

NCC Test Report

Equipment : True wireless headphones
Brand Name : URBANEARS
Model Name : Urbanears Luma
Applicant : 百滋國際股份有限公司
台北市松山區寶清街 17 號 5 樓之 1
Manufacturer : Zound Industries International AB
Room 411-412, 4th Floor, Main Building, No. 99 Qiao
Cheng East Road, Nanshan District, Shenzhen City, China
Standard : LP0002 Section 3.10 (2018-01-10)

The product was received on Jun. 05, 2020, and testing was started from Sep. 09, 2020 and completed on Sep. 15, 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.)

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History of this test report

TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-C10 Ver3.9

Summary of Test Result

Report Clause	Ref.Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	3.10.1.4	Antenna Requirement	PASS	-
3.1	2.3	AC Power-line Conducted Emissions	PASS	-
3.2	3.10.1.6	DTS Bandwidth	PASS	-
3.3	3.10.1.2	Maximum Conducted Output Power	PASS	-
3.4	3.10.1.6	Power Spectral Density	PASS	-
3.5	3.10.1.5	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	3.10.1.5	Emissions in Restricted Frequency Bands	PASS	-
3.7	2.11	Receiver Radiated Unwanted Emissions	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: Yunha Liou

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.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	Unictron	AA055	Chip	N/A	1

Note 1: The EUT has one antenna.

For BT function:

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

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

1.1.3 EUT Information

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

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
BT-LE(1Mbps)	0.642	1.92	405u	3k
BT-LE(2Mbps)	0.348	4.58	218.75u	10k

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

1.2 Testing Applied Standards

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

- ♦ LP0002 (2018-01-10)
- ♦ ANSI C63.10-2013
- ♦ ANSI C63.4-2014

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					
☒	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
☐	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
☒	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 Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward	22.8~23.6°C / 56~60%	15/Sep/2020
RF Conducted	TH07-HY	Gary	23.5~26.9°C / 65~69%	15/Sep/2020
Radiated	03CH09-HY	Lego	22.5~24.5°C / 53~60%	09/Sep/2020~14/Sep/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	110V

2.2 Test Channel Mode

Test Software Version	BlueTest3
-----------------------	-----------

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	1. Test Fixture mode; CTX
	2. Test Fixture mode; CRX
	3. Adapter Charging mode; Normal

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 Receiver Radiated Spurious Emissions		
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.		
OperatingMode < 1GHz	1. Test Fixture mode; CTX /CRX		
	2. Adapter Charging mode; Normal		
Operating Mode > 1GHz	1. Test Fixture mode; CTX /CRX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT		V	

2.4 Accessories

Accessories				
USB cable	Brand Name	URBANEARS	Model Name	USB-C charging cable
	Signal Line	0.15 meter, non-shielded cable, w/o ferrite core		
Battery	Brand Name	VDL	Model Name	1054
Charging Case	Brand Name	URBANEARS	Model Name	Luma Charging Case

