

FCC Test Report

FCC ID : U4GSX5WB
Equipment : Rugged mobile computer with barcode reader
Brand Name : Datalogic
Model Name : Skorpion X5
Applicant : Datalogic S.r.l.
Via S. Vitalino 13, 40012 Lippo di Calderara di
Reno (BO) - Italy
Manufacturer : Datalogic S.r.l.
Via S. Vitalino 13, 40012 Lippo di Calderara di
Reno (BO) - Italy
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 08, 2020, and testing was started from Jun. 15, 2020 and completed on Sep. 10, 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 test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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



Table of Contents

HISTORY OF THIS TEST REPORT3

SUMMARY OF TEST RESULT4

1 GENERAL DESCRIPTION5

1.1 Information.....5

1.2 Testing Applied Standards7

1.3 Testing Location Information7

1.4 Measurement Uncertainty7

2 TEST CONFIGURATION OF EUT.....8

2.1 Test Condition8

2.2 Test Channel Mode8

2.3 The Worst Case Measurement Configuration.....9

2.4 Accessories10

2.5 Support Equipment.....10

2.6 Test Setup Diagram11

3 TRANSMITTER TEST RESULT13

3.1 AC Power-line Conducted Emissions13

3.2 DTS Bandwidth.....15

3.3 Maximum Conducted Output Power16

3.4 Power Spectral Density18

3.5 Emissions in Non-restricted Frequency Bands19

3.6 Emissions in Restricted Frequency Bands.....20

4 TEST EQUIPMENT AND CALIBRATION DATA.....24

APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS

APPENDIX B. TEST RESULTS OF DTS BANDWIDTH

APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER

APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY

APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS

APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS

APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION

APPENDIX H. TEST PHOTOS

PHOTOGRAPHS OF EUT V01



History of this test report

Report No.	Version	Description	Issued Date
FR9N0606-03AL	01	Initial issue of report	Oct. 19, 2020



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)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	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:
None

Reviewed by: Sam Tsai
Report Producer: Ann Hou

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE	2402-2480	0-39 [40]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:

- ♦ Bluetooth LE uses a GFSK (1Mbps/2Mbps) modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	Datalogic-USI	Skorpio X5 antenna	PIFA	mini I-pex
2	Datalogic-USI	Skorpio X5 antenna	PIFA	mini I-pex

Ant.	Port	Gain (dBi)					
		2.4G	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3	BT
1	1	1.7	2.6	3.5	3.5	3.8	1.7
2	2	1.5	3.6	3.6	4.2	4.2	-

Note 1: The EUT has two antennas.

For 2.4GHz function:

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

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

For 5GHz function:

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

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

For BT function:

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

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

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter / Battery
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-LE(1Mbps)	0.63	2.01	393.75u	3k
BT-LE(2Mbps)	0.332	4.79	207.5u	10k

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

1.1.5 Table for Multiple Listing

Form factor	Dock connection	2.4G	5G	Bluetooth	NFC	WPC	Description
Handheld	Wired (Pogo pin)	V	V	V	V		Handheld type with wired charging
Handheld	WLC (wireless)	V	V	V	V	V	Handheld type with wireless charging
Pistol (with handle)	Wired (Pogo pin)	V	V	V	V		Pistol type with wired charging
Pistol	WLC (wireless)	V	V	V	V	V	Pistol type with wireless charging

Note: The information from manufacturer.

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
- ◆ ANSI C63.10-2013

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

- ◆ KDB 558074 D01 v05r02
- ◆ 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	22.3~26.7°C / 53~62%	19/Jun/2020~ 10/Sep/2020
RF Conducted	TH01-HY	Barry	22.6~24.1°C / 53~60%	15/Jun/2020~ 18/Jun/2020
Radiated	03CH02-HY	Streak	21.2~23.8°C / 56~58%	17/Jun/2020~ 10/Sep/2020
Radiated (Co-location)	03CH03-HY	Streak	23.4~23.6°C / 53~58%	01/Aug/2020~ 26/Aug/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 Version	QRCT4
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Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	default
2440MHz	default
2480MHz	default
BT-LE(2Mbps)	-
2402MHz	default
2440MHz	default
2480MHz	default

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	Adapter mode (WLC Handheld)
2	Adapter mode (Wired Handheld)
3	Adapter mode (Wired Pistol)
4	USB mode (Wired Pistol)
5	Adapter mode (WLC Pistol)

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	Bluetooth+WLAN 2.4GHz
2	Bluetooth+WLAN 5GHz

Refer to Sporton Test Report No.: FA9N0606-03 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.

2.4 Accessories

Accessories				
AC Adapter	Brand Name	BI	Model Name	BI24-050300-I
	Power Rating	I/P: 100-240Vac, 0.8A, O/P: 5Vdc, 3A		
	Power Cord	1.5 meter, Shielded cable, with ferrite core		
Battery 1	Brand Name	Zhuhai Gushine Electronic Technology Co.Ltd.	Model Name	BY-07
	Power Rating	3.7Vdc, 3460mAh	Type	Li-ion
Battery 2	Brand Name	Zhuhai Gushine Electronic Technology Co.Ltd.	Model Name	BY-08
	Power Rating	3.635Vdc, 6080mAh	Type	Li-ion
USB Cable	Power Cord	1.5 meter, Shielded cable, w/o ferrite core		

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

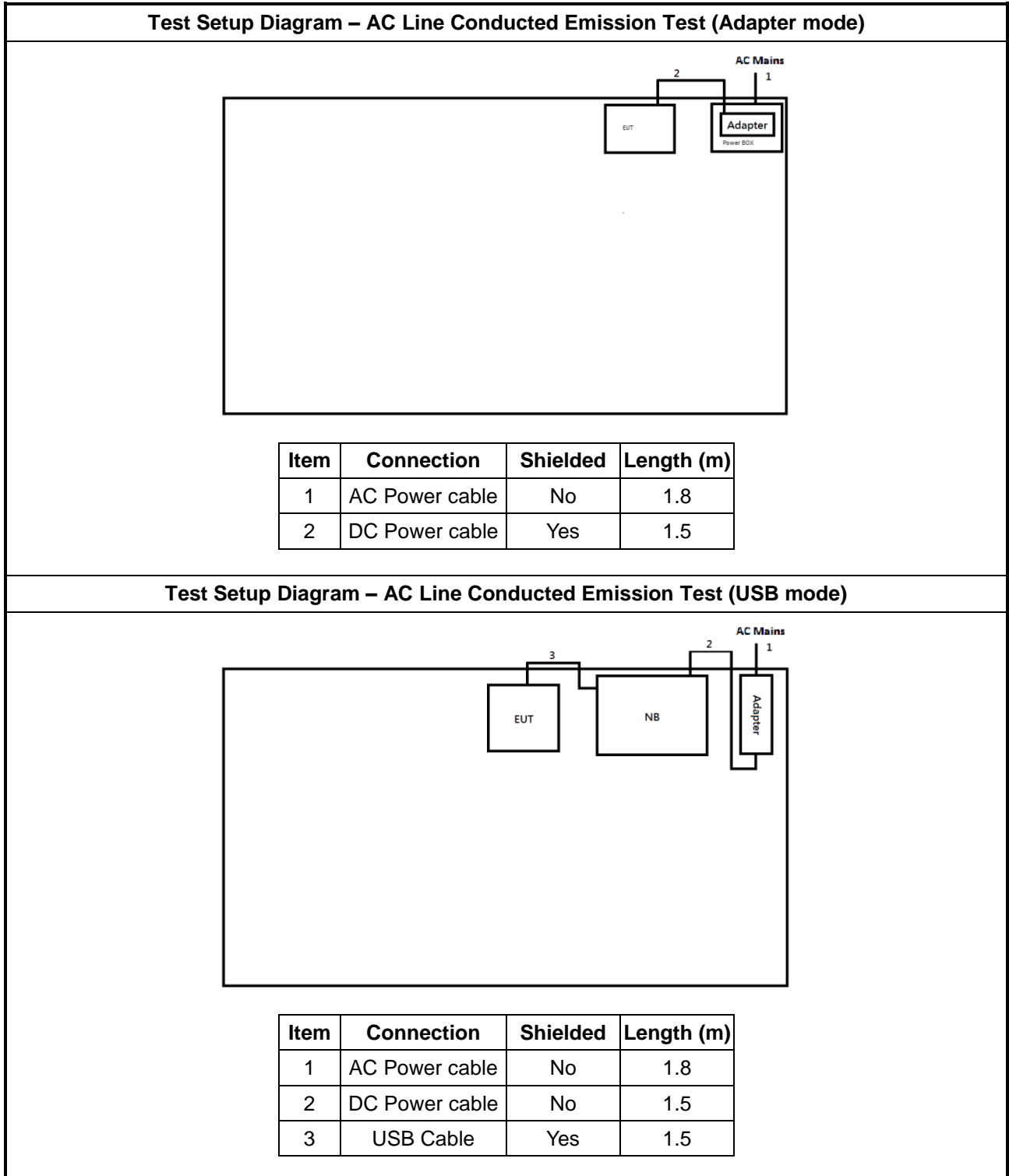
2.5 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	Dell	PP13S	-	-
2	AC adapter for NB	Dell	AA90PM111	-	-

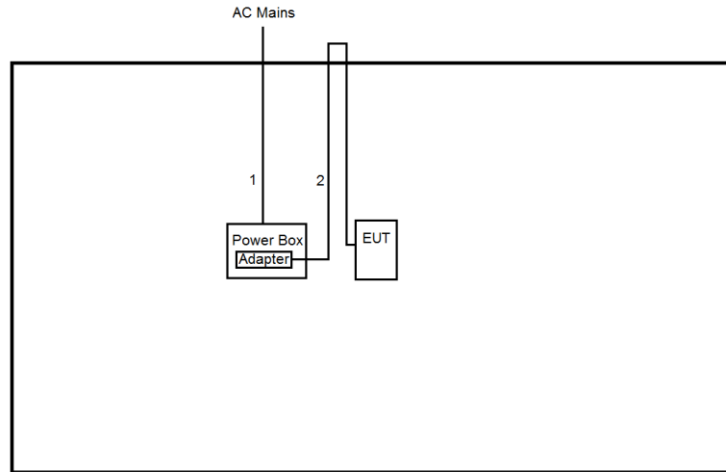
Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	Dell	PP13S	-	-
2	AC adapter for NB	Dell	AA90PM111	-	-

2.6 Test Setup Diagram

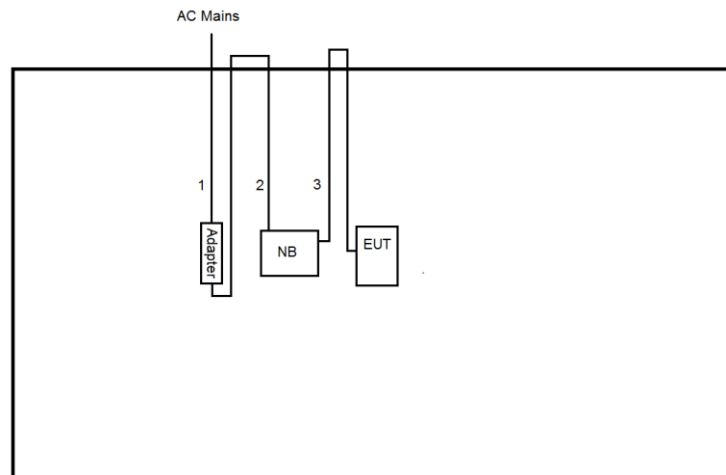


Test Setup Diagram - Radiated Test (Adapter mode)



Item	Connection	Shielded	Length (m)
1	AC Power cable	No	1.8
2	DC Power cable	Yes	1.5

Test Setup Diagram - Radiated Test (USB mode)



Item	Connection	Shielded	Length (m)
1	AC Power cable	No	1.8
2	DC Power cable	No	1.8
3	USB Cable	Yes	1.5

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

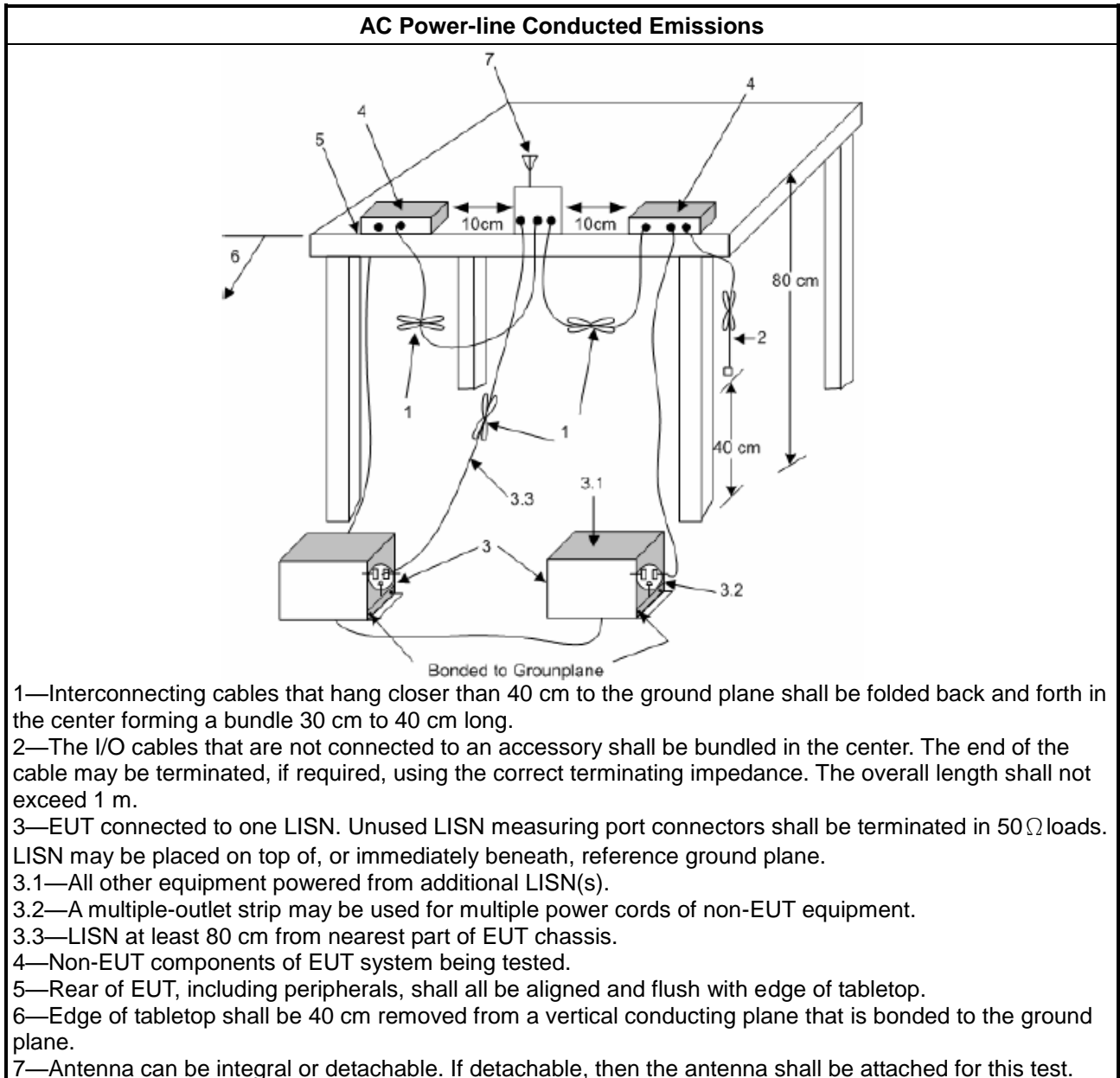
Test Method
<ul style="list-style-type: none"> Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).

3.1.5 Test Setup



3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
<ul style="list-style-type: none"> ▪ 6 dB bandwidth \geq 500 kHz.

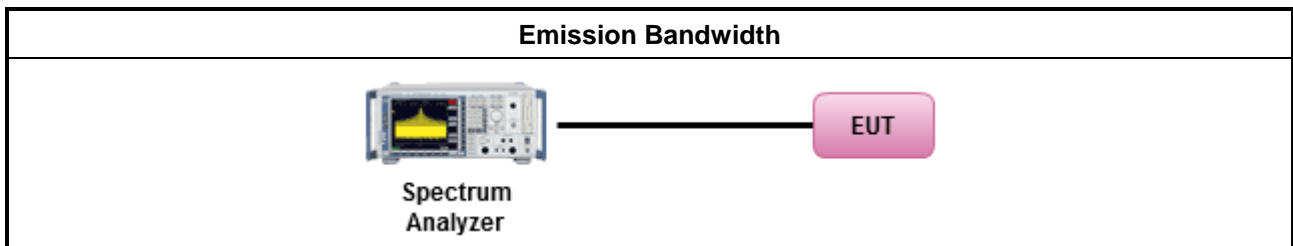
3.2.2 Measuring Instruments

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"> ▪ For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/> Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
<input type="checkbox"/> Refer as RSS-Gen, clause 6.7 for for occupied bandwidth testing.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

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"> ▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS):
	<ul style="list-style-type: none"> - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
e.i.r.p. Power Limit:	
	<ul style="list-style-type: none"> ▪ 2400-2483.5 MHz Band
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS)
	<ul style="list-style-type: none"> - Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ dBm
<p>P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

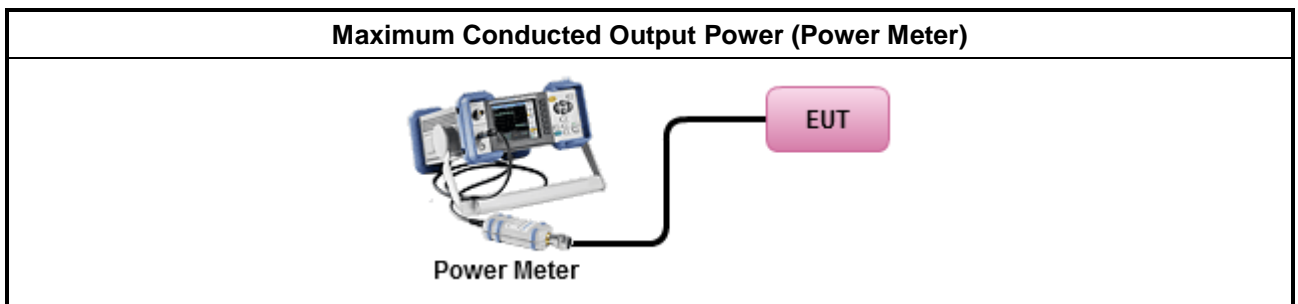
3.3.2 Measuring Instruments

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"> ▪ Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
<ul style="list-style-type: none"> ▪ Maximum Average Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. 	
<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<ul style="list-style-type: none"> ▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

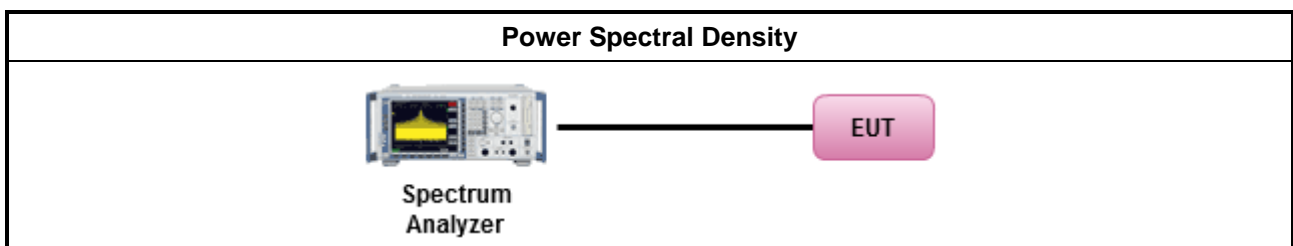
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> ▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
	<ul style="list-style-type: none"> ▪ For conducted measurement.
	<ul style="list-style-type: none"> ▪ If The EUT supports multiple transmit chains using options given below:
	<ul style="list-style-type: none"> ▪ Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

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 level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average level.

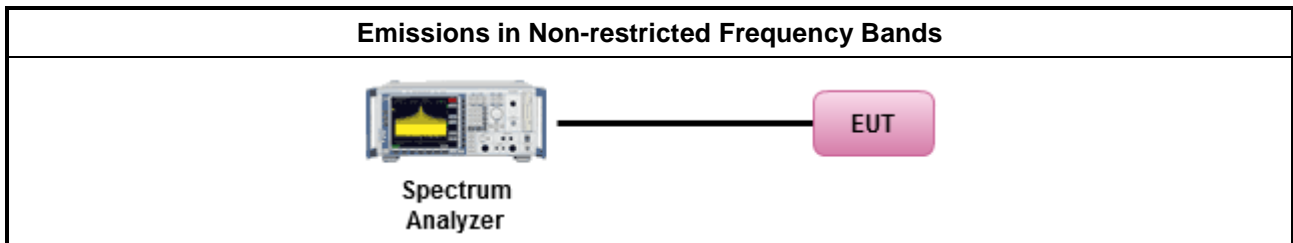
3.5.2 Measuring Instruments

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 KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 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.

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

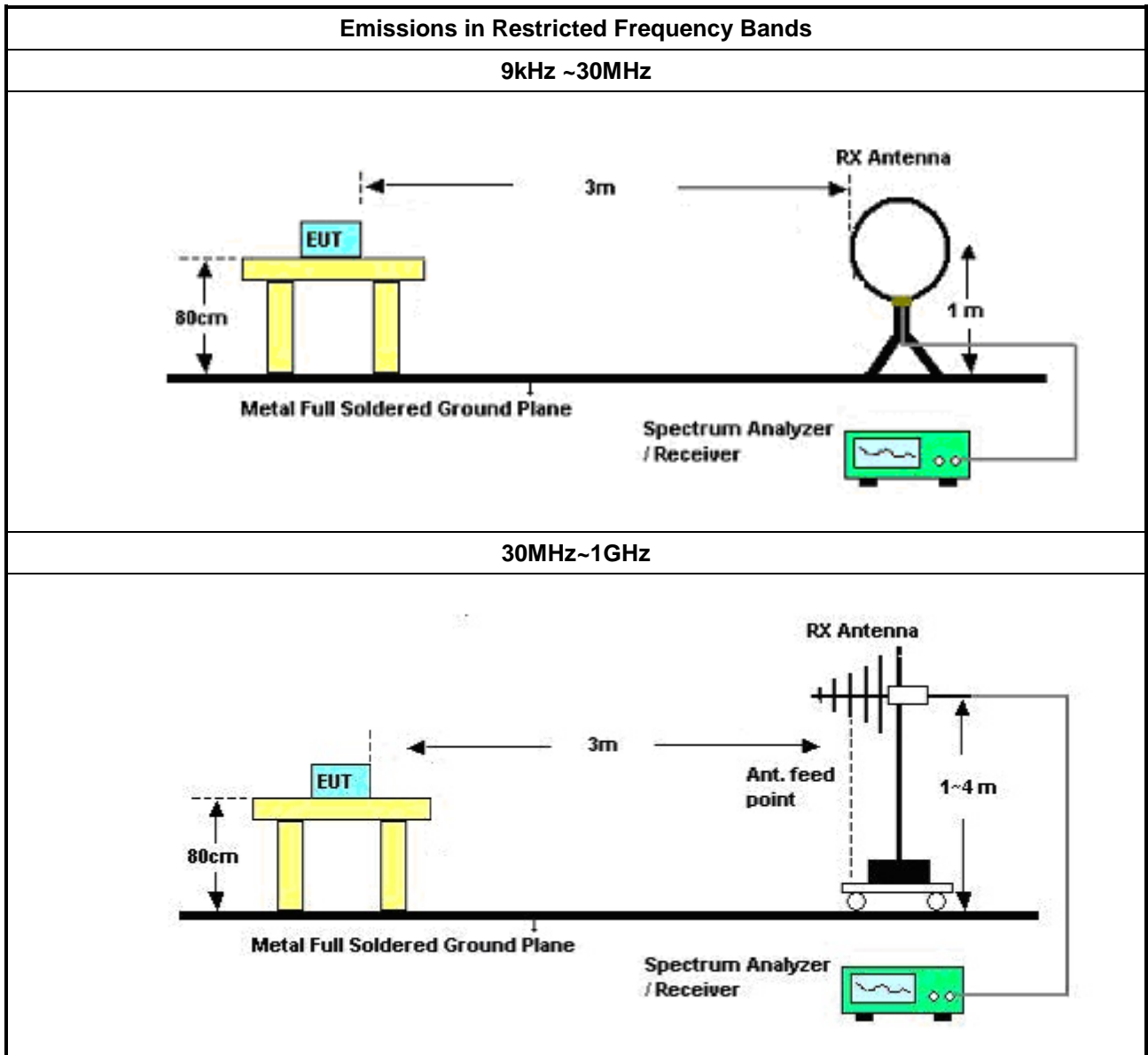
Test Method	
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency 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 KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
	<ul style="list-style-type: none"> ▪ For the transmitter band-edge emissions shall be measured using following options below: <ul style="list-style-type: none"> ▪ Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below. ▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements. ▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.
	<ul style="list-style-type: none"> ▪ Use the following spectrum analyzer settings: <ul style="list-style-type: none"> ▪ Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold. ▪ Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
	<ul style="list-style-type: none"> ▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification. <ul style="list-style-type: none"> ▪ Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field. ▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

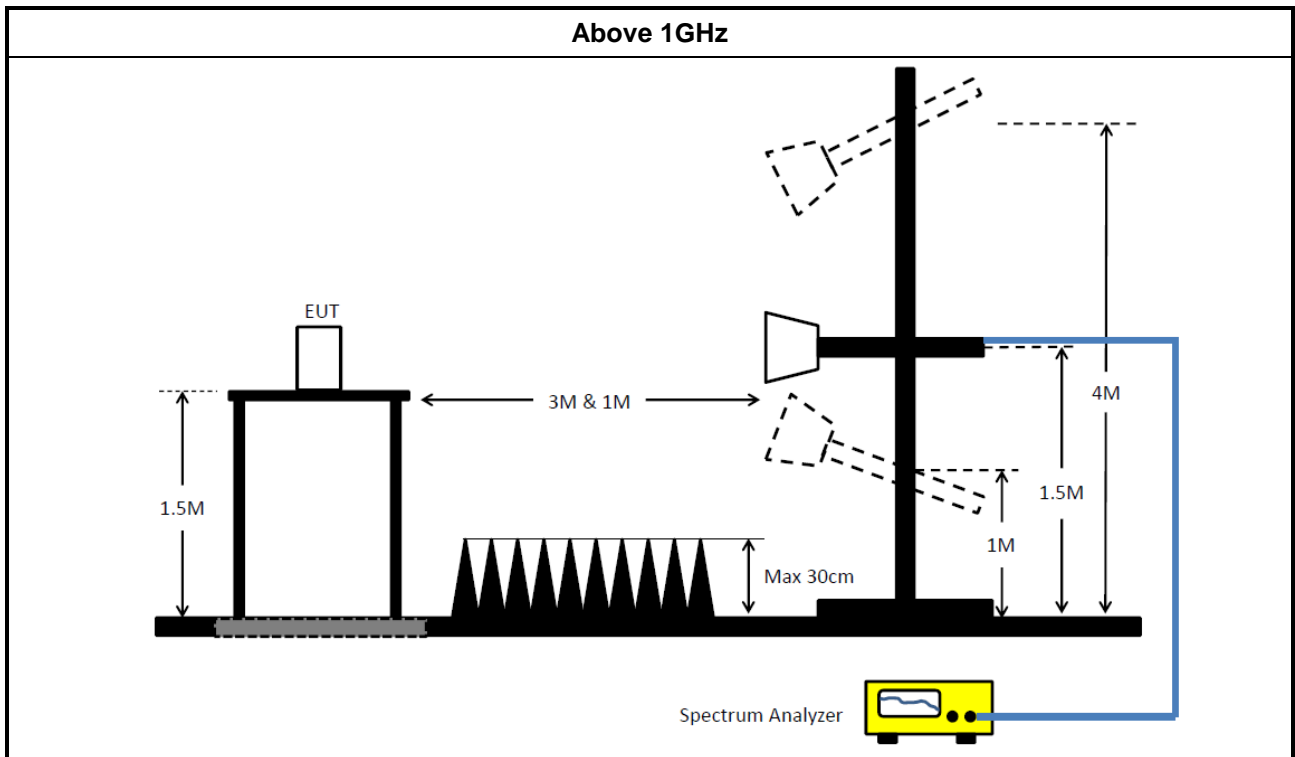
3.6.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.6.5 Test Setup





3.6.6 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.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	29/May/2020	28/May/2021
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	05/Nov/2019	04/Nov/2020
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	31/Aug/2020	30/Aug/2021
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	24/Sep/2019	23/Sep/2020

