

# FCC Test Report

**FCC ID** : VUI-DPCP700  
**Equipment** : IP Desktop Phone  
**Brand Name** : Unify  
**Model Name** : OpenScape Desk Phone CP700  
**Applicant/  
Manufacturer** : PEGATRON CORPORATION  
5F., NO. 76, LIGONG ST., BEITOU DISTRICT, TAIPEI CITY  
11259 Taiwan  
**Standard** : 47 CFR FCC Part 15.247

The product was received on Mar. 12, 2020, and testing was started from Mar. 20, 2020 and completed on Apr. 18, 2020. 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	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	20dB Bandwidth	PASS	-
3.2	15.247(a)	Carrier Frequency Separation	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(a)	Number of Hopping Frequencies and Hopping Bandedge	PASS	-
3.5	15.247(a)	Time of Occupancy (Dwell Time)	PASS	-
3.6	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.7	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

<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: Sam Tsai

Report Producer: Yunha Liou

# 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.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	-	-	printed antenna	I-PEX	4.56

Note 1: The EUT has one antenna.

**For BT function:**

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

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

### 1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter/PoE
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) ≥ 1/T
BT-BR(1Mbps)	0.46	3.37	2.888m	1k
BT-EDR(2Mbps)	0.496	3.05	2.891m	1k
BT-EDR(3Mbps)	0.452	3.45	2.893m	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 v05r02
- ◆ ANSI C63.10-2013
- ◆ KDB 414788 D01 v01r01

## 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.		
<input type="checkbox"/>	Wen Shan	ADD : No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL : 886-3-318-0787      FAX : 886-3-318-0287
Test site Designation No. TW1097 with FCC.		

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward	21.4~22.5°C / 58~62%	23/Mar/2020~18/Apr/2020
RF Conducted	TH06-HY	Edward	20.1~22.4°C / 65~70%	20/Mar/2020~25/Mar/2020
Radiated	03CH03-HY	Jeff	22.5~24.7°C / 50~60%	23/Mar/2020~16/Apr/2020

## 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)	0.9 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.0 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	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	Tera Term
---------------	-----------


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



### 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 Adapter mode
2	PoE mode

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 <input checked="" type="checkbox"/> Non-adaptive frequency hopping systems (Non-AFH) <input checked="" type="checkbox"/> adaptive frequency hopping systems (AFH)
Non-AFH Mode configuration was found to be the worst case and measured during the test.	

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 &lt; 1GHz</b>	CTX
1	AC Adapter mode
2	PoE mode
<b>Operating Mode &gt; 1GHz</b>	CTX
<b>Orthogonal Planes of EUT</b>	<b>Z Plane</b>
	

## 2.4 Accessories

Accessories				
AC Adapter (US Plug)	<b>Brand Name</b>	Salom Electric	<b>Model Name</b>	S30122-H7726-X
	<b>Manufacturer</b>	Salom Electric (Xiamen) Co.,Ltd.		
	<b>Power Rating</b>	I/P:100 - 240Vac, 0.6 A, O/P:38 Vdc, 0.42A		
	<b>Power Cord</b>	1.5 meter, non-shielded cable, w/o ferrite core		
4P4C Cable	<b>Brand Name</b>	NA	<b>Model Name</b>	NA
	<b>Power Cord</b>	4 meter, shielded or non-shielded cable		

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

## 2.5 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ-11 Cable	-	-	-	Note 1
2	PoE	CERIO	POE-S48G2	DoC	Note 1
3	Adapter	L.T.E	LTE36ES-S5-1	DoC	Note 1
4	RJ45 cable	Power sync	CAT-6E-01	-	-
5	Bluetooth Tester	R&S	CBT	-	-

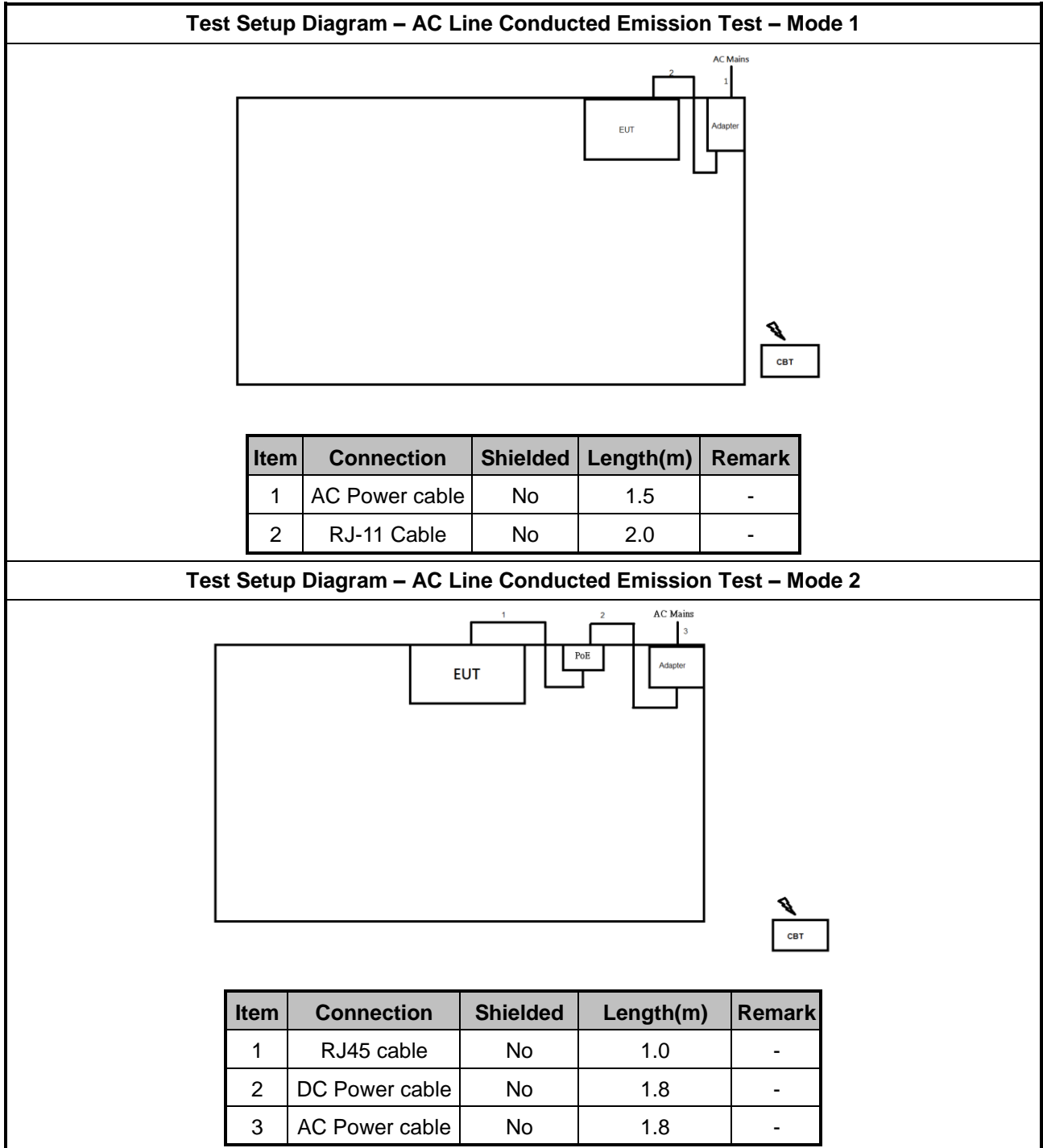
Note: No.1.2.3 was provided by customer.

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	DoC	-
2	Adapter for NB	DELL	HA65NM130	DoC	-
3	Bluetooth Tester	R&S	CBT	-	-
4	Fixture	-	-	-	-

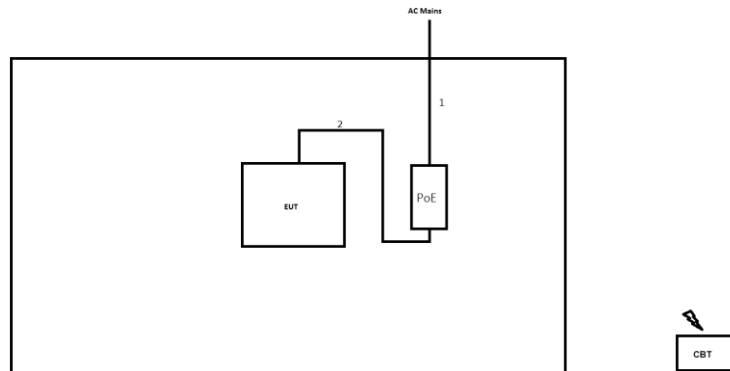
Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ-11 Cable	-	-	-	-
2	Bluetooth Tester	R&S	CBT	-	-
3	PoE	CERIO	POE-S48G2	DoC	Note 1
4	Adapter	L.T.E	LTE36ES-S5-1	DoC	Note 1
5	Bluetooth Tester	R&S	CBT	-	-

Note: No.3.4 was provided by customer.

## 2.6 Test Setup Diagram

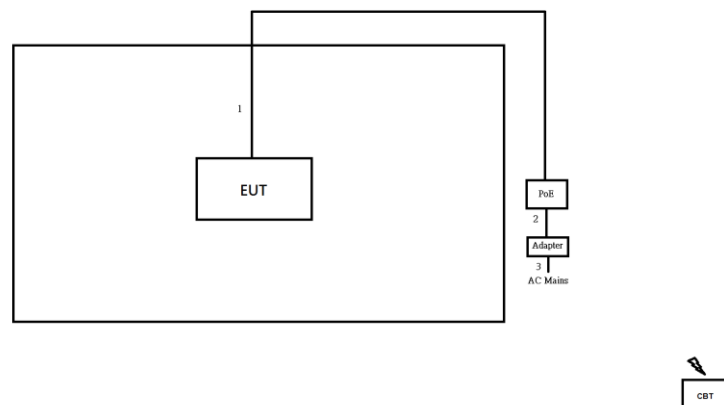


**Test Setup Diagram - Radiated Test – Mode 1**



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.5	-
2	RJ-11 Cable	No	2.0	-

**Test Setup Diagram - Radiated Test – Mode 2**



Item	Connection	Shielded	Length(m)	Remark
1	RJ45 cable	No	10	-
2	DC Power cable	No	1.8	-
3	AC Power cable	No	1.8	-

### 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.

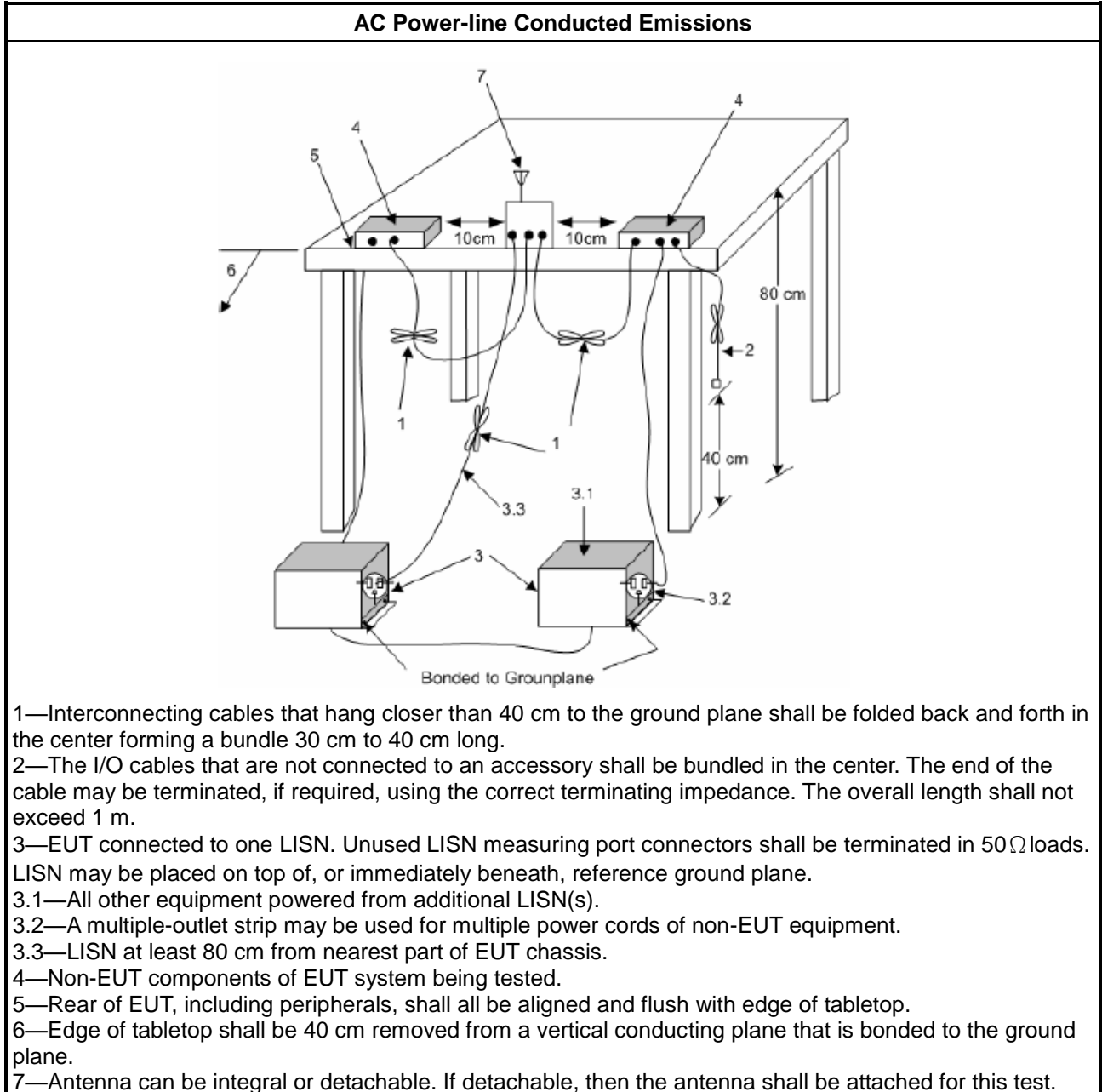
##### 3.1.2 Measuring Instruments

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 for AC 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	

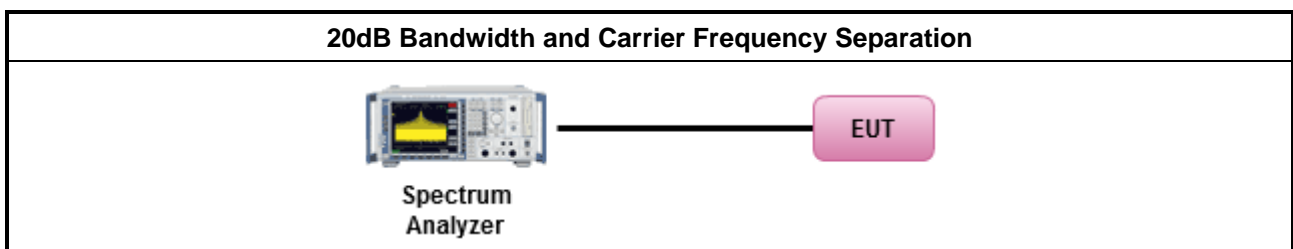
#### 3.2.2 Measuring Instruments

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	

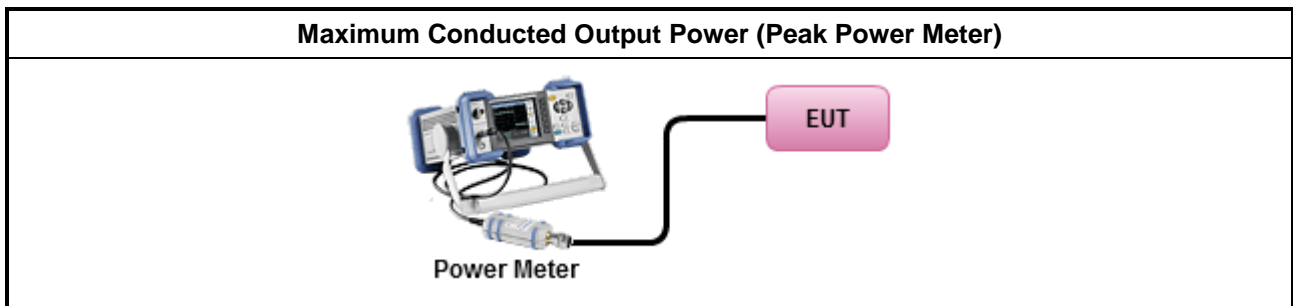
#### 3.3.2 Measuring Instruments

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

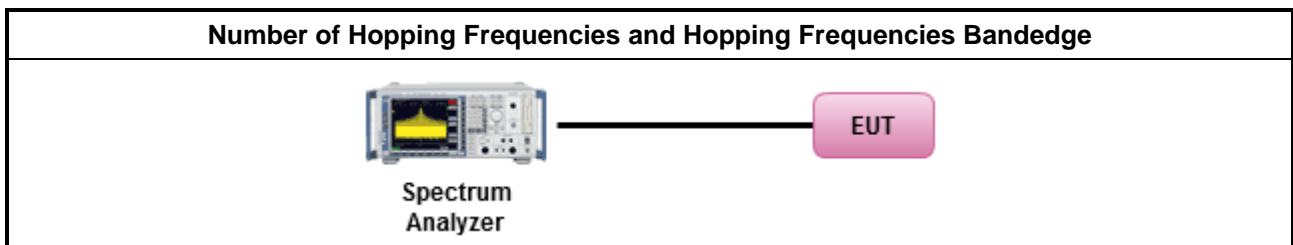
#### 3.4.3 Measuring Instruments

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	

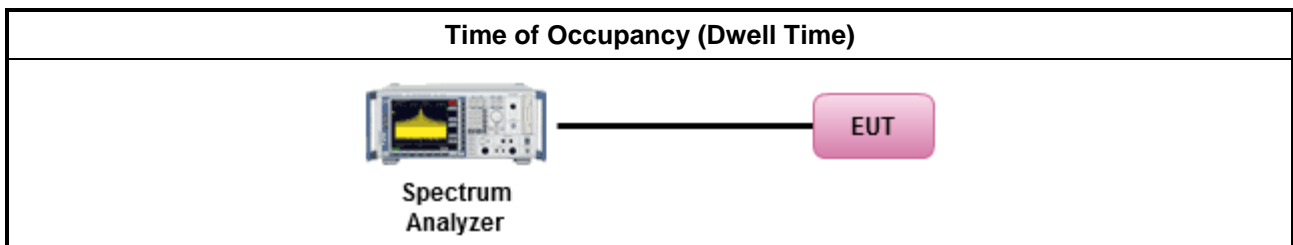
#### 3.5.2 Measuring Instruments

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.	

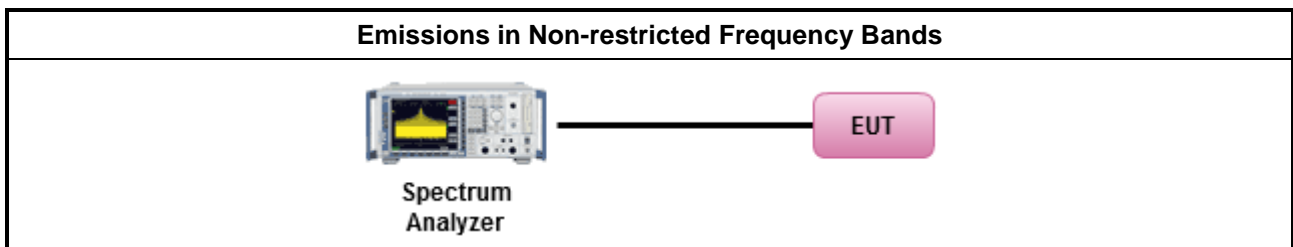
#### 3.6.2 Measuring Instruments

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.

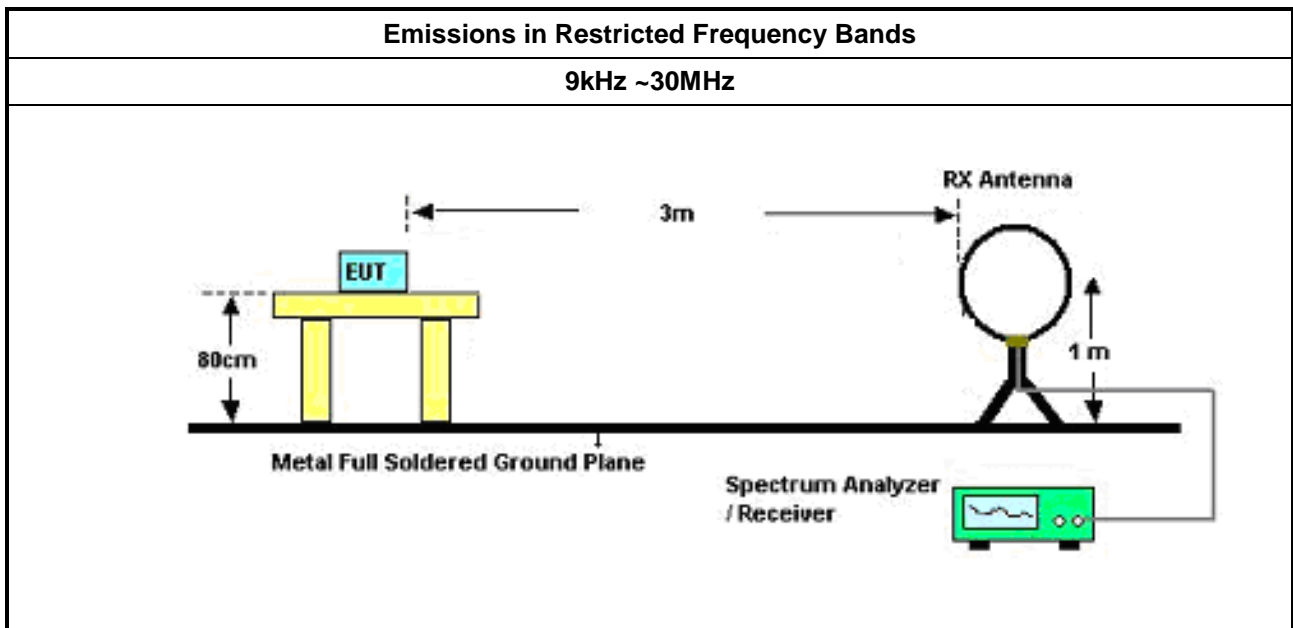
#### 3.7.2 Measuring Instruments

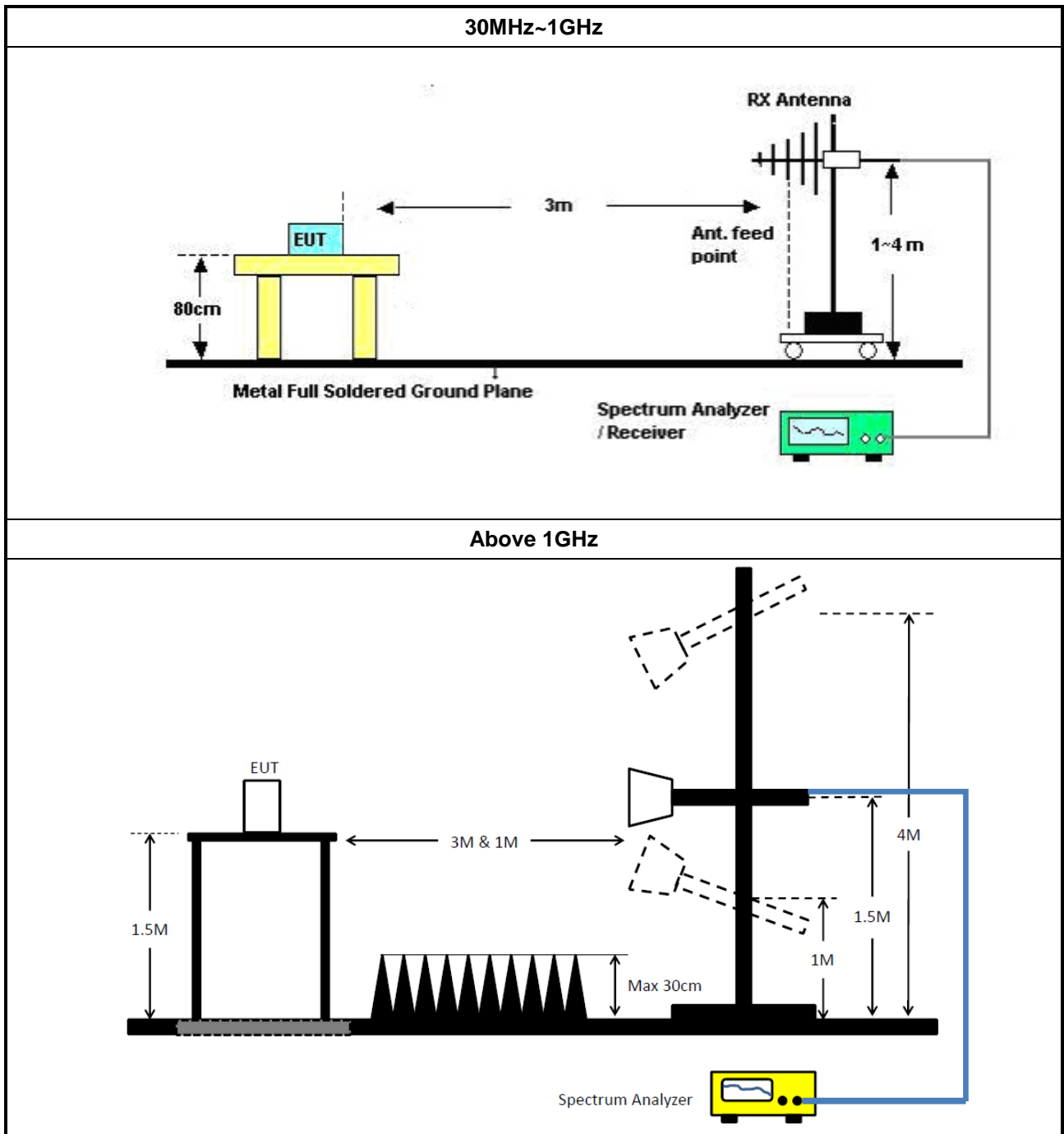
Refer a test equipment and calibration data table in this test report.

