

FCC Test Report

FCC ID : U4G-Q10W
Equipment : PDA
Brand Name : DATALOGIC
Model Name : MEMOR 20
Applicant : Datalogic S.r.l.
Via S. Vitalino, 13 40012, Lippo di
Calderara di Reno (BO) ITALY
Manufacturer : Datalogic S.r.l.
Via S. Vitalino, 13 40012, Lippo di
Calderara di Reno (BO) ITALY
Standard : 47 CFR FCC Part 15.247

The product was received on Dec. 17, 2018, and testing was started from Dec. 25, 2018 and completed on May 14, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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

Table of Contents

HISTORY OF THIS TEST REPORT	3
SUMMARY OF TEST RESULT	4
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 and Support Equipment	10
2.5 Test Setup Diagram	11
3 TRANSMITTER TEST RESULT	12
3.1 AC Power-line Conducted Emissions	12
3.2 20dB Bandwidth and Carrier Frequency Separation.....	13
3.3 Maximum Conducted Output Power	14
3.4 Number of Hopping Frequencies and Hopping Bandedge	15
3.5 Time of Occupancy (Dwell Time)	16
3.6 Emissions in Non-restricted Frequency Bands	17
3.7 Emissions in Restricted Frequency Bands.....	18
4 TEST EQUIPMENT AND CALIBRATION DATA.....	21
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 GH. TEST RESULTS OF RADIATED EMISSION CO-LOCATION	
APPENDIX H. TEST PHOTOS	
PHOTOGRAPHS OF EUT V01	



History of this test report

[illegible]

Summary of Test Result

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

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and explanations:

None

Reviewed by: Jackson Tsai

Report Producer: Ann Hou

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 nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	-	-	PIFA	N/A
2	-	-	Monopole with couple	I-PEX

Ant.	Port	Gain (dBi)		
		2.4G	5G	BT
1	1	2.93	4.16	2.93
2	2	2.93	4.16	-

Note 1: The EUT has two antennas.

For 2.4GHz function:

For IEEE 802.11 b/g mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 1(port 1) and it was record in this test report.

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

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

For 5GHz function:

For IEEE 802.11 a/HT20(Band1) mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 1(port 1) and it was record in this test report.

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

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

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive simultaneously.

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter		
EUT Function	☒ Point-to-multipoint	☐ Point-to-point	
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) $\geq 1/T$
BT-BR(1Mbps)	0.763	1.175	2.888m	1k
BT-EDR(2Mbps)	0.767	1.152	2.89m	1k
BT-EDR(3Mbps)	0.773	1.118	2.893m	1k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

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	Cover	Description
DATALOGIC	MEMOR 20	White	There are two enclosures for EUT. All samples are identical, only the color is different.
		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
- ♦ KDB 558074 D01 v05r02
- ♦ ANSI C63.10-2013
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location			
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	
		TEL : 886-3-327-3456	FAX : 886-3-327-0973
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
AC Conduction	CO01-HY	Jeff	23.2~25.8°C / 51.2~56.1%	14/May/2019
RF Conducted	TH01-HY	Barry	23.1~24.1°C / 61~69%	29/Dec/2018~ 22/Apr/2019
Radiated	03CH09-HY	Daniel	21.3~24.4°C / 52.4~55.9%	25/Dec/2018~ 28/Dec/2018

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)	3.54 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	1.6 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%
Temperature	0.7 °C	Confidence levels of 95%
Humidity	4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

2.2 Test Channel Mode

Test Software Version	QDART_WIN_4_8
-----------------------	---------------

Mode	PowerSetting
BT-BR(1Mbps)	-
2402MHz	8
2441MHz	8
2480MHz	8
BT-EDR(2Mbps)	-
2402MHz	8
2441MHz	8
2480MHz	8
BT-EDR(3Mbps)	-
2402MHz	8
2441MHz	8
2480MHz	8

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	Adapter 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	Adapter mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	Normal link
1	Bluetooth+WLAN 5GHz
Refer to Sporton Test Report No.: Appendix G for Radiated Emission Co-location	

Note.

Non-AFH: DH5 Packet permit maximum $1600 / 79 / 6 = 3.37$ hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times $3.37 \times 1.185 = 4$ within 1.185 seconds.

AFH: DH5 Packet permit maximum $800 / 20 / 6 = 6.67$ hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times $13.33 \times 8 = 106.6$ within 8 seconds.

Under the above conditions, Non-AFH Mode configuration was found to be the worst case and measured during the test.

2.4 Accessories and Support Equipment

Accessories				
Battery	Brand Name	DATALOGIC	Model Name	Memor 20
	Power Rating	3.85Vdc, 4100mAh	Type	Li-ion
USB Cable	Power Cord	1.2 meter, shielded cable, w/o ferrite core		

Reminder: Regarding to more detail and other information, please refer to user manual.

Support Equipment – AC Conduction				
No.	Equipment	Brand Name	Model Name	FCC ID
1	AC adapter	Channel Well	2ACP0183	N/A

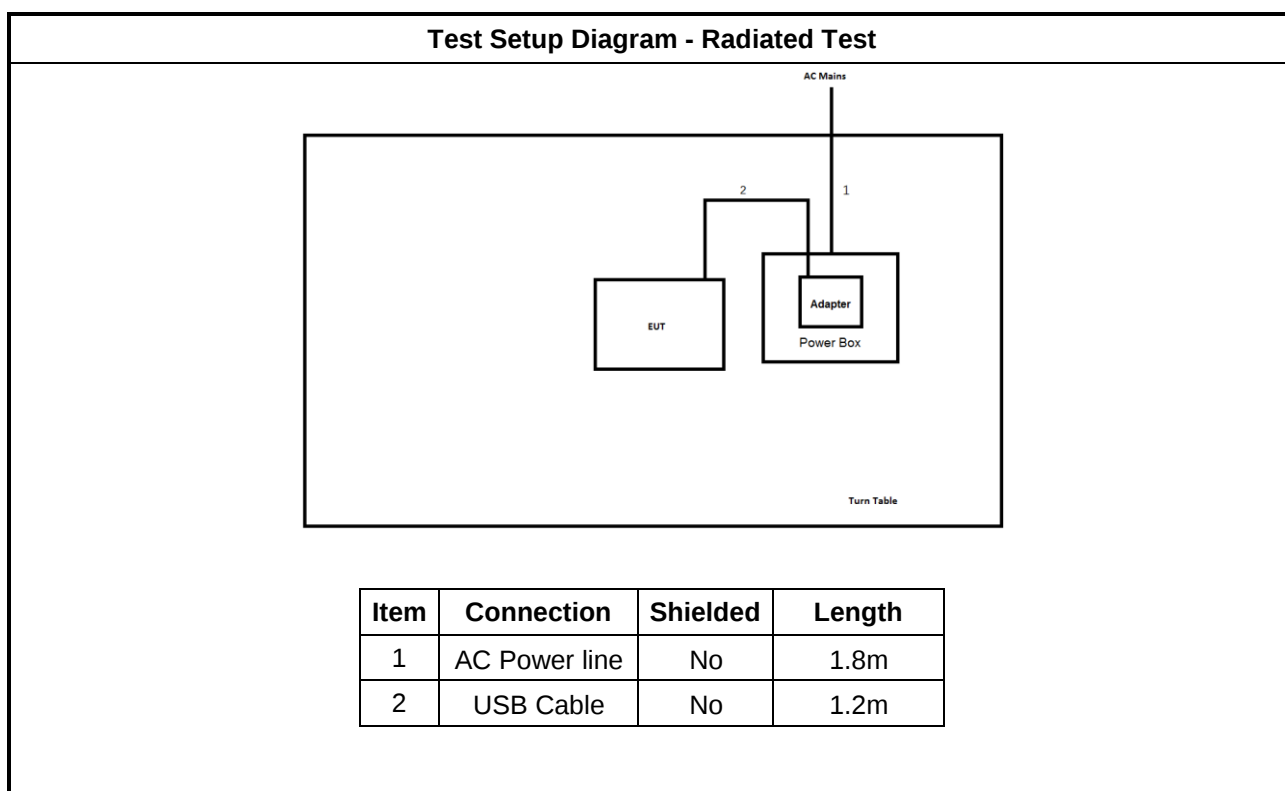
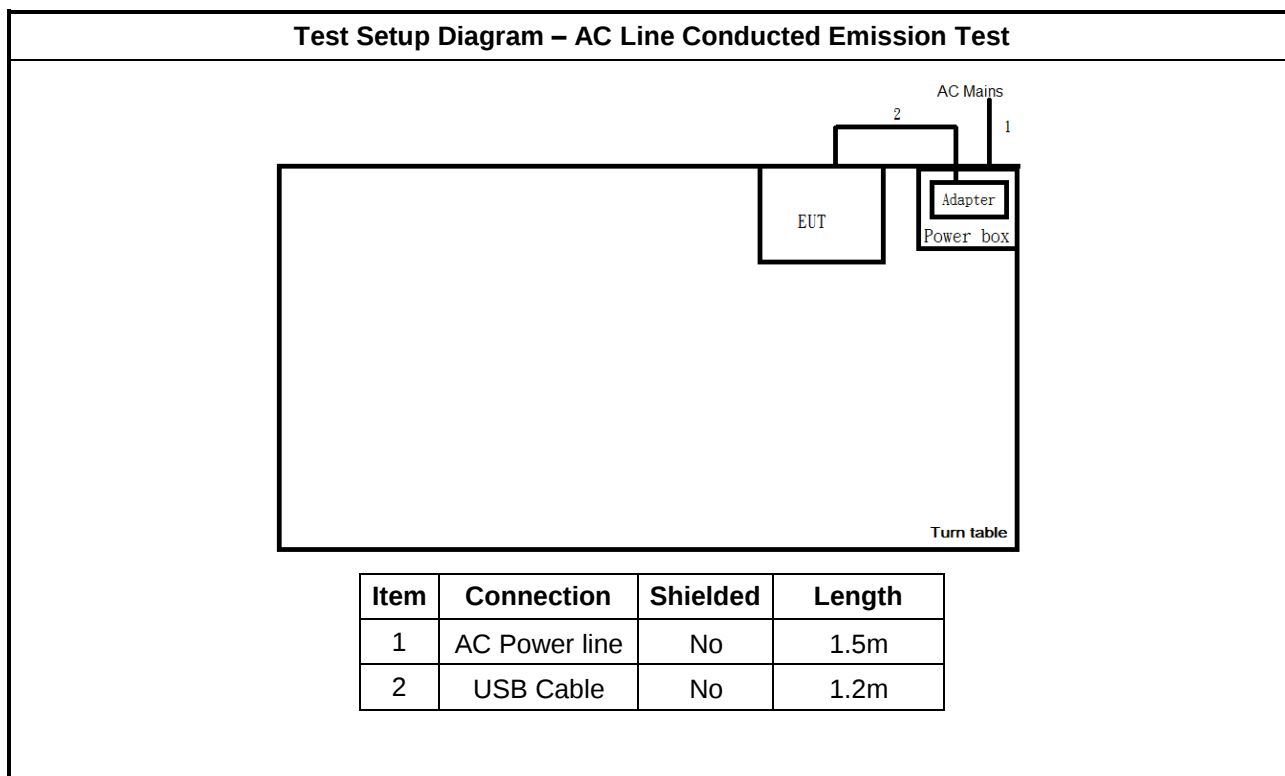
Note: Support equipment No.1 was provided by customer.

Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC

Support Equipment – Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	AC adapter	Channel Well	2ACP0183	N/A

Note: Support equipment No.1 was provided by customer.

2.5 Test Setup Diagram



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.

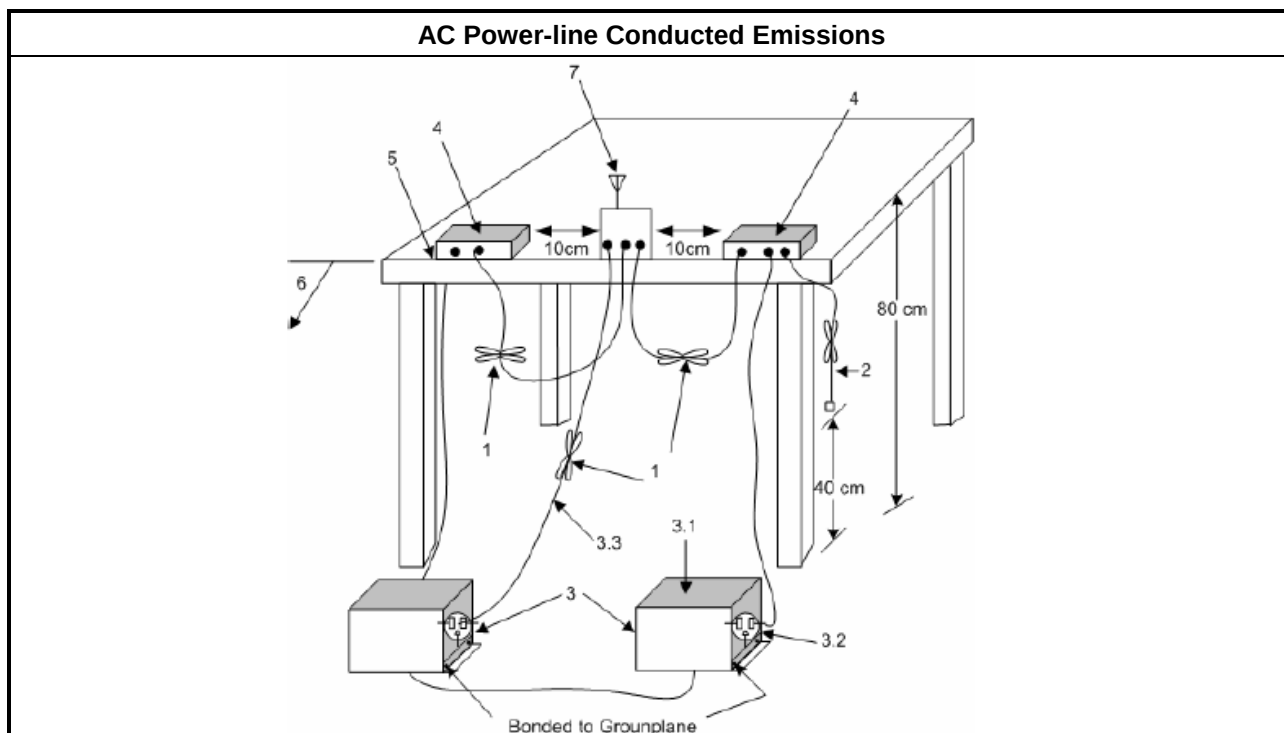
3.1.2 Measuring Instruments

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	
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).
N: Number of Hopping Frequencies; ChS: Hopping Channel Separation	

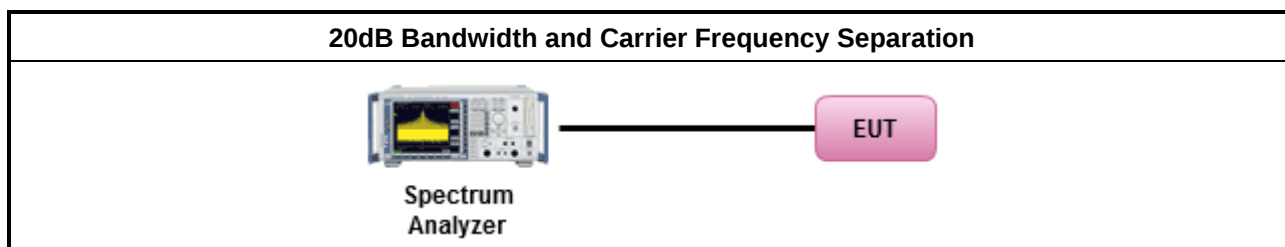
3.2.2 Measuring Instruments

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



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

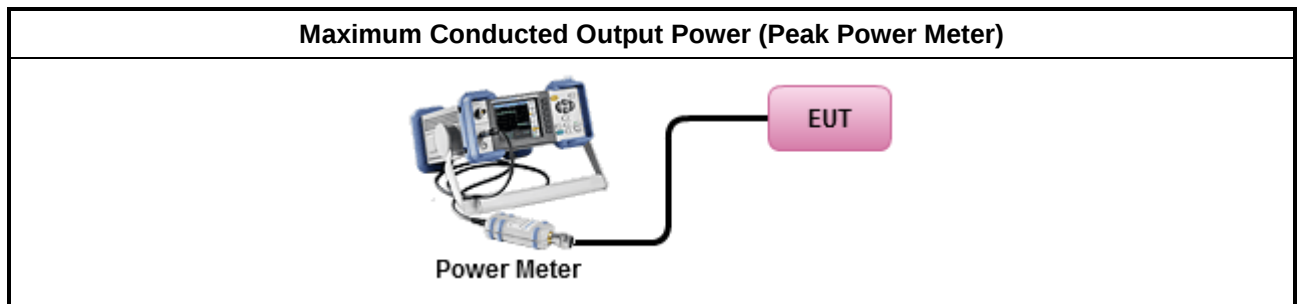
3.3.2 Measuring Instruments

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	
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).
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

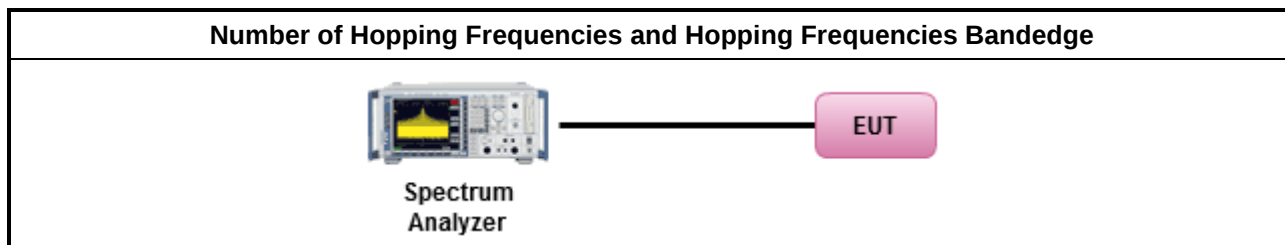
3.4.3 Measuring Instruments

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

Time of Occupancy (Dwell Time) Limit for Frequency Hopping Systems	
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
N: Number of Hopping Frequencies	

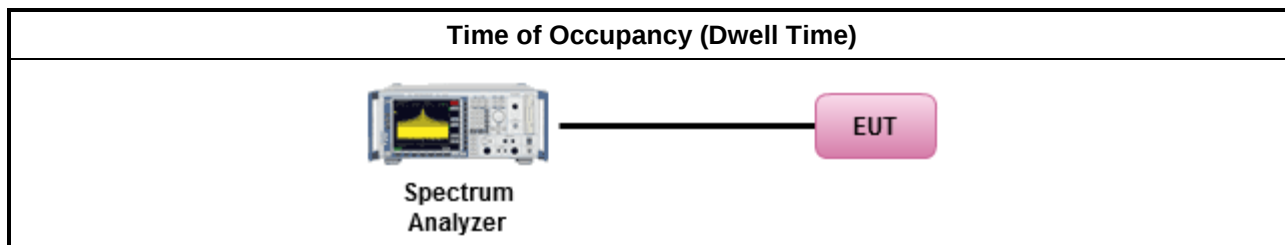
3.5.2 Measuring Instruments

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.	

