FCC Test Report

Equipment	:	**Bluetooth Headphone**
Brand Name	:	**Bang & Olufsen**
Model No.	:	**Beoplay H8i**
FCC ID	:	**TTUBEOPLAYH8I**
Standard	:	**47 CFR FCC Part 15.247**
Operating Band	:	**2400 MHz – 2483.5 MHz**
Applicant	:	**Bang & Olufsen a/s** **Peter Bangs Vej 15, DK-7600 Struer, Denmark**
Manufacturer	:	**Bang & Olufsen a/s** **Peter Bangs Vej 15, DK-7600 Struer, Denmark**

The product sample received on Sep. 14, 2017 and completely tested on Sep. 28, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Phoenix Chen
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

Table of Contents

1 GENERAL DESCRIPTION 5

1.1 Information 5
1.2 Testing Applied Standards 7
1.3 Testing Location Information 7
1.4 Measurement Uncertainty 7

2 TEST CONFIGURATION OF EUT 8

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

3 TRANSMITTER TEST RESULT 13

3.1 AC Power-line Conducted Emissions 13
3.2 20dB Bandwidth and Carrier Frequency Separation 14
3.3 Maximum Conducted Output Power 15
3.4 Number of Hopping Frequencies and Hopping Bandedge 16
3.5 Time of Occupancy (Dwell Time) 17
3.6 Emissions in Non-restricted Frequency Bands 18
3.7 Emissions in Restricted Frequency Bands 19

4 TEST EQUIPMENT AND CALIBRATION DATA 22

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 PHOTOS

PHOTOGRAPHS OF EUT V01

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 Bandedge	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

Revision History

Report No.	Version	Description	Issued Date
FR792502AD	Rev. 01	Initial issue of report	Nov. 13, 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 nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	Sage Elephant	S306300001000-A	Chip	fixed on board	0.95

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From Host System / Battery / AC Adapter		
Type of EUT			
☒	Stand-alone		
☐	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:	…	
☐	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:	…	
☐	Other:		

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	0.789	1.029	2.907m	1k
BT-EDR(2Mbps)	0.784	1.057	2.914m	1k
BT-EDR(3Mbps)	0.791	1.018	2.915m	1k

1.1.5 Table for Multiple Listing

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

Brand Name	Model Name	Color	Description
Bang & Olufsen	Beoplay H8i	Natural	All the models are identical, the difference as appearance color.
Bang & Olufsen	Beoplay H8i	Black	

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
- Public Notice DA 00-705
- ANSI C63.10-2013

1.3 Testing Location Information

Testing Location					
☒	HWA YA	ADD :	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)		
		TEL :	886-3-327-3456	FAX :	886-3-327-0973
Test site Designation No. TW1190 with FCC.					
☐	JHUBEI	ADD :	No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.)		
		TEL :	886-3-656-9065	FAX :	886-3-656-9085
Test site Designation No. TW0006 with FCC.					

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-HY	Gary	21.5°C / 61%	28/Sep/2017
Radiated	03CH02-HY	Lynus	24.4°C / 63%	14/Sep/2017
AC Conduction	CO04-HY	Lynus	24.4°C / 63%	15/Sep/2017

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)	3.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	2.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	2.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	2.9 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	3.7V

2.2 Test Channel Mode

Test Software Version	BlueSuite 2.6.2

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	35
2441MHz	16
2480MHz	17
BT-EDR(2Mbps)	-
2402MHz	58
2441MHz	52
2480MHz	54
BT-EDR(3Mbps)	-
2402MHz	58
2441MHz	52
2480MHz	54

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	USB Mode

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

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	CTX		
1	USB Mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
Worst Planes of EUT			V

2.4 Accessories

Accessories		
Type C to USB Cable*2	Signal Line	1.25 meter, D-Shielded cable
Audio Cable*2	Signal Line	1.25 meter, Non-Shielded cable

2.5 Support Equipment

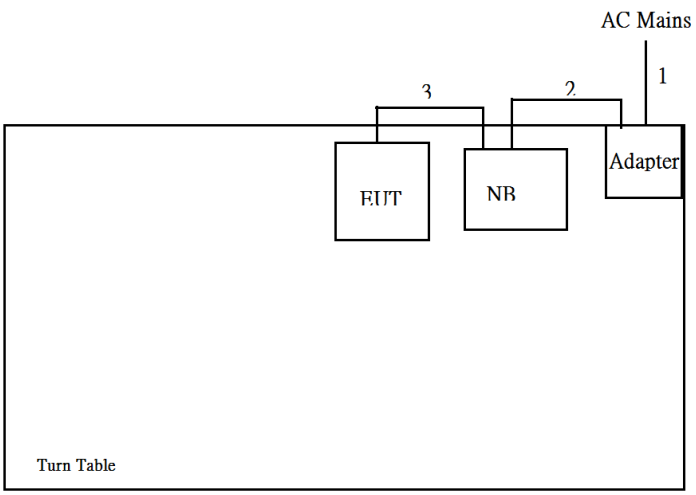
Support Equipment – RF Conducted				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC
3	DC Source	G.W	GPC-6030D	N/A

Support Equipment – Radiated Emission				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E5520	N/A
2	Adapter for NB	DELL	LA65NS2-01	N/A

Support Equipment – AC Conduction				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E5520	N/A
2	Adapter for NB	DELL	LA65NS2-01	N/A

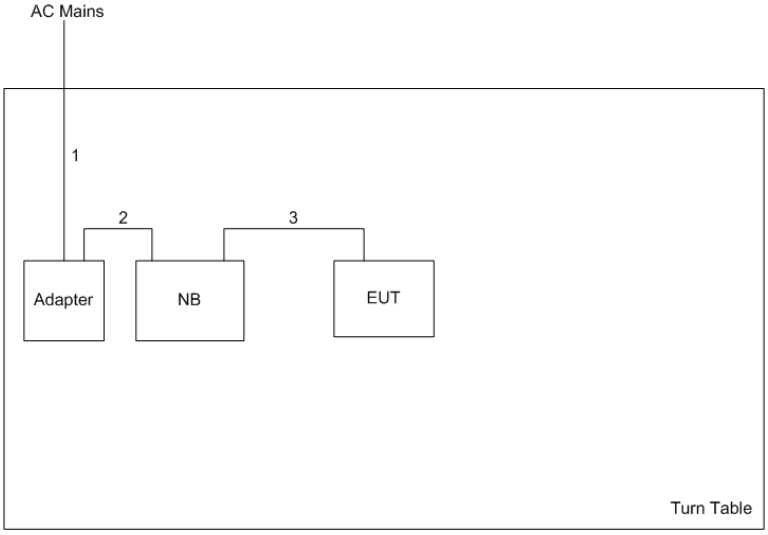
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-
3	Type C to USB Cable	D	1.25	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-
3	Type C to USB Cable	D	1.25	-

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

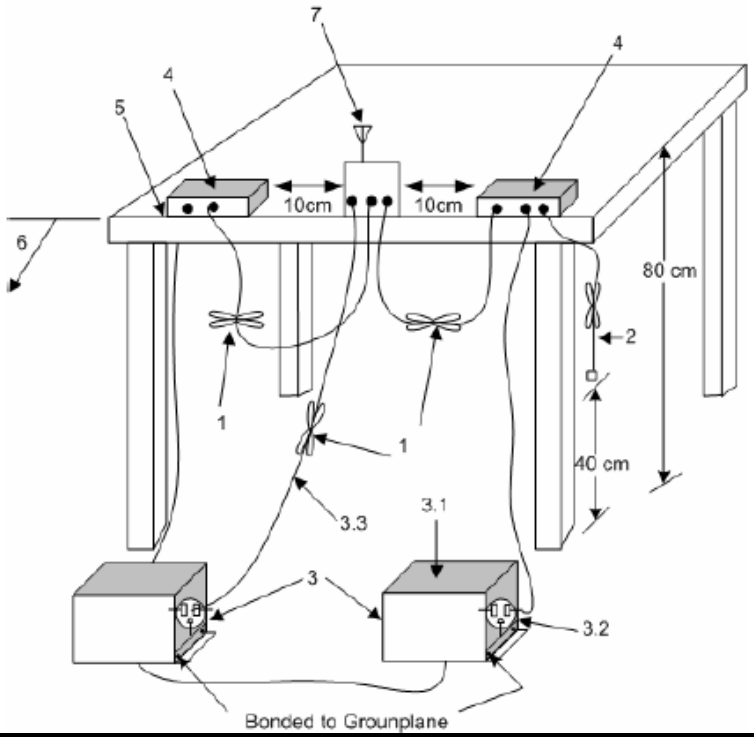
Refer a test equipment and calibration data table in this test report.

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

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	

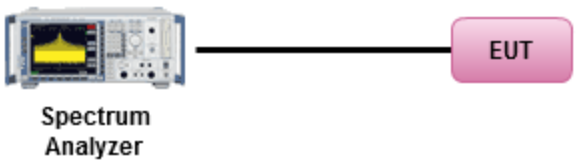
3.2.2 Measuring Instruments

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 6.9.2 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

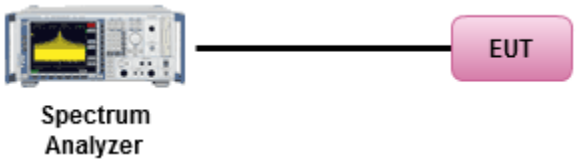
3.4.3 Measuring Instruments

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

Time of Occupancy (Dwell Time) 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	

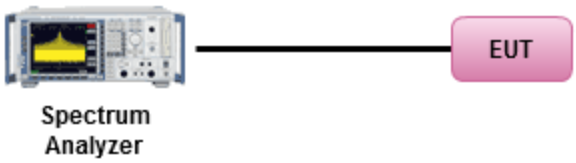
3.5.2 Measuring Instruments

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

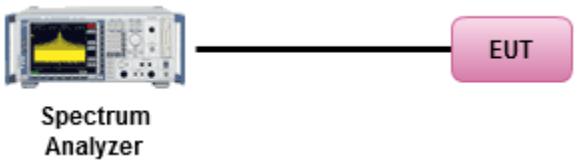
Refer a test equipment and calibration data table in this test report.

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.

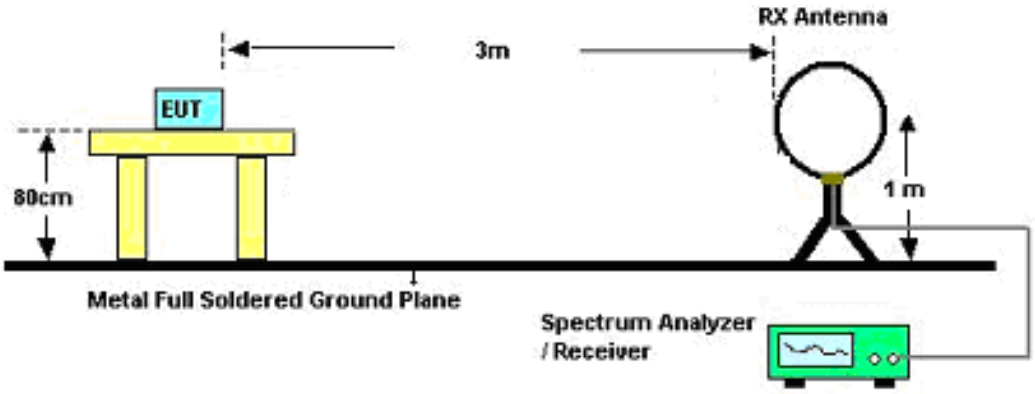
3.7.3 Test Procedures

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.

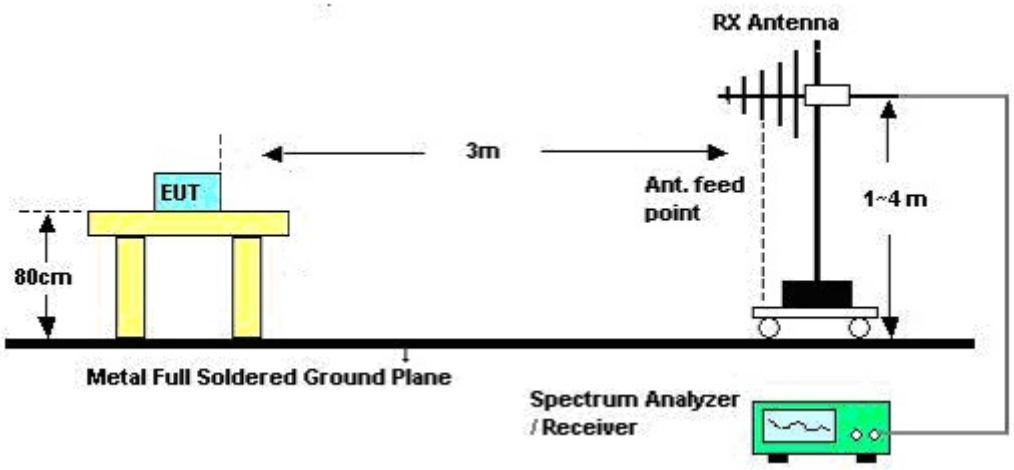
3.7.4 Test Setup

Emissions in Restricted Frequency Bands

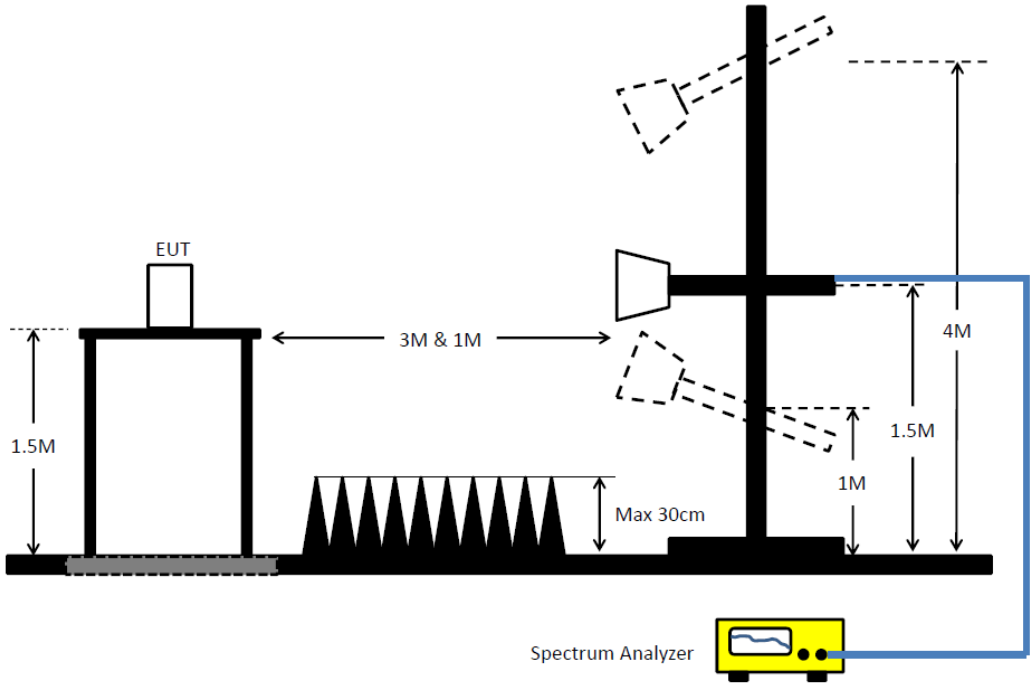
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.7.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported. 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 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102052	9KHz ~ 3.6GHz	29/Apr/2017	28/Apr/2018
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	15/Nov/2016	14/Nov/2017
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	24/Oct/2016	23/Oct/2017
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	R&S	ESH3-Z2	100921	10 kHz ~ 30 MHz	21/Oct/2016	20/Oct/2017
EMC Receiver	R&S	ESR3	102052	9KHz ~ 3.6GHz	29/Apr/2017	28/Apr/2018
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	15/Nov/2016	14/Nov/2017

NCR : Non-Calibration Require

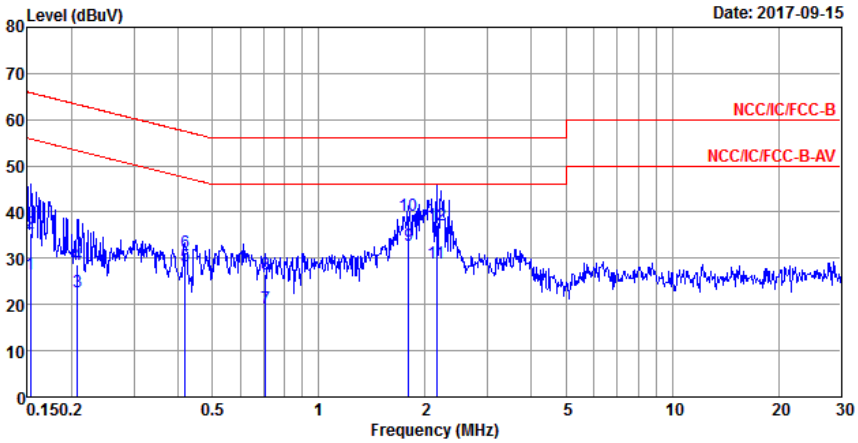
Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSP40	100593	9KHz - 40GHz	26/Oct/2016	25/Oct/2017
3m Semi Anechoic	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz-1GHz	21/Oct/2016	20/Oct/2017
3m Semi Anechoic	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz ~ 18GHz	12/Dec/2016	11/Dec/2017
Amplifier	Agilent	8447D	2944A11149	100KHz-1.3GHz	29/Jun/2017	28/Jun/2018
Amplifier	Agilent	8449B	3008A02373	1GHz-26.5GHz	20/Sep/2016	19/Sep/2017
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA9120D 01531	1GHz-18GHz	11/May/2017	10/May/2018
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	18GHz-40GHz	06/Feb/2017	05/Feb/2018
Bilog Antenna	SCHAFFNER	CBL6112B	2723	30MHz-1GHz	01/Oct/2016	30/Sep/2017
Loop Antenna	TESEQ	HLA 6120	31244	9KHz-30MHz	02/Mar/2017	01/Mar/2018
RF Cable-high	SUHNER	SUCOFLEX104	MY34918/4	1GHz ~ 40GHz	26/Jan/2017	25/Jan/2018
RF Cable-R03m	Jye Bao	RG142	CB017	9kHz ~ 1GHz	26/Jan/2017	25/Jan/2018
Receiver	R&S	ESU-26	100422/026	20Hz ~ 26.5GHz	21/Sep/2016	20/Sep/2017

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	10Hz~40GHz	30/Dec/2016	29/Dec/2017
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	27/Jul/2017	26/Jul/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY677/3	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY678/3	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10717/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017

