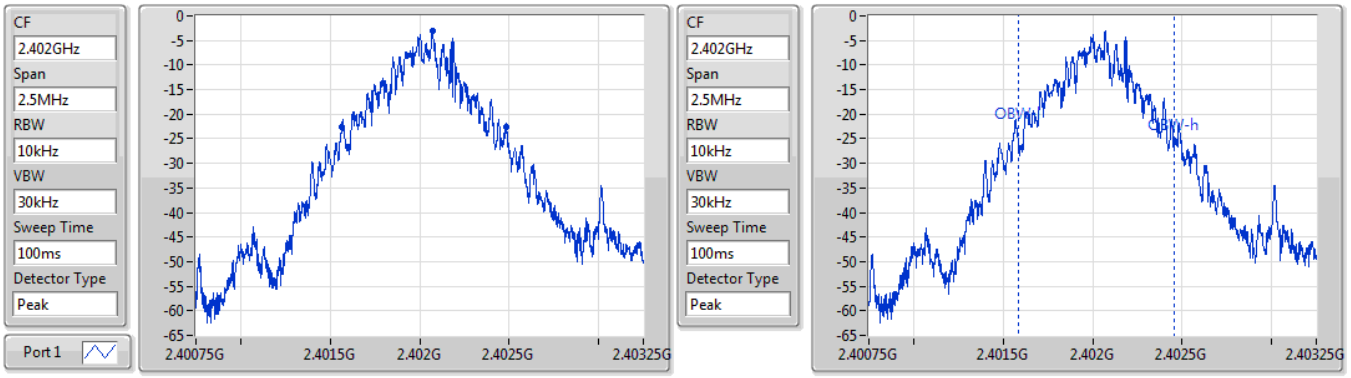
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	920k	875.812k
2440MHz	Pass	Inf	920k	869.565k
2480MHz	Pass	Inf	920k	869.565k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.286M	1.179M
2440MHz	Pass	Inf	1.3M	1.176M
2480MHz	Pass	Inf	1.284M	1.176M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.263M	1.193M
2440MHz	Pass	Inf	1.263M	1.194M
2480MHz	Pass	Inf	1.265M	1.192M

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

BT-BR(1Mbps) **EBW**

2402MHz

27/03/2020

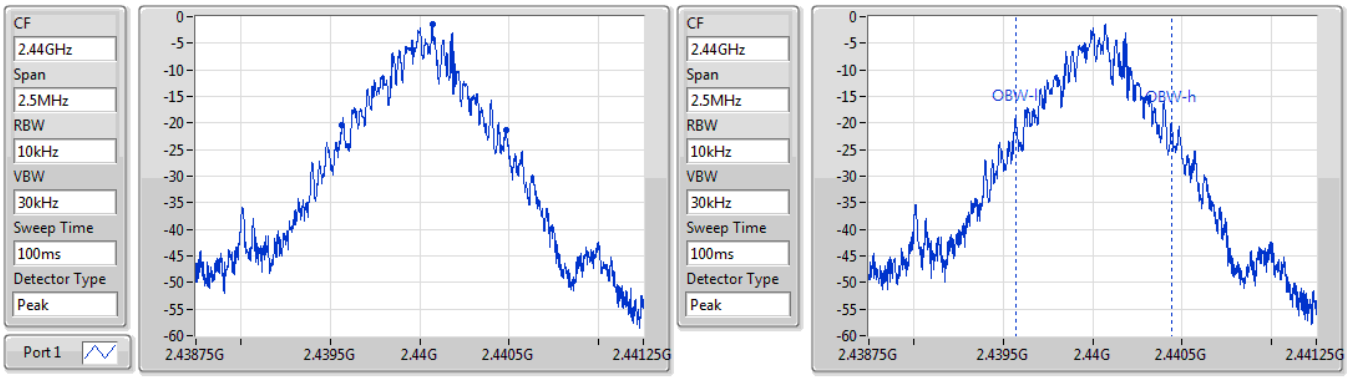


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
920k	2.401565G	2.402485G	875.812k	2.401583G	2.402459G	Inf	1

BT-BR(1Mbps) **EBW**

2440MHz

27/03/2020



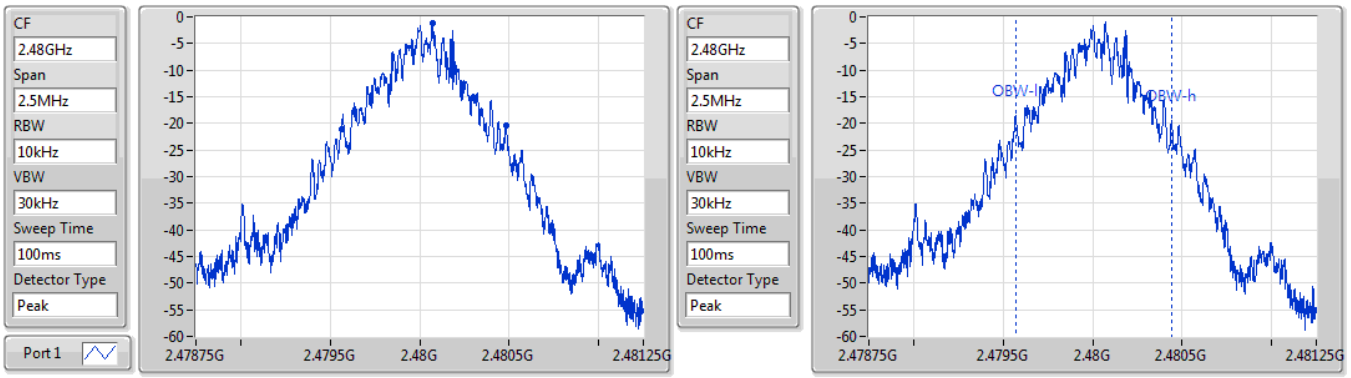
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
920k	2.439565G	2.440485G	869.565k	2.439571G	2.440441G	Inf	1

BT-BR(1Mbps)

EBW

2480MHz

27/03/2020



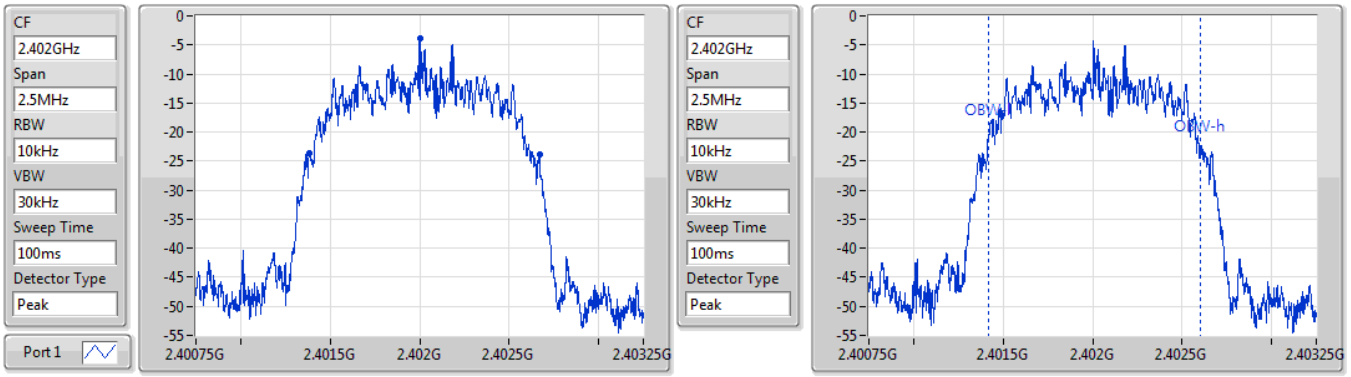
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
920k	2.479564G	2.480484G	869.565k	2.479571G	2.480441G	Inf	1

BT-EDR(2Mbps)

EBW

2402MHz

27/03/2020

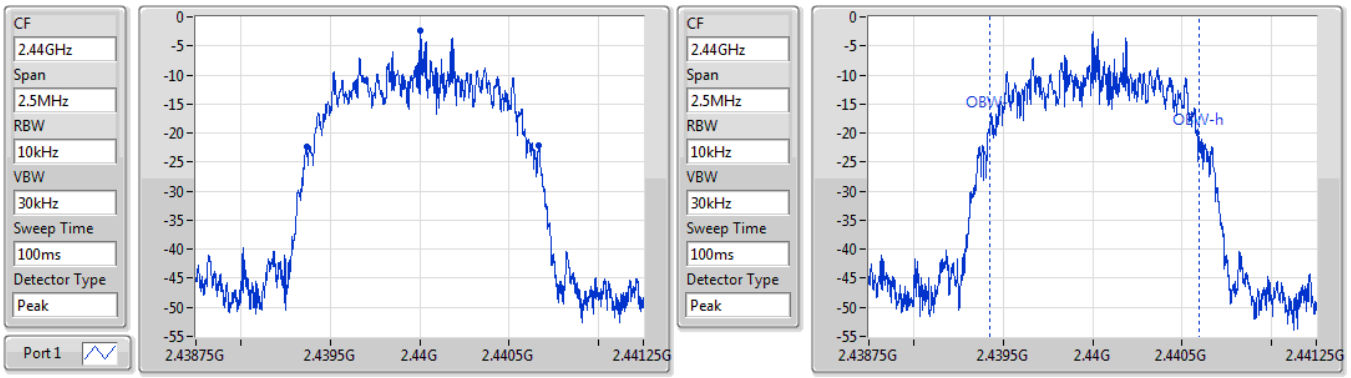


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.286M	2.401383G	2.402669G	1.179M	2.401422G	2.402601G	Inf	1

BT-EDR(2Mbps) EBW

2440MHz

27/03/2020

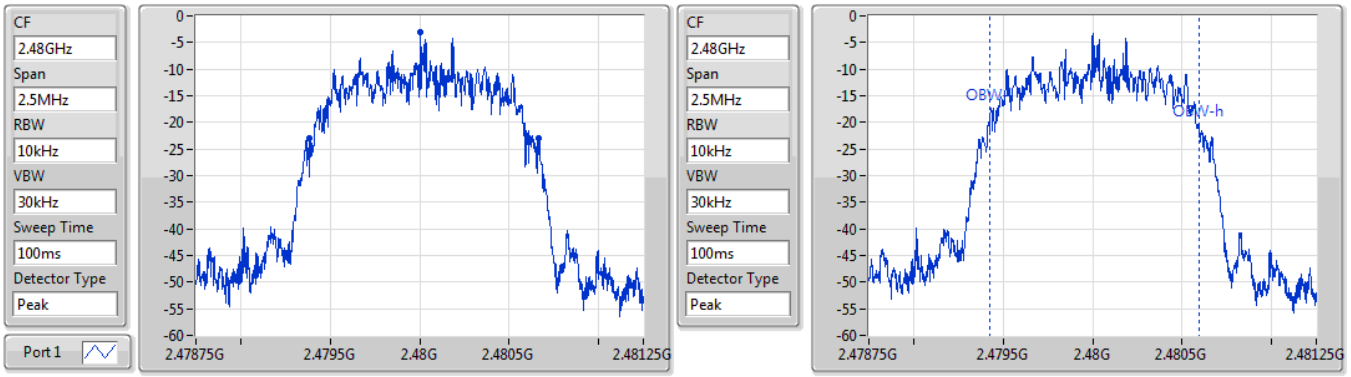


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.3M	2.439368G	2.440668G	1.176M	2.439423G	2.440598G	Inf	1

BT-EDR(2Mbps) EBW

2480MHz

27/03/2020

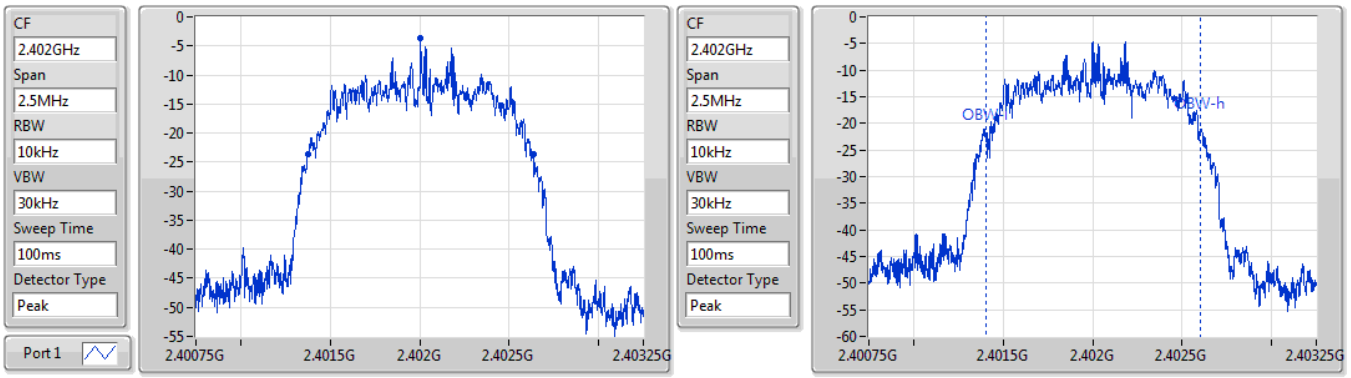


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.284M	2.479384G	2.480668G	1.176M	2.479423G	2.480598G	Inf	1

BT-EDR(3Mbps) EBW

2402MHz

27/03/2020

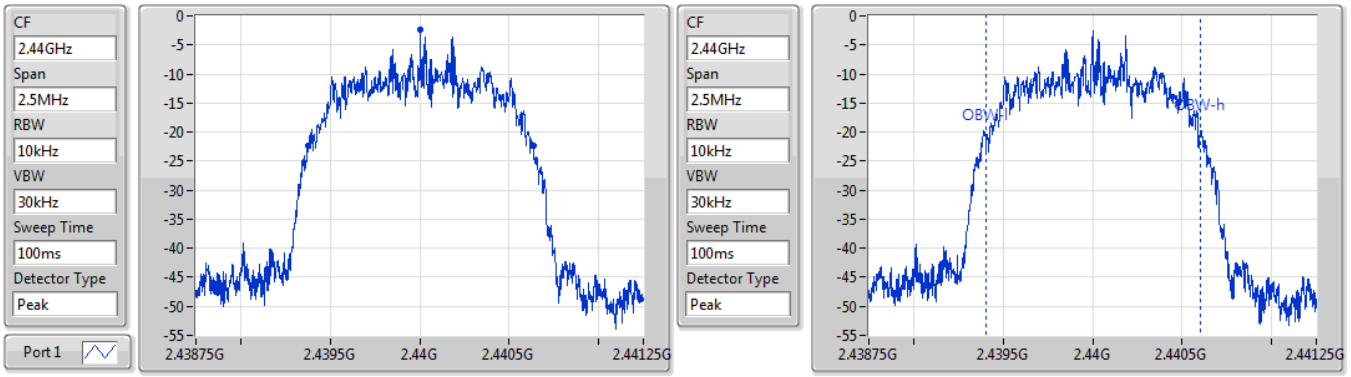


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.263M	2.401374G	2.402636G	1.193M	2.401408G	2.402601G	Inf	1

BT-EDR(3Mbps) EBW

2440MHz

27/03/2020

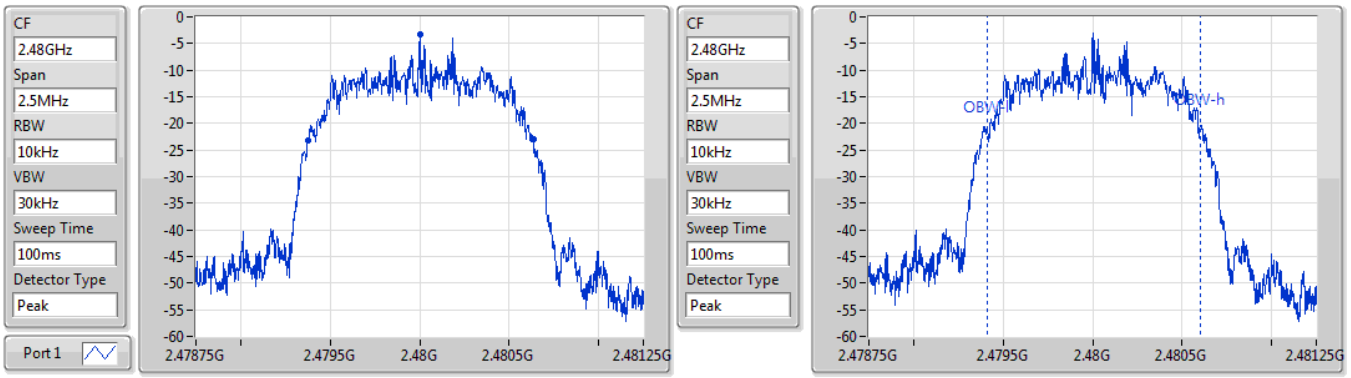


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.263M	2.439374G	2.440636G	1.194M	2.439408G	2.440602G	Inf	1

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

2480MHz

27/03/2020



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.265M	2.479374G	2.480639G	1.192M	2.47941G	2.480602G	Inf	1