### 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:</li> </ul>	
	<ul style="list-style-type: none"> <li>Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.</li> </ul>
	<ul style="list-style-type: none"> <li>Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.</li> </ul>
	<ul style="list-style-type: none"> <li>Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.</li> </ul>
<ul style="list-style-type: none"> <li>KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.</li> </ul>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	
<ul style="list-style-type: none"> <li>Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.</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	ESR3	102052	9kHz ~ 3.6GHz	09/Apr/2019	08/Apr/2020
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	04/Nov/2019	05/Nov/2020
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	12/Sep/2019	11/Sep/2020
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	24/Sep/2019	23/Sep/2020

### NCR : Non-Calibration Require

### Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	28/May/2019	27/May/2020
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	04/Nov/2019	05/Nov/2020
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	12/Sep/2019	11/Sep/2020
AC POWER	APC	AFC-11005G	F310050055	47Hz ~ 63Hz 5 ~ 300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	24/Sep/2019	23/Sep/2020



**Instrument for Radiated Test**

3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	30/Aug/2019	29/Aug/2020
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz ~ 18GHz 3m	30/Aug/2019	29/Aug/2020
EMI Test Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	28/May/2019	27/May/2020
Bilog Antenna & 6dB Attenuator	SCHAFFNER	CBL6111C & N-6-06	2737 & AT-N0603	30MHz ~ 1GHz	11/Oct/2019	10/Oct/2020
Microwave System Preampfier	KEYSIGHT	83017A	MY53270196	1GHz ~ 26.5GHz	09/Sep/2019	08/Sep/2020
Signal Analyzer	R&S	FSV40	101500	10Hz ~ 40GHz	15/Aug/2019	14/Aug/2020
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	18/Mar/2020	17/Mar/2021
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	SN 805801/4+SN 804300/4	1GHz ~ 40GHz	18/Mar/2020	17/Mar/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170614	18GHz~40GHz	22/May/2019	21/May/2020
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 01543	1GHz ~ 18GHz	03/Jun/2019	02/Jun/2020
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz ~ 40GHz	10/Mar/2020	09/Mar/2021
Loop Antenna	TESEQ	HLA 6120	31244	9kHz ~ 30MHz	16/Mar/2020	15/Mar/2021

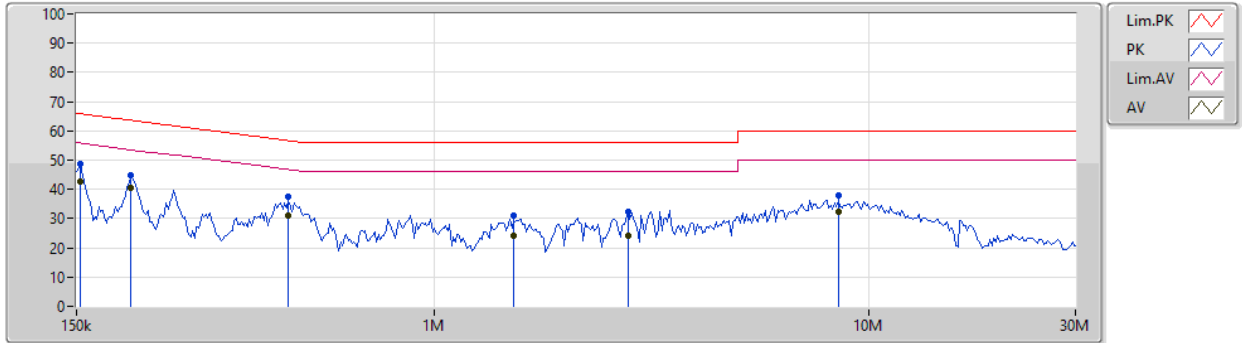




AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Adapter Mode		

23/03/2020



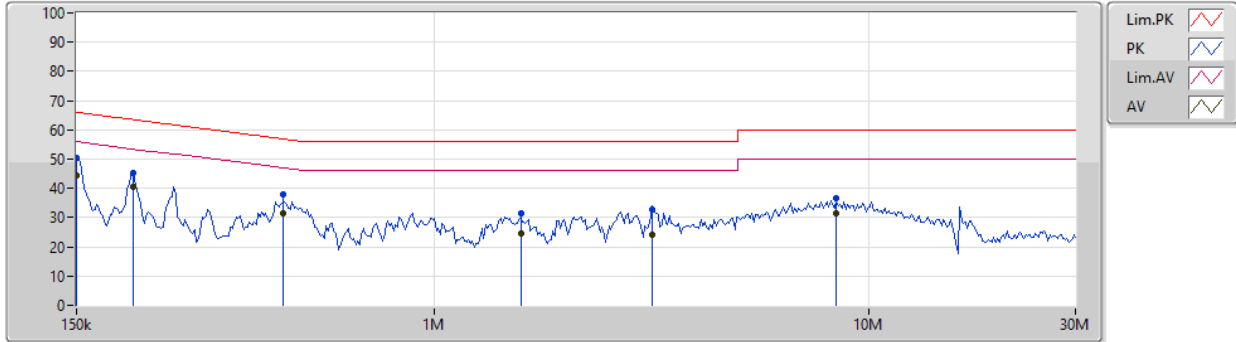
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	153.015k	48.75	65.83	-17.08	19.63	Neutral	-	29.12	9.65	0.11	9.87
AV	153.015k	42.68	55.83	-13.15	19.63	Neutral	-	23.05	9.65	0.11	9.87
QP	200.176k	44.88	63.61	-18.73	19.62	Neutral	-	25.26	9.64	0.11	9.87
AV	200.176k	40.57	53.61	-13.04	19.62	Neutral	"Worst"	20.95	9.64	0.11	9.87
QP	461.75k	37.67	56.67	-19.00	19.63	Neutral	-	18.04	9.63	0.13	9.87
AV	461.75k	31.10	46.67	-15.57	19.63	Neutral	-	11.47	9.63	0.13	9.87
QP	1.524M	30.98	56.00	-25.02	19.64	Neutral	-	11.34	9.64	0.13	9.87
AV	1.524M	23.95	46.00	-22.05	19.64	Neutral	-	4.31	9.64	0.13	9.87
QP	2.796M	32.41	56.00	-23.59	19.69	Neutral	-	12.72	9.65	0.17	9.87
AV	2.796M	24.02	46.00	-21.98	19.69	Neutral	-	4.33	9.65	0.17	9.87
QP	8.523M	37.75	60.00	-22.25	19.82	Neutral	-	17.93	9.69	0.25	9.88
AV	8.523M	32.25	50.00	-17.75	19.82	Neutral	-	12.43	9.69	0.25	9.88



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	Adapter Mode		

23/03/2020



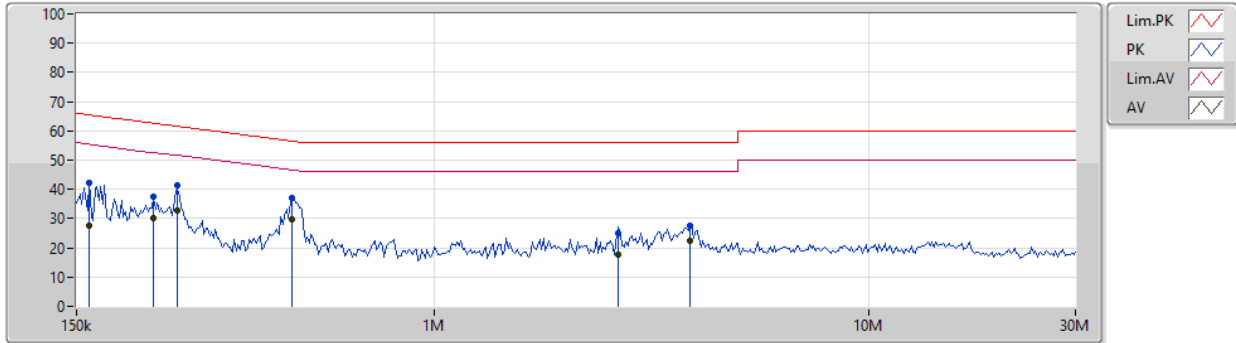
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	150k	50.45	66.00	-15.55	19.64	Line	-	30.81	9.66	0.11	9.87
AV	150k	44.29	56.00	-11.71	19.64	Line	"Worst"	24.65	9.66	0.11	9.87
QP	202.177k	45.20	63.51	-18.31	19.63	Line	-	25.57	9.65	0.11	9.87
AV	202.177k	40.50	53.51	-13.01	19.63	Line	-	20.87	9.65	0.11	9.87
QP	448.17k	38.12	56.92	-18.80	19.64	Line	-	18.48	9.64	0.13	9.87
AV	448.17k	31.66	46.92	-15.26	19.64	Line	-	12.02	9.64	0.13	9.87
QP	1.586M	31.26	56.00	-24.74	19.66	Line	-	11.60	9.65	0.14	9.87
AV	1.586M	24.56	46.00	-21.44	19.66	Line	-	4.90	9.65	0.14	9.87
QP	3.182M	32.85	56.00	-23.15	19.71	Line	-	13.14	9.66	0.17	9.88
AV	3.182M	24.03	46.00	-21.97	19.71	Line	-	4.32	9.66	0.17	9.88
QP	8.438M	36.80	60.00	-23.20	19.81	Line	-	16.99	9.68	0.25	9.88
AV	8.438M	31.34	50.00	-18.66	19.81	Line	-	11.53	9.68	0.25	9.88



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	PoE mode		

18/04/2020



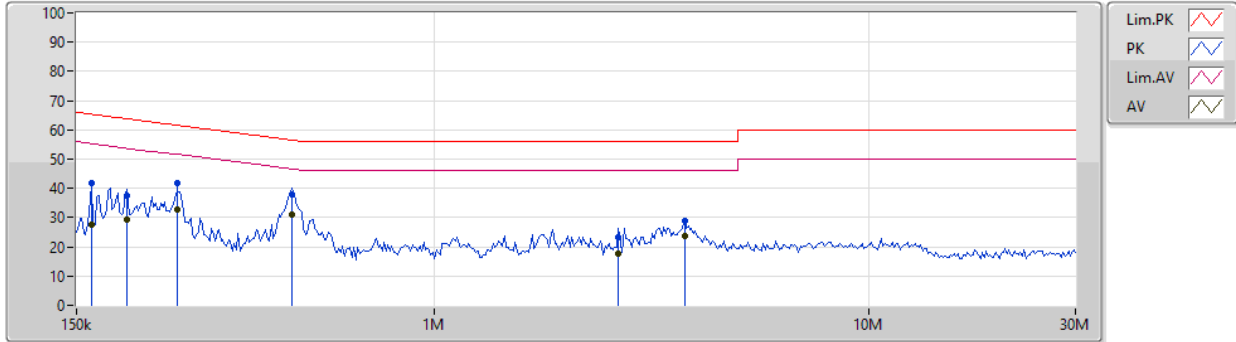
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	160.82k	42.23	65.43	-23.20	19.63	Neutral	-	22.60	9.65	0.11	9.87
AV	160.82k	27.51	55.43	-27.92	19.63	Neutral	-	7.88	9.65	0.11	9.87
QP	225.563k	37.40	62.62	-25.22	19.63	Neutral	-	17.77	9.64	0.12	9.87
AV	225.563k	30.22	52.62	-22.40	19.63	Neutral	-	10.59	9.64	0.12	9.87
QP	256.712k	41.46	61.54	-20.08	19.63	Neutral	-	21.83	9.64	0.12	9.87
AV	256.712k	32.71	51.54	-18.83	19.63	Neutral	-	13.08	9.64	0.12	9.87
QP	471.031k	37.01	56.50	-19.49	19.63	Neutral	-	17.38	9.63	0.13	9.87
AV	471.031k	29.85	46.50	-16.65	19.63	Neutral	"Worst"	10.22	9.63	0.13	9.87
QP	2.661M	24.84	56.00	-31.16	19.68	Neutral	-	5.16	9.65	0.16	9.87
AV	2.661M	17.71	46.00	-28.29	19.68	Neutral	-	-1.97	9.65	0.16	9.87
QP	3.883M	27.43	56.00	-28.57	19.73	Neutral	-	7.70	9.66	0.19	9.88
AV	3.883M	22.49	46.00	-23.51	19.73	Neutral	-	2.76	9.66	0.19	9.88



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	PoE mode		

18/04/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	162.429k	41.89	65.33	-23.44	19.64	Line	-	22.25	9.66	0.11	9.87
AV	162.429k	27.56	55.33	-27.77	19.64	Line	-	7.92	9.66	0.11	9.87
QP	196.231k	37.70	63.76	-26.06	19.63	Line	-	18.07	9.65	0.11	9.87
AV	196.231k	29.40	53.76	-24.36	19.63	Line	-	9.77	9.65	0.11	9.87
QP	256.712k	41.70	61.54	-19.84	19.64	Line	-	22.06	9.65	0.12	9.87
AV	256.712k	32.92	51.54	-18.62	19.64	Line	-	13.28	9.65	0.12	9.87
QP	471.031k	37.90	56.50	-18.60	19.64	Line	-	18.26	9.64	0.13	9.87
AV	471.031k	30.85	46.50	-15.65	19.64	Line	"Worst"	11.21	9.64	0.13	9.87
QP	2.661M	23.35	56.00	-32.65	19.68	Line	-	3.67	9.65	0.16	9.87
AV	2.661M	17.64	46.00	-28.36	19.68	Line	-	-2.04	9.65	0.16	9.87
QP	3.769M	28.80	56.00	-27.20	19.72	Line	-	9.08	9.66	0.18	9.88
AV	3.769M	23.53	46.00	-22.47	19.72	Line	-	3.81	9.66	0.18	9.88



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)	912.5k	872.064k	872KF1D	907.5k	864.568k
BT-EDR(2Mbps)	1.326M	1.221M	1M22G1D	1.316M	1.216M
BT-EDR(3Mbps)	1.336M	1.226M	1M23G1D	1.333M	1.219M

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

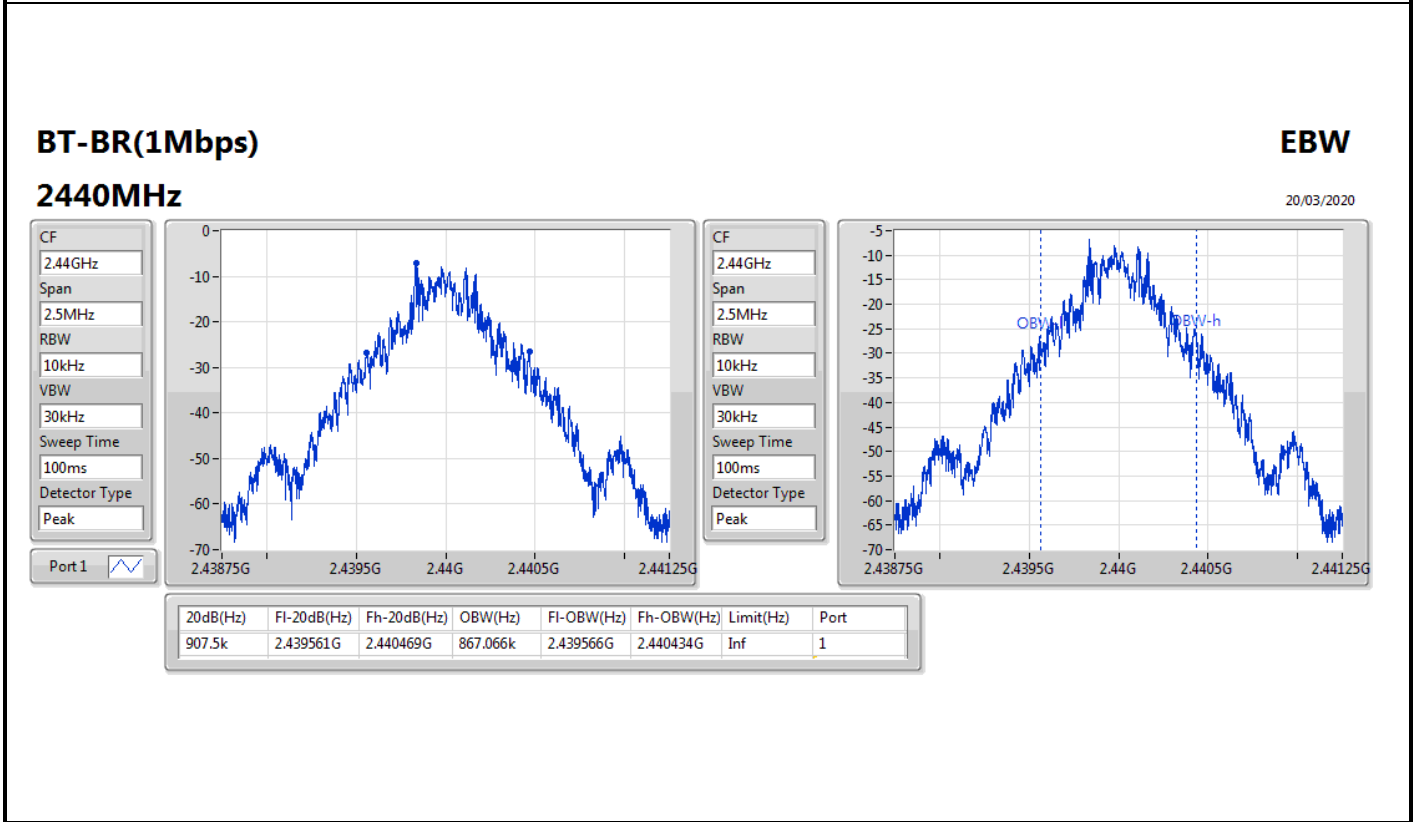
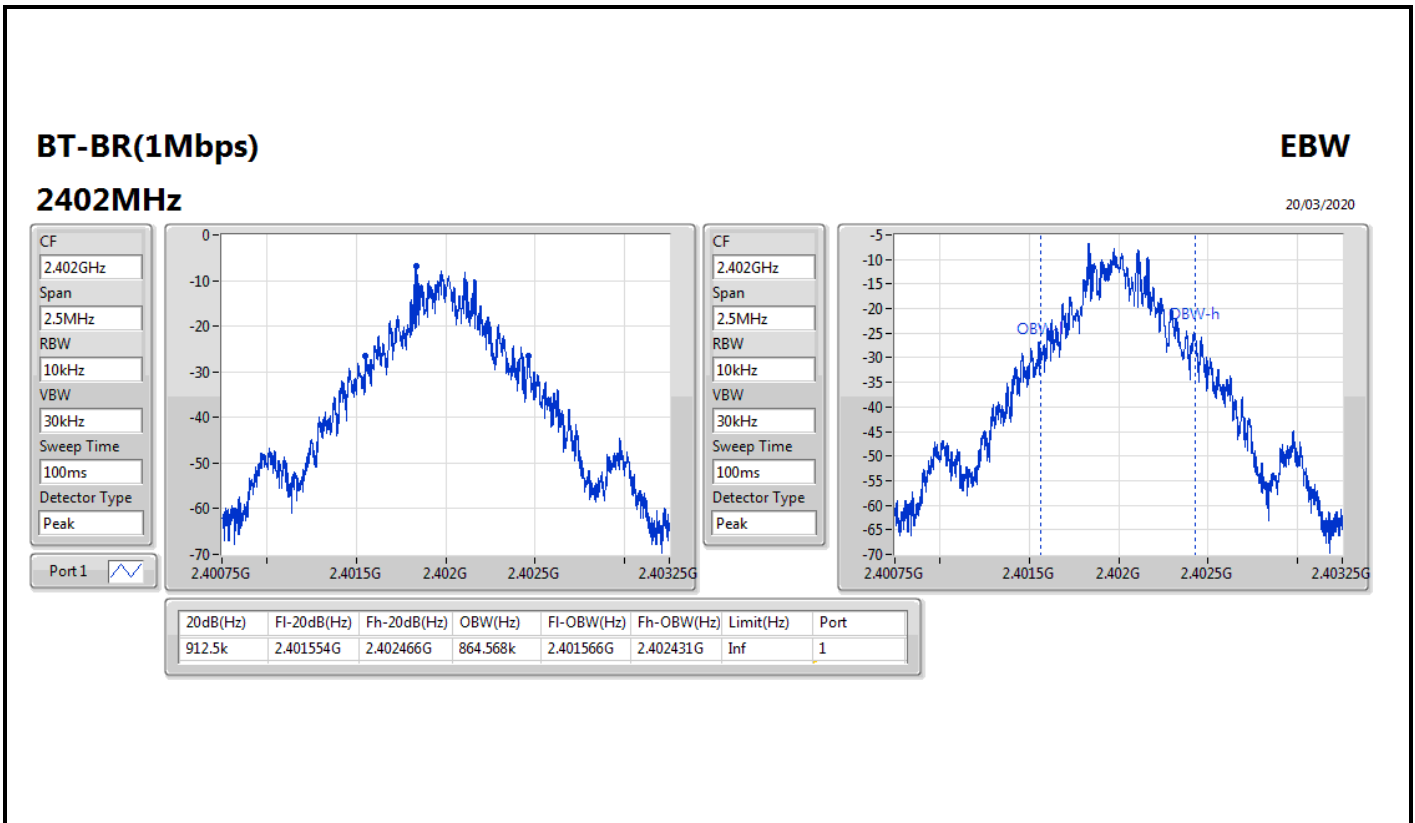
**Min-N dB** = Minimum 20dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

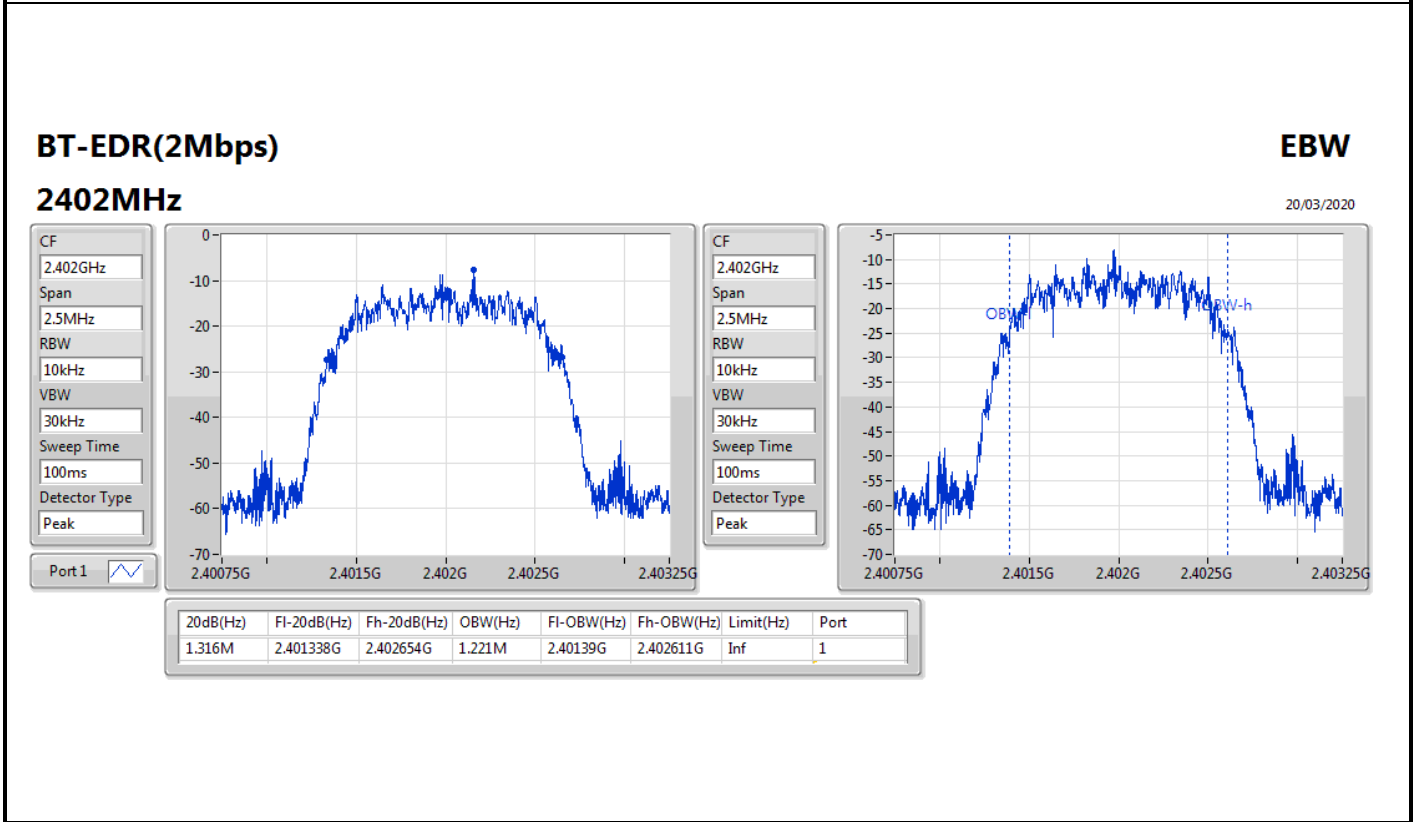
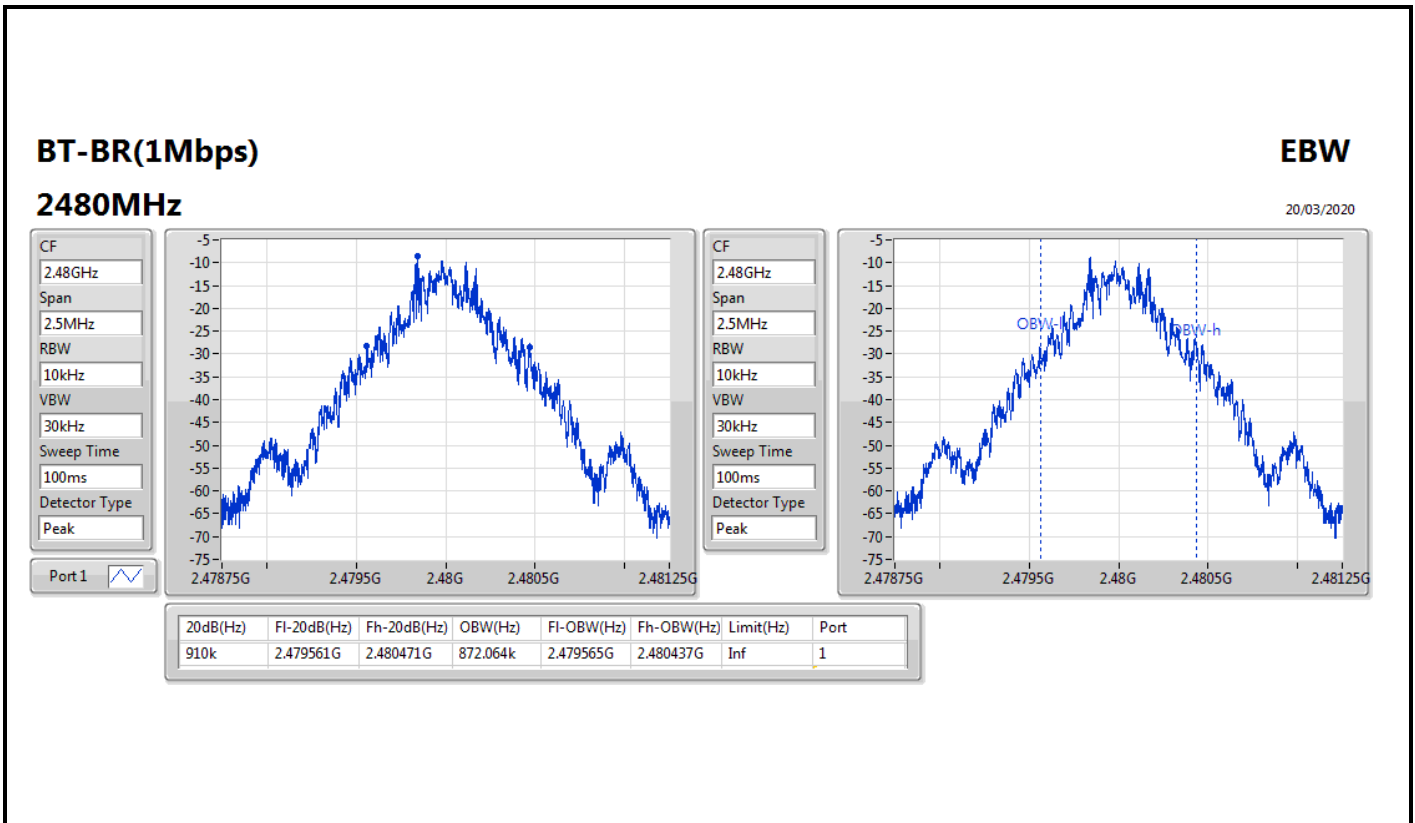


Result

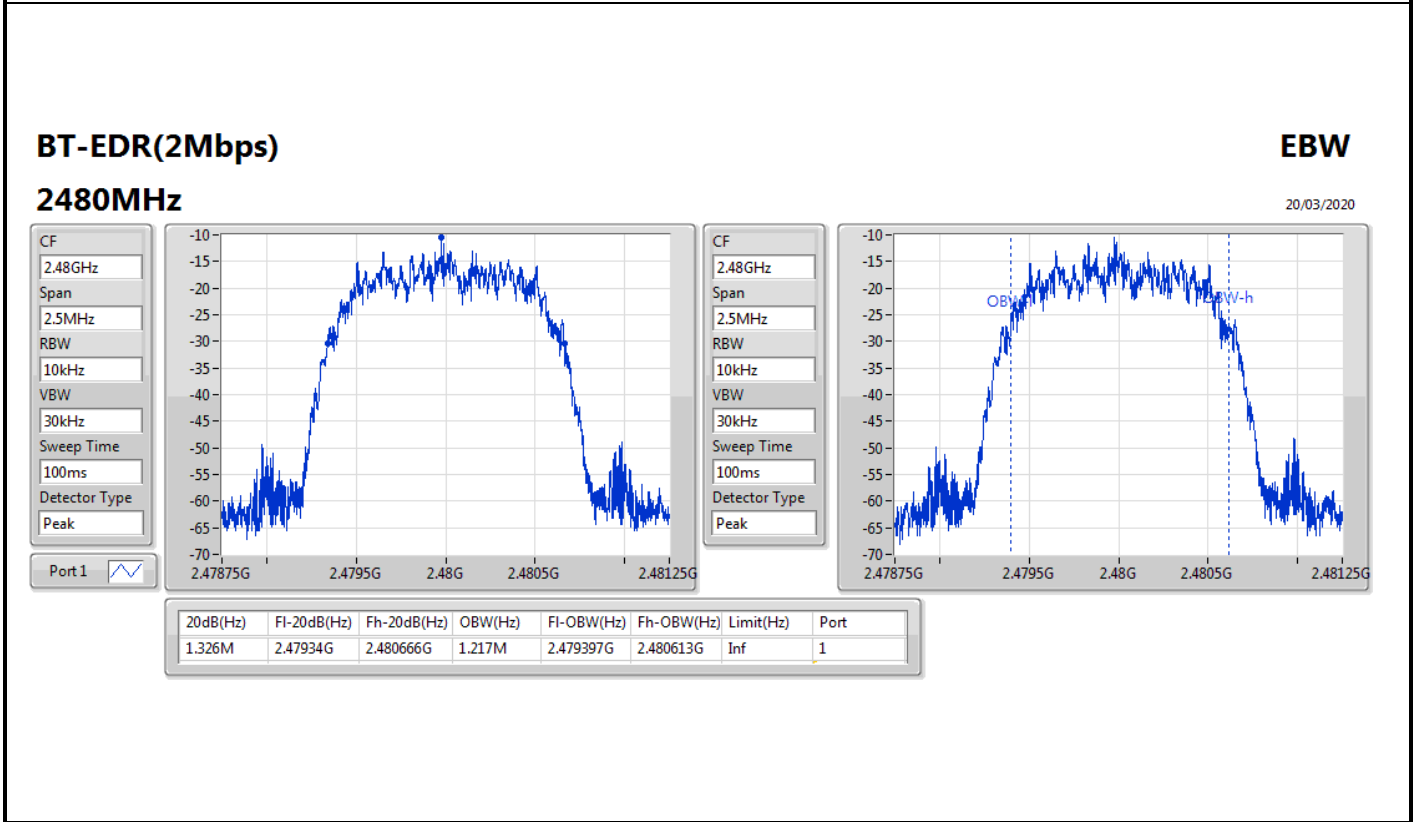
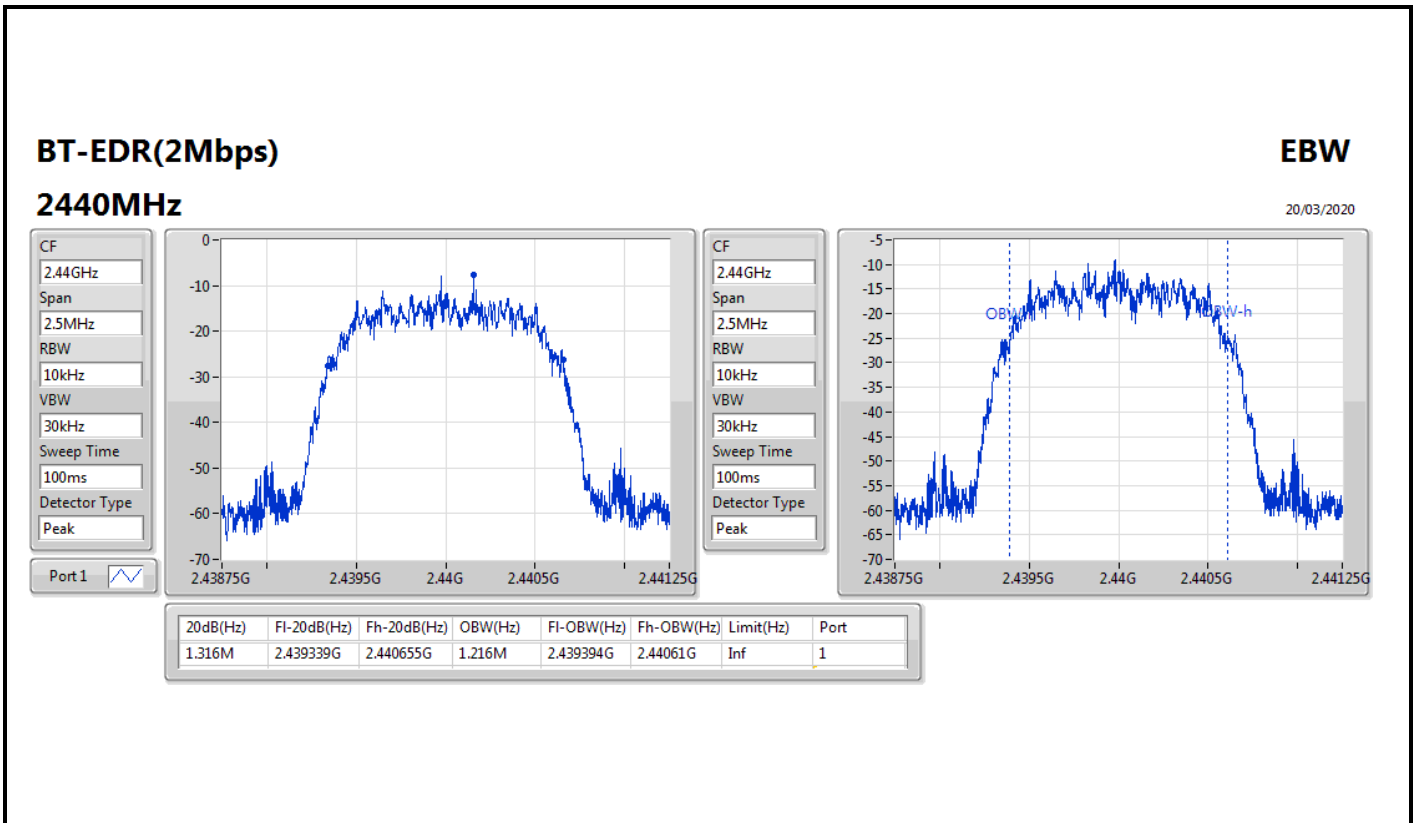
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	912.5k	864.568k
2440MHz	Pass	Inf	907.5k	867.066k
2480MHz	Pass	Inf	910k	872.064k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.316M	1.221M
2440MHz	Pass	Inf	1.316M	1.216M
2480MHz	Pass	Inf	1.326M	1.217M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.336M	1.226M
2440MHz	Pass	Inf	1.336M	1.219M
2480MHz	Pass	Inf	1.333M	1.224M