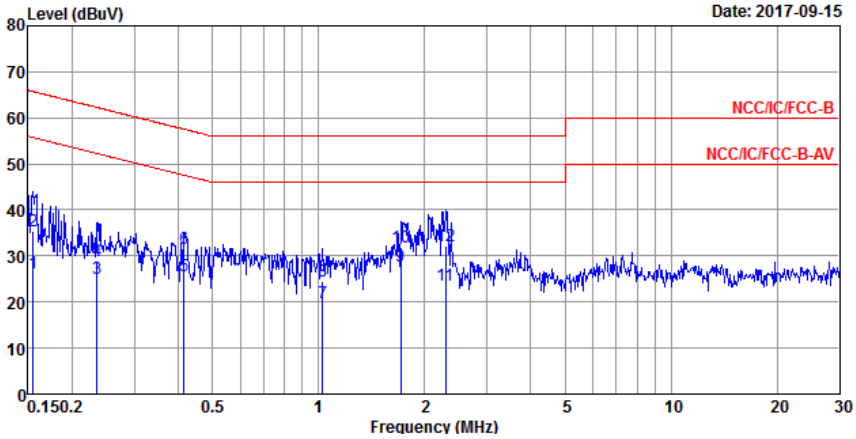
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	USB mode ; BT 2.1+EDR		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15321	26.54	-29.28	55.82	16.72	9.60	0.22	Average
2	0.15321	35.41	-30.41	65.82	25.59	9.60	0.22	QP
3	0.20723	22.78	-30.54	53.32	12.82	9.67	0.29	Average
4	0.20723	28.72	-34.60	63.32	18.76	9.67	0.29	QP
5	0.41927	28.32	-19.14	47.46	18.59	9.63	0.10	Average
6	0.41927	31.20	-26.26	57.46	21.47	9.63	0.10	QP
7	0.70842	19.23	-26.77	46.00	9.52	9.61	0.10	Average
8	0.70842	26.64	-29.36	56.00	16.93	9.61	0.10	QP
9 MAX	1.80001	32.85	-13.15	46.00	22.94	9.64	0.27	Average
10	1.80001	39.15	-16.85	56.00	29.24	9.64	0.27	QP
11	2.15531	28.88	-17.12	46.00	18.94	9.66	0.28	Average
12	2.15531	37.21	-18.79	56.00	27.27	9.66	0.28	QP

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

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	USB mode ; BT 2.1+EDR		



		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15485	26.33	-29.41	55.74	16.44	9.66	0.23	Average
2		0.15485	35.30	-30.44	65.74	25.41	9.66	0.23	QP
3		0.23533	25.18	-27.08	52.26	15.27	9.66	0.25	Average
4		0.23533	29.06	-33.20	62.26	19.15	9.66	0.25	QP
5		0.41485	25.62	-21.93	47.55	15.84	9.68	0.10	Average
6		0.41485	31.62	-25.93	57.55	21.84	9.68	0.10	QP
7		1.02652	19.65	-26.35	46.00	9.90	9.64	0.11	Average
8		1.02652	24.42	-31.58	56.00	14.67	9.64	0.11	QP
9	MAX	1.70712	27.73	-18.27	46.00	17.72	9.75	0.26	Average
10		1.70712	31.90	-24.10	56.00	21.89	9.75	0.26	QP
11		2.29679	23.70	-22.30	46.00	13.65	9.79	0.26	Average
12		2.29679	32.07	-23.93	56.00	22.02	9.79	0.26	QP

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

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	918.75k	889.555k	890KF1D	916.25k	873.313k
BT-EDR(2Mbps)	1.236M	1.209M	1M21G1D	1.233M	1.191M
BT-EDR(3Mbps)	1.253M	1.213M	1M21G1D	1.25M	1.199M

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;

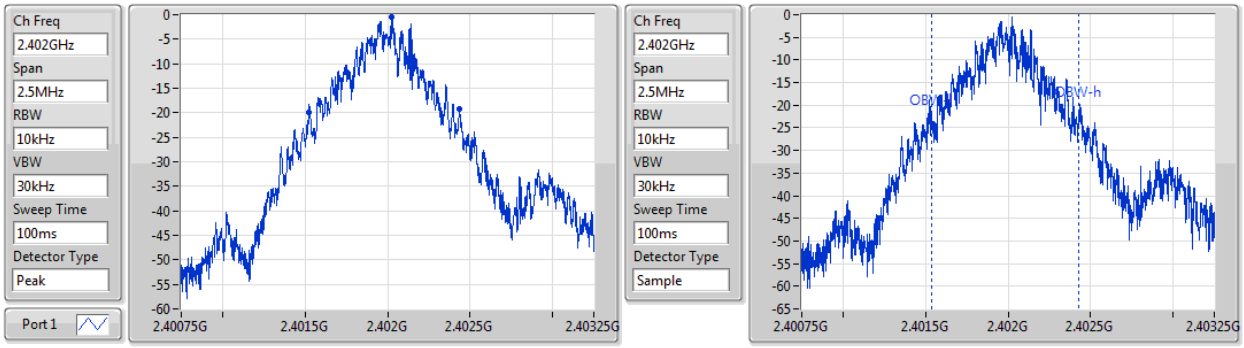
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	Inf	916.25k	889.555k
2441MHz_TnomVnom	Pass	Inf	918.75k	873.313k
2480MHz_TnomVnom	Pass	Inf	918.75k	875.812k
BT-EDR(2Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	Inf	1.236M	1.209M
2441MHz_TnomVnom	Pass	Inf	1.234M	1.191M
2480MHz_TnomVnom	Pass	Inf	1.233M	1.199M
BT-EDR(3Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	Inf	1.253M	1.213M
2441MHz_TnomVnom	Pass	Inf	1.25M	1.203M
2480MHz_TnomVnom	Pass	Inf	1.253M	1.199M

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

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

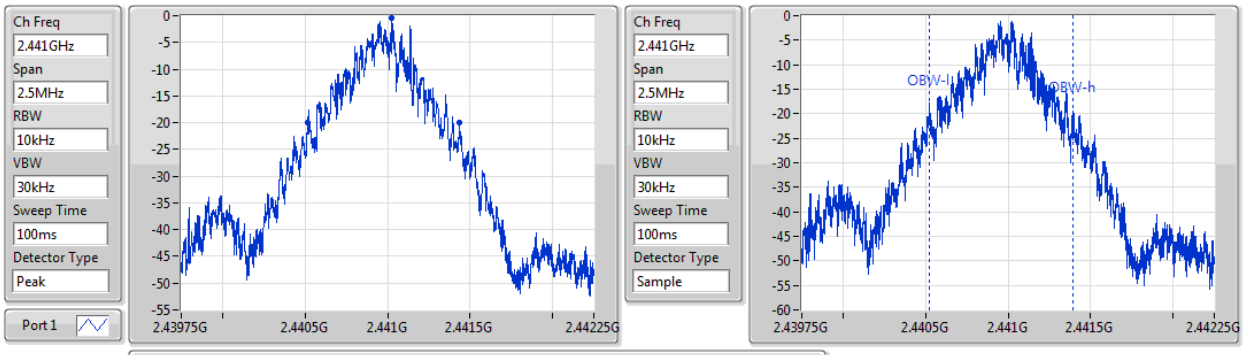
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
916.25k	2.401521G	2.402438G	889.555k	2.401539G	2.402429G	Inf	1

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

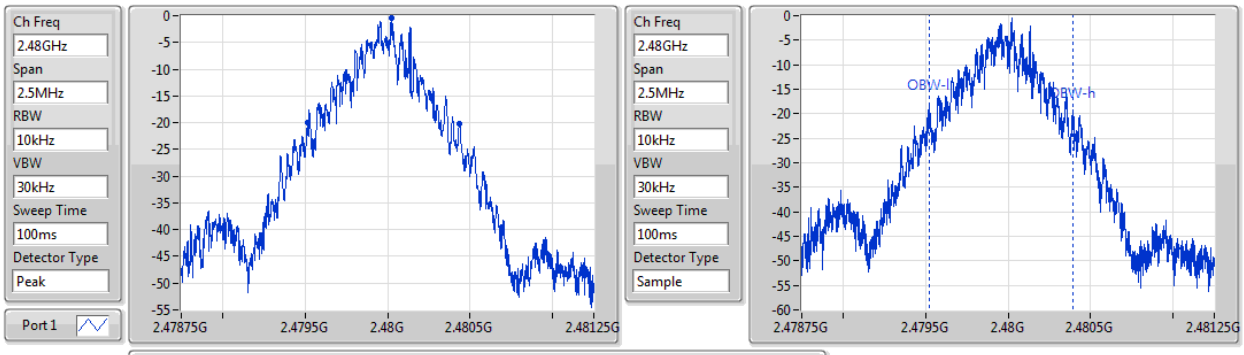
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
918.75k	2.440518G	2.441436G	873.313k	2.440521G	2.441395G	Inf	1

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

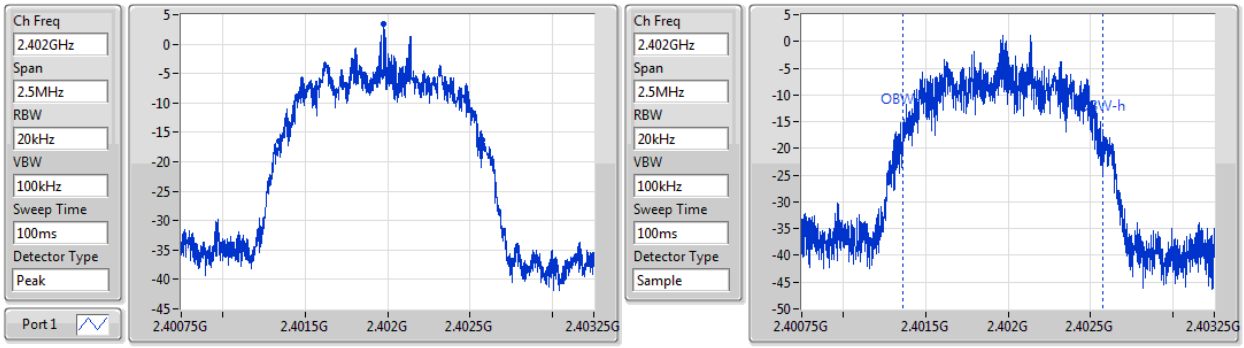
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
918.75k	2.479518G	2.480436G	875.812k	2.47952G	2.480396G	Inf	1

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

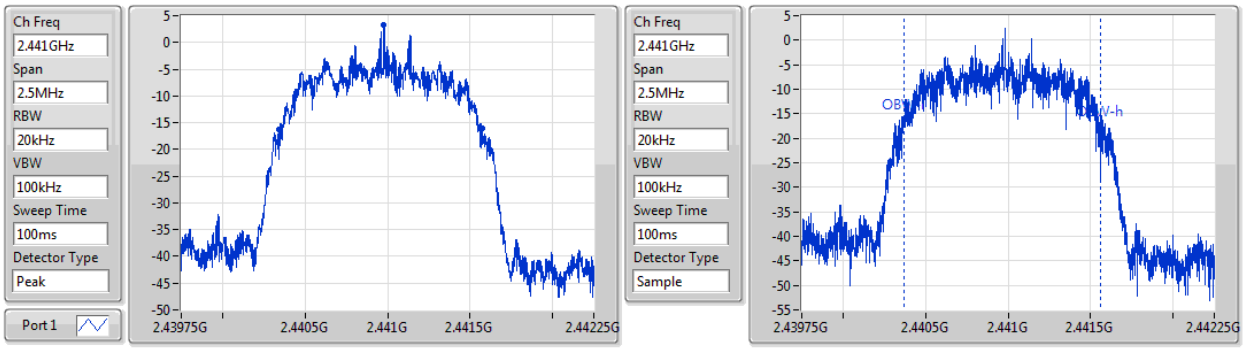
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.236M	2.401341G	2.402578G	1.209M	2.401363G	2.402572G	Inf	1

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

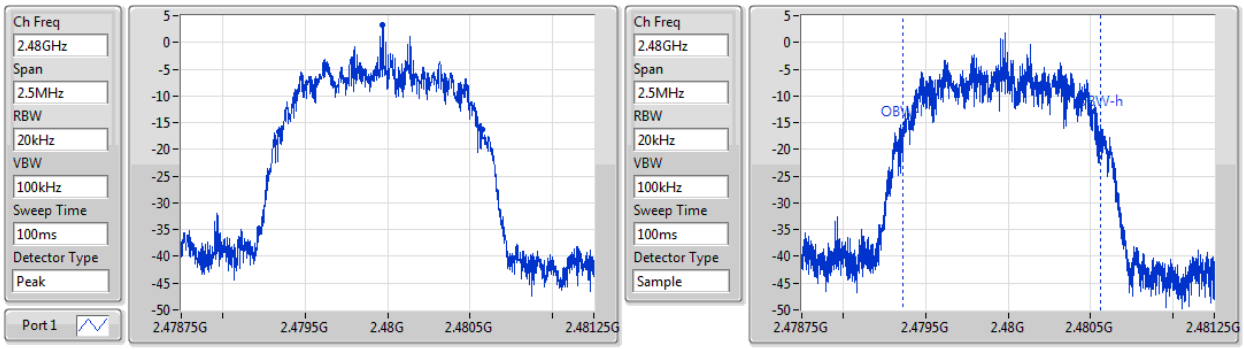
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.234M	2.44034G	2.441574G	1.191M	2.440367G	2.441557G	Inf	1

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

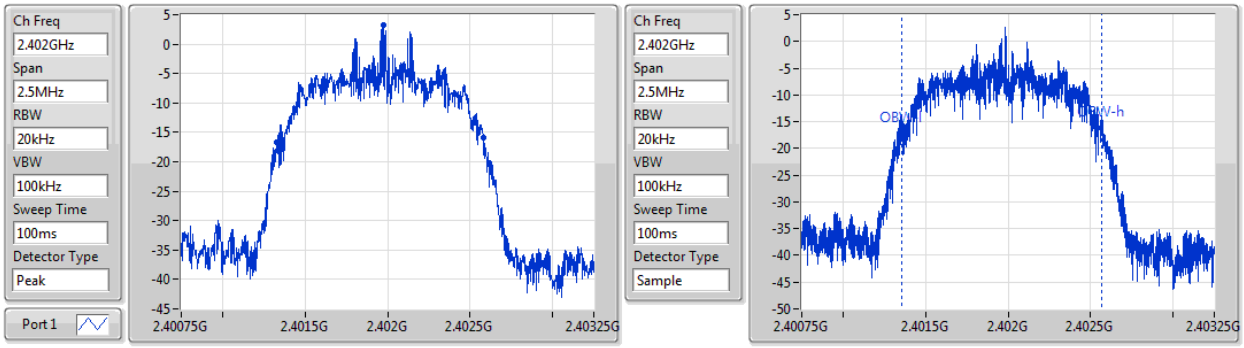
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.233M	2.47934G	2.480573G	1.199M	2.479363G	2.480562G	Inf	1

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

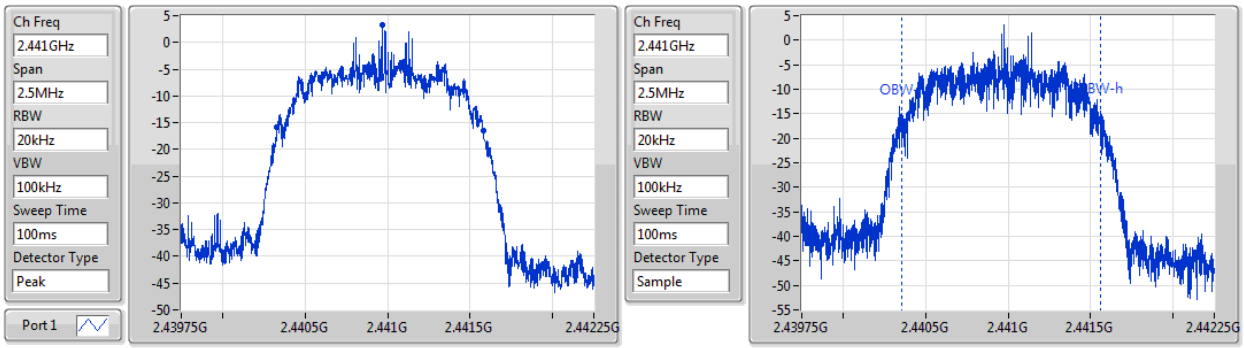
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.253M	2.40133G	2.402583G	1.213M	2.401354G	2.402567G	Inf	1

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

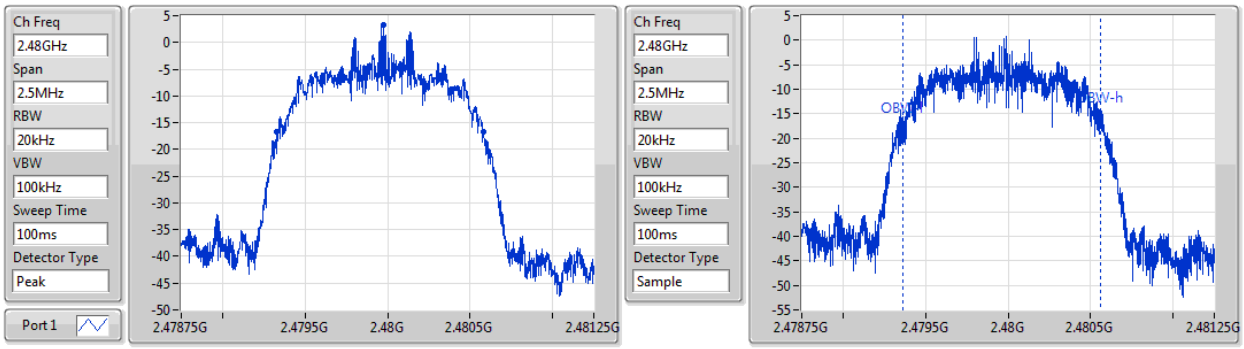
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.25M	2.440331G	2.441581G	1.203M	2.440355G	2.441558G	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
1.253M	2.479329G	2.480581G	1.199M	2.479364G	2.480563G	Inf	1

Summary

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

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.402002G	2.403003G	1.0005M	612.72k
2441MHz_TnomVnom	Pass	2.441004G	2.442003G	999k	613.5525k
2480MHz_TnomVnom	Pass	2.479002G	2.480001G	999k	611.055k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.402004G	2.403001G	997.5k	848.484k
2441MHz_TnomVnom	Pass	2.441001G	2.442001G	1.0005M	821.178k
2480MHz_TnomVnom	Pass	2.479002G	2.480003G	1.0005M	836.496k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.402002G	2.403001G	999k	836.496k
2441MHz_TnomVnom	Pass	2.441001G	2.442001G	1.0005M	832.5k
2480MHz_TnomVnom	Pass	2.479001G	2.480001G	1.0005M	831.834k

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

2.402G/2.403GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402002G	2.403003G	1.0005M	612.72k

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

2.441G/2.442GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441004G	2.442003G	999k	613.5525k

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

2.48G/2.479GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479002G	2.480001G	999k	611.055k

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

2.402G/2.403GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402004G	2.403001G	997.5k	848.484k

