



FCC Test Report

Equipment : MAX-STREAM AC5400 MU-MIMO Tri-Band Router
Brand Name : LINKSYS
Model No. : EA9500 V2, EA9400 V2, EA9500S
FCC ID : Q87-EA9500V2
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
Applicant : Linksys LLC
121 Theory Drive Irvine, CA 92617

The product sample received on Mar. 07, 2017 and completely tested on Apr. 20, 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.



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Testing Applied Standards	8
1.3	Testing Location Information	8
1.4	Measurement Uncertainty	9
2	TEST CONFIGURATION OF EUT	10
2.1	Test Channel Mode	10
2.2	The Worst Case Measurement Configuration.....	11
2.3	EUT Operation during Test	12
2.4	Accessories	13
2.5	Support Equipment.....	13
2.6	Test Setup Diagram	14
3	TRANSMITTER TEST RESULT	17
3.1	AC Power-line Conducted Emissions	17
3.2	20dB Bandwidth and Carrier Frequency Separation	19
3.3	Maximum Conducted Output Power	20
3.4	Number of Hopping Frequencies and Hopping Bandedge	21
3.5	Time of Occupancy (Dwell Time)	22
3.6	Emissions in Non-restricted Frequency Bands	23
3.7	Emissions in Restricted Frequency Bands.....	24
4	TEST EQUIPMENT AND CALIBRATION DATA	27
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		
APPENDIX J. PHOTOGRAPHS OF EUT		

Summary of Test Result

Conformance Test Specifications				
Report Clause	Ref. Std. Clause	Description	Limit	Result
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	20dB Bandwidth	15.247(a)	Complied
3.2	15.247(a)	Carrier Frequency Separation	15.247(a)	Complied
3.3	15.247(b)	Maximum Conducted Output Power	15.247(b)	Complied
3.4	15.247(a)	Number of Hopping Frequencies and Hopping Band edge	15.247(a)	Complied
3.5	15.247(a)	Time of Occupancy (Dwell Time)	15.247(a)	Complied
3.6	15.247(d)	Emissions in Non-restricted Frequency Bands	15.247(d)	Complied
3.7	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied



SPORTON INTERNATIONAL INC.
TEL : 886-3-3273456
FAX : 886-3-3270973
FCC ID: Q87-EA9500V2

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 $\pi/4$ -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.	Chain	Port	Brand	Part No.	Antenna Type	Connector	Gain (dBi)
1	1	1	ARISTOTLE	RFA-52-F90-11-9597	Dipole	I-PEX	Note
2	2	2	ARISTOTLE	RFA-52-F90-21-9597	Dipole	I-PEX	
3	3	3	ARISTOTLE	RFA-52-F90-31-9597	Dipole	I-PEX	
4	4	4	ARISTOTLE	RFA-52-F90-41-9597	Dipole	I-PEX	
5	5	1	ARISTOTLE	RFA-05-F90-1-9597	Dipole	I-PEX	
6	6	2	ARISTOTLE	RFA-05-F90-2-9597	Dipole	I-PEX	
7	7	3	ARISTOTLE	RFA-05-F90-31-9597	Dipole	I-PEX	
8	8	4	ARISTOTLE	RFA-05-F90-4-9597	Dipole	I-PEX	
9	9	1	arcadyan	WG9117BAC44-88	Dipole	I-PEX	

Note:

Chain Band	2.4GHz WLAN (dBi)	5GHz Band 1 (dBi)	5GHz Band 4 (dBi)	Bluetooth (dBi)
1	1.64	2.64	-	-
2	1.75	2.42	-	-
3	1.72	2.50	-	-
4	1.59	2.51	-	-
5	-	-	2.64	-
6	-	-	1.88	-
7	-	-	2.86	-
8	-	-	1.18	-
9	-	-	-	2.14

Note: **For 2.4GHz function:**

For IEEE 802.11b/g/n/ac mode (4TX/4RX):

Chain1 (Port 1), Chain2 (Port 2), Chain3 (Port 3) and Chain4 (Port 4) can be used as transmitting/receiving antenna.

Chain1 (Port 1), Chain2 (Port 2), Chain3 (Port 3) and Chain4 (Port 4) could transmit/receive simultaneously.

For 5GHz (Band 1) function:

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

Chain1 (Port 1), Chain2 (Port 2), Chain3 (Port 3) and Chain4 (Port 4) can be used as transmitting/receiving antenna.

Chain1 (Port 1), Chain2 (Port 2), Chain3 (Port 3) and Chain4 (Port 4) could transmit/receive simultaneously.

For 5GHz (Band 4) function:

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

Chain5 (Port 1), Chain6 (Port 2), Chain7 (Port 3) and Chain8 (Port 4) can be used as transmitting/receiving antenna.

Chain5 (Port 1), Chain6 (Port 2), Chain7 (Port 3) and Chain8 (Port 4) could transmit/receive simultaneously.

For Bluetooth function:

Only Chain 9 (Port 1) can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
BT-BR(1Mbps)	0.31	5.086
BT-EDR(2Mbps)	0.743	1.29
BT-EDR(3Mbps)	0.772	1.124

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter
-----------------------	--------------------

1.1.5 Table for Multiple Listing

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

Model Name	Description
EA9500 V2	All the models are identical, the difference model names served as marketing strategy.
EA9400 V2	
EA9500S	

Note: From the above models, model: EA9500 V2 was selected as representative model for the test and its data was recorded in this report.

1.2 Testing Applied 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 Public Notice DA 00-705
- ♦ FCC KDB 412172 D01 v01r01

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	Lucke Hsieh / Gino Huang Ron Huang	23°C / 54%	Mar. 06, 2017~Mar. 10, 2017
Radiated Below 1GHz	03CH01-CB	Welson Chen / Mason Chen Steven Liang	22°C / 54%	Apr. 20, 2017
Radiated Above 1 GHz	03CH01-CB	Welson Chen / Mason Chen Steven Liang	22°C / 54%	Feb. 24, 2017~Apr. 20, 2017
AC Conduction	CO01-CB	GN Hou	24°C / 58%	Mar. 24, 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

Band	Power Setting
BT-BR(1Mbps)	-
2402MHz	09
2440MHz	09
2480MHz	09
BT-EDR(2Mbps)	-
2402MHz	09
2440MHz	09
2480MHz	09
BT-EDR(3Mbps)	-
2402MHz	09
2440MHz	09
2480MHz	09

2.2 The Worst Case Measurement Configuration

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

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	Normal Link – EUT in Z axis + Adapter 2
2	Normal Link – EUT in Z axis + Adapter 3
3	Normal Link – EUT in Z axis + Adapter 1
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	CTX-EUT in Z 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
1	WLAN 2.4GHz+WLAN 5GHz Band1+WLAN 5GHz Band4
Refer to Appendix H for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+WLAN 5GHz Band1+WLAN 5GHz Band4+Bluetooth
Refer to Sporton Test Report No.: FA730736 for Co-location RF Exposure Evaluation.	

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

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function

2.4 Accessories

Accessories					
No.	Equipment Name	Brand Name	Model Name	Rating	DC Power Line
1	Adapter 1	APD	DA-48T12	Input: 100-240V~50-60Hz, 1.4A Max Output: 12V, 4A	non-shielded, 1.4m
2	Adapter 2	APD	DA-60M12	Input: 100-240V~50-60Hz 1.5A Max Output: 12V, 5A	non-shielded, 1.4m
3	Adapter 3	Ktec	KSA-65W-12050 0M2	Input: 100-240V~50/60Hz 1.5A Output: 12V, 5.0A	non-shielded, 1.4m
Others					
Power Cable*1, non-shielded, 1.7m,					

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*5	DELL	E6430	DoC
2	Smart phone	Samsung	Galaxy J2	Doc
3	Flash disk3.0*2	Transcend	JetFlash-700	DoC

For Test Site No: 03CH01-CB (below 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
2	NB*3	APPLE	Mac Book	DoC
3	Flash disk3.0	Silicon Power	B06	DoC
4	Flash disk3.0	Transcend	JetFlash-700	DoC
5	Cell-phone	Samsung	Galaxy J2	N/A

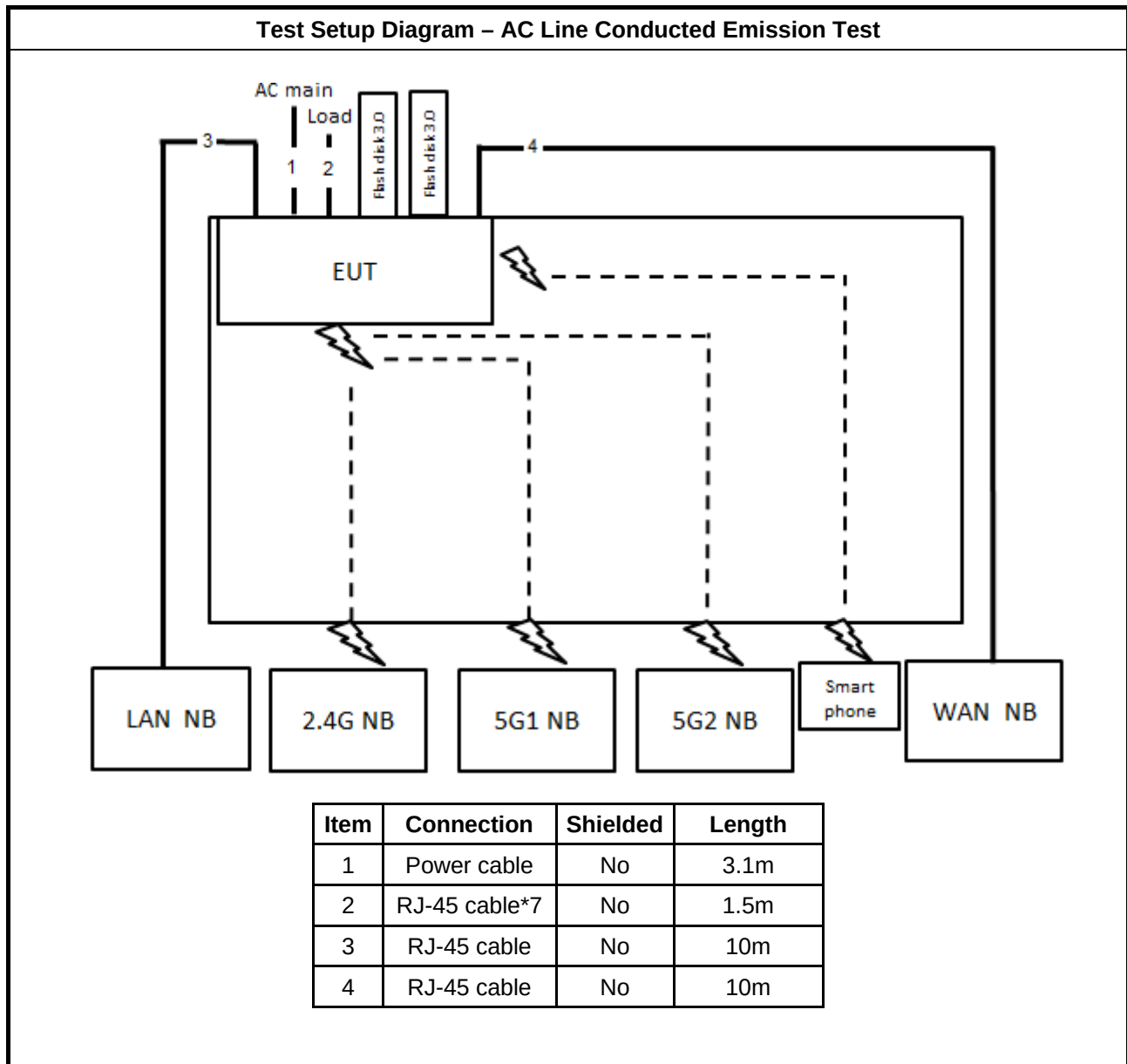
For Test Site No: 03CH01-CB (above 1GHz)

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

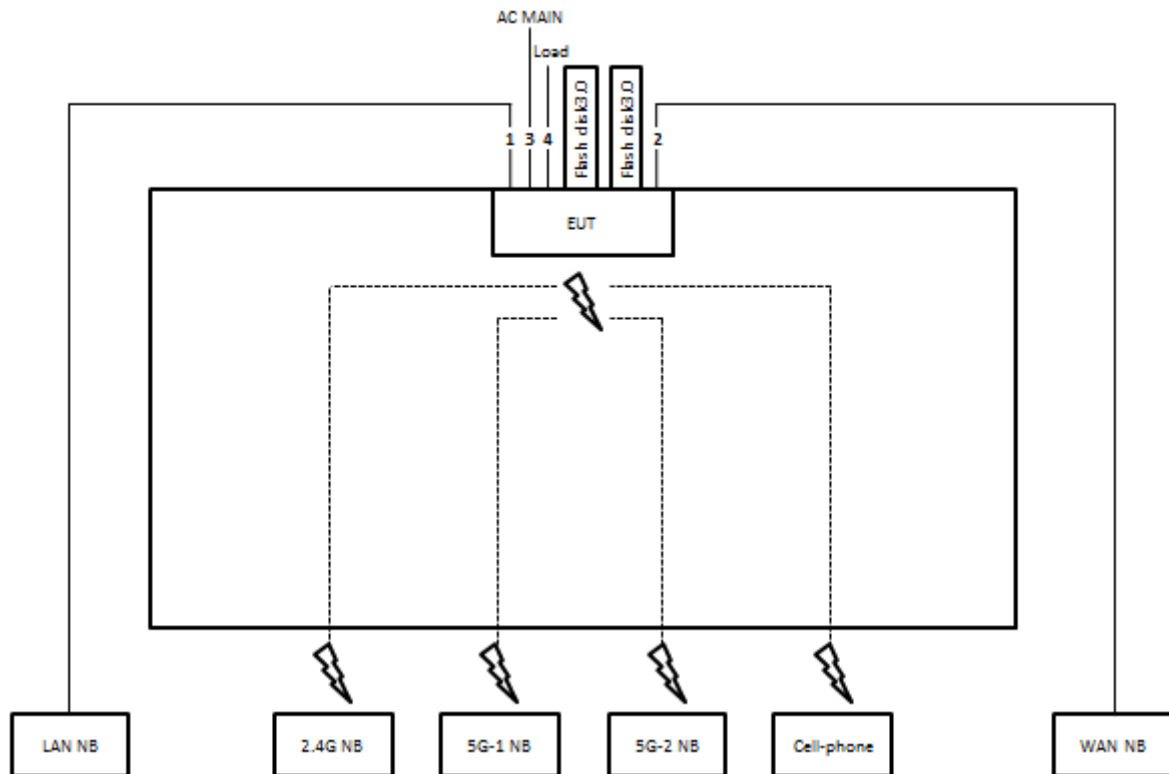
For Test Site No: TH01-CB

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

2.6 Test Setup Diagram

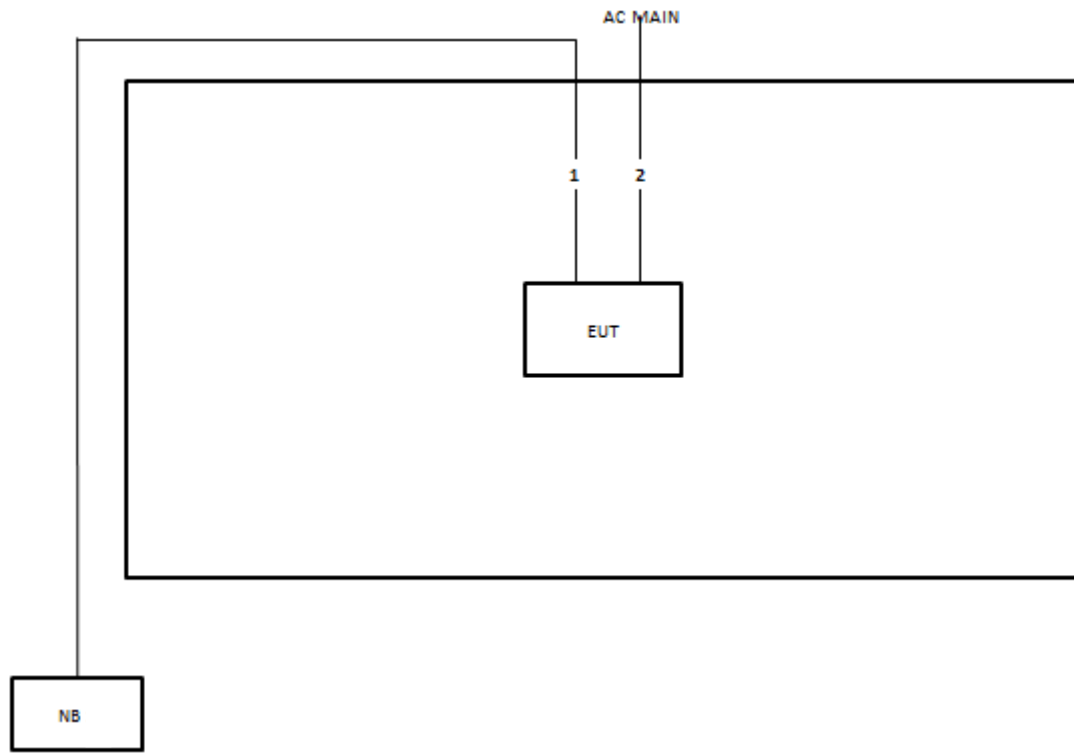


Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	10m
3	Power cable	No	3.1m
4	RJ-45 cable*7	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power Cable	No	3.1m
2	RJ45 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.

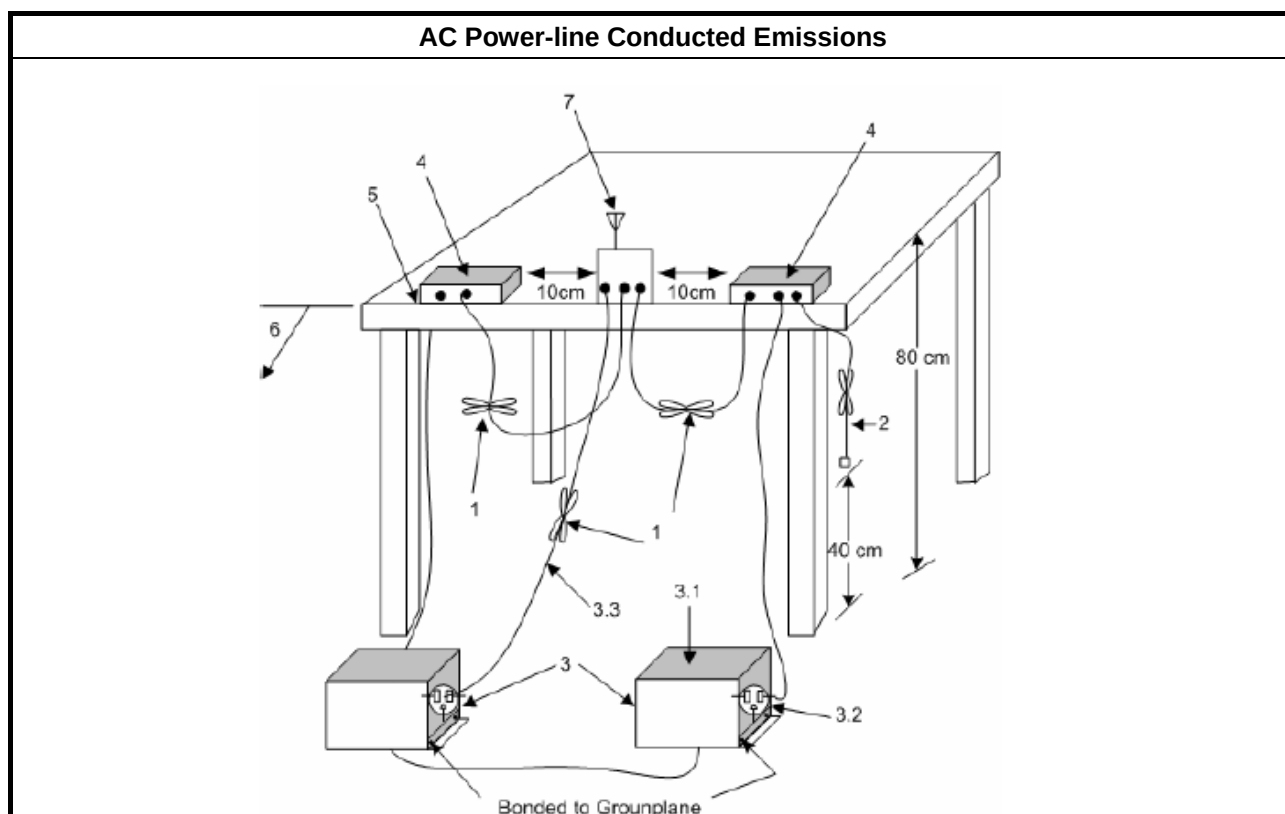
3.1.2 Measuring Instruments

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 foray power-line conducted emissions.