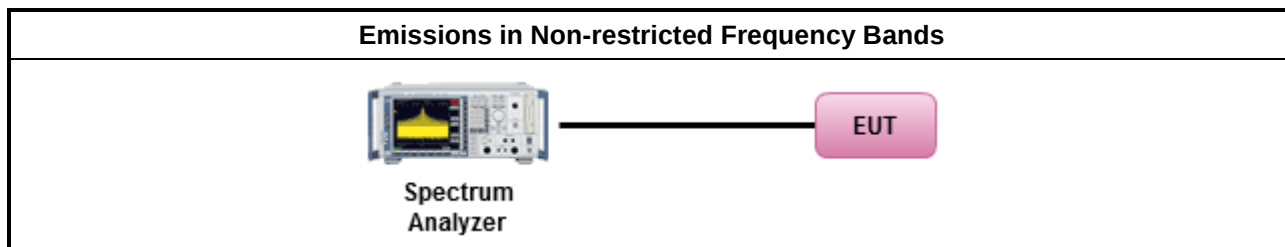
3.6.2 Measuring Instruments

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.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

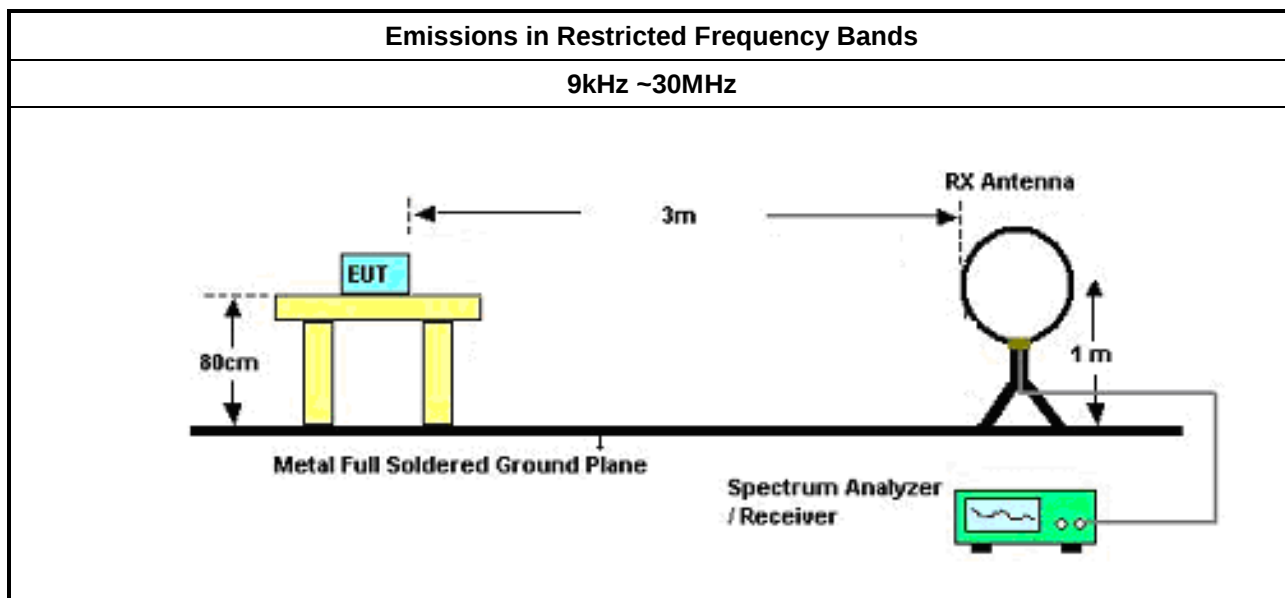
3.7.2 Measuring Instruments

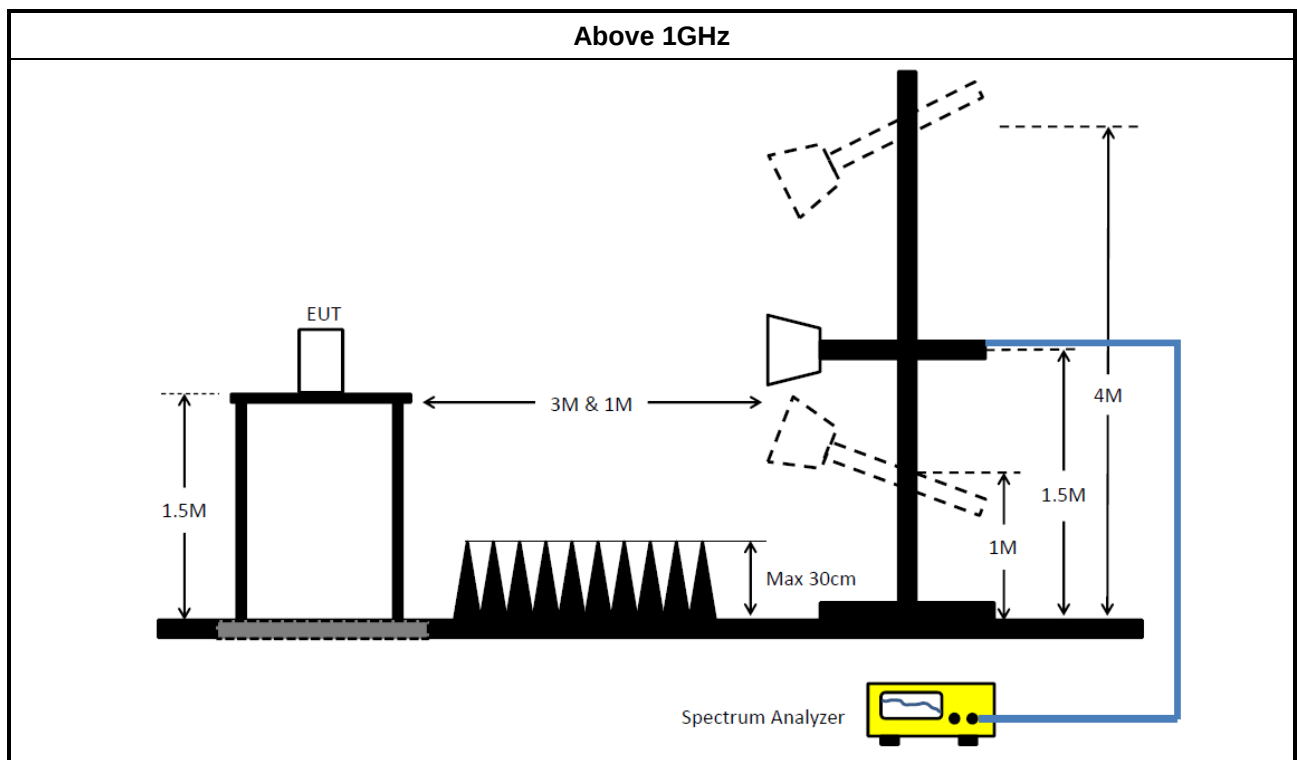
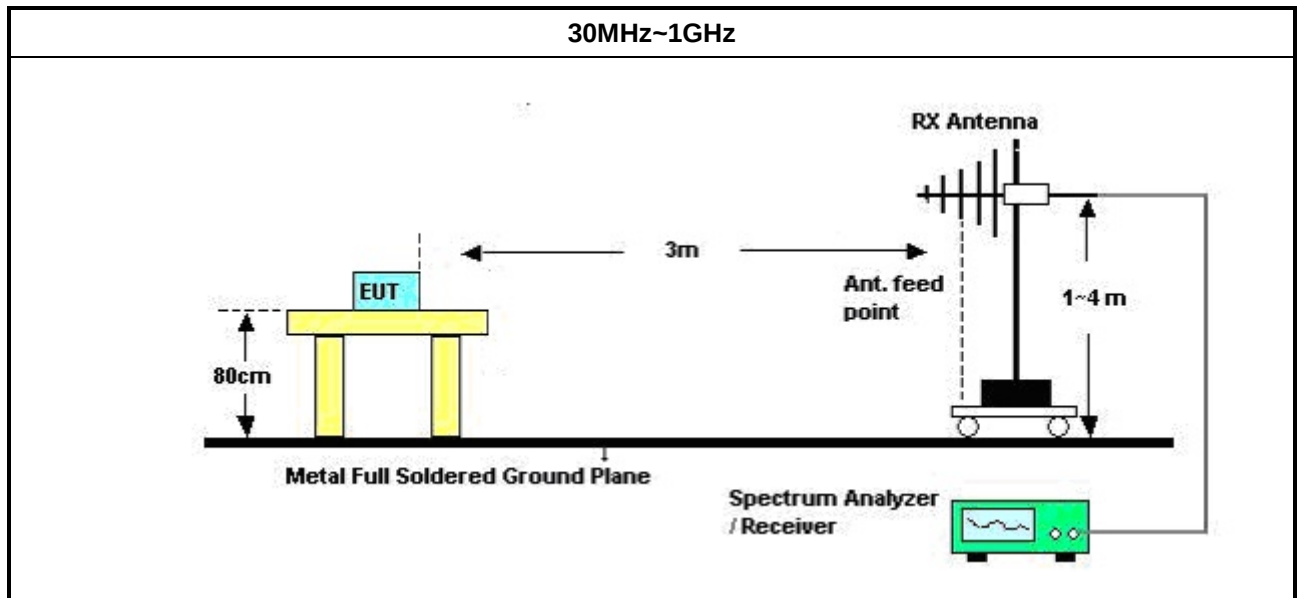
Refer a test equipment and calibration data table in this test report.

3.7.3 Test Procedures

Test Method	
The average emission levels shall be measured in [hopping duty factor].	
Refer as ANSI C63.10; clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.
	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

3.7.4 Test Setup





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.

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	09/Apr/2019	08/Apr/2020
LISN	R&S	ENV 216	101274	9kHz ~ 30MHz	12/Jun/2018	11/Jun/2019
RF Cable-CON	MTJ	RG142	CB001-CO	9kHz ~ 30MHz	17/Sep/2018	16/Sep/2019
AC POWER	APC	AFC-11003G	F308010045	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561F	9495	9kHz ~ 30MHz	11/Oct/2018	10/Oct/2019

NCR : Non-Calibration Require

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101029	10Hz~40GHz	11/Sep/2018	10/Sep/2019
Power Sensor	Anritsu	MA2411B	1339407	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019
Power Meter	Anritsu	ML2495A	1517010	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz ~18G	11/Jan/2018	10/Jan/2019
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz ~18G	10/Jan/2019	09/Jan/2020
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz ~18G	11/Jan/2018	10/Jan/2019
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz ~18G	10/Jan/2019	09/Jan/2020
Cable 0.5m	HUBER	MY10714/4	RF Cable – 05	1G~18G	11/Jan/2018	10/Jan/2019
Cable 0.5m	HUBER	MY10714/4	RF Cable – 05	1G~18G	10/Jan/2019	09/Jan/2020
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	10/Nov/2020

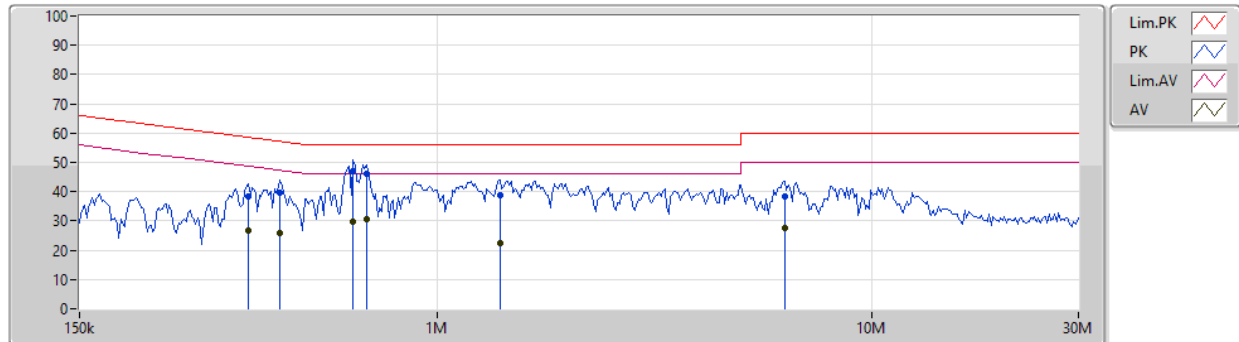
Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	23/Apr/2018	22/Apr/2019
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	14/Jun/2018	13/Jun/2019
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	10/May/2018	09/May/2019
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	27/Apr/2018	26/Apr/2019
EMI Test Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	10/Apr/2018	09/Apr/2019
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	31/Jul/2018	30/Jul/2019
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D & MTJ6102-05	35418 / 3	30MHz~1GHz	02/Oct/2018	03/Oct/2019
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz ~ 40GHz	12/Mar/2018	11/Mar/2019
Preamplifier	MITEQ	TTA1840-35-H G	1864481	18GHz ~ 40GHz	24/Aug/2018	23/Aug/2019
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	29/Mar/2018	28/Mar/2019
RF Cable-R03m	Jye Bao	RG142	CB031	9kHz ~ 1GHz	01/Feb/2018	31/Jan/2019
RF Cable-high	HUBER+SUHNER	SUCOFLEX104	SN 556626/4 + 556627	1GHz ~ 40GHz	14/Mar/2018	13/Mar/2019

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Adapter mode		

14/05/2019

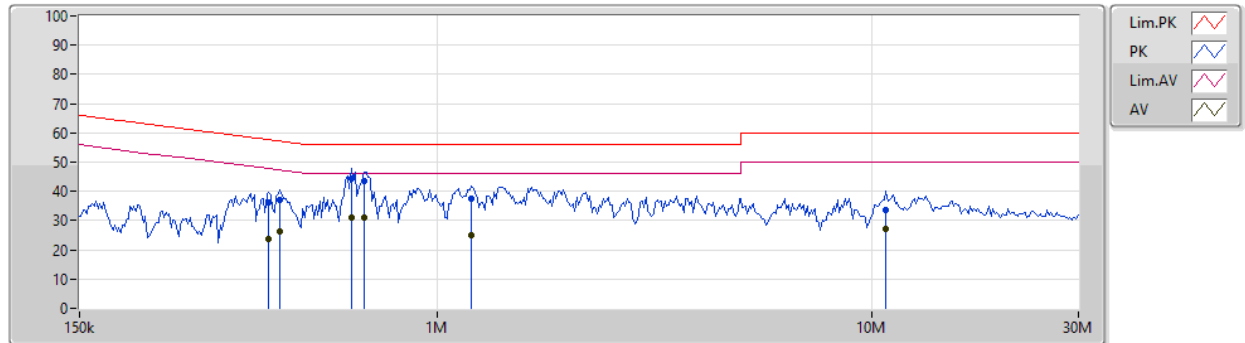


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	367.295k	38.50	58.56	-20.06	19.51	Neutral	-	18.99	9.64	0.01	9.86			
AV	367.295k	26.63	48.56	-21.93	19.51	Neutral	-	7.12	9.64	0.01	9.86			
QP	434.989k	39.47	57.17	-17.70	19.51	Neutral	-	19.96	9.64	0.01	9.86			
AV	434.989k	25.97	47.17	-21.20	19.51	Neutral	-	6.46	9.64	0.01	9.86			
QP	641.227k	46.80	56.00	-9.20	19.51	Neutral	"Worst"	27.29	9.64	0.01	9.86			
AV	641.227k	29.65	46.00	-16.35	19.51	Neutral	-	10.14	9.64	0.01	9.86			
QP	687.482k	46.26	56.00	-9.74	19.51	Neutral	-	26.75	9.64	0.01	9.86			
AV	687.482k	30.65	46.00	-15.35	19.51	Neutral	-	11.14	9.64	0.01	9.86			
QP	1.393M	38.95	56.00	-17.05	19.53	Neutral	-	19.42	9.64	0.03	9.86			
AV	1.393M	22.26	46.00	-23.74	19.53	Neutral	-	2.73	9.64	0.03	9.86			
QP	6.323M	38.25	60.00	-21.75	19.63	Neutral	-	18.62	9.68	0.06	9.89			
AV	6.323M	27.38	50.00	-22.62	19.63	Neutral	-	7.75	9.68	0.06	9.89			

AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Adapter mode		

14/05/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	409.779k	36.06	57.64	-21.58	19.48	Line	-	16.58	9.61	0.01	9.86			
AV	409.779k	23.79	47.64	-23.85	19.48	Line	-	4.31	9.61	0.01	9.86			
QP	434.989k	36.92	57.17	-20.25	19.48	Line	-	17.44	9.61	0.01	9.86			
AV	434.989k	26.32	47.17	-20.85	19.48	Line	-	6.84	9.61	0.01	9.86			
QP	634.878k	44.60	56.00	-11.40	19.48	Line	"Worst"	25.12	9.61	0.01	9.86			
AV	634.878k	31.16	46.00	-14.84	19.48	Line	-	11.68	9.61	0.01	9.86			
QP	680.675k	43.56	56.00	-12.44	19.48	Line	-	24.08	9.61	0.01	9.86			
AV	680.675k	30.92	46.00	-15.08	19.48	Line	-	11.44	9.61	0.01	9.86			
QP	1.2M	37.44	56.00	-18.56	19.49	Line	-	17.95	9.61	0.02	9.86			
AV	1.2M	25.13	46.00	-20.87	19.49	Line	-	5.64	9.61	0.02	9.86			
QP	10.821M	33.50	60.00	-26.50	19.64	Line	-	13.86	9.66	0.07	9.91			
AV	10.821M	27.29	50.00	-22.71	19.64	Line	-	7.65	9.66	0.07	9.91			

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)	915k	848.326k	848KF1D	877.5k	838.331k
BT-EDR(2Mbps)	1.255M	1.184M	1M18G1D	1.254M	1.183M
BT-EDR(3Mbps)	1.255M	1.187M	1M19G1D	1.253M	1.182M

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	915k	842.079k
2441MHz	Pass	Inf	877.5k	848.326k
2480MHz	Pass	Inf	915k	838.331k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.254M	1.184M
2441MHz	Pass	Inf	1.255M	1.183M
2480MHz	Pass	Inf	1.255M	1.184M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.253M	1.187M
2441MHz	Pass	Inf	1.254M	1.186M
2480MHz	Pass	Inf	1.255M	1.182M

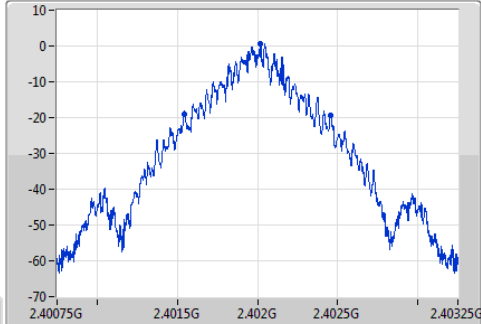
Port X-N dB = Port X 20dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

BT-BR(1Mbps)
2402MHz

02/01/2019

CF
2.402GHz
Span
2.5MHz
RBW
10kHz
VBW
30kHz
Sweep Time
100ms
Detector Type
Peak

Port 1

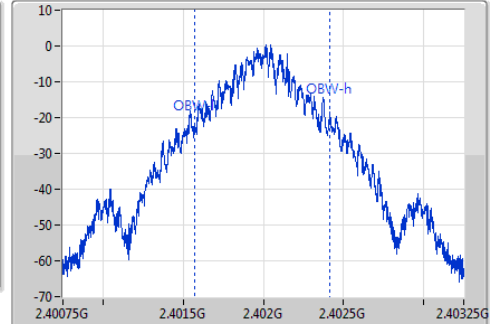


20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
915k	2.401541G	2.402456G	842.079k	2.401571G	2.402414G	Inf	1

EBW

CF
2.402GHz
Span
2.5MHz
RBW
10kHz
VBW
30kHz
Sweep Time
100ms
Detector Type
Sample