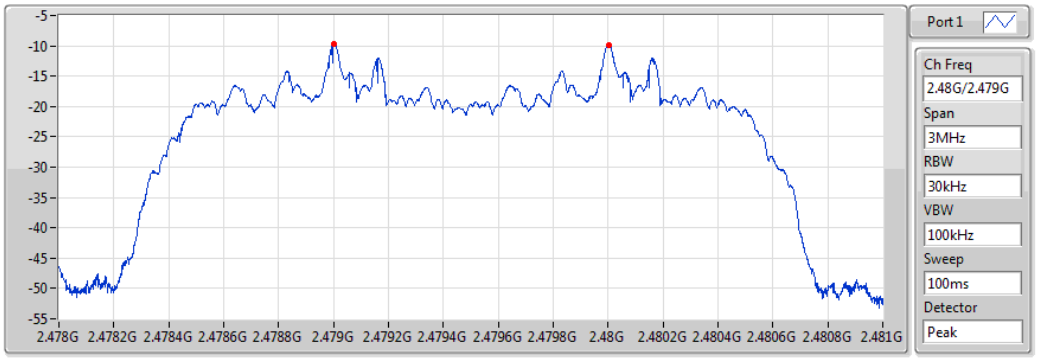
BT-EDR(2Mbps) **Channel Separation**

2.441G/2.442GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441001G	2.442001G	1.0005M	821.178k

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

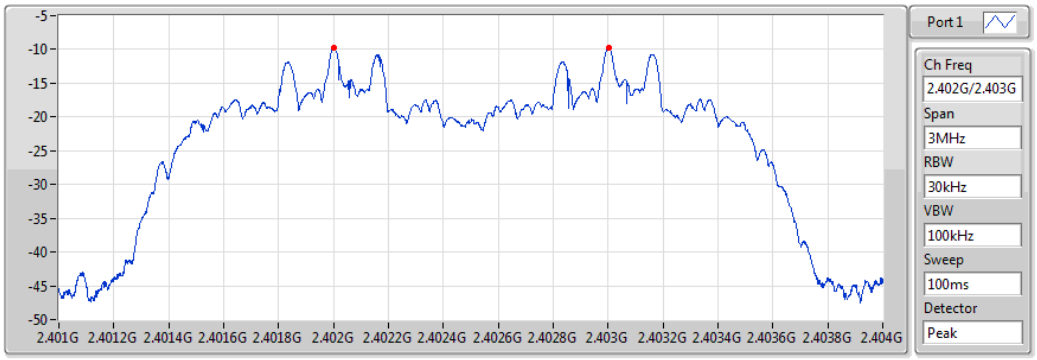
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479002G	2.480003G	1.0005M	836.496k

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

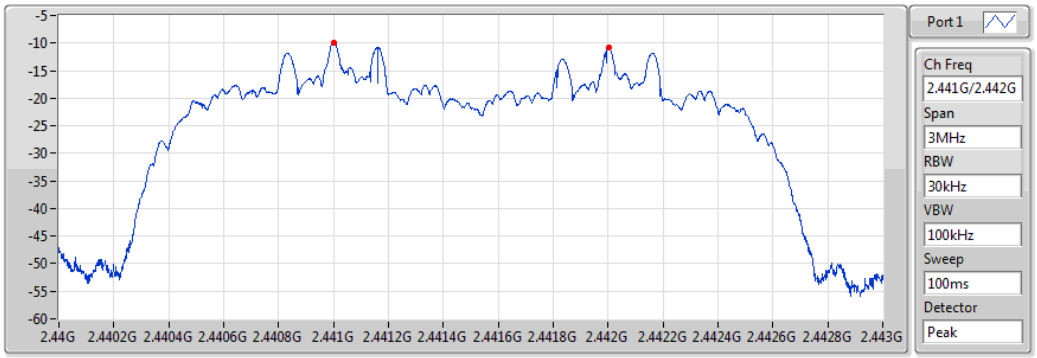
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402002G	2.403001G	999k	836.496k

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

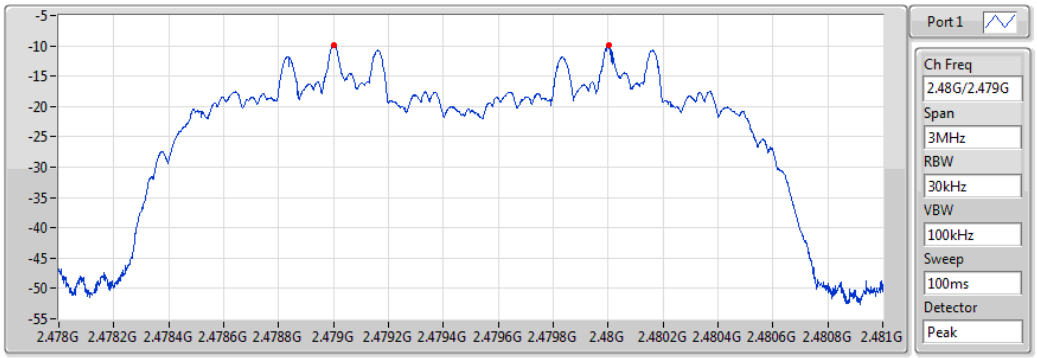
2.441G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441001G	2.442001G	1.0005M	832.5k

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

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479001G	2.480001G	1.0005M	831.834k

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	5.94	0.00393
BT-EDR(2Mbps)	7.70	0.00589
BT-EDR(3Mbps)	7.89	0.00615

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	0.95	5.89	21.00
2441MHz_TnomVnom	Pass	0.95	5.94	21.00
2480MHz_TnomVnom	Pass	0.95	5.86	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	0.95	7.48	21.00
2441MHz_TnomVnom	Pass	0.95	7.70	21.00
2480MHz_TnomVnom	Pass	0.95	7.57	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	0.95	7.79	21.00
2441MHz_TnomVnom	Pass	0.95	7.89	21.00
2480MHz_TnomVnom	Pass	0.95	7.85	21.00

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	5.03	0.00318
BT-EDR(2Mbps)	5.02	0.00318
BT-EDR(3Mbps)	5.01	0.00317

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	0.95	5.03	21.00
2441MHz_TnomVnom	Pass	0.95	4.99	21.00
2480MHz_TnomVnom	Pass	0.95	5.03	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	0.95	5.02	21.00
2441MHz_TnomVnom	Pass	0.95	4.97	21.00
2480MHz_TnomVnom	Pass	0.95	5.02	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	0.95	5.01	21.00
2441MHz_TnomVnom	Pass	0.95	4.99	21.00
2480MHz_TnomVnom	Pass	0.95	4.99	21.00

Summary

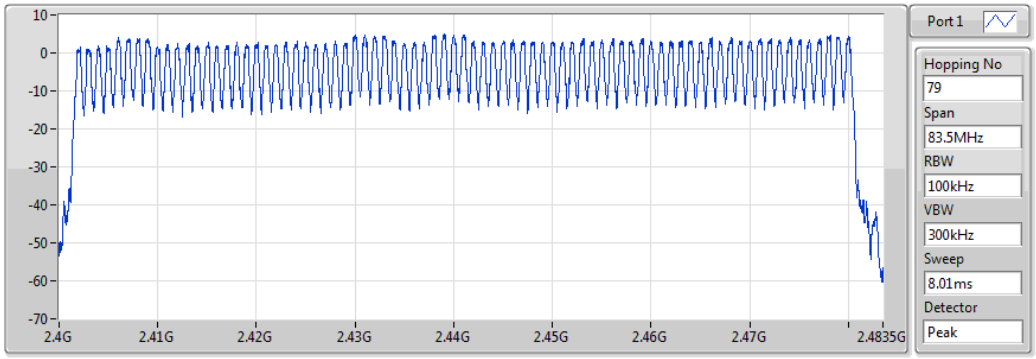
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

Result

Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2441MHz_TnomVnom	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2441MHz_TnomVnom	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2441MHz_TnomVnom	Pass	79	15

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

2441MHz

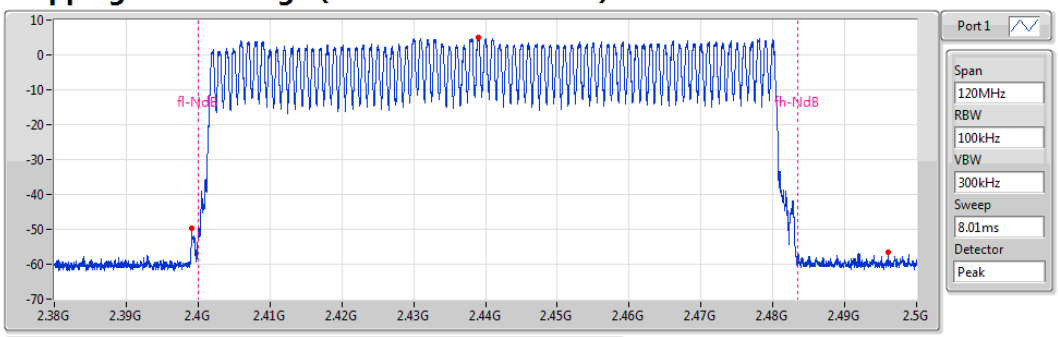


Hopping No	Limit
79	15

BT-BR(1Mbps)

2441MHz

Hopping Ch Bandedge (Non-restricted Band)

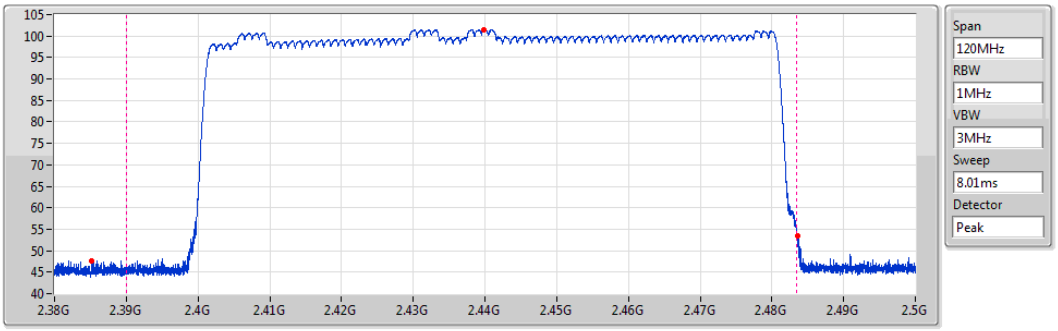


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.87	2.43901G	5.13	2.399155G	-49.56	2.49604G	-56.47

BT-BR(1Mbps)

2441MHz

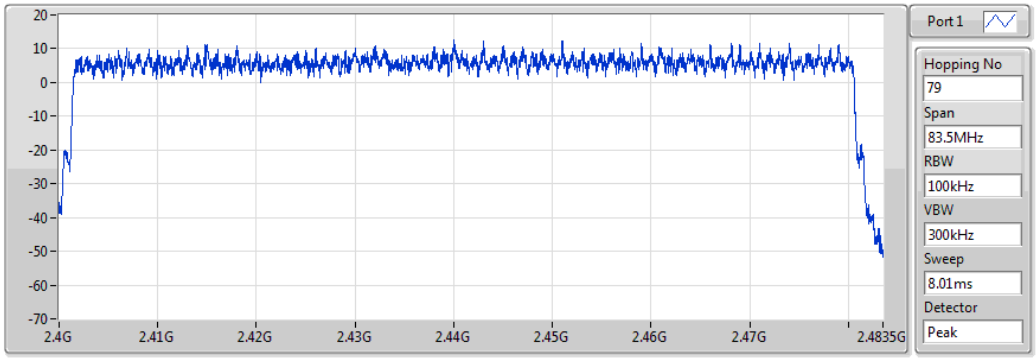
Hopping Ch Bandedge (Restricted Band)



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)
2.43985G	101.54	2.38516G	47.74	17	2.48356G	53.49	22.75	74	54	2.904	-30.74

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

2441MHz

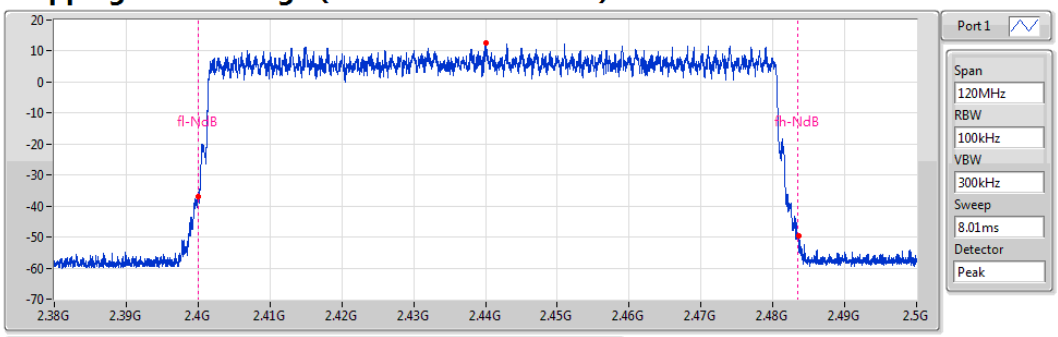


Hopping No	Limit
79	15

BT-EDR(2Mbps)

2441MHz

Hopping Ch Bandedge (Non-restricted Band)

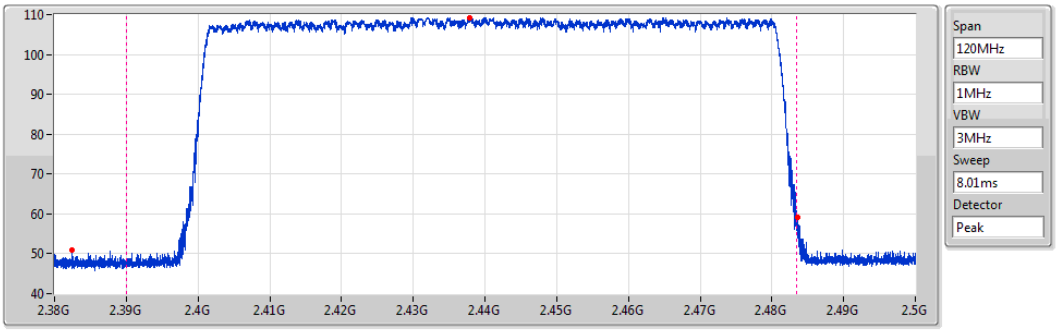


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-7.48	2.44G	12.52	2.399995G	-36.92	2.483575G	-49.65

BT-EDR(2Mbps)

2441MHz

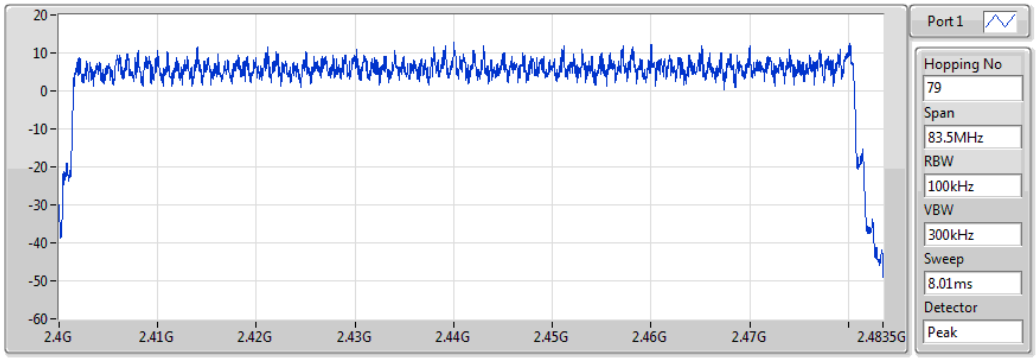
Hopping Ch Bandedge (Restricted Band)



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)
2.43787G	109.29	2.382505G	51.04	2.29	2.483575G	59.14	10.39	74	54	0.365	-48.75

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

2441MHz

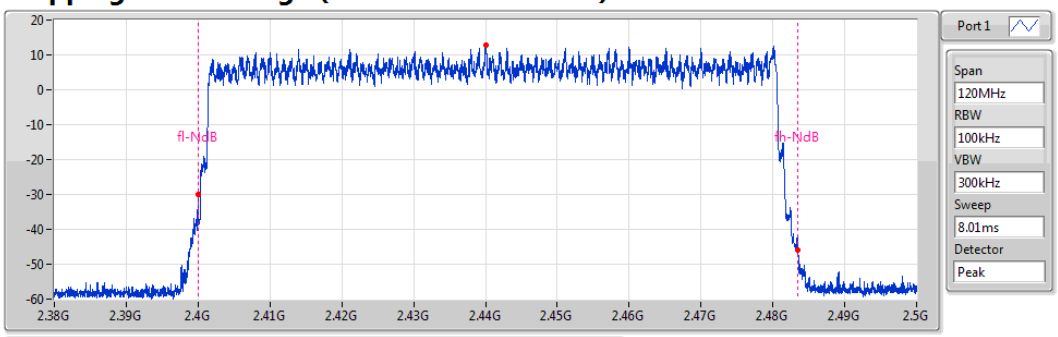


Hopping No	Limit
79	15

BT-EDR(3Mbps)

2441MHz

Hopping Ch Bandedge (Non-restricted Band)

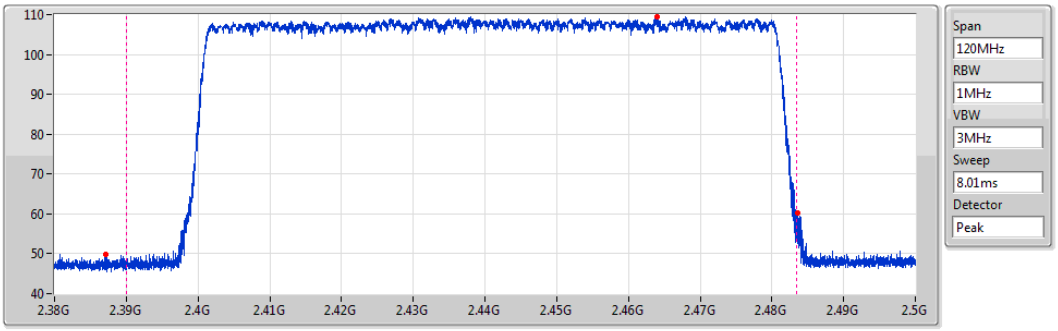


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-7.23	2.440015G	12.77	2.399995G	-30.1	2.483515G	-46

BT-EDR(3Mbps)

2441MHz

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)
2.46403G	109.46	2.387065G	49.92	4.07	2.48362G	60.17	14.32	74	54	0.51	-45.85

Summary

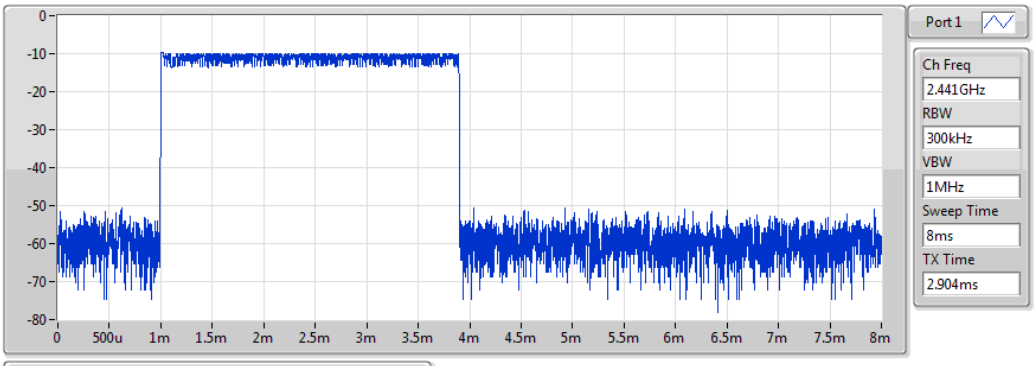
Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	309.5664m
BT-EDR(2Mbps)	38.909m
BT-EDR(3Mbps)	54.366m

