

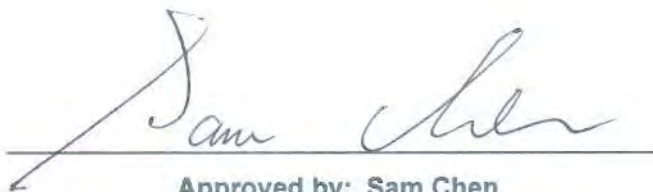


RADIO TEST REPORT

FCC ID : UDX-60069010
Equipment : Network Camera
Brand Name : CISCO
Model Name : MV2-HW
Applicant : Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134, USA
Manufacturer : Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134, USA
Factory : LITE-ON Technology Corp. Networking Plant
No. 101, Neihuan N. Rd., Nanzi Processing Export,
Nanzi Dist., Kaohsiung City 811, Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Jan. 28, 2021, and testing was started from Jan. 29, 2021 and completed on Apr. 08, 2021. We, Sporton International Inc. Hsinchu 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 test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



Table of Contents

History of this test report.....4

Summary of Test Result.....5

1 General Description6

1.1 Information.....6

1.2 Applicable Standards9

1.3 Testing Location Information.....9

1.4 Measurement Uncertainty9

2 Test Configuration of EUT10

2.1 Test Channel Mode10

2.2 Test Voltage10

2.3 The Worst Case Measurement Configuration.....11

2.4 EUT Operation during Test12

2.5 Accessories13

2.6 Support Equipment.....13

2.7 Test Setup Diagram14

3 Transmitter Test Result17

3.1 AC Power-line Conducted Emissions17

3.2 20dB Bandwidth and Carrier Frequency Separation.....19

3.3 Maximum Conducted Output Power20

3.4 Number of Hopping Frequencies and Hopping Bandedge21

3.5 Time of Occupancy (Dwell Time)22

3.6 Emissions in Non-restricted Frequency Bands23

3.7 Emissions in Restricted Frequency Bands.....24

4 Test Equipment and Calibration Data27

Appendix A. Test Results of AC Power-line Conducted Emissions

Appendix B. Test Results of 20dB Bandwidth and Carrier Frequency Separation

Appendix C. Test Results of Maximum Conducted Output Power

Appendix D. Test Results of Number of Hopping Frequencies and Hopping Bandedge

Appendix E. Test Results of Time of Occupancy (Dwell Time)

Appendix F. Test Results of Emissions in Non-restricted Frequency Bands

Appendix G. Test Results of Emissions in Restricted Frequency Bands



Appendix H. Test Photos

Photographs of EUT v01



Summary of Test Result

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 Band edge	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	-

Declaration of Conformity:

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

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Viola Huang



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	1	1
2.4-2.4835GHz	BT-EDR	1	1

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)
	WLAN 2.4GHz	WLAN 5GHz	Bluetooth					
1	2	2	2	Aristotle	RFA-25-10159-P1-V3	PIFA Antenna	I-PEX	Note 1
2	1	1	1	Aristotle	RFA-25-10159-P2	PIFA Antenna	I-PEX	

Note 1:

Ant.	Gain (dBi)		
	WLAN 2.4GHz	WLAN 5GHz	Bluetooth
1	1.3	2.25	1.3
2	2.68	2.67	2.68

Note 2: The above information was declared by manufacturer.

Note 3: The EUT has two antennas.

For 2.4GHz WLAN function

IEEE 802.11b/g/n mode (1TX/1RX):

The EUT supports the antenna with TX and RX diversity functions.

Both port 1 and port 2 support transmit and receive functions, but only one of them will be used at one time.

The port 1 generated the worst case, so it was selected to test and record in the report.

For 5GHz WLAN function

IEEE 802.11a/n/ac mode (1TX/1RX):

The EUT supports the antenna with TX and RX diversity functions.

Both port 1 and port 2 support transmit and receive functions, but only one of them will be used at one time.

The port 1 generated the worst case, so it was selected to test and record in the report.

For Bluetooth function (1TX/1RX):

The EUT supports the antenna with TX and RX diversity functions.

Both port 1 and port 2 support transmit and receive functions, but only one of them will be used at one time.

The port 1 generated the worst case, so it was selected to test and record in the report.



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-BR(1Mbps)	0.786	1.05	2.886m	1k
BT-EDR(2Mbps)	0.589	2.3	2.382m	1k
BT-EDR(3Mbps)	0.742	1.3	2.891m	1k

Note:

- ◆ DC is Duty Cycle.
- ◆ DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter or host system
Test Software Version	QRCT.exe Version 4.0.00156.0



1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Nyle Chang	20.4~21.2 / 54~57	Feb. 02, 2021~Feb. 03, 2021
Radiated (for below 1GHz)	03CH05-CB	Cola Fan	21.3~22.5 / 55~58	Apr. 08, 2021
Radiated (for above 1GHz)	03CH01-CB	Brian Sun	21~22.2 / 55~57	Jan. 29, 2021~Feb. 01, 2021
AC Conduction	CO02-CB	Ryo Fan	21~22 / 58~59	Feb. 26, 2021

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)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.0 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.9 dB	Confidence levels of 95%
Conducted Emission	2.8 dB	Confidence levels of 95%
Output Power Measurement	1.4 dB	Confidence levels of 95%
Power Density Measurement	2.8 dB	Confidence levels of 95%
Bandwidth Measurement	0.4%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-BR(1Mbps)	-
2402MHz	9
2440MHz	9
2480MHz	9
BT-EDR(2Mbps)	-
2402MHz	9
2440MHz	9
2480MHz	9
BT-EDR(3Mbps)	-
2402MHz	9
2440MHz	9
2480MHz	9

2.2 Test Voltage

120 V / 60 Hz



2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	EUT_2.4GHz + powered from adapter
2	EUT_5GHz + powered from adapter
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT_5GHz + powered from host system
For operating mode 2 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT in Z axis_2.4GHz + powered from adapter
2	EUT in Y axis _2.4GHz + powered from adapter
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT in Y axis _5GHz + powered from adapter
Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	EUT in Y axis _2.4GHz + powered from host system
For operating mode 4 is the worst case and it was record in this test report.	



Operating Mode > 1GHz	CTX
	The EUT was performed at Y axis and Z axis position and the worst case was found at Z axis. So the measurement will follow this same test
1	EUT in Z axis

2.4 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.



2.5 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
AC Adapter	CISCO	MA-PWR-USB-US	INPUT: 100-240V, 50-60Hz, 0.32A max OUTPUT: 5.0V, 2.0A
Others			
USB cable*1, Shielded, 3m			
Wall Mount*1			

2.6 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	AP Router	ASUS	RP-N53	MSQ-RPN53
B	AP NB	DELL	E6430	N/A
C	Smart phone	Samsung	Galaxy J2	N/A

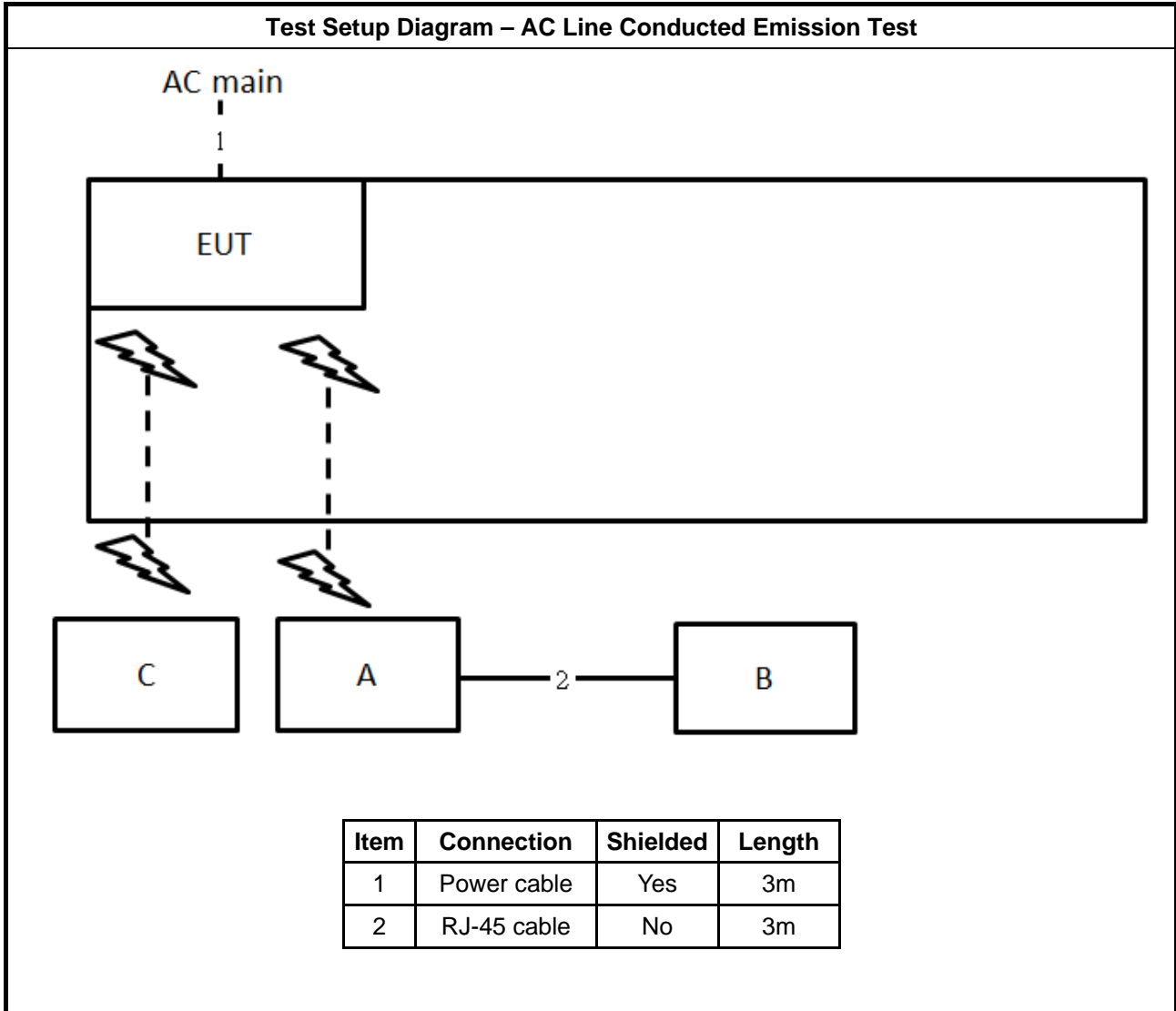
For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	WLAN AP	D-LINK	DIR860L	KA2IR860LA1
D	Smart phone	Samsung	Galaxy J2	N/A
E	Earphone	e-Power	S90W	N/A
F	Mouse	Logitech	M-U0026	N/A

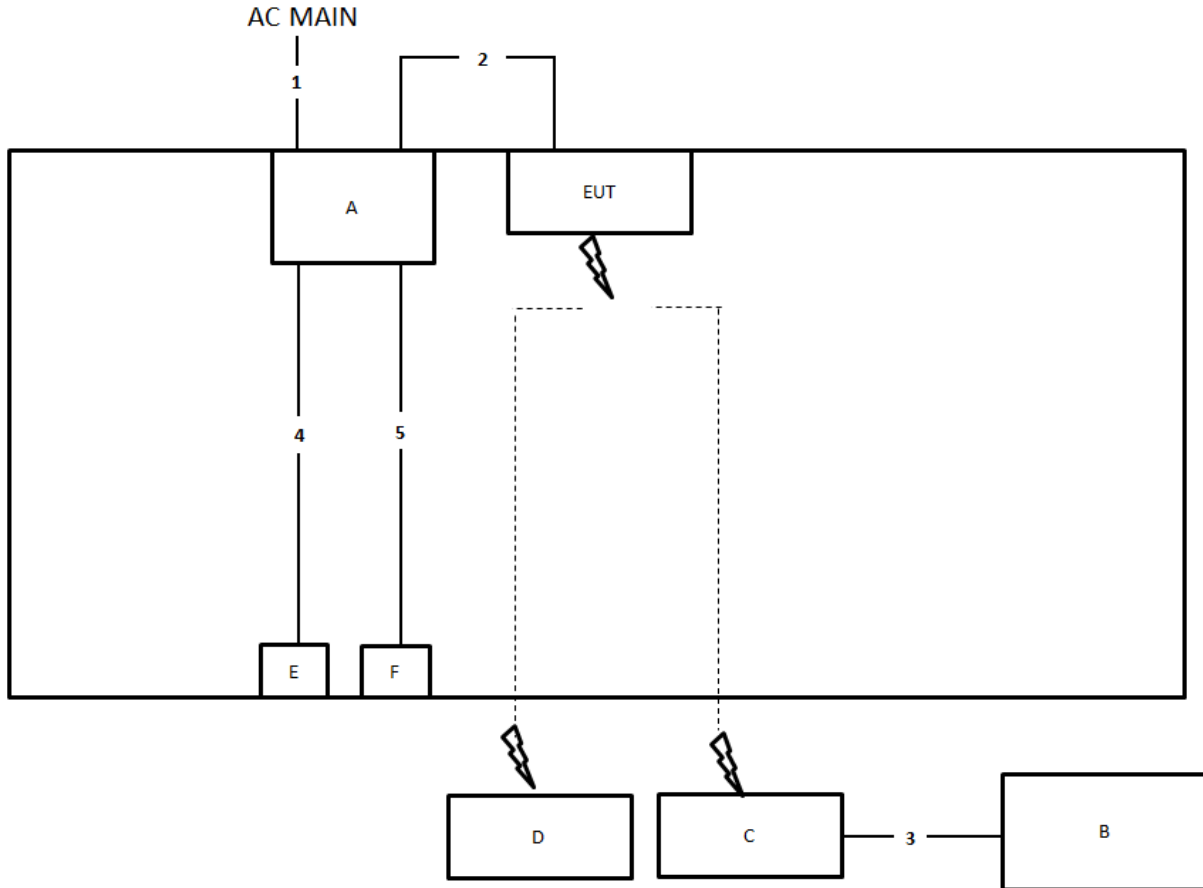
For Radiated (above 1GHz) and RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

2.7 Test Setup Diagram

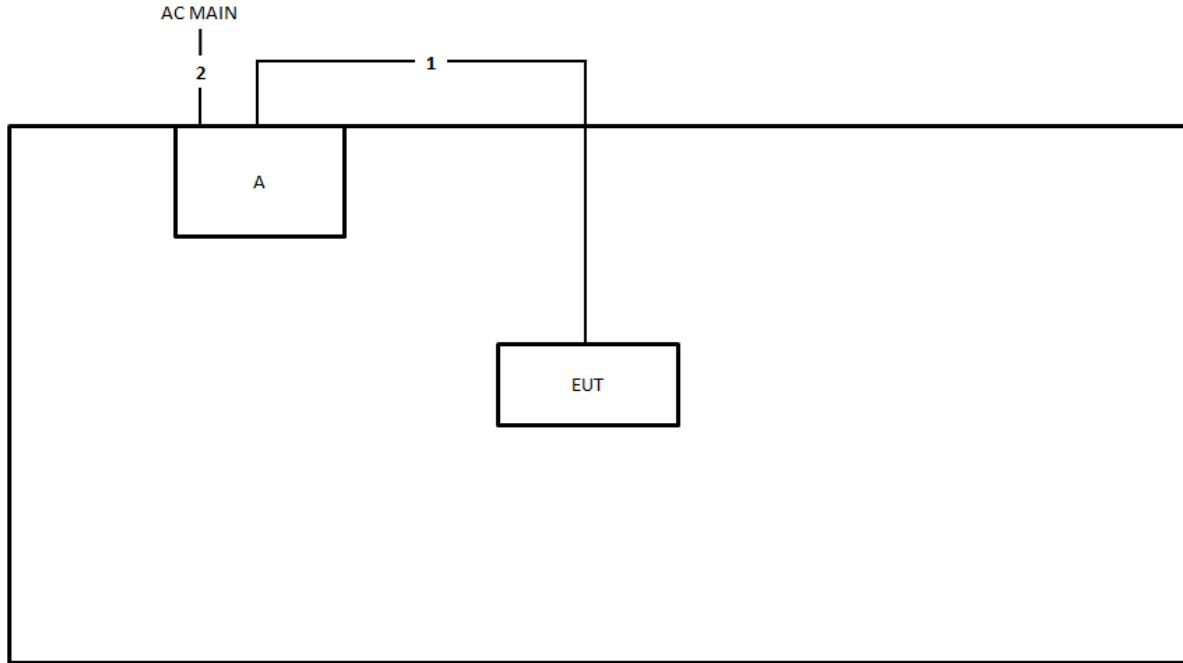


Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	3m
3	RJ-45 cable	No	1.5m
4	Audio cable	No	1.1m
5	USB cable	Yes	1.5m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	USB cable	Yes	1m
2	Power cable	No	2.6m



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

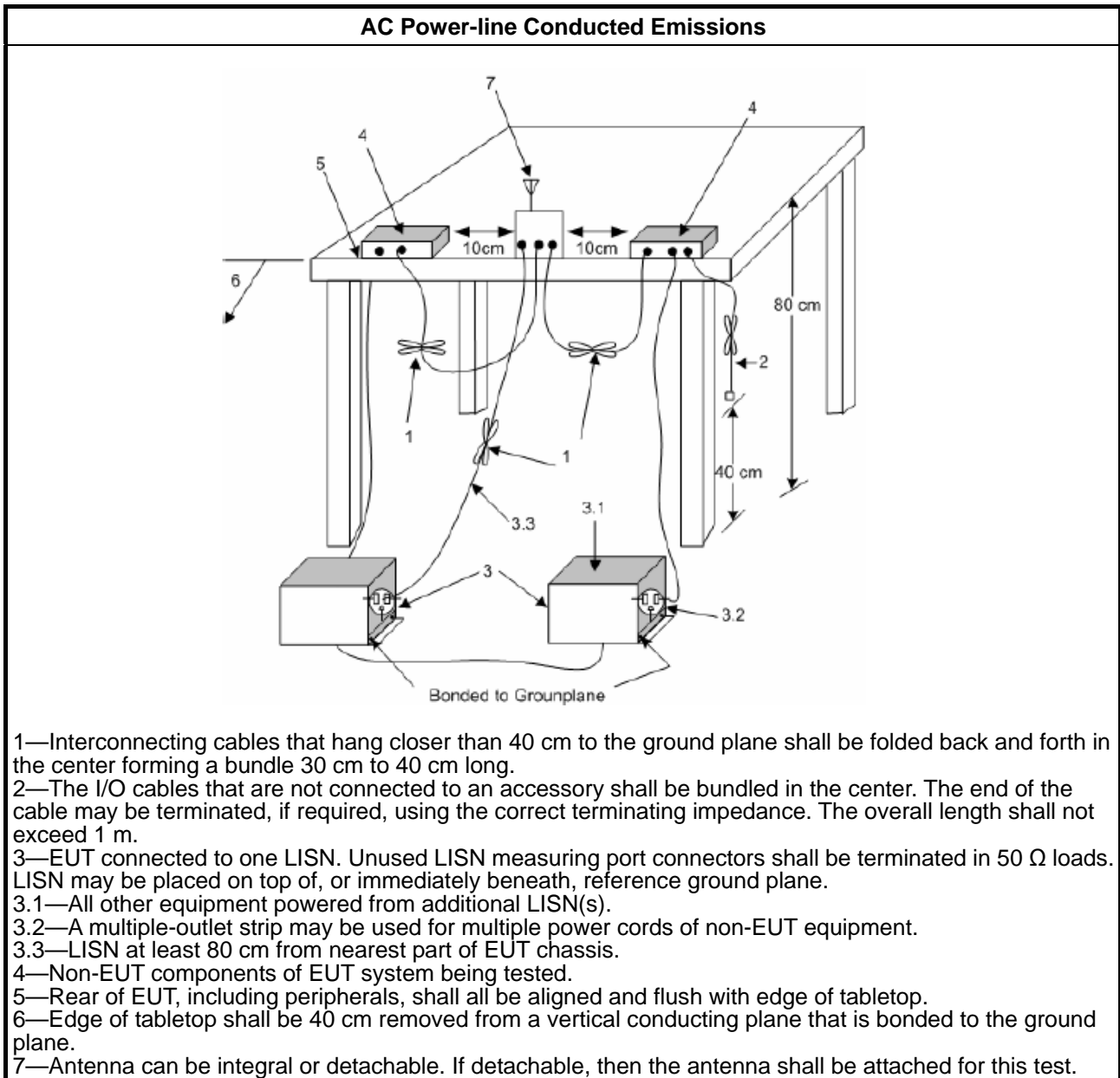
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup



1.1.1. Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 20dB Bandwidth and Carrier Frequency Separation

3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems	
▪ 902-928 MHz Band:	
	▪ $N \geq 50$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth \leq 250 kHz.
	▪ $50 > N \geq 25$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz.
▪ 2400-2483.5 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).
▪ 5725-5850 MHz Band:	
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth \leq 1 MHz.
N: Number of Hopping Frequencies; ChS: Hopping Channel Separation	

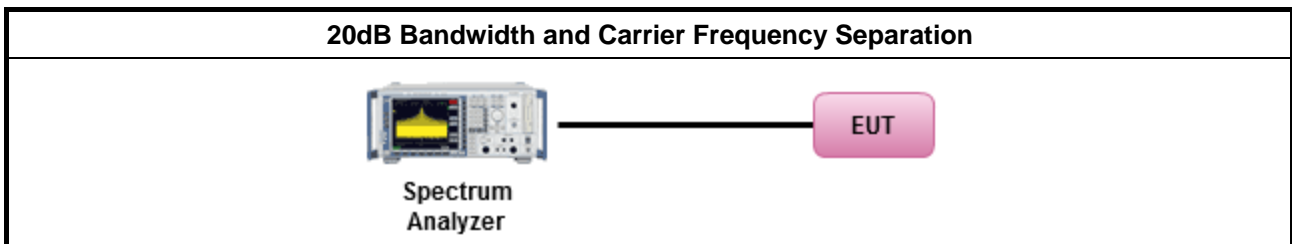
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 6.9.1 for 20 dB bandwidth measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.

3.2.4 Test Setup



3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
<ul style="list-style-type: none"> ▪ 902-928 MHz Band: 	
	<ul style="list-style-type: none"> ▪ $N \geq 50$; Power 30dBm; EIRP 36dBm
	<ul style="list-style-type: none"> ▪ $50 > N \geq 25$; Power 23.98dBm; EIRP 29.98dBm
<ul style="list-style-type: none"> ▪ 2400-2483.5 MHz Band: 	
	<ul style="list-style-type: none"> ▪ $N \geq 75$; Power 30dBm; EIRP 36dBm
	<ul style="list-style-type: none"> ▪ $75 > N \geq 15$; Power 21dBm; EIRP 27dBm
<ul style="list-style-type: none"> ▪ 5725-5850 MHz Band: 	
	<ul style="list-style-type: none"> ▪ $N \geq 75$; Power 30dBm; EIRP 36dBm
N: Number of Hopping Frequencies	

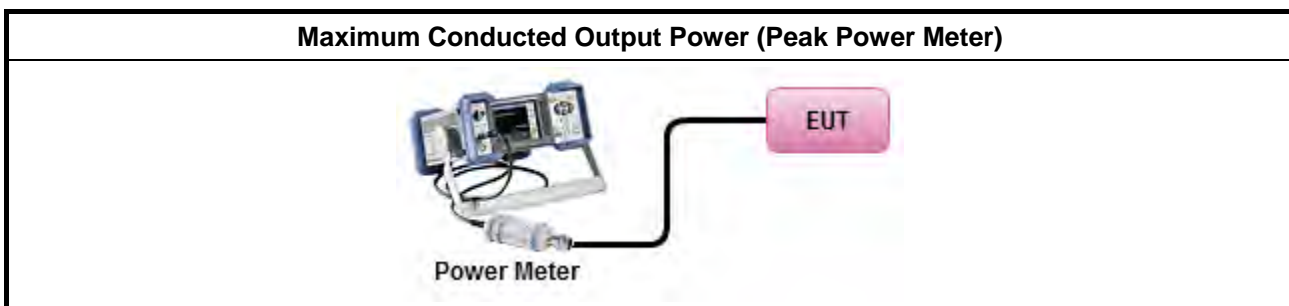
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Number of Hopping Frequencies and Hopping Bandedge

3.4.1 Number of Hopping Frequencies Limit

Number of Hopping Frequencies Limit	
▪	902-928 MHz Band:
	▪ $N \geq 50$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth \leq 250 kHz.
	▪ $50 > N \geq 25$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth $>$ 250 kHz.
▪	2400-2483.5 MHz Band:
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz).
	▪ $75 > N \geq 15$ and $ChS \geq MAX$ (20 dB bandwidth 2/3, 25 kHz).
▪	5725-5850 MHz Band:
	▪ $N \geq 75$ and $ChS \geq MAX$ (20 dB bandwidth, 25 kHz); 20 dB bandwidth \leq 1 MHz.
N: Number of Hopping Frequencies; ChS : Hopping Channel Separation	

3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

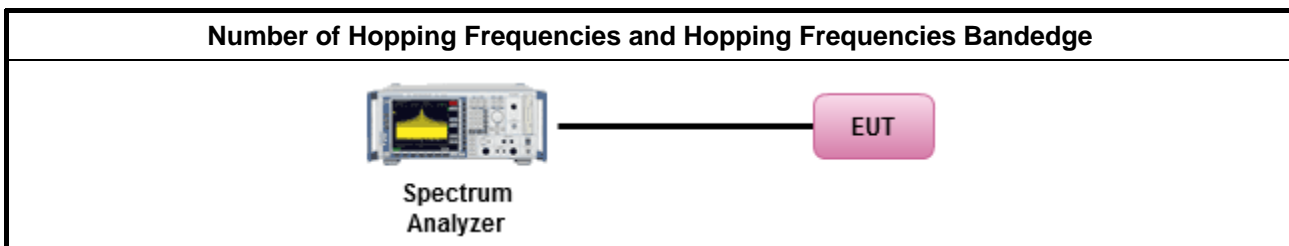
3.4.3 Measuring Instruments

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

3.4.4 Test Procedures

Test Method
▪ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement.
▪ Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement.