Summary

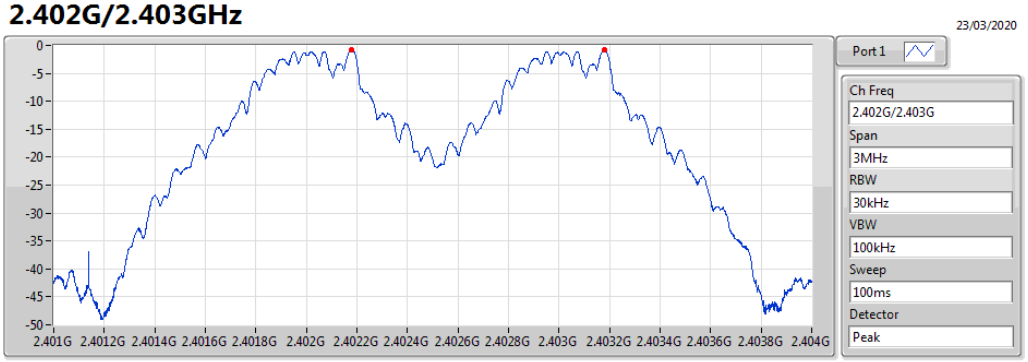
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	999k
BT-EDR(2Mbps)	1.0005M	999k
BT-EDR(3Mbps)	1.002M	1.0005M

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402179G	2.403181G	1.002M	613.5525k
2440MHz	Pass	2.440179G	2.441178G	999k	611.055k
2480MHz	Pass	2.479179G	2.48018G	1.0005M	611.8875k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402017G	2.403018G	1.0005M	869.796k
2440MHz	Pass	2.440017G	2.441018G	1.0005M	872.46k
2480MHz	Pass	2.47902G	2.480019G	999k	869.796k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402178G	2.40318G	1.002M	836.496k
2440MHz	Pass	2.440179G	2.44118G	1.0005M	844.488k
2480MHz	Pass	2.479178G	2.480178G	1.0005M	841.158k

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

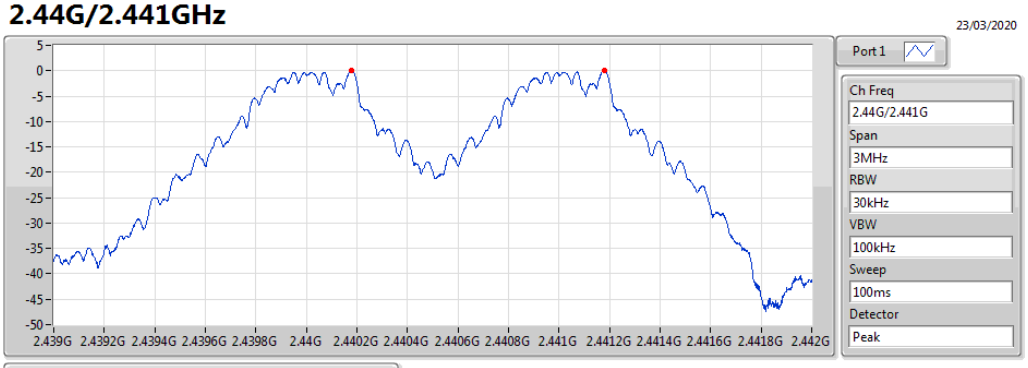
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402179G	2.403181G	1.002M	613.5525k

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

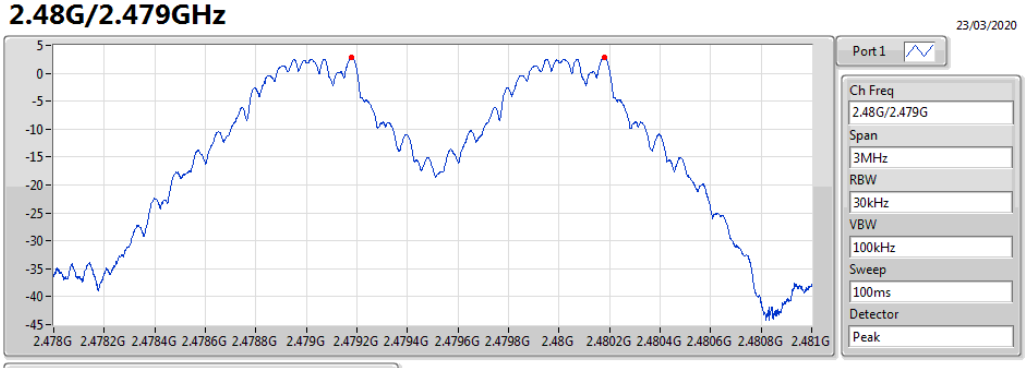
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440179G	2.441178G	999k	611.055k

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

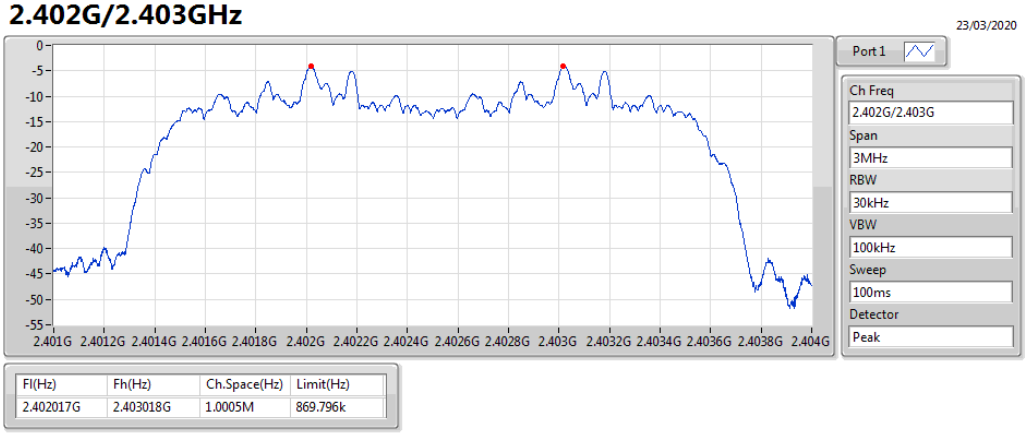
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479179G	2.48018G	1.0005M	611.8875k

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

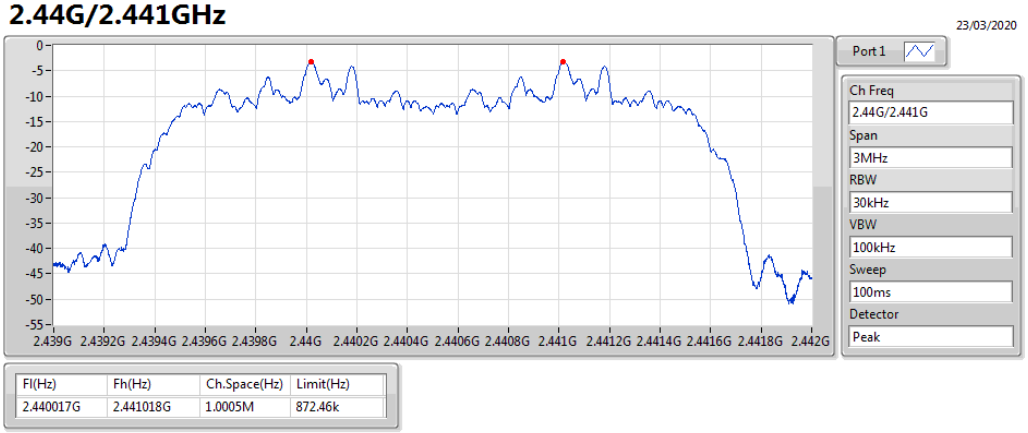
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402017G	2.403018G	1.0005M	869.796k

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

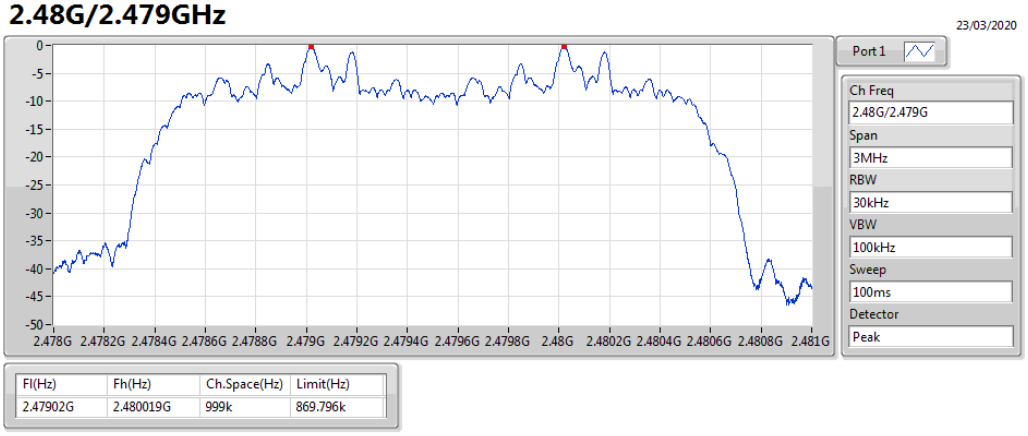
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440017G	2.441018G	1.0005M	872.46k

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

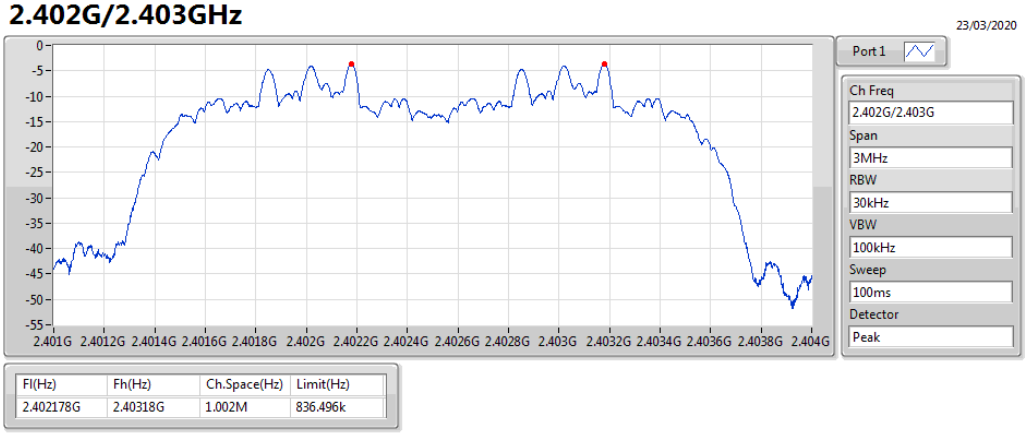
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.47902G	2.480019G	999k	869.796k

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

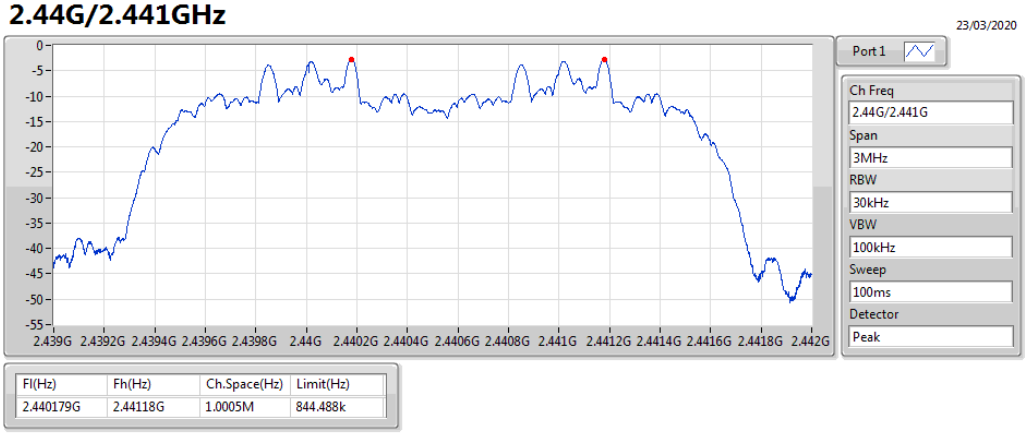
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402178G	2.40318G	1.002M	836.496k

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

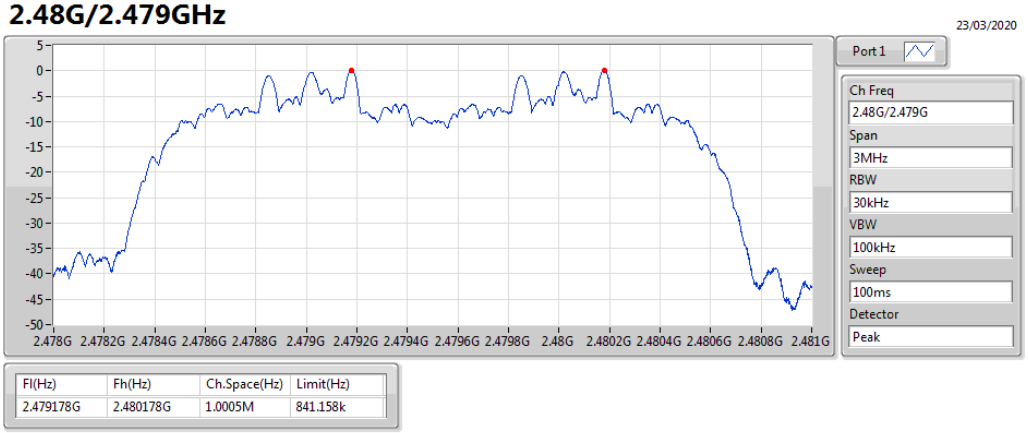
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.440179G	2.44118G	1.0005M	844.488k

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

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479178G	2.480178G	1.0005M	841.158k

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	3.64	0.00231
BT-EDR(2Mbps)	3.45	0.00221
BT-EDR(3Mbps)	3.28	0.00213

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	3.28	3.64	21.00
2440MHz	Pass	3.28	1.33	21.00
2480MHz	Pass	3.28	2.31	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	3.28	2.86	21.00
2440MHz	Pass	3.28	3.45	21.00
2480MHz	Pass	3.28	2.96	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	3.28	2.89	21.00
2440MHz	Pass	3.28	3.28	21.00
2480MHz	Pass	3.28	2.76	21.00

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

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	4.15	0.00260
BT-EDR(2Mbps)	5.75	0.00376
BT-EDR(3Mbps)	6.16	0.00413

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	3.28	4.15	21.00
2440MHz	Pass	3.28	2.14	21.00
2480MHz	Pass	3.28	3.02	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	3.28	4.92	21.00
2440MHz	Pass	3.28	5.75	21.00
2480MHz	Pass	3.28	5.18	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	3.28	5.24	21.00
2440MHz	Pass	3.28	6.16	21.00
2480MHz	Pass	3.28	5.81	21.00

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

Summary

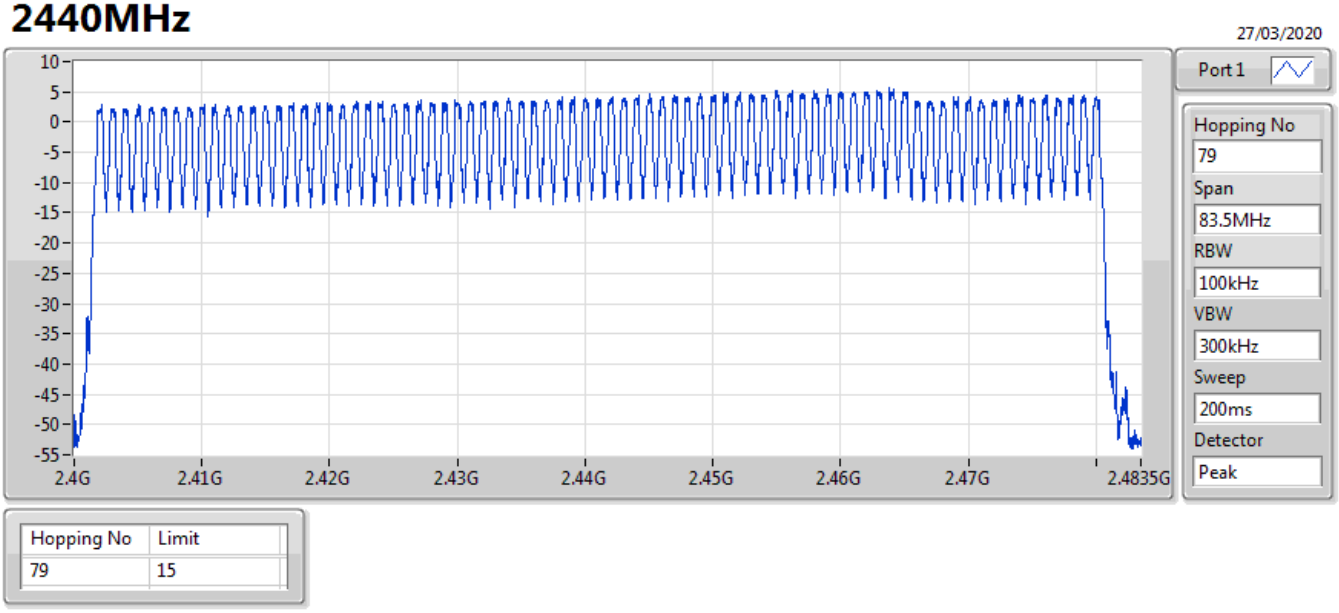
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