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2441MHz_TnomVnom	Pass	31.6	309.5664m	400m	2.904m
BT-EDR(2Mbps)	-	-	-	-	-
2441MHz_TnomVnom	Pass	31.6	38.909m	400m	365u
BT-EDR(3Mbps)	-	-	-	-	-
2441MHz_TnomVnom	Pass	31.6	54.366m	400m	510u

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

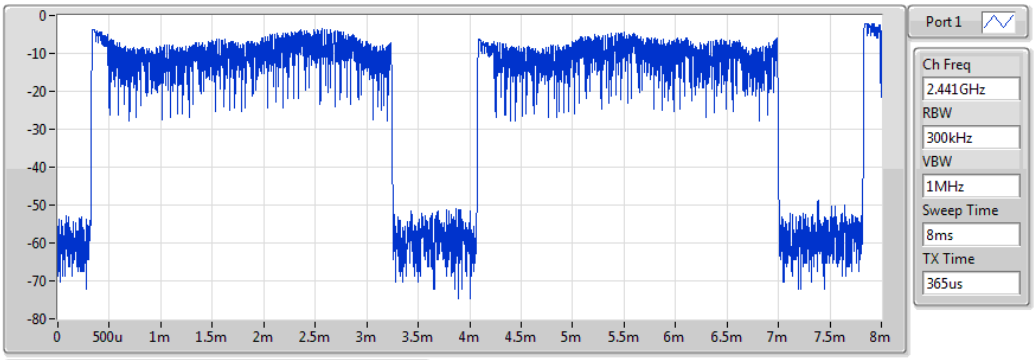
2441MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	309.5664m	400m	2.904m

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

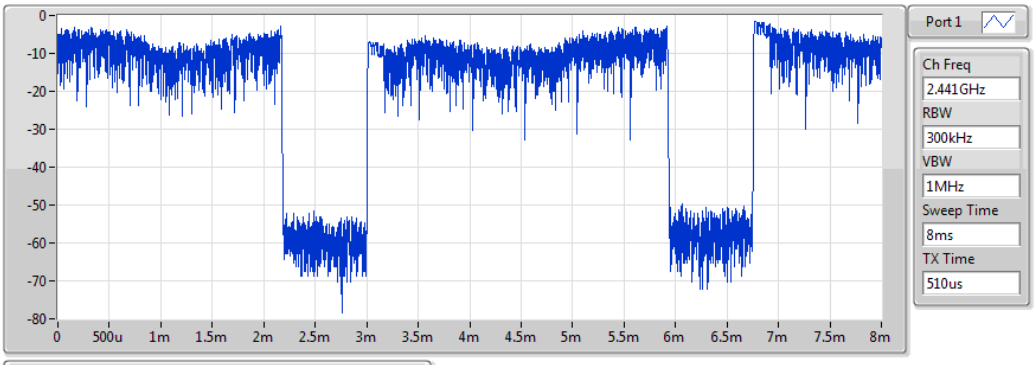
2441MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	38.909m	400m	365u

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

2441MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	54.366m	400m	510u

Summary

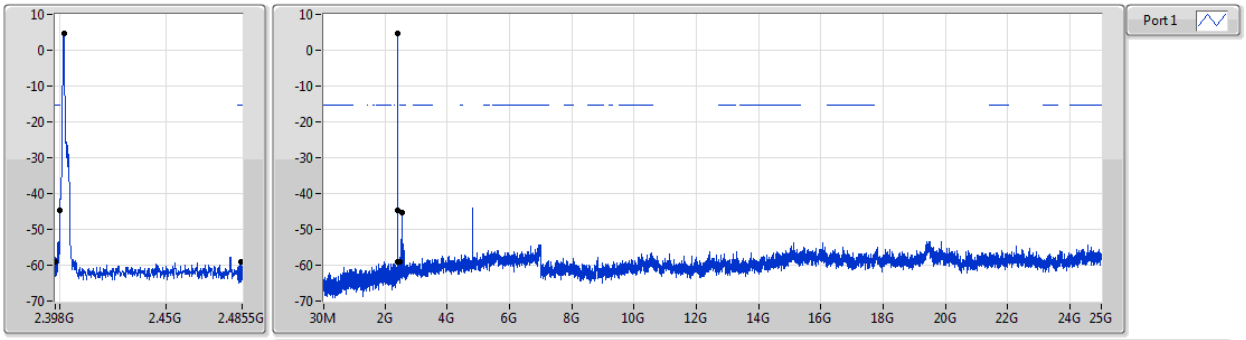
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.402004G	4.67	-15.33	2.398G	-59.13	2.399984G	-44.82	2.484968G	-58.99	2.555858G	-45.30	1
BT-EDR(2Mbps)	Pass	2.402004G	2.90	-17.10	1.972944G	-59.12	2.399984G	-31.28	2.485392G	-58.99	2.555858G	-49.73	1
BT-EDR(3Mbps)	Pass	2.40167G	3.40	-16.60	2.398G	-57.20	2.399988G	-31.18	2.484932G	-59.46	2.555858G	-44.78	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_TnomVnom	Pass	2.402004G	4.67	-15.33	2.398G	-59.13	2.399984G	-44.82	2.484968G	-58.99	2.555858G	-45.30	1
2441MHz_TnomVnom	Pass	2.441082G	4.71	-15.29	2.058192G	-59.60	2.399268G	-59.39	2.484G	-58.98	2.595258G	-47.36	1
2480MHz_TnomVnom	Pass	2.479826G	5.28	-14.72	1.972944G	-60.09	2.398244G	-60.08	2.483508G	-56.18	2.634659G	-50.54	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.402004G	2.90	-17.10	1.972944G	-59.12	2.399984G	-31.28	2.485392G	-58.99	2.555858G	-49.73	1
2441MHz_TnomVnom	Pass	2.440915G	3.10	-16.90	1.998992G	-59.40	2.399148G	-59.46	2.484092G	-59.87	2.595258G	-49.65	1
2480MHz_TnomVnom	Pass	2.479826G	2.15	-17.85	1.886512G	-59.93	2.398368G	-59.65	2.48354G	-54.54	2.634659G	-51.47	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.40167G	3.40	-16.60	2.398G	-57.20	2.399988G	-31.18	2.484932G	-59.46	2.555858G	-44.78	1
2441MHz_TnomVnom	Pass	2.440915G	3.18	-16.82	1.97176G	-60.16	2.399408G	-59.99	2.484644G	-58.10	2.595258G	-51.49	1
2480MHz_TnomVnom	Pass	2.479993G	4.47	-15.53	1.987152G	-58.67	2.398488G	-59.51	2.483504G	-52.35	2.634659G	-49.66	1

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

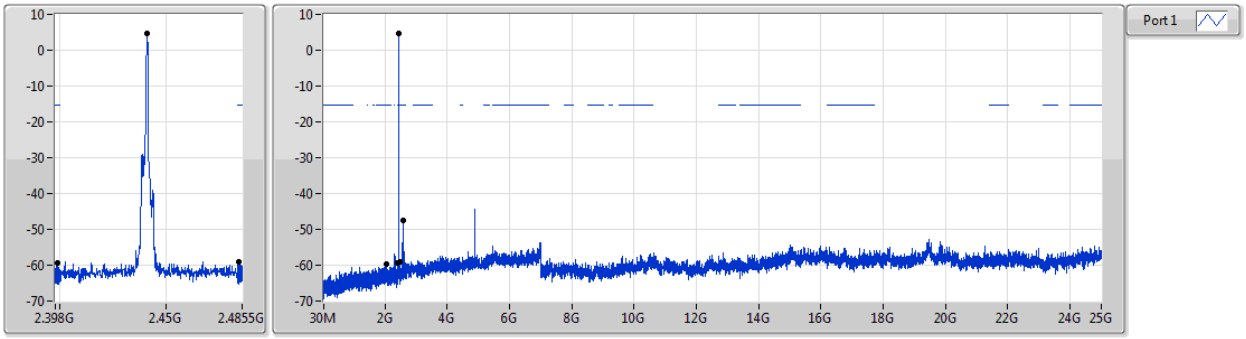
2402MHz



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	4.67	-15.33	2.398G	-59.13	2.399984G	-44.82	2.484968G	-58.99	2.555858G	-45.30	1

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

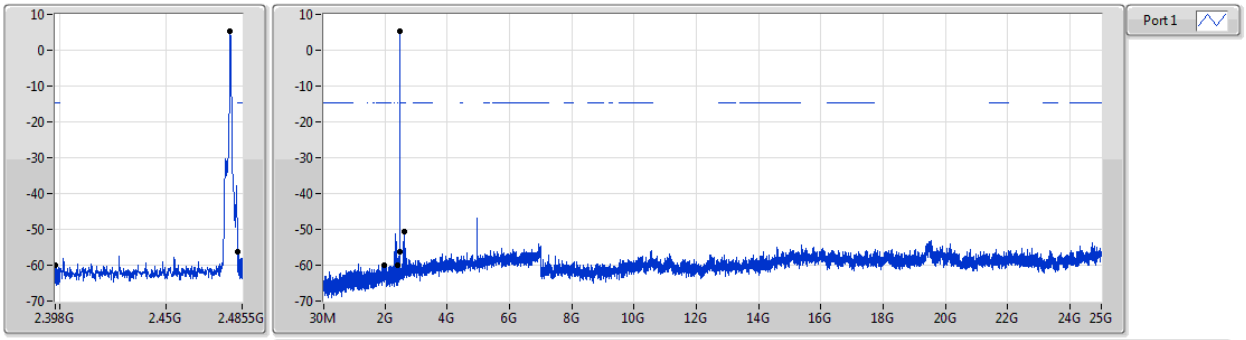
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.441082G	4.71	-15.29	2.058192G	-59.60	2.399268G	-59.39	2.484G	-58.98	2.595258G	-47.36	1

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

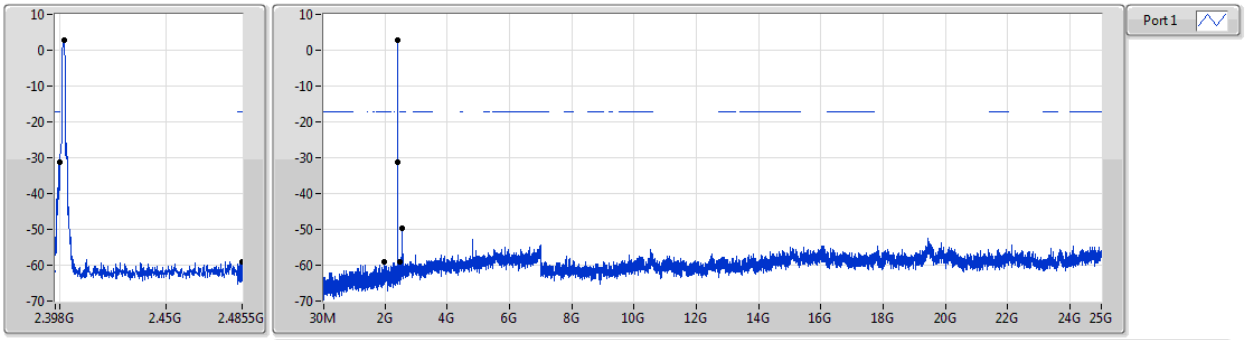
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.479826G	5.28	-14.72	1.972944G	-60.09	2.398244G	-60.08	2.483508G	-56.18	2.634659G	-50.54	1

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

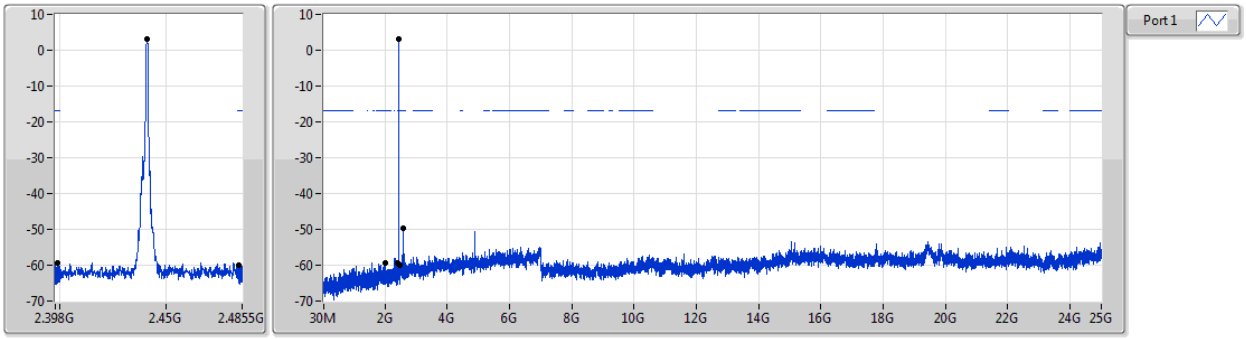
2402MHz



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	2.90	-17.10	1.972944G	-59.12	2.399984G	-31.28	2.485392G	-58.99	2.555858G	-49.73	1

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

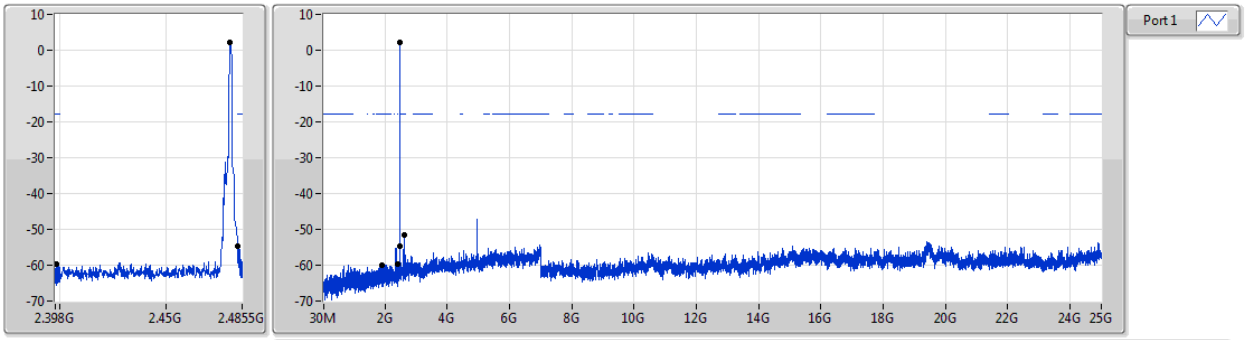
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.440915G	3.10	-16.90	1.998992G	-59.40	2.399148G	-59.46	2.484092G	-59.87	2.595258G	-49.65	1

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

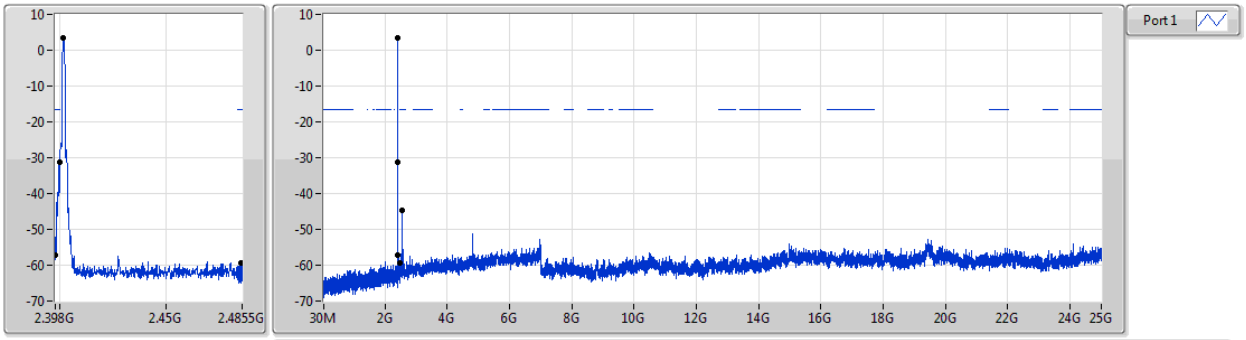
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.479826G	2.15	-17.85	1.886512G	-59.93	2.398368G	-59.65	2.48354G	-54.54	2.634659G	-51.47	1

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

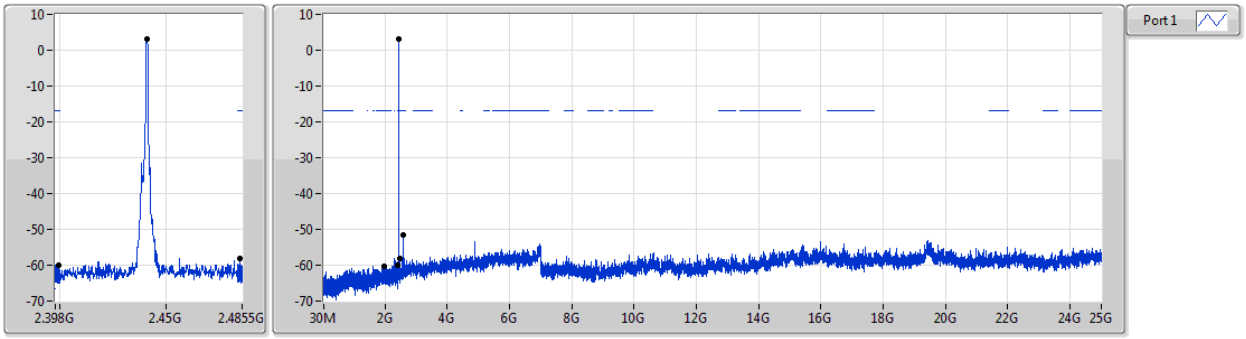
2402MHz



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	3.40	-16.60	2.398G	-57.20	2.399988G	-31.18	2.484932G	-59.46	2.555858G	-44.78	1

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

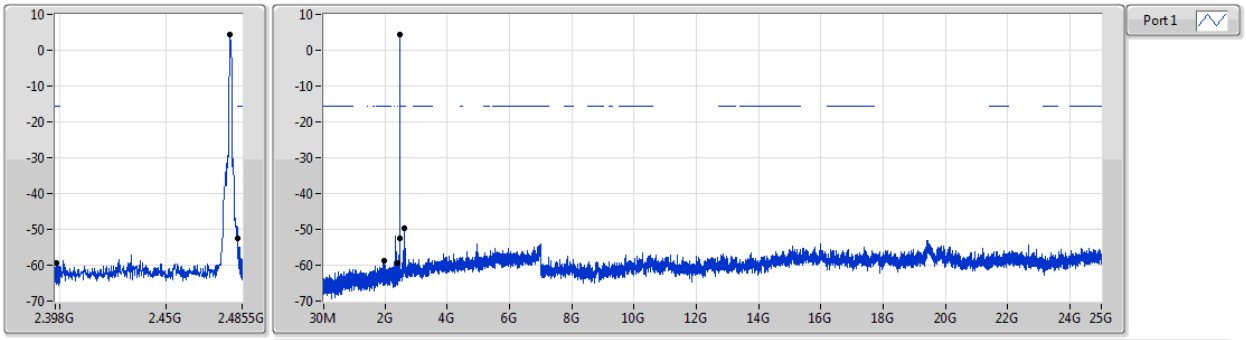
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.440915G	3.18	-16.82	1.97176G	-60.16	2.399408G	-59.99	2.484644G	-58.10	2.595258G	-51.49	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
2.479993G	4.47	-15.53	1.987152G	-58.67	2.398488G	-59.51	2.483504G	-52.35	2.634659G	-49.66	1