3.1.4 Test Setup





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:	
	▪ $N \geq 50$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 250 kHz.
	▪ $50 > N \geq 25$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz.
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq \text{MAX}$ (20 dB bandwidth 2/3, 25 kHz).
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq \text{MAX}$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 1 MHz.
N: Number of Hopping Frequencies; ChS: Hopping Channel Separation	

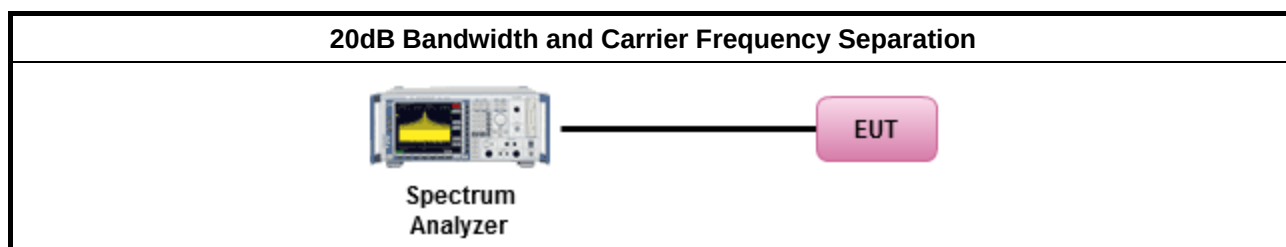
3.2.2 Measuring Instruments

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



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:	
	▪ $N \geq 50$; Power 30dBm; EIRP 36dBm
	▪ $50 > N \geq 25$; Power 24dBm; EIRP 30dBm
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$; Power 30dBm; EIRP 36dBm
	▪ $75 > N \geq 15$; Power 21dBm; EIRP 27dBm
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$; Power 30dBm; EIRP 36dBm
N: Number of Hopping Frequencies	

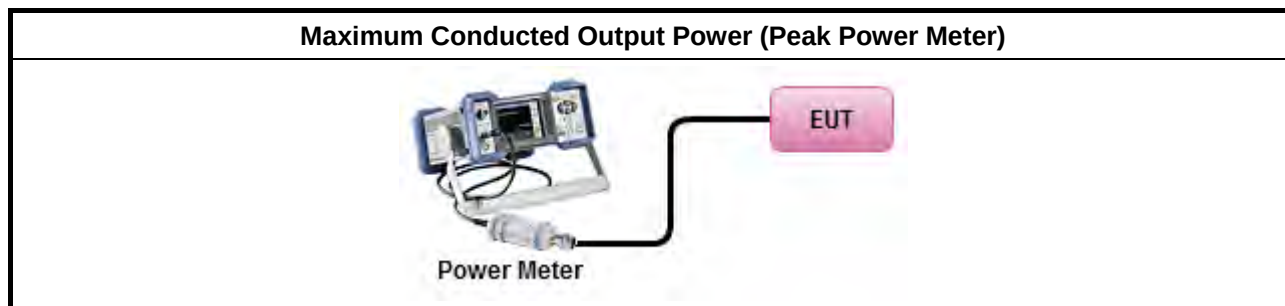
3.3.2 Measuring Instruments

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



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:	
	▪ $N \geq 50$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 250 kHz.
	▪ $50 > N \geq 25$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz.
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $\leq$ 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

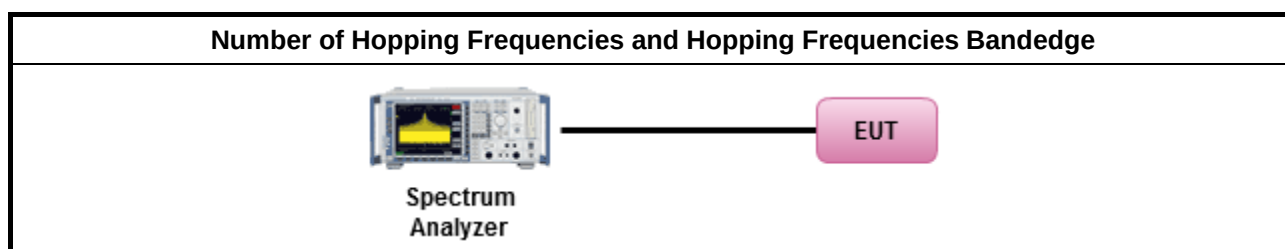
3.4.3 Measuring Instruments

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



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:	
	▪ $N \geq 50$; 0.4s in 20s period
	▪ $50 > N \geq 25$; 0.4s in 10s period
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$; 0.4s in $N \times 0.4$ period
	▪ $75 > N \geq 15$; 0.4s in $N \times 0.4$ period
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$; 0.4s in 30s period
N: Number of Hopping Frequencies	

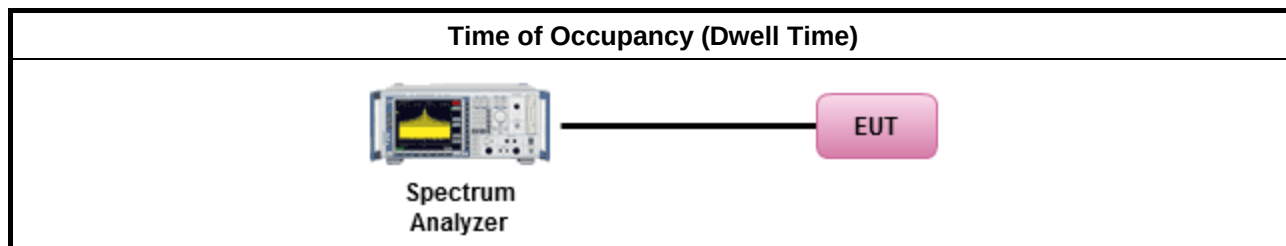
3.5.2 Measuring Instruments

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



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.	

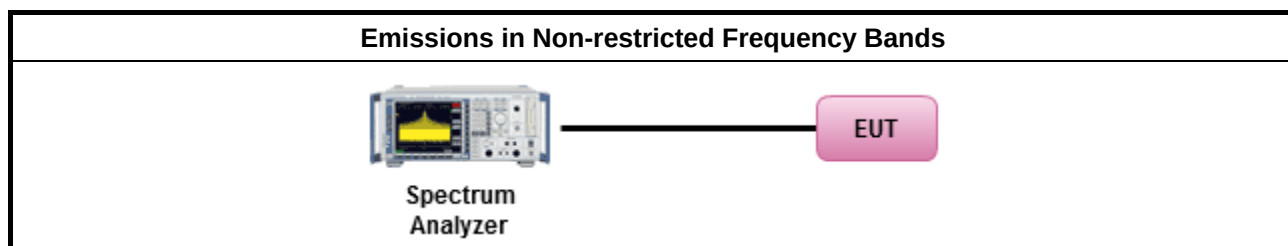
3.6.2 Measuring Instruments

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



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 below 30 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.

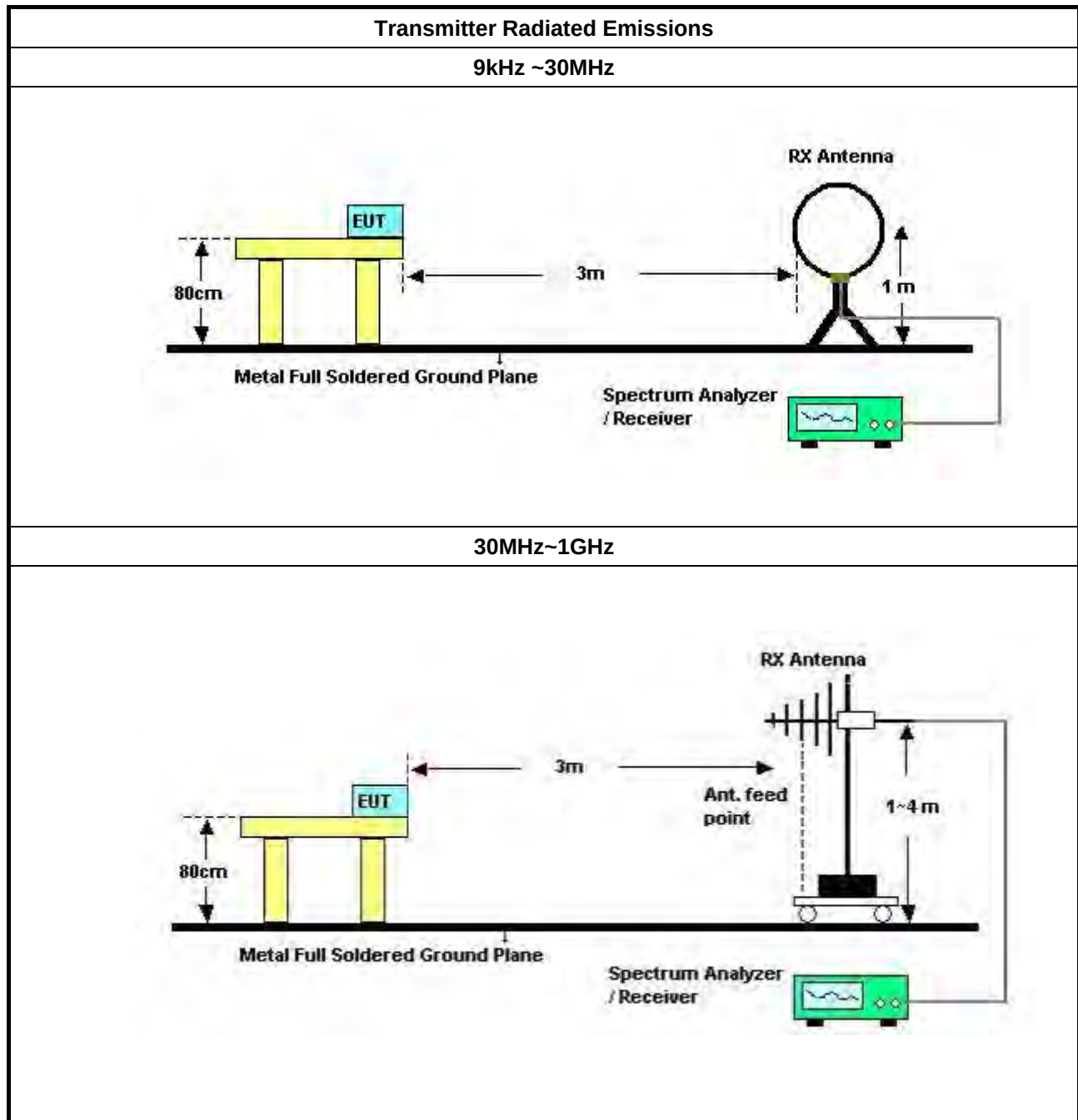
3.7.2 Measuring Instruments

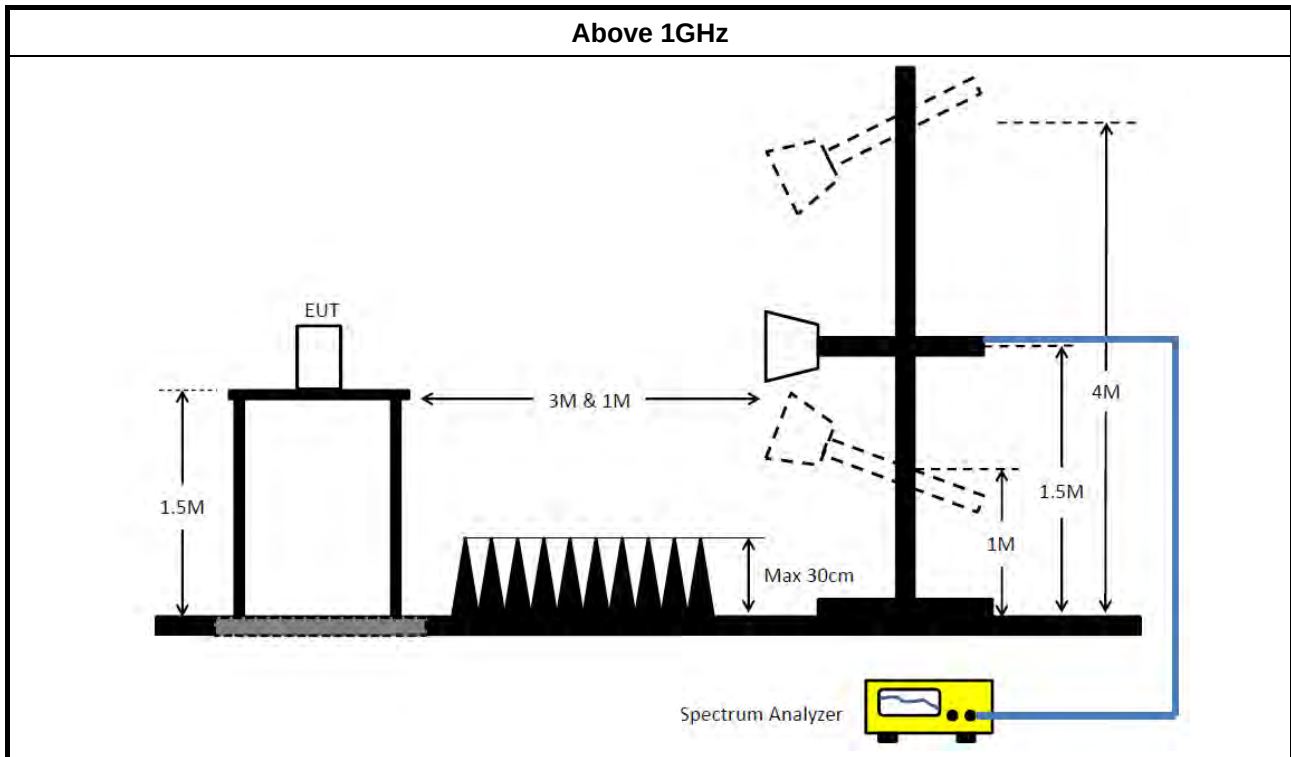
Refer a test equipment and calibration data table in this test report.

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





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)
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	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 13, 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. 21, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	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-I0-7	N/A	N/A	Radiation (03CH01-CB)
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)



FCC Test Report

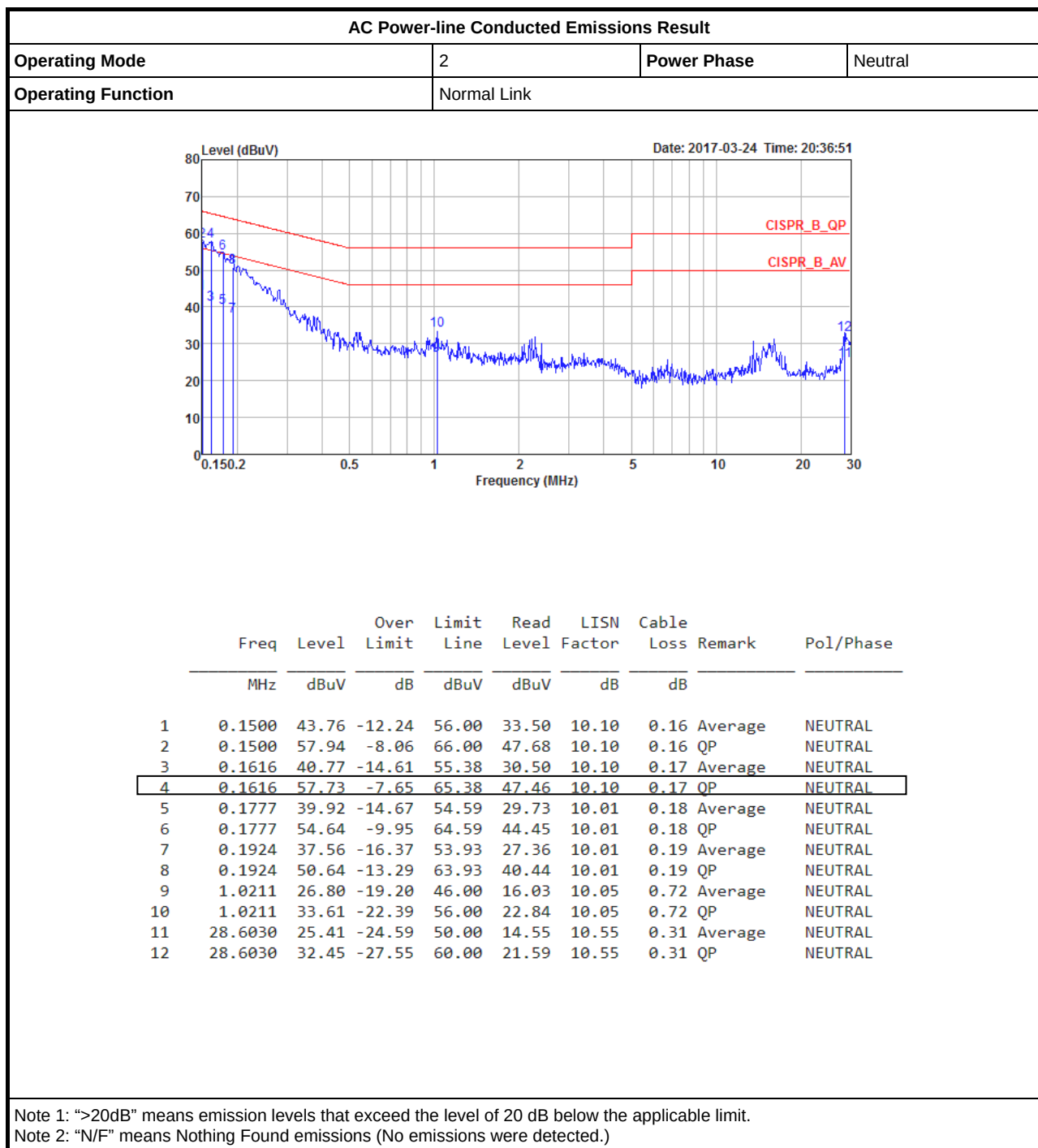
Report No. : FR730736AC

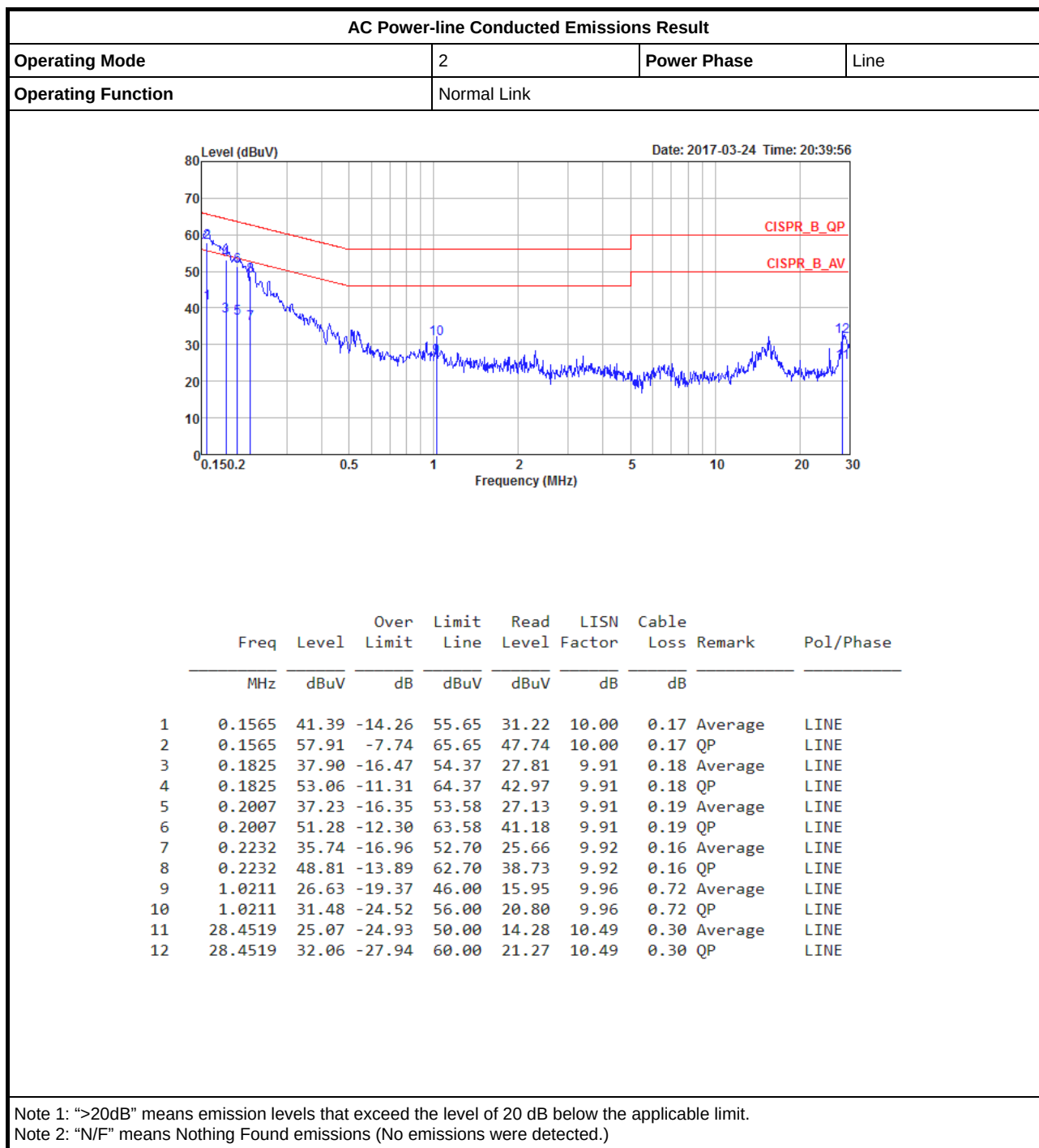
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	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.