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	10Hz~40GHz	19/Mar/2020	18/Mar/2021
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	11/Nov/2020
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	17/Feb/2020	16/Feb/2021
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	17/Feb/2020	16/Feb/2021

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz~1GHz 3m	29/Aug/2019	28/Aug/2020
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	29/Aug/2019	28/Aug/2020
Signal Analyzer	R&S	FSP40	100593	9kHz~40GHz	27/Feb/2020	26/Feb/2021
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	30/Jun/2020	29/Jun/2021
Microwave Preampifier	Agilent	8449B	3008A02373	1GHz~18GHz	16/Oct/2019	15/Oct/2020
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	28/Feb/2020	27/Feb/2021
Double Ridged Guide Horn Antenna	SCHWARZBEC	BBHA 9120 D	BBHA 9120 D 01543	1GHz~18GHz	09/Jun/2020	08/Jun/2021
RF Cable-R03m	Jye Bao	RG142	CB017	9kHz~30MHz	20/Jun/2020	19/Jun/2021
RF Cable-R03m	Jye Bao	RG142	CB017	9kHz~1GHz	25/Mar/2020	24/Mar/2021
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+80 5192/4	1GHz~40GHz	08/Apr/2020	07/Apr/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	13/Mar/2020	12/Mar/2021
Preampifier	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
EMI Test Receiver	R&S	ESR3	102051	9kHz~3.6GHz	29/May/2020	28/May/2021



Instrument for Radiated Test (Co-location)

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	04/Aug/2020	03/Aug/2021
Signal Analyzer	R&S	FSP 30	100793	10Hz~30GHz	15/Feb/2020	14/Feb/2021
Microwave System Preamplifier	KEYSIGHT	83017A	MY53270196	1GHz~26.5GHz	09/Sep/2019	08/Sep/2020
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	26/Mar/2020	25/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	BBHA 9170221	18GHz~40GHz	13/Mar/2020	12/Mar/2021
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	10/Mar/2020	09/Mar/2021



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	432.041k	26.67	47.20	-20.53	Line
Mode 2	Pass	AV	3.403M	28.87	46.00	-17.13	Neutral
Mode 3	Pass	QP	435.504k	29.43	57.15	-27.72	Line
Mode 4	Pass	QP	181.681k	48.49	64.41	-15.92	Neutral
Mode 5	Pass	AV	479.294k	30.18	46.34	-16.16	Neutral



Mode Configure

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	152.414k	41.41	65.87	-24.46	Line	-
Mode 1	Pass	AV	152.414k	31.10	55.87	-24.77	Line	-
Mode 1	Pass	QP	205.615k	35.13	63.38	-28.25	Line	-
Mode 1	Pass	AV	205.615k	24.20	53.38	-29.18	Line	-
Mode 1	Pass	QP	432.041k	31.51	57.20	-25.69	Line	-
Mode 1	Pass	AV	432.041k	26.67	47.20	-20.53	Line	"Worst"
Mode 1	Pass	QP	3.336M	22.21	56.00	-33.79	Line	-
Mode 1	Pass	AV	3.336M	18.38	46.00	-27.62	Line	-
Mode 1	Pass	QP	6.816M	29.25	60.00	-30.75	Line	-
Mode 1	Pass	AV	6.816M	24.57	50.00	-25.43	Line	-
Mode 1	Pass	QP	10.532M	29.82	60.00	-30.18	Line	-
Mode 1	Pass	AV	10.532M	24.94	50.00	-25.06	Line	-
Mode 1	Pass	QP	173.876k	42.65	64.78	-22.13	Neutral	"Worst"
Mode 1	Pass	AV	173.876k	30.21	54.78	-24.57	Neutral	-
Mode 1	Pass	QP	290.996k	30.34	60.49	-30.15	Neutral	-
Mode 1	Pass	AV	290.996k	21.32	50.49	-29.17	Neutral	-
Mode 1	Pass	QP	421.816k	22.67	57.41	-34.74	Neutral	-
Mode 1	Pass	AV	421.816k	18.19	47.41	-29.22	Neutral	-
Mode 1	Pass	QP	2.058M	19.90	56.00	-36.10	Neutral	-
Mode 1	Pass	AV	2.058M	16.26	46.00	-29.74	Neutral	-
Mode 1	Pass	QP	6.497M	28.30	60.00	-31.70	Neutral	-
Mode 1	Pass	AV	6.497M	23.86	50.00	-26.14	Neutral	-
Mode 1	Pass	QP	10.16M	28.03	60.00	-31.97	Neutral	-
Mode 1	Pass	AV	10.16M	23.27	50.00	-26.73	Neutral	-
Mode 2	Pass	QP	167.739k	42.29	65.06	-22.77	Line	-
Mode 2	Pass	AV	167.739k	30.83	55.06	-24.23	Line	-
Mode 2	Pass	QP	304.059k	32.83	60.13	-27.30	Line	-
Mode 2	Pass	AV	304.059k	25.76	50.13	-24.37	Line	-
Mode 2	Pass	QP	425.197k	31.61	57.34	-25.73	Line	-
Mode 2	Pass	AV	425.197k	26.99	47.34	-20.35	Line	"Worst"
Mode 2	Pass	QP	3.599M	22.06	56.00	-33.94	Line	-
Mode 2	Pass	AV	3.599M	18.44	46.00	-27.56	Line	-
Mode 2	Pass	QP	6.87M	29.27	60.00	-30.73	Line	-
Mode 2	Pass	AV	6.87M	24.56	50.00	-25.44	Line	-
Mode 2	Pass	QP	10.616M	29.66	60.00	-30.34	Line	-
Mode 2	Pass	AV	10.616M	24.71	50.00	-25.29	Line	-
Mode 2	Pass	QP	158.622k	47.56	65.54	-17.98	Neutral	-
Mode 2	Pass	AV	158.622k	34.23	55.54	-21.31	Neutral	-
Mode 2	Pass	QP	220.053k	37.50	62.81	-25.31	Neutral	-
Mode 2	Pass	AV	220.053k	24.31	52.81	-28.50	Neutral	-
Mode 2	Pass	QP	440.751k	29.95	57.05	-27.10	Neutral	-
Mode 2	Pass	AV	440.751k	25.43	47.05	-21.62	Neutral	-
Mode 2	Pass	QP	3.403M	34.13	56.00	-21.87	Neutral	-
Mode 2	Pass	AV	3.403M	28.87	46.00	-17.13	Neutral	"Worst"
Mode 2	Pass	QP	5.605M	29.64	60.00	-30.36	Neutral	-
Mode 2	Pass	AV	5.605M	24.56	50.00	-25.44	Neutral	-
Mode 2	Pass	QP	10.917M	30.64	60.00	-29.36	Neutral	-
Mode 2	Pass	AV	10.917M	25.34	50.00	-24.66	Neutral	-
Mode 3	Pass	QP	261.263k	25.07	61.39	-36.32	Line	-
Mode 3	Pass	AV	261.263k	22.30	51.39	-29.09	Line	-



Conducted Emissions at Powerline

Appendix A

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 3	Pass	QP	435.504k	29.43	57.15	-27.72	Line	"Worst"
Mode 3	Pass	AV	435.504k	14.43	47.15	-32.72	Line	-
Mode 3	Pass	QP	740.588k	13.36	56.00	-42.64	Line	-
Mode 3	Pass	AV	740.588k	12.15	46.00	-33.85	Line	-
Mode 3	Pass	QP	2.15M	20.96	56.00	-35.04	Line	-
Mode 3	Pass	AV	2.15M	16.71	46.00	-29.29	Line	-
Mode 3	Pass	QP	3.671M	19.34	56.00	-36.66	Line	-
Mode 3	Pass	AV	3.671M	16.08	46.00	-29.92	Line	-
Mode 3	Pass	QP	7.265M	17.07	60.00	-42.93	Line	-
Mode 3	Pass	AV	7.265M	14.82	50.00	-35.18	Line	-
Mode 3	Pass	QP	599.363	29.27	111.85	-82.58	Neutral	-
Mode 3	Pass	AV	599.363	26.09	101.85	-75.76	Neutral	-
Mode 3	Pass	QP	258.152k	24.31	61.49	-37.18	Neutral	-
Mode 3	Pass	AV	258.152k	21.03	51.49	-30.46	Neutral	-
Mode 3	Pass	QP	428.605k	23.72	57.28	-33.56	Neutral	-
Mode 3	Pass	AV	428.605k	13.66	47.28	-33.62	Neutral	-
Mode 3	Pass	QP	2.211M	24.48	56.00	-31.52	Neutral	-
Mode 3	Pass	AV	2.211M	17.79	46.00	-28.21	Neutral	"Worst"
Mode 3	Pass	QP	3.642M	19.15	56.00	-36.85	Neutral	-
Mode 3	Pass	AV	3.642M	16.43	46.00	-29.57	Neutral	-
Mode 3	Pass	QP	8.422M	17.07	60.00	-42.93	Neutral	-
Mode 3	Pass	AV	8.422M	14.74	50.00	-35.26	Neutral	-
Mode 4	Pass	QP	160.533k	48.75	65.43	-16.68	Line	-
Mode 4	Pass	AV	160.533k	28.15	55.43	-27.28	Line	-
Mode 4	Pass	QP	180.957k	48.45	64.43	-15.98	Line	"Worst"
Mode 4	Pass	AV	180.957k	32.96	54.43	-21.47	Line	-
Mode 4	Pass	QP	227.194k	42.93	62.56	-19.63	Line	-
Mode 4	Pass	AV	227.194k	30.39	52.56	-22.17	Line	-
Mode 4	Pass	QP	1.62M	24.07	56.00	-31.93	Line	-
Mode 4	Pass	AV	1.62M	19.04	46.00	-26.96	Line	-
Mode 4	Pass	QP	4.255M	24.45	56.00	-31.55	Line	-
Mode 4	Pass	AV	4.255M	18.79	46.00	-27.21	Line	-
Mode 4	Pass	QP	14.61M	26.20	60.00	-33.80	Line	-
Mode 4	Pass	AV	14.61M	17.92	50.00	-32.08	Line	-
Mode 4	Pass	QP	181.681k	48.49	64.41	-15.92	Neutral	"Worst"
Mode 4	Pass	AV	181.681k	33.21	54.41	-21.20	Neutral	-
Mode 4	Pass	QP	222.704k	42.46	62.71	-20.25	Neutral	-
Mode 4	Pass	AV	222.704k	28.65	52.71	-24.06	Neutral	-
Mode 4	Pass	QP	387.896k	24.00	58.10	-34.10	Neutral	-
Mode 4	Pass	AV	387.896k	15.53	48.10	-32.57	Neutral	-
Mode 4	Pass	QP	2.211M	26.53	56.00	-29.47	Neutral	-
Mode 4	Pass	AV	2.211M	21.60	46.00	-24.40	Neutral	-
Mode 4	Pass	QP	4.188M	24.88	56.00	-31.12	Neutral	-
Mode 4	Pass	AV	4.188M	19.20	46.00	-26.80	Neutral	-
Mode 4	Pass	QP	14.905M	30.31	60.00	-29.69	Neutral	-
Mode 4	Pass	AV	14.905M	23.69	50.00	-26.31	Neutral	-
Mode 5	Pass	QP	162.467k	40.37	65.33	-24.96	Line	-
Mode 5	Pass	AV	162.467k	28.50	55.33	-26.83	Line	-
Mode 5	Pass	QP	473.588k	35.41	56.46	-21.05	Line	-
Mode 5	Pass	AV	473.588k	28.02	46.46	-18.44	Line	"Worst"



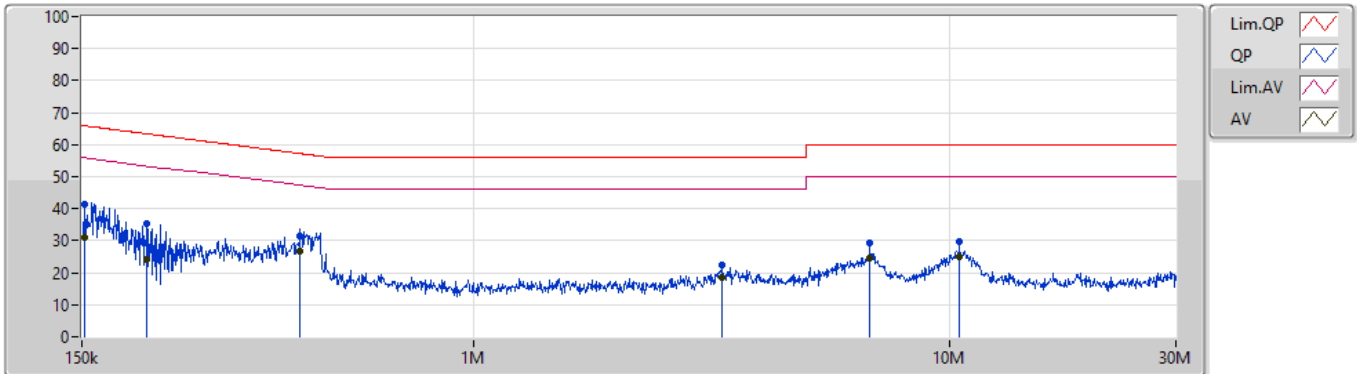
Conducted Emissions at Powerline

Appendix A

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 5	Pass	QP	889.871k	23.02	56.00	-32.98	Line	-
Mode 5	Pass	AV	889.871k	17.36	46.00	-28.64	Line	-
Mode 5	Pass	QP	2.009M	25.97	56.00	-30.03	Line	-
Mode 5	Pass	AV	2.009M	20.25	46.00	-25.75	Line	-
Mode 5	Pass	QP	3.376M	30.92	56.00	-25.08	Line	-
Mode 5	Pass	AV	3.376M	24.92	46.00	-21.08	Line	-
Mode 5	Pass	QP	13.223M	28.70	60.00	-31.30	Line	-
Mode 5	Pass	AV	13.223M	24.85	50.00	-25.15	Line	-
Mode 5	Pass	QP	156.734k	42.93	65.64	-22.71	Neutral	-
Mode 5	Pass	AV	156.734k	33.45	55.64	-22.19	Neutral	-
Mode 5	Pass	QP	479.294k	38.91	56.34	-17.43	Neutral	-
Mode 5	Pass	AV	479.294k	30.18	46.34	-16.16	Neutral	"Worst"
Mode 5	Pass	QP	1.023M	26.80	56.00	-29.20	Neutral	-
Mode 5	Pass	AV	1.023M	21.27	46.00	-24.73	Neutral	-
Mode 5	Pass	QP	1.495M	26.25	56.00	-29.75	Neutral	-
Mode 5	Pass	AV	1.495M	19.71	46.00	-26.29	Neutral	-
Mode 5	Pass	QP	3.671M	30.75	56.00	-25.25	Neutral	-
Mode 5	Pass	AV	3.671M	25.09	46.00	-20.91	Neutral	-
Mode 5	Pass	QP	13.329M	33.70	60.00	-26.30	Neutral	-
Mode 5	Pass	AV	13.329M	28.98	50.00	-21.02	Neutral	-

Conducted Emissions at Powerline_Mode 1

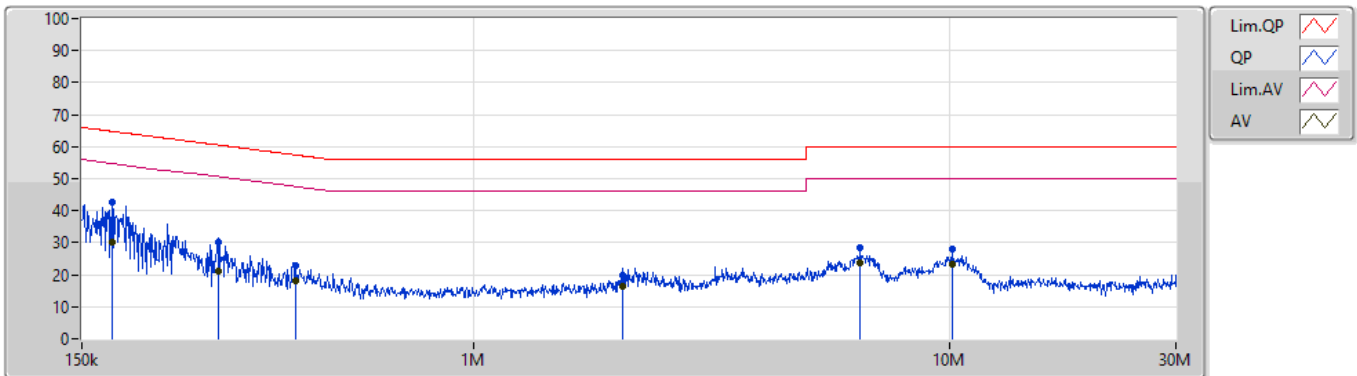
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	152.414k	41.41	65.87	-24.46	19.64	Line	-	21.77	9.66	0.11
AV	152.414k	31.10	55.87	-24.77	19.64	Line	-	11.46	9.66	0.11
QP	205.615k	35.13	63.38	-28.25	19.63	Line	-	15.50	9.65	0.11
AV	205.615k	24.20	53.38	-29.18	19.63	Line	-	4.57	9.65	0.11
QP	432.041k	31.51	57.20	-25.69	19.64	Line	-	11.87	9.64	0.13
AV	432.041k	26.67	47.20	-20.53	19.64	Line	"Worst"	7.03	9.64	0.13
QP	3.336M	22.21	56.00	-33.79	19.72	Line	-	2.49	9.66	0.18
AV	3.336M	18.38	46.00	-27.62	19.72	Line	-	-1.34	9.66	0.18
QP	6.816M	29.25	60.00	-30.75	19.79	Line	-	9.46	9.68	0.23
AV	6.816M	24.57	50.00	-25.43	19.79	Line	-	4.78	9.68	0.23
QP	10.532M	29.82	60.00	-30.18	19.85	Line	-	9.97	9.69	0.28
AV	10.532M	24.94	50.00	-25.06	19.85	Line	-	5.09	9.69	0.28

Conducted Emissions at Powerline_Mode 1

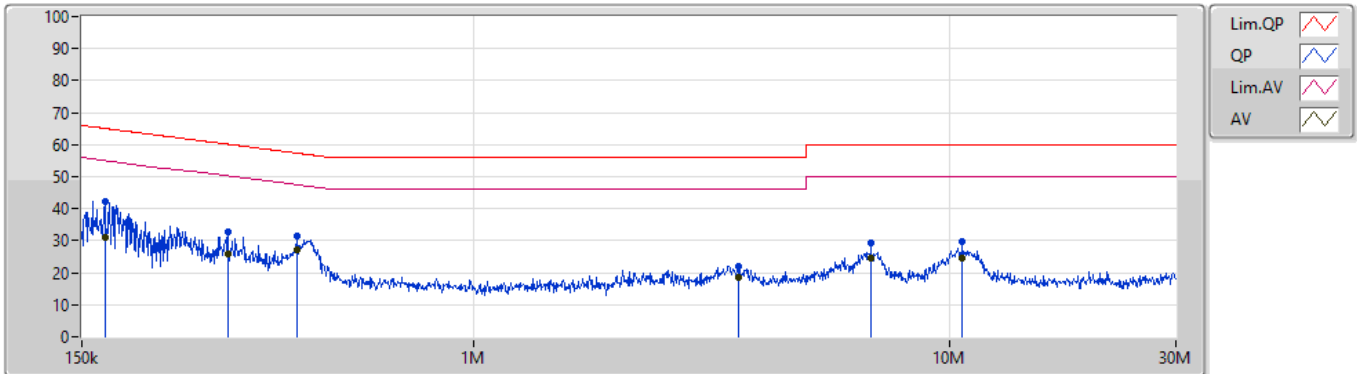
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	173.876k	42.65	64.78	-22.13	19.62	Neutral	"Worst"	23.03	9.64	0.11
AV	173.876k	30.21	54.78	-24.57	19.62	Neutral	-	10.59	9.64	0.11
QP	290.996k	30.34	60.49	-30.15	19.62	Neutral	-	10.72	9.63	0.12
AV	290.996k	21.32	50.49	-29.17	19.62	Neutral	-	1.70	9.63	0.12
QP	421.816k	22.67	57.41	-34.74	19.63	Neutral	-	3.04	9.63	0.13
AV	421.816k	18.19	47.41	-29.22	19.63	Neutral	-	-1.44	9.63	0.13
QP	2.058M	19.90	56.00	-36.10	19.67	Neutral	-	0.23	9.65	0.15
AV	2.058M	16.26	46.00	-29.74	19.67	Neutral	-	-3.41	9.65	0.15
QP	6.497M	28.30	60.00	-31.70	19.79	Neutral	-	8.51	9.68	0.23
AV	6.497M	23.86	50.00	-26.14	19.79	Neutral	-	4.07	9.68	0.23
QP	10.16M	28.03	60.00	-31.97	19.85	Neutral	-	8.18	9.70	0.27
AV	10.16M	23.27	50.00	-26.73	19.85	Neutral	-	3.42	9.70	0.27

Conducted Emissions at Powerline_Mode 2

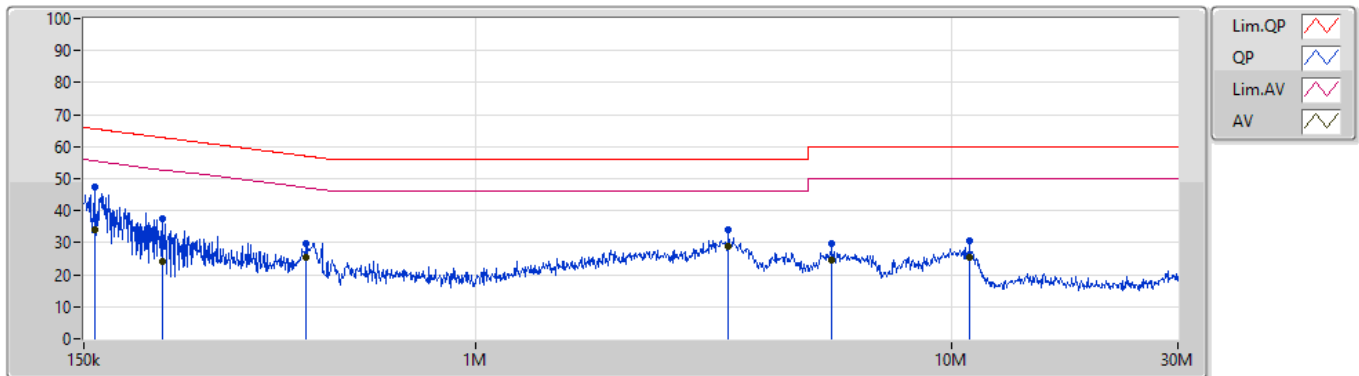
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	167.739k	42.29	65.06	-22.77	19.64	Line	-	22.65	9.66	0.11
AV	167.739k	30.83	55.06	-24.23	19.64	Line	-	11.19	9.66	0.11
QP	304.059k	32.83	60.13	-27.30	19.63	Line	-	13.20	9.64	0.12
AV	304.059k	25.76	50.13	-24.37	19.63	Line	-	6.13	9.64	0.12
QP	425.197k	31.61	57.34	-25.73	19.64	Line	-	11.97	9.64	0.13
AV	425.197k	26.99	47.34	-20.35	19.64	Line	"Worst"	7.35	9.64	0.13
QP	3.599M	22.06	56.00	-33.94	19.72	Line	-	2.34	9.66	0.18
AV	3.599M	18.44	46.00	-27.56	19.72	Line	-	-1.28	9.66	0.18
QP	6.87M	29.27	60.00	-30.73	19.79	Line	-	9.48	9.68	0.23
AV	6.87M	24.56	50.00	-25.44	19.79	Line	-	4.77	9.68	0.23
QP	10.616M	29.66	60.00	-30.34	19.85	Line	-	9.81	9.69	0.28
AV	10.616M	24.71	50.00	-25.29	19.85	Line	-	4.86	9.69	0.28

Conducted Emissions at Powerline_Mode 2

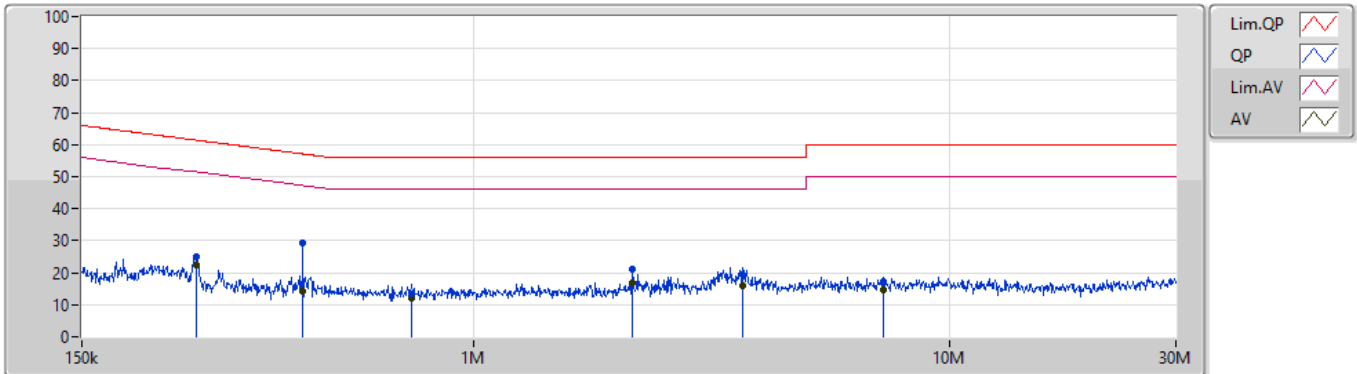
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	158.622k	47.56	65.54	-17.98	19.63	Neutral	-	27.93	9.65	0.11
AV	158.622k	34.23	55.54	-21.31	19.63	Neutral	-	14.60	9.65	0.11
QP	220.053k	37.50	62.81	-25.31	19.62	Neutral	-	17.88	9.64	0.11
AV	220.053k	24.31	52.81	-28.50	19.62	Neutral	-	4.69	9.64	0.11
QP	440.751k	29.95	57.05	-27.10	19.63	Neutral	-	10.32	9.63	0.13
AV	440.751k	25.43	47.05	-21.62	19.63	Neutral	-	5.80	9.63	0.13
QP	3.403M	34.13	56.00	-21.87	19.72	Neutral	-	14.41	9.66	0.18
AV	3.403M	28.87	46.00	-17.13	19.72	Neutral	"Worst"	9.15	9.66	0.18
QP	5.605M	29.64	60.00	-30.36	19.76	Neutral	-	9.88	9.67	0.21
AV	5.605M	24.56	50.00	-25.44	19.76	Neutral	-	4.80	9.67	0.21
QP	10.917M	30.64	60.00	-29.36	19.86	Neutral	-	10.78	9.70	0.28
AV	10.917M	25.34	50.00	-24.66	19.86	Neutral	-	5.48	9.70	0.28

Conducted Emissions at Powerline_Mode 3

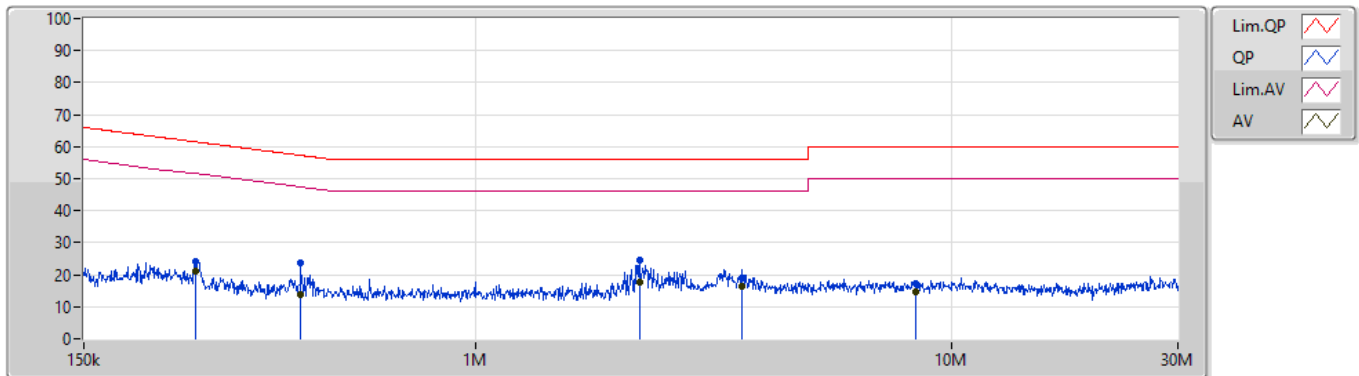
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	261.263k	25.07	61.39	-36.32	19.64	Line	-	5.43	9.65	0.12
AV	261.263k	22.30	51.39	-29.09	19.64	Line	-	2.66	9.65	0.12
QP	435.504k	29.43	57.15	-27.72	19.64	Line	"Worst"	9.79	9.64	0.13
AV	435.504k	14.43	47.15	-32.72	19.64	Line	-	-5.21	9.64	0.13
QP	740.588k	13.36	56.00	-42.64	19.63	Line	-	-6.27	9.64	0.12
AV	740.588k	12.15	46.00	-33.85	19.63	Line	-	-7.48	9.64	0.12
QP	2.15M	20.96	56.00	-35.04	19.67	Line	-	1.29	9.65	0.15
AV	2.15M	16.71	46.00	-29.29	19.67	Line	-	-2.96	9.65	0.15
QP	3.671M	19.34	56.00	-36.66	19.72	Line	-	-0.38	9.66	0.18
AV	3.671M	16.08	46.00	-29.92	19.72	Line	-	-3.64	9.66	0.18
QP	7.265M	17.07	60.00	-42.93	19.80	Line	-	-2.73	9.68	0.24
AV	7.265M	14.82	50.00	-35.18	19.80	Line	-	-4.98	9.68	0.24