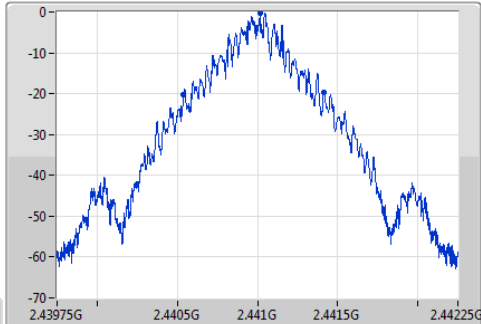
Port 1


BT-BR(1Mbps)
2441MHz

02/01/2019

CF
2.441GHz
Span
2.5MHz
RBW
10kHz
VBW
30kHz
Sweep Time
100ms
Detector Type
Peak

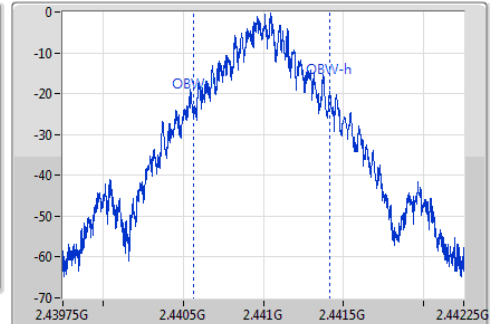
Port 1



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
877.5k	2.44054G	2.441418G	848.326k	2.440565G	2.441414G	Inf	1

CF
2.441GHz
Span
2.5MHz
RBW
10kHz
VBW
30kHz
Sweep Time
100ms
Detector Type
Sample

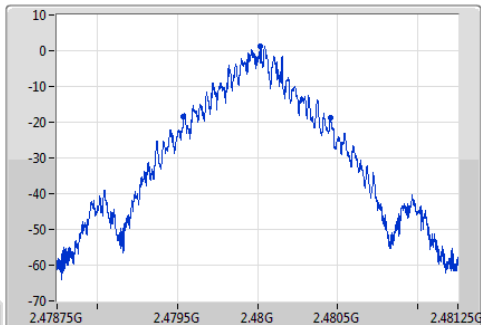
Port 1


BT-BR(1Mbps)
2480MHz

02/01/2019

CF
2.48GHz
Span
2.5MHz
RBW
10kHz
VBW
30kHz
Sweep Time
100ms
Detector Type
Peak

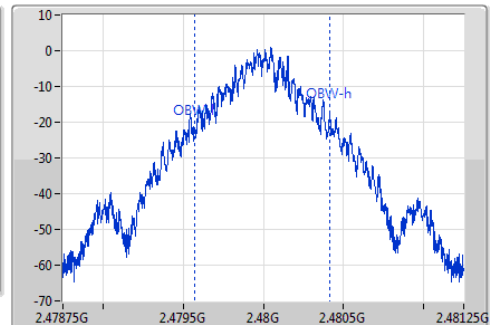
Port 1



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
915k	2.47954G	2.480455G	838.331k	2.479573G	2.480411G	Inf	1

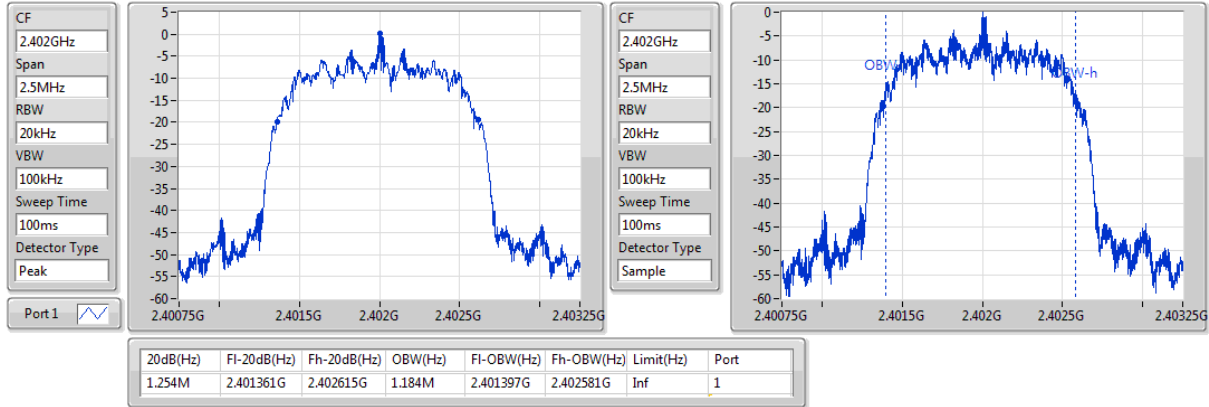
CF
2.48GHz
Span
2.5MHz
RBW
10kHz
VBW
30kHz
Sweep Time
100ms
Detector Type
Sample

Port 1

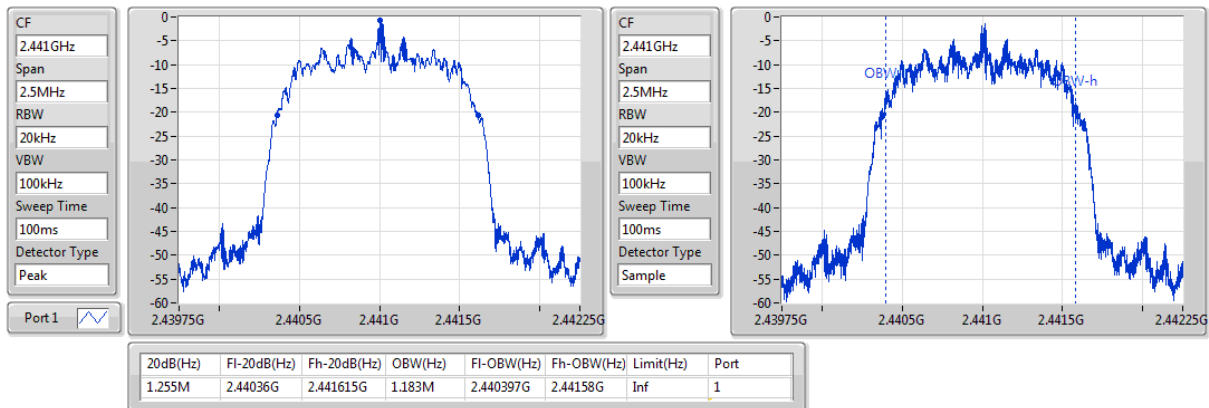


BT-EDR(2Mbps)
EBW
2402MHz

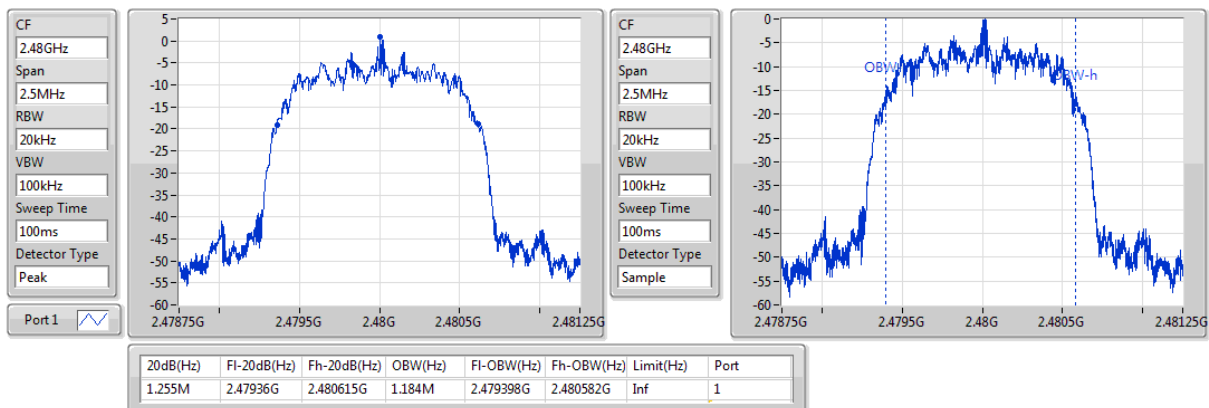
02/01/2019


BT-EDR(2Mbps)
EBW
2441MHz

02/01/2019

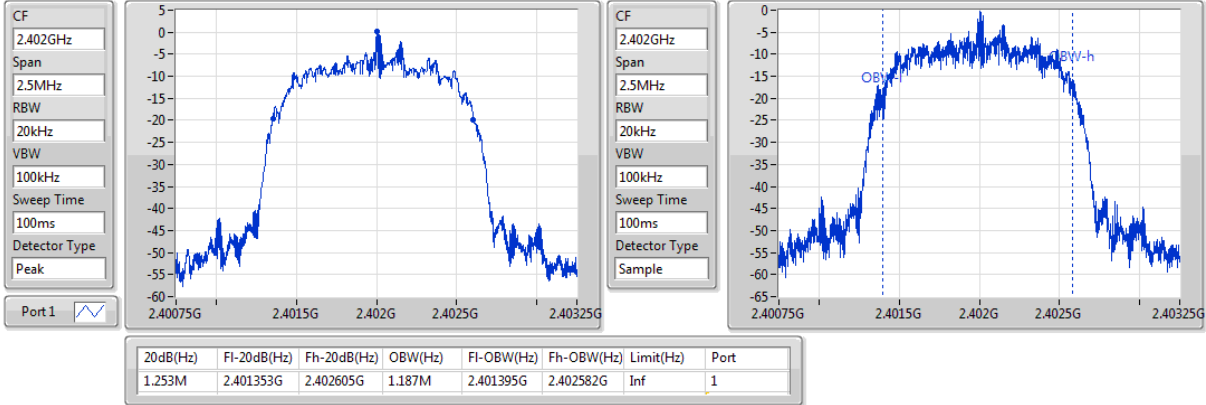

BT-EDR(2Mbps)
EBW
2480MHz

02/01/2019

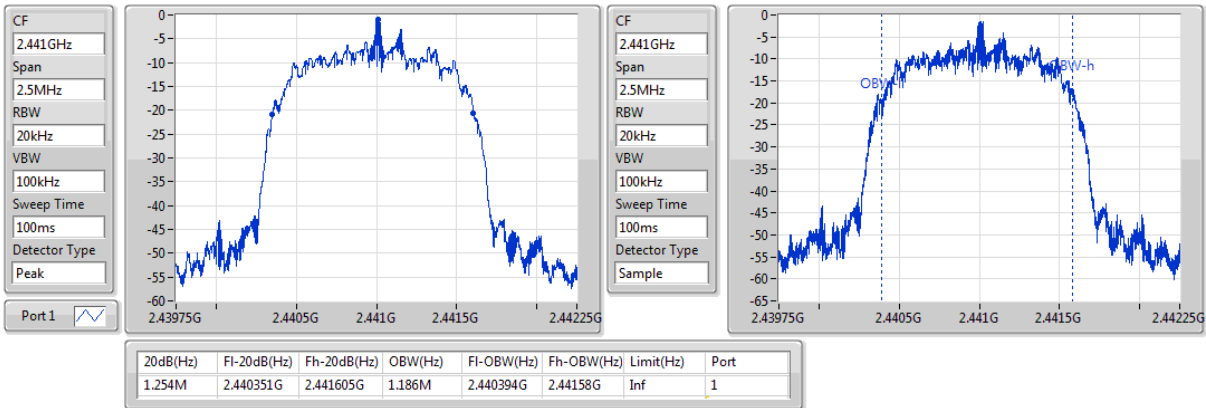


BT-EDR(3Mbps)
EBW
2402MHz

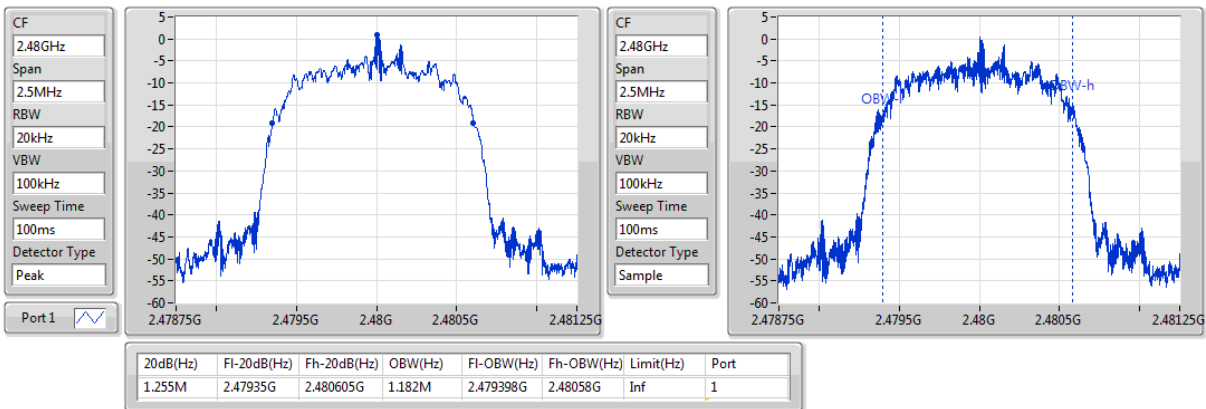
02/01/2019


BT-EDR(3Mbps)
EBW
2441MHz

02/01/2019


BT-EDR(3Mbps)
EBW
2480MHz

02/01/2019



Summary

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

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402004G	2.403004G	1.0005M	609.39k
2441MHz	Pass	2.441004G	2.442006G	1.002M	584.415k
2480MHz	Pass	2.479005G	2.480003G	997.5k	609.39k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402004G	2.403006G	1.002M	835.164k
2441MHz	Pass	2.441004G	2.442004G	1.0005M	835.83k
2480MHz	Pass	2.479004G	2.480004G	1.0005M	835.83k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402004G	2.403004G	1.0005M	834.498k
2441MHz	Pass	2.441002G	2.442006G	1.0035M	835.164k
2480MHz	Pass	2.479004G	2.480004G	1.0005M	835.83k

BT-BR(1Mbps)

Channel Separation

2.402G/2.403GHz



BT-BR(1Mbps)

Channel Separation

2.441G/2.442GHz



BT-BR(1Mbps)

Channel Separation

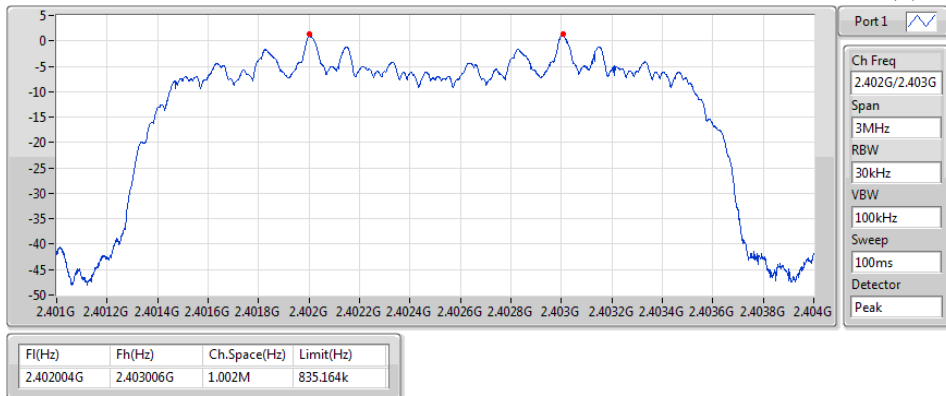
2.48G/2.479GHz



BT-EDR(2Mbps)

Channel Separation

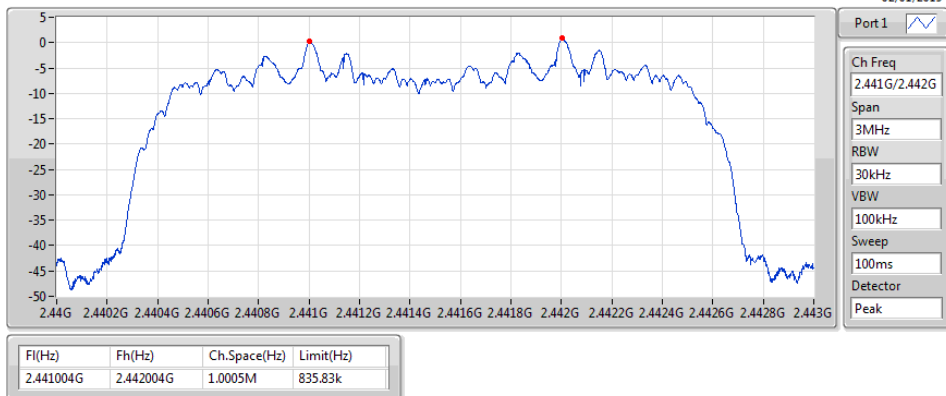
2.402G/2.403GHz



BT-EDR(2Mbps)

Channel Separation

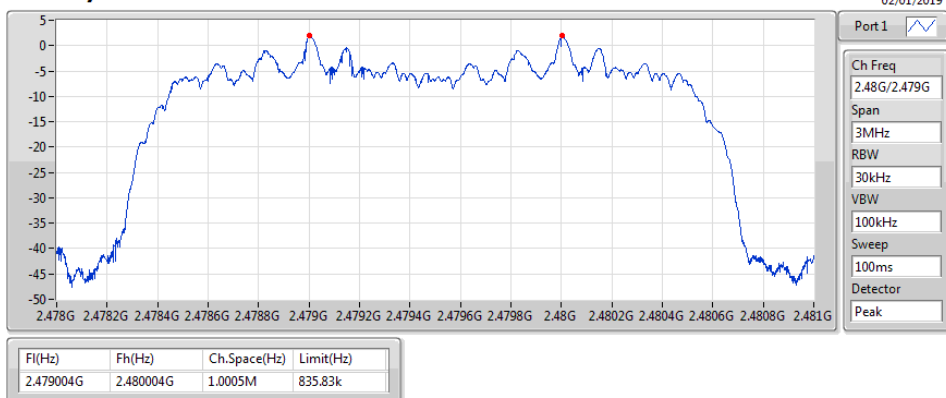
2.441G/2.442GHz



BT-EDR(2Mbps)

Channel Separation

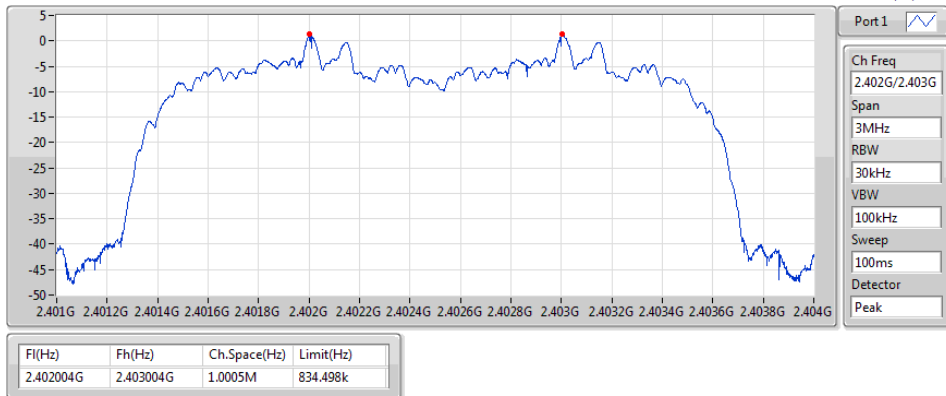
2.48G/2.479GHz



BT-EDR(3Mbps)