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

2.5 Support Equipment

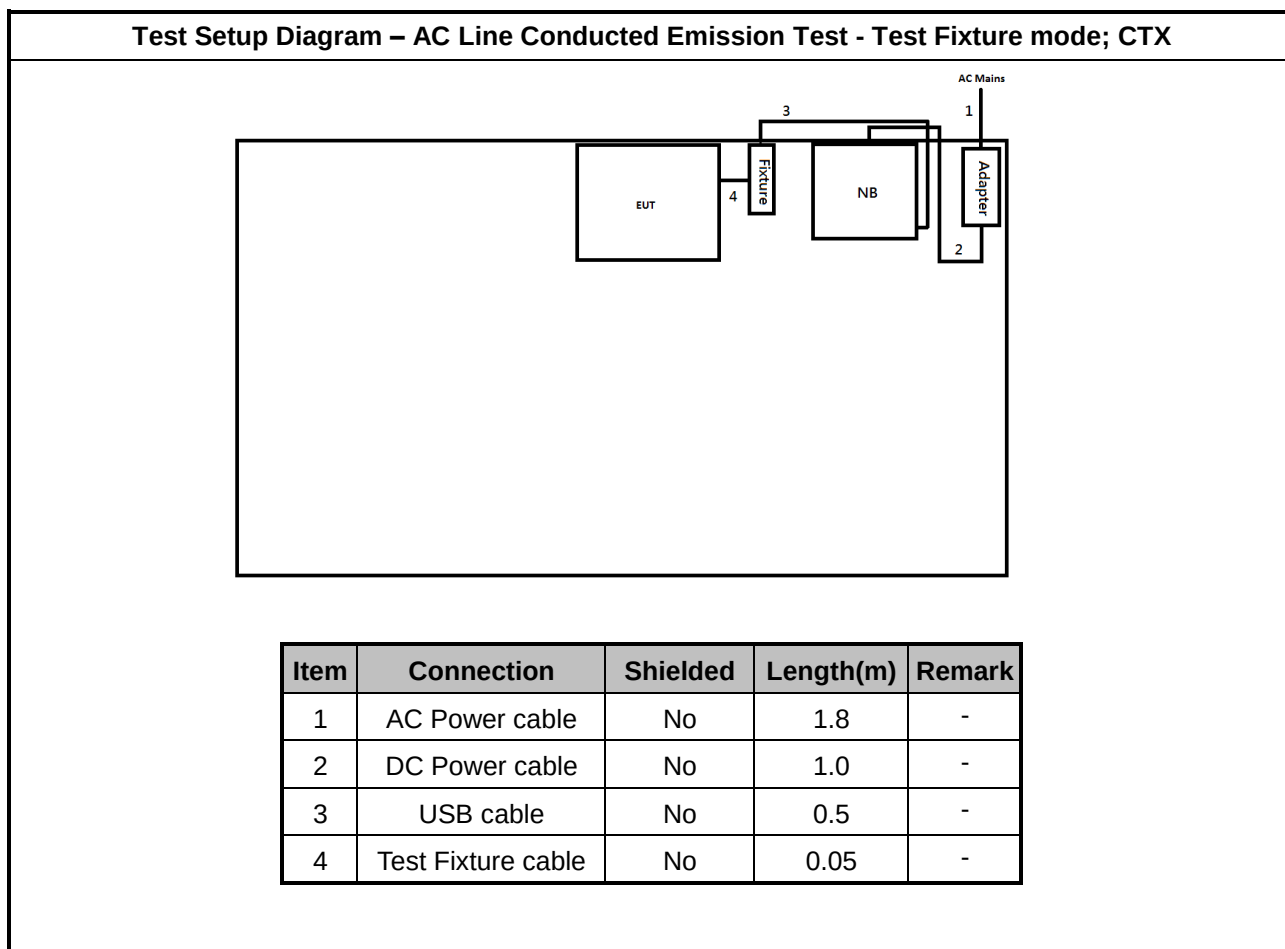
Support Equipment – AC Conduction / Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	Acer	ZQS	-	-
2	AC Adapter	Chicony	A10-090P3A	-	-
3	AC Power Cable for NB	Power sync	PW-GPC180-3	-	-
4	Mouse(USB)	lenovo	MOGOUO	-	-
5	iPod	Apple	A1199	-	-
6	30-pin to USB Original Cable	Apple	MA591GC	-	-
7	USB cable	Sony	UC-E6	-	-
8	AC Adapter	Apple	A1357	-	-
9	Test Fixture	IHX	316	-	Note 1

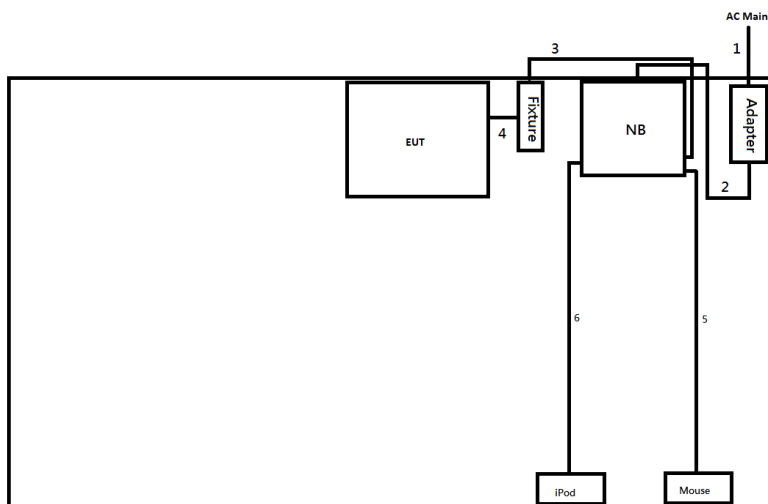
Note: No.9 was provided by customer. The applicant has signed the recognizance that the equipment will not be sold with the accessory.