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	935k	892.054k	892kF1D	921.25k	887.056k
BT-EDR(2Mbps)	-	-	-	-	-
2.4-2.4835GHz	1.339M	1.221M	1M22G1D	1.338M	1.221M
BT-EDR(3Mbps)	-	-	-	-	-
2.4-2.4835GHz	1.326M	1.219M	1M22G1D	1.314M	1.216M

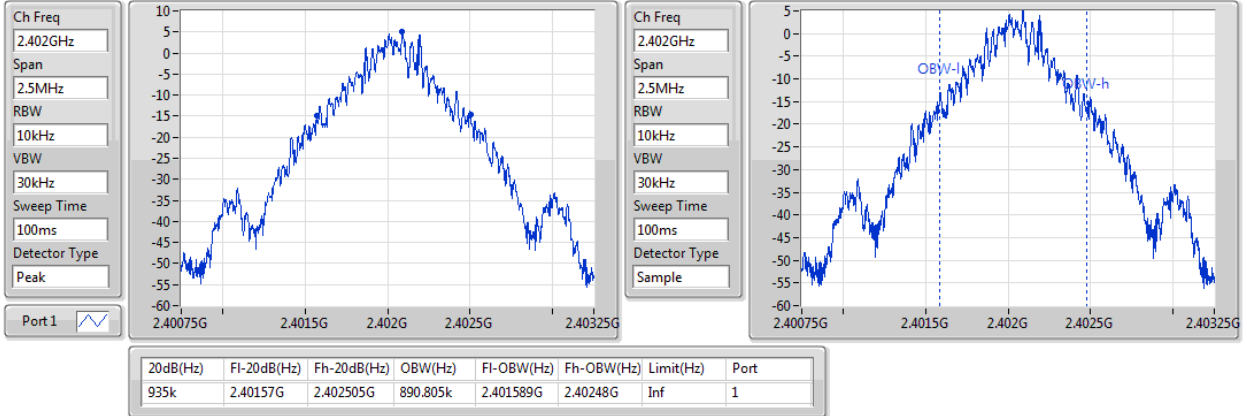
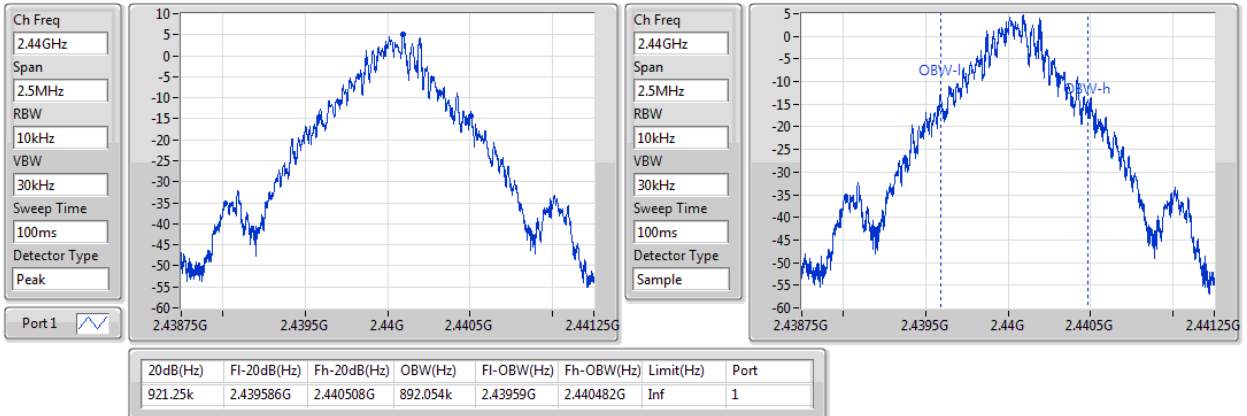
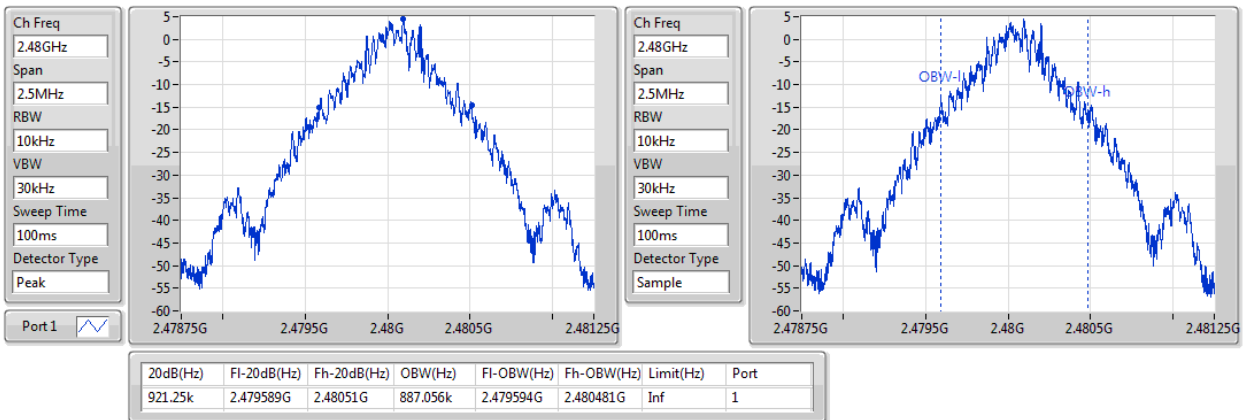
Max-N dB = Maximum 20dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

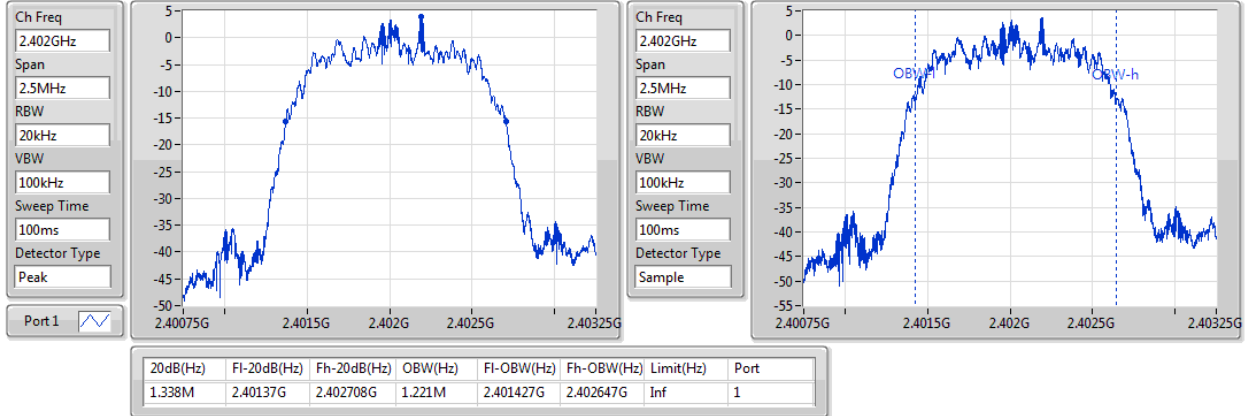
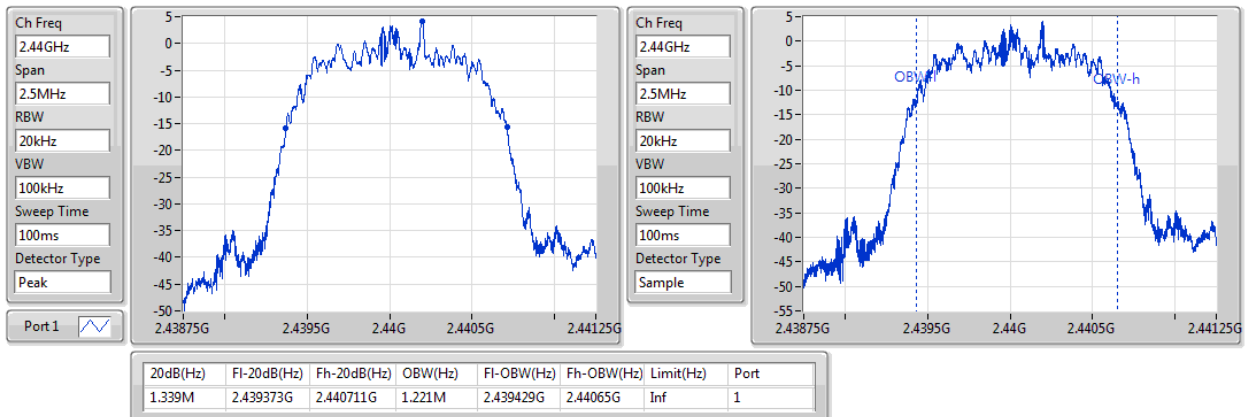
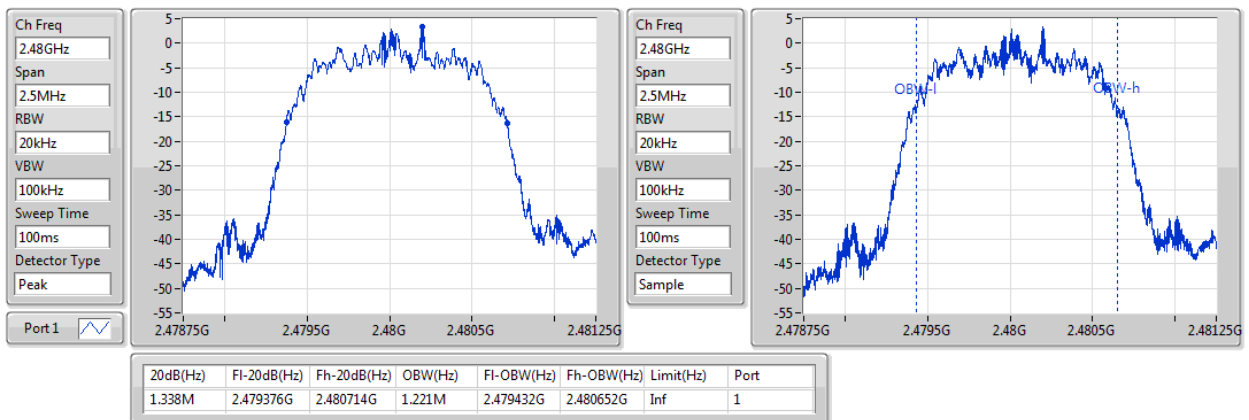
Min-N dB = Minimum 20dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

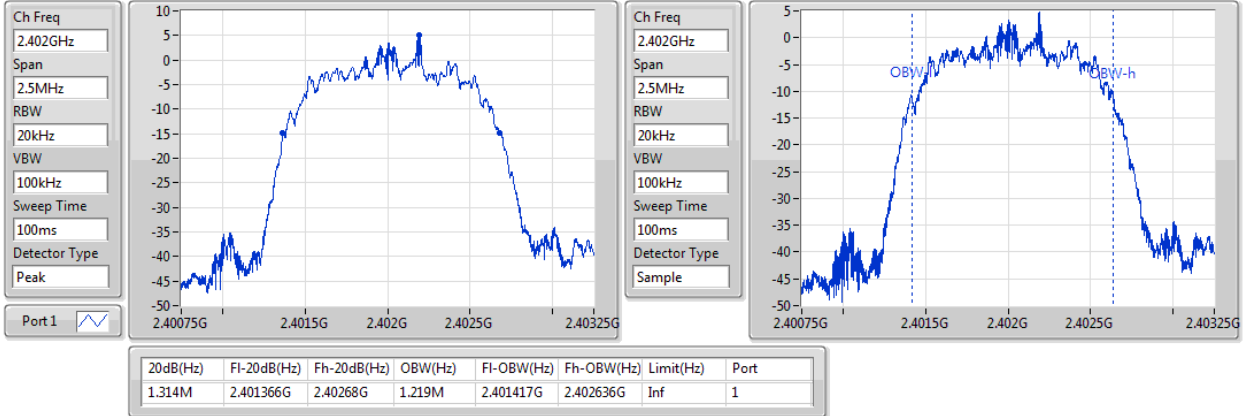
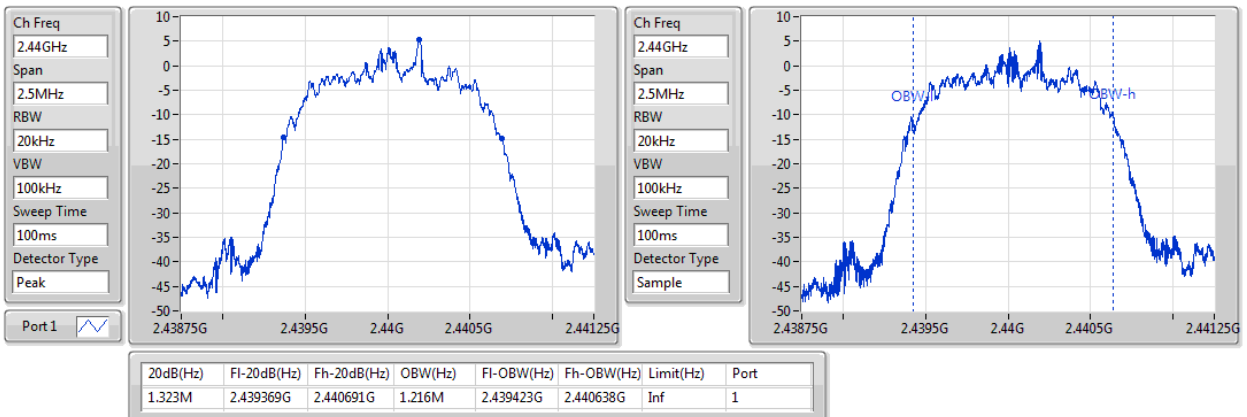
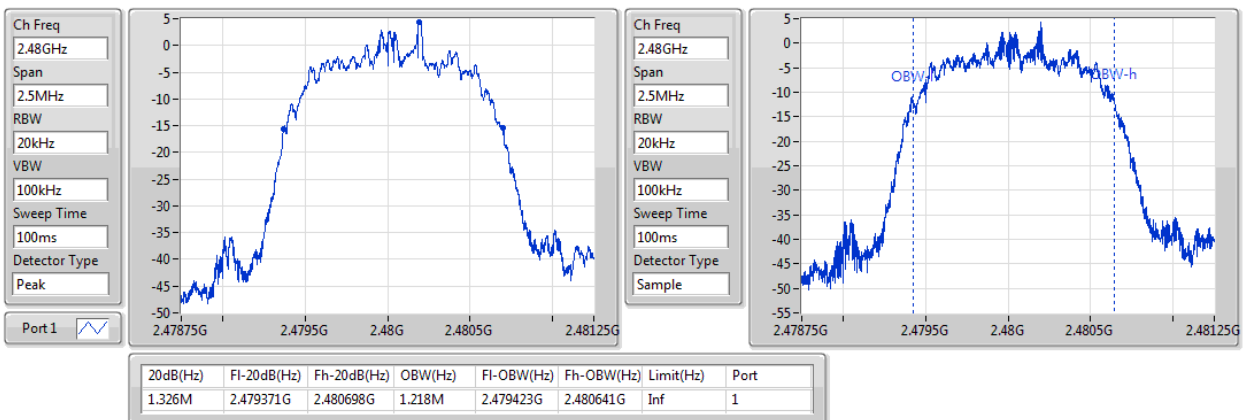
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	935k	890.805k
2440MHz	Pass	Inf	921.25k	892.054k
2480MHz	Pass	Inf	921.25k	887.056k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.338M	1.221M
2440MHz	Pass	Inf	1.339M	1.221M
2480MHz	Pass	Inf	1.338M	1.221M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.314M	1.219M
2440MHz	Pass	Inf	1.323M	1.216M
2480MHz	Pass	Inf	1.326M	1.218M

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

BT-BR(1Mbps)
EBW
2402MHz

BT-BR(1Mbps)
EBW
2440MHz

BT-BR(1Mbps)
EBW
2480MHz


BT-EDR(2Mbps)
EBW
2402MHz

BT-EDR(2Mbps)
EBW
2440MHz

BT-EDR(2Mbps)
EBW
2480MHz


BT-EDR(3Mbps)
EBW
2402MHz

BT-EDR(3Mbps)
EBW
2440MHz

BT-EDR(3Mbps)
EBW
2480MHz


Summary

Mode	Power	Power
	(dBm)	(W)
BT-BR(1Mbps)	-	-
2.4-2.4835GHz	10.80	0.01202
BT-EDR(2Mbps)	-	-
2.4-2.4835GHz	7.99	0.00630
BT-EDR(3Mbps)	-	-
2.4-2.4835GHz	8.23	0.00665

Result

Mode	Result	Gain	Power	Power Limit
		(dBi)	(dBm)	(dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.14	10.80	30.00
2440MHz	Pass	2.14	10.77	30.00
2480MHz	Pass	2.14	10.25	30.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.14	7.91	30.00
2440MHz	Pass	2.14	7.99	30.00
2480MHz	Pass	2.14	7.99	30.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.14	8.13	30.00
2440MHz	Pass	2.14	8.23	30.00
2480MHz	Pass	2.14	7.61	30.00

Summary

Mode	Power (dBm)	Power (W)
BT-BR(1Mbps)	-	-
2.4-2.4835GHz	10.97	0.0125
BT-EDR(2Mbps)	-	-
2.4-2.4835GHz	10.39	0.01094
BT-EDR(3Mbps)	-	-
2.4-2.4835GHz	11.07	0.01279

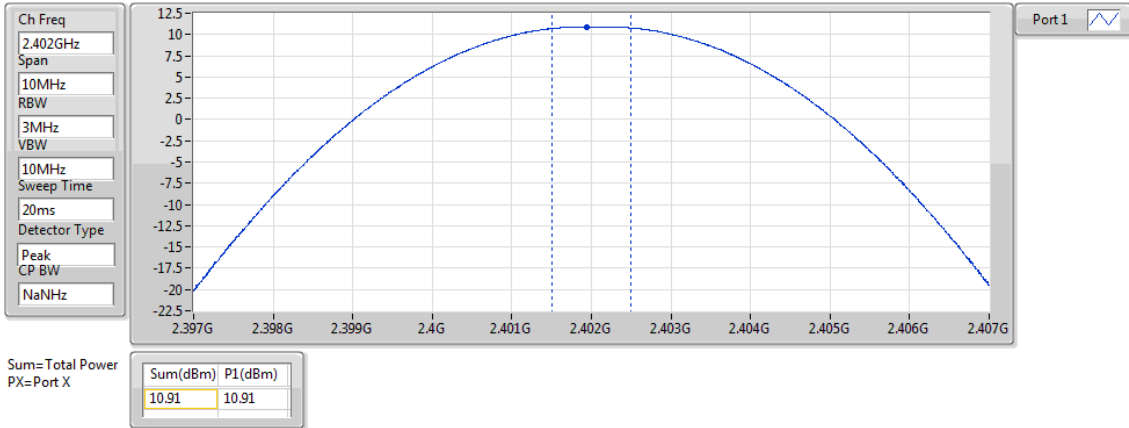
Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.14	10.91	30.00
2440MHz	Pass	2.14	10.97	30.00
2480MHz	Pass	2.14	10.32	30.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.14	10.26	30.00
2440MHz	Pass	2.14	10.39	30.00
2480MHz	Pass	2.14	9.67	30.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.14	10.91	30.00
2440MHz	Pass	2.14	11.07	30.00
2480MHz	Pass	2.14	10.40	30.00

BT-BR(1Mbps)