Channel Separation

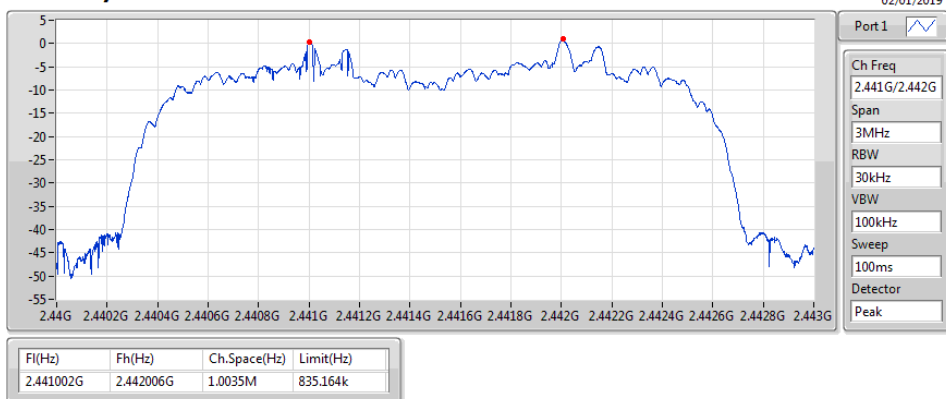
2.402G/2.403GHz



BT-EDR(3Mbps)

Channel Separation

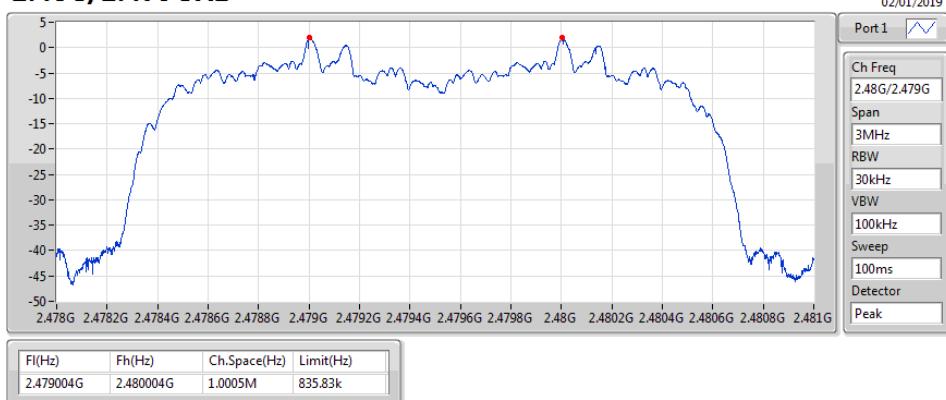
2.441G/2.442GHz



BT-EDR(3Mbps)

Channel Separation

2.48G/2.479GHz



Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	7.24	0.00530
BT-EDR(2Mbps)	6.37	0.00434
BT-EDR(3Mbps)	6.77	0.00475

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.93	6.52	21.00
2441MHz	Pass	2.93	5.73	21.00
2480MHz	Pass	2.93	7.24	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.93	5.63	21.00
2441MHz	Pass	2.93	4.72	21.00
2480MHz	Pass	2.93	6.37	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.93	6.09	21.00
2441MHz	Pass	2.93	5.19	21.00
2480MHz	Pass	2.93	6.77	21.00

Summary

Mode	Power	Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.87	0.00486
BT-EDR(2Mbps)	3.46	0.00222
BT-EDR(3Mbps)	3.43	0.00220

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.93	6.07	21.00
2441MHz	Pass	2.93	5.27	21.00
2480MHz	Pass	2.93	6.87	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.93	2.59	21.00
2441MHz	Pass	2.93	1.54	21.00
2480MHz	Pass	2.93	3.46	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.93	2.58	21.00
2441MHz	Pass	2.93	1.52	21.00
2480MHz	Pass	2.93	3.43	21.00

Summary

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

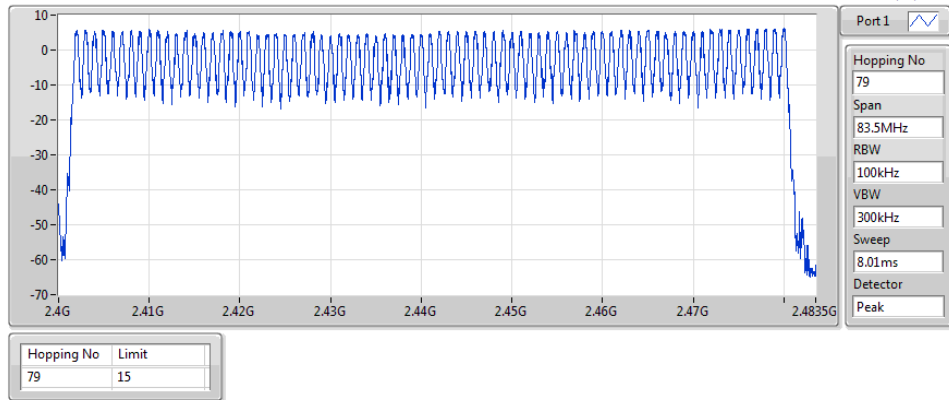
Result

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

BT-BR(1Mbps)

2441MHz

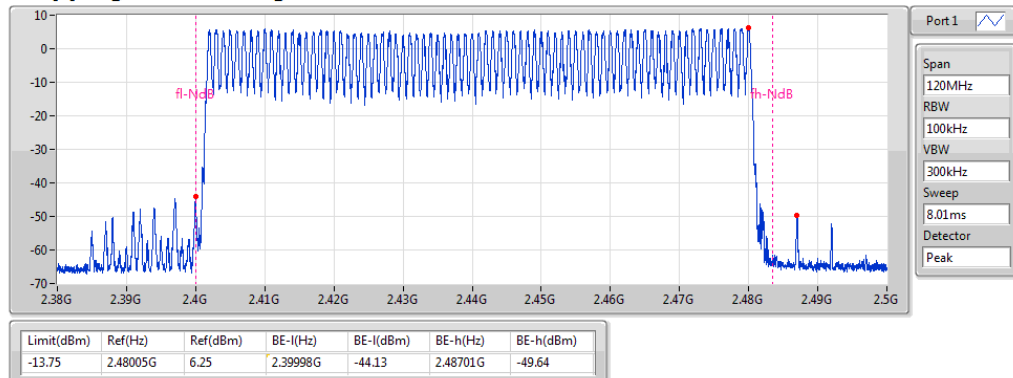
Hopping Ch



BT-BR(1Mbps)

2441MHz

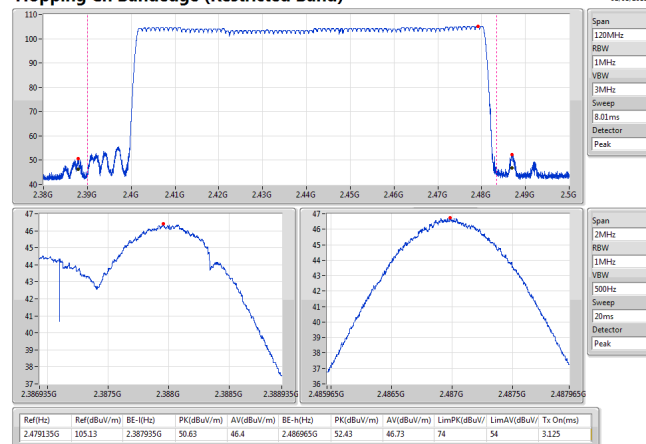
Hopping Ch Bandedge (Non-restricted Band)



BT-BR(1Mbps)

2441MHz

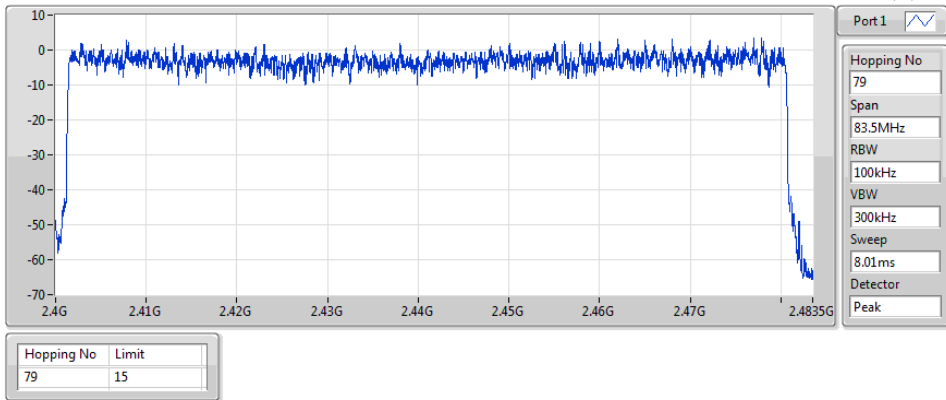
Hopping Ch Bandedge (Restricted Band)



BT-EDR(2Mbps)

2441MHz

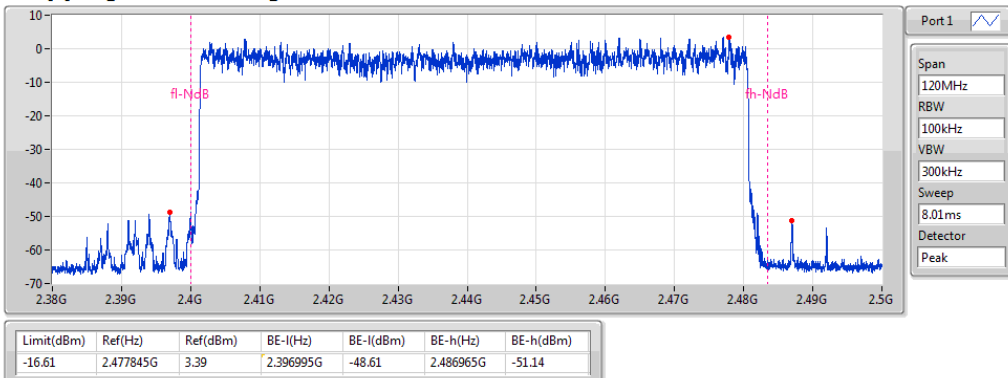
Hopping Ch



BT-EDR(2Mbps)

2441MHz

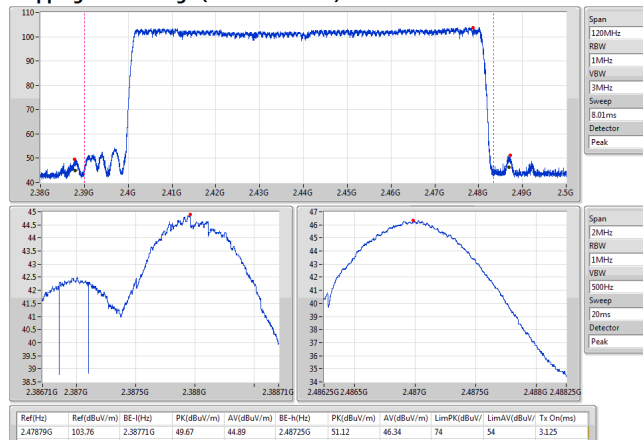
Hopping Ch Bandedge (Non-restricted Band)



BT-EDR(2Mbps)

2441MHz

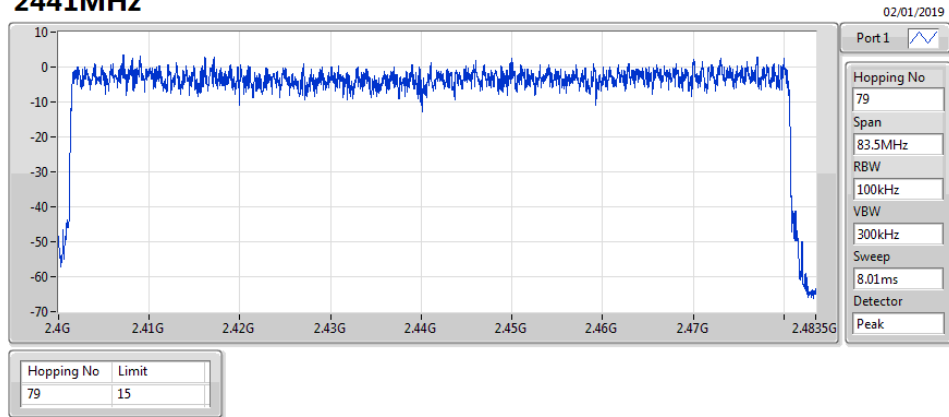
Hopping Ch Bandedge (Restricted Band)



BT-EDR(3Mbps)

2441MHz

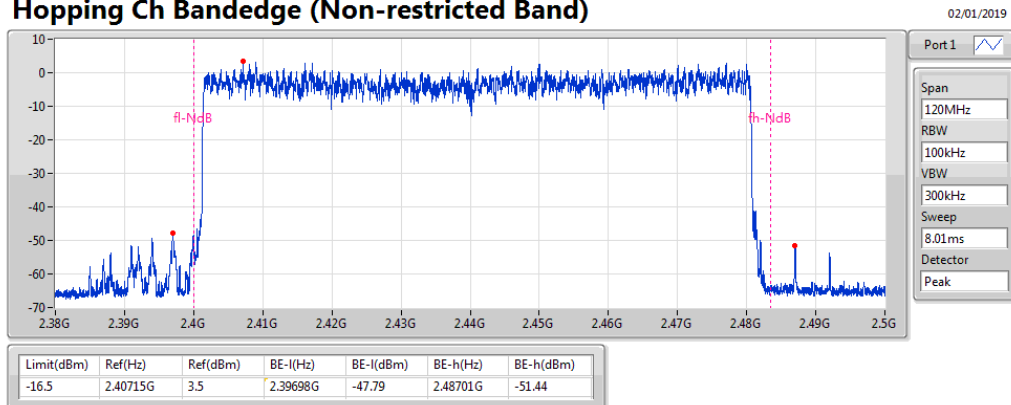
Hopping Ch



BT-EDR(3Mbps)

2441MHz

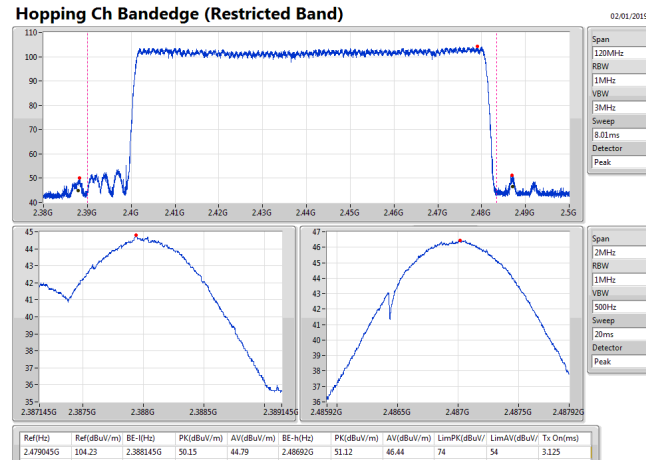
Hopping Ch Bandedge (Non-restricted Band)



BT-EDR(3Mbps)

2441MHz

Hopping Ch Bandedge (Restricted Band)



Summary

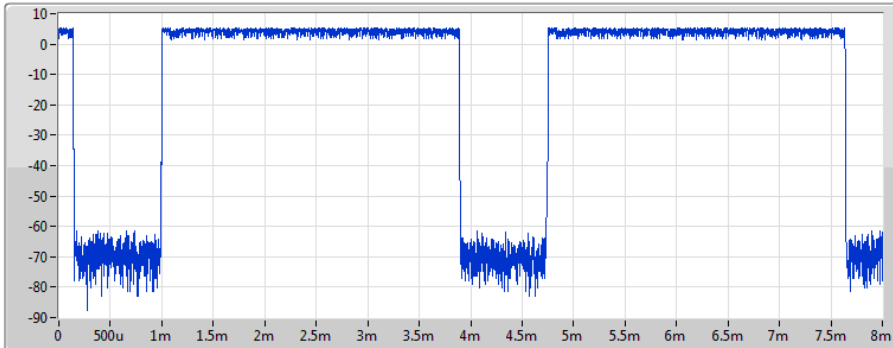
Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	308.1806m
BT-EDR(2Mbps)	308.3938m
BT-EDR(3Mbps)	308.607m

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	308.1806m	400m	2.891m
BT-EDR(2Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	308.3938m	400m	2.893m
BT-EDR(3Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	308.607m	400m	2.895m

BT-BR(1Mbps)

2441MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.1806m	400m	2.891m

Dwell

02/01/2019

Port 1 

Ch Freq
2.441GHz

RBW
300kHz

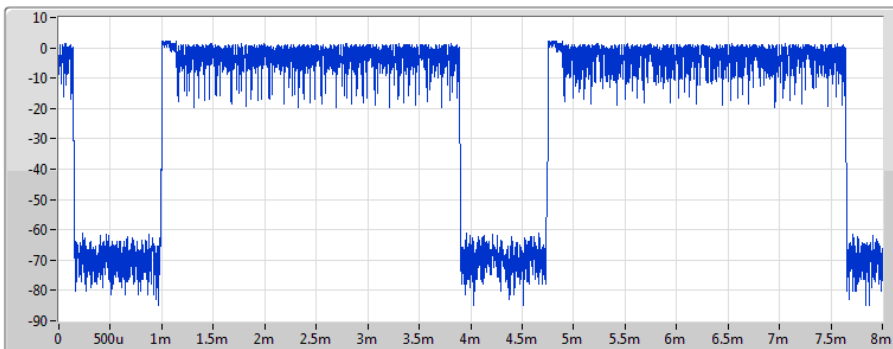
VBW
1MHz

Sweep Time
8ms

TX Time
2.891ms

BT-EDR(2Mbps)

2441MHz



Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.3938m	400m	2.893m

Dwell

02/01/2019

Port 1 

Ch Freq
2.441GHz

RBW
300kHz

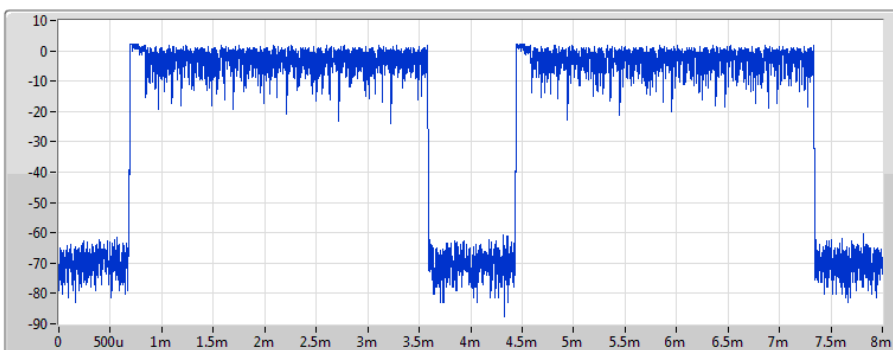
VBW
1MHz

Sweep Time
8ms

TX Time
2.893ms

BT-EDR(3Mbps)