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	Acer	ZQS	-	-
2	AC Adapter	Chicony	A10-090P3A	-	-
3	Test Fixture	IHX	316	-	Note 1

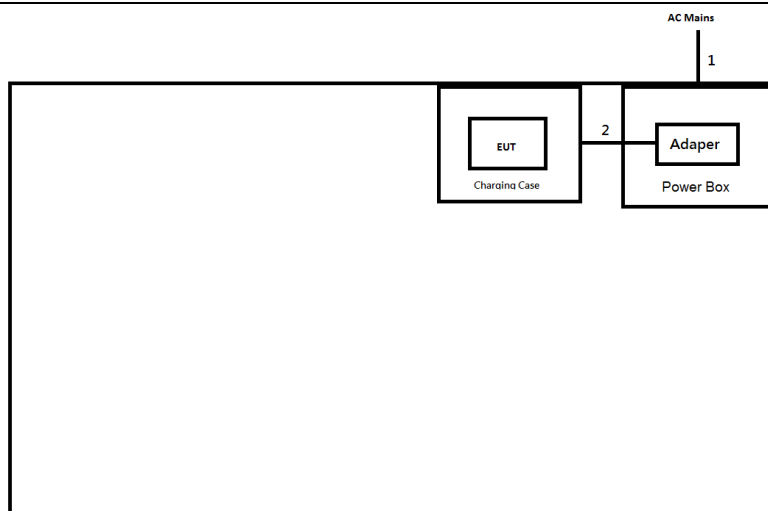
Note: No.3 was provided by customer. The applicant has signed the recognizance that the equipment will not be sold with the accessory.

2.6 Test Setup Diagram

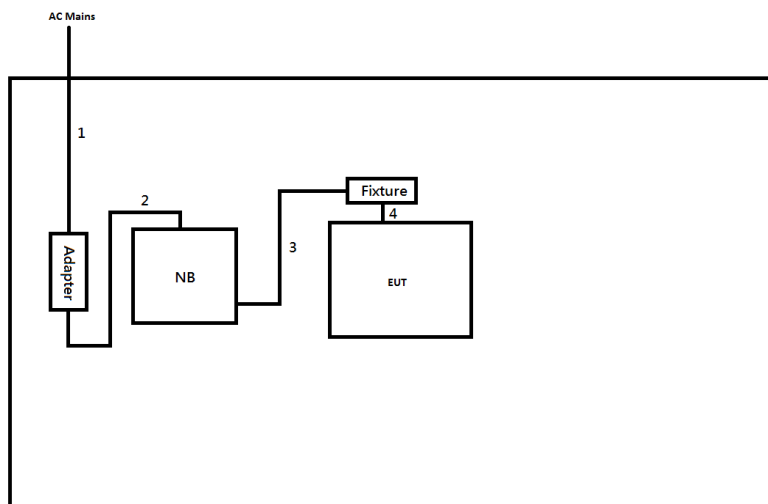


Test Setup Diagram – AC Line Conducted Emission Test -Test Fixture mode; CRX


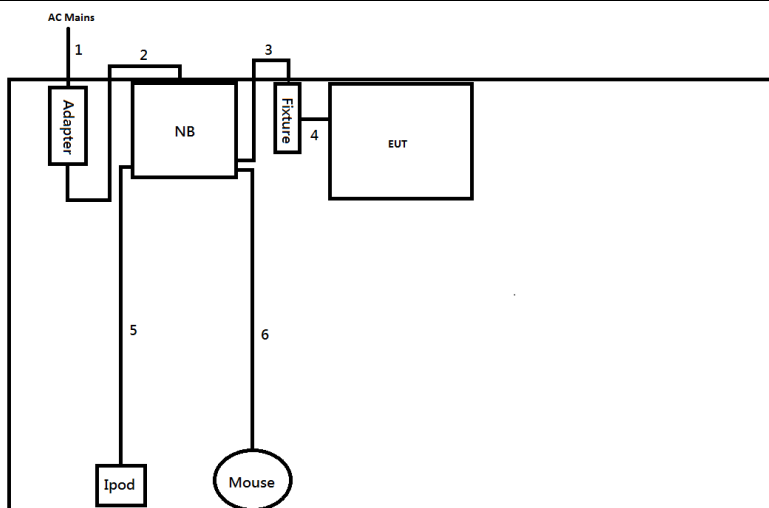
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.0	-
3	USB cable	No	0.5	-
4	Test Fixture cable	No	0.05	-
5	USB Cable	No	1.2	-
6	30-pin to USB Original Cable	No	1.0	-