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

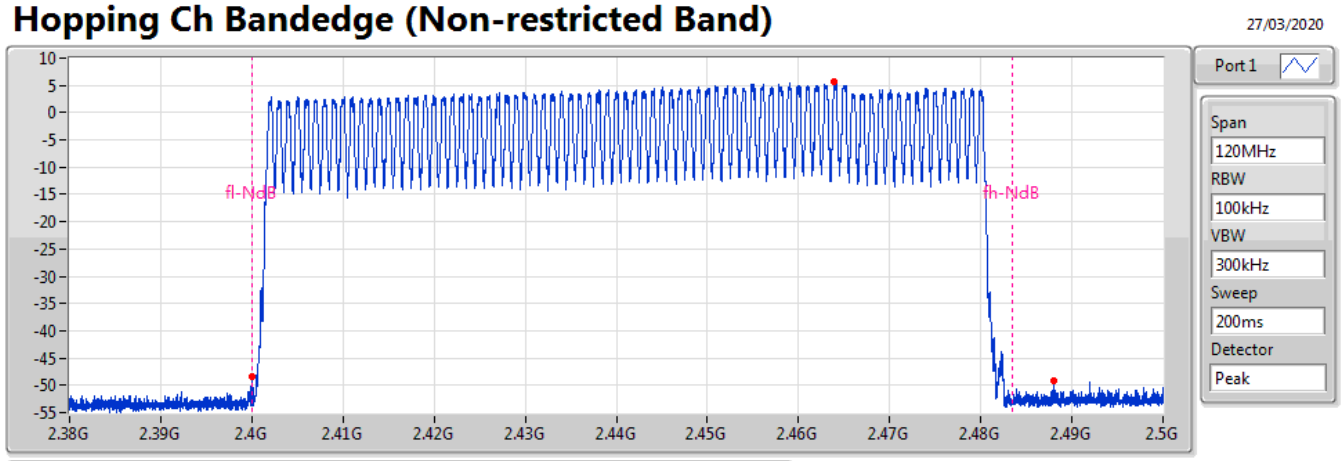


Hopping No	Limit
79	15

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

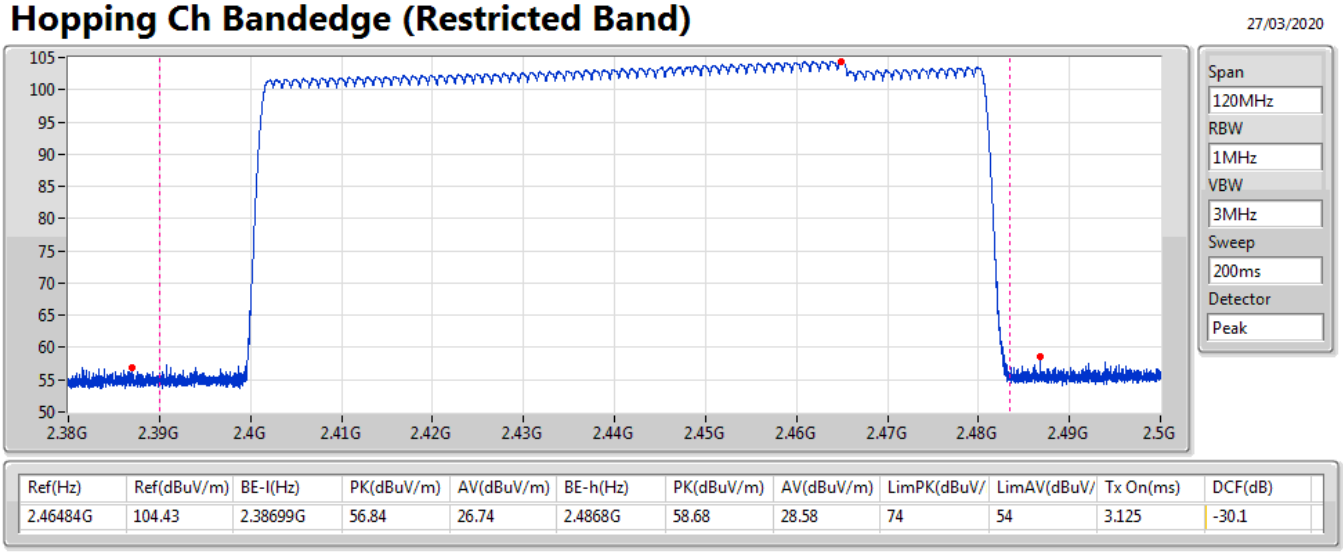


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.27	2.46385G	5.73	2.39998G	-48.38	2.488075G	-49.12

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

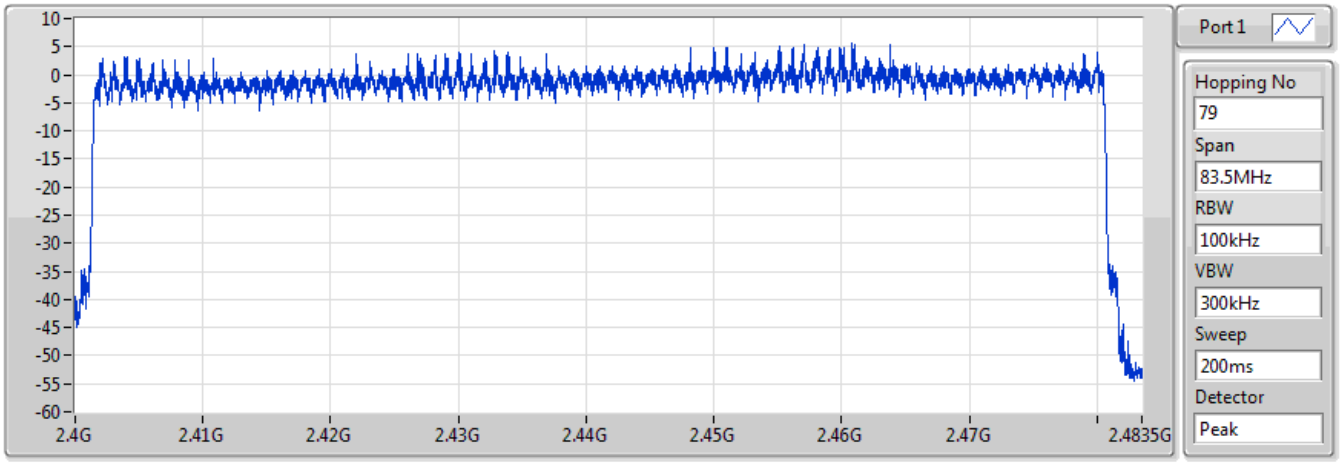


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.46484G	104.43	2.38699G	56.84	26.74	2.4868G	58.68	28.58	74	54	3.125	-30.1

BT-EDR(2Mbps)

2440MHz

Hopping Ch

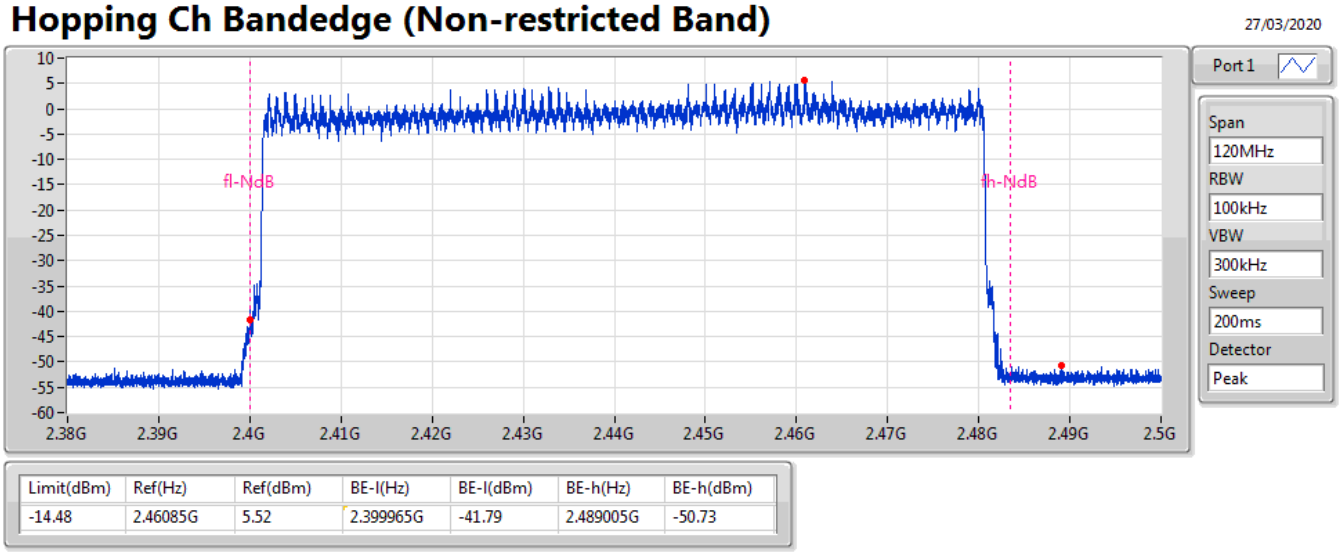


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

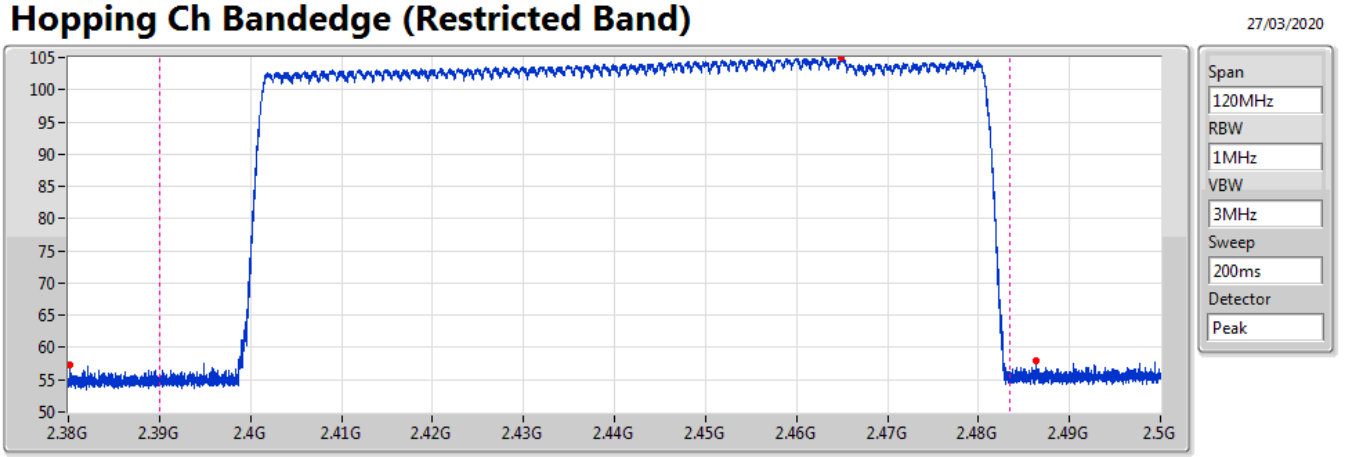


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.48	2.46085G	5.52	2.399965G	-41.79	2.489005G	-50.73

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

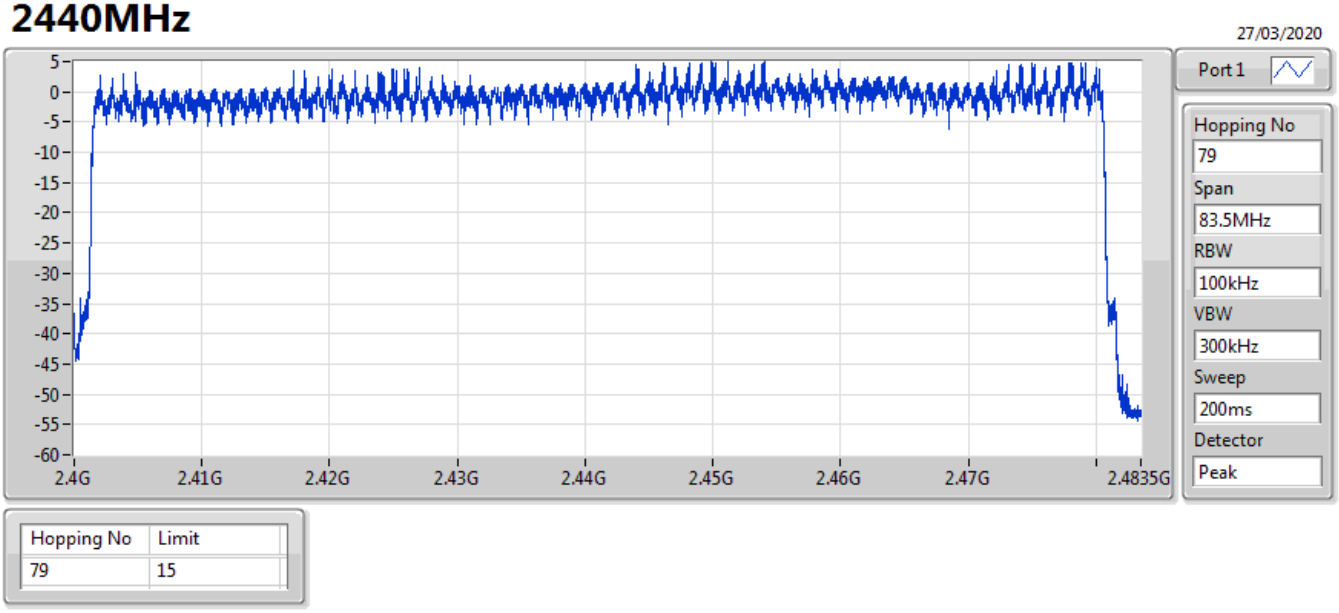


Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.464945G	104.94	2.380135G	57.22	27.12	2.48632G	58.01	27.91	74	54	3.125	-30.1

BT-EDR(3Mbps)

2440MHz

Hopping Ch

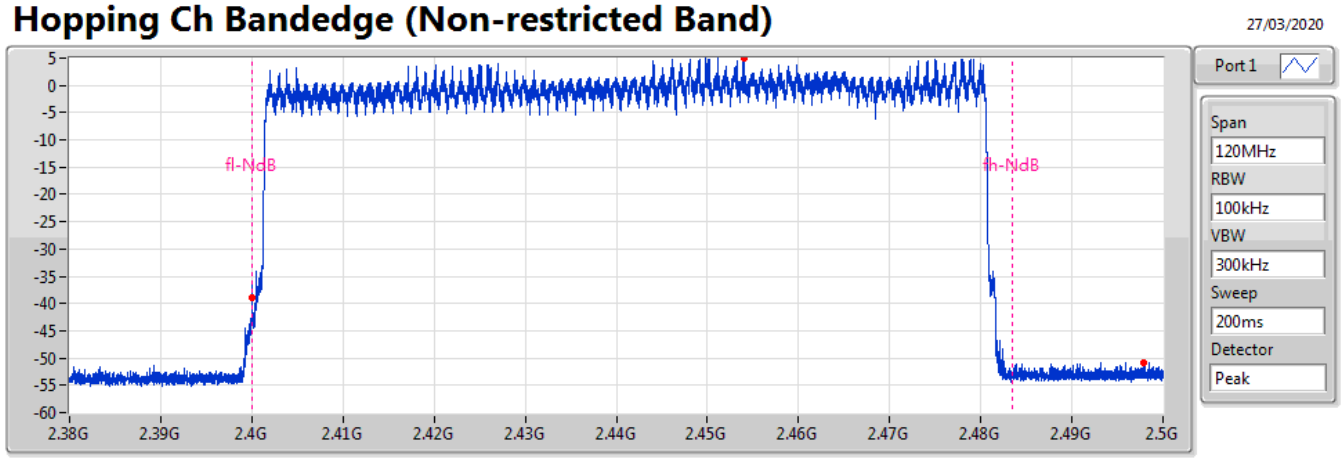


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

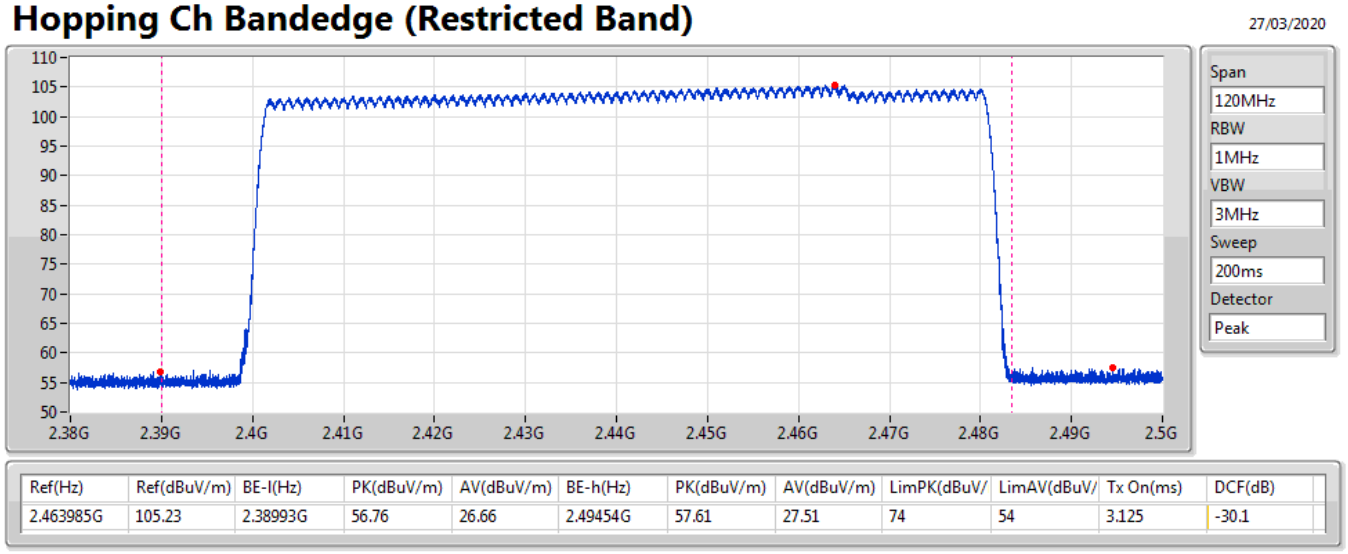


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-15.05	2.45401G	4.95	2.399995G	-39.03	2.497885G	-50.88

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)
2.463985G	105.23	2.38993G	56.76	26.66	2.49454G	57.61	27.51	74	54	3.125	-30.1

