Testing Laboratory 1190

FCC RADIO TEST REPORT

FCC ID	:	2AKBCGRODT2019
Equipment	:	Mighty Audio Device
Brand Name	:	Mighty
Model Name	:	M2
Applicant	:	Mighty Audio, Inc. 707 Coeur d'Alene Ave, Venice, CA 90291 USA
Manufacturer	:	Dongguanhung Fu Electronic Technology Co., LTD ChuTang ChinXiaoTang Industrial Zone,FengGang,DongGuang, GuangDong,China Postcode 523682
Standard	:	47 CFR FCC Part 15.247

The product was received on Apr. 08, 2019, and testing was started from Jun. 14, 2019 and completed on Jul. 04, 2019. 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: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

Table of Contents

History of this test report **4**

Summary of Test Result **5**

1 General Description **6**

1.1 Information 6
1.2 Applicable Standards 7
1.3 Testing Location Information 7
1.4 Measurement Uncertainty 7

2 Test Configuration of EUT **8**

2.1 Test Channel Mode 8
2.2 The Worst Case Measurement Configuration 9
2.3 EUT Operation during Test 10
2.4 Accessories 10
2.5 Support Equipment 11
2.6 Test Setup Diagram 12

3 Transmitter Test Result **14**

3.1 AC Power-line Conducted Emissions 14
3.2 20dB Bandwidth and Carrier Frequency Separation 16
3.3 Maximum Conducted Output Power 17
3.4 Number of Hopping Frequencies and Hopping Bandedge 18
3.5 Time of Occupancy (Dwell Time) 19
3.6 Emissions in Non-restricted Frequency Bands 20
3.7 Emissions in Restricted Frequency Bands 21

4 Test Equipment and Calibration Data **24**

Appendix A. Test Results of AC Power-line Conducted Emissions

Appendix B. Test Results of 20dB Bandwidth AND Carrier Frequency Separation

Appendix C. Test Results of Maximum Conducted Output Power

Appendix D. Test Results of Number of Hopping Frequencies and Hopping Bandedge

Appendix E. Test Results of Time of Occupancy (Dwell Time)

Appendix F. Test Results of Emissions in Non-restricted Frequency Bands

Appendix G. Test Results of Emissions in Restricted Frequency Bands

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
FR932911AA	01	Initial issue of report	Jul. 18, 2019

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: Sandy Chuang

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:
- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- 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.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2, 3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	M-A	AntEffic	PCB antenna	N/A	2.6

Note: The above information was declared by manufacturer.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	0.074	11.31	297.5u	10k
BT-EDR(3Mbps)	0.063	12.01	210u	10k
BT-EDR(2Mbps)	0.065	11.87	260.87u	10k

1.1.4 EUT Operational Condition

EUT Power Type	From Host System or Battery
Test Software Version	Tera Term 4.75、Spotify、Mighty Audio

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
- FCC KDB 558074 D01 v05r02

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	Owen Hsu	21~24°C / 50~53%	Jun. 14, 2019~ Jun. 15, 2019
Radiated (Below 1GHz)	03CH04-CB	Justin Lin	23~25°C / 58~62%	Jun. 14, 2019~ Jul. 04, 2019
Radiated (Above 1GHz)	03CH03-CB	Justin Lin	22~27°C / 55~60%	Jun. 14, 2019~ Jul. 04, 2019
AC Conduction	CO01-CB	Max Lin	22.1~23.2°C / 56~58%	Jul. 01, 2019

Test site Designation No. TW0006 with FCC.
Test site registered number IC 4086B 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%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	PowerSetting
BT-BR(1Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default
BT-EDR(2Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default
BT-EDR(3Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default

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	CTX
Test Mode	EUT with host system

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
Test Mode	The EUT can be placed in X axis, Y-axis and Z-axis. EUT X axis has been evaluated to be the worst case at Emissions in Restricted Frequency Bands <Above 1GHz>; thus, the measurement will follow this same test configuration.
	Place EUT in X axis - EUT with host system
Operating Mode > 1GHz	CTX
Test Mode	The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at X axis, thus the measurement will follow this same test configuration.
	Place EUT in X axis

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
Test Mode	The EUT can be placed in X axis, Y-axis and Z-axis. EUT X axis has been evaluated to be the worst case at Emissions in Restricted Frequency Bands <Above 1GHz>; thus, the measurement will follow this same test configuration.
	Place EUT in X axis - WLAN 2.4GHz + Bluetooth
Refer to Appendix H for Radiated Emission Co-location.	

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
Battery	PATL	402431	3.8Vdc, 320mAh
Other			
USB Cable*1: Non-Shielded, 0.26m			

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E6430	N/A
B	Earphone	e-Power	S90W	N/A
C	Mouse	Logitech	M-U0026	N/A
D	iPad	Apple	A1421	N/A
E	AP Router	ASUS	RP-N53	MSQ-RPN53

For Radiated:

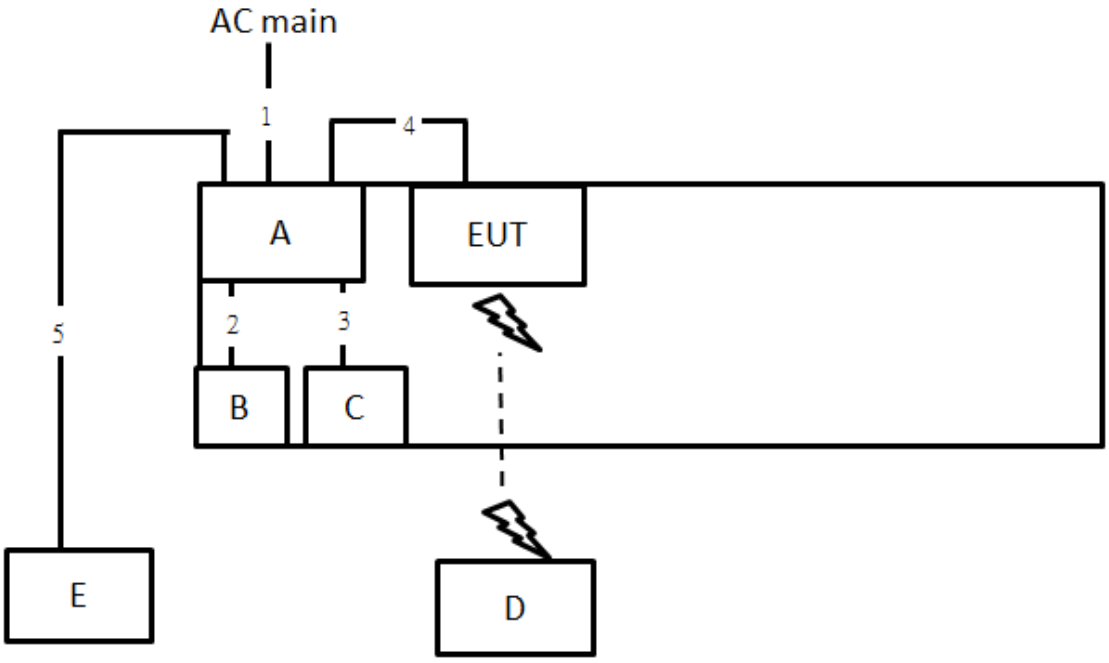
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	iPad	Apple	A1489	N/A
C	WLAN AP	Netgear	R7500	PY314300288

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	WLAN AP	Netgear	R7500	PY314300288
C	iPad	Apple	A1458	DMRK42SCF185

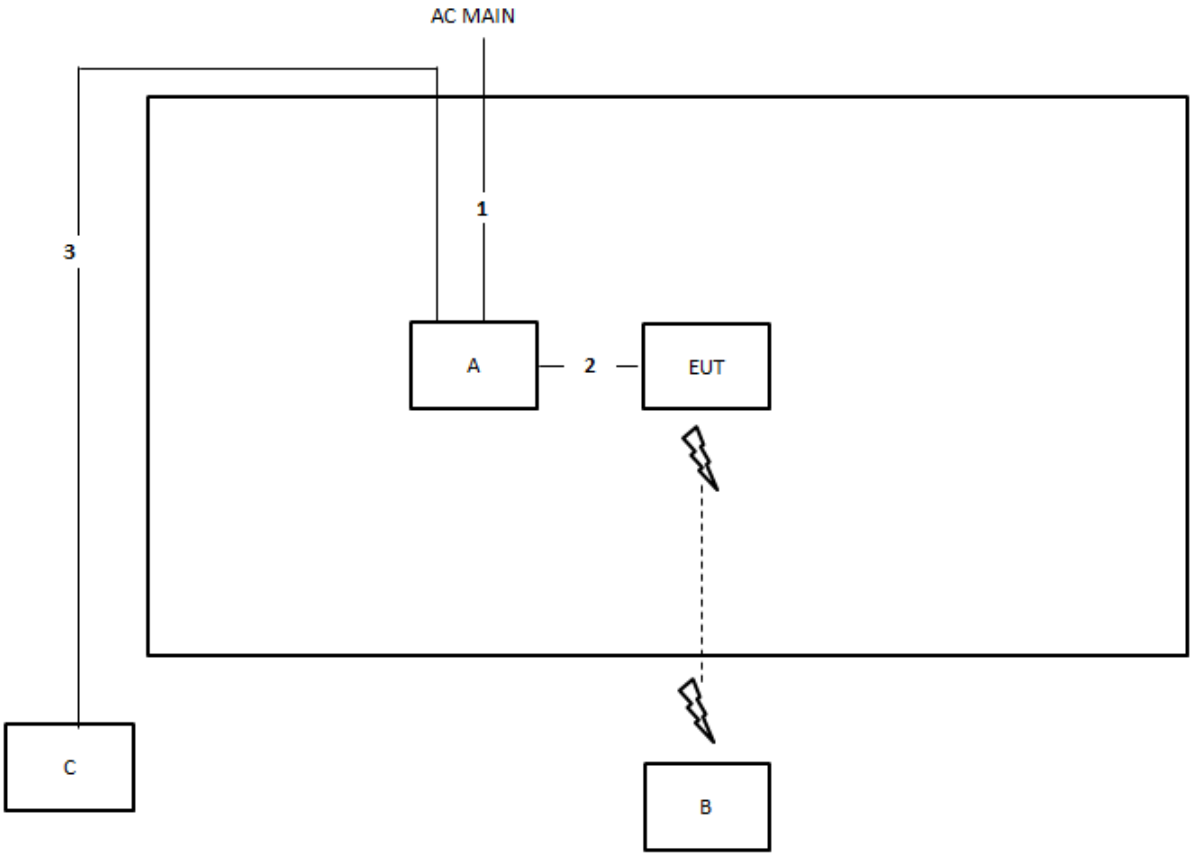
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	Audio cable	No	1.8m
3	USB cable	Yes	1.8m
4	USB cable	No	0.26m
5	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	No	0.26m
3	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

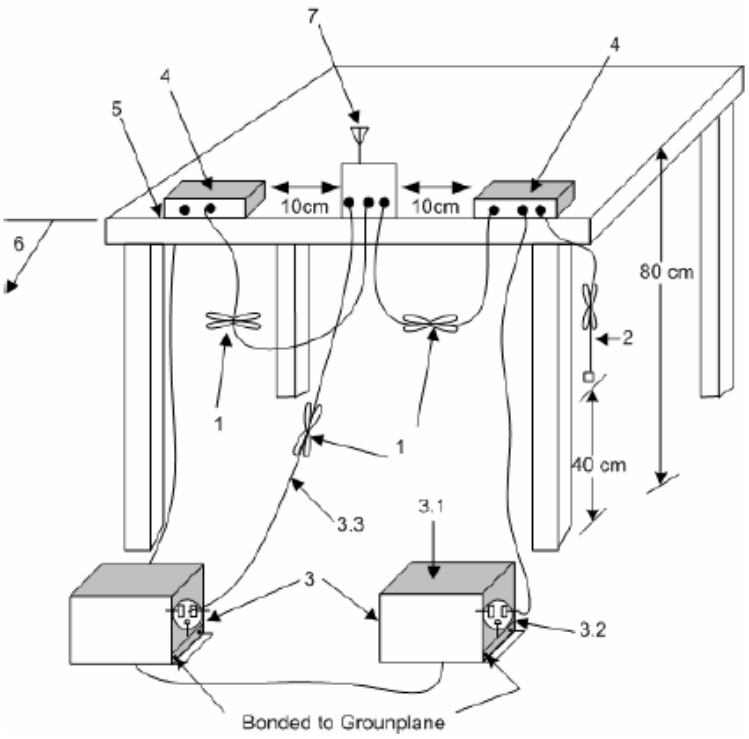
Refer a test equipment and calibration data table in this test report.

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 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	

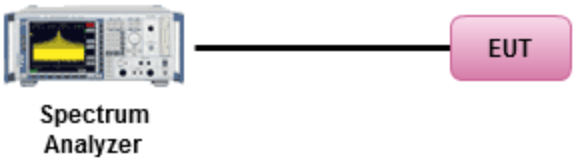
3.2.2 Measuring Instruments

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

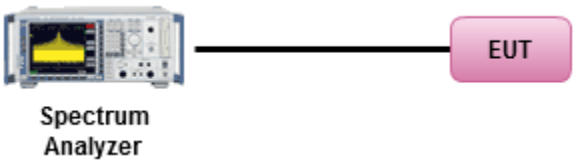
3.4.3 Measuring Instruments

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

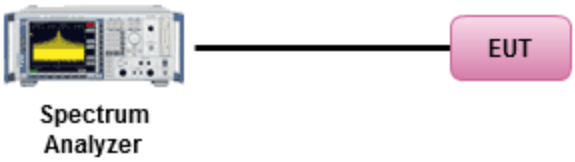
Refer a test equipment and calibration data table in this test report.

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

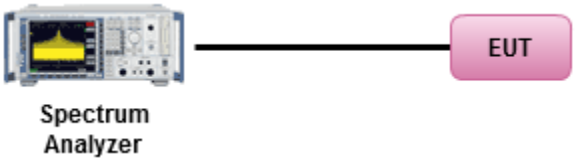
Refer a test equipment and calibration data table in this test report.

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.

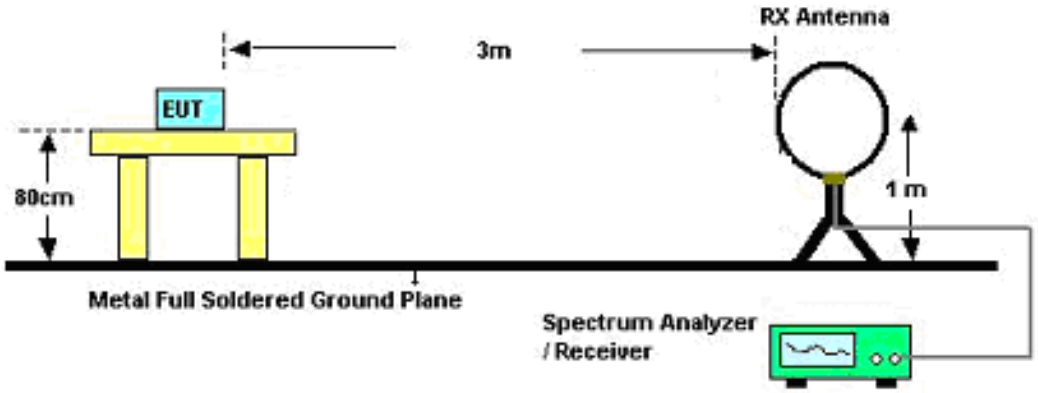
3.7.3 Test Procedures

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.

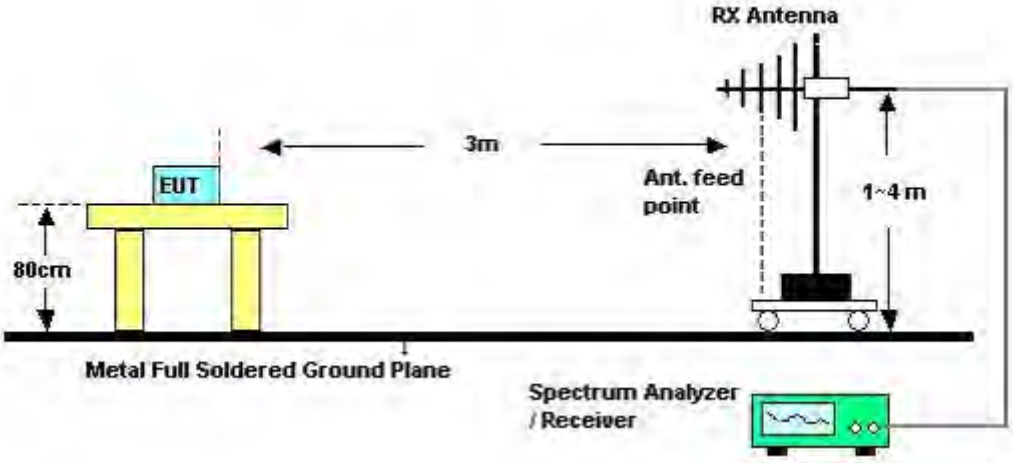
3.7.4 Test Setup

Emissions in Restricted Frequency Bands

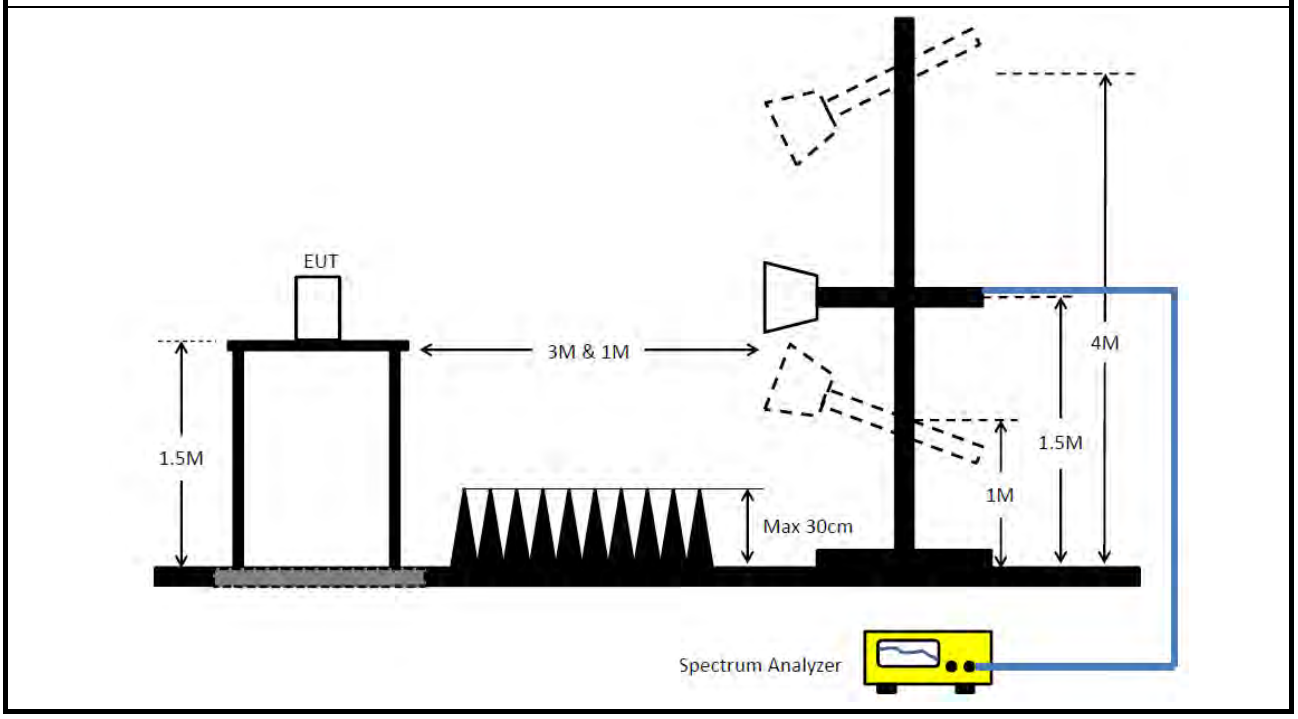
9kHz ~30MHz



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 = Level.