Summary

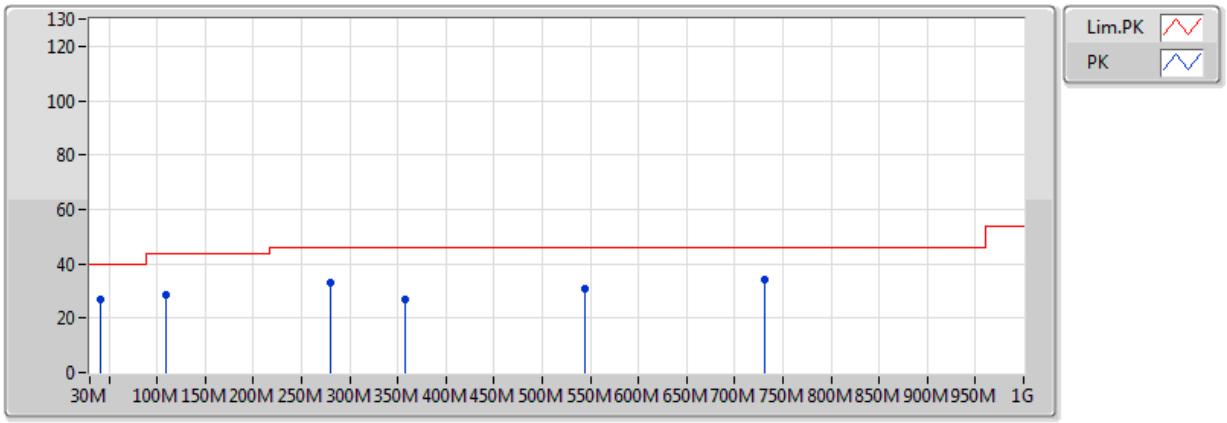
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	288.02M	39.91	46.00	-6.09	-6.74	3	Horizontal	360	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2441MHz	Pass	PK	35.82M	23.64	40.00	-16.36	-7.48	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	119.24M	29.58	43.50	-13.92	-8.87	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	288.02M	39.91	46.00	-6.09	-6.74	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	367.56M	35.17	46.00	-10.83	-5.00	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	458.74M	27.65	46.00	-18.35	-3.04	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	577.08M	31.13	46.00	-14.87	-1.17	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	41.64M	26.83	40.00	-13.17	-9.99	3	Vertical	0	1.00	-
2441MHz	Pass	PK	109.54M	28.47	43.50	-15.03	-9.33	3	Vertical	0	1.00	-
2441MHz	Pass	PK	280.26M	33.09	46.00	-12.91	-6.90	3	Vertical	0	1.00	-
2441MHz	Pass	PK	357.86M	26.90	46.00	-19.10	-5.29	3	Vertical	0	1.00	-
2441MHz	Pass	PK	544.1M	31.09	46.00	-14.91	-1.28	3	Vertical	0	1.00	-
2441MHz	Pass	PK	730.34M	34.40	46.00	-11.60	0.29	3	Vertical	0	1.00	-

BT-BR(1Mbps)

2441MHz_USB Charging

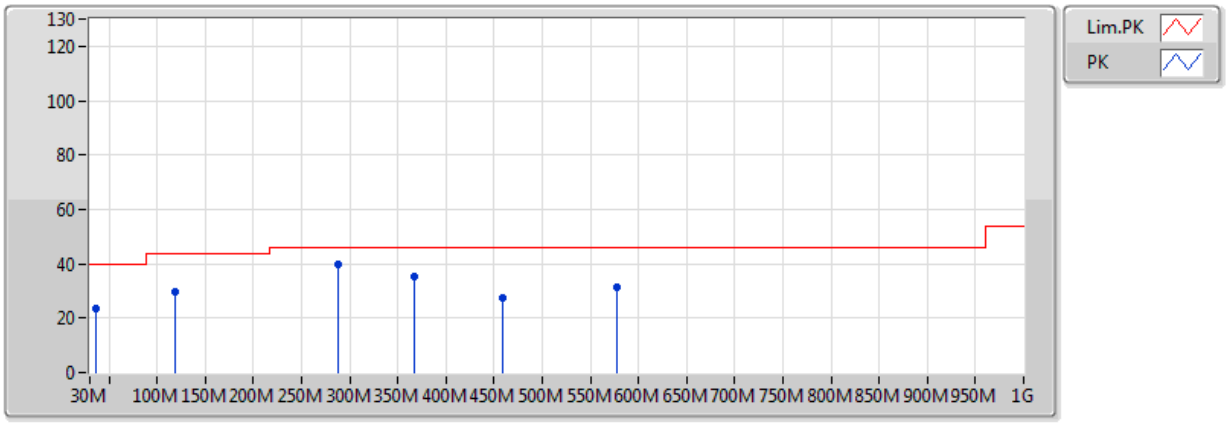


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	41.64M	26.83	40.00	-13.17	-9.99	3	Vertical	0	1.00	-	36.82	16.75	0.94	27.68
PK	109.54M	28.47	43.50	-15.03	-9.33	3	Vertical	0	1.00	-	37.80	17.00	1.44	27.77
PK	280.26M	33.09	46.00	-12.91	-6.90	3	Vertical	0	1.00	-	39.99	17.94	2.40	27.25
PK	357.86M	26.90	46.00	-19.10	-5.29	3	Vertical	0	1.00	-	32.19	19.69	2.66	27.64
PK	544.1M	31.09	46.00	-14.91	-1.28	3	Vertical	0	1.00	-	32.37	23.67	3.58	28.52
PK	730.34M	34.40	46.00	-11.60	0.29	3	Vertical	0	1.00	-	34.11	24.44	4.14	28.29

BT-BR(1Mbps)

2441MHz_USB Charging



EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	35.82M	23.64	40.00	-16.36	-7.48	3	Horizontal	360	1.00	-	31.12	19.51	0.78	27.77
PK	119.24M	29.58	43.50	-13.92	-8.87	3	Horizontal	360	1.00	-	38.45	17.27	1.60	27.74
PK	288.02M	39.91	46.00	-6.09	-6.74	3	Horizontal	360	1.00	-	46.65	18.04	2.45	27.23
PK	367.56M	35.17	46.00	-10.83	-5.00	3	Horizontal	360	1.00	-	40.17	19.97	2.74	27.71
PK	458.74M	27.65	46.00	-18.35	-3.04	3	Horizontal	360	1.00	-	30.69	21.95	3.28	28.27
PK	577.08M	31.13	46.00	-14.87	-1.17	3	Horizontal	360	1.00	-	32.30	23.74	3.63	28.55

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	2.483502G	64.25	74.00	-9.75	31.27	3	Horizontal	46	2.39	-
BT-EDR(2Mbps)	Pass	PK	2.483502G	63.30	74.00	-10.70	31.27	3	Horizontal	47	2.39	-
BT-EDR(3Mbps)	Pass	PK	2.483502G	60.74	74.00	-13.26	31.27	3	Horizontal	48	2.39	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3768G	32.83	54.00	-21.17	30.89	3	Horizontal	205	3.08	-
2402MHz	Pass	AV	2.4022G	78.96	Inf	-Inf	30.98	3	Horizontal	205	3.08	-
2402MHz	Pass	PK	2.3768G	55.32	74.00	-18.68	30.89	3	Horizontal	205	3.08	-
2402MHz	Pass	PK	2.4022G	101.46	Inf	-Inf	30.98	3	Horizontal	205	3.08	-
2402MHz	Pass	AV	2.3894G	32.69	54.00	-21.31	30.93	3	Vertical	226	1.63	-
2402MHz	Pass	AV	2.4022G	72.91	Inf	-Inf	30.98	3	Vertical	226	1.63	-
2402MHz	Pass	PK	2.3894G	55.19	74.00	-18.81	30.93	3	Vertical	226	1.63	-
2402MHz	Pass	PK	2.4022G	95.41	Inf	-Inf	30.98	3	Vertical	226	1.63	-
2402MHz	Pass	AV	4.80433G	40.46	54.00	-13.54	2.10	3	Horizontal	171	3.17	-
2402MHz	Pass	PK	4.80433G	62.97	74.00	-11.03	2.10	3	Horizontal	171	3.17	-
2402MHz	Pass	AV	4.804342G	38.69	54.00	-15.31	2.10	3	Vertical	148	1.30	-
2402MHz	Pass	PK	4.804342G	61.20	74.00	-12.80	2.10	3	Vertical	148	1.30	-
2441MHz	Pass	AV	2.389998G	32.74	54.00	-21.26	30.93	3	Horizontal	182	1.44	-
2441MHz	Pass	AV	2.441G	78.56	Inf	-Inf	31.12	3	Horizontal	182	1.44	-
2441MHz	Pass	AV	2.4946G	33.13	54.00	-20.87	31.31	3	Horizontal	182	1.44	-
2441MHz	Pass	PK	2.389998G	55.24	74.00	-18.76	30.93	3	Horizontal	182	1.44	-
2441MHz	Pass	PK	2.441G	101.05	Inf	-Inf	31.12	3	Horizontal	182	1.44	-
2441MHz	Pass	PK	2.4946G	55.63	74.00	-18.37	31.31	3	Horizontal	182	1.44	-
2441MHz	Pass	AV	2.3414G	32.83	54.00	-21.17	30.76	3	Vertical	43	1.26	-
2441MHz	Pass	AV	2.441G	74.51	Inf	-Inf	31.12	3	Vertical	43	1.26	-
2441MHz	Pass	AV	2.4926G	32.77	54.00	-21.23	31.30	3	Vertical	43	1.26	-
2441MHz	Pass	PK	2.3414G	55.34	74.00	-18.66	30.76	3	Vertical	43	1.26	-
2441MHz	Pass	PK	2.441G	97.01	Inf	-Inf	31.12	3	Vertical	43	1.26	-
2441MHz	Pass	PK	2.4926G	55.28	74.00	-18.72	31.30	3	Vertical	43	1.26	-
2441MHz	Pass	AV	4.88G	32.97	54.00	-21.03	2.56	3	Horizontal	214	2.05	-
2441MHz	Pass	AV	7.323G	29.56	54.00	-24.44	8.44	3	Horizontal	149	1.48	-
2441MHz	Pass	PK	4.88G	55.47	74.00	-18.53	2.56	3	Horizontal	214	2.05	-
2441MHz	Pass	PK	7.323G	52.06	74.00	-21.94	8.44	3	Horizontal	149	1.48	-
2441MHz	Pass	AV	4.88G	29.55	54.00	-24.45	2.56	3	Vertical	221	1.47	-
2441MHz	Pass	AV	7.323G	31.14	54.00	-22.86	8.44	3	Vertical	314	2.08	-
2441MHz	Pass	PK	4.88G	52.05	74.00	-21.95	2.56	3	Vertical	221	1.47	-
2441MHz	Pass	PK	7.323G	53.64	74.00	-20.36	8.44	3	Vertical	314	2.08	-
2480MHz	Pass	AV	2.4798G	81.54	Inf	-Inf	31.26	3	Horizontal	46	2.39	-
2480MHz	Pass	AV	2.483502G	41.75	54.00	-12.25	31.27	3	Horizontal	46	2.39	-
2480MHz	Pass	PK	2.4798G	104.04	Inf	-Inf	31.26	3	Horizontal	46	2.39	-
2480MHz	Pass	PK	2.483502G	64.25	74.00	-9.75	31.27	3	Horizontal	46	2.39	-
2480MHz	Pass	AV	2.4798G	77.79	Inf	-Inf	31.26	3	Vertical	216	1.63	-
2480MHz	Pass	AV	2.483502G	38.48	54.00	-15.52	31.27	3	Vertical	216	1.63	-
2480MHz	Pass	PK	2.4798G	100.29	Inf	-Inf	31.26	3	Vertical	216	1.63	-
2480MHz	Pass	PK	2.483502G	61.01	74.00	-12.99	31.27	3	Vertical	216	1.63	-
2480MHz	Pass	AV	4.96G	28.54	54.00	-25.46	2.68	3	Horizontal	215	2.26	-
2480MHz	Pass	AV	7.44G	29.70	54.00	-24.30	8.59	3	Horizontal	4	1.50	-
2480MHz	Pass	PK	4.96G	51.04	74.00	-22.96	2.68	3	Horizontal	215	2.26	-
2480MHz	Pass	PK	7.44G	52.20	74.00	-21.80	8.59	3	Horizontal	4	1.50	-
2480MHz	Pass	AV	4.96G	26.82	54.00	-27.18	2.68	3	Vertical	220	1.52	-
2480MHz	Pass	AV	7.44G	30.13	54.00	-23.87	8.59	3	Vertical	171	1.50	-
2480MHz	Pass	PK	4.96G	49.32	74.00	-24.68	2.68	3	Vertical	220	1.52	-

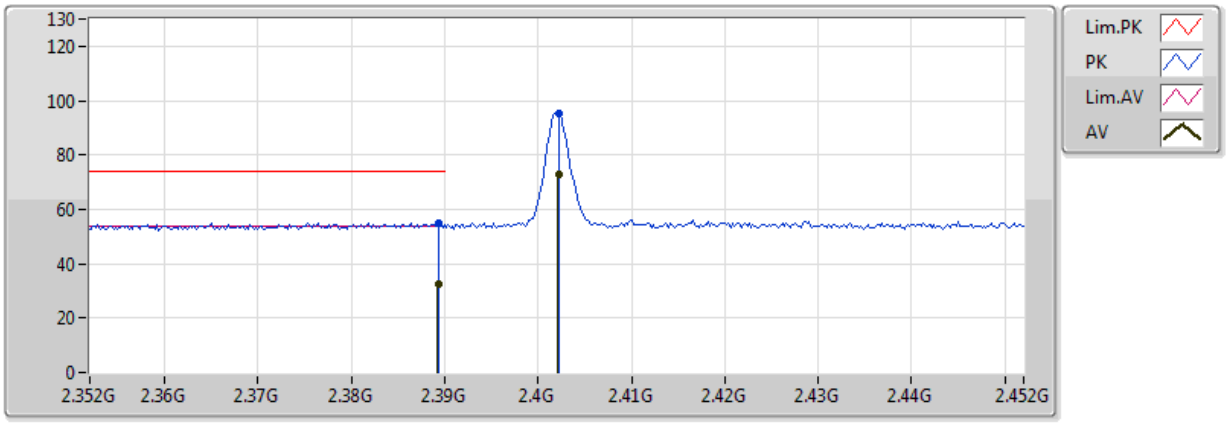
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2480MHz	Pass	PK	7.44G	52.63	74.00	-21.37	8.59	3	Vertical	171	1.50	-
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3896G	32.76	74.00	-41.24	30.93	3	Horizontal	204	3.08	-
2402MHz	Pass	AV	2.402G	77.42	Inf	-Inf	30.98	3	Horizontal	204	3.08	-
2402MHz	Pass	PK	2.3896G	55.27	74.00	-18.73	30.93	3	Horizontal	204	3.08	-
2402MHz	Pass	PK	2.402G	99.91	Inf	-Inf	30.98	3	Horizontal	204	3.08	-
2402MHz	Pass	AV	2.3834G	32.24	54.00	-21.76	30.91	3	Vertical	224	2.04	-
2402MHz	Pass	AV	2.4018G	71.57	Inf	-Inf	30.98	3	Vertical	224	2.04	-
2402MHz	Pass	PK	2.3834G	54.74	74.00	-19.26	30.91	3	Vertical	224	2.04	-
2402MHz	Pass	PK	2.4018G	94.06	Inf	-Inf	30.98	3	Vertical	224	2.04	-
2441MHz	Pass	AV	2.3722G	32.35	74.00	-41.65	30.87	3	Horizontal	180	1.45	-
2441MHz	Pass	AV	2.441G	77.16	Inf	-Inf	31.12	3	Horizontal	180	1.45	-
2441MHz	Pass	AV	2.4938G	32.91	74.00	-41.09	31.31	3	Horizontal	180	1.45	-
2441MHz	Pass	PK	2.3722G	54.86	74.00	-19.14	30.87	3	Horizontal	180	1.45	-
2441MHz	Pass	PK	2.441G	99.66	Inf	-Inf	31.12	3	Horizontal	180	1.45	-
2441MHz	Pass	PK	2.4938G	55.41	74.00	-18.59	31.31	3	Horizontal	180	1.45	-
2441MHz	Pass	AV	2.3678G	32.62	54.00	-21.38	30.86	3	Vertical	217	1.95	-
2441MHz	Pass	AV	2.441G	74.30	Inf	-Inf	31.12	3	Vertical	217	1.95	-
2441MHz	Pass	AV	2.4862G	33.20	54.00	-20.80	31.28	3	Vertical	217	1.95	-
2441MHz	Pass	PK	2.3678G	55.12	74.00	-18.88	30.86	3	Vertical	217	1.95	-
2441MHz	Pass	PK	2.441G	96.80	Inf	-Inf	31.12	3	Vertical	217	1.95	-
2441MHz	Pass	PK	2.4862G	55.70	74.00	-18.30	31.28	3	Vertical	217	1.95	-
2480MHz	Pass	AV	2.4798G	80.84	Inf	-Inf	31.26	3	Horizontal	47	2.39	-
2480MHz	Pass	AV	2.483502G	40.80	54.00	-13.20	31.27	3	Horizontal	47	2.39	-
2480MHz	Pass	PK	2.4798G	103.33	Inf	-Inf	31.26	3	Horizontal	47	2.39	-
2480MHz	Pass	PK	2.483502G	63.30	74.00	-10.70	31.27	3	Horizontal	47	2.39	-
2480MHz	Pass	AV	2.4802G	75.32	Inf	-Inf	31.26	3	Vertical	17	1.85	-
2480MHz	Pass	AV	2.483502G	36.78	54.00	-17.22	31.27	3	Vertical	17	1.85	-
2480MHz	Pass	PK	2.4802G	97.82	Inf	-Inf	31.26	3	Vertical	17	1.85	-
2480MHz	Pass	PK	2.483502G	59.28	74.00	-14.72	31.27	3	Vertical	17	1.85	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3666G	32.41	54.00	-21.59	30.85	3	Horizontal	203	3.09	-
2402MHz	Pass	AV	2.402G	77.14	Inf	-Inf	30.98	3	Horizontal	203	3.09	-
2402MHz	Pass	PK	2.3666G	54.91	74.00	-19.09	30.85	3	Horizontal	203	3.09	-
2402MHz	Pass	PK	2.402G	99.64	Inf	-Inf	30.98	3	Horizontal	203	3.09	-
2402MHz	Pass	AV	2.3674G	32.49	54.00	-21.51	30.86	3	Vertical	224	2.04	-
2402MHz	Pass	AV	2.4022G	71.48	Inf	-Inf	30.98	3	Vertical	224	2.04	-
2402MHz	Pass	PK	2.3674G	54.98	74.00	-19.02	30.86	3	Vertical	224	2.04	-
2402MHz	Pass	PK	2.4022G	93.97	Inf	-Inf	30.98	3	Vertical	224	2.04	-
2441MHz	Pass	AV	2.365G	31.86	54.00	-22.14	30.85	3	Horizontal	182	1.45	-
2441MHz	Pass	AV	2.4414G	77.77	Inf	-Inf	31.12	3	Horizontal	182	1.45	-
2441MHz	Pass	AV	2.485G	32.77	54.00	-21.23	31.28	3	Horizontal	182	1.45	-
2441MHz	Pass	PK	2.365G	54.36	74.00	-19.64	30.85	3	Horizontal	182	1.45	-
2441MHz	Pass	PK	2.4414G	100.27	Inf	-Inf	31.12	3	Horizontal	182	1.45	-
2441MHz	Pass	PK	2.485G	55.26	74.00	-18.74	31.28	3	Horizontal	182	1.45	-
2441MHz	Pass	AV	2.3874G	32.54	54.00	-21.46	30.93	3	Vertical	216	1.94	-
2441MHz	Pass	AV	2.4414G	73.91	Inf	-Inf	31.12	3	Vertical	216	1.94	-
2441MHz	Pass	AV	2.499G	32.58	54.00	-21.42	31.33	3	Vertical	216	1.94	-
2441MHz	Pass	PK	2.3874G	55.04	74.00	-18.96	30.93	3	Vertical	216	1.94	-