3.4.5 Test Setup



3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

3.5 Time of Occupancy (Dwell Time)

3.5.1 Time of Occupancy (Dwell Time) Limit

20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems	
<ul style="list-style-type: none"> 902-928 MHz Band: 	
	<ul style="list-style-type: none"> N ≥ 50; 0.4s in 20s period
	<ul style="list-style-type: none"> 50 > N ≥ 25; 0.4s in 10s period
<ul style="list-style-type: none"> 2400-2483.5 MHz Band: 	
	<ul style="list-style-type: none"> N ≥ 75; 0.4s in N x 0.4 period
	<ul style="list-style-type: none"> 75 > N ≥ 15; 0.4s in N x 0.4 period
<ul style="list-style-type: none"> 5725-5850 MHz Band: 	
	<ul style="list-style-type: none"> N ≥ 75; 0.4s in 30s period
N: Number of Hopping Frequencies	

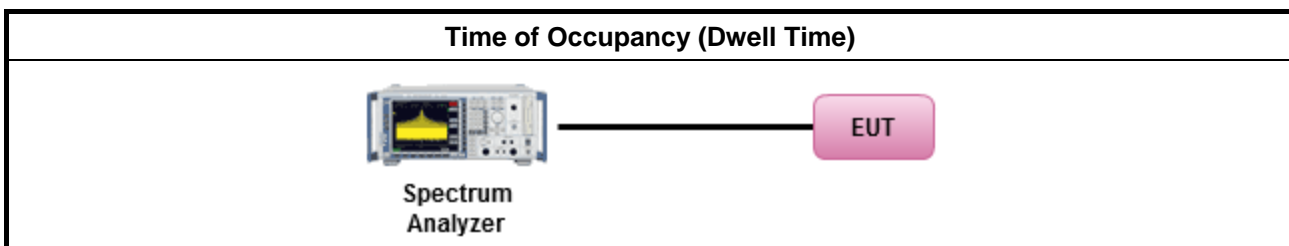
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement. 	
<ul style="list-style-type: none"> 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. 	
	<ul style="list-style-type: none"> The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is 5/1600 seconds, or 3.125ms. DH5 Packet permit maximum 1600 / 79 / 6 = 3.37 hops per second in each channel.

3.5.4 Test Setup



3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

3.6 Emissions in Non-restricted Frequency Bands

3.6.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dBc)
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.

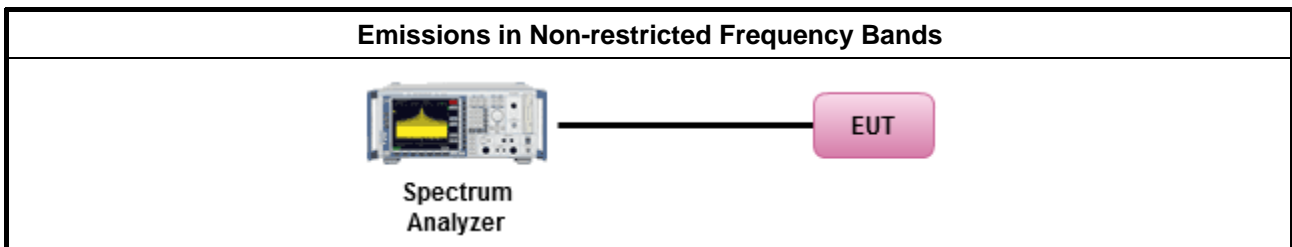
3.6.2 Measuring Instruments

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"> Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands.

3.6.4 Test Setup



3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F



3.7 Emissions in Restricted Frequency Bands

3.7.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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

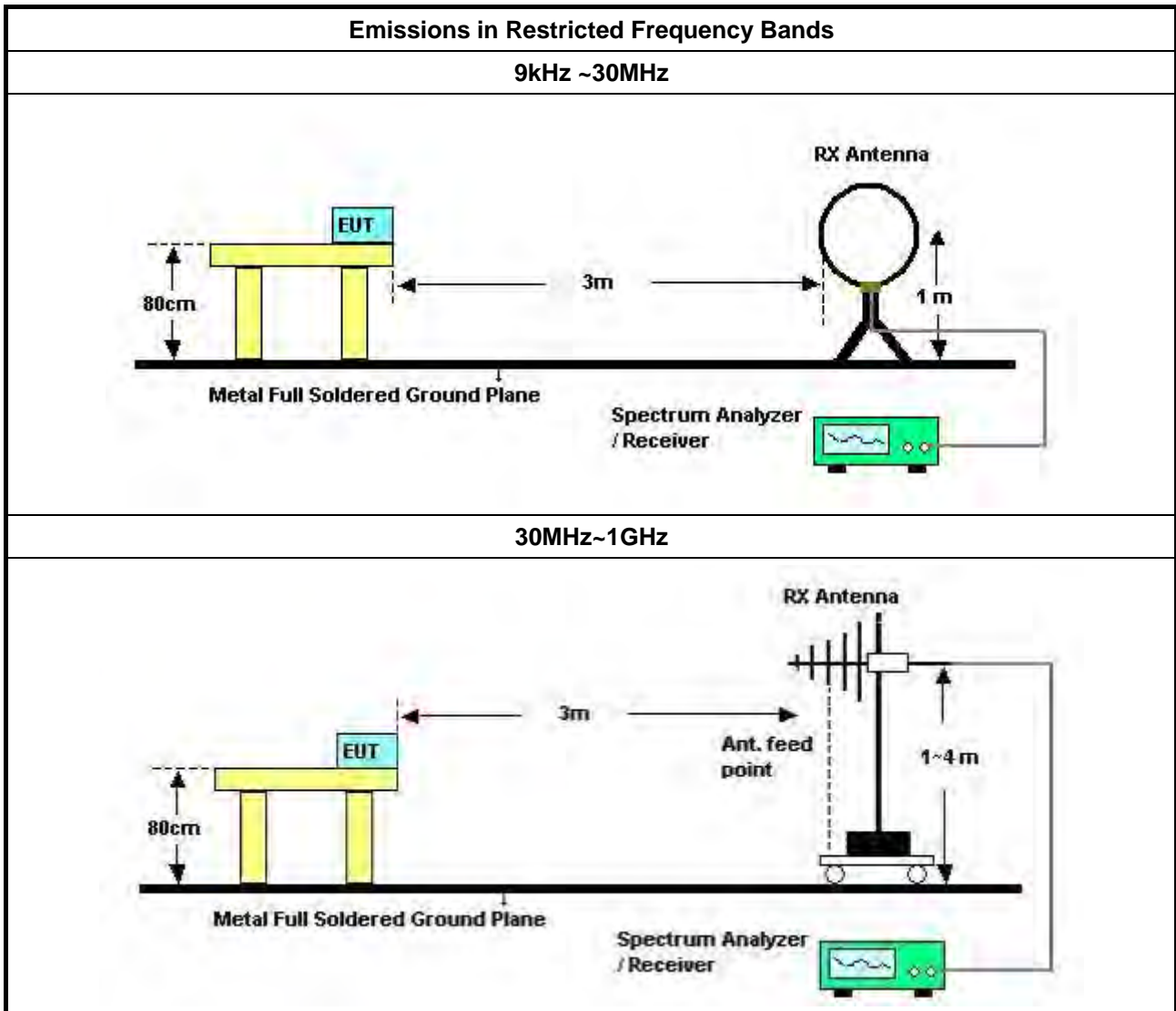
3.7.2 Measuring Instruments

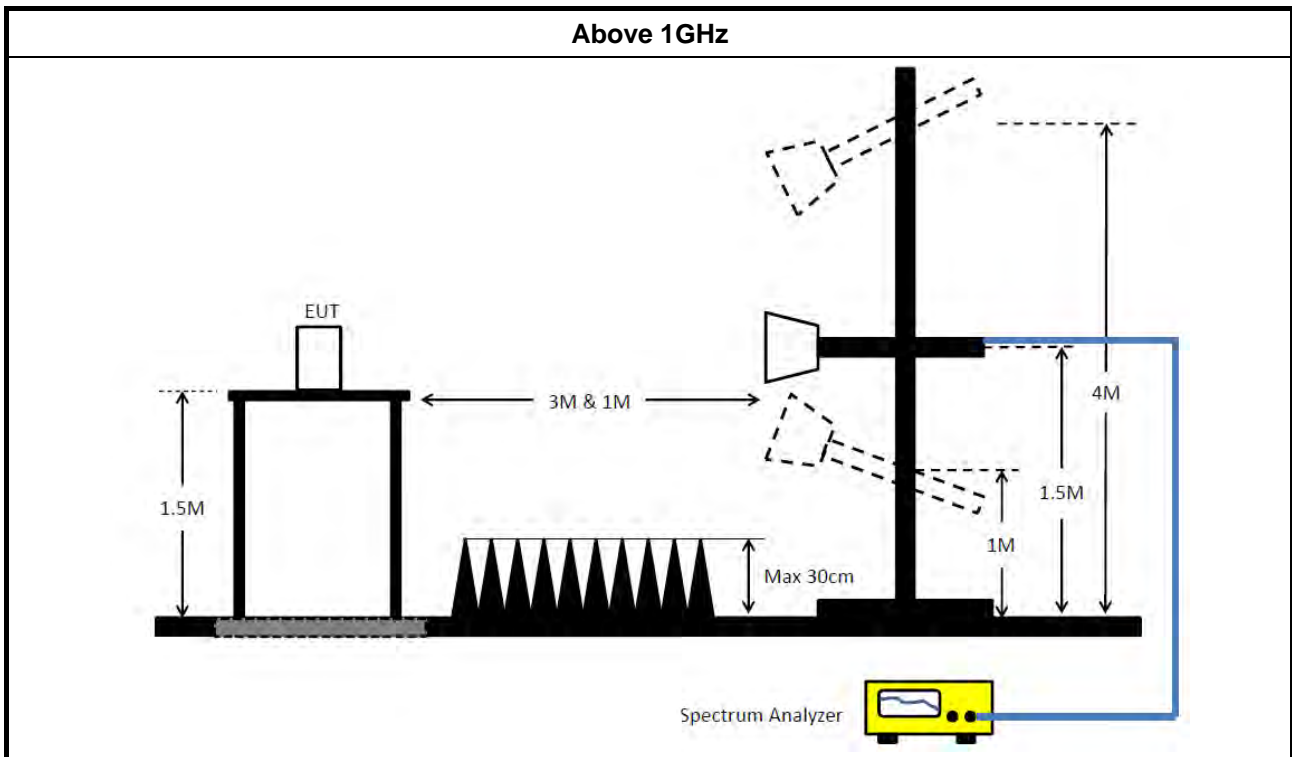
Refer a test equipment and calibration data table in this test report.

3.7.3 Test Procedures

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

3.7.4 Test Setup





3.7.5 Measurement Results Calculation

The measured Level is calculated using:
 Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

3.7.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.
 All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
 The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.7.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Dec. 04, 2020	Dec. 03, 2021	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 20, 2020	Nov. 19, 2021	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Mar. 10, 2020	Mar. 09, 2021	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz~30MHz	Oct. 20, 2020	Oct. 19, 2021	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 19, 2020	Mar. 18, 2021	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 10, 2020	Aug. 09, 2021	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 29, 2020	May 28, 2021	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGR EN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2020	Nov. 05, 2021	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 07, 2021	Jan. 06, 2022	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Apr. 16, 2020	Apr. 15, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 31, 2020	Dec. 30, 2021	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 17, 2020	Aug. 16, 2021	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 17, 2020	Aug. 16, 2021	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

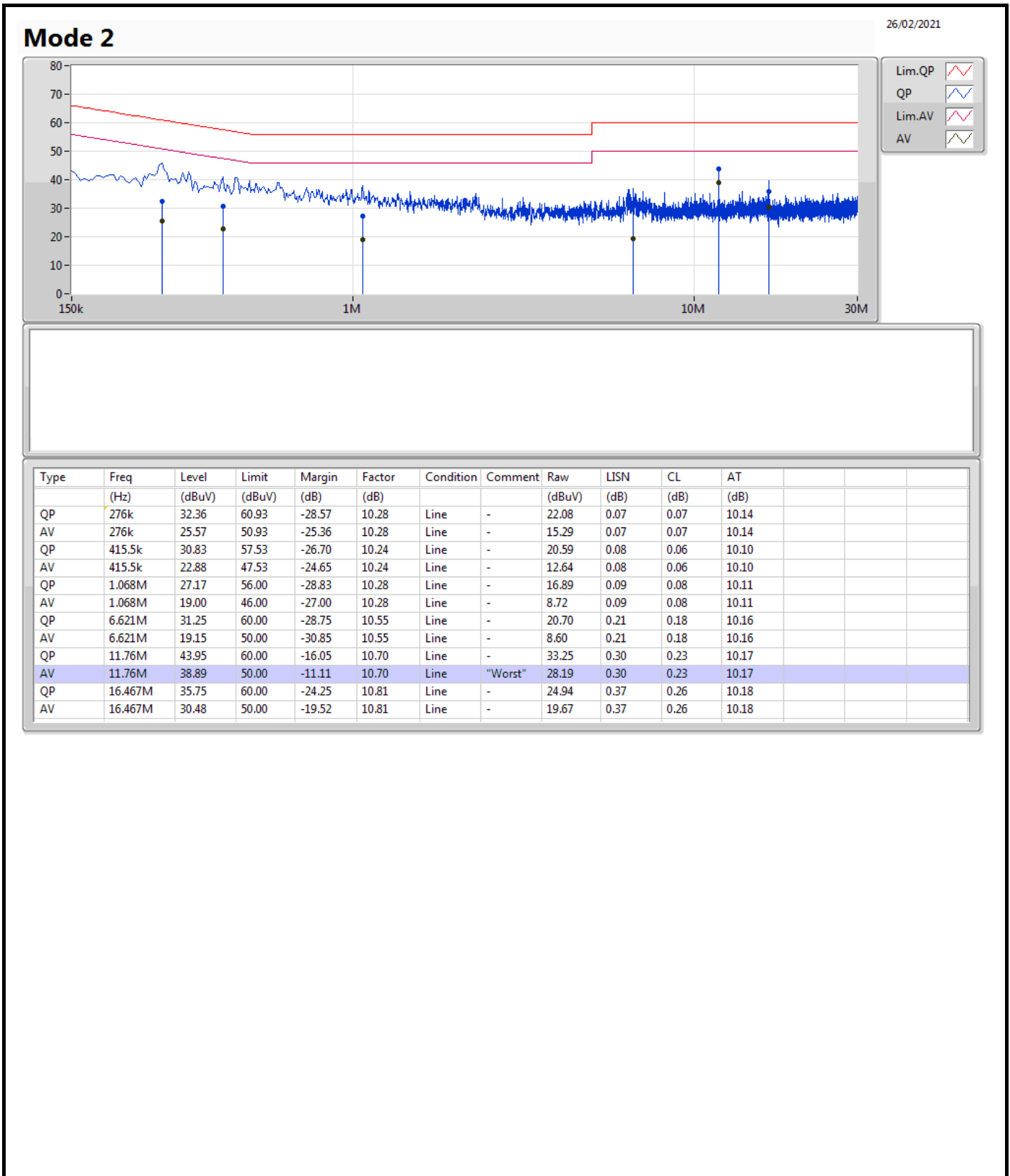
Note: Calibration Interval of instruments listed above is one year.

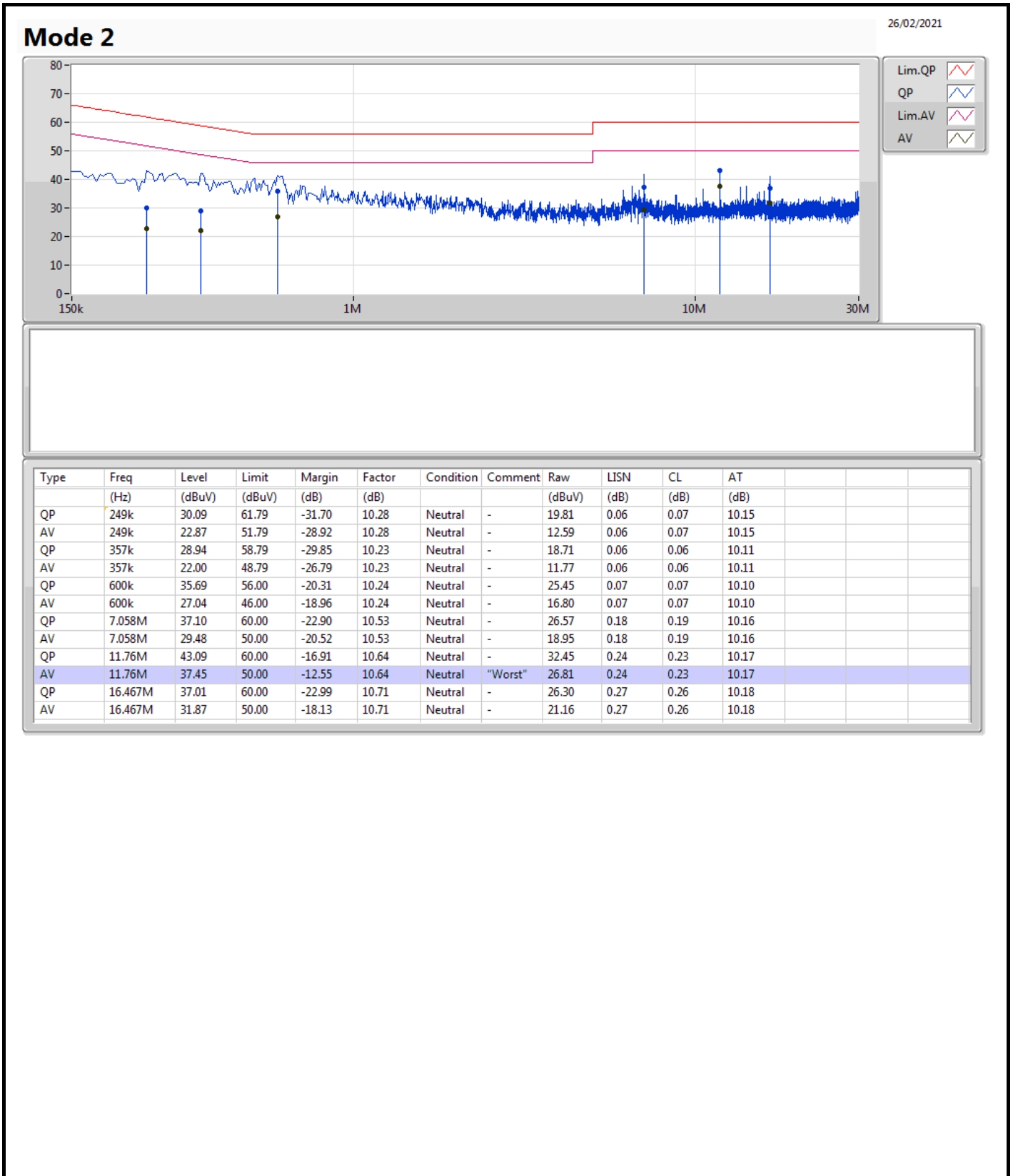
N.C.R. means Non-Calibration required.



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	11.76M	38.89	50.00	-11.11	Line







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)	922.5k	897.051k	897KF1D	916.25k	884.558k
BT-EDR(2Mbps)	1.218M	1.184M	1M18G1D	1.203M	1.179M
BT-EDR(3Mbps)	1.249M	1.191M	1M19G1D	1.246M	1.187M

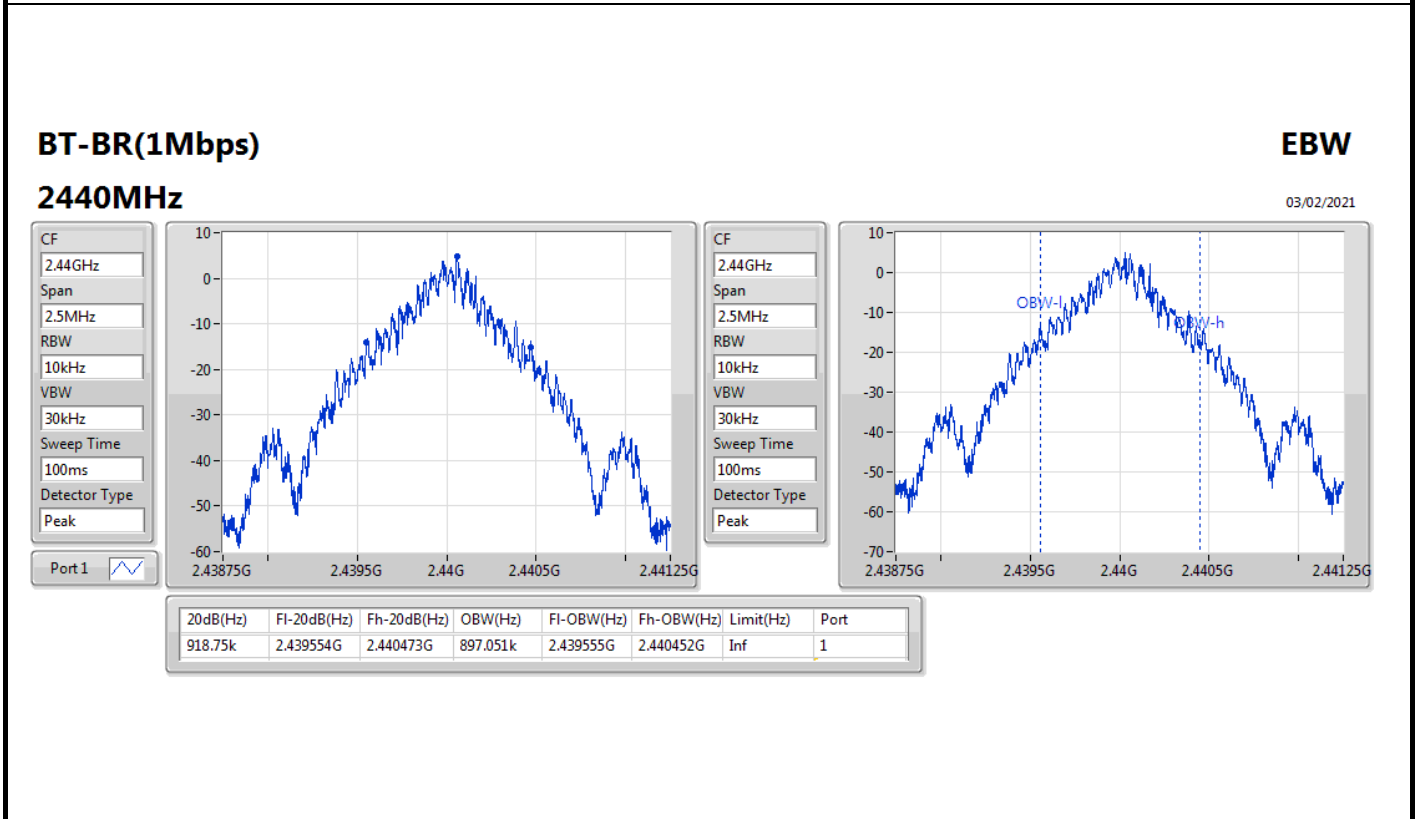
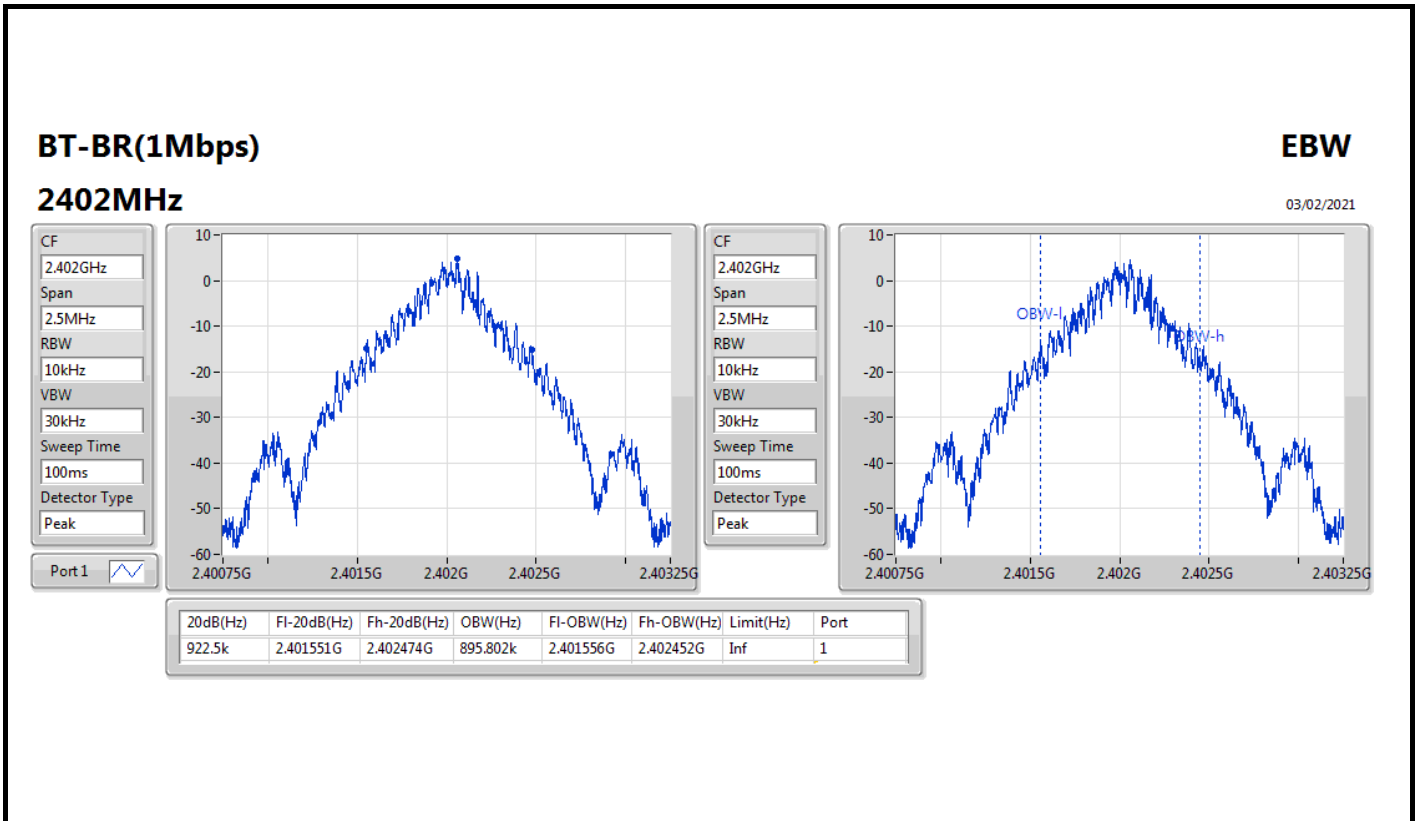
Max-N dB = Maximum 20dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