Conducted Emissions at Powerline_Mode 3

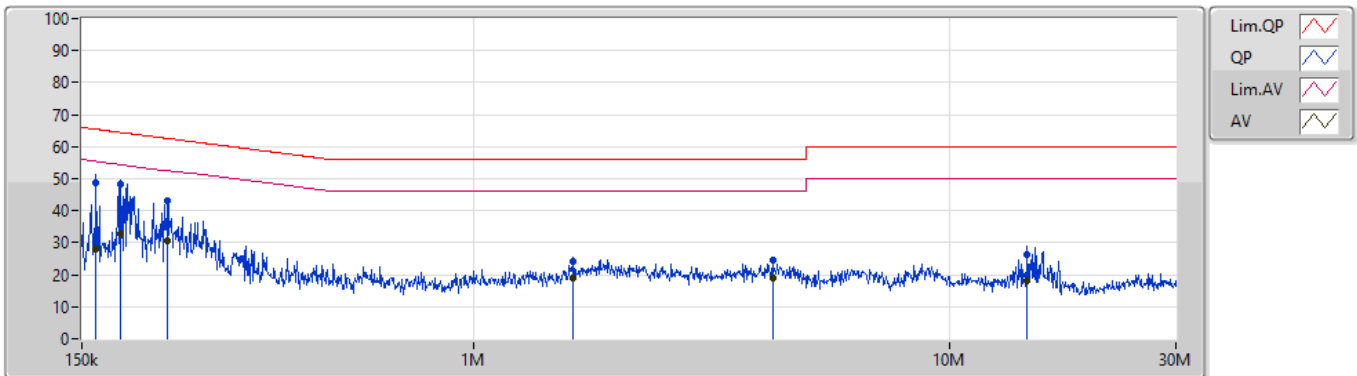
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	599.363	29.27	111.85	-82.58	21.76	Neutral	-	7.51	11.97	-0.09
AV	599.363	26.09	101.85	-75.76	21.76	Neutral	-	4.33	11.97	-0.09
QP	258.152k	24.31	61.49	-37.18	19.63	Neutral	-	4.68	9.64	0.12
AV	258.152k	21.03	51.49	-30.46	19.63	Neutral	-	1.40	9.64	0.12
QP	428.605k	23.72	57.28	-33.56	19.63	Neutral	-	4.09	9.63	0.13
AV	428.605k	13.66	47.28	-33.62	19.63	Neutral	-	-5.97	9.63	0.13
QP	2.211M	24.48	56.00	-31.52	19.67	Neutral	-	4.81	9.65	0.15
AV	2.211M	17.79	46.00	-28.21	19.67	Neutral	"Worst"	-1.88	9.65	0.15
QP	3.642M	19.15	56.00	-36.85	19.72	Neutral	-	-0.57	9.66	0.18
AV	3.642M	16.43	46.00	-29.57	19.72	Neutral	-	-3.29	9.66	0.18
QP	8.422M	17.07	60.00	-42.93	19.82	Neutral	-	-2.75	9.69	0.25
AV	8.422M	14.74	50.00	-35.26	19.82	Neutral	-	-5.08	9.69	0.25

Conducted Emissions at Powerline_Mode 4

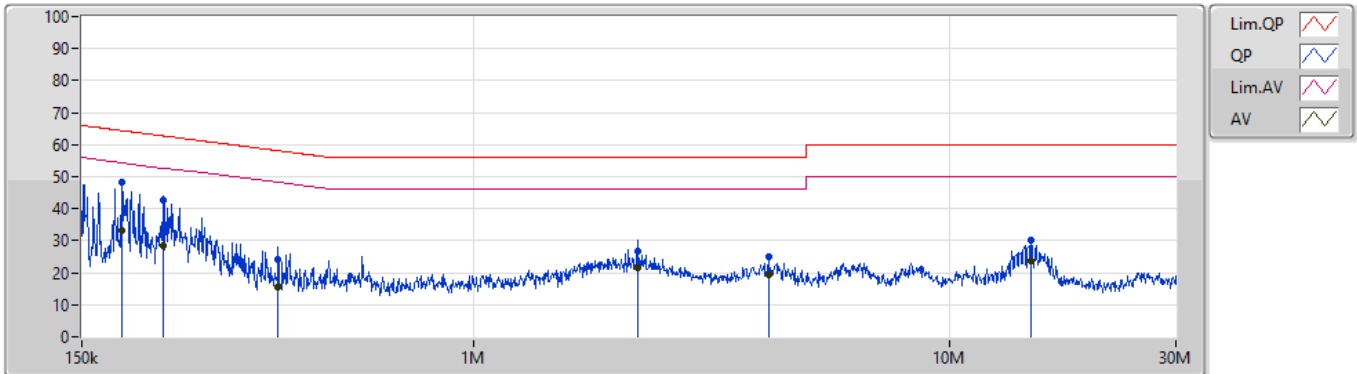
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	160.533k	48.75	65.43	-16.68	19.64	Line	-	29.11	9.66	0.11
AV	160.533k	28.15	55.43	-27.28	19.64	Line	-	8.51	9.66	0.11
QP	180.957k	48.45	64.43	-15.98	19.63	Line	"Worst"	28.82	9.65	0.11
AV	180.957k	32.96	54.43	-21.47	19.63	Line	-	13.33	9.65	0.11
QP	227.194k	42.93	62.56	-19.63	19.64	Line	-	23.29	9.65	0.12
AV	227.194k	30.39	52.56	-22.17	19.64	Line	-	10.75	9.65	0.12
QP	1.62M	24.07	56.00	-31.93	19.66	Line	-	4.41	9.65	0.14
AV	1.62M	19.04	46.00	-26.96	19.66	Line	-	-0.62	9.65	0.14
QP	4.255M	24.45	56.00	-31.55	19.73	Line	-	4.72	9.66	0.19
AV	4.255M	18.79	46.00	-27.21	19.73	Line	-	-0.94	9.66	0.19
QP	14.61M	26.20	60.00	-33.80	19.85	Line	-	6.35	9.66	0.31
AV	14.61M	17.92	50.00	-32.08	19.85	Line	-	-1.93	9.66	0.31

Conducted Emissions at Powerline_Mode 4

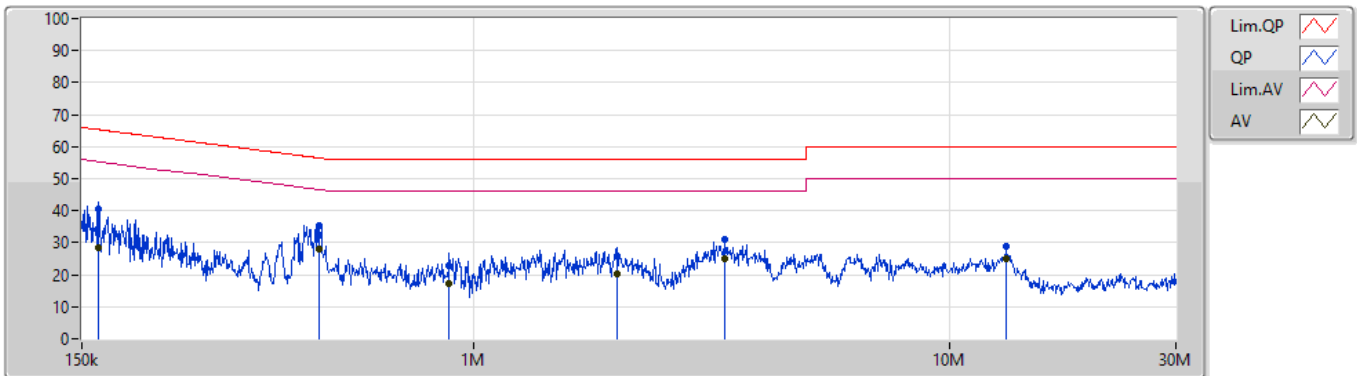
19/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)
QP	181.681k	48.49	64.41	-15.92	19.62	Neutral	"Worst"	28.87	9.64	0.11
AV	181.681k	33.21	54.41	-21.20	19.62	Neutral	-	13.59	9.64	0.11
QP	222.704k	42.46	62.71	-20.25	19.62	Neutral	-	22.84	9.64	0.11
AV	222.704k	28.65	52.71	-24.06	19.62	Neutral	-	9.03	9.64	0.11
QP	387.896k	24.00	58.10	-34.10	19.63	Neutral	-	4.37	9.63	0.13
AV	387.896k	15.53	48.10	-32.57	19.63	Neutral	-	-4.10	9.63	0.13
QP	2.211M	26.53	56.00	-29.47	19.67	Neutral	-	6.86	9.65	0.15
AV	2.211M	21.60	46.00	-24.40	19.67	Neutral	-	1.93	9.65	0.15
QP	4.188M	24.88	56.00	-31.12	19.73	Neutral	-	5.15	9.66	0.19
AV	4.188M	19.20	46.00	-26.80	19.73	Neutral	-	-0.53	9.66	0.19
QP	14.905M	30.31	60.00	-29.69	19.90	Neutral	-	10.41	9.71	0.31
AV	14.905M	23.69	50.00	-26.31	19.90	Neutral	-	3.79	9.71	0.31

Conducted Emissions at Powerline_Mode 5

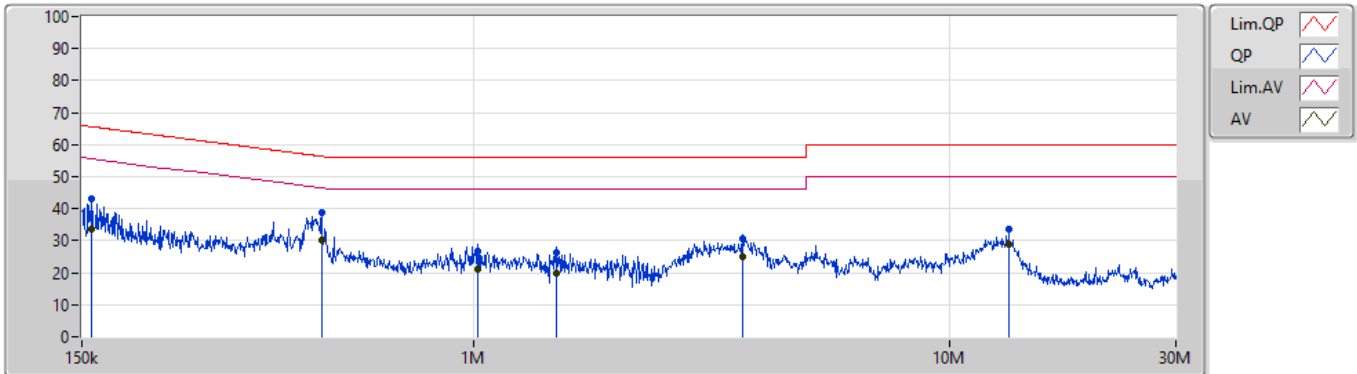
10/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	162.467k	40.37	65.33	-24.96	19.54	Line	-	20.83	9.66	0.01	9.87
AV	162.467k	28.50	55.33	-26.83	19.54	Line	-	8.96	9.66	0.01	9.87
QP	473.588k	35.41	56.46	-21.05	19.54	Line	-	15.87	9.64	0.03	9.87
AV	473.588k	28.02	46.46	-18.44	19.54	Line	"Worst"	8.48	9.64	0.03	9.87
QP	889.871k	23.02	56.00	-32.98	19.56	Line	-	3.46	9.64	0.05	9.87
AV	889.871k	17.36	46.00	-28.64	19.56	Line	-	-2.20	9.64	0.05	9.87
QP	2.009M	25.97	56.00	-30.03	19.60	Line	-	6.37	9.65	0.08	9.87
AV	2.009M	20.25	46.00	-25.75	19.60	Line	-	0.65	9.65	0.08	9.87
QP	3.376M	30.92	56.00	-25.08	19.65	Line	-	11.27	9.66	0.11	9.88
AV	3.376M	24.92	46.00	-21.08	19.65	Line	-	5.27	9.66	0.11	9.88
QP	13.223M	28.70	60.00	-31.30	19.79	Line	-	8.91	9.67	0.24	9.88
AV	13.223M	24.85	50.00	-25.15	19.79	Line	-	5.06	9.67	0.24	9.88

Conducted Emissions at Powerline_Mode 5

10/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	156.734k	42.93	65.64	-22.71	19.53	Neutral	-	23.40	9.65	0.01	9.87
AV	156.734k	33.45	55.64	-22.19	19.53	Neutral	-	13.92	9.65	0.01	9.87
QP	479.294k	38.91	56.34	-17.43	19.53	Neutral	-	19.38	9.63	0.03	9.87
AV	479.294k	30.18	46.34	-16.16	19.53	Neutral	"Worst"	10.65	9.63	0.03	9.87
QP	1.023M	26.80	56.00	-29.20	19.56	Neutral	-	7.24	9.63	0.05	9.88
AV	1.023M	21.27	46.00	-24.73	19.56	Neutral	-	1.71	9.63	0.05	9.88
QP	1.495M	26.25	56.00	-29.75	19.58	Neutral	-	6.67	9.64	0.07	9.87
AV	1.495M	19.71	46.00	-26.29	19.58	Neutral	-	0.13	9.64	0.07	9.87
QP	3.671M	30.75	56.00	-25.25	19.66	Neutral	-	11.09	9.66	0.12	9.88
AV	3.671M	25.09	46.00	-20.91	19.66	Neutral	-	5.43	9.66	0.12	9.88
QP	13.329M	33.70	60.00	-26.30	19.83	Neutral	-	13.87	9.71	0.24	9.88
AV	13.329M	28.98	50.00	-21.02	19.83	Neutral	-	9.15	9.71	0.24	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-LE(1Mbps)	665k	1.027M	1M03F1D	661.25k	1.026M
BT-LE(2Mbps)	1.138M	2.035M	2M04F1D	1.135M	2.033M

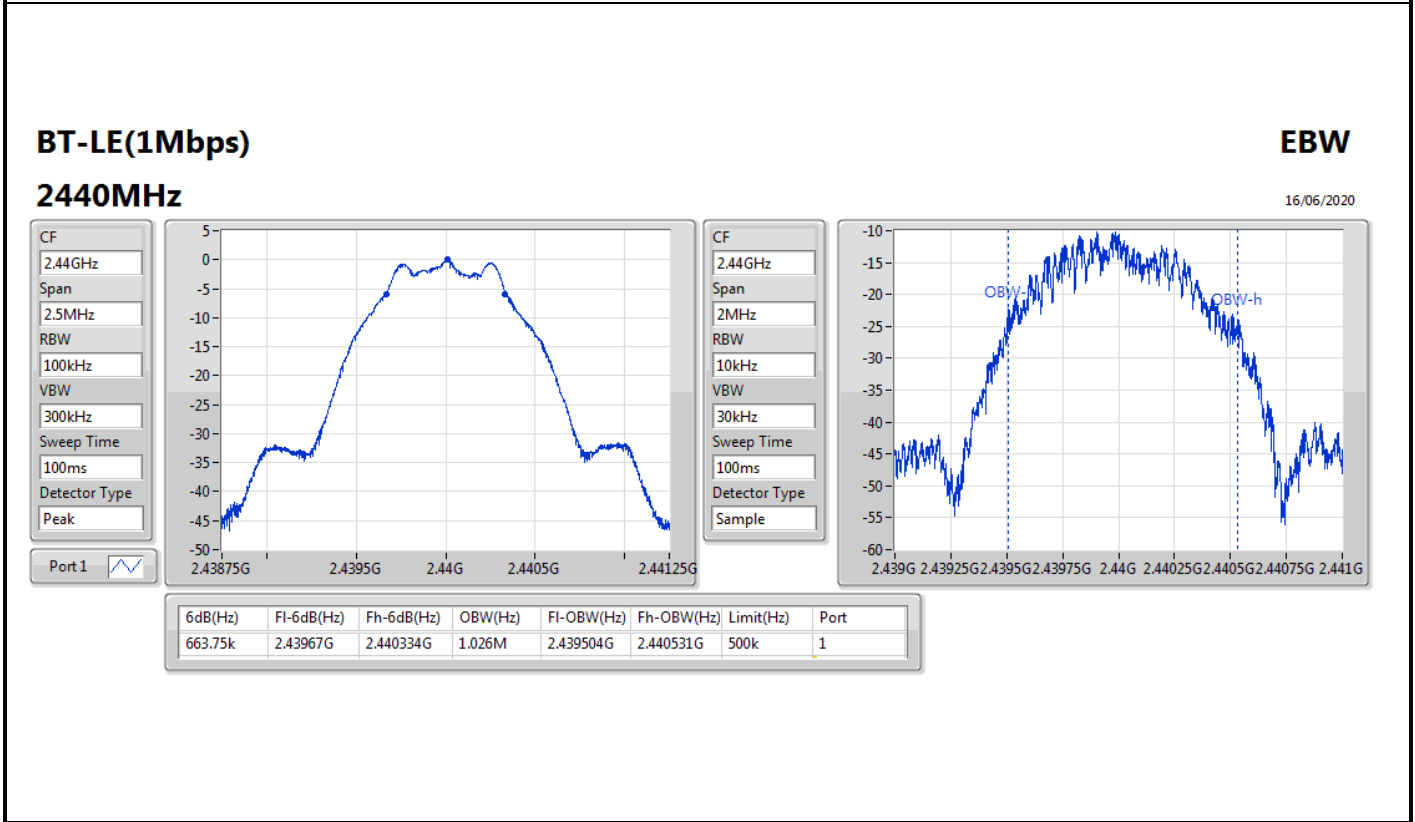
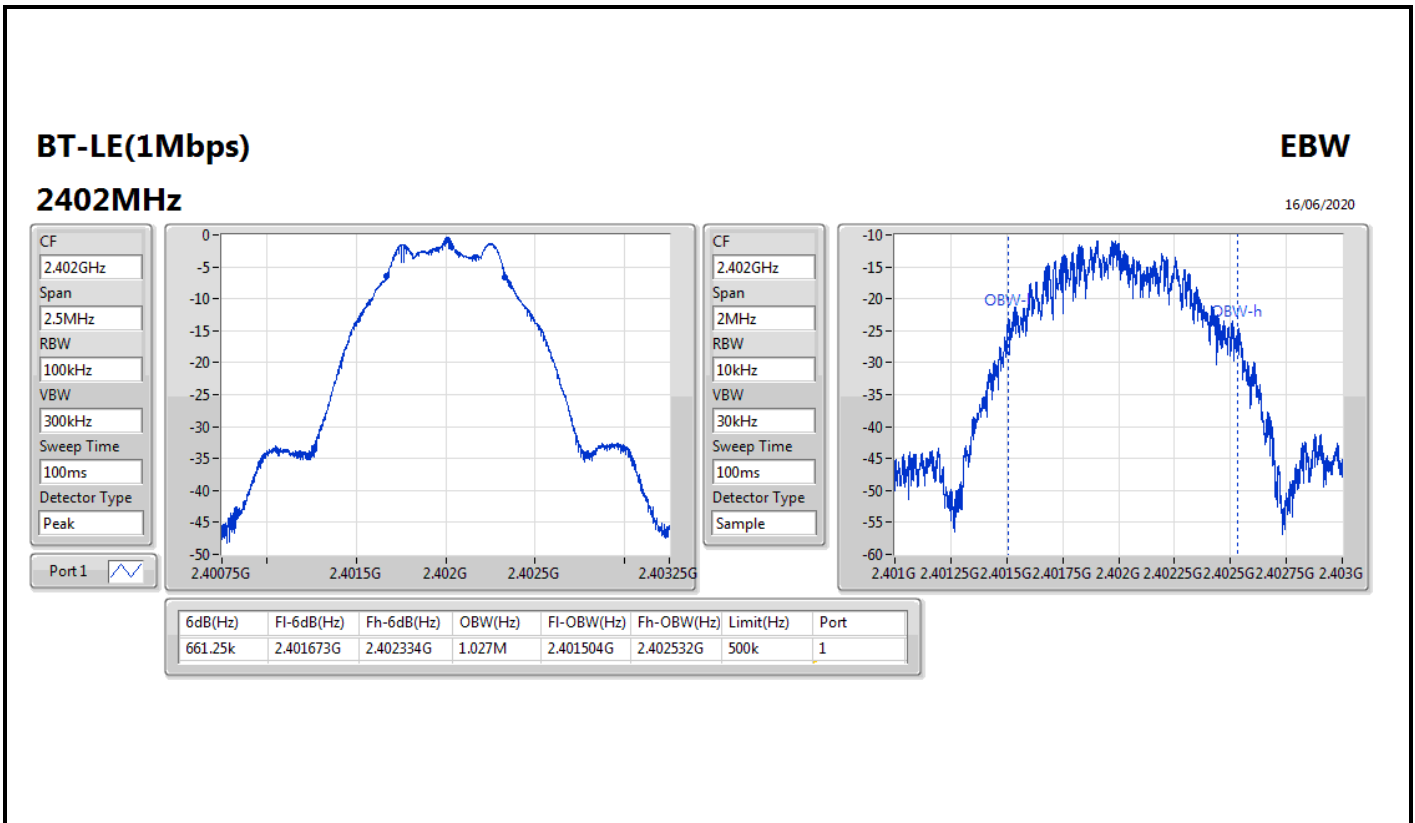
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

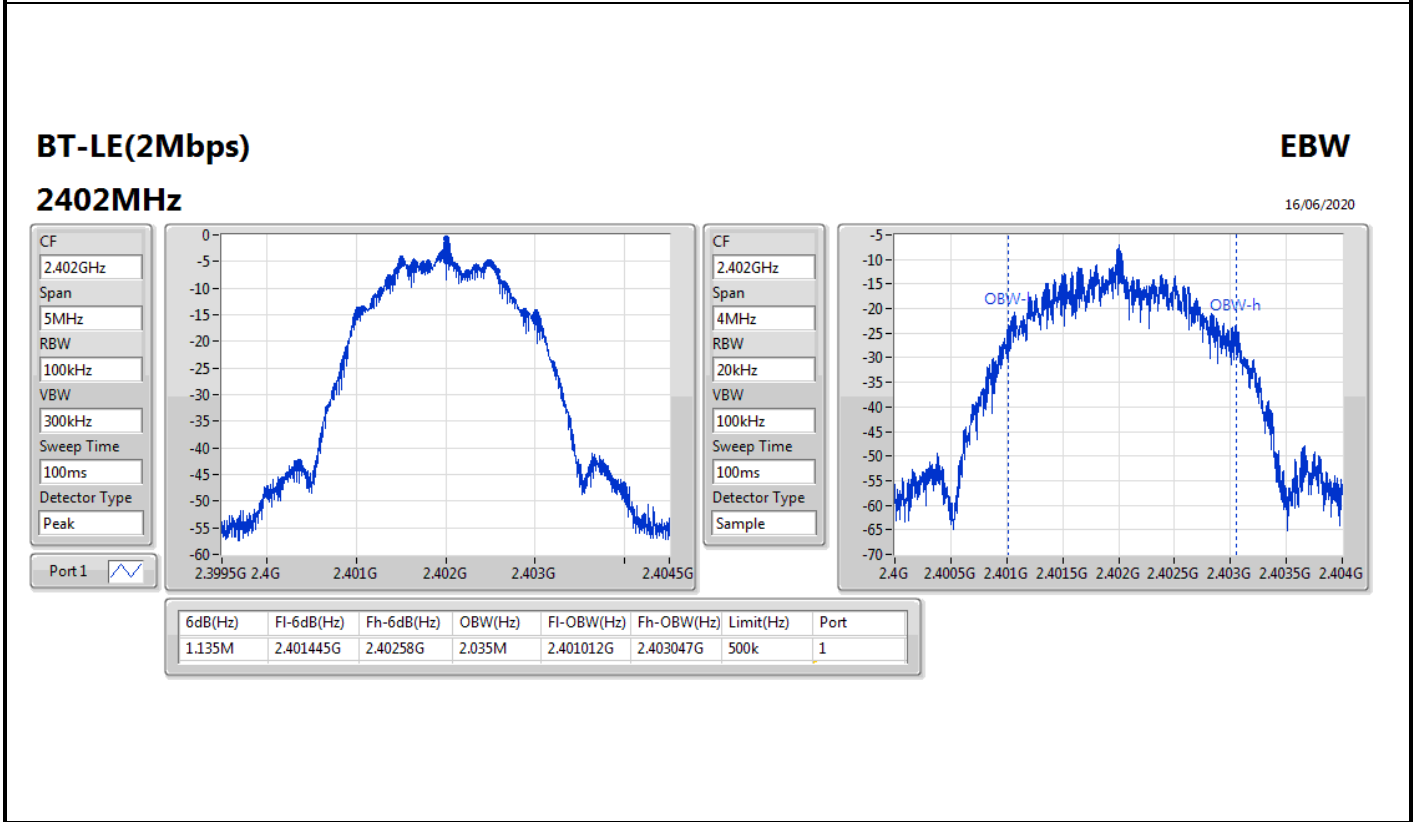
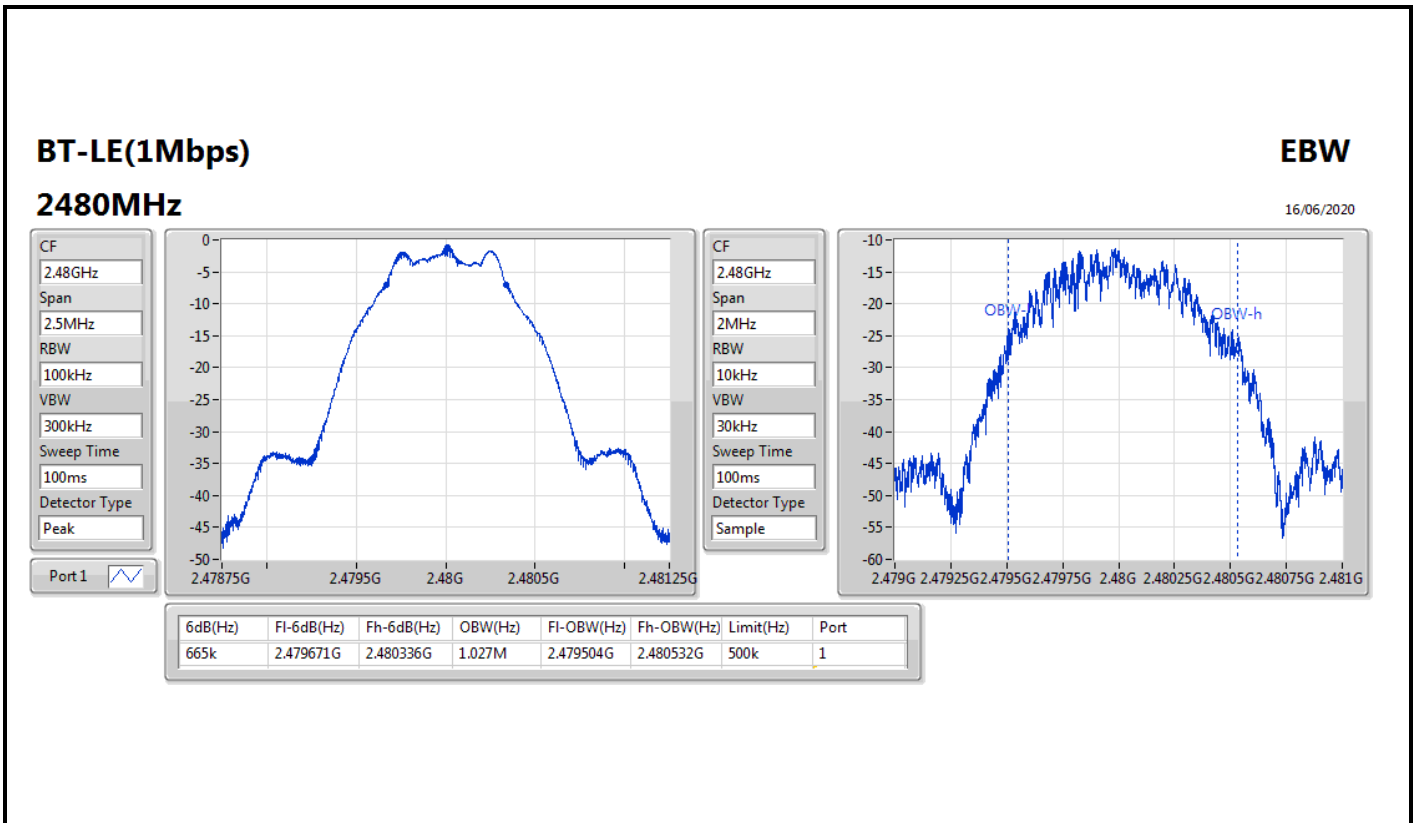