2441MHz



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

Dwell

02/01/2019

Port 1 

Ch Freq
2.441GHz

RBW
300kHz

VBW
1MHz

Sweep Time
8ms

TX Time
2.895ms

Summary

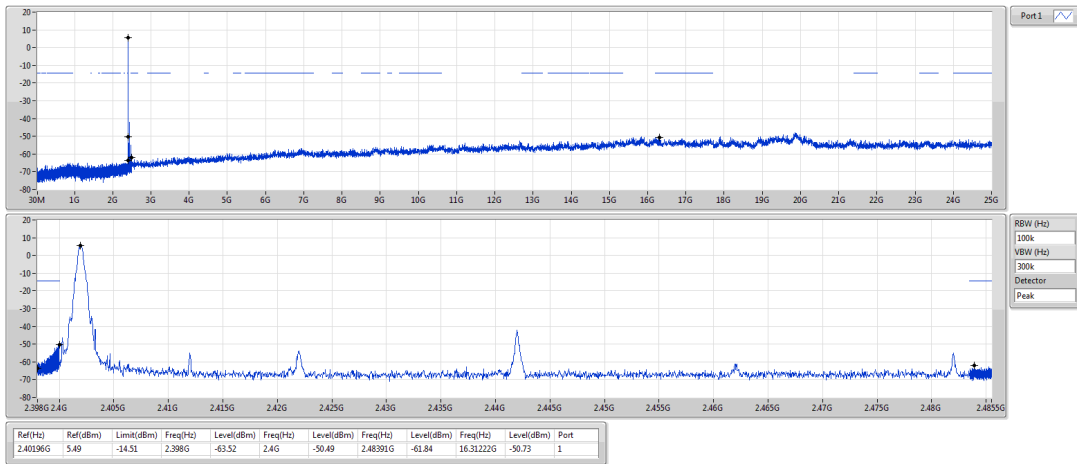
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.44104G	4.60	-15.40	2.1538G	-64.69	2.39839G	-63.61	2.48456G	-62.99	17.53926G	-51.16	1
BT-EDR(2Mbps)	Pass	2.441G	-0.22	-20.22	2.3092G	-64.97	2.3987G	-63.70	2.4848G	-62.62	16.65275G	-51.29	1
BT-EDR(3Mbps)	Pass	2.44096G	-0.32	-20.32	851.1M	-64.74	2.39886G	-63.81	2.48512G	-63.56	15.17805G	-50.85	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	2.40196G	5.49	-14.51	2.398G	-63.52	2.4G	-50.49	2.48391G	-61.84	16.31222G	-50.73	1
2441MHz	Pass	2.44104G	4.60	-15.40	2.1538G	-64.69	2.39839G	-63.61	2.48456G	-62.99	17.53926G	-51.16	1
2480MHz	Pass	2.48003G	6.34	-13.66	1.99544G	-64.19	2.39936G	-63.66	2.48353G	-59.23	16.22497G	-50.68	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.4018G	2.80	-17.20	2.39711G	-64.60	2.3998G	-53.16	2.48375G	-62.78	15.26811G	-49.95	1
2441MHz	Pass	2.441G	-0.22	-20.22	2.3092G	-64.97	2.3987G	-63.70	2.4848G	-62.62	16.65275G	-51.29	1
2480MHz	Pass	2.47987G	3.88	-16.12	1.97502G	-64.71	2.39842G	-63.88	2.48366G	-59.31	24.93527G	-51.16	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40188G	0.41	-19.59	2.15469G	-63.71	2.39998G	-53.54	2.48493G	-62.05	16.20527G	-50.90	1
2441MHz	Pass	2.44096G	-0.32	-20.32	851.1M	-64.74	2.39886G	-63.81	2.48512G	-63.56	15.17805G	-50.85	1
2480MHz	Pass	2.47995G	1.53	-18.47	2.39238G	-65.07	2.39873G	-62.41	2.48359G	-60.71	16.23623G	-50.55	1

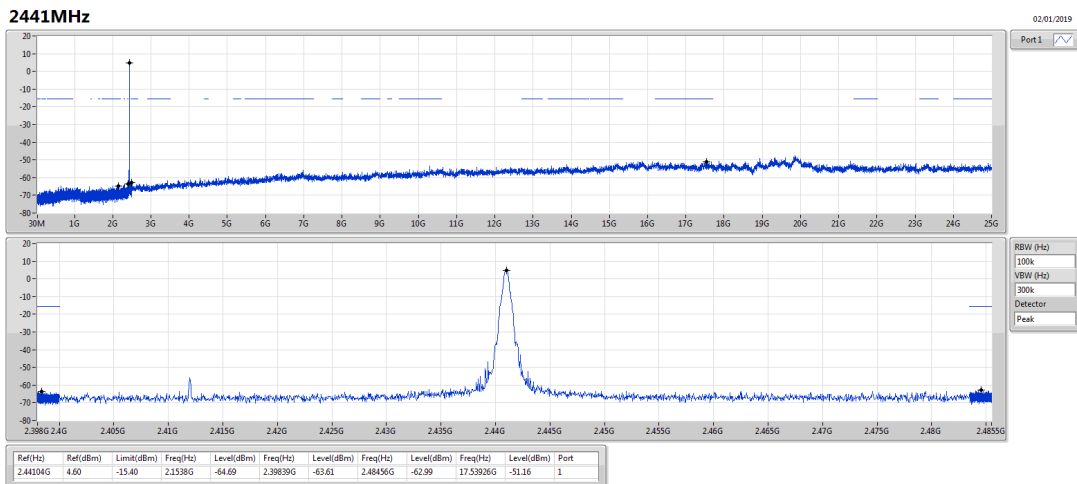
BT-BR(1Mbps)
2402MHz

CSE NdB



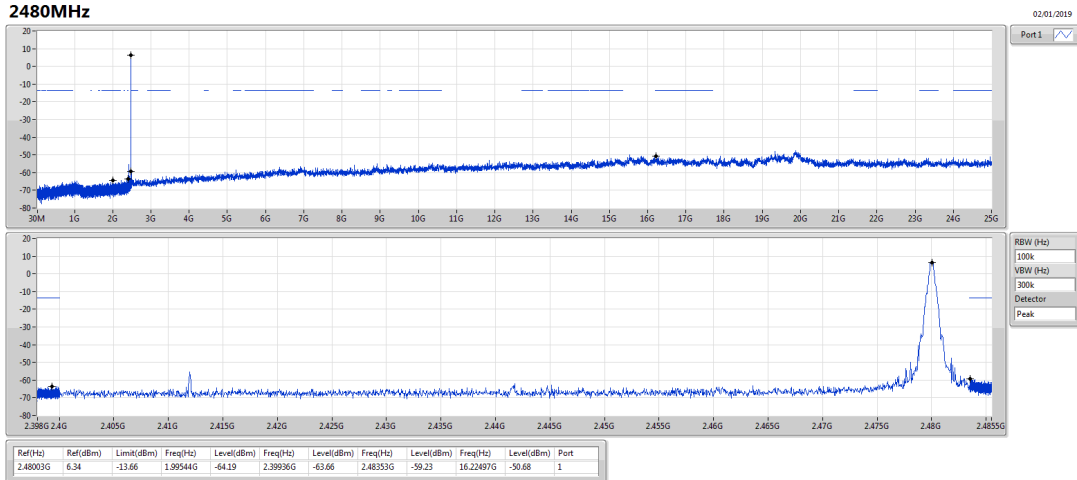
BT-BR(1Mbps)
2441MHz

CSE NdB



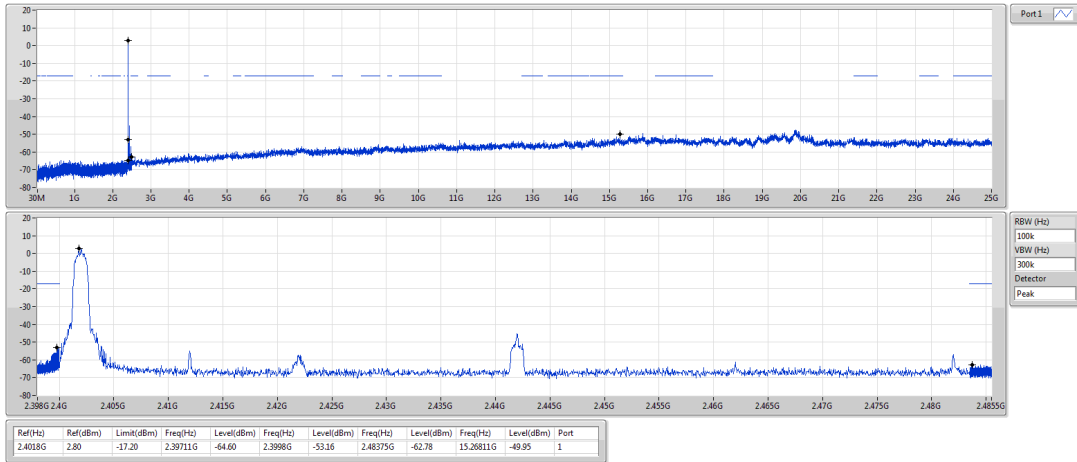
BT-BR(1Mbps)
2480MHz

CSE NdB



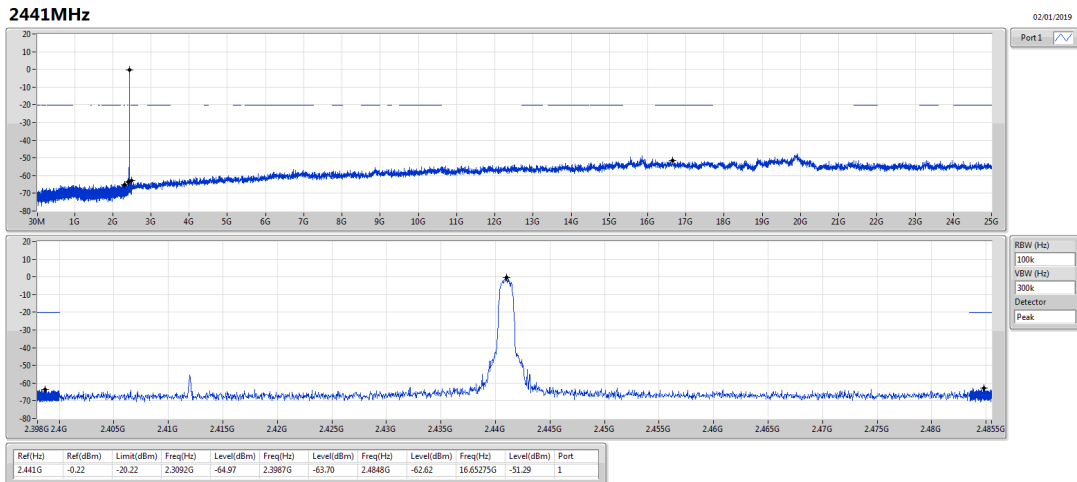
BT-EDR(2Mbps)
2402MHz

CSE NdB



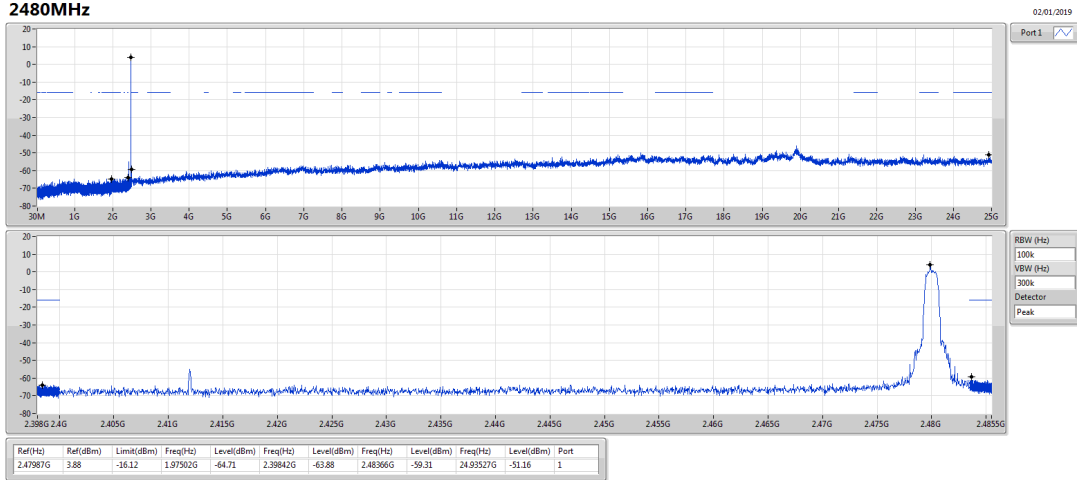
BT-EDR(2Mbps)
2441MHz

CSE NdB



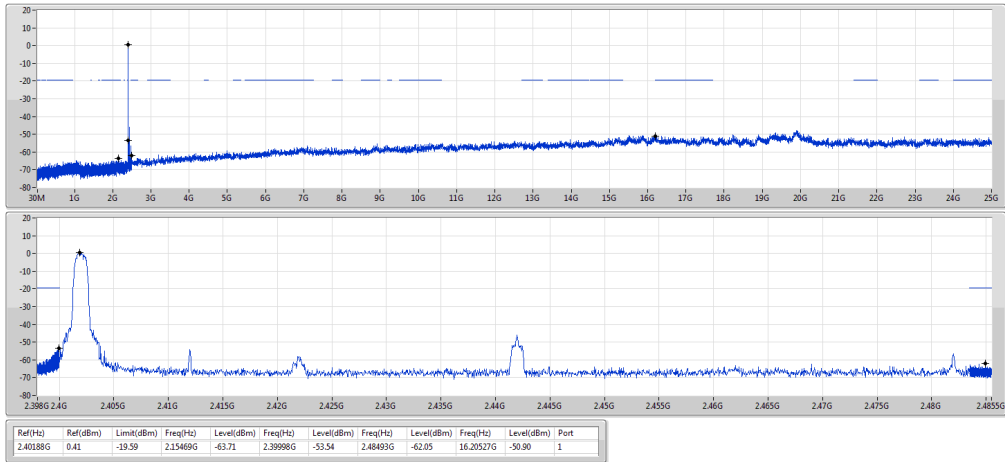
BT-EDR(2Mbps)
2480MHz

CSE NdB



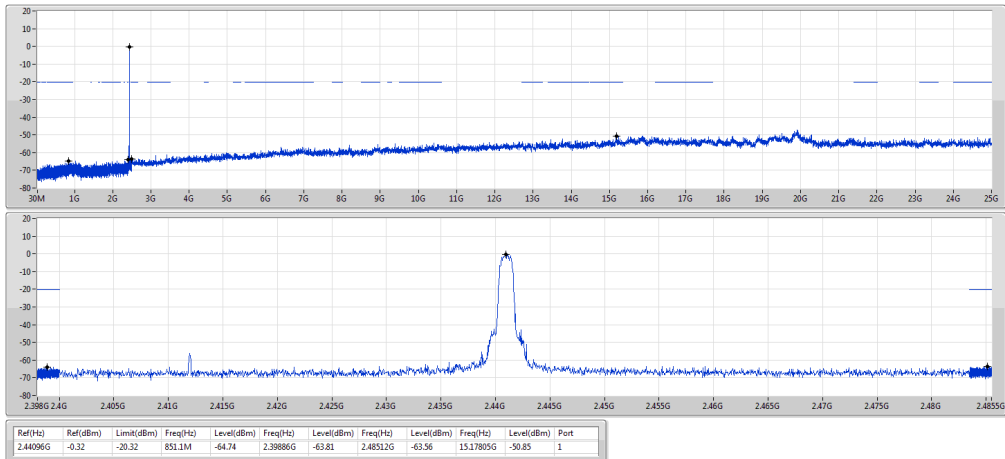
BT-EDR(3Mbps)
2402MHz

CSE NdB



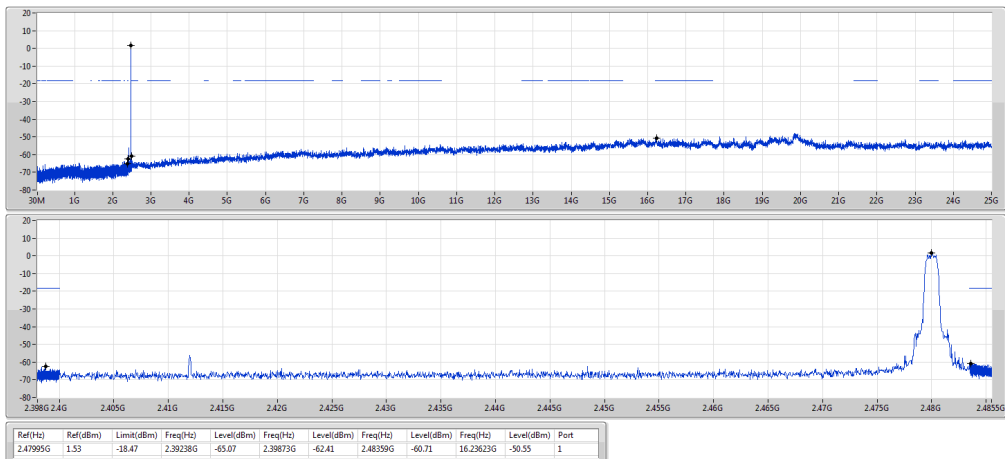
BT-EDR(3Mbps)
2441MHz

CSE NdB



BT-EDR(3Mbps)
2480MHz

CSE NdB





RSE TX below 1GHz Result

Appendix G.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-EDR(2Mbps)	Pass	PK	30M	34.52	40.00	-5.48	-13.40	3	Vertical	360	3.00	-

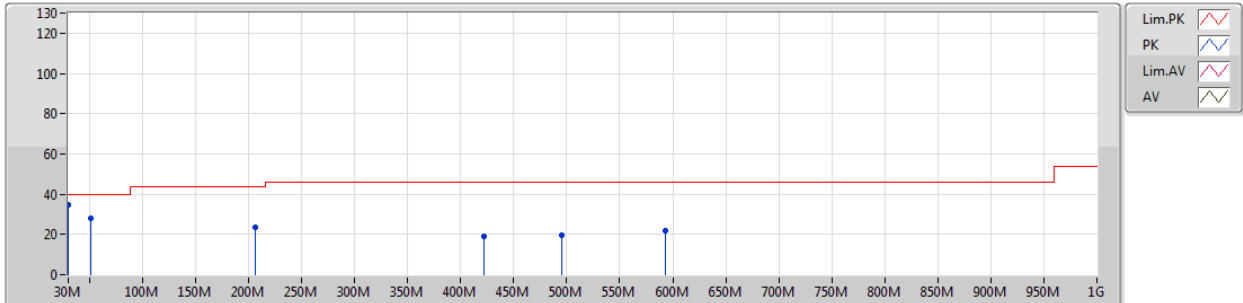
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2441MHz	Pass	PK	30M	34.52	40.00	-5.48	-13.40	3	Vertical	360	3.00	-
2441MHz	Pass	PK	51.34M	28.08	40.00	-11.92	-23.90	3	Vertical	360	3.00	-
2441MHz	Pass	PK	206.54M	23.48	43.50	-20.02	-20.99	3	Vertical	360	3.00	-
2441MHz	Pass	PK	421.88M	19.03	46.00	-26.97	-13.21	3	Vertical	360	3.00	-
2441MHz	Pass	PK	495.6M	19.81	46.00	-26.19	-12.15	3	Vertical	360	3.00	-
2441MHz	Pass	PK	592.6M	21.88	46.00	-24.12	-10.94	3	Vertical	360	3.00	-
2441MHz	Pass	PK	30M	21.74	40.00	-18.26	-13.40	3	Horizontal	0	3.00	-
2441MHz	Pass	PK	173.56M	27.56	43.50	-15.94	-20.92	3	Horizontal	0	3.00	-
2441MHz	Pass	PK	210.42M	31.05	43.50	-12.45	-20.96	3	Horizontal	0	3.00	-
2441MHz	Pass	PK	404.42M	20.29	46.00	-25.71	-13.86	3	Horizontal	0	3.00	-
2441MHz	Pass	PK	505.3M	21.11	46.00	-24.89	-12.11	3	Horizontal	0	3.00	-
2441MHz	Pass	PK	559.62M	23.62	46.00	-22.38	-10.31	3	Horizontal	0	3.00	-

BT-EDR(2Mbps)