PK Power

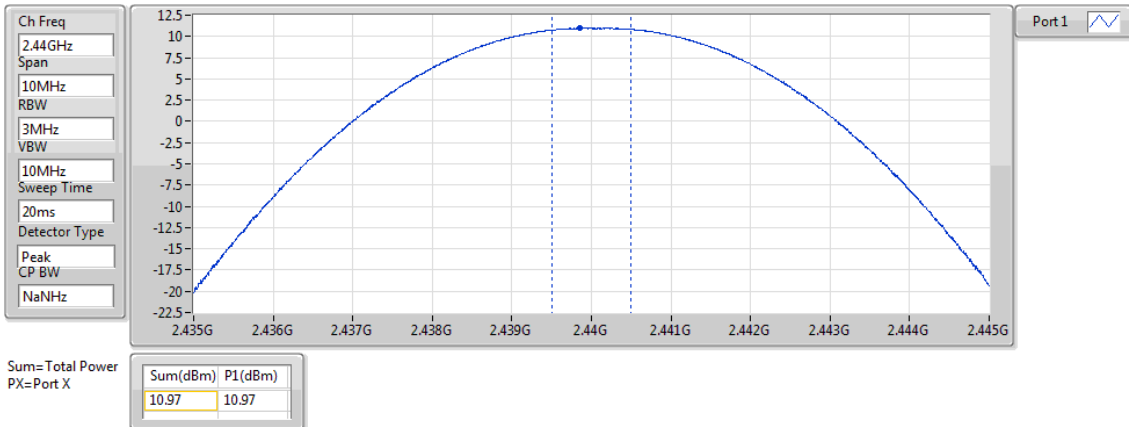
2402MHz



BT-BR(1Mbps)

PK Power

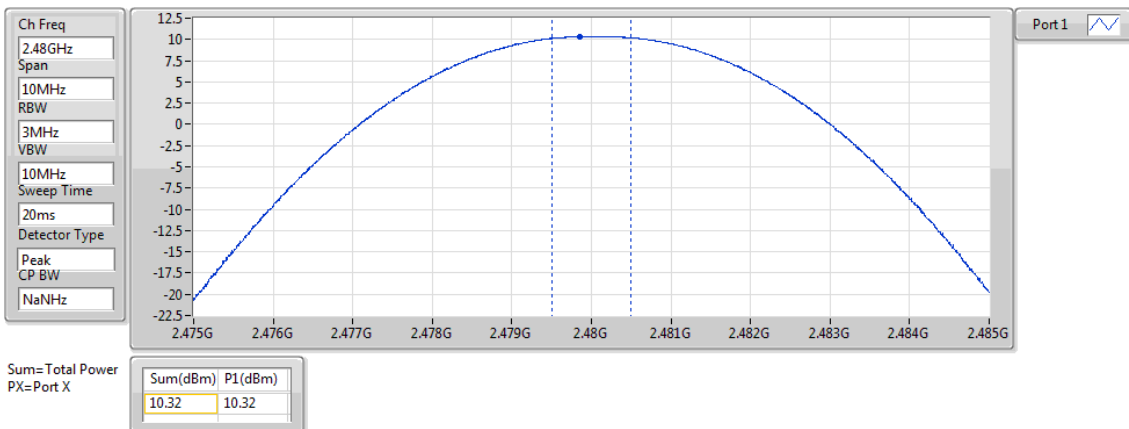
2440MHz



BT-BR(1Mbps)

PK Power

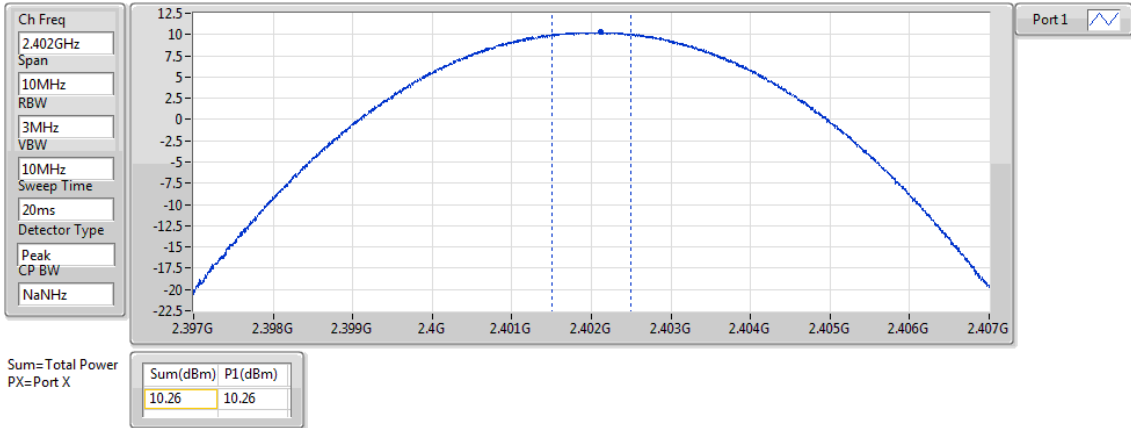
2480MHz



BT-EDR(2Mbps)

PK Power

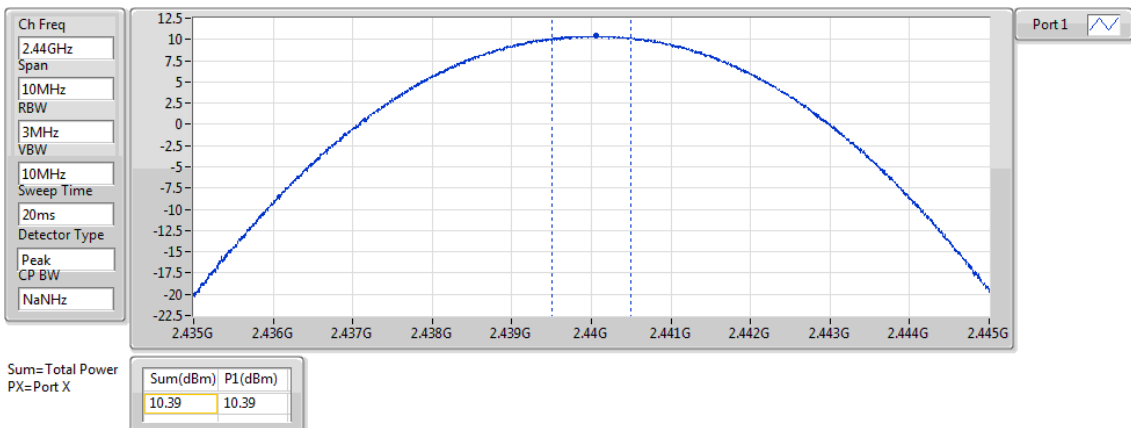
2402MHz



BT-EDR(2Mbps)

PK Power

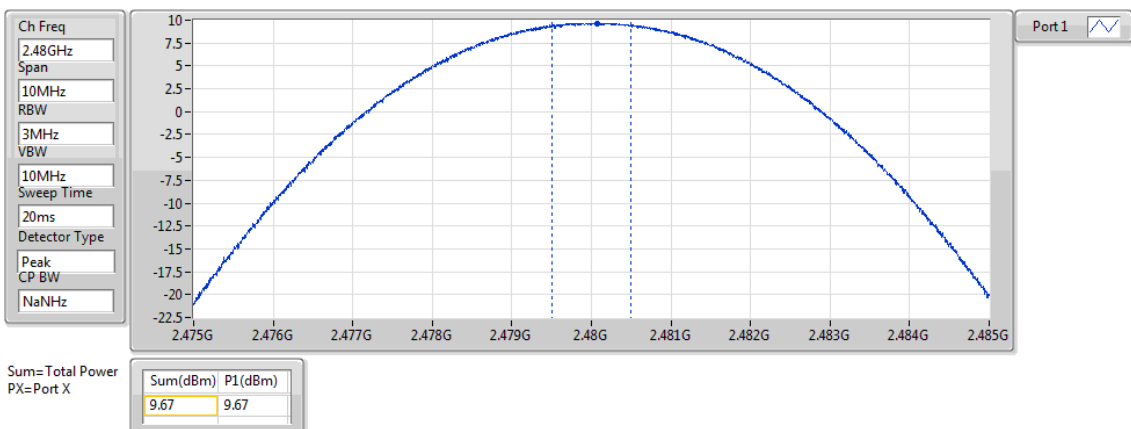
2440MHz



BT-EDR(2Mbps)

PK Power

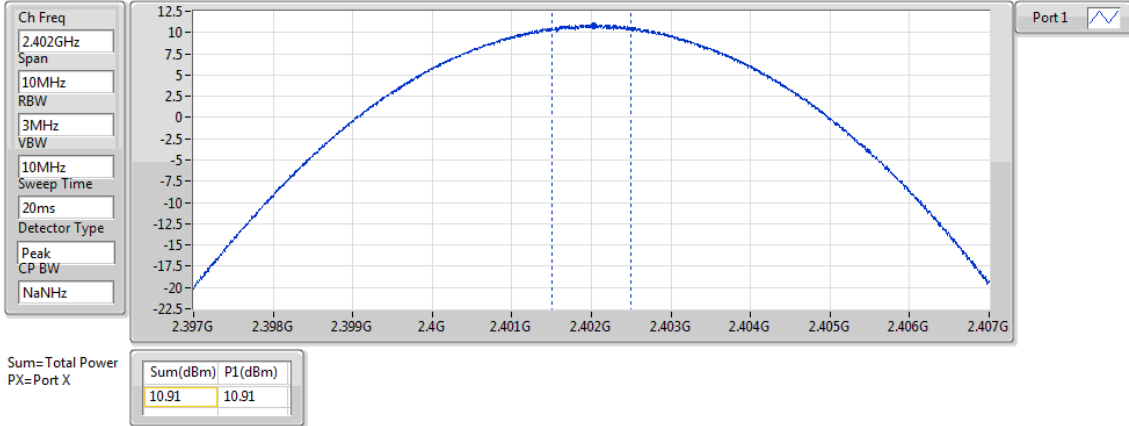
2480MHz



BT-EDR(3Mbps)

PK Power

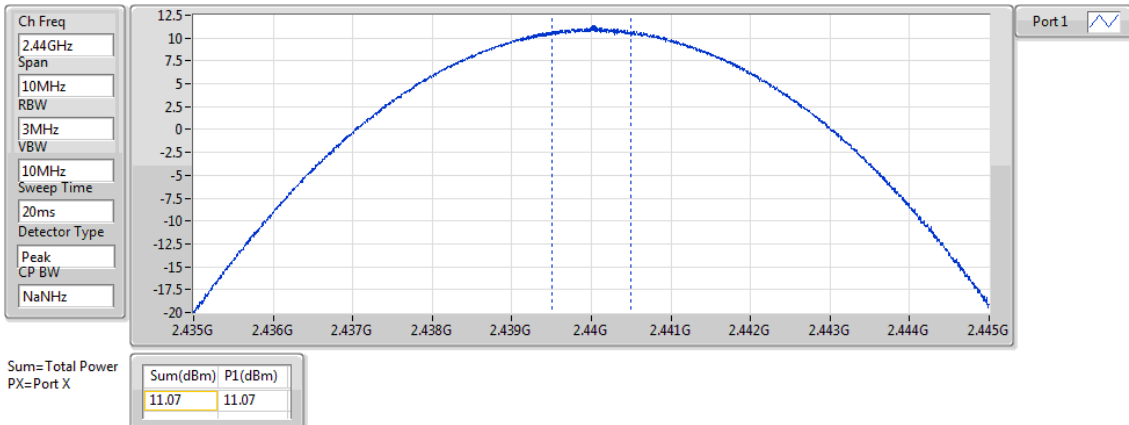
2402MHz



BT-EDR(3Mbps)

PK Power

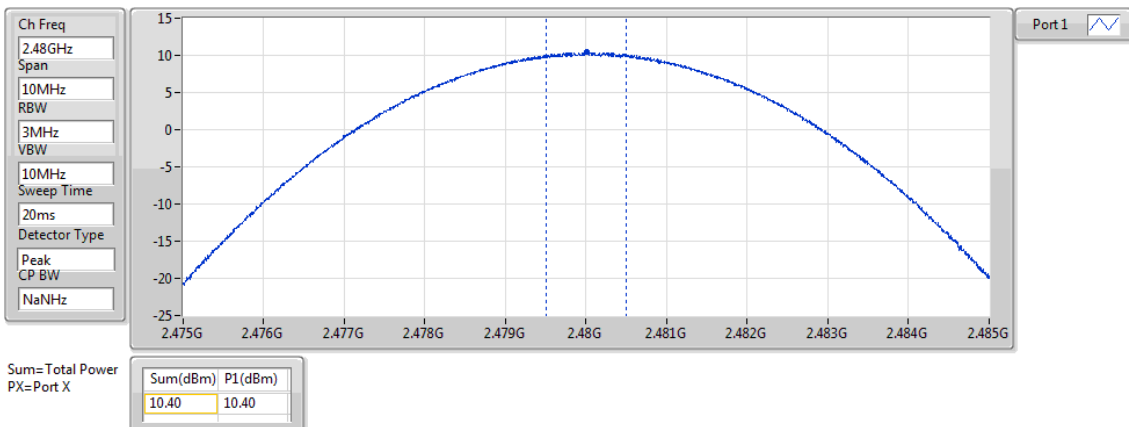
2440MHz



BT-EDR(3Mbps)

PK Power

2480MHz



Summary

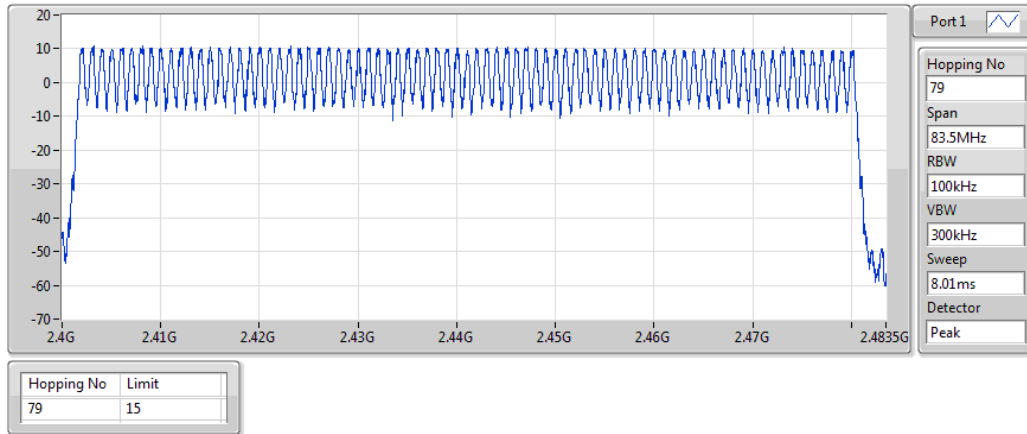
Mode	Max-Hop No
BT-BR(1Mbps)	-
2.4-2.4835GHz	79
BT-EDR(2Mbps)	-
2.4-2.4835GHz	79
BT-EDR(3Mbps)	-
2.4-2.4835GHz	79

Result

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

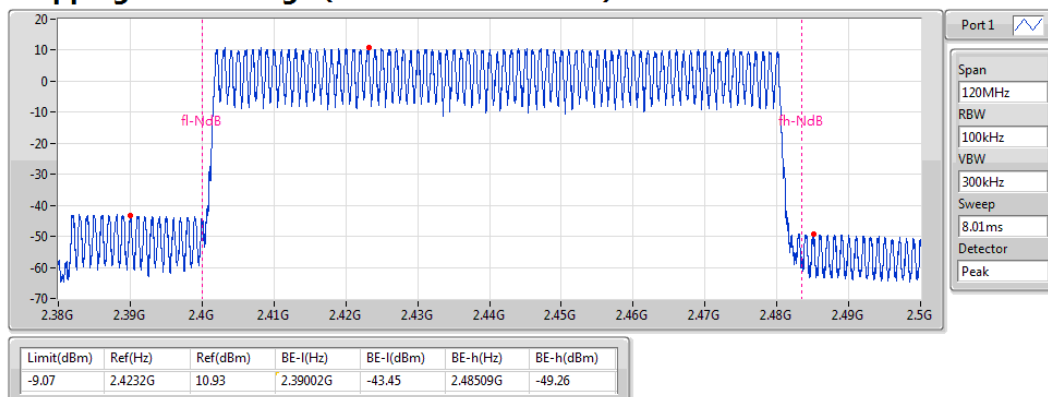
BT-BR(1Mbps) 2440MHz

Hopping Ch



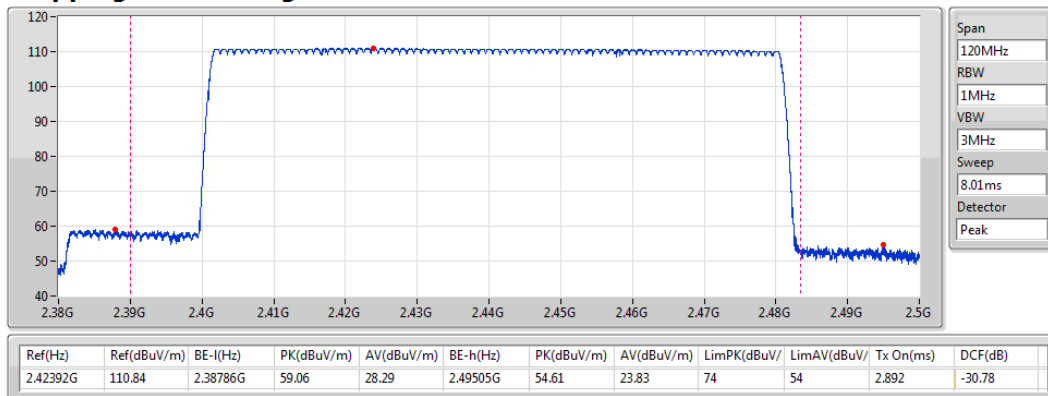
BT-BR(1Mbps) 2440MHz

Hopping Ch Bandedge (Non-restricted Band)



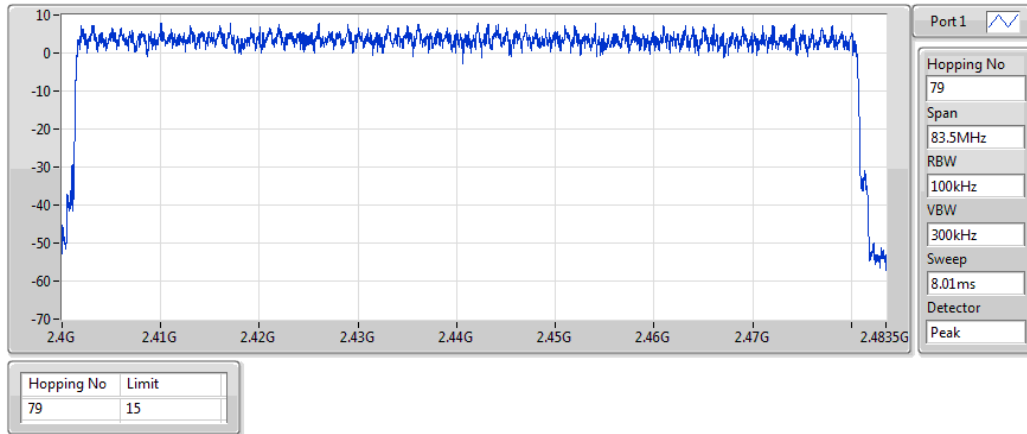
BT-BR(1Mbps) 2440MHz

Hopping Ch Bandedge (Restricted Band)