Test Setup Diagram – AC Line Conducted Emission Test - Adapter Charging Mode; Normal


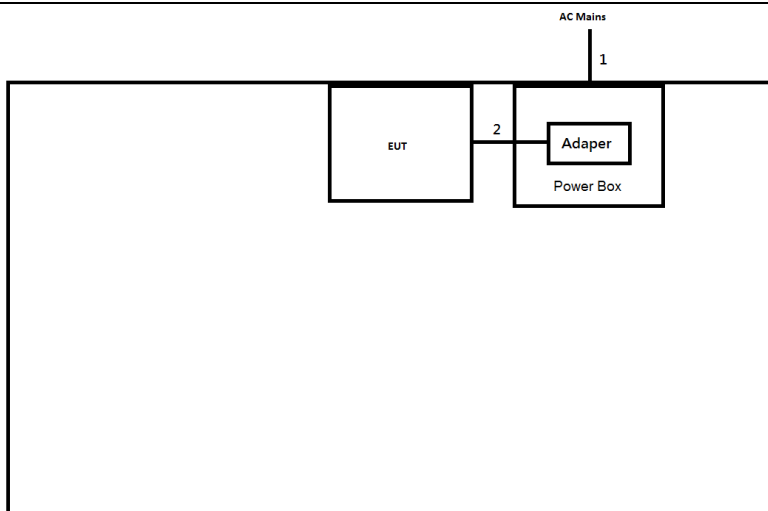
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB cable	No	0.15	-

Test Setup Diagram - Radiated Test - Test Fixture mode; CTX


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.0	-
3	USB cable	No	0.5	-
4	Test Fixture cable	No	0.05	-

Test Setup Diagram - Radiated Test - Test Fixture mode; CRX


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.0	-
3	USB cable	No	0.5	-
4	Test Fixture cable	No	0.05	-
5	30-pin to USB Original Cable	No	1.0	-
6	USB cable	No	1.2	-

Test Setup Diagram - Radiated Test - Adapter Charging mode; Normal


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB cable	No	0.15	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

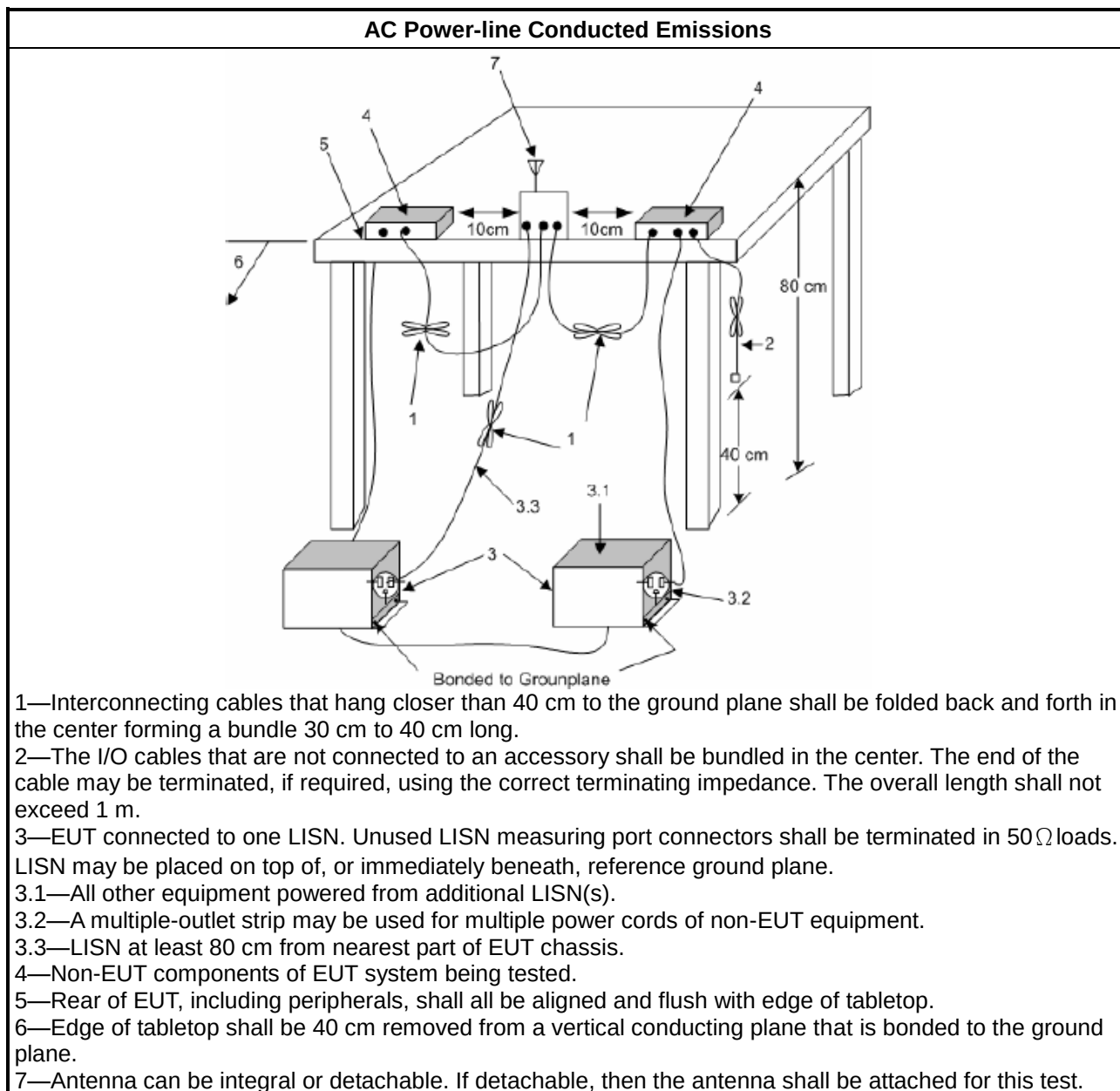
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

