NCC Test Report

Equipment	:	Wall plate 802.11ac Wave 2, 2x2:2, BT, Internal Antenna
Brand Name	:	Extreme Networks
Model No.	:	AP-7612
Standard	:	LP0002 Section 3.10.1 (2016-08-23)
Operating Band	:	2400 MHz – 2483.5 MHz
Applicant	:	香港商極進網路有限公司台灣分公司 臺北市松山區復勢里南京東路 4 段 126 號 5 樓
Manufacturer	:	啟碁科技股份有限公司 新竹科學工業園區新竹縣園區二路 20 號

The product sample received on Apr. 13, 2017 and completely tested on Jun. 15, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given inanes and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONALINC., the test report shall not be reproduced except in full.

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

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PHOTOGRAPHS OF EUT V01

Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**Limit**	**Result**
1.1.2	3.10.1.4	Antenna Requirement	LP0002-2.2	Complied
3.1	2.3	AC Power-line Conducted Emissions	LP0002-2.3	Complied
3.2	3.10.1.6	20dB Bandwidth	3.10.1.6	Complied
3.2	3.10.1.6	Carrier Frequency Separation	3.10.1.6	Complied
3.3	3.10.1.2	Maximum Conducted Output Power	3.10.1.2	Complied
3.4	3.10.1.6	Number of Hopping Frequencies and Hopping Band edge	3.10.1.6	Complied
3.5	3.10.1.6	Time of Occupancy (Dwell Time)	3.10.1.6	Complied
3.6	3.10.1.5	Emissions in Non-restricted Frequency Bands	3.10.1.5	Complied
3.7	3.10.1.5	Emissions in Restricted Frequency Bands	Restricted Bands: LP0002-2.8	Complied

Revision History

Report No.	Version	Description	Issued Date
TR741335-02AD	Rev. 01	Initial issue of report	Oct. 02, 2017

1 General Description

1.1 Information

1.1.1 RF General Information

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

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

Note:
- Bluetooth BR uses a GFSK (1Mbps).
- Bluetooth EDR uses a combination of π/4-DQPSK (2Mbps) and 8DPSK (3Mbps).
- Bluetooth BR/EDR uses as a system using FHSS modulation.
- BWch is the channel separation
- 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.	Brand	P/N	Antenna Type	Connector	Gain (dBi)		
					2.4G	5G	BT
1	WNC	95XKAA15.GBO	Dipole Antenna	I-PEX	5.4	-	-
2	WNC	95XKAA15.GBP	Dipole Antenna	I-PEX	5.4	-	-
3	WNC	95XKAA15.GBR	Dipole Antenna	I-PEX	-	8.5	-
4	WNC	95XKAA15.GBQ	Dipole Antenna	I-PEX	-	8.5	-
5	WNC	95XKAA15.GBS	Dipole Antenna	I-PEX	-	-	3.7

Note: The EUT has five antennas.

<For 2.4GHz Function>

For IEEE 802.11b/g/n/ac mode (1TX, 2RX):

Ant. 1 connect to port 2 and Ant. 2 connect to port 1

The EUT supports the Ant. 1 and Ant. 2 with TX diversity function.

Ant. 2 generated the worst case than Ant. 1, so it is tested and recorded in the report.

Ant. 1 and Ant. 2 could receive simultaneously.

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

Ant. 1 connect to port 1 and Ant. 2 connect to port 2

Ant. 1 and Ant. 2 could transmit/receive simultaneously.

<For 5GHz Function>

For IEEE 802.11a/n/ac mode (1TX, 2RX):

Ant. 3 connect to port 2 and Ant. 4 connect to port 1

The EUT supports the Ant. 3 and Ant. 4 with TX diversity function.

Ant. 4 generated the worst case than Ant. 3, so it is tested and recorded in the report.

Ant. 3 and Ant. 4 could receive simultaneously.

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

Ant. 3 connect to port 1 and Ant. 4 connect to port 2

Ant. 3 and Ant. 4 could transmit/receive simultaneously.

<For Bluetooth Function>

For bluetooth mode (1TX, 1RX):

Ant. 5 connect to port 1

Only Ant. 5 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
BT-BR(1Mbps)	0.744	1.284
BT-EDR(2Mbps)	0.757	1.209
BT-EDR(3Mbps)	0.785	1.051

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE

1.2 Testing Applied Standards

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

- NCC LP0002 (2016-08-23)
- FCC Public Notice DA 00-705

1.3 Testing Location Information

Testing Location							
☐	HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.			
		TEL	:	886-3-327-3456	FAX	:	886-3-318-0055
☒	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	TH01-CB	Brian Sun	22°C / 54%	Apr. 27, 2017 ~ May 13, 2017
Radiated below 1GHz (Intentional)	03CH01-CB	Welson Chen & Paul Chen & Justin Lin	22°C / 54%	Jun. 13, 2017~Jun. 14, 2017
Radiated below 1GHz (Unintentional)	03CH01-CB	Welson Chen & Paul Chen & Justin Lin	22°C / 54%	May 06, 2017
Radiated above 1GHz (Unintentional 1GHz~5th)	03CH01-CB	Welson Chen & Paul Chen & Justin Lin	22°C / 54%	May 06, 2017
Radiated above 1GHz (Intentional 1GHz~10th)	03CH01-CB	Welson Chen & Paul Chen & Justin Lin	22°C / 54%	Apr. 21, 2017 ~ May 31, 2017
AC Conduction (Intentional)	CO01-CB	Rick Yeh	25°C / 60%	Jun. 15, 2017
AC Conduction (Unintentional)	CO01-CB	Kane Liu	22°C / 58%	May 08, 2017

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)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	Default
2442MHz	Default
2480MHz	Default
BT-EDR(2Mbps)	-
2402MHz	Default
2442MHz	Default
2480MHz	Default
BT-EDR(3Mbps)	-
2402MHz	Default
2442MHz	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	Intentional - CTX
1	EUT + WLAN 2.4GHz + Adapter
2	EUT + WLAN 2.4GHz + PoE
3	EUT + WLAN 5GHz + Adapter
4	EUT + WLAN 5GHz + PoE
5	EUT + BT2.0 + Adapter
6	EUT + BT2.0 + PoE
7	EUT + BT4.0 + Adapter
8	EUT + BT4.0 + PoE
For operating mode 8 is the worst case and it was record in this test report.	
Operating Mode	Unintentional - Normal Link
1	EUT + Adapter
2	EUT + PoE
For operating mode 2 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Intentional - CTX
1	EUT in Y axis + WLAN 2.4GHz + Adapter
2	EUT in Y axis + WLAN 2.4GHz + PoE
3	EUT in Y axis + WLAN 5GHz + Adapter
4	EUT in Y axis + WLAN 5GHz + PoE
5	EUT in Y axis + BT2.0 + Adapter
6	EUT in Y axis + BT2.0 + PoE
7	EUT in Y axis + BT4.0 + Adapter
8	EUT in Y axis + BT4.0 + PoE
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode < 1GHz	Unintentional - Normal Link
1	EUT in Y axis + Adapter
2	EUT in Y axis + PoE
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz Unintentional 1GHz~5th	Unintentional - Normal Link
Mode 1 generated the worst test result for Radiated emission unintentional below 1GHz test, thus the measurement fot Radiated emission unintentional 1GHz~5th Harmonic test will follow this same test configuration.	
1	EUT in Y axis + Adapter
Operating Mode > 1GHz Intentional 1GHz~10th	Intentional - CTX
1	EUT in Y axis

Note1: The EUT can only use Y axis position.

Note2: The PoE was for measurement only, would not be marketed.

The PoE information as below:

Support Unit	Brand	Model Number
PoE	Microsemi	PD-6238G300

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories			
Equipment Name	**Brand Holder**	**Model Name**	**Rating**
Adapter (Interchangeable plug)	Powertron Electronics Corp.	PA1024-120IB200	INPUT: 100-240V ~ 50-60Hz, 0.6A OUTPUT: 12V, 2.0A, 24W Max
Other			
EU plug*1 / BZ plug*1 / AU plug*1			
China plug*1 / US plug*1 / UK plug*1			
Wall-mounted rack*1			

Note: Adapter could change six different plugs (EU, BZ, AU, China, US and UK), only adapter with US plug was selected to test and recorded in this report as a result.

2.5 Support Equipment

For Test Site No: CO01-CB
Operating Mode: Intentional - CTX

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E6430	DoC
2	PoE	Microsemi	PD-6238G300	DoC

Operating Mode: Unintentional - Normal Link

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*4	DELL	E6430	DoC
2	CBT Bluetooth tester	Anritsu	MT8852B	DoC
3	PoE	Microsemi	PD-6238G300	DoC

For Test Site No: 03CH01-CB (below 1GHz)
Operating Mode: Intentional - CTX

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC
2	PoE	Microsemi	PD-6238G300	DoC

Operating Mode: Unintentional - Normal Link

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC
3	CBT Bluetooth tester	Anritsu	MT8852B	DoC

For Test Site No: 03CH01-CB (above 1GHz) / Operating Mode: Unintentional 1~5th

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC
2	CBT Bluetooth tester	Anritsu	MT8852B	DoC

Operating Mode: Intentional 1~10th
For non-beamforming mode

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC

For beamforming mode

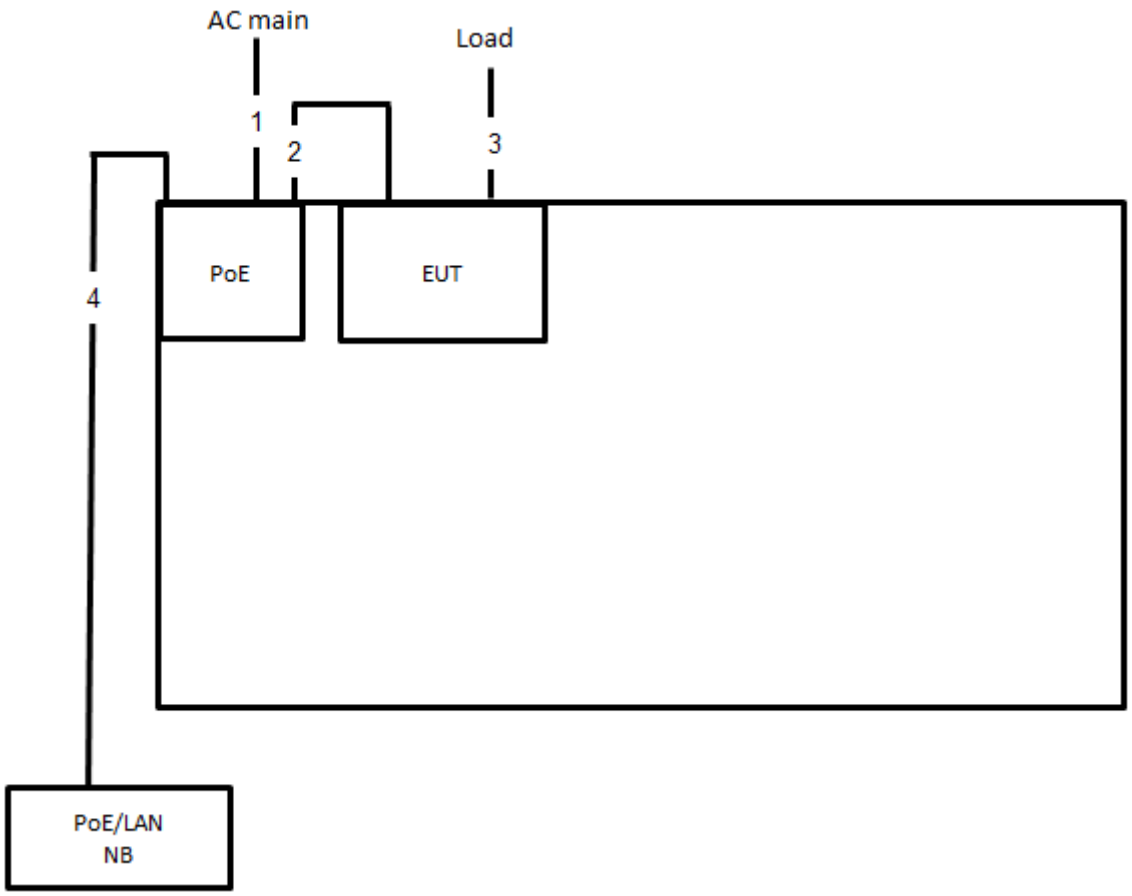
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	DoC
2	RX Device	Extreme Networks	AP-7612	QXO-AP7612

For Test Site No: TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC

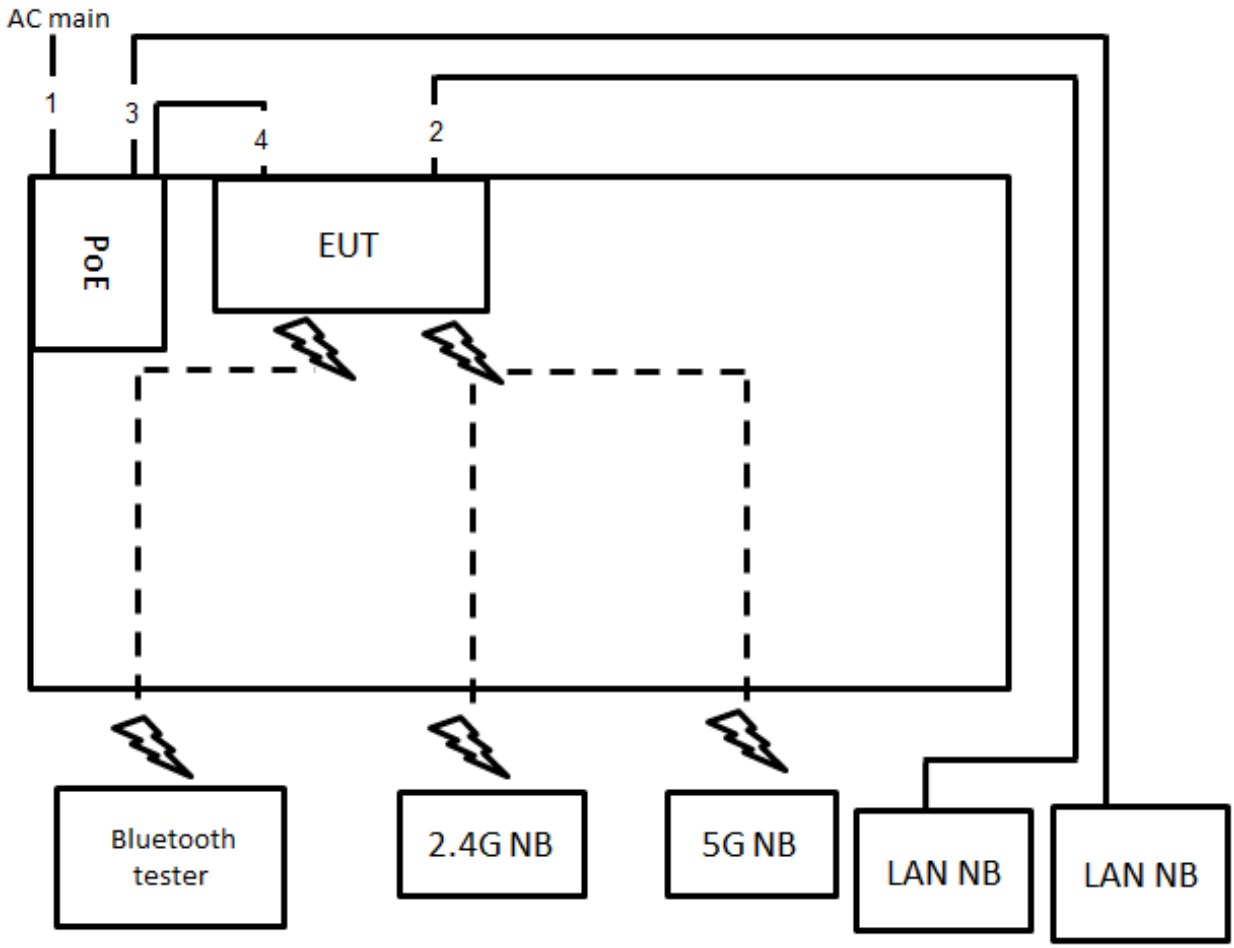
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test
Operating Mode: Intentional - CTX



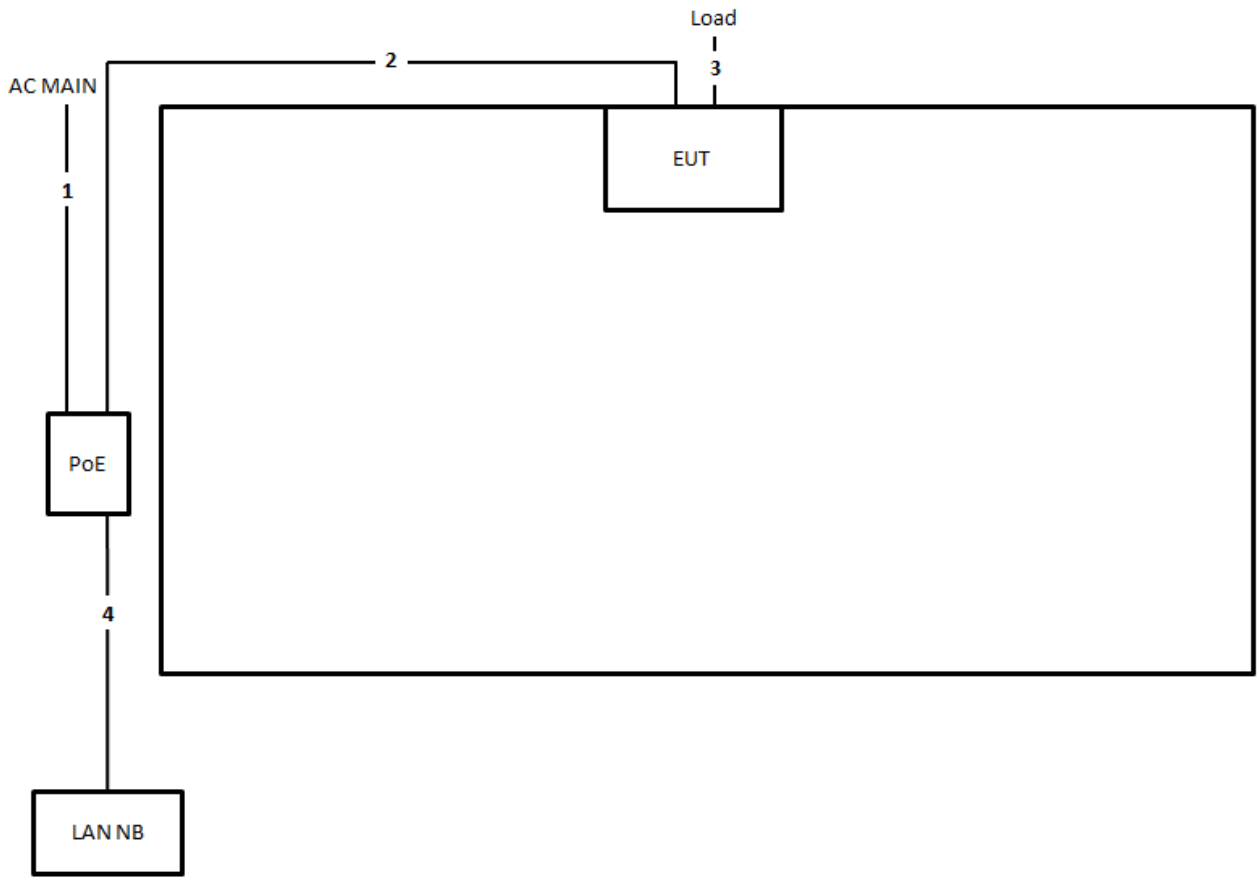
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	1.5m
4	RJ-45 cable	No	10m

Test Setup Diagram – AC Line Conducted Emission Test
Operating Mode: Unintentional - Normal Link



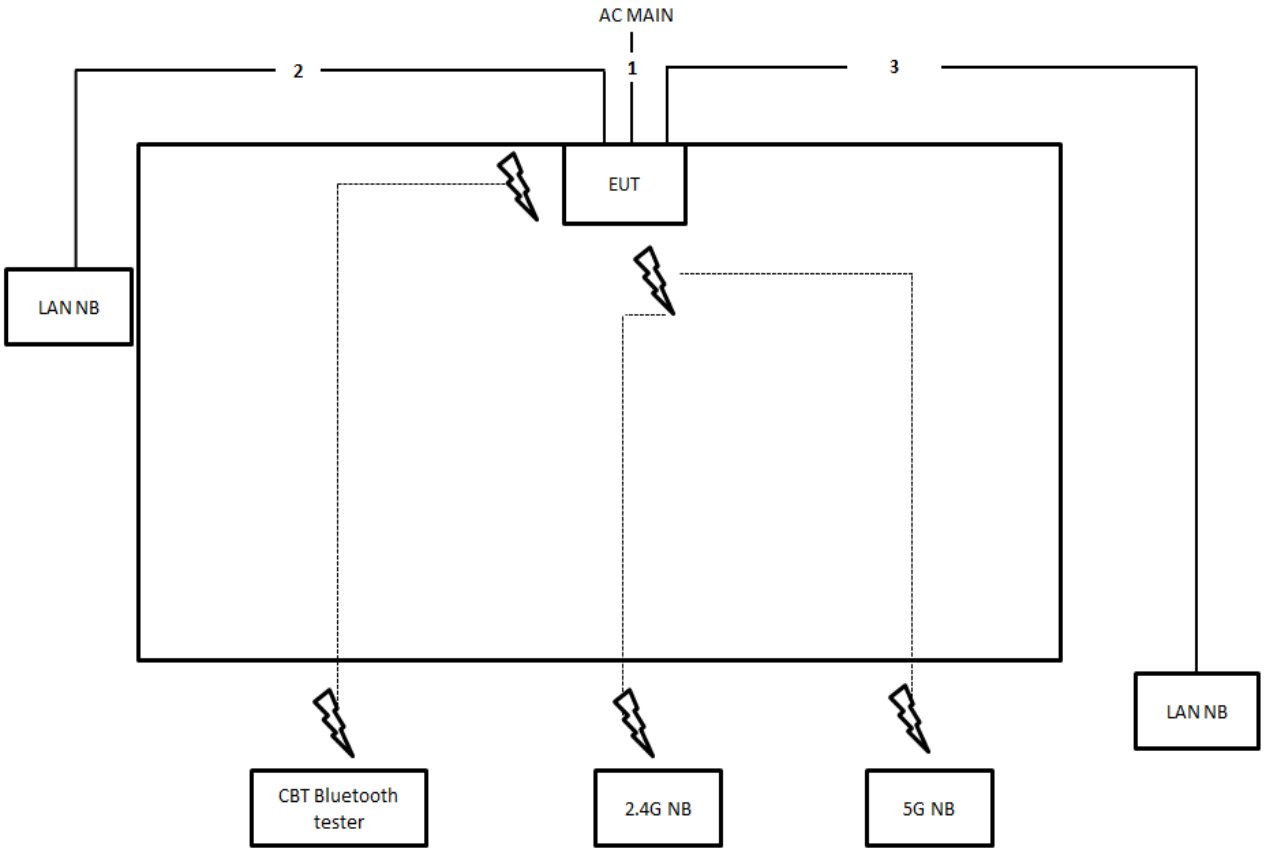
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1m

Test Setup Diagram - Radiated Test < 1GHz
Operating Mode: Intentional - CTX



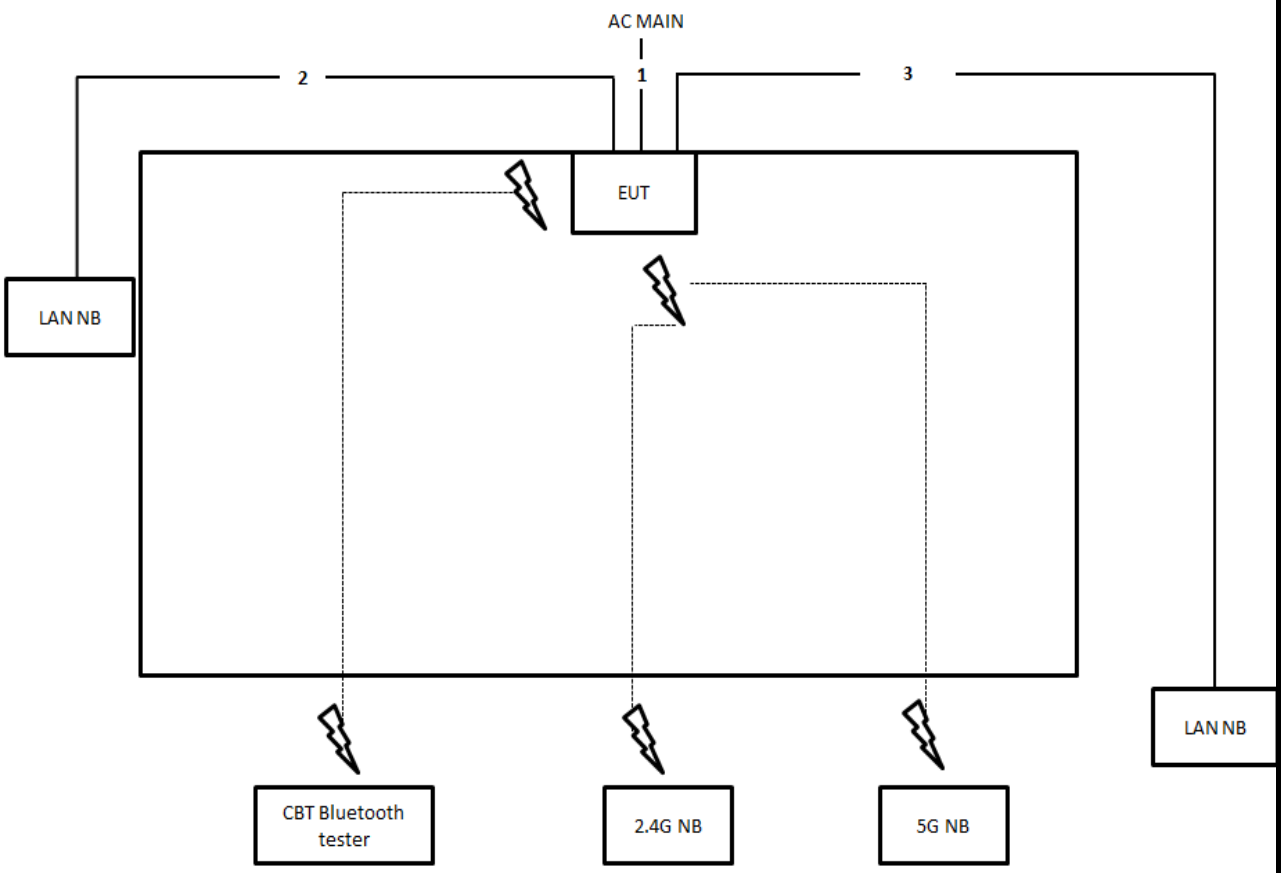
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m
4	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test < 1GHz
Operating Mode: Unintentional - Normal Link