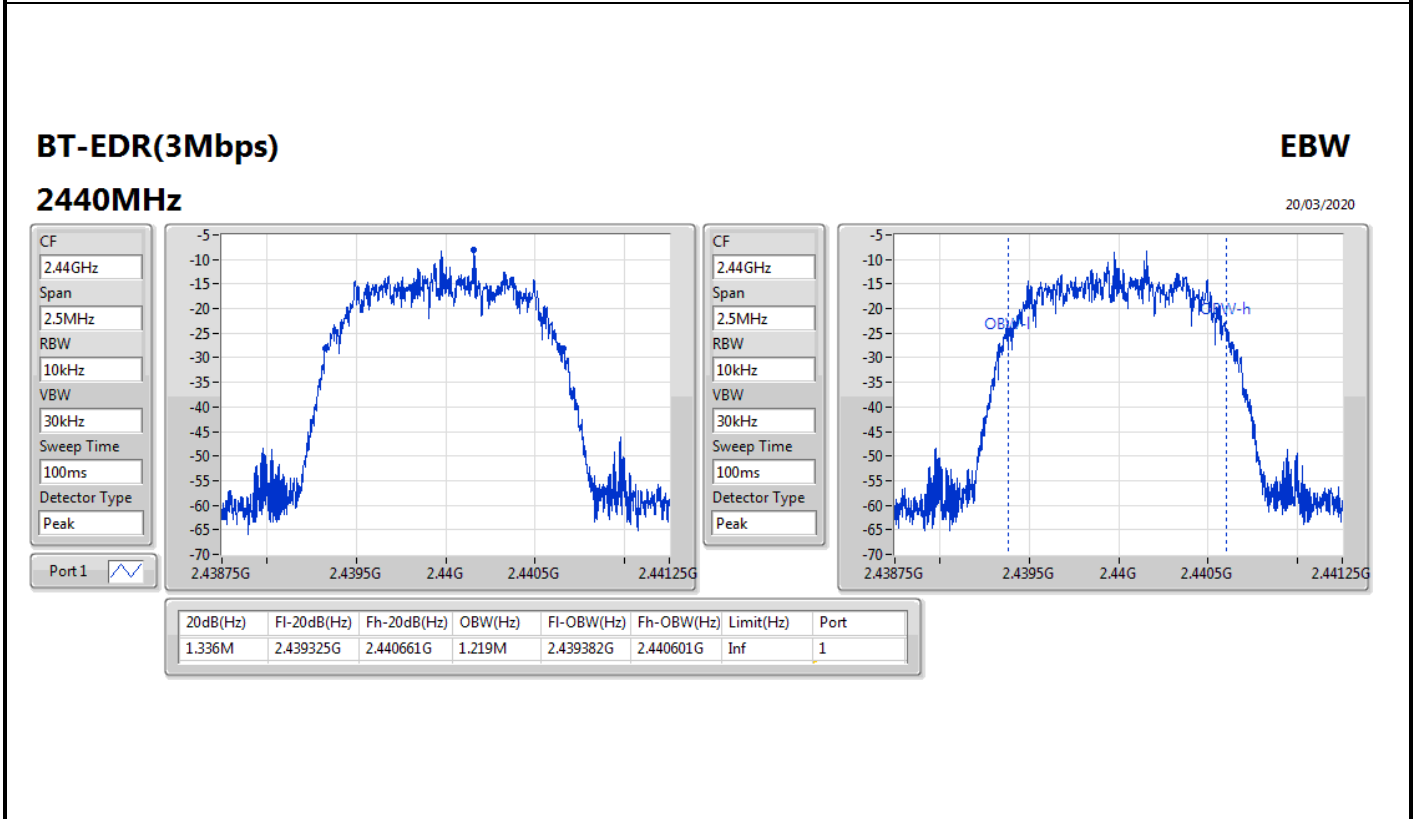
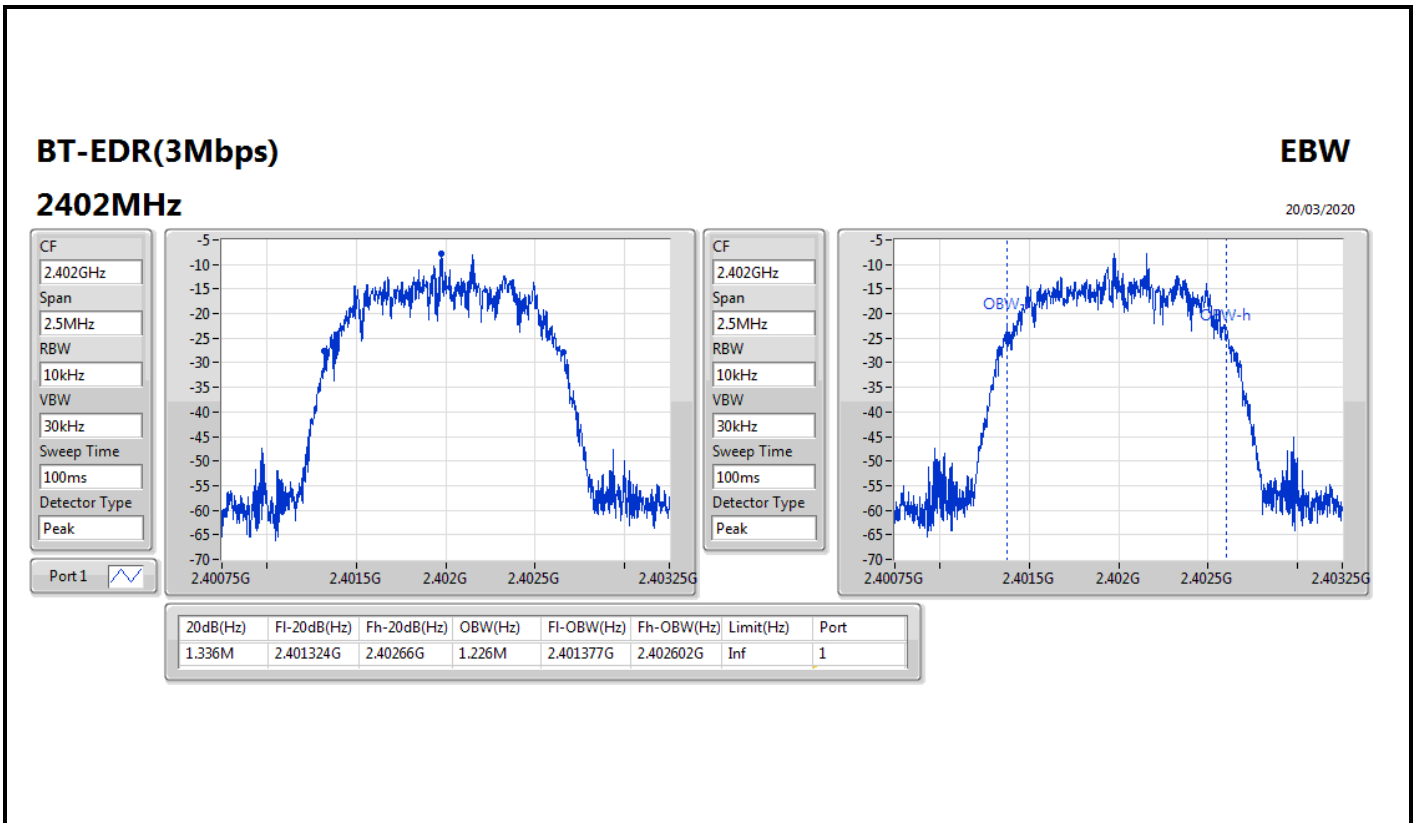
Port X-N dB = Port X 20dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

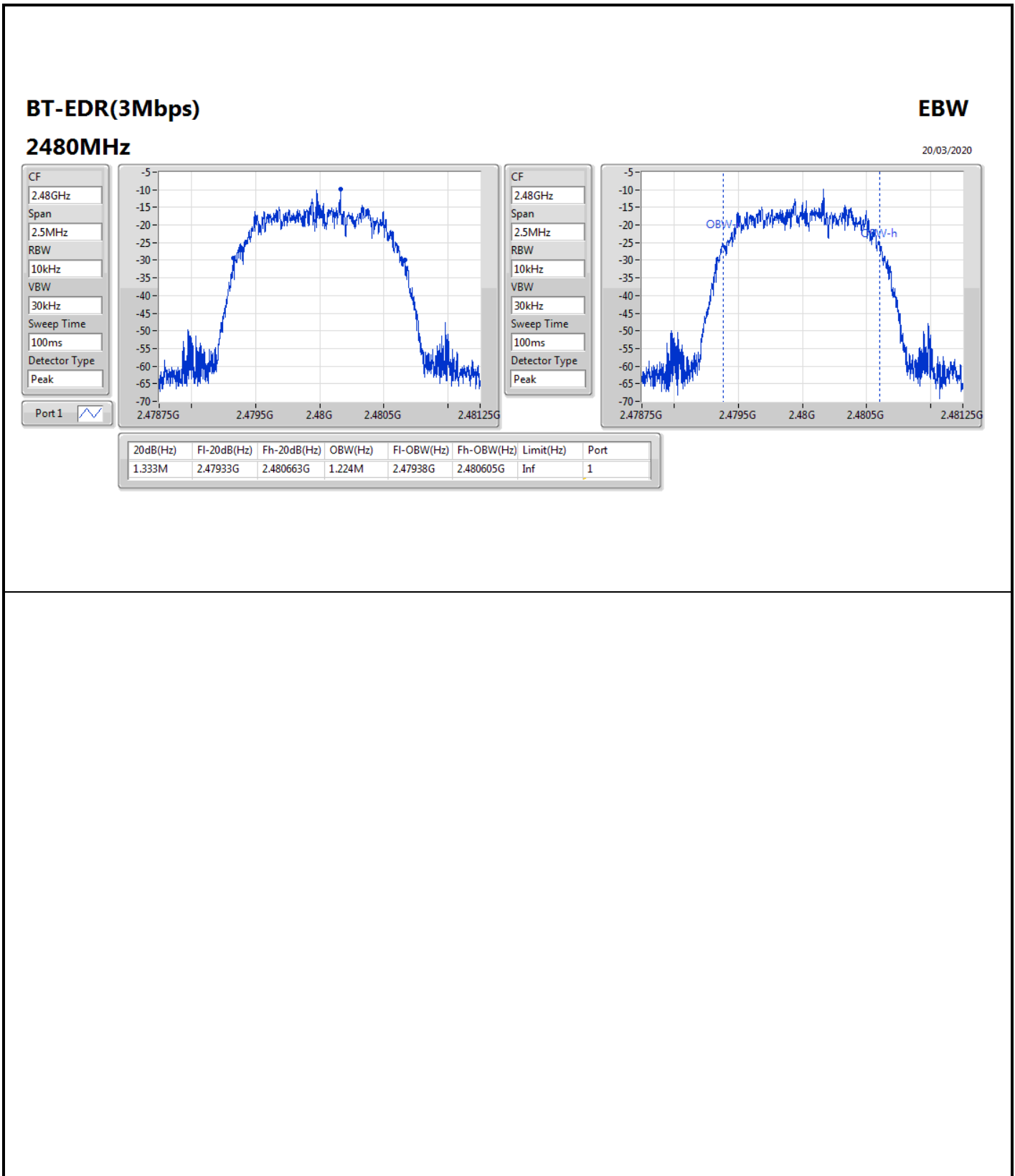














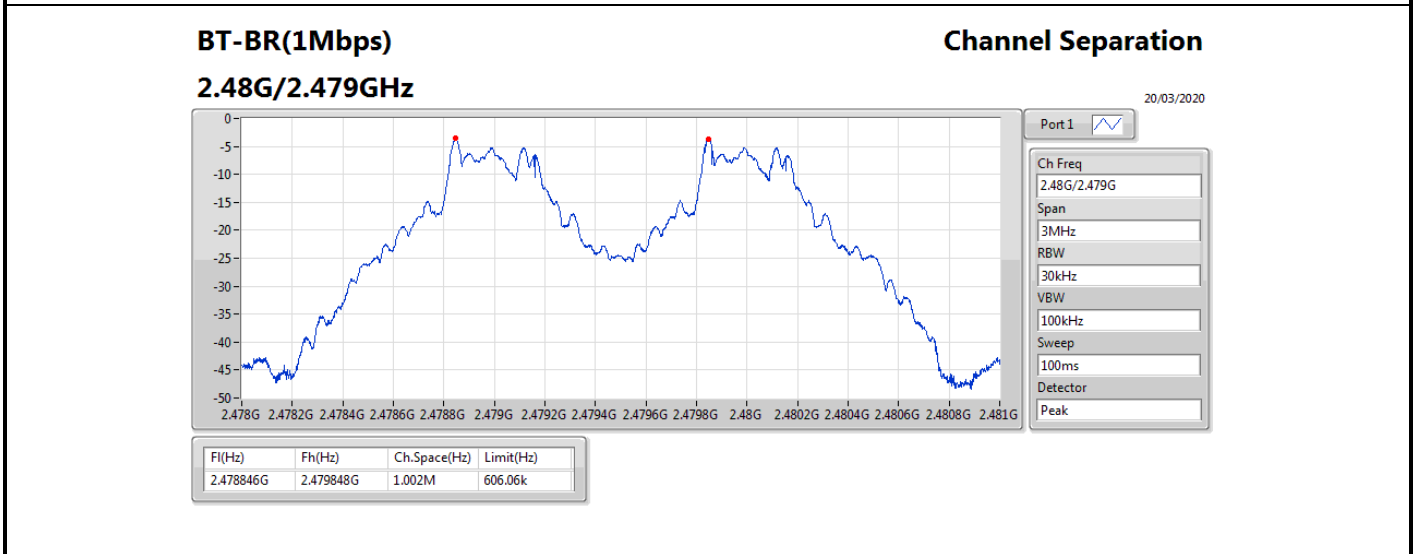
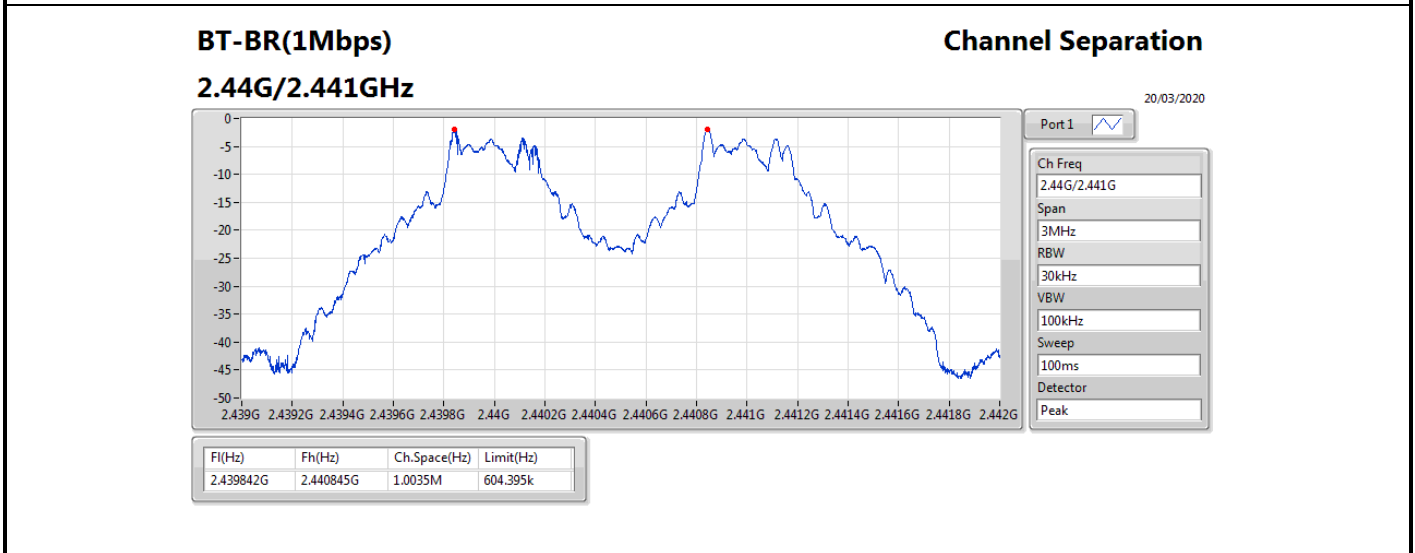
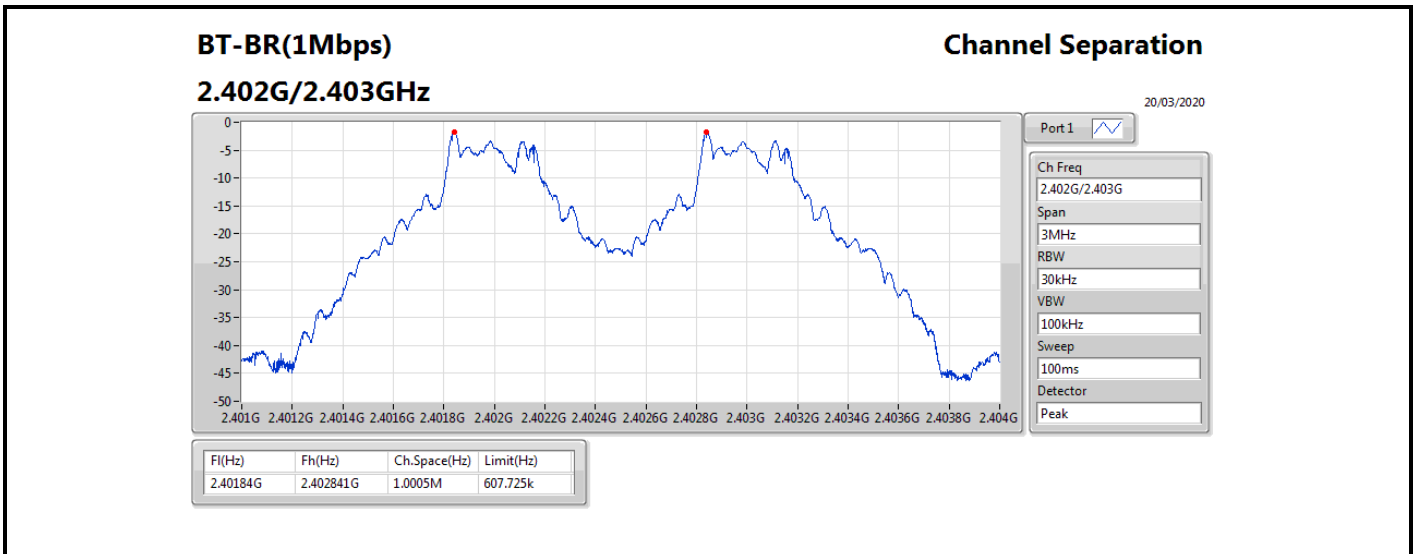
**Summary**

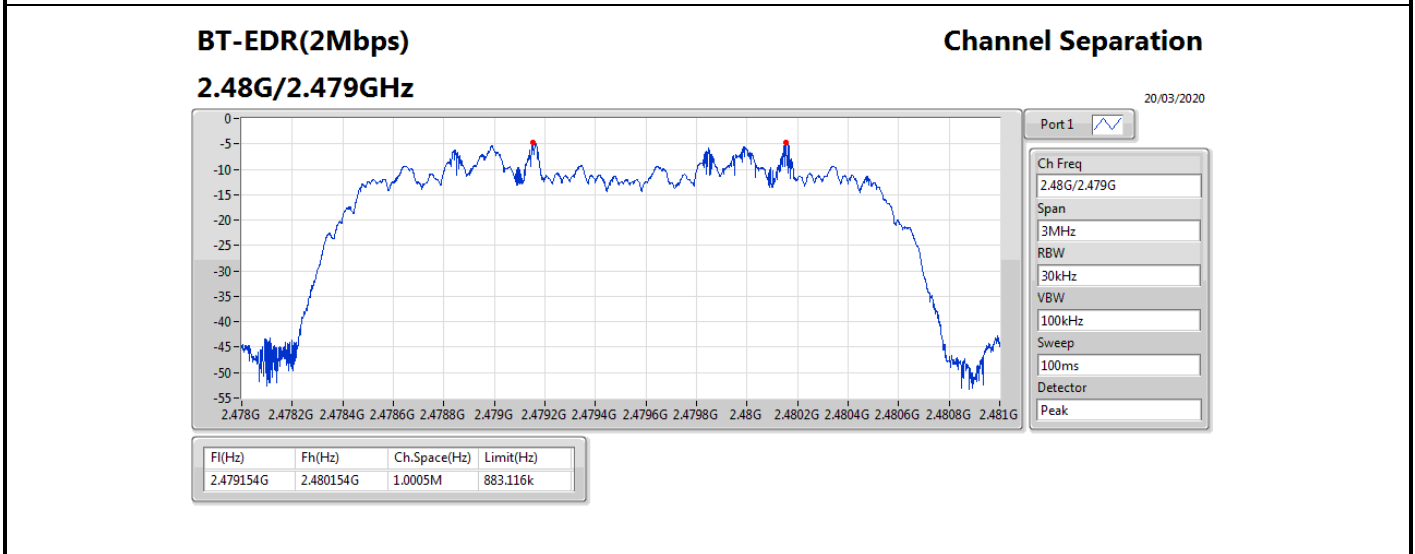
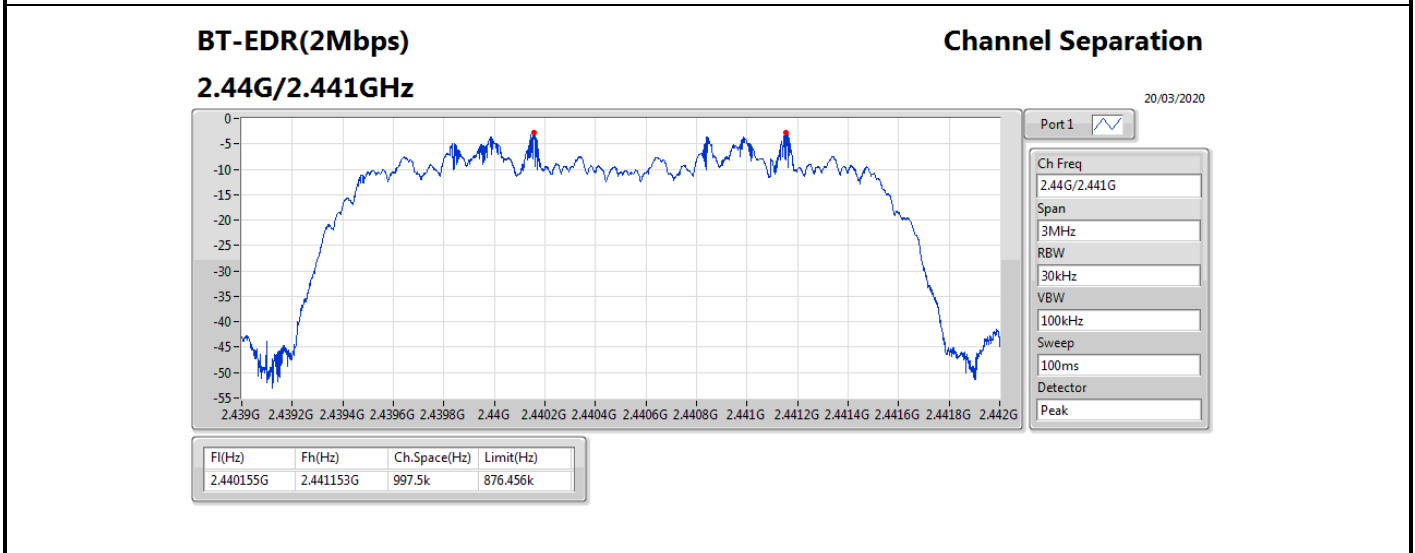
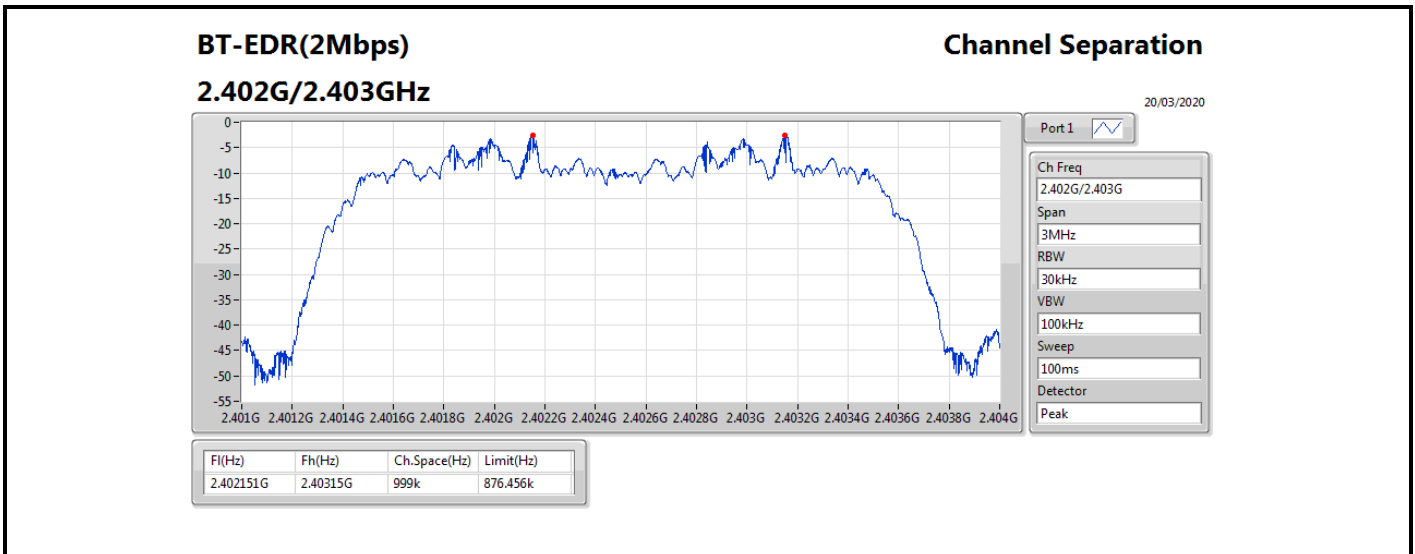
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.0035M	1.0005M
BT-EDR(2Mbps)	1.0005M	997.5k
BT-EDR(3Mbps)	1.0005M	1.0005M