3.1.4 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:	
▪	6 dB bandwidth $\geq$ 500 kHz.

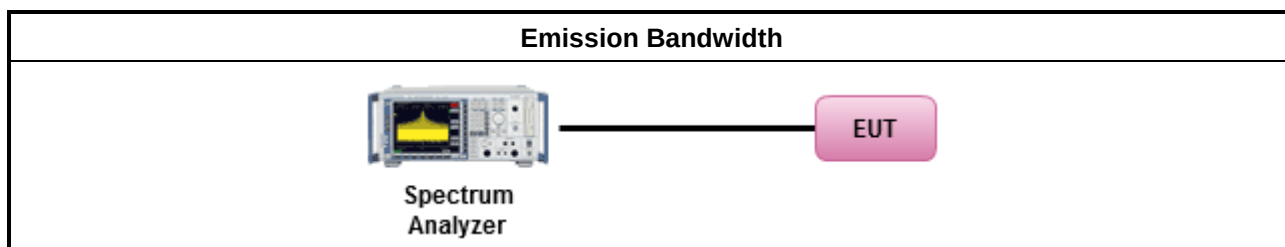
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
☒	Refer as KDB 558074, clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
☐	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
☐	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	
	If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	- 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:	
	2400-2483.5 MHz Band
	Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	Smart antenna system (SAS)
	- Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	- Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

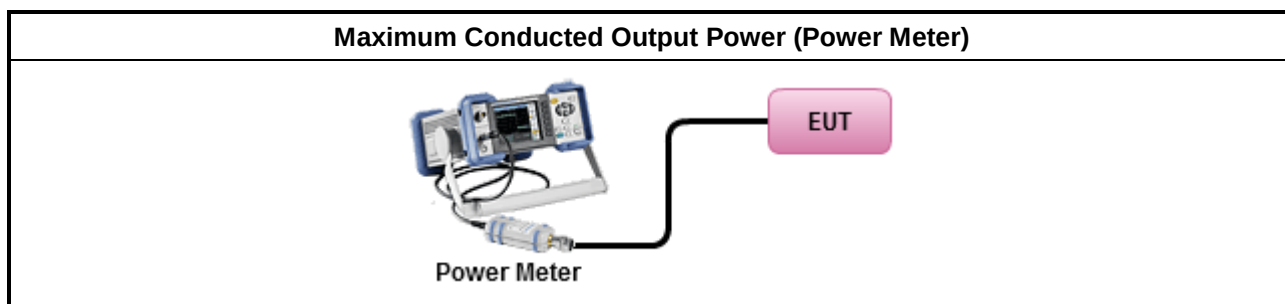
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
☐	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
For conducted measurement.	
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.	
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	
▪	Power Spectral Density (PSD) ≤ 8 dBm/3kHz