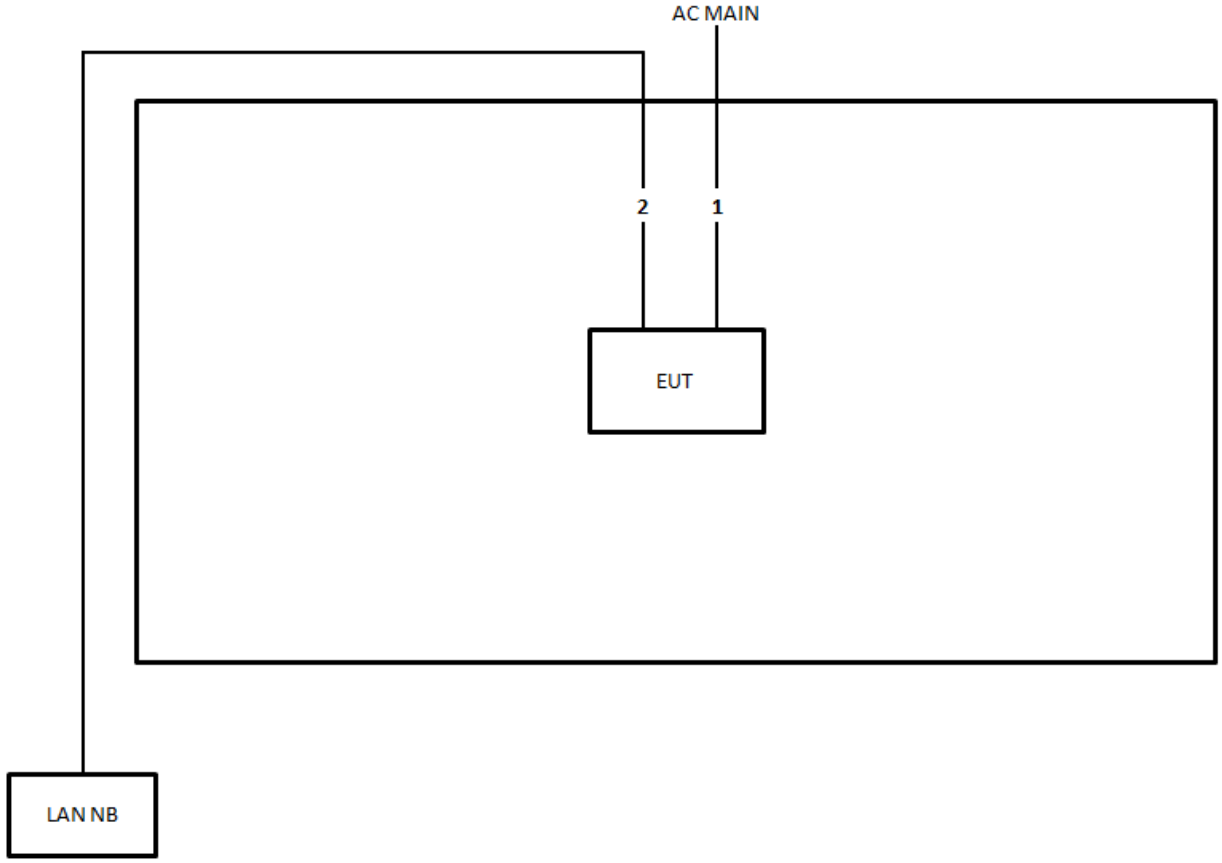
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz
Operating Mode: Unintentional 1~5th



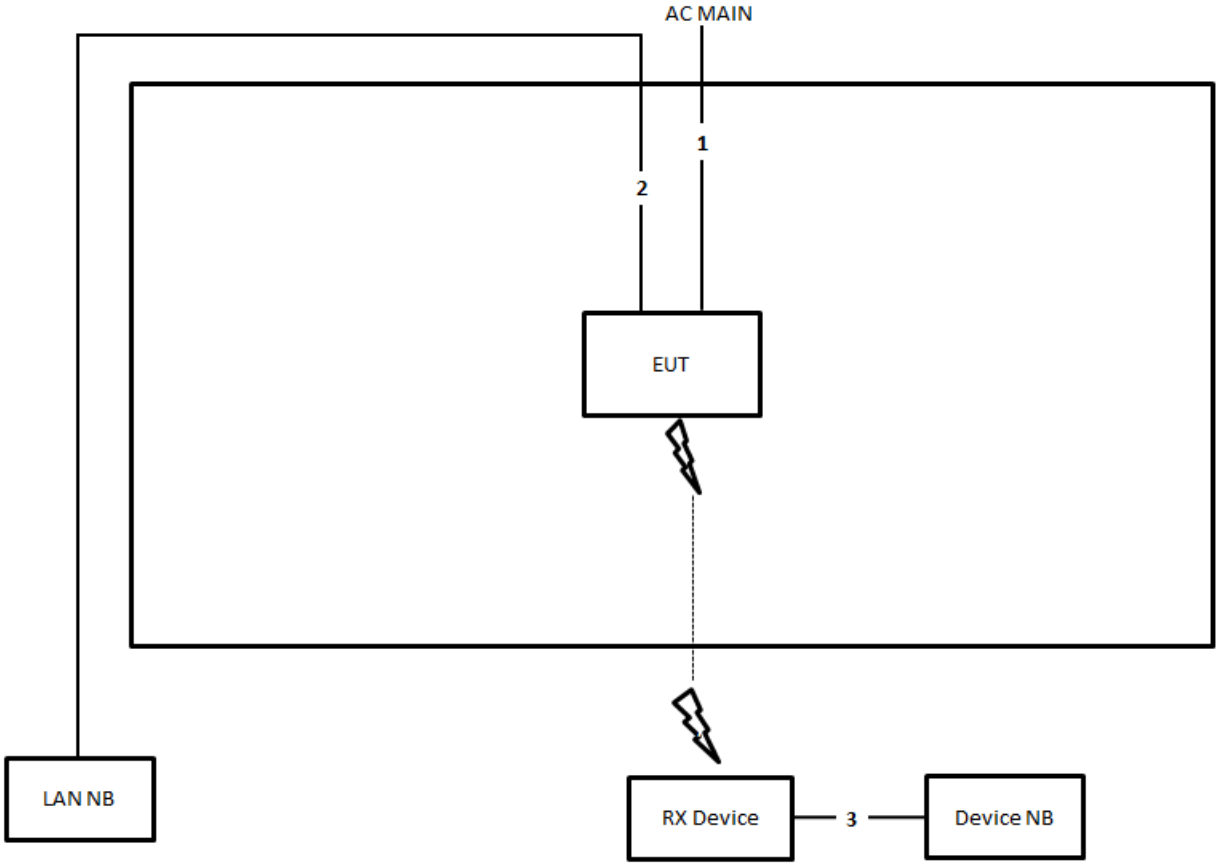
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz / Operating Mode: Intentional 1~10th
For non-beamforming mode



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

Test Setup Diagram - Radiated Test > 1GHz / Operating Mode: Intentional 1~10th
For beamforming mode



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

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

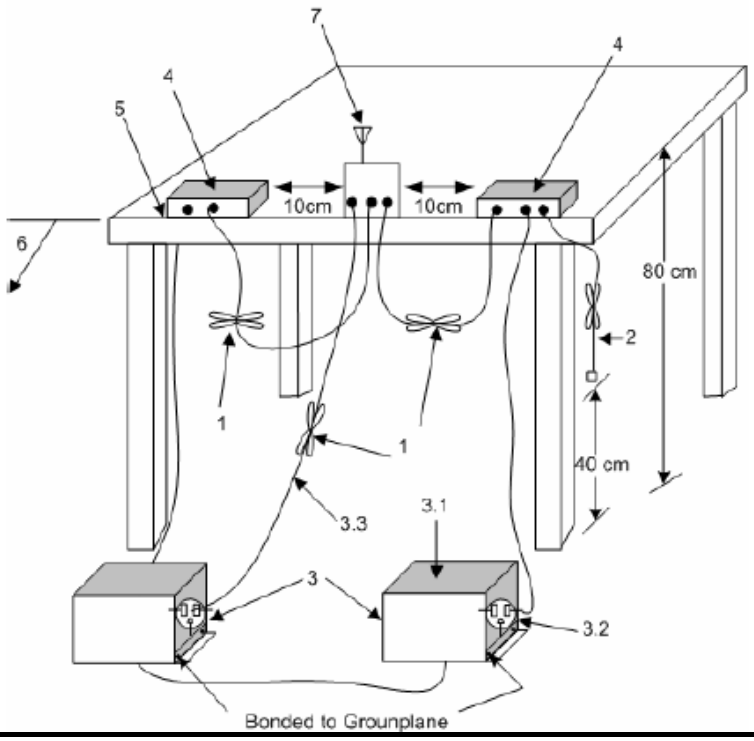
Refer a test equipment and calibration data table in this test report.

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



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	

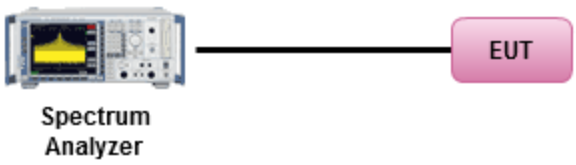
3.2.2 Measuring Instruments

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

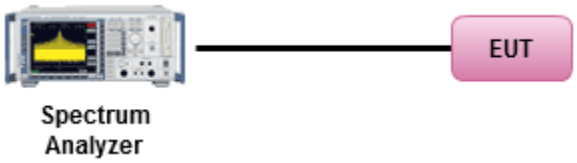
3.4.3 Measuring Instruments

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	

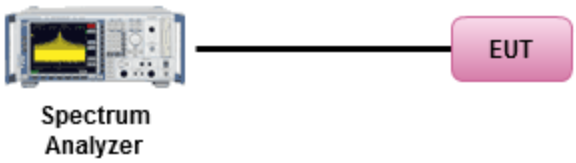
3.5.2 Measuring Instruments

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 (dB)**
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.	

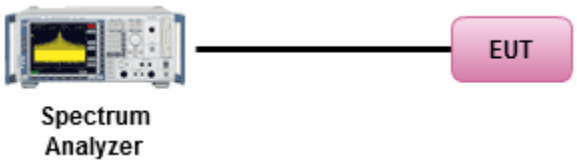
3.6.2 Measuring Instruments

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.

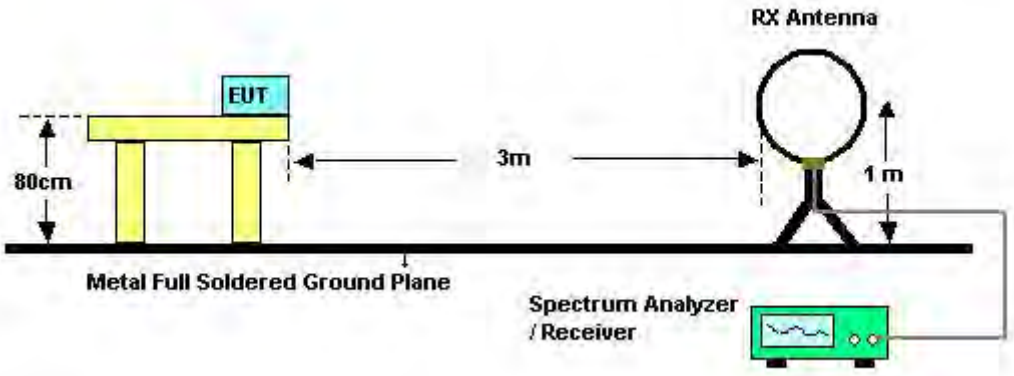
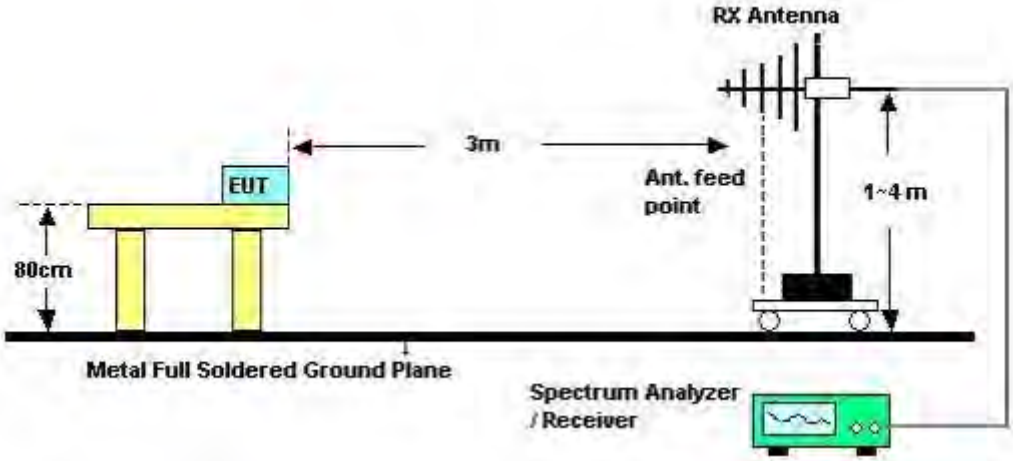
3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

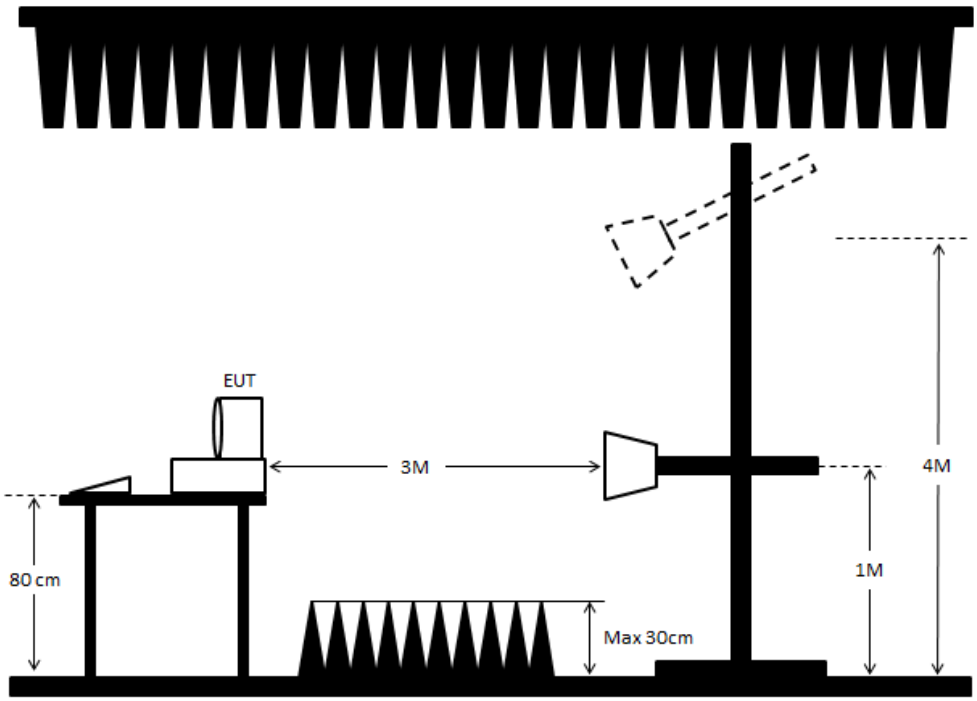
Test Method	
▪ The average emission levels shall be measured in [hopping duty factor].	
▪ Refer as ANSI C63.10; clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions 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

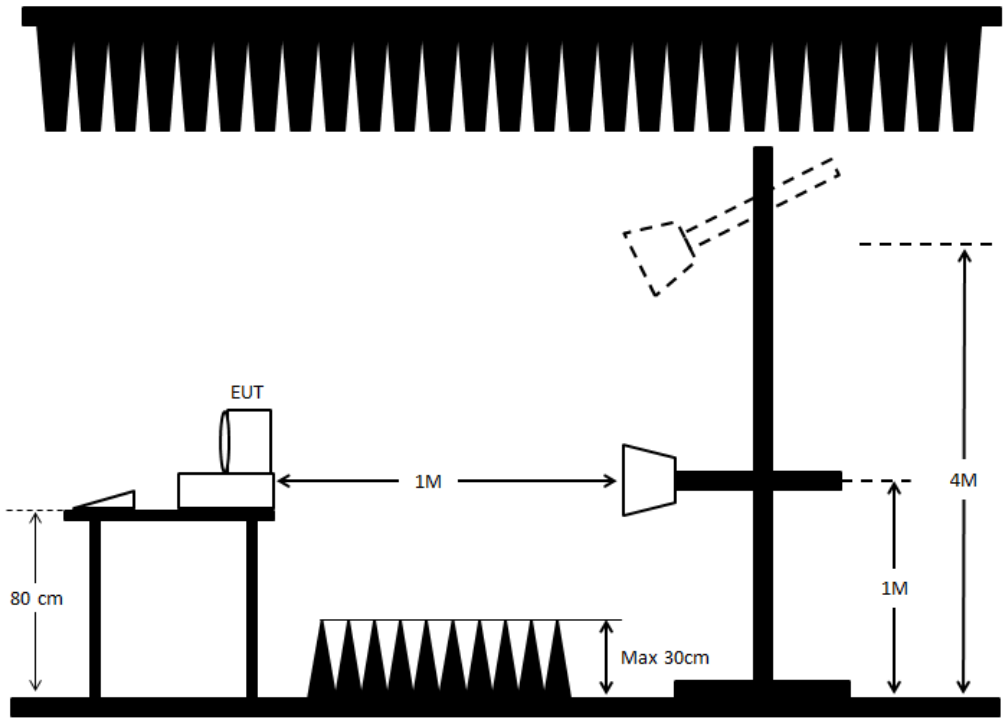
Transmitter Radiated Emissions
9kHz ~30MHz

30MHz~1GHz


Unintentional 1GHz~5th Harmonic

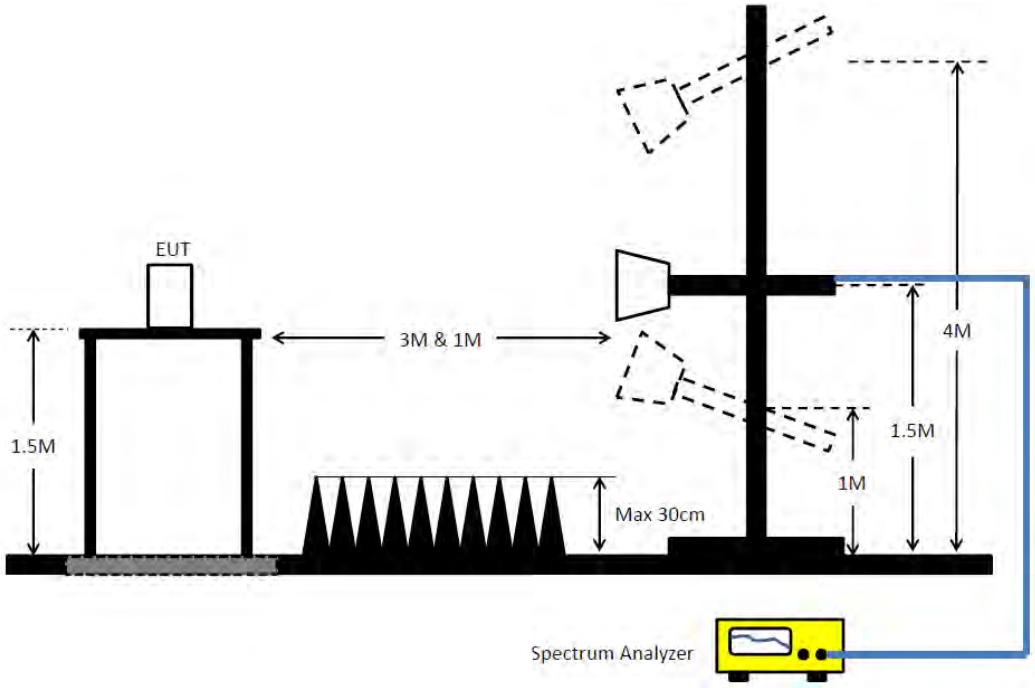
1,000~18,000 MHz



18,000~30,000 MHz



Above 1GHz



3.7.5 Transmitter Radiated Unwanted Emissions (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.

3.7.6 Transmitter Radiated Unwanted Emissions

Refer as Appendix G

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz~100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)

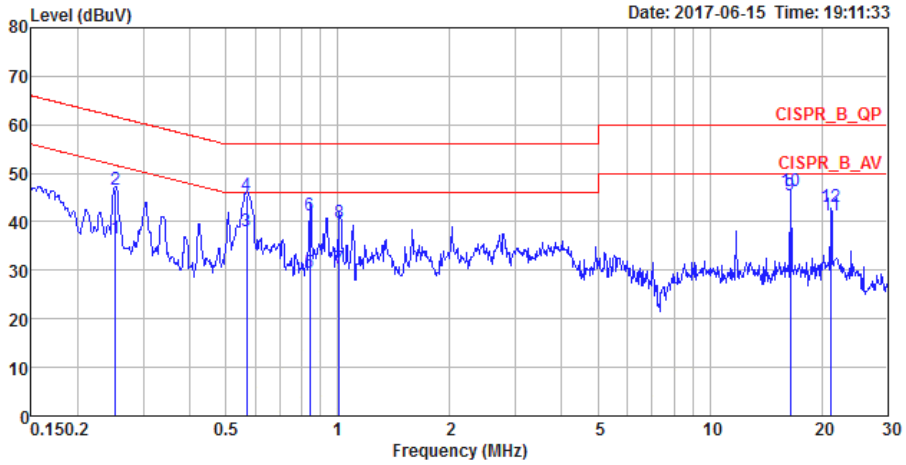
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz–26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)

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

"*" Calibration Interval of instruments listed above is two years.

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

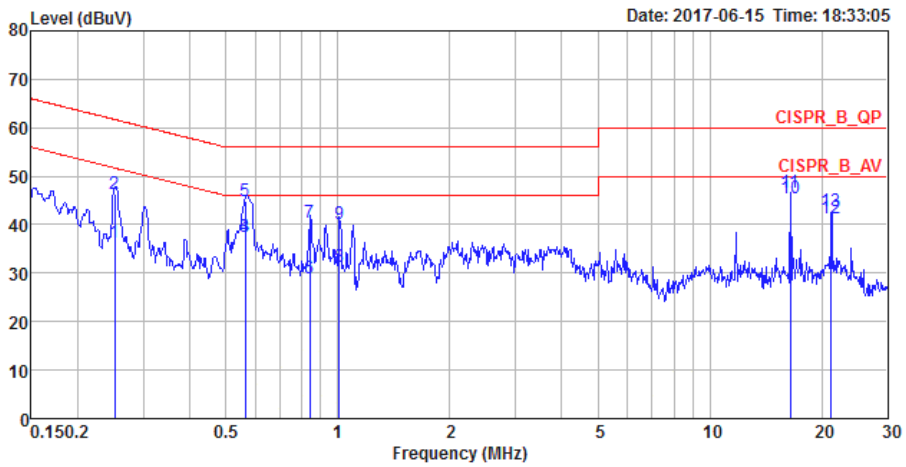
AC Power-line Conducted Emissions Result			
Operating Mode	8	**Power Phase**	Neutral
Operating Function	Intentional - CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2521	36.72	-14.97	51.69	26.55	10.08	0.09	Average	NEUTRAL
2	0.2521	46.56	-15.13	61.69	36.39	10.08	0.09	QP	NEUTRAL
3	0.5696	38.06	-7.94	46.00	27.78	10.20	0.08	Average	NEUTRAL
4	0.5696	45.53	-10.47	56.00	35.25	10.20	0.08	QP	NEUTRAL
5	0.8413	29.58	-16.42	46.00	19.33	10.10	0.15	Average	NEUTRAL
6	0.8413	41.34	-14.66	56.00	31.09	10.10	0.15	QP	NEUTRAL
7	1.0084	30.39	-15.61	46.00	20.15	10.05	0.19	Average	NEUTRAL
8	1.0084	39.91	-16.09	56.00	29.67	10.05	0.19	QP	NEUTRAL
9	16.4646	45.35	-4.65	50.00	34.87	10.29	0.19	Average	NEUTRAL
10	16.4646	46.32	-13.68	60.00	35.84	10.29	0.19	QP	NEUTRAL
11	21.1676	41.28	-8.72	50.00	30.70	10.37	0.21	Average	NEUTRAL
12	21.1676	43.01	-16.99	60.00	32.43	10.37	0.21	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.)

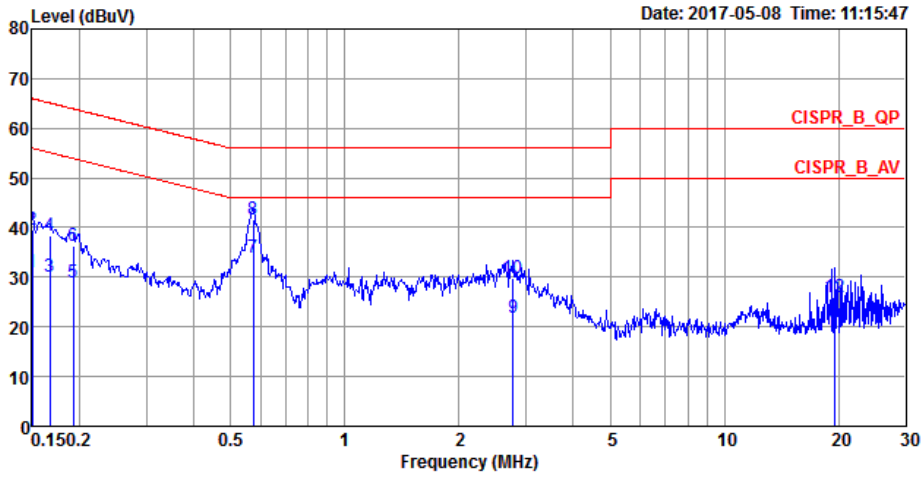
AC Power-line Conducted Emissions Result			
Operating Mode	8	**Power Phase**	Line
Operating Function	Intentional - CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2515	36.42	-15.29	51.71	26.41	9.92	0.09	Average	LINE
2	0.2515	46.39	-15.32	61.71	36.38	9.92	0.09	QP	LINE
3	0.5637	37.61	-8.39	46.00	27.58	9.95	0.08	Average	LINE
4	0.5637	37.64	-8.36	46.00	27.61	9.95	0.08	Average	LINE
5	0.5637	44.97	-11.03	56.00	34.94	9.95	0.08	QP	LINE
6	0.8396	28.86	-17.14	46.00	18.75	9.96	0.15	Average	LINE
7	0.8396	40.48	-15.52	56.00	30.37	9.96	0.15	QP	LINE
8	1.0107	31.14	-14.86	46.00	20.99	9.96	0.19	Average	LINE
9	1.0107	40.08	-15.92	56.00	29.93	9.96	0.19	QP	LINE
10	16.4638	45.58	-4.42	50.00	35.12	10.27	0.19	Average	LINE
11	16.4638	46.51	-13.49	60.00	36.05	10.27	0.19	QP	LINE
12	21.1682	41.22	-8.78	50.00	30.65	10.36	0.21	Average	LINE
13	21.1682	42.93	-17.07	60.00	32.36	10.36	0.21	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.)