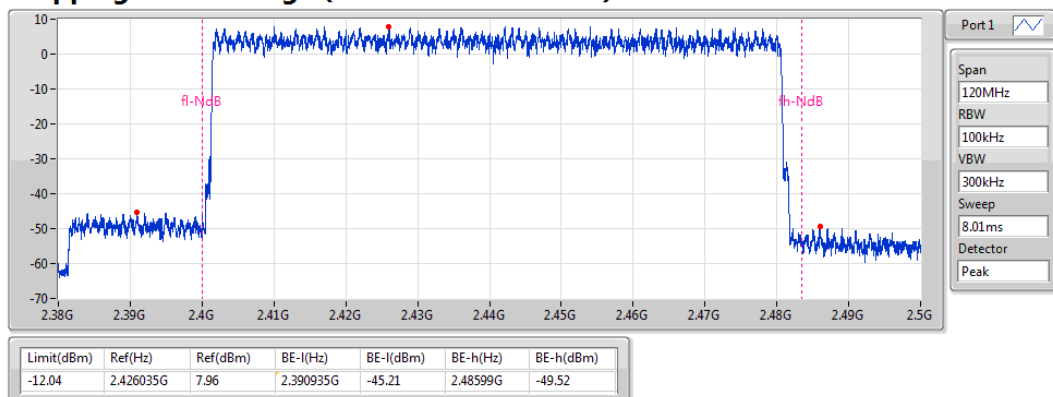
BT-EDR(2Mbps) 2440MHz

Hopping Ch



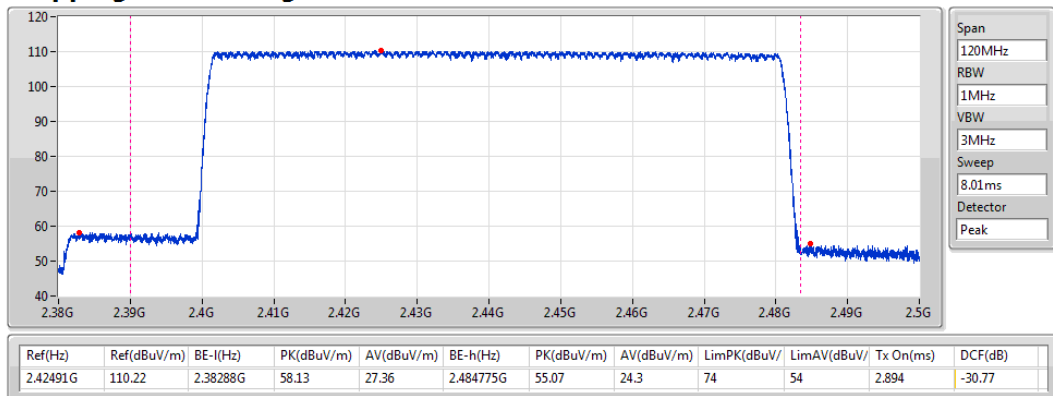
BT-EDR(2Mbps) 2440MHz

Hopping Ch Bandedge (Non-restricted Band)



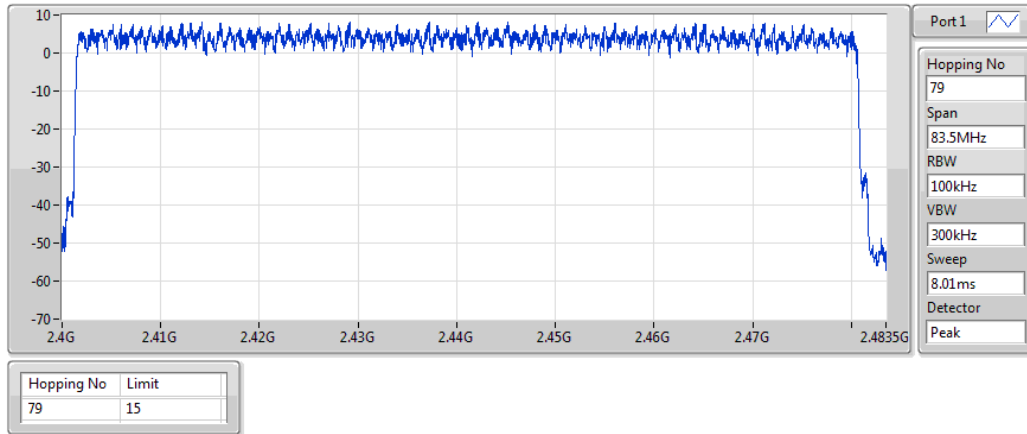
BT-EDR(2Mbps) 2440MHz

Hopping Ch Bandedge (Restricted Band)



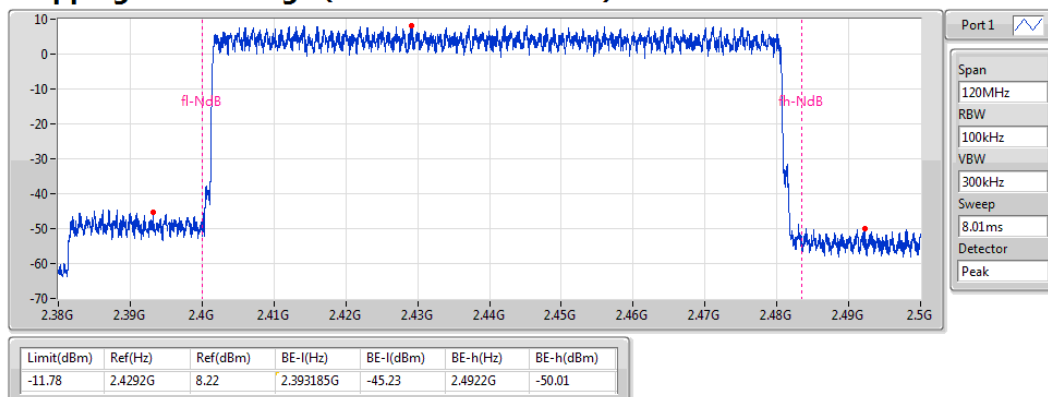
BT-EDR(3Mbps) 2440MHz

Hopping Ch



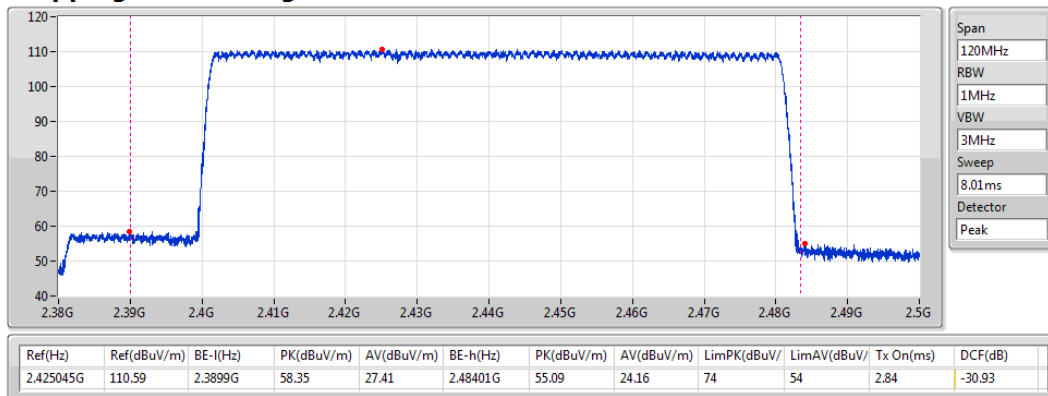
BT-EDR(3Mbps) 2440MHz

Hopping Ch Bandedge (Non-restricted Band)



BT-EDR(3Mbps) 2440MHz

Hopping Ch Bandedge (Restricted Band)



Summary

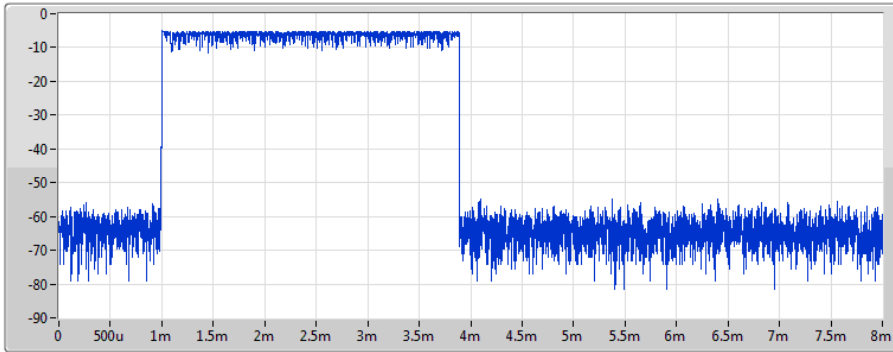
Mode	Max-Dwell (s)
BT-BR(1Mbps)	-
2.4-2.4835GHz	308.2872m
BT-EDR(2Mbps)	-
2.4-2.4835GHz	308.5004m
BT-EDR(3Mbps)	-
2.4-2.4835GHz	302.744m

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.2872m	400m	2.892m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.5004m	400m	2.894m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	302.744m	400m	2.84m

BT-BR(1Mbps)

2440MHz



Dwell

Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

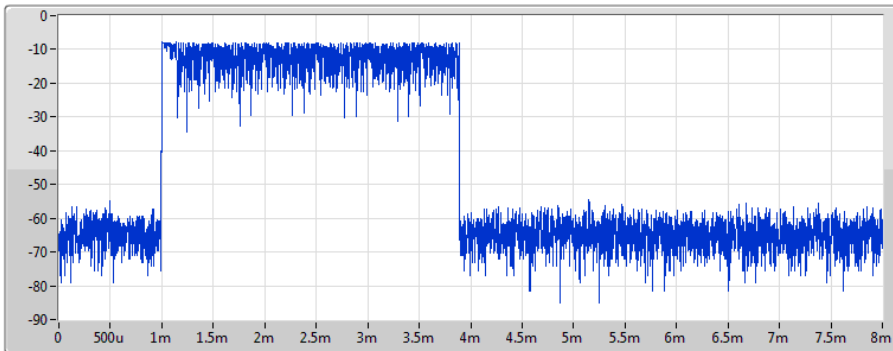
Sweep Time
8ms

TX Time
2.892ms

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

BT-EDR(2Mbps)

2440MHz



Dwell

Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

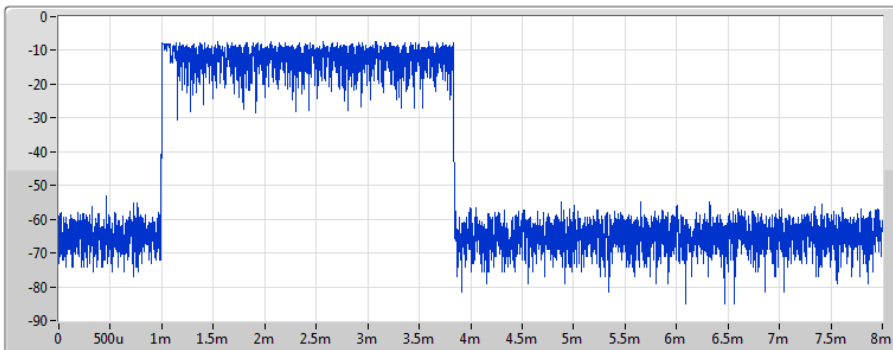
Sweep Time
8ms

TX Time
2.894ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.5004m	400m	2.894m

BT-EDR(3Mbps)

2440MHz



Dwell

Port 1 

Ch Freq
2.44GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.84ms

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	302.744m	400m	2.84m

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-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.402171G	10.10	-9.90	2.002544G	-59.53	2.399996G	-49.54	2.485436G	-61.80	7.205102G	-43.36	1

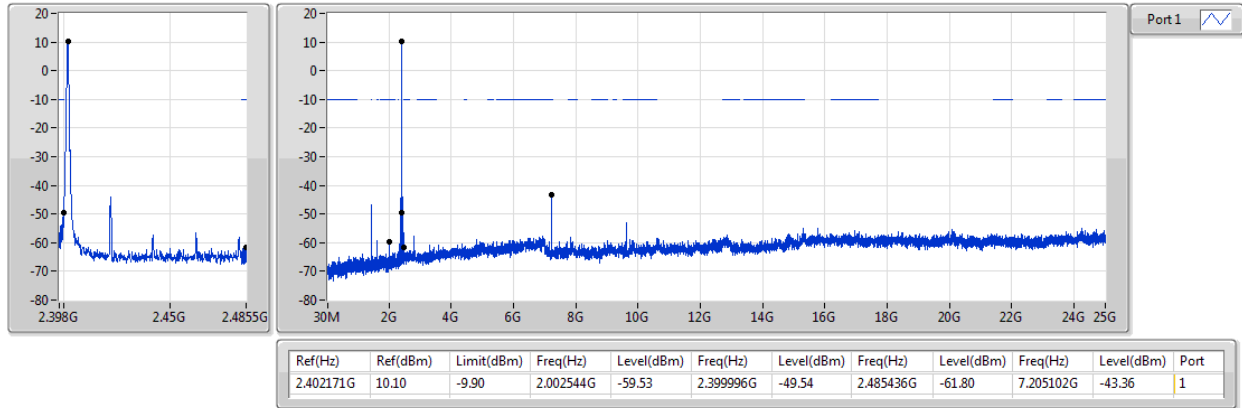
Result

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	2.402171G	10.10	-9.90	2.002544G	-59.53	2.399996G	-49.54	2.485436G	-61.80	7.205102G	-43.36	1
2440MHz	Pass	2.44008G	9.84	-10.16	1.627216G	-59.54	2.399968G	-58.61	2.483856G	-61.86	9.760498G	-52.12	1
2480MHz	Pass	2.48016G	9.89	-10.11	1.653264G	-58.67	2.399984G	-60.11	2.483712G	-56.74	9.920914G	-50.12	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.401837G	6.98	-13.02	2.394448G	-60.83	2.399928G	-48.46	2.485G	-61.70	24.431509G	-54.19	1
2440MHz	Pass	2.439913G	5.48	-14.52	1.627216G	-59.67	2.399976G	-60.41	2.485356G	-60.85	24.248579G	-54.84	1
2480MHz	Pass	2.48016G	6.64	-13.36	1.653264G	-62.81	2.399764G	-61.56	2.48352G	-56.29	2.499572G	-54.68	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.401837G	5.91	-14.09	2.396816G	-61.99	2.399752G	-49.07	2.484264G	-61.87	16.979209G	-55.42	1
2440MHz	Pass	2.44008G	6.20	-13.80	2.033328G	-61.82	2.399728G	-59.34	2.483712G	-61.59	15.313136G	-55.33	1
2480MHz	Pass	2.48016G	4.91	-15.09	2.067664G	-60.69	2.399908G	-59.64	2.483808G	-55.87	2.499572G	-54.77	1

BT-BR(1Mbps)

CSE NdB

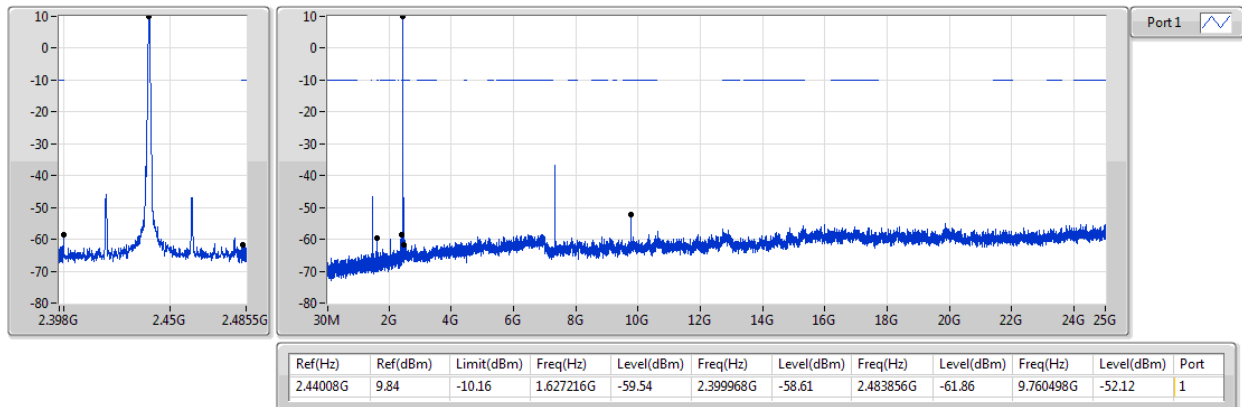
2402MHz



BT-BR(1Mbps)

CSE NdB

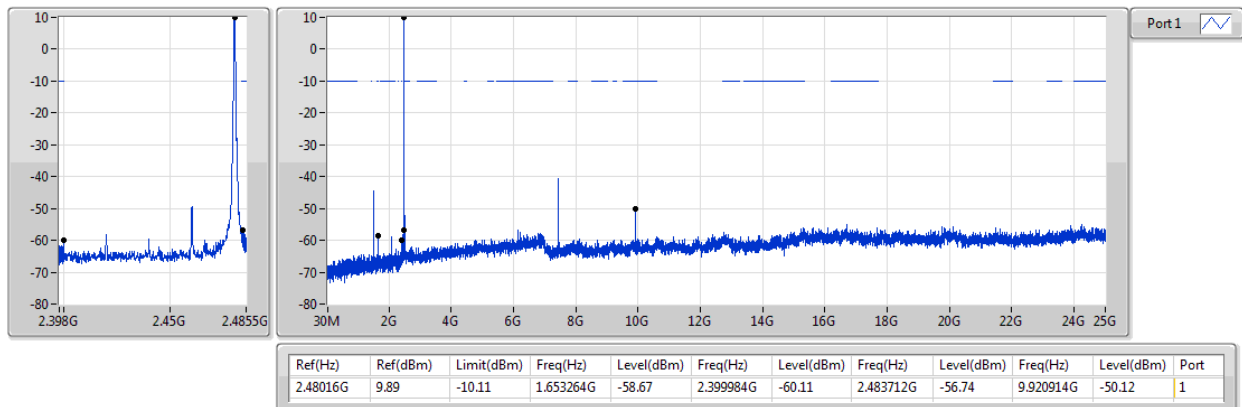
2440MHz



BT-BR(1Mbps)

CSE NdB

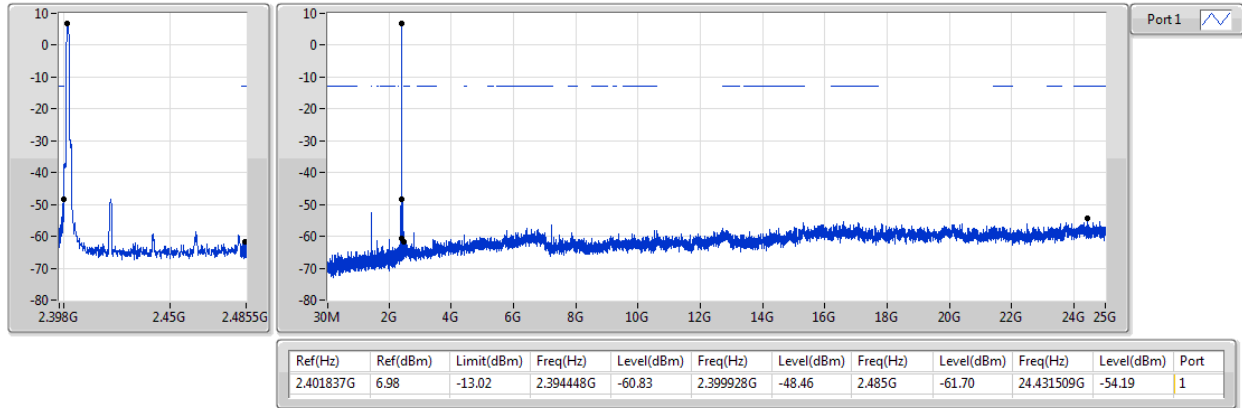
2480MHz



BT-EDR(2Mbps)

CSE NdB

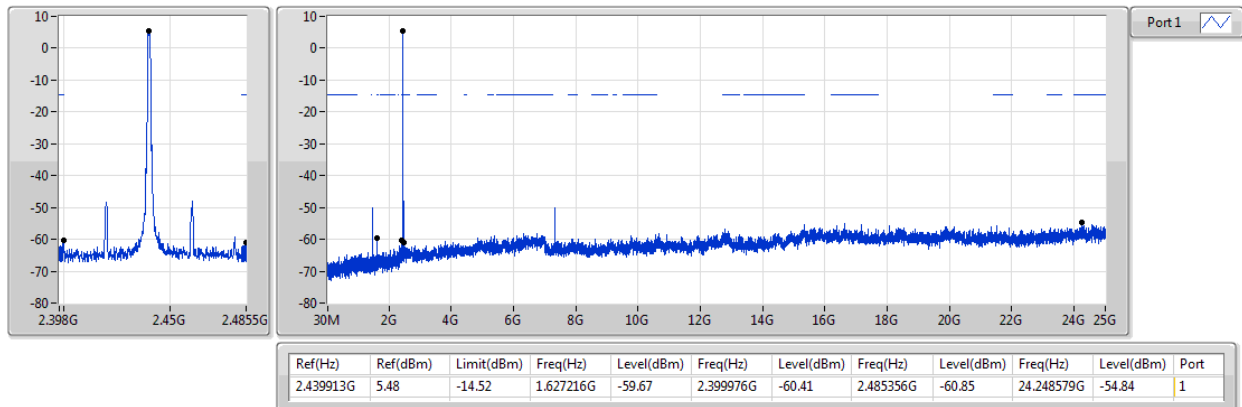
2402MHz



BT-EDR(2Mbps)