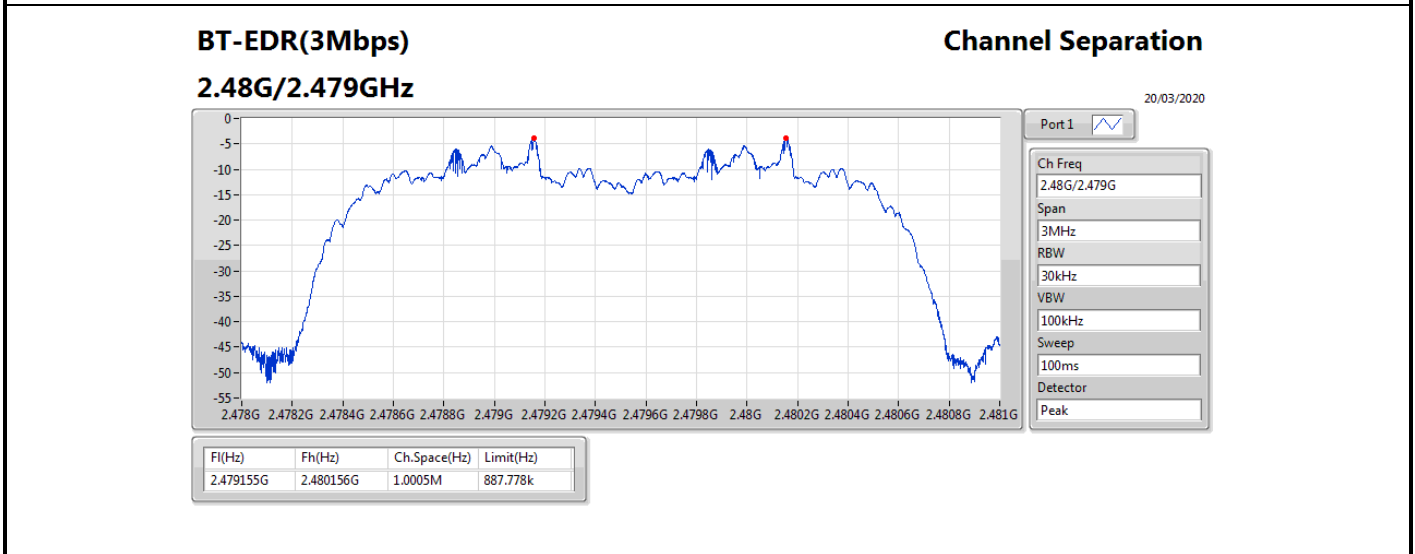
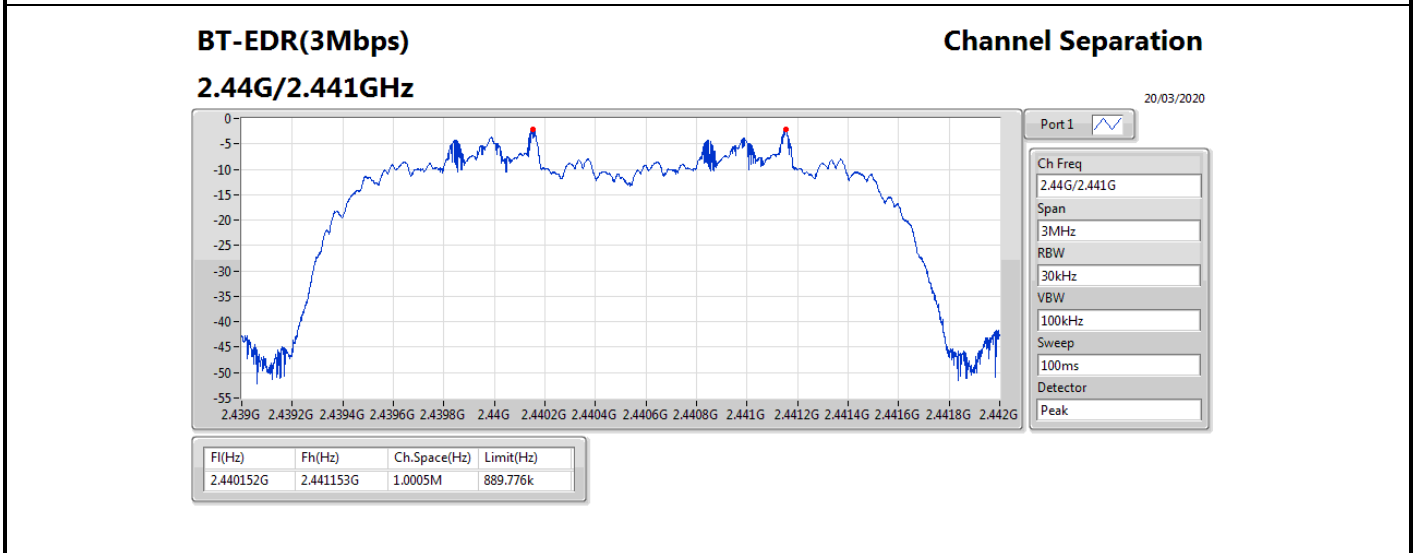
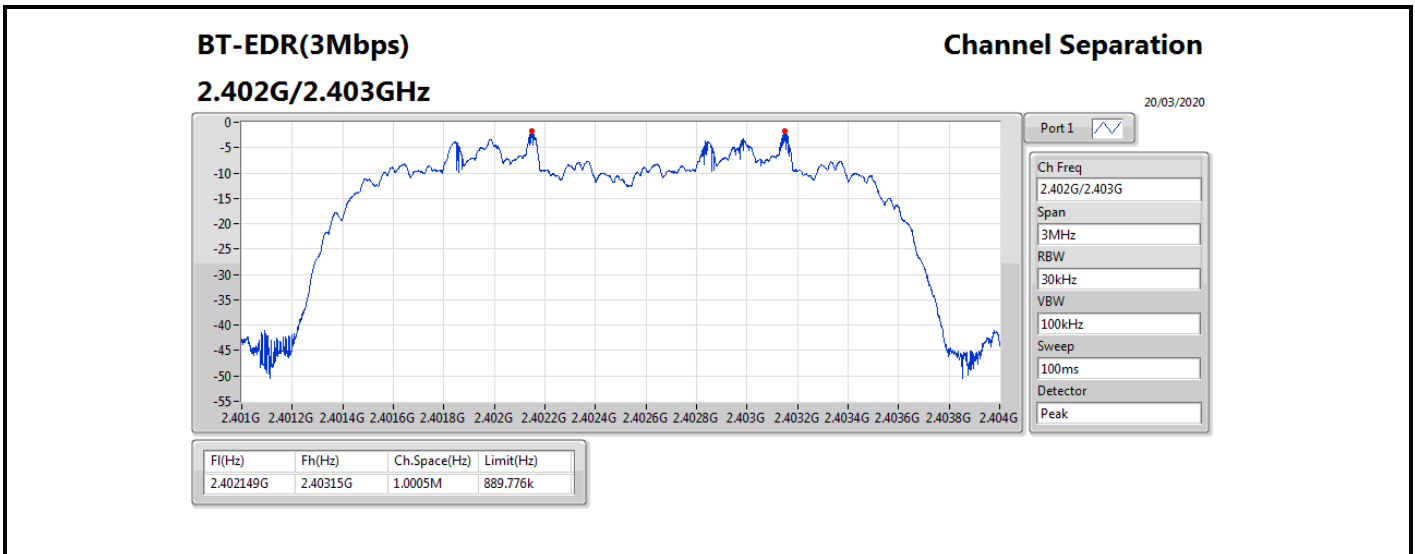


**Result**

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.40184G	2.402841G	1.0005M	607.725k
2440MHz	Pass	2.439842G	2.440845G	1.0035M	604.395k
2480MHz	Pass	2.478846G	2.479848G	1.002M	606.06k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402151G	2.40315G	999k	876.456k
2440MHz	Pass	2.440155G	2.441153G	997.5k	876.456k
2480MHz	Pass	2.479154G	2.480154G	1.0005M	883.116k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402149G	2.40315G	1.0005M	889.776k
2440MHz	Pass	2.440152G	2.441153G	1.0005M	889.776k
2480MHz	Pass	2.479155G	2.480156G	1.0005M	887.778k











**Summary**

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	2.08	0.00161
BT-EDR(2Mbps)	2.09	0.00162
BT-EDR(3Mbps)	2.53	0.00179



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	4.56	2.08	21.00
2440MHz	Pass	4.56	1.46	21.00
2480MHz	Pass	4.56	0.17	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	4.56	2.09	21.00
2440MHz	Pass	4.56	1.85	21.00
2480MHz	Pass	4.56	-0.01	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	4.56	2.53	21.00
2440MHz	Pass	4.56	2.17	21.00
2480MHz	Pass	4.56	0.40	21.00

DG = Directional Gain; Port X = Port X output power



**Summary**

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	0.04	0.00101
BT-EDR(2Mbps)	0.01	0.00100
BT-EDR(3Mbps)	0.03	0.00101



**Result**

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	4.56	0.04	21.00
2440MHz	Pass	4.56	-0.27	21.00
2480MHz	Pass	4.56	-1.97	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	4.56	0.01	21.00
2440MHz	Pass	4.56	-0.32	21.00
2480MHz	Pass	4.56	-2.11	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	4.56	0.03	21.00
2440MHz	Pass	4.56	-0.32	21.00
2480MHz	Pass	4.56	-2.10	21.00

**DG** = Directional Gain; **Port X** = Port X output power



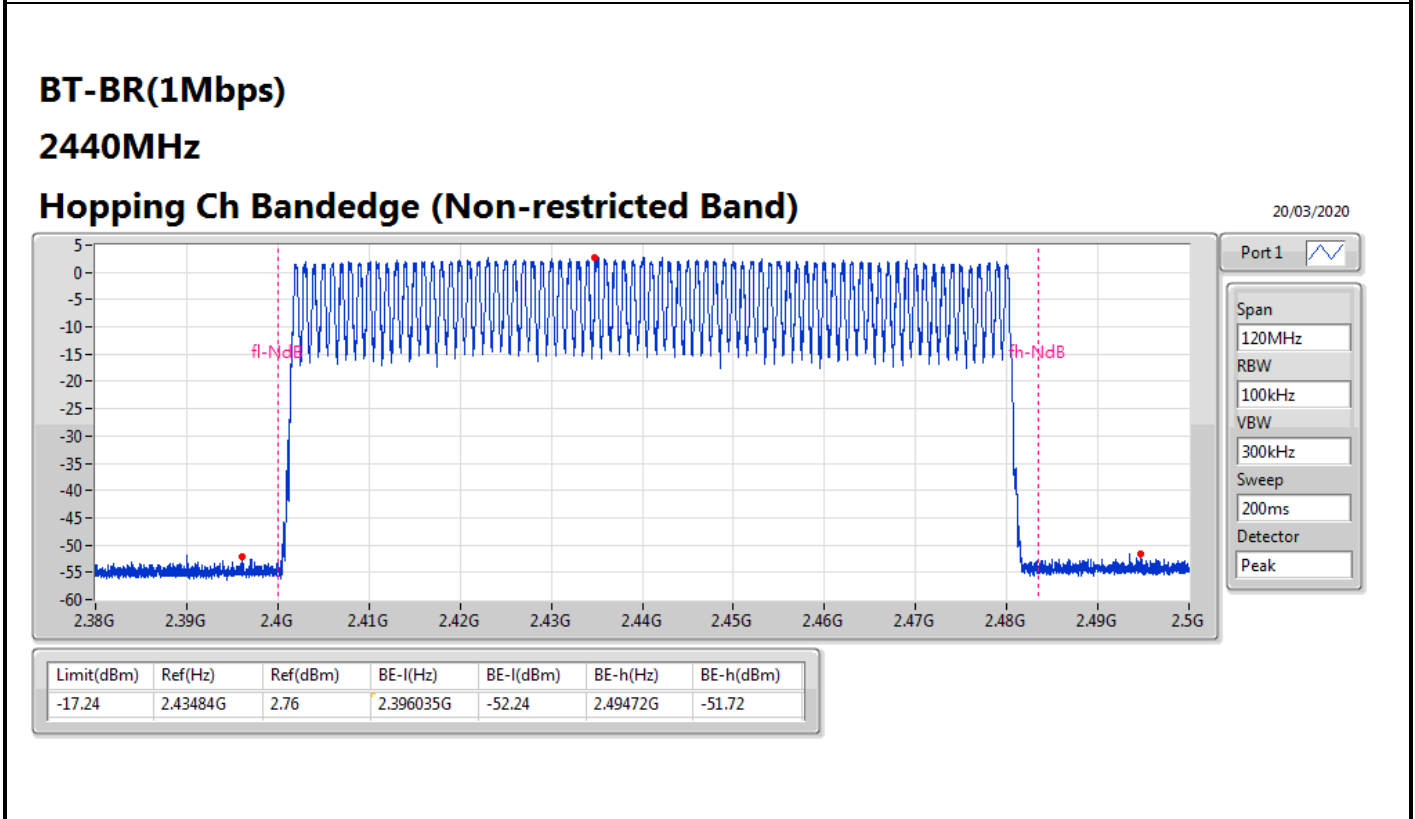
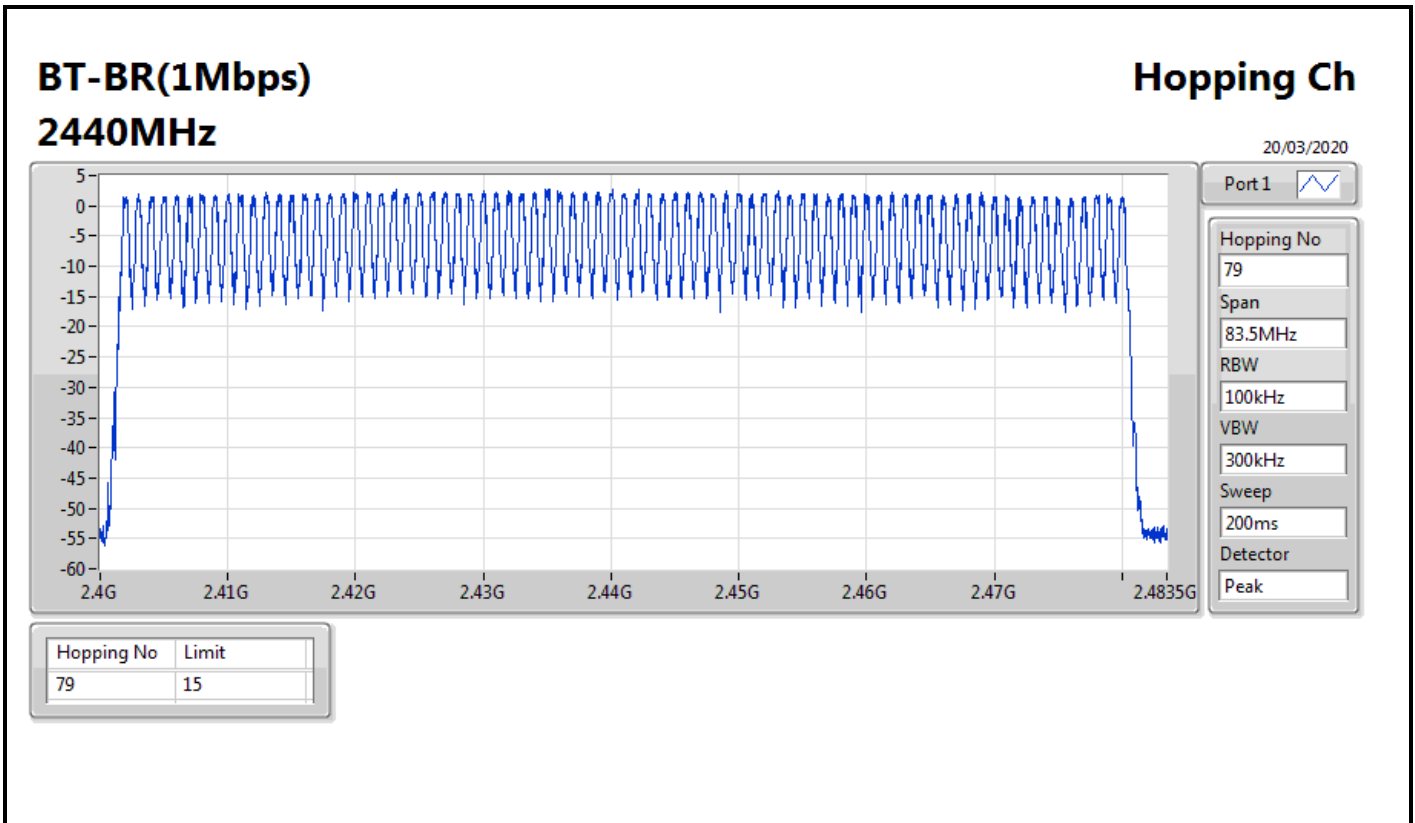
**Summary**

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



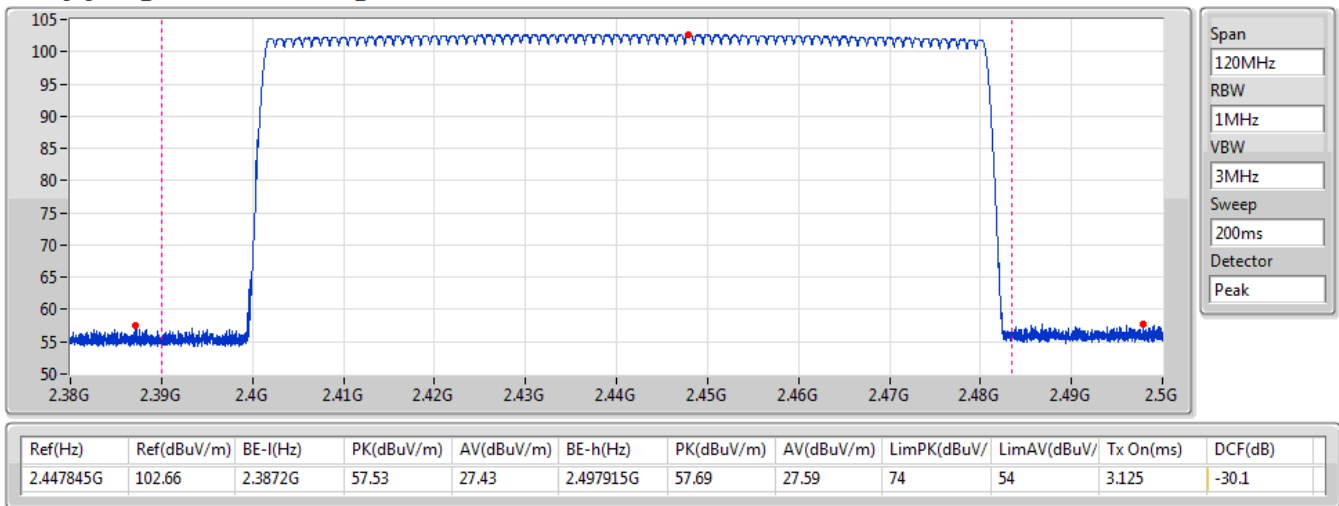
**Result**

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



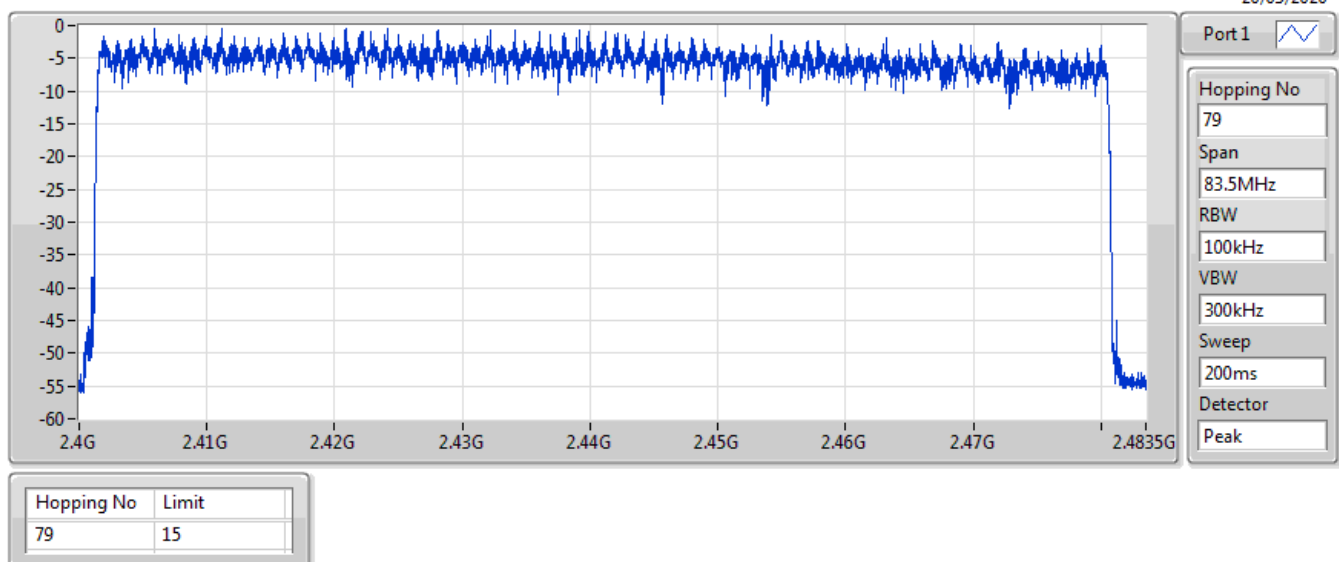
**BT-BR(1Mbps)**  
**2440MHz**  
**Hopping Ch Bandedge (Restricted Band)**

20/03/2020



**BT-EDR(2Mbps)**  
**2440MHz**  
**Hopping Ch**

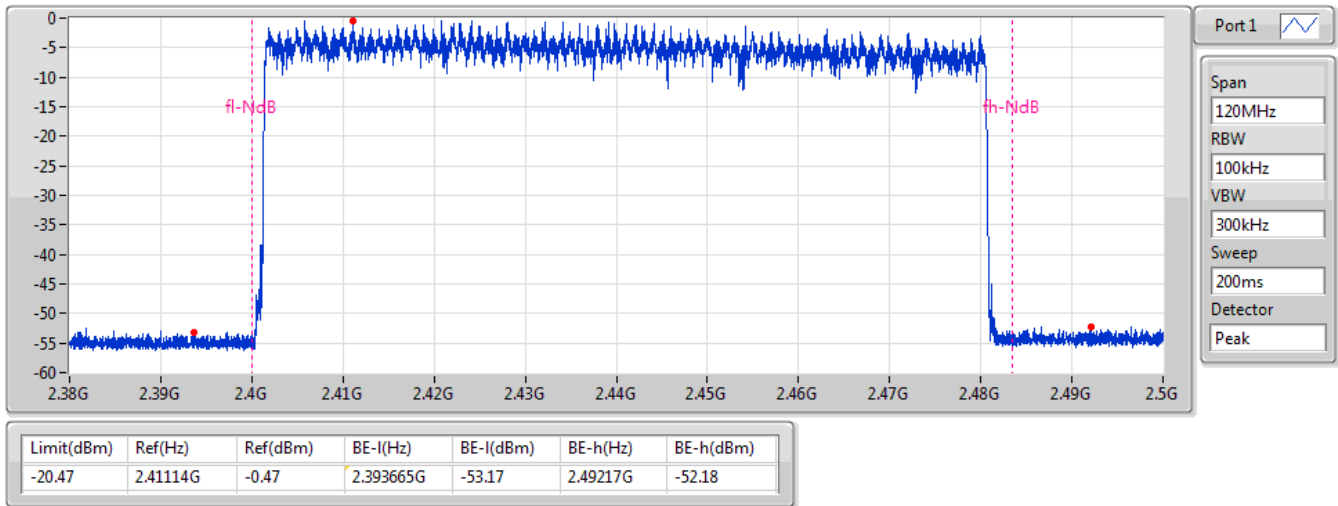
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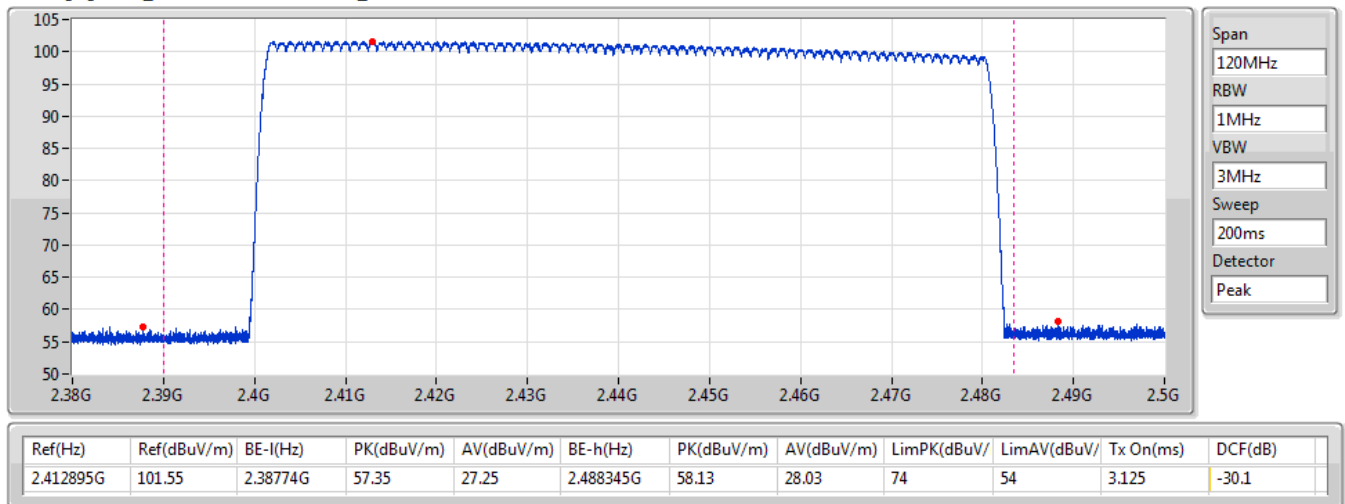
## BT-EDR(2Mbps) 2440MHz Hopping Ch Bandedge (Non-restricted Band)

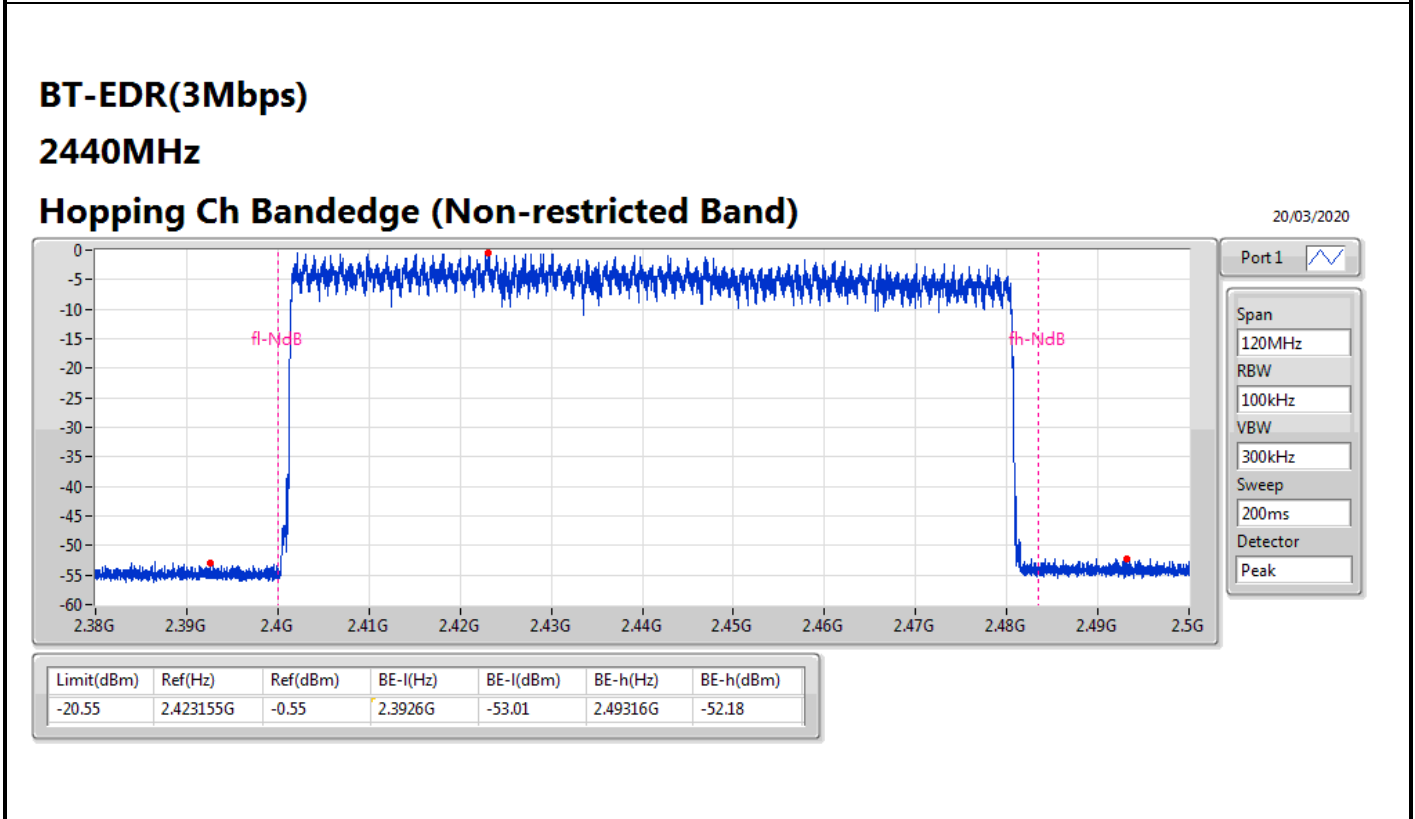
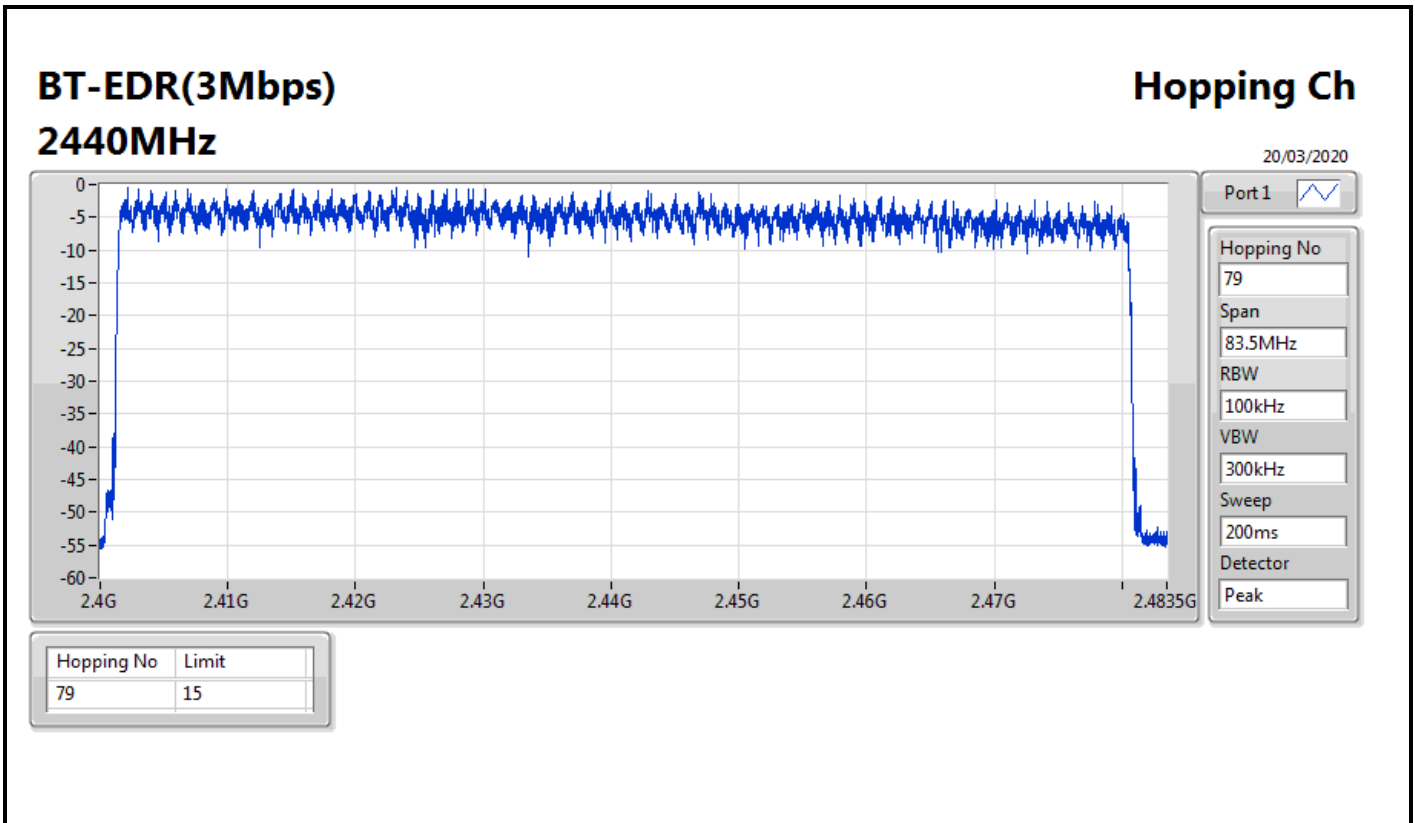
20/03/2020