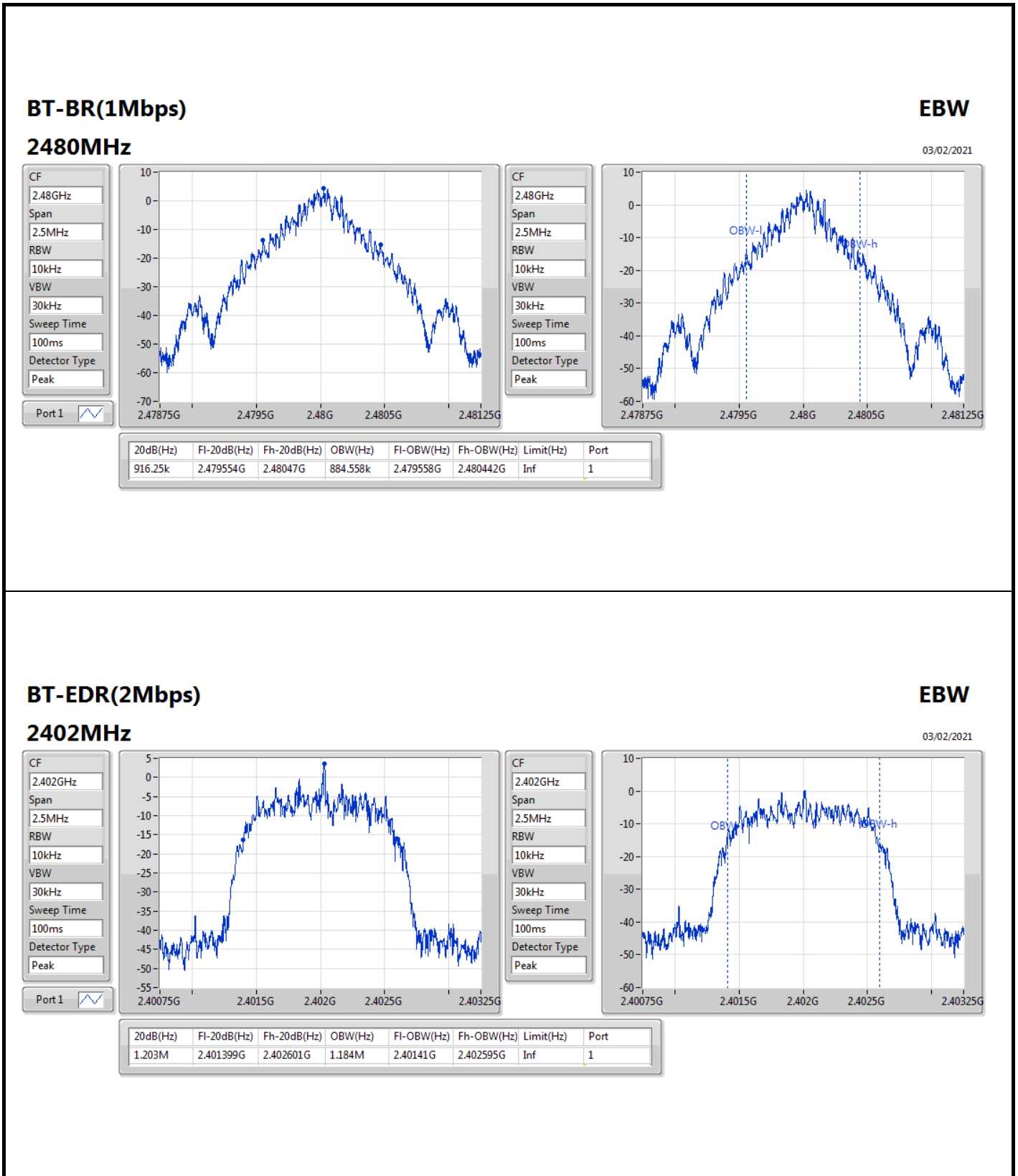
Min-N dB = Minimum 20dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

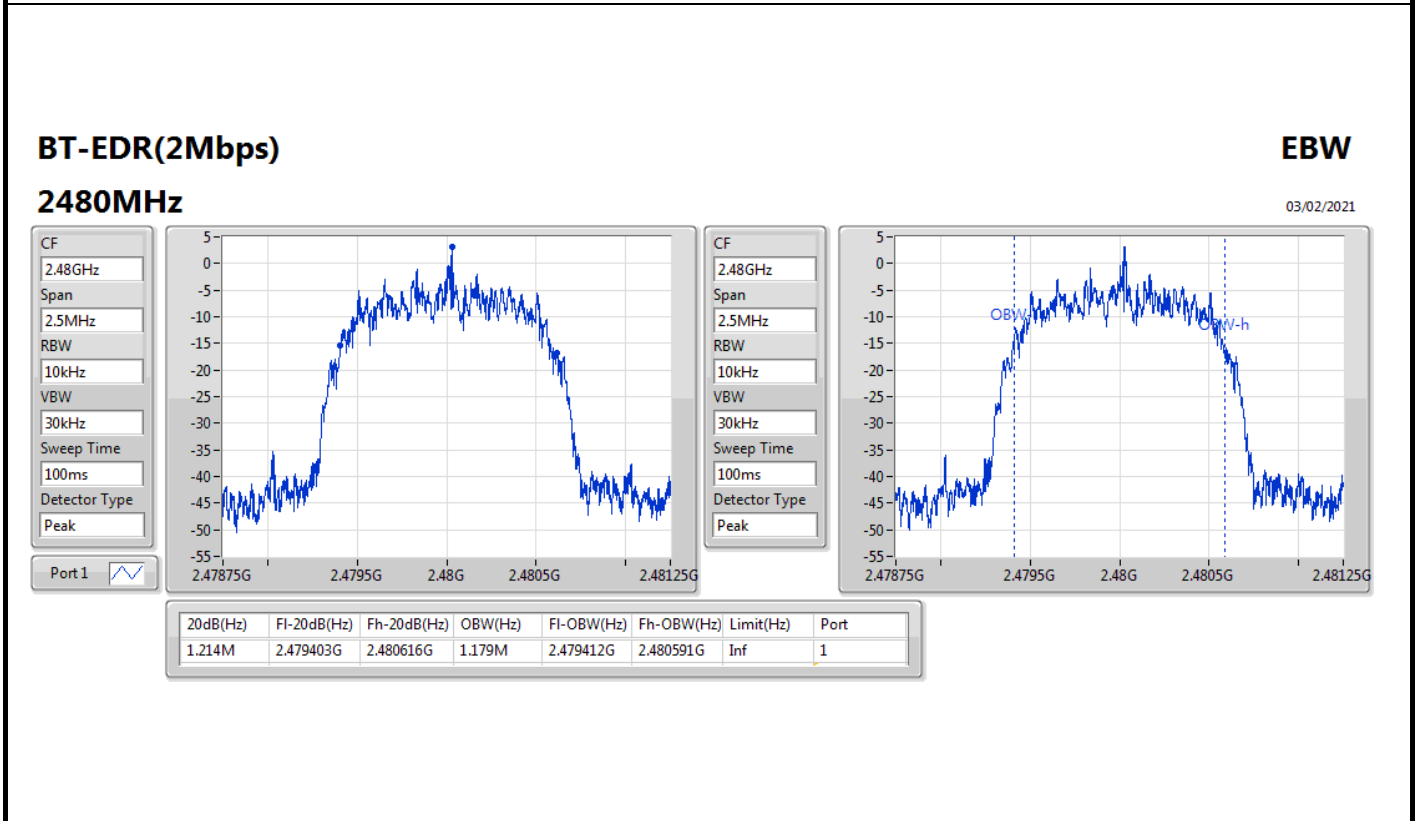
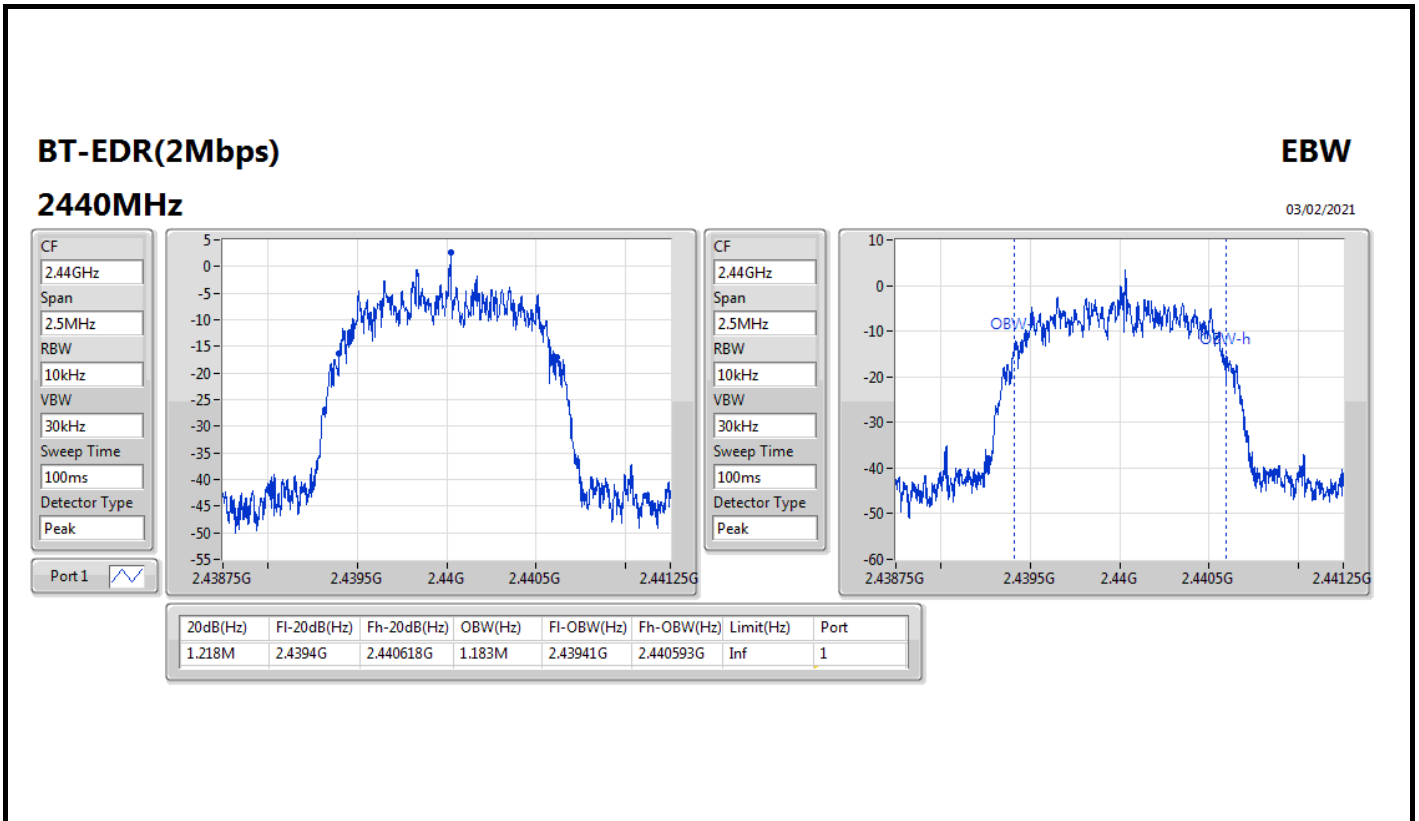
Result

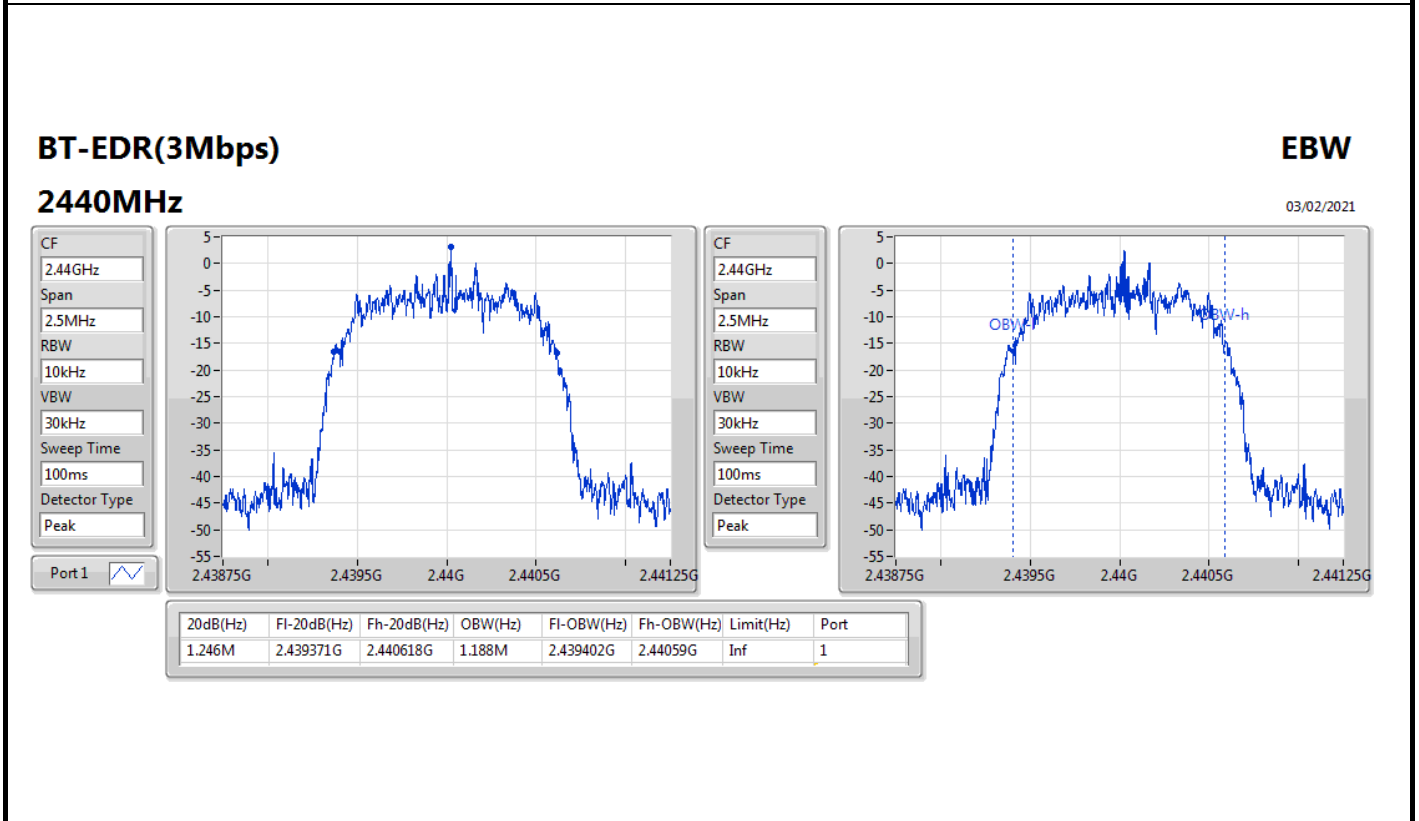
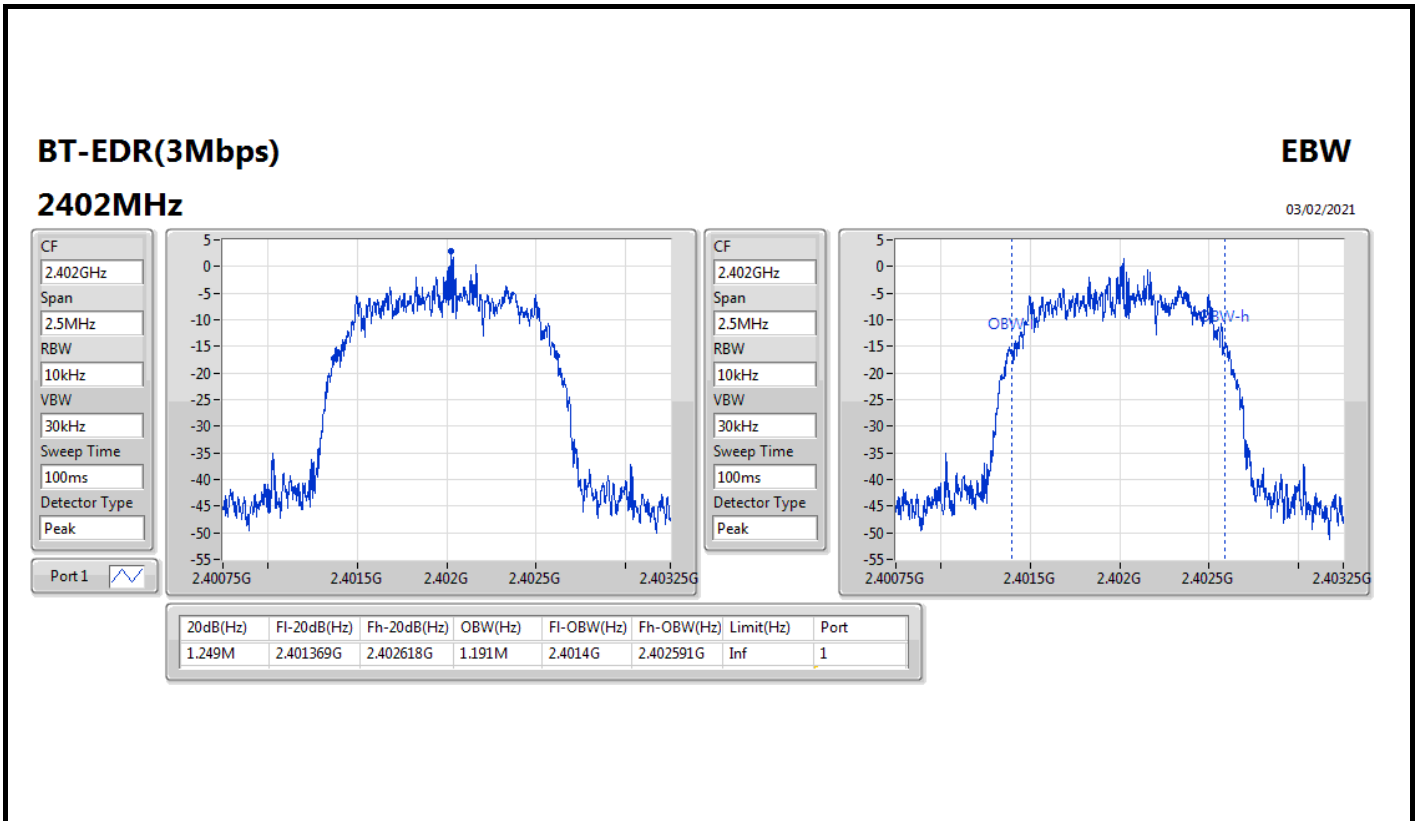
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	922.5k	895.802k
2440MHz	Pass	Inf	918.75k	897.051k
2480MHz	Pass	Inf	916.25k	884.558k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.203M	1.184M
2440MHz	Pass	Inf	1.218M	1.183M
2480MHz	Pass	Inf	1.214M	1.179M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.249M	1.191M
2440MHz	Pass	Inf	1.246M	1.188M
2480MHz	Pass	Inf	1.248M	1.187M

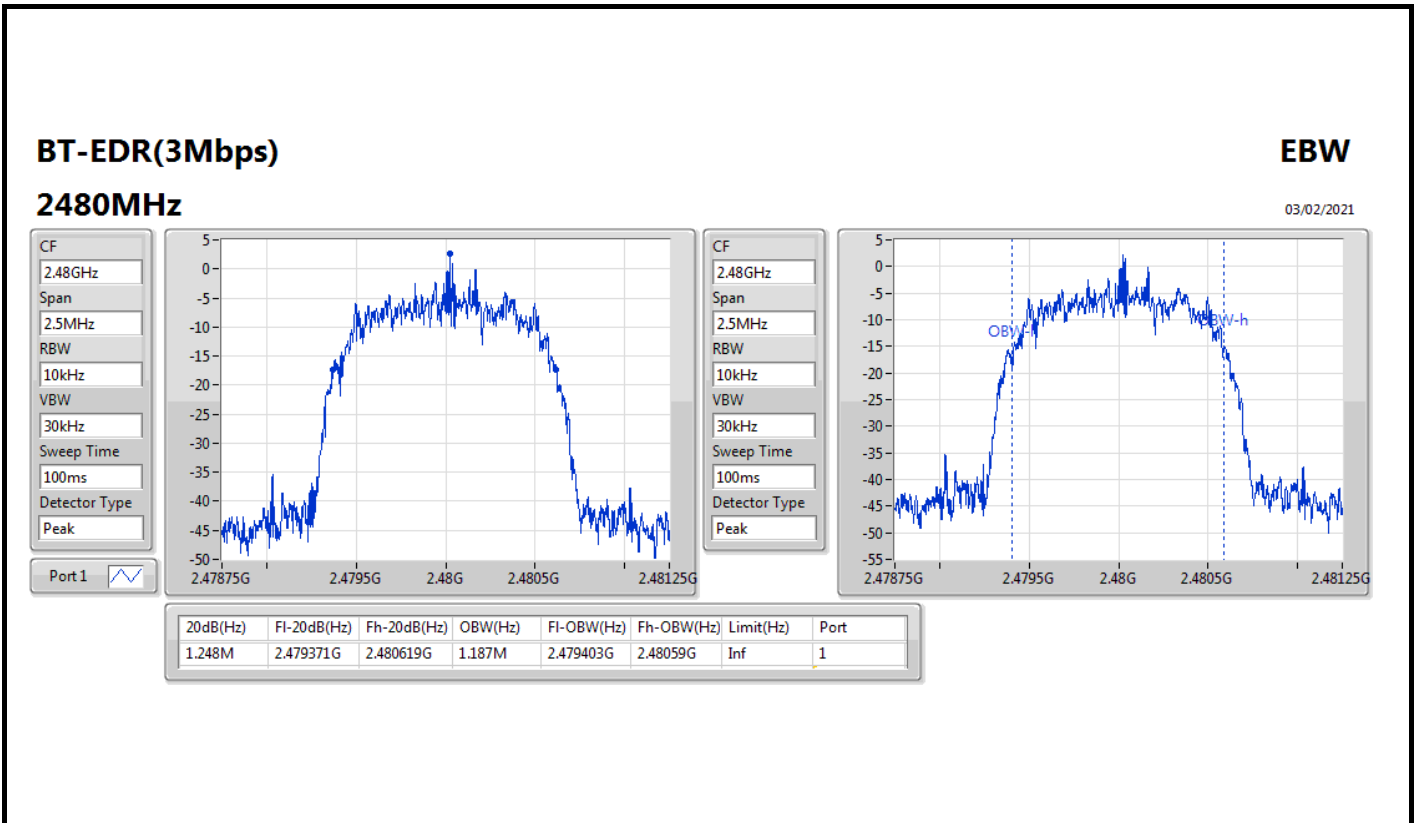
Port X-N dB = Port X 20dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;