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	309.2999m
BT-EDR(2Mbps)	310.12605m
BT-EDR(3Mbps)	310.23265m

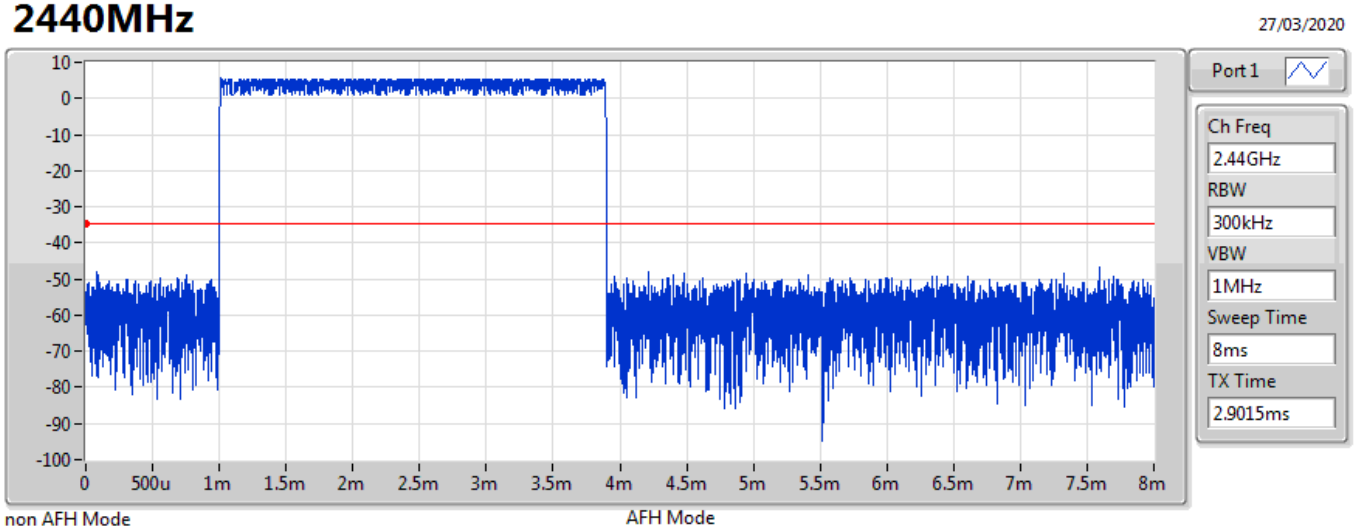
Result

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	310.12605m	400m	2.90925m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	310.23265m	400m	2.91025m

BT-BR(1Mbps)

Dwell

2440MHz



non AFH Mode

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

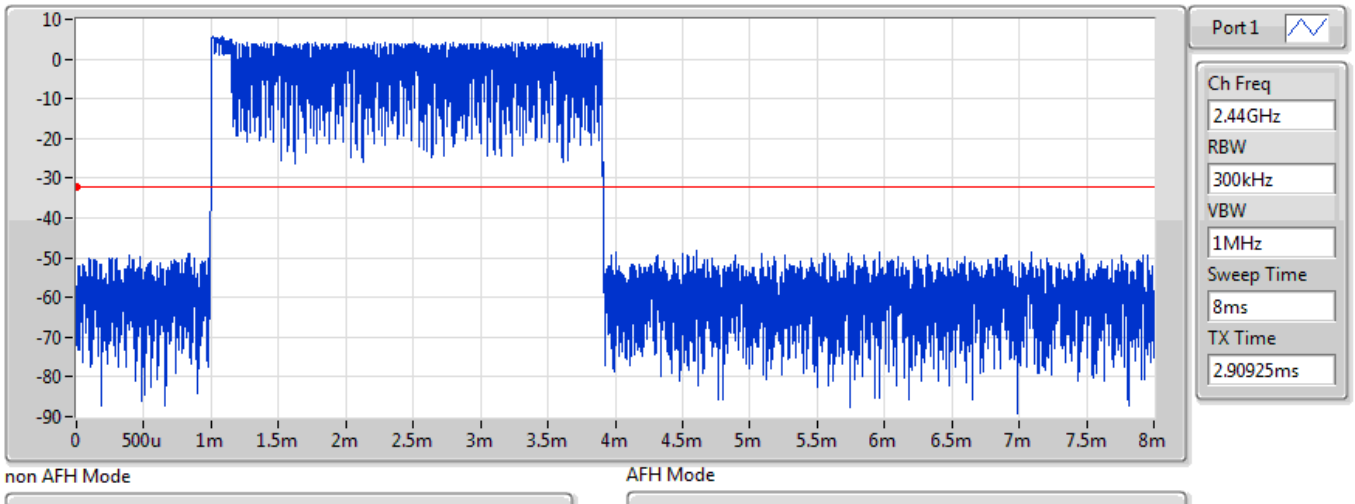
AFH Mode

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

BT-EDR(2Mbps)

Dwell

2440MHz



non AFH Mode

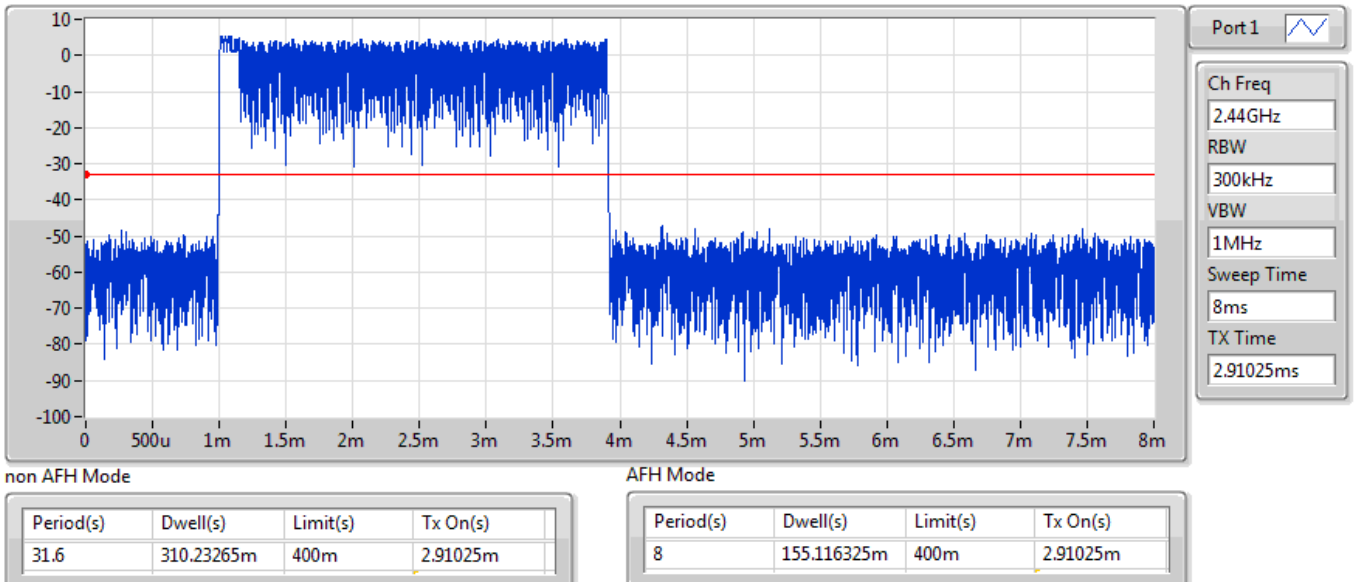
Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	310.12605m	400m	2.90925m

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	155.063025m	400m	2.90925m

BT-EDR(3Mbps) **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

Summary

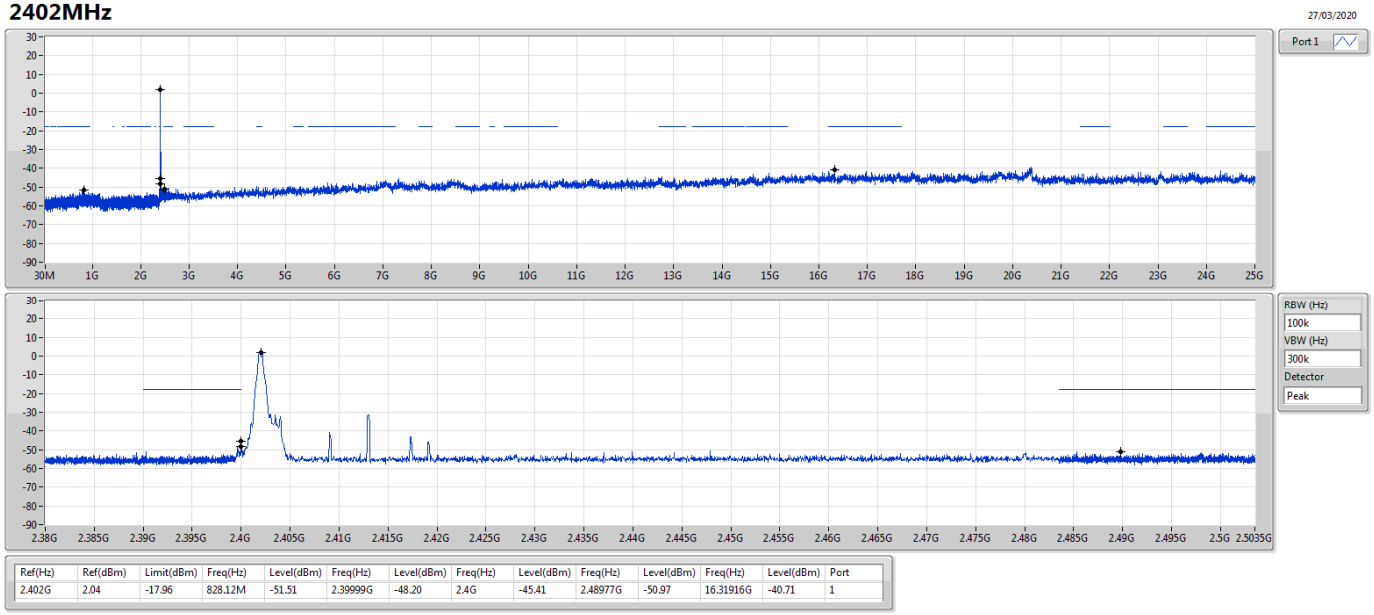
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.402G	2.04	-17.96	828.12M	-51.51	2.39999G	-48.20	2.4G	-45.41	2.48977G	-50.97	16.31916G	-40.71	1
BT-EDR(2Mbps)	Pass	2.40184G	2.44	-17.56	1.79426G	-52.85	2.39998G	-38.71	2.4G	-36.88	2.49446G	-52.06	17.66333G	-41.38	1
BT-EDR(3Mbps)	Pass	2.40184G	3.21	-16.79	750.57M	-52.73	2.39997G	-41.23	2.4G	-43.05	2.48972G	-51.34	17.63802G	-40.52	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	2.402G	2.04	-17.96	828.12M	-51.51	2.39999G	-48.20	2.4G	-45.41	2.48977G	-50.97	16.31916G	-40.71	1
2440MHz	Pass	2.44004G	3.69	-16.31	859.26M	-52.46	2.39059G	-52.08	2.4835G	-54.51	2.4898G	-51.70	24.36729G	-41.09	1
2480MHz	Pass	2.48003G	4.05	-15.95	653.63M	-52.14	2.39827G	-51.77	2.4G	-55.70	2.48934G	-51.98	16.58068G	-41.70	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	2.44	-17.56	1.79426G	-52.85	2.39998G	-38.71	2.4G	-36.88	2.49446G	-52.06	17.66333G	-41.38	1
2440MHz	Pass	2.44016G	2.99	-17.01	658.33M	-53.26	2.39502G	-52.88	2.4G	-54.96	2.49397G	-51.80	23.49273G	-41.77	1
2480MHz	Pass	2.47987G	3.16	-16.84	1.94848G	-52.58	2.39476G	-52.20	2.4G	-55.41	2.48355G	-51.20	16.58631G	-41.53	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	3.21	-16.79	750.57M	-52.73	2.39997G	-41.23	2.4G	-43.05	2.48972G	-51.34	17.63802G	-40.52	1
2440MHz	Pass	2.44021G	4.28	-15.72	769.66M	-52.86	2.39929G	-52.69	2.4G	-54.35	2.49532G	-51.71	16.48507G	-41.35	1
2480MHz	Pass	2.48003G	3.80	-16.20	715.61M	-52.29	2.39077G	-51.44	2.4835G	-54.47	2.4899G	-51.43	17.21902G	-41.63	1

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

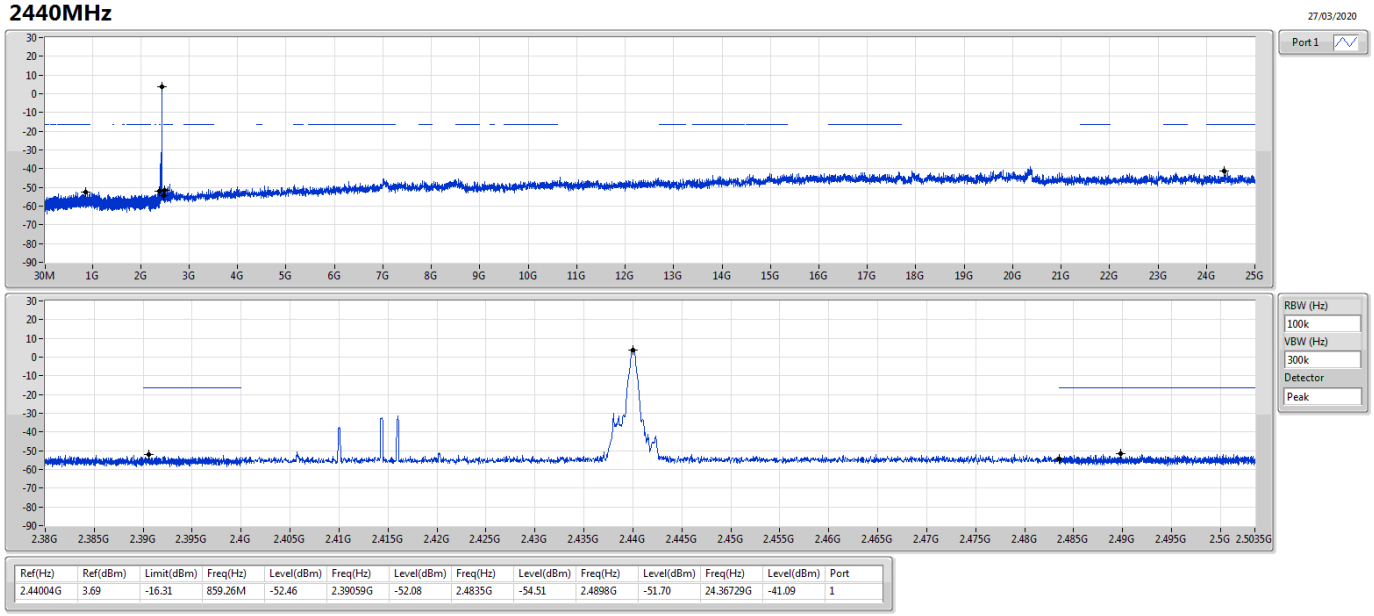
2402MHz



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
2.402G	2.04	-17.96	828.12M	-51.51	2.39999G	-48.20	2.4G	-45.41	2.48977G	-50.97	16.31916G	-40.71	1

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

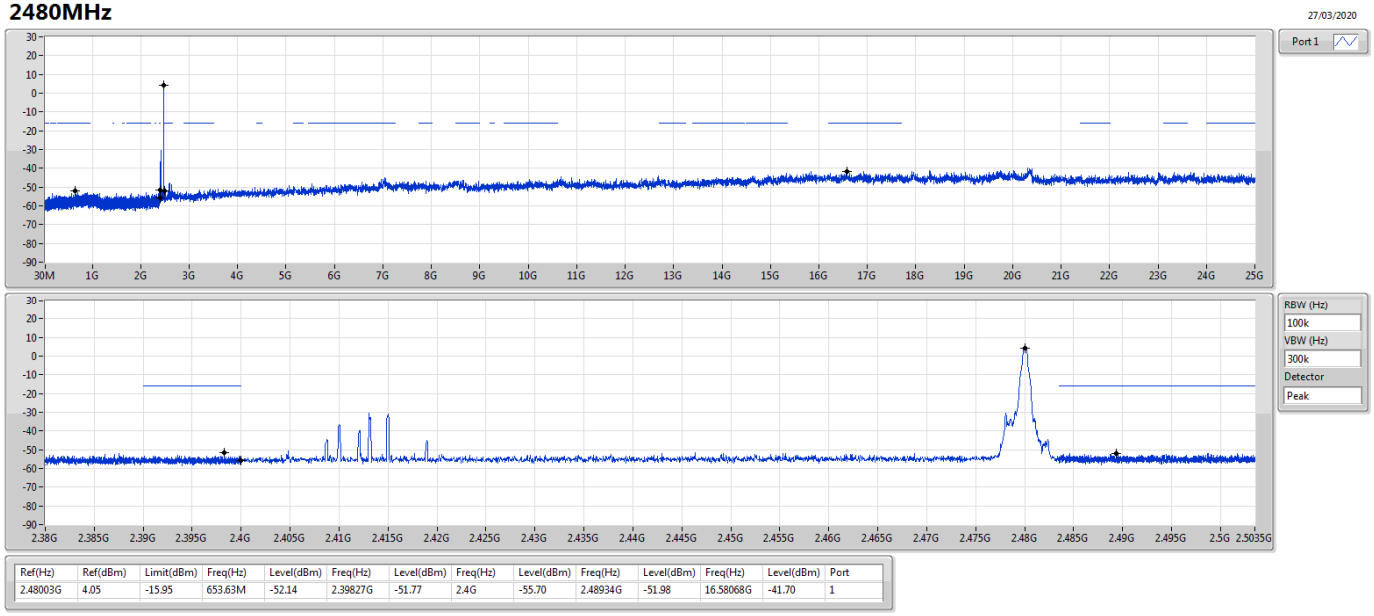
2440MHz



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
2.44004G	3.69	-16.31	859.26M	-52.46	2.39059G	-52.08	2.4835G	-54.51	2.4898G	-51.70	24.36729G	-41.09	1