CSE NdB

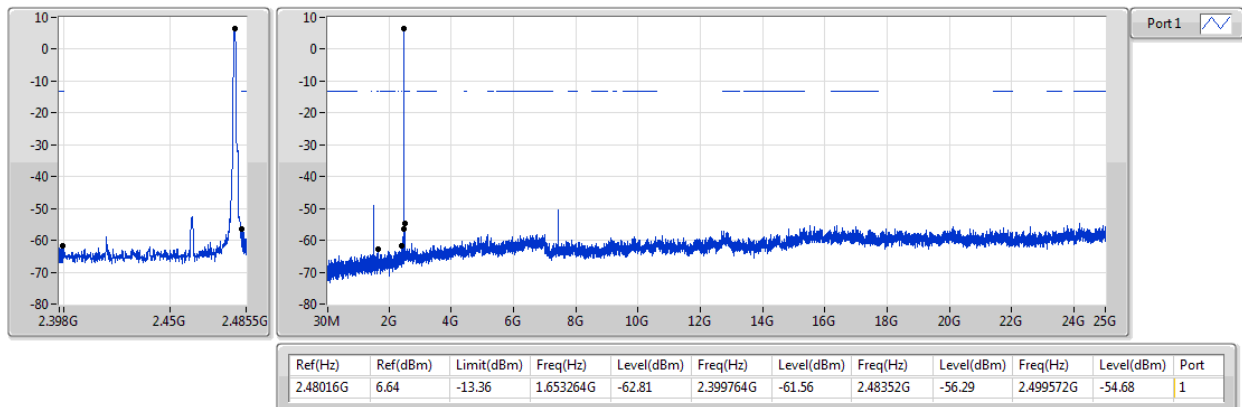
2440MHz



BT-EDR(2Mbps)

CSE NdB

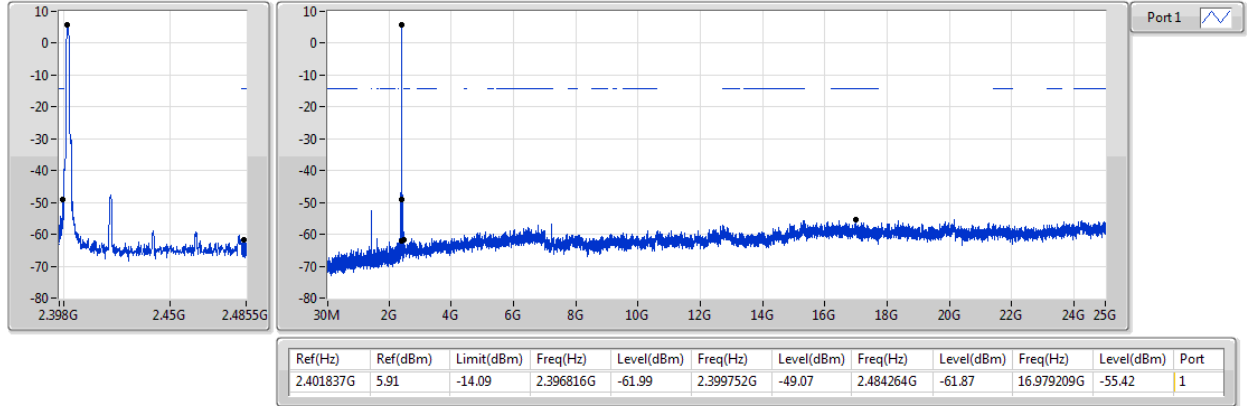
2480MHz



BT-EDR(3Mbps)

CSE NdB

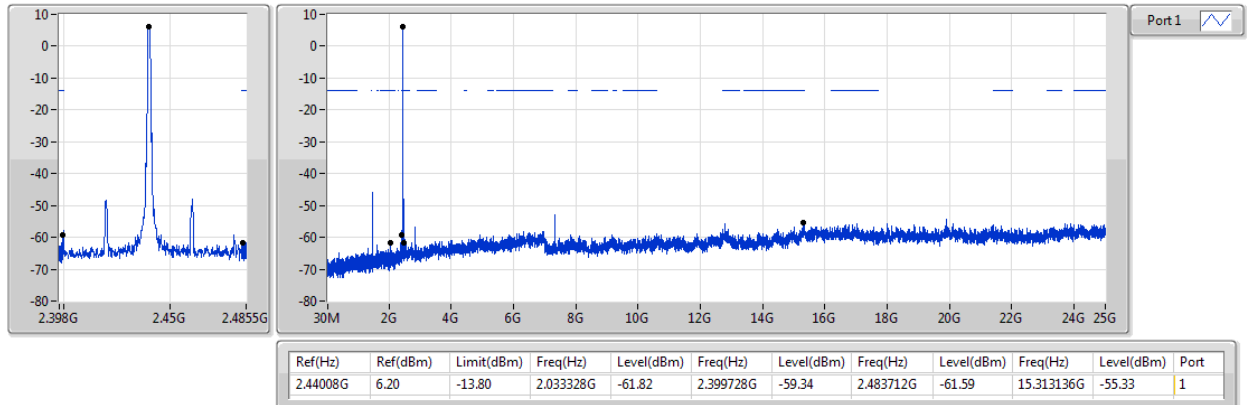
2402MHz



BT-EDR(3Mbps)

CSE NdB

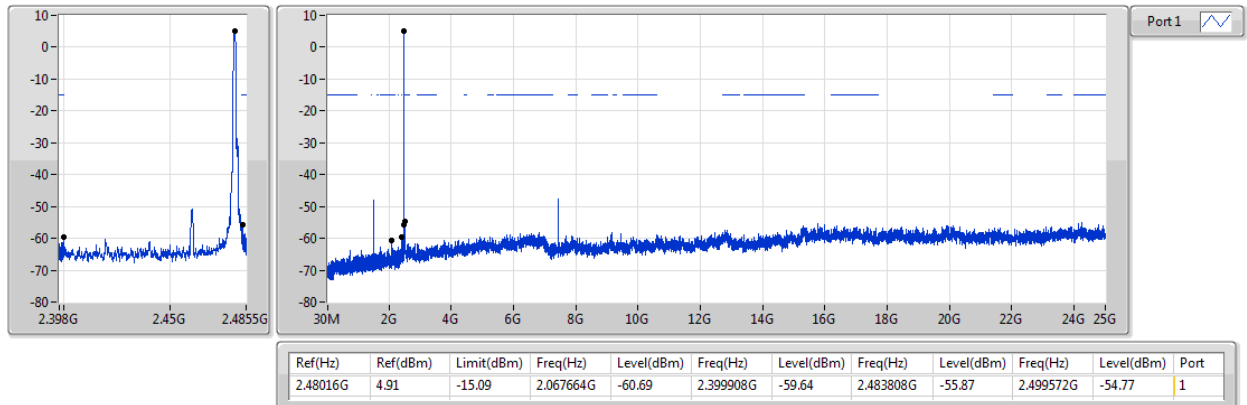
2440MHz

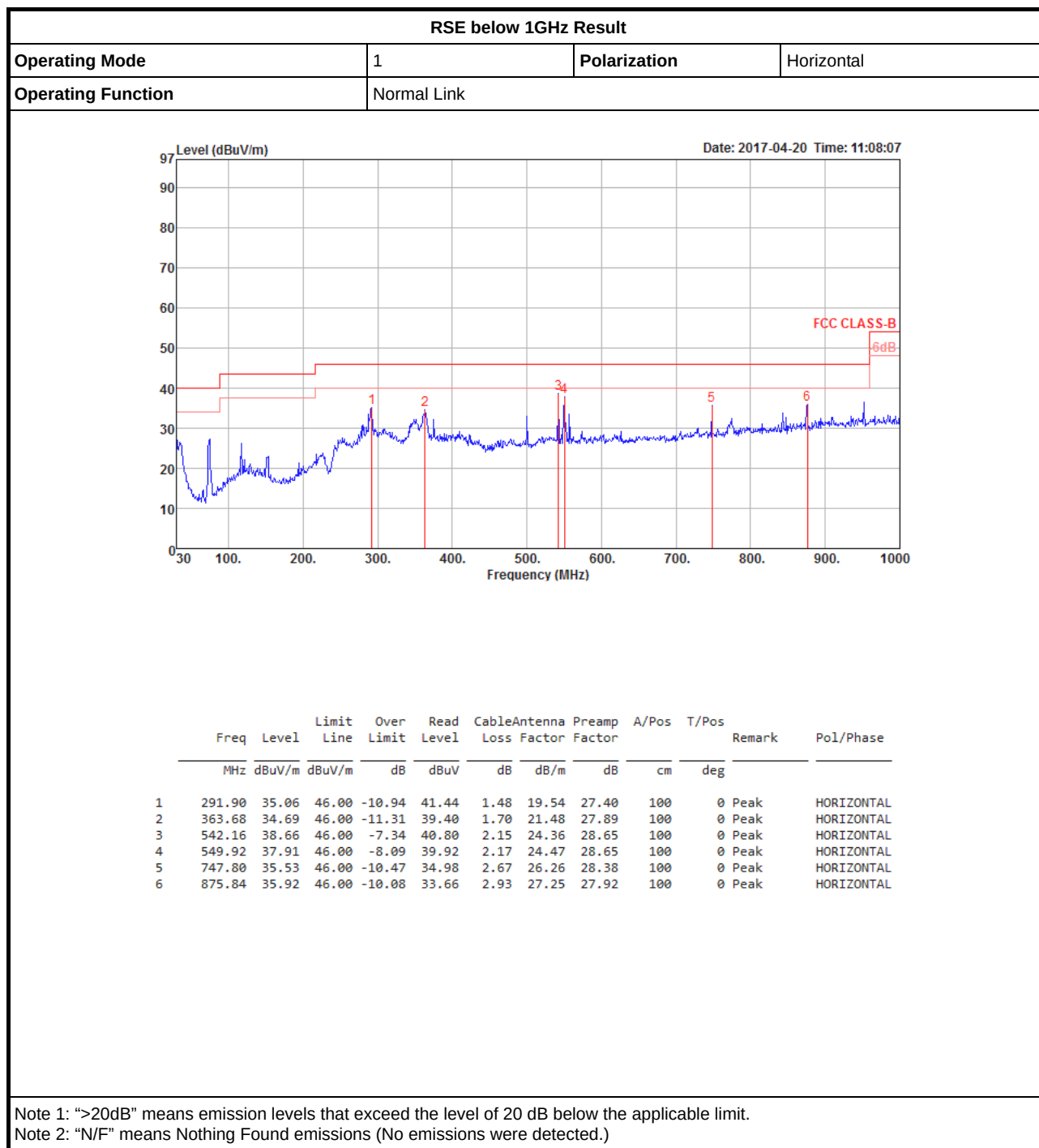


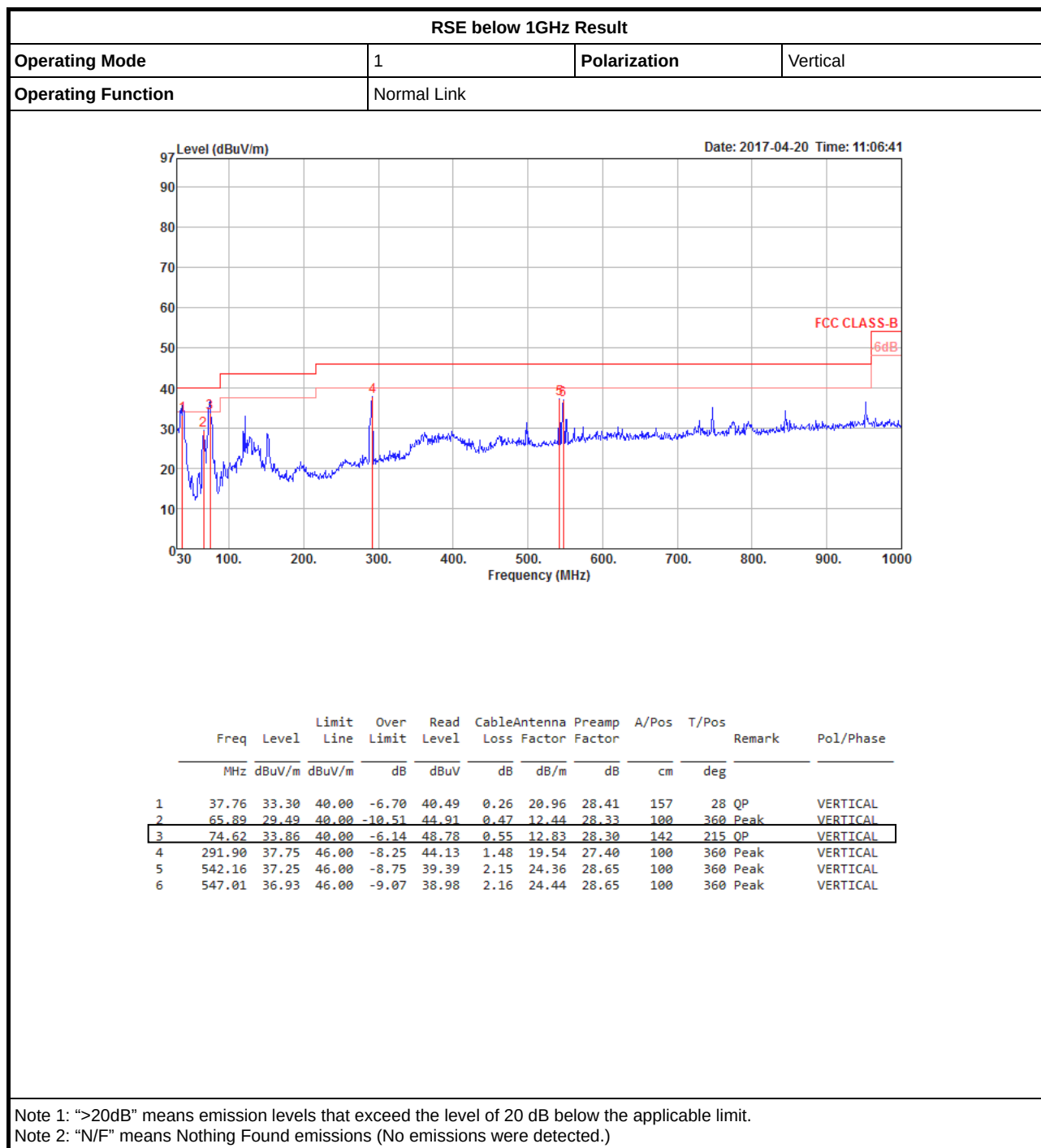
BT-EDR(3Mbps)

CSE NdB

2480MHz









RSE TX above 1GHz Result

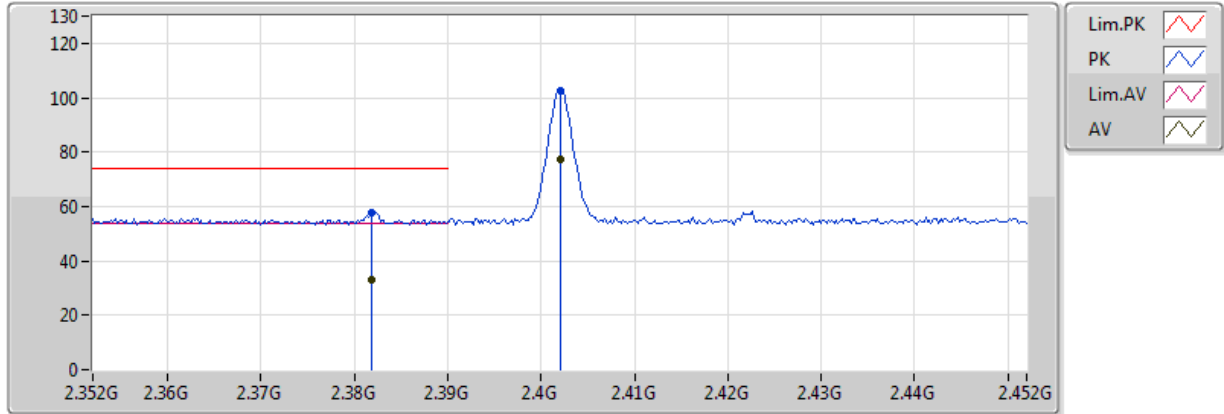
Appendix G.2

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	2.3822G	60.76	74.00	-13.24	32.34	3	H	298	1.50	-

BT-BR(1Mbps)

2402MHz_TX

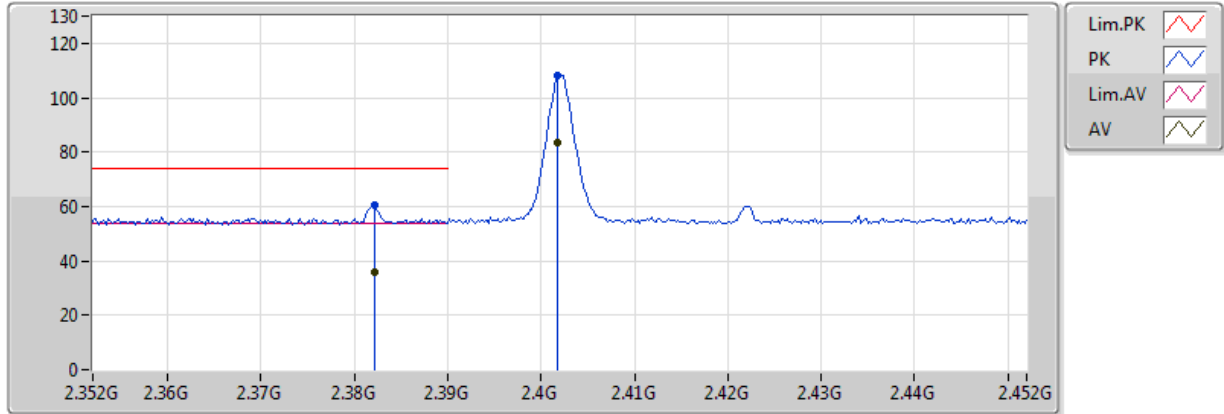


20170412
EUT Z1TX
setting: Default power
04-J-6

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	32.91	54.00	-21.09	32.34	3	V	260	2.76	-
AV	2.402G	77.54	Inf	-Inf	32.42	3	V	260	2.76	-
PK	2.3818G	57.95	74.00	-16.05	32.34	3	V	260	2.76	-
PK	2.402G	102.58	Inf	-Inf	32.42	3	V	260	2.76	-

BT-BR(1Mbps)

2402MHz_TX

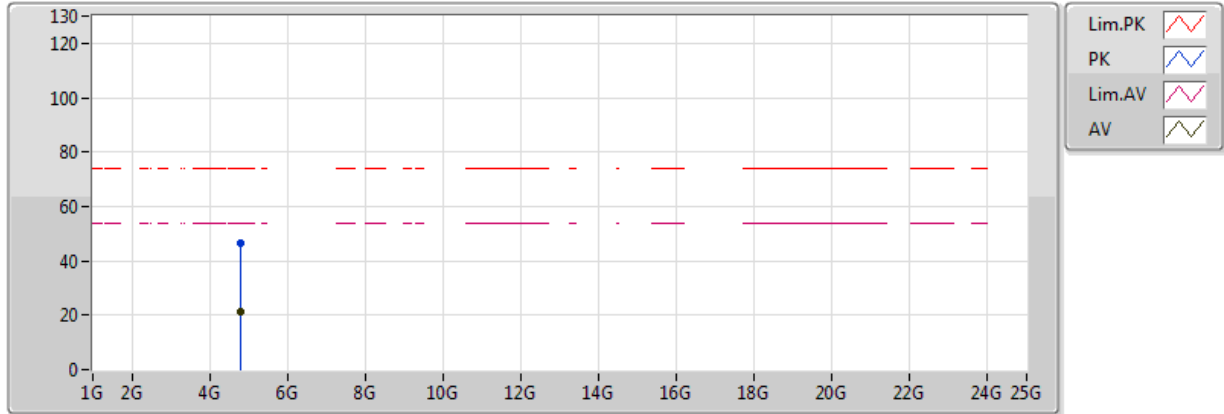


20170412
EUT Z1TX
setting: Default power
04-J-6

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	35.72	54.00	-18.28	32.34	3	H	298	1.50	-
AV	2.4018G	83.26	Inf	-Inf	32.42	3	H	298	1.50	-
PK	2.3822G	60.76	74.00	-13.24	32.34	3	H	298	1.50	-
PK	2.4018G	108.30	Inf	-Inf	32.42	3	H	298	1.50	-

BT-BR(1Mbps)