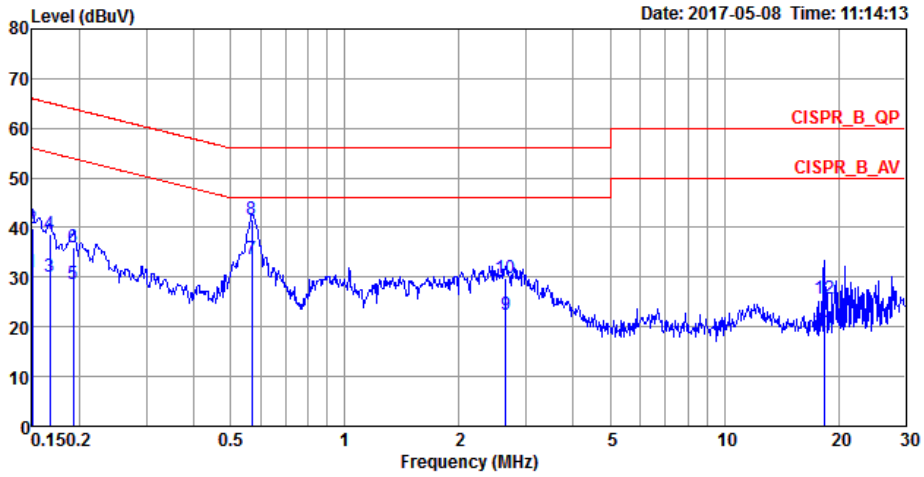
AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Neutral
Operating Function	Unintentional - Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	30.99	-25.01	56.00	21.01	9.94	0.04	Average	NEUTRAL
2	0.1500	39.68	-26.32	66.00	29.70	9.94	0.04	QP	NEUTRAL
3	0.1668	30.23	-24.89	55.12	20.24	9.95	0.04	Average	NEUTRAL
4	0.1668	38.46	-26.66	65.12	28.47	9.95	0.04	QP	NEUTRAL
5	0.1924	28.79	-25.14	53.93	18.76	9.98	0.05	Average	NEUTRAL
6	0.1924	36.36	-27.57	63.93	26.33	9.98	0.05	QP	NEUTRAL
7	0.5731	34.03	-11.97	46.00	24.01	9.97	0.05	Average	NEUTRAL
8	0.5731	41.56	-14.44	56.00	31.54	9.97	0.05	QP	NEUTRAL
9	2.7794	21.80	-24.20	46.00	11.68	10.02	0.10	Average	NEUTRAL
10	2.7794	29.72	-26.28	56.00	19.60	10.02	0.10	QP	NEUTRAL
11	19.5316	19.29	-30.71	50.00	8.75	10.29	0.25	Average	NEUTRAL
12	19.5316	26.05	-33.95	60.00	15.51	10.29	0.25	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.)

AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Line
Operating Function	Unintentional - Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	31.09	-24.91	56.00	21.10	9.95	0.04	Average	LINE
2	0.1500	39.75	-26.25	66.00	29.76	9.95	0.04	QP	LINE
3	0.1668	30.20	-24.92	55.12	20.22	9.94	0.04	Average	LINE
4	0.1668	38.75	-26.37	65.12	28.77	9.94	0.04	QP	LINE
5	0.1924	28.76	-25.17	53.93	18.78	9.93	0.05	Average	LINE
6	0.1924	35.95	-27.98	63.93	25.97	9.93	0.05	QP	LINE
7	0.5701	33.70	-12.30	46.00	23.73	9.92	0.05	Average	LINE
8	0.5701	41.51	-14.49	56.00	31.54	9.92	0.05	QP	LINE
9	2.6500	22.44	-23.56	46.00	12.35	9.99	0.10	Average	LINE
10	2.6500	29.82	-26.18	56.00	19.73	9.99	0.10	QP	LINE
11	18.3284	19.21	-30.79	50.00	8.77	10.20	0.24	Average	LINE
12	18.3284	25.77	-34.23	60.00	15.33	10.20	0.24	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.)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2.4-2.4835GHz	702.5k	823.338k	823kF1D	701.25k	820.84k
BT-EDR(2Mbps)	-	-	-	-	-
2.4-2.4835GHz	1.316M	1.212M	1M21G1D	1.316M	1.212M
BT-EDR(3Mbps)	-	-	-	-	-
2.4-2.4835GHz	1.286M	1.212M	1M21G1D	1.285M	1.211M

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;

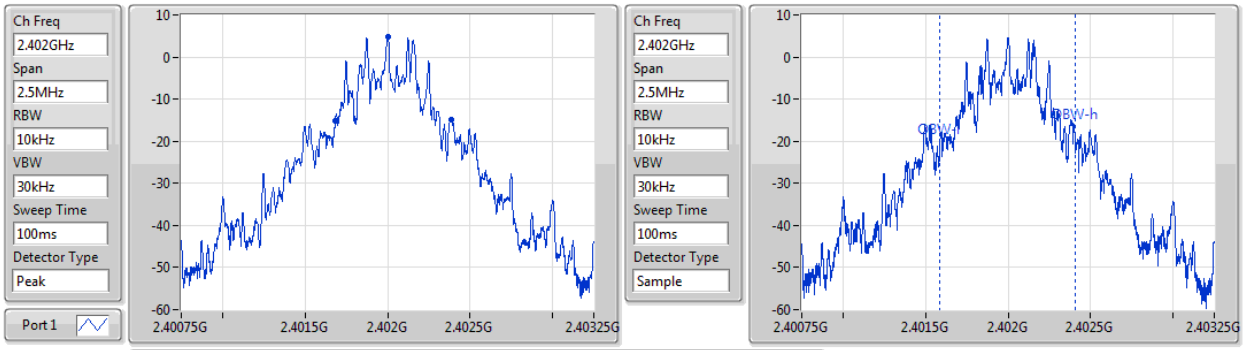
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	702.5k	820.84k
2442MHz	Pass	Inf	702.5k	823.338k
2480MHz	Pass	Inf	701.25k	822.089k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.316M	1.212M
2442MHz	Pass	Inf	1.316M	1.212M
2480MHz	Pass	Inf	1.316M	1.212M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.285M	1.211M
2442MHz	Pass	Inf	1.285M	1.212M
2480MHz	Pass	Inf	1.286M	1.212M

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

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

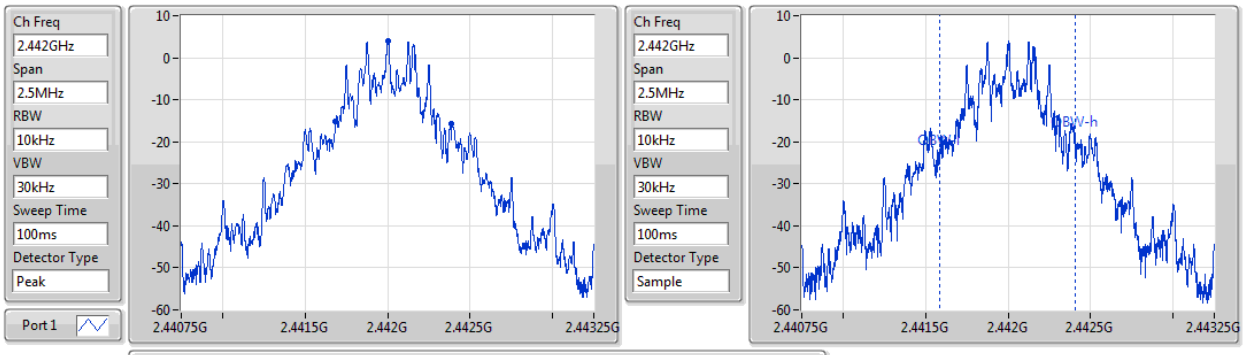
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
702.5k	2.401683G	2.402385G	820.84k	2.401585G	2.402406G	Inf	1

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

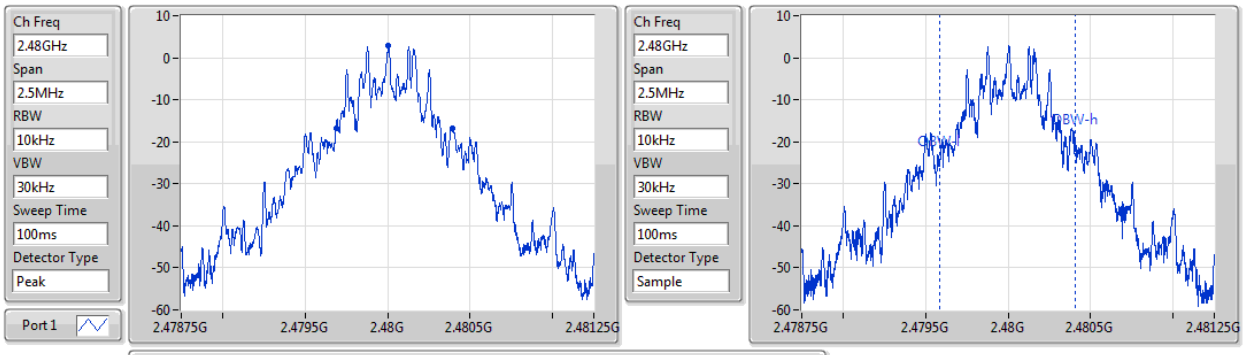
2442MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
702.5k	2.441686G	2.442389G	823.338k	2.441586G	2.44241G	Inf	1

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

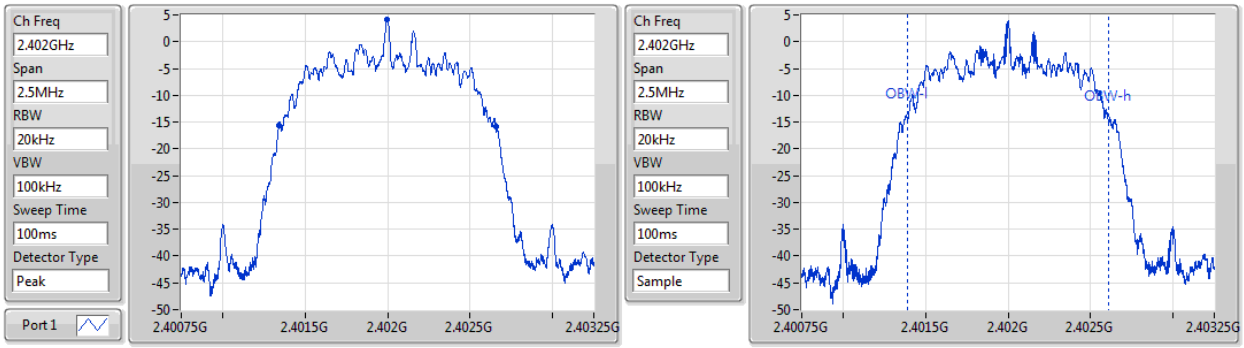
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
701.25k	2.479689G	2.48039G	822.089k	2.479588G	2.48041G	Inf	1

BT-EDR(2Mbps) **EBW**

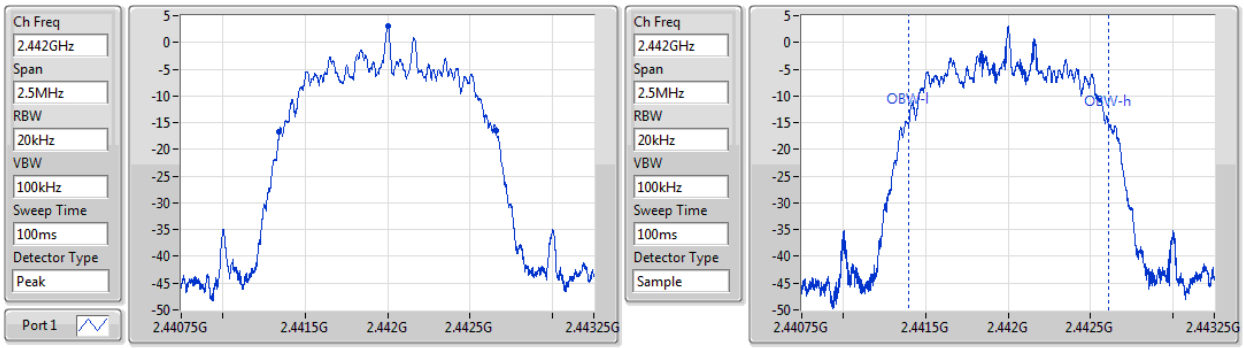
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.316M	2.401341G	2.402658G	1.212M	2.401394G	2.402606G	Inf	1

BT-EDR(2Mbps) **EBW**

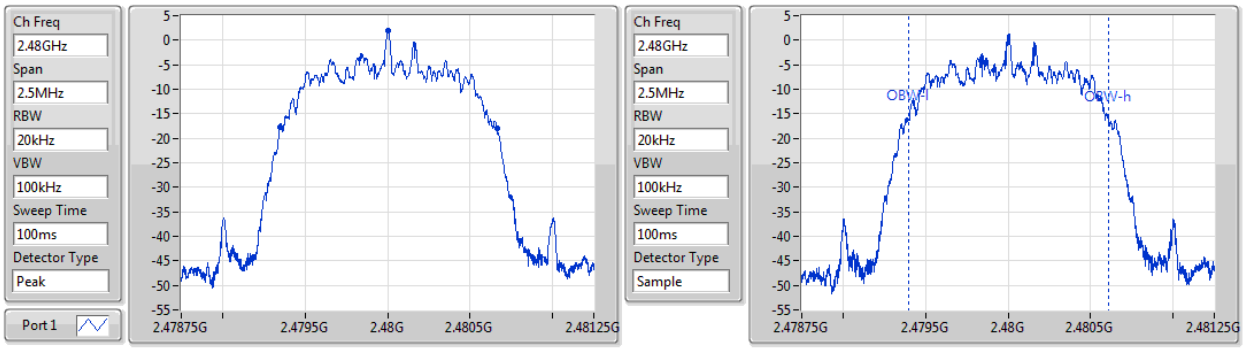
2442MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.316M	2.441344G	2.44266G	1.212M	2.441395G	2.442607G	Inf	1

BT-EDR(2Mbps) **EBW**

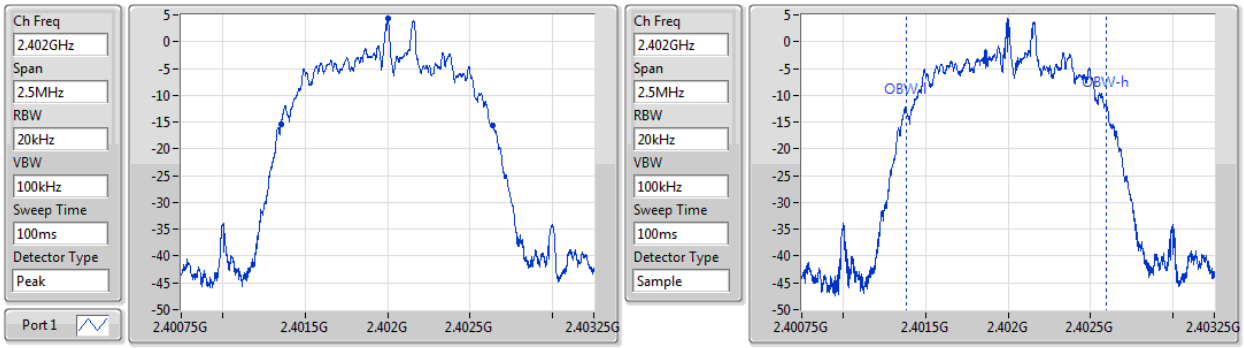
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.316M	2.479346G	2.480663G	1.212M	2.479398G	2.48061G	Inf	1

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

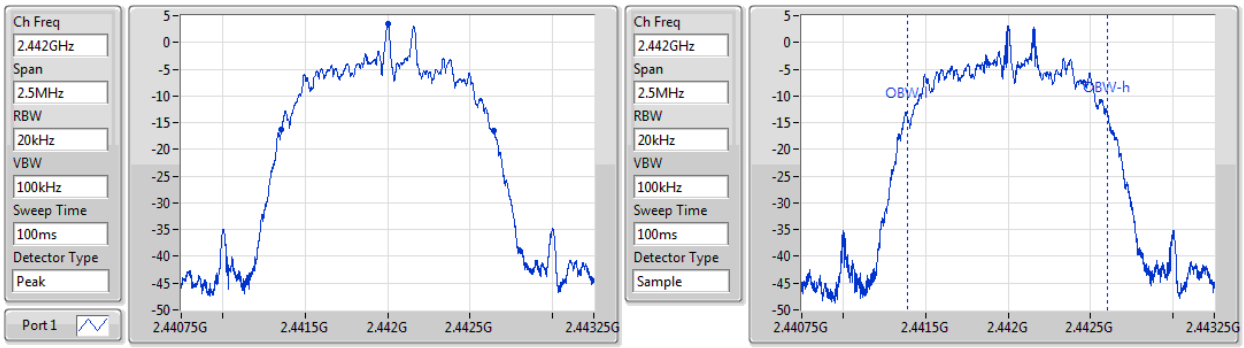
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.285M	2.401354G	2.402639G	1.211M	2.401387G	2.402597G	Inf	1

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

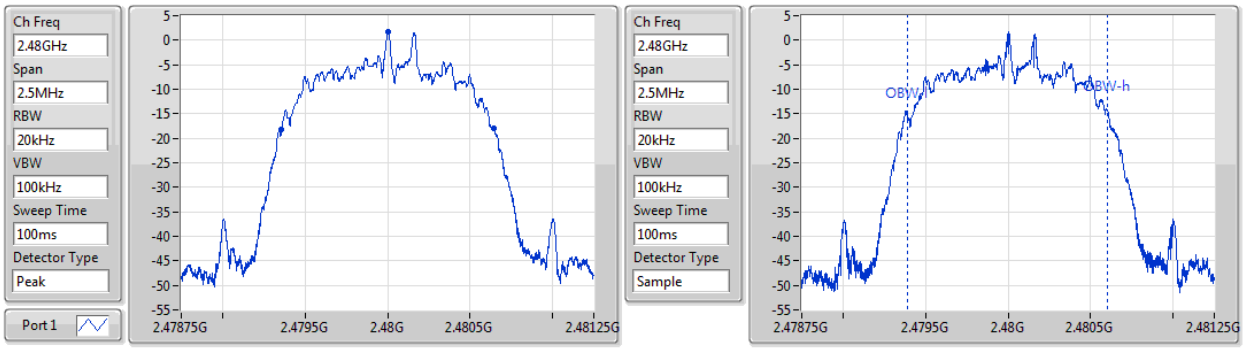
2442MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.285M	2.441356G	2.442641G	1.212M	2.441388G	2.4426G	Inf	1

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

2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.286M	2.479358G	2.480644G	1.212M	2.47939G	2.480602G	Inf	1

Channel Separation-FS Result

Summary

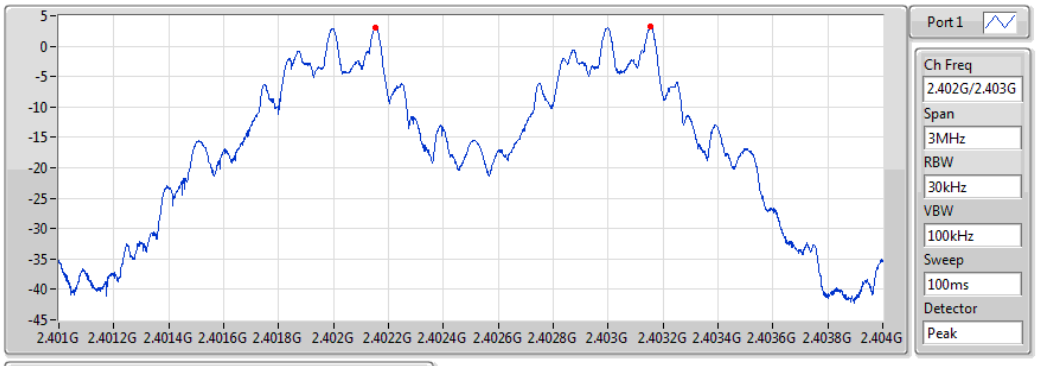
Mode	Max-Space (Hz)	Min-Space (Hz)
BT-BR(1Mbps)	-	-
2.4-2.4835GHz	1.0005M	999k
BT-EDR(2Mbps)	-	-
2.4-2.4835GHz	1.0005M	997.5k
BT-EDR(3Mbps)	-	-
2.4-2.4835GHz	1.0035M	999k

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402154G	2.403153G	999k	467.865k
2442MHz	Pass	2.442157G	2.443156G	999k	467.865k
2480MHz	Pass	2.479158G	2.480159G	1.0005M	467.0325k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.401998G	2.402997G	999k	876.456k
2442MHz	Pass	2.442001G	2.443001G	1.0005M	876.456k
2480MHz	Pass	2.479004G	2.480001G	997.5k	876.456k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402157G	2.403156G	999k	855.81k
2442MHz	Pass	2.442158G	2.443162G	1.0035M	855.81k
2480MHz	Pass	2.479161G	2.48016G	999k	856.476k

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

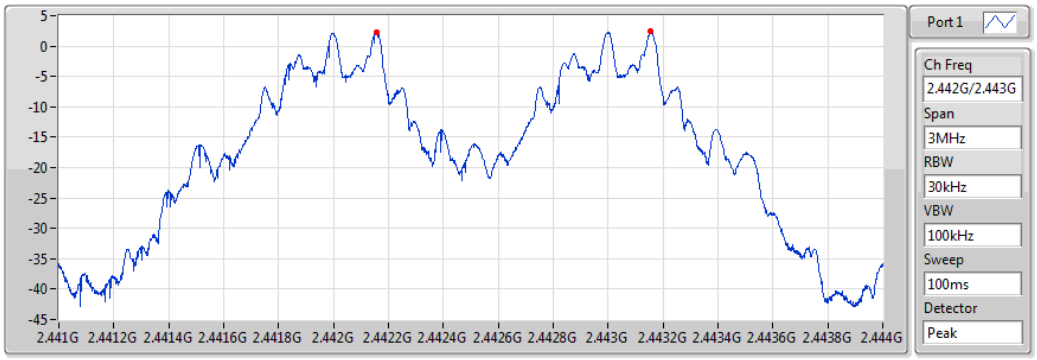
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402154G	2.403153G	999k	467.865k

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

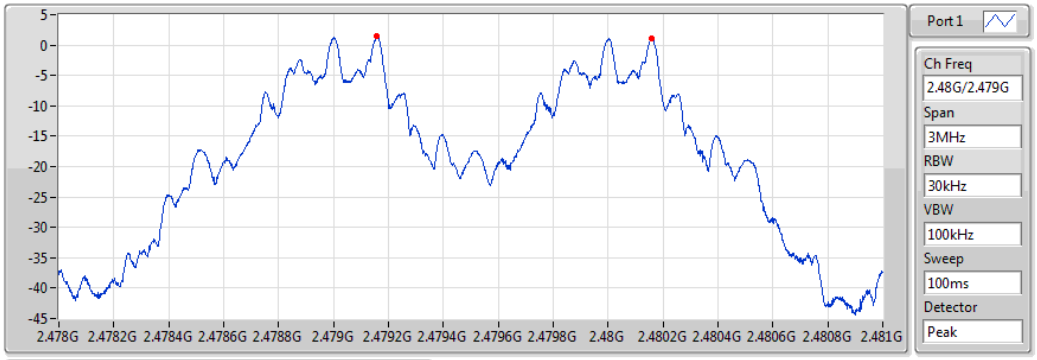
2.442G/2.443GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.442157G	2.443156G	999k	467.865k

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

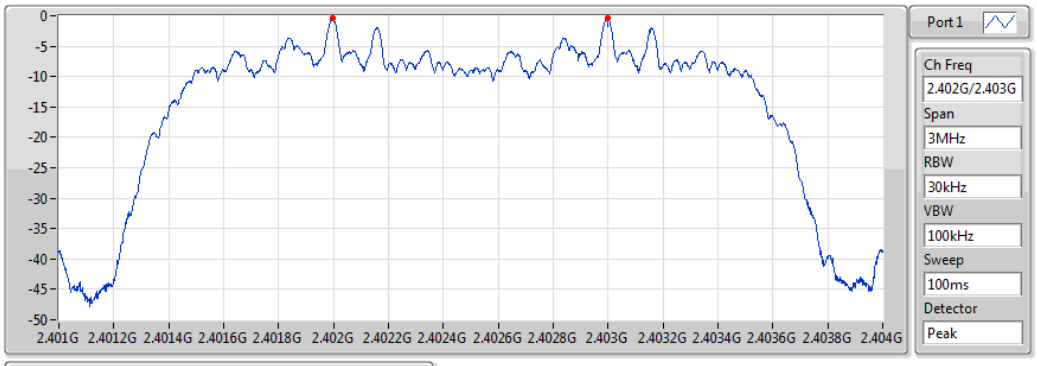
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479158G	2.480159G	1.0005M	467.0325k

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

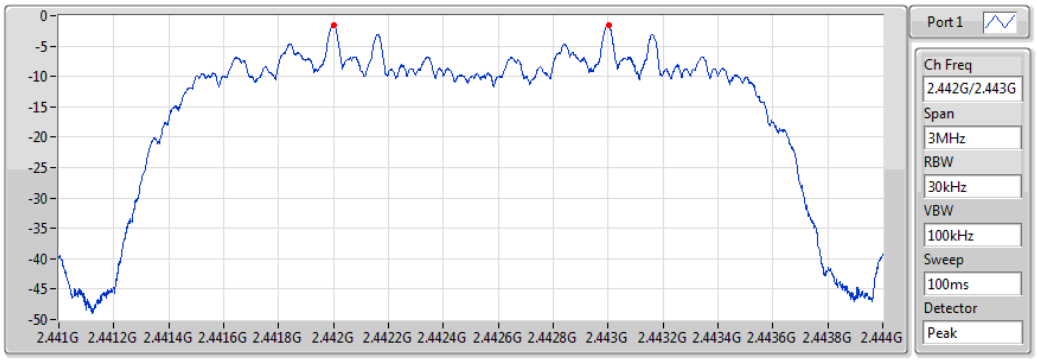
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.401998G	2.402997G	999k	876.456k

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

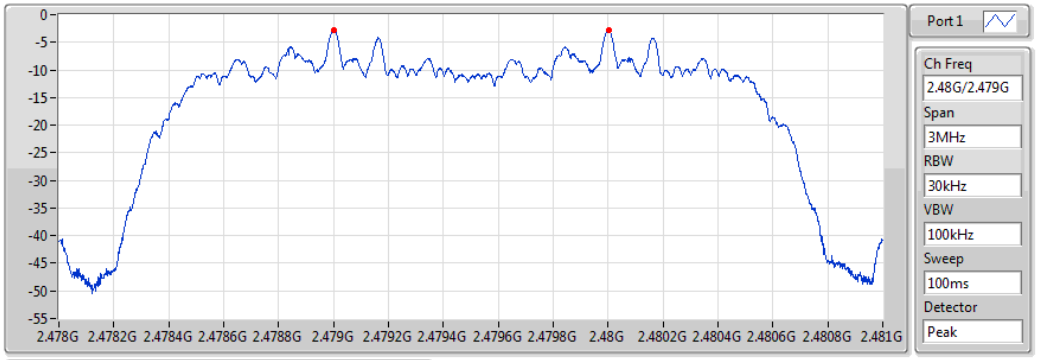
2.442G/2.443GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.442001G	2.443001G	1.0005M	876.456k

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

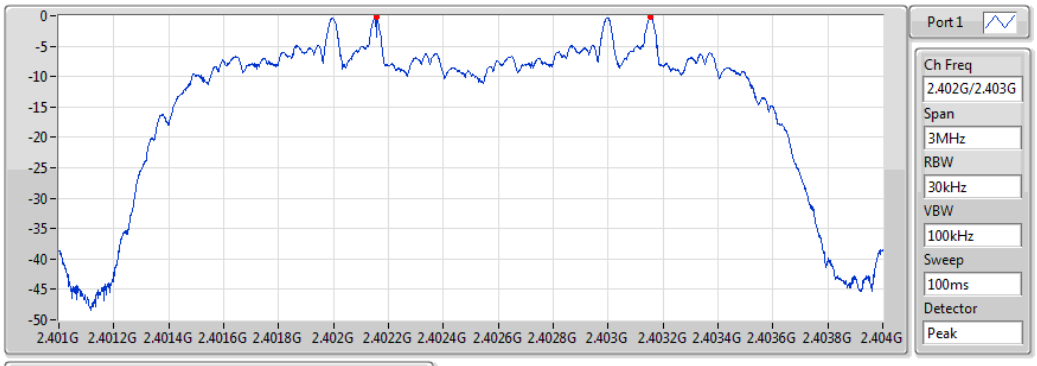
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479004G	2.480001G	997.5k	876.456k