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

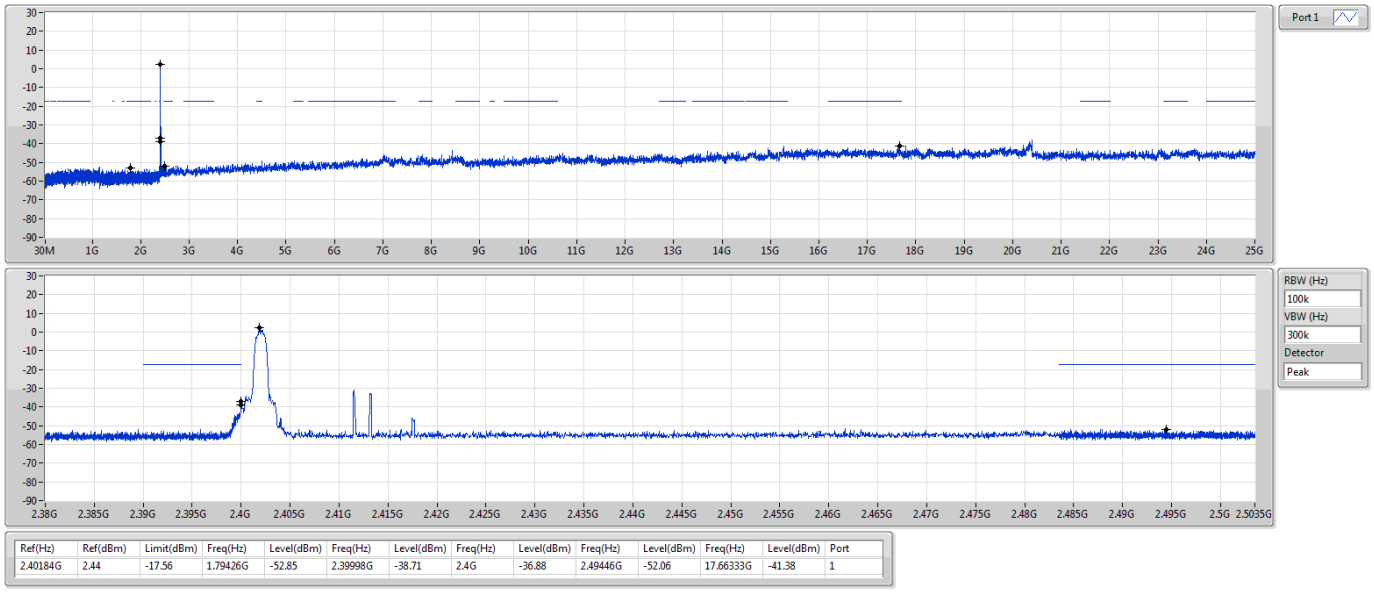
2480MHz



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
2.48003G	4.05	-15.95	653.63M	-52.14	2.39827G	-51.77	2.4G	-55.70	2.48934G	-51.98	16.58068G	-41.70	1

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

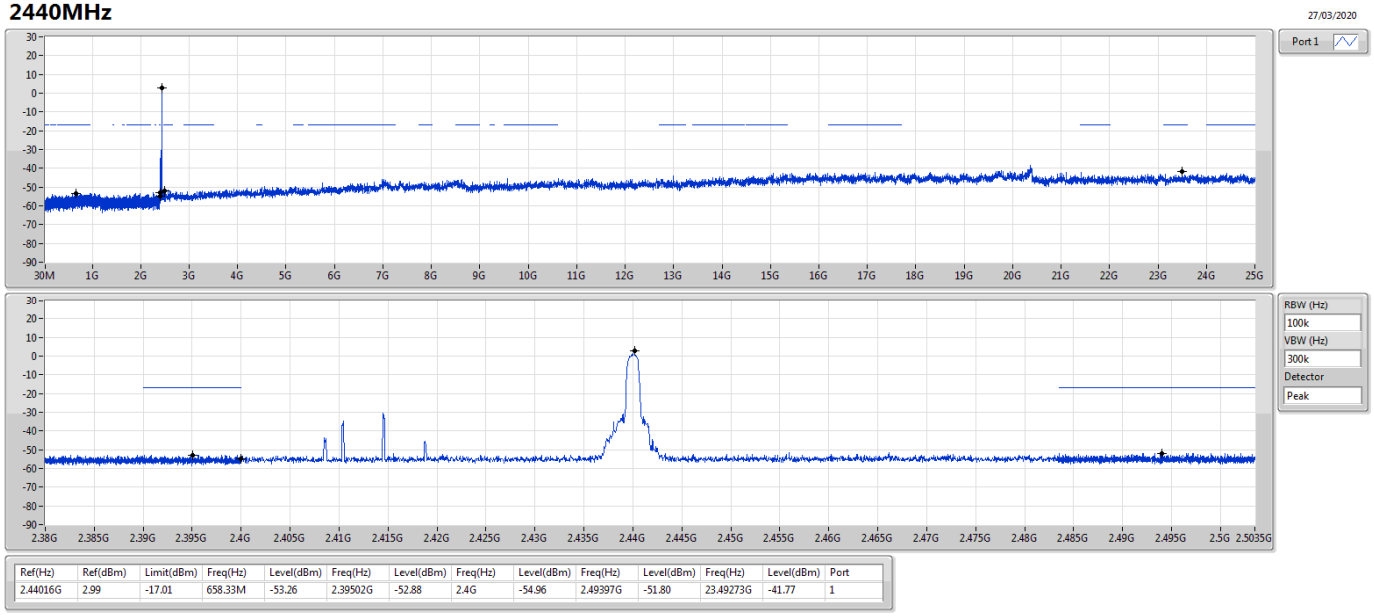
2402MHz



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
2.40184G	2.44	-17.56	1.79426G	-52.85	2.39998G	-38.71	2.4G	-36.88	2.49446G	-52.06	17.66333G	-41.38	1

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

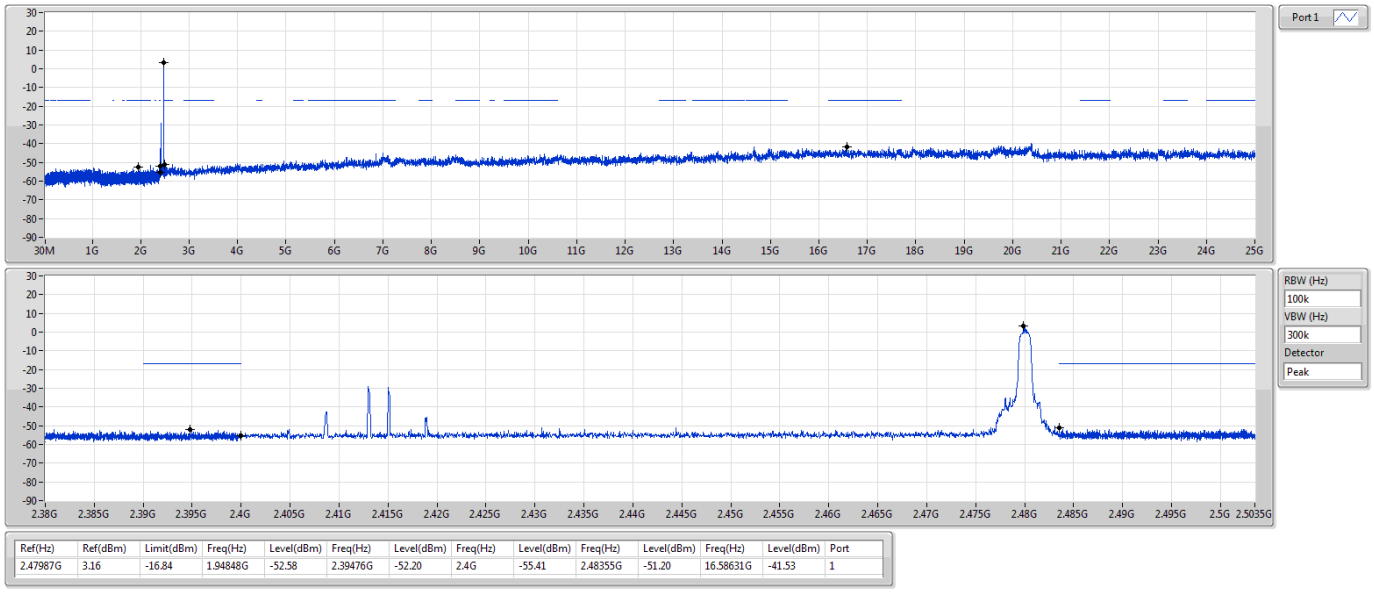
2440MHz



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	2.99	-17.01	658.33M	-53.26	2.39502G	-52.88	2.4G	-54.96	2.49397G	-51.80	23.49273G	-41.77	1

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

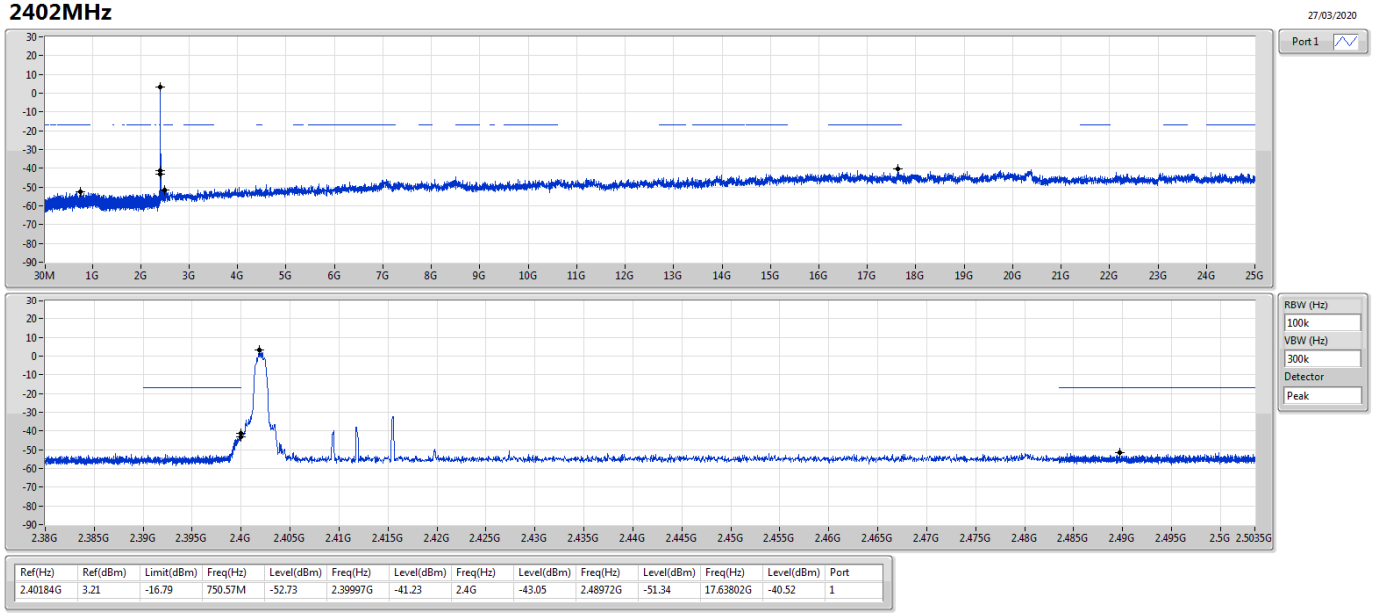
2480MHz



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
2.47987G	3.16	-16.84	1.94848G	-52.58	2.39476G	-52.20	2.4G	-55.41	2.48355G	-51.20	16.58631G	-41.53	1

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

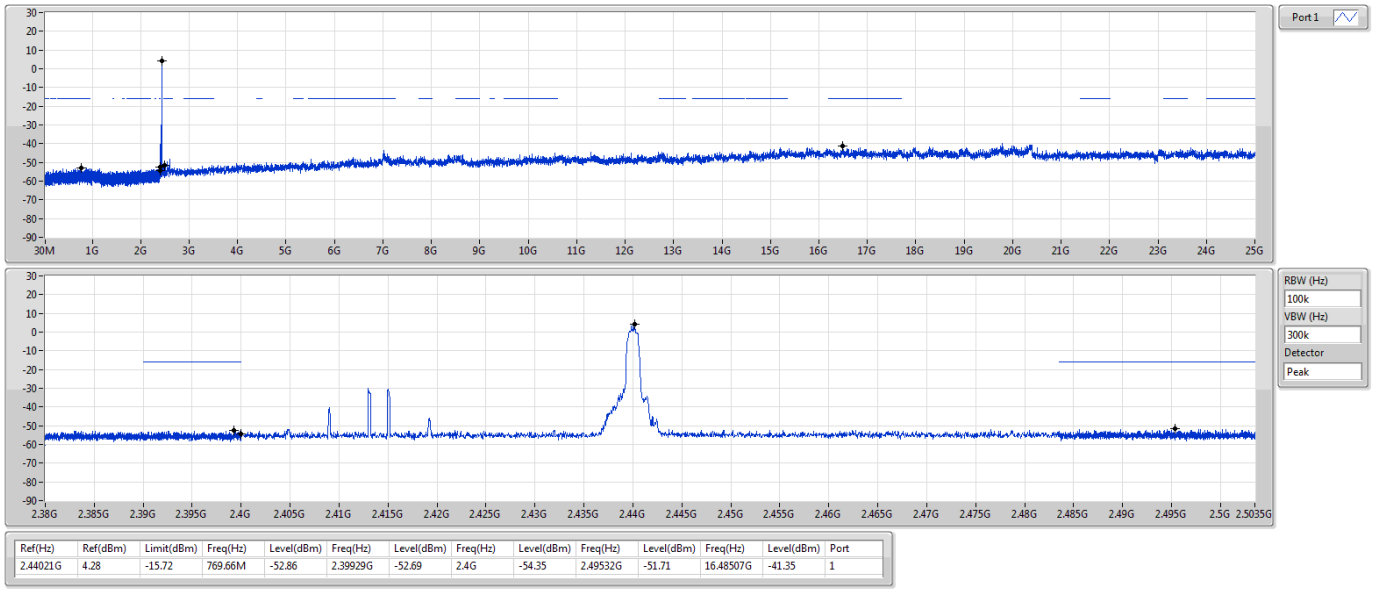
2402MHz



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
2.40184G	3.21	-16.79	750.57M	-52.73	2.39997G	-41.23	2.4G	-43.05	2.48972G	-51.34	17.63802G	-40.52	1

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

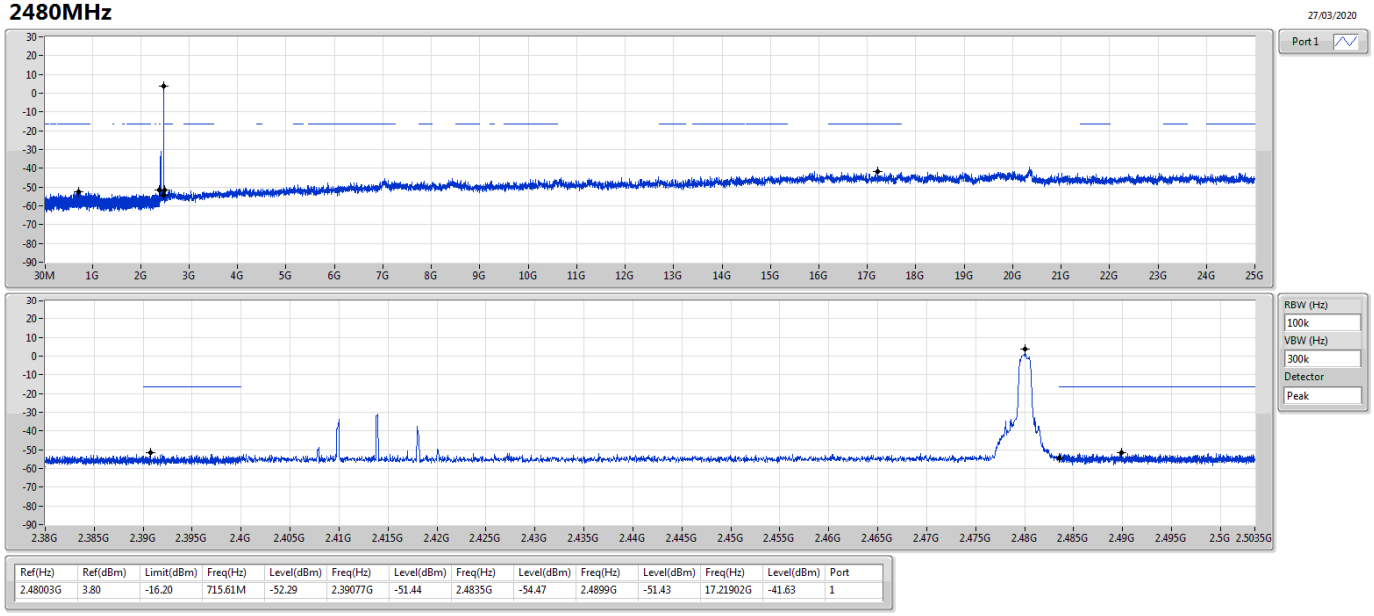
2440MHz



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
2.44021G	4.28	-15.72	769.66M	-52.86	2.39929G	-52.69	2.4G	-54.35	2.49532G	-51.71	16.48507G	-41.35	1