## BT-EDR(2Mbps) 2440MHz Hopping Ch Bandedge (Restricted Band)

20/03/2020

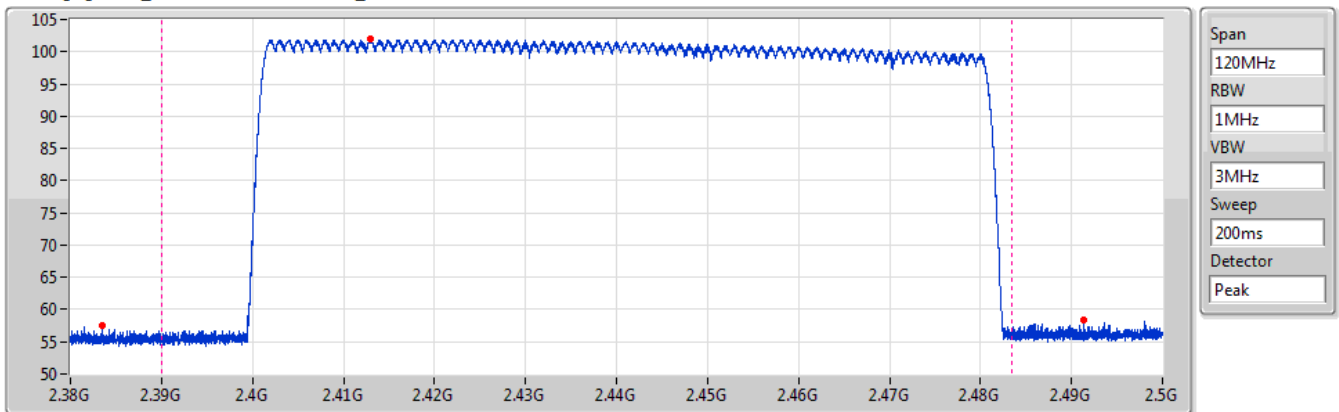






**BT-EDR(3Mbps)**  
**2440MHz**  
**Hopping Ch Bandedge (Restricted Band)**

20/03/2020



Ref(Hz)	Ref(dBuV/m)	BE-l(Hz)	PK(dBuV/m)	AV(dBuV/m)	BE-h(Hz)	PK(dBuV/m)	AV(dBuV/m)	LimPK(dBuV/	LimAV(dBuV/	Tx On(ms)	DCF(dB)
2.412985G	101.89	2.38342G	57.47	27.37	2.49133G	58.32	28.22	74	54	3.125	-30.1



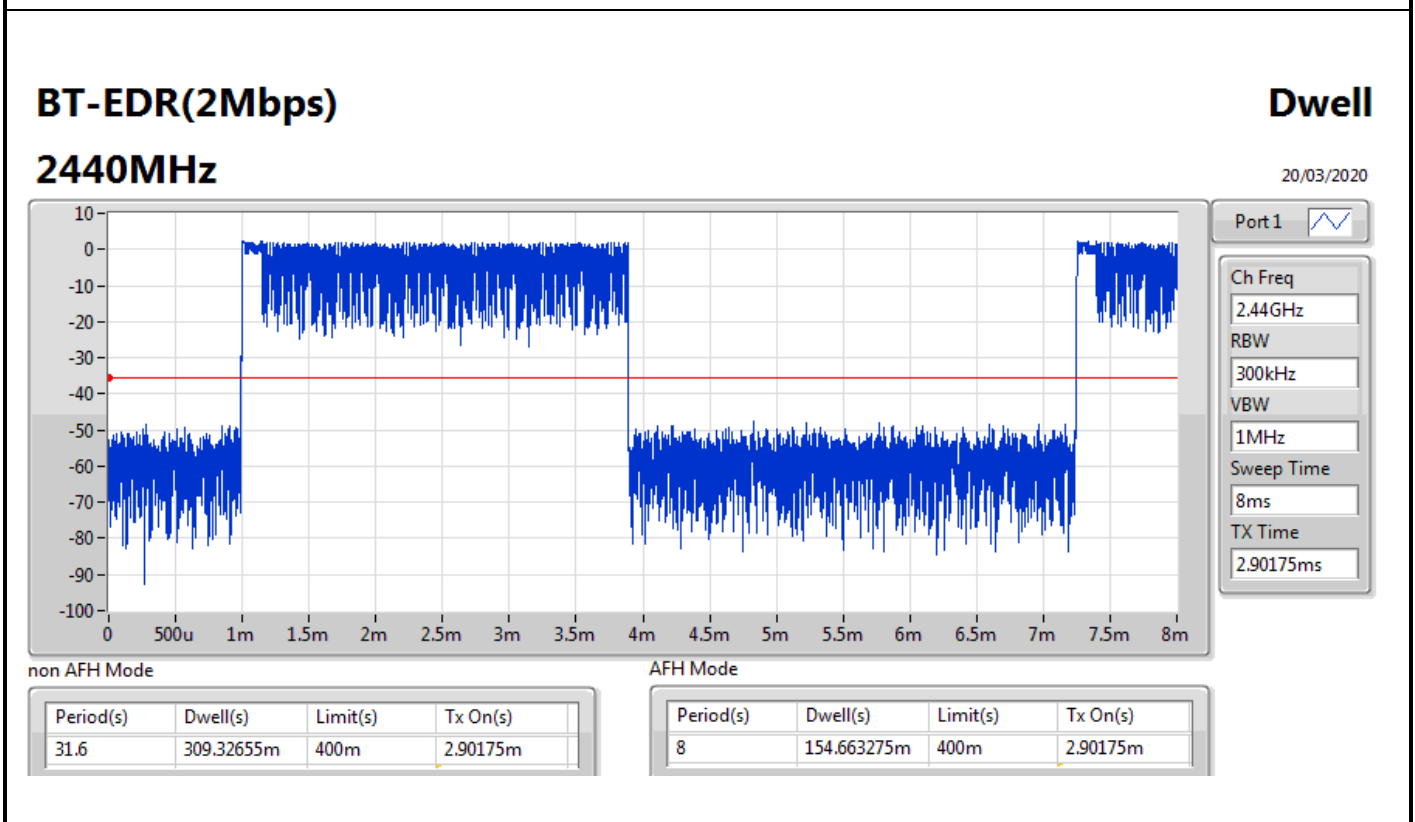
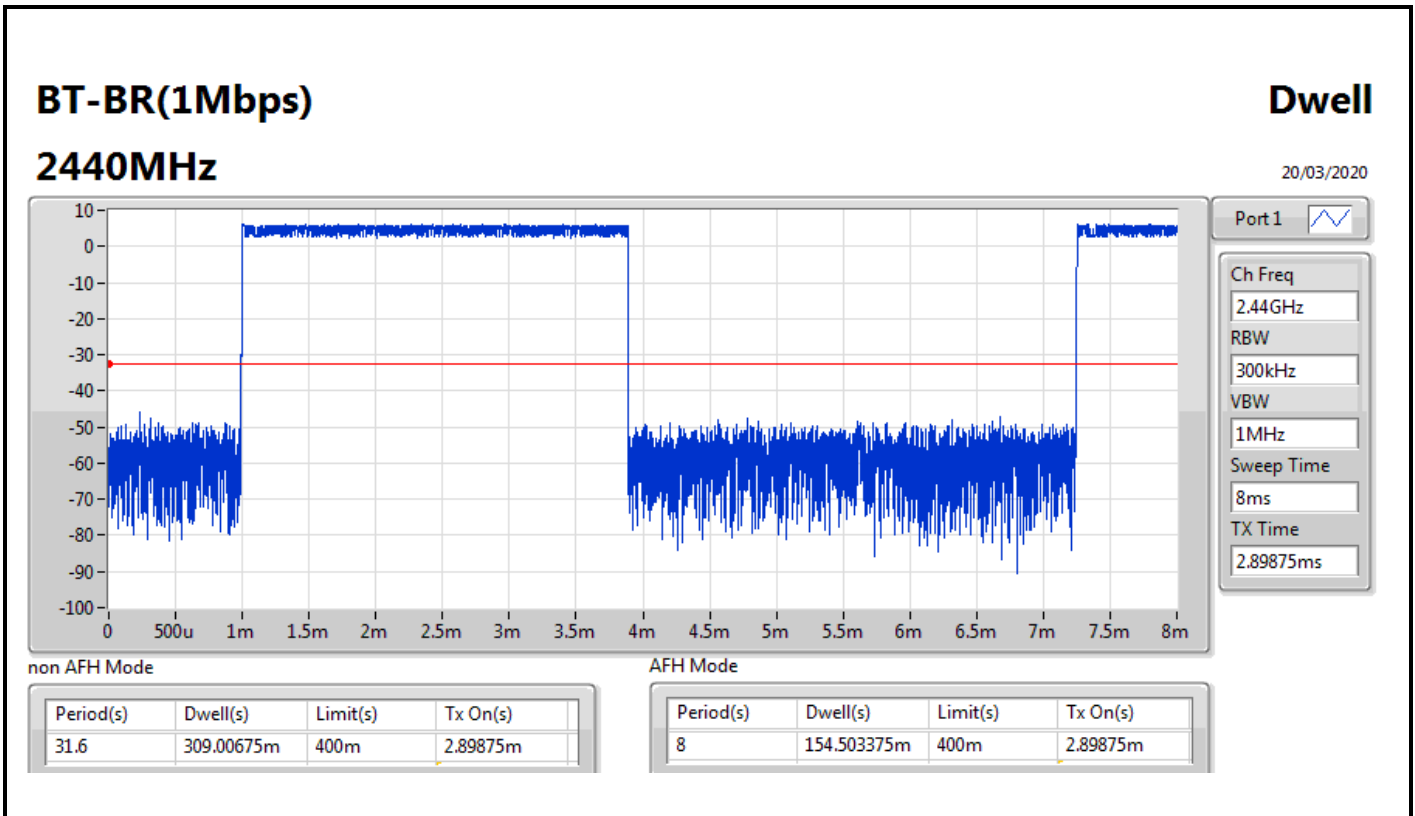
**Summary**

<b>Mode</b>	<b>Max-Dwell (s)</b>
2.4-2.4835GHz	-
BT-BR(1Mbps)	309.00675m
BT-EDR(2Mbps)	309.32655m
BT-EDR(3Mbps)	309.48645m



**Result**

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	309.00675m	400m	2.89875m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	309.32655m	400m	2.90175m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	309.48645m	400m	2.90325m

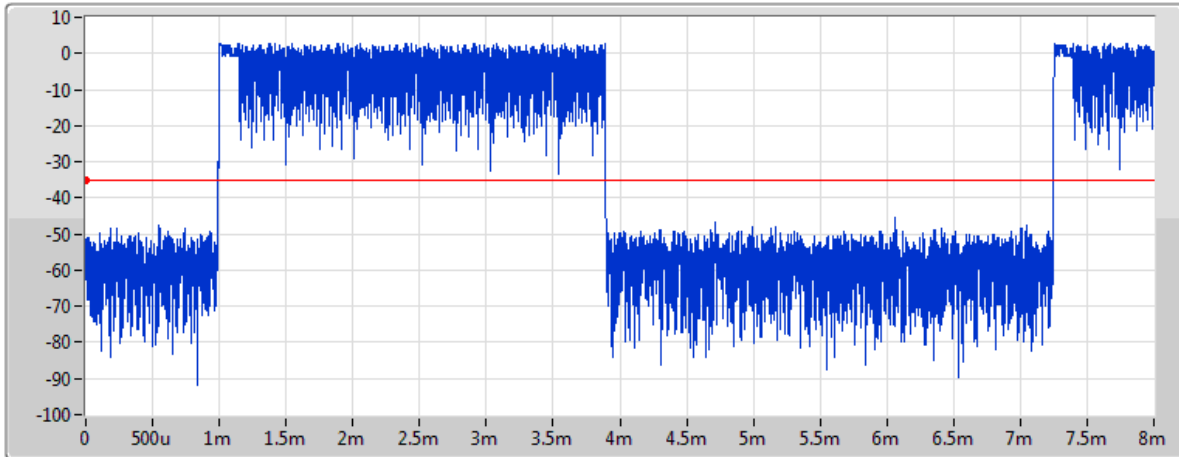



**BT-EDR(3Mbps)**

**Dwell**

**2440MHz**

20/03/2020



Port 1 

Ch Freq  
2.44GHz

RBW  
300kHz

VBW  
1MHz

Sweep Time  
8ms

TX Time  
2.90325ms

non AFH Mode

AFH Mode

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	309.48645m	400m	2.90325m

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
8	154.743225m	400m	2.90325m



Summary

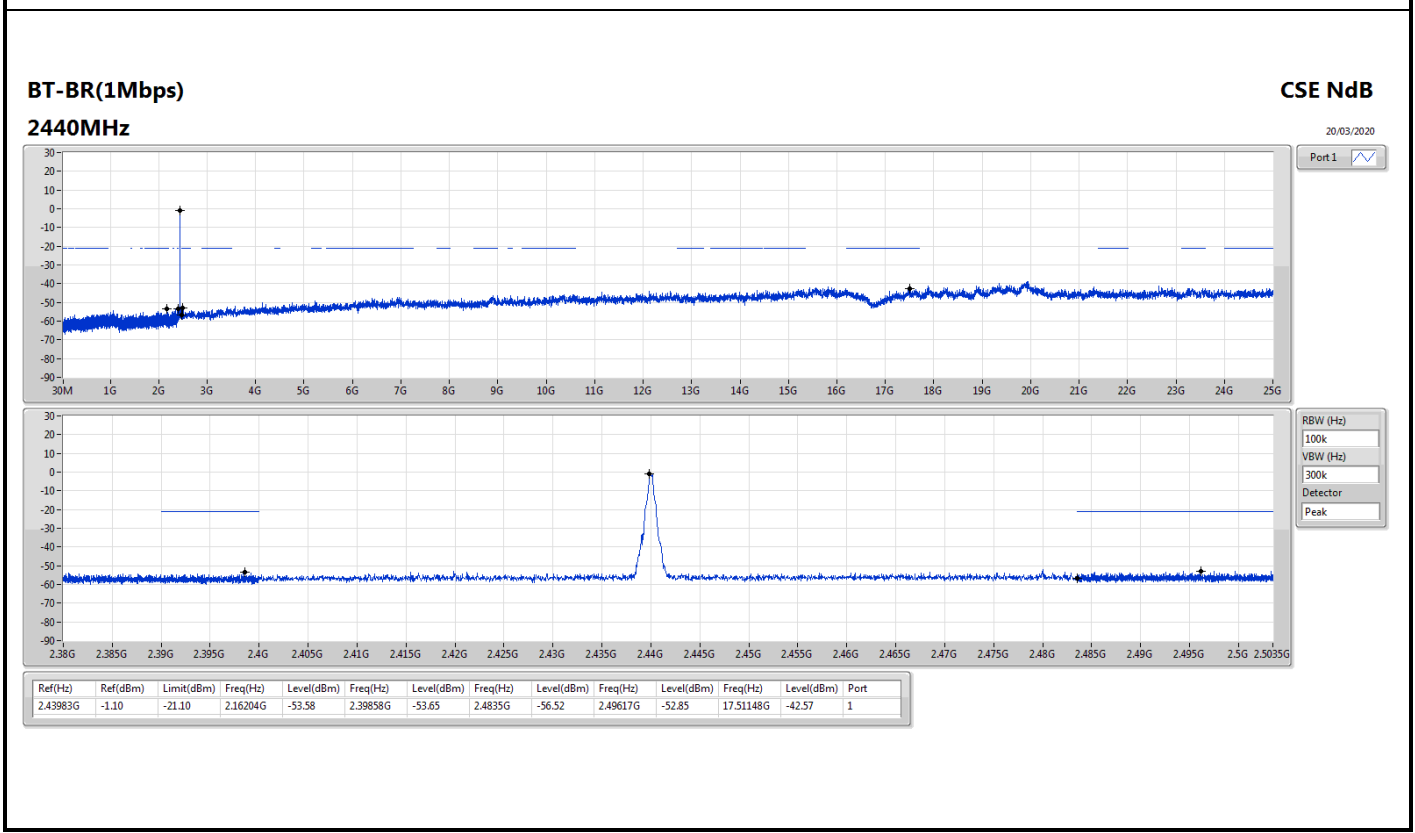
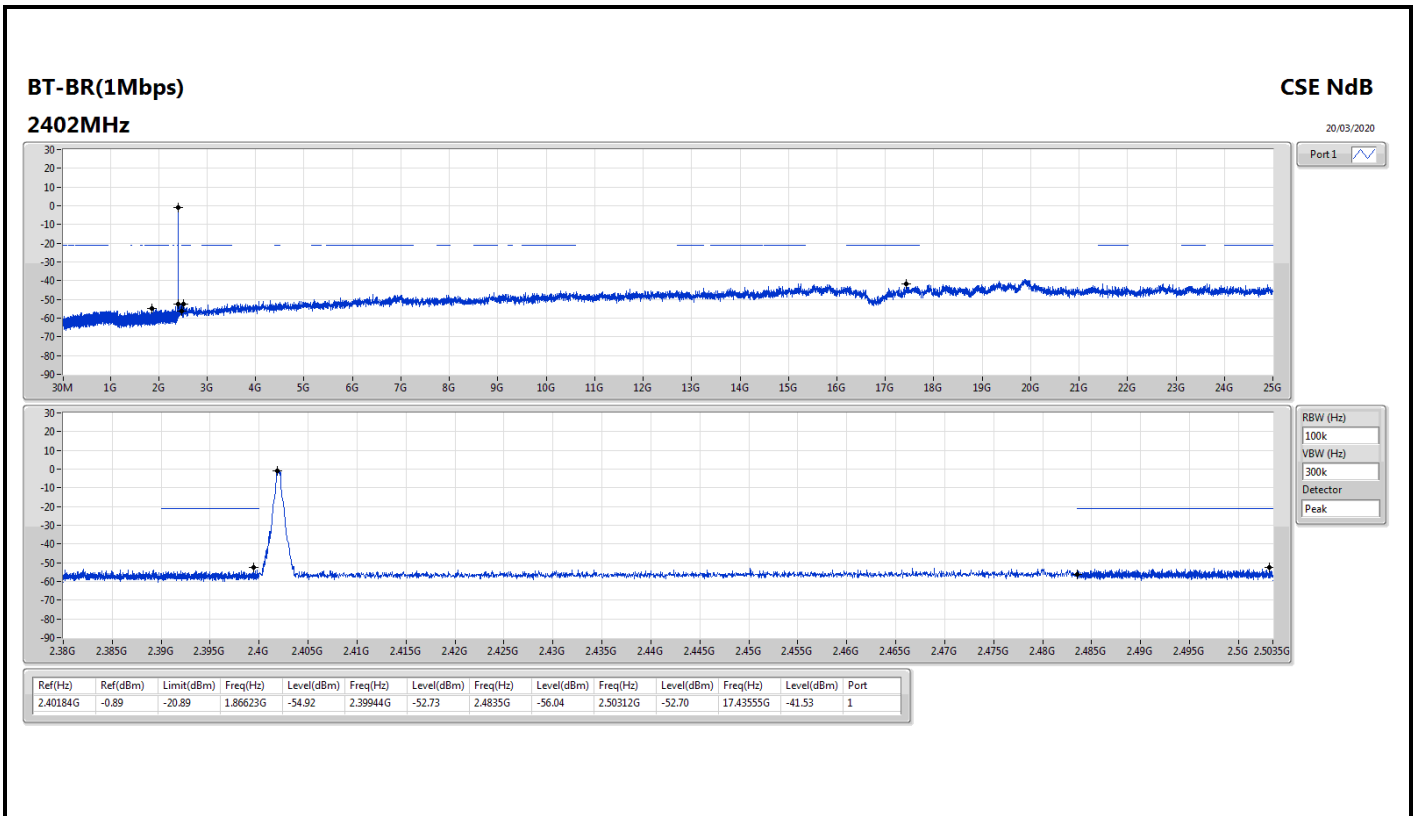
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.48016G	-2.80	-22.80	2.03778G	-54.62	2.39696G	-53.92	2.4835G	-55.06	2.48822G	-51.95	24.18169G	-42.29	1
BT-EDR(2Mbps)	Pass	2.47999G	-3.43	-23.43	1.91353G	-54.24	2.3944G	-52.81	2.4G	-56.49	2.50337G	-53.15	17.47211G	-41.13	1
BT-EDR(3Mbps)	Pass	2.48016G	-2.97	-22.97	2.13384G	-54.03	2.39204G	-54.19	2.4835G	-56.98	2.49427G	-53.50	23.34088G	-40.46	1

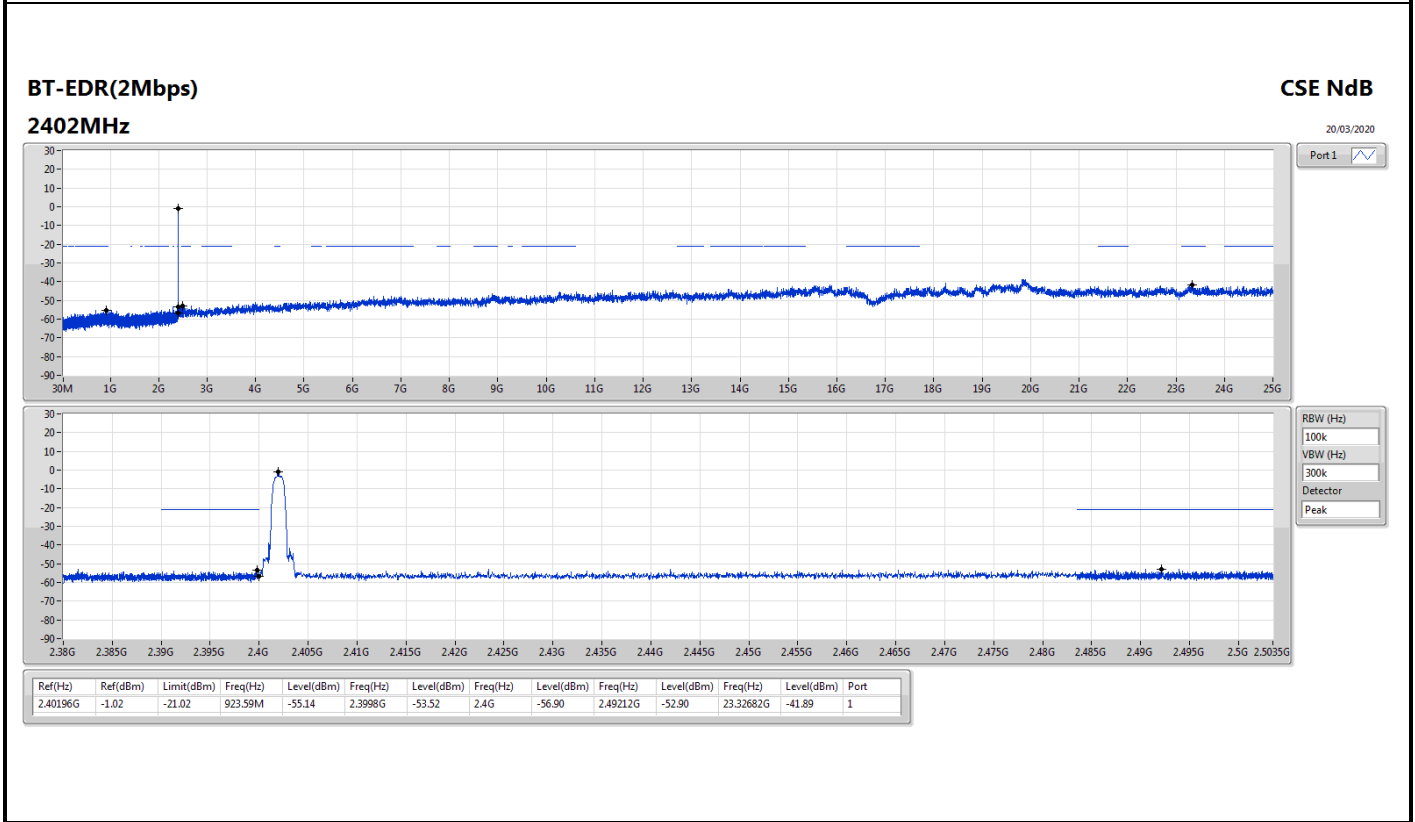
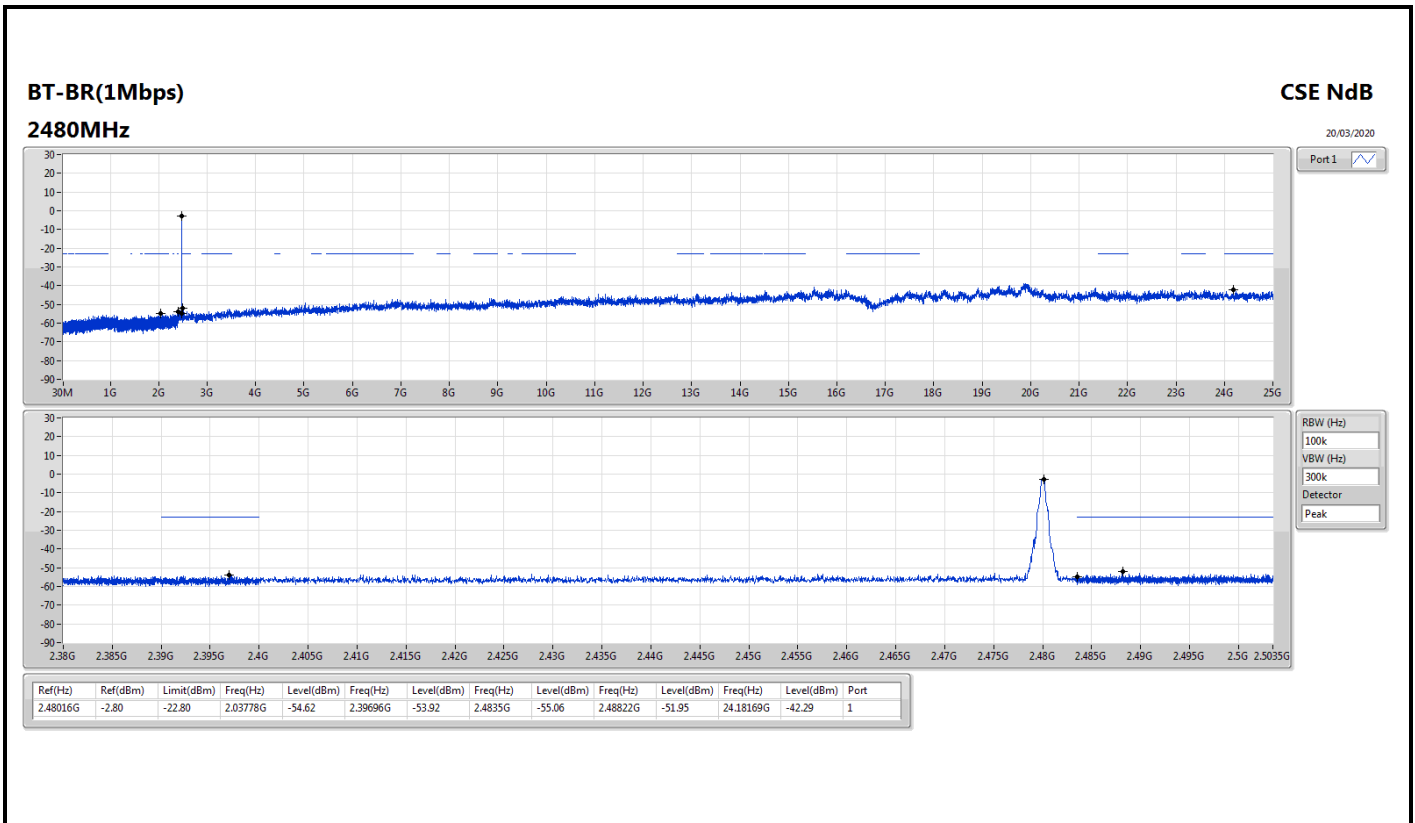