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

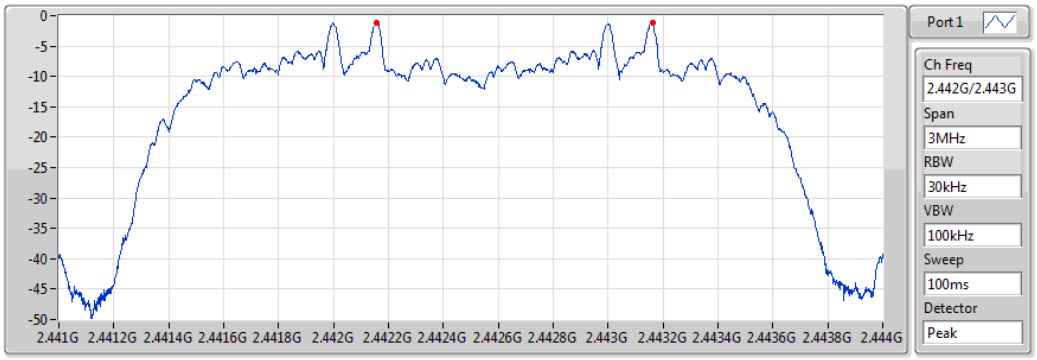
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402157G	2.403156G	999k	855.81k

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

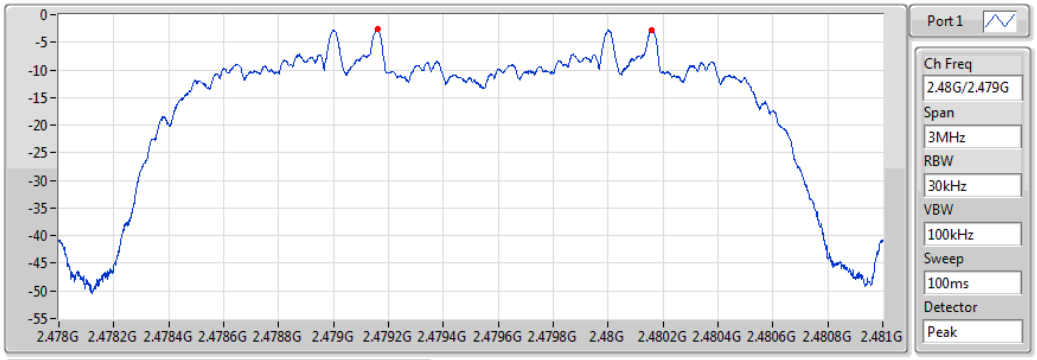
2.442G/2.443GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.442158G	2.443162G	1.0035M	855.81k

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

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479161G	2.48016G	999k	856.476k

Summary

Mode	Power	Power
	(dBm)	(W)
BT-BR(1Mbps)	-	-
2.4-2.4835GHz	9.54	0.00899
BT-EDR(2Mbps)	-	-
2.4-2.4835GHz	6.29	0.00426
BT-EDR(3Mbps)	-	-
2.4-2.4835GHz	6.40	0.00437

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	3.70	9.54	21.00
2442MHz	Pass	3.70	8.82	21.00
2480MHz	Pass	3.70	7.69	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	3.70	6.29	21.00
2442MHz	Pass	3.70	5.19	21.00
2480MHz	Pass	3.70	4.05	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	3.70	6.40	21.00
2442MHz	Pass	3.70	5.45	21.00
2480MHz	Pass	3.70	3.90	21.00

Summary

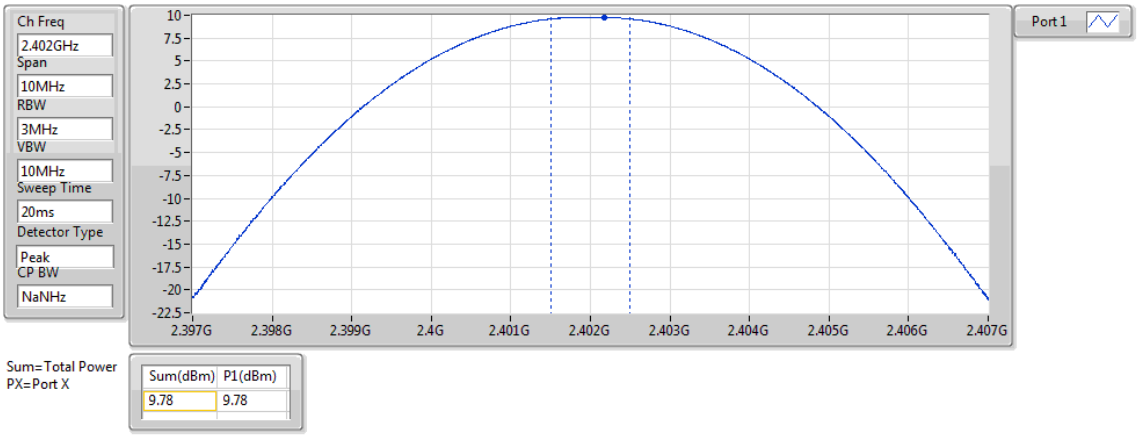
Mode	Power (dBm)	Power (W)
BT-BR(1Mbps)	-	-
2.4-2.4835GHz	9.78	0.00951
BT-EDR(2Mbps)	-	-
2.4-2.4835GHz	8.68	0.00738
BT-EDR(3Mbps)	-	-
2.4-2.4835GHz	9.23	0.00838

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	3.70	9.78	21.00
2442MHz	Pass	3.70	9.04	21.00
2480MHz	Pass	3.70	7.90	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	3.70	8.68	21.00
2442MHz	Pass	3.70	7.70	21.00
2480MHz	Pass	3.70	6.56	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	3.70	9.23	21.00
2442MHz	Pass	3.70	8.34	21.00
2480MHz	Pass	3.70	6.90	21.00

BT-BR(1Mbps) **PK Power**

2402MHz

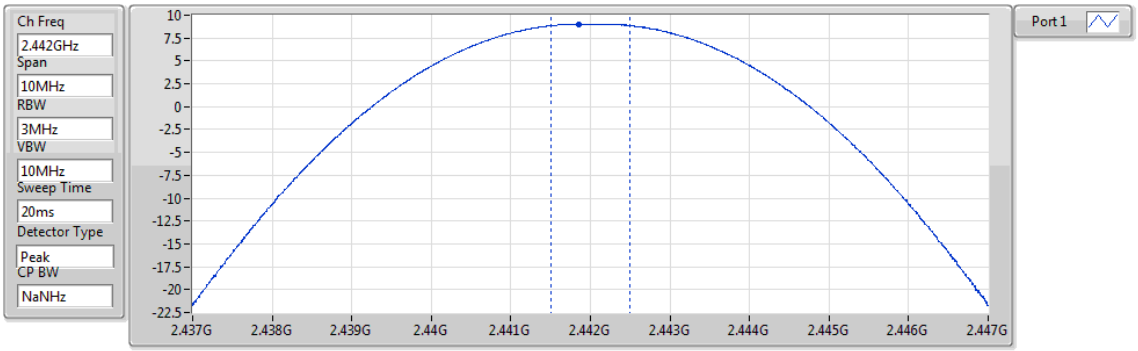


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
9.78	9.78

BT-BR(1Mbps) **PK Power**

2442MHz

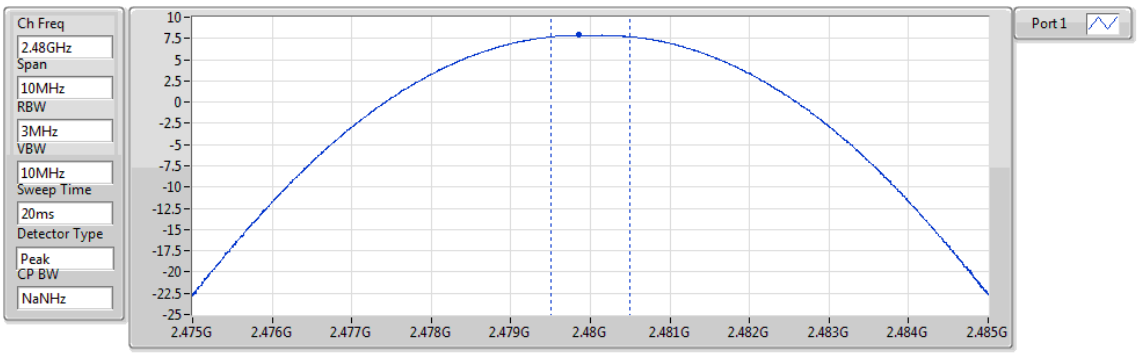


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
9.04	9.04

BT-BR(1Mbps) **PK Power**

2480MHz

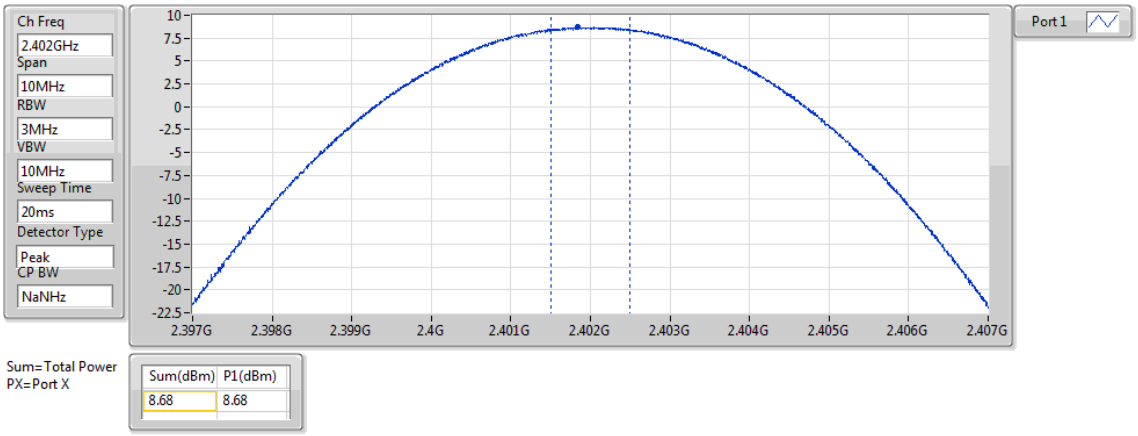


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
7.90	7.90

BT-EDR(2Mbps) **PK Power**

2402MHz

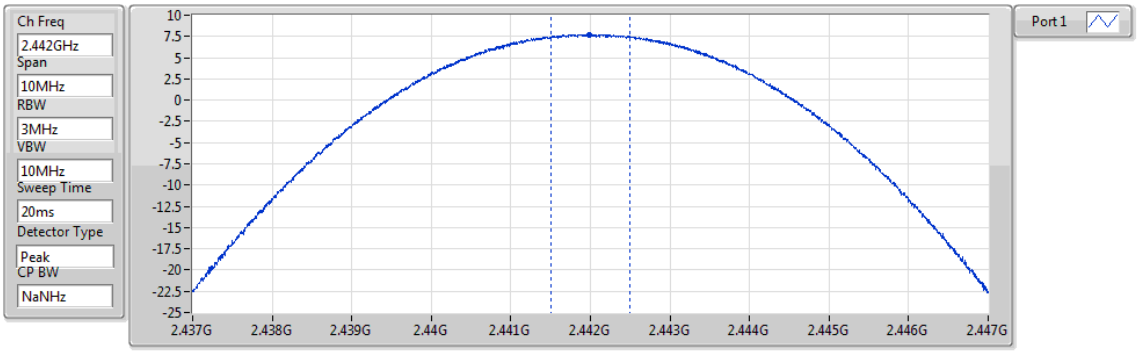


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
8.68	8.68

BT-EDR(2Mbps) **PK Power**

2442MHz

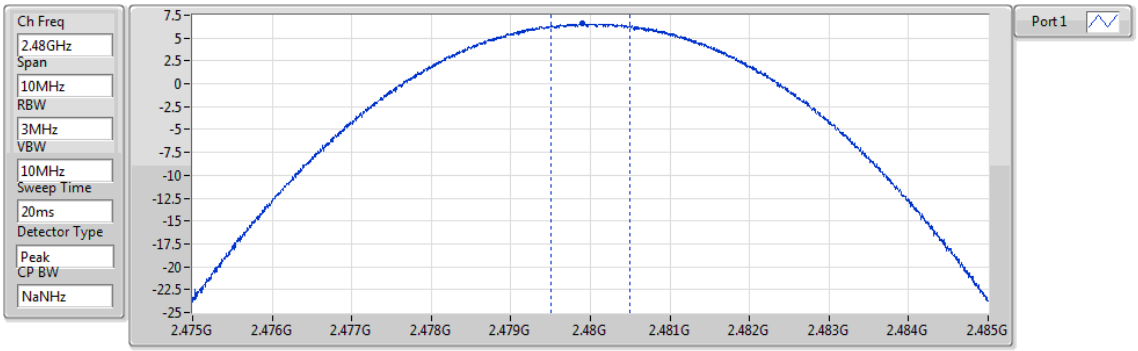


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
7.70	7.70

BT-EDR(2Mbps) **PK Power**

2480MHz

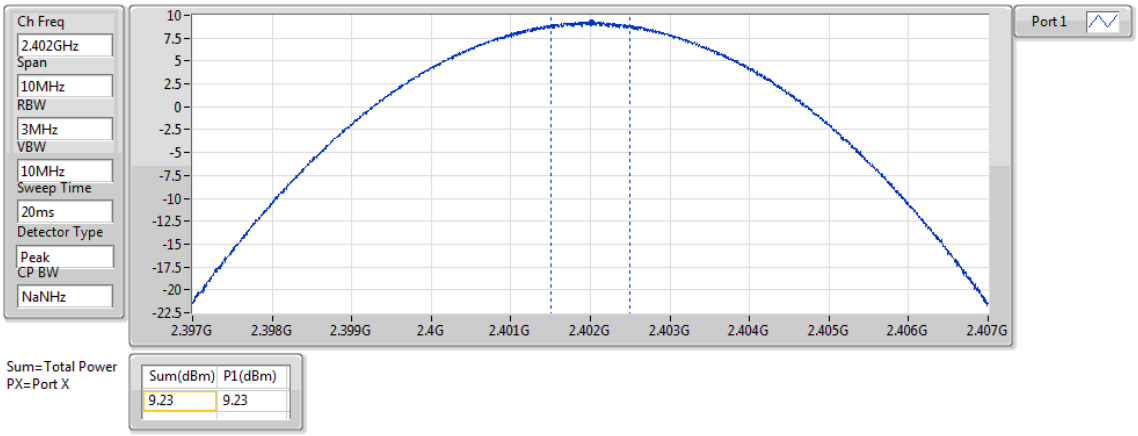


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
6.56	6.56

BT-EDR(3Mbps) **PK Power**

2402MHz

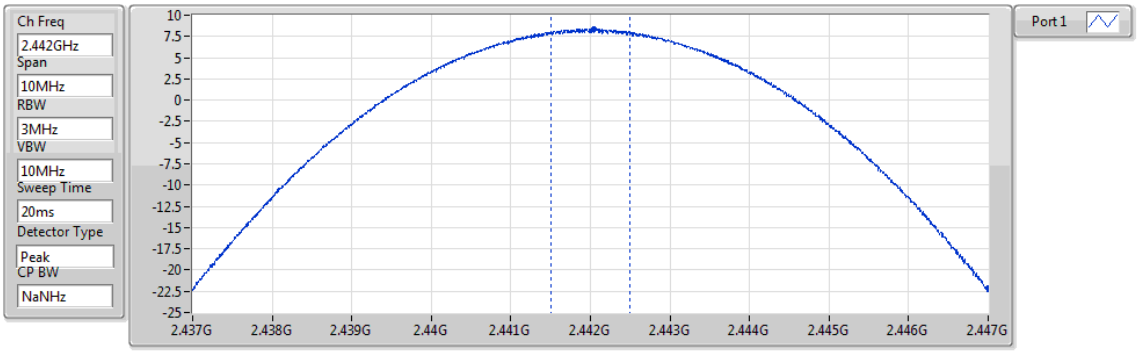


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
9.23	9.23

BT-EDR(3Mbps) **PK Power**

2442MHz

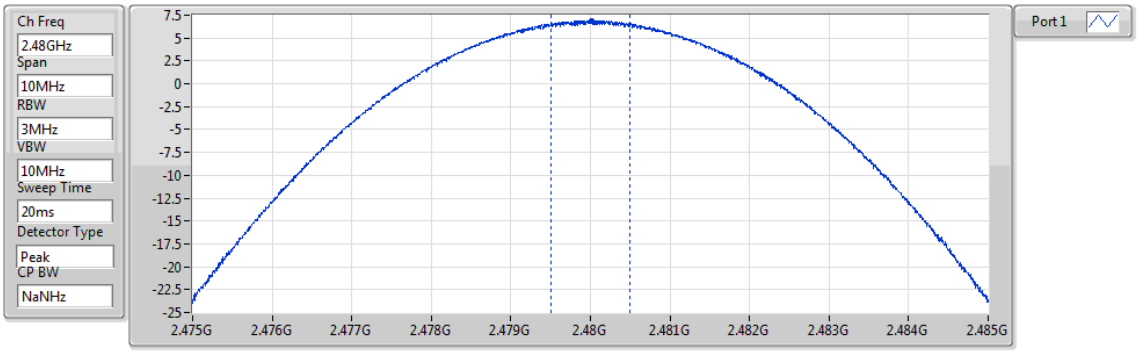


Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
8.34	8.34

BT-EDR(3Mbps) **PK Power**

2480MHz



Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
6.90	6.90

Summary

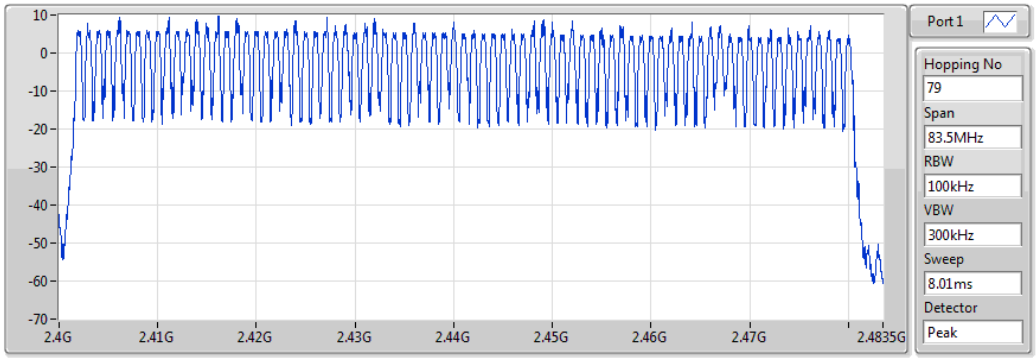
Mode	Max-Hop No
BT-BR(1Mbps)	-
2.4-2.4835GHz	79
BT-EDR(2Mbps)	-
2.4-2.4835GHz	79
BT-EDR(3Mbps)	-
2.4-2.4835GHz	79

Result

Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2442MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2442MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2442MHz	Pass	79	15

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

2442MHz

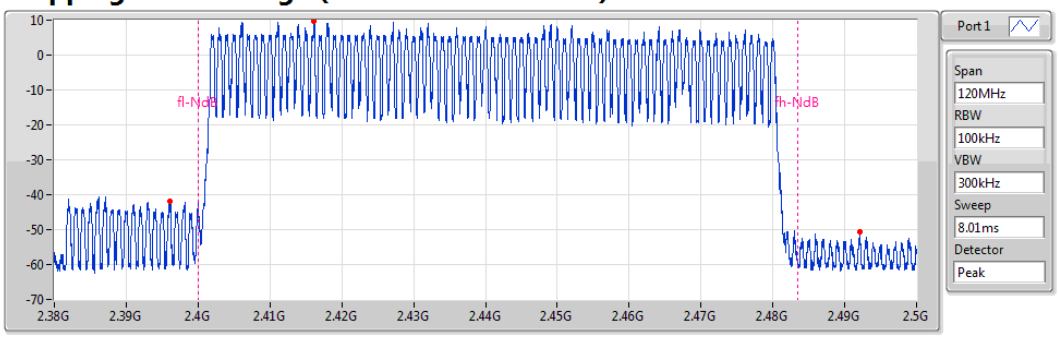


Hopping No	Limit
79	15

BT-BR(1Mbps)

2442MHz

Hopping Ch Bandedge (Non-restricted Band)

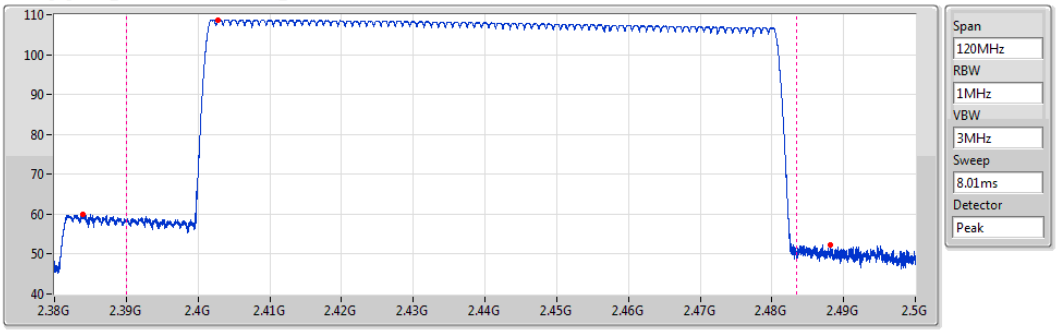


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-10.38	2.41615G	9.62	2.396155G	-41.93	2.49214G	-50.77

BT-BR(1Mbps)

2442MHz

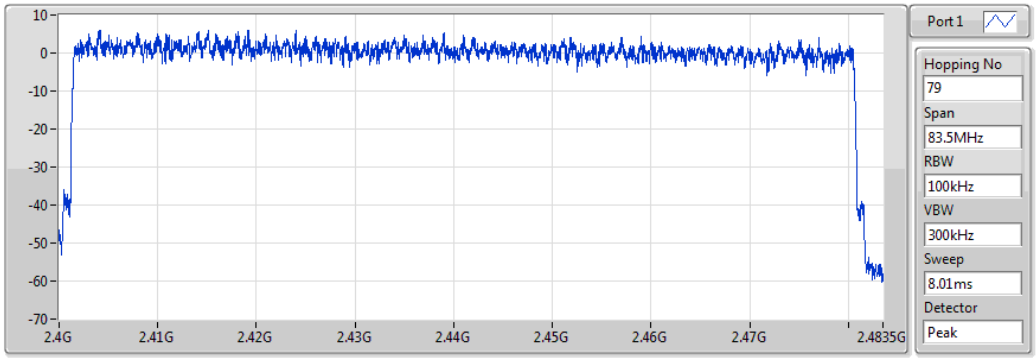
Hopping Ch Bandedge (Restricted Band)



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)
2.40283G	108.66	2.383945G	59.93	29.16	2.48812G	52.43	21.65	74	54	2.892	-30.78

BT-EDR(2Mbps) **Hopping Ch**

2442MHz

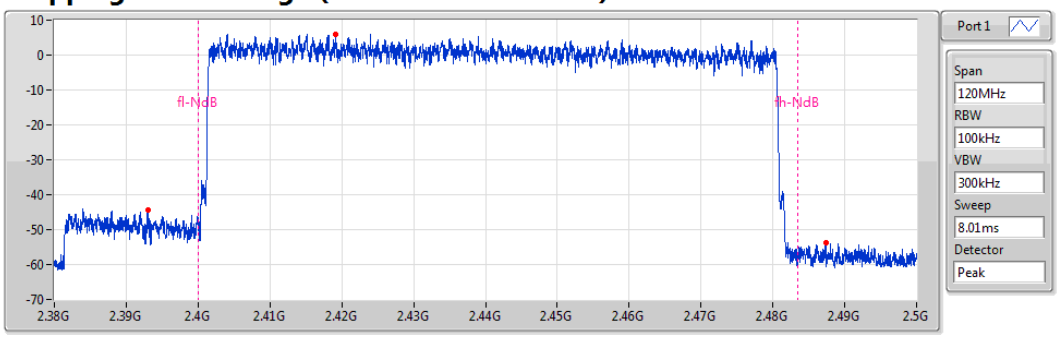


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2442MHz

Hopping Ch Bandedge (Non-restricted Band)

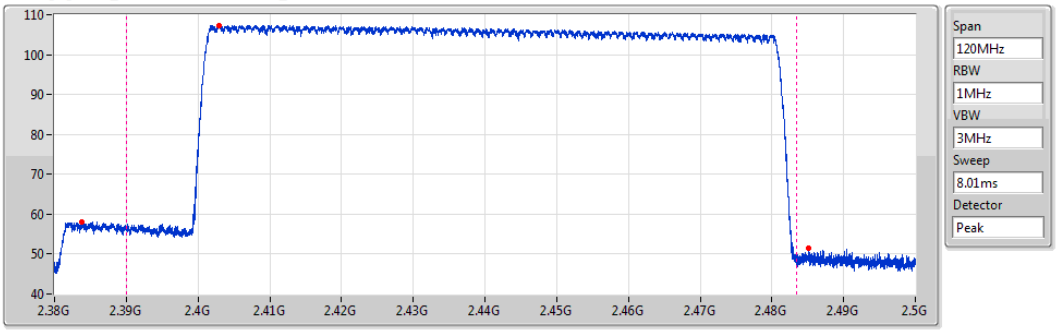


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-13.97	2.41915G	6.03	2.39299G	-44.49	2.487355G	-53.91

BT-EDR(2Mbps)

2442MHz

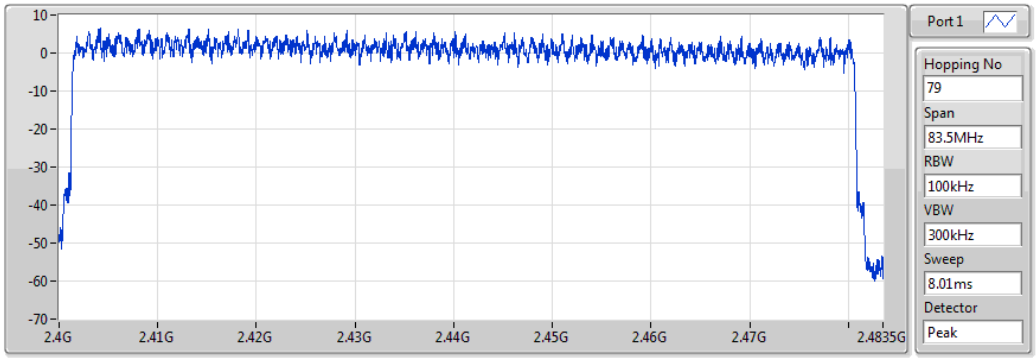
Hopping Ch Bandedge (Restricted Band)



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)
2.402875G	107.35	2.38384G	58.06	27.3	2.48518G	51.51	20.75	74	54	2.895	-30.77