2402MHz_TX

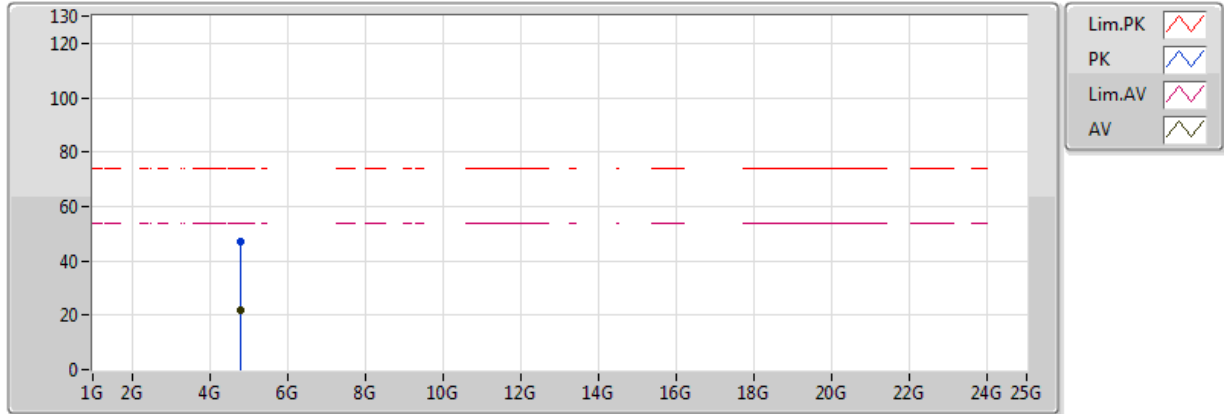


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.804872G	21.47	54.00	-32.53	6.55	3	V	246	2.17	-
PK	4.804872G	46.51	74.00	-27.49	6.55	3	V	246	2.17	-

BT-BR(1Mbps)

2402MHz_TX

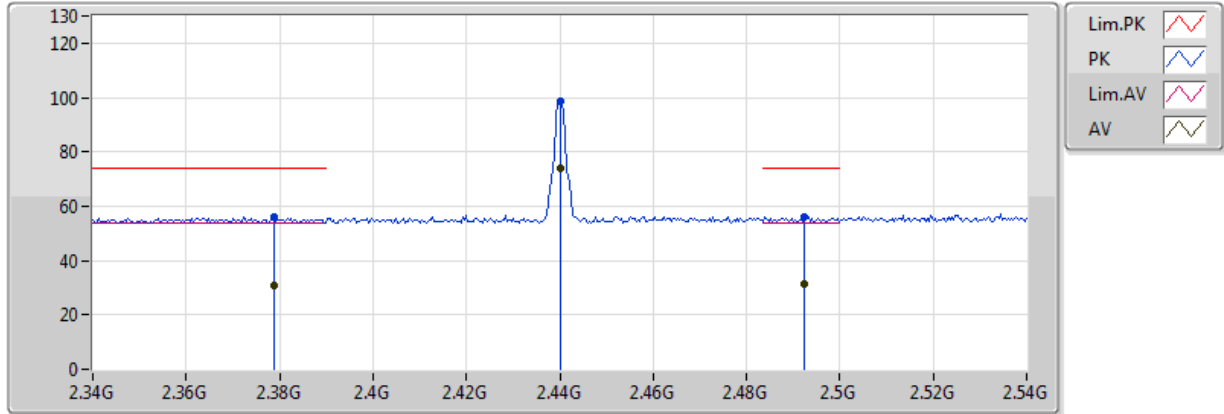


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.804276G	22.02	54.00	-31.98	6.55	3	H	191	1.03	-
PK	4.804276G	47.06	74.00	-26.94	6.55	3	H	191	1.03	-

BT-BR(1Mbps)

2440MHz_TX

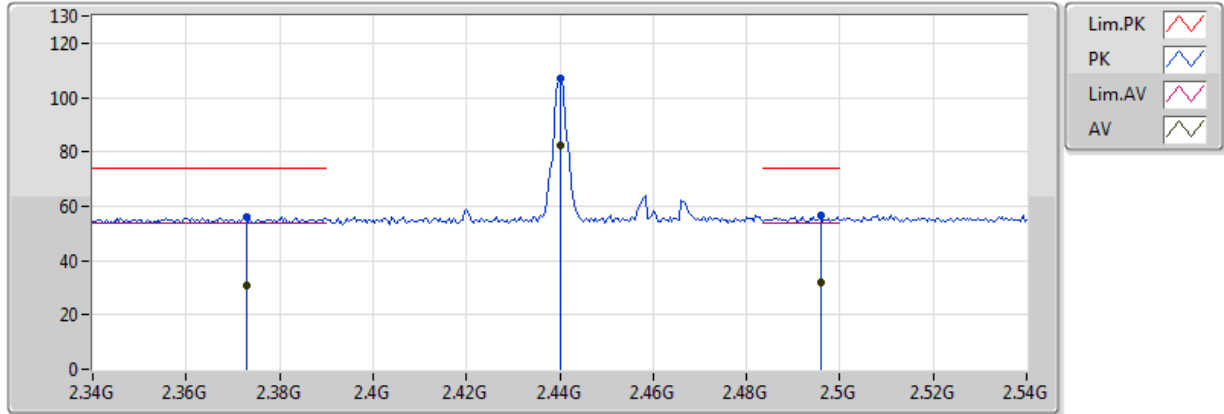


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3788G	30.80	54.00	-23.20	32.33	3	V	288	1.02	-
AV	2.44G	73.70	Inf	-Inf	32.55	3	V	288	1.02	-
AV	2.4924G	31.19	54.00	-22.81	32.74	3	V	288	1.02	-
PK	2.3788G	55.84	74.00	-18.16	32.33	3	V	288	1.02	-
PK	2.44G	98.74	Inf	-Inf	32.55	3	V	288	1.02	-
PK	2.4924G	56.23	74.00	-17.77	32.74	3	V	288	1.02	-

BT-BR(1Mbps)

2440MHz_TX

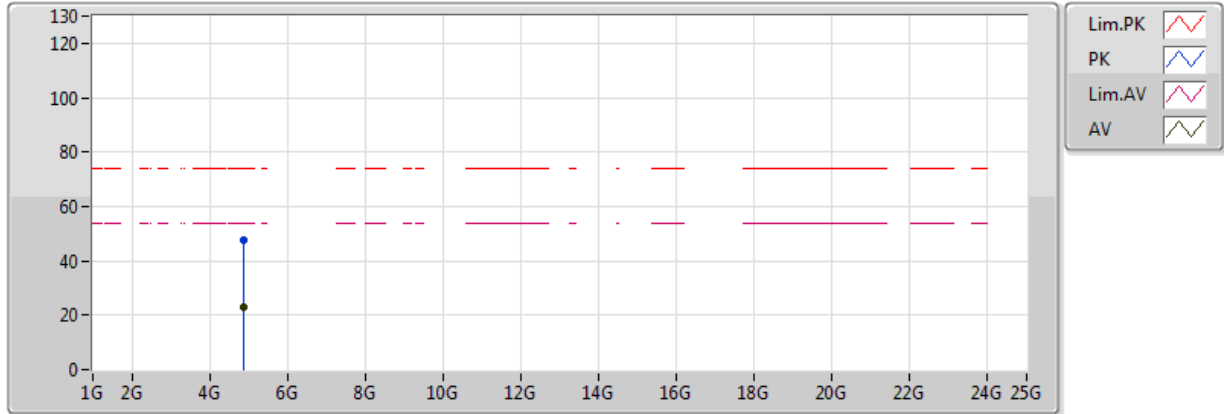


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3728G	30.93	54.00	-23.07	32.31	3	H	298	1.46	-
AV	2.44G	82.22	Inf	-Inf	32.55	3	H	298	1.46	-
AV	2.496G	31.83	54.00	-22.17	32.76	3	H	298	1.46	-
PK	2.3728G	55.97	74.00	-18.03	32.31	3	H	298	1.46	-
PK	2.44G	107.26	Inf	-Inf	32.55	3	H	298	1.46	-
PK	2.496G	56.87	74.00	-17.13	32.76	3	H	298	1.46	-

BT-BR(1Mbps)

2440MHz_TX

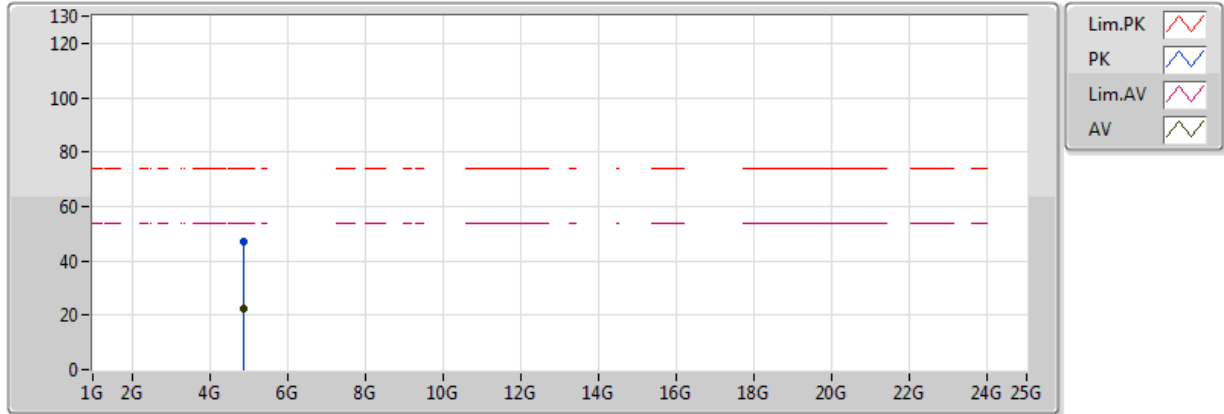


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.880268G	22.78	54.00	-31.22	6.76	3	V	323	2.41	-
PK	4.880268G	47.82	74.00	-26.18	6.76	3	V	323	2.41	-

BT-BR(1Mbps)

2440MHz_TX

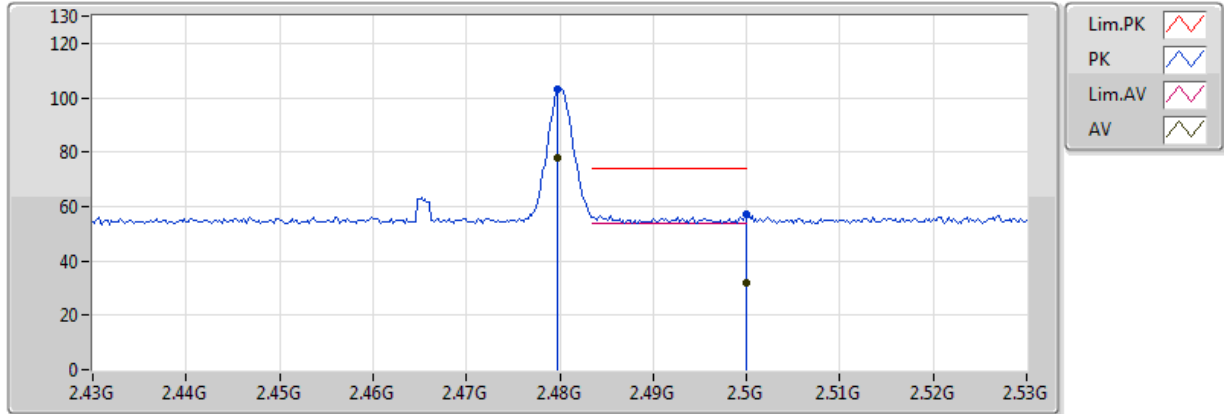


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.880044G	22.17	54.00	-31.83	6.76	3	H	176	1.29	-
PK	4.88044G	47.21	74.00	-26.79	6.76	3	H	176	1.29	-

BT-BR(1Mbps)

2480MHz_TX

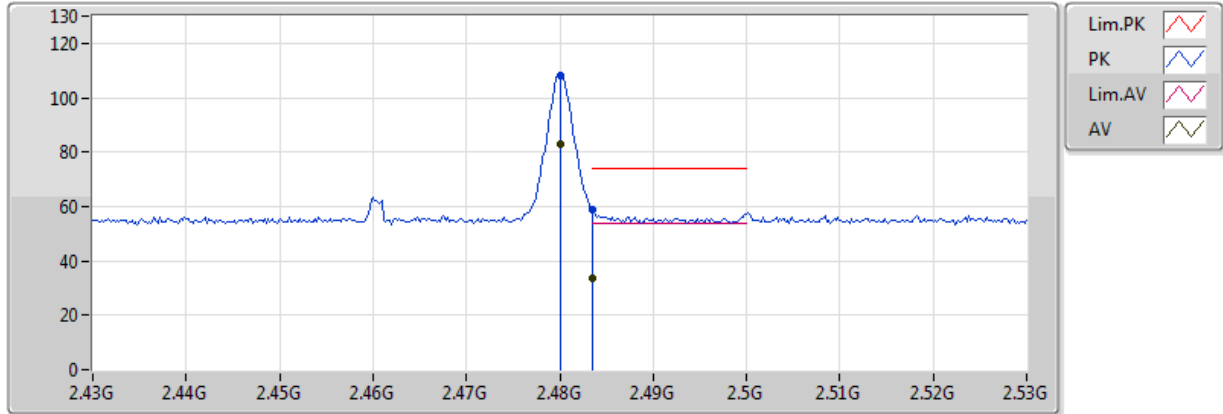


20170413
EUT Z 1TX
setting: Default power
05-M-01

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	77.91	Inf	-Inf	32.70	3	V	257	2.91	-
AV	2.5G	32.12	54.00	-21.88	32.77	3	V	257	2.91	-
PK	2.4798G	102.95	Inf	-Inf	32.70	3	V	257	2.91	-
PK	2.5G	57.16	74.00	-16.84	32.77	3	V	257	2.91	-

BT-BR(1Mbps)

2480MHz_TX

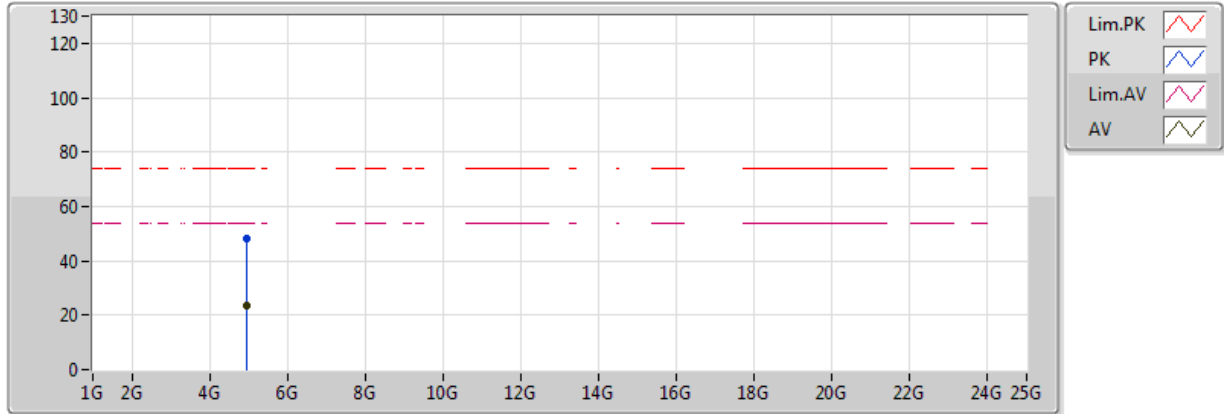


20170413
EUT Z1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.48G	82.92	Inf	-Inf	32.70	3	H	310	1.01	-
AV	2.483502G	33.85	54.00	-20.15	32.71	3	H	310	1.01	-
PK	2.48G	107.96	Inf	-Inf	32.70	3	H	310	1.01	-
PK	2.483502G	58.89	74.00	-15.11	32.71	3	H	310	1.01	-

BT-BR(1Mbps)

2480MHz_TX

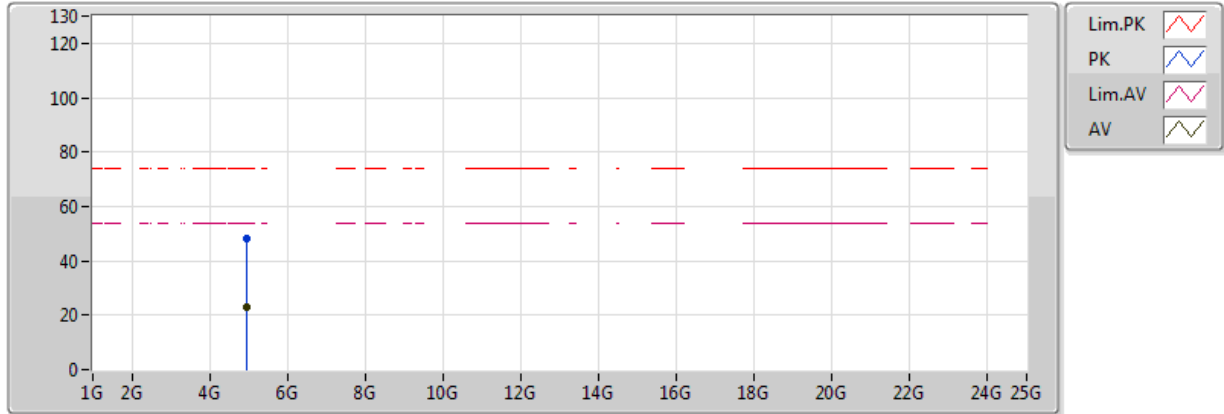


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.960352G	23.27	54.00	-30.73	6.97	3	V	195	1.65	-
PK	4.960352G	48.31	74.00	-25.69	6.97	3	V	195	1.65	-

BT-BR(1Mbps)

2480MHz_TX

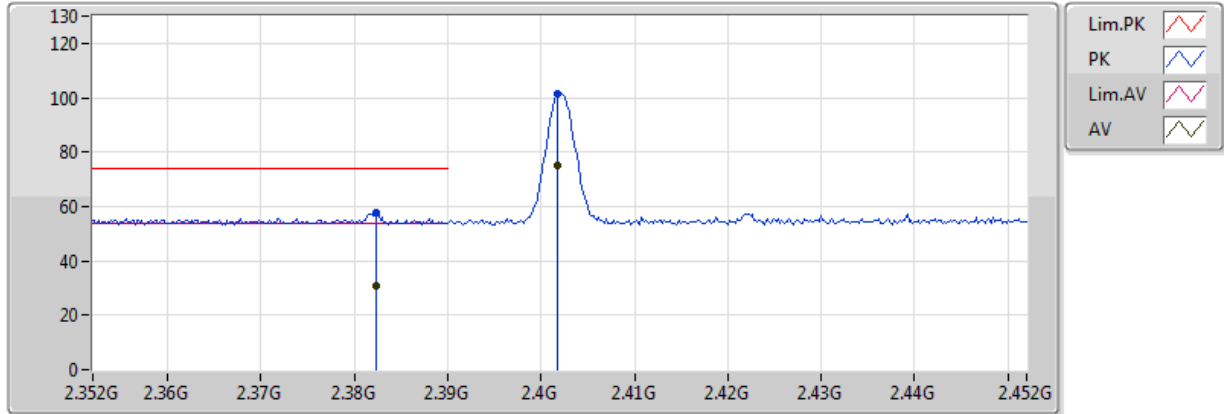


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.959272G	23.13	54.00	-30.87	6.96	3	H	132	2.13	-
PK	4.959272G	48.19	74.00	-25.81	6.96	3	H	132	2.13	-

BT-EDR(3Mbps)

2402MHz_TX

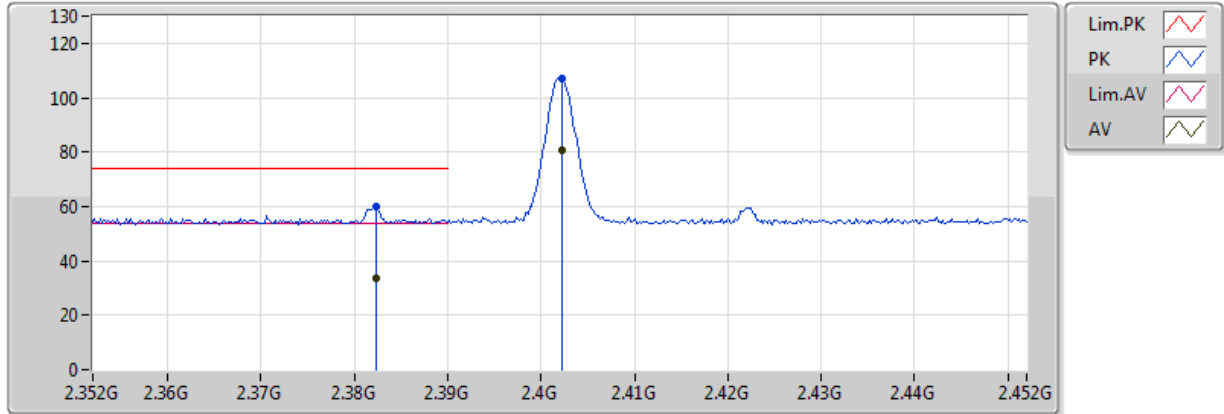


20170413
EUT Z1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3824G	31.06	54.00	-22.94	32.34	3	V	225	2.16	-
AV	2.4018G	74.90	Inf	-Inf	32.42	3	V	225	2.16	-
PK	2.3824G	57.44	74.00	-16.56	32.34	3	V	225	2.16	-
PK	2.4018G	101.28	Inf	-Inf	32.42	3	V	225	2.16	-

