

# FCC Test Report

**FCC ID** : XN6-SB3651NG6  
**Contains ID** : PJH-IA9QH5SY5A24  
**Equipment** : 36-Inch Sound Bar 5.1 System  
**Brand Name** : VIZIO  
**Model Name** : SB3651n-G6  
**Applicant** : Zylux Acoustic Corporation  
3F, 22, Lane 35, Jihu Road, Taipei Neihu  
Technology Park, Taipei 114, Taiwan.  
**Manufacturer** : Zylux Acoustic Corporation  
3F, 22, Lane 35, Jihu Road, Taipei Neihu  
Technology Park, Taipei 114, Taiwan.  
**Standard** : 47 CFR FCC Part 15.247

The product was received on Jan. 28, 2019, and testing was started from Feb. 22, 2019 and completed on Mar. 15, 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.)



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### 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

<b>Declaration of Conformity:</b>
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
<b>Comments and explanations:</b>
None

Reviewed by: Jackson Tsai

Report Producer: Debby Hung

# 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	Gain (dBi)
1	LITEON	WB300A	PCB antenna	N/A	4.1

### 1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter
EUT Function	<input checked="" type="checkbox"/> Point-to-multipoint <input type="checkbox"/> Point-to-point
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)
	Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)
	Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:

### 1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
BT-BR(1Mbps)	0.773	1.118	2.925m	1k
BT-EDR(2Mbps)	0.775	1.107	2.931m	1k
BT-EDR(3Mbps)	0.775	1.107	2.933m	1k

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

## 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 v05r01
- ◆ ANSI C63.10-2013

## 1.3 Testing Location Information

Testing Location		
<input checked="" type="checkbox"/>	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.		
<input type="checkbox"/>	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	CO04-HY	Kevin	26.7~24.2°C / 51.6~61.3%	22/Feb/2019
RF Conducted	TH06-HY	Clara	23.6~25.6°C / 63~68%	15/Mar/2019
Radiated	03CH09-HY	Ryan	21.3~22°C / 61~66%	15/Mar/2019



### 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	Airoha.AB152x_ Version 2.1.4.16078
-----------------------	------------------------------------


Mode	PowerSetting
BT-BR(1Mbps)	-
2402MHz	63
2441MHz	63
2480MHz	61
BT-EDR(2Mbps)	-
2402MHz	63
2441MHz	63
2480MHz	63
BT-EDR(3Mbps)	-
2402MHz	60
2441MHz	63
2480MHz	61



### 2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral
<b>Operating Mode</b>	CTX
1	AC Main

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	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
<b>Test Condition</b>	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Emissions in Restricted Frequency Bands
<b>Test Condition</b>	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.
<b>Operating Mode</b>	CTX
1	AC Main
<b>Orthogonal Planes of EUT</b>	<b>Z Plane</b>
	
<b>Worst Planes of EUT</b>	V

## 2.4 Accessories and Support Equipment

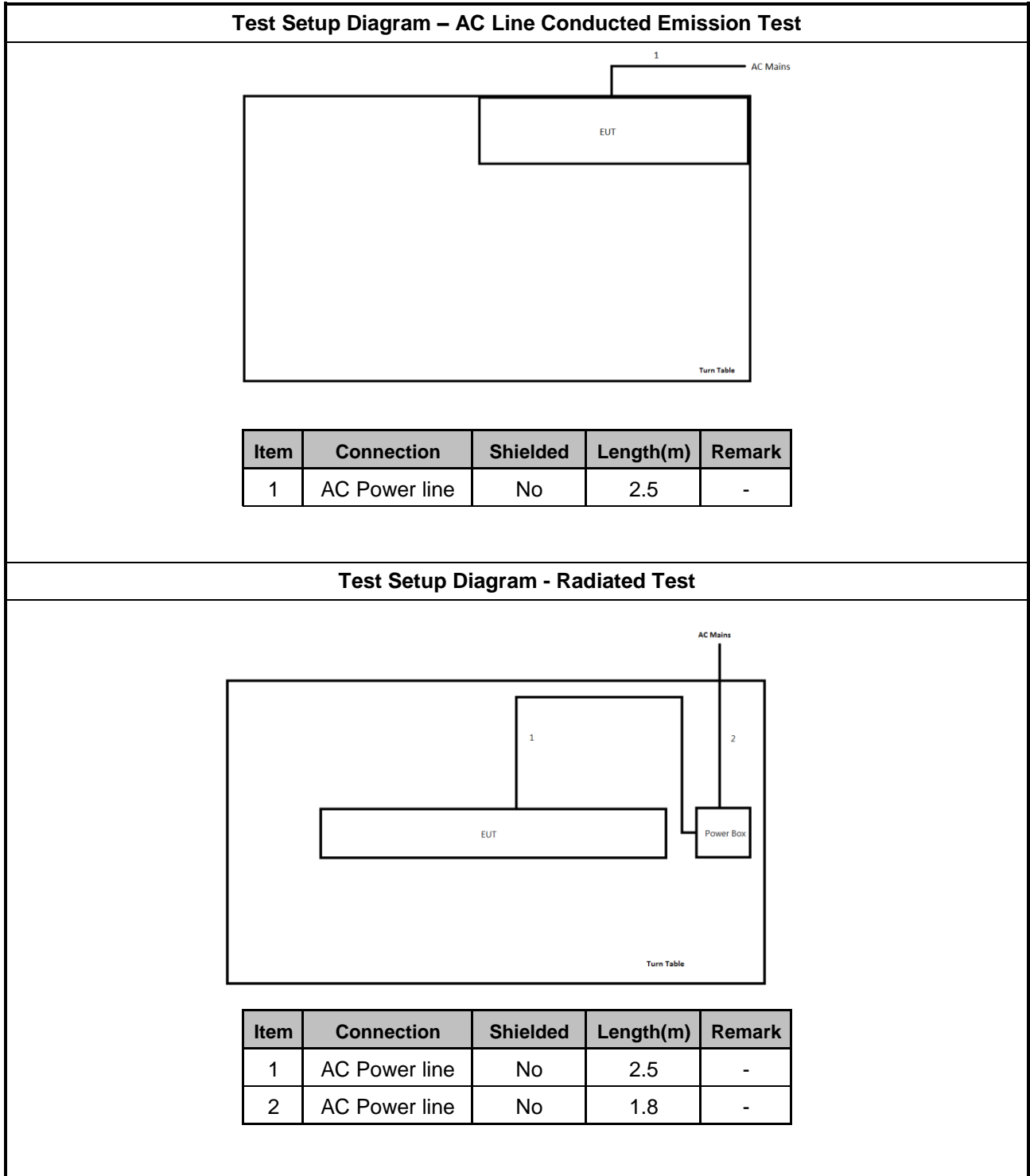
Optical digital audio cable	<b>Brand Name</b>	NA	<b>Model Name</b>	1018-0000602
	<b>Manufacturer</b>	Changzhou Saihua Hancheng Electronic Co. Ltd	<b>SN</b>	N/A
	<b>Signal Line</b>	1.22 meter, Non-Shielded cable, without ferrite core		
AC Power Cord	<b>Signal Line</b>	2.5 meter, Non-Shielded cable, without ferrite core		
AUX Cable	<b>Signal Line</b>	1.5 meter, Non-Shielded cable, without ferrite core		
HDMI Cable	<b>Signal Line</b>	1.85 meter, D-Shielded cable, without ferrite core		
Coaxial Cable	<b>Signal Line</b>	1.55 meter, Non-Shielded cable, without ferrite core		
RCA Cable	<b>Signal Line</b>	8.0 meter, Non-Shielded cable, without ferrite core		
Remote control	<b>Brand Name</b>	VIZIO	<b>Model Name</b>	NA
SB3651n-G6 Subwoofer	<b>Brand Name</b>	VIZIO	<b>Model Name</b>	NA

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

Support Equipment - RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	R33002 / DOC
2	Adapter for NB	DELL	HA65NM130	R35737 / DOC
3	Fixture	-	-	-

Note.Support equipment No.3 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.

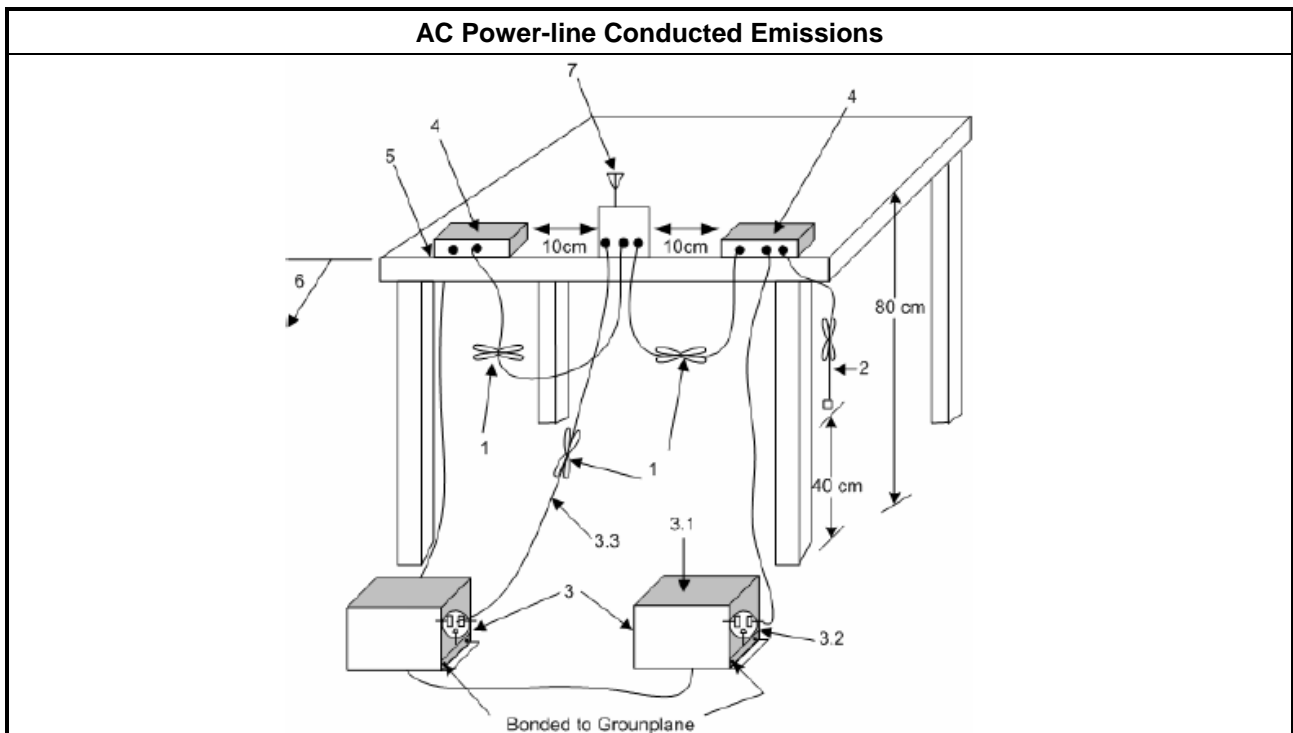
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.</li> </ul>

##### 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	
<ul style="list-style-type: none"> <li>2400-2483.5 MHz Band:</li> </ul>	
	<ul style="list-style-type: none"> <li><math>N \geq 75</math> and <math>ChS \geq MAX</math> (20 dB bandwidth, 25 kHz).</li> </ul>
	<ul style="list-style-type: none"> <li><math>75 &gt; N \geq 15</math> and <math>ChS \geq MAX</math> (20 dB bandwidth 2/3,25 kHz).</li> </ul>
<b>N:</b> Number of Hopping Frequencies; <b>ChS:</b> Hopping Channel Separation	

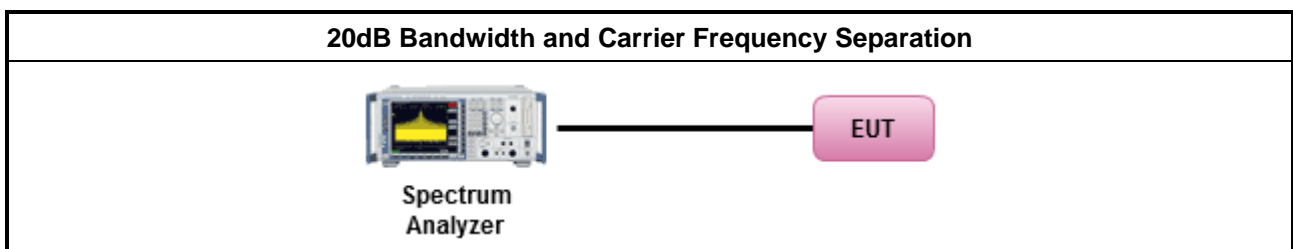
#### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 6.9.2 for 20 dB bandwidth measurement.</li> </ul>
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.</li> </ul>

#### 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	
<ul style="list-style-type: none"> <li>▪ 2400-2483.5 MHz Band:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ <math>N \geq 75</math>; Power 30dBm; EIRP 36dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ <math>75 &gt; N \geq 15</math>; Power 21dBm; EIRP 27dBm</li> </ul>
<b>N:</b> Number of Hopping Frequencies	

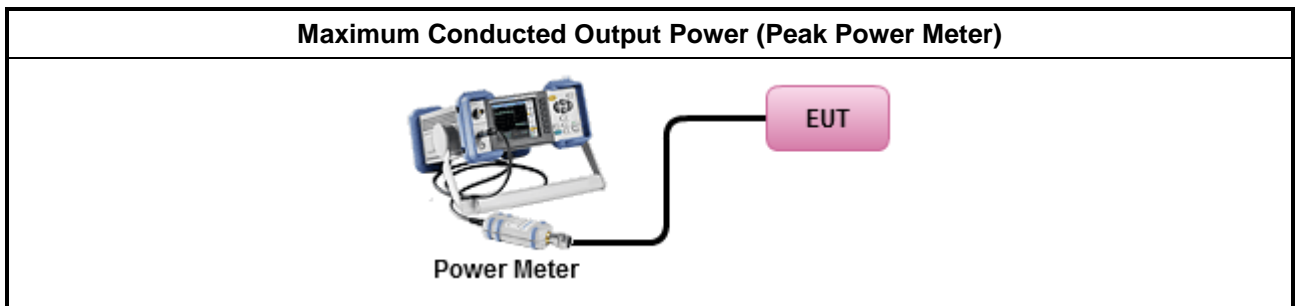
#### 3.3.2 Measuring Instruments

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

#### 3.3.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement.</li> </ul>

#### 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	
<ul style="list-style-type: none"> <li>2400-2483.5 MHz Band:</li> </ul>	
	<ul style="list-style-type: none"> <li><math>N \geq 75</math> and <math>ChS \geq MAX</math> (20 dB bandwidth, 25 kHz).</li> </ul>
	<ul style="list-style-type: none"> <li><math>75 &gt; N \geq 15</math> and <math>ChS \geq MAX</math> (20 dB bandwidth 2/3, 25 kHz).</li> </ul>
<b>N:</b> Number of Hopping Frequencies; <b>ChS</b> : Hopping Channel Separation	

#### 3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

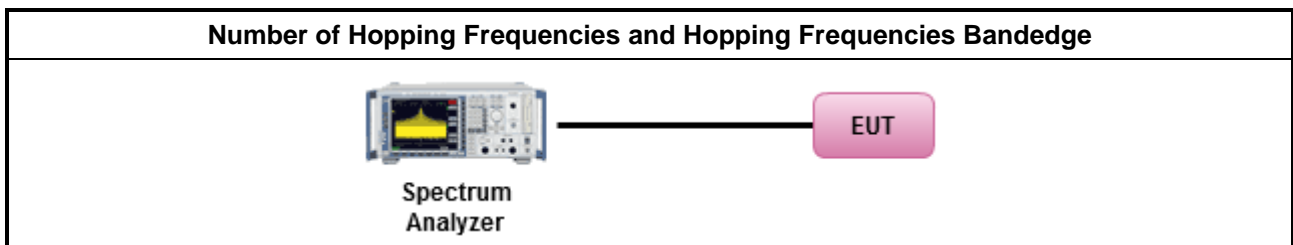
#### 3.4.3 Measuring Instruments

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

#### 3.4.4 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement.</li> </ul>
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.</li> </ul>

#### 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	
<ul style="list-style-type: none"> <li>2400-2483.5 MHz Band:</li> </ul>	
	<ul style="list-style-type: none"> <li><math>N \geq 75</math>; 0.4s in <math>N \times 0.4</math> period</li> </ul>
	<ul style="list-style-type: none"> <li><math>75 &gt; N \geq 15</math>; 0.4s in <math>N \times 0.4</math> period</li> </ul>
<b>N:</b> Number of Hopping Frequencies	

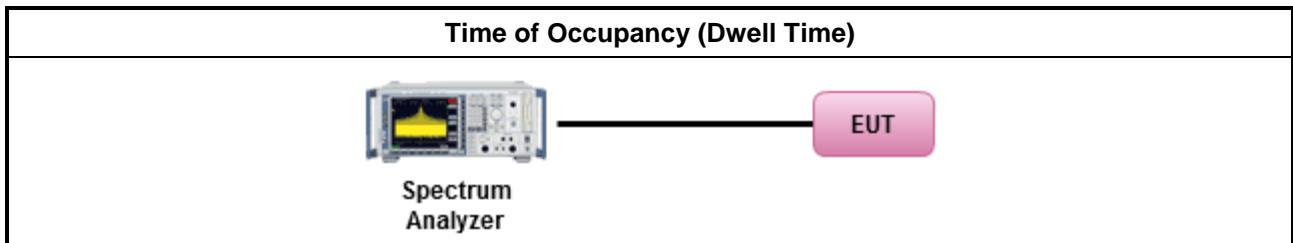
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	
	<ul style="list-style-type: none"> <li>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 <math>5/1600</math> seconds, or 3.125ms. DH5 Packet permit maximum <math>1600 / 79 / 6 = 3.37</math> hops per second in each channel.</li> </ul>