3.7.6 Emissions in Restricted Frequency Bands (Below 30MHz)

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

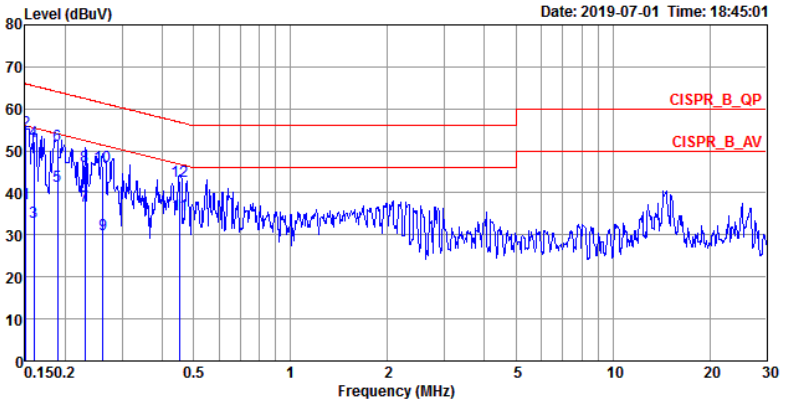
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 28, 2019	Jan. 29, 2020	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Jan. 11, 2019	Jan. 10, 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)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & Woken	CBL6112B & N-6-06	22021&AT-N0607	30MHz ~ 1GHz	Oct. 12, 2018	Oct. 11, 2019	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	310N	187291	0.1MHz ~ 1GHz	Mar. 19, 2019	Mar. 18, 2020	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 26, 2018	Dec. 25, 2019	Radiation (03CH04-CB
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jul. 03, 2018	Jul. 02, 2019	Radiation (03CH04-CB
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jun. 26, 2019	Jun. 25, 2020	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+22	30MHz – 1GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH04-CB)
Horn Antenna	ETS・Lindgren	3115	6821	750MHz~18GHz	Jan. 24, 2019	Jan. 23, 2020	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Dec. 20, 2018	Dec. 19, 2019	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP-40	100019	9kHz ~ 40GHz	Jun. 19, 2019	Jun. 18, 2020	Radiation (03CH03-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-20+27	1GHz ~ 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-27	1GHz ~ 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH03-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jun. 22, 2018	Jun. 21, 2019	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 03, 2018	Sep. 02, 2019	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 03, 2018	Sep. 02, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-3	1 GHz – 26.5 GHz	Oct. 24, 2018	Oct. 23, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)

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

NCR means Non-Calibration required.

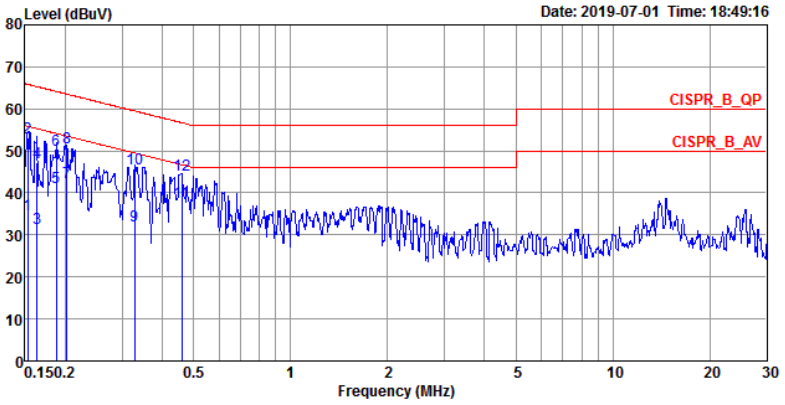
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1508	37.63	-18.33	55.96	27.73	9.84	0.06	Average	LINE
2	0.1508	54.62	-11.34	65.96	44.72	9.84	0.06	QP	LINE
3	0.1598	33.00	-22.47	55.47	23.10	9.84	0.06	Average	LINE
4	0.1598	52.15	-13.32	65.47	42.25	9.84	0.06	QP	LINE
5	0.1894	41.73	-12.33	54.06	31.82	9.85	0.06	Average	LINE
6	0.1894	51.23	-12.83	64.06	41.32	9.85	0.06	QP	LINE
7	0.2304	36.97	-15.47	52.44	27.06	9.85	0.06	Average	LINE
8	0.2304	46.35	-16.09	62.44	36.44	9.85	0.06	QP	LINE
9	0.2616	30.17	-21.21	51.38	20.25	9.86	0.06	Average	LINE
10	0.2616	46.48	-14.90	61.38	36.56	9.86	0.06	QP	LINE
11	0.4539	34.84	-11.96	46.80	24.91	9.87	0.06	Average	LINE
12	0.4539	42.89	-13.91	56.80	32.96	9.87	0.06	QP	LINE

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.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1532	34.93	-20.89	55.82	25.04	9.83	0.06	Average	NEUTRAL
2	0.1532	53.09	-12.73	65.82	43.20	9.83	0.06	QP	NEUTRAL
3	0.1633	31.62	-23.68	55.30	21.73	9.83	0.06	Average	NEUTRAL
4	0.1633	47.19	-18.11	65.30	37.30	9.83	0.06	QP	NEUTRAL
5	0.1874	41.35	-12.80	54.15	31.46	9.83	0.06	Average	NEUTRAL
6	0.1874	50.31	-13.84	64.15	40.42	9.83	0.06	QP	NEUTRAL
7	0.2018	42.51	-11.03	53.54	32.62	9.83	0.06	Average	NEUTRAL
8	0.2018	50.80	-12.74	63.54	40.91	9.83	0.06	QP	NEUTRAL
9	0.3286	32.25	-17.24	49.49	22.35	9.84	0.06	Average	NEUTRAL
10	0.3286	45.63	-13.86	59.49	35.73	9.84	0.06	QP	NEUTRAL
11	0.4588	37.74	-8.97	46.71	27.83	9.85	0.06	Average	NEUTRAL
12	0.4588	44.14	-12.57	56.71	34.23	9.85	0.06	QP	NEUTRAL

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	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	875k	858.321k	858KF1D	872.5k	857.071k
BT-EDR(2Mbps)	1.308M	1.154M	1M15G1D	1.306M	1.149M
BT-EDR(3Mbps)	1.208M	1.127M	1M13G1D	1.203M	1.122M

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	872.5k	858.321k
2440MHz	Pass	Inf	873.75k	858.321k
2480MHz	Pass	Inf	875k	857.071k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.308M	1.149M
2440MHz	Pass	Inf	1.306M	1.152M
2480MHz	Pass	Inf	1.308M	1.154M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.208M	1.127M
2440MHz	Pass	Inf	1.208M	1.122M
2480MHz	Pass	Inf	1.203M	1.126M

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

BT-BR(1Mbps) EBW

2402MHz

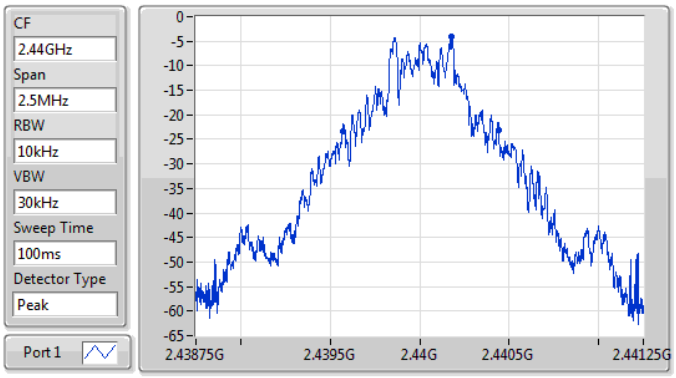
15/06/2019

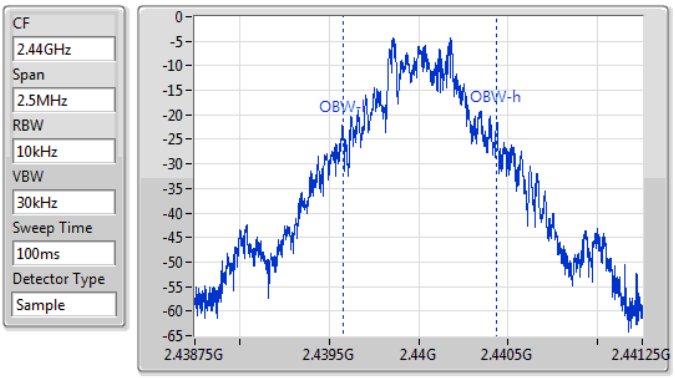
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
872.5k	2.401564G	2.402436G	858.321k	2.401574G	2.402432G	Inf	1

BT-BR(1Mbps) EBW

2440MHz

15/06/2019



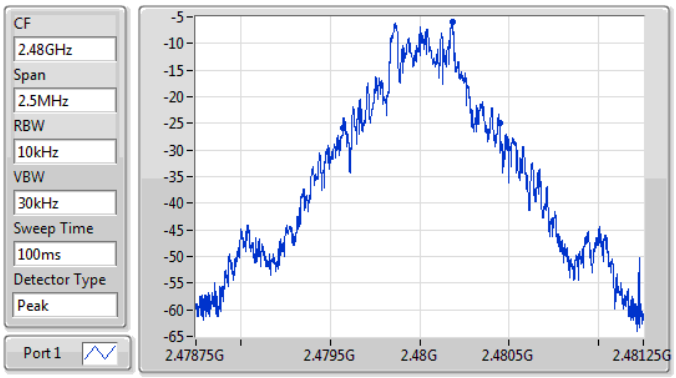


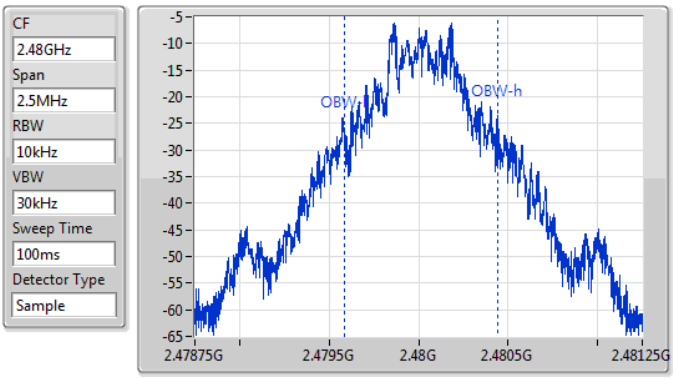
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
873.75k	2.439569G	2.440443G	858.321k	2.439579G	2.440437G	Inf	1

BT-BR(1Mbps) EBW

2480MHz

15/06/2019



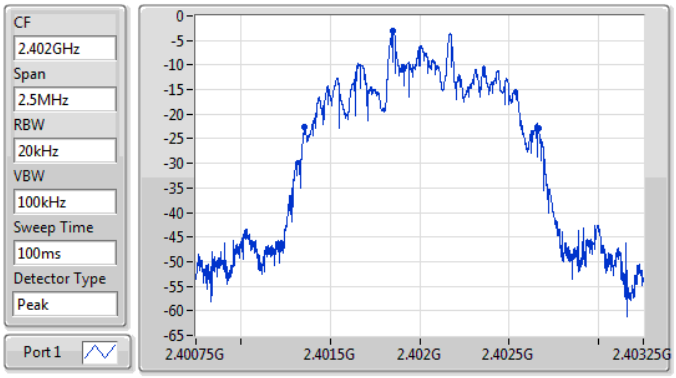


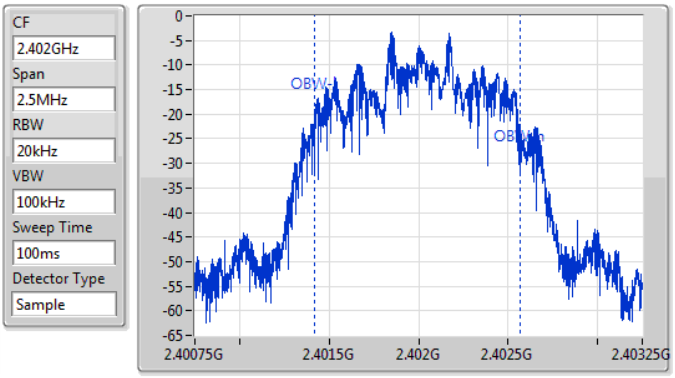
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
875k	2.479571G	2.480446G	857.071k	2.479584G	2.480441G	Inf	1

BT-EDR(2Mbps) EBW

2402MHz

15/06/2019



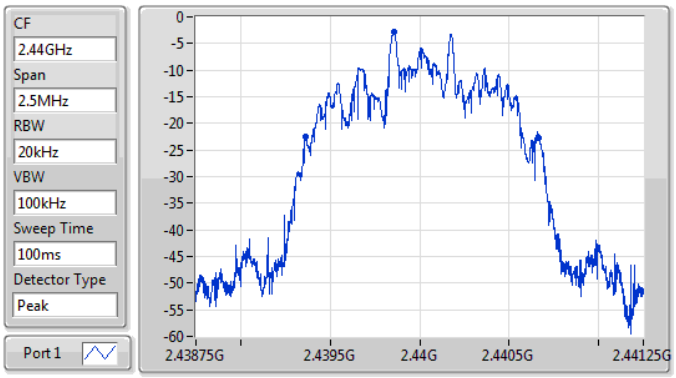


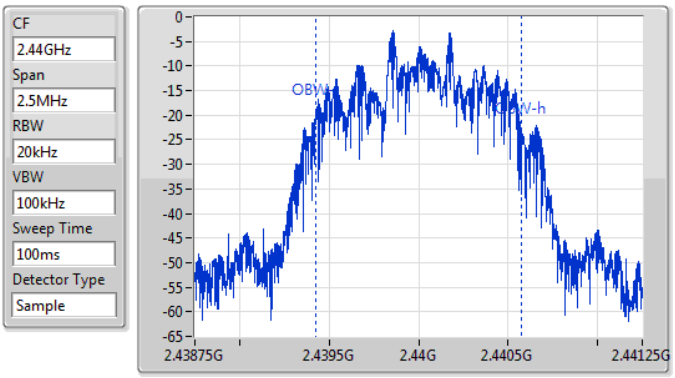
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.308M	2.401356G	2.402664G	1.149M	2.401422G	2.402571G	Inf	1

BT-EDR(2Mbps) EBW

2440MHz

15/06/2019



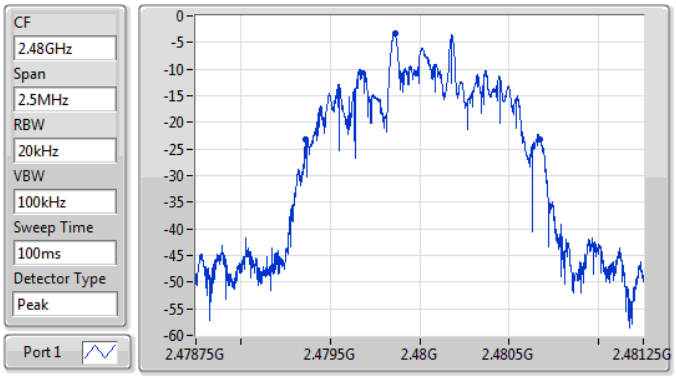


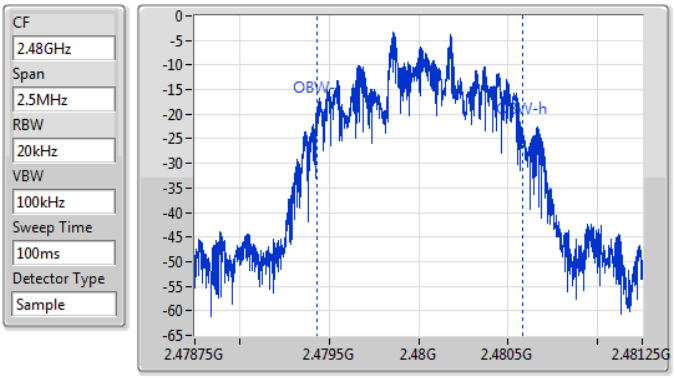
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.306M	2.439361G	2.440668G	1.152M	2.439424G	2.440576G	Inf	1

BT-EDR(2Mbps) EBW

2480MHz

15/06/2019



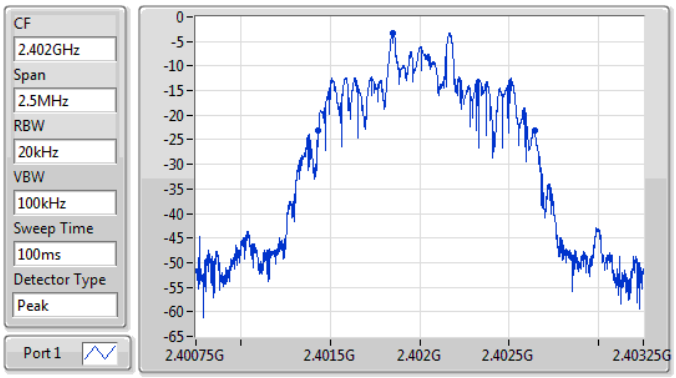


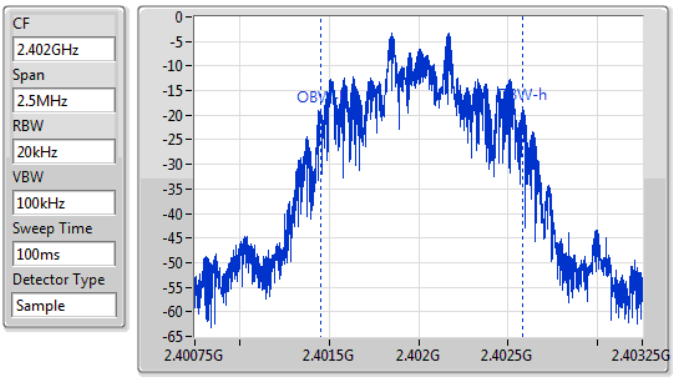
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.308M	2.479365G	2.480673G	1.154M	2.479429G	2.480583G	Inf	1

BT-EDR(3Mbps) EBW

2402MHz

15/06/2019



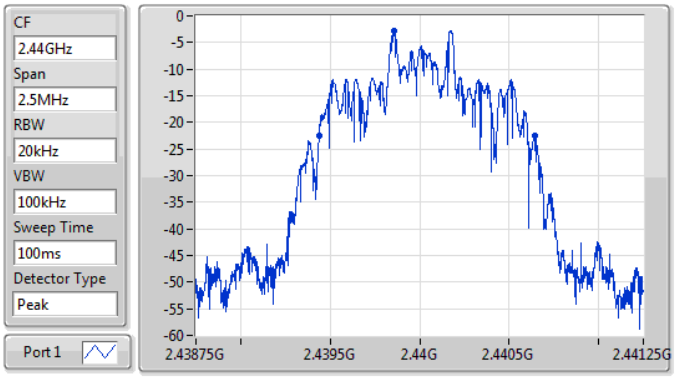


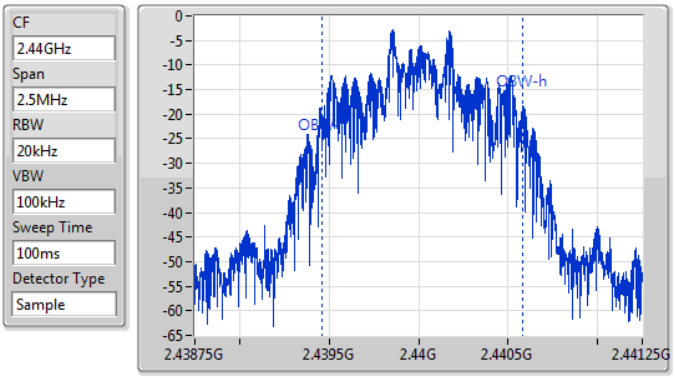
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.208M	2.401434G	2.402641G	1.127M	2.401453G	2.40258G	Inf	1