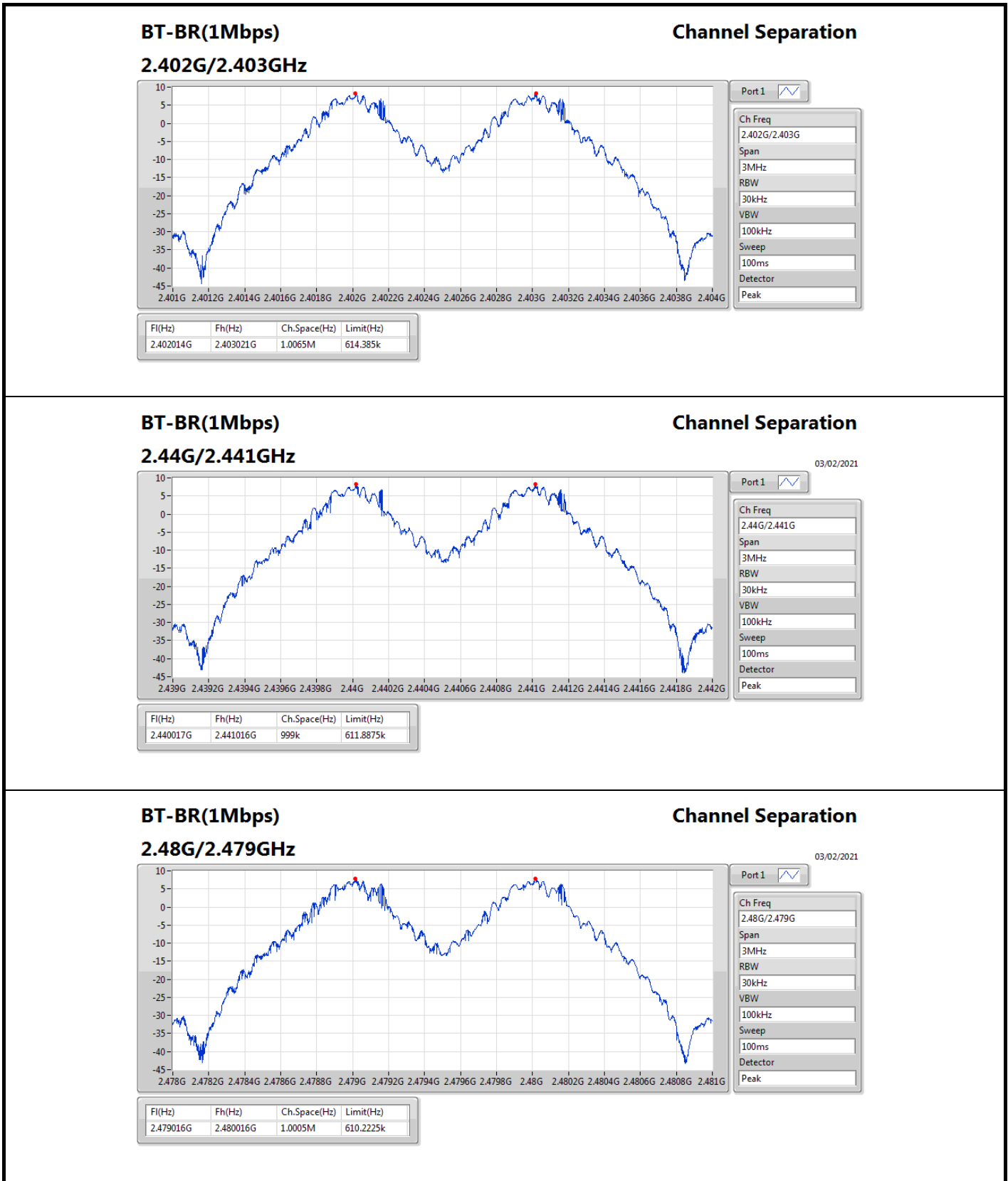


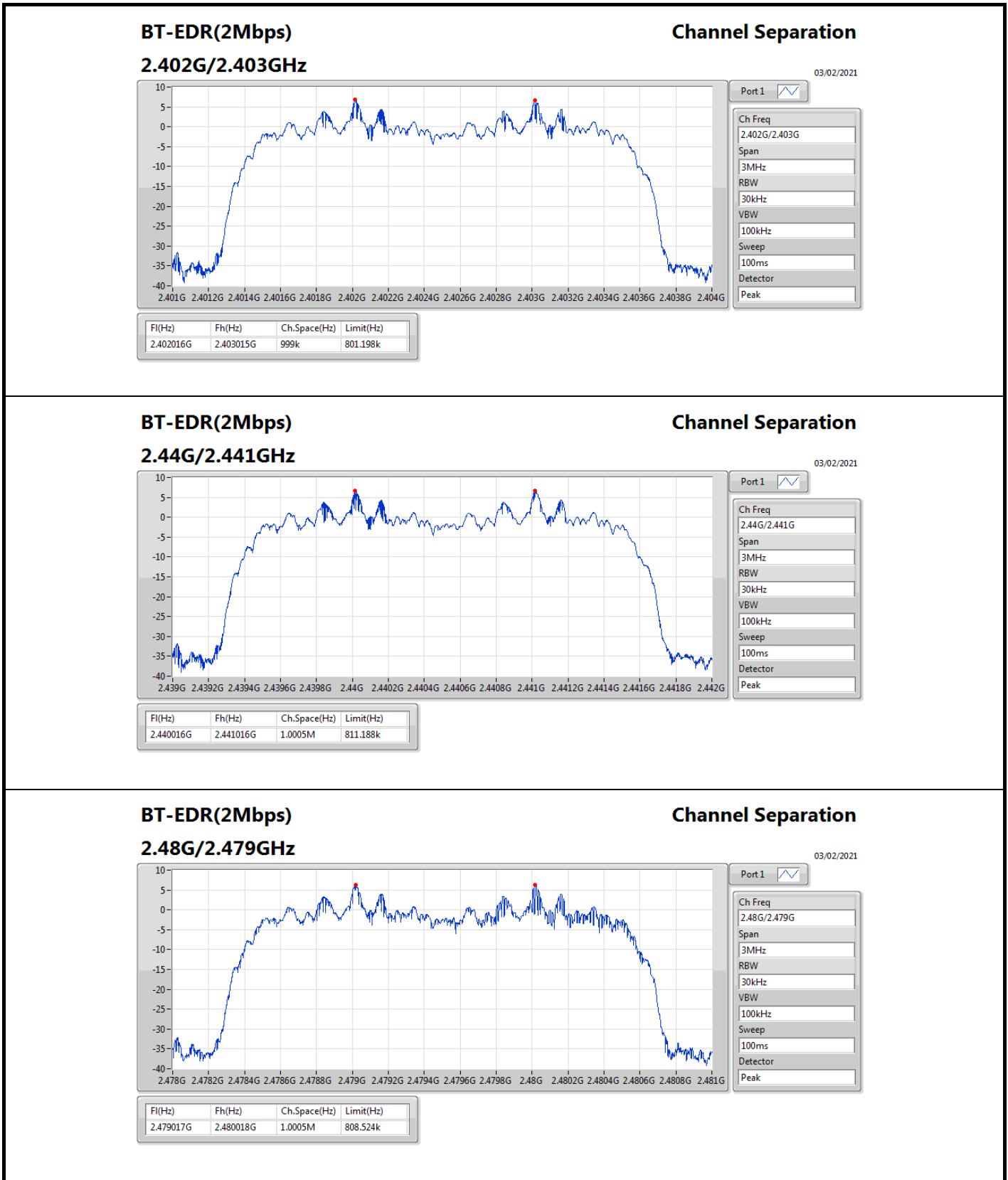
Summary

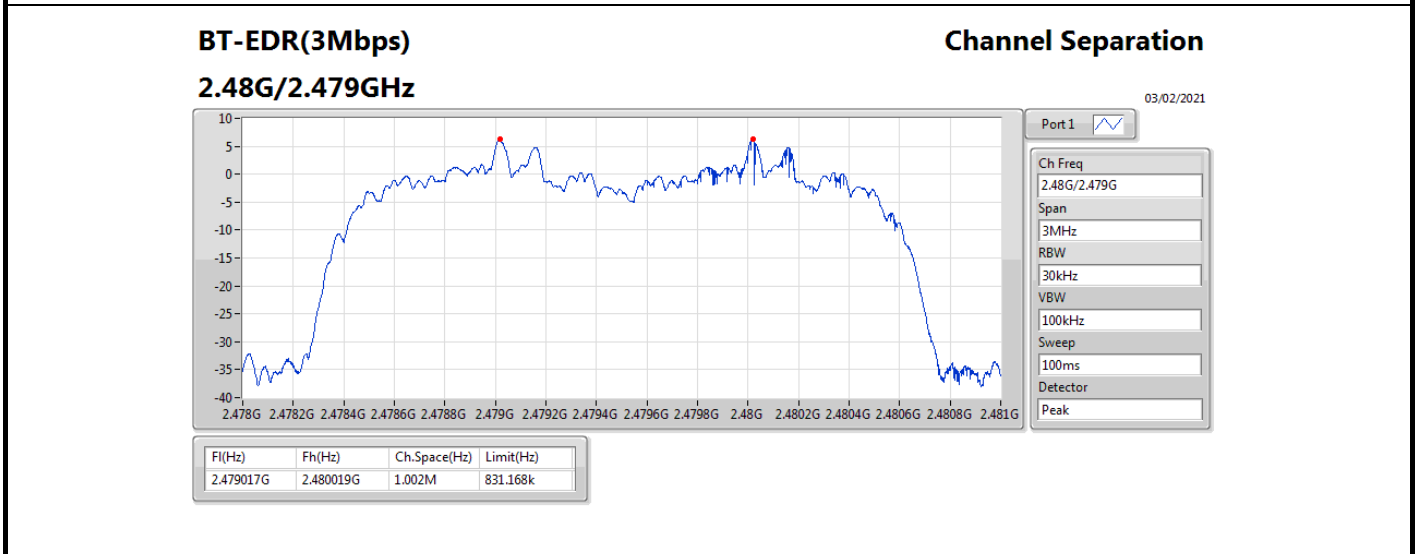
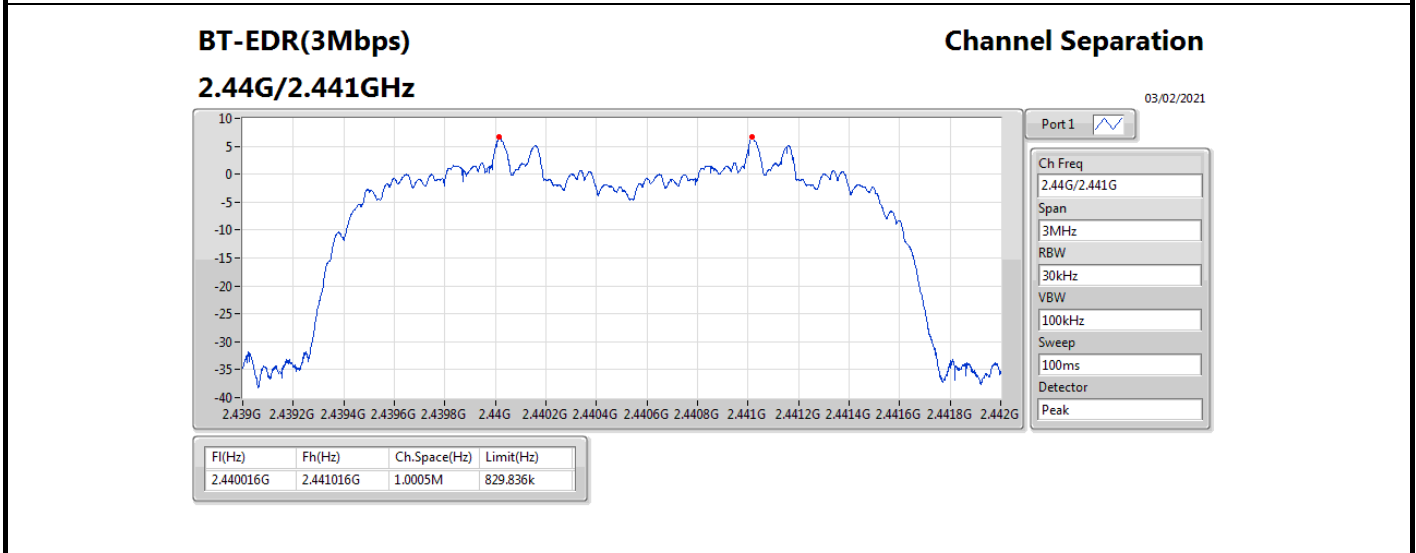
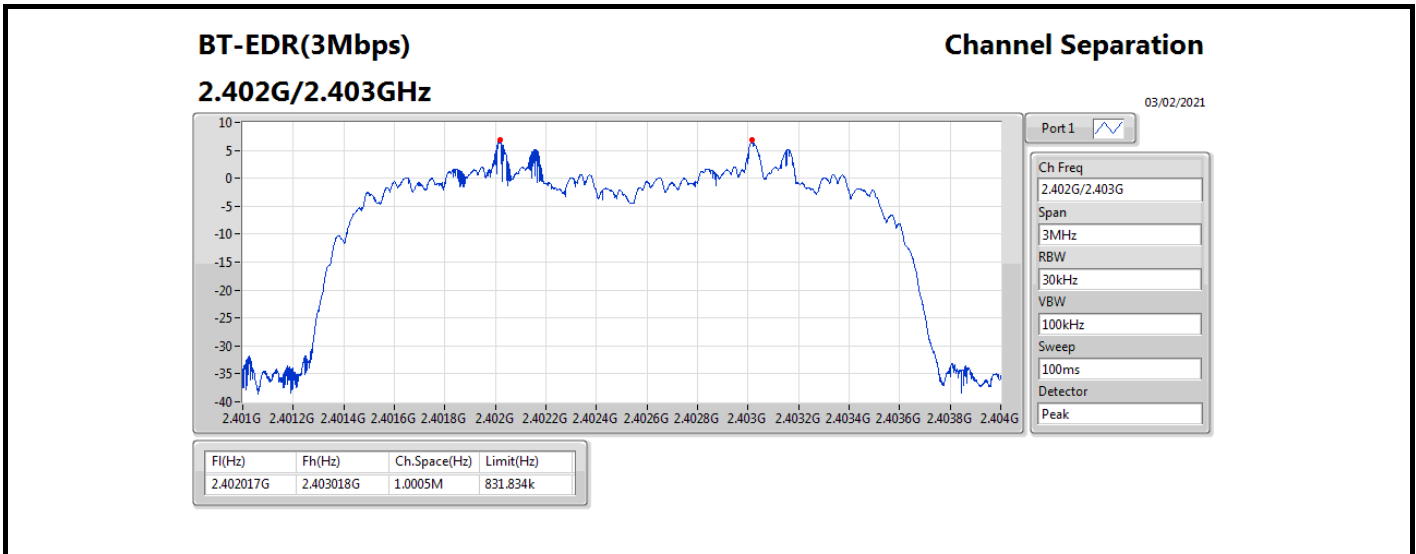
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.0065M	999k
BT-EDR(2Mbps)	1.0005M	999k
BT-EDR(3Mbps)	1.002M	1.0005M

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402014G	2.403021G	1.0065M	614.385k
2440MHz	Pass	2.440017G	2.441016G	999k	611.8875k
2480MHz	Pass	2.479016G	2.480016G	1.0005M	610.2225k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402016G	2.403015G	999k	801.198k
2440MHz	Pass	2.440016G	2.441016G	1.0005M	811.188k
2480MHz	Pass	2.479017G	2.480018G	1.0005M	808.524k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402017G	2.403018G	1.0005M	831.834k
2440MHz	Pass	2.440016G	2.441016G	1.0005M	829.836k
2480MHz	Pass	2.479017G	2.480019G	1.002M	831.168k









Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	10.32	0.01076
BT-EDR(2Mbps)	8.05	0.00638
BT-EDR(3Mbps)	8.10	0.00646



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.68	10.32	21.00
2440MHz	Pass	2.68	10.28	21.00
2480MHz	Pass	2.68	9.92	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.68	8.02	21.00
2440MHz	Pass	2.68	8.05	21.00
2480MHz	Pass	2.68	7.72	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.68	8.10	21.00
2440MHz	Pass	2.68	8.03	21.00
2480MHz	Pass	2.68	7.82	21.00

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



Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	10.57	0.01140
BT-EDR(2Mbps)	10.62	0.01153
BT-EDR(3Mbps)	10.86	0.01219



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	2.68	10.57	21.00
2440MHz	Pass	2.68	10.46	21.00
2480MHz	Pass	2.68	10.06	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	2.68	10.62	21.00
2440MHz	Pass	2.68	10.47	21.00
2480MHz	Pass	2.68	10.14	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	2.68	10.86	21.00
2440MHz	Pass	2.68	10.73	21.00
2480MHz	Pass	2.68	10.42	21.00

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



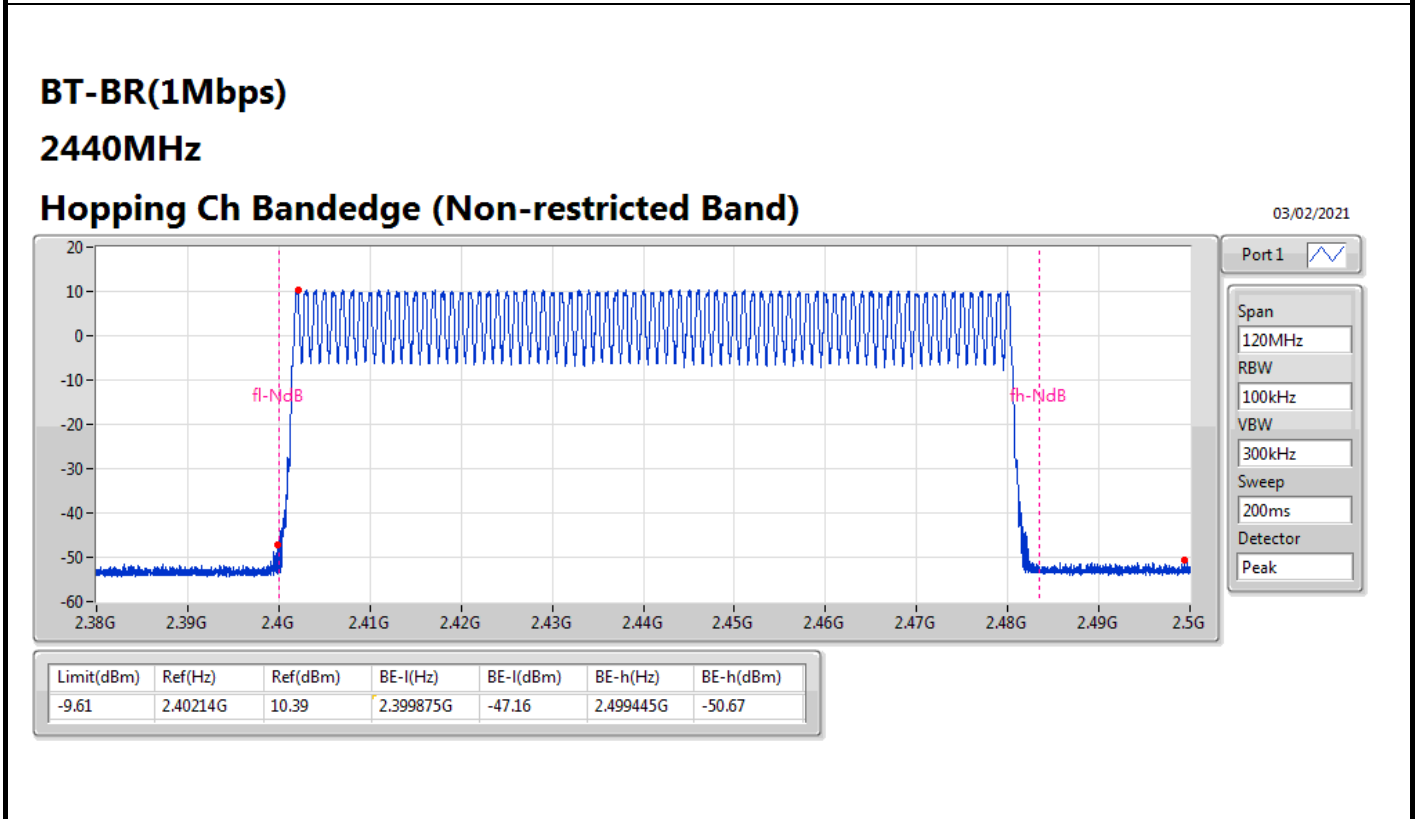
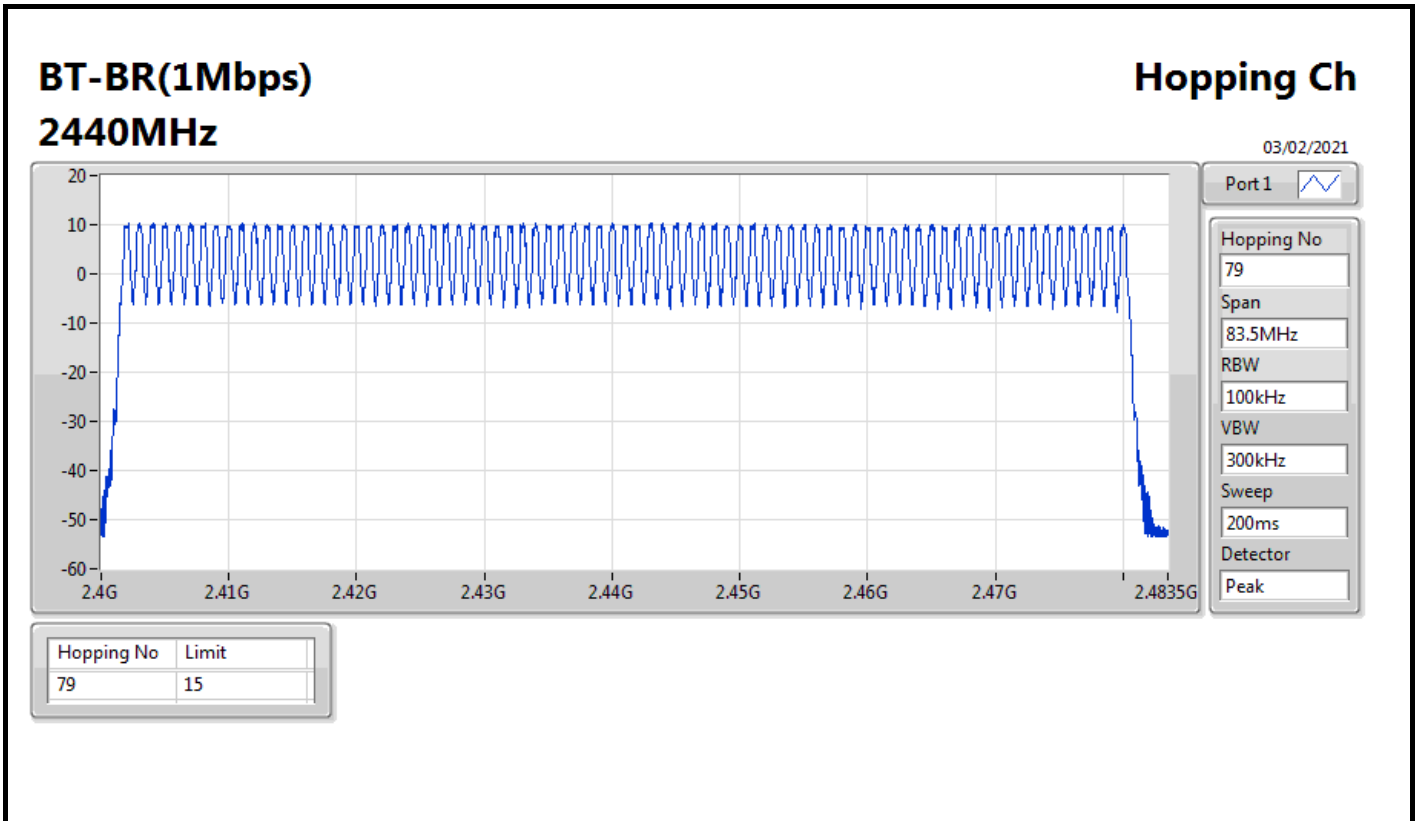
Summary

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



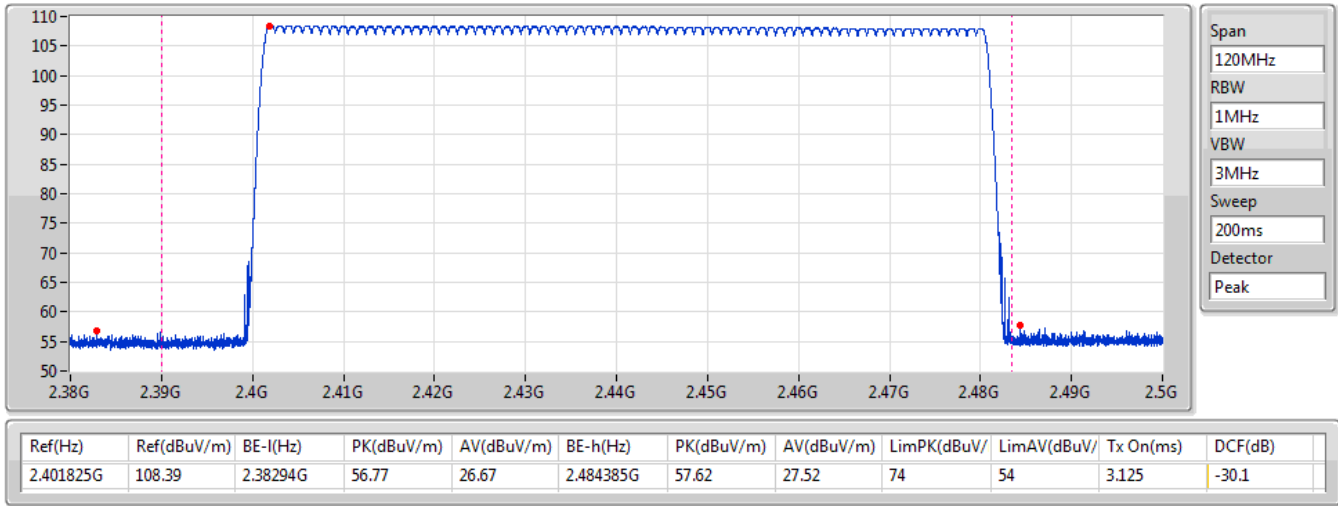
Result

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



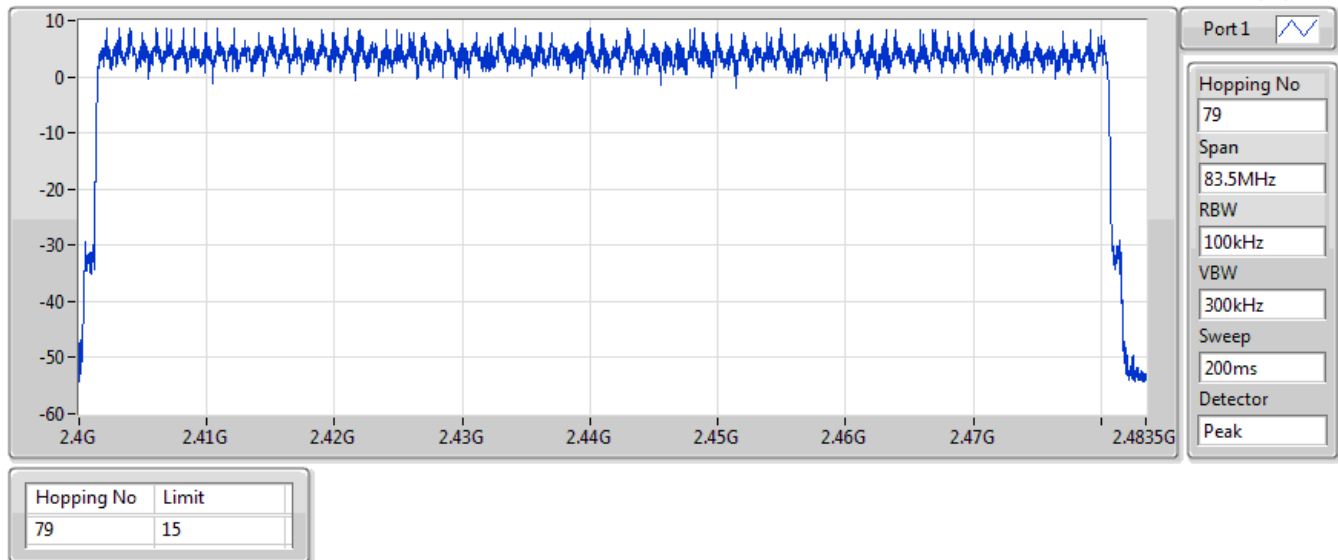
BT-BR(1Mbps)
2440MHz
Hopping Ch Bandedge (Restricted Band)

03/02/2021



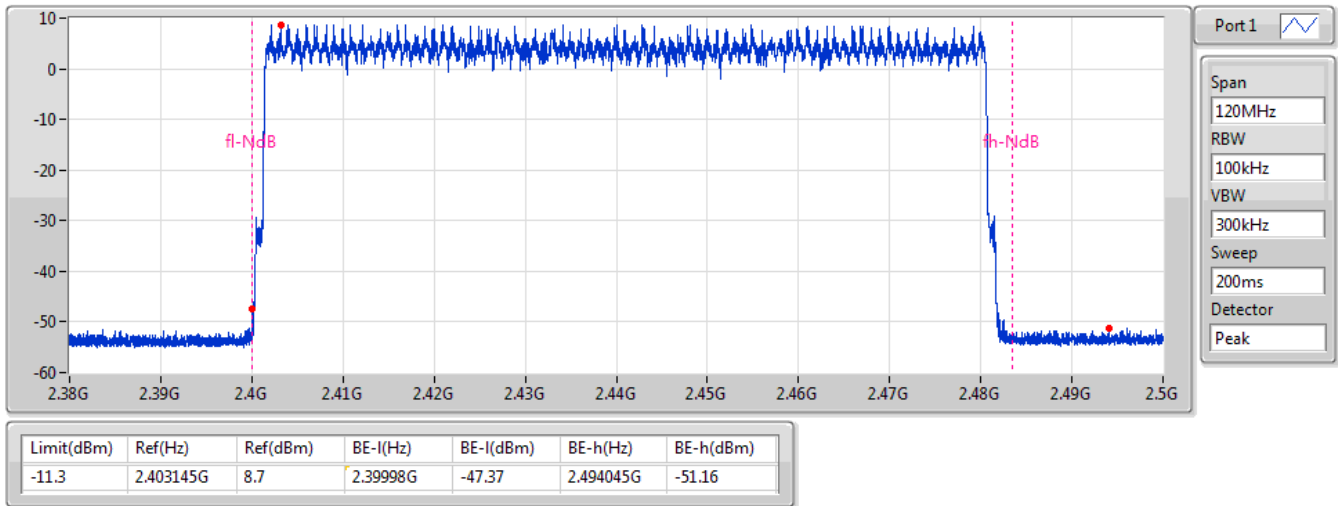
BT-EDR(2Mbps) **Hopping Ch**
2440MHz

03/02/2021



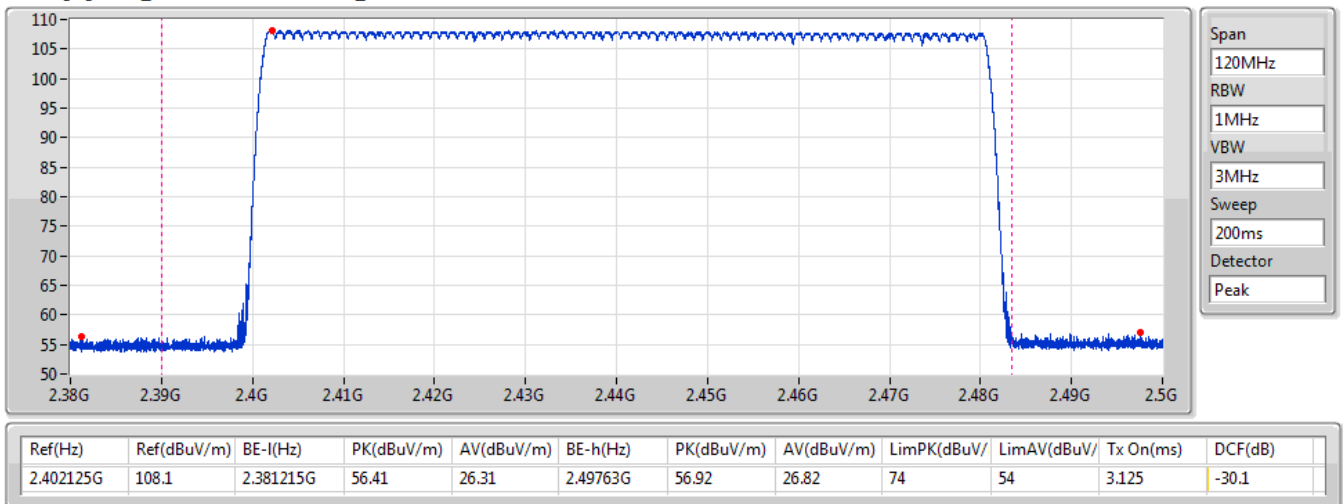
BT-EDR(2Mbps)
2440MHz
Hopping Ch Bandedge (Non-restricted Band)