#### 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.	

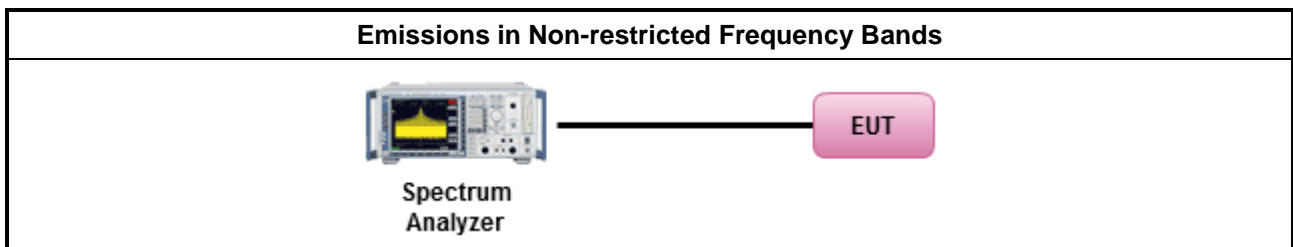
#### 3.6.2 Measuring Instruments

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

#### 3.6.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.</li> </ul>

#### 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.

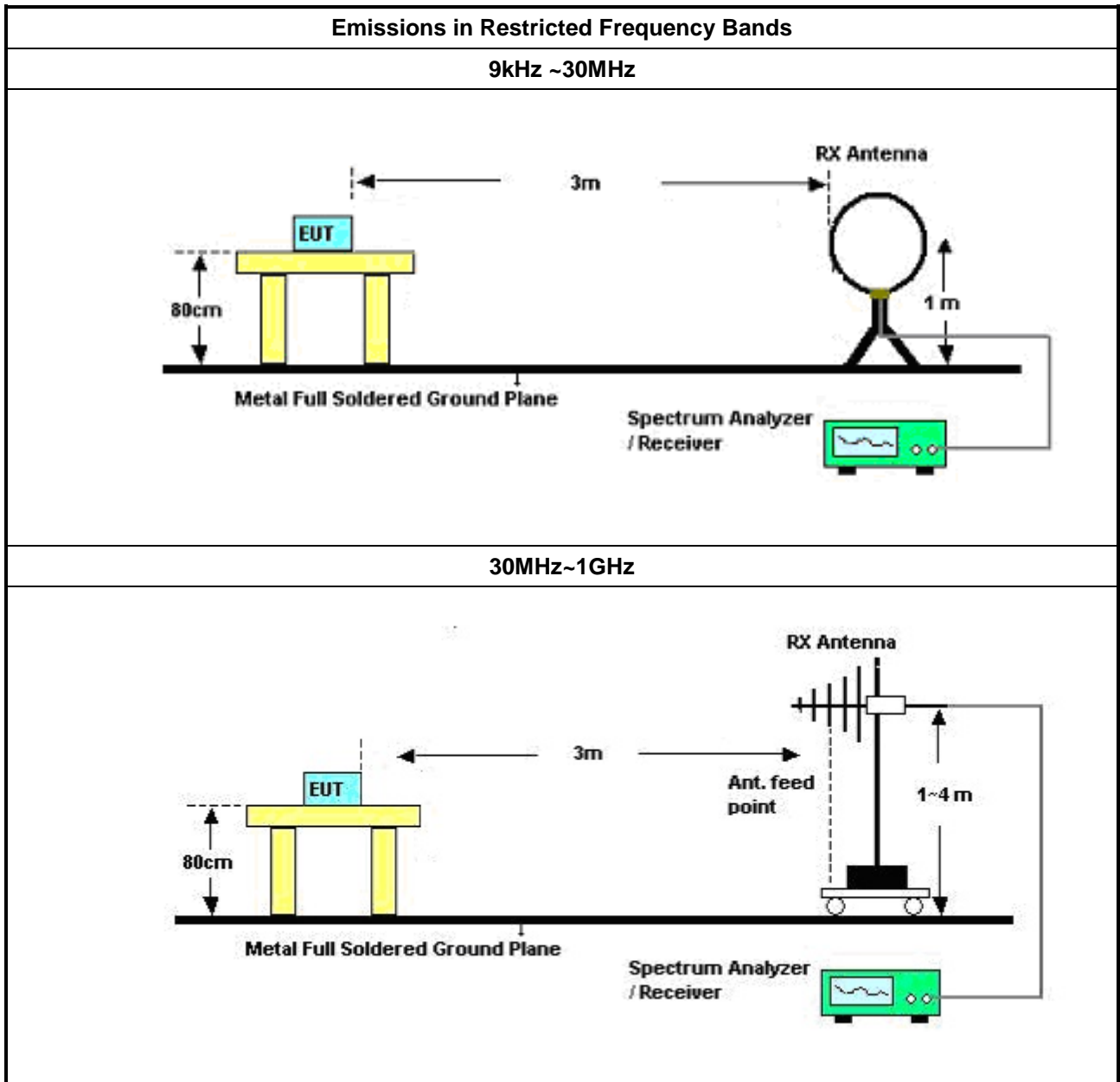
#### 3.7.2 Measuring Instruments

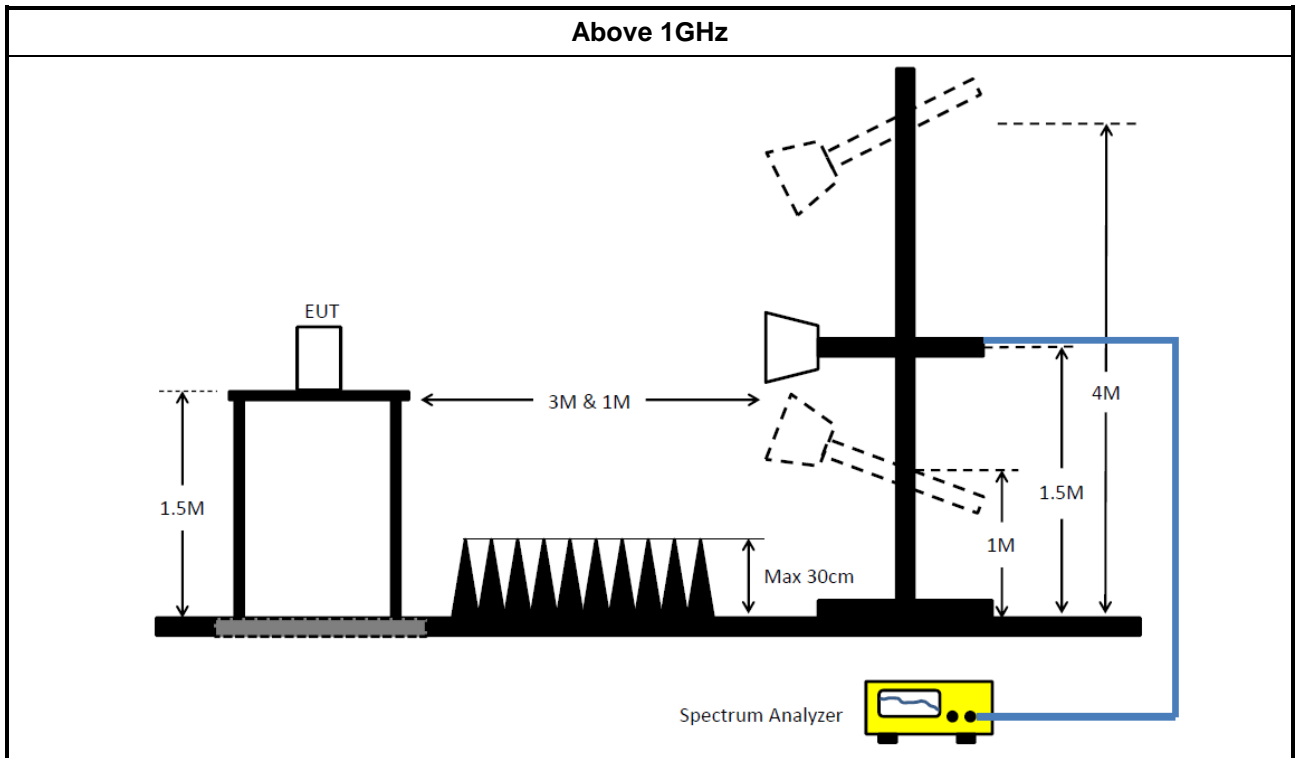
Refer a test equipment and calibration data table in this test report.

#### 3.7.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [hopping duty factor].</li> </ul>
	<ul style="list-style-type: none"> <li>▪ 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.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For the transmitter unwanted emissions shall be measured using following options below:               <ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.</li> <li>▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.</li> <li>▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.</li> </ul> </li> </ul>

### 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	ESR	102051	9KHz ~ 3.6GHz	03/May/2018	02/May/2019
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	08/Nov/2018	07/Nov/2019
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	17/Sep/2018	16/Sep/2019
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Puls e Limiter	SCHWARZBEC K	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2018	11/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	101500	10Hz~40GHz	18/Jul/2018	17/Jul/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	10/Jan/2019	09/Jan/2020
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz ~18G	10/Jan/2019	09/Jan/2020
Cable 0.5m	HUBER	MY39470/4	RF Cable - 29	30MHz ~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	SCHWARZBEC K	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBEC K	BBHA9170	BBHA9170339	18GHz ~ 40GHz	11/Apr/2018	10/Apr/2019
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	29/Mar/2018	28/Mar/2019
LF-CABLE-2019 0218	Jye Bao	RG142	CB028	9kHz ~ 1GHz	18/Feb/2019	17/Feb/2020
RF Cable-high	HUBER+SUHNER	SUCOFLEX104	SN 556626/4 + 556627	1GHz ~ 40GHz	02/Mar/2019	01/Mar/2020

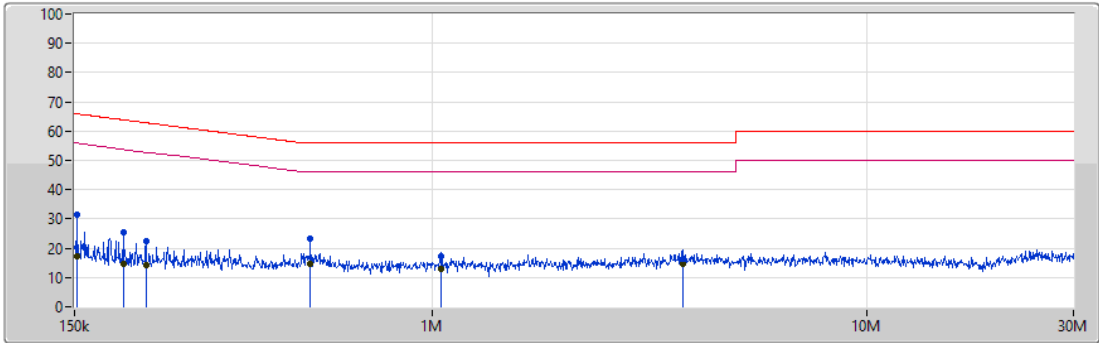


AC Power-line Conducted Emissions Result

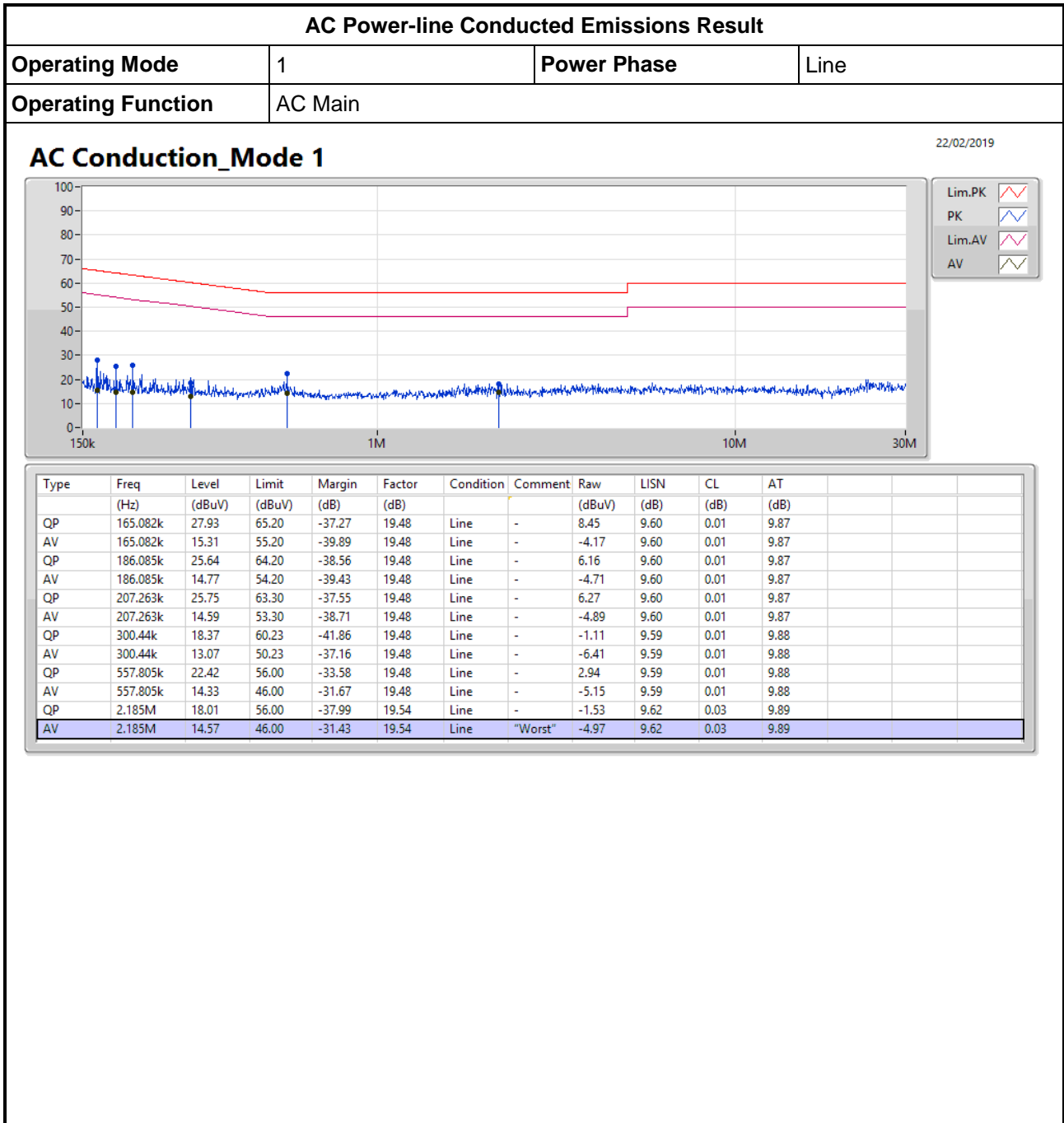
Operating Mode	1	Power Phase	Neutral
Operating Function	AC Main		

AC Conduction\_Mode 1

22/02/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	151.807k	31.59	65.90	-34.31	19.48	Neutral	-	12.11	9.60	0.01	9.87
AV	151.807k	17.14	55.90	-38.76	19.48	Neutral	-	-2.34	9.60	0.01	9.87
QP	194.439k	25.43	63.84	-38.41	19.47	Neutral	-	5.96	9.59	0.01	9.87
AV	194.439k	14.54	53.84	-39.30	19.47	Neutral	-	-4.93	9.59	0.01	9.87
QP	219.176k	22.51	62.85	-40.34	19.47	Neutral	-	3.04	9.59	0.01	9.87
AV	219.176k	14.07	52.85	-38.78	19.47	Neutral	-	-5.40	9.59	0.01	9.87
QP	523.291k	23.13	56.00	-32.87	19.48	Neutral	-	3.65	9.59	0.01	9.88
AV	523.291k	14.53	46.00	-31.47	19.48	Neutral	-	-4.95	9.59	0.01	9.88
QP	1.048M	17.11	56.00	-38.89	19.49	Neutral	-	-2.38	9.59	0.02	9.88
AV	1.048M	12.83	46.00	-33.17	19.49	Neutral	-	-6.66	9.59	0.02	9.88
QP	3.775M	16.37	56.00	-39.63	19.54	Neutral	-	-3.17	9.61	0.04	9.89
AV	3.775M	14.56	46.00	-31.44	19.54	Neutral	"Worst"	-4.98	9.61	0.04	9.89







**Summary**

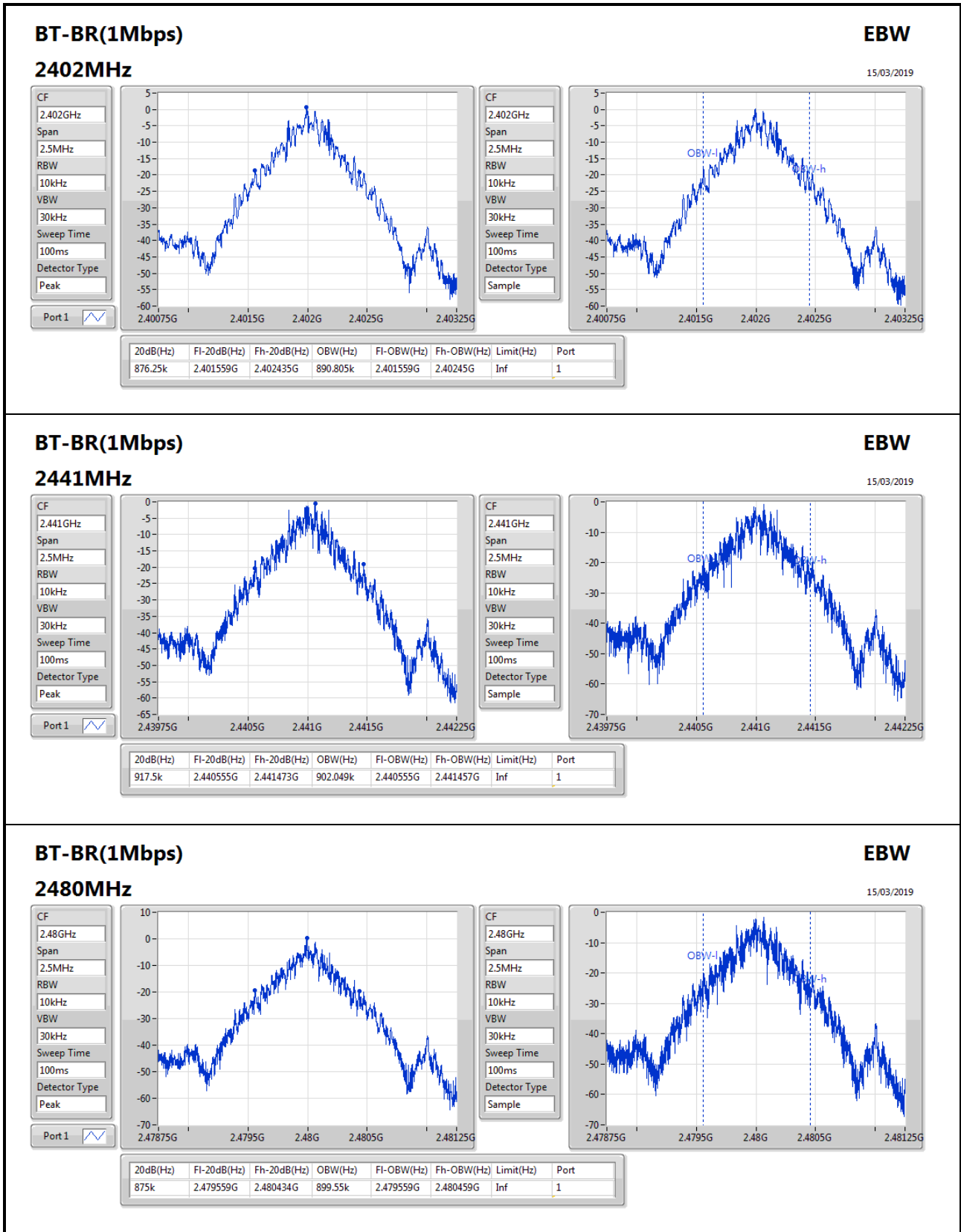
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	917.5k	902.049k	902KF1D	875k	890.805k
BT-EDR(2Mbps)	1.313M	1.284M	1M28G1D	1.249M	1.269M
BT-EDR(3Mbps)	1.285M	1.252M	1M25G1D	1.241M	1.246M