2441MHz_Adapter

28/12/2018

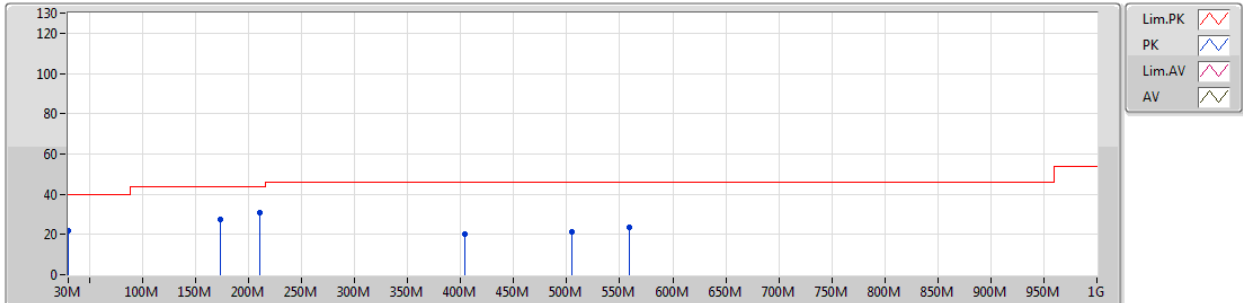


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	30M	34.52	40.00	-5.48	-13.40	3	Vertical	360	3.00	-
PK	51.34M	28.08	40.00	-11.92	-23.90	3	Vertical	360	3.00	-
PK	206.54M	23.48	43.50	-20.02	-20.99	3	Vertical	360	3.00	-
PK	421.88M	19.03	46.00	-26.97	-13.21	3	Vertical	360	3.00	-
PK	495.6M	19.81	46.00	-26.19	-12.15	3	Vertical	360	3.00	-
PK	592.6M	21.88	46.00	-24.12	-10.94	3	Vertical	360	3.00	-

BT-EDR(2Mbps)

2441MHz_Adapter

28/12/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	30M	21.74	40.00	-18.26	-13.40	3	Horizontal	0	3.00	-
PK	173.56M	27.56	43.50	-15.94	-20.92	3	Horizontal	0	3.00	-
PK	210.42M	31.05	43.50	-12.45	-20.96	3	Horizontal	0	3.00	-
PK	404.42M	20.29	46.00	-25.71	-13.86	3	Horizontal	0	3.00	-
PK	505.3M	21.11	46.00	-24.89	-12.11	3	Horizontal	0	3.00	-
PK	559.62M	23.62	46.00	-22.38	-10.31	3	Horizontal	0	3.00	-

**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	AV	2.4878G	43.91	54.00	-10.09	31.13	3	Vertical	295	1.35	-
BT-EDR(2Mbps)	Pass	AV	2.4886G	43.96	54.00	-10.04	31.13	3	Horizontal	130	1.25	-
BT-EDR(3Mbps)	Pass	AV	2.4942G	43.86	54.00	-10.14	31.15	3	Vertical	298	1.20	-

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	2.3814G	43.22	54.00	-10.78	30.75	3	Vertical	299	1.22	-
2402MHz	Pass	AV	2.402G	103.41	Inf	-Inf	30.82	3	Vertical	299	1.22	-
2402MHz	Pass	PK	2.366G	56.61	74.00	-17.39	30.69	3	Vertical	299	1.22	-
2402MHz	Pass	PK	2.4022G	103.80	Inf	-Inf	30.82	3	Vertical	299	1.22	-
2402MHz	Pass	AV	2.3836G	43.22	54.00	-10.78	30.75	3	Horizontal	126	1.55	-
2402MHz	Pass	AV	2.402G	102.59	Inf	-Inf	30.82	3	Horizontal	126	1.55	-
2402MHz	Pass	PK	2.3752G	55.84	74.00	-18.16	30.72	3	Horizontal	126	1.55	-
2402MHz	Pass	PK	2.4022G	102.98	Inf	-Inf	30.82	3	Horizontal	126	1.55	-
2402MHz	Pass	AV	4.80064G	30.27	54.00	-23.73	2.07	3	Vertical	215	2.10	-
2402MHz	Pass	PK	4.79872G	42.99	74.00	-31.01	2.07	3	Vertical	215	2.10	-
2402MHz	Pass	AV	4.80112G	30.23	54.00	-23.77	2.07	3	Horizontal	50	2.71	-
2402MHz	Pass	PK	4.80508G	42.90	74.00	-31.10	2.08	3	Horizontal	50	2.71	-
2441MHz	Pass	AV	2.3466G	43.05	54.00	-10.95	30.62	3	Vertical	296	1.37	-
2441MHz	Pass	AV	2.441G	102.68	Inf	-Inf	30.95	3	Vertical	296	1.37	-
2441MHz	Pass	AV	2.493G	43.72	54.00	-10.28	31.14	3	Vertical	296	1.37	-
2441MHz	Pass	PK	2.361G	56.02	74.00	-17.98	30.67	3	Vertical	296	1.37	-
2441MHz	Pass	PK	2.441G	103.07	Inf	-Inf	30.95	3	Vertical	296	1.37	-
2441MHz	Pass	PK	2.485G	55.97	74.00	-18.03	31.12	3	Vertical	296	1.37	-
2441MHz	Pass	AV	2.3798G	43.02	54.00	-10.98	30.74	3	Horizontal	127	1.26	-
2441MHz	Pass	AV	2.441G	102.04	Inf	-Inf	30.95	3	Horizontal	127	1.26	-
2441MHz	Pass	AV	2.4898G	43.76	54.00	-10.24	31.13	3	Horizontal	127	1.26	-
2441MHz	Pass	PK	2.373G	55.27	74.00	-18.73	30.71	3	Horizontal	127	1.26	-
2441MHz	Pass	PK	2.441G	102.43	Inf	-Inf	30.95	3	Horizontal	127	1.26	-
2441MHz	Pass	PK	2.495G	56.84	74.00	-17.16	31.16	3	Horizontal	127	1.26	-
2441MHz	Pass	AV	4.88794G	30.36	54.00	-23.64	2.29	3	Vertical	178	2.16	-
2441MHz	Pass	PK	4.89616G	43.28	74.00	-30.72	2.31	3	Vertical	178	2.16	-
2441MHz	Pass	AV	4.88776G	30.27	54.00	-23.73	2.29	3	Horizontal	101	1.85	-
2441MHz	Pass	PK	4.89652G	43.11	74.00	-30.89	2.31	3	Horizontal	101	1.85	-
2480MHz	Pass	AV	2.48G	102.86	Inf	-Inf	31.09	3	Vertical	295	1.35	-
2480MHz	Pass	AV	2.4878G	43.91	54.00	-10.09	31.13	3	Vertical	295	1.35	-
2480MHz	Pass	PK	2.4798G	103.33	Inf	-Inf	31.09	3	Vertical	295	1.35	-
2480MHz	Pass	PK	2.4944G	56.18	74.00	-17.82	31.15	3	Vertical	295	1.35	-
2480MHz	Pass	AV	2.48G	102.16	Inf	-Inf	31.09	3	Horizontal	126	1.47	-
2480MHz	Pass	AV	2.4844G	43.82	54.00	-10.18	31.12	3	Horizontal	126	1.47	-
2480MHz	Pass	PK	2.4798G	102.62	Inf	-Inf	31.09	3	Horizontal	126	1.47	-
2480MHz	Pass	PK	2.4956G	56.92	74.00	-17.08	31.16	3	Horizontal	126	1.47	-
2480MHz	Pass	AV	4.96786G	30.51	54.00	-23.49	2.49	3	Vertical	148	2.94	-
2480MHz	Pass	PK	4.97398G	43.42	74.00	-30.58	2.50	3	Vertical	148	2.94	-
2480MHz	Pass	AV	4.97158G	30.44	54.00	-23.56	2.49	3	Horizontal	87	2.47	-
2480MHz	Pass	PK	4.94914G	42.96	74.00	-31.04	2.44	3	Horizontal	87	2.47	-
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3712G	43.01	54.00	-10.99	30.71	3	Vertical	299	1.24	-
2402MHz	Pass	AV	2.402G	98.60	Inf	-Inf	30.82	3	Vertical	299	1.24	-
2402MHz	Pass	PK	2.353G	55.39	74.00	-18.61	30.65	3	Vertical	299	1.24	-
2402MHz	Pass	PK	2.4022G	102.29	Inf	-Inf	30.82	3	Vertical	299	1.24	-
2402MHz	Pass	AV	2.3638G	43.21	54.00	-10.79	30.68	3	Horizontal	125	1.54	-
2402MHz	Pass	AV	2.402G	96.82	Inf	-Inf	30.82	3	Horizontal	125	1.54	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2402MHz	Pass	PK	2.374G	56.80	74.00	-17.20	30.72	3	Horizontal	125	1.54	-
2402MHz	Pass	PK	2.4022G	100.54	Inf	-Inf	30.82	3	Horizontal	125	1.54	-
2441MHz	Pass	AV	2.3646G	43.08	54.00	-10.92	30.69	3	Vertical	300	1.36	-
2441MHz	Pass	AV	2.441G	97.25	Inf	-Inf	30.95	3	Vertical	300	1.36	-
2441MHz	Pass	AV	2.485G	43.70	54.00	-10.30	31.12	3	Vertical	300	1.36	-
2441MHz	Pass	PK	2.3662G	55.73	74.00	-18.27	30.70	3	Vertical	300	1.36	-
2441MHz	Pass	PK	2.441G	101.25	Inf	-Inf	30.95	3	Vertical	300	1.36	-
2441MHz	Pass	PK	2.4934G	56.96	74.00	-17.04	31.14	3	Vertical	300	1.36	-
2441MHz	Pass	AV	2.3686G	43.21	54.00	-10.79	30.70	3	Horizontal	130	1.25	-
2441MHz	Pass	AV	2.441G	95.31	Inf	-Inf	30.95	3	Horizontal	130	1.25	-
2441MHz	Pass	AV	2.4886G	43.96	54.00	-10.04	31.13	3	Horizontal	130	1.25	-
2441MHz	Pass	PK	2.3486G	56.24	74.00	-17.76	30.63	3	Horizontal	130	1.25	-
2441MHz	Pass	PK	2.441G	99.11	Inf	-Inf	30.95	3	Horizontal	130	1.25	-
2441MHz	Pass	PK	2.4882G	55.71	74.00	-18.29	31.13	3	Horizontal	130	1.25	-
2480MHz	Pass	AV	2.48G	97.47	Inf	-Inf	31.09	3	Vertical	295	1.09	-
2480MHz	Pass	AV	2.4898G	43.83	54.00	-10.17	31.13	3	Vertical	295	1.09	-
2480MHz	Pass	PK	2.4798G	101.20	Inf	-Inf	31.09	3	Vertical	295	1.09	-
2480MHz	Pass	PK	2.4838G	55.94	74.00	-18.06	31.11	3	Vertical	295	1.09	-
2480MHz	Pass	AV	2.48G	95.67	Inf	-Inf	31.09	3	Horizontal	120	1.48	-
2480MHz	Pass	AV	2.4868G	43.77	54.00	-10.23	31.12	3	Horizontal	120	1.48	-
2480MHz	Pass	PK	2.4798G	99.40	Inf	-Inf	31.09	3	Horizontal	120	1.48	-
2480MHz	Pass	PK	2.4835G	56.90	74.00	-17.10	31.11	3	Horizontal	120	1.48	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3556G	43.04	54.00	-10.96	30.66	3	Vertical	275	1.10	-
2402MHz	Pass	AV	2.402G	97.52	Inf	-Inf	30.82	3	Vertical	275	1.10	-
2402MHz	Pass	PK	2.3702G	55.98	74.00	-18.02	30.71	3	Vertical	275	1.10	-
2402MHz	Pass	PK	2.402G	101.46	Inf	-Inf	30.82	3	Vertical	275	1.10	-
2402MHz	Pass	AV	2.3774G	42.98	54.00	-11.02	30.73	3	Horizontal	125	1.56	-
2402MHz	Pass	AV	2.402G	95.00	Inf	-Inf	30.82	3	Horizontal	125	1.56	-
2402MHz	Pass	PK	2.3698G	57.20	74.00	-16.80	30.71	3	Horizontal	125	1.56	-
2402MHz	Pass	PK	2.402G	98.93	Inf	-Inf	30.82	3	Horizontal	125	1.56	-
2441MHz	Pass	AV	2.3802G	42.98	54.00	-11.02	30.74	3	Vertical	298	1.20	-
2441MHz	Pass	AV	2.441G	96.44	Inf	-Inf	30.95	3	Vertical	298	1.20	-
2441MHz	Pass	AV	2.4942G	43.86	54.00	-10.14	31.15	3	Vertical	298	1.20	-
2441MHz	Pass	PK	2.3806G	55.94	74.00	-18.06	30.75	3	Vertical	298	1.20	-
2441MHz	Pass	PK	2.441G	100.49	Inf	-Inf	30.95	3	Vertical	298	1.20	-
2441MHz	Pass	PK	2.4922G	56.19	74.00	-17.81	31.14	3	Vertical	298	1.20	-
2441MHz	Pass	AV	2.3722G	43.07	54.00	-10.93	30.71	3	Horizontal	121	1.49	-
2441MHz	Pass	AV	2.441G	94.35	Inf	-Inf	30.95	3	Horizontal	121	1.49	-
2441MHz	Pass	AV	2.4942G	43.83	54.00	-10.17	31.15	3	Horizontal	121	1.49	-
2441MHz	Pass	PK	2.381G	55.90	74.00	-18.10	30.75	3	Horizontal	121	1.49	-
2441MHz	Pass	PK	2.441G	98.55	Inf	-Inf	30.95	3	Horizontal	121	1.49	-
2441MHz	Pass	PK	2.4954G	56.16	74.00	-17.84	31.16	3	Horizontal	121	1.49	-
2480MHz	Pass	AV	2.48G	95.75	Inf	-Inf	31.09	3	Vertical	296	1.73	-
2480MHz	Pass	AV	2.4848G	43.85	54.00	-10.15	31.12	3	Vertical	296	1.73	-
2480MHz	Pass	PK	2.48G	99.60	Inf	-Inf	31.09	3	Vertical	296	1.73	-
2480MHz	Pass	PK	2.4974G	56.00	74.00	-18.00	31.16	3	Vertical	296	1.73	-
2480MHz	Pass	AV	2.48G	95.65	Inf	-Inf	31.09	3	Horizontal	122	1.08	-
2480MHz	Pass	AV	2.493G	43.83	54.00	-10.17	31.14	3	Horizontal	122	1.08	-



RSE TX above 1GHz Result

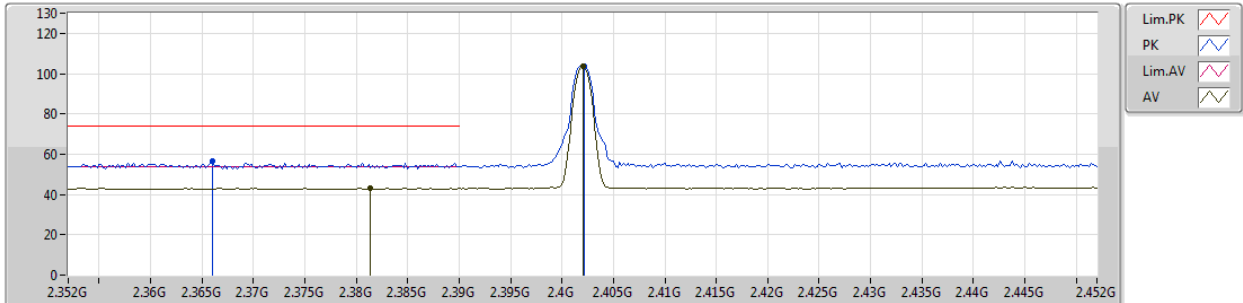
Appendix G.2

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	2.48G	99.49	Inf	-Inf	31.09	3	Horizontal	122	1.08	-
2480MHz	Pass	PK	2.4904G	56.64	74.00	-17.36	31.13	3	Horizontal	122	1.08	-

BT-BR(1Mbps)

2402MHz_TX

26/12/2018

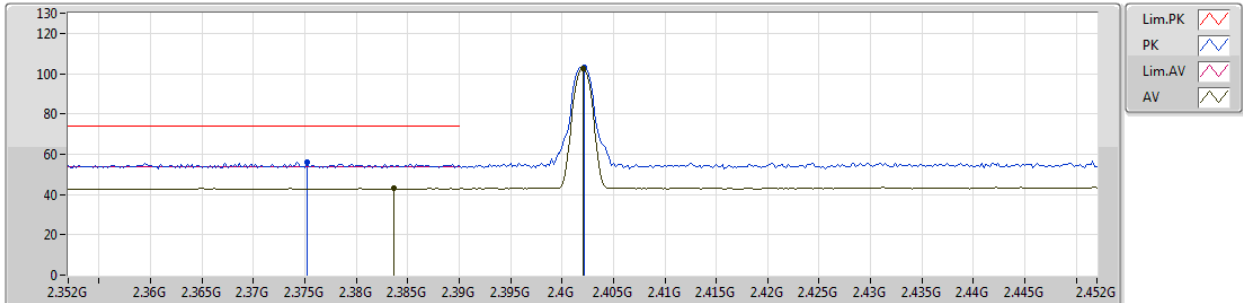


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3814G	43.22	54.00	-10.78	30.75	3	Vertical	299	1.22	-
AV	2.402G	103.41	Inf	-Inf	30.82	3	Vertical	299	1.22	-
PK	2.366G	56.61	74.00	-17.39	30.69	3	Vertical	299	1.22	-
PK	2.402G	103.80	Inf	-Inf	30.82	3	Vertical	299	1.22	-

BT-BR(1Mbps)

2402MHz_TX

26/12/2018

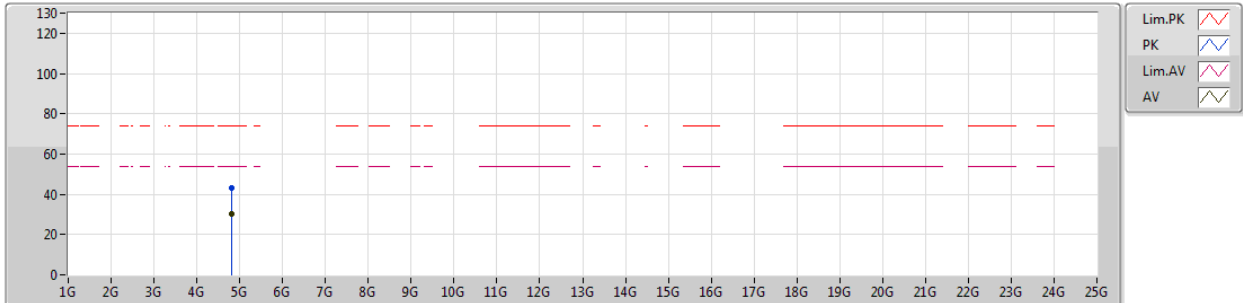


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments							
AV	2.3836G	43.22	54.00	-10.78	30.75	3	Horizontal	126	1.55	-							
AV	2.402G	102.59	Inf	-Inf	30.82	3	Horizontal	126	1.55	-							
PK	2.3752G	55.84	74.00	-18.16	30.72	3	Horizontal	126	1.55	-							
PK	2.4022G	102.98	Inf	-Inf	30.82	3	Horizontal	126	1.55	-							

BT-BR(1Mbps)