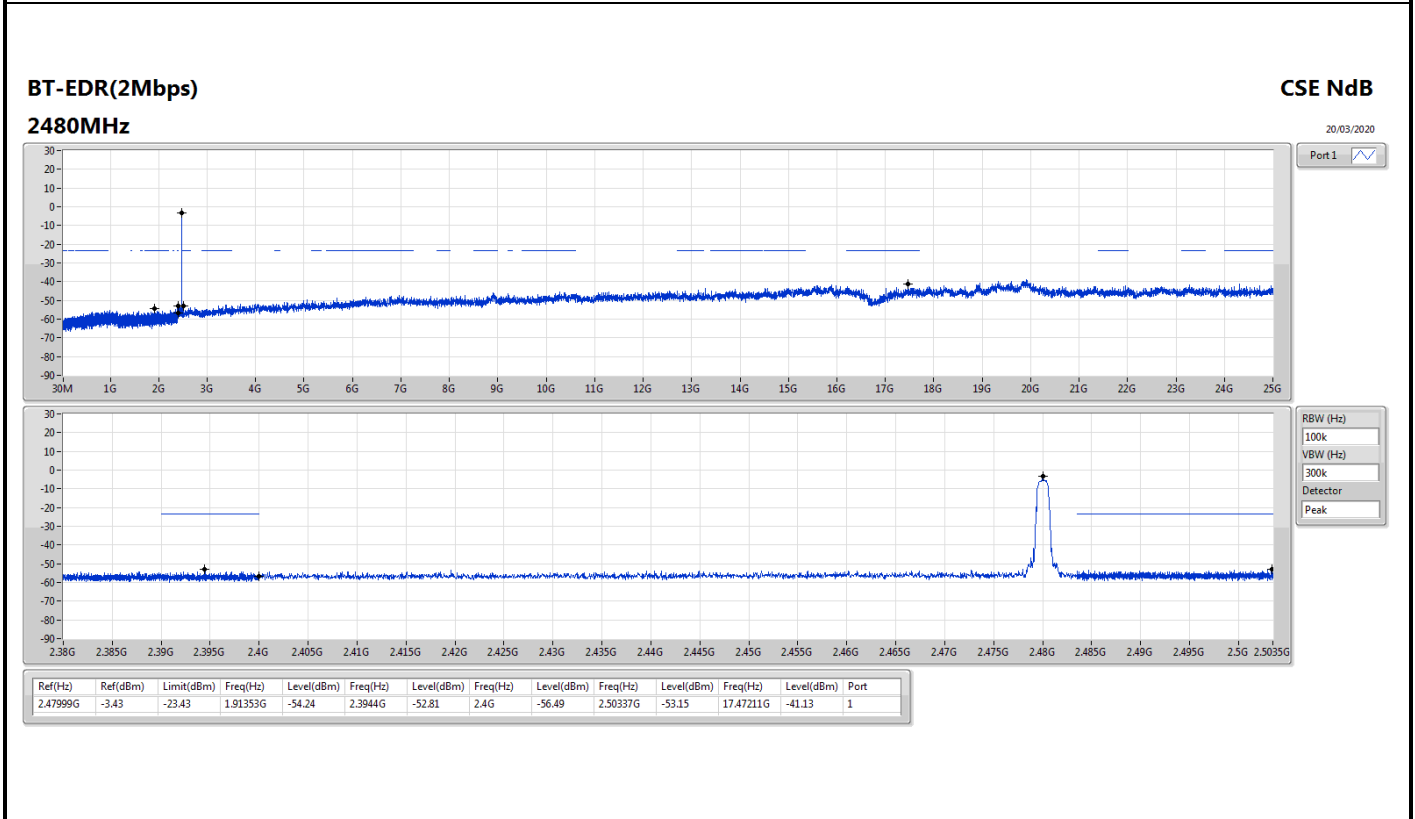
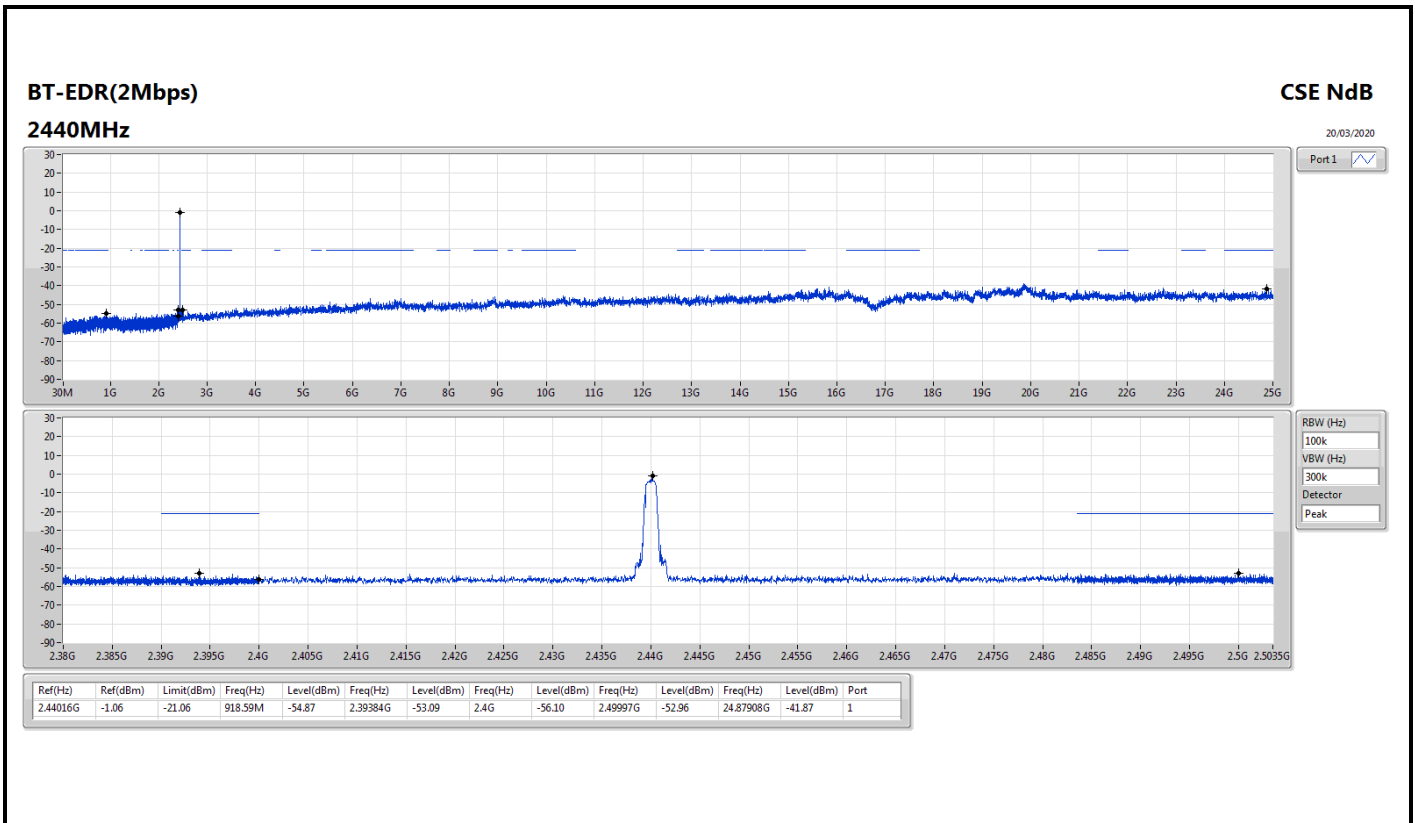


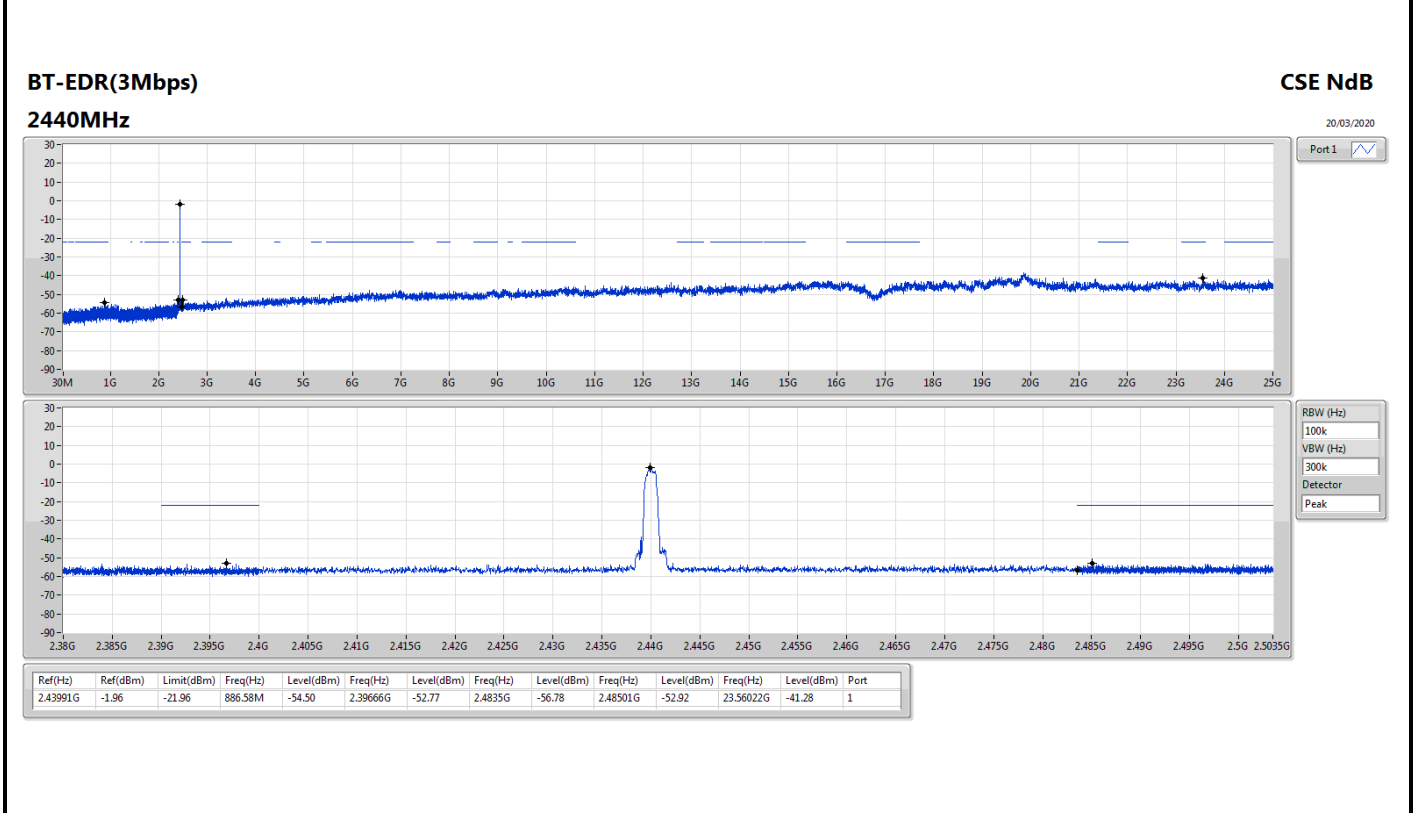
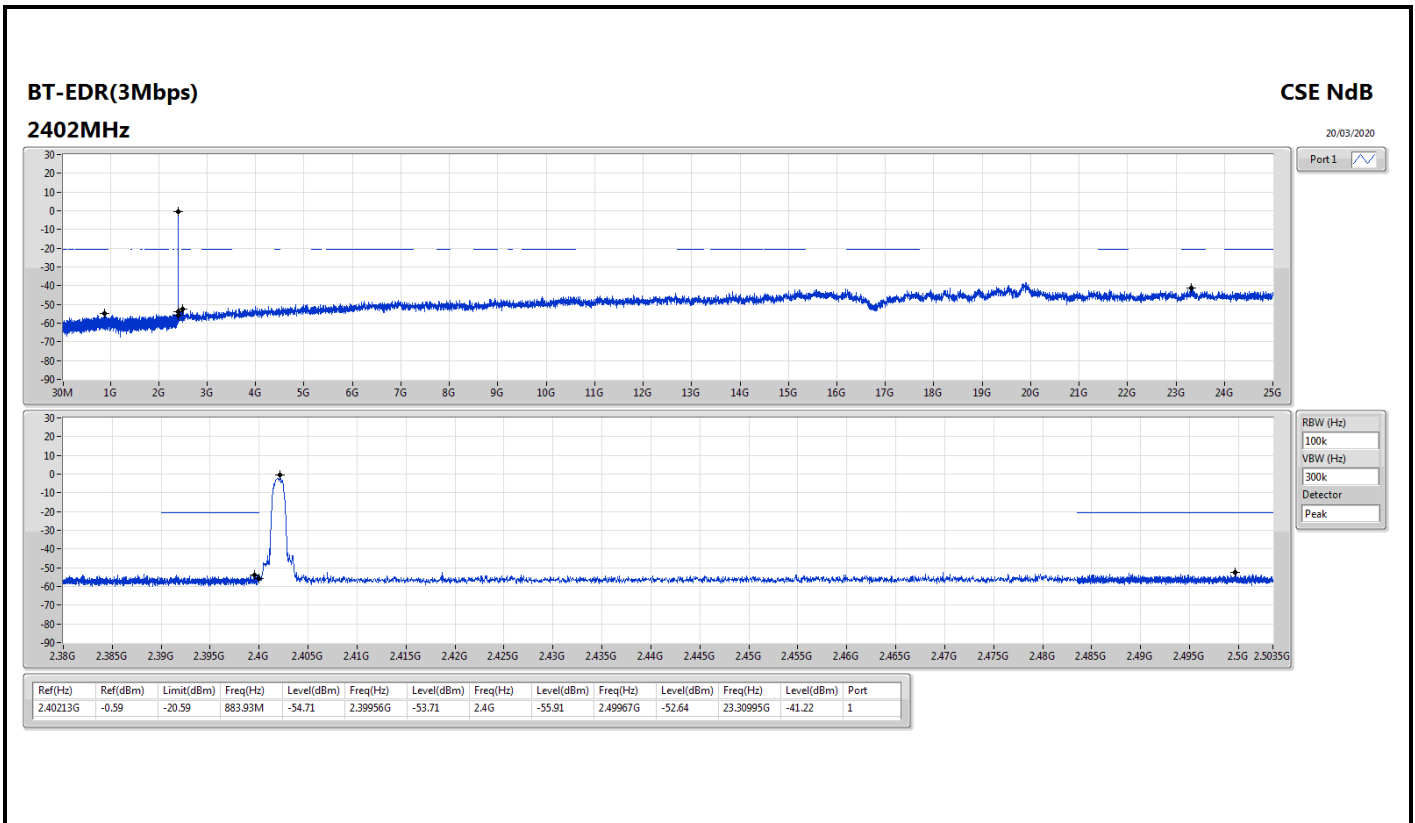
Result

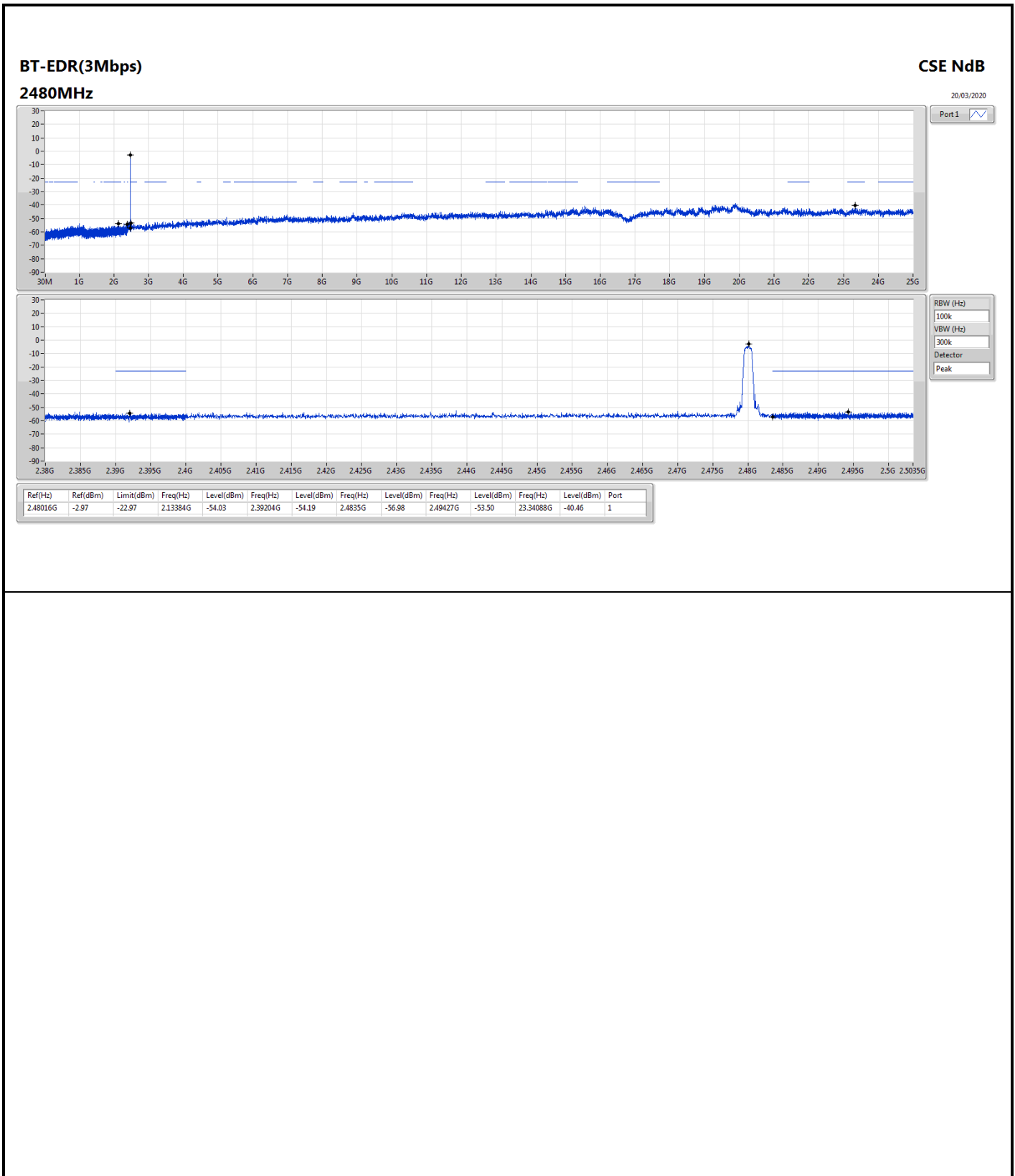
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	-0.89	-20.89	1.86623G	-54.92	2.39944G	-52.73	2.4835G	-56.04	2.50312G	-52.70	17.43555G	-41.53	1
2440MHz	Pass	2.43983G	-1.10	-21.10	2.16204G	-53.58	2.39858G	-53.65	2.4835G	-56.52	2.49617G	-52.85	17.51148G	-42.57	1
2480MHz	Pass	2.48016G	-2.80	-22.80	2.03778G	-54.62	2.39696G	-53.92	2.4835G	-55.06	2.48822G	-51.95	24.18169G	-42.29	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	-1.02	-21.02	923.59M	-55.14	2.3998G	-53.52	2.4G	-56.90	2.49212G	-52.90	23.32682G	-41.89	1
2440MHz	Pass	2.44016G	-1.06	-21.06	918.59M	-54.87	2.39384G	-53.09	2.4G	-56.10	2.49997G	-52.96	24.87908G	-41.87	1
2480MHz	Pass	2.47999G	-3.43	-23.43	1.91353G	-54.24	2.3944G	-52.81	2.4G	-56.49	2.50337G	-53.15	17.47211G	-41.13	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40213G	-0.59	-20.59	883.93M	-54.71	2.39956G	-53.71	2.4G	-55.91	2.49967G	-52.64	23.30995G	-41.22	1
2440MHz	Pass	2.43991G	-1.96	-21.96	886.58M	-54.50	2.39666G	-52.77	2.4835G	-56.78	2.48501G	-52.92	23.56022G	-41.28	1
2480MHz	Pass	2.48016G	-2.97	-22.97	2.13384G	-54.03	2.39204G	-54.19	2.4835G	-56.98	2.49427G	-53.50	23.34088G	-40.46	1













Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-EDR(3Mbps)	Pass	PK	307.42M	42.88	46.00	-3.12	3	Horizontal	0	1.00	-



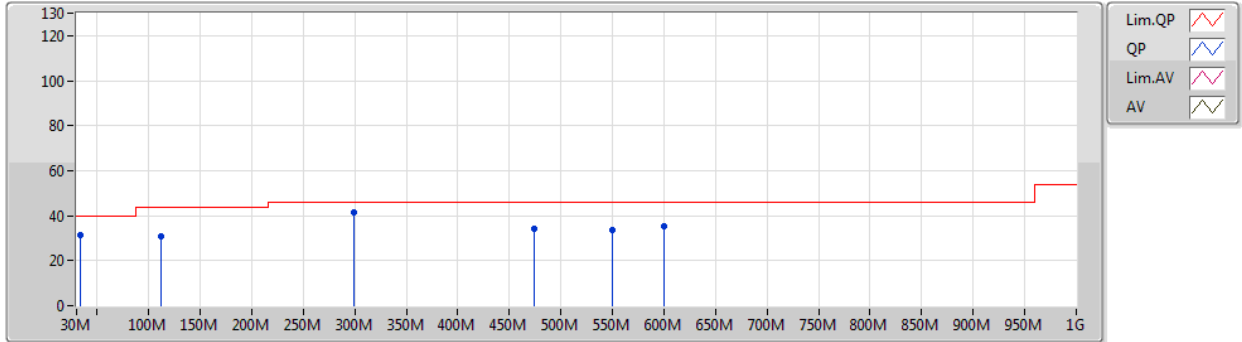
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz_Adapter	Pass	PK	33.88M	31.54	40.00	-8.46	3	Vertical	0	1.00	-
2440MHz_Adapter	Pass	PK	111.48M	30.73	43.50	-12.77	3	Vertical	0	1.00	-
2440MHz_Adapter	Pass	PK	474.26M	34.03	46.00	-11.97	3	Vertical	0	1.00	-
2440MHz_Adapter	Pass	PK	549.92M	33.40	46.00	-12.60	3	Vertical	0	1.00	-
2440MHz_Adapter	Pass	PK	600.36M	35.57	46.00	-10.43	3	Vertical	0	1.00	-
2440MHz_Adapter	Pass	QP	299.66M	41.32	46.00	-4.68	3	Vertical	282	1.92	-
2440MHz_Adapter	Pass	PK	113.42M	31.00	43.50	-12.50	3	Horizontal	360	1.00	-
2440MHz_Adapter	Pass	PK	274.44M	36.57	46.00	-9.43	3	Horizontal	360	1.00	-
2440MHz_Adapter	Pass	PK	524.7M	32.39	46.00	-13.61	3	Horizontal	360	1.00	-
2440MHz_Adapter	Pass	PK	575.14M	32.46	46.00	-13.54	3	Horizontal	360	1.00	-
2440MHz_Adapter	Pass	PK	749.74M	37.05	46.00	-8.95	3	Horizontal	360	1.00	-
2440MHz_Adapter	Pass	QP	299.66M	42.36	46.00	-3.64	3	Horizontal	243	1.00	-
2440MHz_PoE	Pass	PK	33.88M	32.69	40.00	-7.31	3	Vertical	360	1.00	-
2440MHz_PoE	Pass	PK	241.46M	34.45	46.00	-11.55	3	Vertical	360	1.00	-
2440MHz_PoE	Pass	PK	291.9M	39.36	46.00	-6.64	3	Vertical	360	1.00	-
2440MHz_PoE	Pass	PK	357.86M	31.18	46.00	-14.82	3	Vertical	360	1.00	-
2440MHz_PoE	Pass	PK	474.26M	31.90	46.00	-14.10	3	Vertical	360	1.00	-
2440MHz_PoE	Pass	PK	549.92M	34.12	46.00	-11.88	3	Vertical	360	1.00	-
2440MHz_PoE	Pass	PK	125.06M	32.99	43.50	-10.51	3	Horizontal	0	1.00	-
2440MHz_PoE	Pass	PK	224M	33.98	46.00	-12.02	3	Horizontal	0	1.00	-
2440MHz_PoE	Pass	PK	274.44M	35.84	46.00	-10.16	3	Horizontal	0	1.00	-
2440MHz_PoE	Pass	PK	307.42M	42.88	46.00	-3.12	3	Horizontal	0	1.00	-
2440MHz_PoE	Pass	PK	524.7M	34.25	46.00	-11.75	3	Horizontal	0	1.00	-
2440MHz_PoE	Pass	PK	600.36M	35.30	46.00	-10.70	3	Horizontal	0	1.00	-



**BT-EDR(3Mbps)**  
**2440MHz\_Adapter**

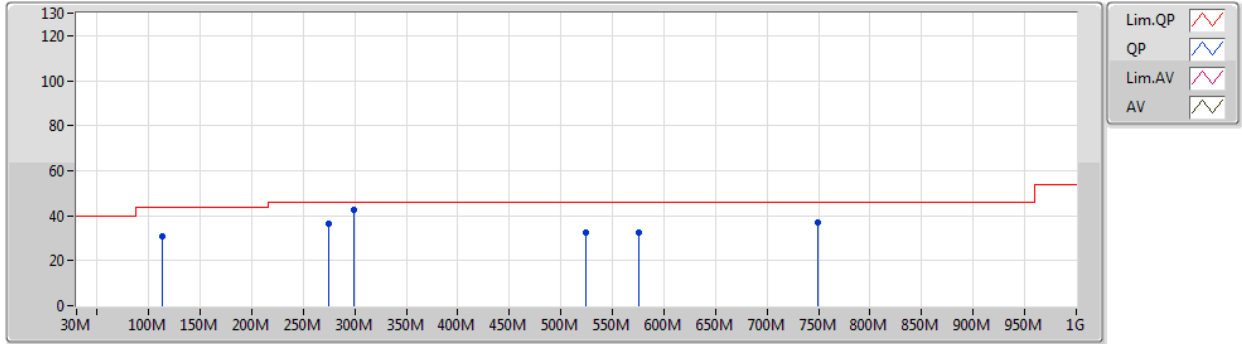
24/03/2020



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	33.88M	31.54	40.00	-8.46	-5.33	3	Vertical	0	1.00	-	36.87	21.37	0.86	27.56
PK	111.48M	30.73	43.50	-12.77	-8.70	3	Vertical	0	1.00	-	39.43	17.03	1.61	27.34
PK	474.26M	34.03	46.00	-11.97	-1.58	3	Vertical	0	1.00	-	35.61	22.68	3.50	27.76
PK	549.92M	33.40	46.00	-12.60	-0.25	3	Vertical	0	1.00	-	33.65	24.03	3.77	28.05
PK	600.36M	35.57	46.00	-10.43	-0.20	3	Vertical	0	1.00	-	35.77	23.77	4.08	28.05
QP	299.66M	41.32	46.00	-4.68	-5.54	3	Vertical	282	1.92	-	46.86	18.41	2.75	26.70

**BT-EDR(3Mbps)**  
**2440MHz\_Adapter**

24/03/2020

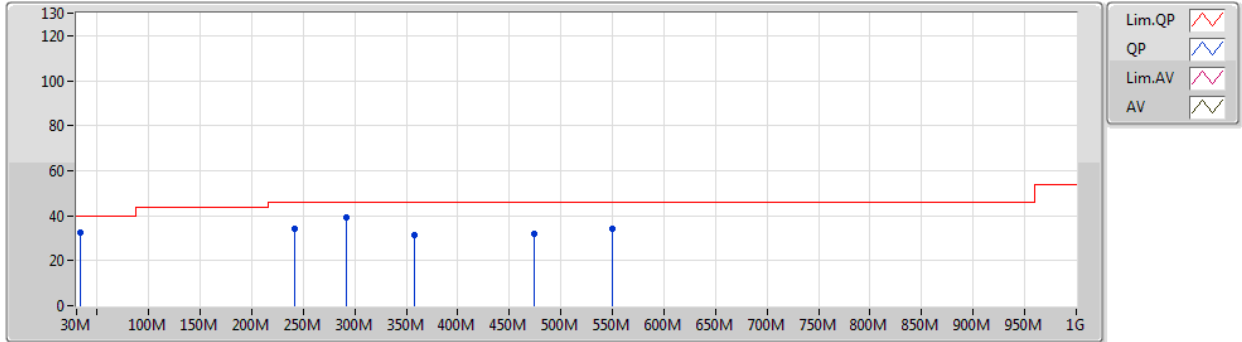


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	113.42M	31.00	43.50	-12.50	-8.56	3	Horizontal	360	1.00	-	39.56	17.14	1.63	27.33
PK	274.44M	36.57	46.00	-9.43	-6.09	3	Horizontal	360	1.00	-	42.66	18.02	2.61	26.72
PK	524.7M	32.39	46.00	-13.61	-1.45	3	Horizontal	360	1.00	-	33.84	22.79	3.69	27.93
PK	575.14M	32.46	46.00	-13.54	-0.02	3	Horizontal	360	1.00	-	32.48	24.10	3.93	28.05
PK	749.74M	37.05	46.00	-8.95	1.25	3	Horizontal	360	1.00	-	35.80	24.78	4.51	28.04
QP	299.66M	42.36	46.00	-3.64	-5.54	3	Horizontal	243	1.00	-	47.90	18.41	2.75	26.70