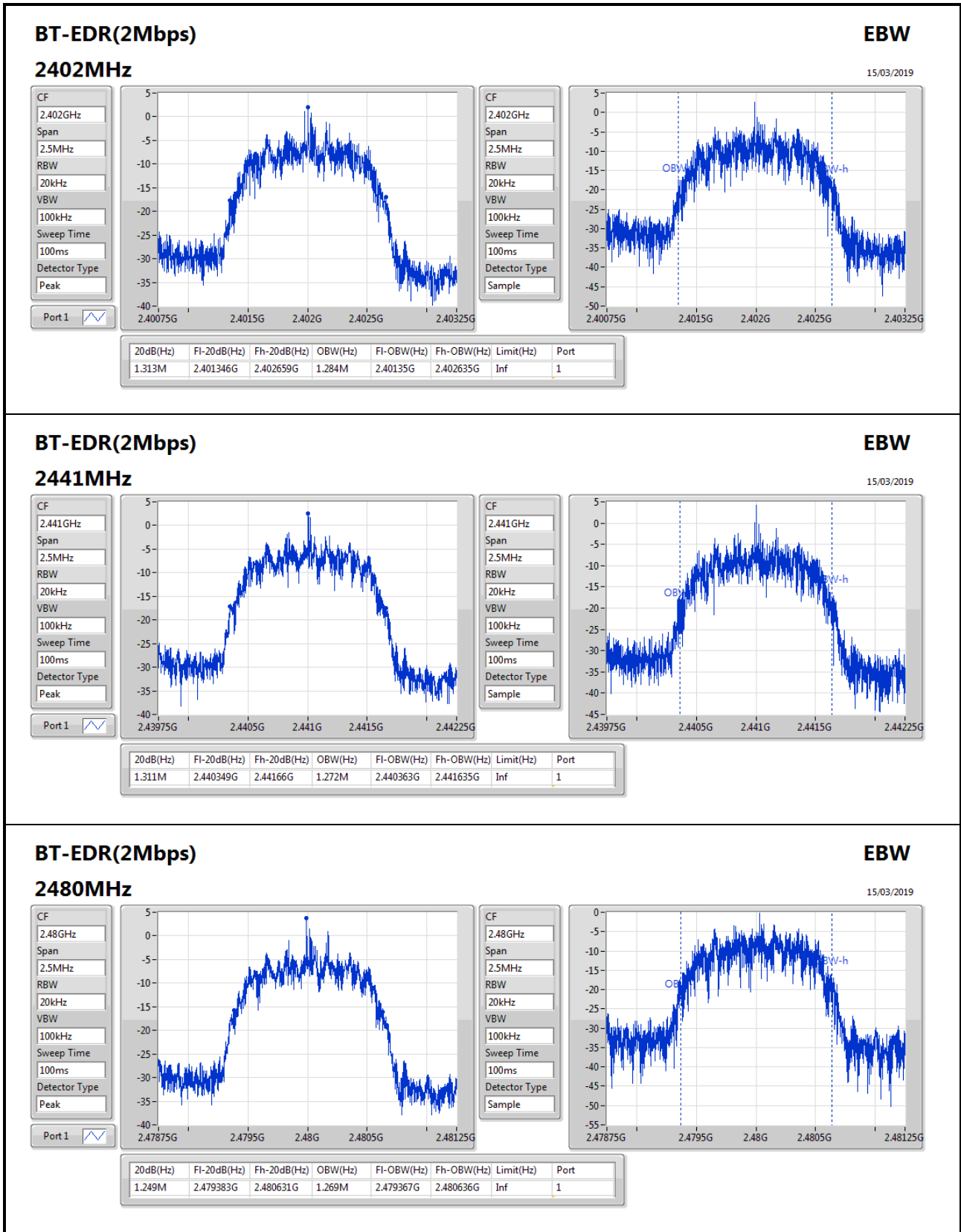
**Max-N dB** = Maximum 20dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;  
**Min-N dB** = Minimum 20dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

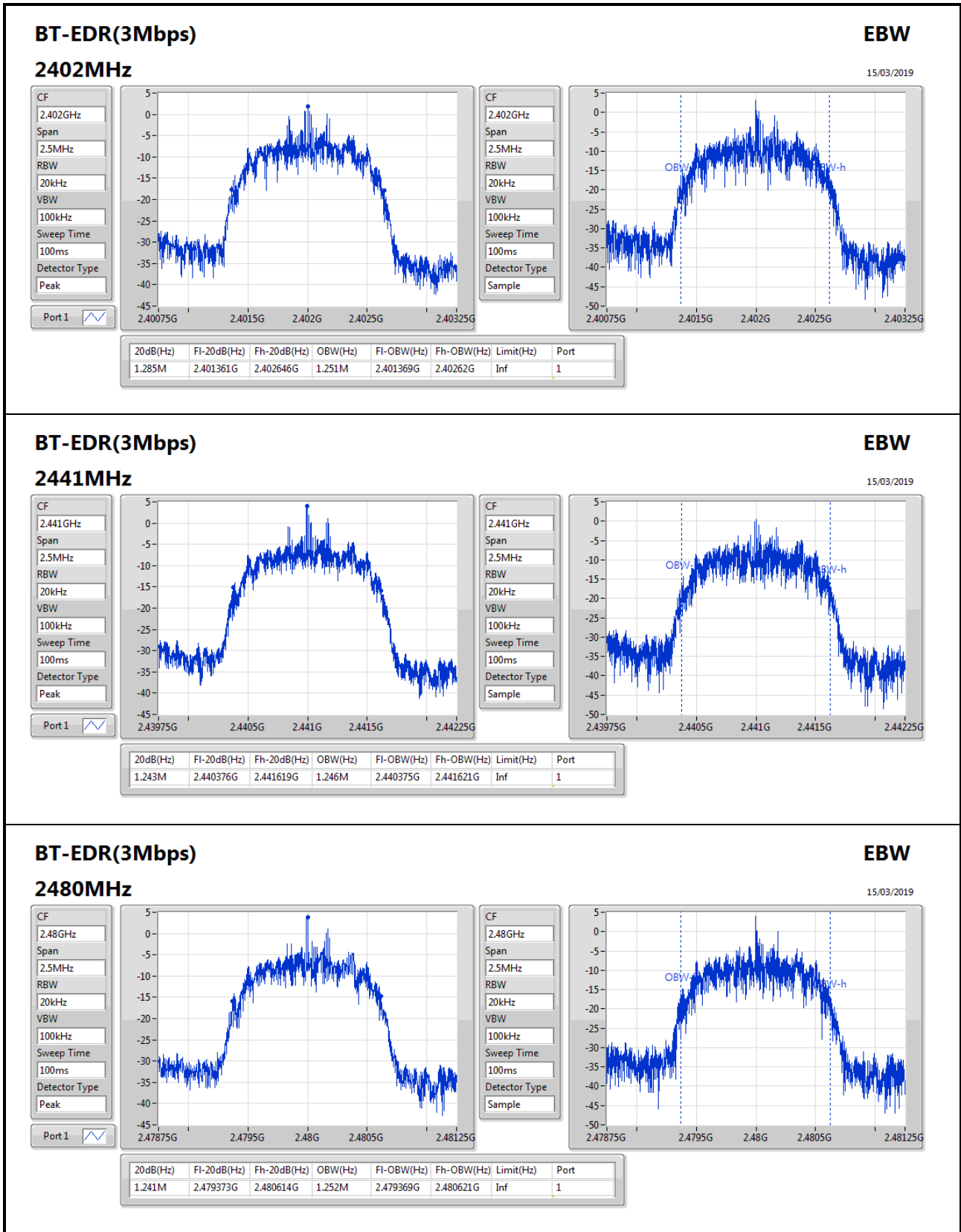
**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	876.25k	890.805k
2441MHz	Pass	Inf	917.5k	902.049k
2480MHz	Pass	Inf	875k	899.55k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.313M	1.284M
2441MHz	Pass	Inf	1.311M	1.272M
2480MHz	Pass	Inf	1.249M	1.269M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.285M	1.251M
2441MHz	Pass	Inf	1.243M	1.246M
2480MHz	Pass	Inf	1.241M	1.252M

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







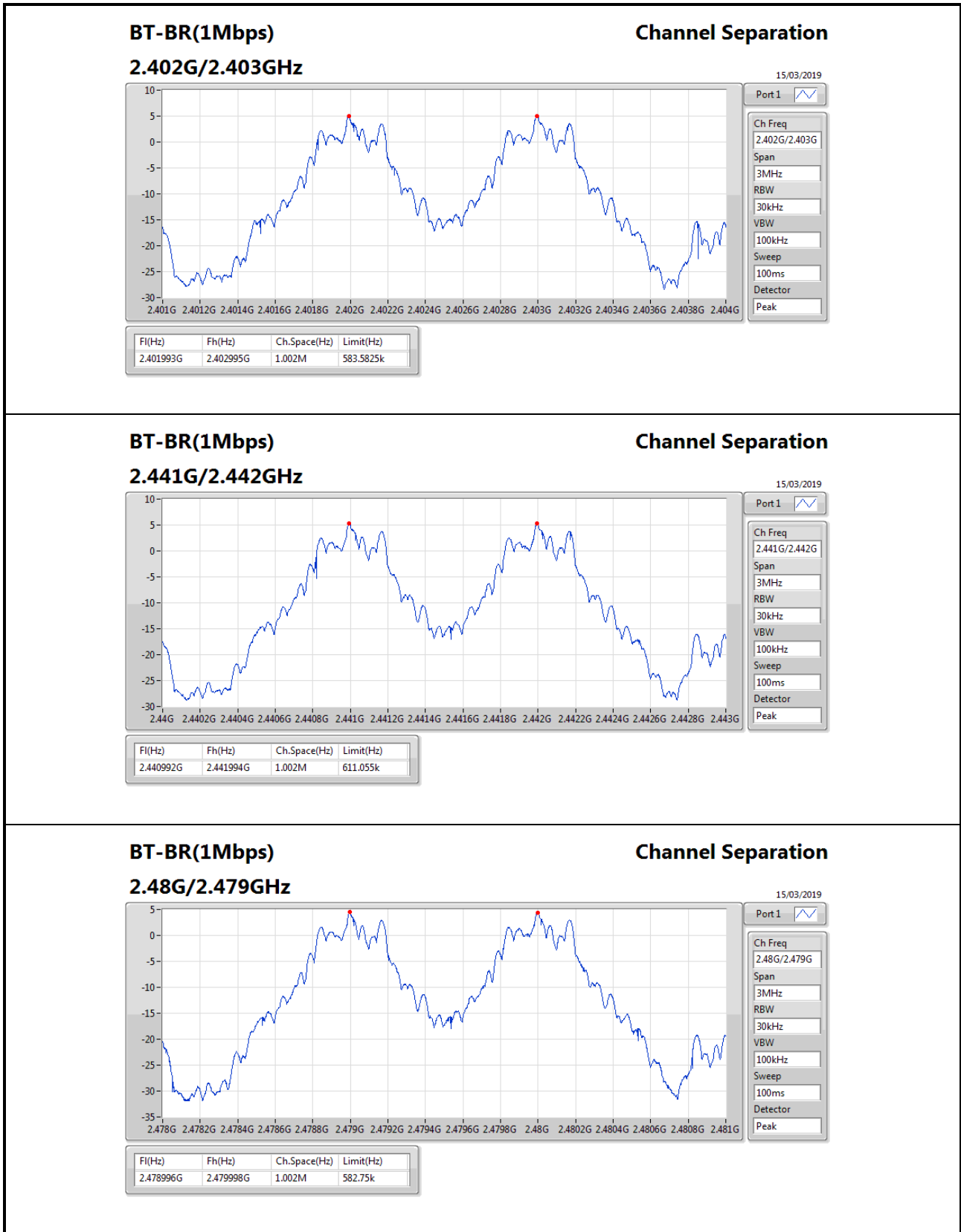


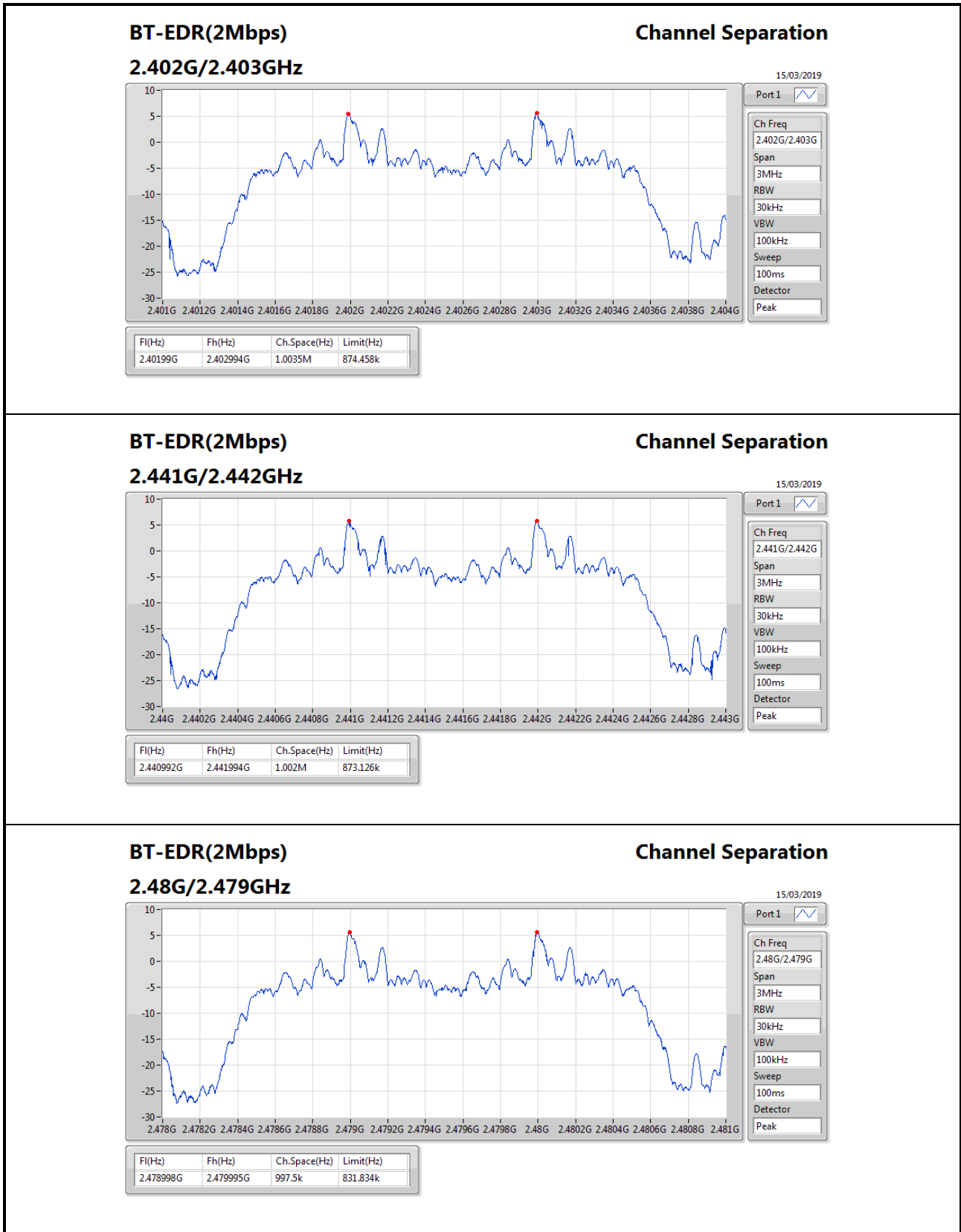
**Summary**

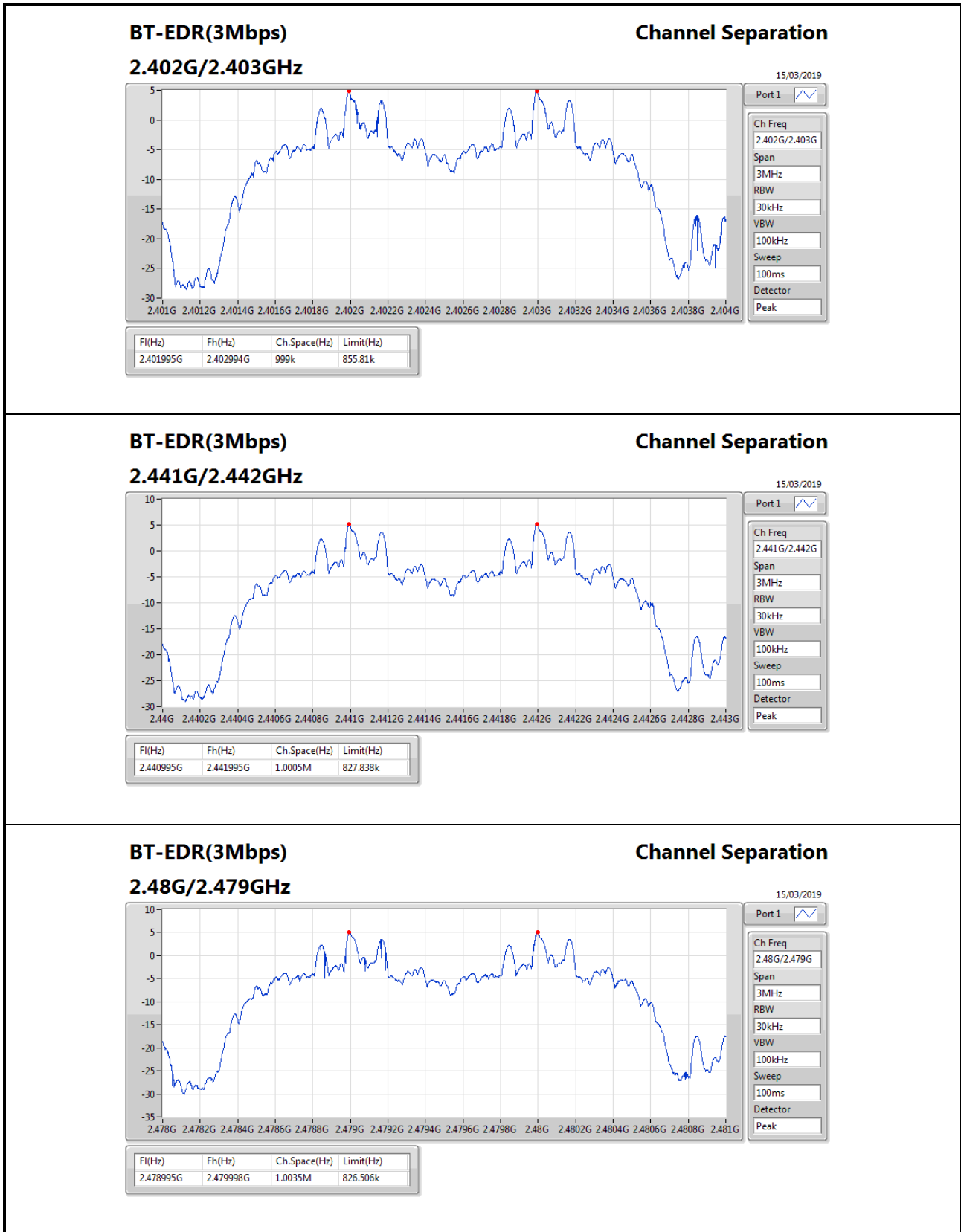
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.002M	1.002M
BT-EDR(2Mbps)	1.0035M	997.5k
BT-EDR(3Mbps)	1.0035M	999k