2402MHz_TX

26/12/2018

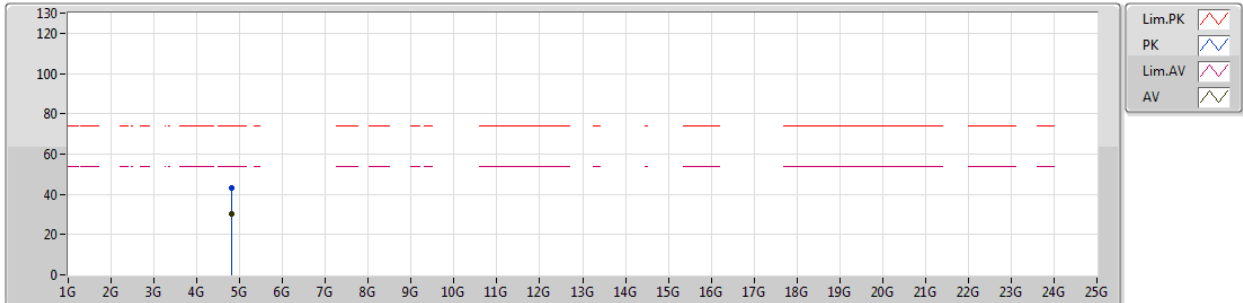


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80064G	30.27	54.00	-23.73	2.07	3	Vertical	215	2.10	-
PK	4.79872G	42.99	74.00	-31.01	2.07	3	Vertical	215	2.10	-

BT-BR(1Mbps)

2402MHz_TX

26/12/2018

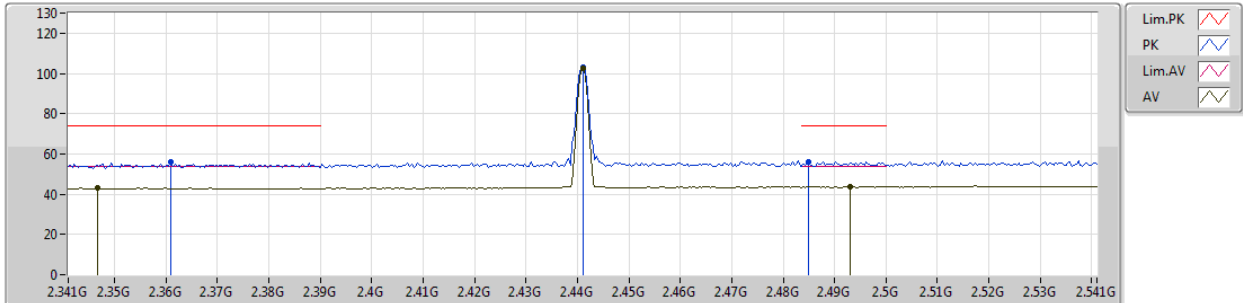


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80112G	30.23	54.00	-23.77	2.07	3	Horizontal	50	2.71	-
PK	4.80508G	42.90	74.00	-31.10	2.08	3	Horizontal	50	2.71	-

BT-BR(1Mbps)

26/12/2018

2441MHz_TX

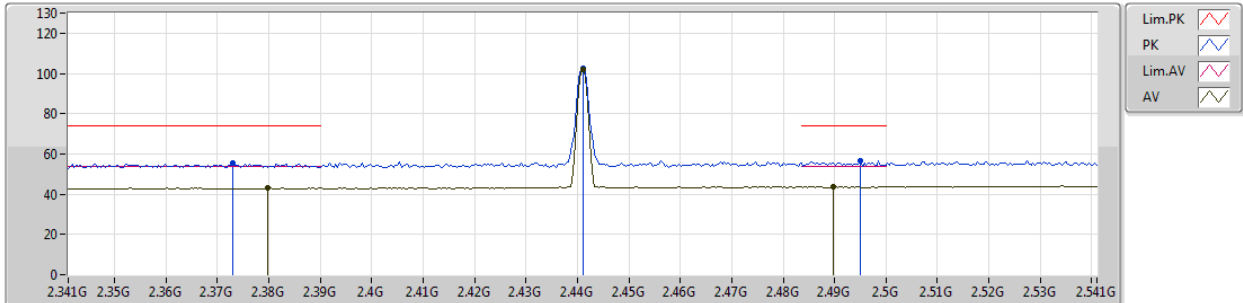


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3466G	43.05	54.00	-10.95	30.62	3	Vertical	296	1.37	-
AV	2.441G	102.68	Inf	-Inf	30.95	3	Vertical	296	1.37	-
AV	2.493G	43.72	54.00	-10.28	31.14	3	Vertical	296	1.37	-
PK	2.361G	56.02	74.00	-17.98	30.67	3	Vertical	296	1.37	-
PK	2.441G	103.07	Inf	-Inf	30.95	3	Vertical	296	1.37	-
PK	2.485G	55.97	74.00	-18.03	31.12	3	Vertical	296	1.37	-

BT-BR(1Mbps)

2441MHz_TX

26/12/2018

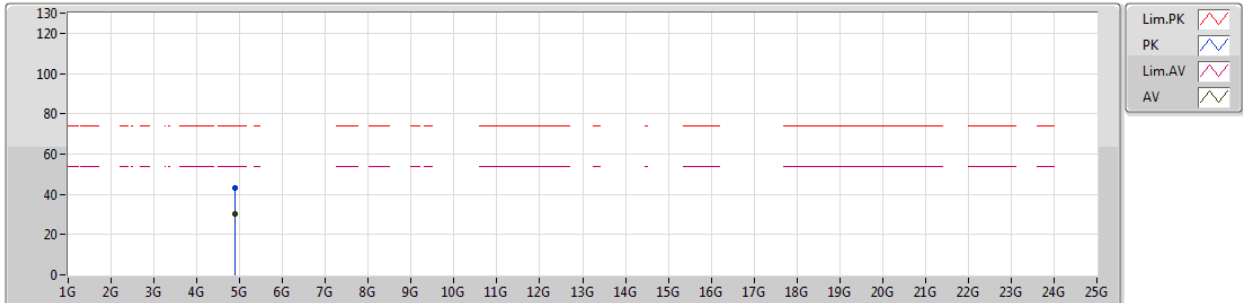


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3798G	43.02	54.00	-10.98	30.74	3	Horizontal	127	1.26	-
AV	2.441 G	102.04	Inf	-Inf	30.95	3	Horizontal	127	1.26	-
AV	2.4898G	43.76	54.00	-10.24	31.13	3	Horizontal	127	1.26	-
PK	2.373G	55.27	74.00	-18.73	30.71	3	Horizontal	127	1.26	-
PK	2.441 G	102.43	Inf	-Inf	30.95	3	Horizontal	127	1.26	-
PK	2.495G	56.84	74.00	-17.16	31.16	3	Horizontal	127	1.26	-

BT-BR(1Mbps)

2441MHz_TX

26/12/2018

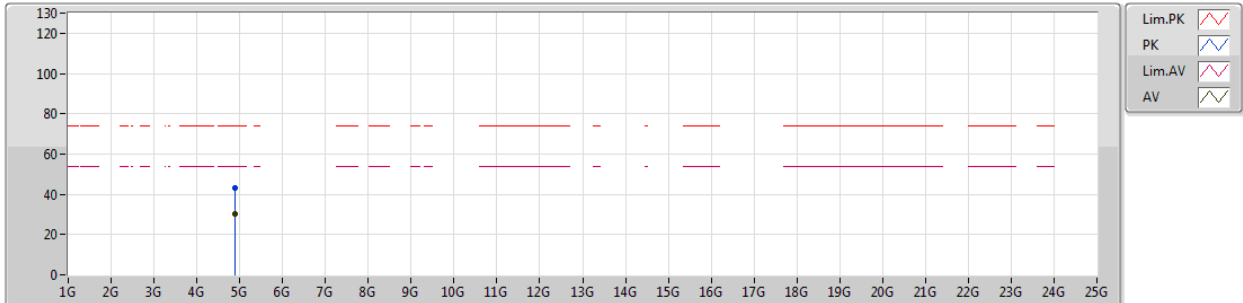


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88794G	30.36	54.00	-23.64	2.29	3	Vertical	178	2.16	-
PK	4.89616G	43.28	74.00	-30.72	2.31	3	Vertical	178	2.16	-

BT-BR(1Mbps)

2441MHz_TX

26/12/2018

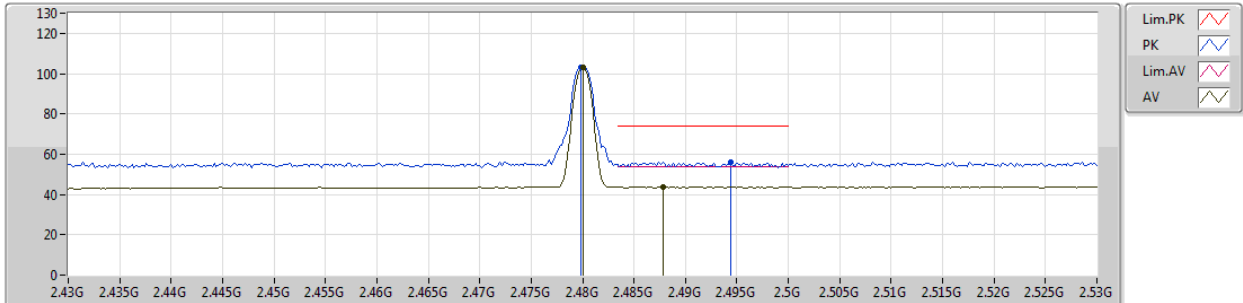


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	4.88776G	30.27	54.00	-23.73	2.29	3	Horizontal	101	1.85	-								
PK	4.89652G	43.11	74.00	-30.89	2.31	3	Horizontal	101	1.85	-								

BT-BR(1Mbps)

2480MHz_TX

26/12/2018

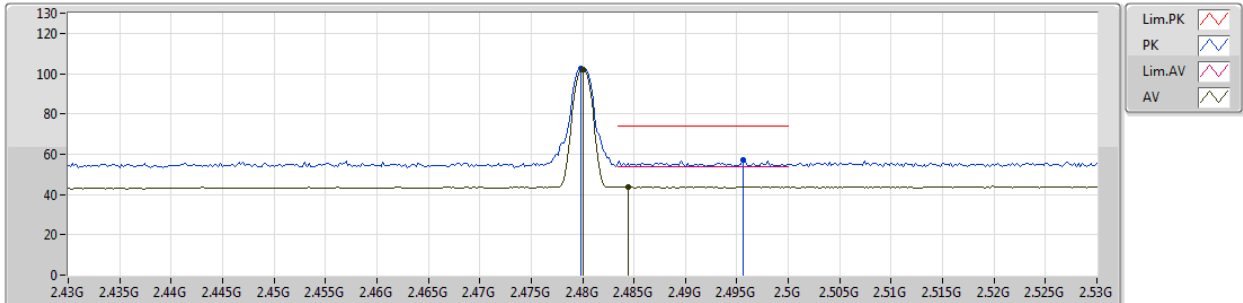


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	102.86	Inf	-Inf	31.09	3	Vertical	295	1.35	-
AV	2.4878G	43.91	54.00	-10.09	31.13	3	Vertical	295	1.35	-
PK	2.4798G	103.33	Inf	-Inf	31.09	3	Vertical	295	1.35	-
PK	2.4944G	56.18	74.00	-17.82	31.15	3	Vertical	295	1.35	-

BT-BR(1Mbps)

2480MHz_TX

26/12/2018

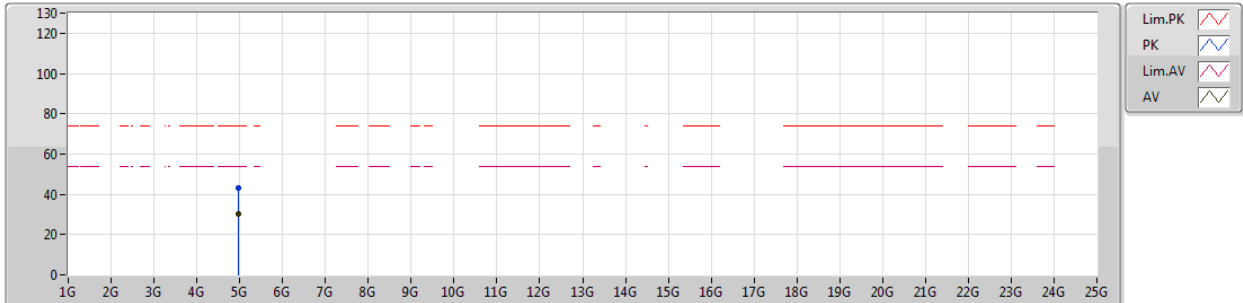


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	102.16	Inf	-Inf	31.09	3	Horizontal	126	1.47	-
AV	2.4844G	43.82	54.00	-10.18	31.12	3	Horizontal	126	1.47	-
PK	2.4798G	102.62	Inf	-Inf	31.09	3	Horizontal	126	1.47	-
PK	2.4956G	56.92	74.00	-17.08	31.16	3	Horizontal	126	1.47	-

BT-BR(1Mbps)

2480MHz_TX

26/12/2018

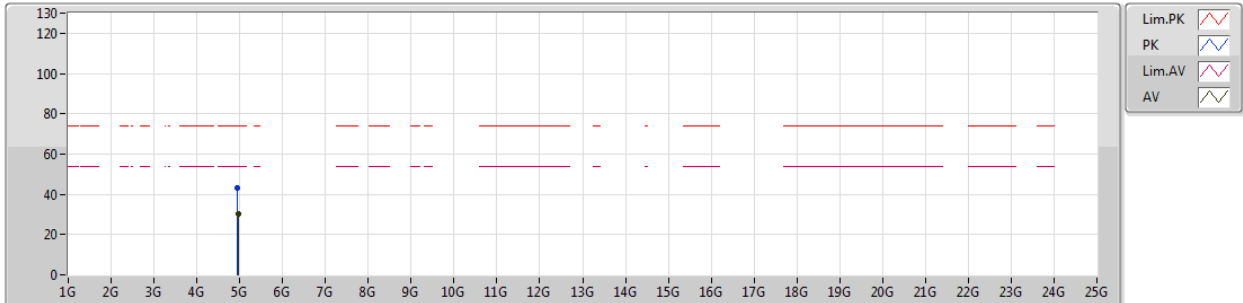


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.96786G	30.51	54.00	-23.49	2.49	3	Vertical	148	2.94	-
PK	4.97398G	43.42	74.00	-30.58	2.50	3	Vertical	148	2.94	-

BT-BR(1Mbps)

2480MHz_TX

26/12/2018

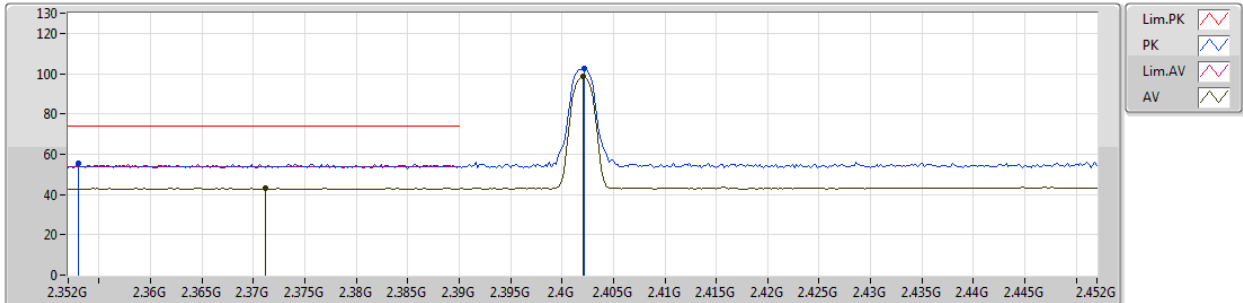


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.97158G	30.44	54.00	-23.56	2.49	3	Horizontal	87	2.47	-
PK	4.94914G	42.96	74.00	-31.04	2.44	3	Horizontal	87	2.47	-

BT-EDR(2Mbps)

2402MHz_TX

25/12/2018

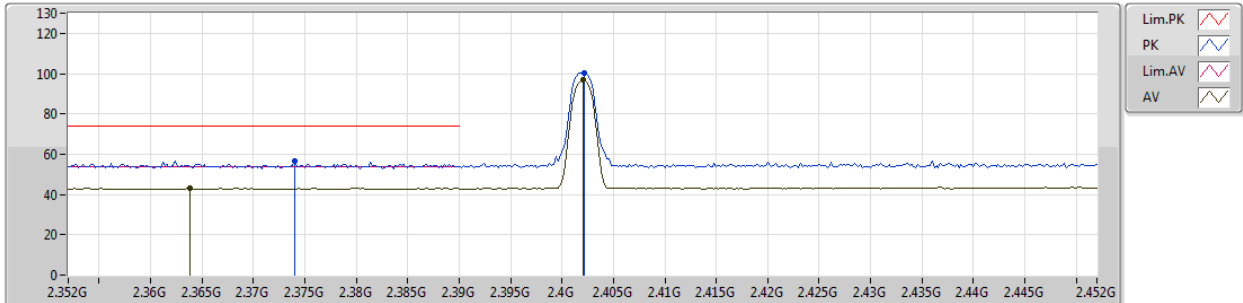


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3712G	43.01	54.00	-10.99	30.71	3	Vertical	299	1.24	-								
AV	2.402G	98.60	Inf	-Inf	30.82	3	Vertical	299	1.24	-								
PK	2.353G	55.39	74.00	-18.61	30.65	3	Vertical	299	1.24	-								
PK	2.402G	102.29	Inf	-Inf	30.82	3	Vertical	299	1.24	-								

BT-EDR(2Mbps)

2402MHz_TX

25/12/2018

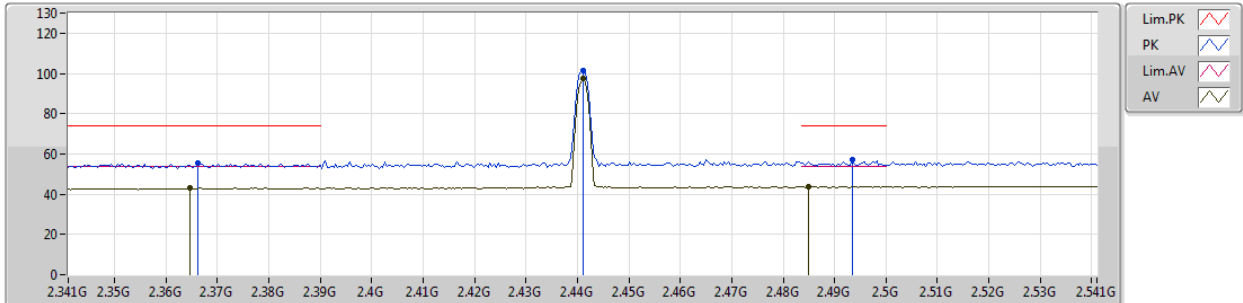


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3638G	43.21	54.00	-10.79	30.68	3	Horizontal	125	1.54	-
AV	2.402G	96.82	Inf	-Inf	30.82	3	Horizontal	125	1.54	-
PK	2.374G	56.80	74.00	-17.20	30.72	3	Horizontal	125	1.54	-
PK	2.4022G	100.54	Inf	-Inf	30.82	3	Horizontal	125	1.54	-

BT-EDR(2Mbps)