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

2442MHz

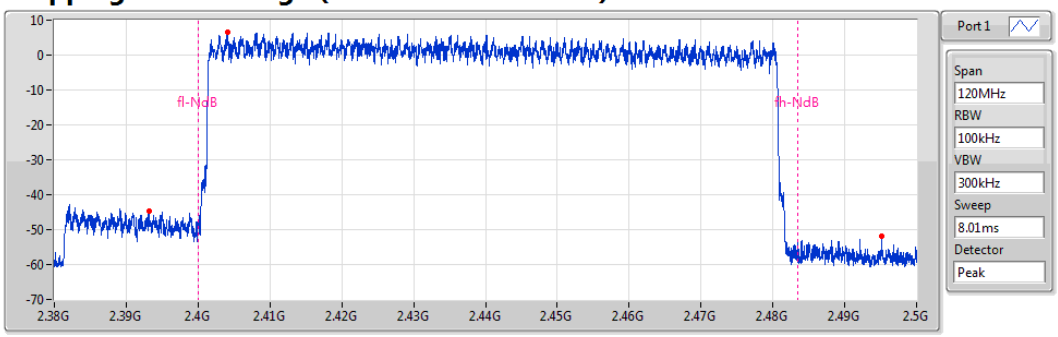


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2442MHz

Hopping Ch Bandedge (Non-restricted Band)

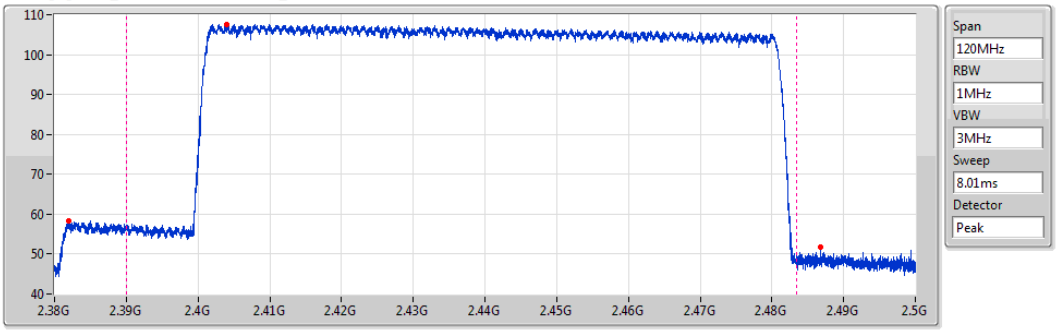


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-13.59	2.40415G	6.41	2.39314G	-44.55	2.49517G	-51.86

BT-EDR(3Mbps)

2442MHz

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)
2.403955G	107.68	2.381995G	58.25	27.49	2.486785G	51.79	21.03	74	54	2.896	-30.76

Summary

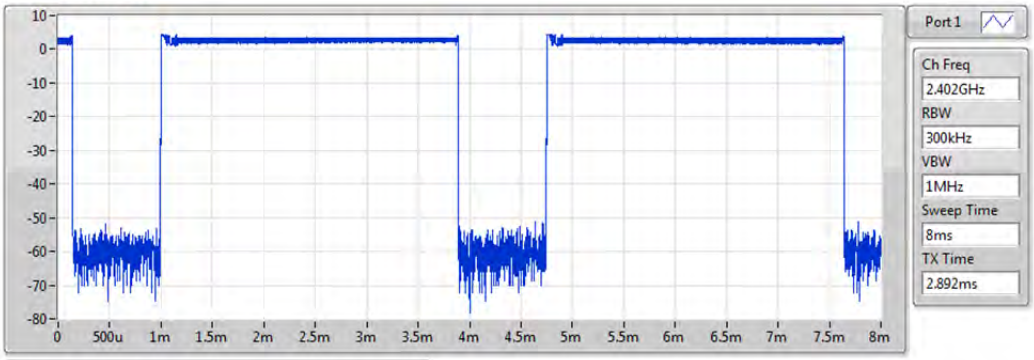
Mode	Max-Dwell (s)
BT-BR(1Mbps)	-
2.4-2.4835GHz	308.2872m
BT-EDR(2Mbps)	-
2.4-2.4835GHz	308.607m
BT-EDR(3Mbps)	-
2.4-2.4835GHz	308.7136m

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	31.6	308.2872m	400m	2.892m
2442MHz	Pass	0	308.2872m	400m	2.892m
2480MHz	Pass	31.6	308.2872m	400m	2.892m
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	31.6	308.607m	400m	2.895m
2442MHz	Pass	0	308.607m	400m	2.895m
2480MHz	Pass	31.6	308.607m	400m	2.895m
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	31.6	308.7136m	400m	2.896m
2442MHz	Pass	0	308.7136m	400m	2.896m
2480MHz	Pass	31.6	308.7136m	400m	2.896m

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

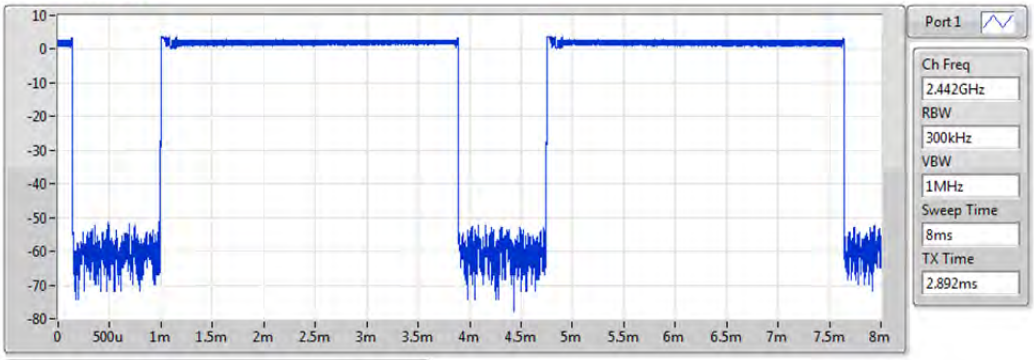
2402MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.2872m	400m	2.892m

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

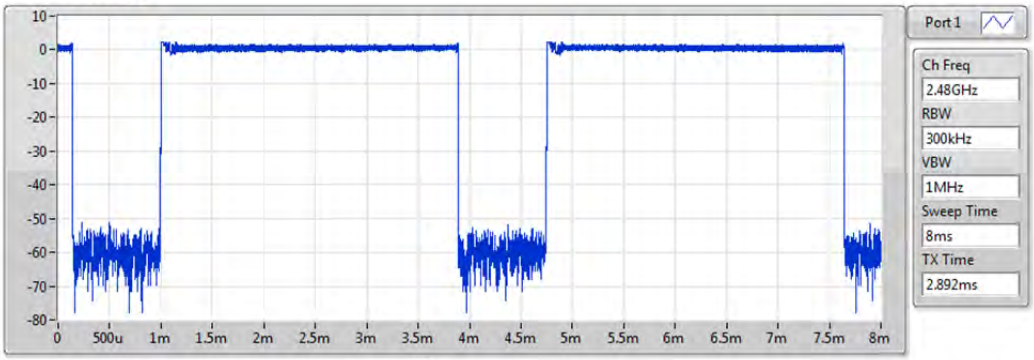
2442MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.2872m	400m	2.892m

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

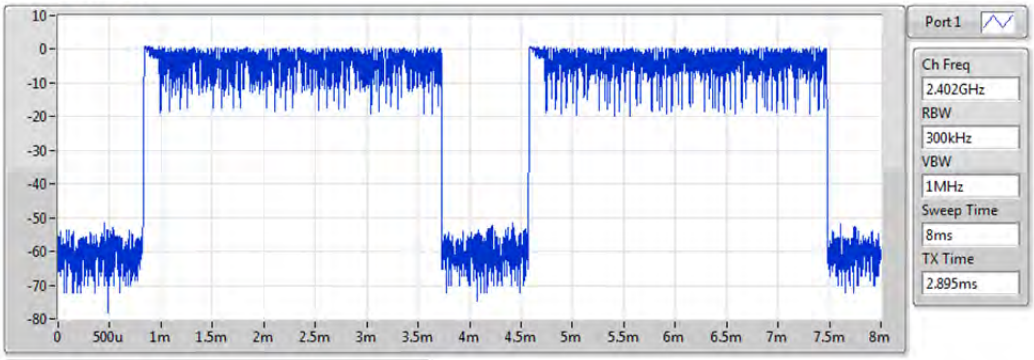
2480MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.2872m	400m	2.892m

BT-EDR(2Mbps) **Dwell**

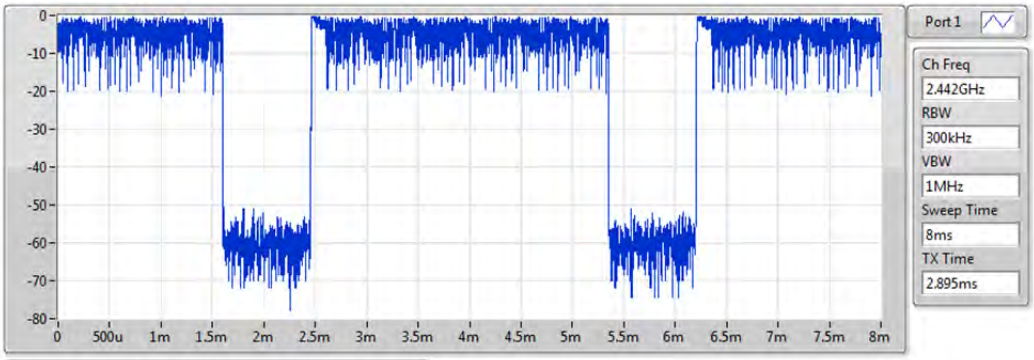
2402MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.607m	400m	2.895m

BT-EDR(2Mbps) **Dwell**

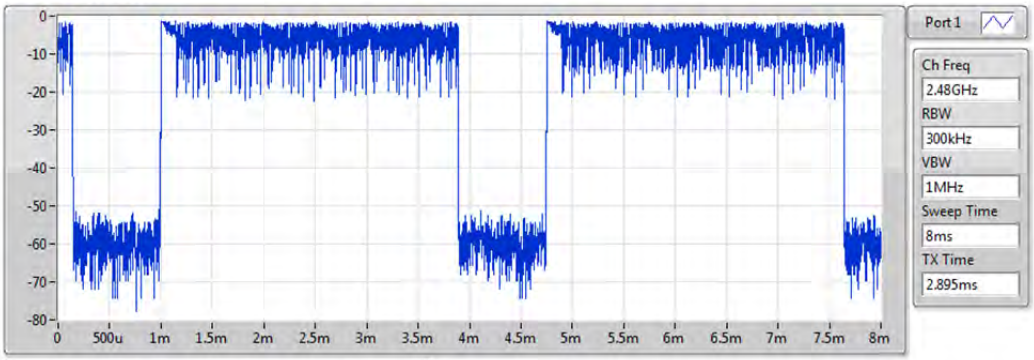
2442MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.607m	400m	2.895m

BT-EDR(2Mbps) **Dwell**

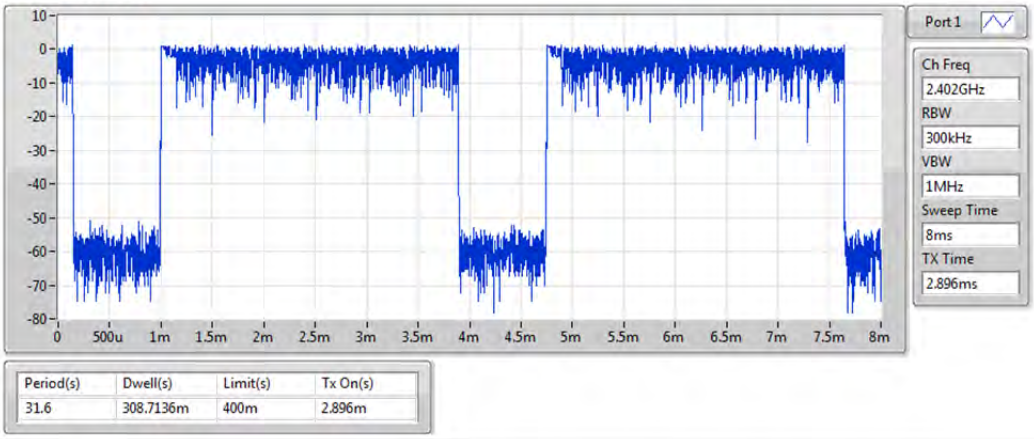
2480MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.607m	400m	2.895m

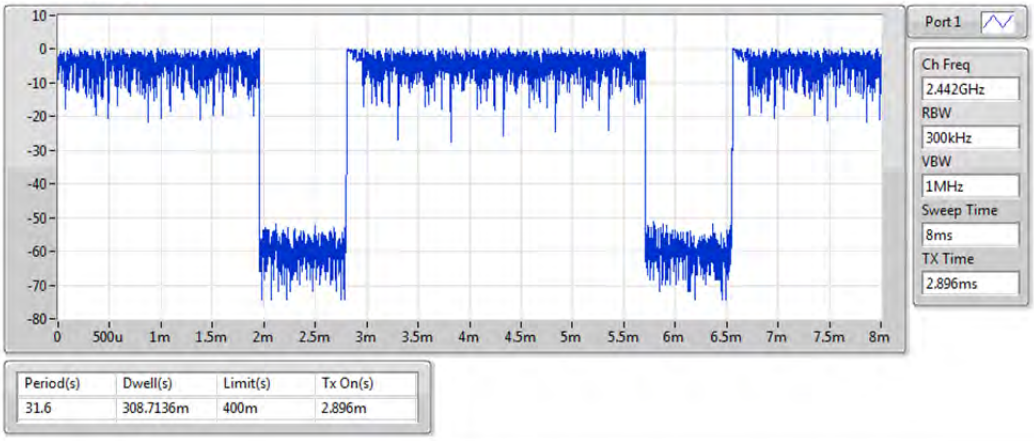
BT-EDR(3Mbps) **Dwell**

2402MHz



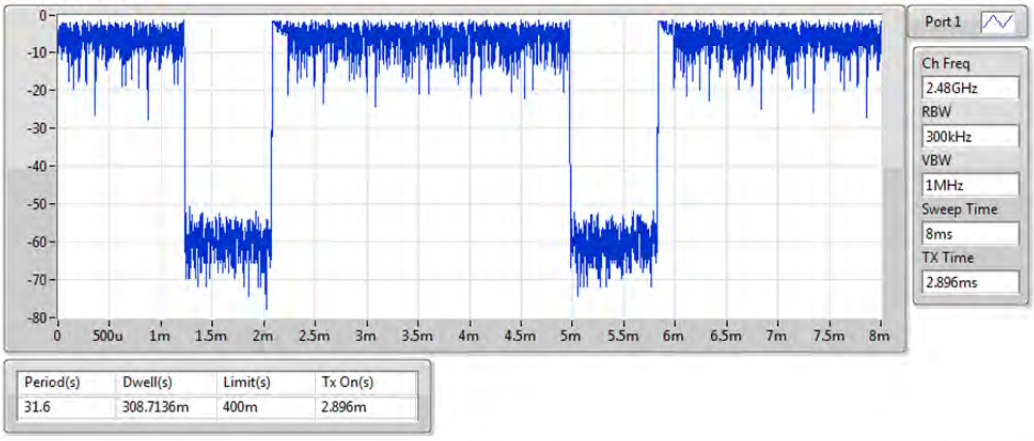
BT-EDR(3Mbps) **Dwell**

2442MHz



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

2480MHz



Summary

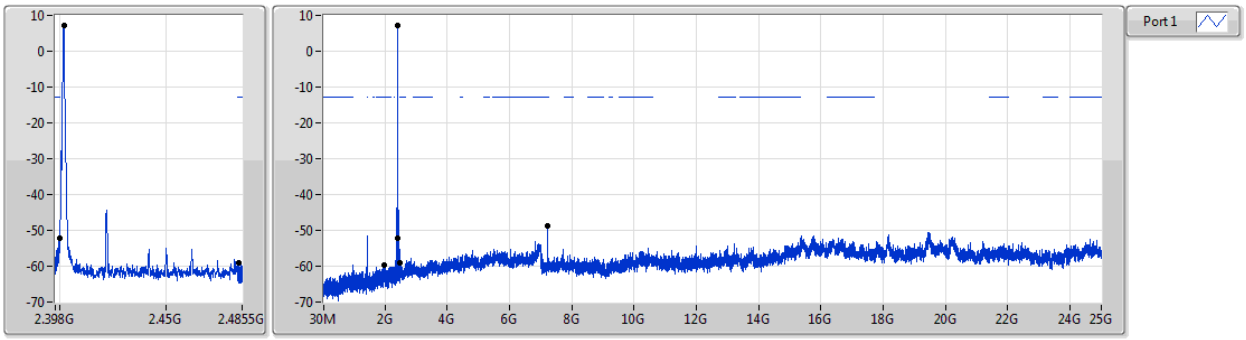
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.479826G	2.69	-17.31	2.067664G	-58.85	2.399668G	-59.02	2.484132G	-57.82	16.683707G	-50.97	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402004G	7.11	-12.89	1.967024G	-59.64	2.399912G	-52.27	2.484148G	-58.98	7.205102G	-48.72	1
2480MHz	Pass	2.480327G	6.19	-13.81	1.954G	-59.56	2.399884G	-59.10	2.483996G	-56.96	16.376947G	-51.19	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402004G	4.42	-15.58	1.745616G	-60.06	2.39952G	-51.03	2.483672G	-58.89	16.720293G	-51.76	1
2480MHz	Pass	2.479993G	3.08	-16.92	2.06648G	-59.70	2.398556G	-59.48	2.48366G	-57.68	15.048591G	-52.02	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40167G	4.36	-15.64	2.002544G	-58.38	2.399616G	-50.76	2.484312G	-59.77	7.205102G	-50.70	1
2480MHz	Pass	2.479826G	2.69	-17.31	2.067664G	-58.85	2.399668G	-59.02	2.484132G	-57.82	16.683707G	-50.97	1

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

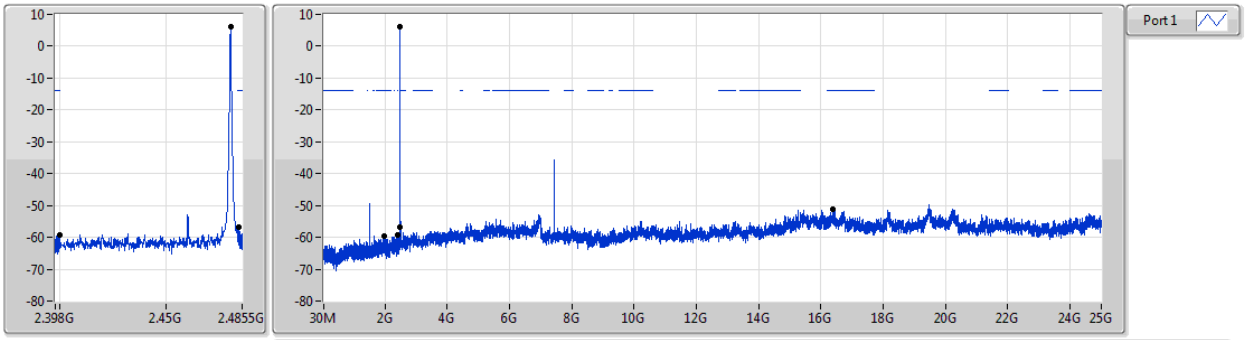
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402004G	7.11	-12.89	1.967024G	-59.64	2.399912G	-52.27	2.484148G	-58.98	7.205102G	-48.72	1

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

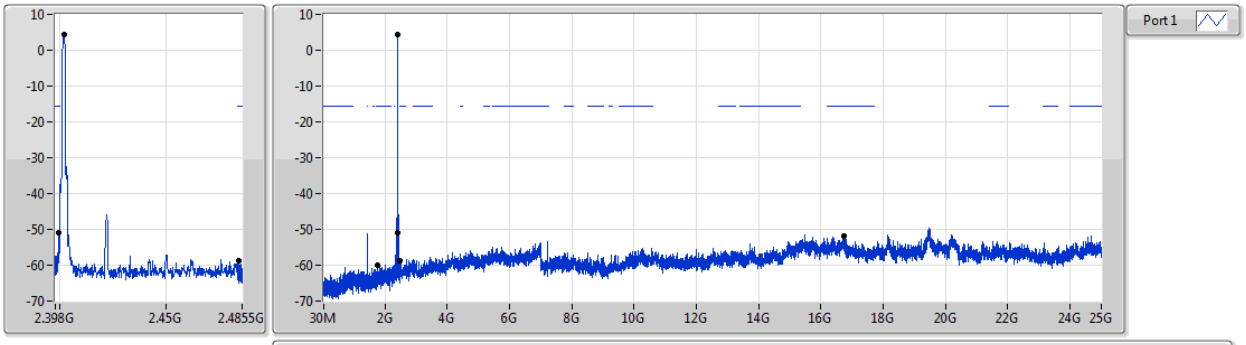
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.480327G	6.19	-13.81	1.954G	-59.56	2.399884G	-59.10	2.483996G	-56.96	16.376947G	-51.19	1

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

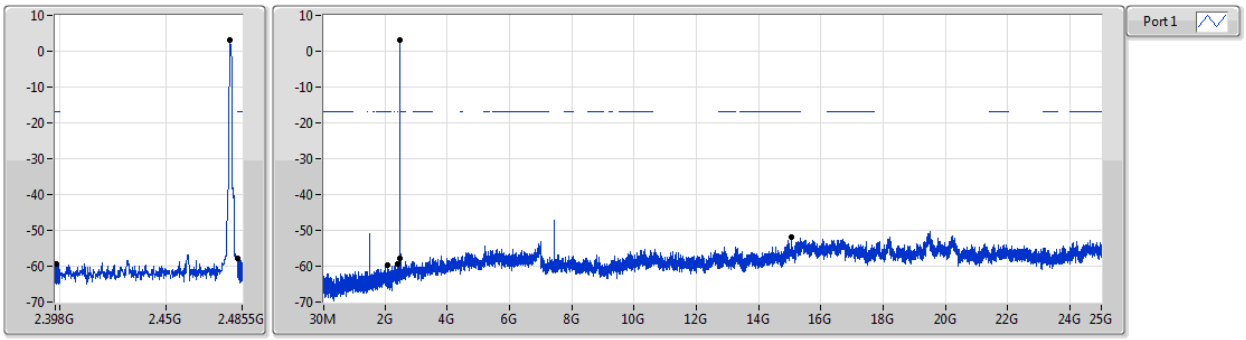
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402004G	4.42	-15.58	1.745616G	-60.06	2.39952G	-51.03	2.483672G	-58.89	16.720293G	-51.76	1

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

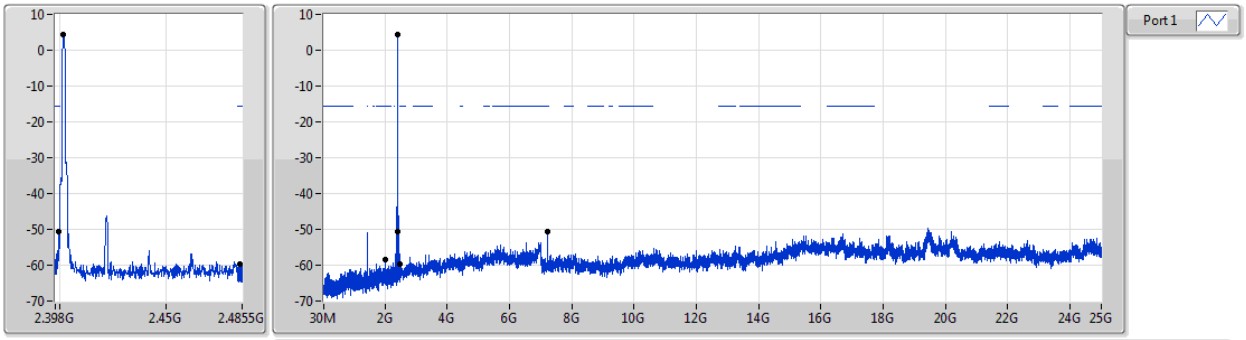
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.479993G	3.08	-16.92	2.06648G	-59.70	2.398556G	-59.48	2.48366G	-57.68	15.048591G	-52.02	1

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

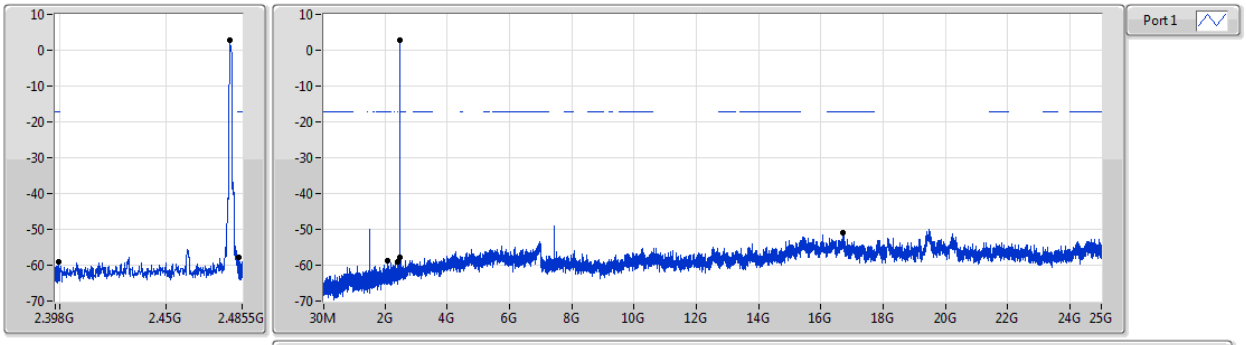
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40167G	4.36	-15.64	2.002544G	-58.38	2.399616G	-50.76	2.484312G	-59.77	7.205102G	-50.70	1

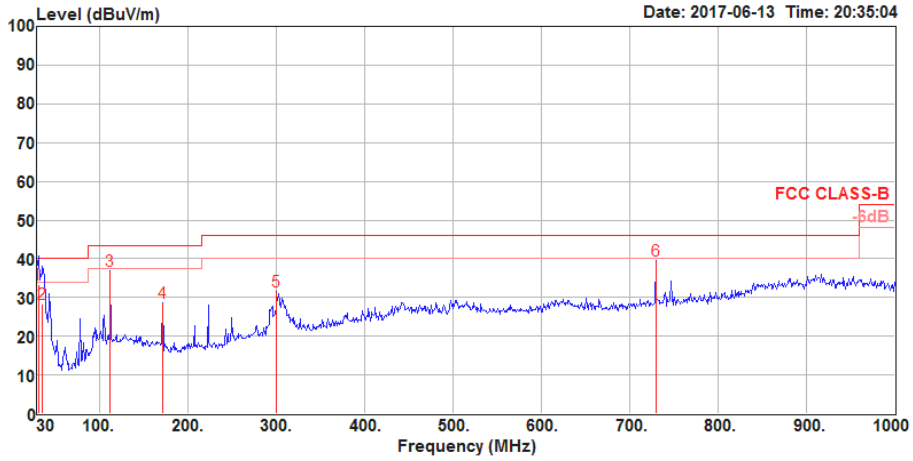
BT-EDR(3Mbps) **CSE NdB**

2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.479826G	2.69	-17.31	2.067664G	-58.85	2.399668G	-59.02	2.484132G	-57.82	16.683707G	-50.97	1

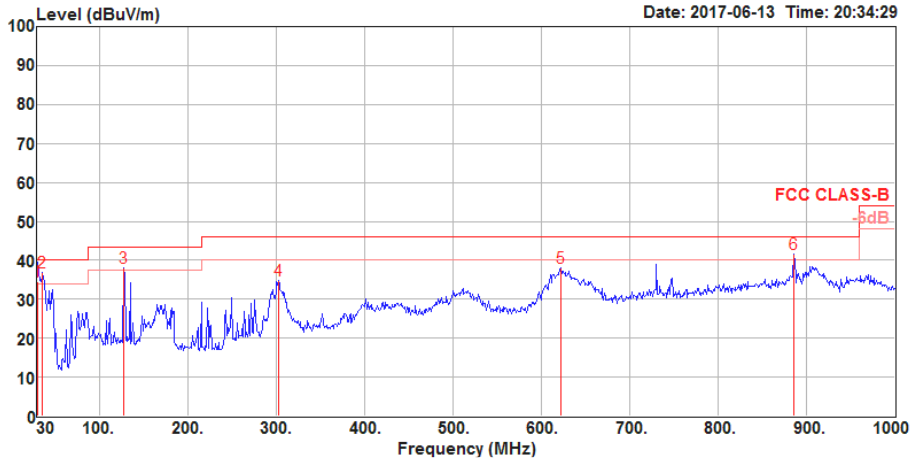
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Horizontal
Operating Function	Intentional - CTX		



	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	30.97	33.49	40.00	-6.51	40.27	0.64	25.01	32.43	100	140	QP	HORIZONTAL
2	35.82	28.38	40.00	-11.62	37.95	0.69	22.17	32.43	100	75	QP	HORIZONTAL
3	112.45	36.95	43.50	-6.55	49.76	1.23	18.33	32.37	300	1	Peak	HORIZONTAL
4	171.62	28.71	43.50	-14.79	43.57	1.51	15.95	32.32	300	1	Peak	HORIZONTAL
5	300.63	31.51	46.00	-14.49	42.08	2.00	19.70	32.27	200	283	Peak	HORIZONTAL
6	729.37	39.55	46.00	-6.45	42.82	3.14	25.86	32.27	100	304	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.)