BT-EDR(3Mbps) EBW

2440MHz

15/06/2019



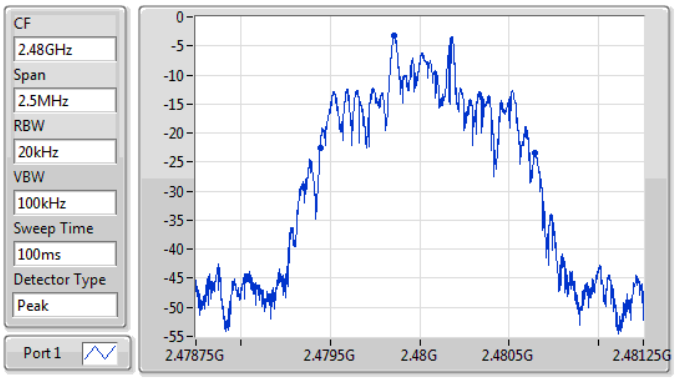


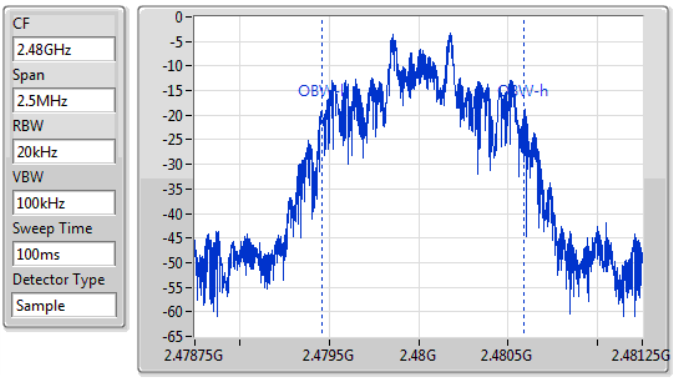
20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.208M	2.439438G	2.440645G	1.122M	2.43946G	2.440582G	Inf	1

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

2480MHz

15/06/2019





20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.203M	2.479444G	2.480646G	1.126M	2.47946G	2.480586G	Inf	1

Summary

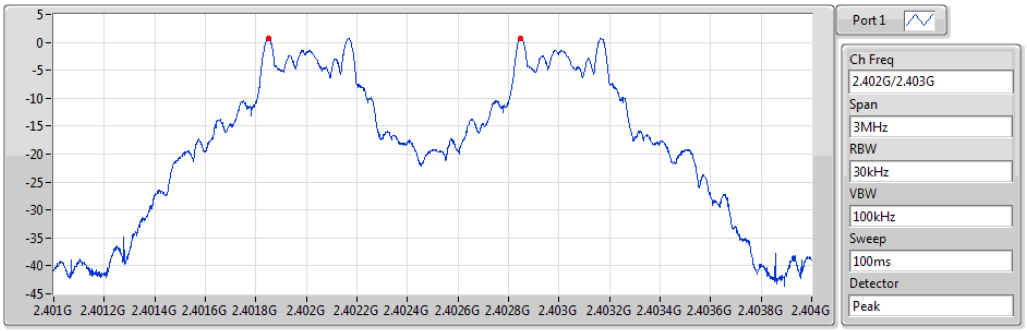
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	997.5k
BT-EDR(2Mbps)	1.0035M	1.002M
BT-EDR(3Mbps)	1.0005M	999k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.401849G	2.40285G	1.0005M	581.085k
2440MHz	Pass	2.439855G	2.440853G	997.5k	581.9175k
2480MHz	Pass	2.478858G	2.47986G	1.002M	582.75k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401849G	2.402851G	1.002M	871.128k
2440MHz	Pass	2.439852G	2.440856G	1.0035M	869.796k
2480MHz	Pass	2.478858G	2.47986G	1.002M	871.128k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.401851G	2.40285G	999k	804.528k
2440MHz	Pass	2.439854G	2.440853G	999k	804.528k
2480MHz	Pass	2.47886G	2.47986G	1.0005M	801.198k

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

2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401849G	2.40285G	1.0005M	581.085k

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

2.44G/2.441GHz

15/06/2019

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439855G	2.440853G	997.5k	581.9175k

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

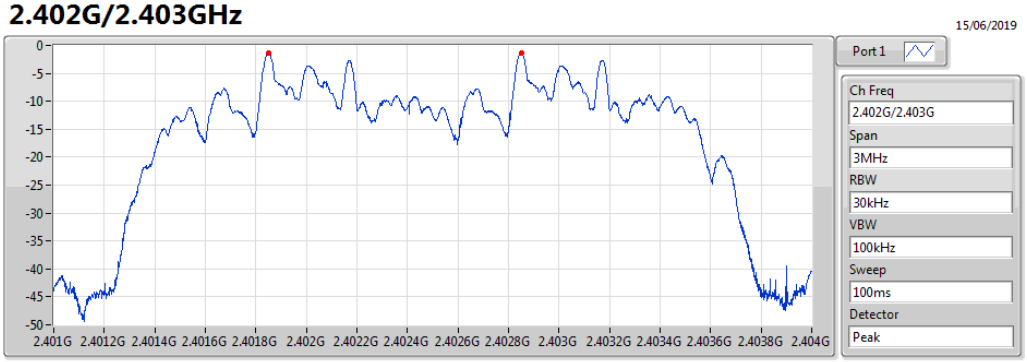
2.48G/2.479GHz

15/06/2019

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478858G	2.47986G	1.002M	582.75k

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

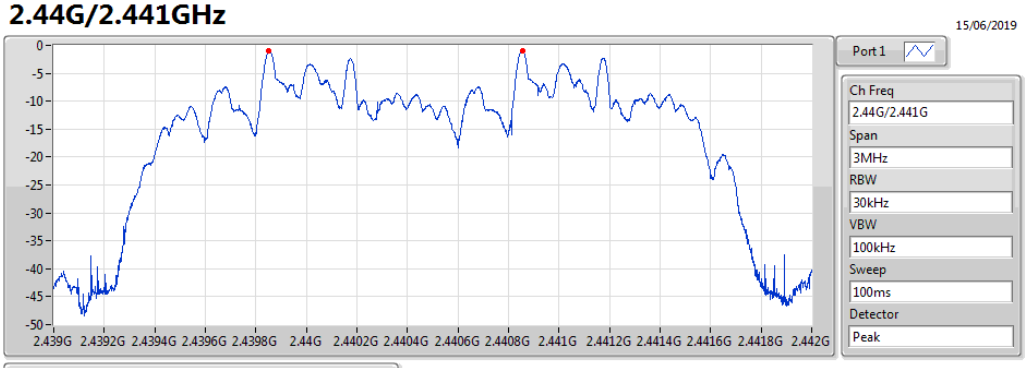
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401849G	2.402851G	1.002M	871.128k

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

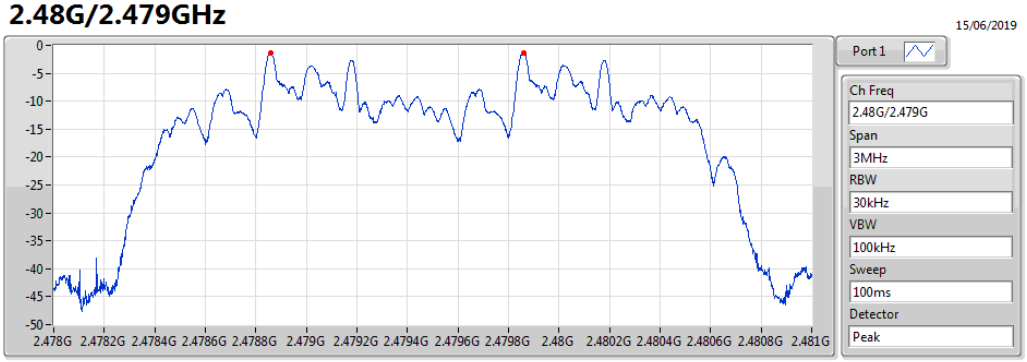
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439852G	2.440856G	1.0035M	869.796k

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

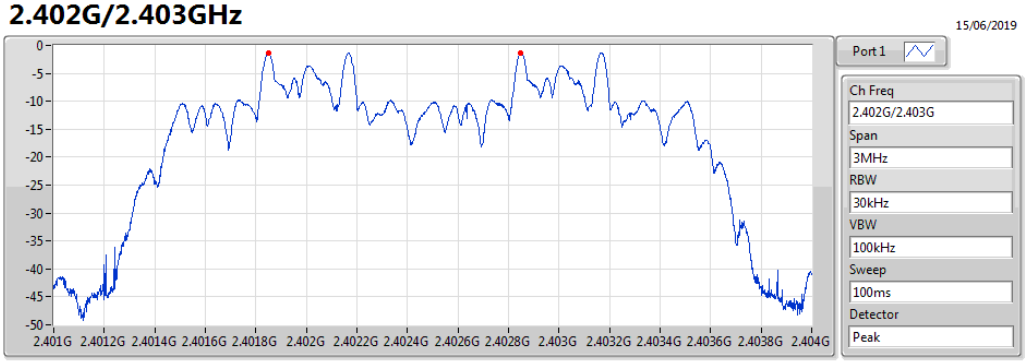
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.478858G	2.47986G	1.002M	871.128k

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

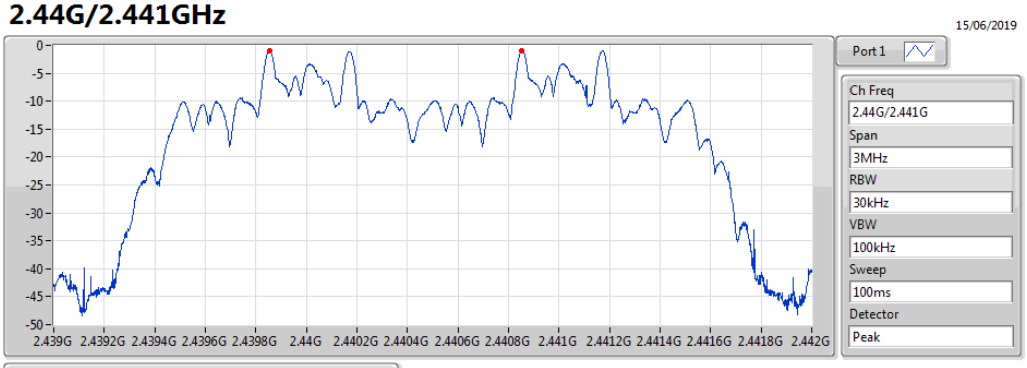
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401851G	2.40285G	999k	804.528k

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

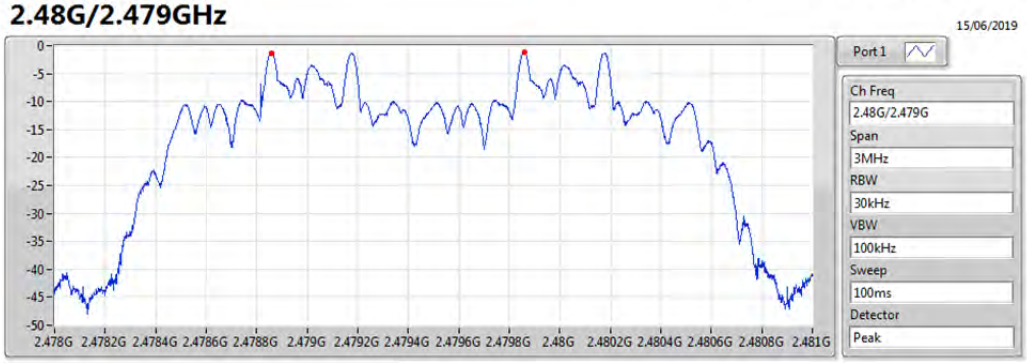
2.44G/2.441GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.439854G	2.440853G	999k	804.528k

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

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.47886G	2.47986G	1.0005M	801.198k

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	2.52	0.00179
BT-EDR(2Mbps)	0.51	0.00112
BT-EDR(3Mbps)	0.48	0.00112

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.60	2.49	21.00
2440MHz	Pass	2.60	2.52	21.00
2480MHz	Pass	2.60	2.26	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.60	0.41	21.00
2440MHz	Pass	2.60	0.13	21.00
2480MHz	Pass	2.60	0.51	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.60	0.36	21.00
2440MHz	Pass	2.60	0.14	21.00
2480MHz	Pass	2.60	0.48	21.00

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

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	2.69	0.00186
BT-EDR(2Mbps)	0.72	0.00118
BT-EDR(3Mbps)	0.71	0.00118

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.60	2.63	21.00
2440MHz	Pass	2.60	2.69	21.00
2480MHz	Pass	2.60	2.41	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.60	0.63	21.00
2440MHz	Pass	2.60	0.36	21.00
2480MHz	Pass	2.60	0.72	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.60	0.61	21.00
2440MHz	Pass	2.60	0.38	21.00
2480MHz	Pass	2.60	0.71	21.00

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

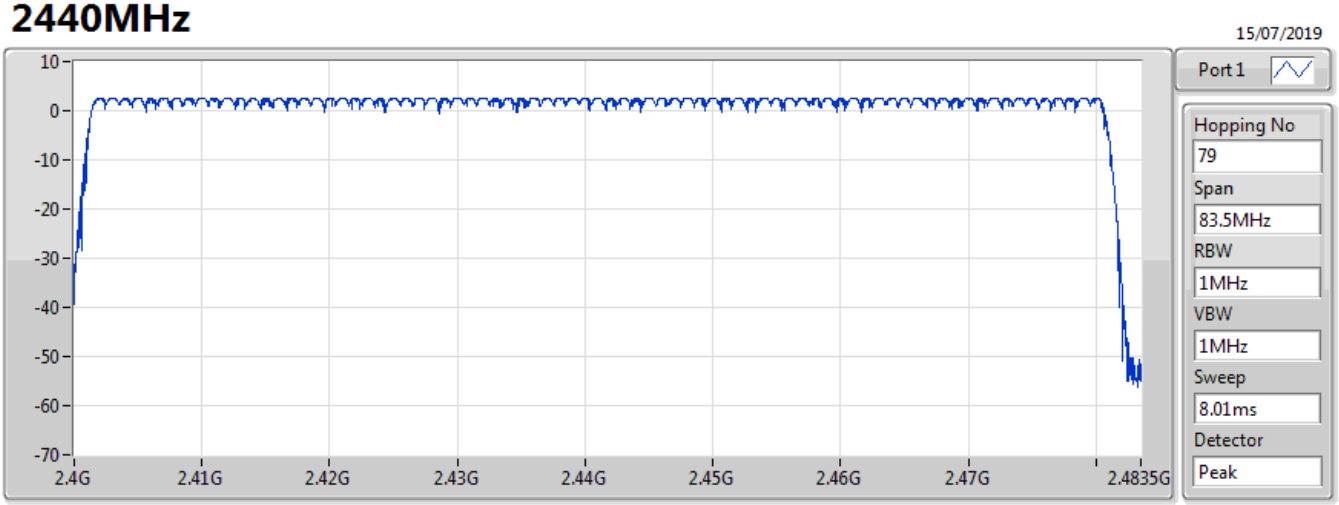
Summary

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

Result

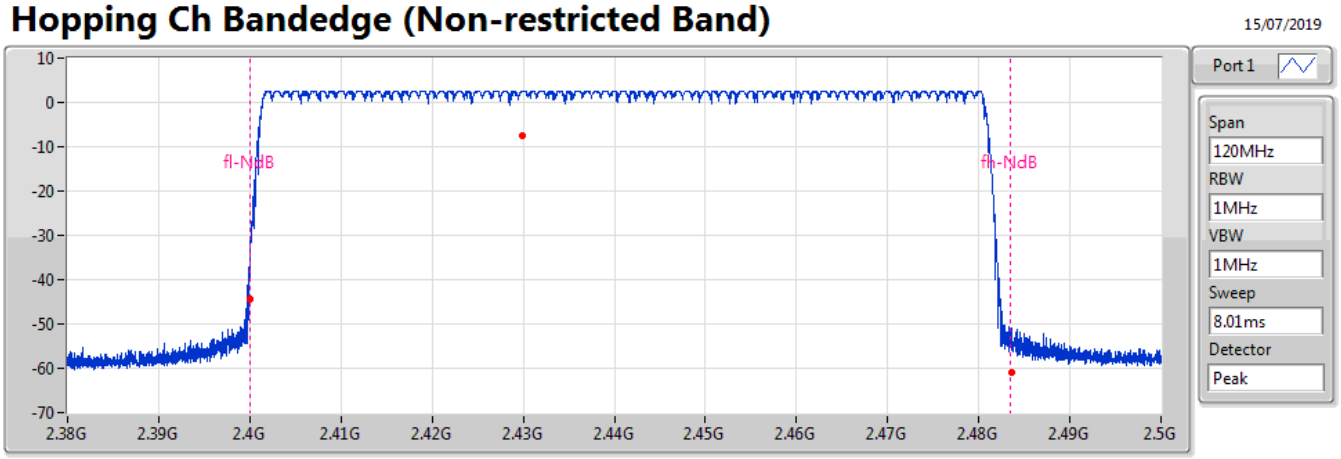
Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2440MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2440MHz	Pass	79	15

BT-BR(1Mbps) Hopping Ch
2440MHz



Hopping No	Limit
79	15

BT-BR(1Mbps)
2440MHz
Hopping Ch Bandedge (Non-restricted Band)



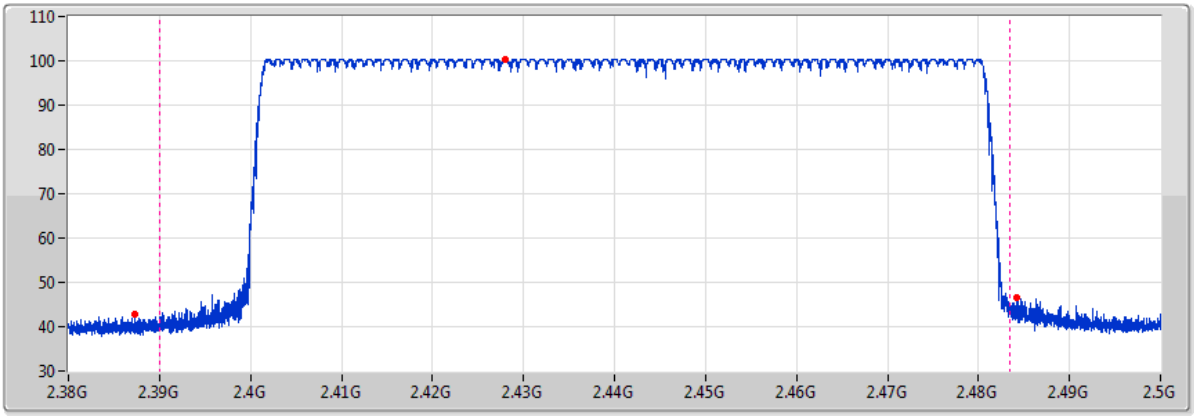
Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-27.48	2.429875G	-7.48	2.399995G	-44.28	2.483575G	-60.96

BT-BR(1Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

15/07/2019



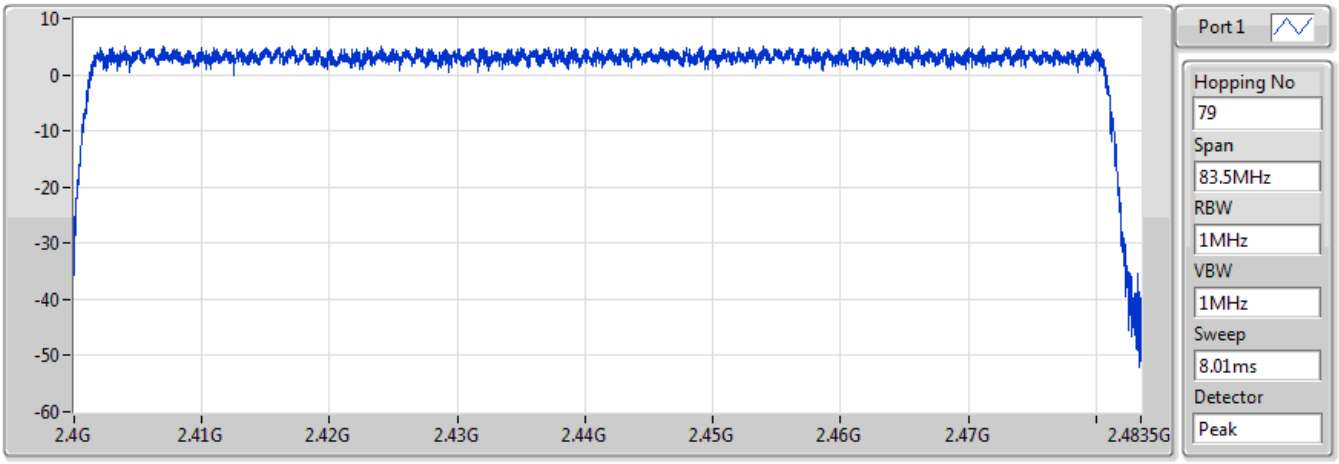
Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.428G	100.33	2.38735G	42.67	12.57	2.484175G	46.5	16.4	74	54	3.125	-30.1