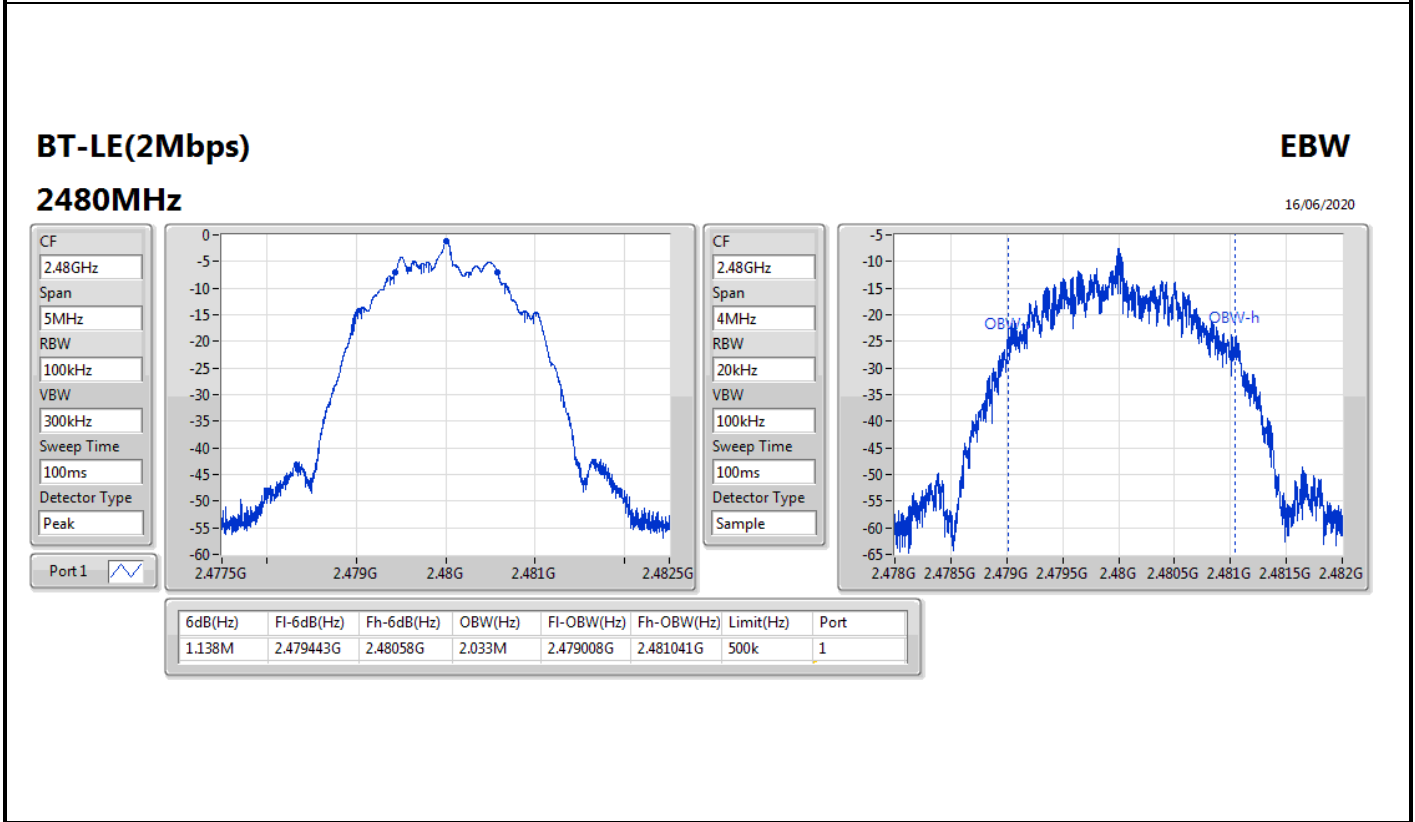
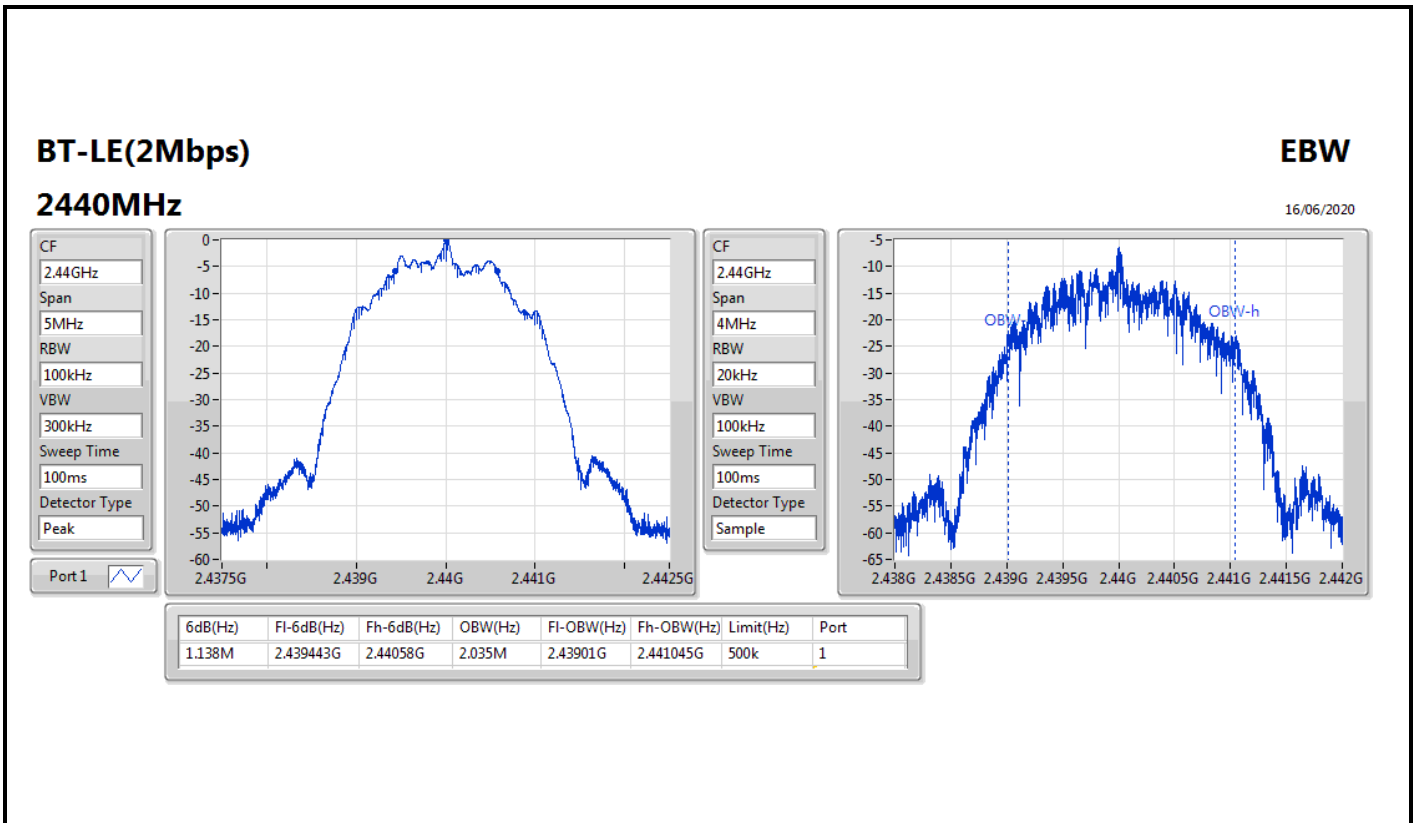
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	661.25k	1.027M
2440MHz	Pass	500k	663.75k	1.026M
2480MHz	Pass	500k	665k	1.027M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.135M	2.035M
2440MHz	Pass	500k	1.138M	2.035M
2480MHz	Pass	500k	1.138M	2.033M

Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;









Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	-0.24	0.00095
BT-LE(2Mbps)	-0.38	0.00092



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	1.70	-0.87	30.00
2440MHz	Pass	1.70	-0.24	30.00
2480MHz	Pass	1.70	-1.32	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	1.70	-1.03	30.00
2440MHz	Pass	1.70	-0.38	30.00
2480MHz	Pass	1.70	-1.47	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-14.97
BT-LE(2Mbps)	-18.29

RBW=3 kHz.

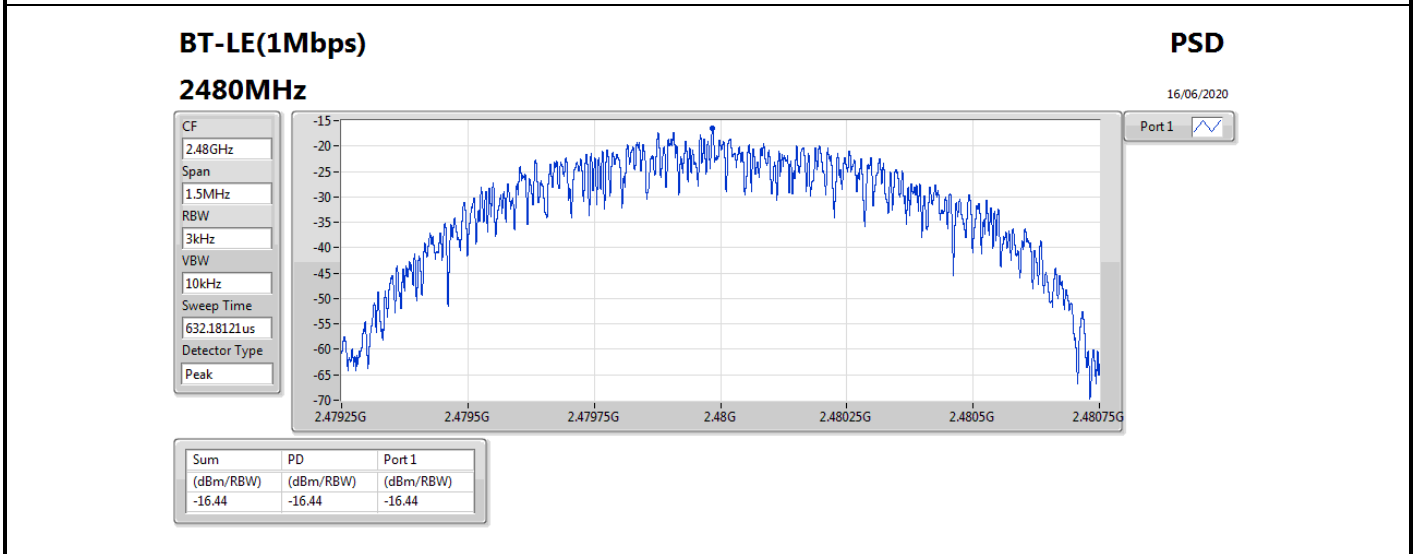
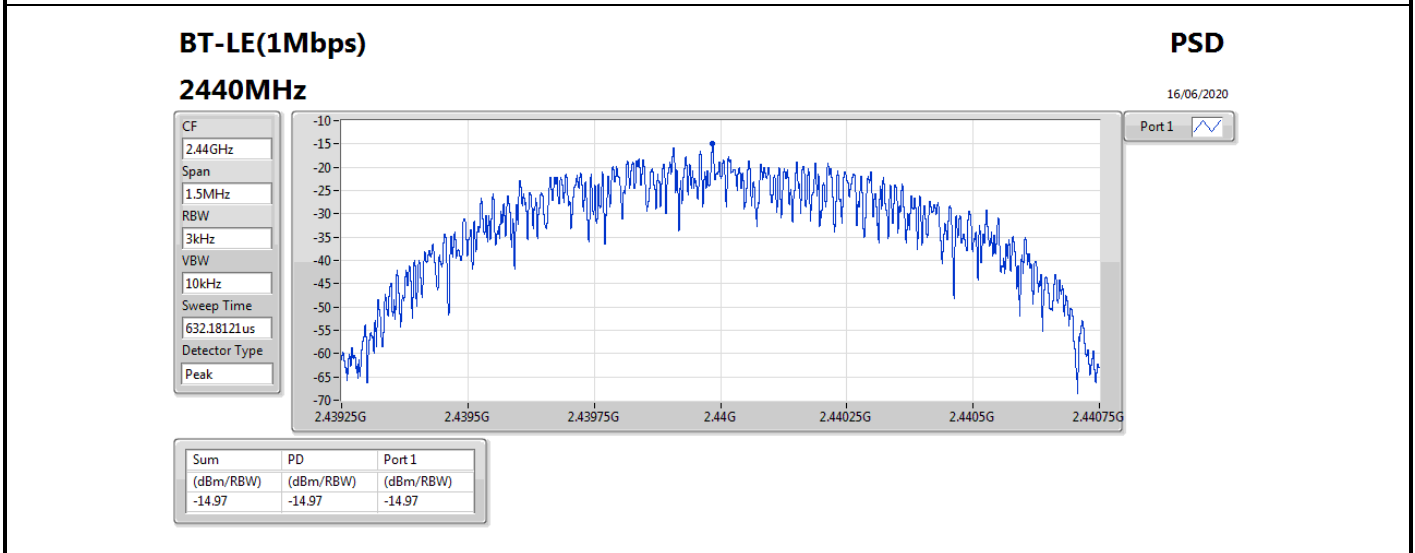
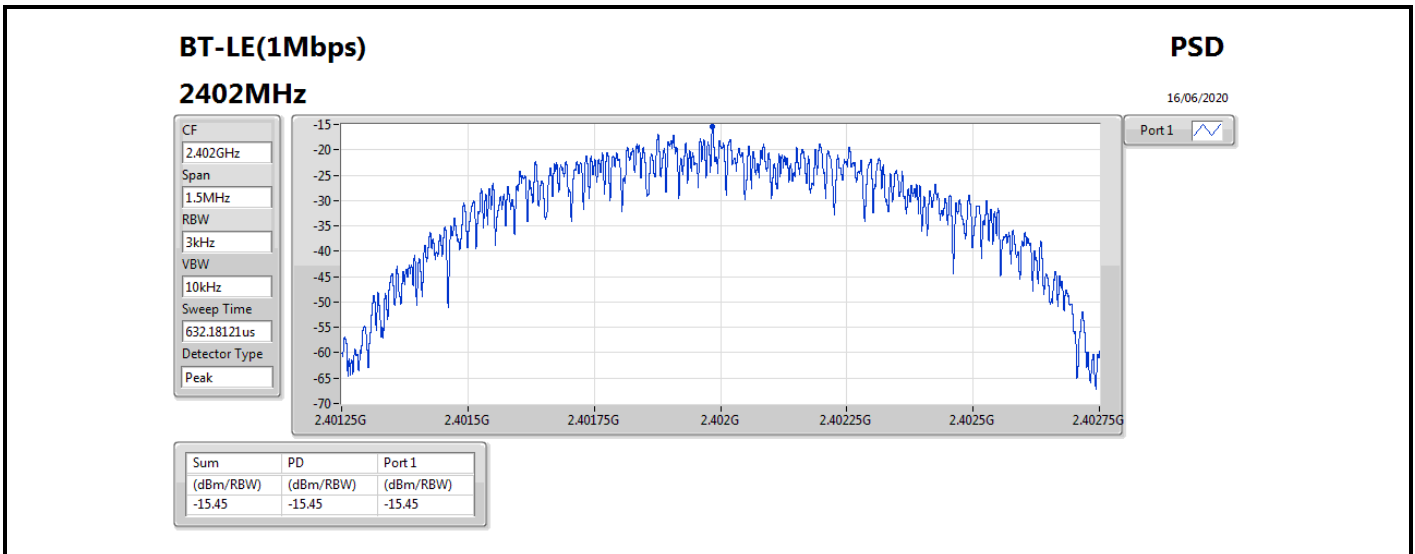


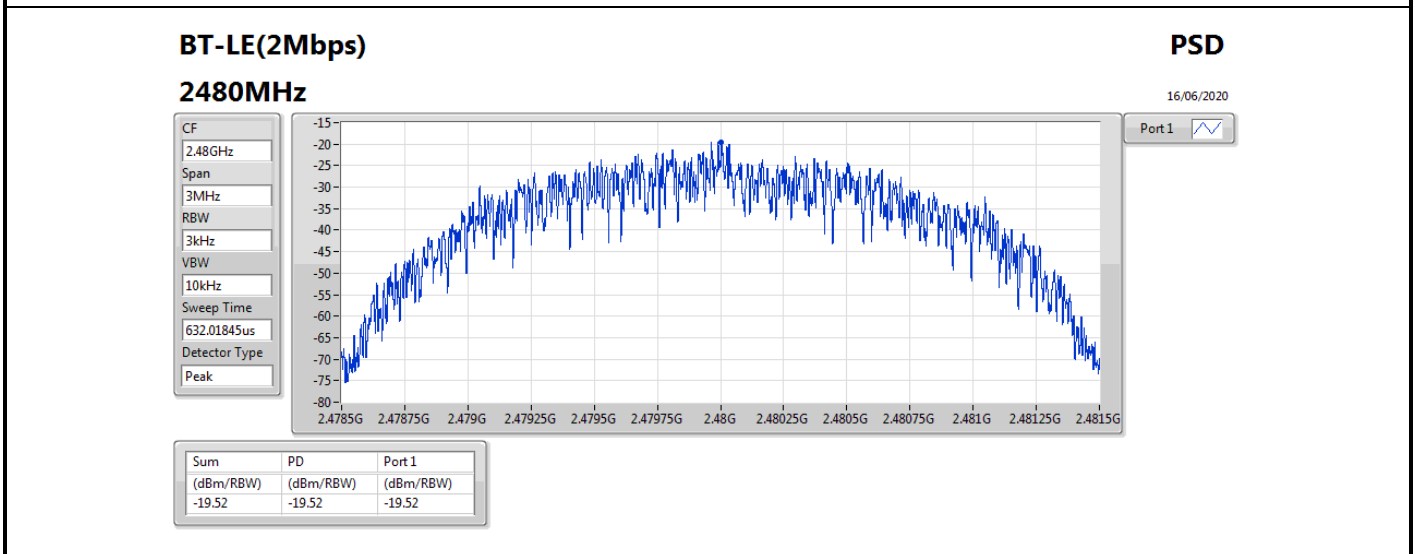
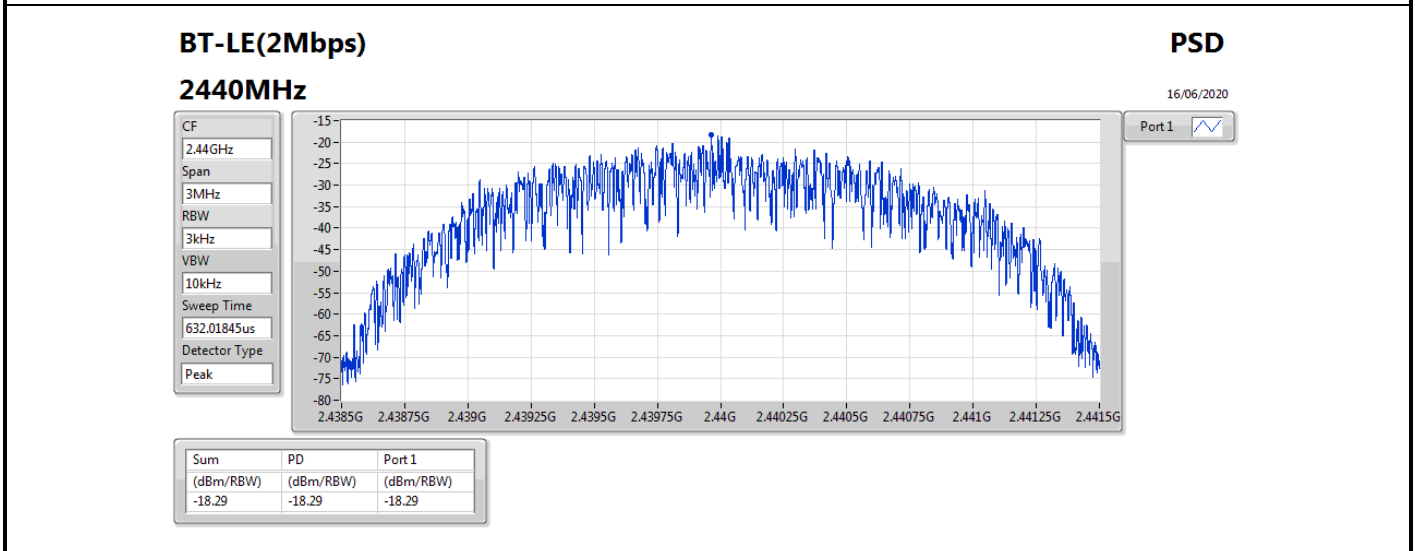
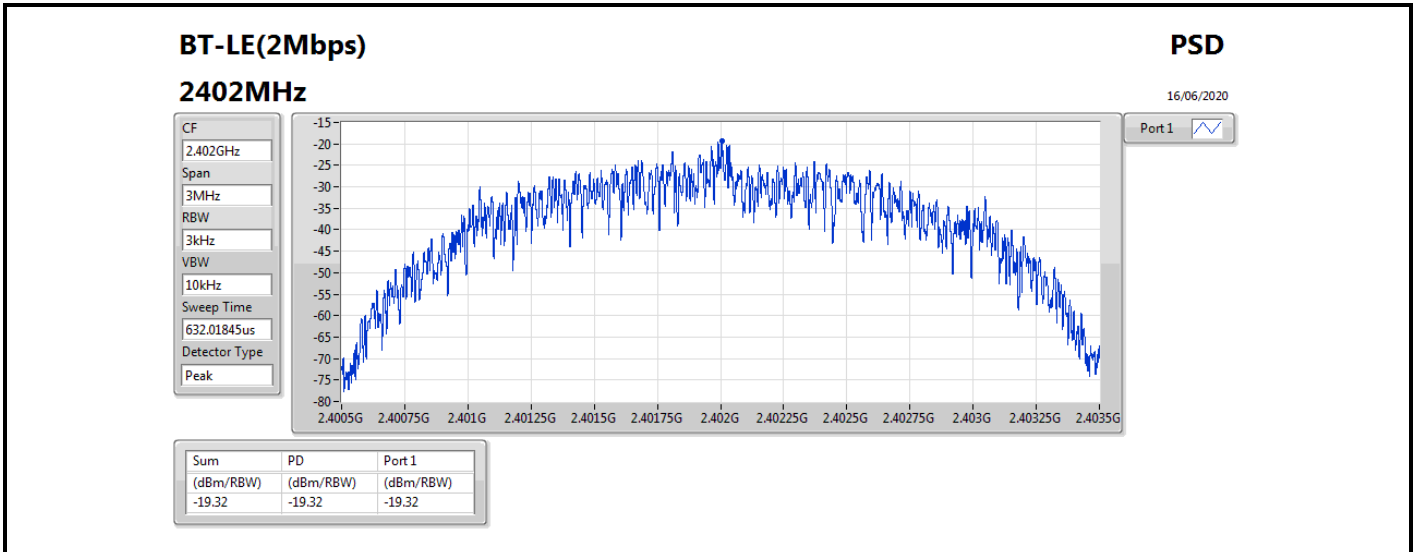
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	1.70	-15.45	8.00
2440MHz	Pass	1.70	-14.97	8.00
2480MHz	Pass	1.70	-16.44	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	1.70	-19.32	8.00
2440MHz	Pass	1.70	-18.29	8.00
2480MHz	Pass	1.70	-19.52	8.00

DG = Directional Gain; RBW=3 kHz;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X power density;







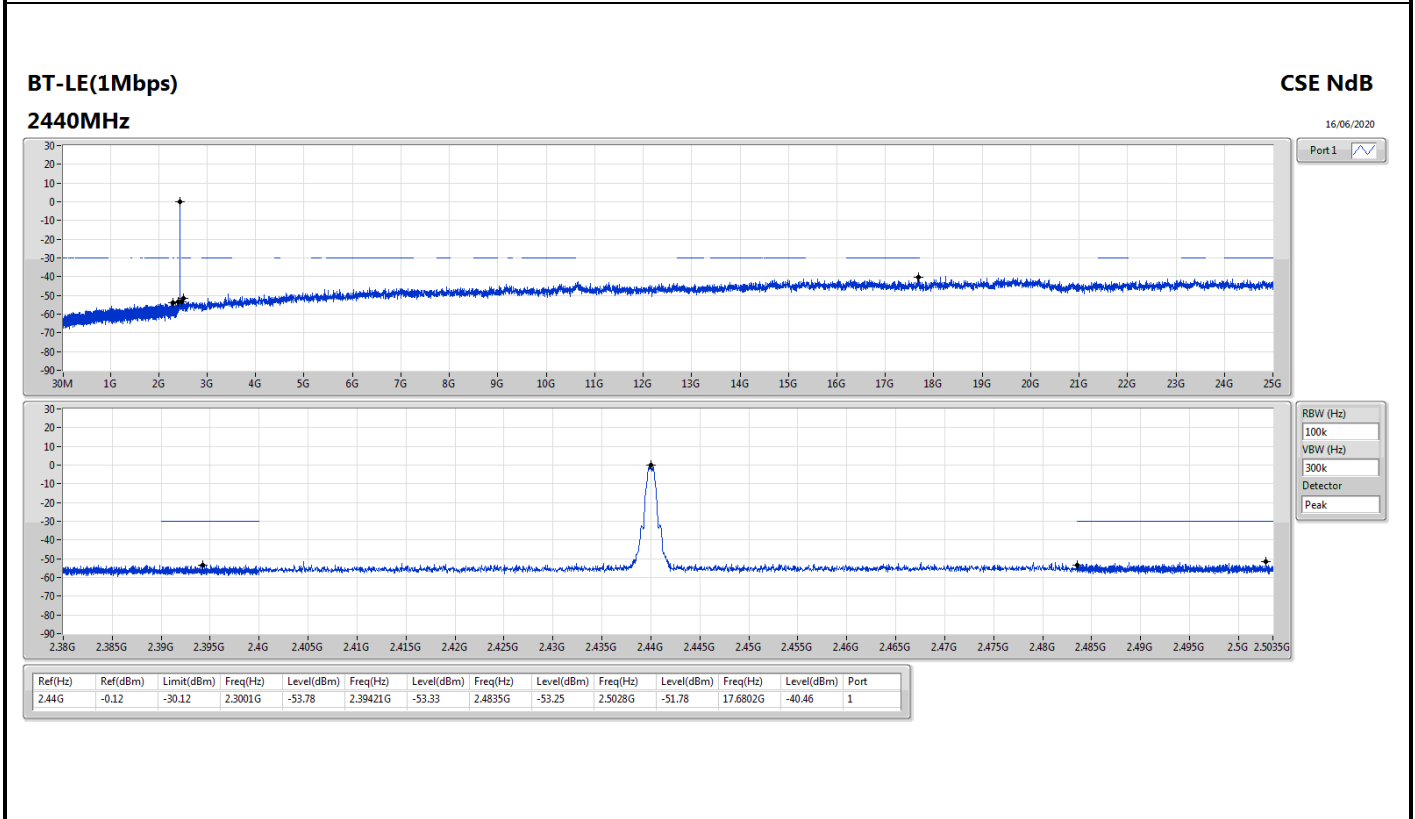
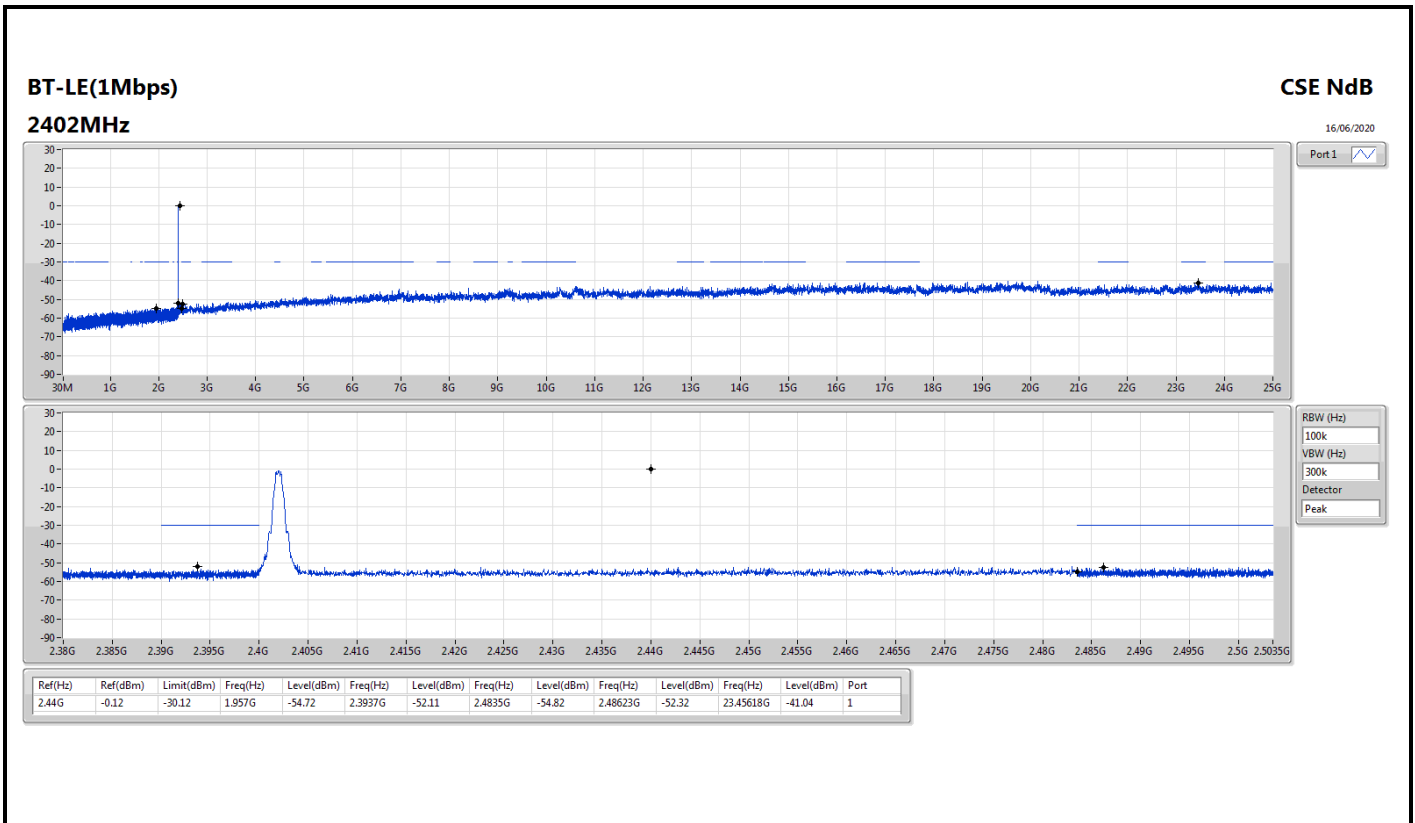
Summary