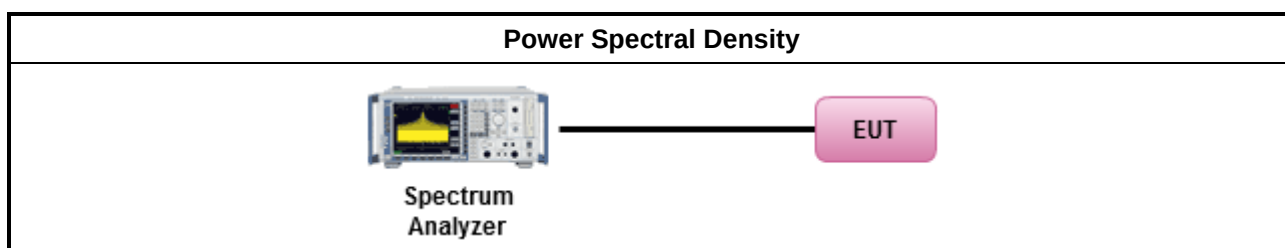
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
▪	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).
☒	Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
▪	For conducted measurement.
▪	If The EUT supports multiple transmit chains using options given below:
▪	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.	

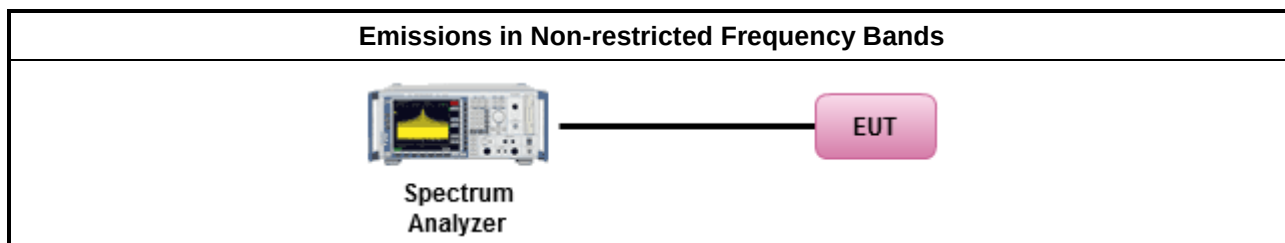
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
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