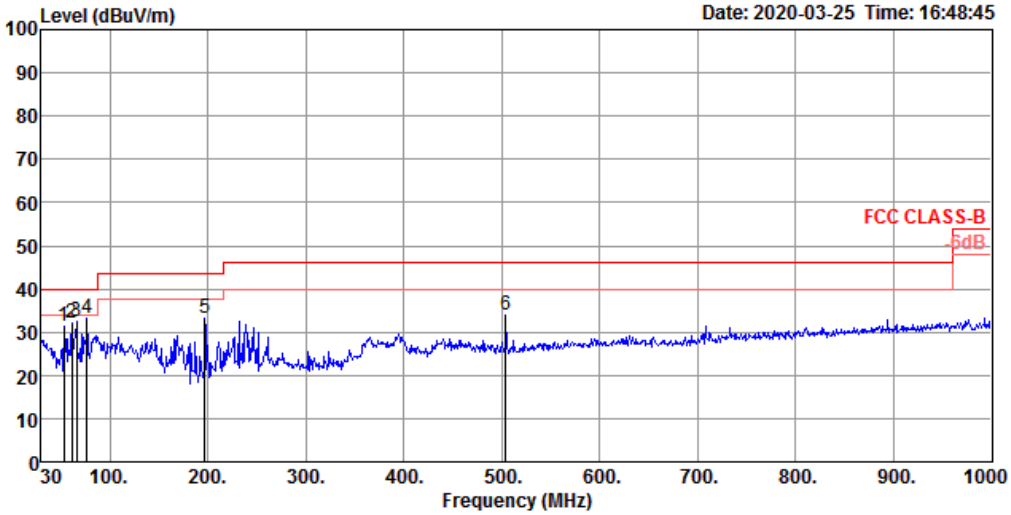
BT-EDR(3Mbps) **CSE NdB**

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	3.80	-16.20	715.61M	-52.29	2.39077G	-51.44	2.4835G	-54.47	2.4899G	-51.43	17.21902G	-41.63	1

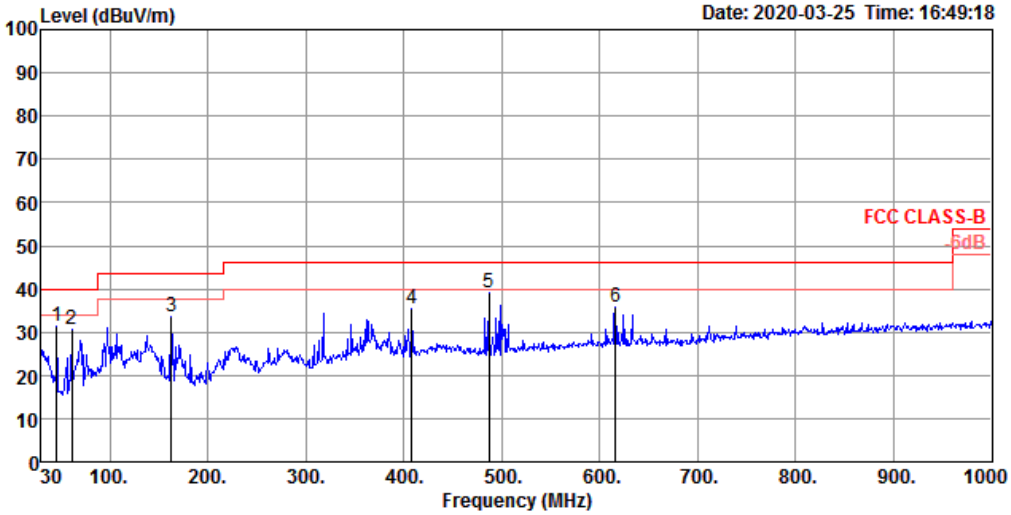
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	CTX		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	53.28	31.24	40.00	-8.76	48.06	0.92	14.04	31.78	100	191	Peak	VERTICAL
2	61.04	32.25	40.00	-7.75	50.50	1.00	12.60	31.85	200	94	Peak	VERTICAL
3	65.89	32.44	40.00	-7.56	50.71	1.00	12.60	31.87	100	196	Peak	VERTICAL
4	76.56	33.03	40.00	-6.97	50.70	1.14	13.06	31.87	125	233	Peak	VERTICAL
5	196.84	33.26	43.50	-10.24	47.51	1.73	15.97	31.95	100	108	Peak	VERTICAL
6	504.33	33.87	46.00	-12.13	39.50	2.95	23.89	32.47	100	102	Peak	VERTICAL

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		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	45.52	31.46	40.00	-8.54	45.39	0.90	16.78	31.61	125	32	Peak	HORIZONTAL
2	61.04	30.49	40.00	-9.51	48.74	1.00	12.60	31.85	300	273	Peak	HORIZONTAL
3	162.89	33.42	43.50	-10.08	47.28	1.62	16.36	31.84	100	102	Peak	HORIZONTAL
4	408.30	35.36	46.00	-10.64	42.38	2.60	22.59	32.21	100	236	Peak	HORIZONTAL
5	486.87	39.23	46.00	-6.77	45.17	2.89	23.61	32.44	300	113	Peak	HORIZONTAL
6	615.88	35.67	46.00	-10.33	39.65	3.29	25.11	32.38	100	248	Peak	HORIZONTAL

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.)

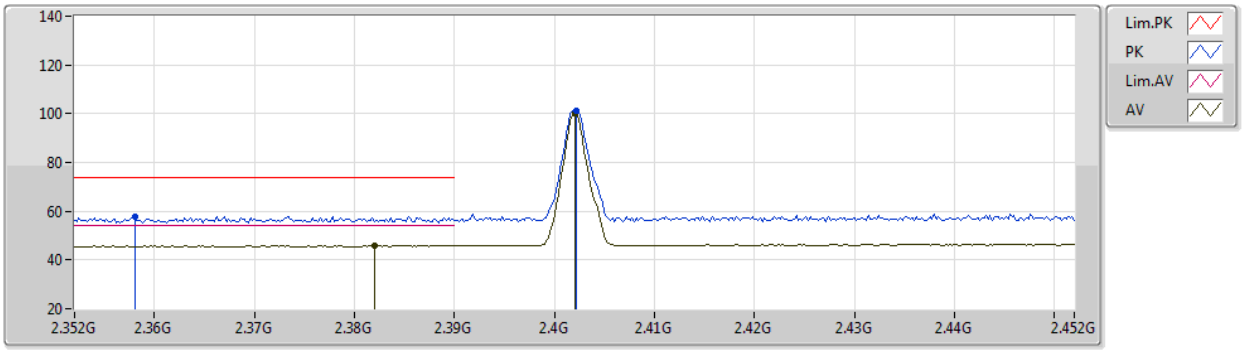
Summary

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	4.80403G	50.97	54.00	-3.03	3	Vertical	80	1.60	-

BT-BR(1Mbps)

2402MHz_TX

31/03/2020



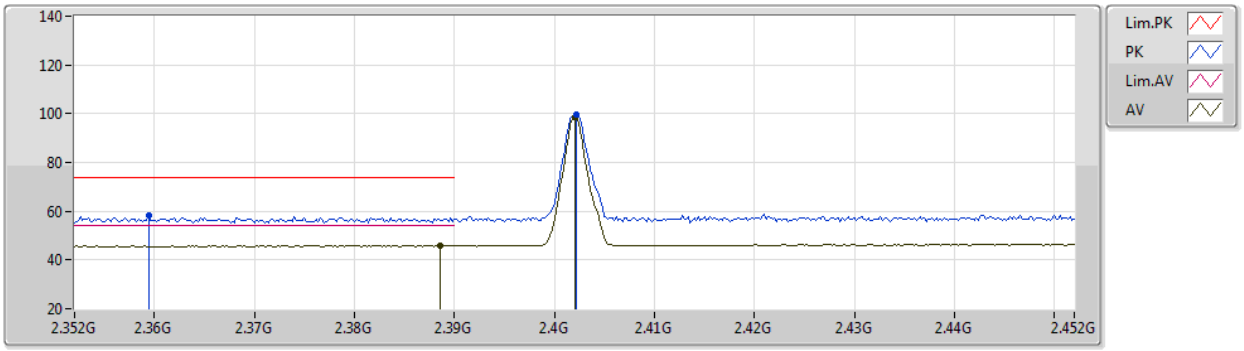
EUT Z_1TX
Setting 35
01-B-G-2

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	2.358G	58.00	74.00	-16.00	27.40	3	Vertical	272	2.73	-	27.42	3.18	-
AV	2.382G	45.90	54.00	-8.10	15.25	3	Vertical	272	2.73	-	27.46	3.19	-
PK	2.4022G	101.32	Inf	-Inf	70.61	3	Vertical	272	2.73	-	27.51	3.20	-
AV	2.402G	100.32	Inf	-Inf	69.61	3	Vertical	272	2.73	-	27.51	3.20	-

BT-BR(1Mbps)

2402MHz_TX

31/03/2020



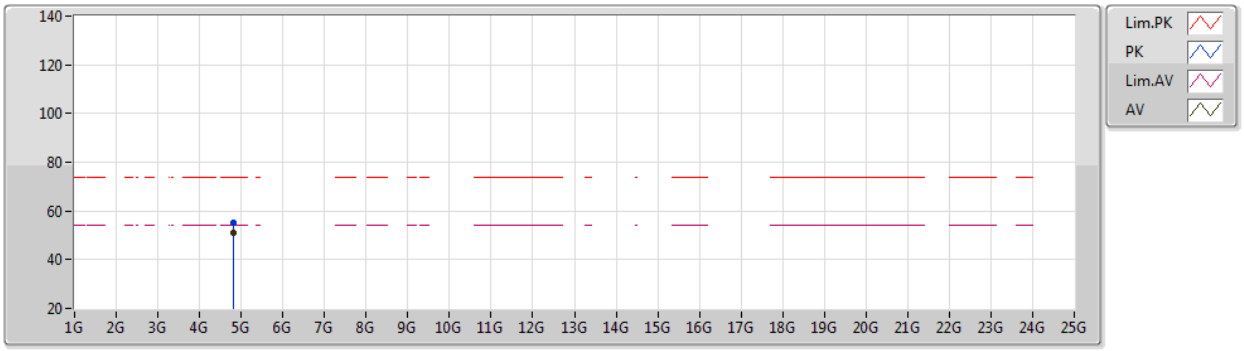
EUT Z_1TX
Setting 35
01-B-G-2

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	2.3594G	58.17	74.00	-15.83	27.57	3	Horizontal	331	1.61	-	27.42	3.18	-
AV	2.3886G	45.93	54.00	-8.07	15.26	3	Horizontal	331	1.61	-	27.48	3.19	-
PK	2.4022G	99.47	Inf	-Inf	68.76	3	Horizontal	331	1.61	-	27.51	3.20	-
AV	2.402G	98.46	Inf	-Inf	67.75	3	Horizontal	331	1.61	-	27.51	3.20	-

BT-BR(1Mbps)

2402MHz_TX

31/03/2020



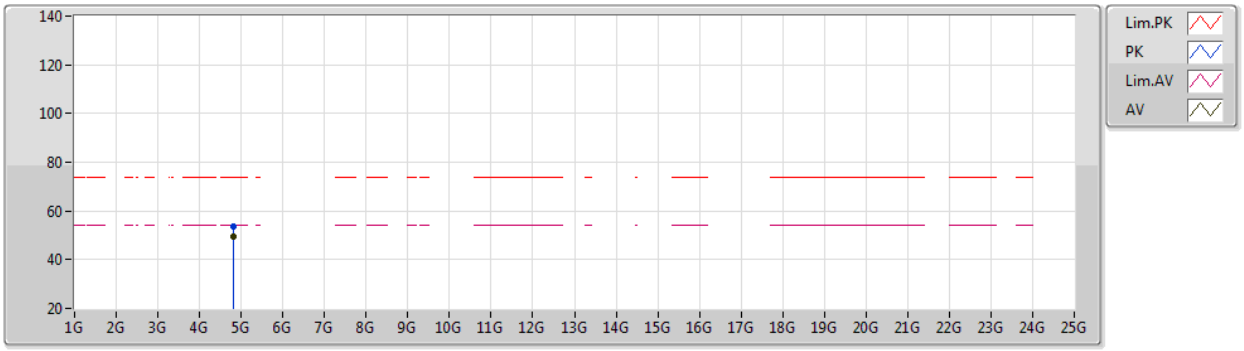
EUT Z_1TX
Setting 35
01-B-G-2

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	4.80435G	55.01	74.00	-18.99	51.64	3	Vertical	80	1.60	-	32.41	5.70	34.74
AV	4.80403G	50.97	54.00	-3.03	47.60	3	Vertical	80	1.60	-	32.41	5.70	34.74

BT-BR(1Mbps)

2402MHz_TX

31/03/2020



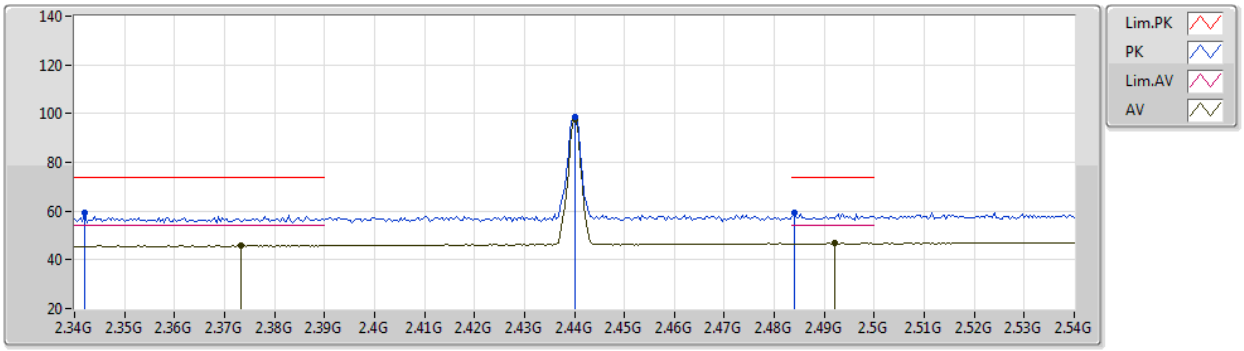
EUT Z_1TX
Setting 35
01-B-G-2

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	4.80411G	53.85	74.00	-20.15	50.48	3	Horizontal	277	2.52	-	32.41	5.70	34.74
AV	4.80401G	49.49	54.00	-4.51	46.12	3	Horizontal	277	2.52	-	32.41	5.70	34.74

BT-BR(1Mbps)

2440MHz_TX

31/03/2020



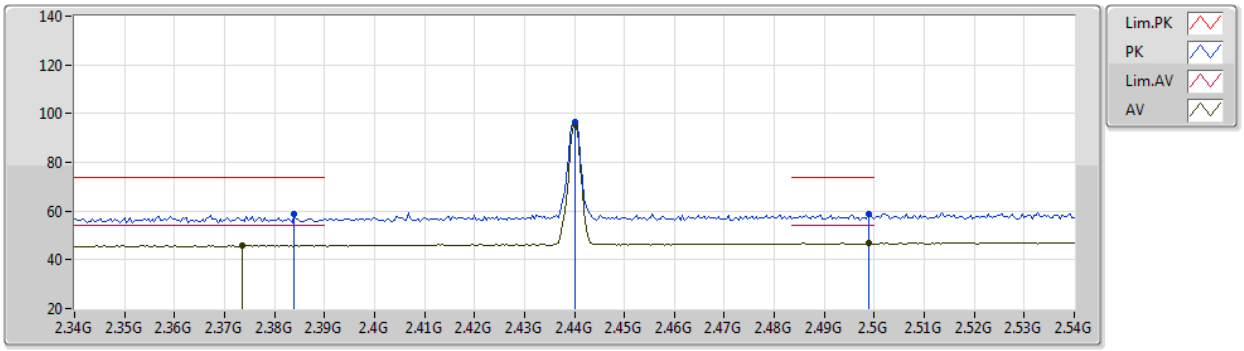
EUT Z_1TX
Setting 5
01-B-G-2

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	2.342G	59.10	74.00	-14.90	28.55	3	Vertical	272	2.50	-	27.38	3.17	-
AV	2.3732G	45.85	54.00	-8.15	15.21	3	Vertical	272	2.50	-	27.45	3.19	-
PK	2.44G	98.82	Inf	-Inf	67.94	3	Vertical	272	2.50	-	27.66	3.22	-
AV	2.44G	97.75	Inf	-Inf	66.87	3	Vertical	272	2.50	-	27.66	3.22	-
PK	2.484G	59.52	74.00	-14.48	28.44	3	Vertical	272	2.50	-	27.84	3.24	-
AV	2.492G	46.97	54.00	-7.03	15.85	3	Vertical	272	2.50	-	27.87	3.25	-

BT-BR(1Mbps)