03/02/2021



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

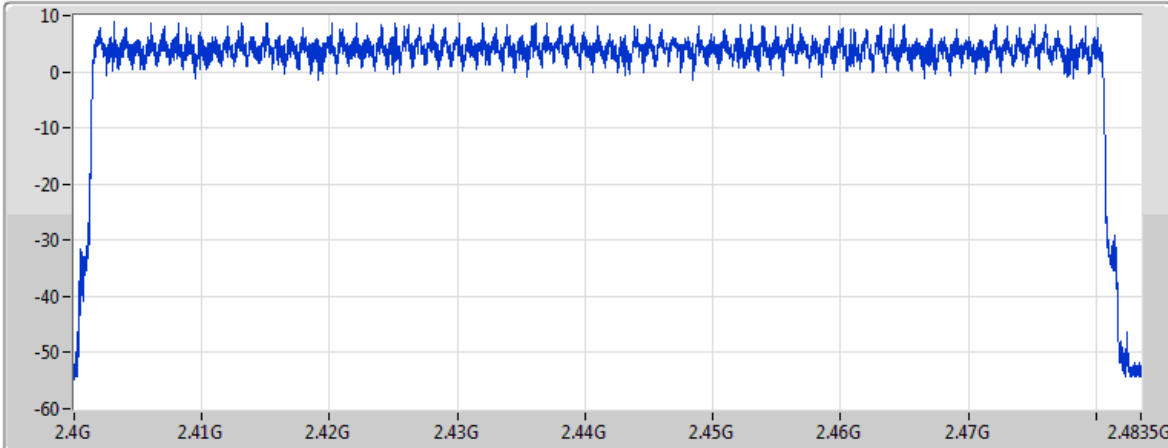
03/02/2021



BT-EDR(3Mbps)
2440MHz

Hopping Ch

03/02/2021



Port 1

Hopping No
79

Span
83.5MHz

RBW
100kHz

VBW
300kHz

Sweep
200ms

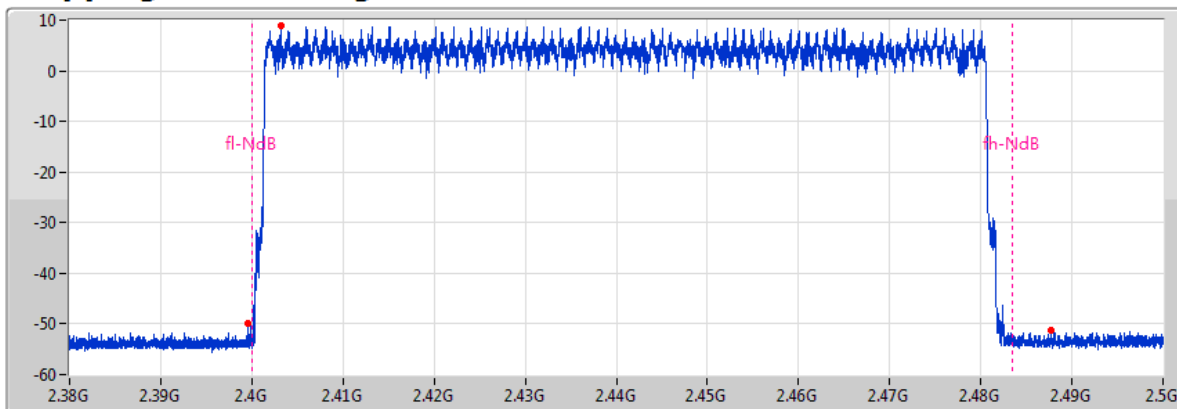
Detector
Peak

Hopping No	Limit
79	15

BT-EDR(3Mbps)
2440MHz

Hopping Ch Bandedge (Non-restricted Band)

03/02/2021



Port 1

Span
120MHz

RBW
100kHz

VBW
300kHz

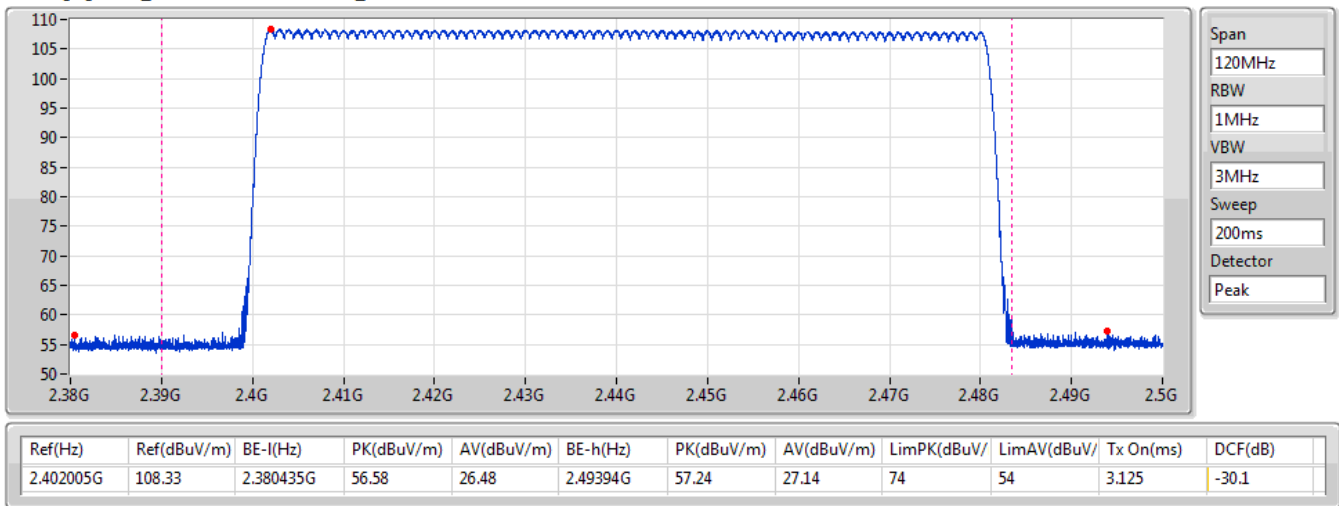
Sweep
200ms

Detector
Peak

Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-11.18	2.40316G	8.82	2.399545G	-49.83	2.48773G	-51.15

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

03/02/2021





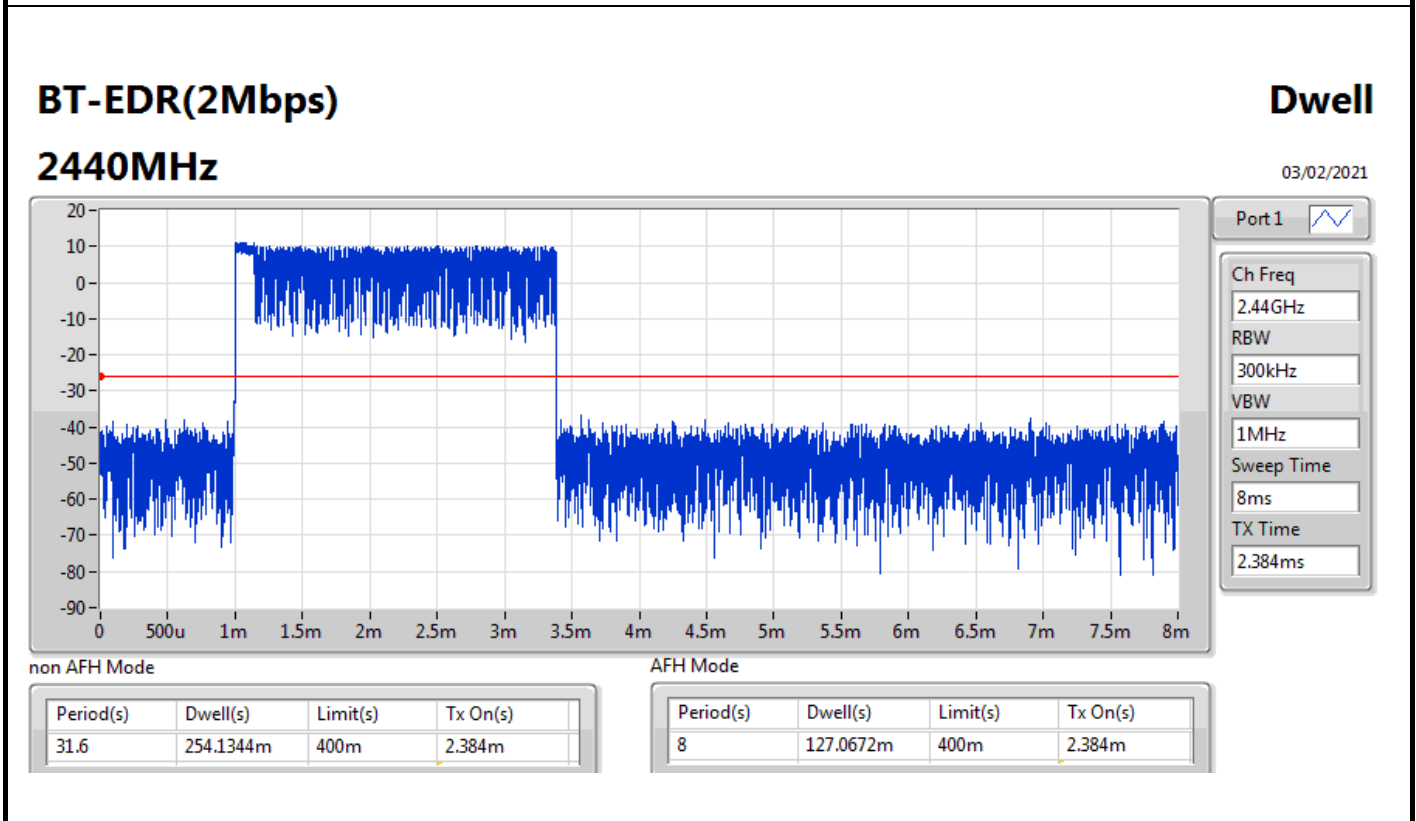
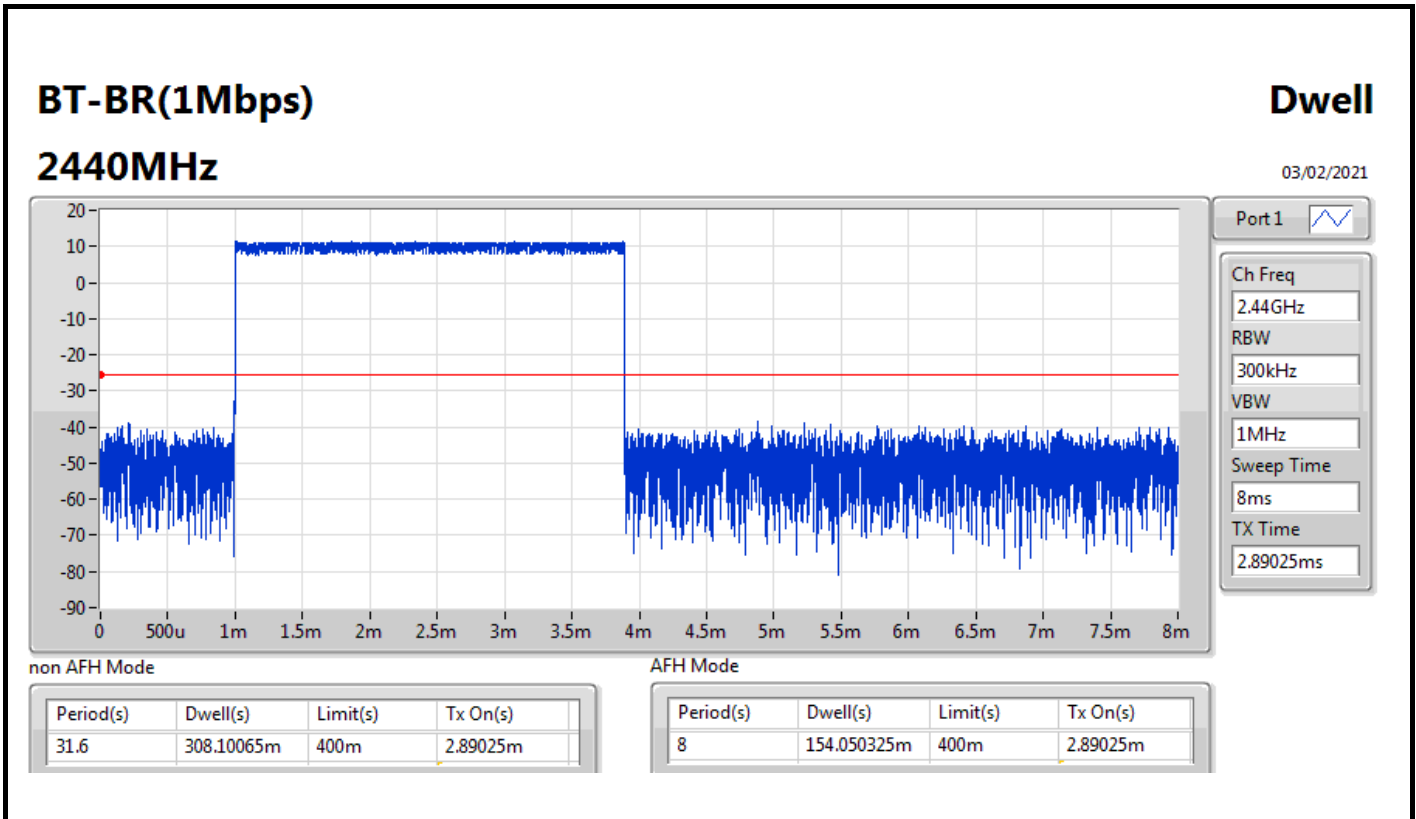
Summary

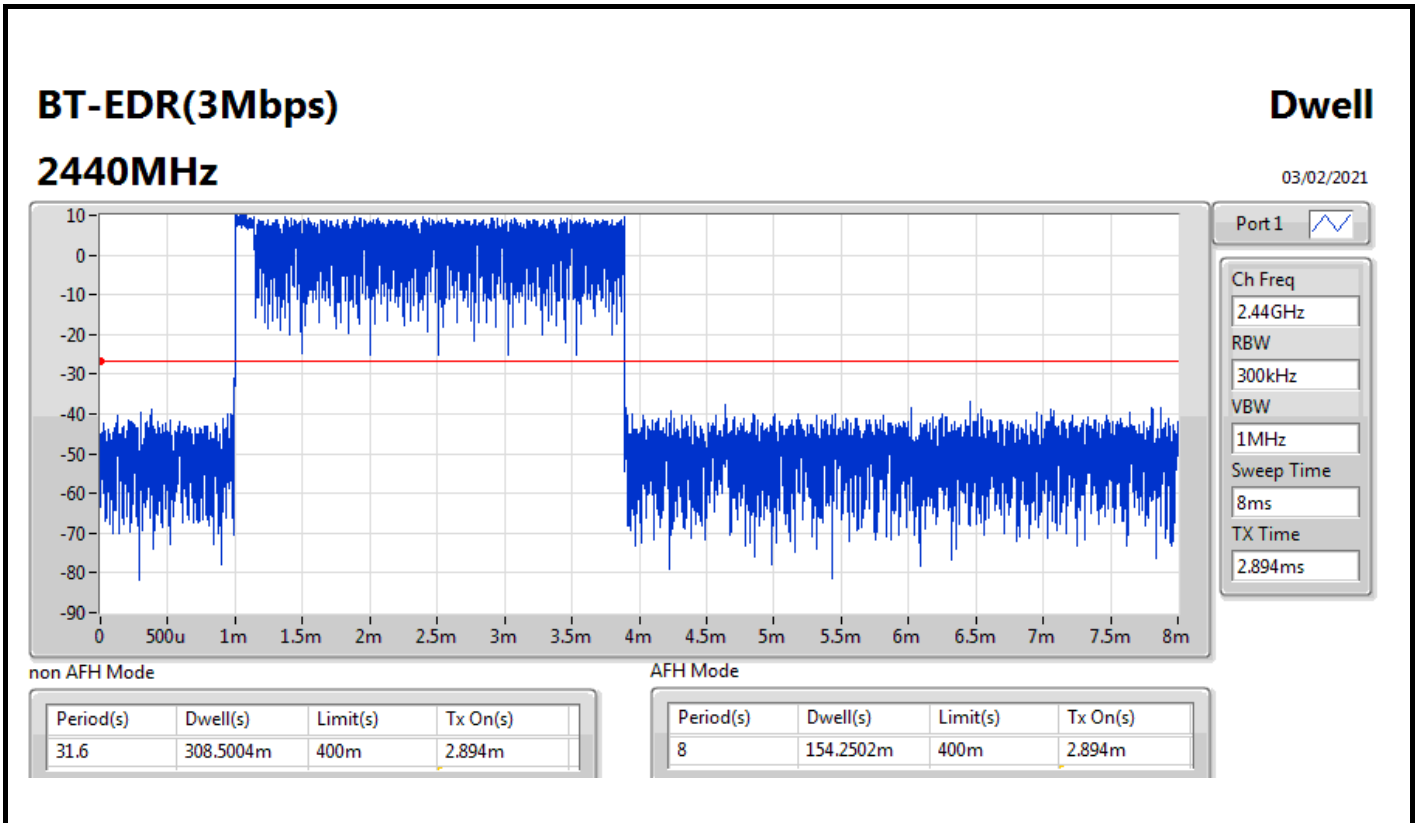
Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	308.10065m
BT-EDR(2Mbps)	254.1344m
BT-EDR(3Mbps)	308.5004m



Result

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.10065m	400m	2.89025m
BT-EDR(2Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	254.1344m	400m	2.384m
BT-EDR(3Mbps)	-	-	-	-	-
2440MHz	Pass	31.6	308.5004m	400m	2.894m





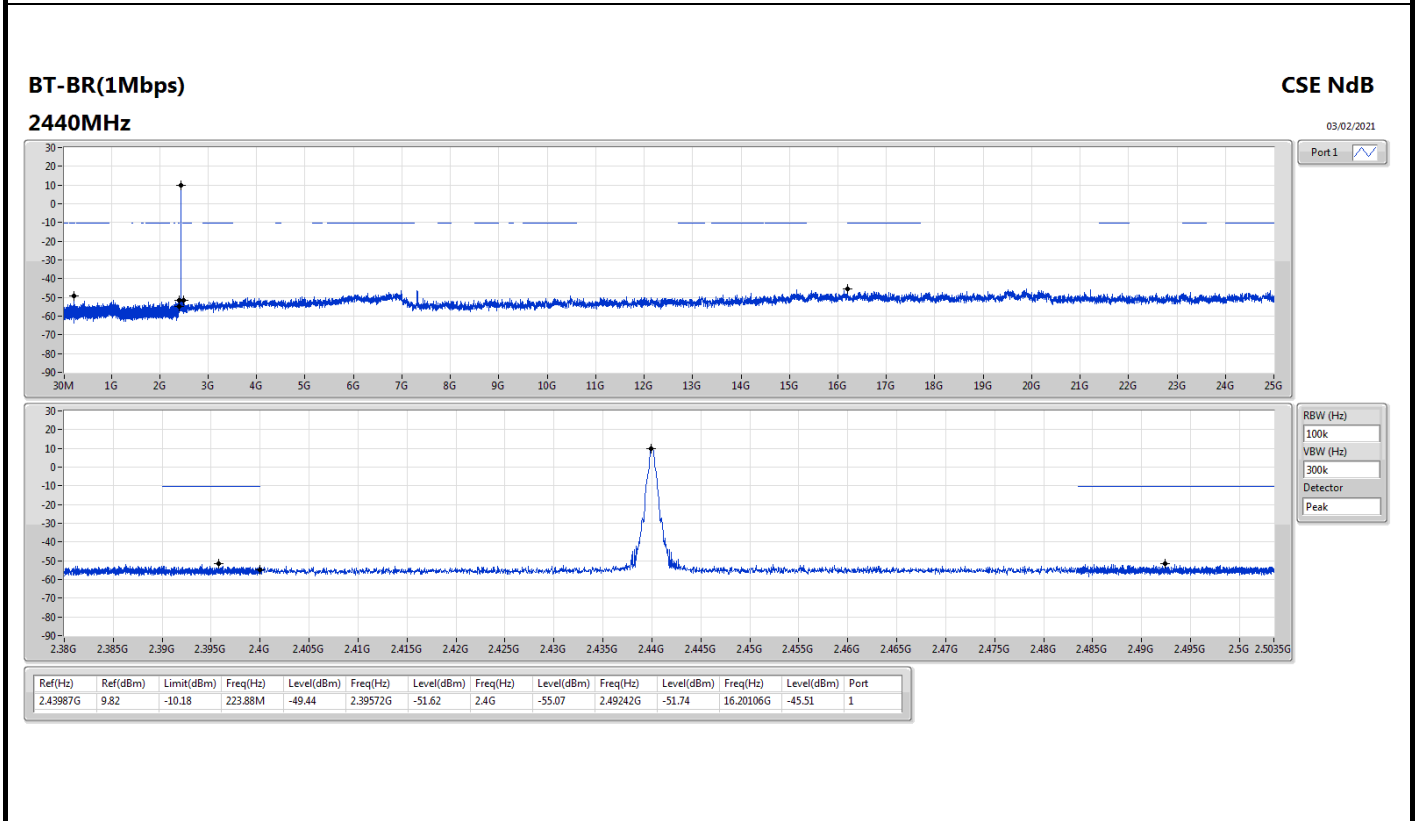
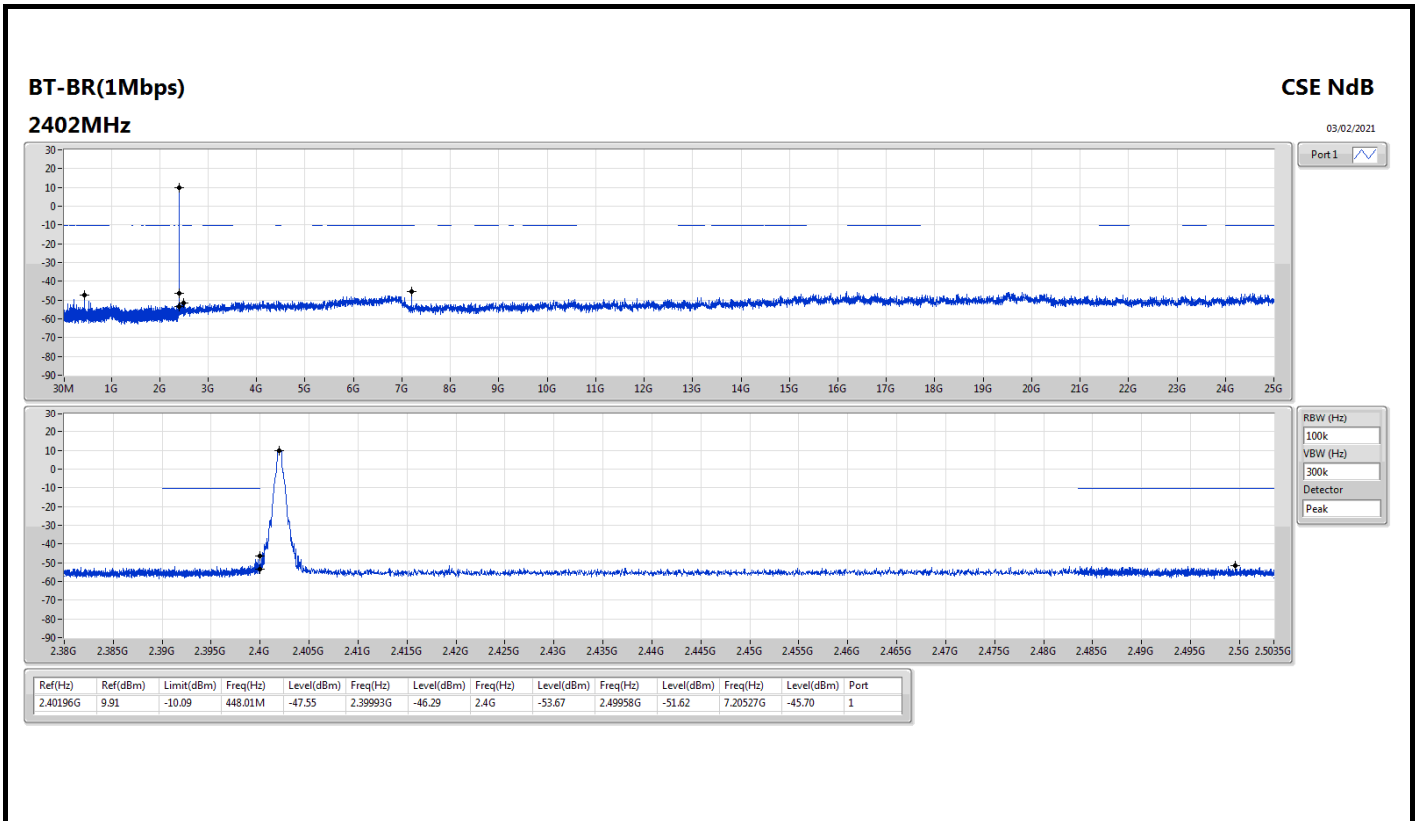