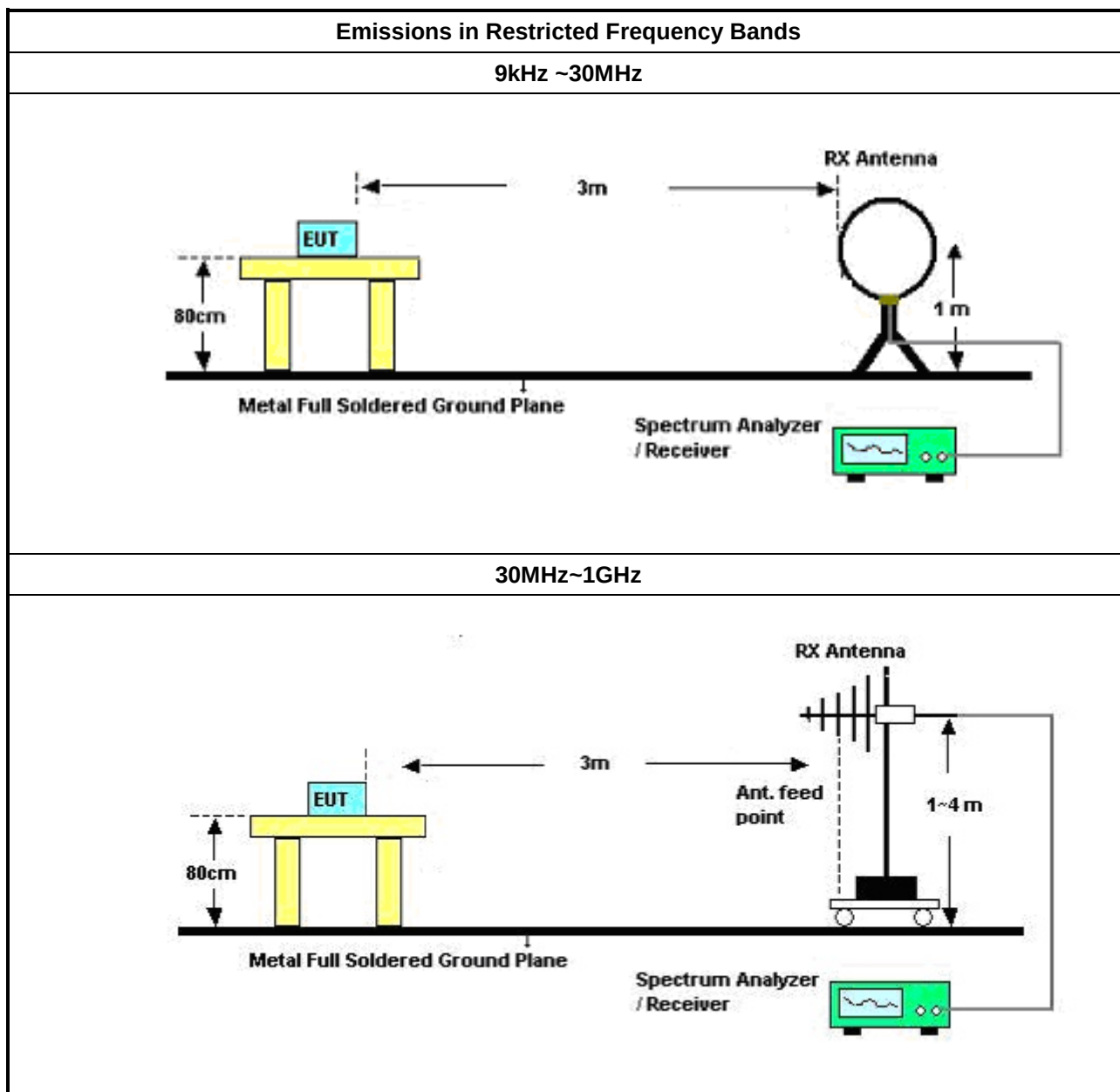
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
For the transmitter band-edge emissions shall be measured using following options below:	
	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.
Use the following spectrum analyzer settings:	
	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.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on LP0002 5.5.2: 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.