BT-EDR(2Mbps)

Hopping Ch

2440MHz

15/07/2019



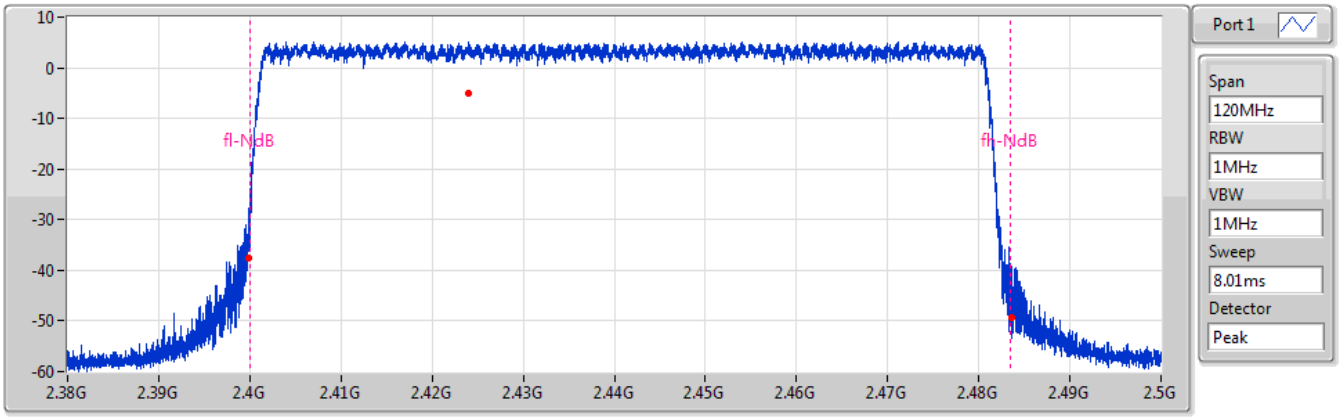
Hopping No	Limit
79	15

BT-EDR(2Mbps)

2440MHz

Hopping Ch Bandedge (Non-restricted Band)

15/07/2019



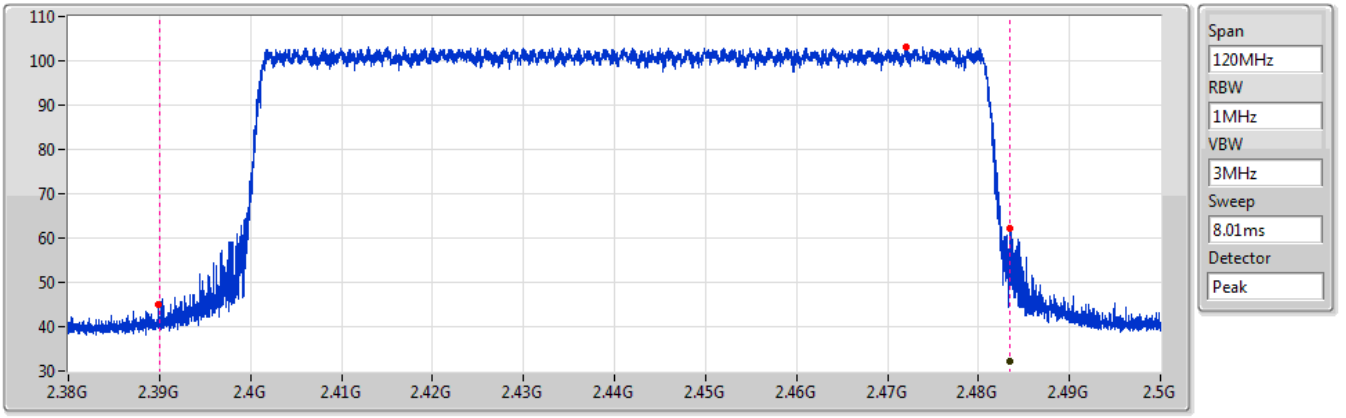
Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-24.98	2.42404G	-4.98	2.399815G	-37.7	2.483665G	-49.21

BT-EDR(2Mbps)

2440MHz

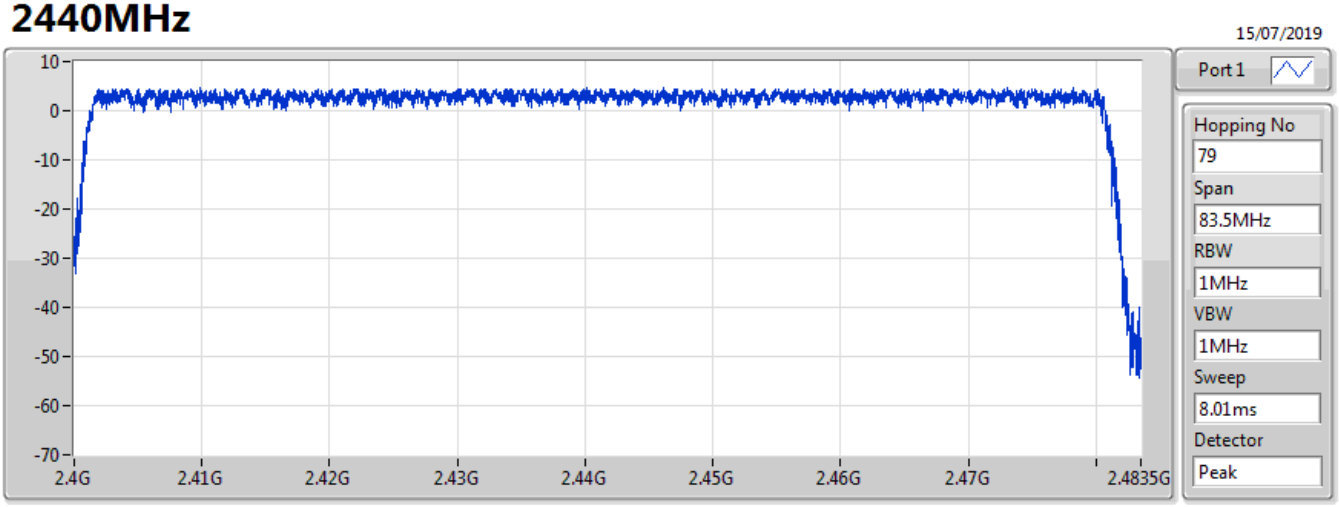
Hopping Ch Bandedge (Restricted Band)

15/07/2019



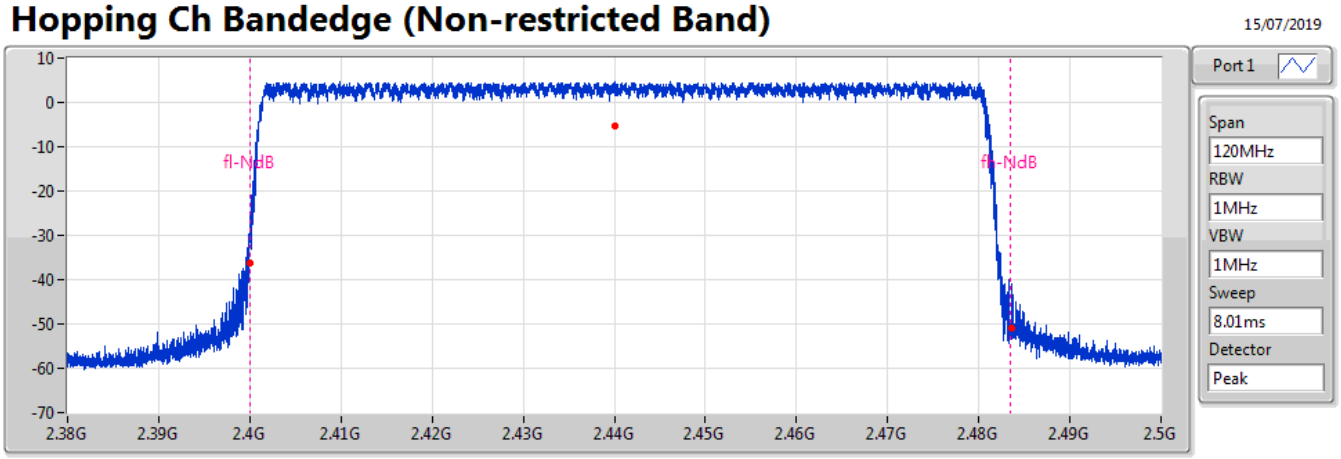
Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.47198G	103.05	2.389825G	44.9	14.8	2.483515G	62.31	32.21	74	54	3.125	-30.1

BT-EDR(3Mbps) Hopping Ch
2440MHz



Hopping No	Limit
79	15

BT-EDR(3Mbps)
2440MHz
Hopping Ch Bandedge (Non-restricted Band)



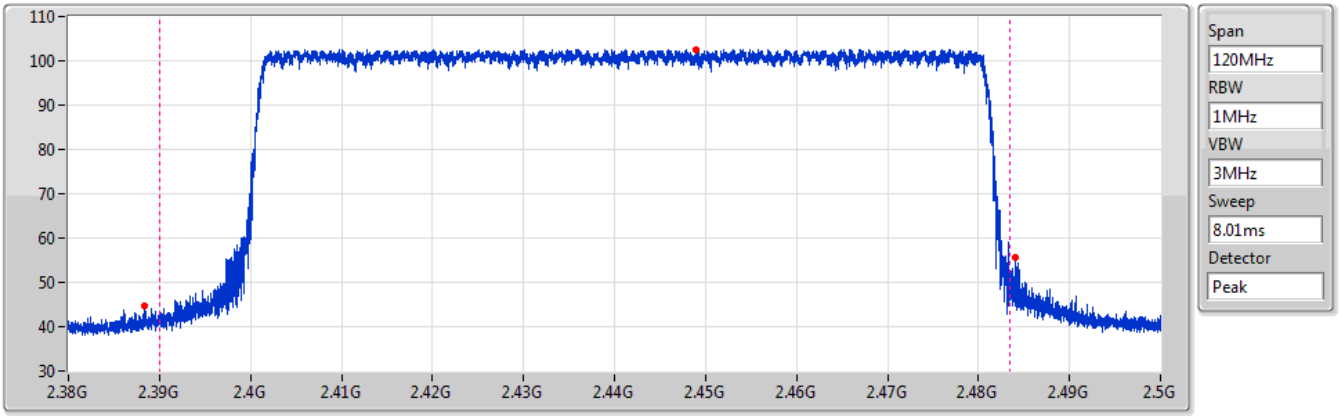
Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-25.43	2.440105G	-5.43	2.399995G	-36.19	2.483605G	-50.97

BT-EDR(3Mbps)

2440MHz

Hopping Ch Bandedge (Restricted Band)

15/07/2019



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)
2.448895G	102.56	2.38828G	44.66	14.56	2.484115G	55.59	25.49	74	54	3.125	-30.1

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	31.8734m
BT-EDR(2Mbps)	24.8378m
BT-EDR(3Mbps)	22.5992m

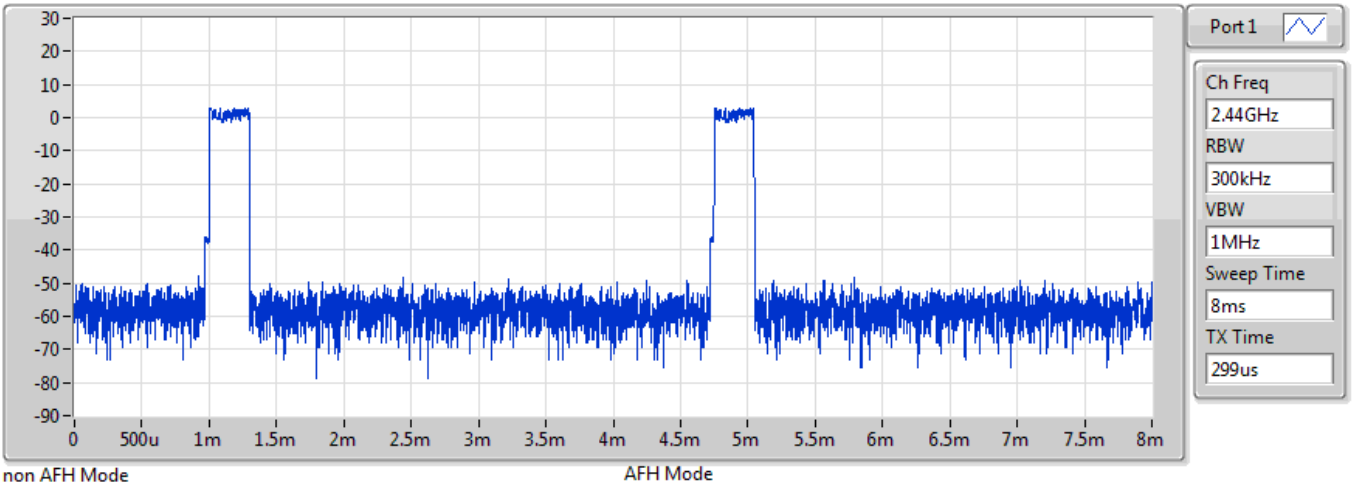
Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	31.8734m	400m	299u
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	24.8378m	400m	233u
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	22.5992m	400m	212u

BT-BR(1Mbps) Dwell

2440MHz

15/06/2019



non AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	31.8734m	400m	299u

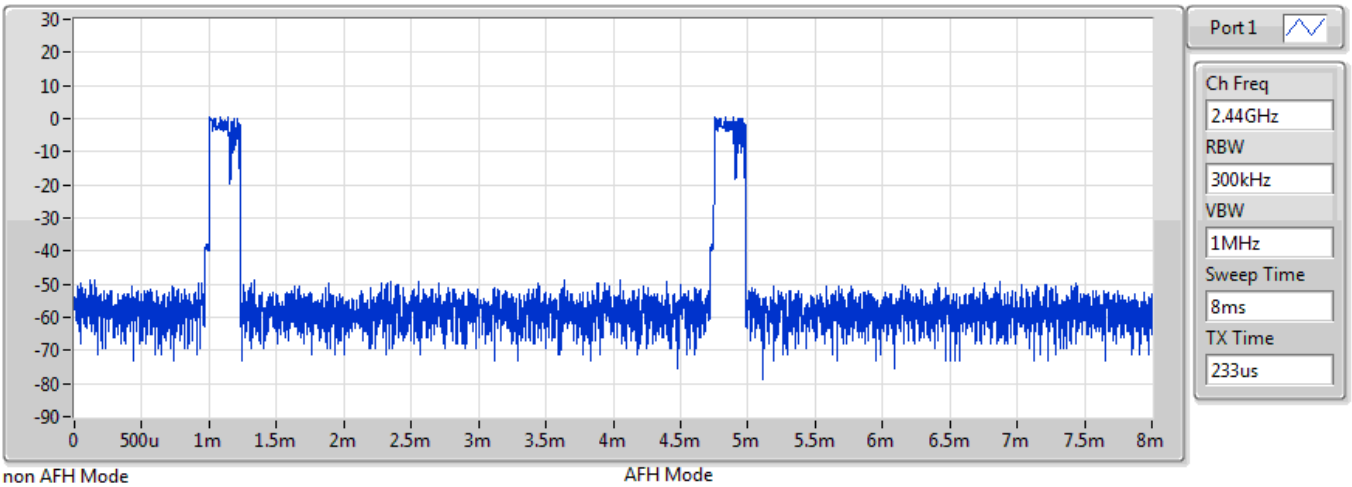
AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
0	15.9367m	400m	299u

BT-EDR(2Mbps) Dwell

2440MHz

15/06/2019



non AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	24.8378m	400m	233u

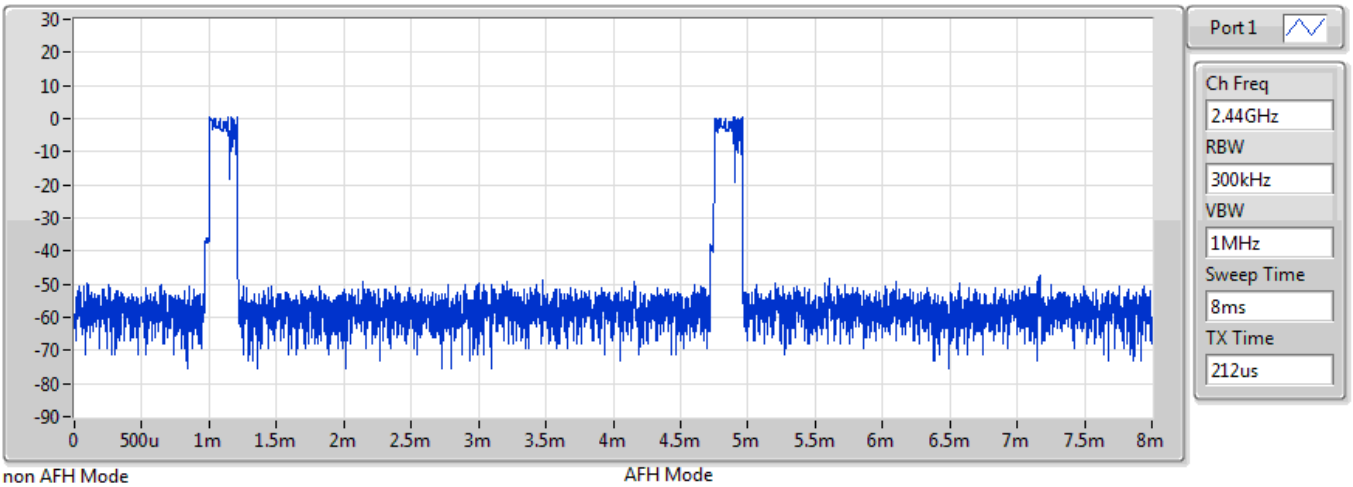
AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
0	12.4189m	400m	233u