**Result**

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.401993G	2.402995G	1.002M	583.5825k
2441MHz	Pass	2.440992G	2.441994G	1.002M	611.055k
2480MHz	Pass	2.478996G	2.479998G	1.002M	582.75k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.40199G	2.402994G	1.0035M	874.458k
2441MHz	Pass	2.440992G	2.441994G	1.002M	873.126k
2480MHz	Pass	2.478998G	2.479995G	997.5k	831.834k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.401995G	2.402994G	999k	855.81k
2441MHz	Pass	2.440995G	2.441995G	1.0005M	827.838k
2480MHz	Pass	2.478995G	2.479998G	1.0035M	826.506k











**Summary**

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.39	0.00436
BT-EDR(2Mbps)	7.38	0.00547
BT-EDR(3Mbps)	6.88	0.00488

**Result**

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	4.10	6.19	21.00
2441MHz	Pass	4.10	6.39	21.00
2480MHz	Pass	4.10	4.94	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	4.10	7.22	21.00
2441MHz	Pass	4.10	7.38	21.00
2480MHz	Pass	4.10	7.19	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	4.10	6.62	21.00
2441MHz	Pass	4.10	6.85	21.00
2480MHz	Pass	4.10	6.88	21.00



Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	6.16	0.00413
BT-EDR(2Mbps)	5.85	0.00385
BT-EDR(3Mbps)	5.12	0.00325

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	4.10	5.88	21.00
2441MHz	Pass	4.10	6.16	21.00
2480MHz	Pass	4.10	5.33	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	4.10	5.66	21.00
2441MHz	Pass	4.10	5.85	21.00
2480MHz	Pass	4.10	5.67	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	4.10	4.80	21.00
2441MHz	Pass	4.10	5.09	21.00
2480MHz	Pass	4.10	5.12	21.00

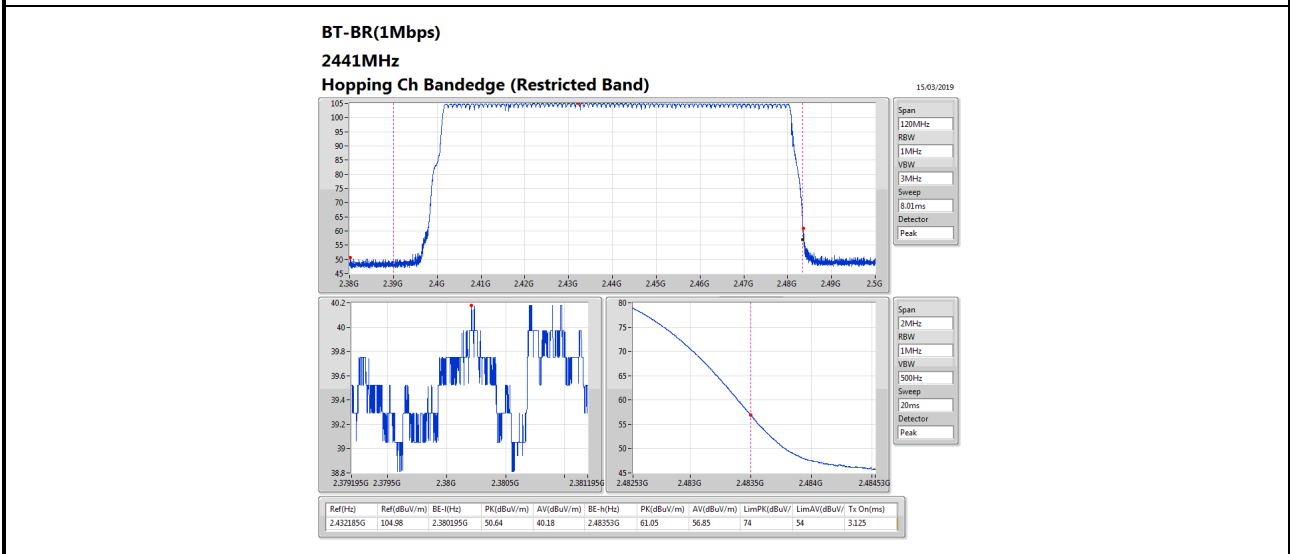
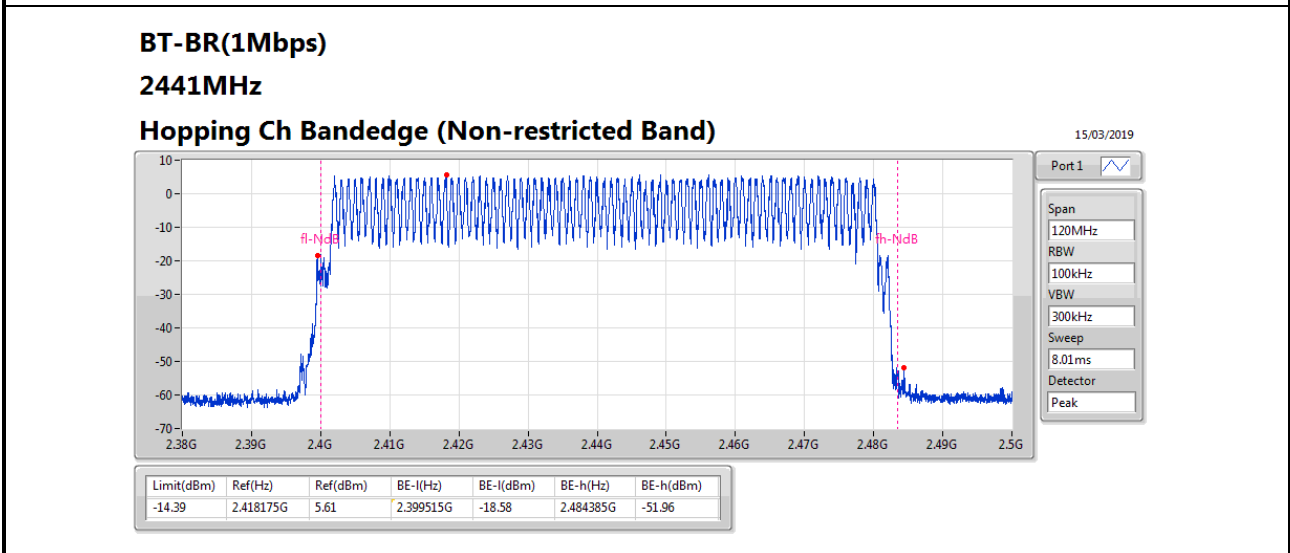
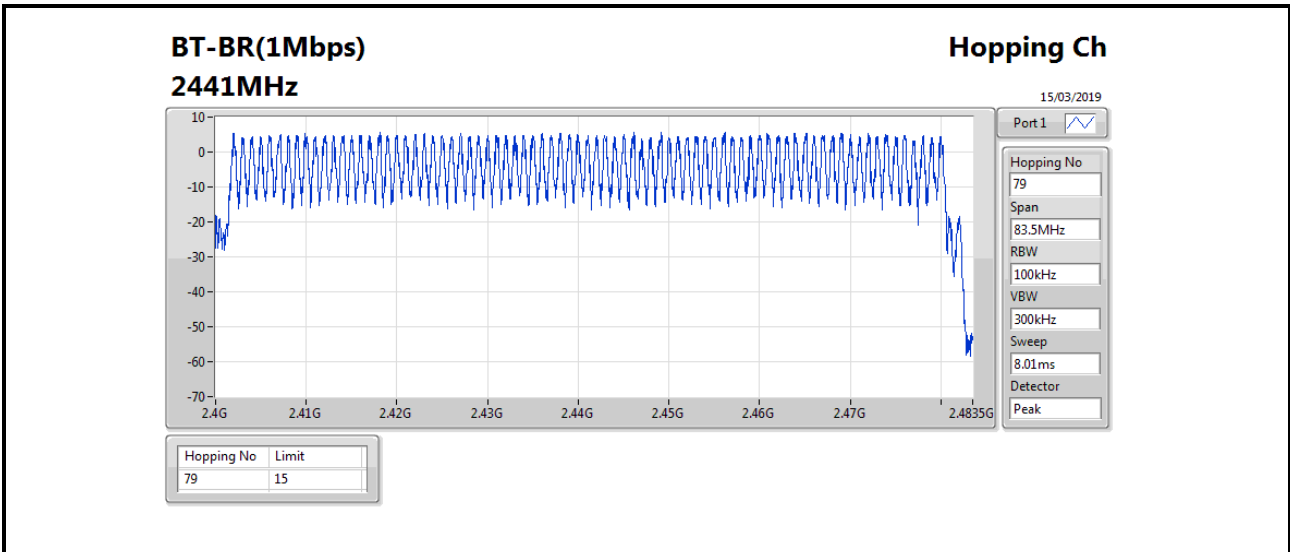


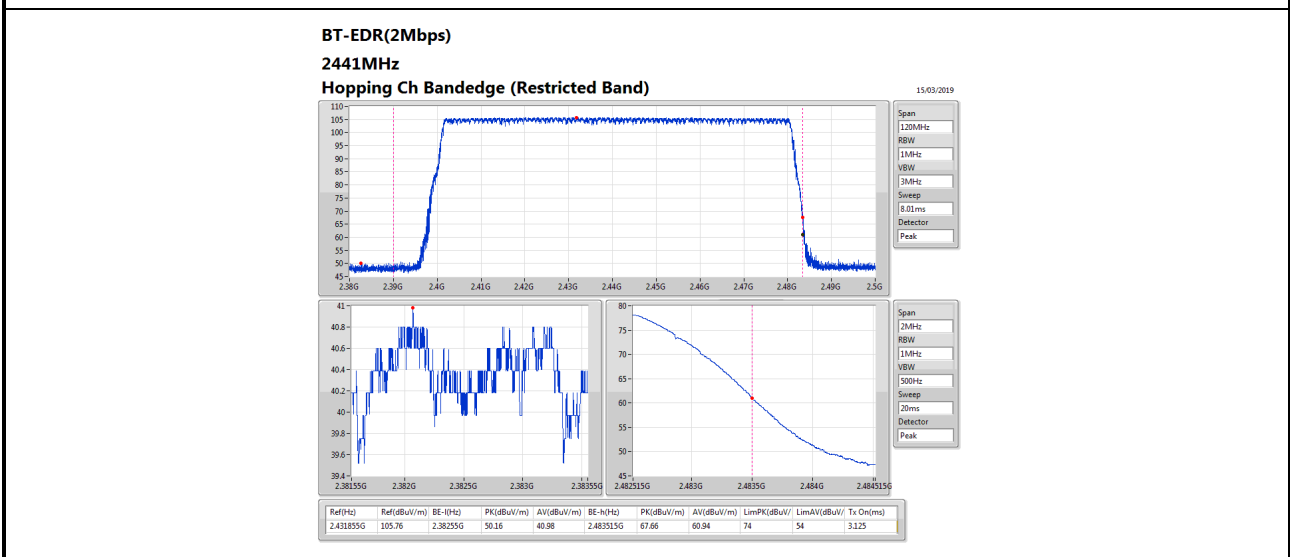
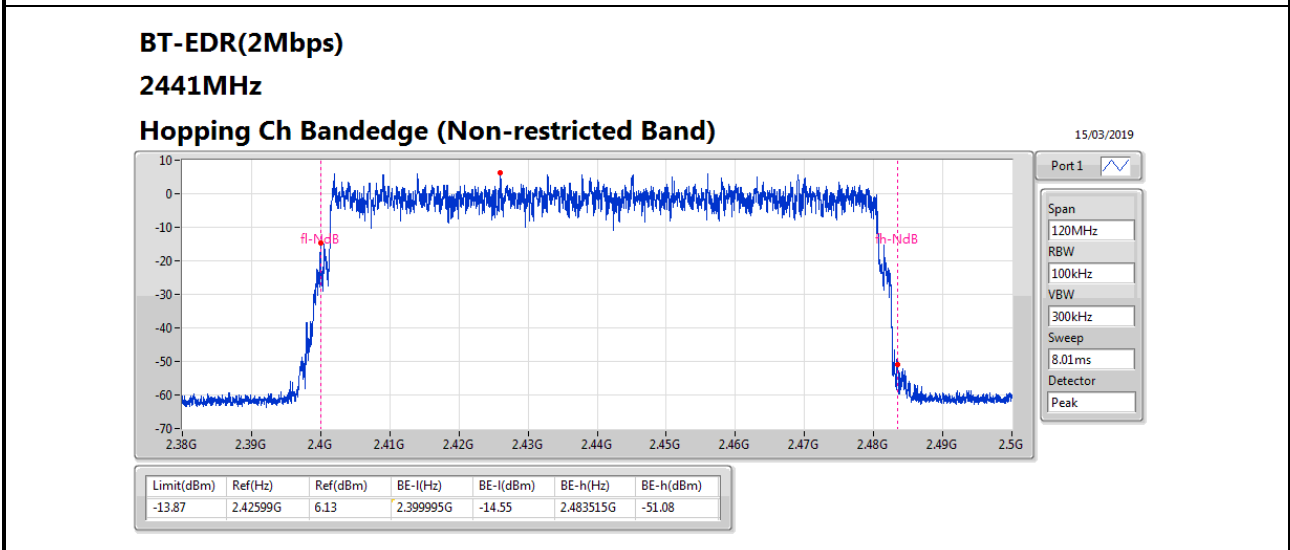
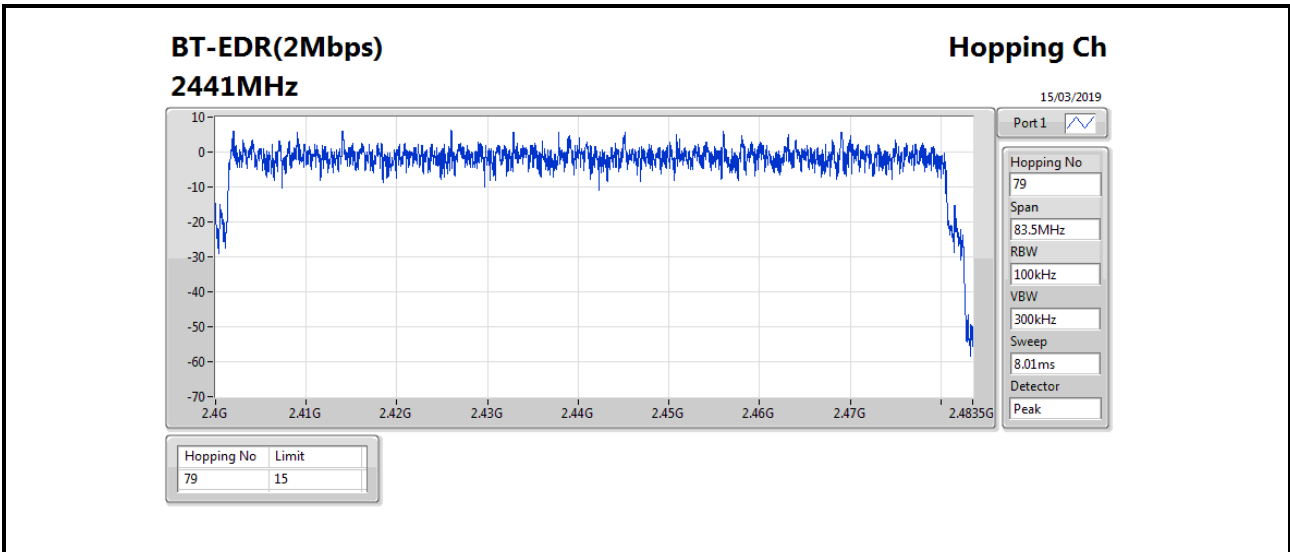
**Summary**

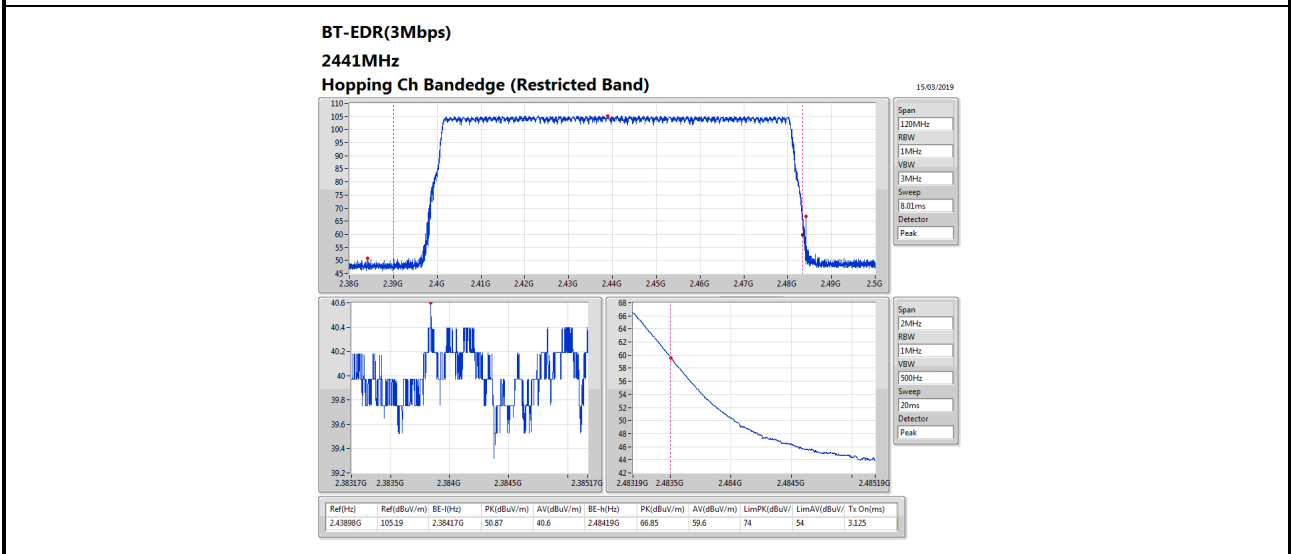
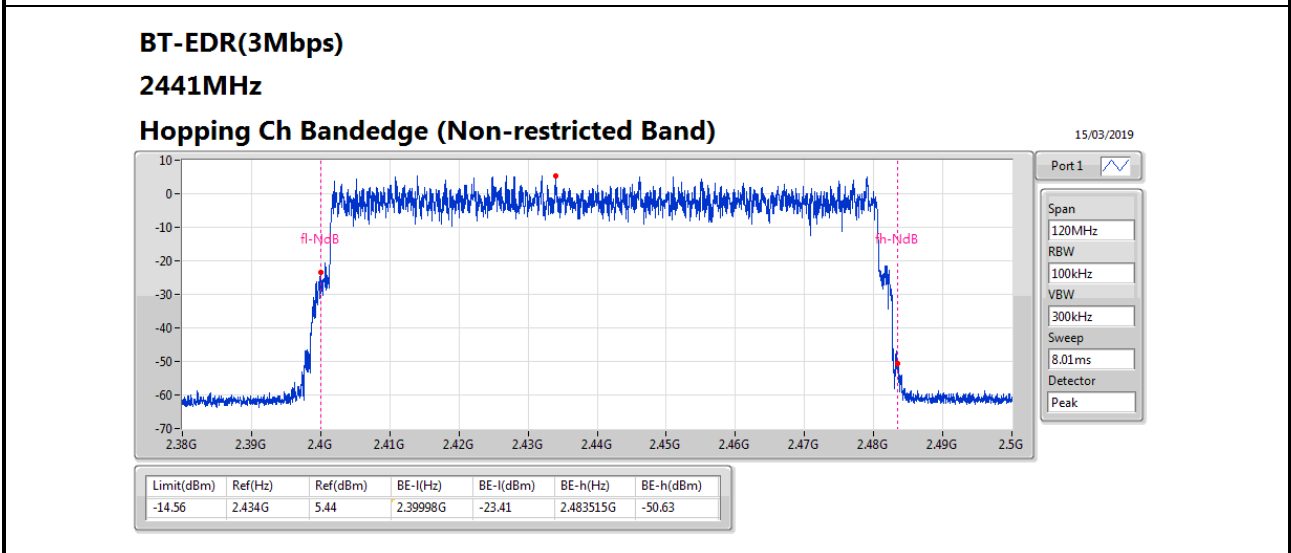
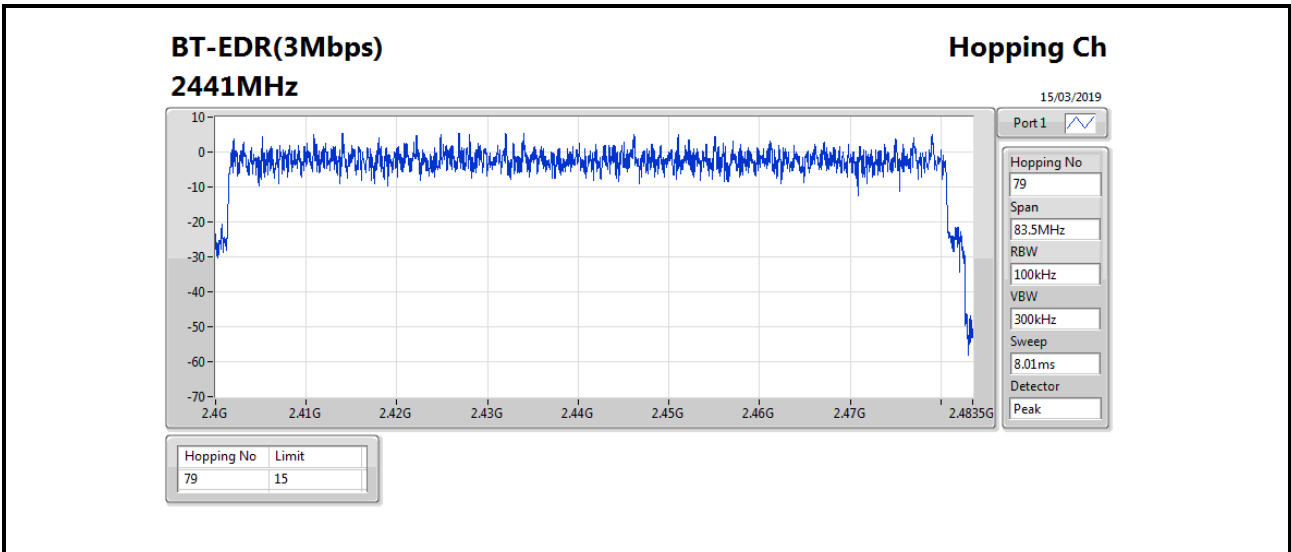
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