**BT-EDR(3Mbps)**

16/04/2020

**2440MHz\_PoE**



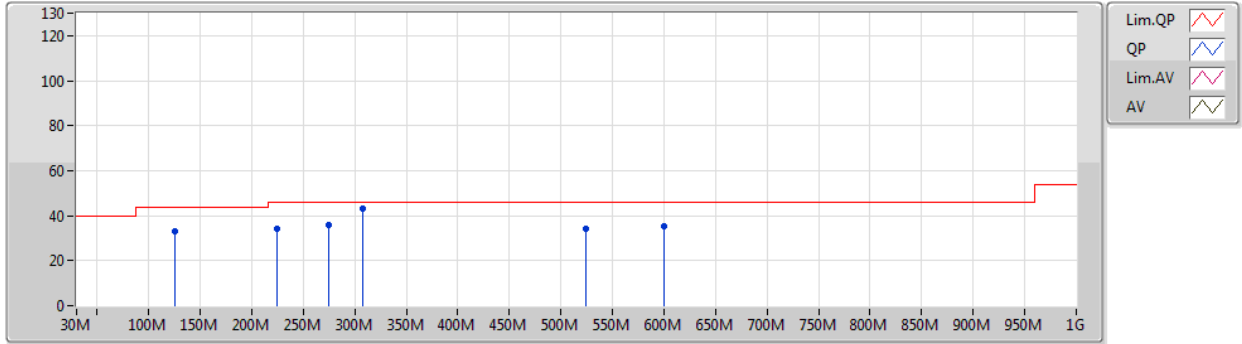
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	33.88M	32.69	40.00	-7.31	-5.33	3	Vertical	360	1.00	-	38.02	21.37	0.86	27.56
PK	241.46M	34.45	46.00	-11.55	-7.71	3	Vertical	360	1.00	-	42.16	16.62	2.44	26.77
PK	291.9M	39.36	46.00	-6.64	-5.78	3	Vertical	360	1.00	-	45.14	18.22	2.71	26.71
PK	357.86M	31.18	46.00	-14.82	-4.22	3	Vertical	360	1.00	-	35.40	19.81	3.00	27.03
PK	474.26M	31.90	46.00	-14.10	-1.58	3	Vertical	360	1.00	-	33.48	22.68	3.50	27.76
PK	549.92M	34.12	46.00	-11.88	-0.25	3	Vertical	360	1.00	-	34.37	24.03	3.77	28.05



**BT-EDR(3Mbps)**

16/04/2020

**2440MHz\_PoE**



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	125.06M	32.99	43.50	-10.51	-8.37	3	Horizontal	0	1.00	-	41.36	17.20	1.72	27.29
PK	224M	33.98	46.00	-12.02	-9.82	3	Horizontal	0	1.00	-	43.80	14.68	2.34	26.84
PK	274.44M	35.84	46.00	-10.16	-6.09	3	Horizontal	0	1.00	-	41.93	18.02	2.61	26.72
PK	307.42M	42.88	46.00	-3.12	-5.35	3	Horizontal	0	1.00	-	48.23	18.61	2.78	26.74
PK	524.7M	34.25	46.00	-11.75	-1.45	3	Horizontal	0	1.00	-	35.70	22.79	3.69	27.93
PK	600.36M	35.30	46.00	-10.70	-0.20	3	Horizontal	0	1.00	-	35.50	23.77	4.08	28.05



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	PK	2.4964G	55.93	74.00	-18.07	3	Horizontal	234	1.01	-
BT-EDR(3Mbps)	Pass	PK	2.381G	55.88	74.00	-18.12	3	Horizontal	234	1.15	-



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3878G	31.70	54.00	-22.30	3	Vertical	360	1.73	-
2402MHz	Pass	AV	2.4018G	76.28	Inf	-Inf	3	Vertical	360	1.73	-
2402MHz	Pass	PK	2.3878G	54.20	74.00	-19.80	3	Vertical	360	1.73	-
2402MHz	Pass	PK	2.4018G	98.78	Inf	-Inf	3	Vertical	360	1.73	-
2402MHz	Pass	AV	2.3718G	31.83	54.00	-22.17	3	Horizontal	236	1.05	-
2402MHz	Pass	AV	2.4018G	74.45	Inf	-Inf	3	Horizontal	236	1.05	-
2402MHz	Pass	PK	2.3718G	54.33	74.00	-19.67	3	Horizontal	236	1.05	-
2402MHz	Pass	PK	2.4018G	96.95	Inf	-Inf	3	Horizontal	236	1.05	-
2402MHz	Pass	AV	4.80828G	26.09	54.00	-27.91	3	Vertical	162	1.50	-
2402MHz	Pass	PK	4.80828G	48.59	74.00	-25.41	3	Vertical	162	1.50	-
2402MHz	Pass	AV	4.8016G	26.18	54.00	-27.82	3	Horizontal	172	1.50	-
2402MHz	Pass	PK	4.8016G	48.68	74.00	-25.32	3	Horizontal	172	1.50	-
2440MHz	Pass	AV	2.388G	32.47	54.00	-21.53	3	Vertical	360	1.62	-
2440MHz	Pass	AV	2.44G	76.56	Inf	-Inf	3	Vertical	360	1.62	-
2440MHz	Pass	AV	2.4996G	32.92	54.00	-21.08	3	Vertical	360	1.62	-
2440MHz	Pass	PK	2.388G	54.97	74.00	-19.03	3	Vertical	360	1.62	-
2440MHz	Pass	PK	2.44G	99.06	Inf	-Inf	3	Vertical	360	1.62	-
2440MHz	Pass	PK	2.4996G	55.42	74.00	-18.58	3	Vertical	360	1.62	-
2440MHz	Pass	AV	2.3884G	31.57	54.00	-22.43	3	Horizontal	234	1.01	-
2440MHz	Pass	AV	2.44G	74.95	Inf	-Inf	3	Horizontal	234	1.01	-
2440MHz	Pass	AV	2.4964G	33.43	54.00	-20.57	3	Horizontal	234	1.01	-
2440MHz	Pass	PK	2.3884G	54.07	74.00	-19.93	3	Horizontal	234	1.01	-
2440MHz	Pass	PK	2.44G	97.45	Inf	-Inf	3	Horizontal	234	1.01	-
2440MHz	Pass	PK	2.4964G	55.93	74.00	-18.07	3	Horizontal	234	1.01	-
2440MHz	Pass	AV	4.87622G	26.24	54.00	-27.76	3	Vertical	246	1.67	-
2440MHz	Pass	PK	4.87622G	48.74	74.00	-25.26	3	Vertical	246	1.67	-
2440MHz	Pass	AV	4.87746G	26.43	54.00	-27.57	3	Horizontal	119	1.79	-
2440MHz	Pass	PK	4.87746G	48.93	74.00	-25.07	3	Horizontal	119	1.79	-
2480MHz	Pass	AV	2.48G	74.77	Inf	-Inf	3	Vertical	345	1.94	-
2480MHz	Pass	AV	2.4836G	32.49	54.00	-21.51	3	Vertical	345	1.94	-
2480MHz	Pass	PK	2.48G	97.27	Inf	-Inf	3	Vertical	345	1.94	-
2480MHz	Pass	PK	2.4836G	54.99	74.00	-19.01	3	Vertical	345	1.94	-
2480MHz	Pass	AV	2.48G	73.31	Inf	-Inf	3	Horizontal	234	1.08	-
2480MHz	Pass	AV	2.49G	32.81	54.00	-21.19	3	Horizontal	234	1.08	-
2480MHz	Pass	PK	2.48G	95.81	Inf	-Inf	3	Horizontal	234	1.08	-
2480MHz	Pass	PK	2.49G	55.31	74.00	-18.69	3	Horizontal	234	1.08	-
2480MHz	Pass	AV	4.96168G	27.19	54.00	-26.81	3	Vertical	22	2.49	-
2480MHz	Pass	PK	4.96168G	49.69	74.00	-24.31	3	Vertical	22	2.49	-
2480MHz	Pass	AV	4.96564G	26.38	54.00	-27.62	3	Horizontal	140	1.97	-
2480MHz	Pass	PK	4.96564G	48.88	74.00	-25.12	3	Horizontal	140	1.97	-
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3738G	32.23	54.00	-21.77	3	Vertical	360	1.74	-
2402MHz	Pass	AV	2.4022G	77.79	Inf	-Inf	3	Vertical	360	1.74	-
2402MHz	Pass	PK	2.3738G	54.73	74.00	-19.27	3	Vertical	360	1.74	-
2402MHz	Pass	PK	2.4022G	100.29	Inf	-Inf	3	Vertical	360	1.74	-
2402MHz	Pass	AV	2.381G	33.38	54.00	-20.62	3	Horizontal	234	1.15	-
2402MHz	Pass	AV	2.402G	76.46	Inf	-Inf	3	Horizontal	234	1.15	-

Remark :

Level (dBuV/m) = Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA( Preamp Factor)

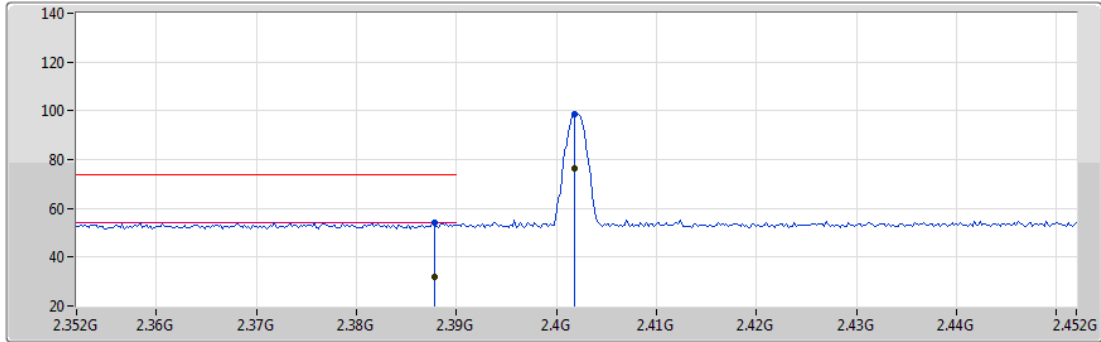


Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2402MHz	Pass	PK	2.381G	55.88	74.00	-18.12	3	Horizontal	234	1.15	-
2402MHz	Pass	PK	2.402G	98.96	Inf	-Inf	3	Horizontal	234	1.15	-
2402MHz	Pass	AV	4.81288G	26.02	54.00	-27.98	3	Vertical	74	2.08	-
2402MHz	Pass	PK	4.81288G	48.52	74.00	-25.48	3	Vertical	74	2.08	-
2402MHz	Pass	AV	4.80292G	26.25	54.00	-27.75	3	Horizontal	207	1.92	-
2402MHz	Pass	PK	4.80292G	48.75	74.00	-25.25	3	Horizontal	207	1.92	-
2440MHz	Pass	AV	2.3788G	32.45	54.00	-21.55	3	Vertical	360	1.61	-
2440MHz	Pass	AV	2.44G	78.46	Inf	-Inf	3	Vertical	360	1.61	-
2440MHz	Pass	AV	2.4984G	32.91	54.00	-21.09	3	Vertical	360	1.61	-
2440MHz	Pass	PK	2.3788G	54.95	74.00	-19.05	3	Vertical	360	1.61	-
2440MHz	Pass	PK	2.44G	100.96	Inf	-Inf	3	Vertical	360	1.61	-
2440MHz	Pass	PK	2.4984G	55.41	74.00	-18.59	3	Vertical	360	1.61	-
2440MHz	Pass	AV	2.3724G	32.25	54.00	-21.75	3	Horizontal	236	1.00	-
2440MHz	Pass	AV	2.44G	76.82	Inf	-Inf	3	Horizontal	236	1.00	-
2440MHz	Pass	AV	2.4868G	32.99	54.00	-21.01	3	Horizontal	236	1.00	-
2440MHz	Pass	PK	2.3724G	54.75	74.00	-19.25	3	Horizontal	236	1.00	-
2440MHz	Pass	PK	2.44G	99.32	Inf	-Inf	3	Horizontal	236	1.00	-
2440MHz	Pass	PK	2.4868G	55.49	74.00	-18.51	3	Horizontal	236	1.00	-
2440MHz	Pass	AV	4.88234G	26.06	54.00	-27.94	3	Vertical	278	1.95	-
2440MHz	Pass	PK	4.88234G	48.56	74.00	-25.44	3	Vertical	278	1.95	-
2440MHz	Pass	AV	4.88306G	26.33	54.00	-27.67	3	Horizontal	151	1.95	-
2440MHz	Pass	PK	4.88306G	48.83	74.00	-25.17	3	Horizontal	151	1.95	-
2480MHz	Pass	AV	2.48G	74.77	Inf	-Inf	3	Vertical	345	1.94	-
2480MHz	Pass	AV	2.4836G	32.49	54.00	-21.51	3	Vertical	345	1.94	-
2480MHz	Pass	PK	2.48G	97.27	Inf	-Inf	3	Vertical	345	1.94	-
2480MHz	Pass	PK	2.4836G	54.99	74.00	-19.01	3	Vertical	345	1.94	-
2480MHz	Pass	AV	2.48G	73.31	Inf	-Inf	3	Horizontal	234	1.08	-
2480MHz	Pass	AV	2.49G	32.81	54.00	-21.19	3	Horizontal	234	1.08	-
2480MHz	Pass	PK	2.48G	95.81	Inf	-Inf	3	Horizontal	234	1.08	-
2480MHz	Pass	PK	2.49G	55.31	74.00	-18.69	3	Horizontal	234	1.08	-
2480MHz	Pass	AV	4.96168G	27.19	54.00	-26.81	3	Vertical	22	2.49	-
2480MHz	Pass	PK	4.96168G	49.69	74.00	-24.31	3	Vertical	22	2.49	-
2480MHz	Pass	AV	4.96564G	26.38	54.00	-27.62	3	Horizontal	140	1.97	-
2480MHz	Pass	PK	4.96564G	48.88	74.00	-25.12	3	Horizontal	140	1.97	-

**BT-BR(1Mbps)**

23/03/2020

**2402MHz\_TX**



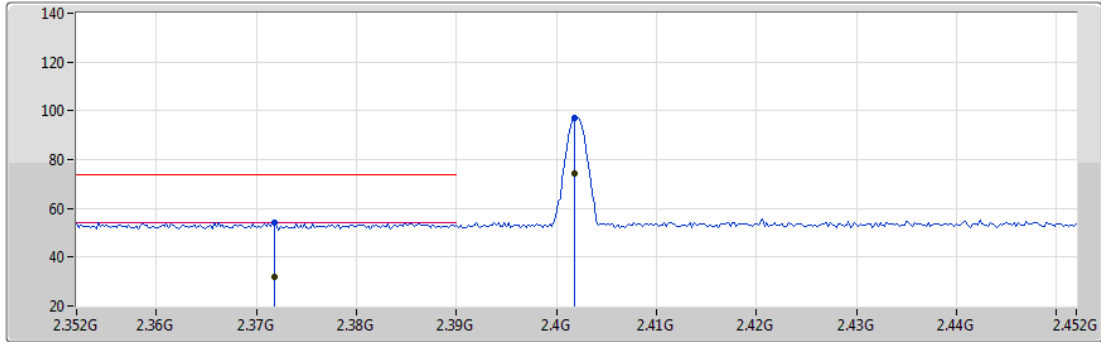
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3878G	31.70	54.00	-22.30	3.34	3	Vertical	360	1.73	-	28.36	29.58	3.99	30.23
AV	2.4018G	76.28	Inf	-Inf	3.49	3	Vertical	360	1.73	-	72.79	29.70	4.01	30.22
PK	2.3878G	54.20	74.00	-19.80	3.34	3	Vertical	360	1.73	-	50.86	29.58	3.99	30.23
PK	2.4018G	98.78	Inf	-Inf	3.49	3	Vertical	360	1.73	-	95.29	29.70	4.01	30.22



**BT-BR(1Mbps)**

23/03/2020

**2402MHz\_TX**



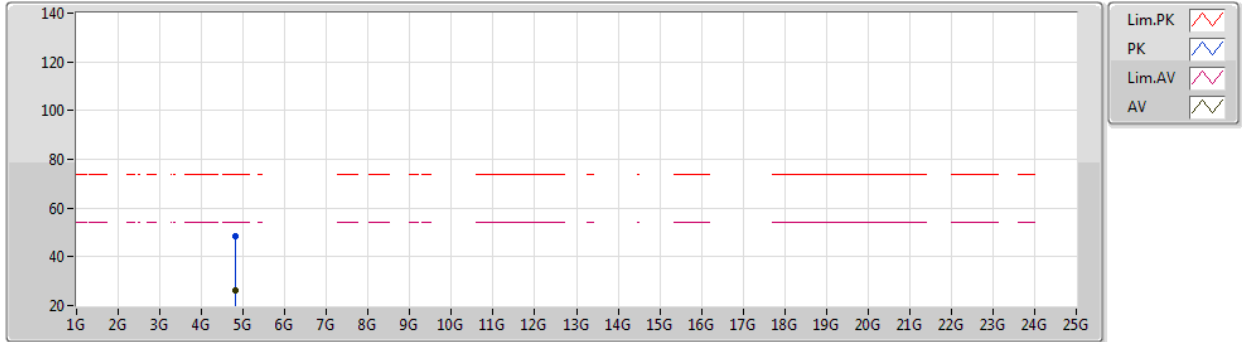
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3718G	31.83	54.00	-22.17	3.16	3	Horizontal	236	1.05	-	28.67	29.42	3.98	30.24
AV	2.4018G	74.45	Inf	-Inf	3.49	3	Horizontal	236	1.05	-	70.96	29.70	4.01	30.22
PK	2.3718G	54.33	74.00	-19.67	3.16	3	Horizontal	236	1.05	-	51.17	29.42	3.98	30.24
PK	2.4018G	96.95	Inf	-Inf	3.49	3	Horizontal	236	1.05	-	93.46	29.70	4.01	30.22



**BT-BR(1Mbps)**

23/03/2020

**2402MHz\_TX**

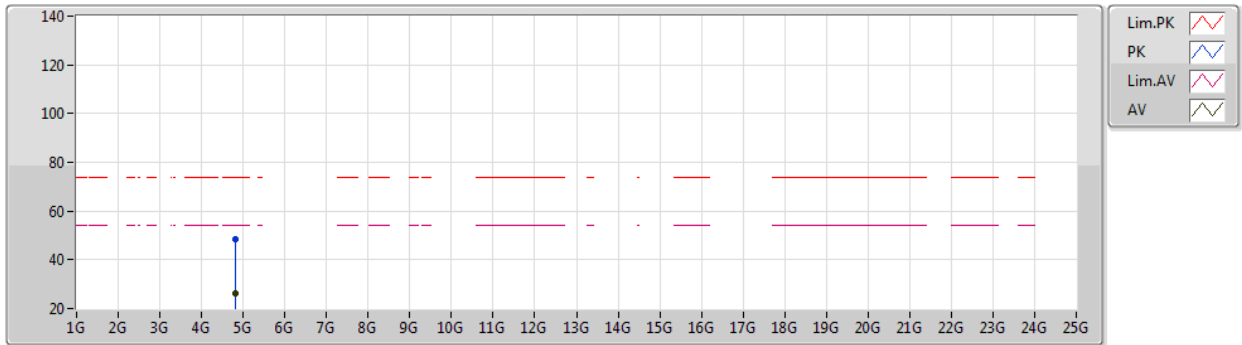


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80828G	26.09	54.00	-27.91	9.99	3	Vertical	162	1.50	-	16.10	33.62	5.78	29.41
PK	4.80828G	48.59	74.00	-25.41	9.99	3	Vertical	162	1.50	-	38.60	33.62	5.78	29.41

**BT-BR(1Mbps)**

23/03/2020

**2402MHz\_TX**

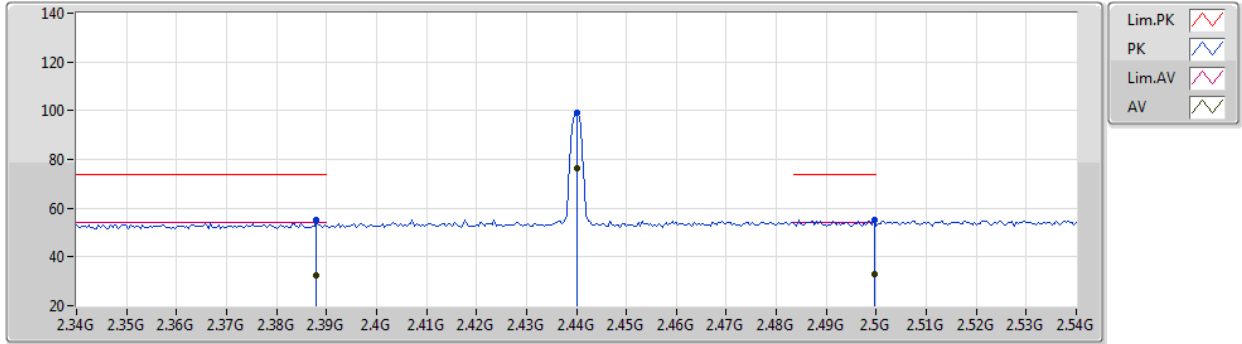


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.8016G	26.18	54.00	-27.82	9.97	3	Horizontal	172	1.50	-	16.21	33.60	5.78	29.41
PK	4.8016G	48.68	74.00	-25.32	9.97	3	Horizontal	172	1.50	-	38.71	33.60	5.78	29.41

**BT-BR(1Mbps)**

23/03/2020

**2440MHz\_TX**

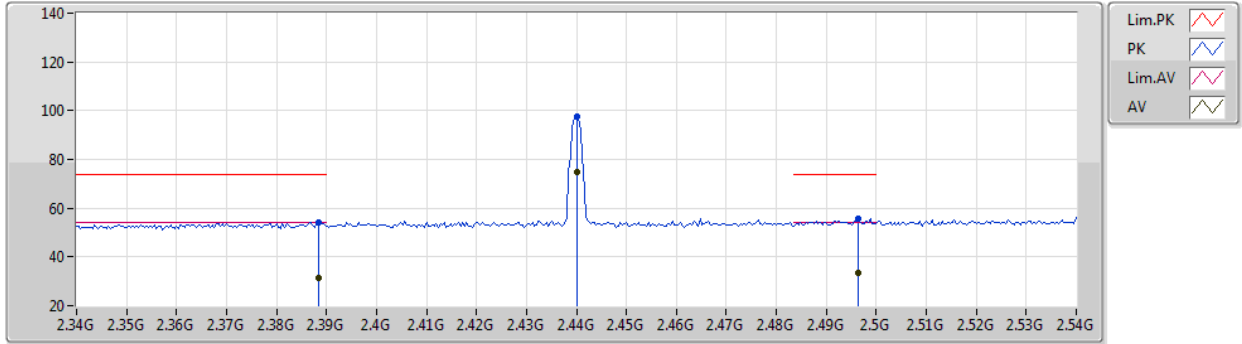


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.388G	32.47	54.00	-21.53	3.34	3	Vertical	360	1.62	-	29.13	29.58	3.99	30.23
AV	2.44G	76.56	Inf	-Inf	3.62	3	Vertical	360	1.62	-	72.94	29.78	4.04	30.20
AV	2.4996G	32.92	54.00	-21.08	4.13	3	Vertical	360	1.62	-	28.79	30.20	4.10	30.17
PK	2.388G	54.97	74.00	-19.03	3.34	3	Vertical	360	1.62	-	51.63	29.58	3.99	30.23
PK	2.44G	99.06	Inf	-Inf	3.62	3	Vertical	360	1.62	-	95.44	29.78	4.04	30.20
PK	2.4996G	55.42	74.00	-18.58	4.13	3	Vertical	360	1.62	-	51.29	30.20	4.10	30.17

**BT-BR(1Mbps)**

23/03/2020

**2440MHz\_TX**



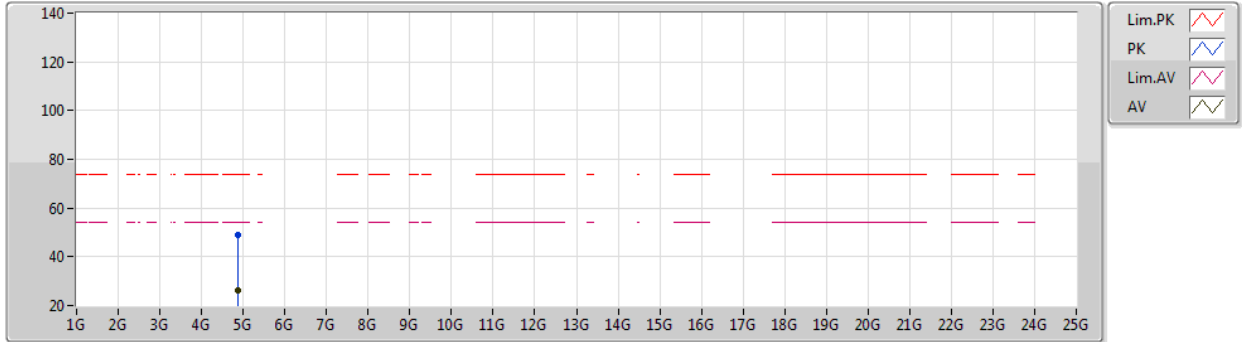
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3884G	31.57	54.00	-22.43	3.35	3	Horizontal	234	1.01	-	28.22	29.58	4.00	30.23
AV	2.44G	74.95	Inf	-Inf	3.62	3	Horizontal	234	1.01	-	71.33	29.78	4.04	30.20
AV	2.4964G	33.43	54.00	-20.57	4.10	3	Horizontal	234	1.01	-	29.33	30.17	4.10	30.17
PK	2.3884G	54.07	74.00	-19.93	3.35	3	Horizontal	234	1.01	-	50.72	29.58	4.00	30.23
PK	2.44G	97.45	Inf	-Inf	3.62	3	Horizontal	234	1.01	-	93.83	29.78	4.04	30.20
PK	2.4964G	55.93	74.00	-18.07	4.10	3	Horizontal	234	1.01	-	51.83	30.17	4.10	30.17



**BT-BR(1Mbps)**

23/03/2020

**2440MHz\_TX**



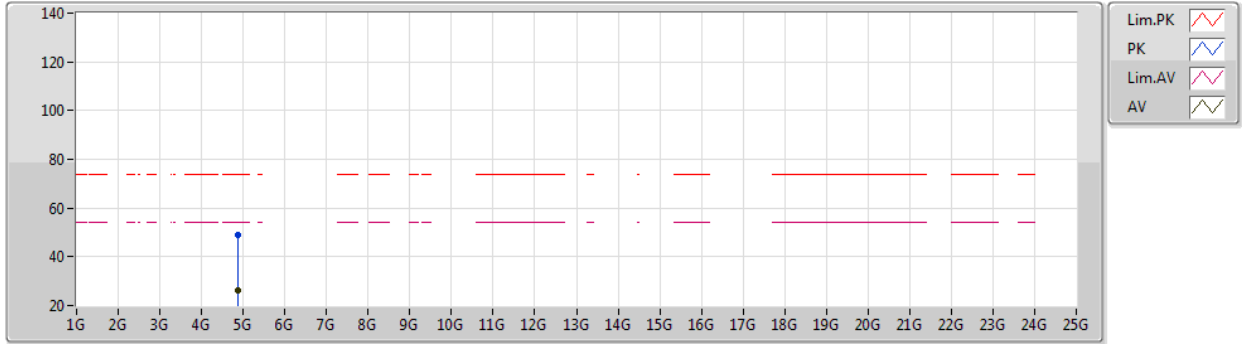
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87622G	26.24	54.00	-27.76	10.20	3	Vertical	246	1.67	-	16.04	33.75	5.83	29.38
PK	4.87622G	48.74	74.00	-25.26	10.20	3	Vertical	246	1.67	-	38.54	33.75	5.83	29.38



**BT-BR(1Mbps)**

23/03/2020

**2440MHz\_TX**



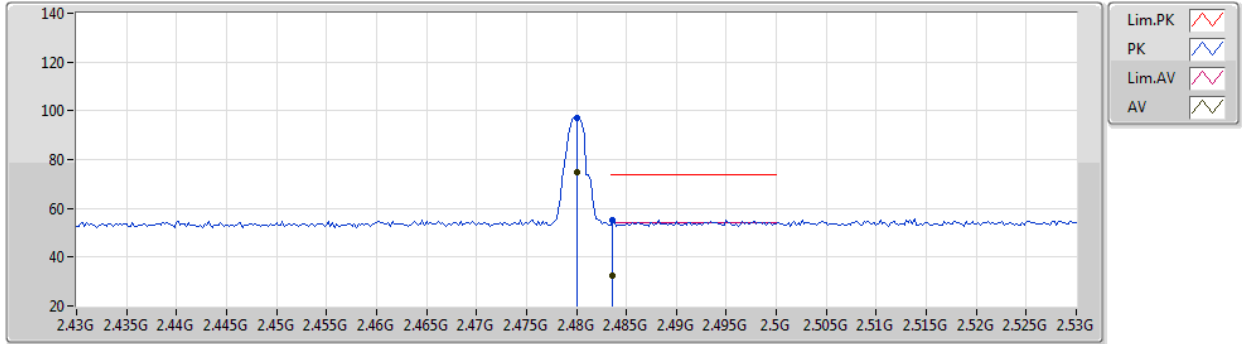
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87746G	26.43	54.00	-27.57	10.20	3	Horizontal	119	1.79	-	16.23	33.75	5.83	29.38
PK	4.87746G	48.93	74.00	-25.07	10.20	3	Horizontal	119	1.79	-	38.73	33.75	5.83	29.38