RSE TX above 1GHz Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2441MHz	Pass	PK	2.4414G	96.41	Inf	-Inf	31.12	3	Vertical	216	1.94	-
2441MHz	Pass	PK	2.499G	55.08	74.00	-18.92	31.33	3	Vertical	216	1.94	-
2480MHz	Pass	AV	2.4802G	80.09	Inf	-Inf	31.26	3	Horizontal	48	2.39	-
2480MHz	Pass	AV	2.483502G	38.24	54.00	-15.76	31.27	3	Horizontal	48	2.39	-
2480MHz	Pass	PK	2.4802G	102.59	Inf	-Inf	31.26	3	Horizontal	48	2.39	-
2480MHz	Pass	PK	2.483502G	60.74	74.00	-13.26	31.27	3	Horizontal	48	2.39	-
2480MHz	Pass	AV	2.48G	75.43	Inf	-Inf	31.26	3	Vertical	17	1.86	-
2480MHz	Pass	AV	2.483502G	36.86	54.00	-17.14	31.27	3	Vertical	17	1.86	-
2480MHz	Pass	PK	2.48G	97.93	Inf	-Inf	31.26	3	Vertical	17	1.86	-
2480MHz	Pass	PK	2.483502G	59.36	74.00	-14.64	31.27	3	Vertical	17	1.86	-

BT-BR(1Mbps)

2402MHz_TX

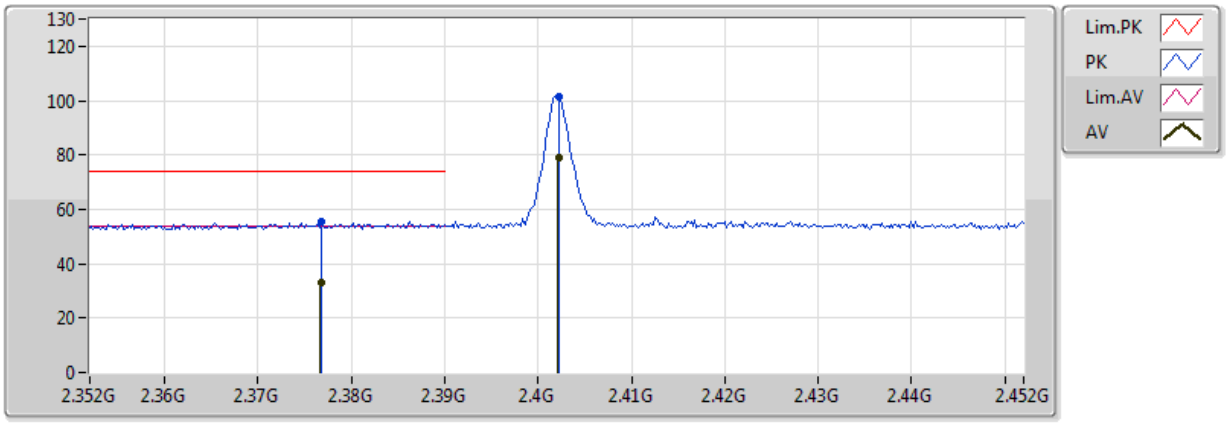


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3894G	32.69	54.00	-21.31	30.93	3	Vertical	226	1.63	-	1.76	27.31	3.62	-
AV	2.4022G	72.91	Inf	-Inf	30.98	3	Vertical	226	1.63	-	41.93	27.35	3.63	-
PK	2.3894G	55.19	74.00	-18.81	30.93	3	Vertical	226	1.63	-	24.26	27.31	3.62	-
PK	2.4022G	95.41	Inf	-Inf	30.98	3	Vertical	226	1.63	-	64.43	27.35	3.63	-

BT-BR(1Mbps)

2402MHz_TX

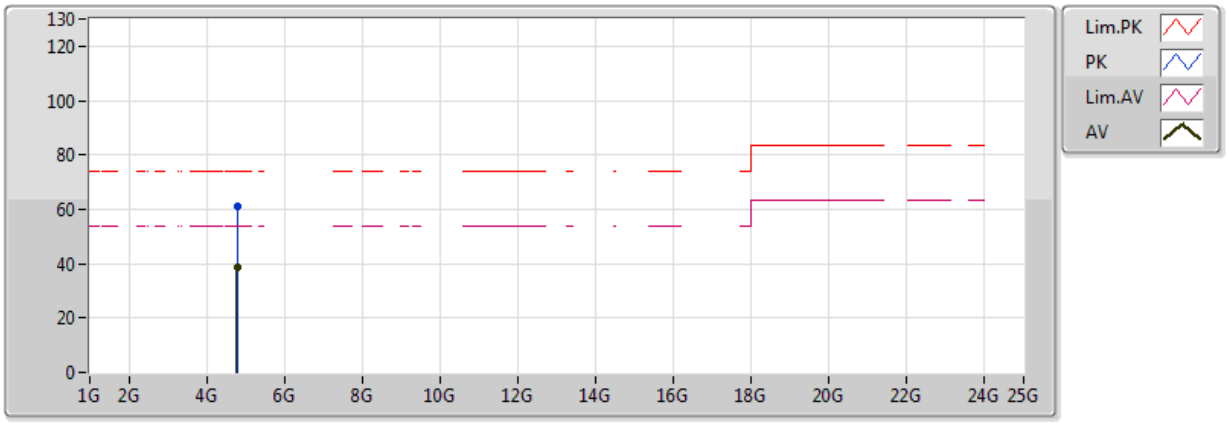


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3768G	32.83	54.00	-21.17	30.89	3	Horizontal	205	3.08	-	1.94	27.28	3.61	-
AV	2.4022G	78.96	Inf	-Inf	30.98	3	Horizontal	205	3.08	-	47.98	27.35	3.63	-
PK	2.3768G	55.32	74.00	-18.68	30.89	3	Horizontal	205	3.08	-	24.44	27.28	3.61	-
PK	2.4022G	101.46	Inf	-Inf	30.98	3	Horizontal	205	3.08	-	70.48	27.35	3.63	-

BT-BR(1Mbps)

2402MHz_TX

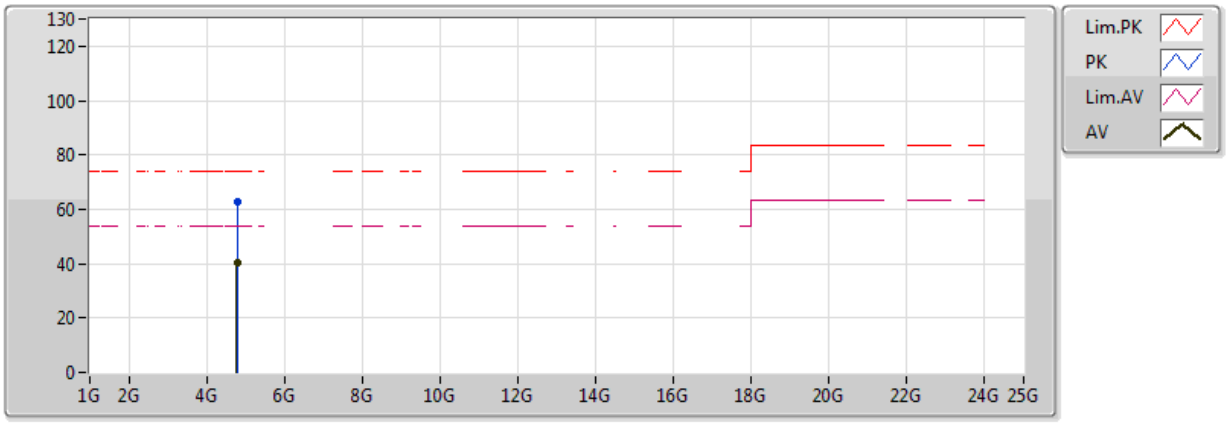


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.804342G	38.69	54.00	-15.31	2.10	3	Vertical	148	1.30	-	36.59	31.25	5.38	34.53
PK	4.804342G	61.20	74.00	-12.80	2.10	3	Vertical	148	1.30	-	59.09	31.25	5.38	34.53

BT-BR(1Mbps)

2402MHz_TX

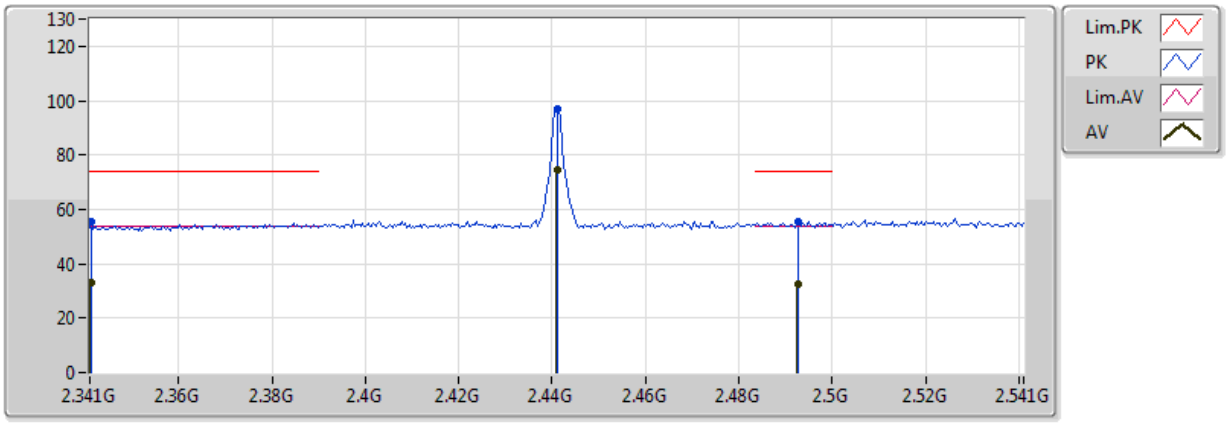


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80433G	40.46	54.00	-13.54	2.10	3	Horizontal	171	3.17	-	38.36	31.25	5.38	34.53
PK	4.80433G	62.97	74.00	-11.03	2.10	3	Horizontal	171	3.17	-	60.86	31.25	5.38	34.53

BT-BR(1Mbps)

2441MHz_TX

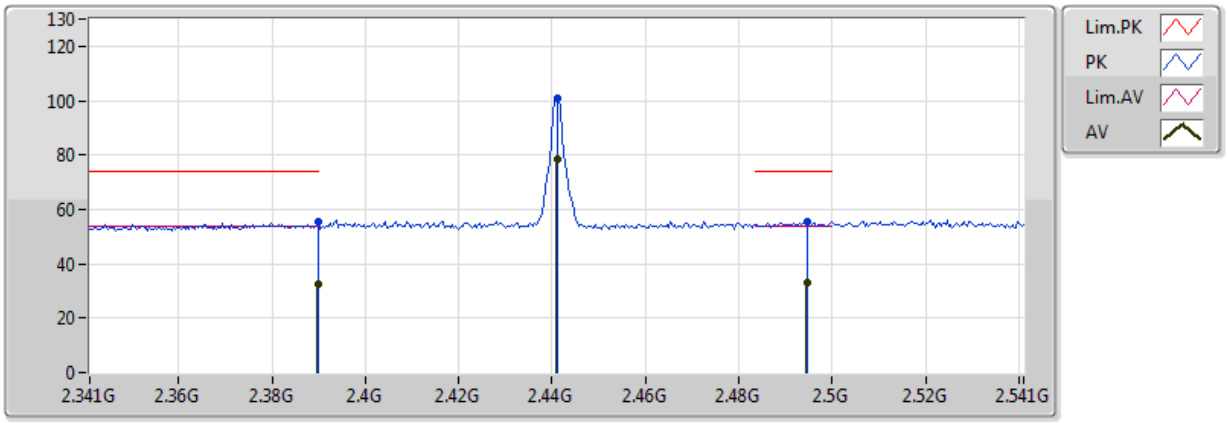


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3414G	32.83	54.00	-21.17	30.76	3	Vertical	43	1.26	-	2.07	27.19	3.58	-
AV	2.441G	74.51	Inf	-Inf	31.12	3	Vertical	43	1.26	-	43.39	27.45	3.67	-
AV	2.4926G	32.77	54.00	-21.23	31.30	3	Vertical	43	1.26	-	1.47	27.58	3.72	-
PK	2.3414G	55.34	74.00	-18.66	30.76	3	Vertical	43	1.26	-	24.57	27.19	3.58	-
PK	2.441G	97.01	Inf	-Inf	31.12	3	Vertical	43	1.26	-	65.89	27.45	3.67	-
PK	2.4926G	55.28	74.00	-18.72	31.30	3	Vertical	43	1.26	-	23.97	27.58	3.72	-

BT-BR(1Mbps)

2441MHz_TX

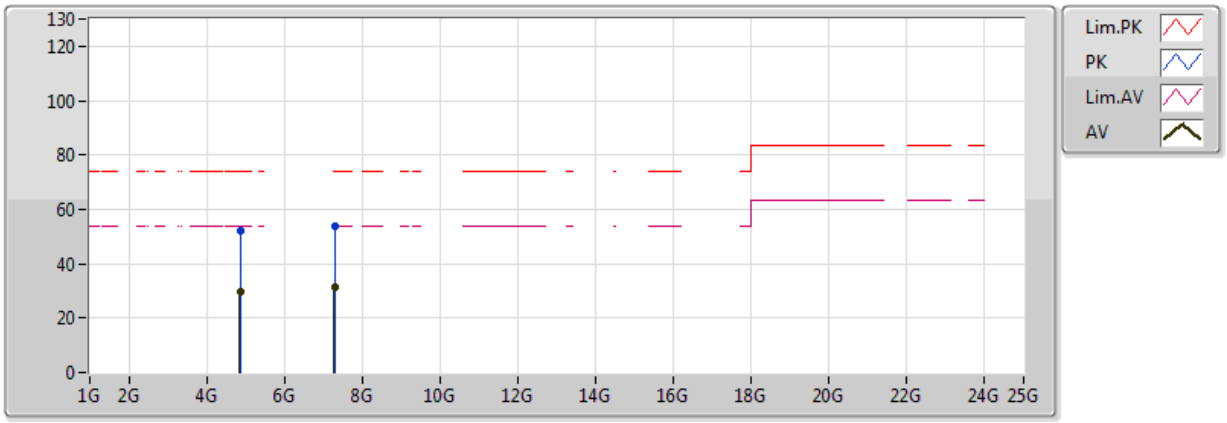


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.389998G	32.74	54.00	-21.26	30.93	3	Horizontal	182	1.44	-	1.81	27.31	3.62	-
AV	2.441G	78.56	Inf	-Inf	31.12	3	Horizontal	182	1.44	-	47.44	27.45	3.67	-
AV	2.4946G	33.13	54.00	-20.87	31.31	3	Horizontal	182	1.44	-	1.82	27.59	3.72	-
PK	2.389998G	55.24	74.00	-18.76	30.93	3	Horizontal	182	1.44	-	24.31	27.31	3.62	-
PK	2.441G	101.05	Inf	-Inf	31.12	3	Horizontal	182	1.44	-	69.94	27.45	3.67	-
PK	2.4946G	55.63	74.00	-18.37	31.31	3	Horizontal	182	1.44	-	24.32	27.59	3.72	-

BT-BR(1Mbps)

2441MHz_TX

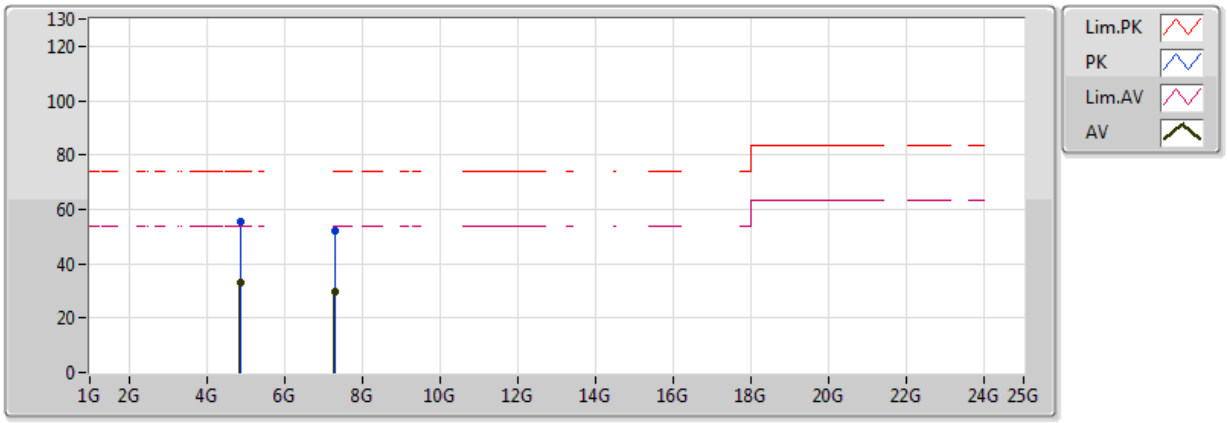


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88G	29.55	54.00	-24.45	2.56	3	Vertical	221	1.47	-	26.99	31.31	6.45	35.19
AV	7.323G	31.14	54.00	-22.86	8.44	3	Vertical	314	2.08	-	22.70	36.04	7.67	35.28
PK	4.88G	52.05	74.00	-21.95	2.56	3	Vertical	221	1.47	-	49.49	31.31	6.45	35.19
PK	7.323G	53.64	74.00	-20.36	8.44	3	Vertical	314	2.08	-	45.20	36.04	7.67	35.28

BT-BR(1Mbps)