BT-EDR(3Mbps) Dwell

2440MHz

15/06/2019



non AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	22.5992m	400m	212u

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
0	11.2996m	400m	212u

Summary

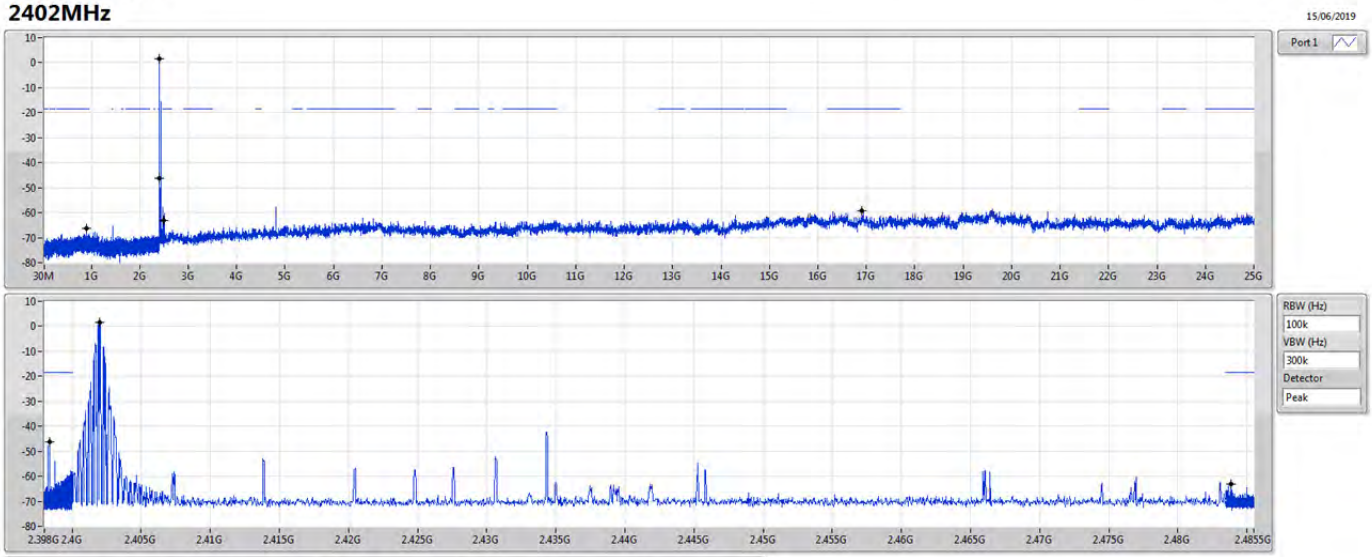
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.48008G	1.01	-18.99	863.24M	-67.78	2.39859G	-55.93	2.48376G	-43.72	17.26064G	-59.63	1
BT-EDR(2Mbps)	Pass	2.40196G	-1.87	-21.87	921.55M	-67.88	2.39938G	-44.02	2.48367G	-65.00	24.90431G	-59.87	1
BT-EDR(3Mbps)	Pass	2.402G	-0.72	-20.72	534.98M	-68.10	2.39961G	-40.71	2.48533G	-65.63	16.29533G	-59.04	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)	Port
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	1.54	-18.46	899.94M	-66.35	2.39838G	-46.13	2.48382G	-63.03	16.90041G	-59.20	1
2440MHz	Pass	2.44021G	2.33	-17.67	816.77M	-68.64	2.39892G	-56.47	2.48427G	-63.21	17.50549G	-59.61	1
2480MHz	Pass	2.48008G	1.01	-18.99	863.24M	-67.78	2.39859G	-55.93	2.48376G	-43.72	17.26064G	-59.63	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	-1.87	-21.87	921.55M	-67.88	2.39938G	-44.02	2.48367G	-65.00	24.90431G	-59.87	1
2440MHz	Pass	2.44G	-1.52	-21.52	2.01113G	-68.44	2.39883G	-55.48	2.48515G	-65.66	16.44449G	-59.66	1
2480MHz	Pass	2.48003G	-0.35	-20.35	728.86M	-67.60	2.39853G	-51.75	2.48381G	-60.13	16.92855G	-59.72	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	-0.72	-20.72	534.98M	-68.10	2.39961G	-40.71	2.48533G	-65.63	16.29533G	-59.04	1
2440MHz	Pass	2.43987G	-1.37	-21.37	2.06352G	-68.36	2.39945G	-45.64	2.48525G	-65.00	24.81707G	-59.73	1
2480MHz	Pass	2.4802G	-0.16	-20.16	842.82M	-67.76	2.39855G	-55.43	2.4841G	-47.94	16.67808G	-60.20	1

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

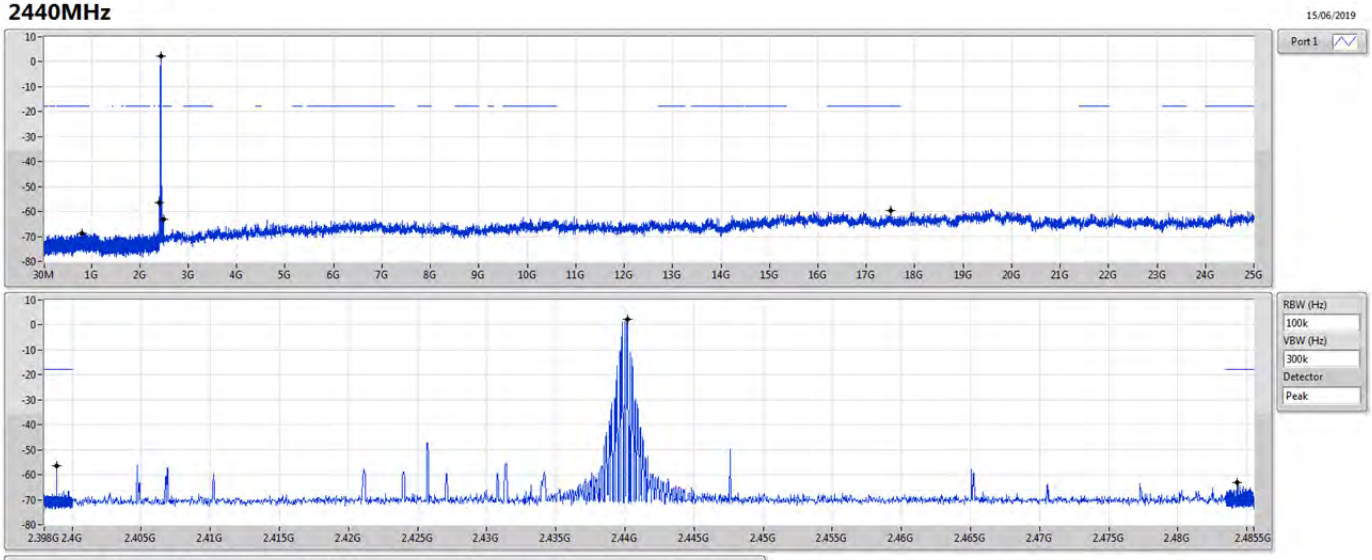
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	1.54	-18.46	899.94M	-66.35	2.39838G	-46.13	2.48382G	-63.03	16.90041G	-59.20	1

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

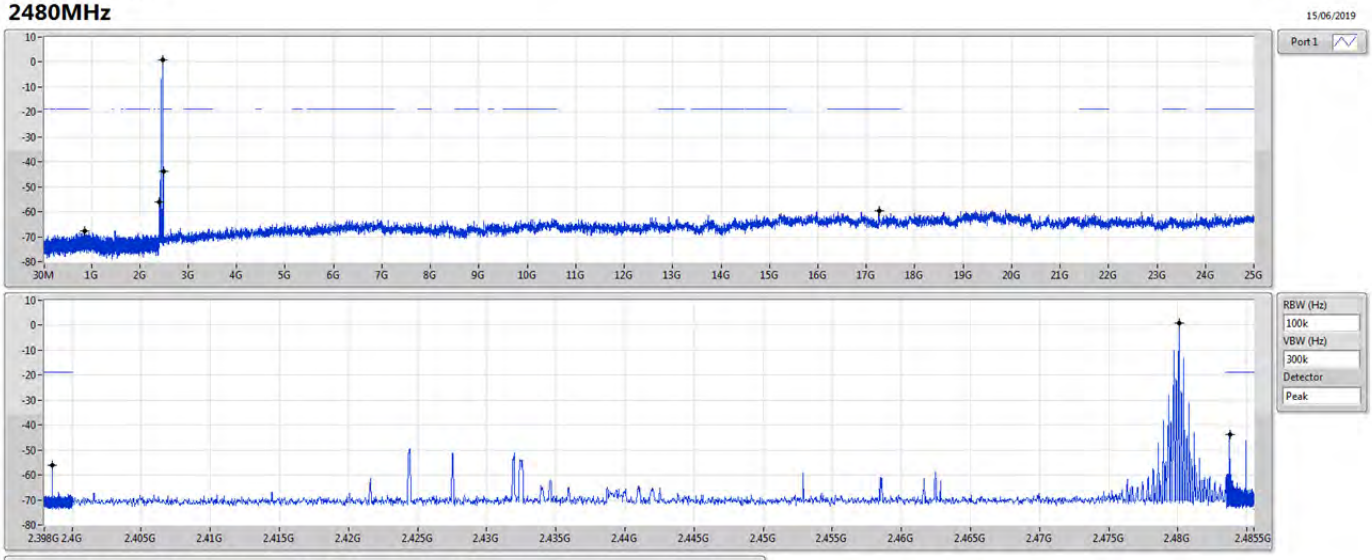
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44021G	2.33	-17.67	816.77M	-68.64	2.39892G	-56.47	2.48427G	-63.21	17.50549G	-59.61	1

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

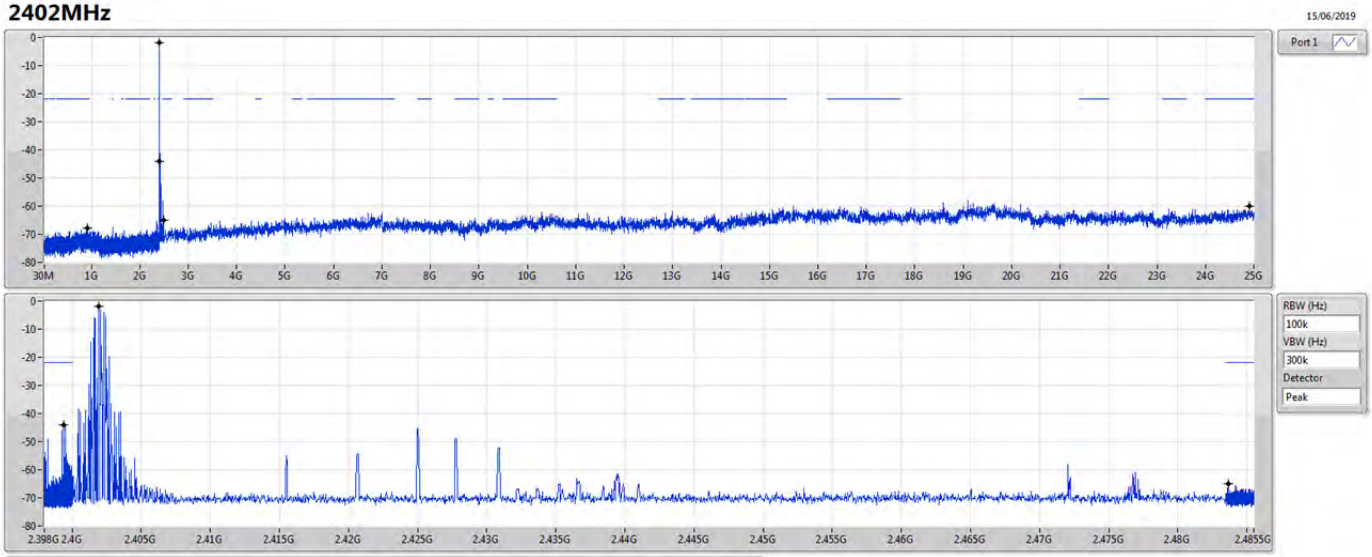
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48008G	1.01	-18.99	863.24M	-67.78	2.39859G	-55.93	2.48376G	-43.72	17.26064G	-59.63	1

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

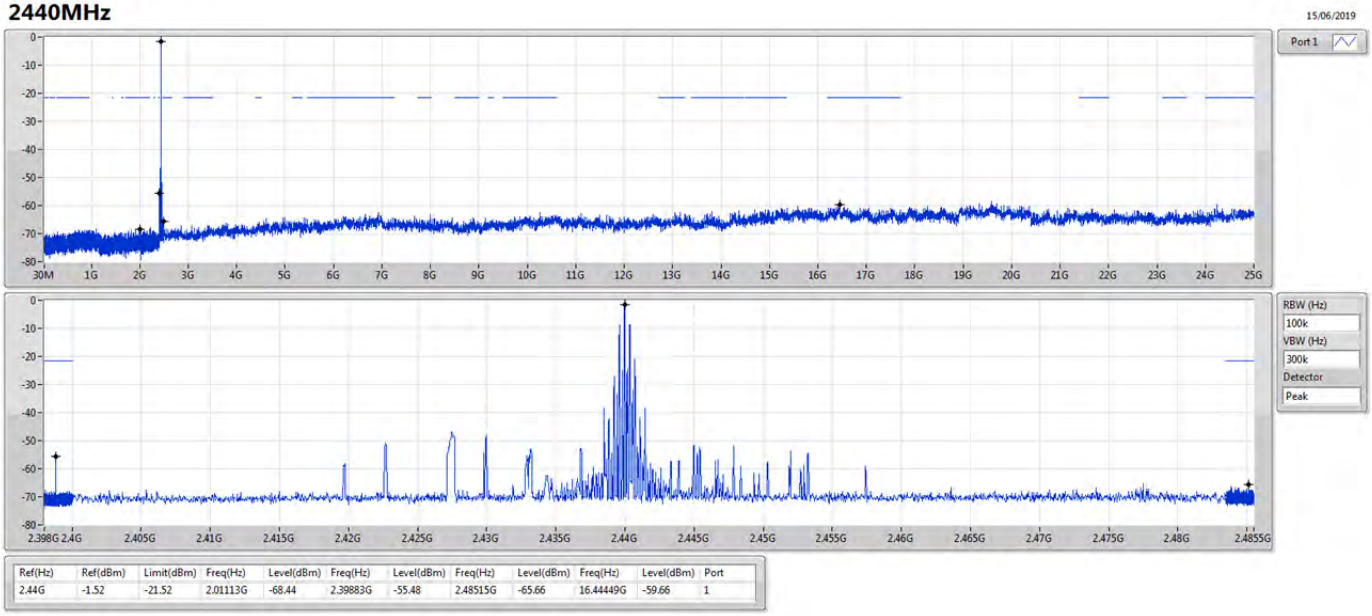
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40196G	-1.87	-21.87	921.55M	-67.88	2.39938G	-44.02	2.48367G	-65.00	24.90431G	-59.87	1

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

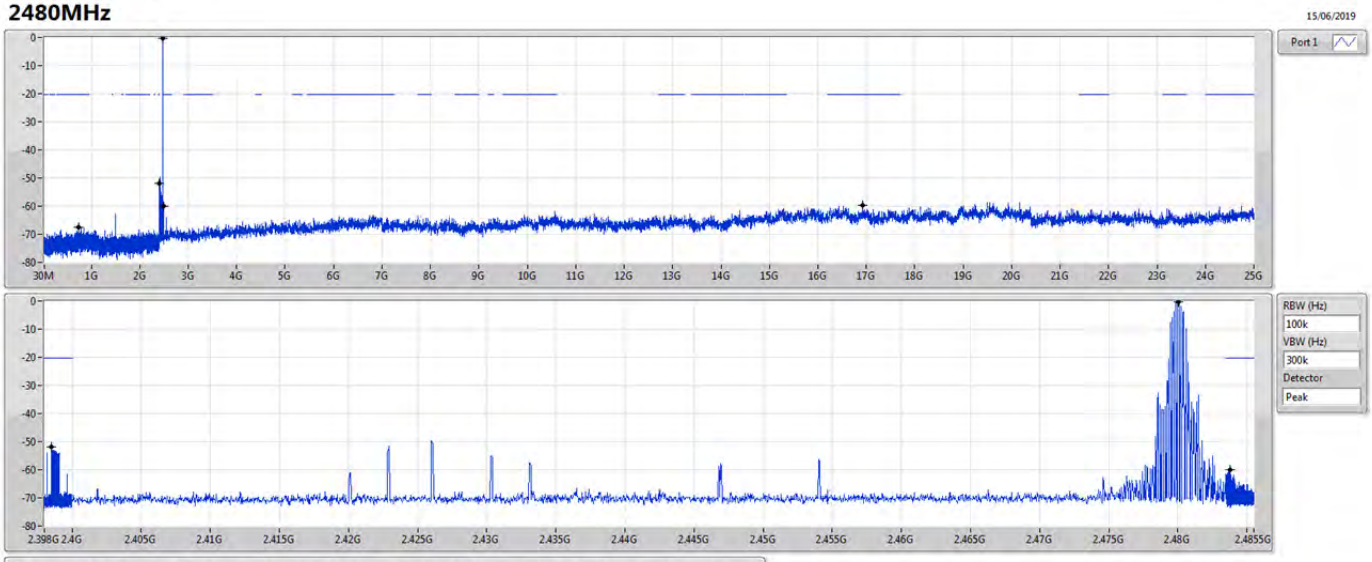
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44G	-1.52	-21.52	2.01113G	-68.44	2.39883G	-55.48	2.48515G	-65.66	16.44449G	-59.66	1

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

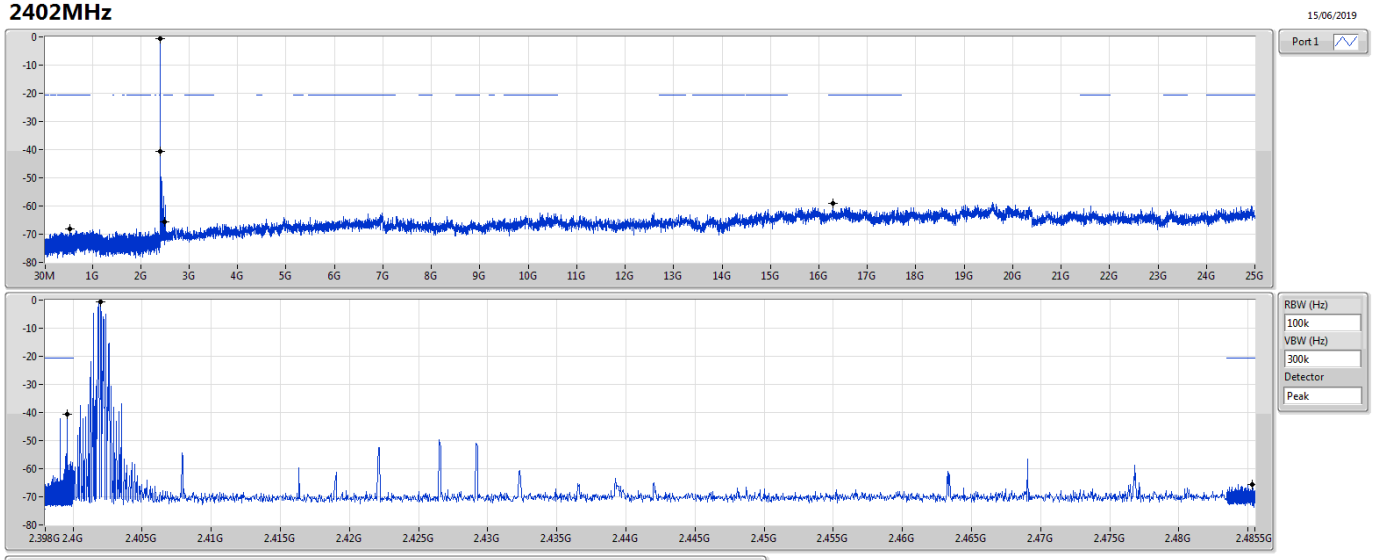
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48003G	-0.35	-20.35	728.86M	-67.60	2.39853G	-51.75	2.48381G	-60.13	16.92855G	-59.72	1

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

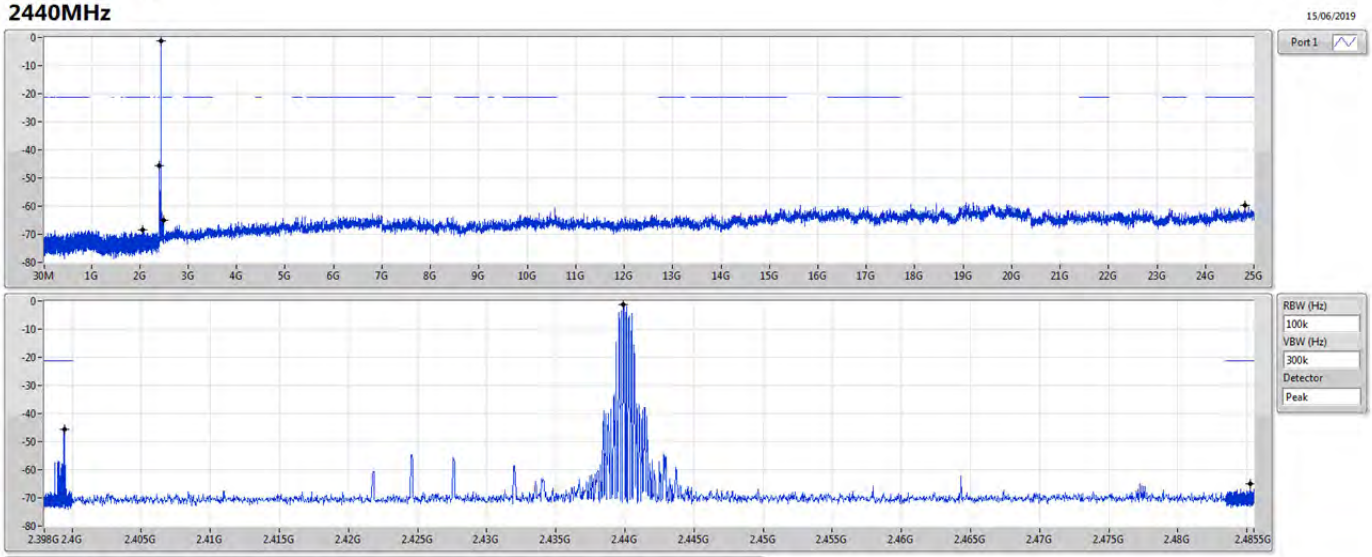
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	-0.72	-20.72	534.98M	-68.10	2.39961G	-40.71	2.48533G	-65.63	16.29533G	-59.04	1