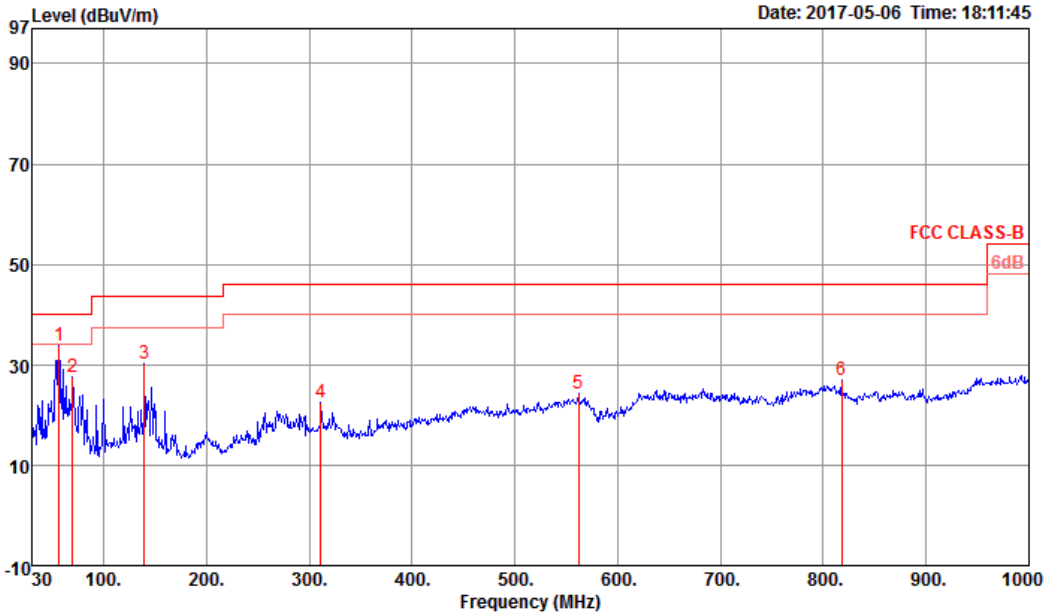
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	Intentional - CTX		



	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	34.64	40.00	-5.36	40.84	0.63	25.60	32.43	200	30	QP	VERTICAL
2	35.82	36.82	40.00	-3.18	46.39	0.69	22.17	32.43	100	239	Peak	VERTICAL
3	127.00	37.96	43.50	-5.54	50.47	1.30	18.55	32.36	150	246	Peak	VERTICAL
4	302.57	34.81	46.00	-11.19	45.31	2.01	19.76	32.27	200	223	Peak	VERTICAL
5	621.70	37.99	46.00	-8.01	42.36	2.89	25.12	32.38	100	188	Peak	VERTICAL
6	885.54	41.64	46.00	-4.36	42.42	3.47	27.41	31.66	100	195	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.)

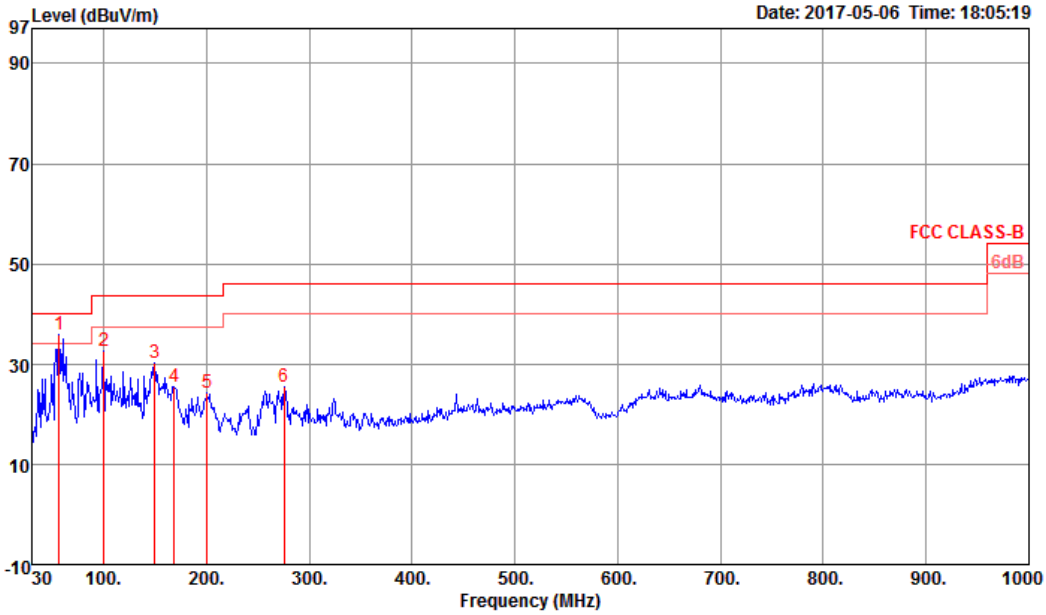
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Unintentional - Normal Link		



	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	56.19	33.67	40.00	-6.33	48.26	0.43	13.34	28.36	100	0	Peak	HORIZONTAL
2	69.77	27.66	40.00	-12.34	43.09	0.48	12.40	28.31	100	0	Peak	HORIZONTAL
3	139.61	30.27	43.50	-13.23	39.54	0.89	17.80	27.96	100	0	Peak	HORIZONTAL
4	311.30	22.59	46.00	-23.41	28.51	1.54	20.02	27.48	100	0	Peak	HORIZONTAL
5	561.56	24.27	46.00	-21.73	26.15	2.19	24.58	28.65	100	0	Peak	HORIZONTAL
6	817.64	26.82	46.00	-19.18	25.38	2.84	26.79	28.19	100	0	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.)

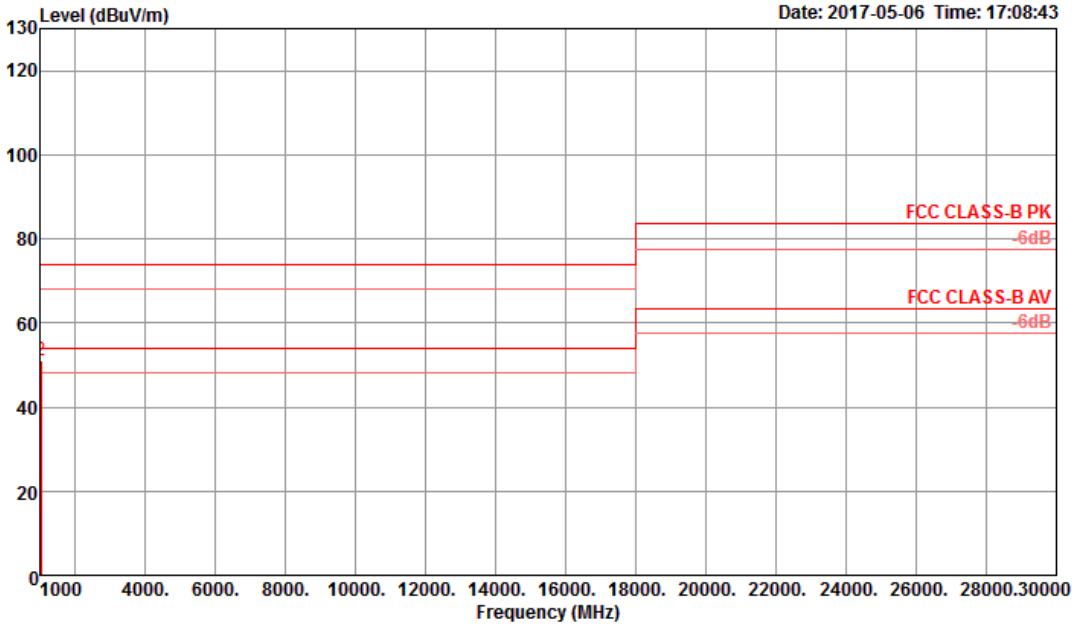
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Unintentional - Normal Link		



	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	56.19	35.84	40.00	-4.16	50.43	0.43	13.34	28.36	300	360	Peak	VERTICAL
2	99.84	32.68	43.50	-10.82	43.12	0.69	17.10	28.23	300	360	Peak	VERTICAL
3	149.31	30.34	43.50	-13.16	40.28	0.92	17.04	27.90	300	360	Peak	VERTICAL
4	168.71	25.46	43.50	-18.04	36.09	1.02	16.16	27.81	300	360	Peak	VERTICAL
5	200.72	24.39	43.50	-19.11	34.51	1.13	16.41	27.66	300	360	Peak	VERTICAL
6	275.41	25.57	46.00	-20.43	32.29	1.42	19.30	27.44	300	360	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.)

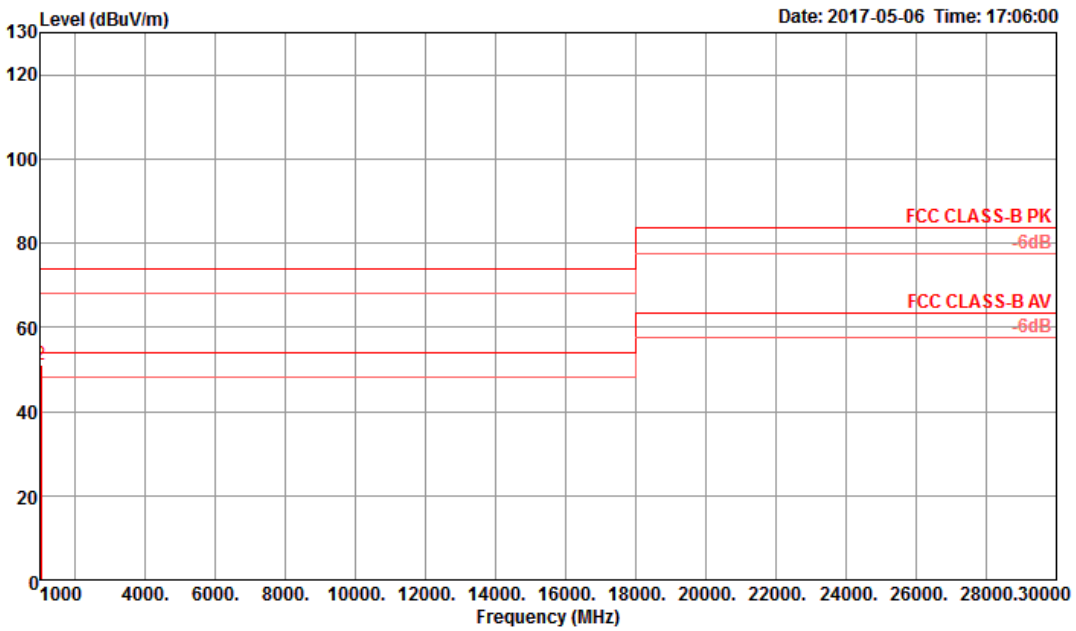
RSE Unintentional 1GHz~5th			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Unintentional - Normal Link		



	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	1031.32	38.62	54.00	-15.38	48.13	2.43	23.84	35.78	123	141	Average	HORIZONTAL
2	1031.86	51.04	74.00	-22.96	60.54	2.43	23.84	35.77	123	141	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.)

RSE Unintentional 1GHz~5th			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Intentional - 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	1032.42	37.95	54.00	-16.05	47.45	2.43	23.84	35.77	134	215	Average	VERTICAL
2	1034.29	50.92	74.00	-23.08	60.41	2.43	23.85	35.77	134	215	Peak	VERTICAL

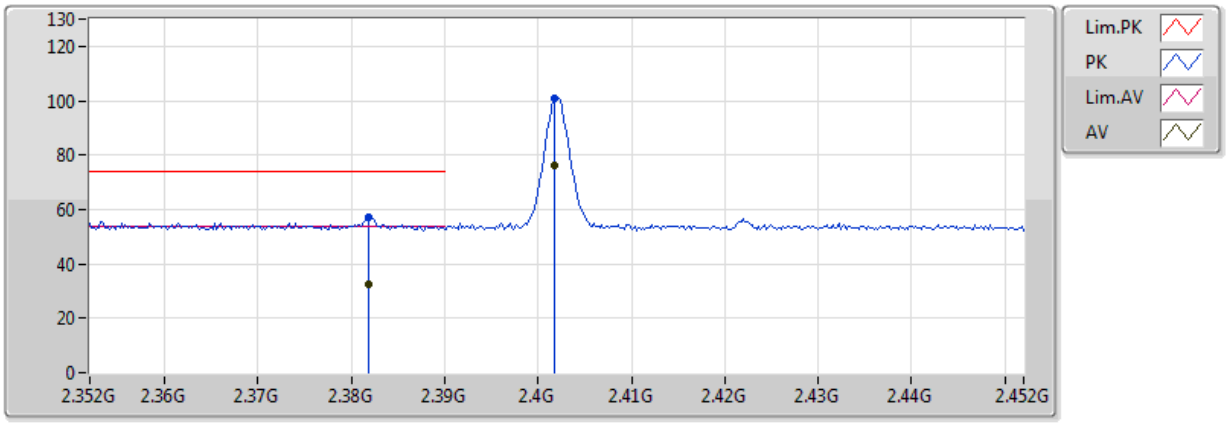
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	PK	2.382G	61.84	74.00	-12.16	31.05	3	H	0	1.00	-

BT-BR(1Mbps)

2402MHz_TX

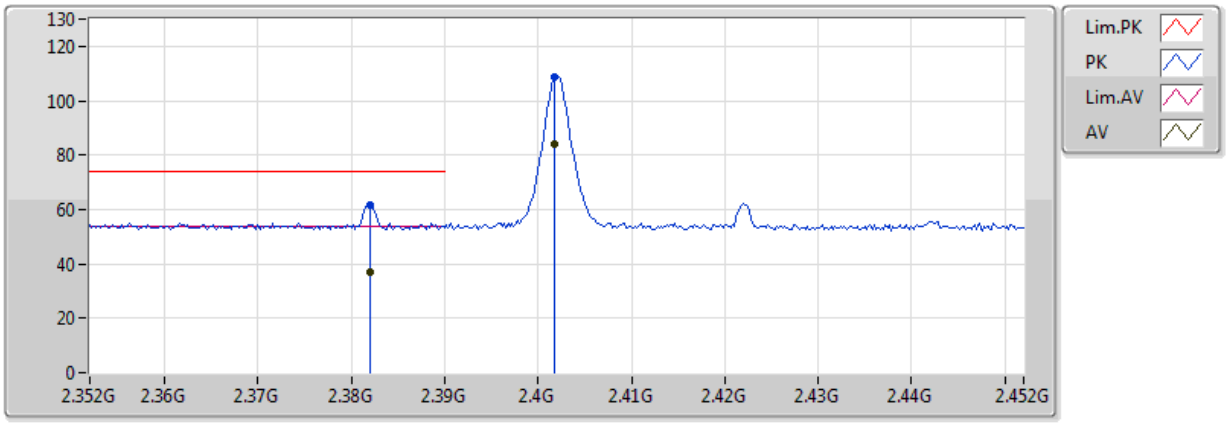


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3818G	32.60	54.00	-21.40	31.05	3	V	302	1.59	-
AV	2.4018G	76.15	Inf	-Inf	31.02	3	V	302	1.59	-
PK	2.3818G	57.33	74.00	-16.67	31.05	3	V	302	1.59	-
PK	2.4018G	100.88	Inf	-Inf	31.02	3	V	302	1.59	-

BT-BR(1Mbps)

2402MHz_TX

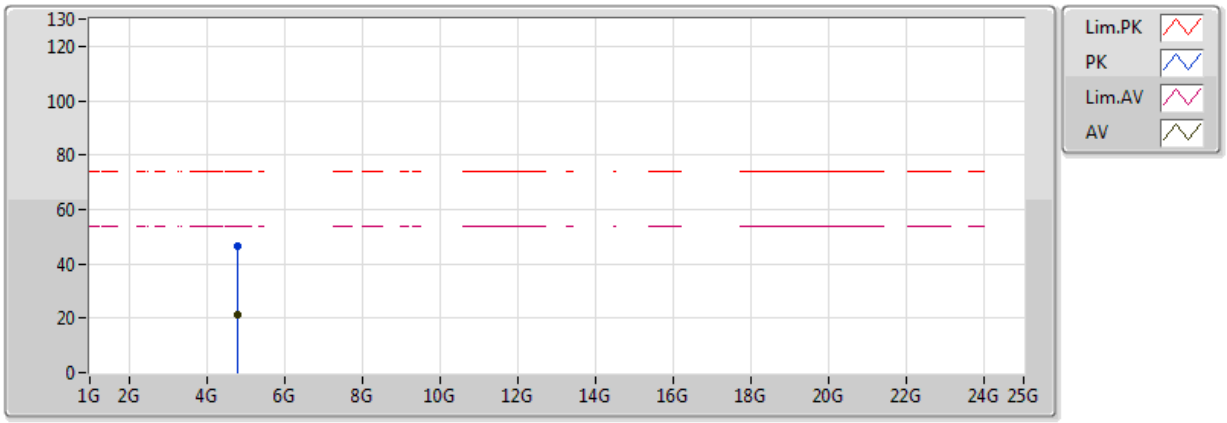


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.382G	37.11	54.00	-16.89	31.05	3	H	0	1.00	-
AV	2.4018G	84.18	Inf	-Inf	31.02	3	H	0	1.00	-
PK	2.382G	61.84	74.00	-12.16	31.05	3	H	0	1.00	-
PK	2.4018G	108.91	Inf	-Inf	31.02	3	H	0	1.00	-

BT-BR(1Mbps)

2402MHz_TX

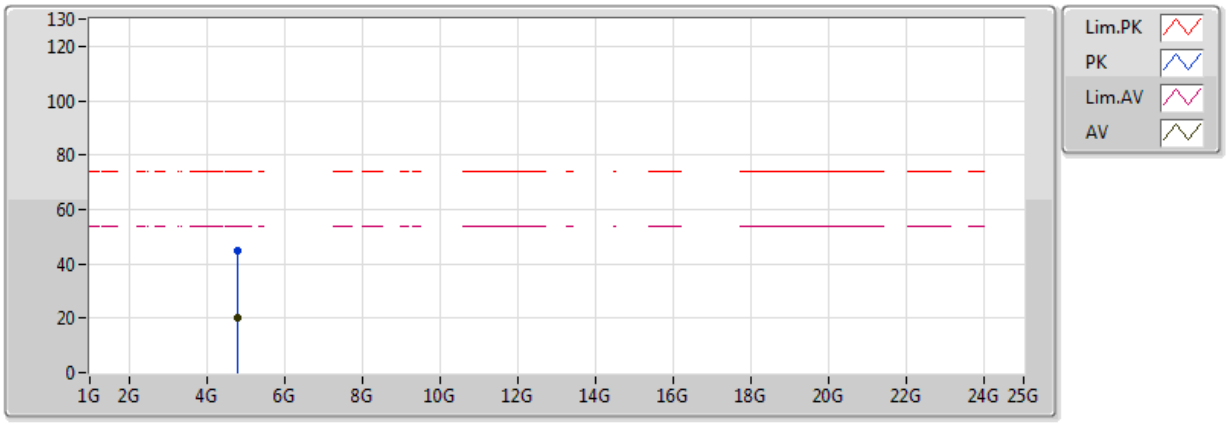


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8112G	21.54	54.00	-32.46	3.36	3	V	350	2.10	-
PK	4.8112G	46.27	74.00	-27.73	3.36	3	V	350	2.10	-

BT-BR(1Mbps)

2402MHz_TX

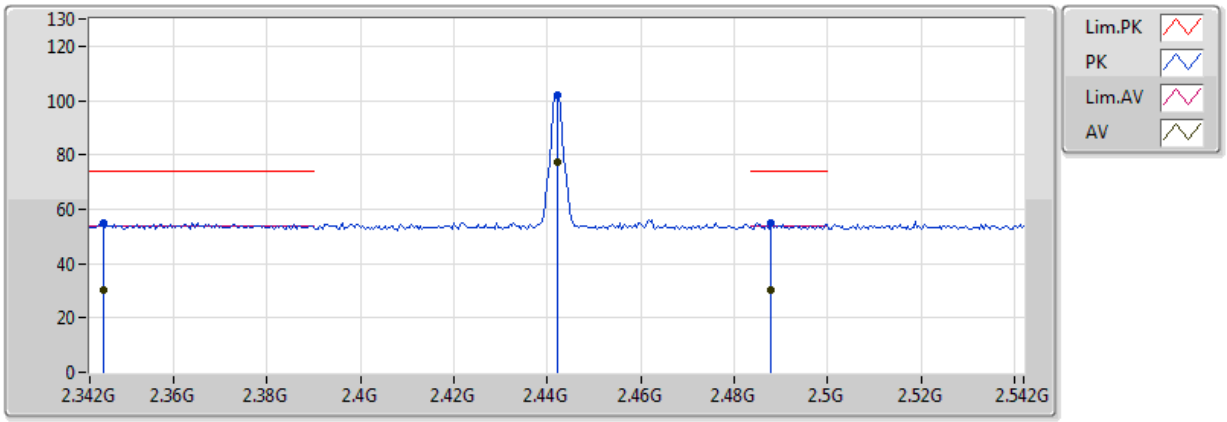


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.779G	20.12	54.00	-33.88	3.27	3	H	294	1.50	-
PK	4.779G	44.85	74.00	-29.15	3.27	3	H	294	1.50	-

BT-BR(1Mbps)

2442MHz_TX

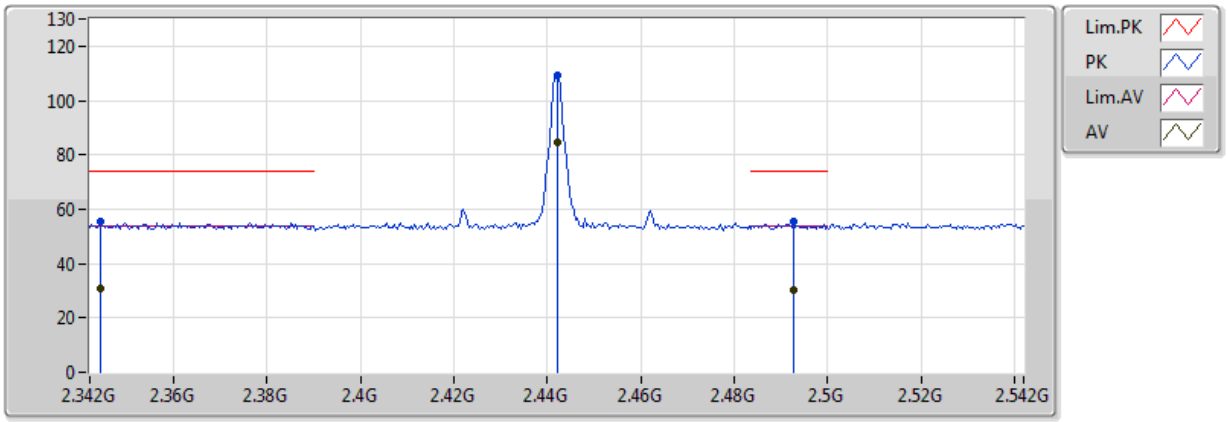


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3448G	30.06	54.00	-23.94	31.10	3	V	18	1.50	-
AV	2.442G	77.36	Inf	-Inf	30.97	3	V	18	1.50	-
AV	2.488G	30.26	54.00	-23.74	30.91	3	V	18	1.50	-
PK	2.3448G	54.79	74.00	-19.21	31.10	3	V	18	1.50	-
PK	2.442G	102.09	Inf	-Inf	30.97	3	V	18	1.50	-
PK	2.488G	54.99	74.00	-19.01	30.91	3	V	18	1.50	-

BT-BR(1Mbps)

2442MHz_TX

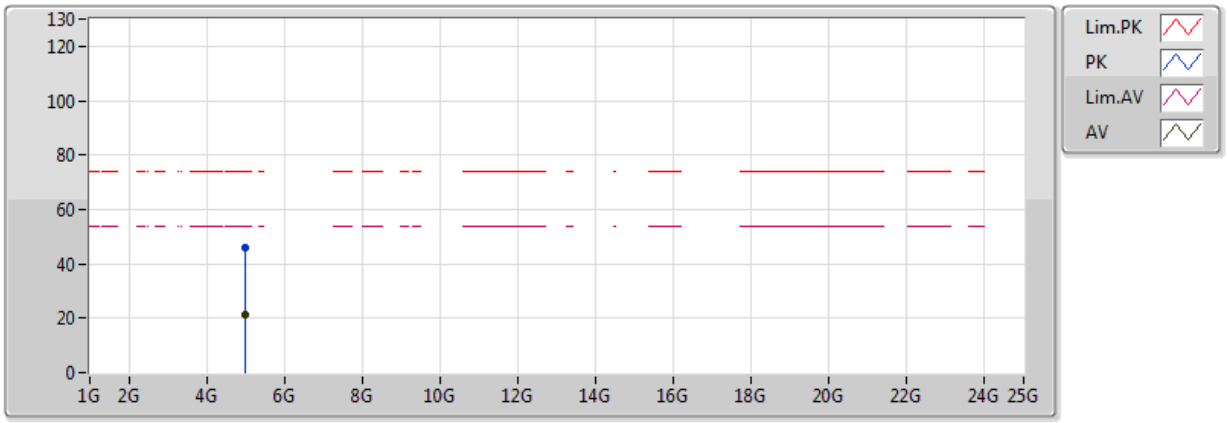


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3444G	30.77	54.00	-23.23	31.10	3	H	17	1.73	-
AV	2.442G	84.76	Inf	-Inf	30.97	3	H	17	1.73	-
AV	2.4928G	30.49	54.00	-23.51	30.91	3	H	17	1.73	-
PK	2.3444G	55.50	74.00	-18.50	31.10	3	H	17	1.73	-
PK	2.442G	109.49	Inf	-Inf	30.97	3	H	17	1.73	-
PK	2.4928G	55.22	74.00	-18.78	30.91	3	H	17	1.73	-