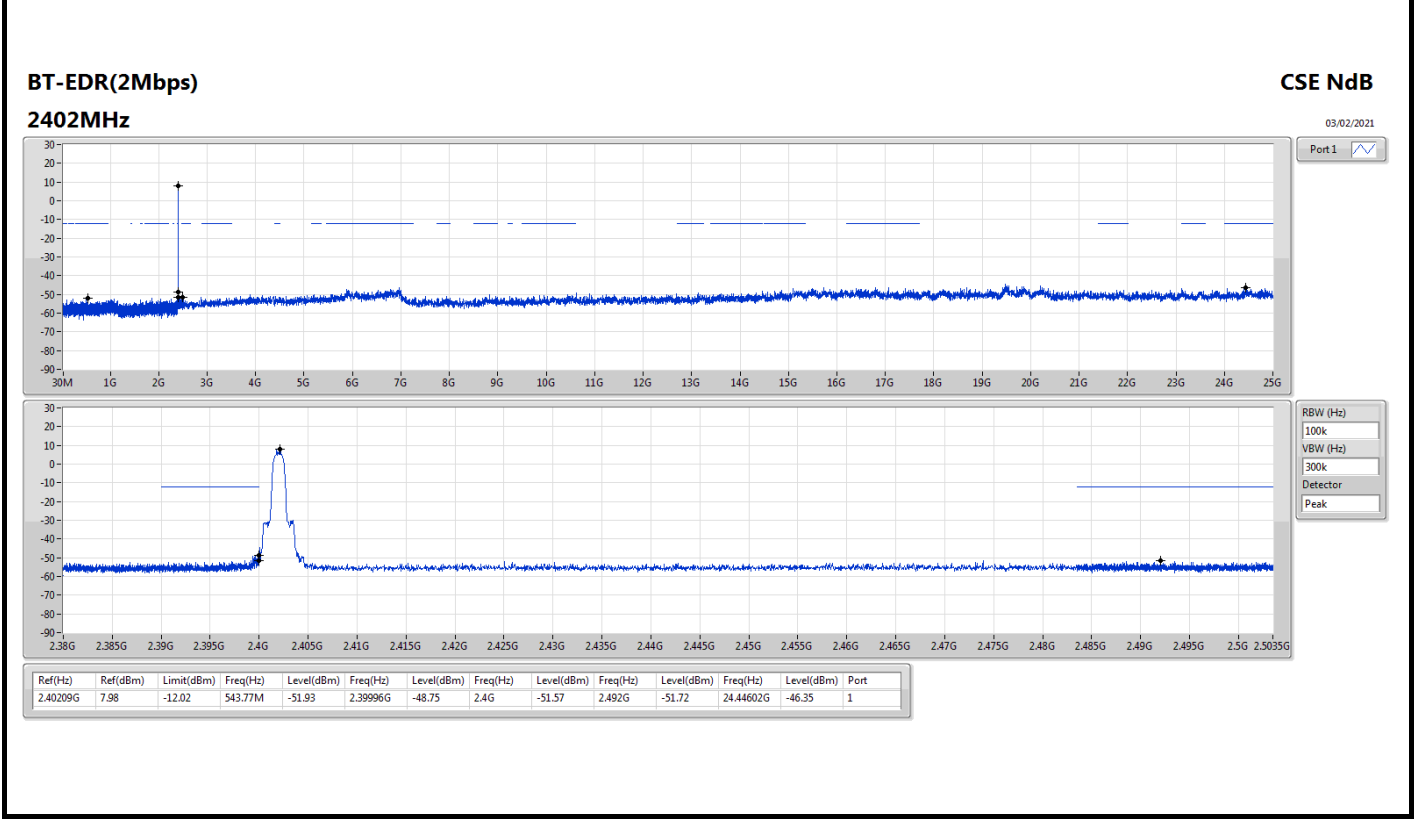
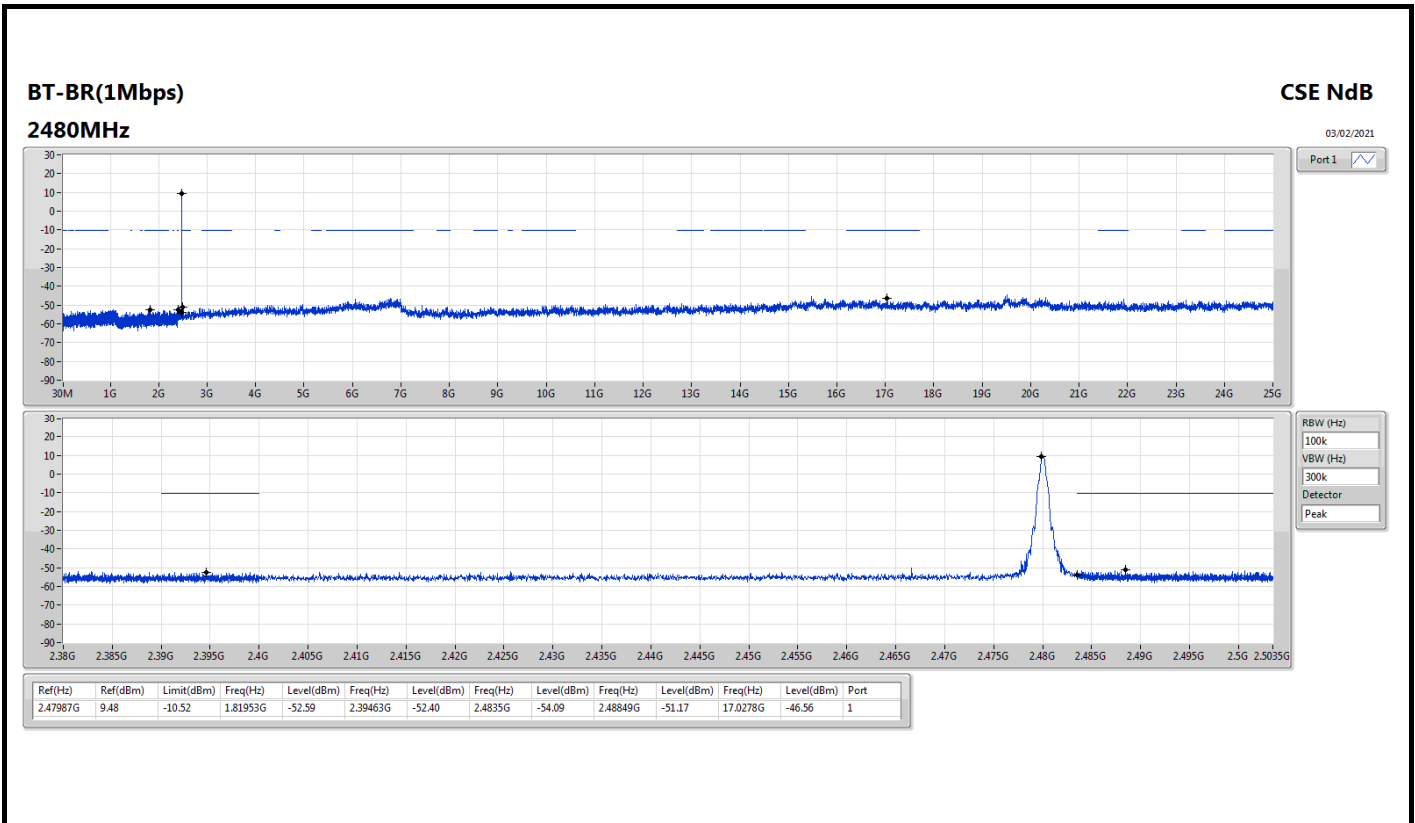
Summary

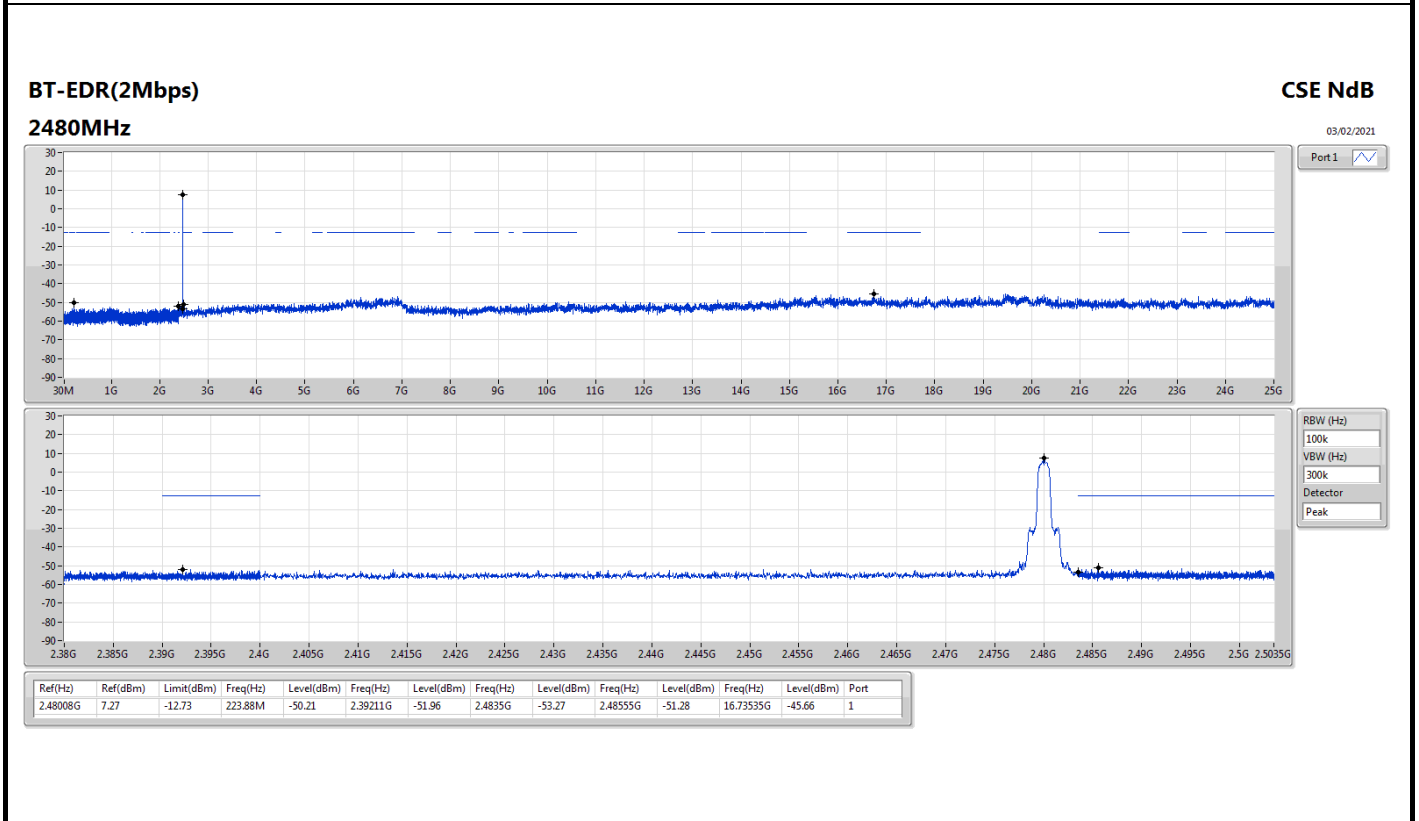
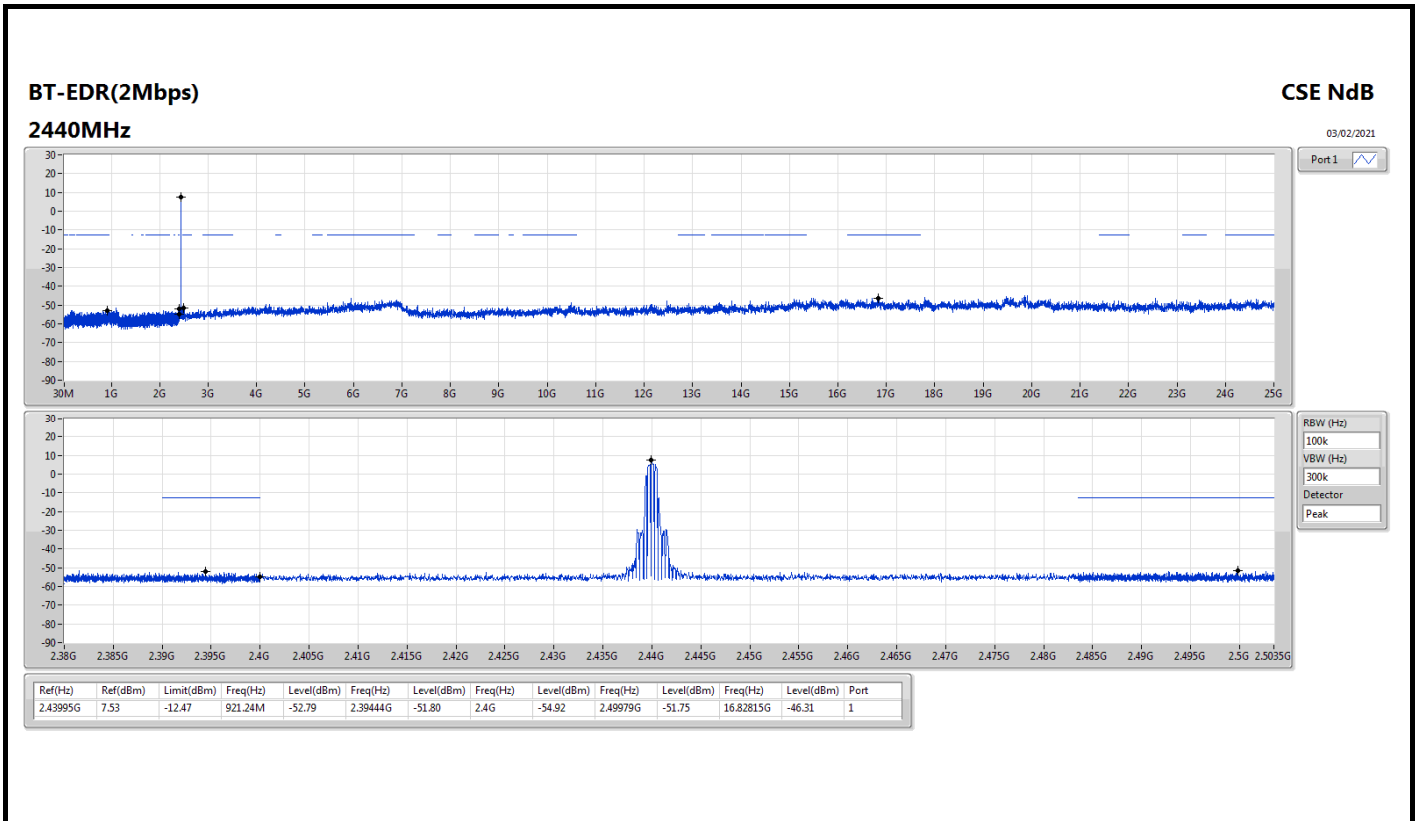
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-BR(1Mbps)	Pass	2.40196G	9.91	-10.09	448.01M	-47.55	2.39993G	-46.29	2.4G	-53.67	2.49958G	-51.62	7.20527G	-45.70	1
BT-EDR(2Mbps)	Pass	2.40209G	7.98	-12.02	543.77M	-51.93	2.39996G	-48.75	2.4G	-51.57	2.492G	-51.72	24.44602G	-46.35	1
BT-EDR(3Mbps)	Pass	2.40184G	8.42	-11.58	95.8M	-51.98	2.39999G	-48.11	2.4G	-51.69	2.49641G	-50.86	24.44321G	-46.39	1

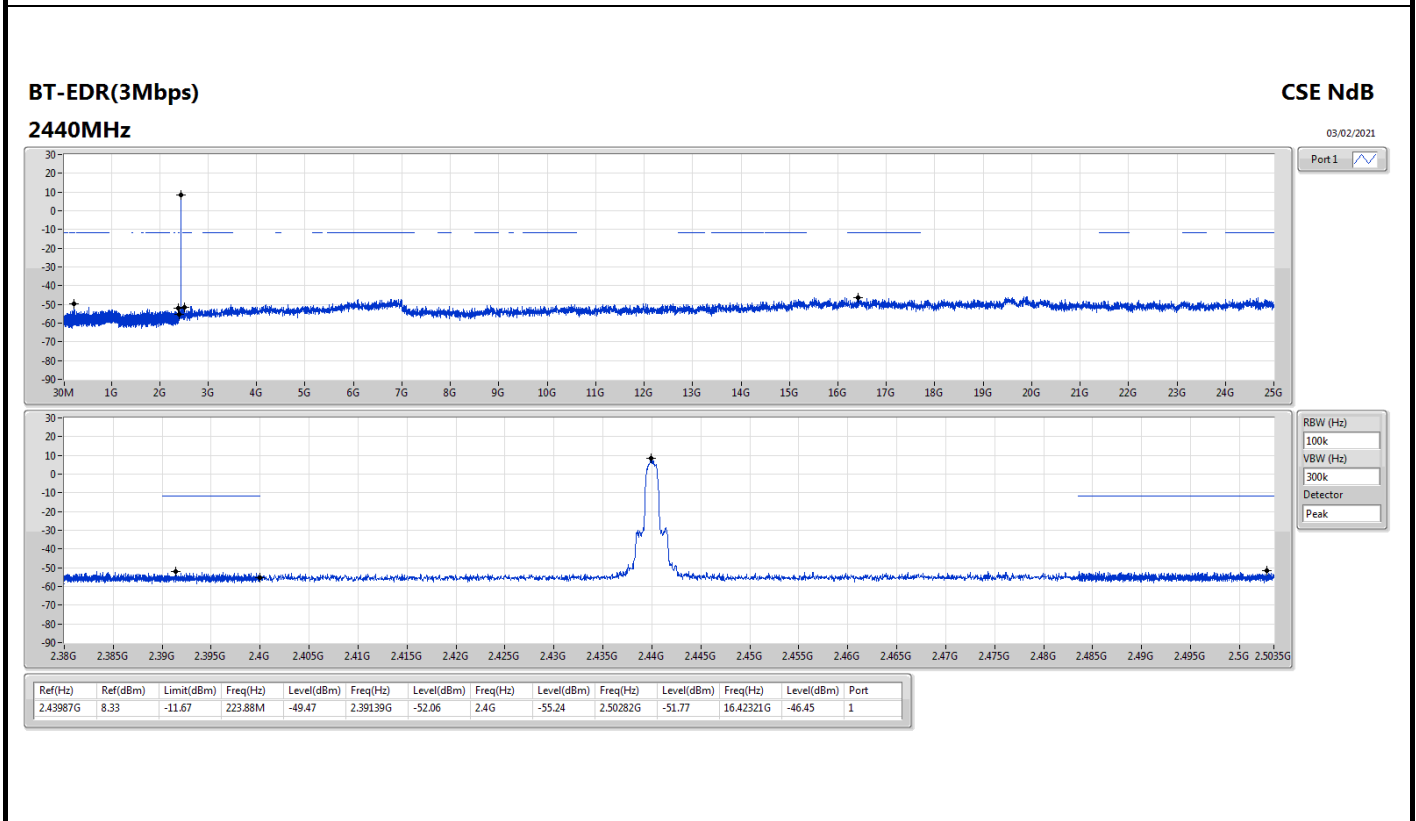
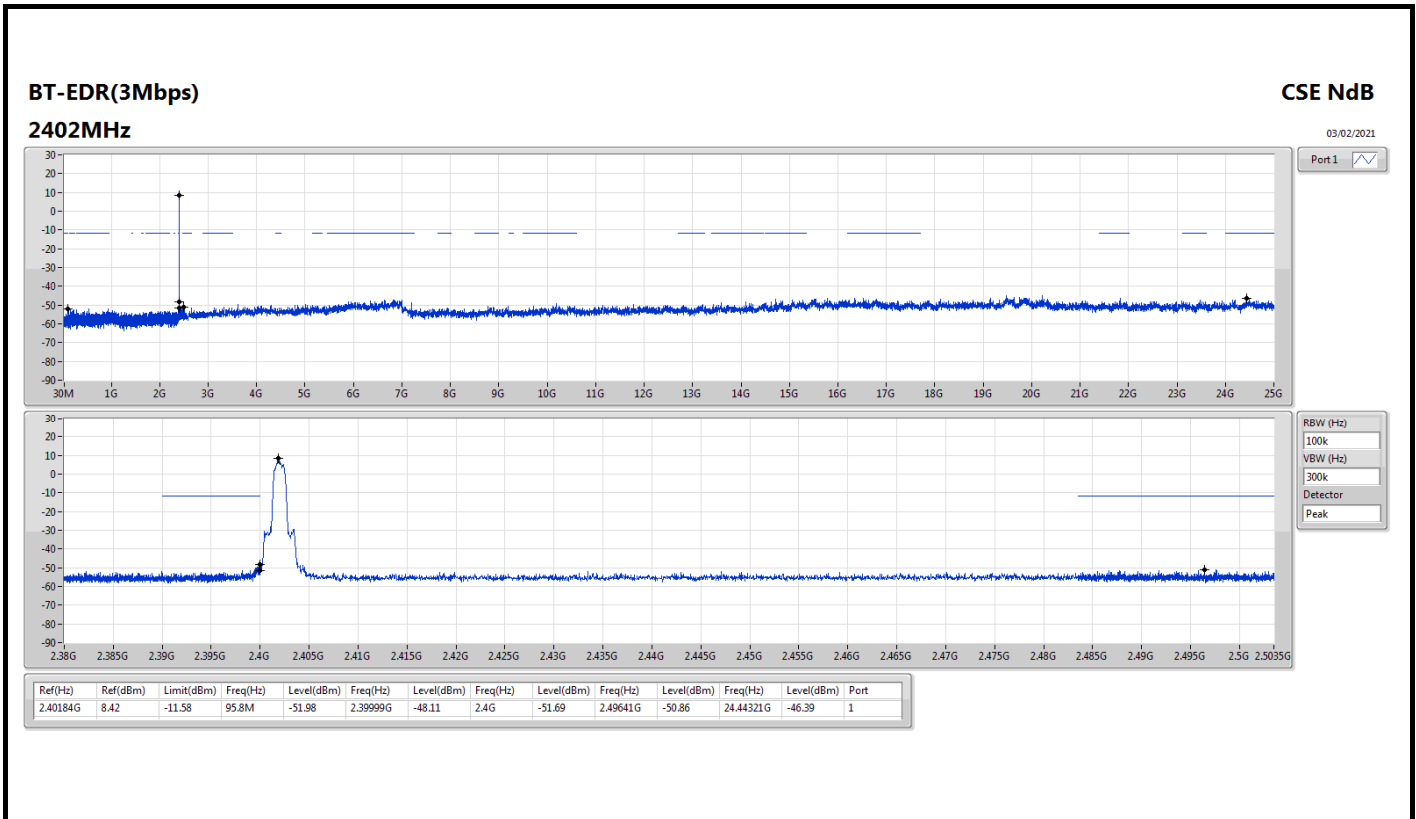
Result

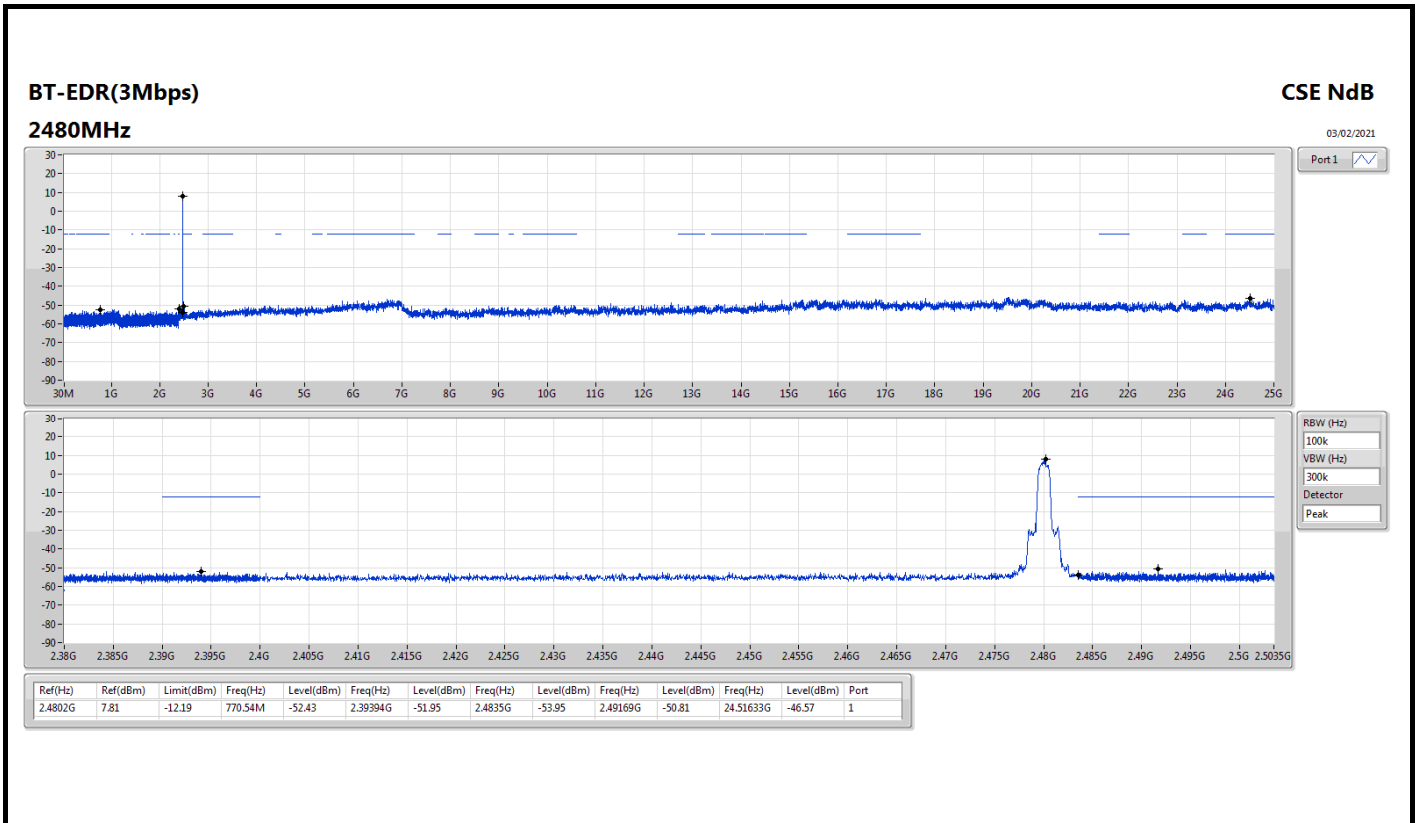
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-BR(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40196G	9.91	-10.09	448.01M	-47.55	2.39993G	-46.29	2.4G	-53.67	2.49958G	-51.62	7.20527G	-45.70	1
2440MHz	Pass	2.43987G	9.82	-10.18	223.88M	-49.44	2.39572G	-51.62	2.4G	-55.07	2.49242G	-51.74	16.20106G	-45.51	1
2480MHz	Pass	2.47987G	9.48	-10.52	1.81953G	-52.59	2.39463G	-52.40	2.4835G	-54.09	2.48849G	-51.17	17.0278G	-46.56	1
BT-EDR(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40209G	7.98	-12.02	543.77M	-51.93	2.39996G	-48.75	2.4G	-51.57	2.492G	-51.72	24.44602G	-46.35	1
2440MHz	Pass	2.43995G	7.53	-12.47	921.24M	-52.79	2.39444G	-51.80	2.4G	-54.92	2.49979G	-51.75	16.82815G	-46.31	1
2480MHz	Pass	2.48008G	7.27	-12.73	223.88M	-50.21	2.39211G	-51.96	2.4835G	-53.27	2.48555G	-51.28	16.73535G	-45.66	1
BT-EDR(3Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	8.42	-11.58	95.8M	-51.98	2.39999G	-48.11	2.4G	-51.69	2.49641G	-50.86	24.44321G	-46.39	1
2440MHz	Pass	2.43987G	8.33	-11.67	223.88M	-49.47	2.39139G	-52.06	2.4G	-55.24	2.50282G	-51.77	16.42321G	-46.45	1
2480MHz	Pass	2.4802G	7.81	-12.19	770.54M	-52.43	2.39394G	-51.95	2.4835G	-53.95	2.49169G	-50.81	24.51633G	-46.57	1