**BT-BR(1Mbps)**

23/03/2020

**2480MHz\_TX**



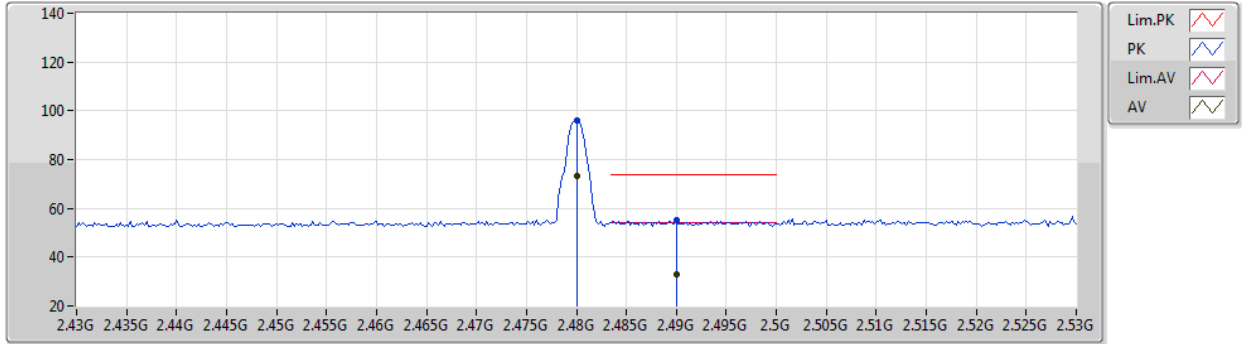
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	74.77	Inf	-Inf	3.94	3	Vertical	345	1.94	-	70.83	30.04	4.08	30.18
AV	2.4836G	32.49	54.00	-21.51	3.97	3	Vertical	345	1.94	-	28.52	30.07	4.08	30.18
PK	2.48G	97.27	Inf	-Inf	3.94	3	Vertical	345	1.94	-	93.33	30.04	4.08	30.18
PK	2.4836G	54.99	74.00	-19.01	3.97	3	Vertical	345	1.94	-	51.02	30.07	4.08	30.18



**BT-BR(1Mbps)**

23/03/2020

**2480MHz\_TX**



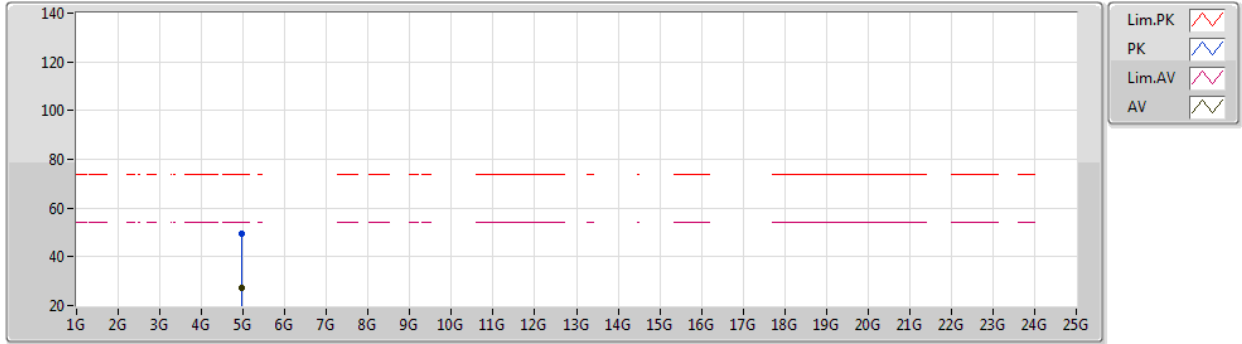
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	73.31	Inf	-Inf	3.94	3	Horizontal	234	1.08	-	69.37	30.04	4.08	30.18
AV	2.49G	32.81	54.00	-21.19	4.03	3	Horizontal	234	1.08	-	28.78	30.12	4.09	30.18
PK	2.48G	95.81	Inf	-Inf	3.94	3	Horizontal	234	1.08	-	91.87	30.04	4.08	30.18
PK	2.49G	55.31	74.00	-18.69	4.03	3	Horizontal	234	1.08	-	51.28	30.12	4.09	30.18



**BT-BR(1Mbps)**

23/03/2020

**2480MHz\_TX**



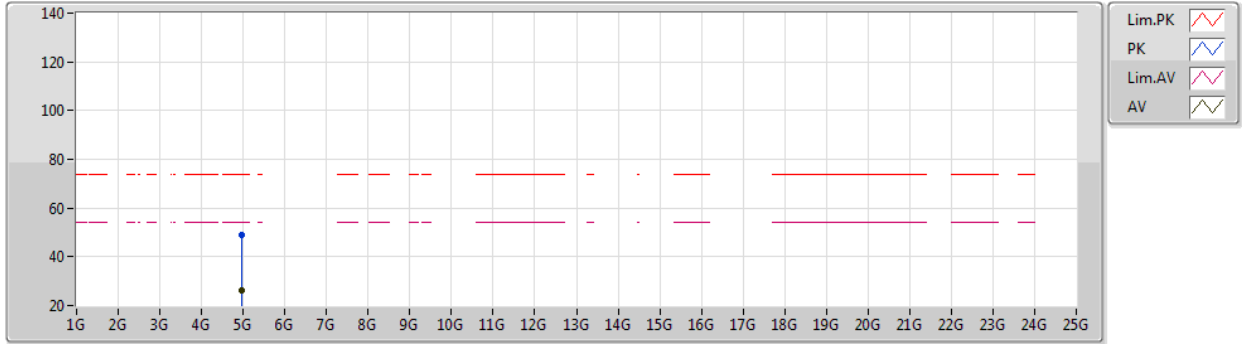
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96168G	27.19	54.00	-26.81	10.47	3	Vertical	22	2.49	-	16.72	33.92	5.89	29.34
PK	4.96168G	49.69	74.00	-24.31	10.47	3	Vertical	22	2.49	-	39.22	33.92	5.89	29.34



**BT-BR(1Mbps)**

23/03/2020

**2480MHz\_TX**

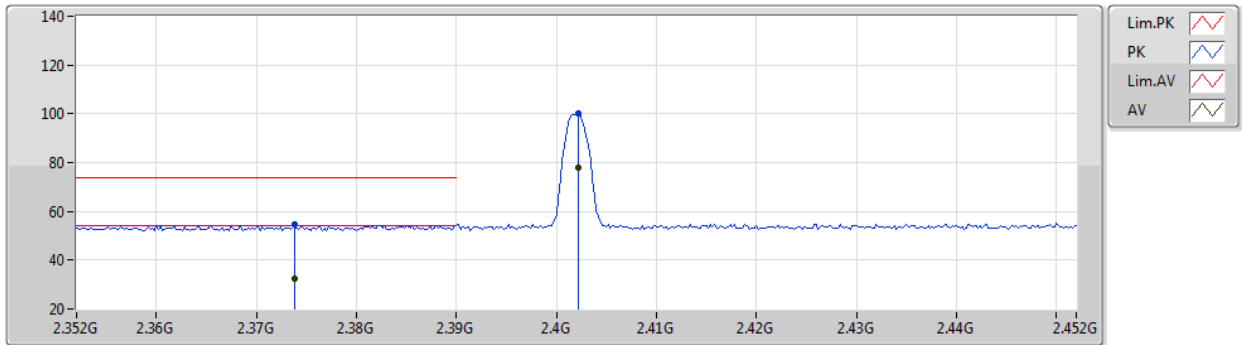


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96564G	26.38	54.00	-27.62	10.49	3	Horizontal	140	1.97	-	15.89	33.93	5.90	29.34
PK	4.96564G	48.88	74.00	-25.12	10.49	3	Horizontal	140	1.97	-	38.39	33.93	5.90	29.34

**BT-EDR(3Mbps)**

24/03/2020

**2402MHz\_TX**



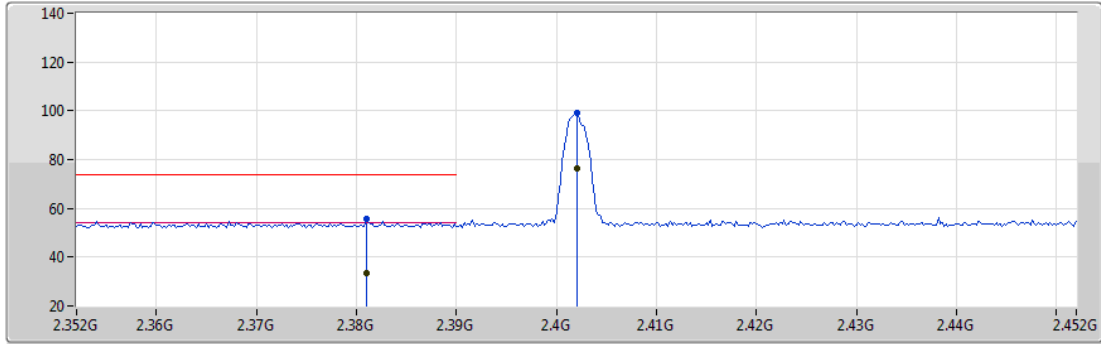
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3738G	32.23	54.00	-21.77	3.18	3	Vertical	360	1.74	-	29.05	29.44	3.98	30.24
AV	2.4022G	77.79	Inf	-Inf	3.49	3	Vertical	360	1.74	-	74.30	29.70	4.01	30.22
PK	2.3738G	54.73	74.00	-19.27	3.18	3	Vertical	360	1.74	-	51.55	29.44	3.98	30.24
PK	2.4022G	100.29	Inf	-Inf	3.49	3	Vertical	360	1.74	-	96.80	29.70	4.01	30.22



**BT-EDR(3Mbps)**

24/03/2020

**2402MHz\_TX**

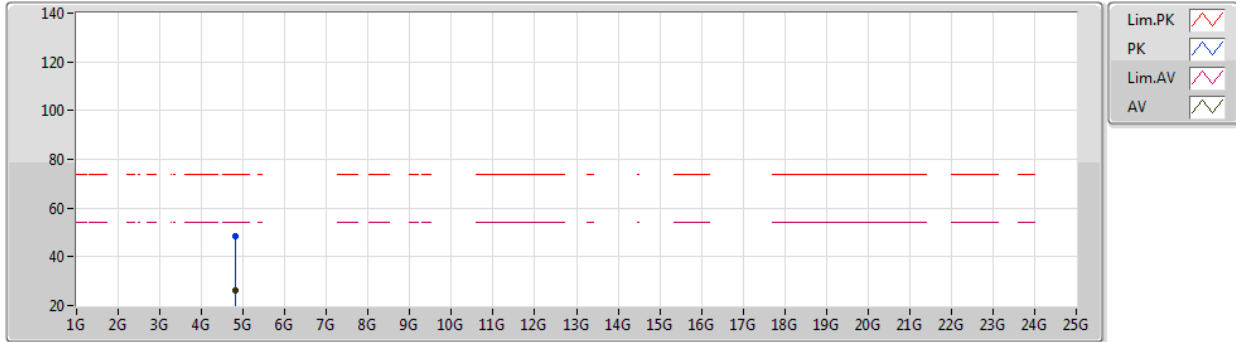


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.381G	33.38	54.00	-20.62	3.27	3	Horizontal	234	1.15	-	30.11	29.51	3.99	30.23
AV	2.402G	76.46	Inf	-Inf	3.49	3	Horizontal	234	1.15	-	72.97	29.70	4.01	30.22
PK	2.381G	55.88	74.00	-18.12	3.27	3	Horizontal	234	1.15	-	52.61	29.51	3.99	30.23
PK	2.402G	98.96	Inf	-Inf	3.49	3	Horizontal	234	1.15	-	95.47	29.70	4.01	30.22

**BT-EDR(3Mbps)**

24/03/2020

**2402MHz\_TX**

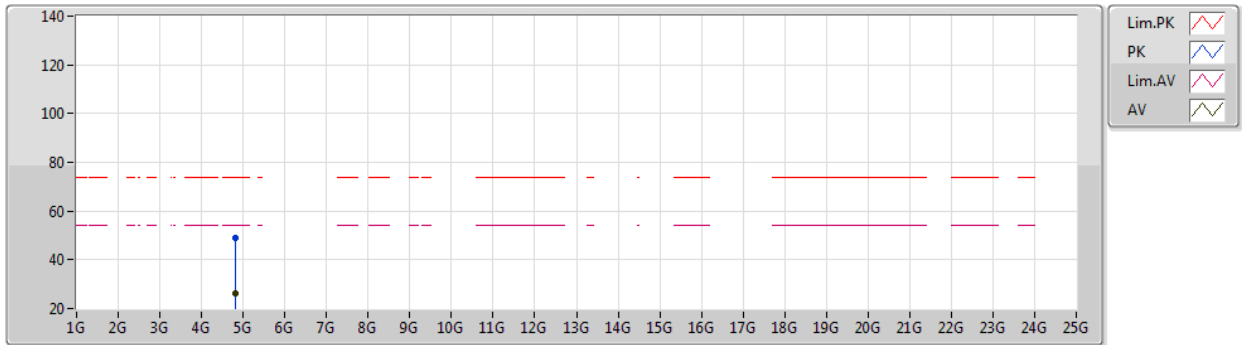


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.81288G	26.02	54.00	-27.98	10.01	3	Vertical	74	2.08	-	16.01	33.63	5.79	29.41
PK	4.81288G	48.52	74.00	-25.48	10.01	3	Vertical	74	2.08	-	38.51	33.63	5.79	29.41

**BT-EDR(3Mbps)**

24/03/2020

**2402MHz\_TX**

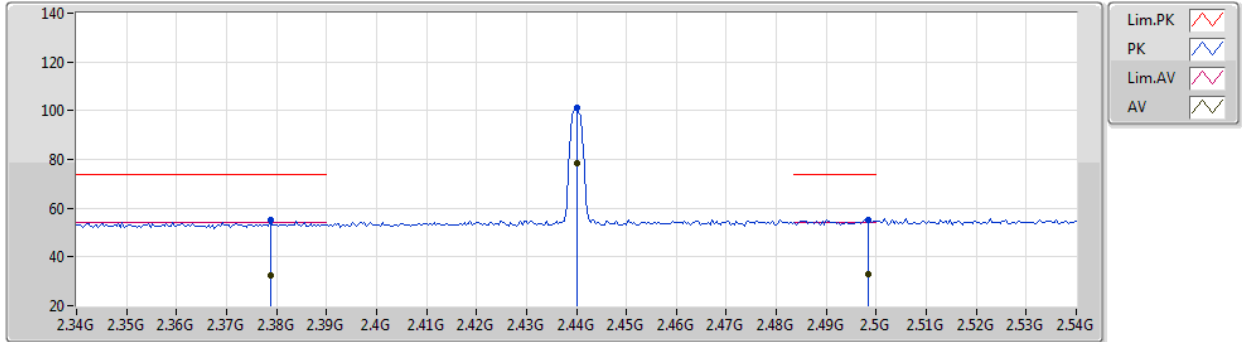


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80292G	26.25	54.00	-27.75	9.94	3	Horizontal	207	1.92	-	16.31	33.58	5.77	29.41
PK	4.80292G	48.75	74.00	-25.25	9.98	3	Horizontal	207	1.92	-	38.77	33.61	5.78	29.41

**BT-EDR(3Mbps)**

24/03/2020

**2440MHz\_TX**



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3788G	32.45	54.00	-21.55	3.24	3	Vertical	360	1.61	-	29.21	29.49	3.99	30.24
AV	2.44G	78.46	Inf	-Inf	3.62	3	Vertical	360	1.61	-	74.84	29.78	4.04	30.20
AV	2.4984G	32.91	54.00	-21.09	4.12	3	Vertical	360	1.61	-	28.79	30.19	4.10	30.17
PK	2.3788G	54.95	74.00	-19.05	3.24	3	Vertical	360	1.61	-	51.71	29.49	3.99	30.24
PK	2.44G	100.96	Inf	-Inf	3.62	3	Vertical	360	1.61	-	97.34	29.78	4.04	30.20
PK	2.4984G	55.41	74.00	-18.59	4.12	3	Vertical	360	1.61	-	51.29	30.19	4.10	30.17

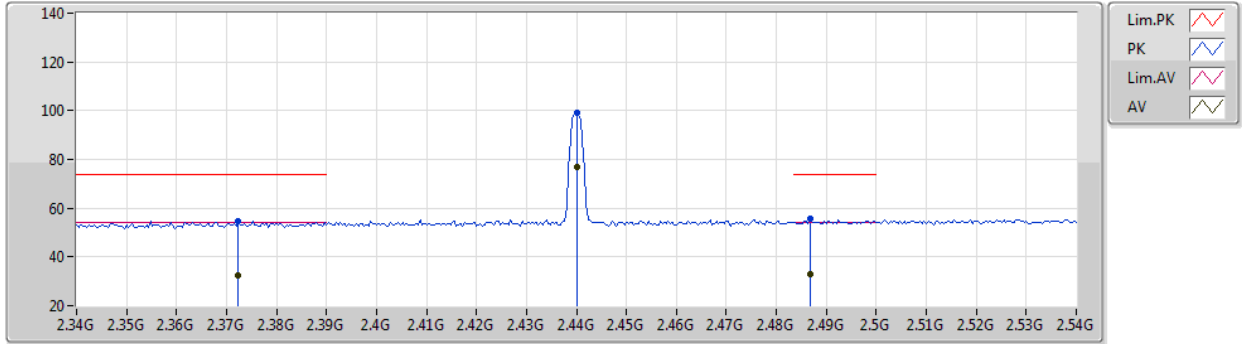




**BT-EDR(3Mbps)**

24/03/2020

**2440MHz\_TX**



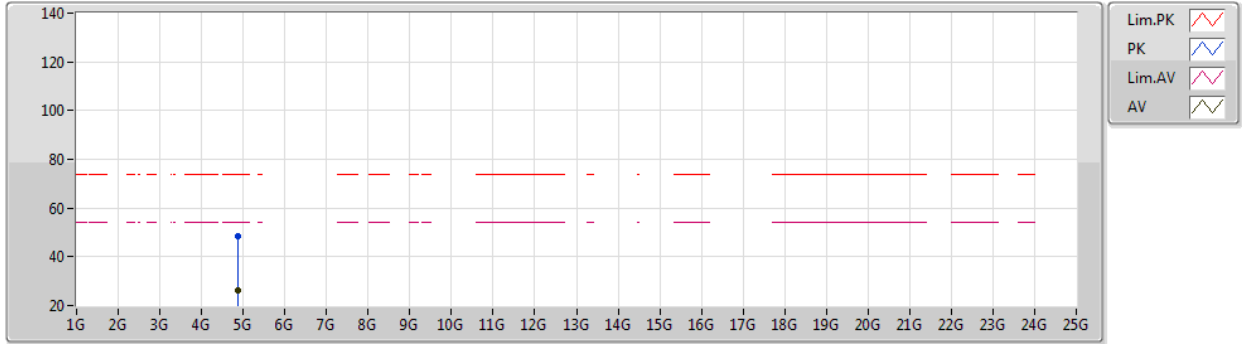
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3724G	32.25	54.00	-21.75	3.16	3	Horizontal	236	1.00	-	29.09	29.42	3.98	30.24
AV	2.44G	76.82	Inf	-Inf	3.62	3	Horizontal	236	1.00	-	73.20	29.78	4.04	30.20
AV	2.4868G	32.99	54.00	-21.01	4.00	3	Horizontal	236	1.00	-	28.99	30.09	4.09	30.18
PK	2.3724G	54.75	74.00	-19.25	3.16	3	Horizontal	236	1.00	-	51.59	29.42	3.98	30.24
PK	2.44G	99.32	Inf	-Inf	3.62	3	Horizontal	236	1.00	-	95.70	29.78	4.04	30.20
PK	2.4868G	55.49	74.00	-18.51	4.00	3	Horizontal	236	1.00	-	51.49	30.09	4.09	30.18



**BT-EDR(3Mbps)**

24/03/2020

**2440MHz\_TX**



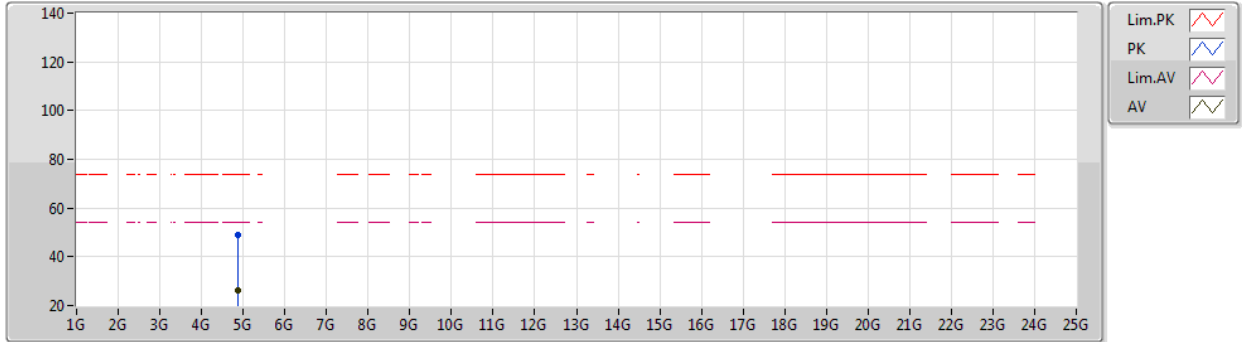
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88234G	26.06	54.00	-27.94	10.23	3	Vertical	278	1.95	-	15.83	33.76	5.84	29.37
PK	4.88234G	48.56	74.00	-25.44	10.23	3	Vertical	278	1.95	-	38.33	33.76	5.84	29.37



**BT-EDR(3Mbps)**

24/03/2020

**2440MHz\_TX**



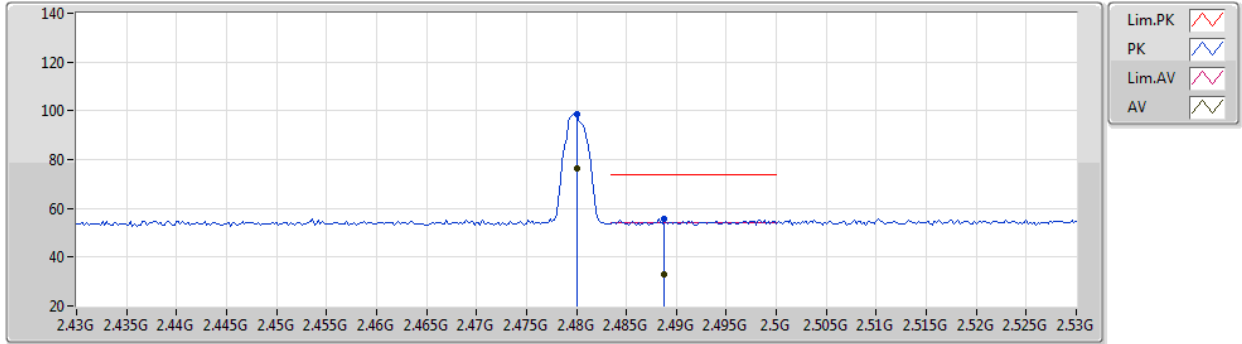
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AV	4.88306G	26.33	54.00	-27.67	10.24	3	Horizontal	151	1.95	-	16.09	33.77	5.84	29.37
PK	4.88306G	48.83	74.00	-25.17	10.24	3	Horizontal	151	1.95	-	38.59	33.77	5.84	29.37



**BT-EDR(3Mbps)**

24/03/2020

**2480MHz\_TX**

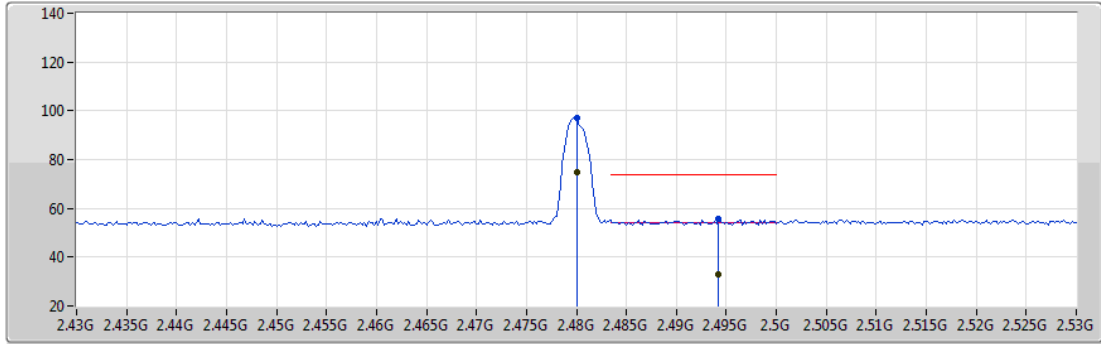


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	76.33	Inf	-Inf	3.94	3	Vertical	345	1.95	-	72.39	30.04	4.08	30.18
AV	2.4888G	33.06	54.00	-20.94	4.02	3	Vertical	345	1.95	-	29.04	30.11	4.09	30.18
PK	2.48G	98.83	Inf	-Inf	3.94	3	Vertical	345	1.95	-	94.89	30.04	4.08	30.18
PK	2.4888G	55.56	74.00	-18.44	4.02	3	Vertical	345	1.95	-	51.54	30.11	4.09	30.18

**BT-EDR(3Mbps)**

24/03/2020

**2480MHz\_TX**



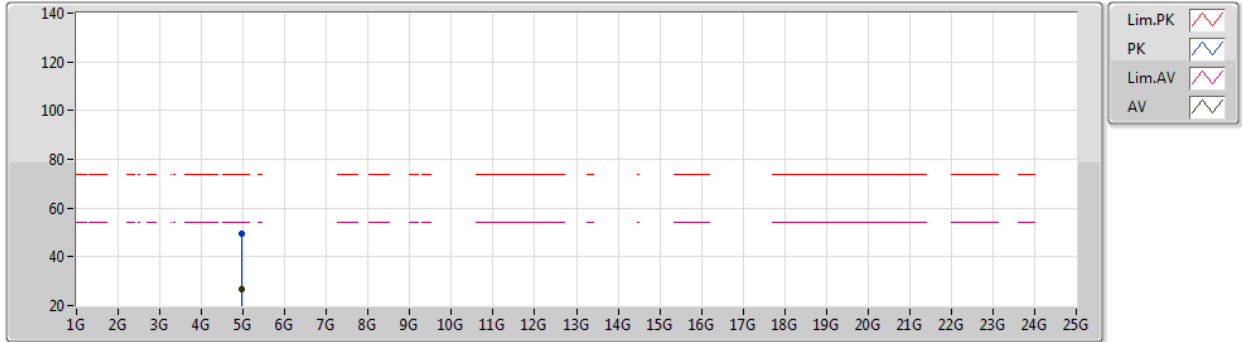
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	74.75	Inf	-Inf	3.94	3	Horizontal	232	1.09	-	70.81	30.04	4.08	30.18
AV	2.4942G	32.96	54.00	-21.04	4.07	3	Horizontal	232	1.09	-	28.89	30.15	4.09	30.17
PK	2.48G	97.25	Inf	-Inf	3.94	3	Horizontal	232	1.09	-	93.31	30.04	4.08	30.18
PK	2.4942G	55.46	74.00	-18.54	4.07	3	Horizontal	232	1.09	-	51.39	30.15	4.09	30.17



**BT-EDR(3Mbps)**

24/03/2020

**2480MHz\_TX**



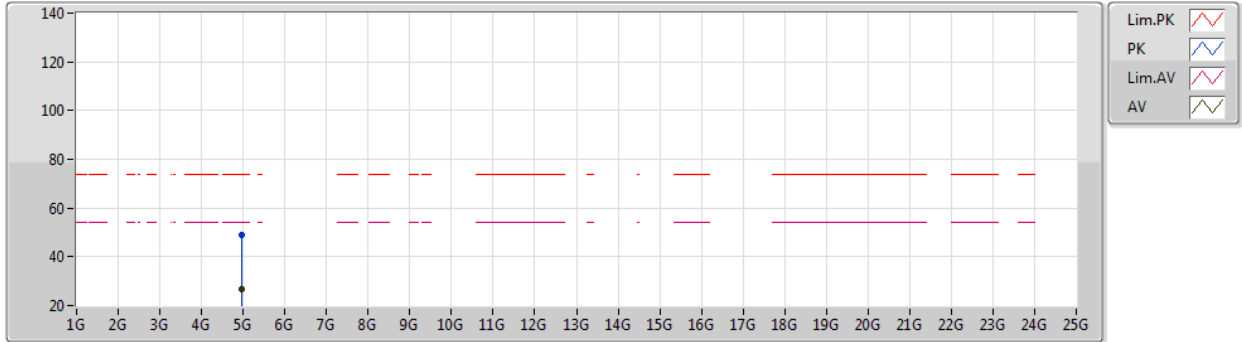
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.9612G	26.81	54.00	-27.19	10.47	3	Vertical	223	1.20	-	16.34	33.92	5.89	29.34
PK	4.9612G	49.31	74.00	-24.69	10.47	3	Vertical	223	1.20	-	38.84	33.92	5.89	29.34



**BT-EDR(3Mbps)**

24/03/2020

**2480MHz\_TX**



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96214G	26.52	54.00	-27.48	10.47	3	Horizontal	82	2.16	-	16.05	33.92	5.89	29.34
PK	4.96214G	49.02	74.00	-24.98	10.47	3	Horizontal	82	2.16	-	38.55	33.92	5.89	29.34