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

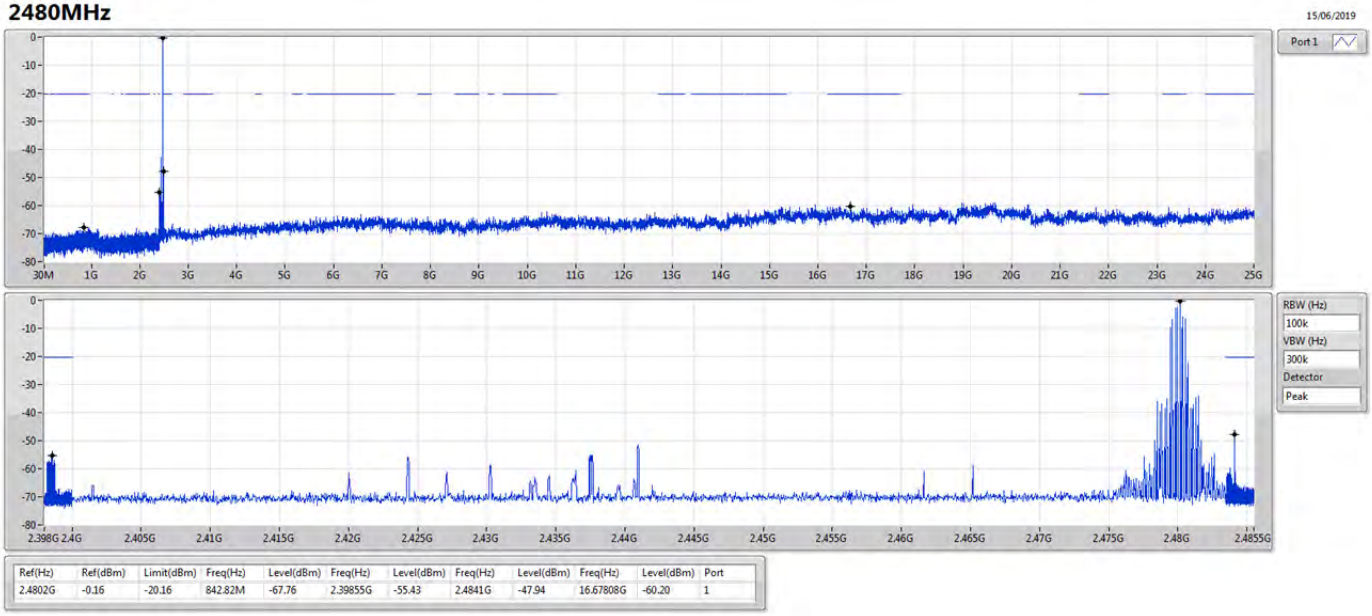
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43987G	-1.37	-21.37	2.06352G	-68.36	2.39945G	-45.64	2.48525G	-65.00	24.81707G	-59.73	1

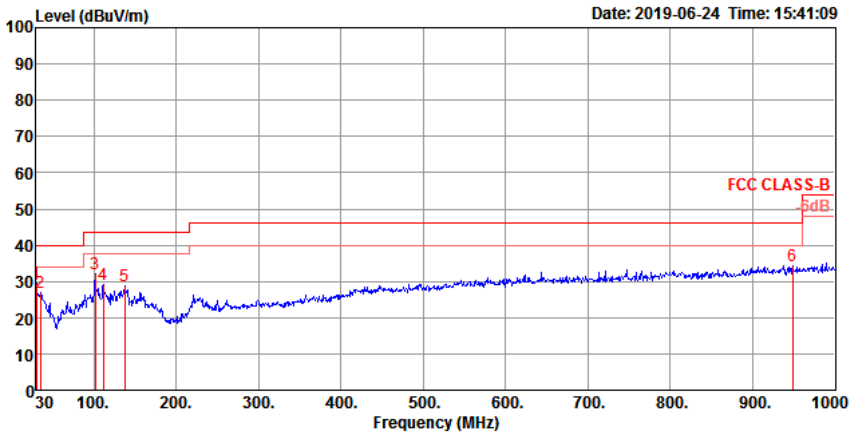
BT-EDR(3Mbps) **CSE NdB**

2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4802G	-0.16	-20.16	842.82M	-67.76	2.39855G	-55.43	2.4841G	-47.94	16.67808G	-60.20	1

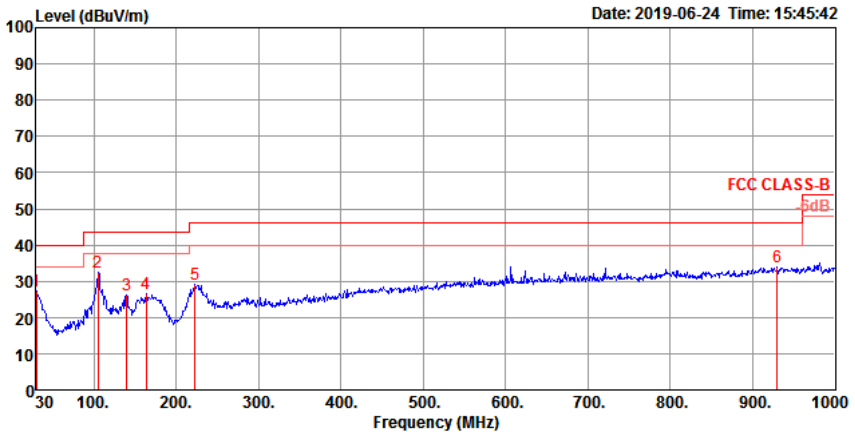
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	CTX		



	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	30.00	29.51	40.00	-10.49	37.11	0.49	24.10	32.19	300	360	Peak	VERTICAL
2	34.85	27.10	40.00	-12.90	37.44	0.57	21.30	32.21	125	151	Peak	VERTICAL
3	101.78	32.06	43.50	-11.44	45.94	1.07	17.11	32.06	100	265	Peak	VERTICAL
4	111.48	29.00	43.50	-14.50	42.07	1.10	17.92	32.09	100	240	Peak	VERTICAL
5	137.67	28.62	43.50	-14.88	42.25	1.21	17.31	32.15	100	308	Peak	VERTICAL
6	948.59	34.31	46.00	-11.69	35.05	3.31	26.69	30.74	300	70	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	30.00	27.47	40.00	-12.53	35.07	0.49	24.10	32.19	100	53	Peak	HORIZONTAL
2	104.69	32.61	43.50	-10.89	46.27	1.07	17.34	32.07	300	303	Peak	HORIZONTAL
3	139.61	26.14	43.50	-17.36	39.97	1.22	17.10	32.15	150	303	Peak	HORIZONTAL
4	163.86	26.65	43.50	-16.85	41.52	1.31	15.91	32.09	125	260	Peak	HORIZONTAL
5	223.03	29.00	46.00	-17.00	43.90	1.55	15.53	31.98	150	173	Peak	HORIZONTAL
6	930.16	33.87	46.00	-12.13	34.99	3.22	26.60	30.94	100	297	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.)

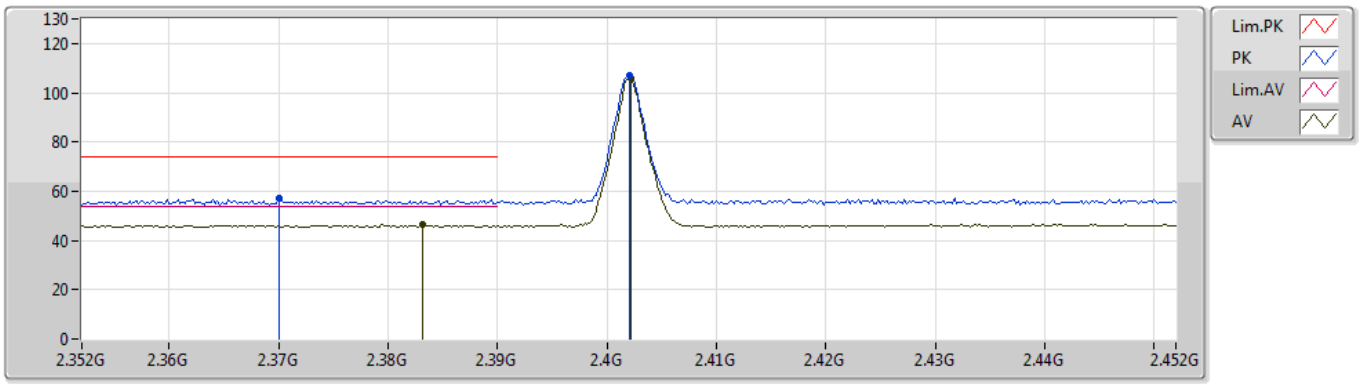
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	AV	2.4835G	50.91	54.00	-3.09	32.41	3	Vertical	5	1.24	-

BT-BR(1Mbps)

2402MHz_TX

14/06/2019



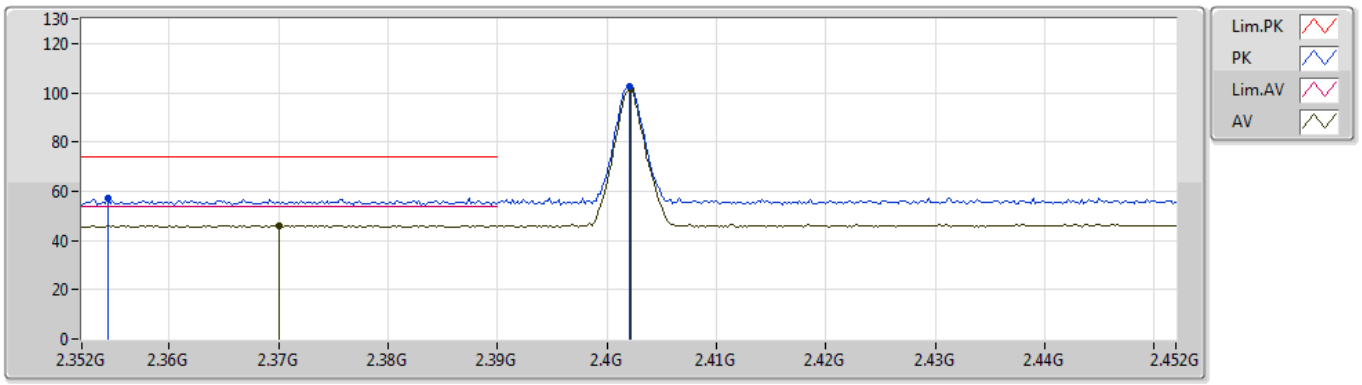
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.37G	57.04	74.00	-16.96	32.00	3	Vertical	15	1.06	-
AV	2.3832G	46.42	54.00	-7.58	32.04	3	Vertical	15	1.06	-
PK	2.402G	106.97	Inf	-Inf	32.10	3	Vertical	15	1.06	-
AV	2.4022G	105.89	Inf	-Inf	32.10	3	Vertical	15	1.06	-

BT-BR(1Mbps)

2402MHz_TX

14/06/2019



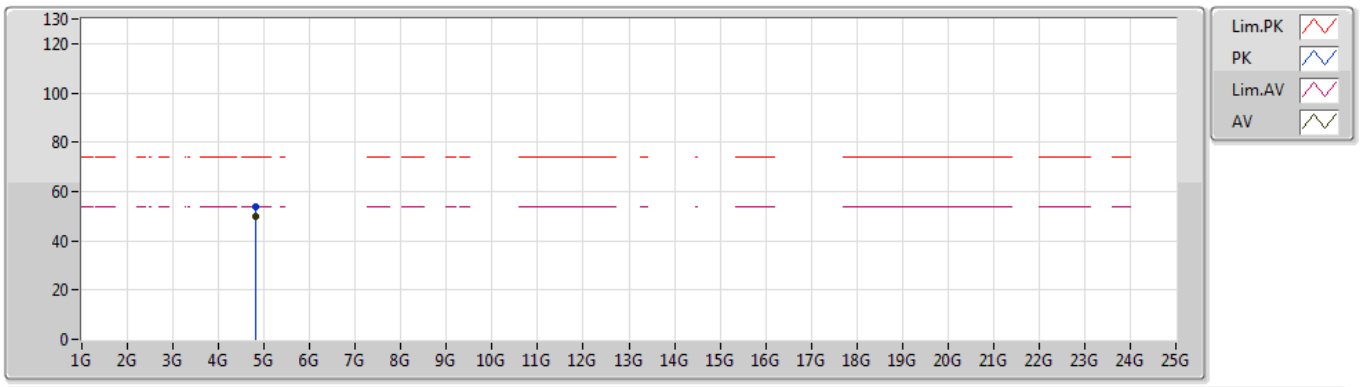
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3544G	57.11	74.00	-16.89	31.96	3	Horizontal	211	1.01	-
AV	2.37G	46.17	54.00	-7.83	32.00	3	Horizontal	211	1.01	-
PK	2.402G	102.43	Inf	-Inf	32.10	3	Horizontal	211	1.01	-
AV	2.4022G	101.65	Inf	-Inf	32.10	3	Horizontal	211	1.01	-

BT-BR(1Mbps)

2402MHz_TX

14/06/2019



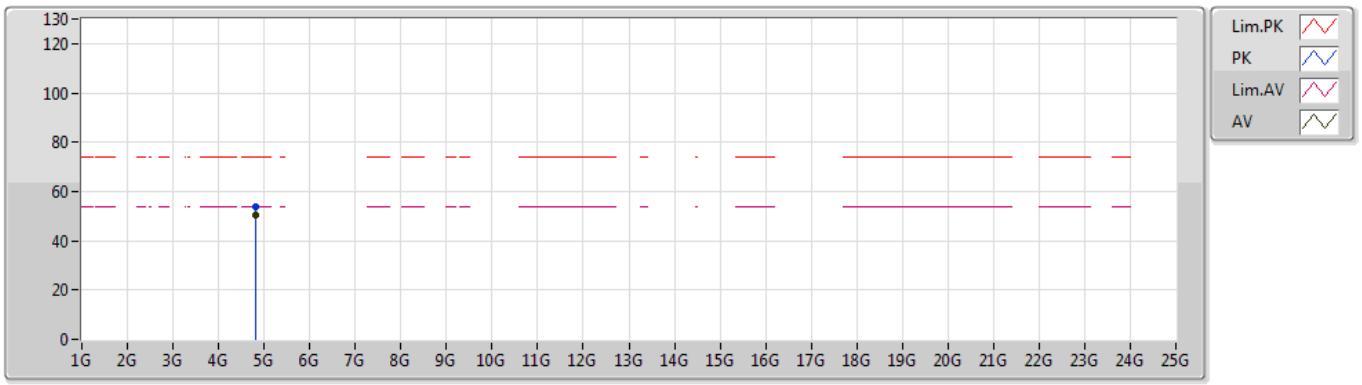
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.80429G	53.84	74.00	-20.16	5.06	3	Vertical	98	1.16	-
AV	4.80372G	49.75	54.00	-4.25	5.06	3	Vertical	98	1.16	-

BT-BR(1Mbps)

2402MHz_TX

14/06/2019



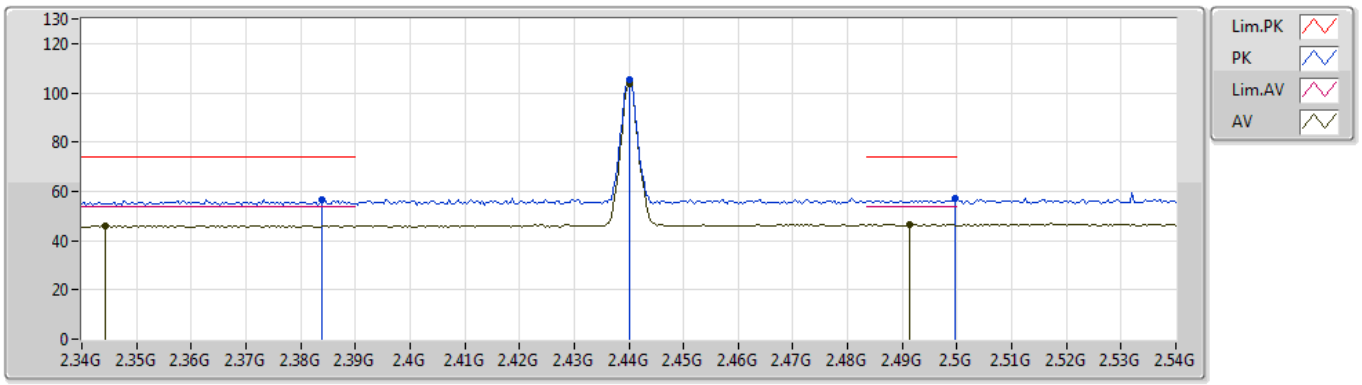
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.80413G	53.96	74.00	-20.04	5.06	3	Horizontal	178	2.99	-
AV	4.80375G	50.48	54.00	-3.52	5.06	3	Horizontal	178	2.99	-

BT-BR(1Mbps)

2440MHz_TX

14/06/2019



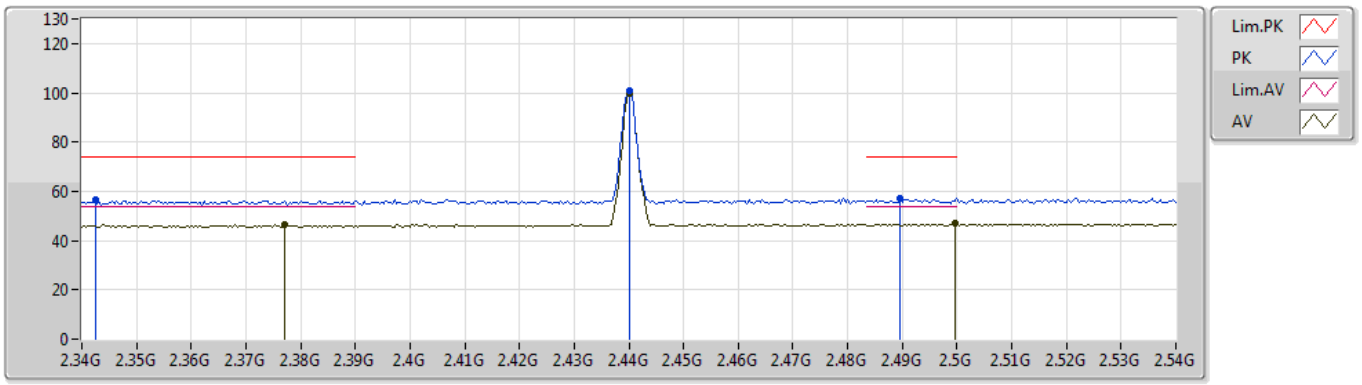
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.384G	56.71	74.00	-17.29	32.05	3	Vertical	4	1.43	-
AV	2.3444G	46.21	54.00	-7.79	31.93	3	Vertical	4	1.43	-
PK	2.44G	105.12	Inf	-Inf	32.24	3	Vertical	4	1.43	-
AV	2.44G	103.82	Inf	-Inf	32.24	3	Vertical	4	1.43	-
PK	2.4996G	57.06	74.00	-16.94	32.47	3	Vertical	4	1.43	-
AV	2.4912G	46.66	54.00	-7.34	32.43	3	Vertical	4	1.43	-

BT-BR(1Mbps)