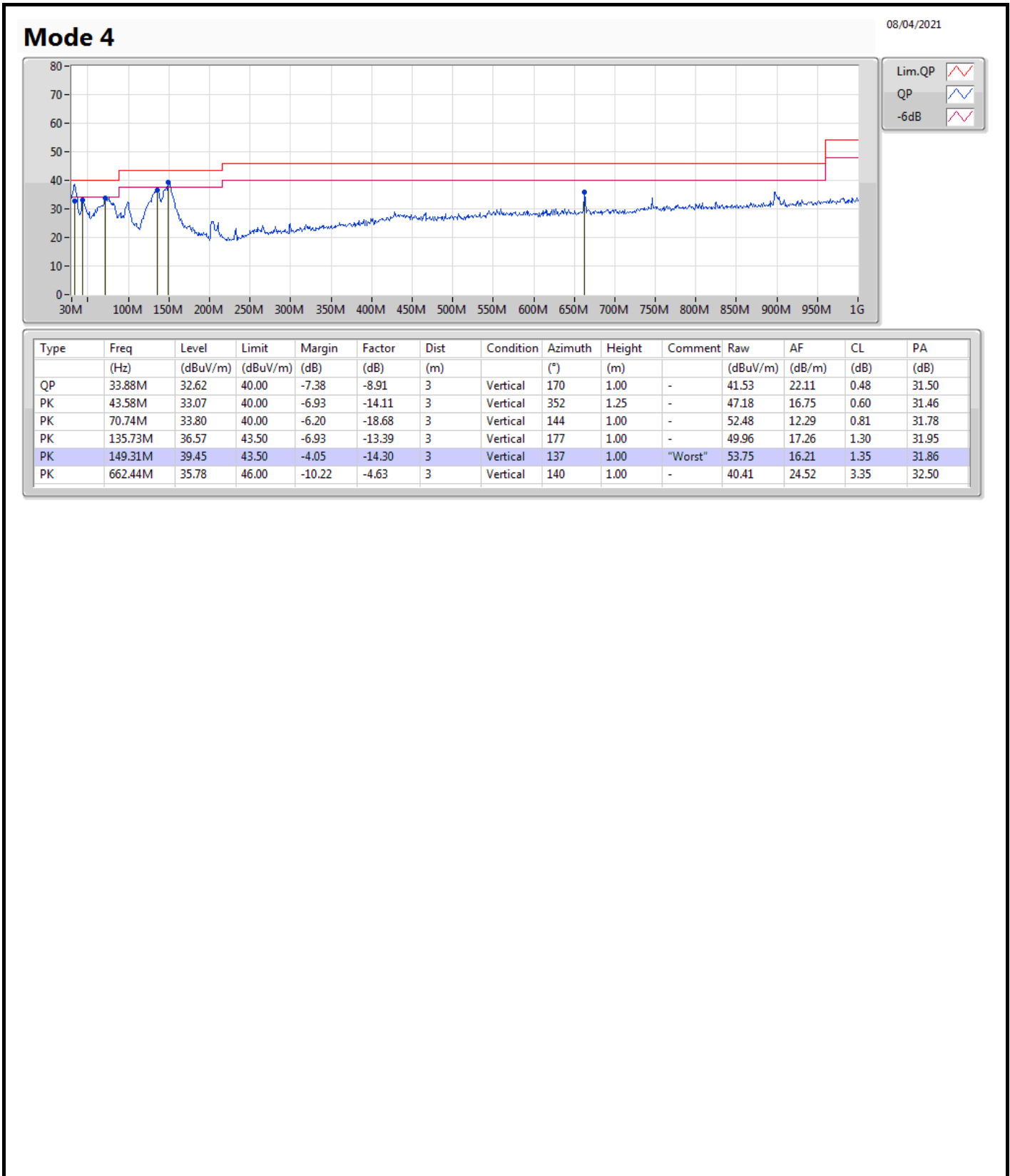


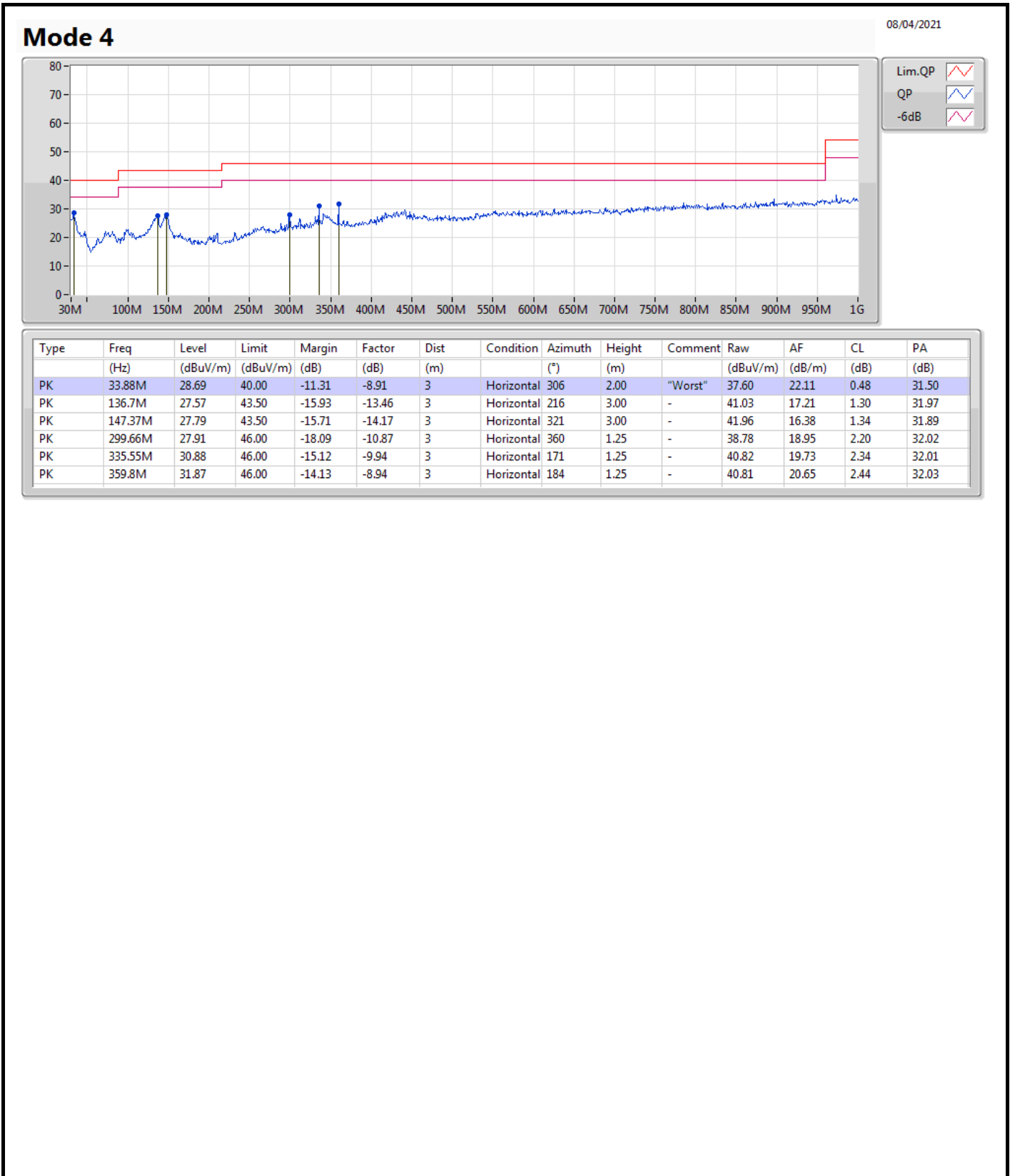




Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 4	Pass	PK	149.31M	39.45	43.50	-4.05	Vertical







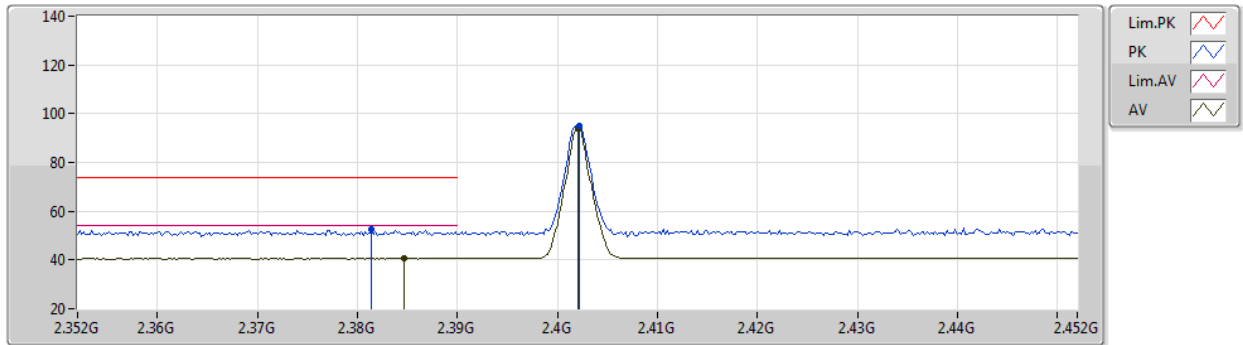
Summary

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	AV	2.4835G	43.52	54.00	-10.48	3	Horizontal	34	1.33	-

BT-BR(1Mbps)

02/02/2021

2402MHz_TX



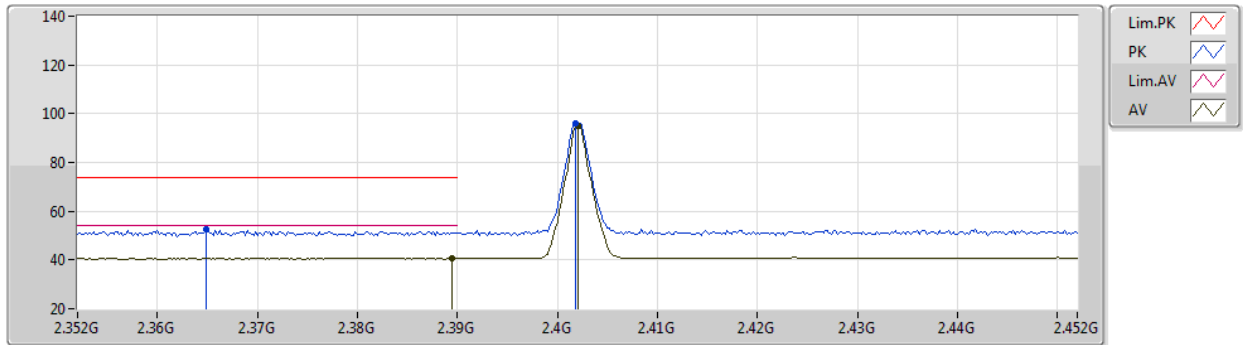
EUT_Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3814G	52.73	74.00	-21.27	23.19	3	Vertical	344	1.50	-	27.36	2.18	-
AV	2.3846G	40.78	54.00	-13.22	11.23	3	Vertical	344	1.50	-	27.37	2.18	-
PK	2.4022G	94.89	Inf	-Inf	65.29	3	Vertical	344	1.50	-	27.40	2.20	-
AV	2.402G	94.03	Inf	-Inf	64.43	3	Vertical	344	1.50	-	27.40	2.20	-

BT-BR(1Mbps)

02/02/2021

2402MHz_TX



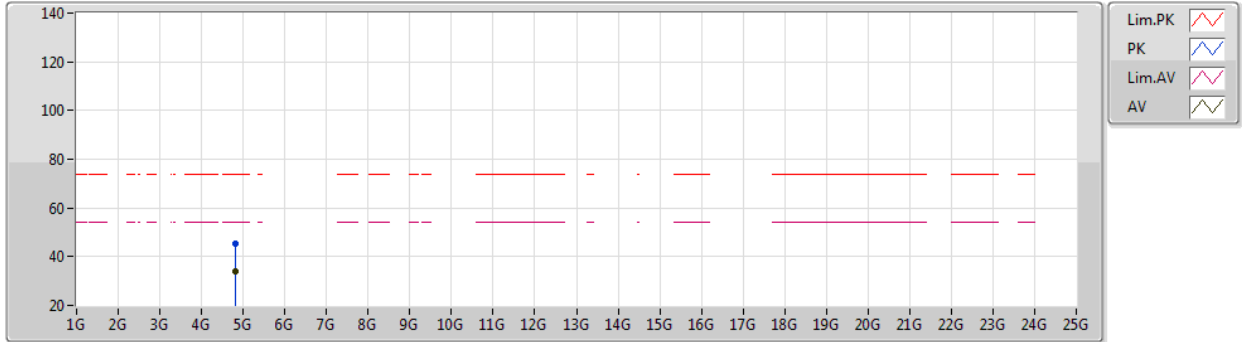
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3648G	52.43	74.00	-21.57	22.94	3	Horizontal	23	1.16	-	27.33	2.16	-
AV	2.3894G	40.72	54.00	-13.28	11.15	3	Horizontal	23	1.16	-	27.38	2.19	-
PK	2.4018G	95.98	Inf	-Inf	66.38	3	Horizontal	23	1.16	-	27.40	2.20	-
AV	2.402G	95.12	Inf	-Inf	65.52	3	Horizontal	23	1.16	-	27.40	2.20	-

BT-BR(1Mbps)

02/02/2021

2402MHz_TX



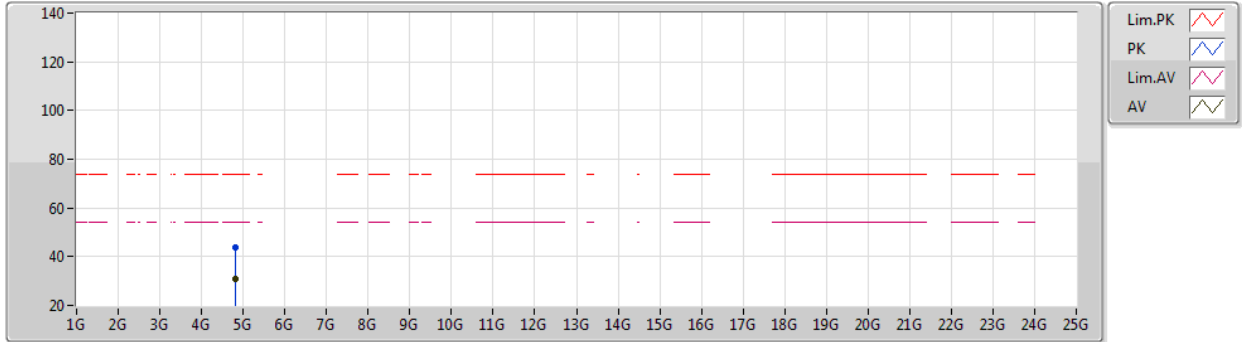
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80376G	45.58	74.00	-28.42	43.02	3	Vertical	0	2.47	-	32.12	5.00	34.56
AV	4.80391G	34.05	54.00	-19.95	31.49	3	Vertical	0	2.47	-	32.12	5.00	34.56

BT-BR(1Mbps)

02/02/2021

2402MHz_TX



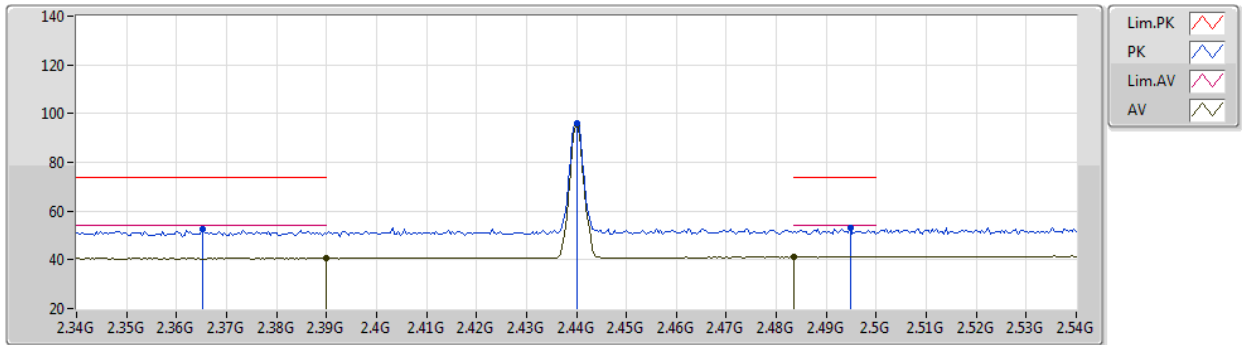
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80474G	44.02	74.00	-29.98	41.45	3	Horizontal	6	2.48	-	32.13	5.00	34.56
AV	4.80398G	30.88	54.00	-23.12	28.32	3	Horizontal	6	2.48	-	32.12	5.00	34.56

BT-BR(1Mbps)

02/02/2021

2440MHz_TX



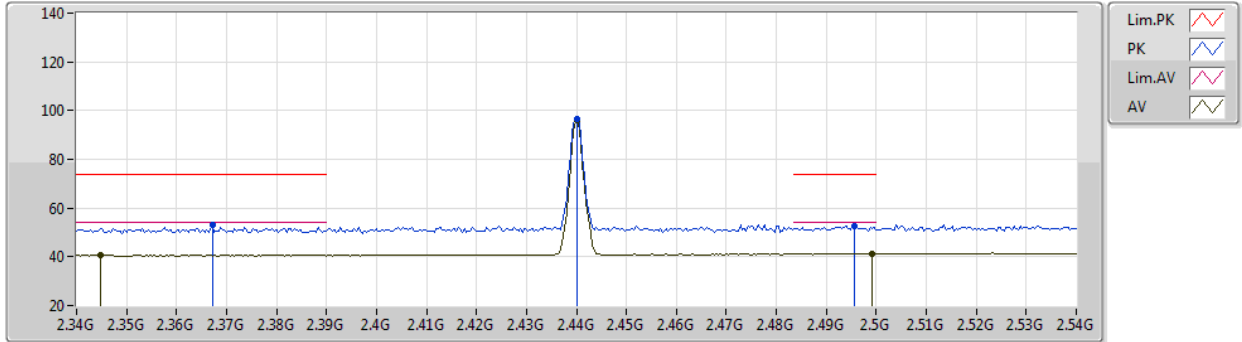
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3652G	52.44	74.00	-21.56	22.94	3	Vertical	338	2.55	-	27.33	2.17	-
AV	2.39G	40.76	54.00	-13.24	11.19	3	Vertical	338	2.55	-	27.38	2.19	-
PK	2.44G	96.13	Inf	-Inf	66.41	3	Vertical	338	2.55	-	27.48	2.24	-
AV	2.44G	95.27	Inf	-Inf	65.55	3	Vertical	338	2.55	-	27.48	2.24	-
PK	2.4948G	53.32	74.00	-20.68	23.26	3	Vertical	338	2.55	-	27.77	2.29	-
AV	2.4835G	41.25	54.00	-12.75	11.27	3	Vertical	338	2.55	-	27.70	2.28	-

BT-BR(1Mbps)

02/02/2021

2440MHz_TX



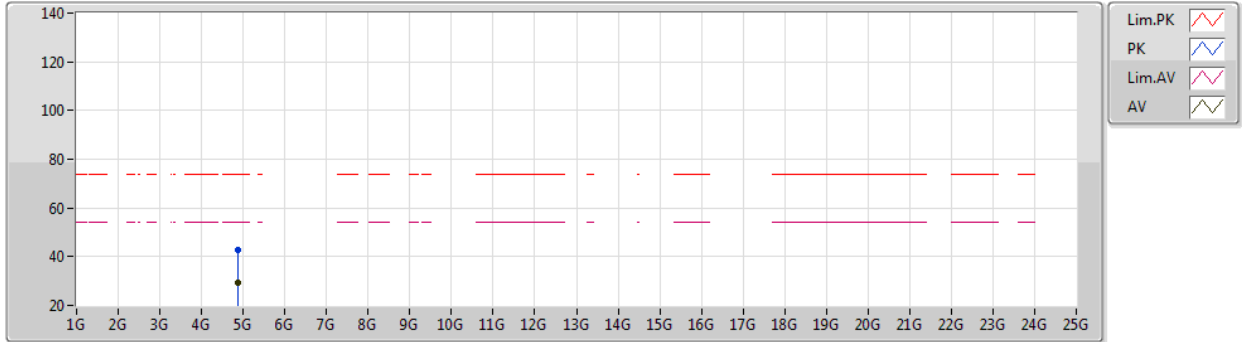
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3672G	52.95	74.00	-21.05	23.45	3	Horizontal	30	1.10	-	27.33	2.17	-
AV	2.3448G	40.73	54.00	-13.27	11.29	3	Horizontal	30	1.10	-	27.30	2.14	-
PK	2.44G	96.77	Inf	-Inf	67.05	3	Horizontal	30	1.10	-	27.48	2.24	-
AV	2.44G	95.93	Inf	-Inf	66.21	3	Horizontal	30	1.10	-	27.48	2.24	-
PK	2.4956G	52.54	74.00	-21.46	22.47	3	Horizontal	30	1.10	-	27.77	2.30	-
AV	2.4992G	41.27	54.00	-12.73	11.17	3	Horizontal	30	1.10	-	27.80	2.30	-

BT-BR(1Mbps)

02/02/2021

2440MHz_TX



EUT Z_1TX
Setting 9
01-A-G-2

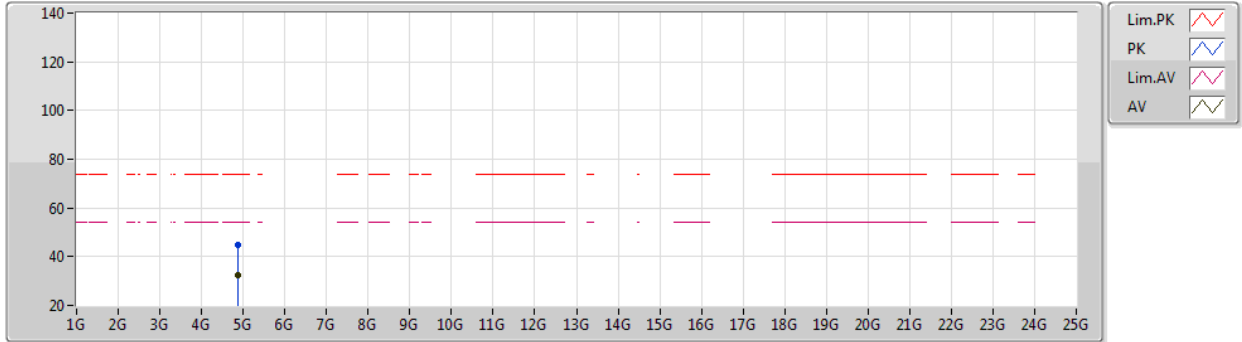
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8799G	42.83	74.00	-31.17	39.85	3	Vertical	285	1.51	-	32.46	5.04	34.52
AV	4.87977G	29.34	54.00	-24.66	26.36	3	Vertical	285	1.51	-	32.46	5.04	34.52



BT-BR(1Mbps)

02/02/2021

2440MHz_TX



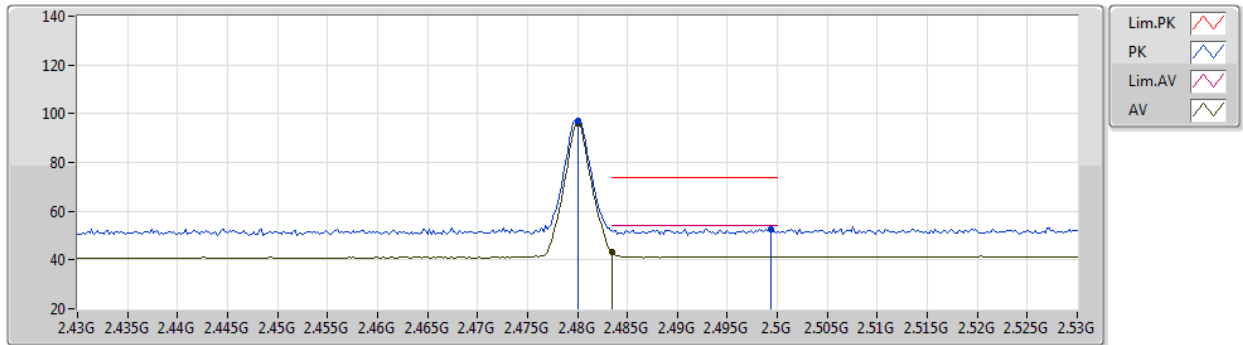
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87909G	45.04	74.00	-28.96	42.06	3	Horizontal	144	2.60	-	32.46	5.04	34.52
AV	4.87961G	32.38	54.00	-21.62	29.40	3	Horizontal	144	2.60	-	32.46	5.04	34.52

BT-BR(1Mbps)

02/02/2021

2480MHz_TX



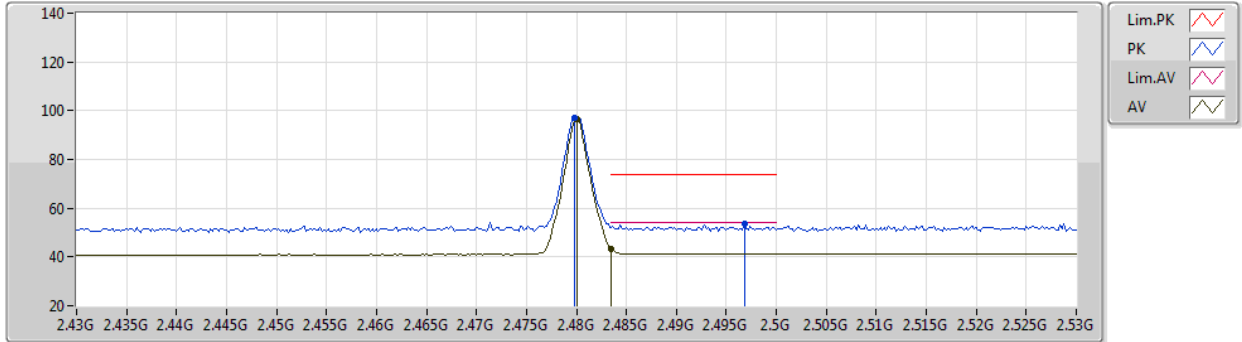
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.48G	96.83	Inf	-Inf	66.87	3	Vertical	342	2.95	-	27.68	2.28	-
AV	2.48G	95.97	Inf	-Inf	66.01	3	Vertical	342	2.95	-	27.68	2.28	-
PK	2.4994G	52.79	74.00	-21.21	22.69	3	Vertical	342	2.95	-	27.80	2.30	-
AV	2.4835G	43.43	54.00	-10.57	13.45	3	Vertical	342	2.95	-	27.70	2.28	-

BT-BR(1Mbps)