**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







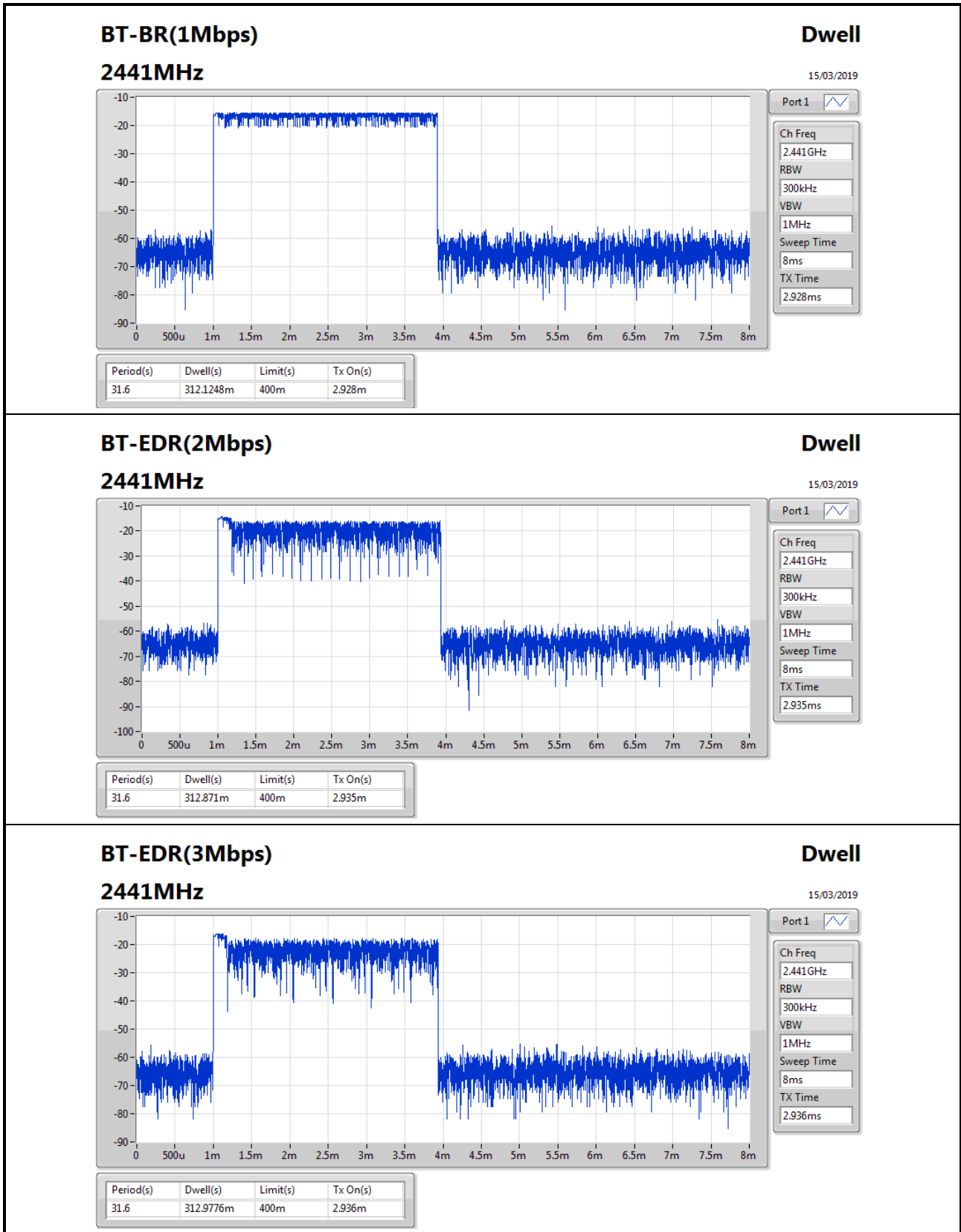


Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	312.1248m
BT-EDR(2Mbps)	312.871m
BT-EDR(3Mbps)	312.9776m

Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	312.1248m	400m	2.928m
BT-EDR(2Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	312.871m	400m	2.935m
BT-EDR(3Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	312.9776m	400m	2.936m





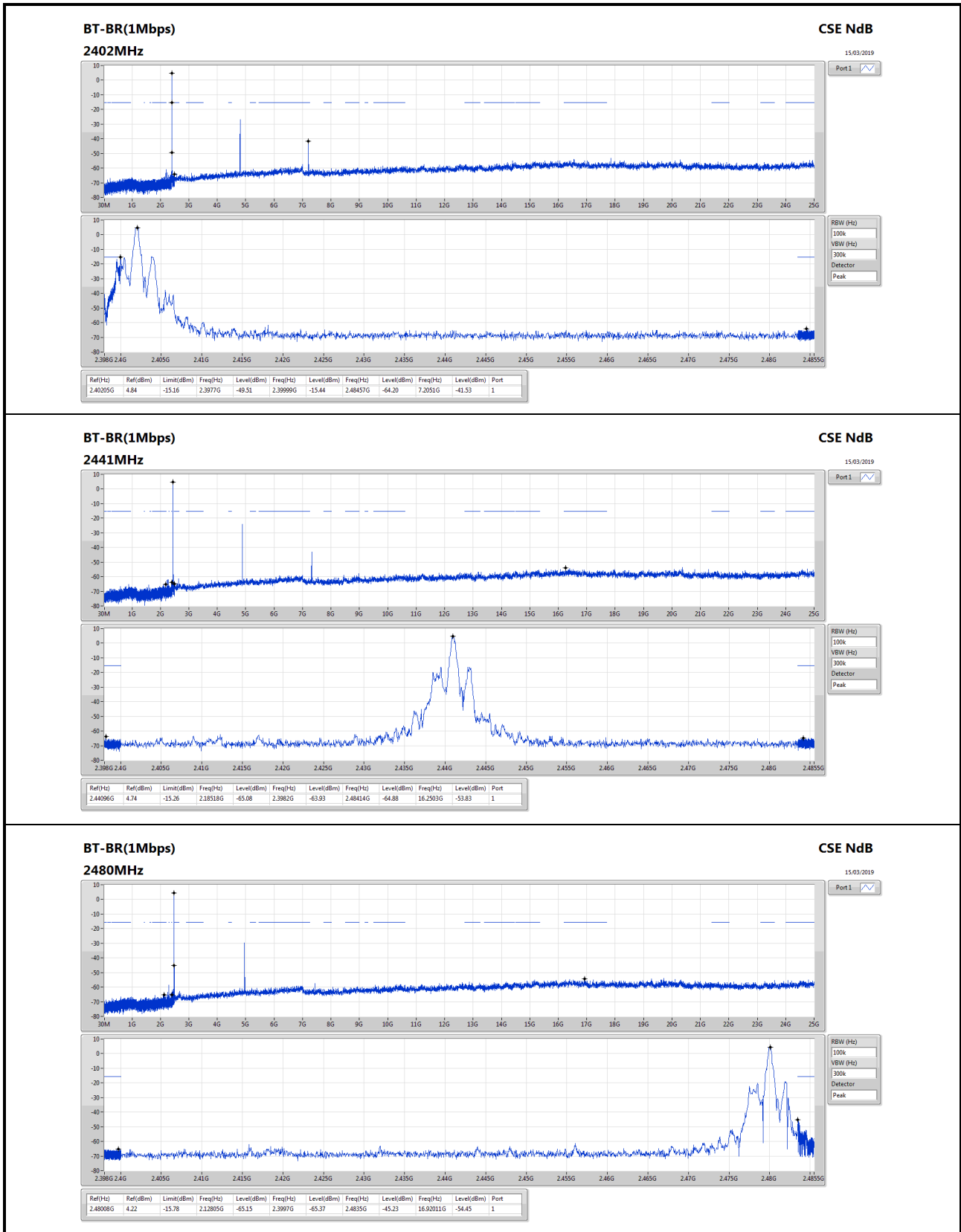


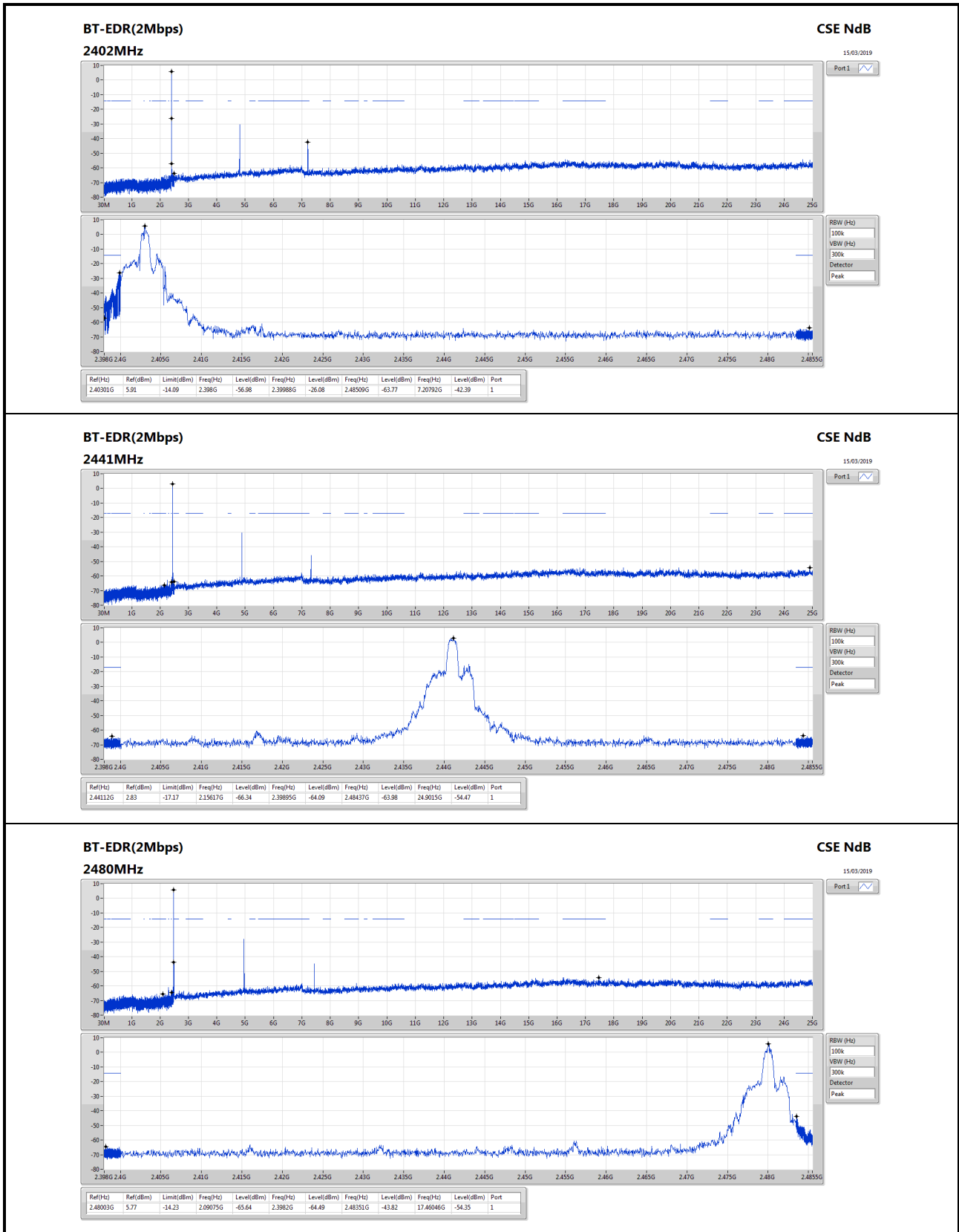
Summary

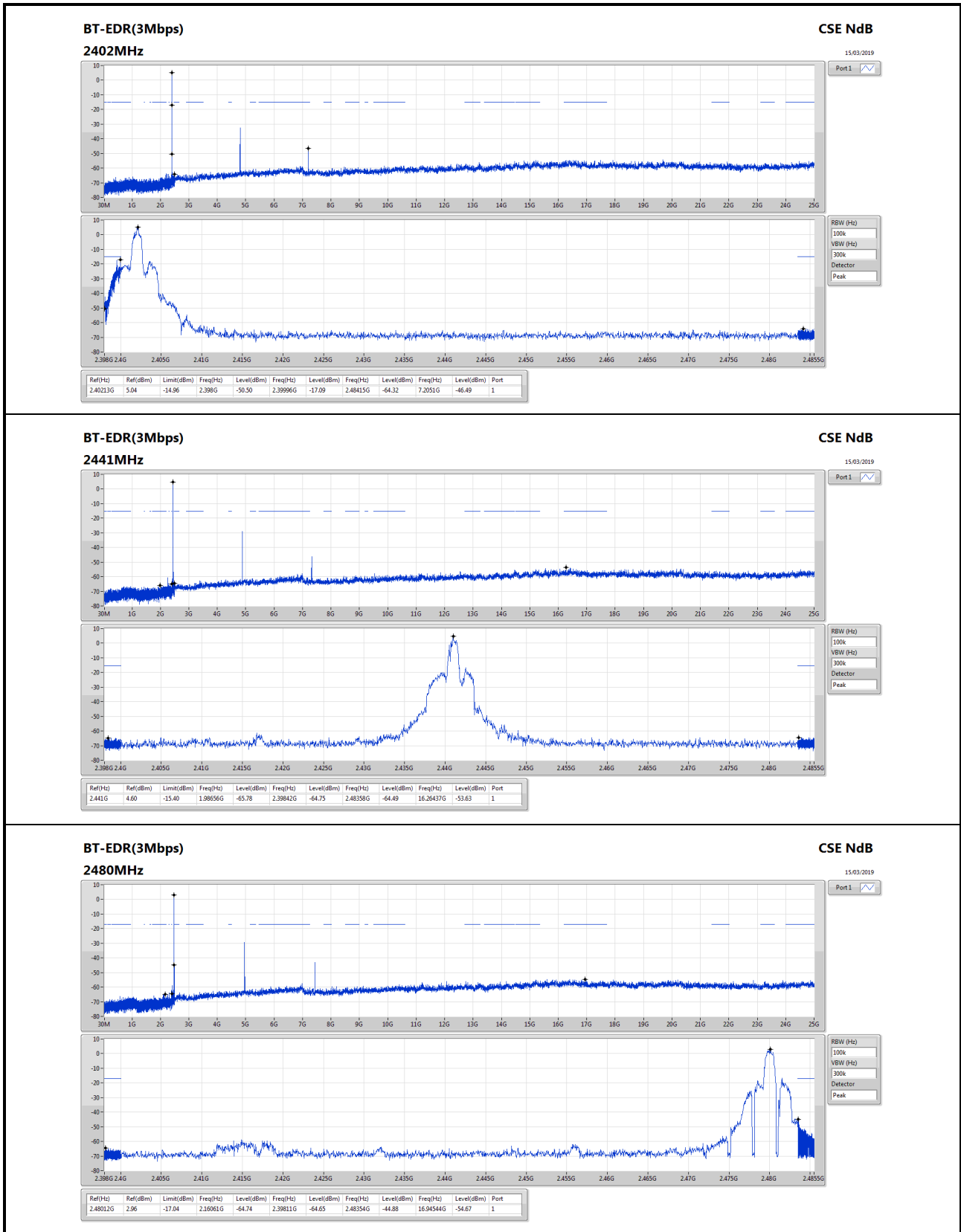
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.40205G	4.84	-15.16	2.3977G	-49.51	2.39999G	-15.44	2.48457G	-64.20	7.2051G	-41.53	1
BT-EDR(2Mbps)	Pass	2.40301G	5.91	-14.09	2.398G	-56.98	2.39988G	-26.08	2.48509G	-63.77	7.20792G	-42.39	1
BT-EDR(3Mbps)	Pass	2.40213G	5.04	-14.96	2.398G	-50.50	2.39996G	-17.09	2.48415G	-64.32	7.2051G	-46.49	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	2.40205G	4.84	-15.16	2.3977G	-49.51	2.39999G	-15.44	2.48457G	-64.20	7.2051G	-41.53	1
2441MHz	Pass	2.44096G	4.74	-15.26	2.18518G	-65.08	2.3982G	-63.93	2.48414G	-64.88	16.2503G	-53.83	1
2480MHz	Pass	2.48008G	4.22	-15.78	2.12805G	-65.15	2.3997G	-65.37	2.4835G	-45.23	16.92011G	-54.45	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40301G	5.91	-14.09	2.398G	-56.98	2.39988G	-26.08	2.48509G	-63.77	7.20792G	-42.39	1
2441MHz	Pass	2.44112G	2.83	-17.17	2.15617G	-66.34	2.39895G	-64.09	2.48437G	-63.98	24.9015G	-54.47	1
2480MHz	Pass	2.48003G	5.77	-14.23	2.09075G	-65.64	2.3982G	-64.49	2.48351G	-43.82	17.46046G	-54.35	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40213G	5.04	-14.96	2.398G	-50.50	2.39996G	-17.09	2.48415G	-64.32	7.2051G	-46.49	1
2441MHz	Pass	2.441G	4.60	-15.40	1.98656G	-65.78	2.39842G	-64.75	2.48358G	-64.49	16.26437G	-53.63	1
2480MHz	Pass	2.48012G	2.96	-17.04	2.16061G	-64.74	2.39811G	-64.65	2.48354G	-44.88	16.94544G	-54.67	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	127M	33.30	43.50	-10.20	-18.98	3	Horizontal	360	1.00	-