25/12/2018

2441MHz_TX

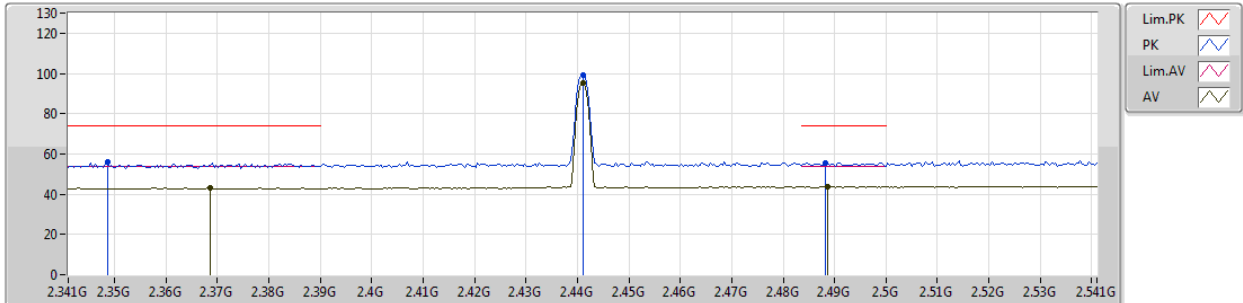


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3646G	43.08	54.00	-10.92	30.69	3	Vertical	300	1.36	-
AV	2.441G	97.25	Inf	-Inf	30.95	3	Vertical	300	1.36	-
AV	2.485G	43.70	54.00	-10.30	31.12	3	Vertical	300	1.36	-
PK	2.3662G	55.73	74.00	-18.27	30.70	3	Vertical	300	1.36	-
PK	2.441G	101.25	Inf	-Inf	30.95	3	Vertical	300	1.36	-
PK	2.4934G	56.96	74.00	-17.04	31.14	3	Vertical	300	1.36	-

BT-EDR(2Mbps)

2441MHz_TX

25/12/2018

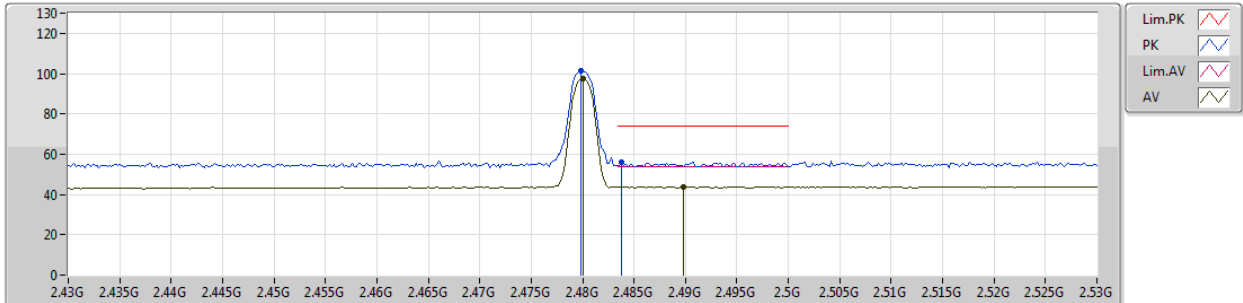


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3686G	43.21	54.00	-10.79	30.70	3	Horizontal	130	1.25	-
AV	2.441G	95.31	Inf	-Inf	30.95	3	Horizontal	130	1.25	-
AV	2.4886G	43.96	54.00	-10.04	31.13	3	Horizontal	130	1.25	-
PK	2.3486G	56.24	74.00	-17.76	30.63	3	Horizontal	130	1.25	-
PK	2.441G	99.11	Inf	-Inf	30.95	3	Horizontal	130	1.25	-
PK	2.4882G	55.71	74.00	-18.29	31.13	3	Horizontal	130	1.25	-

BT-EDR(2Mbps)

2480MHz_TX

25/12/2018

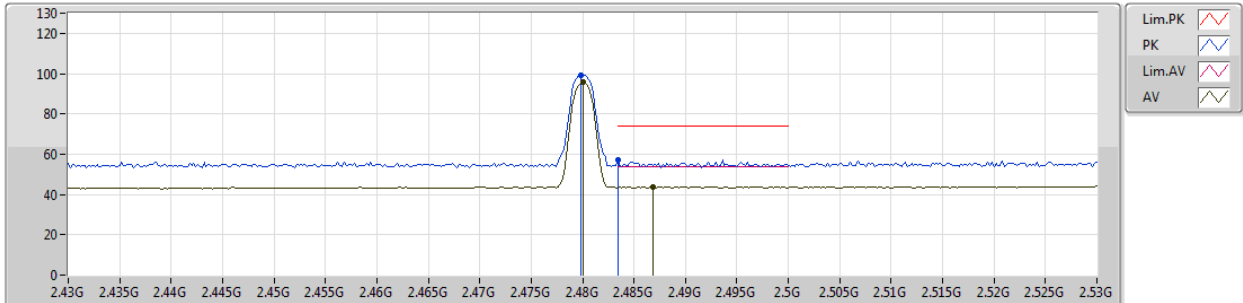


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	97.47	Inf	-Inf	31.09	3	Vertical	295	1.09	-
AV	2.4898G	43.83	54.00	-10.17	31.13	3	Vertical	295	1.09	-
PK	2.4798G	101.20	Inf	-Inf	31.09	3	Vertical	295	1.09	-
PK	2.4838G	55.94	74.00	-18.06	31.11	3	Vertical	295	1.09	-

BT-EDR(2Mbps)

2480MHz_TX

25/12/2018

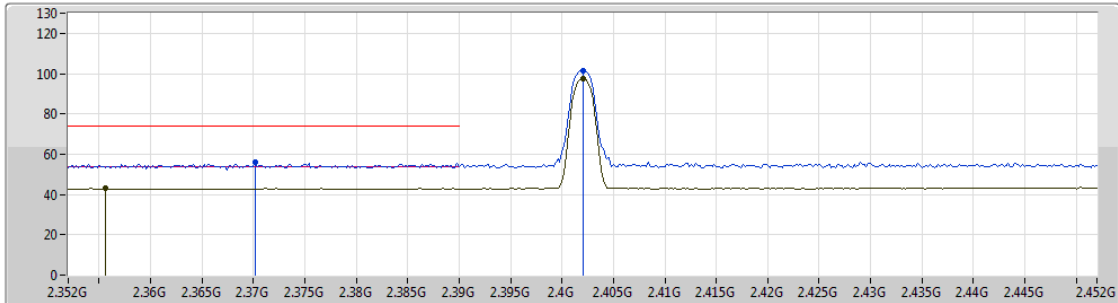


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	95.67	Inf	-Inf	31.09	3	Horizontal	120	1.48	-
AV	2.4868G	43.77	54.00	-10.23	31.12	3	Horizontal	120	1.48	-
PK	2.4798G	99.40	Inf	-Inf	31.09	3	Horizontal	120	1.48	-
PK	2.4835G	56.90	74.00	-17.10	31.11	3	Horizontal	120	1.48	-

BT-EDR(3Mbps)

2402MHz_TX

25/12/2018



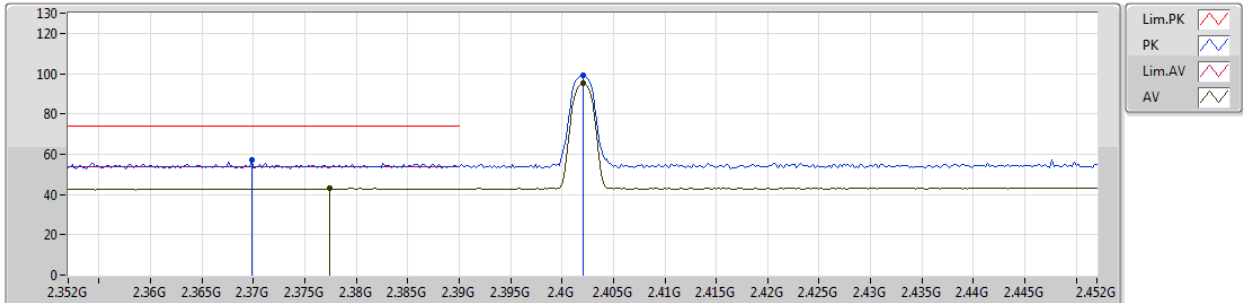
Lim.PK	
PK	
Lim.AV	
AV	

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3556G	43.04	54.00	-10.96	30.66	3	Vertical	275	1.10	-								
AV	2.402G	97.52	Inf	-Inf	30.82	3	Vertical	275	1.10	-								
PK	2.3702G	55.98	74.00	-18.02	30.71	3	Vertical	275	1.10	-								
PK	2.402G	101.46	Inf	-Inf	30.82	3	Vertical	275	1.10	-								

BT-EDR(3Mbps)

2402MHz_TX

25/12/2018

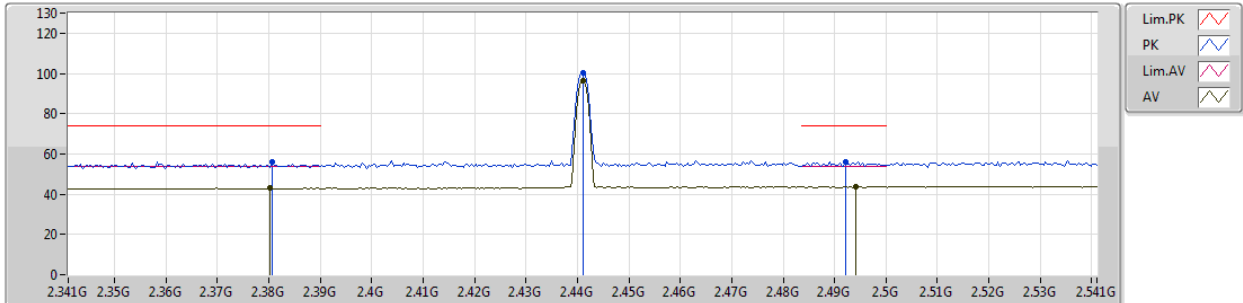


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
AV	2.3774G	42.98	54.00	-11.02	30.73	3	Horizontal	125	1.56	-								
AV	2.402G	95.00	Inf	-Inf	30.82	3	Horizontal	125	1.56	-								
PK	2.3698G	57.20	74.00	-16.80	30.71	3	Horizontal	125	1.56	-								
PK	2.402G	98.93	Inf	-Inf	30.82	3	Horizontal	125	1.56	-								

BT-EDR(3Mbps)

25/12/2018

2441MHz_TX

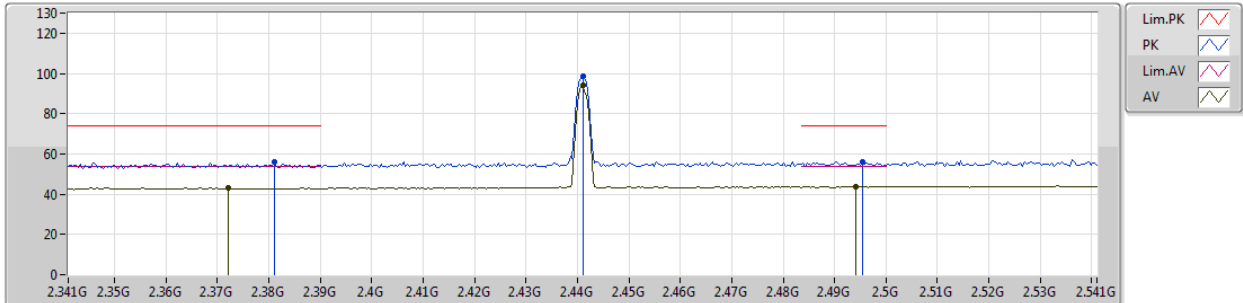


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3802G	42.98	54.00	-11.02	30.74	3	Vertical	298	1.20	-
AV	2.441G	96.44	Inf	-Inf	30.95	3	Vertical	298	1.20	-
AV	2.4942G	43.86	54.00	-10.14	31.15	3	Vertical	298	1.20	-
PK	2.3806G	55.94	74.00	-18.06	30.75	3	Vertical	298	1.20	-
PK	2.441G	100.49	Inf	-Inf	30.95	3	Vertical	298	1.20	-
PK	2.4922G	56.19	74.00	-17.81	31.14	3	Vertical	298	1.20	-

BT-EDR(3Mbps)

25/12/2018

2441MHz_TX

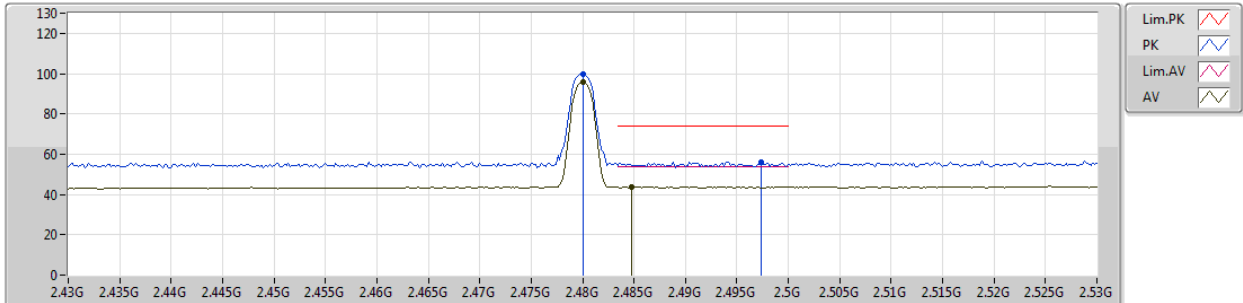


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3722G	43.07	54.00	-10.93	30.71	3	Horizontal	121	1.49	-
AV	2.441G	94.35	Inf	-Inf	30.95	3	Horizontal	121	1.49	-
AV	2.4942G	43.83	54.00	-10.17	31.15	3	Horizontal	121	1.49	-
PK	2.381G	55.90	74.00	-18.10	30.75	3	Horizontal	121	1.49	-
PK	2.441G	98.55	Inf	-Inf	30.95	3	Horizontal	121	1.49	-
PK	2.4954G	56.16	74.00	-17.84	31.16	3	Horizontal	121	1.49	-

BT-EDR(3Mbps)

2480MHz_TX

25/12/2018

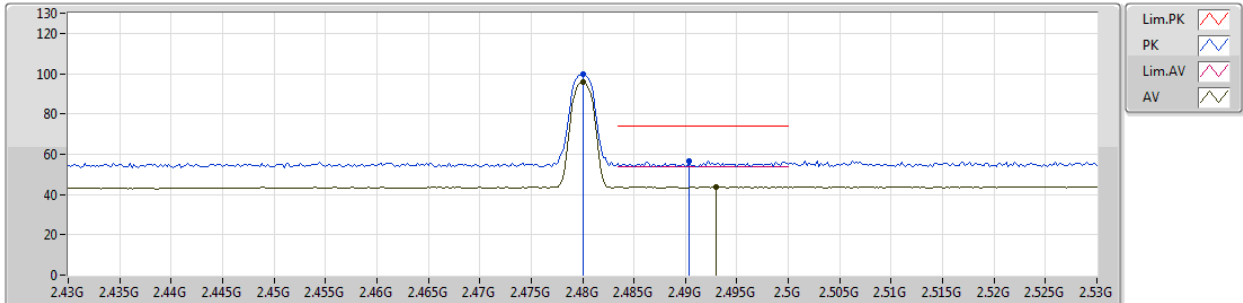


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	95.75	Inf	-Inf	31.09	3	Vertical	296	1.73	-
AV	2.4848G	43.85	54.00	-10.15	31.12	3	Vertical	296	1.73	-
PK	2.48G	99.60	Inf	-Inf	31.09	3	Vertical	296	1.73	-
PK	2.4974G	56.00	74.00	-18.00	31.16	3	Vertical	296	1.73	-

BT-EDR(3Mbps)

2480MHz_TX

25/12/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	95.65	Inf	-Inf	31.09	3	Horizontal	122	1.08	-
AV	2.493G	43.83	54.00	-10.17	31.14	3	Horizontal	122	1.08	-
PK	2.48G	99.49	Inf	-Inf	31.09	3	Horizontal	122	1.08	-
PK	2.4904G	56.64	74.00	-17.36	31.13	3	Horizontal	122	1.08	-

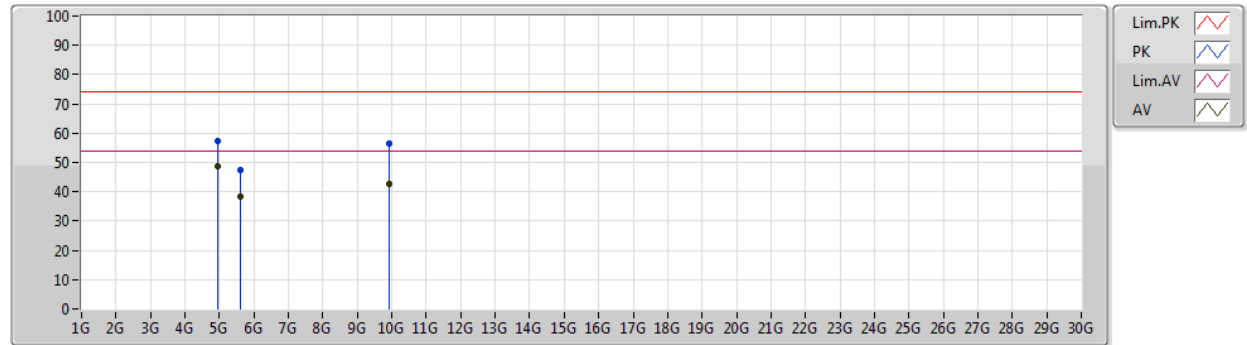


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.95998G	49.42	54.00	-4.58	3.71	3	Horizontal	328	1.00	-

Mode 1

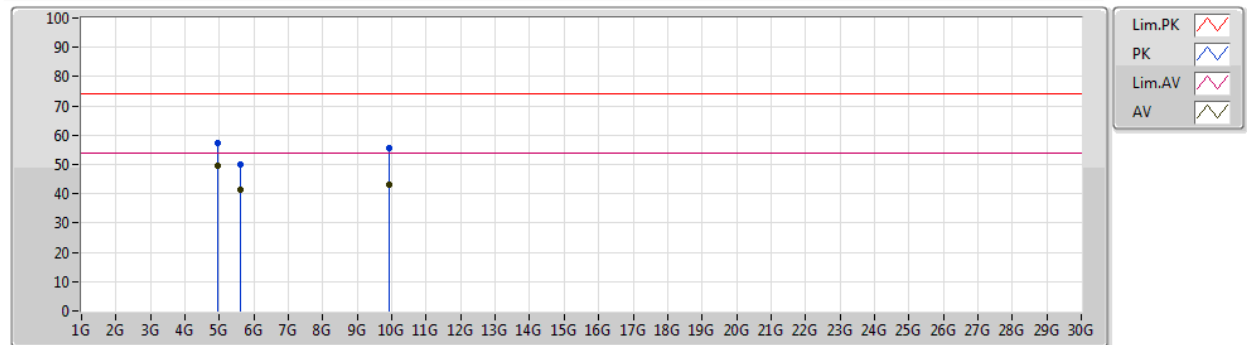
25/12/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
AV	4.96001G	48.68	54.00	-5.32	3.71	3	Vertical	259	2.96	-				
AV	5.61996G	38.23	54.00	-15.77	4.68	3	Vertical	211	1.06	-				
AV	9.91998G	42.69	54.00	-11.31	12.80	3	Vertical	123	2.58	-				
PK	4.95968G	57.15	74.00	-16.85	3.71	3	Vertical	259	2.96	-				
PK	5.62G	47.46	74.00	-26.54	4.68	3	Vertical	211	1.06	-				
PK	9.92384G	56.54	74.00	-17.46	12.81	3	Vertical	123	2.58	-				

Mode 1

25/12/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment				
AV	4.95998G	49.42	54.00	-4.58	3.71	3	Horizontal	328	1.00	-				
AV	5.62008G	41.38	54.00	-12.62	4.68	3	Horizontal	328	1.50	-				
AV	9.91998G	43.12	54.00	-10.88	12.80	3	Horizontal	326	2.87	-				
PK	4.95976G	57.32	74.00	-16.68	3.71	3	Horizontal	328	1.00	-				
PK	5.61999G	50.09	74.00	-23.91	4.68	3	Horizontal	328	1.50	-				
PK	9.9202G	55.45	74.00	-18.55	12.80	3	Horizontal	326	2.87	-				