2440MHz_TX

14/06/2019



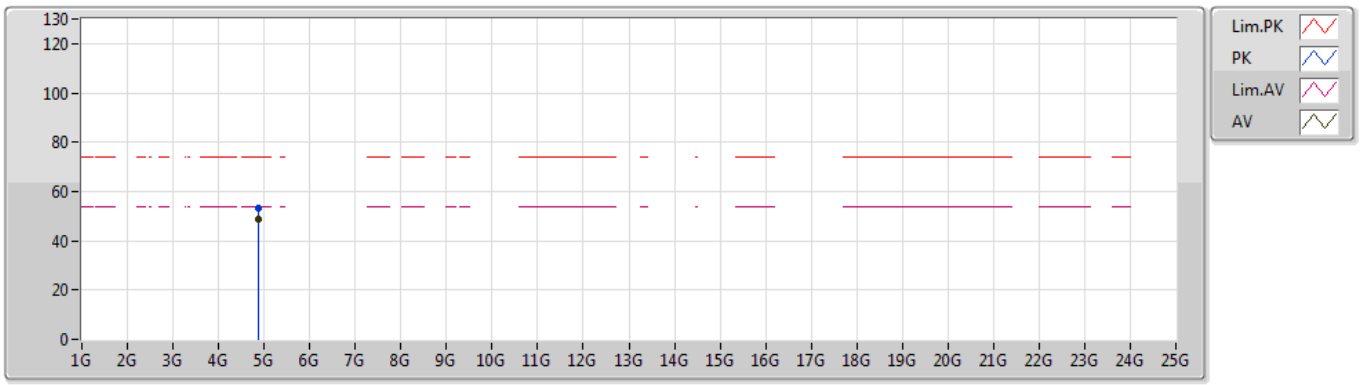
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3424G	56.51	74.00	-17.49	31.92	3	Horizontal	210	1.19	-
AV	2.3772G	46.37	54.00	-7.63	32.02	3	Horizontal	210	1.19	-
PK	2.44G	100.60	Inf	-Inf	32.24	3	Horizontal	210	1.19	-
AV	2.44G	99.54	Inf	-Inf	32.24	3	Horizontal	210	1.19	-
PK	2.4896G	57.00	74.00	-17.00	32.43	3	Horizontal	210	1.19	-
AV	2.4996G	46.95	54.00	-7.05	32.47	3	Horizontal	210	1.19	-

BT-BR(1Mbps)

2440MHz_TX

14/06/2019



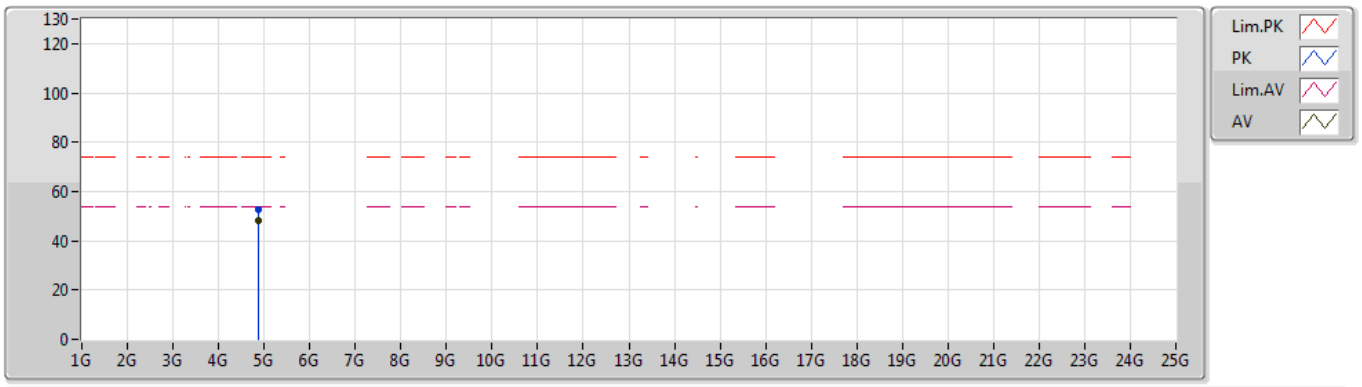
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.88015G	53.18	74.00	-20.82	5.25	3	Vertical	107	1.06	-
AV	4.87972G	48.78	54.00	-5.22	5.25	3	Vertical	107	1.06	-

BT-BR(1Mbps)

2440MHz_TX

14/06/2019



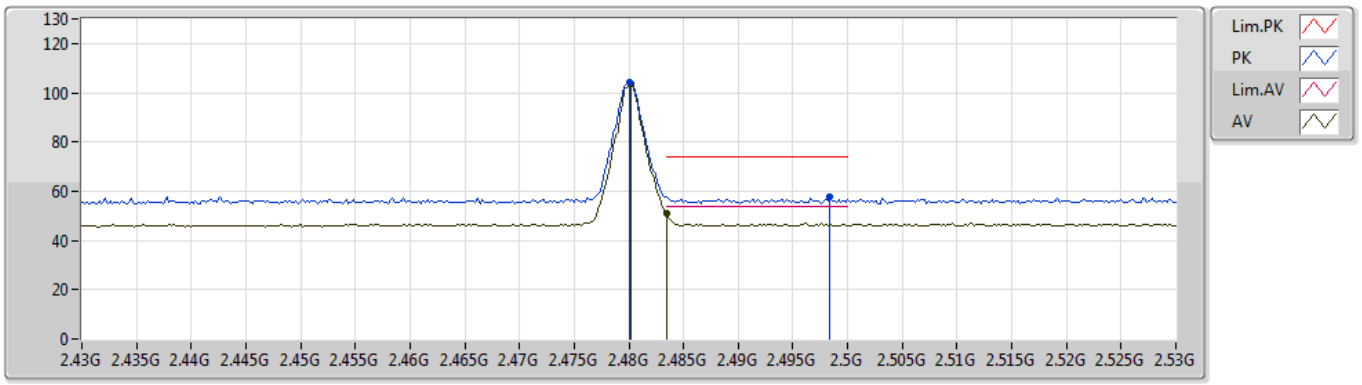
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.88017G	52.63	74.00	-21.37	5.25	3	Horizontal	176	2.88	-
AV	4.87975G	48.36	54.00	-5.64	5.25	3	Horizontal	176	2.88	-

BT-BR(1Mbps)

2480MHz_TX

14/06/2019



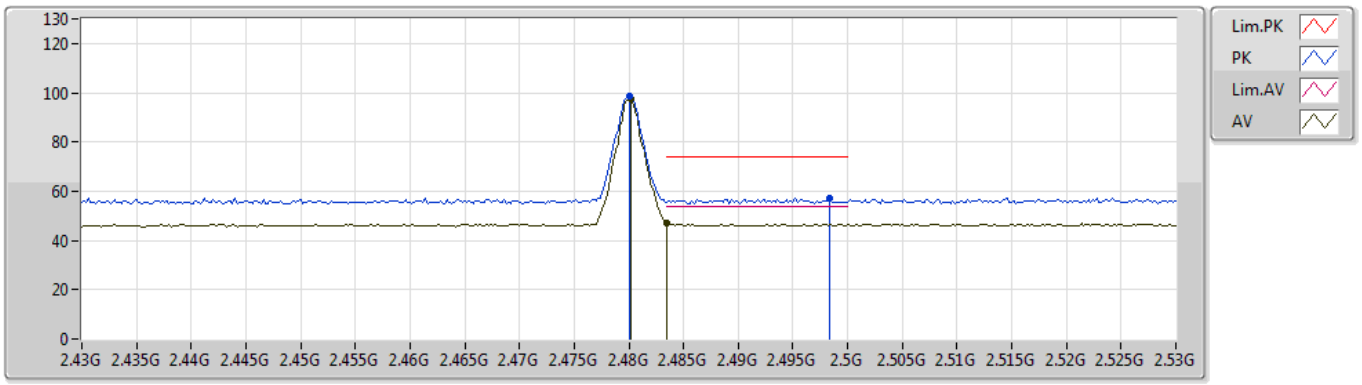
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.48G	104.33	Inf	-Inf	32.39	3	Vertical	5	1.24	-
AV	2.4802G	103.46	Inf	-Inf	32.39	3	Vertical	5	1.24	-
PK	2.4984G	57.86	74.00	-16.14	32.47	3	Vertical	5	1.24	-
AV	2.4835G	50.91	54.00	-3.09	32.41	3	Vertical	5	1.24	-

BT-BR(1Mbps)

2480MHz_TX

14/06/2019



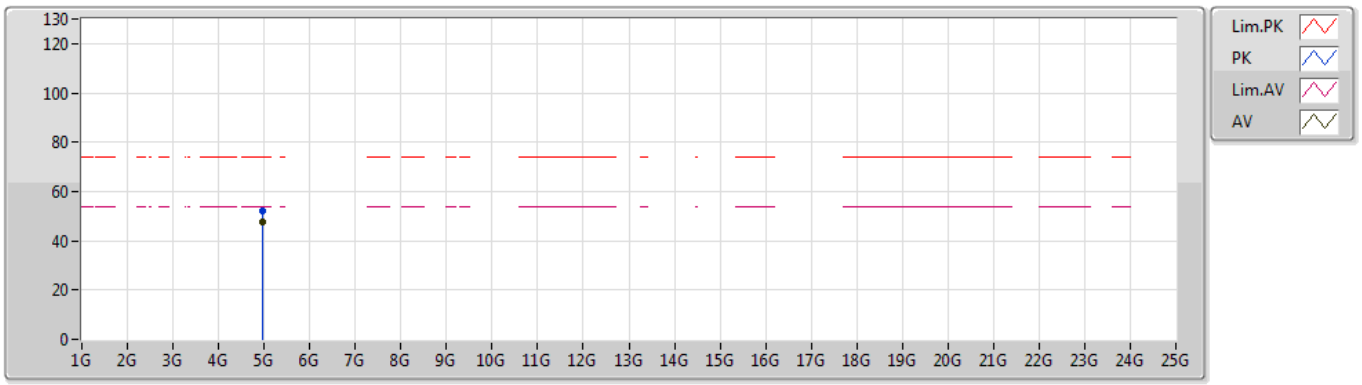
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.48G	98.48	Inf	-Inf	32.39	3	Horizontal	167	1.18	-
AV	2.4802G	97.36	Inf	-Inf	32.39	3	Horizontal	167	1.18	-
PK	2.4984G	57.04	74.00	-16.96	32.47	3	Horizontal	167	1.18	-
AV	2.4835G	46.98	54.00	-7.02	32.41	3	Horizontal	167	1.18	-

BT-BR(1Mbps)

2480MHz_TX

14/06/2019



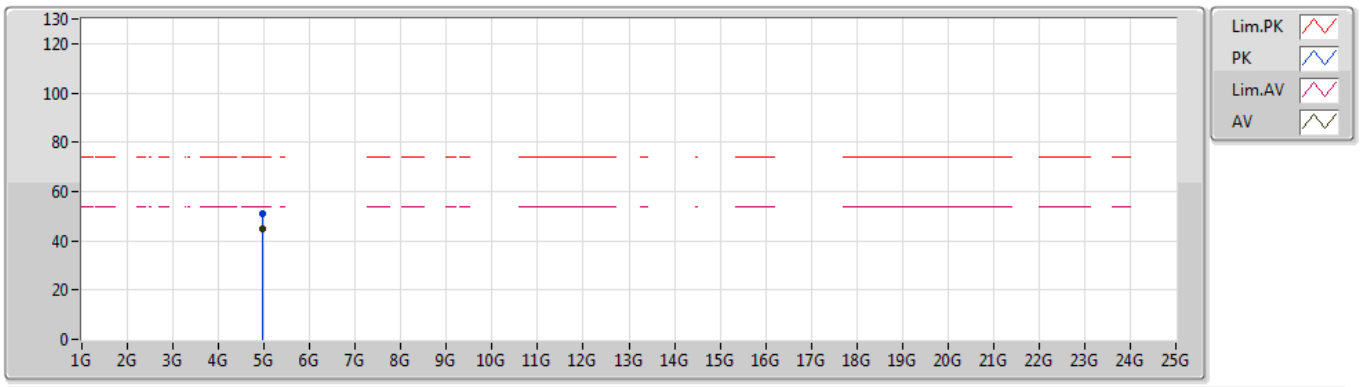
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.95964G	52.09	74.00	-21.91	5.44	3	Vertical	112	1.01	-
AV	4.95975G	47.83	54.00	-6.17	5.44	3	Vertical	112	1.01	-

BT-BR(1Mbps)

2480MHz_TX

14/06/2019



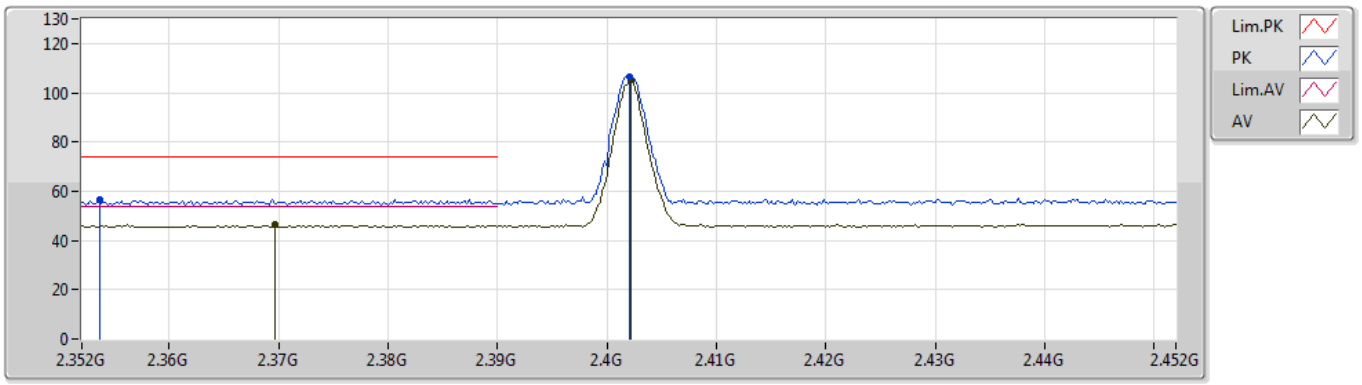
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.95987G	50.86	74.00	-23.14	5.44	3	Horizontal	182	1.02	-
AV	4.95976G	44.98	54.00	-9.02	5.44	3	Horizontal	182	1.02	-

BT-EDR(3Mbps)

2402MHz_TX

14/06/2019



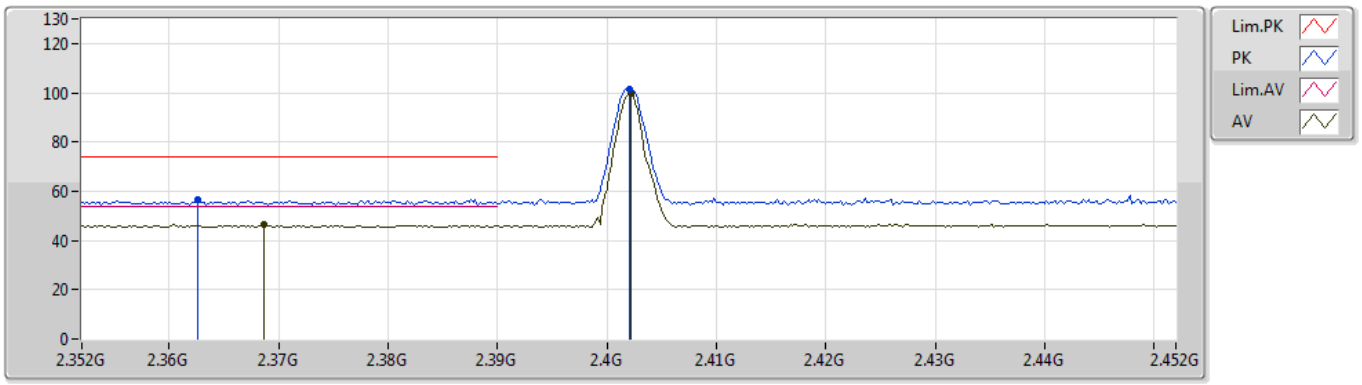
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3536G	56.67	74.00	-17.33	31.96	3	Vertical	14	1.07	-
AV	2.3696G	46.33	54.00	-7.67	32.00	3	Vertical	14	1.07	-
PK	2.402G	106.70	Inf	-Inf	32.10	3	Vertical	14	1.07	-
AV	2.4022G	105.11	Inf	-Inf	32.10	3	Vertical	14	1.07	-

BT-EDR(3Mbps)

2402MHz_TX

14/06/2019



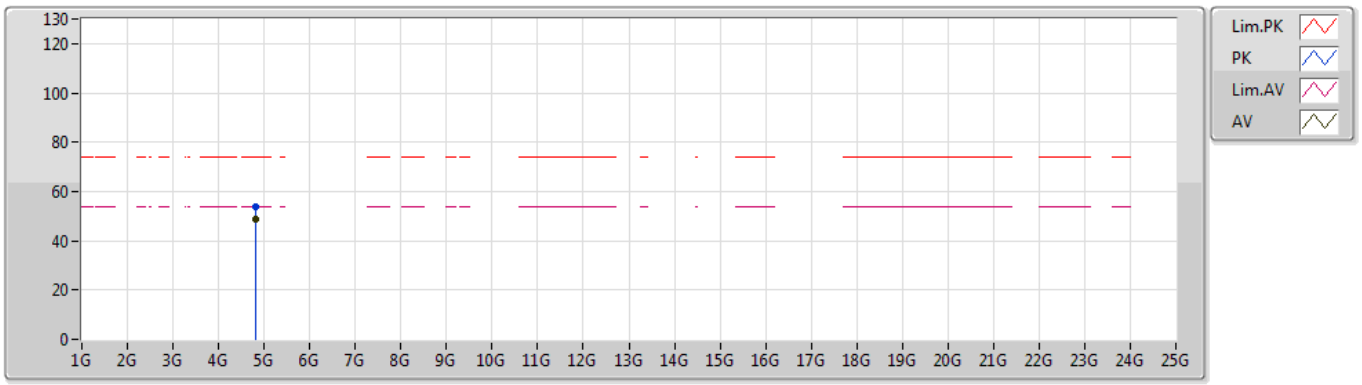
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3626G	56.75	74.00	-17.25	31.99	3	Horizontal	209	1.01	-
AV	2.3686G	46.55	54.00	-7.45	32.00	3	Horizontal	209	1.01	-
PK	2.402G	101.47	Inf	-Inf	32.10	3	Horizontal	209	1.01	-
AV	2.4022G	99.86	Inf	-Inf	32.10	3	Horizontal	209	1.01	-

BT-EDR(3Mbps)

2402MHz_TX

14/06/2019



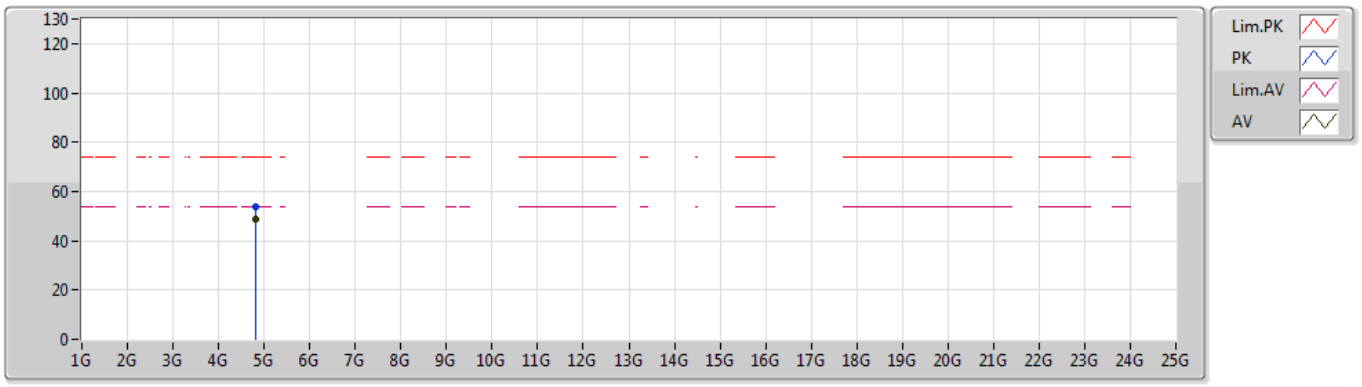
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.80404G	53.95	74.00	-20.05	5.06	3	Vertical	92	1.10	-
AV	4.80374G	48.61	54.00	-5.39	5.06	3	Vertical	92	1.10	-