BT-BR(1Mbps)

2442MHz_TX

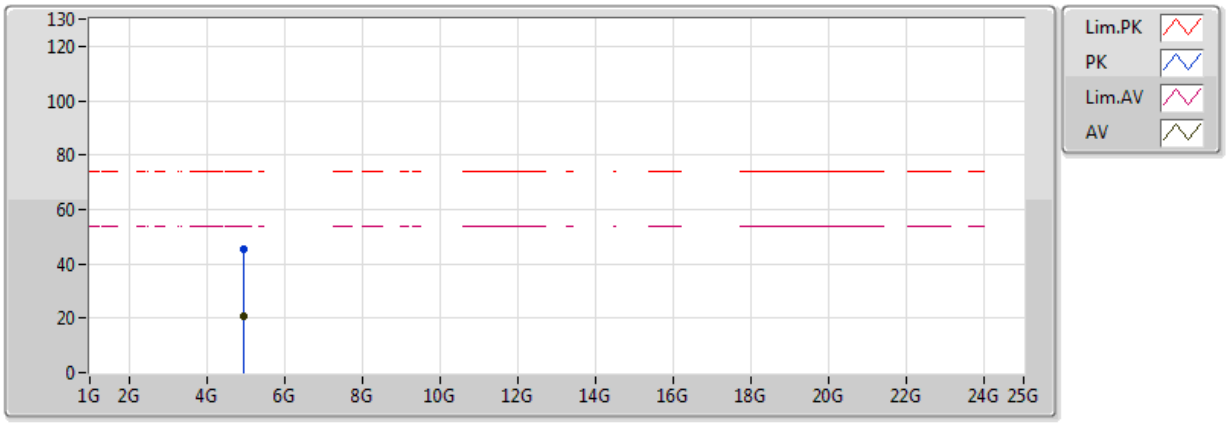


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9784G	21.29	54.00	-32.71	3.86	3	V	267	1.27	-
PK	4.9784G	46.02	74.00	-27.98	3.86	3	V	267	1.27	-

BT-BR(1Mbps)

2442MHz_TX

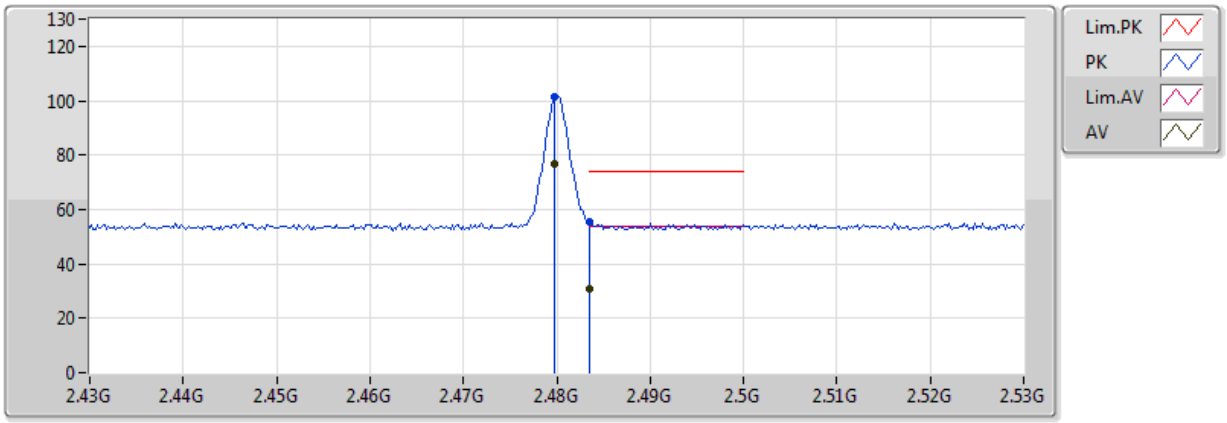


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9704G	20.86	54.00	-33.14	3.83	3	H	287	1.64	-
PK	4.9704G	45.59	74.00	-28.41	3.83	3	H	287	1.64	-

BT-BR(1Mbps)

2480MHz_TX

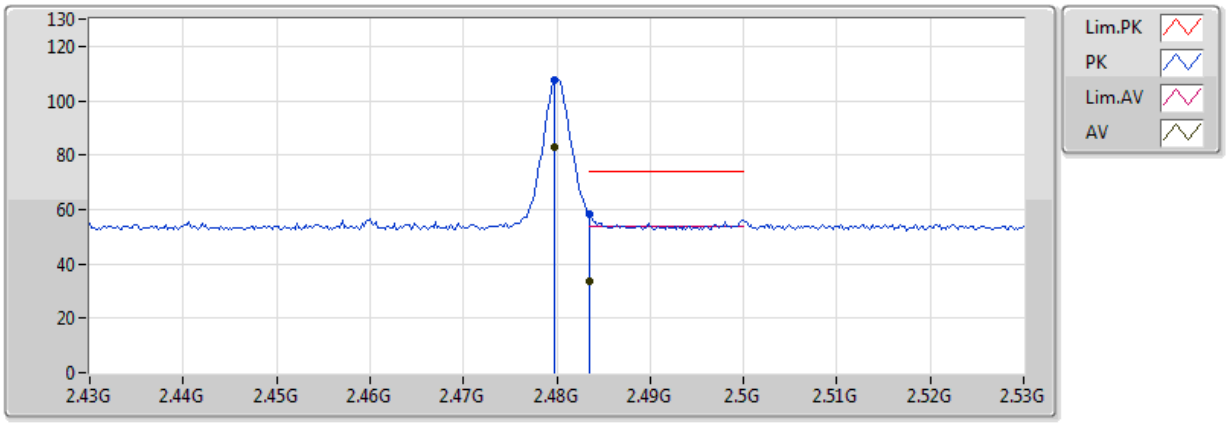


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4798G	76.57	Inf	-Inf	30.92	3	V	19	1.50	-
AV	2.483502G	30.56	54.00	-23.44	30.92	3	V	19	1.50	-
PK	2.4798G	101.30	Inf	-Inf	30.92	3	V	19	1.50	-
PK	2.483502G	55.29	74.00	-18.71	30.92	3	V	19	1.50	-

BT-BR(1Mbps)

2480MHz_TX

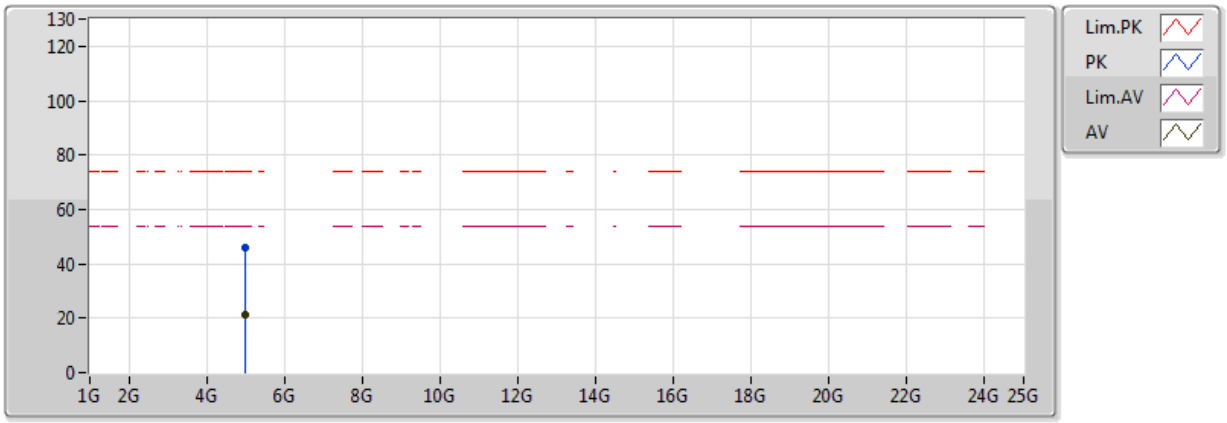


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4798G	82.95	Inf	-Inf	30.92	3	H	354	1.51	-
AV	2.483502G	33.82	54.00	-20.18	30.92	3	H	354	1.51	-
PK	2.4798G	107.68	Inf	-Inf	30.92	3	H	354	1.51	-
PK	2.483502G	58.55	74.00	-15.45	30.92	3	H	354	1.51	-

BT-BR(1Mbps)

2480MHz_TX

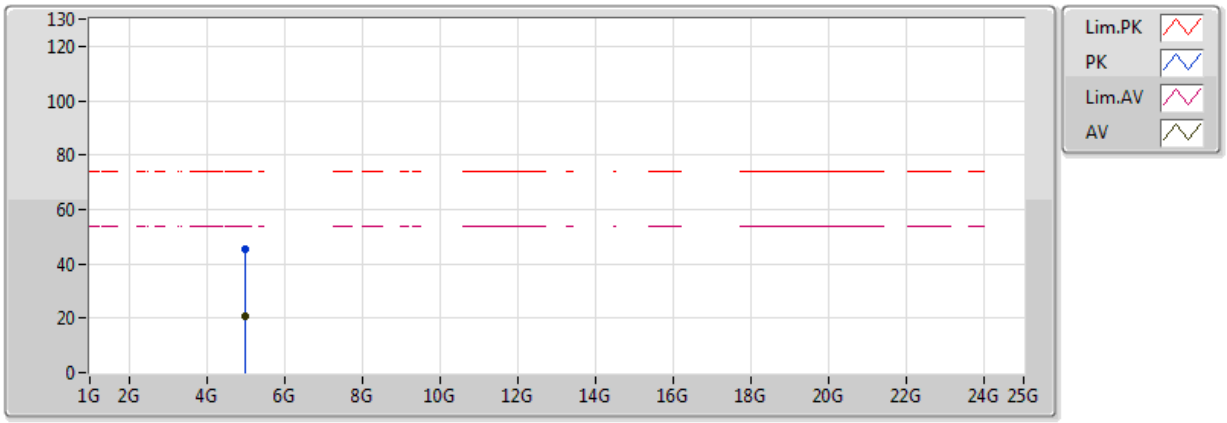


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9988G	21.22	54.00	-32.78	3.92	3	V	83	1.11	-
PK	4.9988G	45.95	74.00	-28.05	3.92	3	V	83	1.11	-

BT-BR(1Mbps)

2480MHz_TX

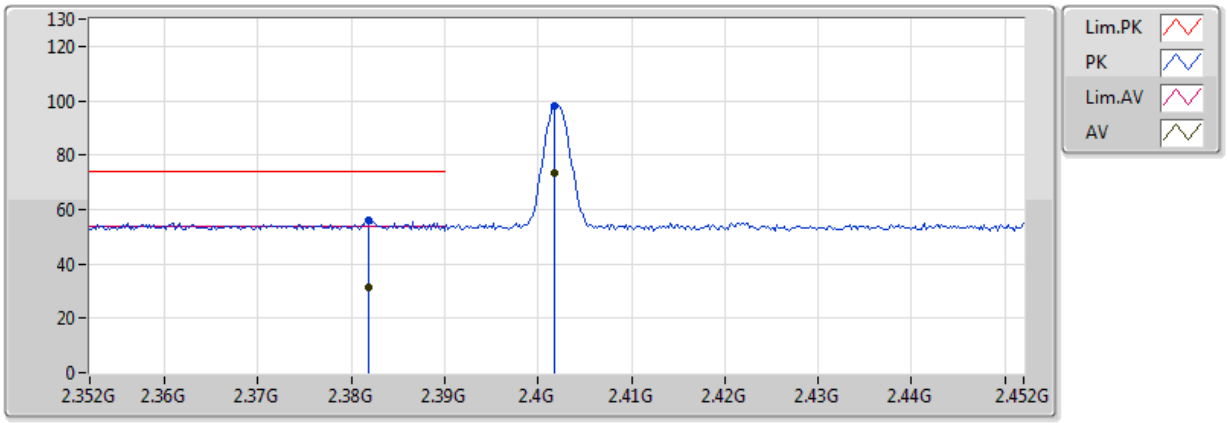


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9782G	20.80	54.00	-33.20	3.86	3	H	263	2.17	-
PK	4.9782G	45.53	74.00	-28.47	3.86	3	H	263	2.17	-

BT-EDR(3Mbps)

2402MHz_TX

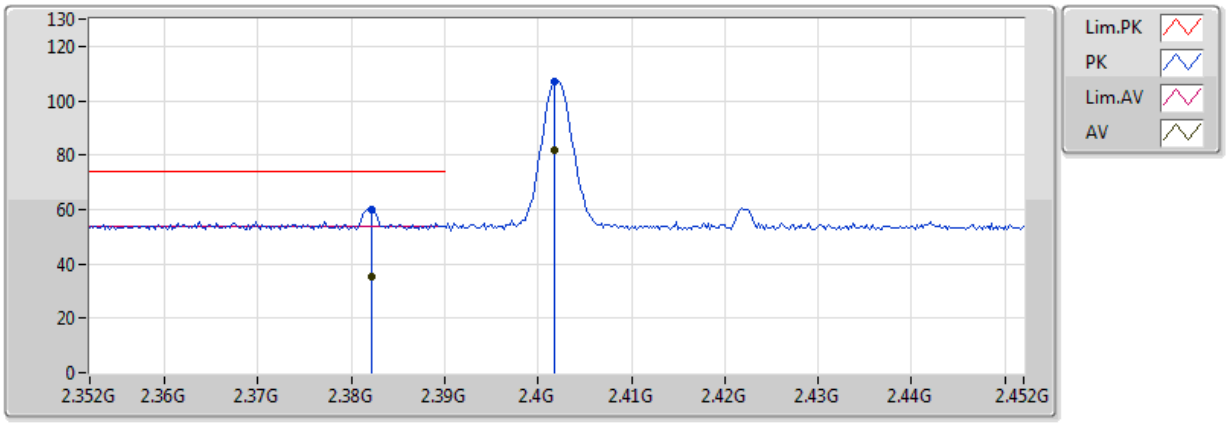


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3818G	31.44	54.00	-22.56	31.05	3	V	302	1.58	-
AV	2.4018G	73.24	Inf	-Inf	31.02	3	V	302	1.58	-
PK	2.3818G	56.17	74.00	-17.83	31.05	3	V	302	1.58	-
PK	2.4018G	97.97	Inf	-Inf	31.02	3	V	302	1.58	-

BT-EDR(3Mbps)

2402MHz_TX

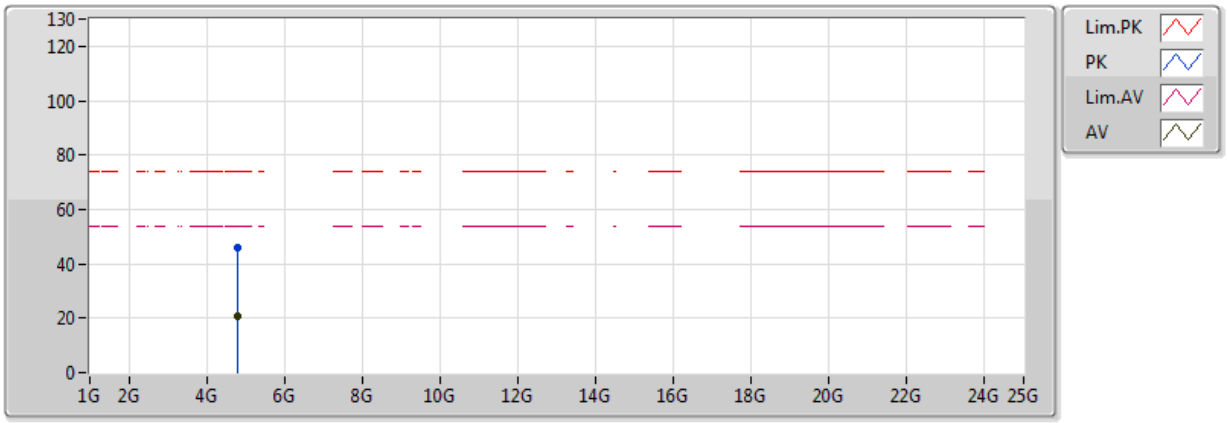


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3822G	35.50	54.00	-18.50	31.05	3	H	7	1.13	-
AV	2.4018G	82.03	Inf	-Inf	31.02	3	H	7	1.13	-
PK	2.3822G	60.23	74.00	-13.77	31.05	3	H	7	1.13	-
PK	2.4018G	106.76	Inf	-Inf	31.02	3	H	7	1.13	-

BT-EDR(3Mbps)

2402MHz_TX

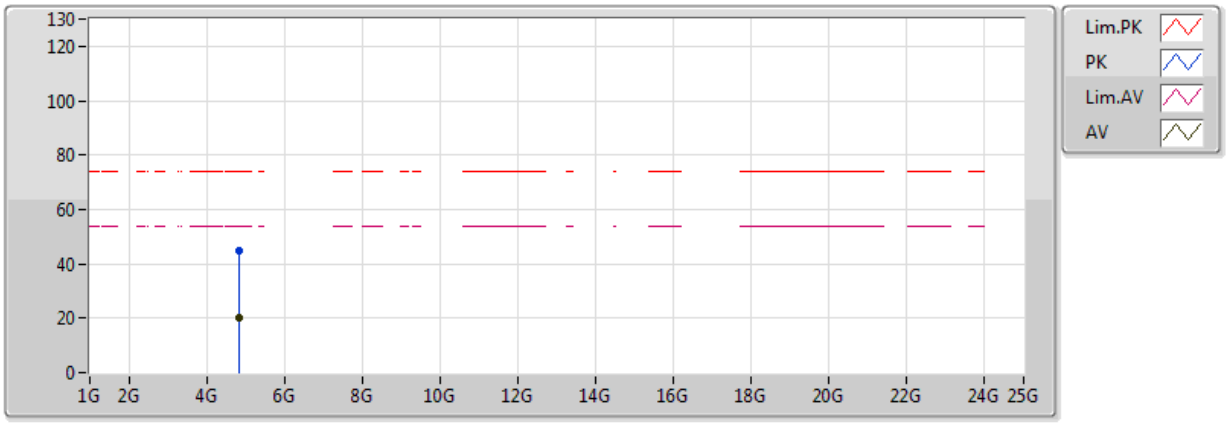


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8148G	20.95	54.00	-33.05	3.37	3	V	345	1.61	-
PK	4.8148G	45.68	74.00	-28.32	3.37	3	V	345	1.61	-

BT-EDR(3Mbps)

2402MHz_TX

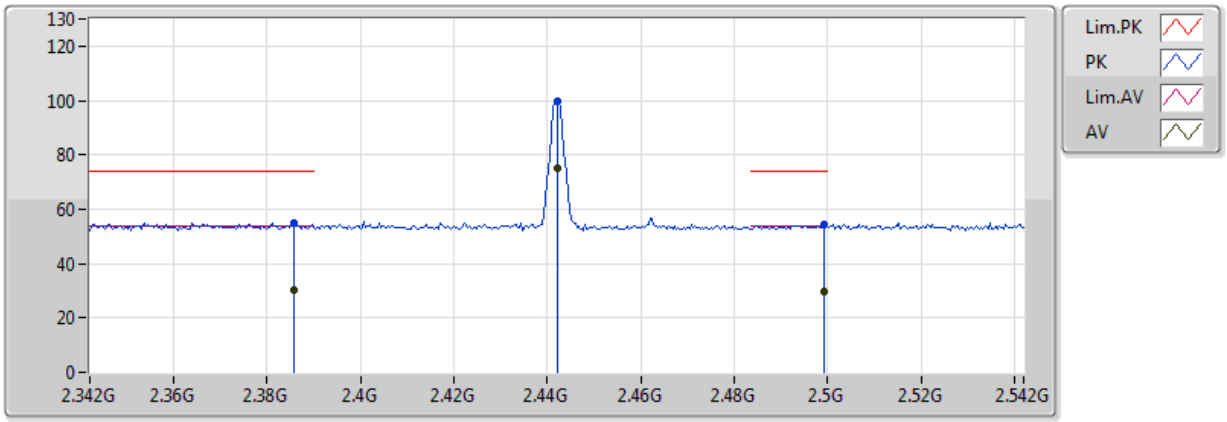


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8278G	20.18	54.00	-33.82	3.41	3	H	221	2.27	-
PK	4.8278G	44.91	74.00	-29.09	3.41	3	H	221	2.27	-

BT-EDR(3Mbps)

2442MHz_TX

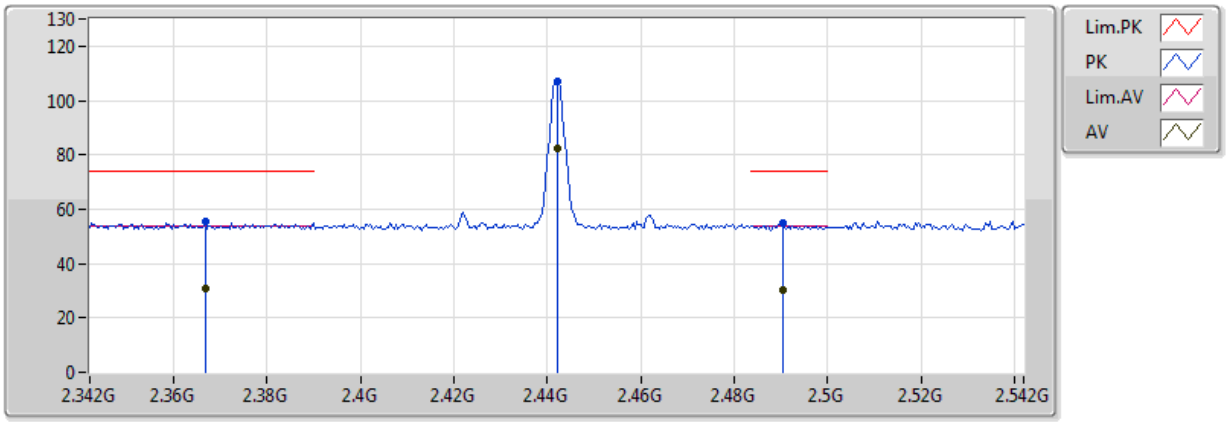


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3856G	30.46	54.00	-23.54	31.04	3	V	15	1.64	-
AV	2.442G	74.99	Inf	-Inf	30.97	3	V	15	1.64	-
AV	2.4992G	29.60	54.00	-24.40	30.90	3	V	15	1.64	-
PK	2.3856G	55.19	74.00	-18.81	31.04	3	V	15	1.64	-
PK	2.442G	99.72	Inf	-Inf	30.97	3	V	15	1.64	-
PK	2.4992G	54.33	74.00	-19.67	30.90	3	V	15	1.64	-

BT-EDR(3Mbps)

2442MHz_TX

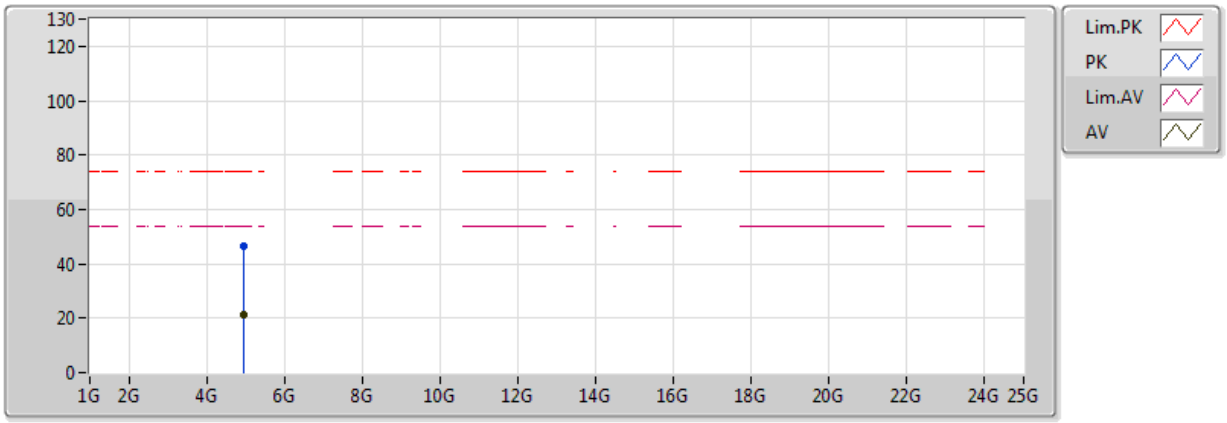


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3668G	30.55	54.00	-23.45	31.07	3	H	16	1.73	-
AV	2.442G	82.26	Inf	-Inf	30.97	3	H	16	1.73	-
AV	2.4904G	30.38	54.00	-23.62	30.91	3	H	16	1.73	-
PK	2.3668G	55.28	74.00	-18.72	31.07	3	H	16	1.73	-
PK	2.442G	106.99	Inf	-Inf	30.97	3	H	16	1.73	-
PK	2.4904G	55.11	74.00	-18.89	30.91	3	H	16	1.73	-

BT-EDR(3Mbps)

2442MHz_TX

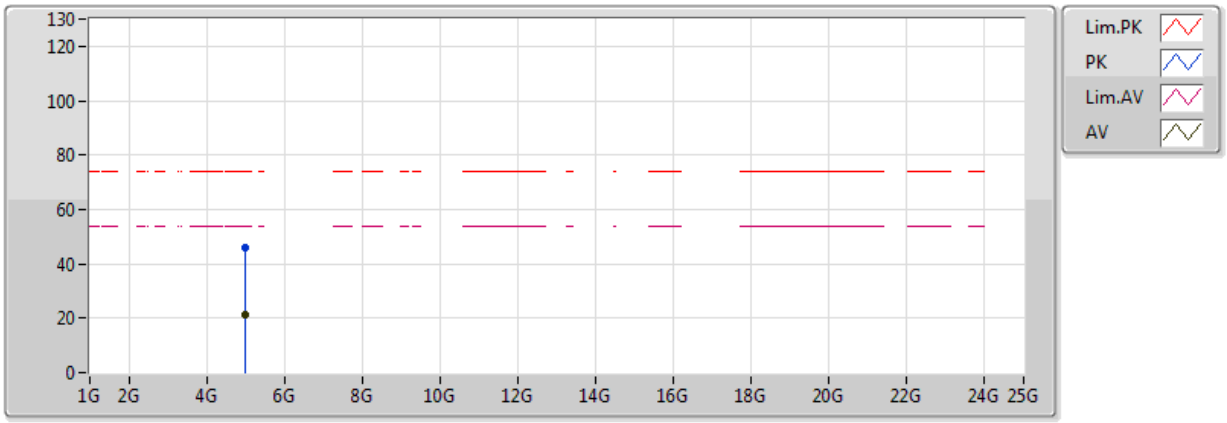


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9428G	21.56	54.00	-32.44	3.75	3	V	340	1.27	-
PK	4.9428G	46.29	74.00	-27.71	3.75	3	V	340	1.27	-

BT-EDR(3Mbps)