02/02/2021

2480MHz_TX



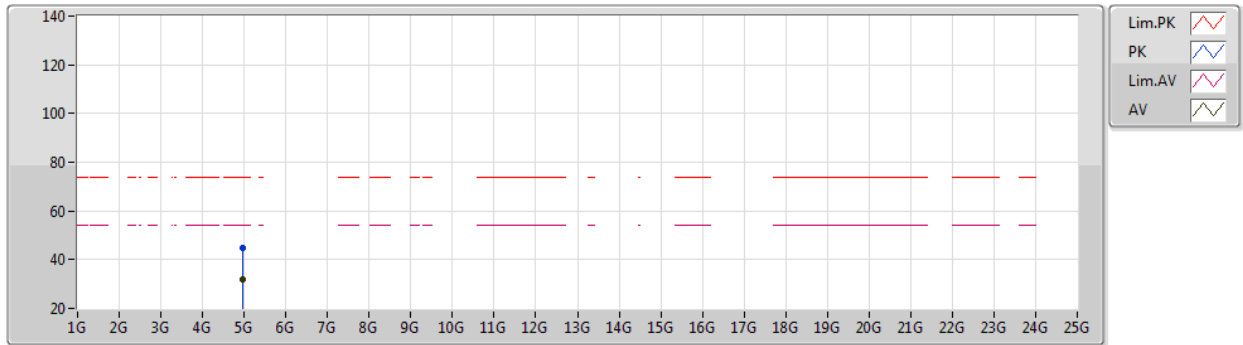
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4798G	97.13	Inf	-Inf	67.17	3	Horizontal	34	1.33	-	27.68	2.28	-
AV	2.48G	96.30	Inf	-Inf	66.34	3	Horizontal	34	1.33	-	27.68	2.28	-
PK	2.4968G	53.58	74.00	-20.42	23.50	3	Horizontal	34	1.33	-	27.78	2.30	-
AV	2.4835G	43.52	54.00	-10.48	13.54	3	Horizontal	34	1.33	-	27.70	2.28	-

BT-BR(1Mbps)

02/02/2021

2480MHz_TX



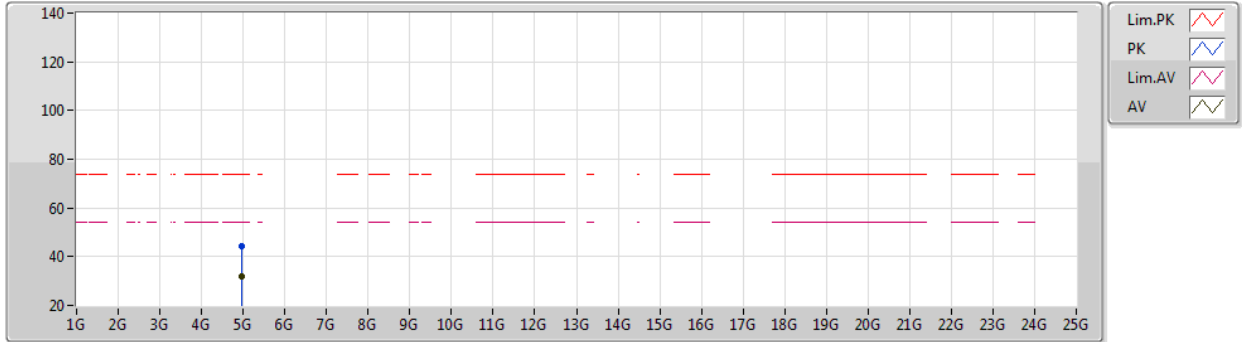
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.95994G	44.61	74.00	-29.39	41.24	3	Vertical	131	1.29	-	32.78	5.08	34.49
AV	4.95994G	32.12	54.00	-21.88	28.75	3	Vertical	131	1.29	-	32.78	5.08	34.49

BT-BR(1Mbps)

02/02/2021

2480MHz_TX



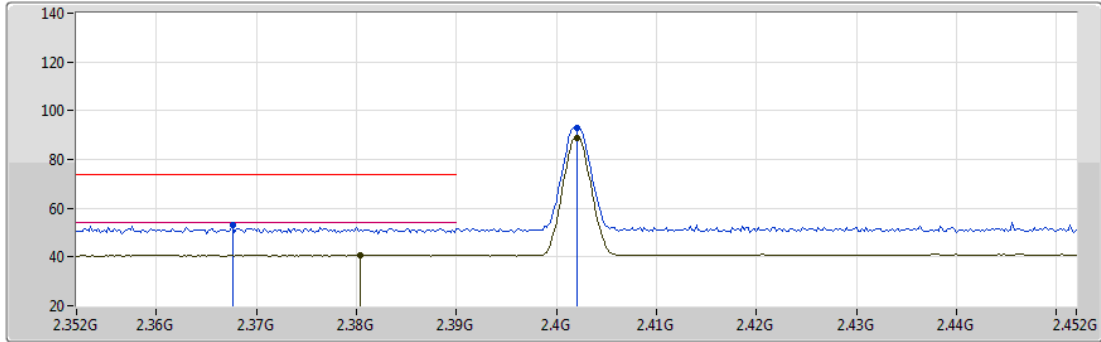
EUT Z_1TX
Setting 9
01-A-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.96019G	44.40	74.00	-29.60	41.03	3	Horizontal	87	2.64	-	32.78	5.08	34.49
AV	4.95989G	31.98	54.00	-22.02	28.61	3	Horizontal	87	2.64	-	32.78	5.08	34.49

BT-EDR(3Mbps)

02/02/2021

2402MHz_TX



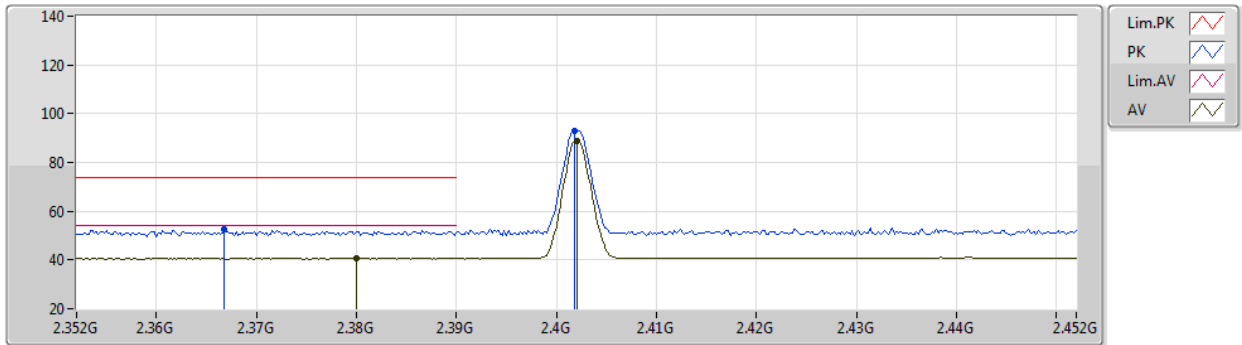
EUT_Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3676G	53.06	74.00	-20.94	23.55	3	Vertical	344	1.49	-	27.34	2.17	-
AV	2.3804G	40.78	54.00	-13.22	11.24	3	Vertical	344	1.49	-	27.36	2.18	-
PK	2.402G	92.82	Inf	-Inf	63.22	3	Vertical	344	1.49	-	27.40	2.20	-
AV	2.402G	88.85	Inf	-Inf	59.25	3	Vertical	344	1.49	-	27.40	2.20	-

BT-EDR(3Mbps)

02/02/2021

2402MHz_TX



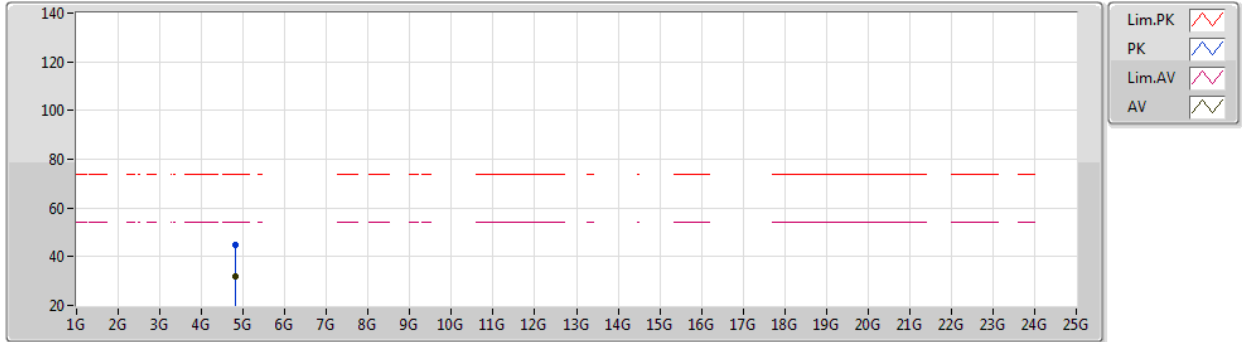
EUT_Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3668G	52.38	74.00	-21.62	22.88	3	Horizontal	360	1.34	-	27.33	2.17	-
AV	2.38G	40.71	54.00	-13.29	11.17	3	Horizontal	360	1.34	-	27.36	2.18	-
PK	2.4018G	92.86	Inf	-Inf	63.26	3	Horizontal	360	1.34	-	27.40	2.20	-
AV	2.402G	88.82	Inf	-Inf	59.22	3	Horizontal	360	1.34	-	27.40	2.20	-

BT-EDR(3Mbps)

02/02/2021

2402MHz_TX



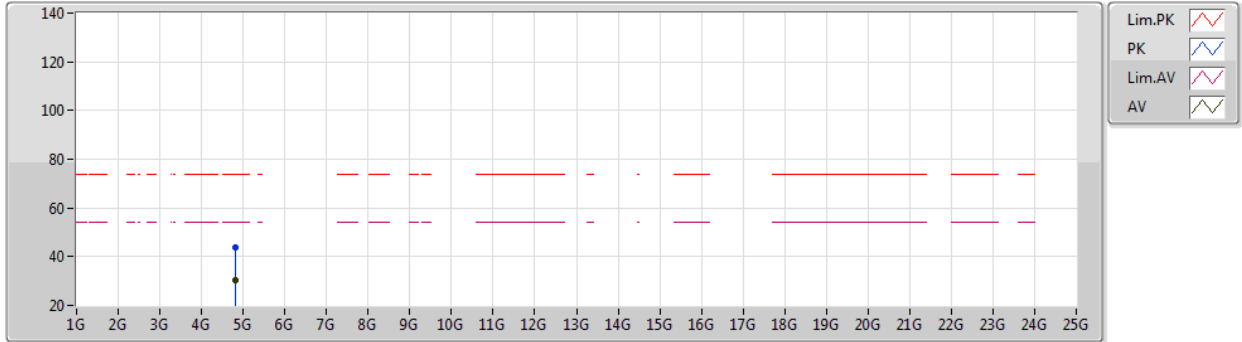
EUT Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80374G	44.58	74.00	-29.42	42.02	3	Vertical	25	1.44	-	32.12	5.00	34.56
AV	4.80406G	31.78	54.00	-22.22	29.22	3	Vertical	25	1.44	-	32.12	5.00	34.56

BT-EDR(3Mbps)

02/02/2021

2402MHz_TX



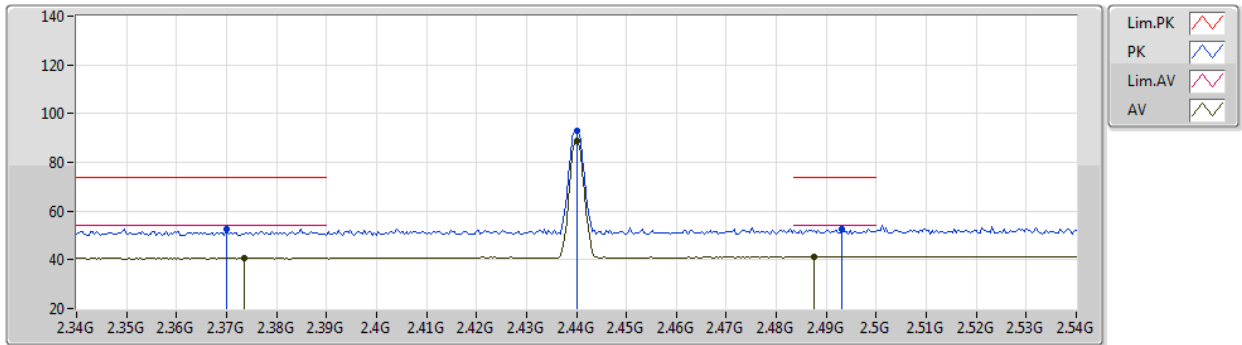
EUT Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80246G	43.71	74.00	-30.29	41.16	3	Horizontal	344	2.25	-	32.11	5.00	34.56
AV	4.80214G	30.58	54.00	-23.42	28.03	3	Horizontal	344	2.25	-	32.11	5.00	34.56

BT-EDR(3Mbps)

02/02/2021

2440MHz_TX



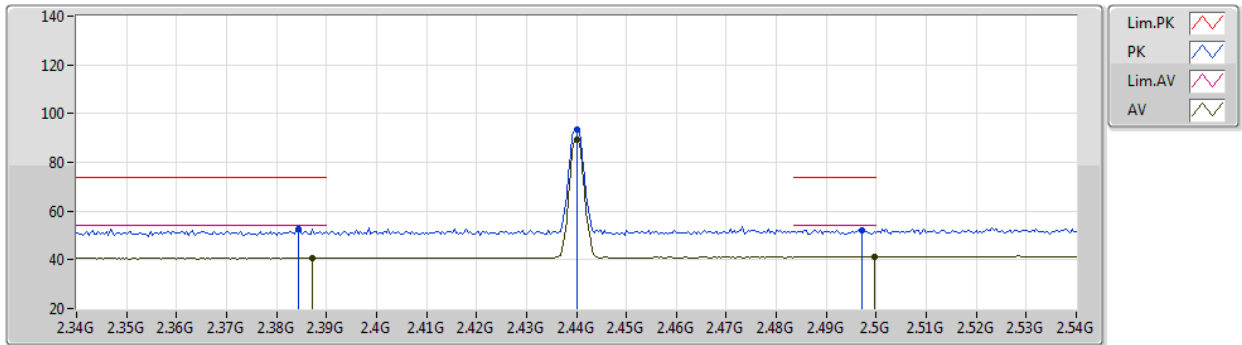
EUT Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.37G	52.67	74.00	-21.33	23.16	3	Vertical	344	1.61	-	27.34	2.17	-
AV	2.3736G	40.68	54.00	-13.32	11.16	3	Vertical	344	1.61	-	27.35	2.17	-
PK	2.44G	92.87	Inf	-Inf	63.15	3	Vertical	344	1.61	-	27.48	2.24	-
AV	2.44G	88.80	Inf	-Inf	59.08	3	Vertical	344	1.61	-	27.48	2.24	-
PK	2.4932G	52.59	74.00	-21.41	22.54	3	Vertical	344	1.61	-	27.76	2.29	-
AV	2.4876G	41.38	54.00	-12.62	11.36	3	Vertical	344	1.61	-	27.73	2.29	-

BT-EDR(3Mbps)

02/02/2021

2440MHz_TX



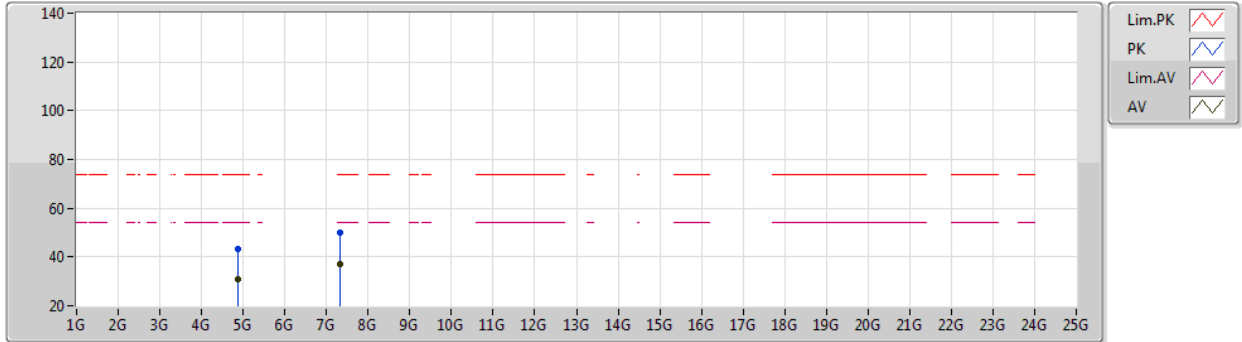
EUT Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3844G	52.73	74.00	-21.27	23.18	3	Horizontal	31	1.00	-	27.37	2.18	-
AV	2.3872G	40.82	54.00	-13.18	11.26	3	Horizontal	31	1.00	-	27.37	2.19	-
PK	2.44G	93.55	Inf	-Inf	63.83	3	Horizontal	31	1.00	-	27.48	2.24	-
AV	2.44G	89.48	Inf	-Inf	59.76	3	Horizontal	31	1.00	-	27.48	2.24	-
PK	2.4972G	52.22	74.00	-21.78	22.14	3	Horizontal	31	1.00	-	27.78	2.30	-
AV	2.4996G	41.40	54.00	-12.60	11.30	3	Horizontal	31	1.00	-	27.80	2.30	-

BT-EDR(3Mbps)

02/02/2021

2440MHz_TX



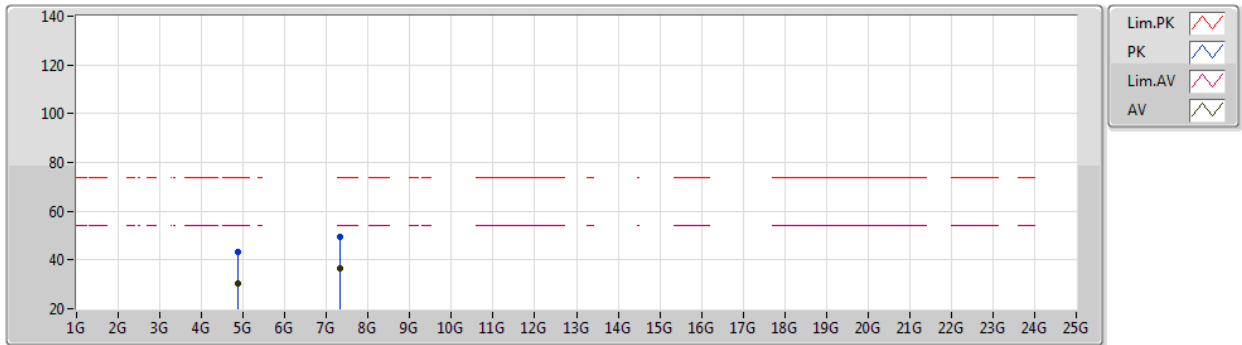
EUT_Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.88222G	43.45	74.00	-30.55	40.47	3	Vertical	255	1.08	-	32.46	5.04	34.52
AV	4.88G	30.69	54.00	-23.31	27.71	3	Vertical	255	1.08	-	32.46	5.04	34.52
PK	7.3224G	49.84	74.00	-24.16	40.98	3	Vertical	179	1.00	-	37.19	6.32	34.65
AV	7.32G	37.09	54.00	-16.91	28.24	3	Vertical	179	1.00	-	37.18	6.32	34.65

BT-EDR(3Mbps)

02/02/2021

2440MHz_TX



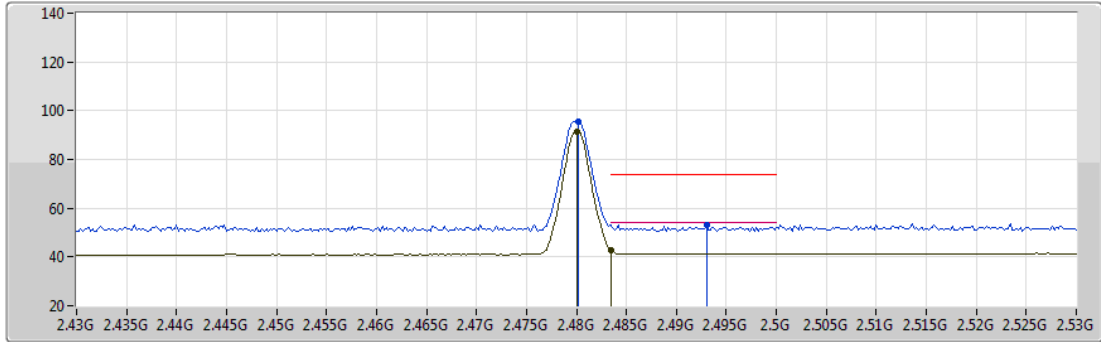
EUT_Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87286G	43.38	74.00	-30.62	40.42	3	Horizontal	259	2.20	-	32.45	5.04	34.53
AV	4.87236G	30.33	54.00	-23.67	27.38	3	Horizontal	259	2.20	-	32.44	5.04	34.53
PK	7.32024G	49.49	74.00	-24.51	40.64	3	Horizontal	266	2.35	-	37.18	6.32	34.65
AV	7.32062G	36.65	54.00	-17.35	27.80	3	Horizontal	266	2.35	-	37.18	6.32	34.65

BT-EDR(3Mbps)

02/02/2021

2480MHz_TX



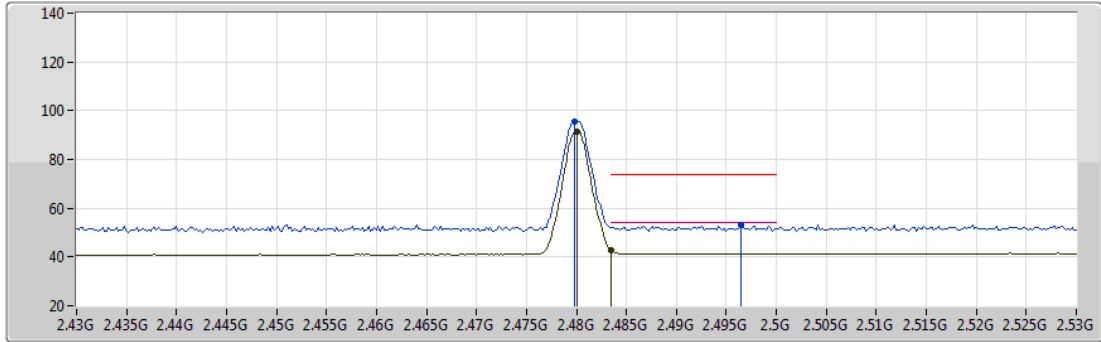
EUT_Z_1TX
Setting 9
01-A-B-4





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4802G	95.54	Inf	-Inf	65.58	3	Vertical	59	1.00	-	27.68	2.28	-
AV	2.48G	91.46	Inf	-Inf	61.50	3	Vertical	59	1.00	-	27.68	2.28	-
PK	2.493G	53.30	74.00	-20.70	23.25	3	Vertical	59	1.00	-	27.76	2.29	-
AV	2.4835G	42.88	54.00	-11.12	12.90	3	Vertical	59	1.00	-	27.70	2.28	-

BT-EDR(3Mbps)

02/02/2021

2480MHz_TX



Lim.PK 
 PK 
 Lim.AV 
 AV 

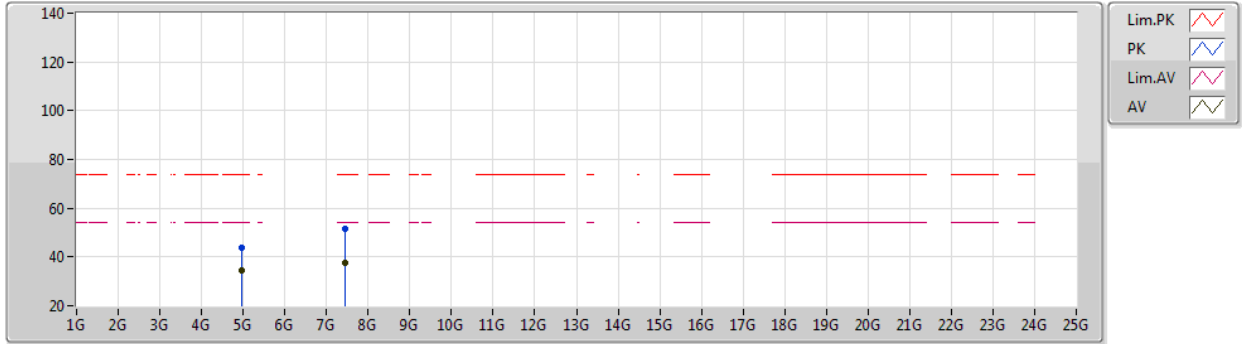
EUT Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4798G	95.45	Inf	-Inf	65.49	3	Horizontal	32	1.14	-	27.68	2.28	-
AV	2.48G	91.44	Inf	-Inf	61.48	3	Horizontal	32	1.14	-	27.68	2.28	-
PK	2.4964G	53.26	74.00	-20.74	23.18	3	Horizontal	32	1.14	-	27.78	2.30	-
AV	2.4835G	42.89	54.00	-11.11	12.91	3	Horizontal	32	1.14	-	27.70	2.28	-

BT-EDR(3Mbps)

02/02/2021

2480MHz_TX



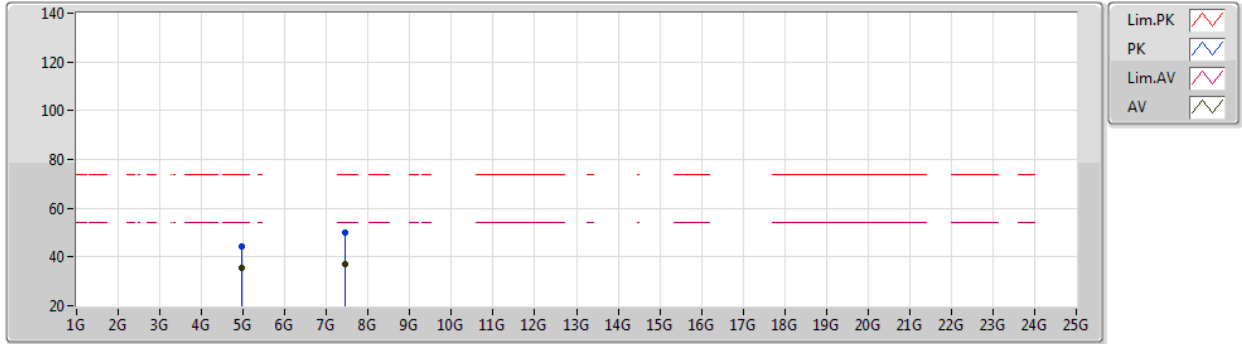
EUT_Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.95634G	43.90	74.00	-30.10	40.52	3	Vertical	53	1.80	-	32.79	5.08	34.49
AV	4.96108G	34.61	54.00	-19.39	31.24	3	Vertical	53	1.80	-	32.78	5.08	34.49
PK	7.43976G	51.64	74.00	-22.36	42.70	3	Vertical	358	1.00	-	37.22	6.38	34.66
AV	7.43982G	37.84	54.00	-16.16	28.90	3	Vertical	358	1.00	-	37.22	6.38	34.66

BT-EDR(3Mbps)

02/02/2021

2480MHz_TX



EUT_Z_1TX
Setting 9
01-A-B-4

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.95966G	44.10	74.00	-29.90	40.73	3	Horizontal	338	1.95	-	32.78	5.08	34.49
AV	4.95962G	35.59	54.00	-18.41	32.22	3	Horizontal	338	1.95	-	32.78	5.08	34.49
PK	7.4451G	50.20	74.00	-23.80	41.27	3	Horizontal	261	1.77	-	37.21	6.38	34.66
AV	7.44866G	36.89	54.00	-17.11	27.97	3	Horizontal	261	1.77	-	37.20	6.38	34.66