2441MHz_TX

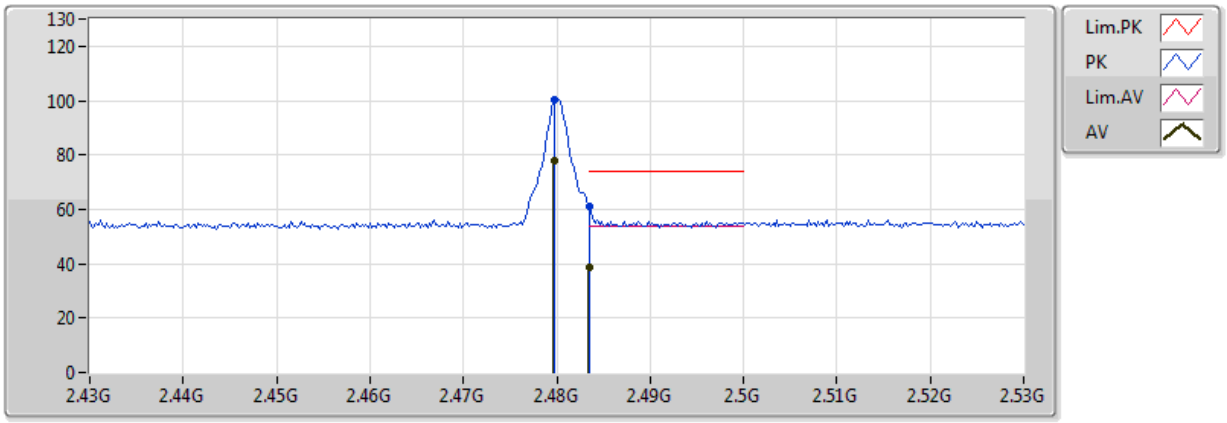


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88G	32.97	54.00	-21.03	2.56	3	Horizontal	214	2.05	-	30.41	31.31	6.45	35.19
AV	7.323G	29.56	54.00	-24.44	8.44	3	Horizontal	149	1.48	-	21.12	36.04	7.67	35.28
PK	4.88G	55.47	74.00	-18.53	2.56	3	Horizontal	214	2.05	-	52.91	31.31	6.45	35.19
PK	7.323G	52.06	74.00	-21.94	8.44	3	Horizontal	149	1.48	-	43.62	36.04	7.67	35.28

BT-BR(1Mbps)

2480MHz_TX

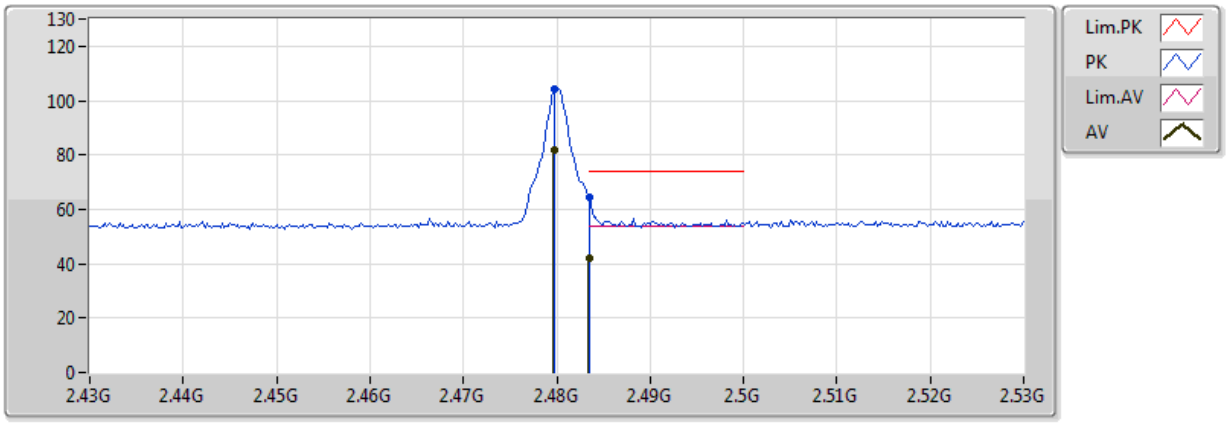


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4798G	77.79	Inf	-Inf	31.26	3	Vertical	216	1.63	-	46.53	27.55	3.71	-
AV	2.483502G	38.48	54.00	-15.52	31.27	3	Vertical	216	1.63	-	7.21	27.56	3.71	-
PK	2.4798G	100.29	Inf	-Inf	31.26	3	Vertical	216	1.63	-	69.03	27.55	3.71	-
PK	2.483502G	61.01	74.00	-12.99	31.27	3	Vertical	216	1.63	-	29.74	27.56	3.71	-

BT-BR(1Mbps)

2480MHz_TX

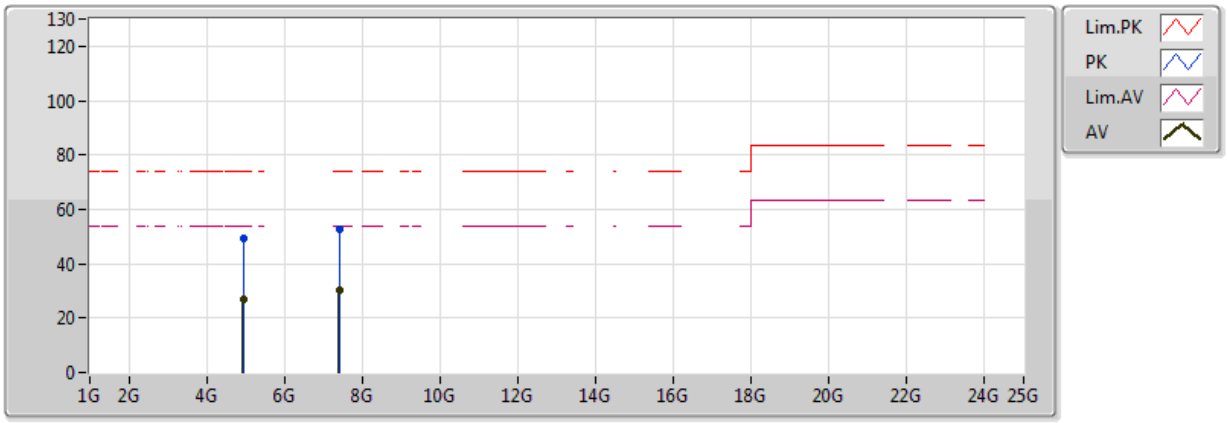


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4798G	81.54	Inf	-Inf	31.26	3	Horizontal	46	2.39	-	50.28	27.55	3.71	-
AV	2.483502G	41.75	54.00	-12.25	31.27	3	Horizontal	46	2.39	-	10.48	27.56	3.71	-
PK	2.4798G	104.04	Inf	-Inf	31.26	3	Horizontal	46	2.39	-	72.78	27.55	3.71	-
PK	2.483502G	64.25	74.00	-9.75	31.27	3	Horizontal	46	2.39	-	32.98	27.56	3.71	-

BT-BR(1Mbps)

2480MHz_TX

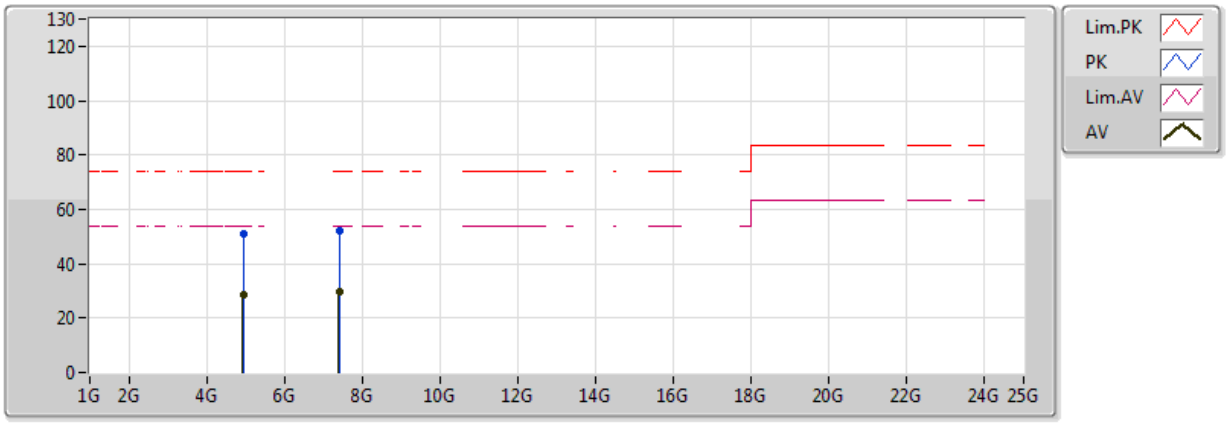


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.96G	26.82	54.00	-27.18	2.68	3	Vertical	220	1.52	-	24.14	31.44	6.46	35.21
AV	7.44G	30.13	54.00	-23.87	8.59	3	Vertical	171	1.50	-	21.54	36.34	7.55	35.31
PK	4.96G	49.32	74.00	-24.68	2.68	3	Vertical	220	1.52	-	46.64	31.44	6.46	35.21
PK	7.44G	52.63	74.00	-21.37	8.59	3	Vertical	171	1.50	-	44.04	36.34	7.55	35.31

BT-BR(1Mbps)

2480MHz_TX

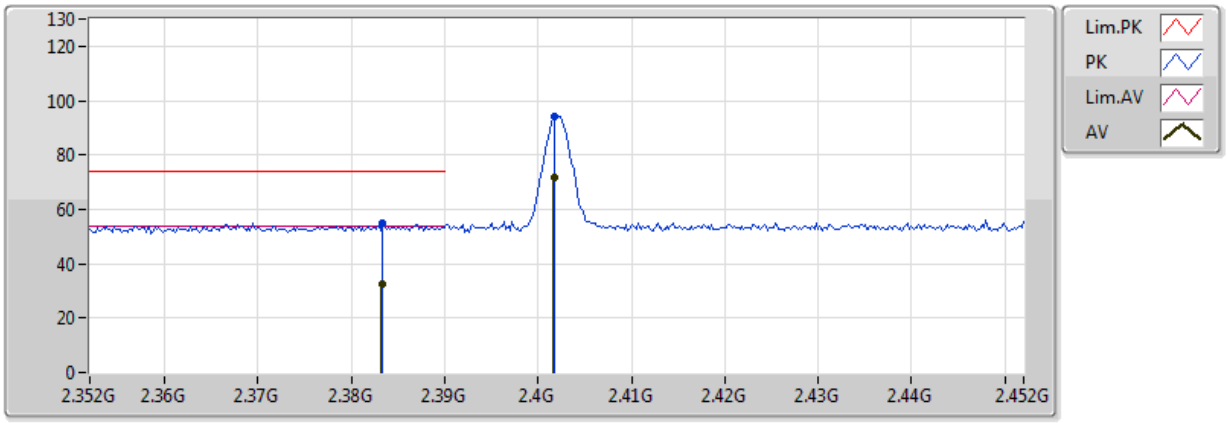


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.96G	28.54	54.00	-25.46	2.68	3	Horizontal	215	2.26	-	25.86	31.44	6.46	35.21
AV	7.44G	29.70	54.00	-24.30	8.59	3	Horizontal	4	1.50	-	21.11	36.34	7.55	35.31
PK	4.96G	51.04	74.00	-22.96	2.68	3	Horizontal	215	2.26	-	48.36	31.44	6.46	35.21
PK	7.44G	52.20	74.00	-21.80	8.59	3	Horizontal	4	1.50	-	43.61	36.34	7.55	35.31

BT-EDR(2Mbps)

2402MHz_TX

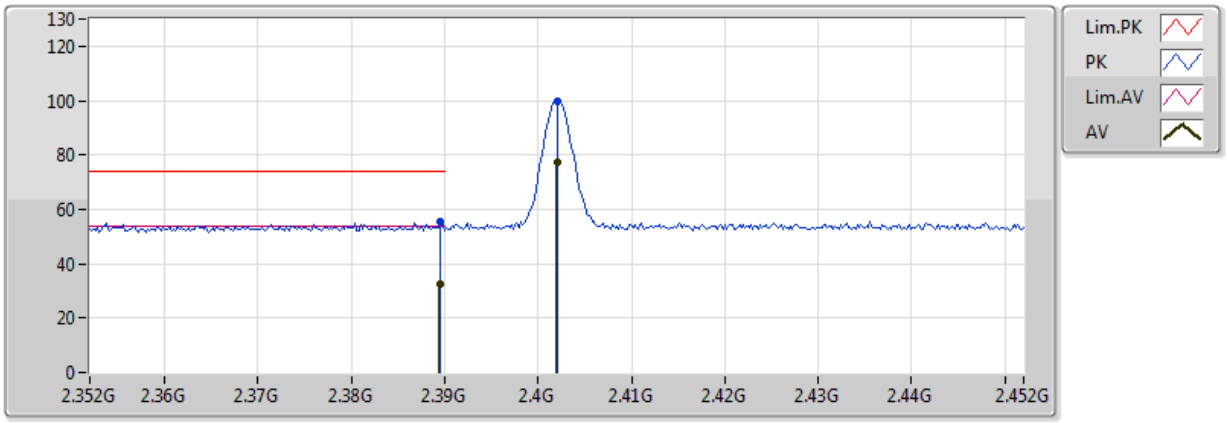


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3834G	32.24	54.00	-21.76	30.91	3	Vertical	224	2.04	-	1.33	27.30	3.62	-
AV	2.4018G	71.57	Inf	-Inf	30.98	3	Vertical	224	2.04	-	40.59	27.34	3.63	-
PK	2.3834G	54.74	74.00	-19.26	30.91	3	Vertical	224	2.04	-	23.83	27.30	3.62	-
PK	2.4018G	94.06	Inf	-Inf	30.98	3	Vertical	224	2.04	-	63.09	27.34	3.63	-

BT-EDR(2Mbps)

2402MHz_TX

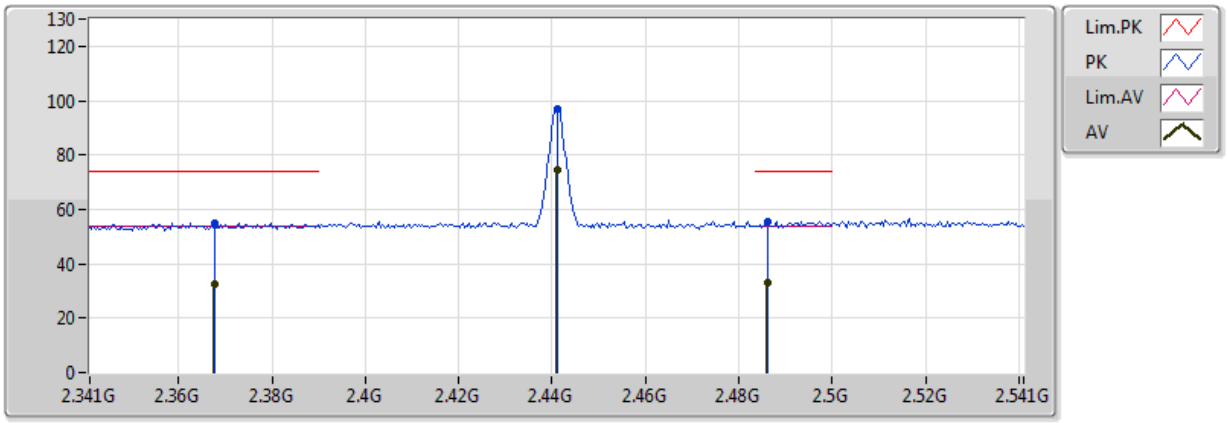


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3896G	32.76	74.00	-41.24	30.93	3	Horizontal	204	3.08	-	1.83	27.31	3.62	-
AV	2.402G	77.42	Inf	-Inf	30.98	3	Horizontal	204	3.08	-	46.44	27.35	3.63	-
PK	2.3896G	55.27	74.00	-18.73	30.93	3	Horizontal	204	3.08	-	24.33	27.31	3.62	-
PK	2.402G	99.91	Inf	-Inf	30.98	3	Horizontal	204	3.08	-	68.94	27.35	3.63	-

BT-EDR(2Mbps)

2441MHz_TX

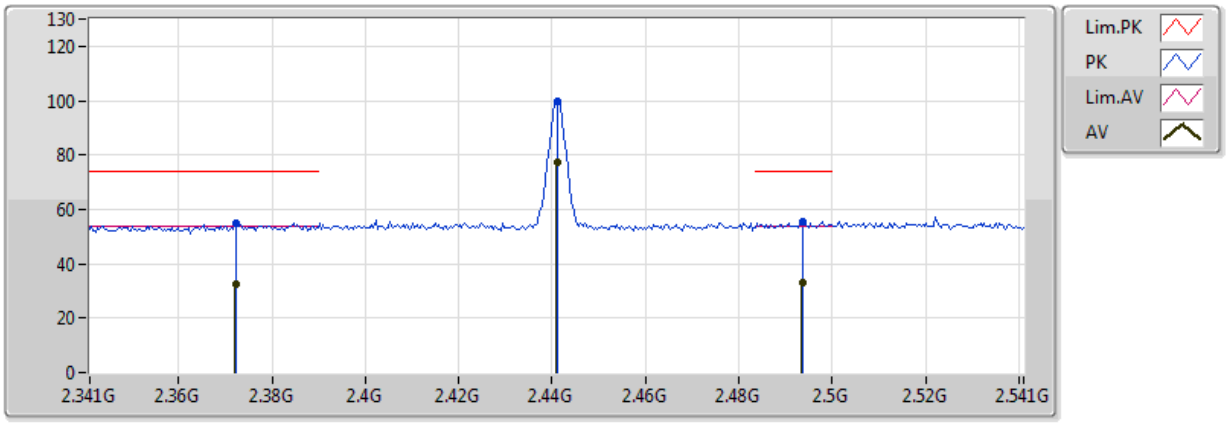


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3678G	32.62	54.00	-21.38	30.86	3	Vertical	217	1.95	-	1.76	27.26	3.60	-
AV	2.441G	74.30	Inf	-Inf	31.12	3	Vertical	217	1.95	-	43.18	27.45	3.67	-
AV	2.4862G	33.20	54.00	-20.80	31.28	3	Vertical	217	1.95	-	1.92	27.56	3.72	-
PK	2.3678G	55.12	74.00	-18.88	30.86	3	Vertical	217	1.95	-	24.26	27.26	3.60	-
PK	2.441G	96.80	Inf	-Inf	31.12	3	Vertical	217	1.95	-	65.68	27.45	3.67	-
PK	2.4862G	55.70	74.00	-18.30	31.28	3	Vertical	217	1.95	-	24.42	27.56	3.72	-

BT-EDR(2Mbps)