BT-EDR(3Mbps)

2402MHz_TX

14/06/2019



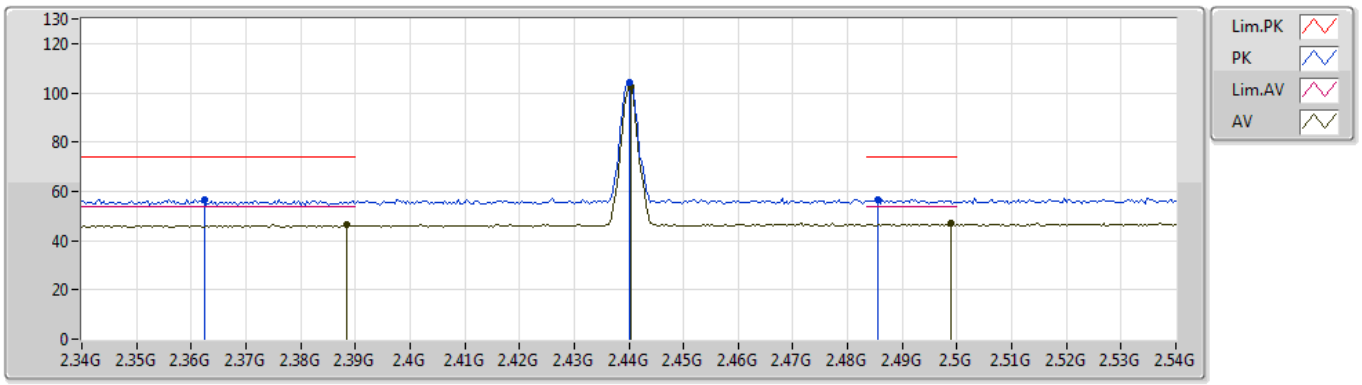
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.80418G	53.62	74.00	-20.38	5.06	3	Horizontal	179	2.99	-
AV	4.80381G	48.78	54.00	-5.22	5.06	3	Horizontal	179	2.99	-

BT-EDR(3Mbps)

2440MHz_TX

15/06/2019



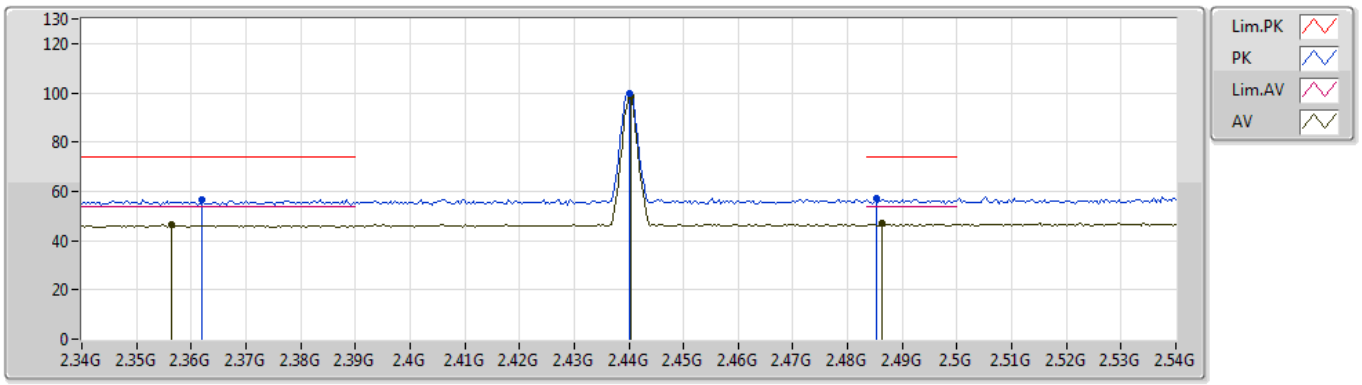
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3624G	56.84	74.00	-17.16	31.98	3	Vertical	6	1.44	-
AV	2.3884G	46.36	54.00	-7.64	32.06	3	Vertical	6	1.44	-
PK	2.44G	104.03	Inf	-Inf	32.24	3	Vertical	6	1.44	-
AV	2.4404G	102.77	Inf	-Inf	32.24	3	Vertical	6	1.44	-
PK	2.4856G	56.84	74.00	-17.16	32.42	3	Vertical	6	1.44	-
AV	2.4988G	46.85	54.00	-7.15	32.47	3	Vertical	6	1.44	-

BT-EDR(3Mbps)

2440MHz_TX

15/06/2019



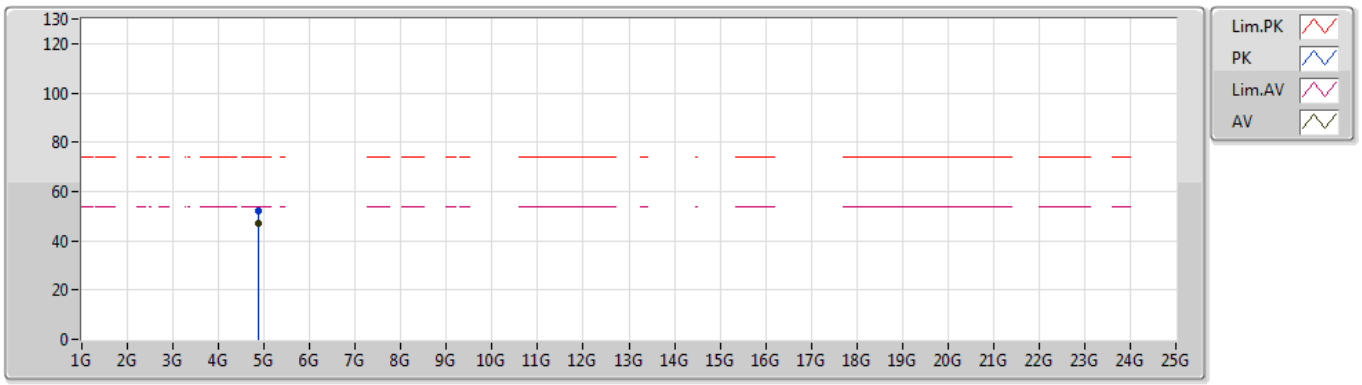
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.362G	56.73	74.00	-17.27	31.98	3	Horizontal	210	1.01	-
AV	2.3564G	46.33	54.00	-7.67	31.96	3	Horizontal	210	1.01	-
PK	2.44G	99.86	Inf	-Inf	32.24	3	Horizontal	210	1.01	-
AV	2.4404G	98.55	Inf	-Inf	32.24	3	Horizontal	210	1.01	-
PK	2.4852G	56.98	74.00	-17.02	32.42	3	Horizontal	210	1.01	-
AV	2.4864G	46.97	54.00	-7.03	32.42	3	Horizontal	210	1.01	-

BT-EDR(3Mbps)

2440MHz_TX

15/06/2019



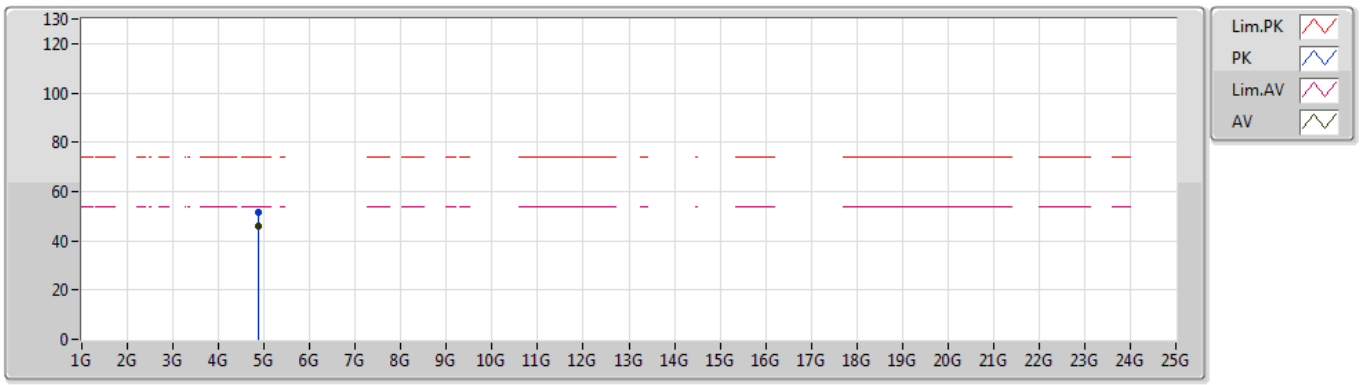
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87993G	52.37	74.00	-21.63	5.25	3	Vertical	153	1.06	-
AV	4.87983G	46.93	54.00	-7.07	5.25	3	Vertical	153	1.06	-

BT-EDR(3Mbps)

2440MHz_TX

15/06/2019



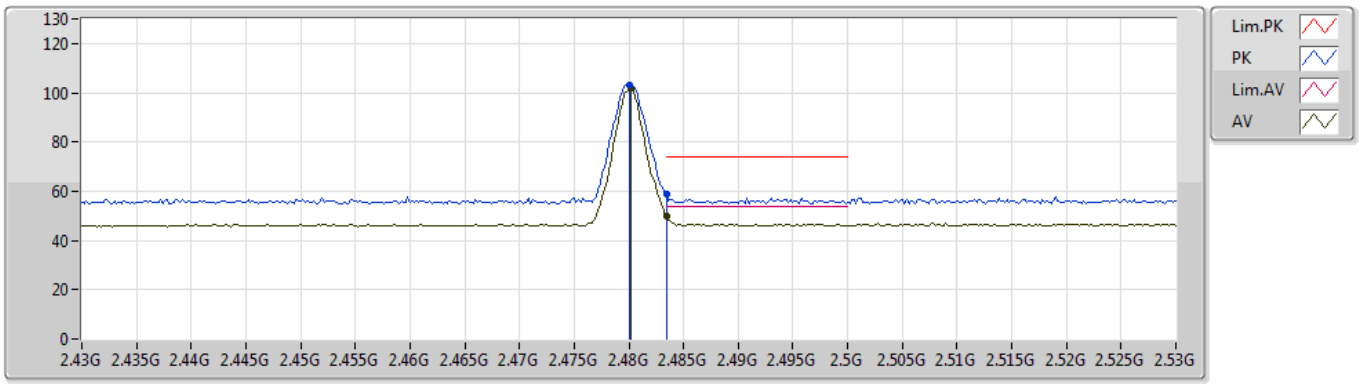
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.88006G	51.38	74.00	-22.62	5.25	3	Horizontal	171	1.01	-
AV	4.87965G	45.84	54.00	-8.16	5.25	3	Horizontal	171	1.01	-

BT-EDR(3Mbps)

2480MHz_TX

15/06/2019



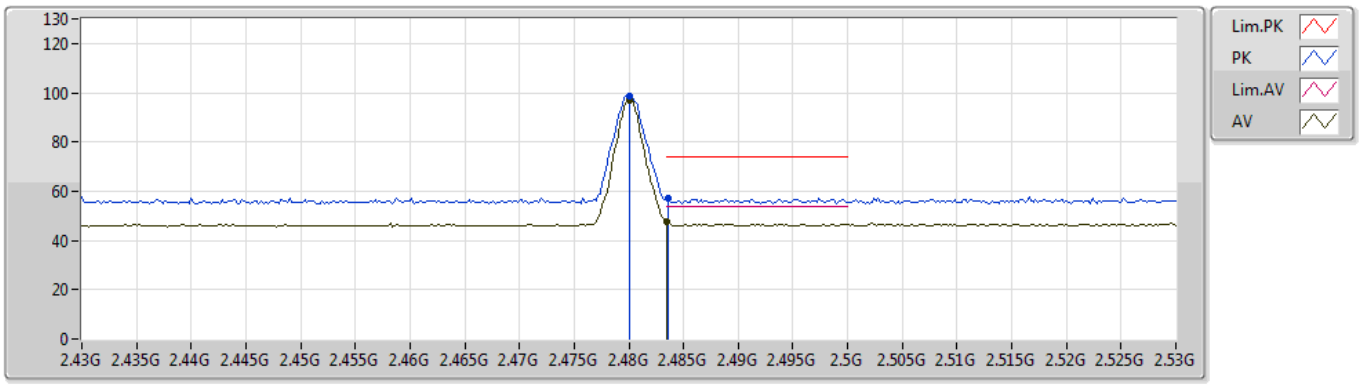
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.48G	103.15	Inf	-Inf	32.39	3	Vertical	6	1.23	-
AV	2.4802G	102.02	Inf	-Inf	32.39	3	Vertical	6	1.23	-
PK	2.4835G	58.67	74.00	-15.33	32.41	3	Vertical	6	1.23	-
AV	2.4835G	50.11	54.00	-3.89	32.41	3	Vertical	6	1.23	-

BT-EDR(3Mbps)

2480MHz_TX

15/06/2019



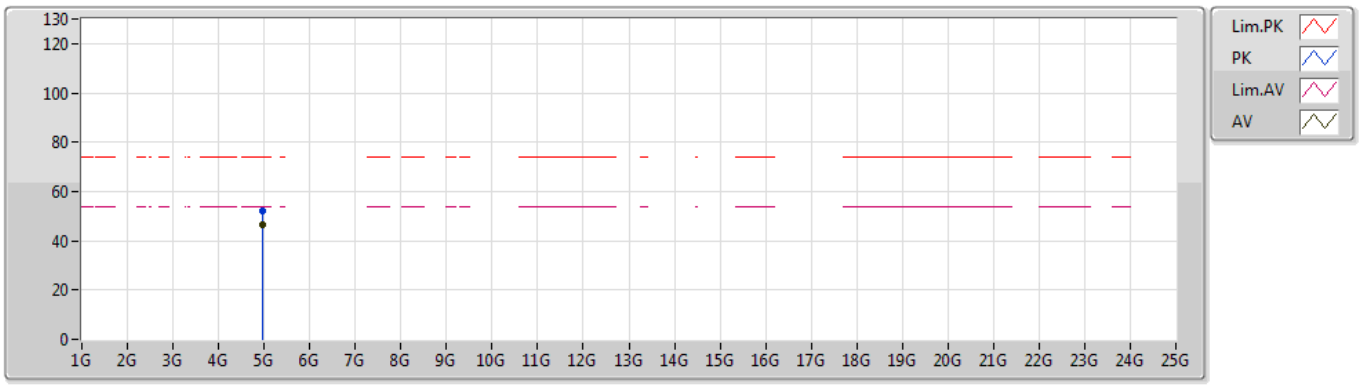
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.48G	98.56	Inf	-Inf	32.39	3	Horizontal	214	1.22	-
AV	2.48G	97.10	Inf	-Inf	32.39	3	Horizontal	214	1.22	-
PK	2.4836G	57.04	74.00	-16.96	32.41	3	Horizontal	214	1.22	-
AV	2.4835G	47.37	54.00	-6.63	32.41	3	Horizontal	214	1.22	-

BT-EDR(3Mbps)

2480MHz_TX

15/06/2019



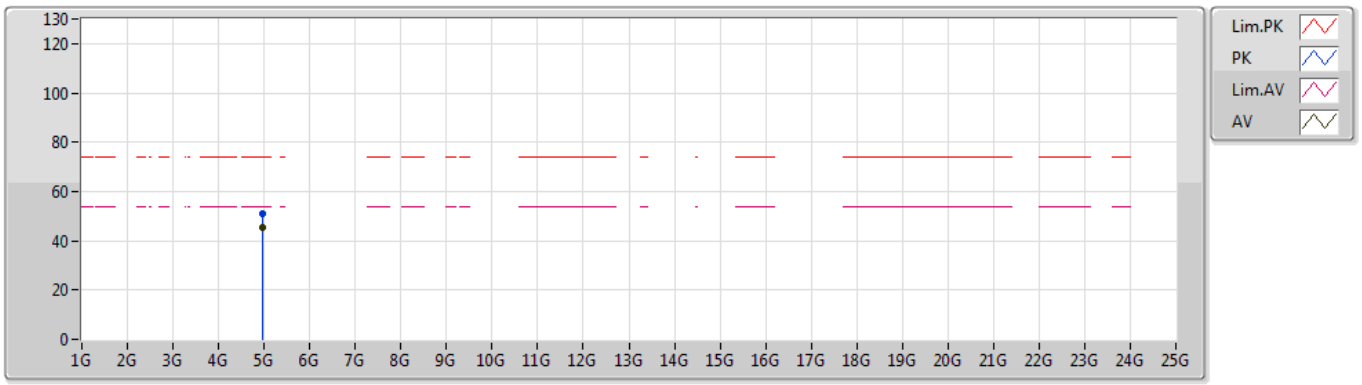
EUT X_1TX
Setting Default
03-J-5
FSP(100080)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.95965G	52.26	74.00	-21.74	5.44	3	Vertical	107	1.11	-
AV	4.95978G	46.73	54.00	-7.27	5.44	3	Vertical	107	1.11	-

BT-EDR(3Mbps)

2480MHz_TX

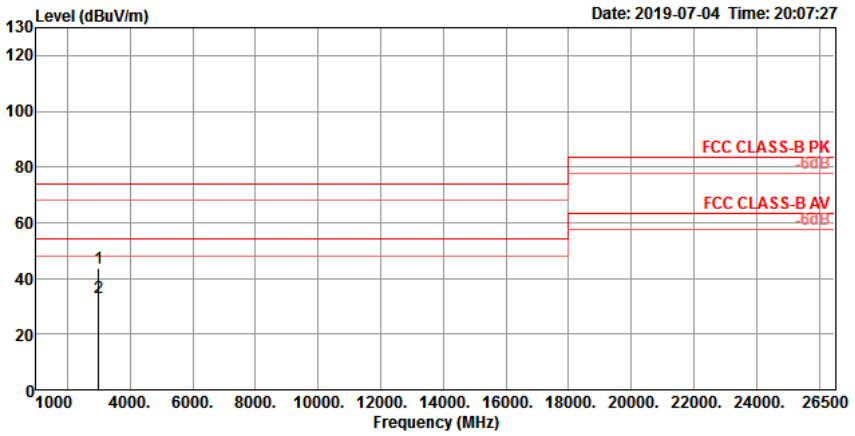
15/06/2019



EUT X_1TX
Setting Default
03-J-5
FSP(100080)

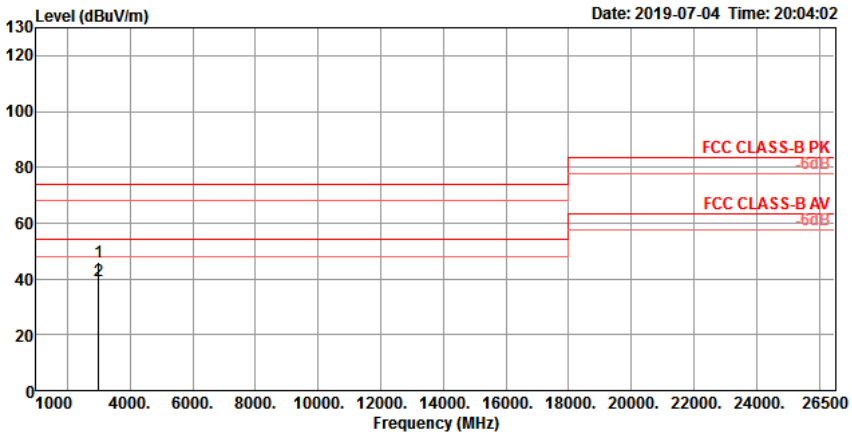
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.96004G	51.19	74.00	-22.81	5.44	3	Horizontal	183	1.17	-
AV	4.9598G	45.15	54.00	-8.85	5.44	3	Horizontal	183	1.17	-

RSE Co-location Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	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	3000.04	43.60	74.00	-30.40	45.76	3.28	29.20	34.64	300	316	Peak	HORIZONTAL
2	3000.10	33.05	54.00	-20.95	35.21	3.28	29.20	34.64	300	316	Average	HORIZONTAL

RSE Co-location Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Normal Link		



	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	2999.95	45.99	74.00	-28.01	48.15	3.28	29.20	34.64	107	58	Peak	VERTICAL
2	3000.12	39.25	54.00	-14.75	41.41	3.28	29.20	34.64	107	58	Average	VERTICAL