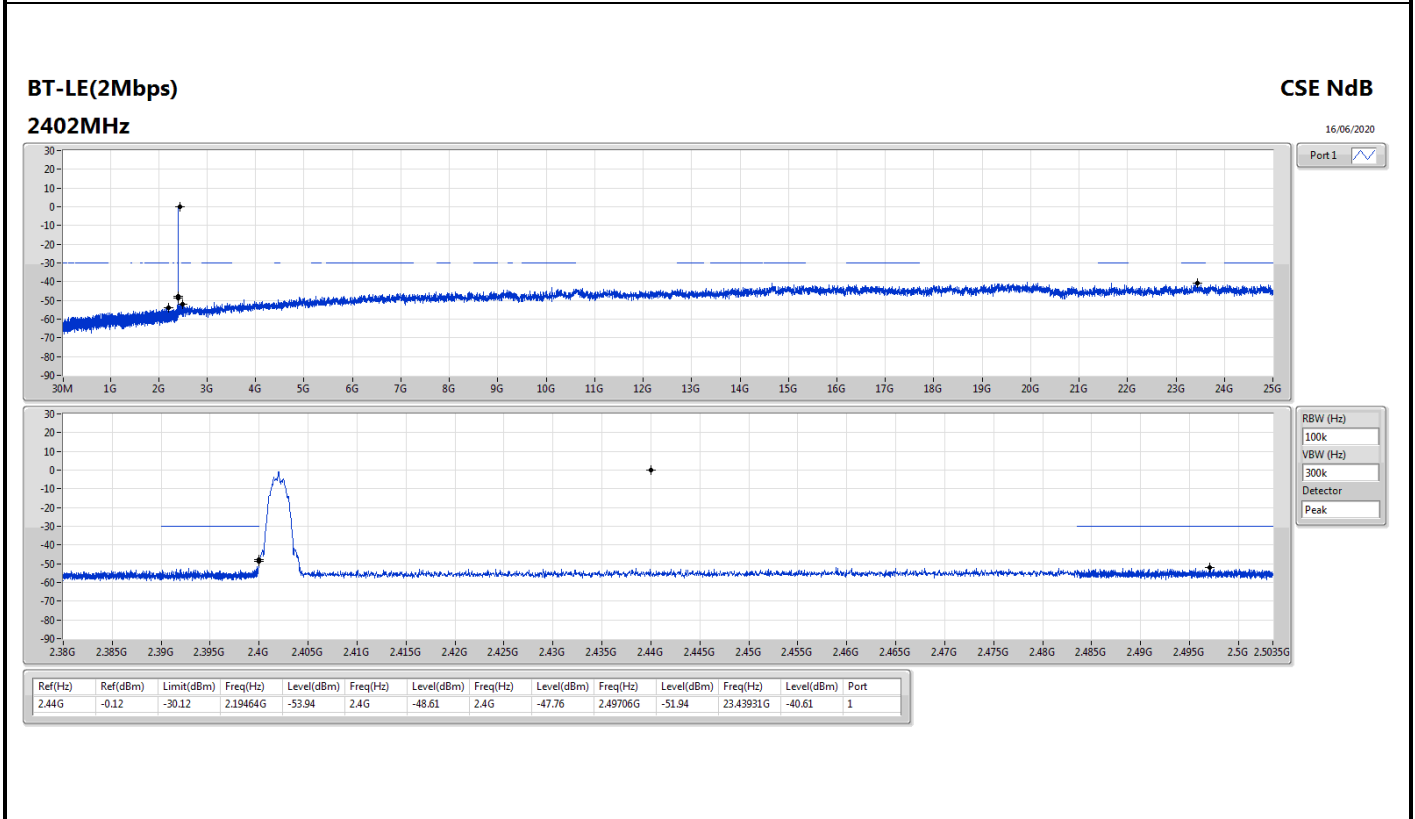
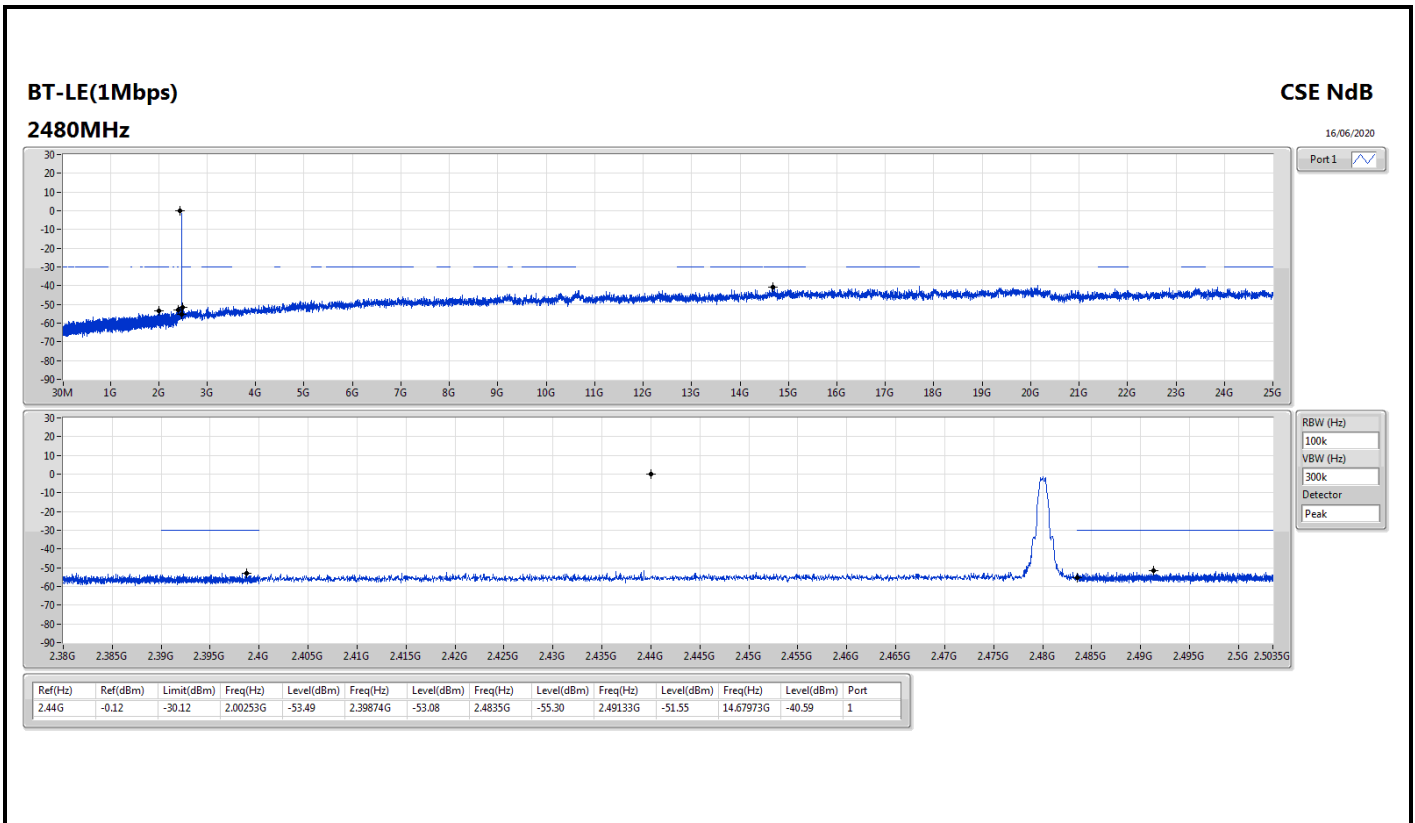
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.44G	-0.12	-30.12	2.00253G	-53.49	2.39874G	-53.08	2.4835G	-55.30	2.49133G	-51.55	14.67973G	-40.59	1
BT-LE(2Mbps)	Pass	2.44G	-0.12	-30.12	2.19464G	-53.94	2.4G	-48.61	2.4G	-47.76	2.49706G	-51.94	23.43931G	-40.61	1

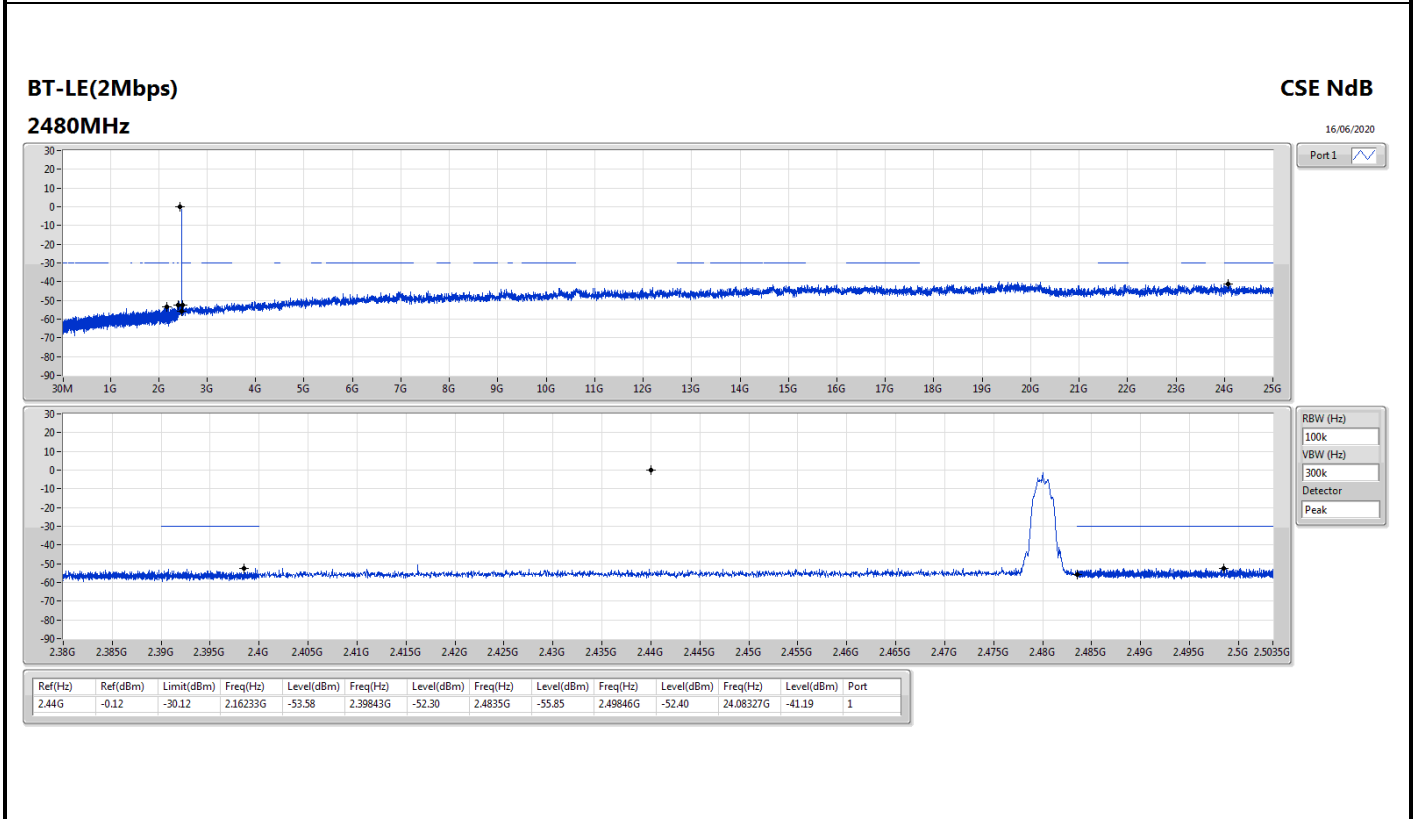
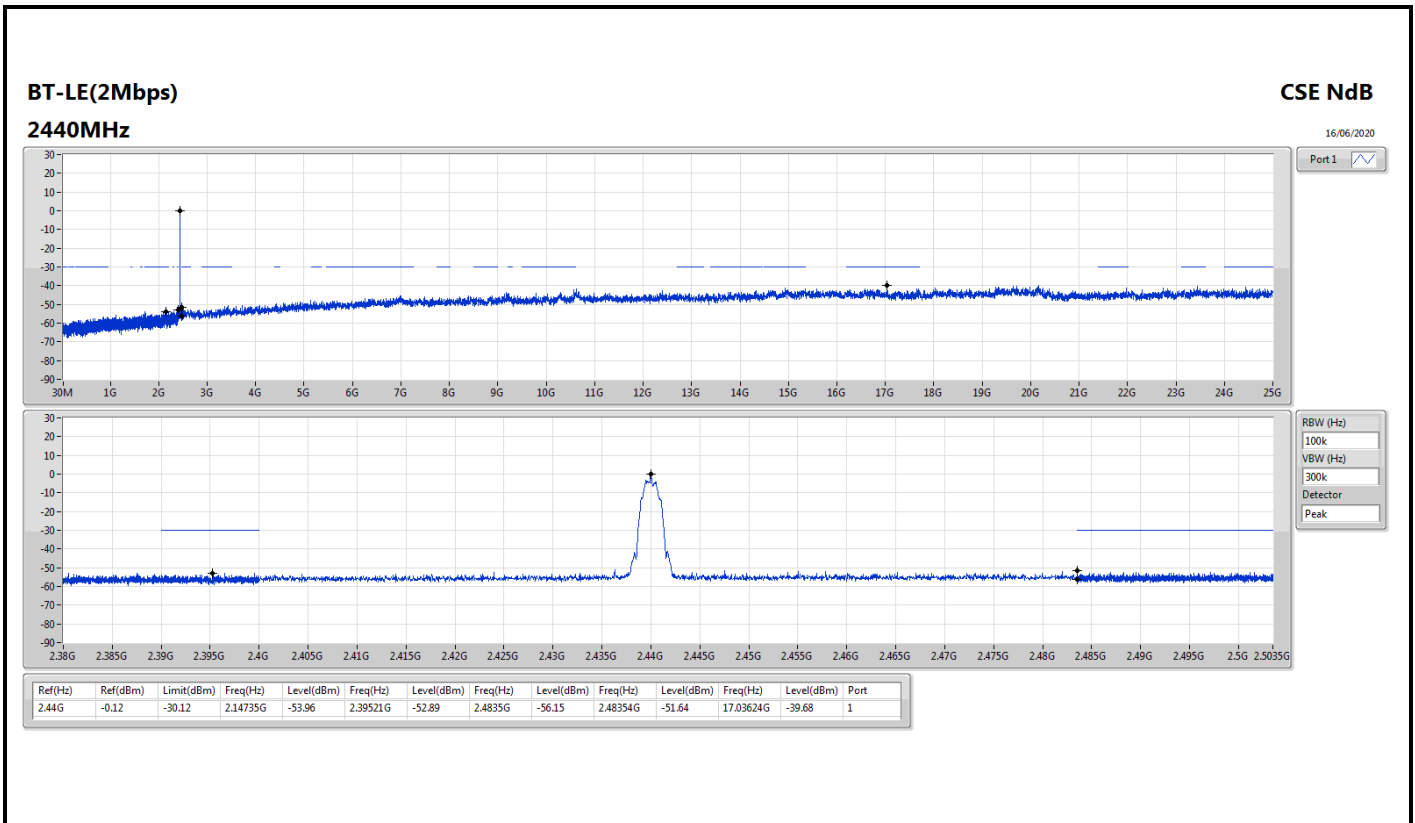


Result

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-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44G	-0.12	-30.12	1.957G	-54.72	2.3937G	-52.11	2.4835G	-54.82	2.48623G	-52.32	23.45618G	-41.04	1
2440MHz	Pass	2.44G	-0.12	-30.12	2.3001G	-53.78	2.39421G	-53.33	2.4835G	-53.25	2.5028G	-51.78	17.6802G	-40.46	1
2480MHz	Pass	2.44G	-0.12	-30.12	2.00253G	-53.49	2.39874G	-53.08	2.4835G	-55.30	2.49133G	-51.55	14.67973G	-40.59	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44G	-0.12	-30.12	2.19464G	-53.94	2.4G	-48.61	2.4G	-47.76	2.49706G	-51.94	23.43931G	-40.61	1
2440MHz	Pass	2.44G	-0.12	-30.12	2.14735G	-53.96	2.39521G	-52.89	2.4835G	-56.15	2.48354G	-51.64	17.03624G	-39.68	1
2480MHz	Pass	2.44G	-0.12	-30.12	2.16233G	-53.58	2.39843G	-52.30	2.4835G	-55.85	2.49846G	-52.40	24.08327G	-41.19	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-LE(2Mbps)	Pass	QP	41.64M	36.83	40.00	-3.17	3	Vertical	273	1.63	-



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	70.74M	34.56	40.00	-5.44	3	Vertical	360	1.00	-
2440MHz	Pass	PK	241.46M	28.13	46.00	-17.87	3	Vertical	360	1.00	-
2440MHz	Pass	PK	412.18M	27.25	46.00	-18.75	3	Vertical	360	1.00	-
2440MHz	Pass	PK	499.48M	29.06	46.00	-16.94	3	Vertical	360	1.00	-
2440MHz	Pass	PK	619.76M	32.56	46.00	-13.44	3	Vertical	360	1.00	-
2440MHz	Pass	QP	41.64M	27.48	40.00	-12.52	3	Vertical	217	1.13	-
2440MHz	Pass	PK	40.6M	32.07	40.00	-7.93	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	147.85M	30.64	43.50	-12.86	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	294.1M	31.34	46.00	-14.66	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	374.05M	31.89	46.00	-14.11	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	516.4M	31.48	46.00	-14.52	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	574.9M	32.70	46.00	-13.30	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	70.74M	33.82	40.00	-6.18	3	Vertical	0	1.00	-
2440MHz	Pass	PK	291.9M	28.78	46.00	-17.22	3	Vertical	0	1.00	-
2440MHz	Pass	PK	412.18M	28.16	46.00	-17.84	3	Vertical	0	1.00	-
2440MHz	Pass	PK	532.46M	30.48	46.00	-15.52	3	Vertical	0	1.00	-
2440MHz	Pass	PK	613.94M	33.05	46.00	-12.95	3	Vertical	0	1.00	-
2440MHz	Pass	QP	42.44M	35.22	40.00	-4.78	3	Vertical	359	1.00	-
2440MHz	Pass	PK	146.4M	33.13	43.50	-10.37	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	293.84M	32.63	46.00	-13.37	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	346.22M	30.80	46.00	-15.20	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	396.66M	31.92	46.00	-14.08	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	547.98M	31.48	46.00	-14.52	3	Horizontal	360	1.00	-
2440MHz	Pass	QP	37.76M	33.05	40.00	-6.95	3	Horizontal	212	2.73	-
2440MHz	Pass	PK	72.68M	33.85	40.00	-6.15	3	Vertical	0	1.00	-
2440MHz	Pass	PK	196.84M	27.75	43.50	-15.75	3	Vertical	0	1.00	-
2440MHz	Pass	PK	338.46M	28.40	46.00	-17.60	3	Vertical	0	1.00	-
2440MHz	Pass	PK	462.62M	29.28	46.00	-16.72	3	Vertical	0	1.00	-
2440MHz	Pass	PK	561.56M	32.88	46.00	-13.12	3	Vertical	0	1.00	-
2440MHz	Pass	QP	41.64M	36.83	40.00	-3.17	3	Vertical	273	1.63	-
2440MHz	Pass	PK	146.4M	32.19	43.50	-11.31	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	286.08M	32.04	46.00	-13.96	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	303.54M	32.28	46.00	-13.72	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	406.36M	30.66	46.00	-15.34	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	557.68M	30.97	46.00	-15.03	3	Horizontal	360	1.00	-
2440MHz	Pass	QP	37.76M	34.90	40.00	-5.10	3	Horizontal	57	1.89	-
2440MHz	Pass	PK	125.06M	33.70	43.50	-9.80	3	Vertical	360	1.00	-
2440MHz	Pass	PK	272.5M	33.75	46.00	-12.25	3	Vertical	360	1.00	-
2440MHz	Pass	PK	311.3M	28.23	46.00	-17.77	3	Vertical	360	1.00	-
2440MHz	Pass	PK	445.16M	28.95	46.00	-17.05	3	Vertical	360	1.00	-
2440MHz	Pass	PK	567.38M	32.80	46.00	-13.20	3	Vertical	360	1.00	-
2440MHz	Pass	QP	53.28M	28.80	40.00	-11.20	3	Vertical	197	2.21	-
2440MHz	Pass	PK	30M	29.87	40.00	-10.13	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	121.18M	37.52	43.50	-5.98	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	266.68M	37.98	46.00	-8.02	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	315.18M	34.21	46.00	-11.79	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	431.58M	30.33	46.00	-15.67	3	Horizontal	0	1.00	-

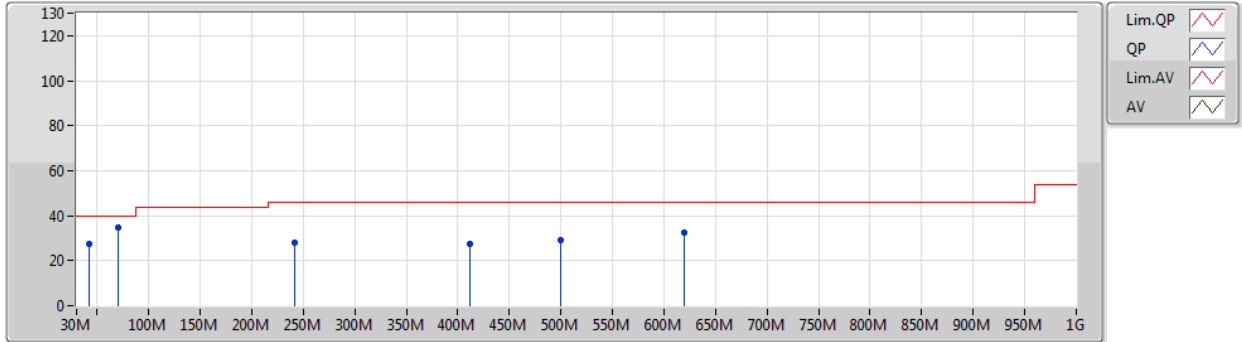


Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2440MHz	Pass	PK	532.46M	36.29	46.00	-9.71	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	125.06M	27.47	43.50	-16.03	3	Vertical	0	1.00	-
2440MHz	Pass	PK	208.48M	27.08	43.50	-16.42	3	Vertical	0	1.00	-
2440MHz	Pass	PK	328.76M	26.25	46.00	-19.75	3	Vertical	0	1.00	-
2440MHz	Pass	PK	466.5M	28.14	46.00	-17.86	3	Vertical	0	1.00	-
2440MHz	Pass	PK	555.74M	30.86	46.00	-15.14	3	Vertical	0	1.00	-
2440MHz	Pass	QP	47.46M	32.72	40.00	-7.28	3	Vertical	23	1.00	-
2440MHz	Pass	PK	47.46M	34.51	40.00	-5.49	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	134.76M	30.66	43.50	-12.84	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	256.98M	30.97	46.00	-15.03	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	326.82M	29.66	46.00	-16.34	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	447.1M	29.49	46.00	-16.51	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	637.22M	31.26	46.00	-14.74	3	Horizontal	360	1.00	-

BT-LE(2Mbps)

21/07/2020

2440MHz_WLC+EXT Battery+Adapter

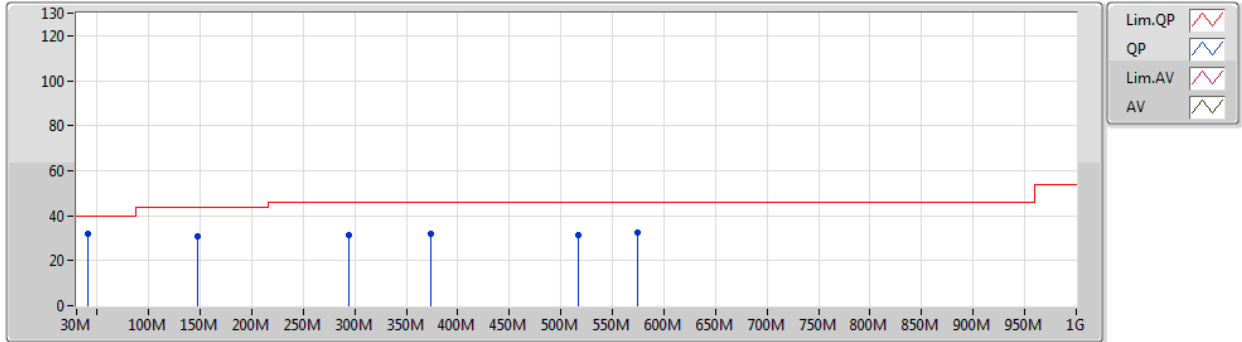


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	70.74M	34.56	40.00	-5.44	-15.11	3	Vertical	360	1.00	-	49.67	11.49	1.24	27.84
PK	241.46M	28.13	46.00	-17.87	-8.11	3	Vertical	360	1.00	-	36.24	16.62	2.36	27.09
PK	412.18M	27.25	46.00	-18.75	-3.07	3	Vertical	360	1.00	-	30.32	21.61	3.13	27.81
PK	499.48M	29.06	46.00	-16.94	-2.05	3	Vertical	360	1.00	-	31.11	22.71	3.52	28.28
PK	619.76M	32.56	46.00	-13.44	-0.19	3	Vertical	360	1.00	-	32.75	24.17	3.94	28.30
QP	41.64M	27.48	40.00	-12.52	-9.51	3	Vertical	217	1.13	-	36.99	16.99	0.94	27.44

BT-LE(2Mbps)