2441MHz_TX

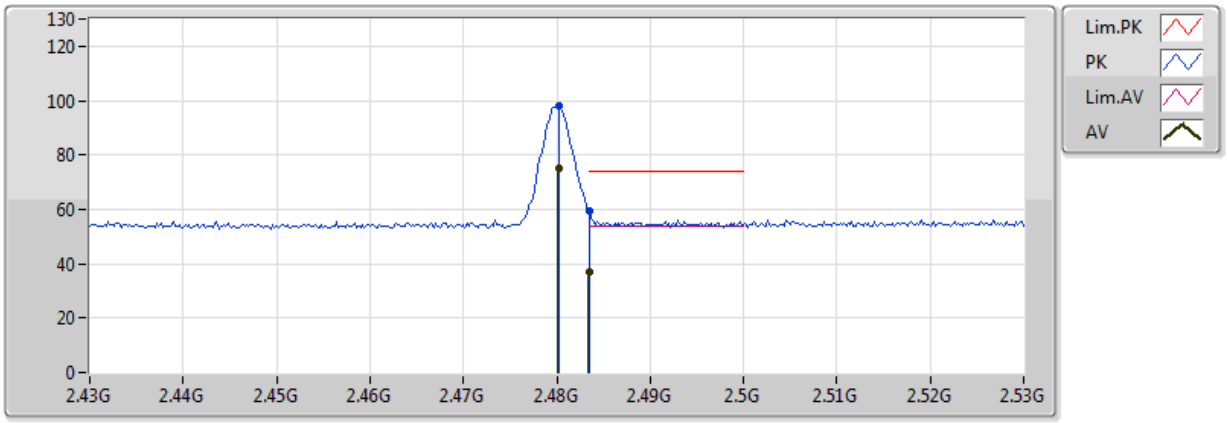


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3722G	32.35	74.00	-41.65	30.87	3	Horizontal	180	1.45	-	1.48	27.27	3.60	-
AV	2.441G	77.16	Inf	-Inf	31.12	3	Horizontal	180	1.45	-	46.04	27.45	3.67	-
AV	2.4938G	32.91	74.00	-41.09	31.31	3	Horizontal	180	1.45	-	1.60	27.58	3.72	-
PK	2.3722G	54.86	74.00	-19.14	30.87	3	Horizontal	180	1.45	-	23.98	27.27	3.60	-
PK	2.441G	99.66	Inf	-Inf	31.12	3	Horizontal	180	1.45	-	68.54	27.45	3.67	-
PK	2.4938G	55.41	74.00	-18.59	31.31	3	Horizontal	180	1.45	-	24.10	27.58	3.72	-

BT-EDR(2Mbps)

2480MHz_TX

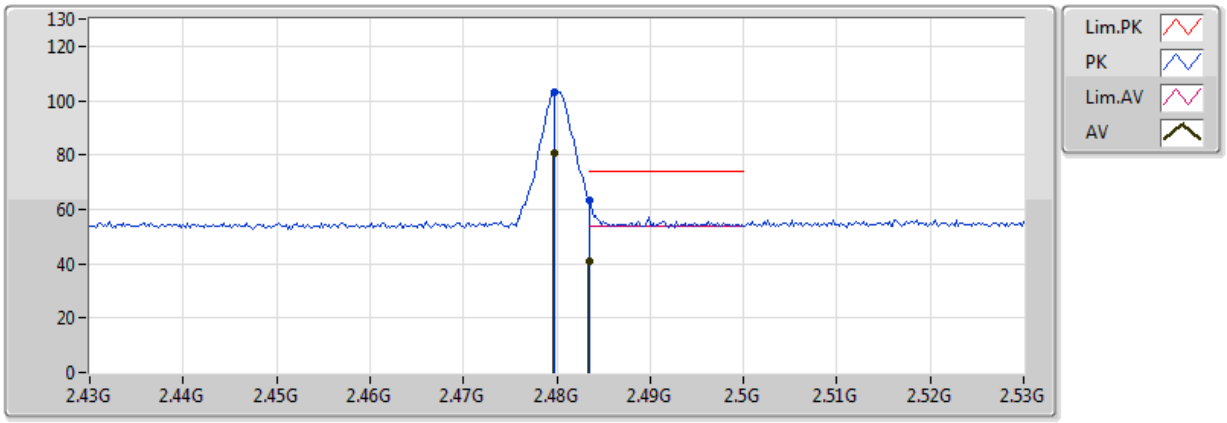


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4802G	75.32	Inf	-Inf	31.26	3	Vertical	17	1.85	-	44.06	27.55	3.71	-
AV	2.483502G	36.78	54.00	-17.22	31.27	3	Vertical	17	1.85	-	5.51	27.56	3.71	-
PK	2.4802G	97.82	Inf	-Inf	31.26	3	Vertical	17	1.85	-	66.56	27.55	3.71	-
PK	2.483502G	59.28	74.00	-14.72	31.27	3	Vertical	17	1.85	-	28.01	27.56	3.71	-

BT-EDR(2Mbps)

2480MHz_TX

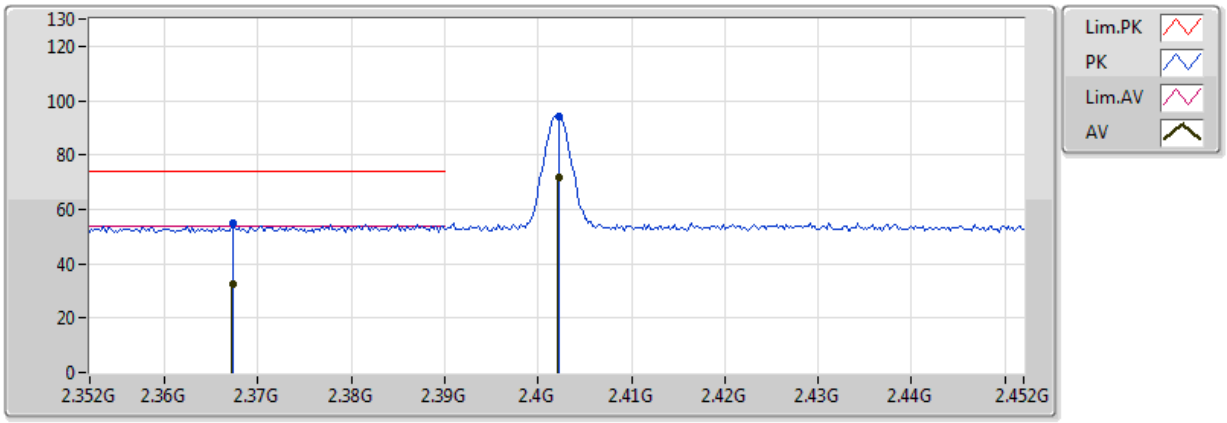


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4798G	80.84	Inf	-Inf	31.26	3	Horizontal	47	2.39	-	49.58	27.55	3.71	-
AV	2.483502G	40.80	54.00	-13.20	31.27	3	Horizontal	47	2.39	-	9.53	27.56	3.71	-
PK	2.4798G	103.33	Inf	-Inf	31.26	3	Horizontal	47	2.39	-	72.08	27.55	3.71	-
PK	2.483502G	63.30	74.00	-10.70	31.27	3	Horizontal	47	2.39	-	32.03	27.56	3.71	-

BT-EDR(3Mbps)

2402MHz_TX

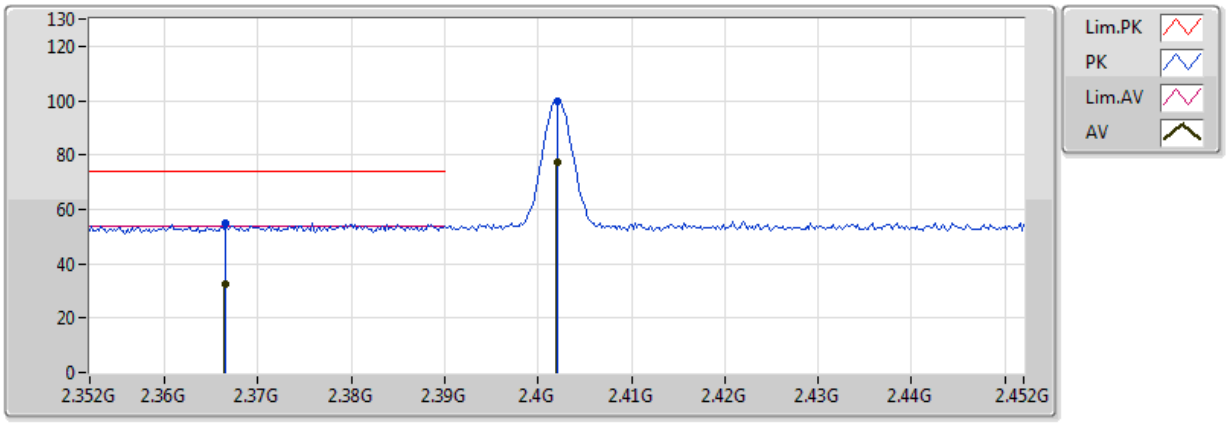


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3674G	32.49	54.00	-21.51	30.86	3	Vertical	224	2.04	-	1.63	27.26	3.60	-
AV	2.4022G	71.48	Inf	-Inf	30.98	3	Vertical	224	2.04	-	40.50	27.35	3.63	-
PK	2.3674G	54.98	74.00	-19.02	30.86	3	Vertical	224	2.04	-	24.13	27.26	3.60	-
PK	2.4022G	93.97	Inf	-Inf	30.98	3	Vertical	224	2.04	-	63.00	27.35	3.63	-

BT-EDR(3Mbps)

2402MHz_TX

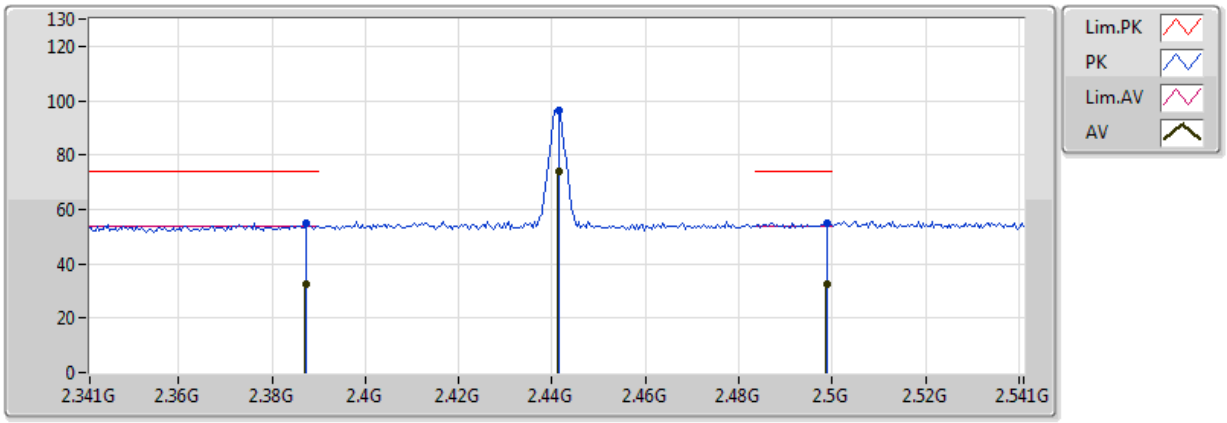


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3666G	32.41	54.00	-21.59	30.85	3	Horizontal	203	3.09	-	1.56	27.25	3.60	-
AV	2.402G	77.14	Inf	-Inf	30.98	3	Horizontal	203	3.09	-	46.16	27.35	3.63	-
PK	2.3666G	54.91	74.00	-19.09	30.85	3	Horizontal	203	3.09	-	24.06	27.25	3.60	-
PK	2.402G	99.64	Inf	-Inf	30.98	3	Horizontal	203	3.09	-	68.66	27.35	3.63	-

BT-EDR(3Mbps)

2441MHz_TX

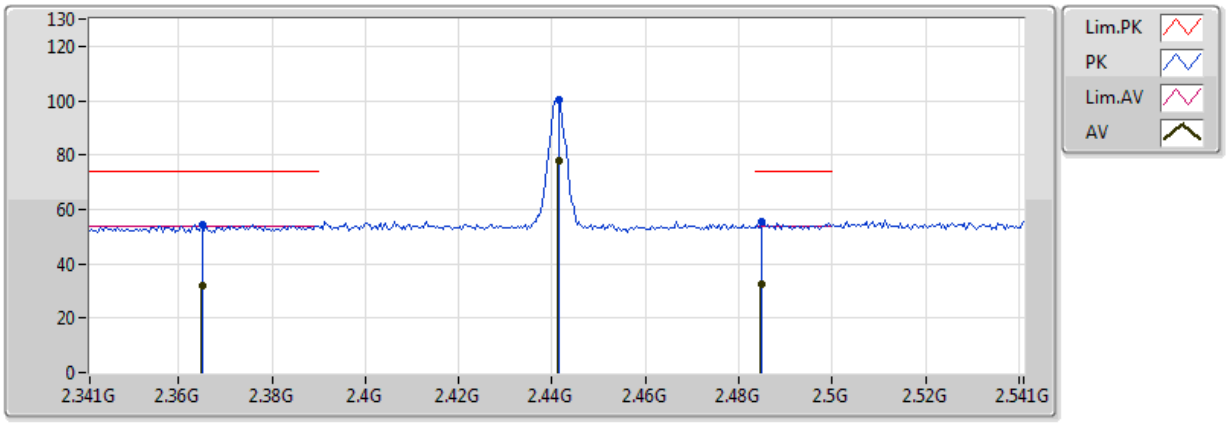


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3874G	32.54	54.00	-21.46	30.93	3	Vertical	216	1.94	-	1.61	27.31	3.62	-
AV	2.4414G	73.91	Inf	-Inf	31.12	3	Vertical	216	1.94	-	42.79	27.45	3.67	-
AV	2.499G	32.58	54.00	-21.42	31.33	3	Vertical	216	1.94	-	1.25	27.60	3.73	-
PK	2.3874G	55.04	74.00	-18.96	30.93	3	Vertical	216	1.94	-	24.11	27.31	3.62	-
PK	2.4414G	96.41	Inf	-Inf	31.12	3	Vertical	216	1.94	-	65.29	27.45	3.67	-
PK	2.499G	55.08	74.00	-18.92	31.33	3	Vertical	216	1.94	-	23.75	27.60	3.73	-

BT-EDR(3Mbps)

2441MHz_TX

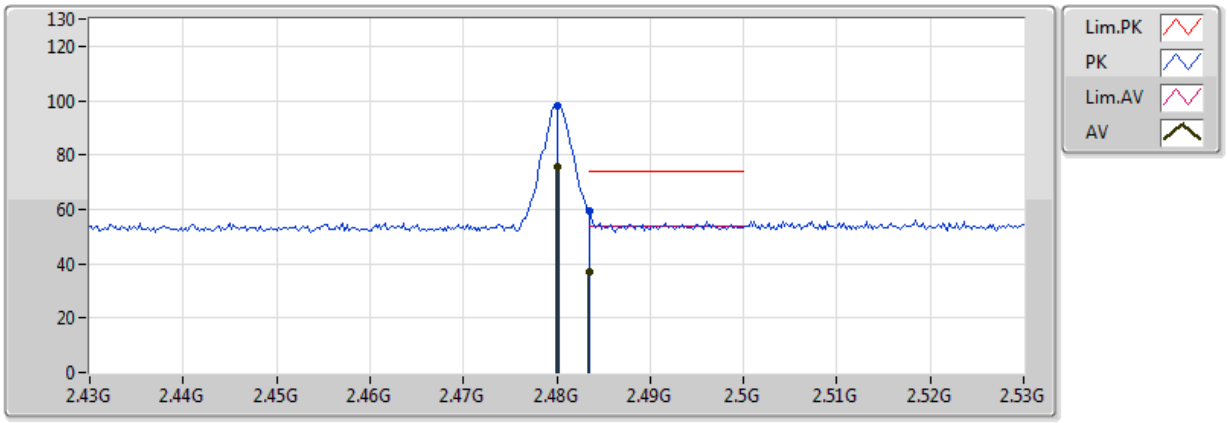


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.365G	31.86	54.00	-22.14	30.85	3	Horizontal	182	1.45	-	1.01	27.25	3.60	-
AV	2.4414G	77.77	Inf	-Inf	31.12	3	Horizontal	182	1.45	-	46.65	27.45	3.67	-
AV	2.485G	32.77	54.00	-21.23	31.28	3	Horizontal	182	1.45	-	1.49	27.56	3.71	-
PK	2.365G	54.36	74.00	-19.64	30.85	3	Horizontal	182	1.45	-	23.51	27.25	3.60	-
PK	2.4414G	100.27	Inf	-Inf	31.12	3	Horizontal	182	1.45	-	69.15	27.45	3.67	-
PK	2.485G	55.26	74.00	-18.74	31.28	3	Horizontal	182	1.45	-	23.99	27.56	3.71	-

BT-EDR(3Mbps)

2480MHz_TX

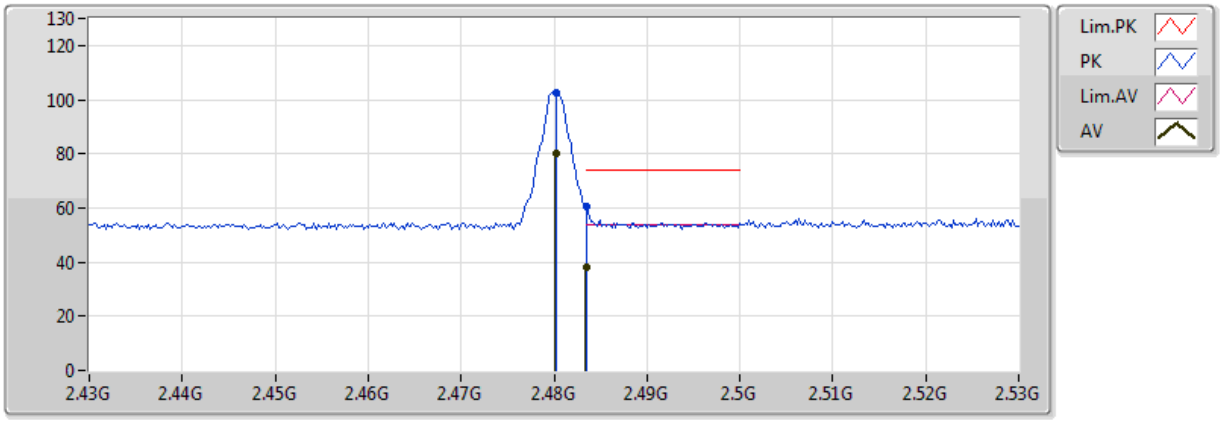


EUT = Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	75.43	Inf	-Inf	31.26	3	Vertical	17	1.86	-	44.17	27.55	3.71	-
AV	2.483502G	36.86	54.00	-17.14	31.27	3	Vertical	17	1.86	-	5.59	27.56	3.71	-
PK	2.48G	97.93	Inf	-Inf	31.26	3	Vertical	17	1.86	-	66.67	27.55	3.71	-
PK	2.483502G	59.36	74.00	-14.64	31.27	3	Vertical	17	1.86	-	28.09	27.56	3.71	-

BT-EDR(3Mbps)

2480MHz_TX



EUT=Z

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.4802G	80.09	Inf	-Inf	31.26	3	Horizontal	48	2.39	-	48.83	27.55	3.71	-
AV	2.483502G	38.24	54.00	-15.76	31.27	3	Horizontal	48	2.39	-	6.97	27.56	3.71	-
PK	2.4802G	102.59	Inf	-Inf	31.26	3	Horizontal	48	2.39	-	71.33	27.55	3.71	-
PK	2.483502G	60.74	74.00	-13.26	31.27	3	Horizontal	48	2.39	-	29.47	27.56	3.71	-