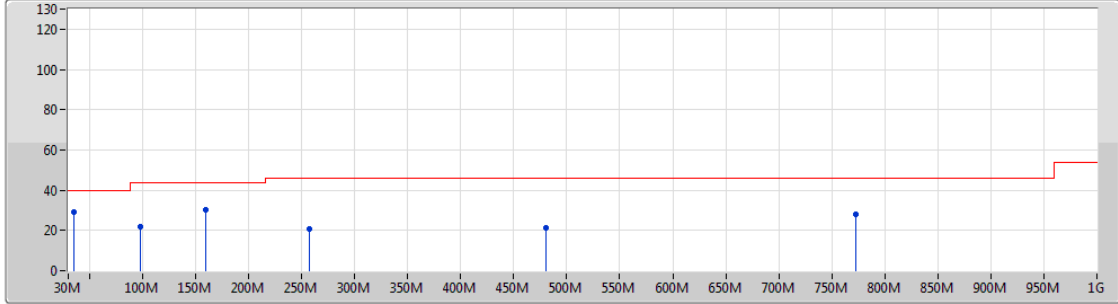
**Result**





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	29.05	40.00	-10.95	-16.12	3	Vertical	0	1.00	-
2441MHz	Pass	PK	97.9M	21.63	43.50	-21.87	-21.12	3	Vertical	0	1.00	-
2441MHz	Pass	PK	159.98M	30.29	43.50	-13.21	-19.77	3	Vertical	0	1.00	-
2441MHz	Pass	PK	256.98M	20.84	46.00	-25.16	-16.07	3	Vertical	0	1.00	-
2441MHz	Pass	PK	480.08M	21.45	46.00	-24.55	-12.10	3	Vertical	0	1.00	-
2441MHz	Pass	PK	773.02M	28.13	46.00	-17.87	-7.73	3	Vertical	0	1.00	-
2441MHz	Pass	PK	82.38M	21.92	40.00	-18.08	-23.42	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	97.9M	27.58	43.50	-15.92	-21.12	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	127M	33.30	43.50	-10.20	-18.98	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	258.92M	27.85	46.00	-18.15	-15.77	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	563.5M	24.26	46.00	-21.74	-9.99	3	Horizontal	360	1.00	-
2441MHz	Pass	PK	856.44M	28.28	46.00	-17.72	-6.61	3	Horizontal	360	1.00	-

**BT-BR(1Mbps)**

15/03/2019

**2441MHz\_Switching Power Supply**



Lim.PK   
 PK   
 Lim.AV   
 AV 

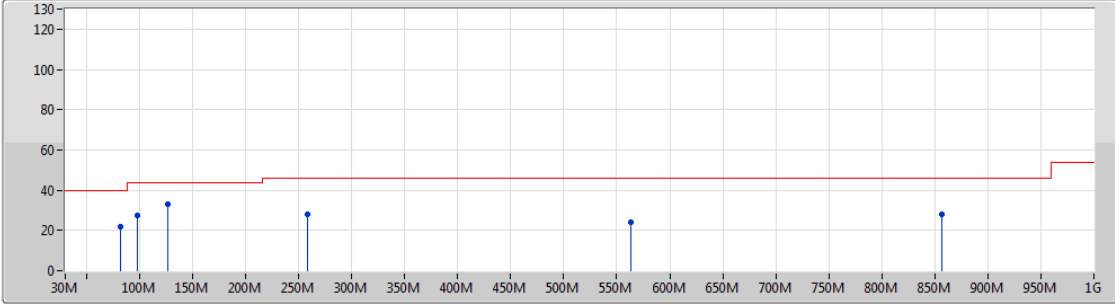
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	35.82M	29.05	40.00	-10.95	-16.12	3	Vertical	0	1.00	-
PK	97.9M	21.63	43.50	-21.87	-21.12	3	Vertical	0	1.00	-
PK	159.98M	30.29	43.50	-13.21	-19.77	3	Vertical	0	1.00	-
PK	256.98M	20.84	46.00	-25.16	-16.07	3	Vertical	0	1.00	-
PK	480.08M	21.45	46.00	-24.55	-12.10	3	Vertical	0	1.00	-
PK	773.02M	28.13	46.00	-17.87	-7.73	3	Vertical	0	1.00	-



**BT-BR(1Mbps)**

15/03/2019

**2441MHz\_Switching Power Supply**



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
PK	82.38M	21.92	40.00	-18.08	-23.42	3	Horizontal	360	1.00	-
PK	97.9M	27.58	43.50	-15.92	-21.12	3	Horizontal	360	1.00	-
PK	127M	33.30	43.50	-10.20	-18.98	3	Horizontal	360	1.00	-
PK	258.92M	27.85	46.00	-18.15	-15.77	3	Horizontal	360	1.00	-
PK	563.5M	24.26	46.00	-21.74	-9.99	3	Horizontal	360	1.00	-
PK	856.44M	28.28	46.00	-17.72	-6.61	3	Horizontal	360	1.00	-





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	4.96004G	53.48	54.00	-0.52	2.47	3	Vertical	273	1.01	-
BT-EDR(3Mbps)	Pass	AV	7.32309G	53.87	54.00	-0.13	8.04	3	Horizontal	297	2.19	-



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	2.3796G	43.09	54.00	-10.91	30.74	3	Vertical	42	1.57	-
2402MHz	Pass	AV	2.402G	92.06	Inf	-Inf	30.82	3	Vertical	42	1.57	-
2402MHz	Pass	PK	2.3788G	55.54	74.00	-18.46	30.74	3	Vertical	42	1.57	-
2402MHz	Pass	PK	2.4022G	92.54	Inf	-Inf	30.82	3	Vertical	42	1.57	-
2402MHz	Pass	AV	2.3872G	42.96	54.00	-11.04	30.76	3	Horizontal	207	1.45	-
2402MHz	Pass	AV	2.402G	99.38	Inf	-Inf	30.82	3	Horizontal	207	1.45	-
2402MHz	Pass	PK	2.3568G	55.96	74.00	-18.04	30.66	3	Horizontal	207	1.45	-
2402MHz	Pass	PK	2.4022G	99.76	Inf	-Inf	30.82	3	Horizontal	207	1.45	-
2402MHz	Pass	AV	4.80401G	48.56	54.00	-5.44	2.08	3	Vertical	278	1.35	-
2402MHz	Pass	PK	4.80424G	52.88	74.00	-21.12	2.08	3	Vertical	278	1.35	-
2402MHz	Pass	AV	4.80403G	49.70	54.00	-4.30	2.08	3	Horizontal	292	1.00	-
2402MHz	Pass	PK	4.80432G	53.87	74.00	-20.13	2.08	3	Horizontal	292	1.00	-
2441MHz	Pass	AV	2.3478G	42.84	54.00	-11.16	30.62	3	Vertical	277	1.42	-
2441MHz	Pass	AV	2.441G	102.95	Inf	-Inf	30.95	3	Vertical	277	1.42	-
2441MHz	Pass	AV	2.4862G	43.73	54.00	-10.27	31.12	3	Vertical	277	1.42	-
2441MHz	Pass	PK	2.3814G	55.84	74.00	-18.16	30.75	3	Vertical	277	1.42	-
2441MHz	Pass	PK	2.441G	103.56	Inf	-Inf	30.95	3	Vertical	277	1.42	-
2441MHz	Pass	PK	2.4954G	56.25	74.00	-17.75	31.16	3	Vertical	277	1.42	-
2441MHz	Pass	AV	2.3842G	42.87	54.00	-11.13	30.76	3	Horizontal	161	1.04	-
2441MHz	Pass	AV	2.441G	98.34	Inf	-Inf	30.95	3	Horizontal	161	1.04	-
2441MHz	Pass	AV	2.4946G	43.75	54.00	-10.25	31.15	3	Horizontal	161	1.04	-
2441MHz	Pass	PK	2.3498G	55.75	74.00	-18.25	30.63	3	Horizontal	161	1.04	-
2441MHz	Pass	PK	2.441G	98.74	Inf	-Inf	30.95	3	Horizontal	161	1.04	-
2441MHz	Pass	PK	2.485G	55.70	74.00	-18.30	31.12	3	Horizontal	161	1.04	-
2441MHz	Pass	AV	4.88201G	51.41	54.00	-2.59	2.27	3	Vertical	278	1.03	-
2441MHz	Pass	AV	7.32305G	51.51	54.00	-2.49	8.04	3	Vertical	293	1.99	-
2441MHz	Pass	PK	4.88228G	55.05	74.00	-18.95	2.27	3	Vertical	278	1.03	-
2441MHz	Pass	PK	7.32352G	57.62	74.00	-16.38	8.04	3	Vertical	293	1.99	-
2441MHz	Pass	AV	4.88205G	51.91	54.00	-2.09	2.27	3	Horizontal	302	1.00	-
2441MHz	Pass	AV	7.32305G	52.94	54.00	-1.06	8.04	3	Horizontal	310	2.18	-
2441MHz	Pass	PK	4.88221G	54.80	74.00	-19.20	2.27	3	Horizontal	300	1.00	-
2441MHz	Pass	PK	7.32346G	58.71	74.00	-15.29	8.04	3	Horizontal	310	2.18	-
2480MHz	Pass	AV	2.48G	102.46	Inf	-Inf	31.09	3	Vertical	275	1.29	-
2480MHz	Pass	AV	2.4835G	46.48	54.00	-7.52	31.11	3	Vertical	275	1.29	-
2480MHz	Pass	PK	2.4802G	102.86	Inf	-Inf	31.09	3	Vertical	275	1.29	-
2480MHz	Pass	PK	2.4838G	64.47	74.00	-9.53	31.11	3	Vertical	275	1.29	-
2480MHz	Pass	AV	2.48G	98.54	Inf	-Inf	31.09	3	Horizontal	160	2.99	-
2480MHz	Pass	AV	2.4835G	45.22	54.00	-8.78	31.11	3	Horizontal	160	2.99	-
2480MHz	Pass	PK	2.4802G	98.94	Inf	-Inf	31.09	3	Horizontal	160	2.99	-
2480MHz	Pass	PK	2.4836G	64.41	74.00	-9.59	31.11	3	Horizontal	160	2.99	-
2480MHz	Pass	AV	4.96004G	53.48	54.00	-0.52	2.47	3	Vertical	273	1.01	-
2480MHz	Pass	AV	7.43999G	41.53	54.00	-12.47	8.37	3	Vertical	288	2.06	-
2480MHz	Pass	PK	4.96027G	56.44	74.00	-17.56	2.47	3	Vertical	273	1.01	-
2480MHz	Pass	PK	7.44057G	51.65	74.00	-22.35	8.38	3	Vertical	288	2.06	-
2480MHz	Pass	AV	4.96005G	52.22	54.00	-1.78	2.47	3	Horizontal	285	1.02	-
2480MHz	Pass	AV	7.44013G	40.98	54.00	-13.02	8.37	3	Horizontal	302	1.05	-
2480MHz	Pass	PK	4.96027G	55.61	74.00	-18.39	2.47	3	Horizontal	285	1.02	-



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	7.4405G	51.05	74.00	-22.95	8.38	3	Horizontal	302	1.05	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3776G	42.98	54.00	-11.02	30.73	3	Vertical	269	1.66	-
2402MHz	Pass	AV	2.402G	101.87	Inf	-Inf	30.82	3	Vertical	269	1.66	-
2402MHz	Pass	PK	2.3616G	55.68	74.00	-18.32	30.67	3	Vertical	269	1.66	-
2402MHz	Pass	PK	2.4022G	104.75	Inf	-Inf	30.82	3	Vertical	269	1.66	-
2402MHz	Pass	AV	2.3784G	43.00	54.00	-11.00	30.73	3	Horizontal	216	2.76	-
2402MHz	Pass	AV	2.402G	99.79	Inf	-Inf	30.82	3	Horizontal	216	2.76	-
2402MHz	Pass	PK	2.3808G	56.00	74.00	-18.00	30.75	3	Horizontal	216	2.76	-
2402MHz	Pass	PK	2.4022G	102.67	Inf	-Inf	30.82	3	Horizontal	216	2.76	-
2402MHz	Pass	AV	4.80412G	48.85	54.00	-5.15	2.08	3	Vertical	269	1.27	-
2402MHz	Pass	PK	4.80413G	56.47	74.00	-17.53	2.08	3	Vertical	269	1.27	-
2402MHz	Pass	AV	4.80419G	52.00	54.00	-2.00	2.08	3	Horizontal	282	1.00	-
2402MHz	Pass	PK	4.80402G	58.92	74.00	-15.08	2.08	3	Horizontal	282	1.00	-
2441MHz	Pass	AV	2.3782G	43.05	54.00	-10.95	30.73	3	Vertical	270	1.28	-
2441MHz	Pass	AV	2.4406G	100.24	Inf	-Inf	30.95	3	Vertical	270	1.28	-
2441MHz	Pass	AV	2.4838G	43.88	54.00	-10.12	31.11	3	Vertical	270	1.28	-
2441MHz	Pass	PK	2.365G	55.87	74.00	-18.13	30.69	3	Vertical	270	1.28	-
2441MHz	Pass	PK	2.441G	104.36	Inf	-Inf	30.95	3	Vertical	270	1.28	-
2441MHz	Pass	PK	2.4962G	55.64	74.00	-18.36	31.16	3	Vertical	270	1.28	-
2441MHz	Pass	AV	2.3894G	42.89	54.00	-11.11	30.77	3	Horizontal	152	1.04	-
2441MHz	Pass	AV	2.441G	96.57	Inf	-Inf	30.95	3	Horizontal	152	1.04	-
2441MHz	Pass	AV	2.499G	43.83	54.00	-10.17	31.17	3	Horizontal	152	1.04	-
2441MHz	Pass	PK	2.3446G	55.09	74.00	-18.91	30.61	3	Horizontal	152	1.04	-
2441MHz	Pass	PK	2.4414G	99.37	Inf	-Inf	30.96	3	Horizontal	152	1.04	-
2441MHz	Pass	PK	2.4954G	56.13	74.00	-17.87	31.16	3	Horizontal	152	1.04	-
2441MHz	Pass	AV	4.88203G	52.29	54.00	-1.71	2.27	3	Vertical	266	1.03	-
2441MHz	Pass	AV	7.3231G	53.59	54.00	-0.41	8.04	3	Vertical	282	1.98	-
2441MHz	Pass	PK	4.88207G	59.39	74.00	-14.61	2.27	3	Vertical	266	1.03	-
2441MHz	Pass	PK	7.32292G	62.65	74.00	-11.35	8.04	3	Vertical	282	1.98	-
2441MHz	Pass	AV	4.88201G	51.82	54.00	-2.18	2.27	3	Horizontal	290	1.00	-
2441MHz	Pass	AV	7.32309G	53.87	54.00	-0.13	8.04	3	Horizontal	297	2.19	-
2441MHz	Pass	PK	4.882G	59.12	74.00	-14.88	2.27	3	Horizontal	290	1.00	-
2441MHz	Pass	PK	7.32297G	62.55	74.00	-11.45	8.04	3	Horizontal	297	2.19	-
2480MHz	Pass	AV	2.48G	100.24	Inf	-Inf	31.09	3	Vertical	261	1.32	-
2480MHz	Pass	AV	2.4835G	50.47	54.00	-3.53	31.11	3	Vertical	261	1.32	-
2480MHz	Pass	PK	2.4802G	103.36	Inf	-Inf	31.09	3	Vertical	261	1.32	-
2480MHz	Pass	PK	2.4835G	69.67	74.00	-4.33	31.11	3	Vertical	261	1.32	-
2480MHz	Pass	AV	2.48G	95.61	Inf	-Inf	31.09	3	Horizontal	145	2.99	-
2480MHz	Pass	AV	2.4835G	47.52	54.00	-6.48	31.11	3	Horizontal	145	2.99	-
2480MHz	Pass	PK	2.4802G	98.74	Inf	-Inf	31.09	3	Horizontal	145	2.99	-
2480MHz	Pass	PK	2.4836G	64.80	74.00	-9.20	31.11	3	Horizontal	145	2.99	-
2480MHz	Pass	AV	4.96001G	53.74	54.00	-0.26	2.47	3	Vertical	260	1.00	-
2480MHz	Pass	AV	7.44011G	43.43	54.00	-10.57	8.37	3	Vertical	276	2.14	-
2480MHz	Pass	PK	4.9601G	60.61	74.00	-13.39	2.47	3	Vertical	260	1.00	-
2480MHz	Pass	PK	7.44003G	55.28	74.00	-18.72	8.37	3	Vertical	276	2.14	-
2480MHz	Pass	AV	4.96004G	52.53	54.00	-1.47	2.47	3	Horizontal	273	1.01	-
2480MHz	Pass	AV	7.4402G	42.63	54.00	-11.37	8.37	3	Horizontal	292	2.22	-
2480MHz	Pass	PK	4.95995G	59.28	74.00	-14.72	2.47	3	Horizontal	273	1.01	-



## RSE TX above 1GHz Result

## Appendix G.2

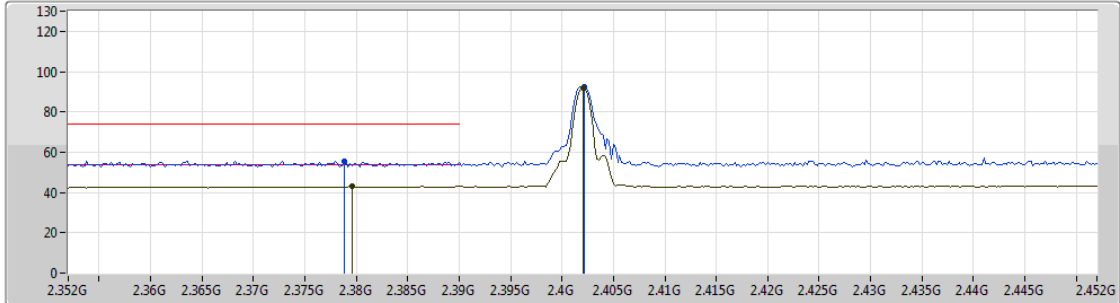
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2480MHz	Pass	PK	7.4399G	53.85	74.00	-20.15	8.37	3	Horizontal	292	2.22	-