21/07/2020

2440MHz_WLC+EXT Battery+Adapter

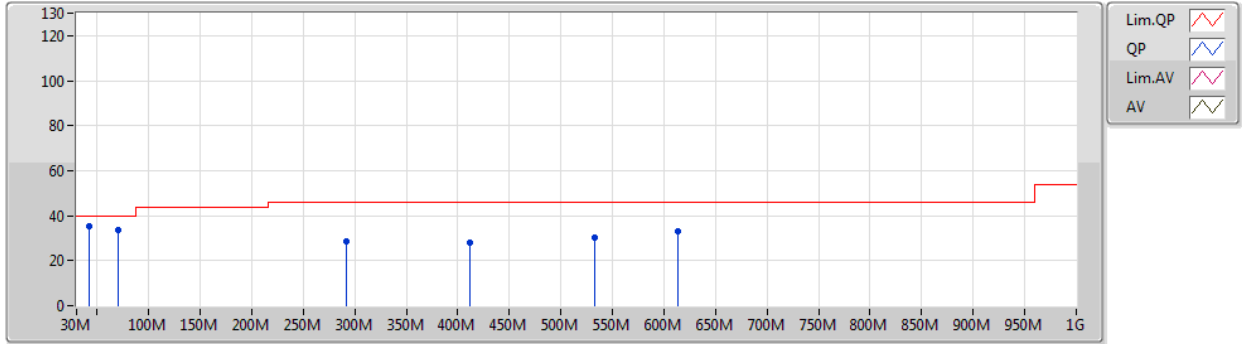


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	40.6M	32.07	40.00	-7.93	-8.80	3	Horizontal	0	1.00	-	40.87	17.66	0.93	27.39
PK	147.85M	30.64	43.50	-12.86	-10.13	3	Horizontal	0	1.00	-	40.77	15.66	1.80	27.59
PK	294.1M	31.34	46.00	-14.66	-6.16	3	Horizontal	0	1.00	-	37.50	18.25	2.63	27.04
PK	374.05M	31.89	46.00	-14.11	-4.46	3	Horizontal	0	1.00	-	36.35	20.09	2.97	27.52
PK	516.4M	31.48	46.00	-14.52	-2.05	3	Horizontal	0	1.00	-	33.53	22.70	3.56	28.31
PK	574.9M	32.70	46.00	-13.30	-0.46	3	Horizontal	0	1.00	-	33.16	24.12	3.76	28.34

BT-LE(2Mbps)

21/07/2020

2440MHz_Wired+EXT Battery+Adapter

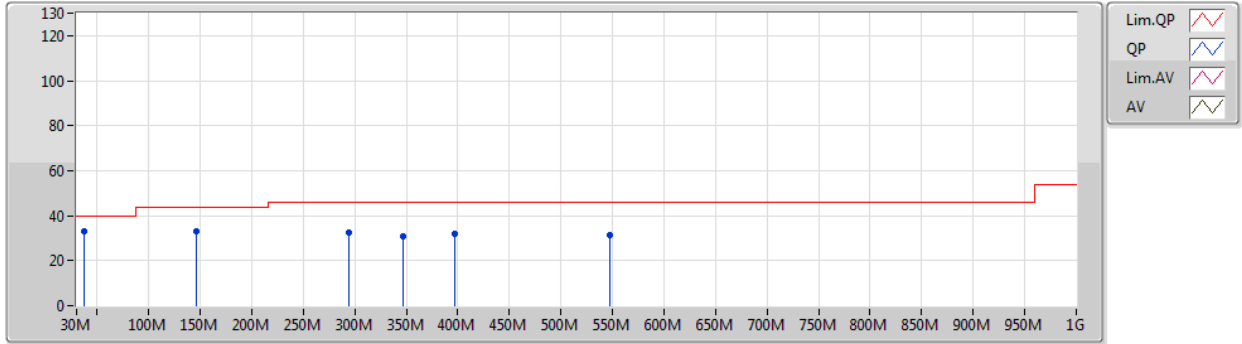


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	70.74M	33.82	40.00	-6.18	-15.11	3	Vertical	0	1.00	-	48.93	11.49	1.24	27.84
PK	291.9M	28.78	46.00	-17.22	-6.20	3	Vertical	0	1.00	-	34.98	18.22	2.62	27.04
PK	412.18M	28.16	46.00	-17.84	-3.07	3	Vertical	0	1.00	-	31.23	21.61	3.13	27.81
PK	532.46M	30.48	46.00	-15.52	-1.71	3	Vertical	0	1.00	-	32.19	23.02	3.60	28.33
PK	613.94M	33.05	46.00	-12.95	-0.34	3	Vertical	0	1.00	-	33.39	24.05	3.92	28.31
QP	42.44M	35.22	40.00	-4.78	-10.10	3	Vertical	359	1.00	-	45.32	16.43	0.95	27.48

BT-LE(2Mbps)

21/07/2020

2440MHz_Wired+EXT Battery+Adapter

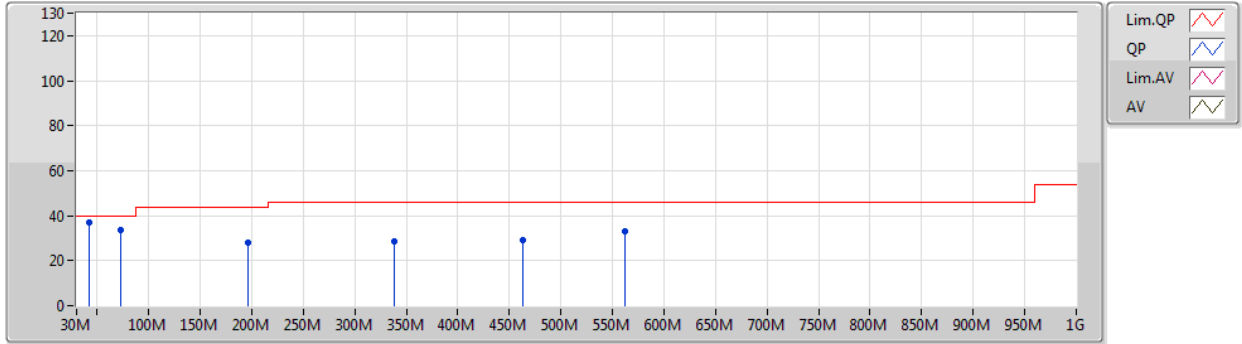


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	146.4M	33.13	43.50	-10.37	-10.13	3	Horizontal	360	1.00	-	43.26	15.67	1.79	27.59
PK	293.84M	32.63	46.00	-13.37	-6.16	3	Horizontal	360	1.00	-	38.79	18.25	2.63	27.04
PK	346.22M	30.80	46.00	-15.20	-5.09	3	Horizontal	360	1.00	-	35.89	19.36	2.85	27.30
PK	396.66M	31.92	46.00	-14.08	-3.76	3	Horizontal	360	1.00	-	35.68	20.87	3.07	27.70
PK	547.98M	31.48	46.00	-14.52	-0.78	3	Horizontal	360	1.00	-	32.26	23.94	3.64	28.36
QP	37.76M	33.05	40.00	-6.95	-7.23	3	Horizontal	212	2.73	-	40.28	19.03	0.89	27.15

BT-LE(2Mbps)

22/07/2020

2440MHz_Gun+EXT Battery+Adapter

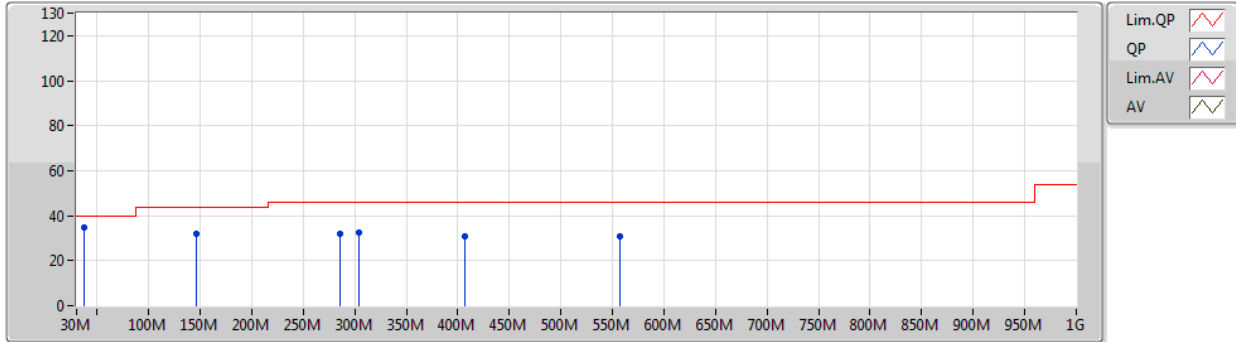


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	72.68M	33.85	40.00	-6.15	-15.05	3	Vertical	0	1.00	-	48.90	11.52	1.26	27.83
PK	196.84M	27.75	43.50	-15.75	-10.86	3	Vertical	0	1.00	-	38.61	14.33	2.12	27.31
PK	338.46M	28.40	46.00	-17.60	-5.40	3	Vertical	0	1.00	-	33.80	19.04	2.82	27.26
PK	462.62M	29.28	46.00	-16.72	-2.53	3	Vertical	0	1.00	-	31.81	22.25	3.34	28.12
PK	561.56M	32.88	46.00	-13.12	-0.69	3	Vertical	0	1.00	-	33.57	23.96	3.70	28.35
QP	41.64M	36.83	40.00	-3.17	-9.51	3	Vertical	273	1.63	-	46.34	16.99	0.94	27.44

BT-LE(2Mbps)

22/07/2020

2440MHz_Gun+EXT Battery+Adapter

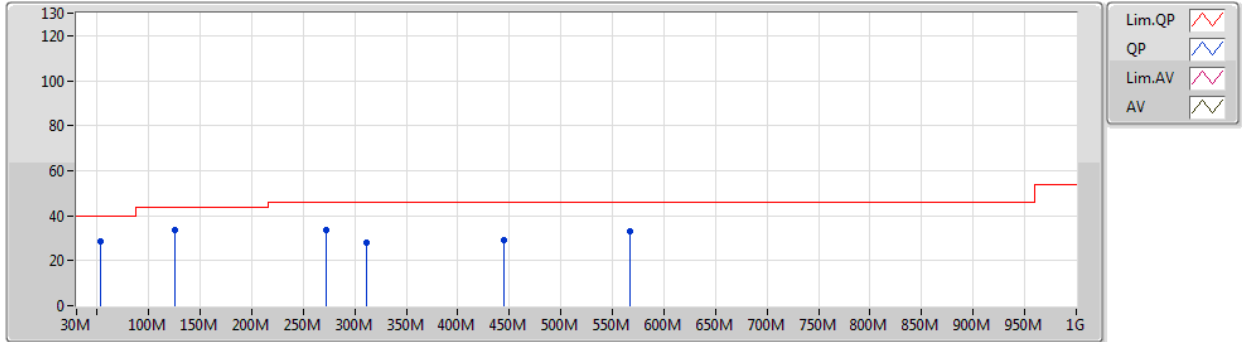


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	146.4M	32.19	43.50	-11.31	-10.13	3	Horizontal	360	1.00	-	42.32	15.67	1.79	27.59
PK	286.08M	32.04	46.00	-13.96	-6.27	3	Horizontal	360	1.00	-	38.31	18.18	2.59	27.04
PK	303.54M	32.28	46.00	-13.72	-5.88	3	Horizontal	360	1.00	-	38.16	18.51	2.67	27.06
PK	406.36M	30.66	46.00	-15.34	-3.34	3	Horizontal	360	1.00	-	34.00	21.32	3.11	27.77
PK	557.68M	30.97	46.00	-15.03	-0.66	3	Horizontal	360	1.00	-	31.63	24.01	3.68	28.35
QP	37.76M	34.90	40.00	-5.10	-7.23	3	Horizontal	57	1.89	-	42.13	19.03	0.89	27.15

BT-LE(2Mbps)

22/07/2020

2440MHz_Gun+EXT Battery+USB

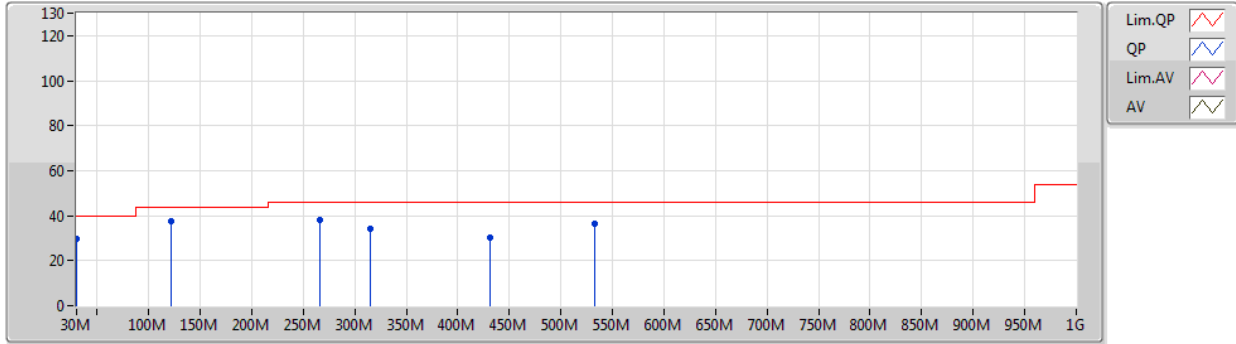


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	125.06M	33.70	43.50	-9.80	-8.83	3	Vertical	360	1.00	-	42.53	17.20	1.66	27.69
PK	272.5M	33.75	46.00	-12.25	-6.43	3	Vertical	360	1.00	-	40.18	18.10	2.52	27.05
PK	311.3M	28.23	46.00	-17.77	-5.70	3	Vertical	360	1.00	-	33.93	18.69	2.71	27.10
PK	445.16M	28.95	46.00	-17.05	-3.01	3	Vertical	360	1.00	-	31.96	21.77	3.26	28.04
PK	567.38M	32.80	46.00	-13.20	-0.70	3	Vertical	360	1.00	-	33.50	23.92	3.73	28.35
QP	53.28M	28.80	40.00	-11.20	-14.45	3	Vertical	197	2.21	-	43.25	12.24	1.07	27.76

BT-LE(2Mbps)

22/07/2020

2440MHz_Gun+EXT Battery+USB

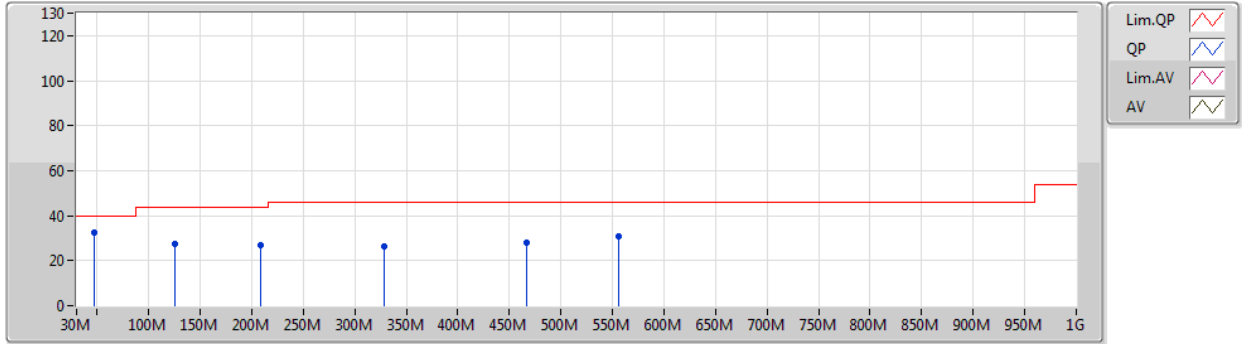


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	29.87	40.00	-10.13	-2.89	3	Horizontal	0	1.00	-	32.76	23.48	0.84	27.21
PK	121.18M	37.52	43.50	-5.98	-8.74	3	Horizontal	0	1.00	-	46.26	17.32	1.64	27.70
PK	266.68M	37.98	46.00	-8.02	-6.12	3	Horizontal	0	1.00	-	44.10	18.44	2.49	27.05
PK	315.18M	34.21	46.00	-11.79	-5.68	3	Horizontal	0	1.00	-	39.89	18.73	2.72	27.13
PK	431.58M	30.33	46.00	-15.67	-3.04	3	Horizontal	0	1.00	-	33.37	21.69	3.21	27.94
PK	532.46M	36.29	46.00	-9.71	-1.71	3	Horizontal	0	1.00	-	38.00	23.02	3.60	28.33

BT-LE(2Mbps)

10/09/2020

2440MHz_WLC Gun+EXT Battery+Adapter

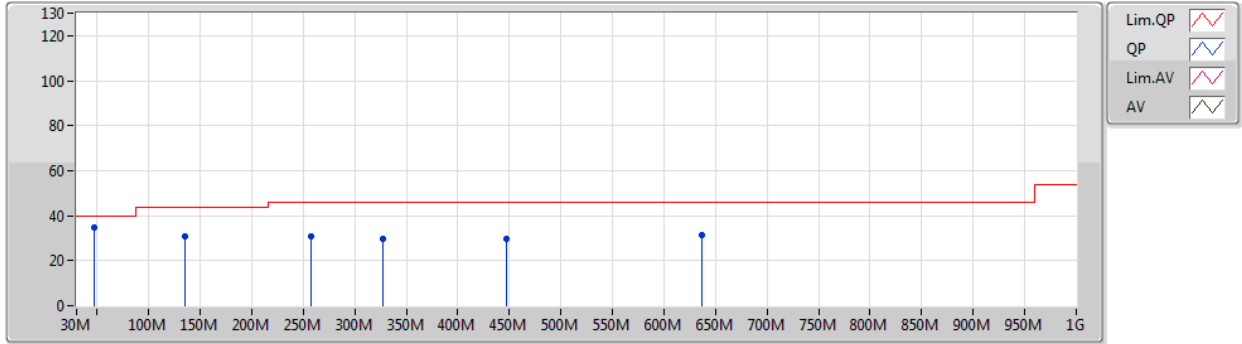


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	125.06M	27.47	43.50	-16.03	-8.13	3	Vertical	0	1.00	-	35.60	17.31	1.83	27.27
PK	208.48M	27.08	43.50	-16.42	-10.20	3	Vertical	0	1.00	-	37.28	14.33	2.35	26.88
PK	328.76M	26.25	46.00	-19.75	-4.97	3	Vertical	0	1.00	-	31.22	18.83	3.02	26.82
PK	466.5M	28.14	46.00	-17.86	-1.70	3	Vertical	0	1.00	-	29.84	22.52	3.50	27.72
PK	555.74M	30.86	46.00	-15.14	0.05	3	Vertical	0	1.00	-	30.81	24.15	3.92	28.02
QP	47.46M	32.72	40.00	-7.28	-12.42	3	Vertical	23	1.00	-	45.14	14.05	1.05	27.52

BT-LE(2Mbps)

10/09/2020

2440MHz_WLC Gun+EXT Battery+Adapter



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	47.46M	34.51	40.00	-5.49	-12.42	3	Horizontal	360	1.00	-	46.93	14.05	1.05	27.52
PK	134.76M	30.66	43.50	-12.84	-8.67	3	Horizontal	360	1.00	-	39.33	16.71	1.87	27.25
PK	256.98M	30.97	46.00	-15.03	-5.69	3	Horizontal	360	1.00	-	36.66	18.37	2.64	26.70
PK	326.82M	29.66	46.00	-16.34	-4.99	3	Horizontal	360	1.00	-	34.65	18.81	3.01	26.81
PK	447.1M	29.49	46.00	-16.51	-2.27	3	Horizontal	360	1.00	-	31.76	22.00	3.39	27.66
PK	637.22M	31.26	46.00	-14.74	0.52	3	Horizontal	360	1.00	-	30.74	24.35	4.25	28.08



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-LE(1Mbps)	Pass	AV	2.4836G	49.19	54.00	-4.81	3	Horizontal	345	1.12	-
BT-LE(2Mbps)	Pass	AV	2.4928G	50.04	54.00	-3.96	3	Vertical	120	1.29	-



Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3702G	48.53	54.00	-5.47	3	Vertical	105	2.40	-
2402MHz	Pass	AV	2.402G	93.69	Inf	-Inf	3	Vertical	105	2.40	-
2402MHz	Pass	PK	2.383G	59.95	74.00	-14.05	3	Vertical	105	2.40	-
2402MHz	Pass	PK	2.402G	95.07	Inf	-Inf	3	Vertical	105	2.40	-
2402MHz	Pass	AV	2.3654G	48.61	54.00	-5.39	3	Horizontal	346	1.14	-
2402MHz	Pass	AV	2.402G	91.66	Inf	-Inf	3	Horizontal	346	1.14	-
2402MHz	Pass	PK	2.366G	59.49	74.00	-14.51	3	Horizontal	346	1.14	-
2402MHz	Pass	PK	2.402G	93.11	Inf	-Inf	3	Horizontal	346	1.14	-
2402MHz	Pass	AV	4.8118G	33.50	54.00	-20.50	3	Vertical	79	2.41	-
2402MHz	Pass	PK	4.79452G	46.10	74.00	-27.90	3	Vertical	79	2.41	-
2402MHz	Pass	AV	4.807G	33.46	54.00	-20.54	3	Horizontal	84	2.38	-
2402MHz	Pass	PK	4.79656G	45.66	74.00	-28.34	3	Horizontal	84	2.38	-
2440MHz	Pass	AV	2.3708G	48.47	54.00	-5.53	3	Vertical	119	1.39	-
2440MHz	Pass	AV	2.44G	94.81	Inf	-Inf	3	Vertical	119	1.39	-
2440MHz	Pass	AV	2.4848G	48.89	54.00	-5.11	3	Vertical	119	1.39	-
2440MHz	Pass	PK	2.3788G	59.58	74.00	-14.42	3	Vertical	119	1.39	-
2440MHz	Pass	PK	2.4404G	96.23	Inf	-Inf	3	Vertical	119	1.39	-
2440MHz	Pass	PK	2.4948G	60.18	74.00	-13.82	3	Vertical	119	1.39	-
2440MHz	Pass	AV	2.3528G	48.55	54.00	-5.45	3	Horizontal	109	1.00	-
2440MHz	Pass	AV	2.44G	92.10	Inf	-Inf	3	Horizontal	109	1.00	-
2440MHz	Pass	AV	2.4992G	48.95	54.00	-5.05	3	Horizontal	109	1.00	-
2440MHz	Pass	PK	2.3716G	59.60	74.00	-14.40	3	Horizontal	109	1.00	-
2440MHz	Pass	PK	2.4404G	93.53	Inf	-Inf	3	Horizontal	109	1.00	-
2440MHz	Pass	PK	2.4972G	59.64	74.00	-14.36	3	Horizontal	109	1.00	-
2440MHz	Pass	AV	4.89302G	33.81	54.00	-20.19	3	Vertical	89	1.79	-
2440MHz	Pass	PK	4.8881G	45.77	74.00	-28.23	3	Vertical	89	1.79	-
2440MHz	Pass	AV	4.87328G	33.94	54.00	-20.06	3	Horizontal	324	2.02	-
2440MHz	Pass	PK	4.8713G	45.81	74.00	-28.19	3	Horizontal	324	2.02	-
2480MHz	Pass	AV	2.48G	94.11	Inf	-Inf	3	Vertical	120	1.00	-
2480MHz	Pass	AV	2.499G	49.06	54.00	-4.94	3	Vertical	120	1.00	-
2480MHz	Pass	PK	2.4798G	95.55	Inf	-Inf	3	Vertical	120	1.00	-
2480MHz	Pass	PK	2.4858G	59.85	74.00	-14.15	3	Vertical	120	1.00	-
2480MHz	Pass	AV	2.48G	92.95	Inf	-Inf	3	Horizontal	345	1.12	-
2480MHz	Pass	AV	2.4836G	49.19	54.00	-4.81	3	Horizontal	345	1.12	-
2480MHz	Pass	PK	2.4798G	94.46	Inf	-Inf	3	Horizontal	345	1.12	-
2480MHz	Pass	PK	2.484G	59.80	74.00	-14.20	3	Horizontal	345	1.12	-
2480MHz	Pass	AV	4.951G	34.20	54.00	-19.80	3	Vertical	40	2.00	-
2480MHz	Pass	PK	4.96684G	46.35	74.00	-27.65	3	Vertical	40	2.00	-
2480MHz	Pass	AV	4.96918G	34.08	54.00	-19.92	3	Horizontal	336	1.53	-
2480MHz	Pass	PK	4.9711G	46.93	74.00	-27.07	3	Horizontal	336	1.53	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.356G	49.47	54.00	-4.53	3	Vertical	110	3.00	-
2402MHz	Pass	AV	2.402G	92.76	Inf	-Inf	3	Vertical	110	3.00	-
2402MHz	Pass	PK	2.381G	59.99	74.00	-14.01	3	Vertical	110	3.00	-
2402MHz	Pass	PK	2.402G	95.83	Inf	-Inf	3	Vertical	110	3.00	-
2402MHz	Pass	AV	2.3694G	49.51	54.00	-4.49	3	Horizontal	343	1.15	-
2402MHz	Pass	AV	2.402G	91.00	Inf	-Inf	3	Horizontal	343	1.15	-

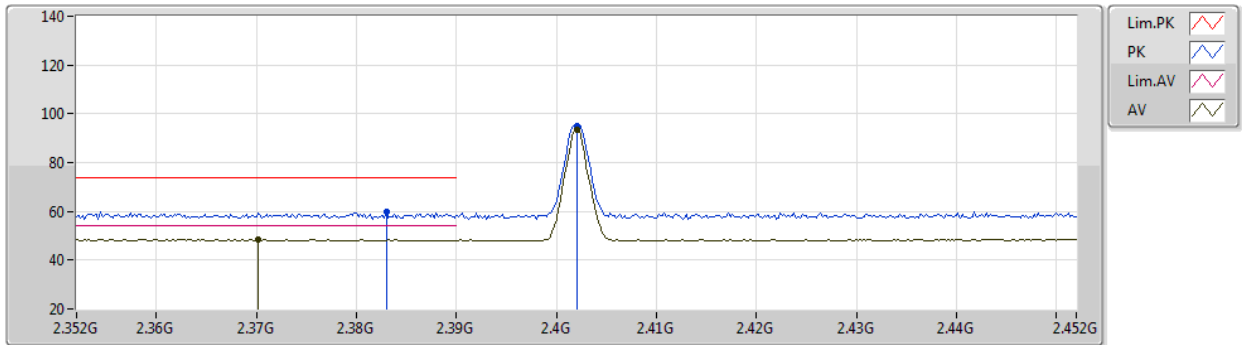


Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2402MHz	Pass	PK	2.3586G	60.18	74.00	-13.82	3	Horizontal	343	1.15	-
2402MHz	Pass	PK	2.402G	94.11	Inf	-Inf	3	Horizontal	343	1.15	-
2402MHz	Pass	AV	4.79224G	35.09	54.00	-18.91	3	Vertical	290	1.20	-
2402MHz	Pass	PK	4.79986G	45.74	74.00	-28.26	3	Vertical	290	1.20	-
2402MHz	Pass	AV	4.79344G	35.13	54.00	-18.87	3	Horizontal	5	1.66	-
2402MHz	Pass	PK	4.80172G	45.45	74.00	-28.55	3	Horizontal	5	1.66	-
2440MHz	Pass	AV	2.3532G	49.30	54.00	-4.70	3	Vertical	120	1.29	-
2440MHz	Pass	AV	2.44G	94.03	Inf	-Inf	3	Vertical	120	1.29	-
2440MHz	Pass	AV	2.4928G	50.04	54.00	-3.96	3	Vertical	120	1.29	-
2440MHz	Pass	PK	2.3624G	59.80	74.00	-14.20	3	Vertical	120	1.29	-
2440MHz	Pass	PK	2.4404G	97.00	Inf	-Inf	3	Vertical	120	1.29	-
2440MHz	Pass	PK	2.4896G	60.29	74.00	-13.71	3	Vertical	120	1.29	-
2440MHz	Pass	AV	2.3516G	49.83	54.00	-4.17	3	Horizontal	107	1.00	-
2440MHz	Pass	AV	2.44G	90.90	Inf	-Inf	3	Horizontal	107	1.00	-
2440MHz	Pass	AV	2.49G	49.89	54.00	-4.11	3	Horizontal	107	1.00	-
2440MHz	Pass	PK	2.35G	59.91	74.00	-14.09	3	Horizontal	107	1.00	-
2440MHz	Pass	PK	2.4404G	93.98	Inf	-Inf	3	Horizontal	107	1.00	-
2440MHz	Pass	PK	2.4888G	60.25	74.00	-13.75	3	Horizontal	107	1.00	-
2440MHz	Pass	AV	4.89248G	35.76	54.00	-18.24	3	Vertical	349	2.48	-
2440MHz	Pass	PK	4.8725G	46.31	74.00	-27.69	3	Vertical	349	2.48	-
2440MHz	Pass	AV	4.89032G	35.25	54.00	-18.75	3	Horizontal	15	1.89	-
2440MHz	Pass	PK	4.88972G	45.73	74.00	-28.27	3	Horizontal	15	1.89	-
2480MHz	Pass	AV	2.48G	93.02	Inf	-Inf	3	Vertical	119	0.99	-
2480MHz	Pass	AV	2.4868G	50.02	54.00	-3.98	3	Vertical	119	0.99	-
2480MHz	Pass	PK	2.4796G	96.10	Inf	-Inf	3	Vertical	119	0.99	-
2480MHz	Pass	PK	2.486G	59.85	74.00	-14.15	3	Vertical	119	0.99	-
2480MHz	Pass	AV	2.48G	91.91	Inf	-Inf	3	Horizontal	342	1.13	-
2480MHz	Pass	AV	2.4932G	49.81	54.00	-4.19	3	Horizontal	342	1.13	-
2480MHz	Pass	PK	2.4796G	95.02	Inf	-Inf	3	Horizontal	342	1.13	-
2480MHz	Pass	PK	2.497G	60.08	74.00	-13.92	3	Horizontal	342	1.13	-
2480MHz	Pass	AV	4.95358G	35.63	54.00	-18.37	3	Vertical	133	1.49	-
2480MHz	Pass	PK	4.95412G	46.21	74.00	-27.79	3	Vertical	133	1.49	-
2480MHz	Pass	AV	4.96588G	36.00	54.00	-18.00	3	Horizontal	253	1.48	-
2480MHz	Pass	PK	4.9573G	46.48	74.00	-27.52	3	Horizontal	253	1.48	-