2440MHz_TX

31/03/2020



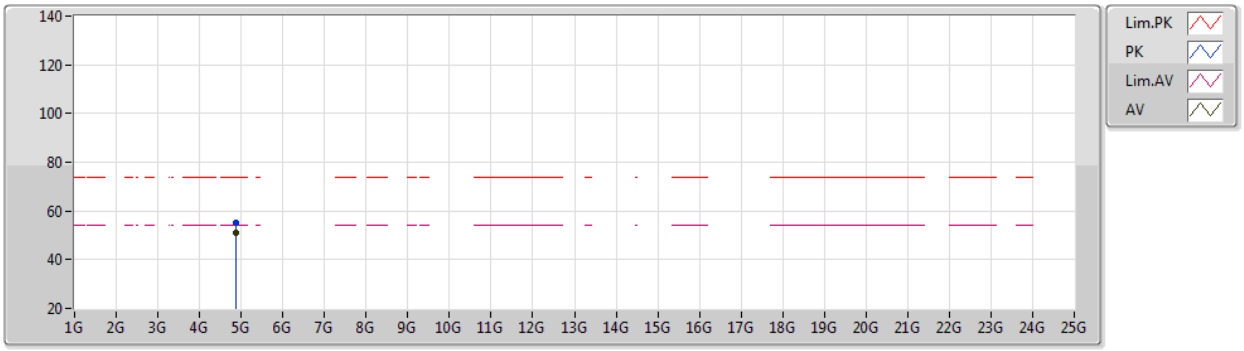
EUT Z_1TX
Setting 5
01-B-G-2

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	2.384G	58.89	74.00	-15.11	28.23	3	Horizontal	330	1.46	-	27.47	3.19	-
AV	2.3736G	45.81	54.00	-8.19	15.17	3	Horizontal	330	1.46	-	27.45	3.19	-
PK	2.44G	96.71	Inf	-Inf	65.83	3	Horizontal	330	1.46	-	27.66	3.22	-
AV	2.44G	95.59	Inf	-Inf	64.71	3	Horizontal	330	1.46	-	27.66	3.22	-
PK	2.4988G	58.92	74.00	-15.08	27.77	3	Horizontal	330	1.46	-	27.90	3.25	-
AV	2.4988G	46.78	54.00	-7.22	15.63	3	Horizontal	330	1.46	-	27.90	3.25	-

BT-BR(1Mbps)

2440MHz_TX

31/03/2020



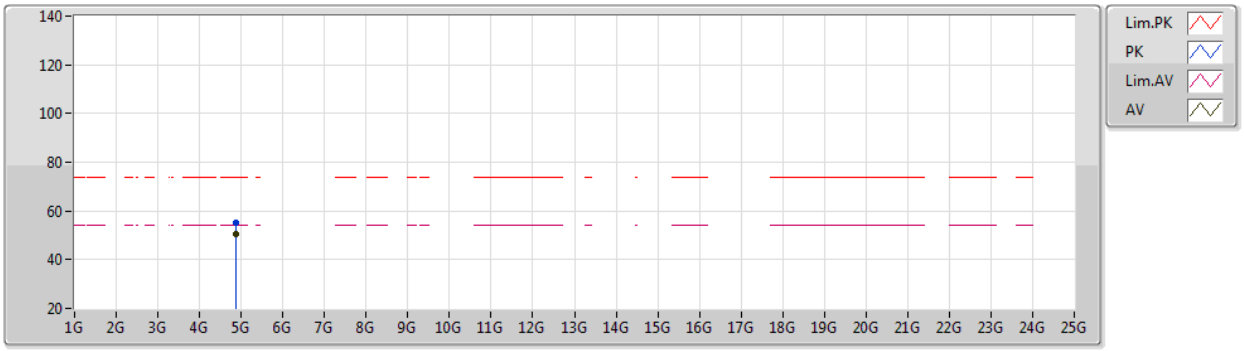
EUT Z_1TX
Setting 5
01-B-G-2

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	4.87968G	55.31	74.00	-18.69	51.69	3	Vertical	83	1.33	-	32.56	5.74	34.68
AV	4.88001G	50.78	54.00	-3.22	47.16	3	Vertical	83	1.33	-	32.56	5.74	34.68

BT-BR(1Mbps)

2440MHz_TX

31/03/2020



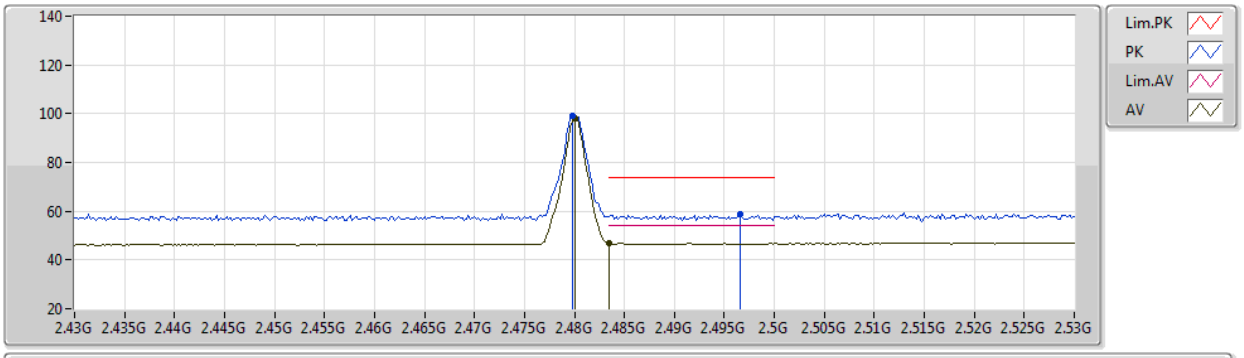
EUT Z_1TX
Setting 5
01-B-G-2

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	4.87971G	55.07	74.00	-18.93	51.45	3	Horizontal	42	1.00	-	32.56	5.74	34.68
AV	4.87999G	50.52	54.00	-3.48	46.90	3	Horizontal	42	1.00	-	32.56	5.74	34.68

BT-BR(1Mbps)

2480MHz_TX

31/03/2020



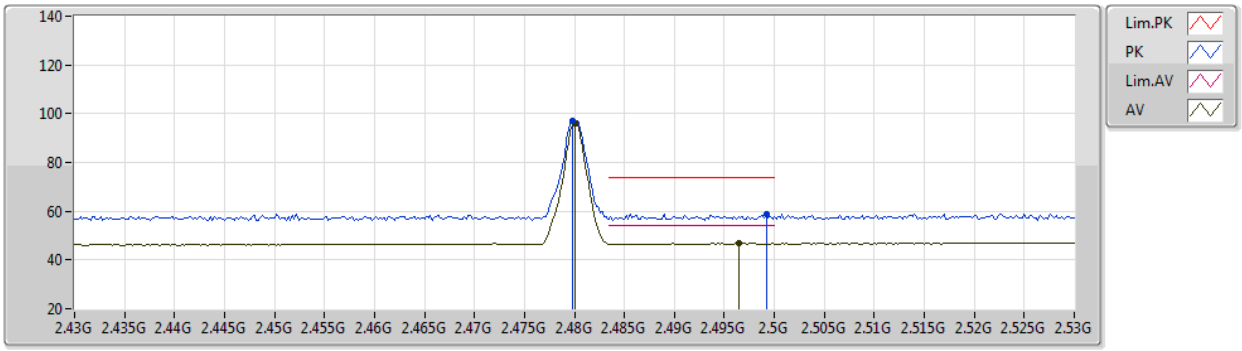
EUT Z_1TX
Setting 13
01-B-G-2

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	98.95	Inf	-Inf	67.89	3	Vertical	269	2.81	-	27.82	3.24	-
AV	2.48G	97.86	Inf	-Inf	66.80	3	Vertical	269	2.81	-	27.82	3.24	-
PK	2.4966G	58.54	74.00	-15.46	27.40	3	Vertical	269	2.81	-	27.89	3.25	-
AV	2.4835G	46.80	54.00	-7.20	15.73	3	Vertical	269	2.81	-	27.83	3.24	-

BT-BR(1Mbps)

2480MHz_TX

31/03/2020



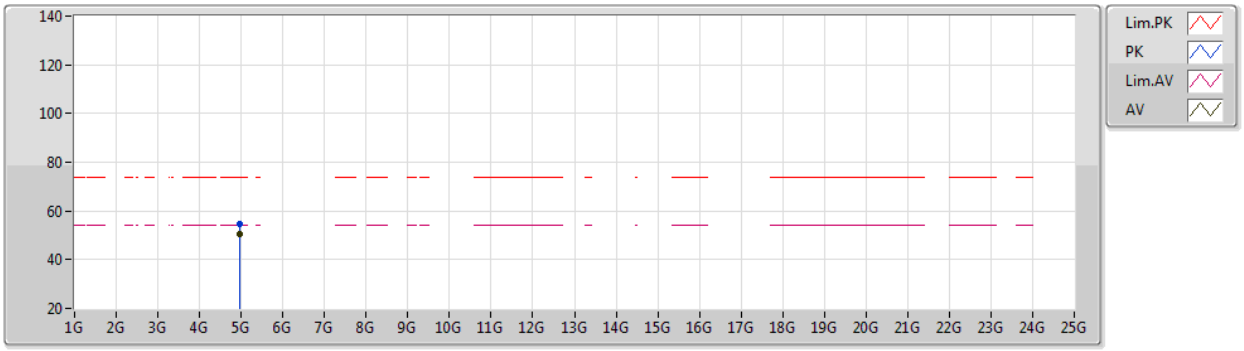
EUT Z_1TX
Setting 13
01-B-G-2

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	97.16	Inf	-Inf	66.10	3	Horizontal	327	1.27	-	27.82	3.24	-
AV	2.48G	96.08	Inf	-Inf	65.02	3	Horizontal	327	1.27	-	27.82	3.24	-
PK	2.4992G	58.70	74.00	-15.30	27.55	3	Horizontal	327	1.27	-	27.90	3.25	-
AV	2.4964G	46.79	54.00	-7.21	15.65	3	Horizontal	327	1.27	-	27.89	3.25	-

BT-BR(1Mbps)

2480MHz_TX

31/03/2020



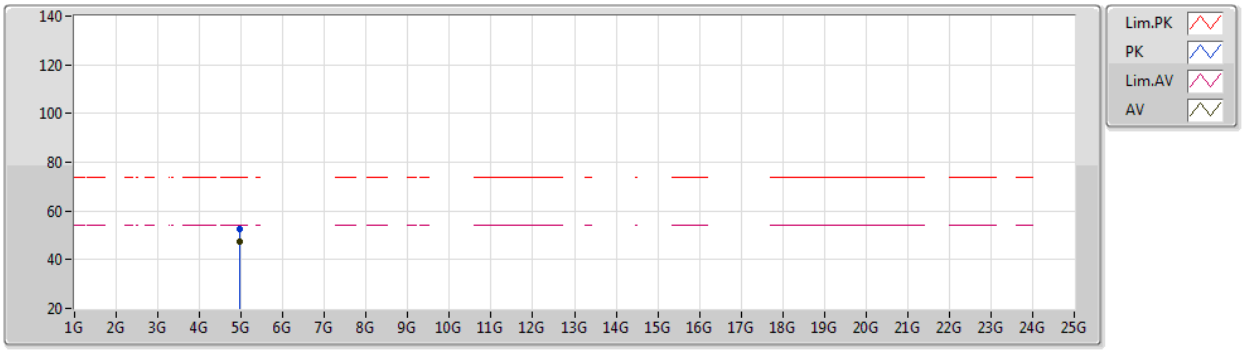
EUT Z_1TX
Setting 13
01-B-G-2

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	4.95964G	54.60	74.00	-19.40	50.65	3	Vertical	271	1.34	-	32.78	5.78	34.61
AV	4.96003G	50.54	54.00	-3.46	46.59	3	Vertical	271	1.34	-	32.78	5.78	34.61

BT-BR(1Mbps)

2480MHz_TX

31/03/2020



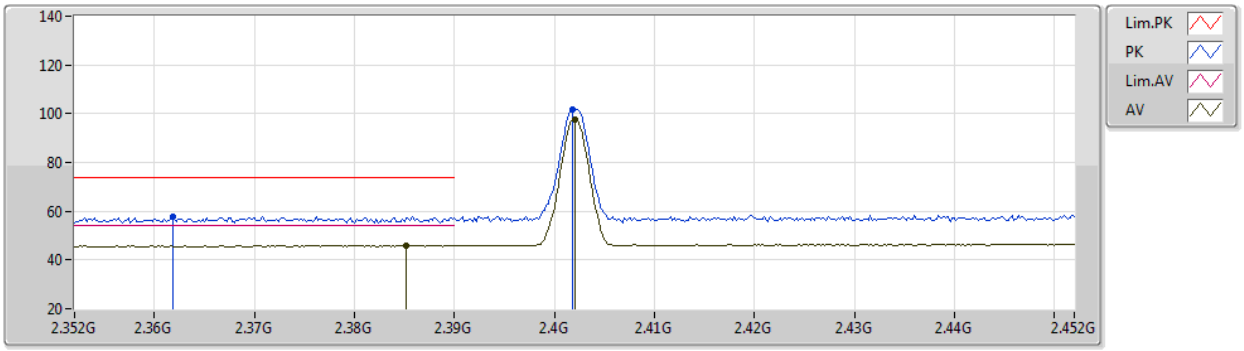
EUT Z_1TX
Setting 13
01-B-G-2

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	4.96031G	52.73	74.00	-21.27	48.78	3	Horizontal	285	2.46	-	32.78	5.78	34.61
AV	4.96G	47.36	54.00	-6.64	43.41	3	Horizontal	285	2.46	-	32.78	5.78	34.61

BT-EDR(3Mbps)

2402MHz_TX

31/03/2020



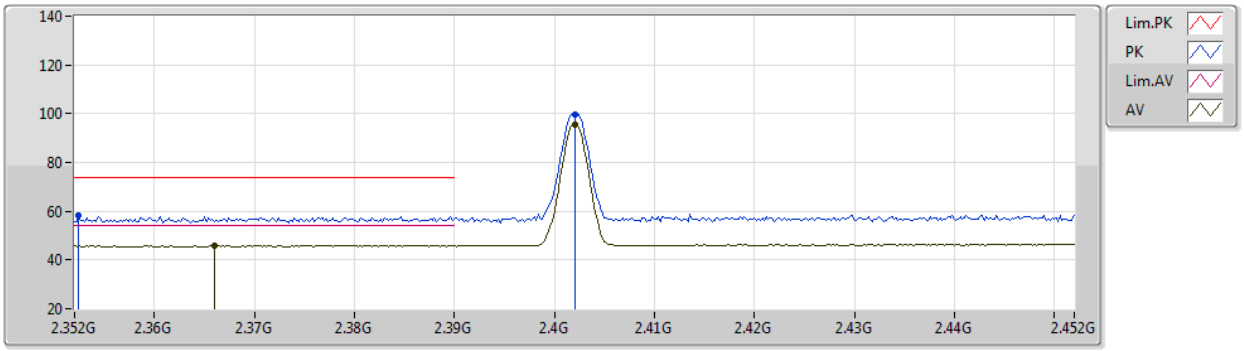
EUT Z_1TX
Setting 57
01-B-G-2

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	2.3618G	57.77	74.00	-16.23	27.17	3	Vertical	272	2.73	-	27.42	3.18	-
AV	2.3852G	45.99	54.00	-8.01	15.33	3	Vertical	272	2.73	-	27.47	3.19	-
PK	2.4018G	101.69	Inf	-Inf	70.98	3	Vertical	272	2.73	-	27.51	3.20	-
AV	2.402G	97.45	Inf	-Inf	66.74	3	Vertical	272	2.73	-	27.51	3.20	-

BT-EDR(3Mbps)

2402MHz_TX

31/03/2020



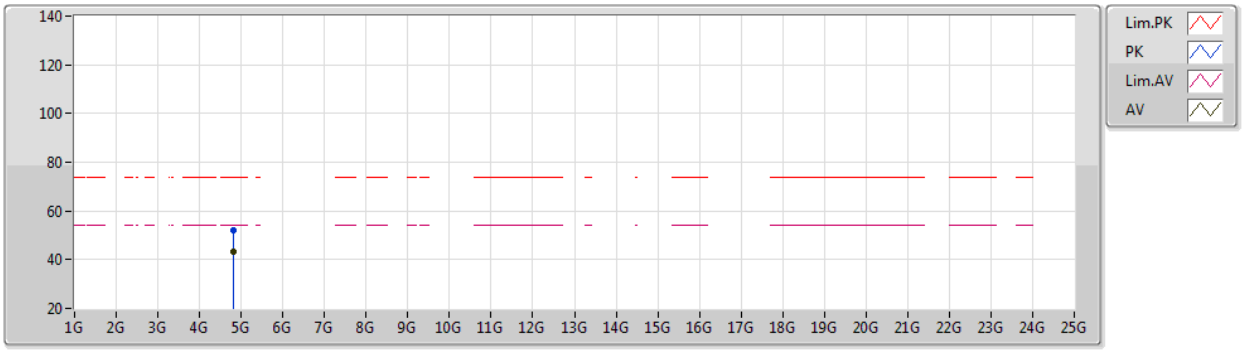
EUT Z_1TX
Setting 57
01-B-G-2

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	58.30	74.00	-15.70	27.72	3	Horizontal	330	1.59	-	27.40	3.18	-
AV	2.366G	45.81	54.00	-8.19	15.20	3	Horizontal	330	1.59	-	27.43	3.18	-
PK	2.402G	99.91	Inf	-Inf	69.20	3	Horizontal	330	1.59	-	27.51	3.20	-
AV	2.402G	95.62	Inf	-Inf	64.91	3	Horizontal	330	1.59	-	27.51	3.20	-

BT-EDR(3Mbps)