2442MHz_TX

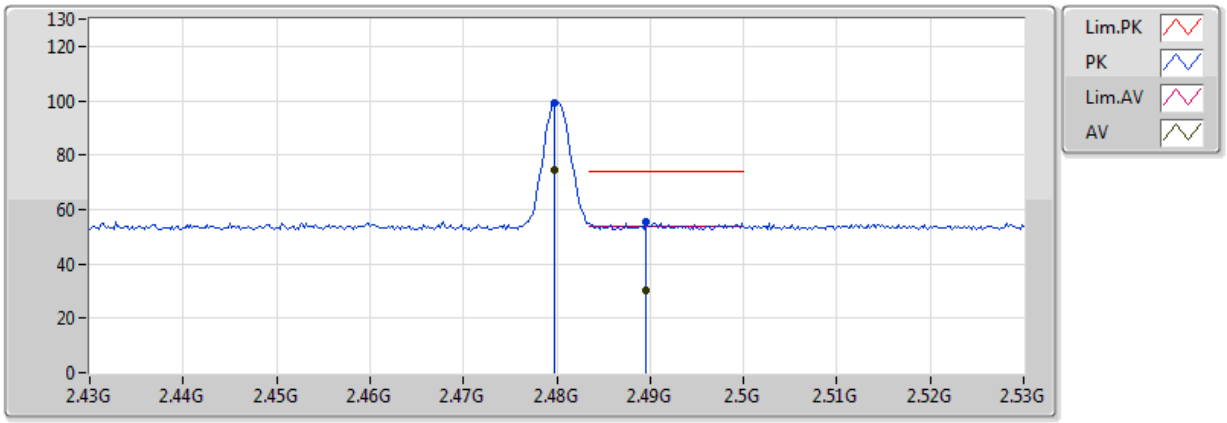


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9824G	21.04	54.00	-32.96	3.87	3	H	43	1.21	-
PK	4.9824G	45.77	74.00	-28.23	3.87	3	H	43	1.21	-

BT-EDR(3Mbps)

2480MHz_TX

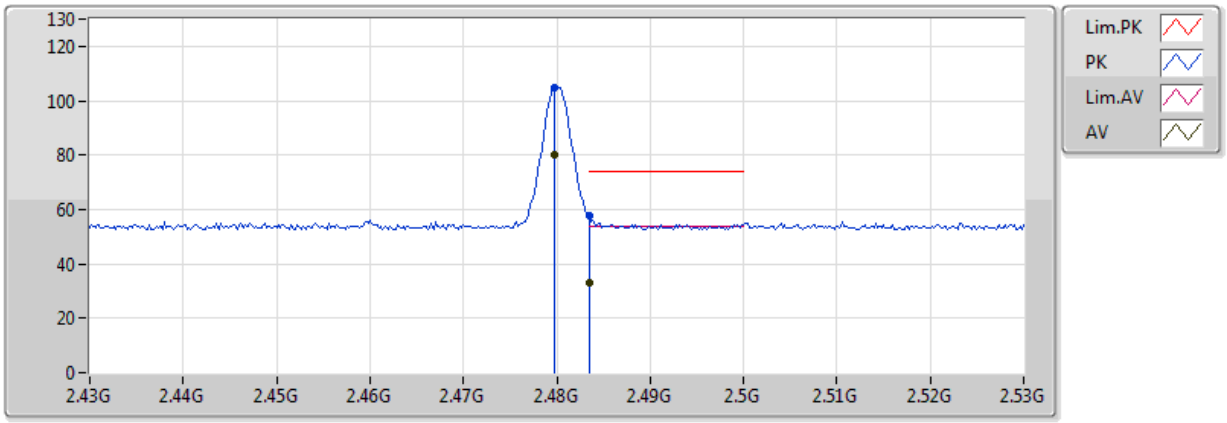


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4798G	74.47	Inf	-Inf	30.92	3	V	15	1.46	-
AV	2.4896G	30.53	54.00	-23.47	30.91	3	V	15	1.46	-
PK	2.4798G	99.20	Inf	-Inf	30.92	3	V	15	1.46	-
PK	2.4896G	55.26	74.00	-18.74	30.91	3	V	15	1.46	-

BT-EDR(3Mbps)

2480MHz_TX

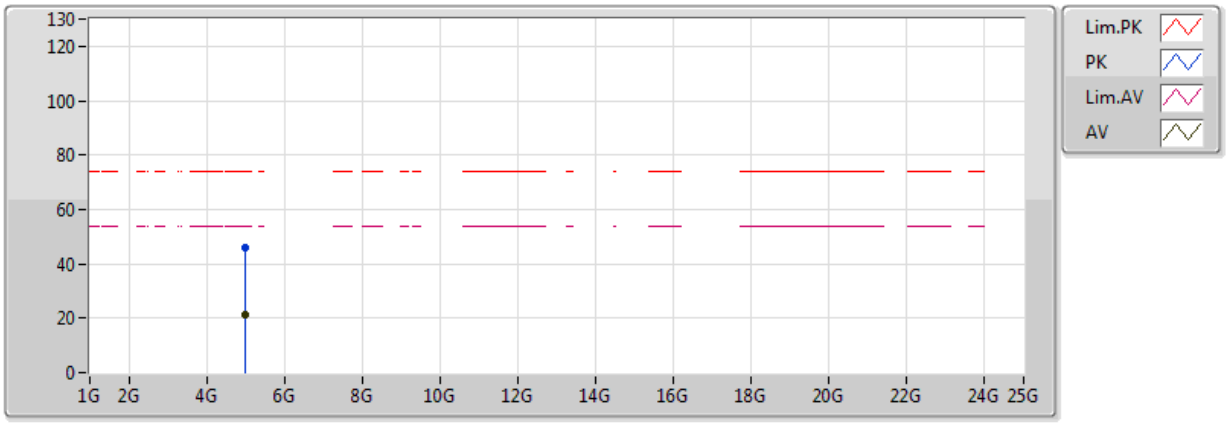


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4798G	80.24	Inf	-Inf	30.92	3	H	354	1.55	-
AV	2.483502G	32.87	54.00	-21.13	30.92	3	H	354	1.55	-
PK	2.4798G	104.97	Inf	-Inf	30.92	3	H	354	1.55	-
PK	2.483502G	57.60	74.00	-16.40	30.92	3	H	354	1.55	-

BT-EDR(3Mbps)

2480MHz_TX

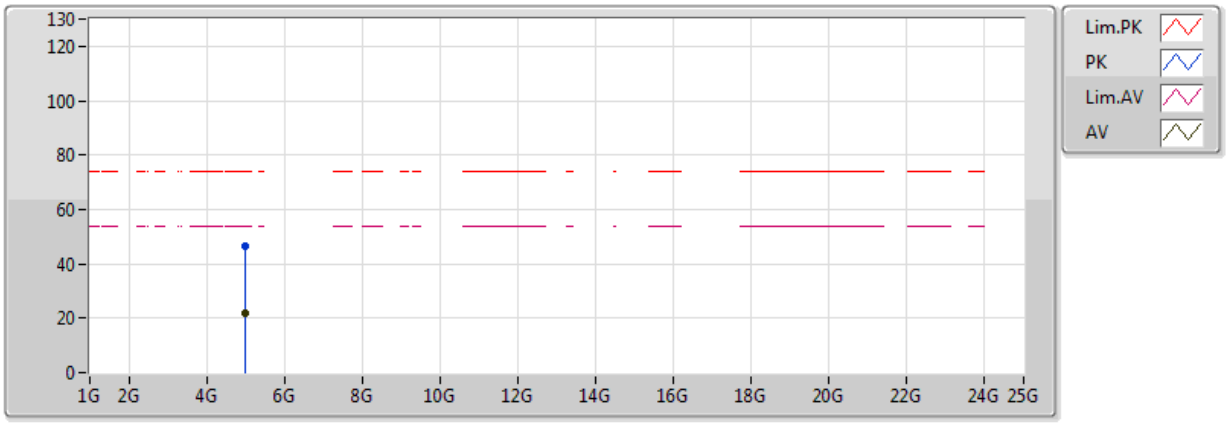


20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.0072G	21.45	54.00	-32.55	3.94	3	V	47	1.04	-
PK	5.0072G	46.18	74.00	-27.82	3.94	3	V	47	1.04	-

BT-EDR(3Mbps)

2480MHz_TX



20170509
EUT Y_1TX
Setting Default
01-J-6
FSP(100304)

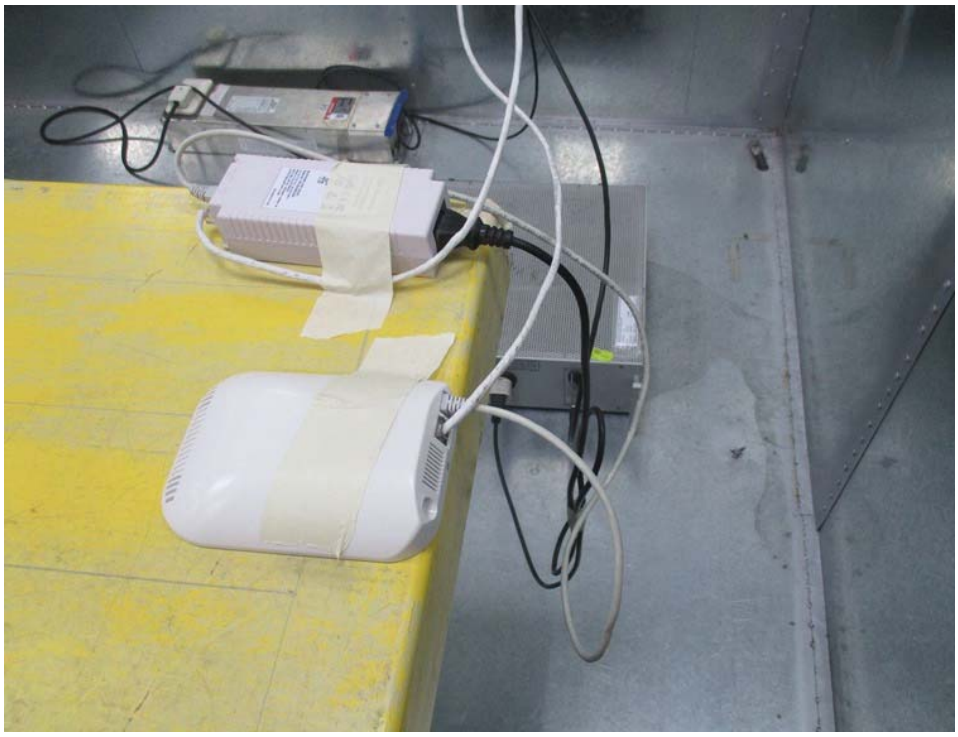
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9802G	21.89	54.00	-32.11	3.86	3	H	32	2.21	-
PK	4.9802G	46.62	74.00	-27.38	3.86	3	H	32	2.21	-

1. Photographs of Conducted Emissions Test Configuration

Test Mode: Mode 8 / Test configuration: Intentional - CTX

FRONT VIEW

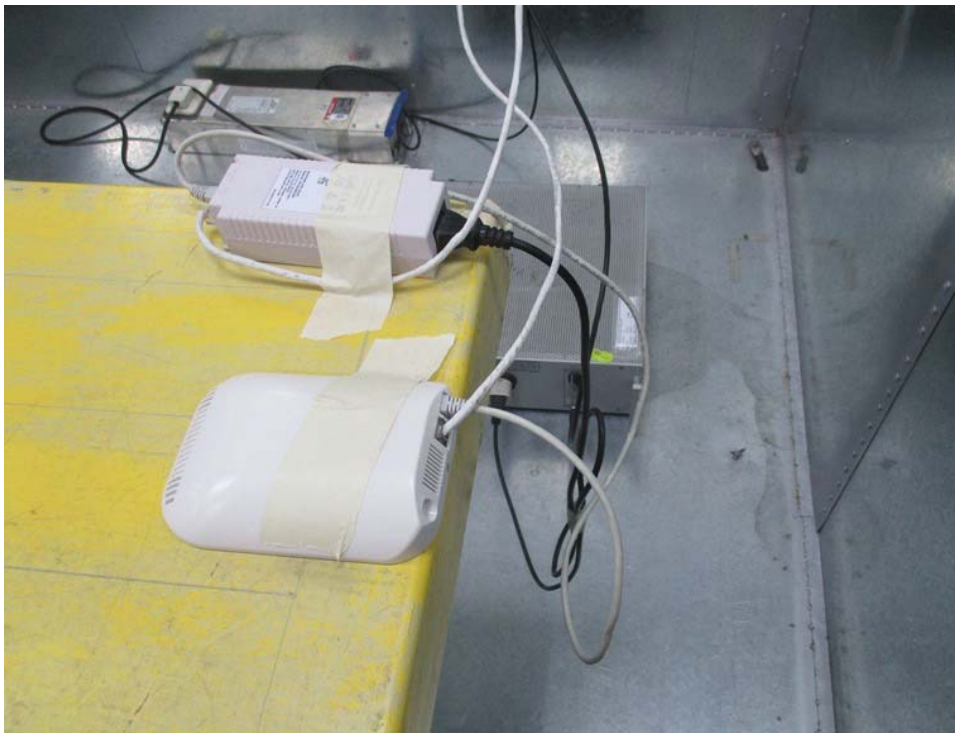
REAR VIEW



Test Mode: Mode 2 / Test configuration: Unintentional - Normal Link

FRONT VIEW

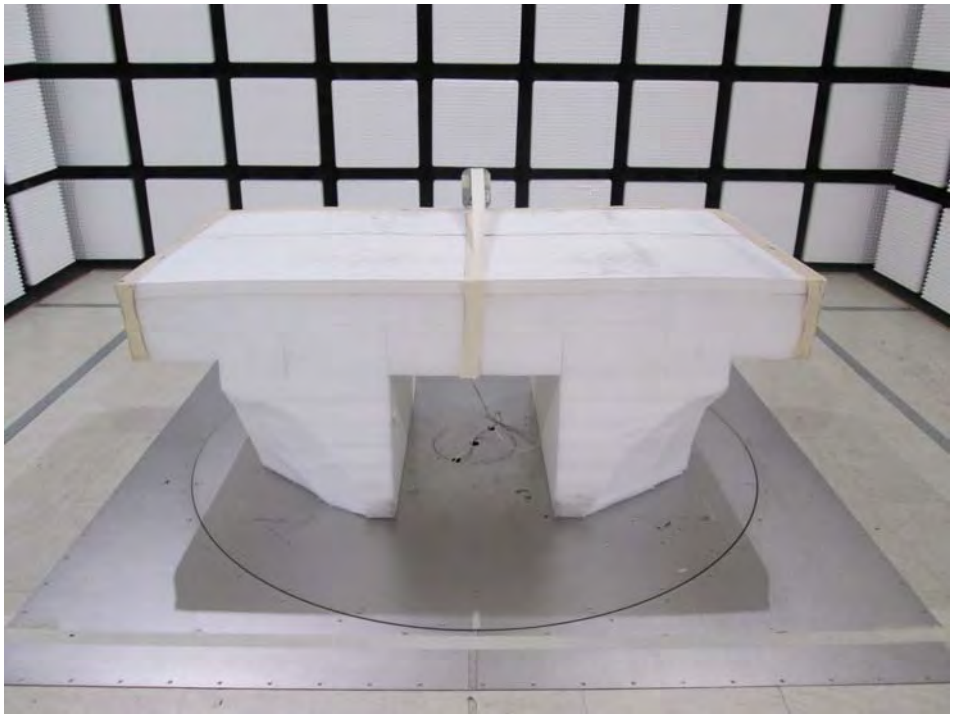
REAR VIEW



2. Photographs of Radiated Emissions Test Configuration

Test Configuration: 30MHz~1GHz / Test Mode: Mode 2 / Intentional - CTX

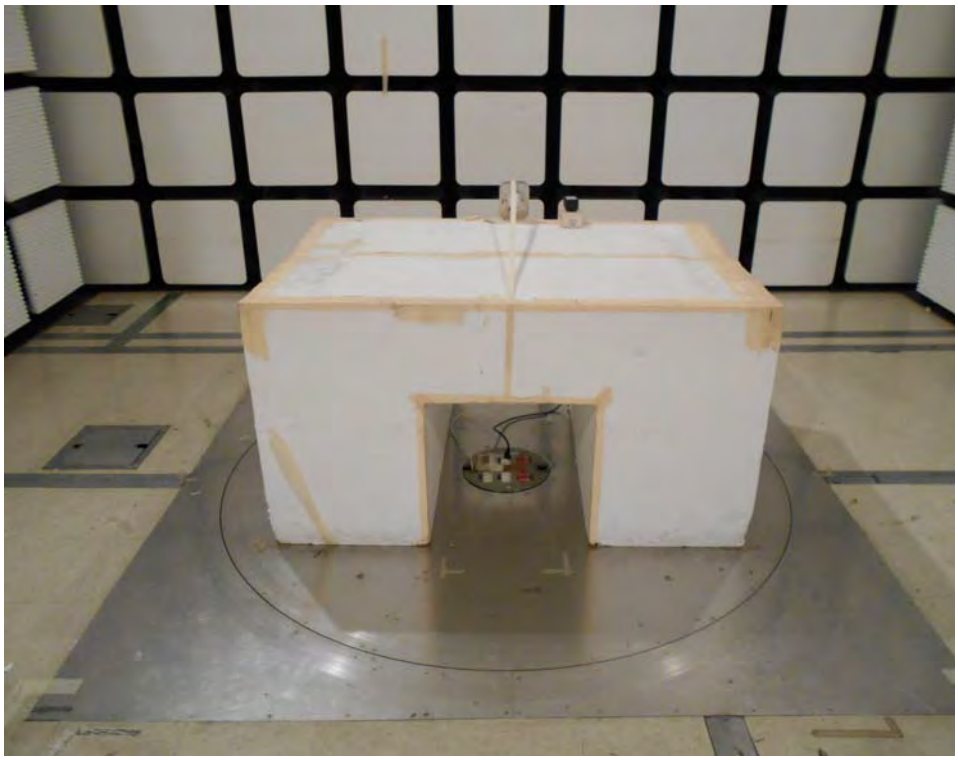
FRONT VIEW



REAR VIEW

Test Configuration: 30MHz~1GHz / Test Mode: Mode 1 / Unintentional - Normal Link

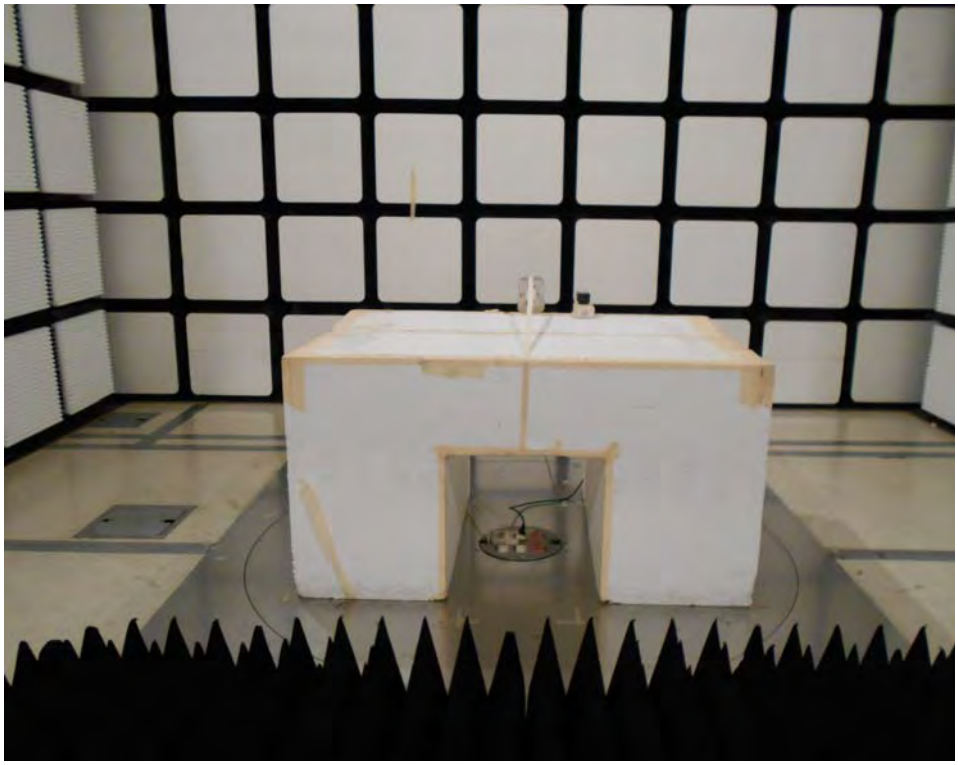
FRONT VIEW



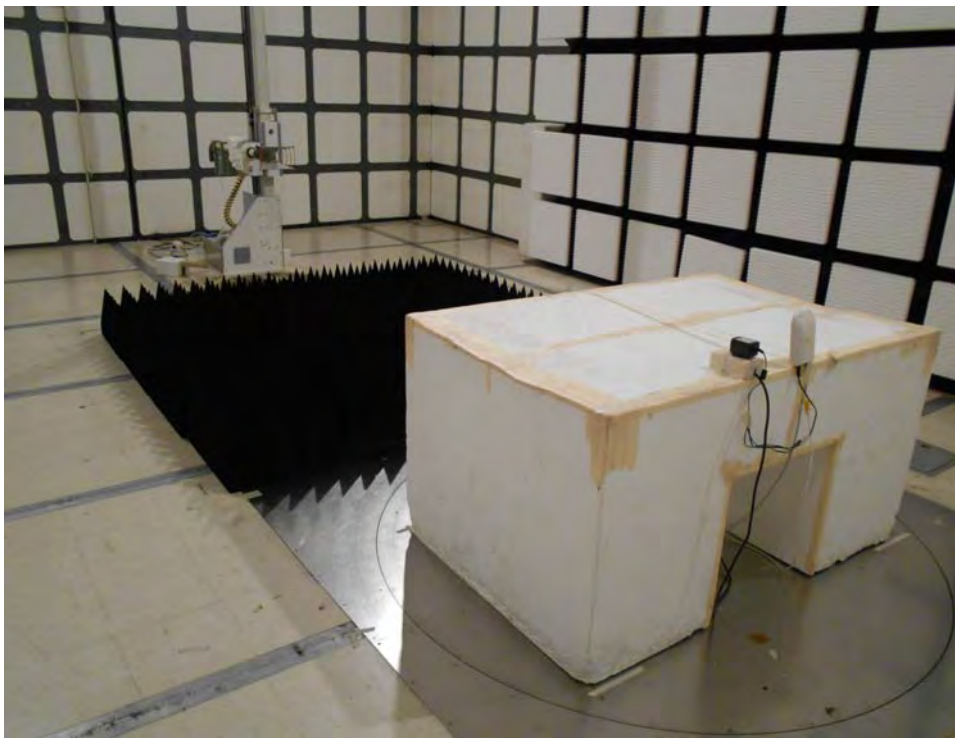
REAR VIEW

Test Configuration: Above 1GHz / Unintentional 1GHz~5th

FRONT VIEW

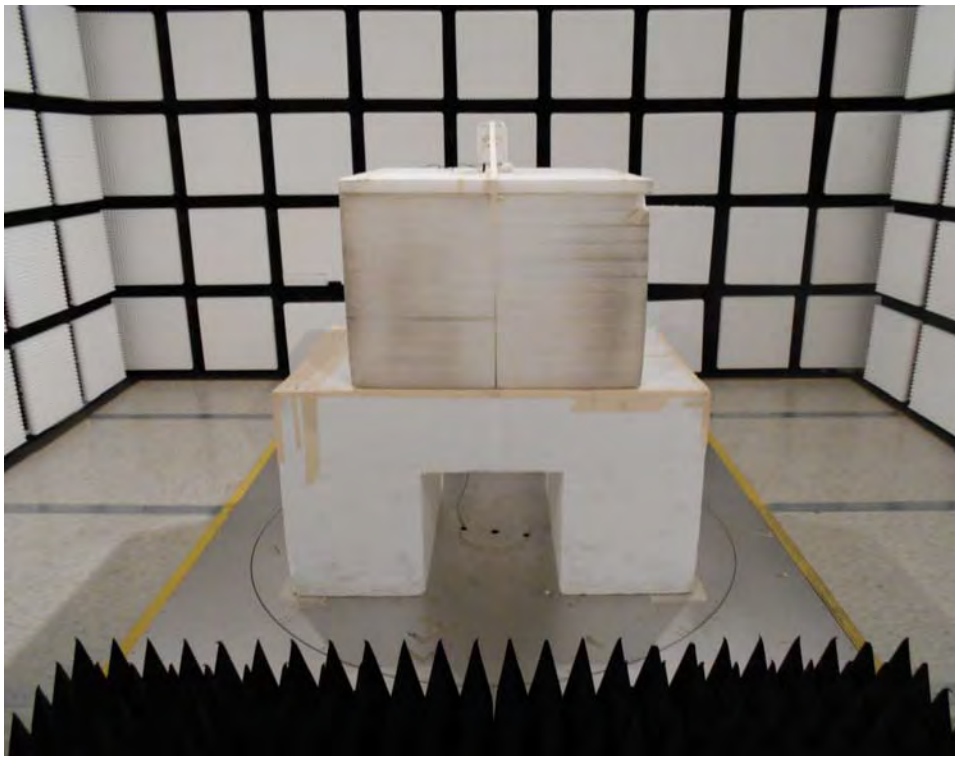
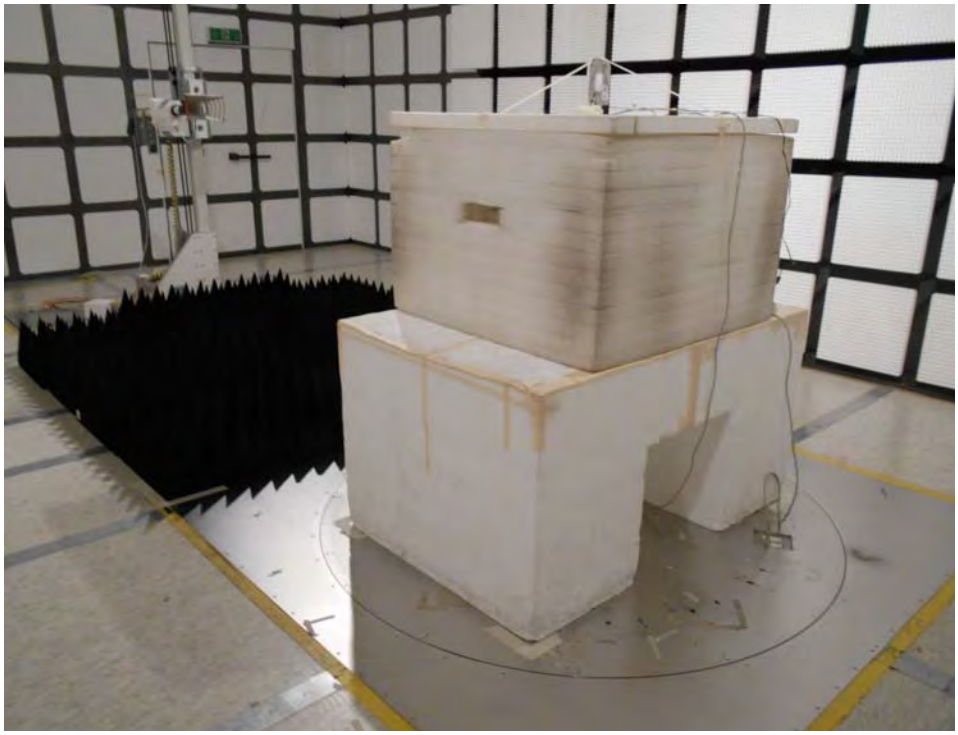


REAR VIEW



Test Configuration: Above 1GHz / Intentional 1GHz~10th

FRONT VIEW



REAR VIEW