BT-LE(1Mbps)

17/06/2020

2402MHz_TX

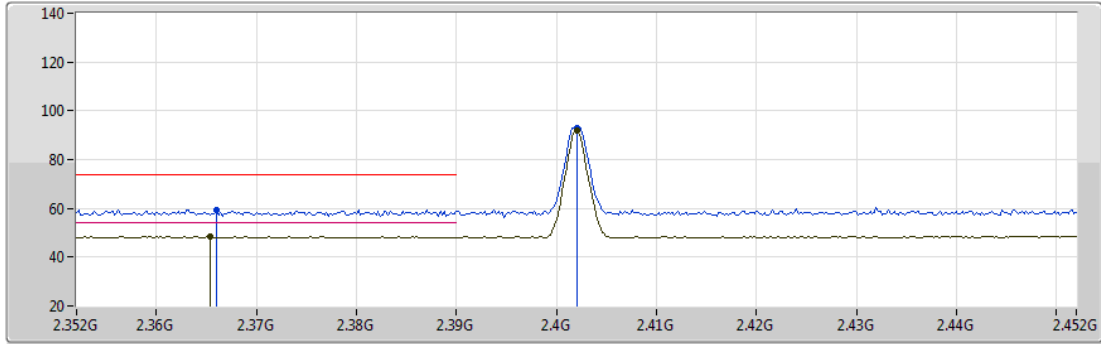


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3702G	48.53	54.00	-5.47	35.58	3	Vertical	105	2.40	-	12.95	29.64	5.94	-
AV	2.402G	93.69	Inf	-Inf	35.67	3	Vertical	105	2.40	-	58.02	29.71	5.96	-
PK	2.383G	59.95	74.00	-14.05	35.62	3	Vertical	105	2.40	-	24.33	29.67	5.95	-
PK	2.402G	95.07	Inf	-Inf	35.67	3	Vertical	105	2.40	-	59.40	29.71	5.96	-

BT-LE(1Mbps)

17/06/2020

2402MHz_TX

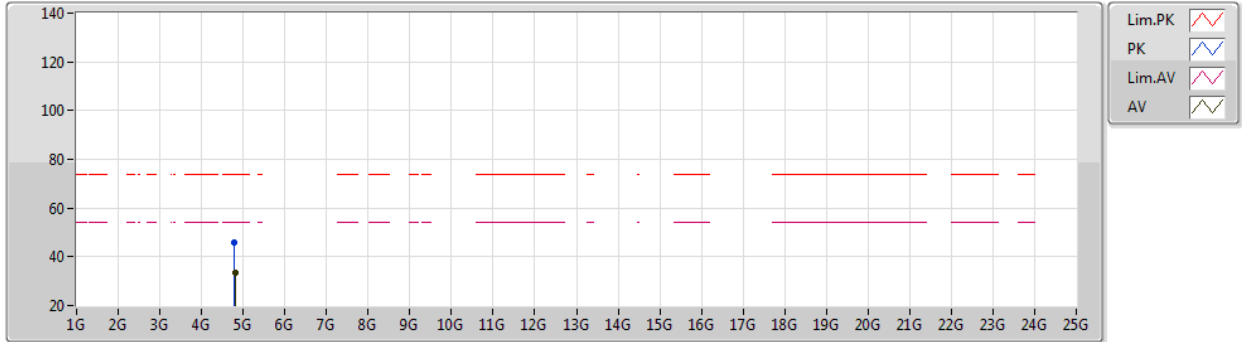


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3654G	48.61	54.00	-5.39	35.56	3	Horizontal	346	1.14	-	13.05	29.63	5.93	-
AV	2.402G	91.66	Inf	-Inf	35.67	3	Horizontal	346	1.14	-	55.99	29.71	5.96	-
PK	2.366G	59.49	74.00	-14.51	35.56	3	Horizontal	346	1.14	-	23.93	29.63	5.93	-
PK	2.402G	93.11	Inf	-Inf	35.67	3	Horizontal	346	1.14	-	57.44	29.71	5.96	-

BT-LE(1Mbps)

17/06/2020

2402MHz_TX

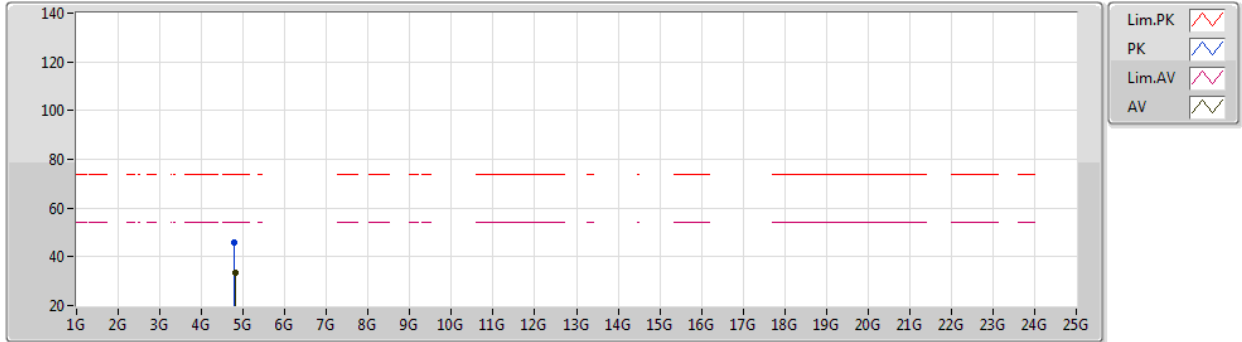


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.8118G	33.50	54.00	-20.50	7.98	3	Vertical	79	2.41	-	25.52	33.62	8.26	33.90
PK	4.79452G	46.10	74.00	-27.90	7.91	3	Vertical	79	2.41	-	38.19	33.57	8.25	33.91

BT-LE(1Mbps)

17/06/2020

2402MHz_TX

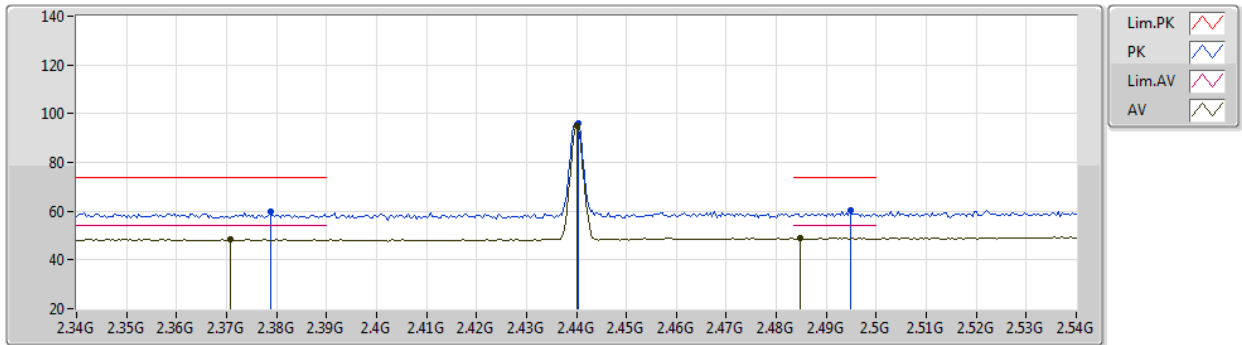


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.807G	33.46	54.00	-20.54	7.95	3	Horizontal	84	2.38	-	25.51	33.61	8.25	33.91
PK	4.79656G	45.66	74.00	-28.34	7.92	3	Horizontal	84	2.38	-	37.74	33.58	8.25	33.91

BT-LE(1Mbps)

17/06/2020

2440MHz_TX

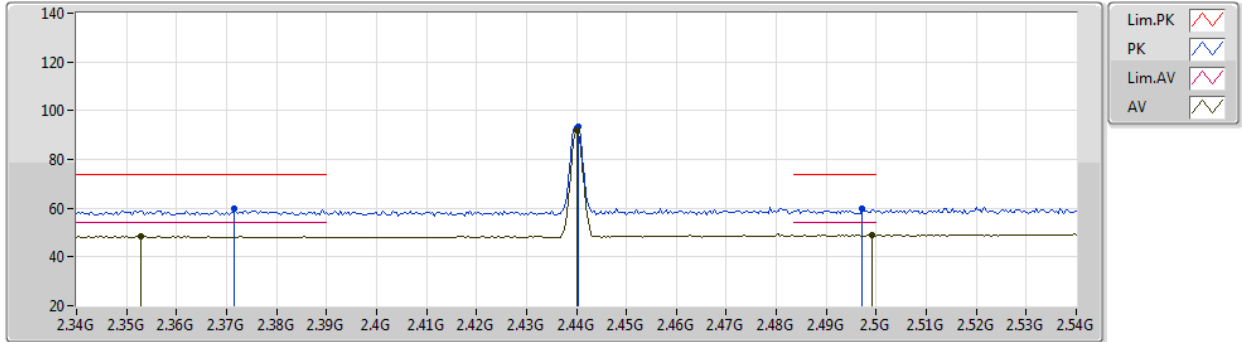


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3708G	48.47	54.00	-5.53	35.58	3	Vertical	119	1.39	-	12.89	29.64	5.94	-
AV	2.44G	94.81	Inf	-Inf	35.91	3	Vertical	119	1.39	-	58.90	29.90	6.01	-
AV	2.4848G	48.89	54.00	-5.11	36.18	3	Vertical	119	1.39	-	12.71	30.12	6.06	-
PK	2.3788G	59.58	74.00	-14.42	35.60	3	Vertical	119	1.39	-	23.98	29.66	5.94	-
PK	2.4404G	96.23	Inf	-Inf	35.91	3	Vertical	119	1.39	-	60.32	29.90	6.01	-
PK	2.4948G	60.18	74.00	-13.82	36.24	3	Vertical	119	1.39	-	23.94	30.17	6.07	-

BT-LE(1Mbps)

17/06/2020

2440MHz_TX



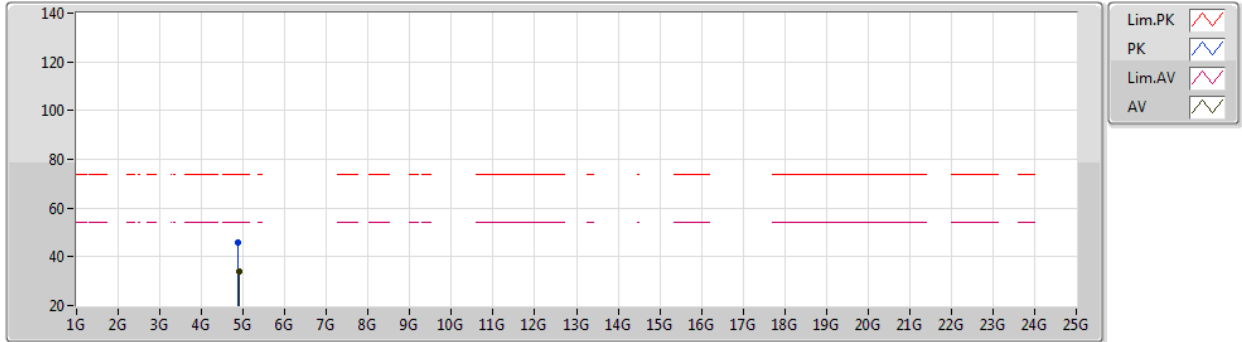
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3528G	48.55	54.00	-5.45	35.53	3	Horizontal	109	1.00	-	13.02	29.61	5.92	-
AV	2.44G	92.10	Inf	-Inf	35.91	3	Horizontal	109	1.00	-	56.19	29.90	6.01	-
AV	2.4992G	48.95	54.00	-5.05	36.28	3	Horizontal	109	1.00	-	12.67	30.20	6.08	-
PK	2.3716G	59.60	74.00	-14.40	35.58	3	Horizontal	109	1.00	-	24.02	29.64	5.94	-
PK	2.4404G	93.53	Inf	-Inf	35.91	3	Horizontal	109	1.00	-	57.62	29.90	6.01	-
PK	2.4972G	59.64	74.00	-14.36	36.27	3	Horizontal	109	1.00	-	23.37	30.19	6.08	-



BT-LE(1Mbps)

17/06/2020

2440MHz_TX

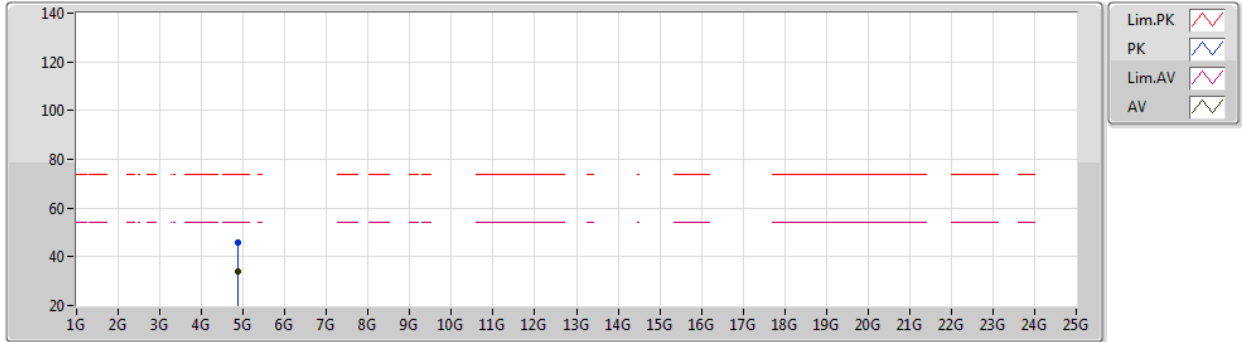


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.89302G	33.81	54.00	-20.19	8.24	3	Vertical	89	1.79	-	25.57	33.79	8.31	33.86
PK	4.8881G	45.77	74.00	-28.23	8.22	3	Vertical	89	1.79	-	37.55	33.78	8.31	33.87

BT-LE(1Mbps)

17/06/2020

2440MHz_TX

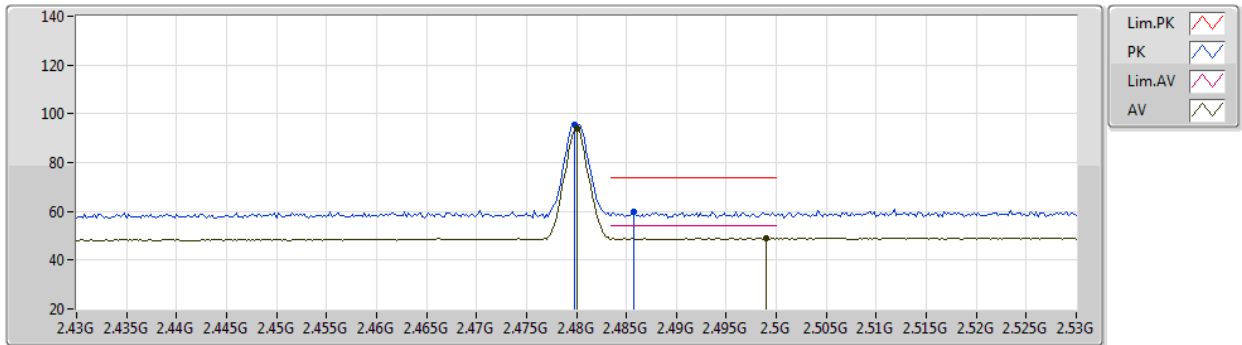


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87328G	33.94	54.00	-20.06	8.18	3	Horizontal	324	2.02	-	25.76	33.75	8.30	33.87
PK	4.8713G	45.81	74.00	-28.19	8.17	3	Horizontal	324	2.02	-	37.64	33.74	8.30	33.87

BT-LE(1Mbps)

17/06/2020

2480MHz_TX

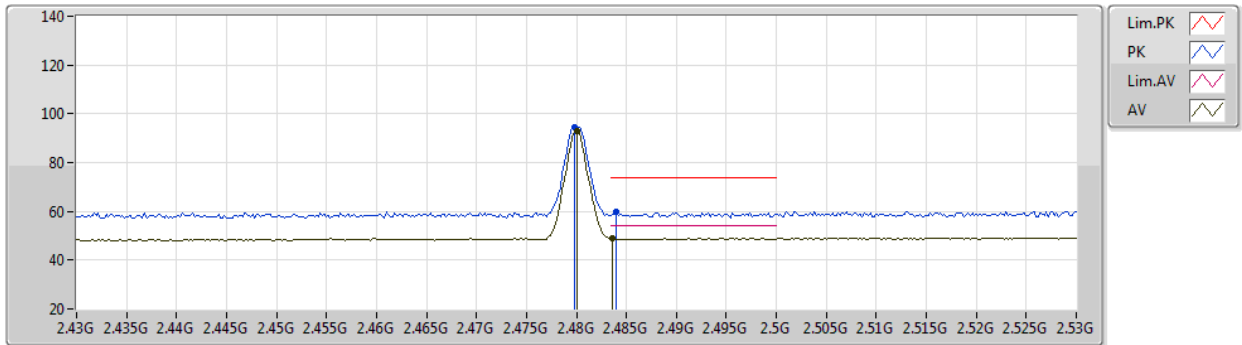


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	94.11	Inf	-Inf	36.16	3	Vertical	120	1.00	-	57.95	30.10	6.06	-
AV	2.499G	49.06	54.00	-4.94	36.28	3	Vertical	120	1.00	-	12.78	30.20	6.08	-
PK	2.4798G	95.55	Inf	-Inf	36.16	3	Vertical	120	1.00	-	59.39	30.10	6.06	-
PK	2.4858G	59.85	74.00	-14.15	36.19	3	Vertical	120	1.00	-	23.66	30.13	6.06	-

BT-LE(1Mbps)

17/06/2020

2480MHz_TX

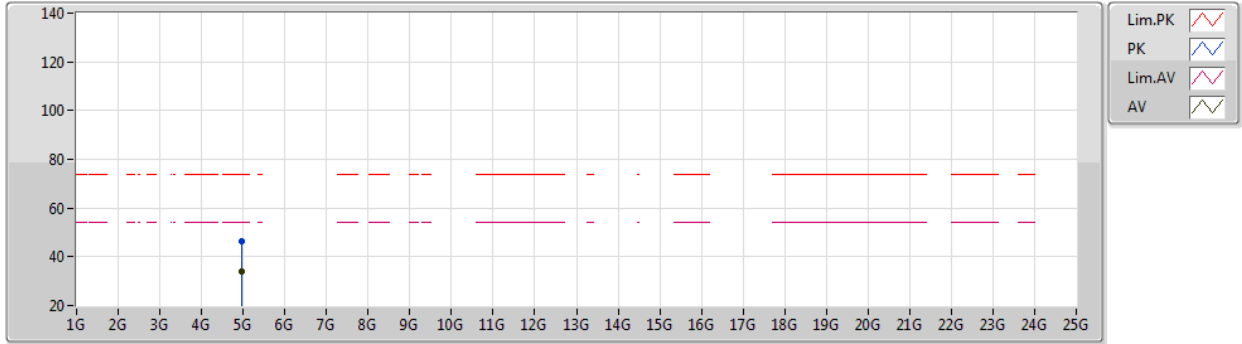


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	92.95	Inf	-Inf	36.16	3	Horizontal	345	1.12	-	56.79	30.10	6.06	-
AV	2.4836G	49.19	54.00	-4.81	36.18	3	Horizontal	345	1.12	-	13.01	30.12	6.06	-
PK	2.4798G	94.46	Inf	-Inf	36.16	3	Horizontal	345	1.12	-	58.30	30.10	6.06	-
PK	2.484G	59.80	74.00	-14.20	36.18	3	Horizontal	345	1.12	-	23.62	30.12	6.06	-

BT-LE(1Mbps)

17/06/2020

2480MHz_TX

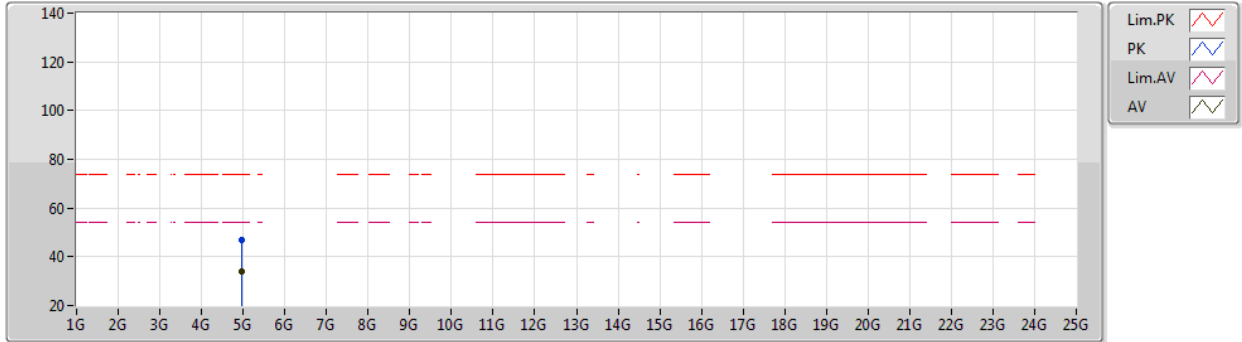


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.951G	34.20	54.00	-19.80	8.42	3	Vertical	40	2.00	-	25.78	33.90	8.35	33.83
PK	4.96684G	46.35	74.00	-27.65	8.47	3	Vertical	40	2.00	-	37.88	33.93	8.36	33.82

BT-LE(1Mbps)

17/06/2020

2480MHz_TX

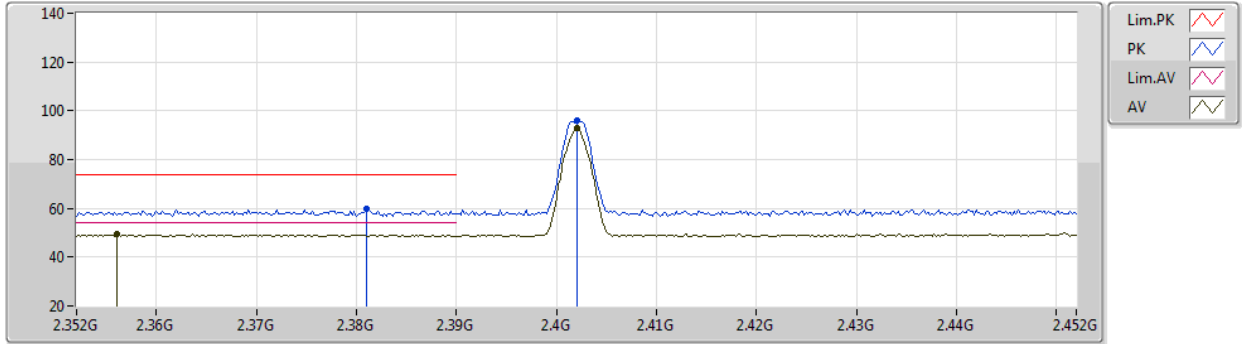


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96918G	34.08	54.00	-19.92	8.48	3	Horizontal	336	1.53	-	25.60	33.94	8.36	33.82
PK	4.9711G	46.93	74.00	-27.07	8.48	3	Horizontal	336	1.53	-	38.45	33.94	8.36	33.82

BT-LE(2Mbps)

17/06/2020

2402MHz_TX

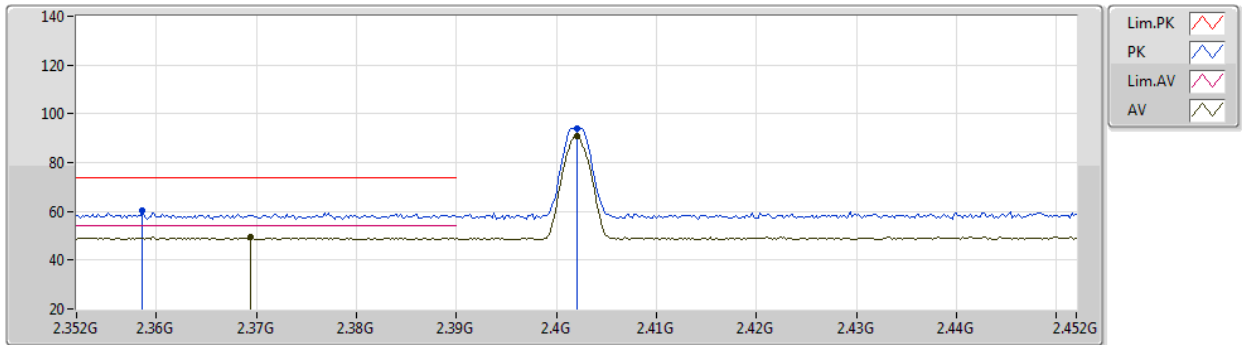


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.356G	49.47	54.00	-4.53	35.54	3	Vertical	110	3.00	-	13.93	29.61	5.93	-
AV	2.402G	92.76	Inf	-Inf	35.67	3	Vertical	110	3.00	-	57.09	29.71	5.96	-
PK	2.381G	59.99	74.00	-14.01	35.61	3	Vertical	110	3.00	-	24.38	29.66	5.95	-
PK	2.402G	95.83	Inf	-Inf	35.67	3	Vertical	110	3.00	-	60.16	29.71	5.96	-

BT-LE(2Mbps)

17/06/2020

2402MHz_TX



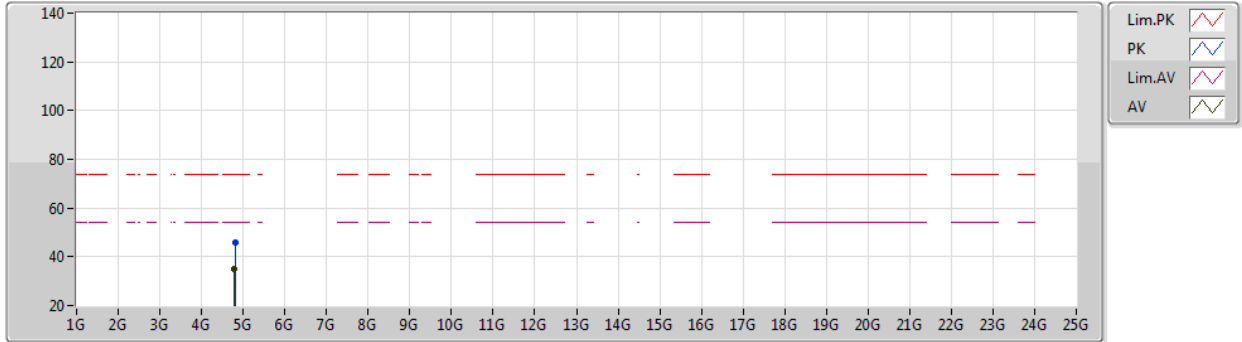
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3694G	49.51	54.00	-4.49	35.58	3	Horizontal	343	1.15	-	13.93	29.64	5.94	-
AV	2.402G	91.00	Inf	-Inf	35.67	3	Horizontal	343	1.15	-	55.33	29.71	5.96	-
PK	2.3586G	60.18	74.00	-13.82	35.55	3	Horizontal	343	1.15	-	24.63	29.62	5.93	-
PK	2.402G	94.11	Inf	-Inf	35.67	3	Horizontal	343	1.15	-	58.44	29.71	5.96	-



BT-LE(2Mbps)