2402MHz_TX

31/03/2020



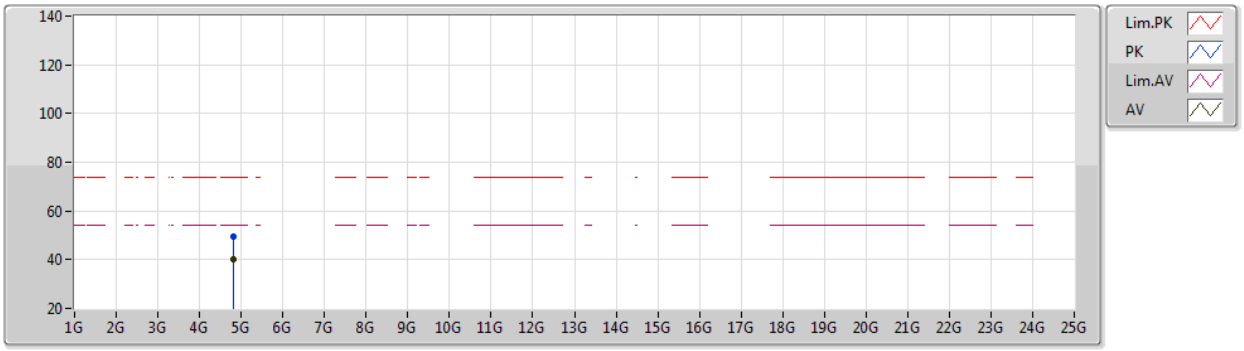
EUT Z_1TX
Setting 57
01-B-G-2

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	4.80413G	52.09	74.00	-21.91	48.72	3	Vertical	216	2.33	-	32.41	5.70	34.74
AV	4.80399G	43.20	54.00	-10.80	39.83	3	Vertical	216	2.33	-	32.41	5.70	34.74

BT-EDR(3Mbps)

2402MHz_TX

31/03/2020



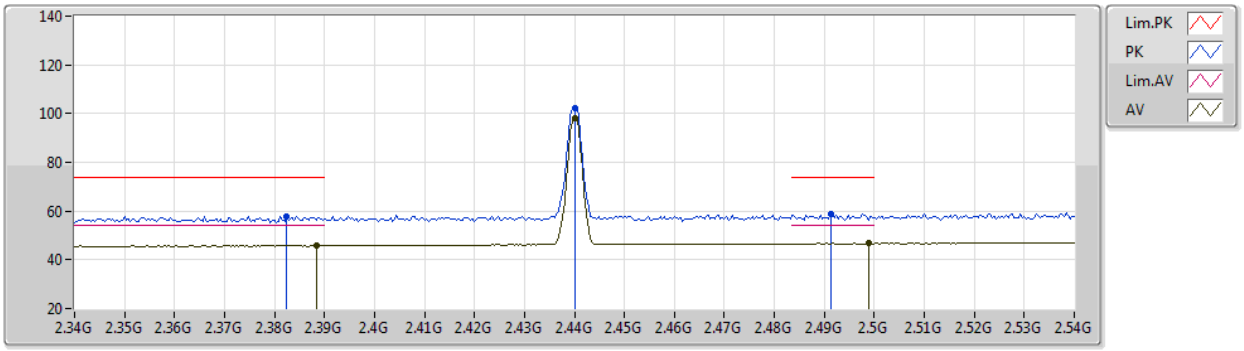
EUT Z_1TX
Setting 57
01-B-G-2

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	4.80379G	49.66	74.00	-24.34	46.29	3	Horizontal	280	2.57	-	32.41	5.70	34.74
AV	4.80403G	40.36	54.00	-13.64	36.99	3	Horizontal	280	2.57	-	32.41	5.70	34.74

BT-EDR(3Mbps)

2440MHz_TX

31/03/2020



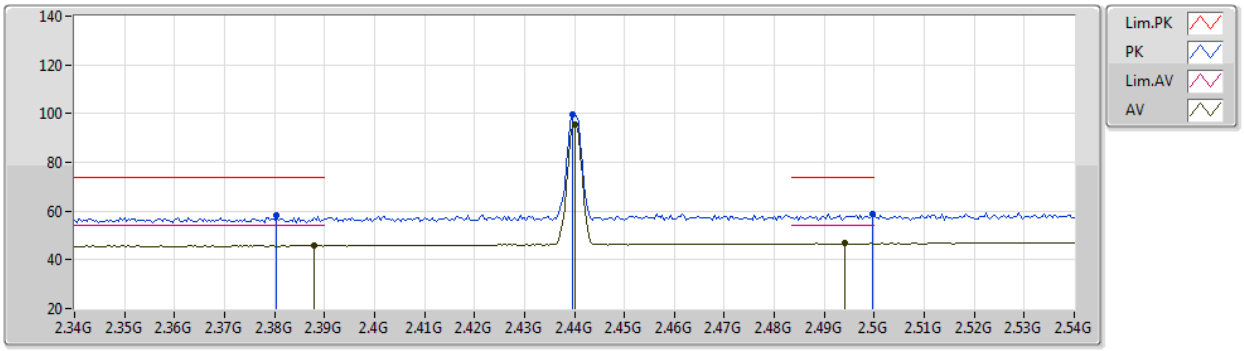
EUT Z_1TX
Setting 55
01-B-G-2

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	2.3824G	57.90	74.00	-16.10	27.25	3	Vertical	272	2.52	-	27.46	3.19	-
AV	2.3884G	45.93	54.00	-8.07	15.26	3	Vertical	272	2.52	-	27.48	3.19	-
PK	2.44G	102.33	Inf	-Inf	71.45	3	Vertical	272	2.52	-	27.66	3.22	-
AV	2.44G	98.06	Inf	-Inf	67.18	3	Vertical	272	2.52	-	27.66	3.22	-
PK	2.4912G	59.05	74.00	-14.95	27.94	3	Vertical	272	2.52	-	27.86	3.25	-
AV	2.4988G	46.85	54.00	-7.15	15.70	3	Vertical	272	2.52	-	27.90	3.25	-

BT-EDR(3Mbps)

2440MHz_TX

31/03/2020



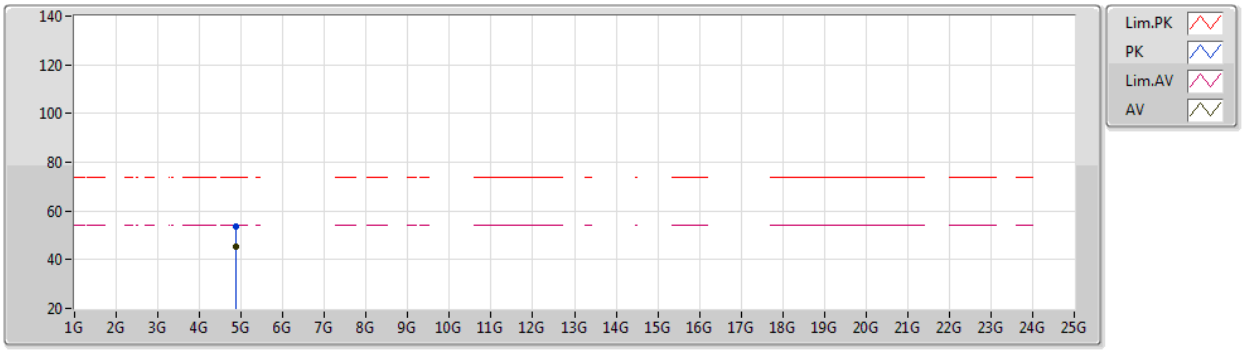
EUT Z_1TX
Setting 55
01-B-G-2

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	2.3804G	58.08	74.00	-15.92	27.43	3	Horizontal	326	1.22	-	27.46	3.19	-
AV	2.388G	45.90	54.00	-8.10	15.23	3	Horizontal	326	1.22	-	27.48	3.19	-
PK	2.4396G	99.69	Inf	-Inf	68.81	3	Horizontal	326	1.22	-	27.66	3.22	-
AV	2.44G	95.40	Inf	-Inf	64.52	3	Horizontal	326	1.22	-	27.66	3.22	-
PK	2.4996G	58.62	74.00	-15.38	27.47	3	Horizontal	326	1.22	-	27.90	3.25	-
AV	2.494G	46.67	54.00	-7.33	15.54	3	Horizontal	326	1.22	-	27.88	3.25	-

BT-EDR(3Mbps)

2440MHz_TX

31/03/2020



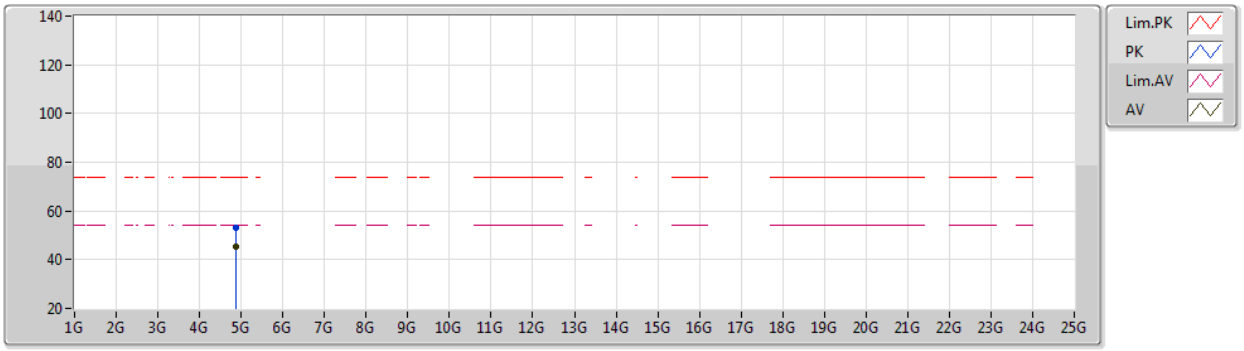
EUT Z_1TX
Setting 55
01-B-G-2

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	4.87972G	53.59	74.00	-20.41	49.97	3	Vertical	79	1.07	-	32.56	5.74	34.68
AV	4.87997G	45.33	54.00	-8.67	41.71	3	Vertical	79	1.07	-	32.56	5.74	34.68

BT-EDR(3Mbps)

2440MHz_TX

31/03/2020



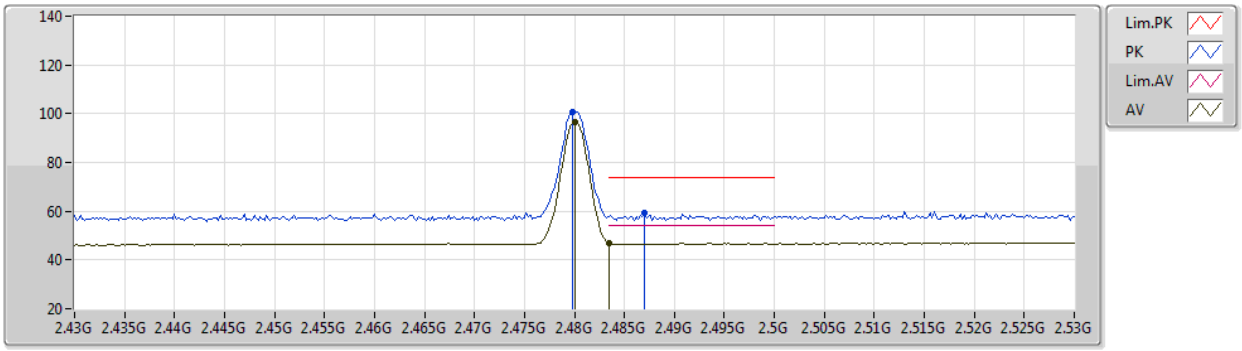
EUT Z_1TX
Setting 55
01-B-G-2

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	4.87972G	53.31	74.00	-20.69	49.69	3	Horizontal	43	1.00	-	32.56	5.74	34.68
AV	4.87989G	45.36	54.00	-8.64	41.74	3	Horizontal	43	1.00	-	32.56	5.74	34.68

BT-EDR(3Mbps)

2480MHz_TX

31/03/2020



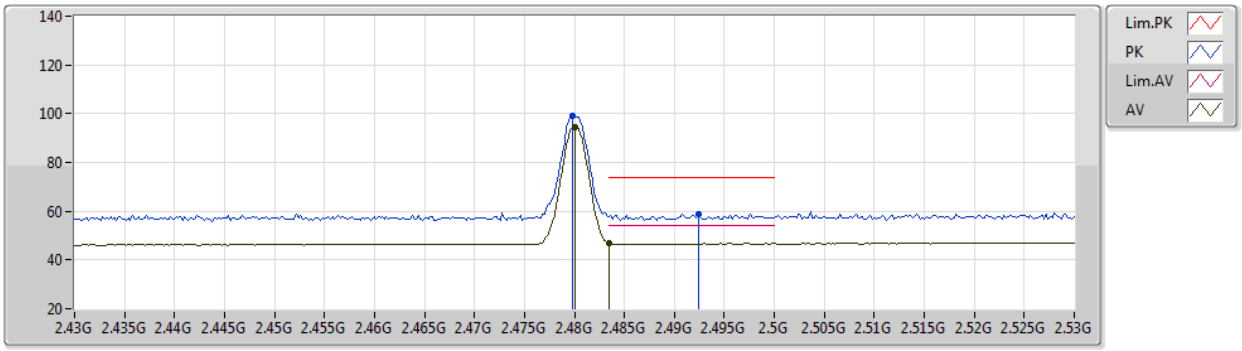
EUT Z_1TX
Setting 50
01-B-G-2

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	100.73	Inf	-Inf	69.67	3	Vertical	270	2.80	-	27.82	3.24	-
AV	2.48G	96.31	Inf	-Inf	65.25	3	Vertical	270	2.80	-	27.82	3.24	-
PK	2.487G	59.36	74.00	-14.64	28.27	3	Vertical	270	2.80	-	27.85	3.24	-
AV	2.4835G	47.01	54.00	-6.99	15.94	3	Vertical	270	2.80	-	27.83	3.24	-

BT-EDR(3Mbps)

2480MHz_TX

31/03/2020



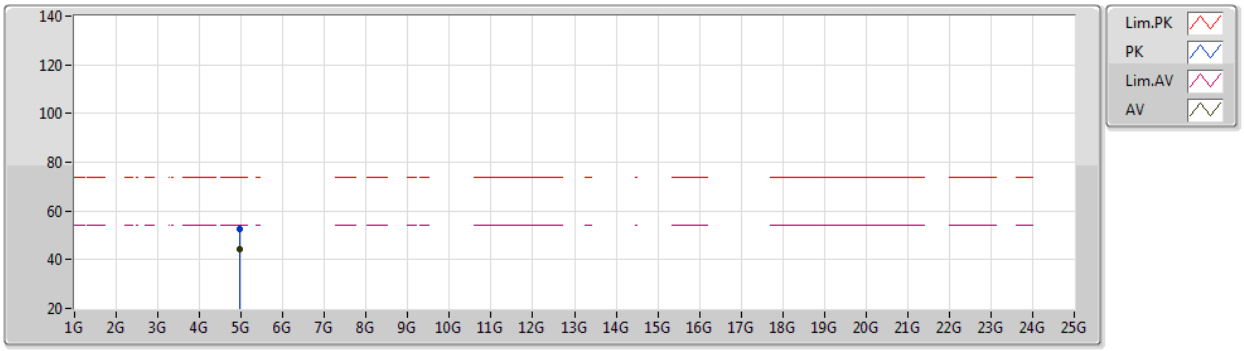
EUT Z_1TX
Setting 50
01-B-G-2

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	98.92	Inf	-Inf	67.86	3	Horizontal	326	1.09	-	27.82	3.24	-
AV	2.48G	94.47	Inf	-Inf	63.41	3	Horizontal	326	1.09	-	27.82	3.24	-
PK	2.4924G	58.68	74.00	-15.32	27.56	3	Horizontal	326	1.09	-	27.87	3.25	-
AV	2.4835G	46.82	54.00	-7.18	15.75	3	Horizontal	326	1.09	-	27.83	3.24	-

BT-EDR(3Mbps)

2480MHz_TX

31/03/2020



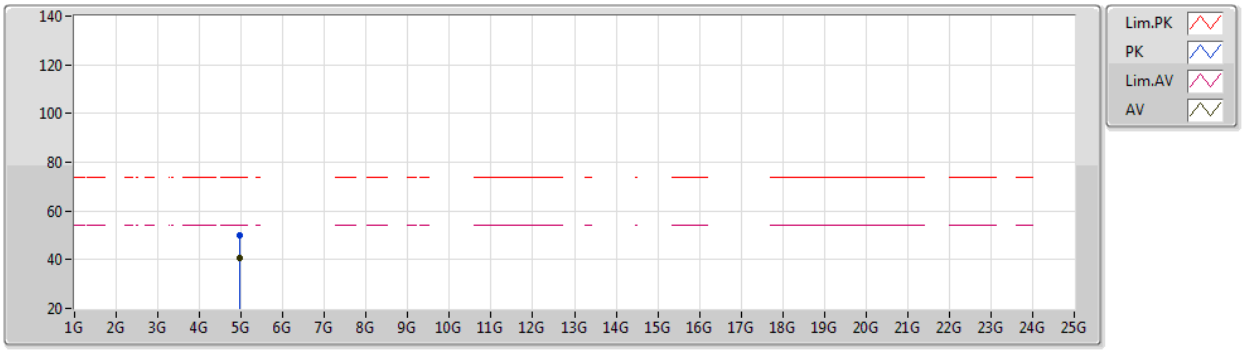
EUT Z_1TX
Setting 50
01-B-G-2

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	4.95998G	52.66	74.00	-21.34	48.71	3	Vertical	270	1.72	-	32.78	5.78	34.61
AV	4.96007G	44.32	54.00	-9.68	40.37	3	Vertical	270	1.72	-	32.78	5.78	34.61

BT-EDR(3Mbps)

2480MHz_TX

31/03/2020



EUT Z_1TX
Setting 50
01-B-G-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	4.95979G	50.12	74.00	-23.88	46.17	3	Horizontal	286	2.46	-	32.78	5.78	34.61
AV	4.95998G	40.44	54.00	-13.56	36.49	3	Horizontal	286	2.46	-	32.78	5.78	34.61