BT-EDR(3Mbps)

2402MHz_TX

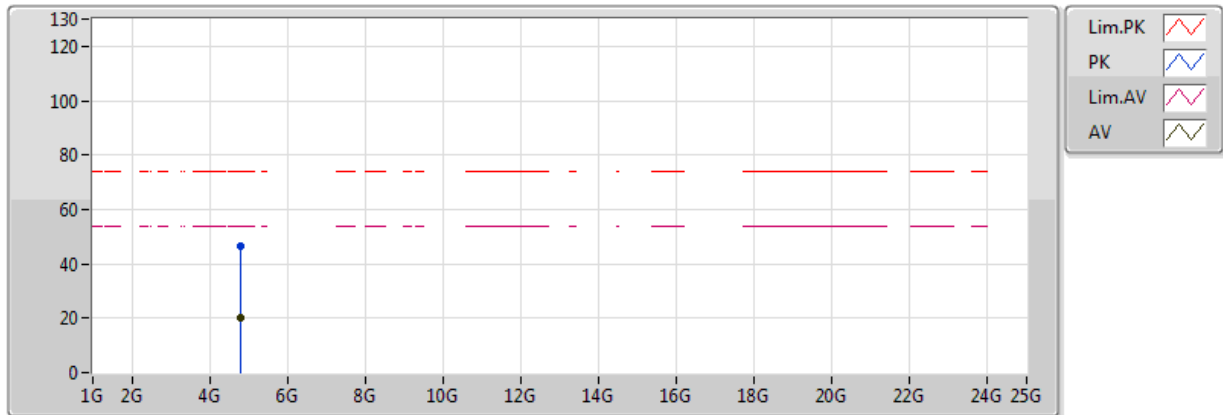


20170413
EUT Z1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3824G	33.39	54.00	-20.61	32.34	3	H	266	1.66	-
AV	2.4022G	80.55	Inf	-Inf	32.42	3	H	266	1.66	-
PK	2.3824G	59.77	74.00	-14.23	32.34	3	H	266	1.66	-
PK	2.4022G	106.93	Inf	-Inf	32.42	3	H	266	1.66	-

BT-EDR(3Mbps)

2402MHz_TX

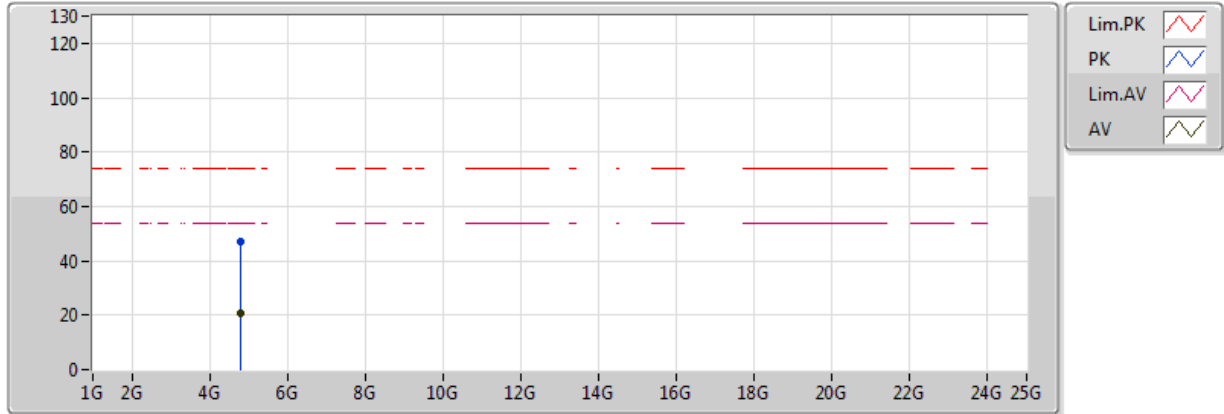


20170413
EUT Z1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.803612G	20.35	54.00	-33.65	6.55	3	V	166	2.47	-
PK	4.803612G	46.73	74.00	-27.27	6.55	3	V	166	2.47	-

BT-EDR(3Mbps)

2402MHz_TX

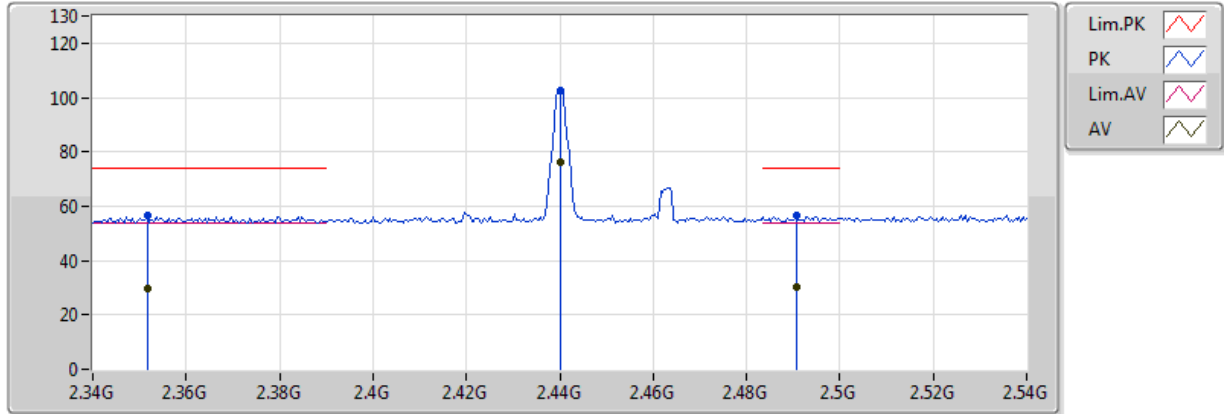


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.803404G	20.72	54.00	-33.28	6.55	3	H	122	2.09	-
PK	4.803404G	47.10	74.00	-26.90	6.55	3	H	122	2.09	-

BT-EDR(3Mbps)

2440MHz_TX

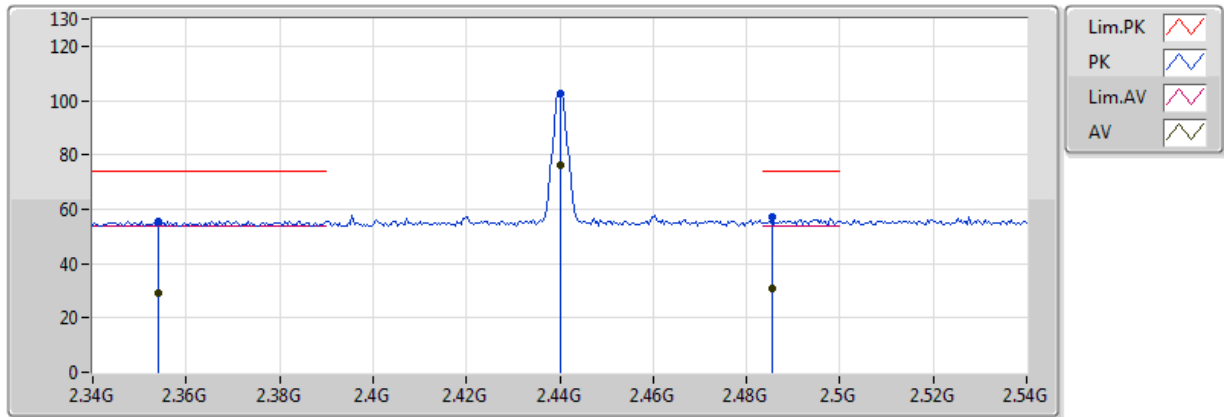


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3516G	29.95	54.00	-24.05	32.23	3	V	225	2.49	-
AV	2.44G	76.37	Inf	-Inf	32.55	3	V	225	2.49	-
AV	2.4908G	30.01	54.00	-23.99	32.74	3	V	225	2.49	-
PK	2.3516G	56.33	74.00	-17.67	32.23	3	V	225	2.49	-
PK	2.44G	102.75	Inf	-Inf	32.55	3	V	225	2.49	-
PK	2.4908G	56.39	74.00	-17.61	32.74	3	V	225	2.49	-

BT-EDR(3Mbps)

2440MHz_TX

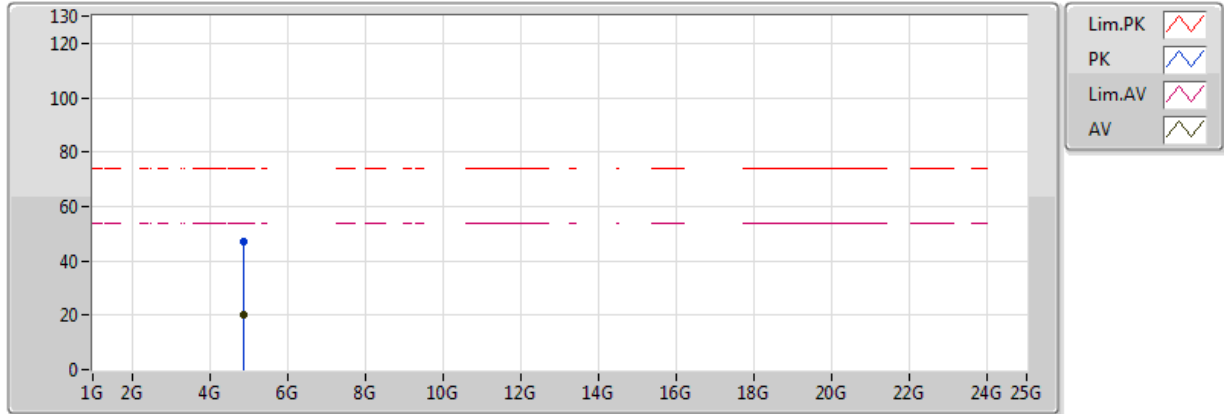


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.354G	29.33	54.00	-24.67	32.24	3	H	319	2.36	-
AV	2.44G	76.34	Inf	-Inf	32.55	3	H	319	2.36	-
AV	2.4856G	30.76	54.00	-23.24	32.72	3	H	319	2.36	-
PK	2.354G	55.71	74.00	-18.29	32.24	3	H	319	2.36	-
PK	2.44G	102.72	Inf	-Inf	32.55	3	H	319	2.36	-
PK	2.4856G	57.14	74.00	-16.86	32.72	3	H	319	2.36	-

BT-EDR(3Mbps)

2440MHz_TX

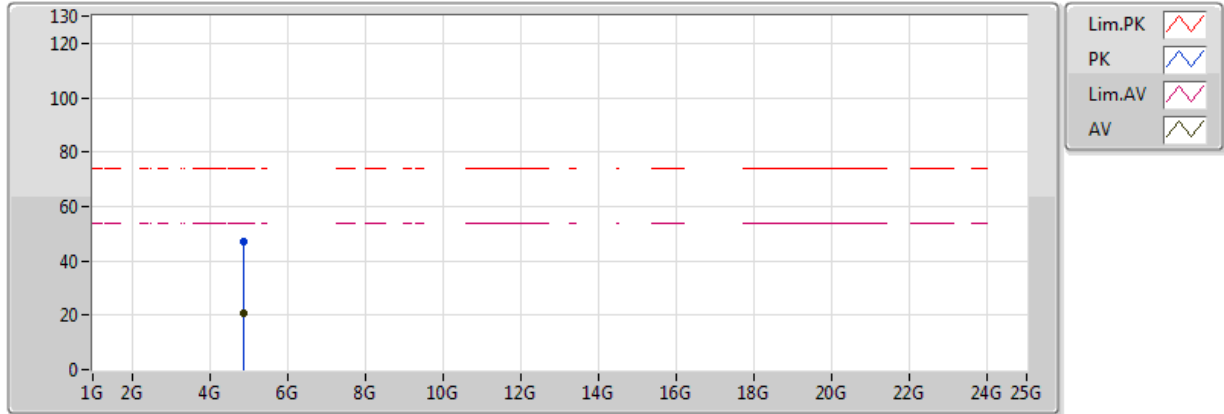


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88038G	20.35	54.00	-33.65	6.76	3	V	300	1.11	-
PK	4.88038G	47.22	74.00	-26.78	6.76	3	V	300	1.11	-

BT-EDR(3Mbps)

2440MHz_TX

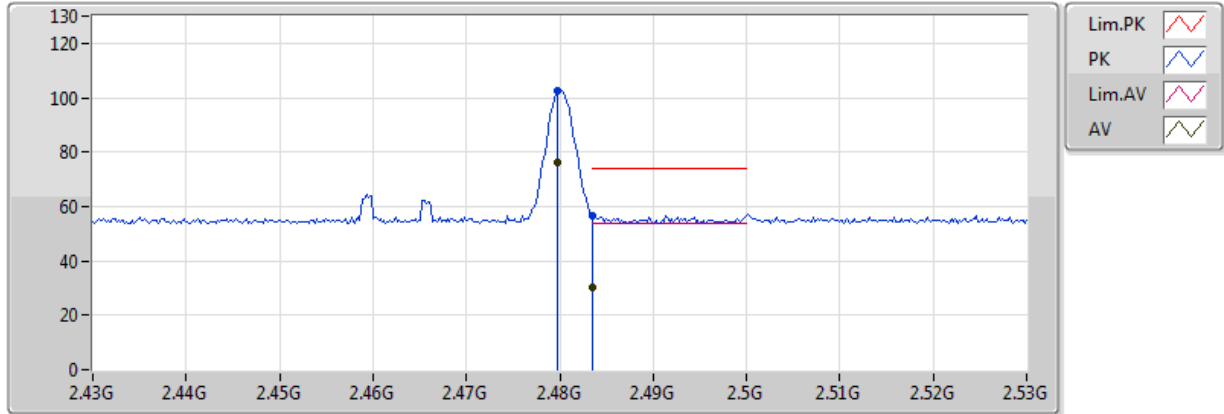


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.880156G	20.72	54.00	-33.28	6.76	3	H	126	2.14	-
PK	4.880156G	47.28	74.00	-26.72	6.76	3	H	126	2.14	-

BT-EDR(3Mbps)

2480MHz_TX

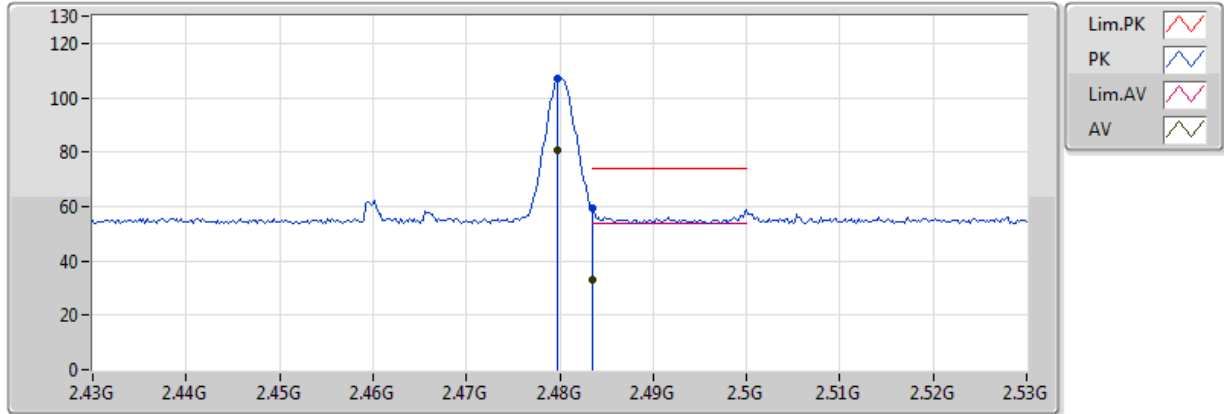


20170413
EUT Z 1TX
setting: Default power
05-M-01

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	75.93	Inf	-Inf	32.70	3	V	190	1.63	-
AV	2.483502G	30.42	54.00	-23.58	32.71	3	V	190	1.63	-
PK	2.4798G	102.31	Inf	-Inf	32.70	3	V	190	1.63	-
PK	2.483502G	56.80	74.00	-17.20	32.71	3	V	190	1.63	-

BT-EDR(3Mbps)

2480MHz_TX

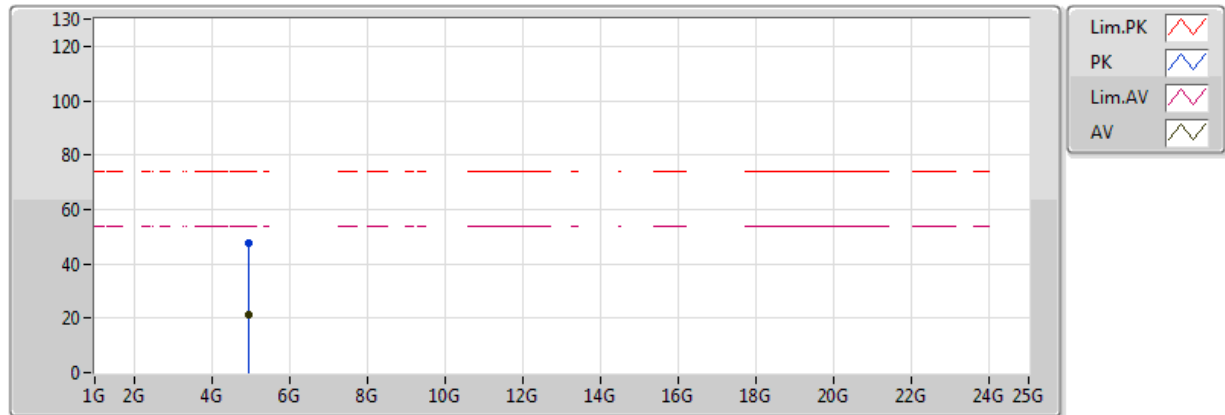


20170413
EUT Z1TX
setting: Default power
05-M-01

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	80.72	Inf	-Inf	32.70	3	H	54	1.74	-
AV	2.483502G	32.88	54.00	-21.12	32.71	3	H	54	1.74	-
PK	2.4798G	107.10	Inf	-Inf	32.70	3	H	54	1.74	-
PK	2.483502G	59.26	74.00	-14.74	32.71	3	H	54	1.74	-

BT-EDR(3Mbps)

2480MHz_TX

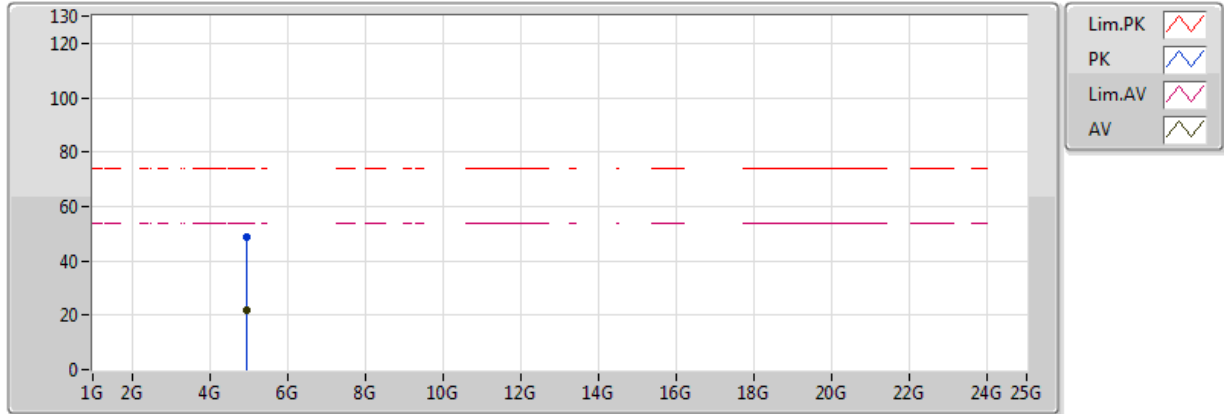


20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.96016G	21.33	54.00	-32.67	6.97	3	V	119	2.11	-
PK	4.96016G	47.71	74.00	-26.29	6.97	3	V	119	2.11	-

BT-EDR(3Mbps)

2480MHz_TX



20170413
EUT Z 1TX
setting: Default power
05-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.95984G	22.10	54.00	-31.90	6.97	3	H	109	2.23	-
PK	4.95984G	48.48	74.00	-25.52	6.97	3	H	109	2.23	-