17/06/2020

2402MHz_TX

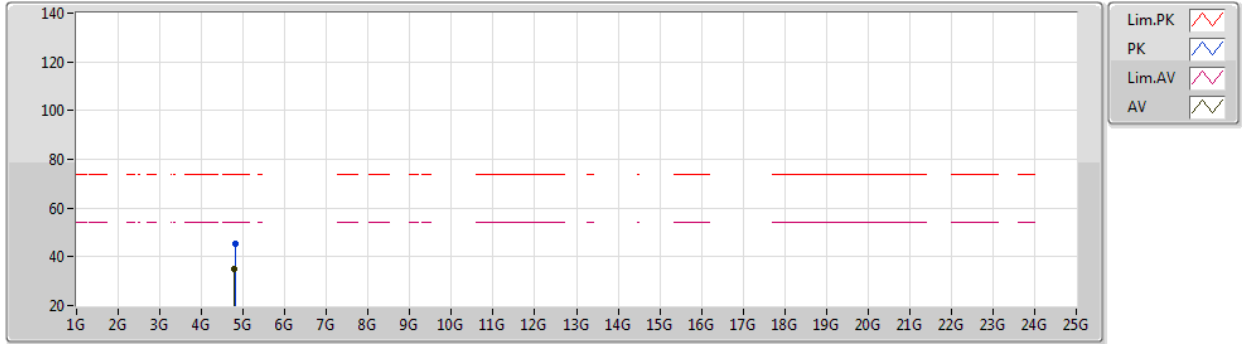


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.79224G	35.09	54.00	-18.91	7.89	3	Vertical	290	1.20	-	27.20	33.55	8.25	33.91
PK	4.79986G	45.74	74.00	-28.26	7.94	3	Vertical	290	1.20	-	37.80	33.60	8.25	33.91

BT-LE(2Mbps)

17/06/2020

2402MHz_TX

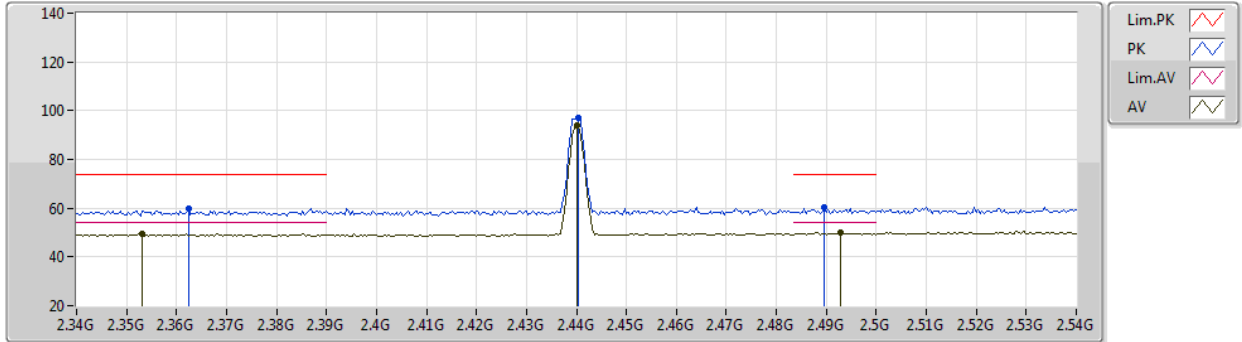


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.79344G	35.13	54.00	-18.87	7.90	3	Horizontal	5	1.66	-	27.23	33.56	8.25	33.91
PK	4.80172G	45.45	74.00	-28.55	7.94	3	Horizontal	5	1.66	-	37.51	33.60	8.25	33.91

BT-LE(2Mbps)

17/06/2020

2440MHz_TX

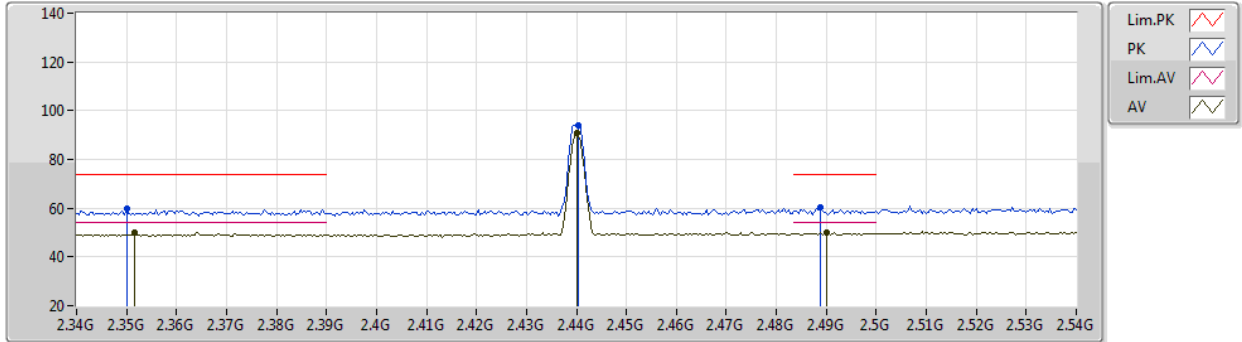


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3532G	49.30	54.00	-4.70	35.53	3	Vertical	120	1.29	-	13.77	29.61	5.92	-
AV	2.44G	94.03	Inf	-Inf	35.91	3	Vertical	120	1.29	-	58.12	29.90	6.01	-
AV	2.4928G	50.04	54.00	-3.96	36.23	3	Vertical	120	1.29	-	13.81	30.16	6.07	-
PK	2.3624G	59.80	74.00	-14.20	35.55	3	Vertical	120	1.29	-	24.25	29.62	5.93	-
PK	2.4404G	97.00	Inf	-Inf	35.91	3	Vertical	120	1.29	-	61.09	29.90	6.01	-
PK	2.4896G	60.29	74.00	-13.71	36.22	3	Vertical	120	1.29	-	24.07	30.15	6.07	-

BT-LE(2Mbps)

17/06/2020

2440MHz_TX



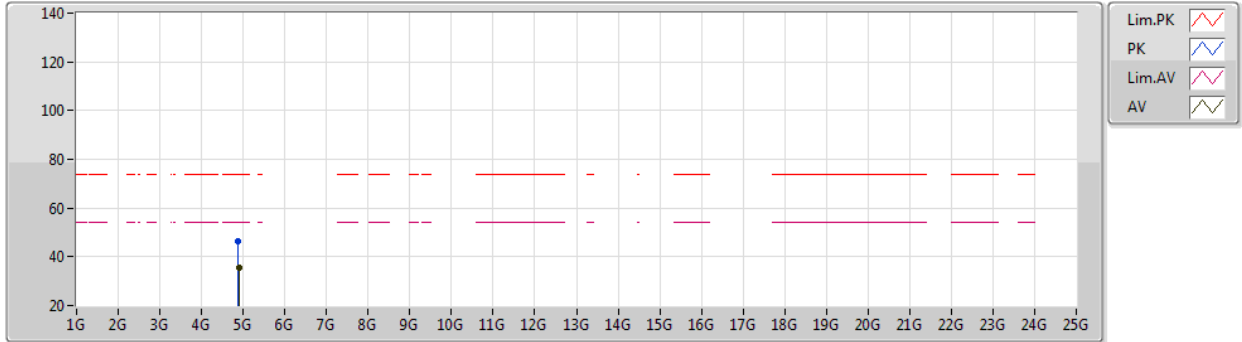
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3516G	49.83	54.00	-4.17	35.52	3	Horizontal	107	1.00	-	14.31	29.60	5.92	-
AV	2.44G	90.90	Inf	-Inf	35.91	3	Horizontal	107	1.00	-	54.99	29.90	6.01	-
AV	2.49G	49.89	54.00	-4.11	36.22	3	Horizontal	107	1.00	-	13.67	30.15	6.07	-
PK	2.35G	59.91	74.00	-14.09	35.52	3	Horizontal	107	1.00	-	24.39	29.60	5.92	-
PK	2.4404G	93.98	Inf	-Inf	35.91	3	Horizontal	107	1.00	-	58.07	29.90	6.01	-
PK	2.4888G	60.25	74.00	-13.75	36.21	3	Horizontal	107	1.00	-	24.04	30.14	6.07	-



BT-LE(2Mbps)

17/06/2020

2440MHz_TX



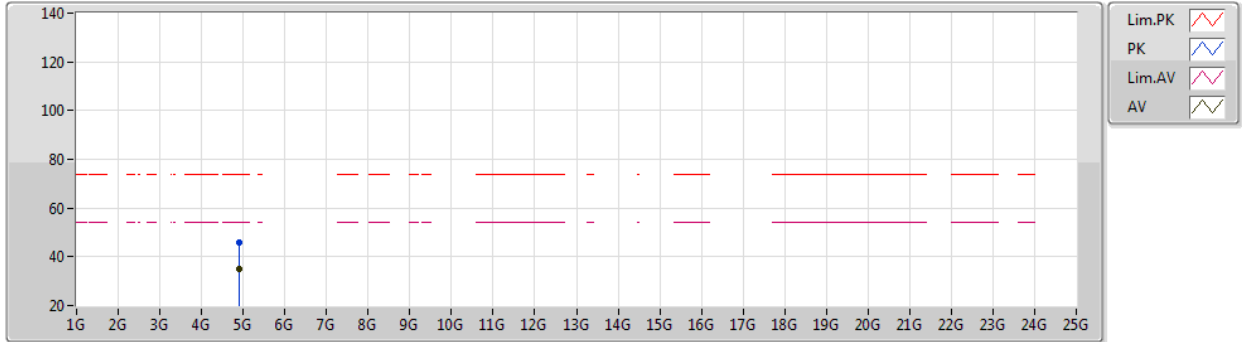
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.89248G	35.76	54.00	-18.24	8.23	3	Vertical	349	2.48	-	27.53	33.78	8.31	33.86
PK	4.8725G	46.31	74.00	-27.69	8.17	3	Vertical	349	2.48	-	38.14	33.74	8.30	33.87



BT-LE(2Mbps)

17/06/2020

2440MHz_TX

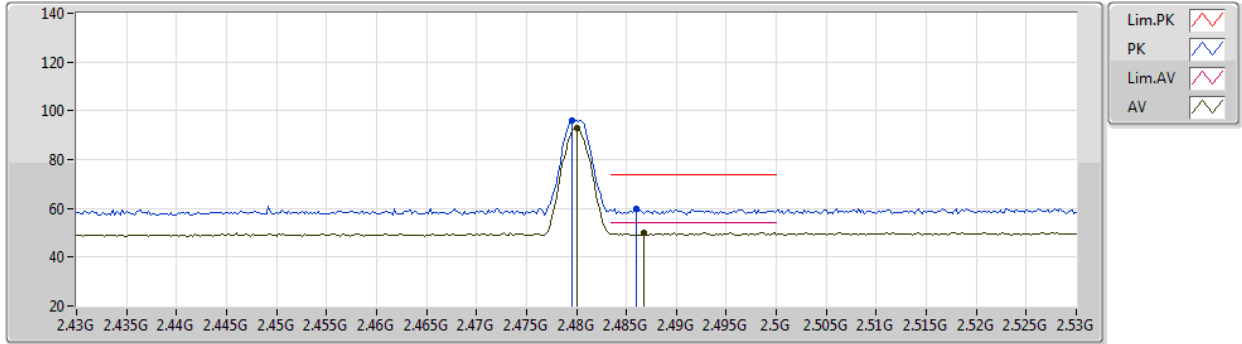


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.89032G	35.25	54.00	-18.75	8.23	3	Horizontal	15	1.89	-	27.02	33.78	8.31	33.86
PK	4.88972G	45.73	74.00	-28.27	8.22	3	Horizontal	15	1.89	-	37.51	33.78	8.31	33.87

BT-LE(2Mbps)

17/06/2020

2480MHz_TX

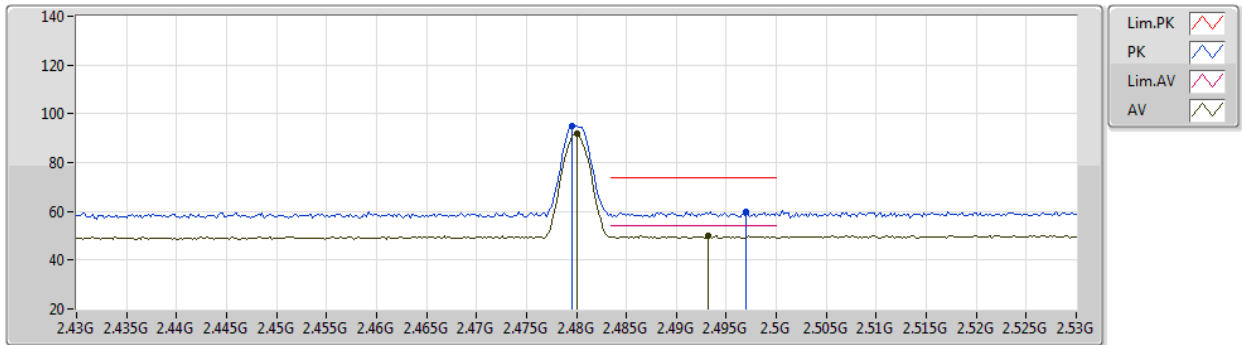


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	93.02	Inf	-Inf	36.16	3	Vertical	119	0.99	-	56.86	30.10	6.06	-
AV	2.4868G	50.02	54.00	-3.98	36.19	3	Vertical	119	0.99	-	13.83	30.13	6.06	-
PK	2.4796G	96.10	Inf	-Inf	36.16	3	Vertical	119	0.99	-	59.94	30.10	6.06	-
PK	2.486G	59.85	74.00	-14.15	36.19	3	Vertical	119	0.99	-	23.66	30.13	6.06	-

BT-LE(2Mbps)

17/06/2020

2480MHz_TX



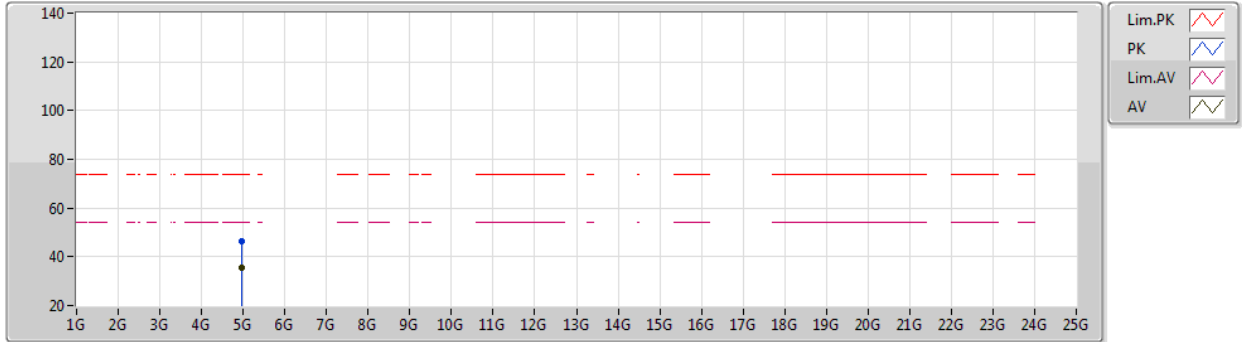
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	91.91	Inf	-Inf	36.16	3	Horizontal	342	1.13	-	55.75	30.10	6.06	-
AV	2.4932G	49.81	54.00	-4.19	36.24	3	Horizontal	342	1.13	-	13.57	30.17	6.07	-
PK	2.4796G	95.02	Inf	-Inf	36.16	3	Horizontal	342	1.13	-	58.86	30.10	6.06	-
PK	2.497G	60.08	74.00	-13.92	36.26	3	Horizontal	342	1.13	-	23.82	30.18	6.08	-



BT-LE(2Mbps)

17/06/2020

2480MHz_TX

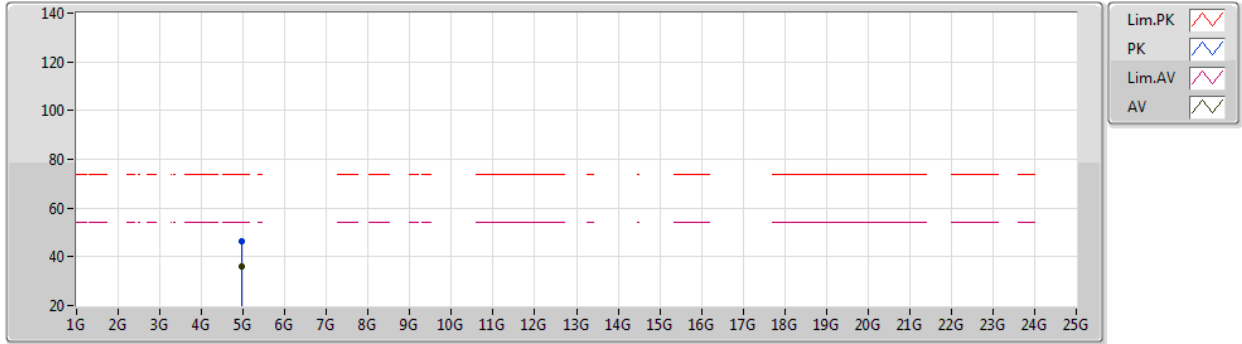


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95358G	35.63	54.00	-18.37	8.43	3	Vertical	133	1.49	-	27.20	33.91	8.35	33.83
PK	4.95412G	46.21	74.00	-27.79	8.43	3	Vertical	133	1.49	-	37.78	33.91	8.35	33.83

BT-LE(2Mbps)

17/06/2020

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	4.96588G	36.00	54.00	-18.00	8.47	3	Horizontal	253	1.48	-	27.53	33.93	8.36	33.82
PK	4.9573G	46.48	74.00	-27.52	8.43	3	Horizontal	253	1.48	-	38.05	33.91	8.35	33.83



Summary

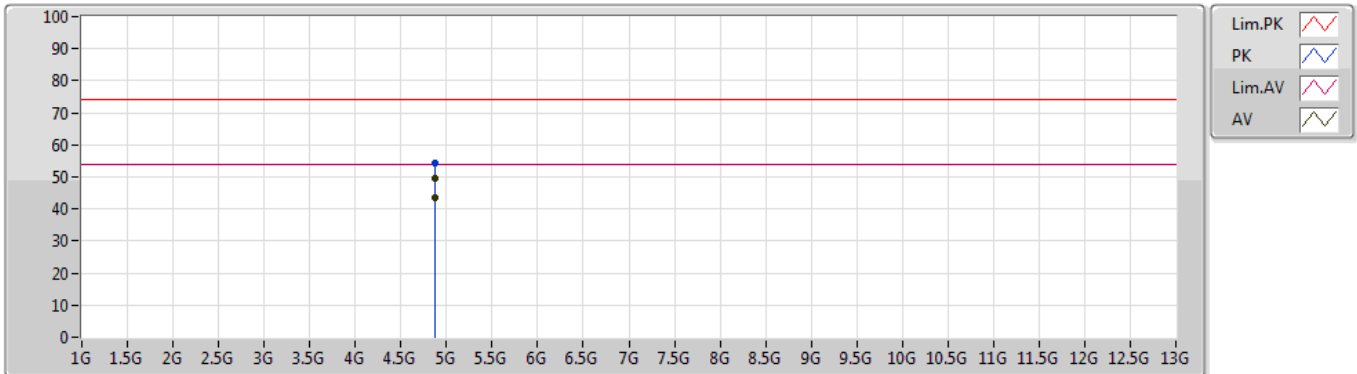
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	4.87996G	51.48	54.00	-2.52	Horizontal
Mode 2	Pass	AV	4.88G	51.90	54.00	-2.10	Vertical

Mode Configure

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.87394G	43.57	54.00	-10.43	3	Vertical	169	1.05	-
Mode 1	Pass	AV	4.87996G	49.51	54.00	-4.49	3	Vertical	140	1.01	"Worst"
Mode 1	Pass	PK	4.87399G	49.54	74.00	-24.46	3	Vertical	169	1.05	-
Mode 1	Pass	PK	4.87968G	54.42	74.00	-19.58	3	Vertical	140	1.01	-
Mode 1	Pass	AV	4.87394G	38.55	54.00	-15.45	3	Horizontal	275	1.01	-
Mode 1	Pass	AV	4.87996G	51.48	54.00	-2.52	3	Horizontal	1	1.01	"Worst"
Mode 1	Pass	PK	4.87399G	47.50	74.00	-26.50	3	Horizontal	275	1.01	-
Mode 1	Pass	PK	4.8798G	51.54	74.00	-22.46	3	Horizontal	1	1.01	-
Mode 2	Pass	AV	4.88G	51.90	54.00	-2.10	3	Vertical	129	1.10	"Worst"
Mode 2	Pass	AV	11.15484G	42.56	54.00	-11.44	3	Vertical	300	2.41	-
Mode 2	Pass	PK	4.88024G	55.45	74.00	-18.55	3	Vertical	129	1.10	-
Mode 2	Pass	PK	11.16868G	55.24	74.00	-18.76	3	Vertical	300	2.41	-
Mode 2	Pass	AV	4.87996G	50.62	54.00	-3.38	3	Horizontal	67	1.08	"Worst"
Mode 2	Pass	AV	11.16164G	42.55	54.00	-11.45	3	Horizontal	199	2.81	-
Mode 2	Pass	PK	4.87964G	54.59	74.00	-19.41	3	Horizontal	67	1.08	-
Mode 2	Pass	PK	11.15088G	55.34	74.00	-18.66	3	Horizontal	199	2.81	-

Radiated Emissions above 1GHz_Mode 1

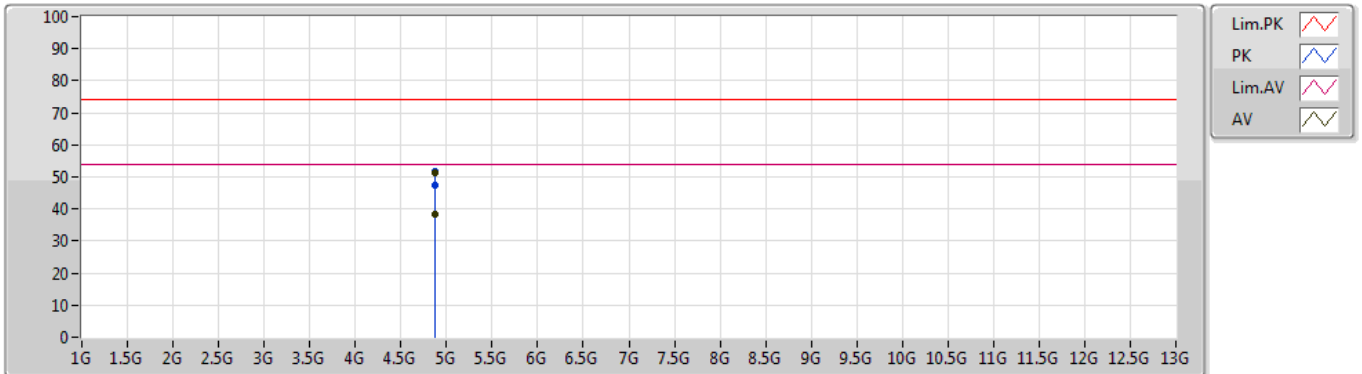
26/08/2020



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)
AV	4.87394G	43.57	54.00	-10.43	8.29	3	Vertical	169	1.05	-	35.28	31.10	6.57	29.38
AV	4.87996G	49.51	54.00	-4.49	8.30	3	Vertical	140	1.01	"Worst"	41.21	31.10	6.58	29.38
PK	4.87399G	49.54	74.00	-24.46	8.29	3	Vertical	169	1.05	-	41.25	31.10	6.57	29.38
PK	4.87968G	54.42	74.00	-19.58	8.30	3	Vertical	140	1.01	-	46.12	31.10	6.58	29.38

Radiated Emissions above 1GHz_Mode 1

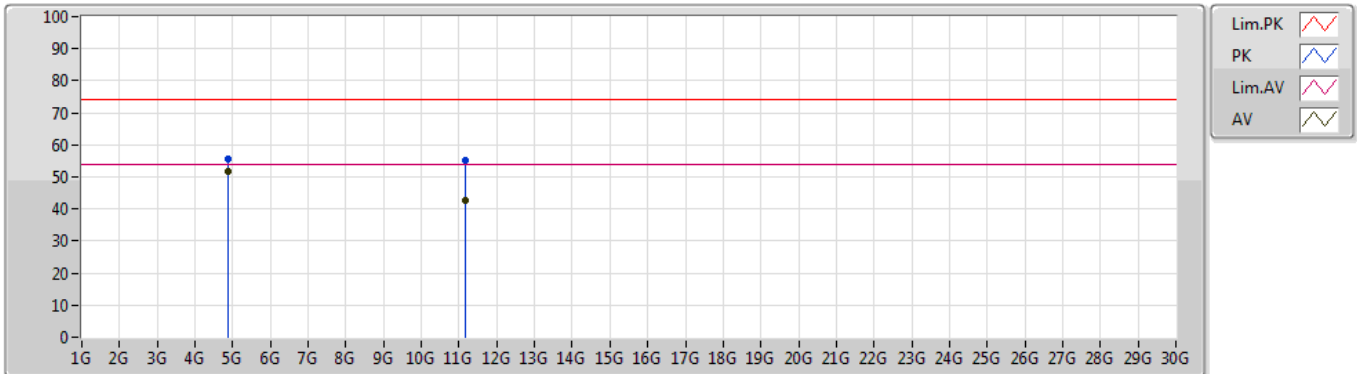
26/08/2020



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)
AV	4.87394G	38.55	54.00	-15.45	8.29	3	Horizontal	275	1.01	-	30.26	31.10	6.57	29.38
AV	4.87996G	51.48	54.00	-2.52	8.30	3	Horizontal	1	1.01	"Worst"	43.18	31.10	6.58	29.38
PK	4.87399G	47.50	74.00	-26.50	8.29	3	Horizontal	275	1.01	-	39.21	31.10	6.57	29.38
PK	4.8798G	51.54	74.00	-22.46	8.30	3	Horizontal	1	1.01	-	43.24	31.10	6.58	29.38

Radiated Emissions above 1GHz_Mode 2

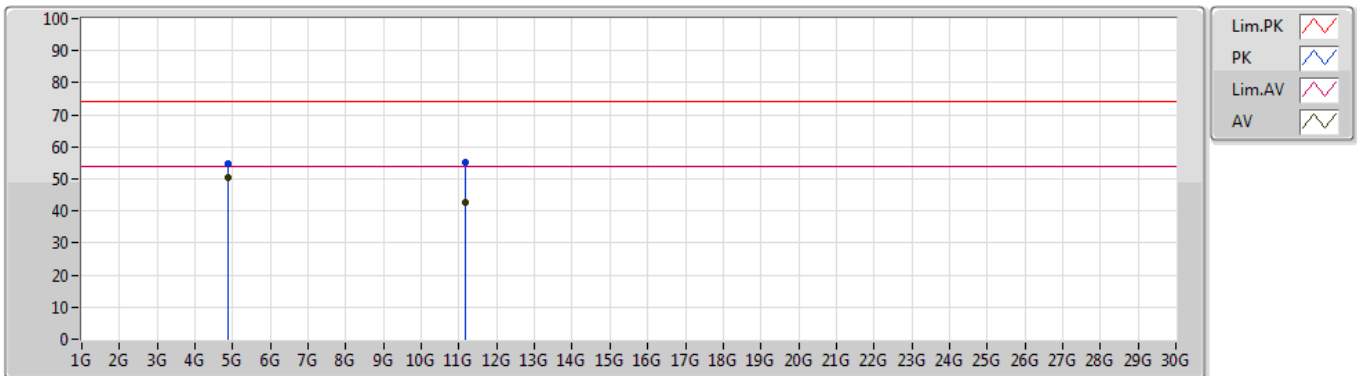
26/08/2020



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)
AV	4.88G	51.90	54.00	-2.10	8.30	3	Vertical	129	1.10	"Worst"	43.60	31.10	6.58	29.38
AV	11.15484G	42.56	54.00	-11.44	18.30	3	Vertical	300	2.41	-	24.26	39.85	9.32	30.87
PK	4.88024G	55.45	74.00	-18.55	8.30	3	Vertical	129	1.10	-	47.15	31.10	6.58	29.38
PK	11.16868G	55.24	74.00	-18.76	18.29	3	Vertical	300	2.41	-	36.95	39.83	9.33	30.87

Radiated Emissions above 1GHz_Mode 2

26/08/2020



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)
AV	4.87996G	50.62	54.00	-3.38	8.30	3	Horizontal	67	1.08	"Worst"	42.32	31.10	6.58	29.38
AV	11.16164G	42.55	54.00	-11.45	18.29	3	Horizontal	199	2.81	-	24.26	39.84	9.32	30.87
PK	4.87964G	54.59	74.00	-19.41	8.30	3	Horizontal	67	1.08	-	46.29	31.10	6.58	29.38
PK	11.15088G	55.34	74.00	-18.66	18.30	3	Horizontal	199	2.81	-	37.04	39.85	9.32	30.87