BT-BR(1Mbps)

2402MHz\_TX

15/03/2019



Lim.PK    
 PK    
 Lim.AV    
 AV

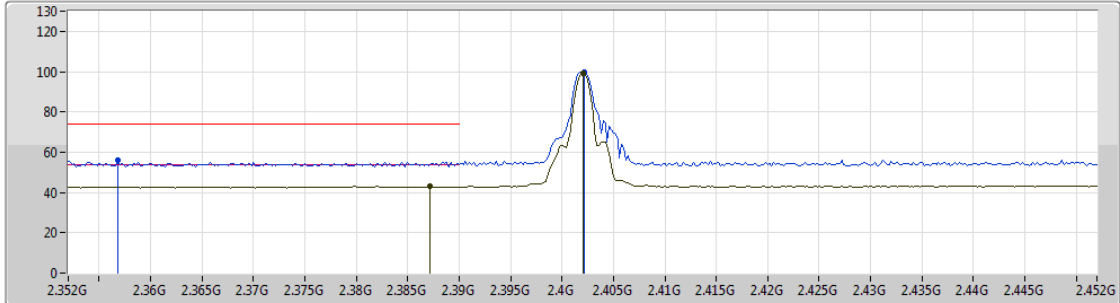
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3796G	43.09	54.00	-10.91	30.74	3	Vertical	42	1.57	-
AV	2.402G	92.06	Inf	-Inf	30.82	3	Vertical	42	1.57	-
PK	2.3788G	55.54	74.00	-18.46	30.74	3	Vertical	42	1.57	-
PK	2.4022G	92.54	Inf	-Inf	30.82	3	Vertical	42	1.57	-



BT-BR(1Mbps)

2402MHz\_TX

15/03/2019



Lim.PK    
 PK    
 Lim.AV    
 AV

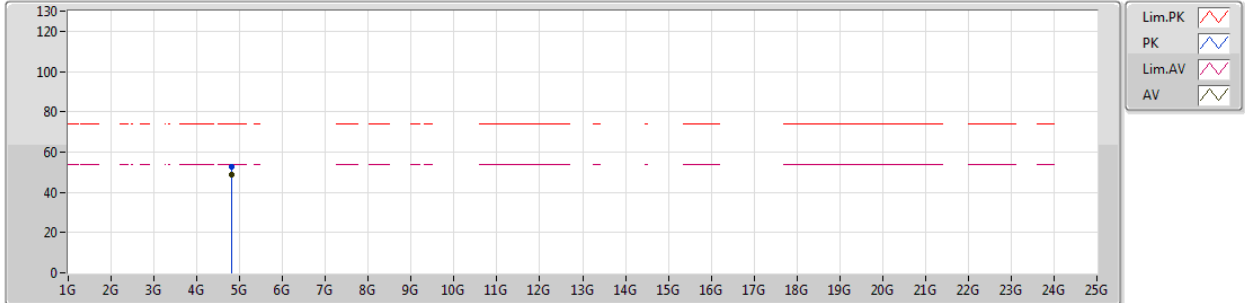
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3872G	42.96	54.00	-11.04	30.76	3	Horizontal	207	1.45	-
AV	2.402G	99.38	Inf	-Inf	30.82	3	Horizontal	207	1.45	-
PK	2.3568G	55.96	74.00	-18.04	30.66	3	Horizontal	207	1.45	-
PK	2.4022G	99.76	Inf	-Inf	30.82	3	Horizontal	207	1.45	-



BT-BR(1Mbps)

15/03/2019

2402MHz\_TX



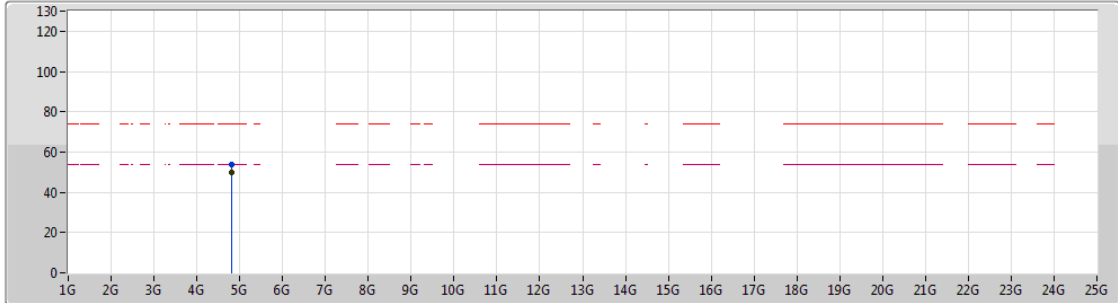
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80401G	48.56	54.00	-5.44	2.08	3	Vertical	278	1.35	-
PK	4.80424G	52.88	74.00	-21.12	2.08	3	Vertical	278	1.35	-



BT-BR(1Mbps)

15/03/2019

2402MHz\_TX



Legend for plot:

- Lim.PK
- PK
- Lim.AV
- AV

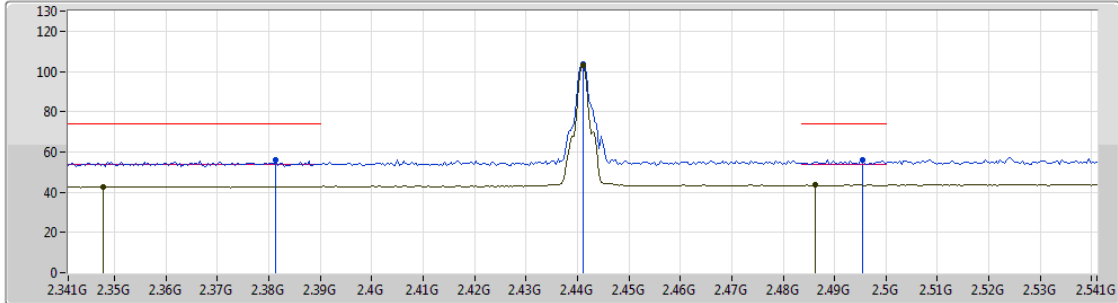
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80403G	49.70	54.00	-4.30	2.08	3	Horizontal	292	1.00	-
PK	4.80432G	53.87	74.00	-20.13	2.08	3	Horizontal	292	1.00	-







**BT-BR(1Mbps)**

**2441MHz\_TX**

15/03/2019



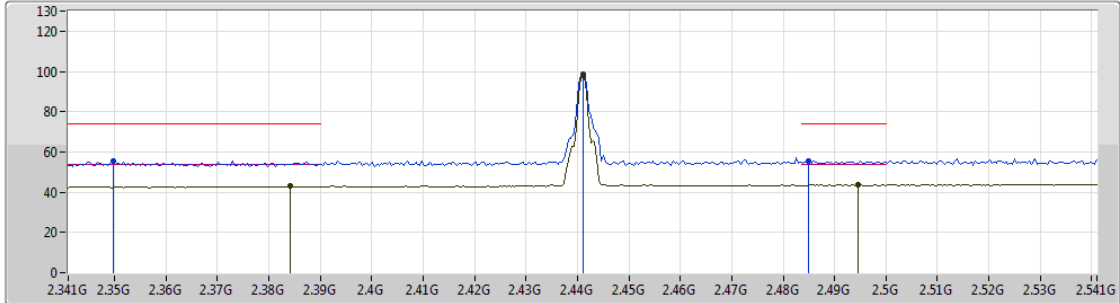
Lim.PK    
 PK    
 Lim.AV    
 AV  





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3478G	42.84	54.00	-11.16	30.62	3	Vertical	277	1.42	-
AV	2.441G	102.95	Inf	-Inf	30.95	3	Vertical	277	1.42	-
AV	2.4862G	43.73	54.00	-10.27	31.12	3	Vertical	277	1.42	-
PK	2.3814G	55.84	74.00	-18.16	30.75	3	Vertical	277	1.42	-
PK	2.441G	103.56	Inf	-Inf	30.95	3	Vertical	277	1.42	-
PK	2.4954G	56.25	74.00	-17.75	31.16	3	Vertical	277	1.42	-

**BT-BR(1Mbps)**

15/03/2019

**2441MHz\_TX**



Lim.PK    
 PK    
 Lim.AV    
 AV  

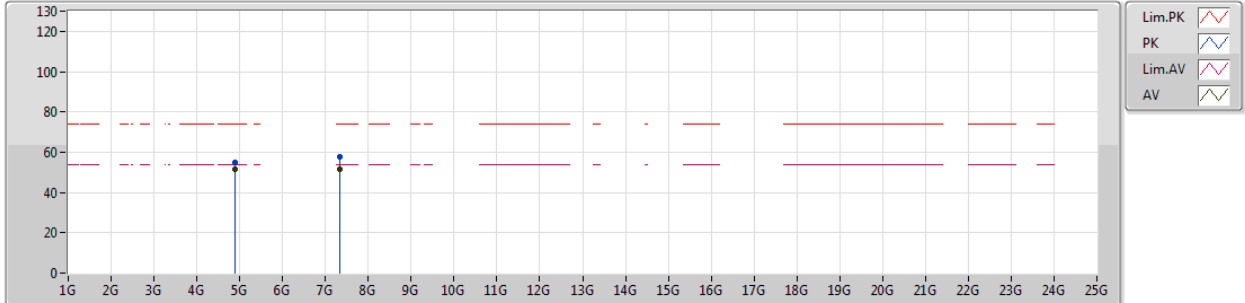
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3842G	42.87	54.00	-11.13	30.76	3	Horizontal	161	1.04	-
AV	2.441G	98.34	Inf	-Inf	30.95	3	Horizontal	161	1.04	-
AV	2.4946G	43.75	54.00	-10.25	31.15	3	Horizontal	161	1.04	-
PK	2.3498G	55.75	74.00	-18.25	30.63	3	Horizontal	161	1.04	-
PK	2.441G	98.74	Inf	-Inf	30.95	3	Horizontal	161	1.04	-
PK	2.485G	55.70	74.00	-18.30	31.12	3	Horizontal	161	1.04	-



BT-BR(1Mbps)

15/03/2019

2441MHz\_TX

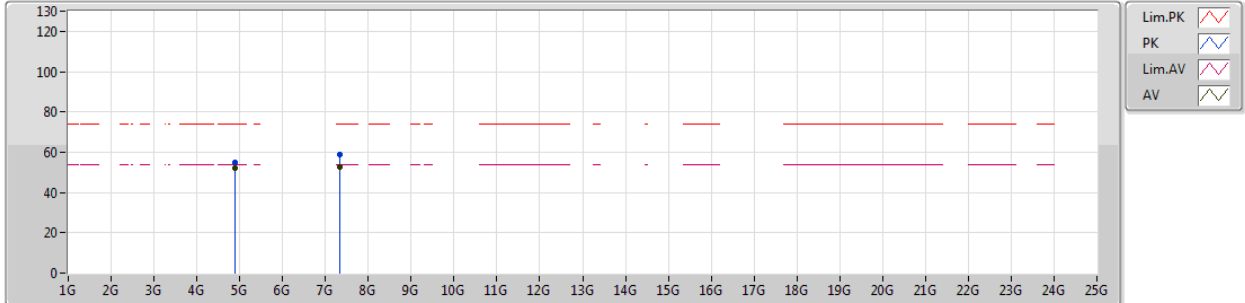


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88201G	51.41	54.00	-2.59	2.27	3	Vertical	278	1.03	-
AV	7.32305G	51.51	54.00	-2.49	8.04	3	Vertical	293	1.99	-
PK	4.88228G	55.05	74.00	-18.95	2.27	3	Vertical	278	1.03	-
PK	7.32352G	57.62	74.00	-16.38	8.04	3	Vertical	293	1.99	-

**BT-BR(1Mbps)**

15/03/2019

**2441MHz\_TX**

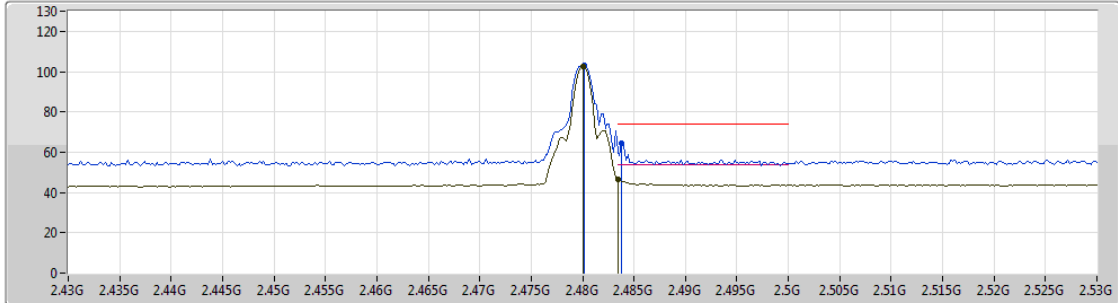


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88205G	51.91	54.00	-2.09	2.27	3	Horizontal	302	1.00	-
AV	7.32305G	52.94	54.00	-1.06	8.04	3	Horizontal	310	2.18	-
PK	4.88221G	54.80	74.00	-19.20	2.27	3	Horizontal	300	1.00	-
PK	7.32346G	58.71	74.00	-15.29	8.04	3	Horizontal	310	2.18	-

**BT-BR(1Mbps)**

**2480MHz\_TX**

15/03/2019

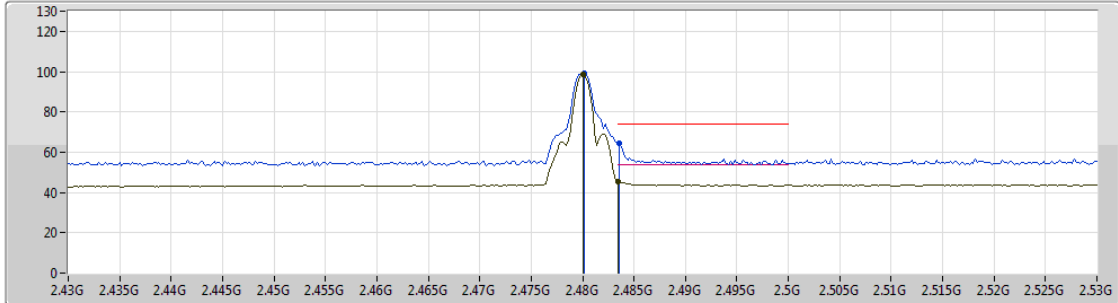


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	102.46	Inf	-Inf	31.09	3	Vertical	275	1.29	-
AV	2.4835G	46.48	54.00	-7.52	31.11	3	Vertical	275	1.29	-
PK	2.4802G	102.86	Inf	-Inf	31.09	3	Vertical	275	1.29	-
PK	2.4838G	64.47	74.00	-9.53	31.11	3	Vertical	275	1.29	-

**BT-BR(1Mbps)**

**2480MHz\_TX**

15/03/2019



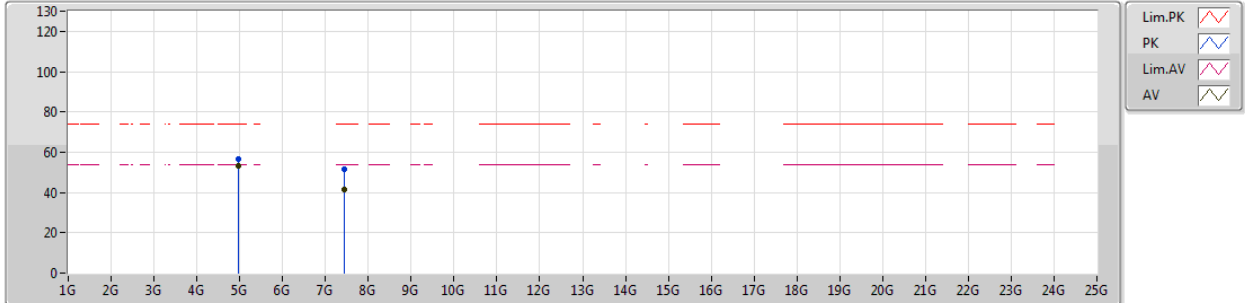
- Lim.PK
- PK
- Lim.AV
- AV

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	98.54	Inf	-Inf	31.09	3	Horizontal	160	2.99	-
AV	2.4835G	45.22	54.00	-8.78	31.11	3	Horizontal	160	2.99	-
PK	2.4802G	98.94	Inf	-Inf	31.09	3	Horizontal	160	2.99	-
PK	2.4836G	64.41	74.00	-9.59	31.11	3	Horizontal	160	2.99	-

**BT-BR(1Mbps)**

**2480MHz\_TX**

15/03/2019

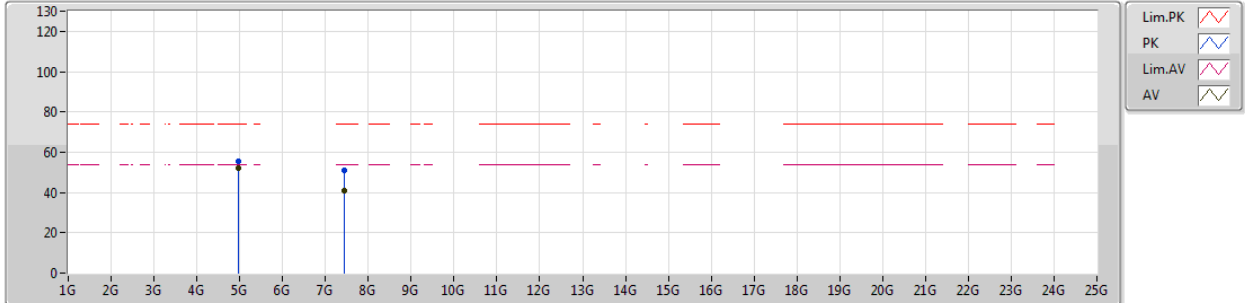


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.96004G	53.48	54.00	-0.52	2.47	3	Vertical	273	1.01	-
AV	7.43999G	41.53	54.00	-12.47	8.37	3	Vertical	288	2.06	-
PK	4.96027G	56.44	74.00	-17.56	2.47	3	Vertical	273	1.01	-
PK	7.44057G	51.65	74.00	-22.35	8.38	3	Vertical	288	2.06	-

**BT-BR(1Mbps)**

15/03/2019

**2480MHz\_TX**



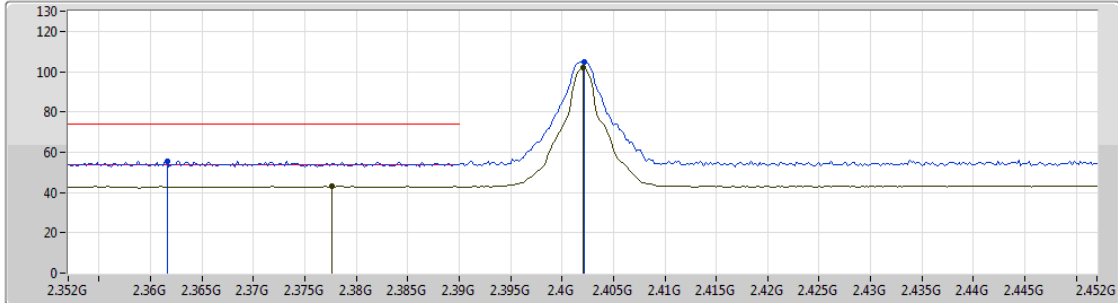
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.96005G	52.22	54.00	-1.78	2.47	3	Horizontal	285	1.02	-
AV	7.44013G	40.98	54.00	-13.02	8.37	3	Horizontal	302	1.05	-
PK	4.96027G	55.61	74.00	-18.39	2.47	3	Horizontal	285	1.02	-
PK	7.4405G	51.05	74.00	-22.95	8.38	3	Horizontal	302	1.05	-







**BT-EDR(3Mbps)**

15/03/2019

**2402MHz\_TX**



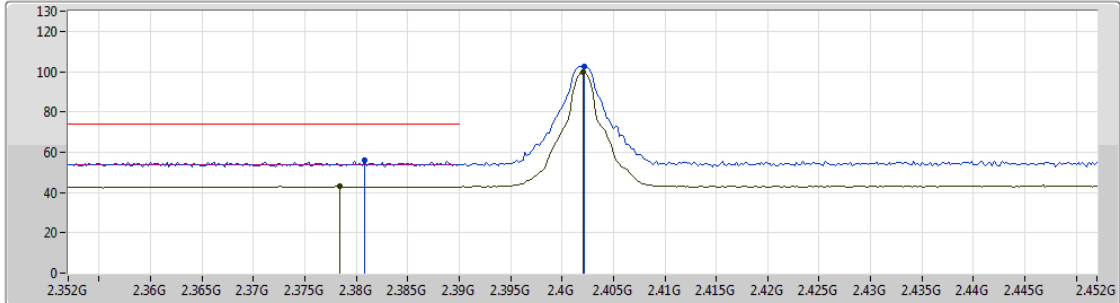
Lim.PK    
 PK    
 Lim.AV    
 AV  

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3776G	42.98	54.00	-11.02	30.73	3	Vertical	269	1.66	-
AV	2.402G	101.87	Inf	-Inf	30.82	3	Vertical	269	1.66	-
PK	2.3616G	55.68	74.00	-18.32	30.67	3	Vertical	269	1.66	-
PK	2.4022G	104.75	Inf	-Inf	30.82	3	Vertical	269	1.66	-

BT-EDR(3Mbps)

2402MHz\_TX

15/03/2019



Lim.PK  
 PK  
 Lim.AV  
 AV

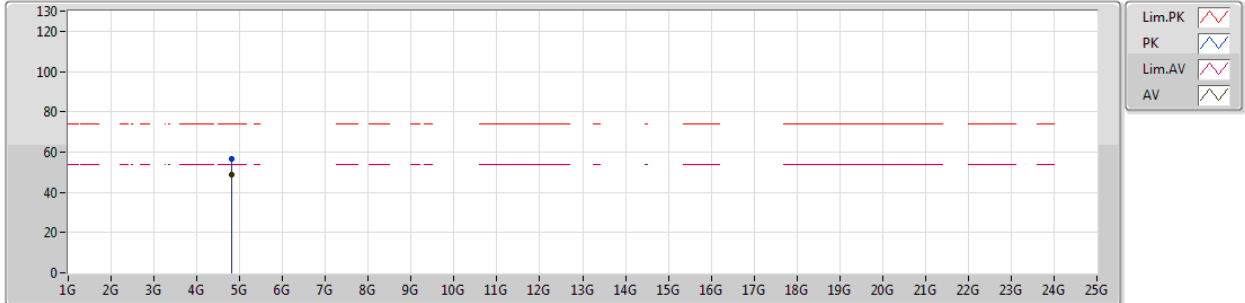
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3784G	43.00	54.00	-11.00	30.73	3	Horizontal	216	2.76	-
AV	2.402G	99.79	Inf	-Inf	30.82	3	Horizontal	216	2.76	-
PK	2.3808G	56.00	74.00	-18.00	30.75	3	Horizontal	216	2.76	-
PK	2.4022G	102.67	Inf	-Inf	30.82	3	Horizontal	216	2.76	-



BT-EDR(3Mbps)

15/03/2019

2402MHz\_TX



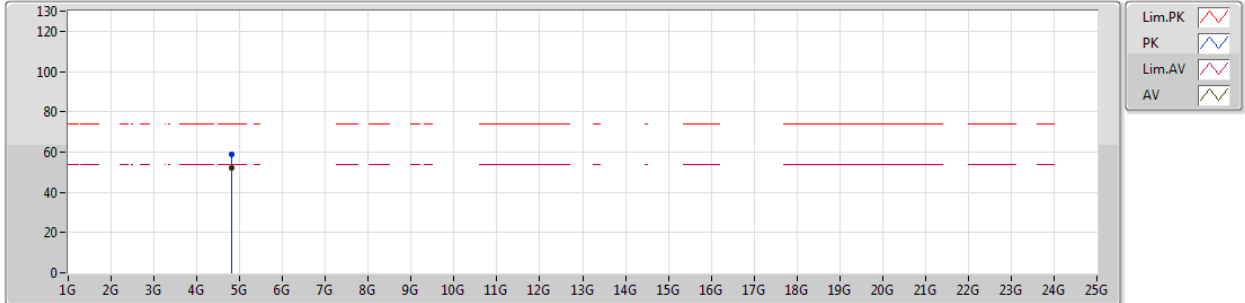
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80412G	48.85	54.00	-5.15	2.08	3	Vertical	269	1.27	-
PK	4.80413G	56.47	74.00	-17.53	2.08	3	Vertical	269	1.27	-



BT-EDR(3Mbps)

15/03/2019

2402MHz\_TX

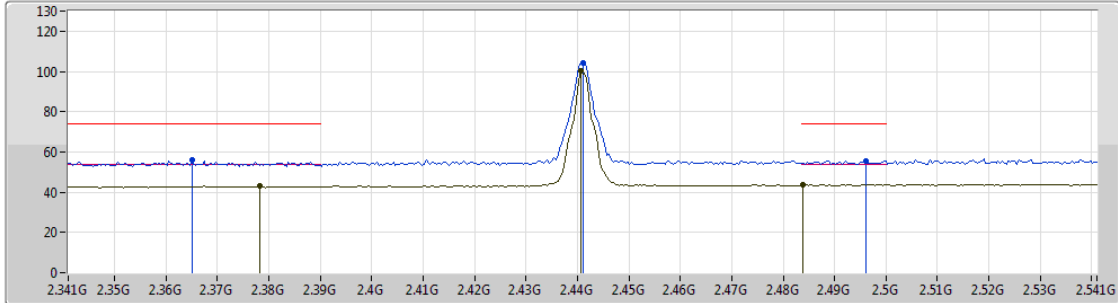


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.80419G	52.00	54.00	-2.00	2.08	3	Horizontal	282	1.00	-
PK	4.80402G	58.92	74.00	-15.08	2.08	3	Horizontal	282	1.00	-

**BT-EDR(3Mbps)**

**2441MHz\_TX**

15/03/2019

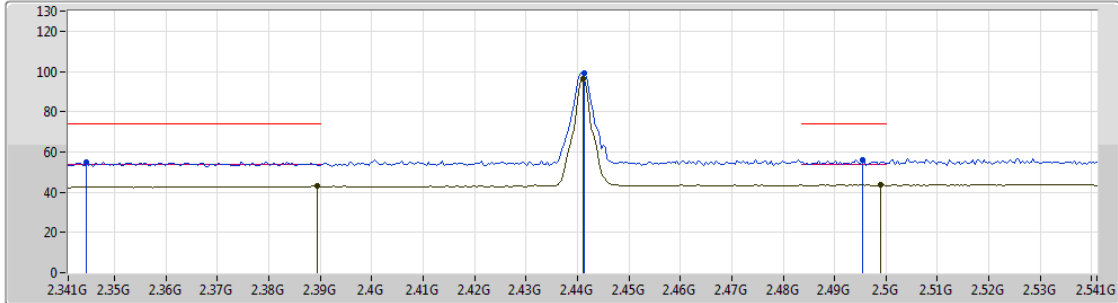



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3782G	43.05	54.00	-10.95	30.73	3	Vertical	270	1.28	-
AV	2.4406G	100.24	Inf	-Inf	30.95	3	Vertical	270	1.28	-
AV	2.4838G	43.88	54.00	-10.12	31.11	3	Vertical	270	1.28	-
PK	2.365G	55.87	74.00	-18.13	30.69	3	Vertical	270	1.28	-
PK	2.441G	104.36	Inf	-Inf	30.95	3	Vertical	270	1.28	-
PK	2.4962G	55.64	74.00	-18.36	31.16	3	Vertical	270	1.28	-

BT-EDR(3Mbps)

15/03/2019

2441MHz\_TX



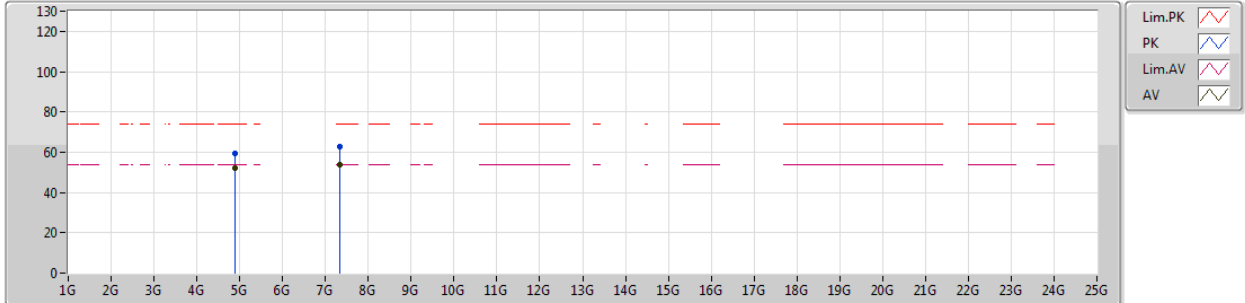
Lim.PK    
 PK    
 Lim.AV    
 AV  

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3894G	42.89	54.00	-11.11	30.77	3	Horizontal	152	1.04	-
AV	2.441G	96.57	Inf	-Inf	30.95	3	Horizontal	152	1.04	-
AV	2.499G	43.83	54.00	-10.17	31.17	3	Horizontal	152	1.04	-
PK	2.3446G	55.09	74.00	-18.91	30.61	3	Horizontal	152	1.04	-
PK	2.4414G	99.37	Inf	-Inf	30.96	3	Horizontal	152	1.04	-
PK	2.4954G	56.13	74.00	-17.87	31.16	3	Horizontal	152	1.04	-

**BT-EDR(3Mbps)**

15/03/2019

**2441MHz\_TX**



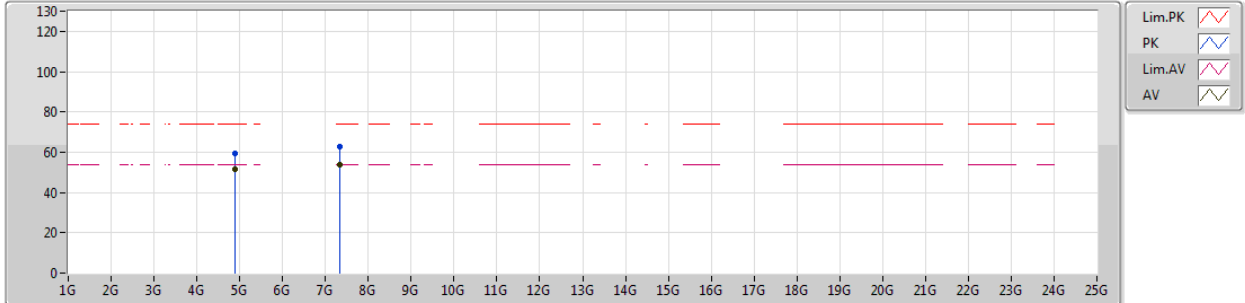
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88203G	52.29	54.00	-1.71	2.27	3	Vertical	266	1.03	-
AV	7.3231G	53.59	54.00	-0.41	8.04	3	Vertical	282	1.98	-
PK	4.88207G	59.39	74.00	-14.61	2.27	3	Vertical	266	1.03	-
PK	7.32292G	62.65	74.00	-11.35	8.04	3	Vertical	282	1.98	-



**BT-EDR(3Mbps)**

15/03/2019

**2441MHz\_TX**



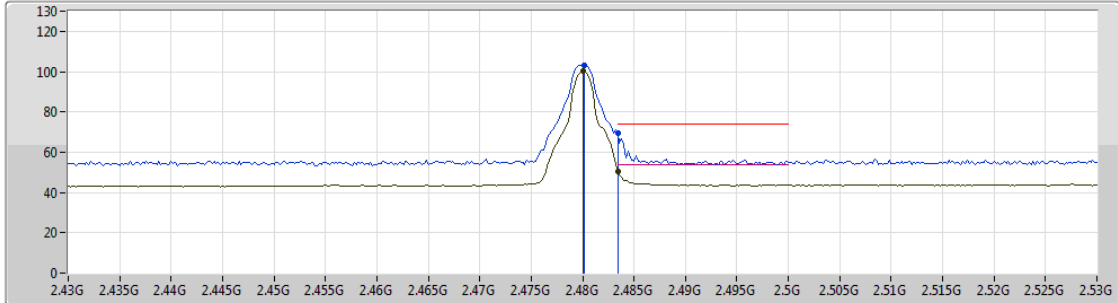
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.88201G	51.82	54.00	-2.18	2.27	3	Horizontal	290	1.00	-
AV	7.32309G	53.87	54.00	-0.13	8.04	3	Horizontal	297	2.19	-
PK	4.882G	59.12	74.00	-14.88	2.27	3	Horizontal	290	1.00	-
PK	7.32297G	62.55	74.00	-11.45	8.04	3	Horizontal	297	2.19	-






**BT-EDR(3Mbps)**

15/03/2019

**2480MHz\_TX**



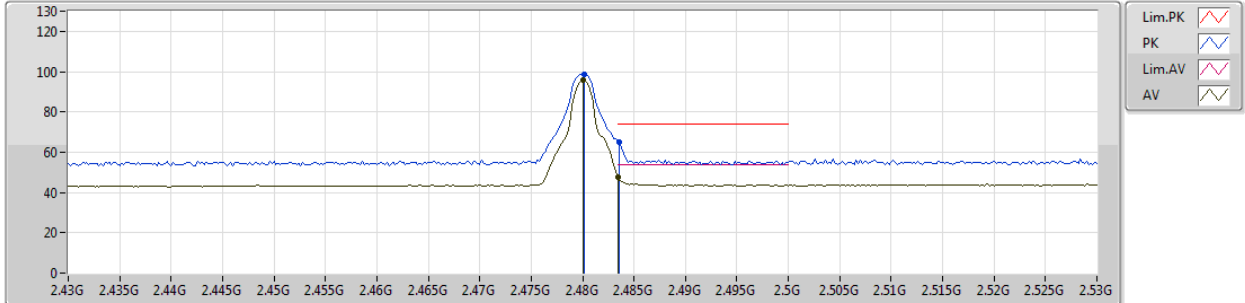
Lim.PK    
 PK    
 Lim.AV    
 AV  

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	100.24	Inf	-Inf	31.09	3	Vertical	261	1.32	-
AV	2.4835G	50.47	54.00	-3.53	31.11	3	Vertical	261	1.32	-
PK	2.4802G	103.36	Inf	-Inf	31.09	3	Vertical	261	1.32	-
PK	2.4835G	69.67	74.00	-4.33	31.11	3	Vertical	261	1.32	-

**BT-EDR(3Mbps)**

**2480MHz\_TX**

15/03/2019

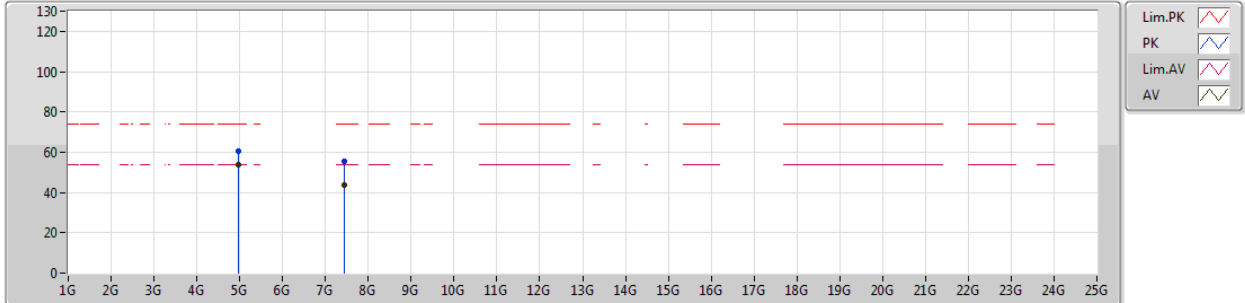


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.48G	95.61	Inf	-Inf	31.09	3	Horizontal	145	2.99	-
AV	2.4835G	47.52	54.00	-6.48	31.11	3	Horizontal	145	2.99	-
PK	2.4802G	98.74	Inf	-Inf	31.09	3	Horizontal	145	2.99	-
PK	2.4836G	64.80	74.00	-9.20	31.11	3	Horizontal	145	2.99	-

**BT-EDR(3Mbps)**

15/03/2019

**2480MHz\_TX**

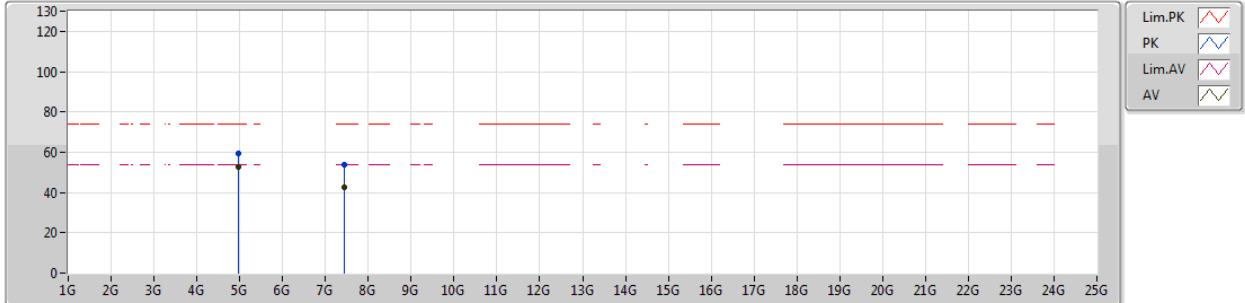


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.96001G	53.74	54.00	-0.26	2.47	3	Vertical	260	1.00	-
AV	7.44011G	43.43	54.00	-10.57	8.37	3	Vertical	276	2.14	-
PK	4.9601G	60.61	74.00	-13.39	2.47	3	Vertical	260	1.00	-
PK	7.44003G	55.28	74.00	-18.72	8.37	3	Vertical	276	2.14	-

**BT-EDR(3Mbps)**

15/03/2019

**2480MHz\_TX**



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.96004G	52.53	54.00	-1.47	2.47	3	Horizontal	273	1.01	-
AV	7.4402G	42.63	54.00	-11.37	8.37	3	Horizontal	292	2.22	-
PK	4.95995G	59.28	74.00	-14.72	2.47	3	Horizontal	273	1.01	-
PK	7.4399G	53.85	74.00	-20.15	8.37	3	Horizontal	292	2.22	-