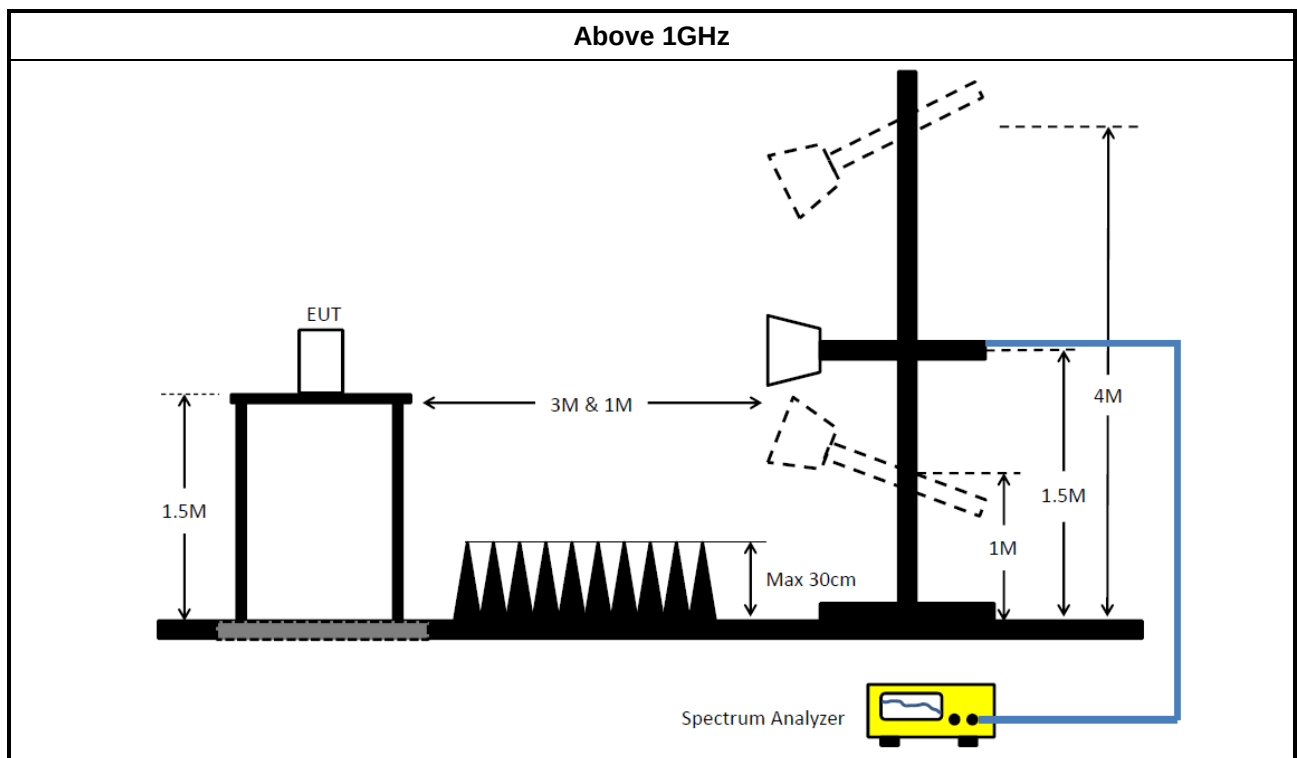
3.6.4 Measurement Results Calculation

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

3.7 Receiver Radiated Spurious Emissions

3.7.1 Receiver in Radiated Spurious Emissions Limit

Restricted Spurious 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.

3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

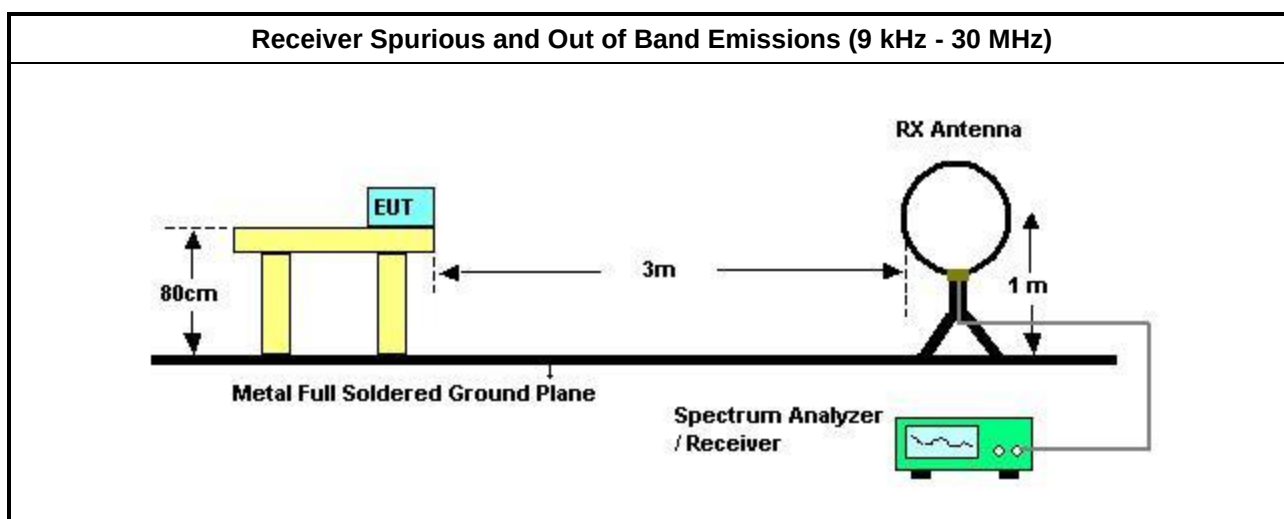
Test Method	
☒	The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is higher, to at least 3 times the highest tuneable or local oscillator frequency, whichever is higher, without exceeding 40 GHz.
☒	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).
☒	For radiated measurement, refer as ANSI C63.4, clause 8.3.
☒	Refer as ANSI C63.4, clause 8.3.1.1 and 8.3.2.1 for radiated emissions from below 30 MHz.
☒	Refer as ANSI C63.4, clause 8.3.1.1 and 8.3.2.1 for radiated emissions from 30 MHz-1 GHz. For the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the QP-Limit so that the QP level does not need to be reported in addition.
☒	Refer as ANSI C63.4, clause 8.3.1.2 and 8.3.2.2 for radiated emissions from above 1 GHz. For the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
☒	All amplitude of spurious emissions that are attenuated by more than 30 dB below the permissible value has no need to be reported.

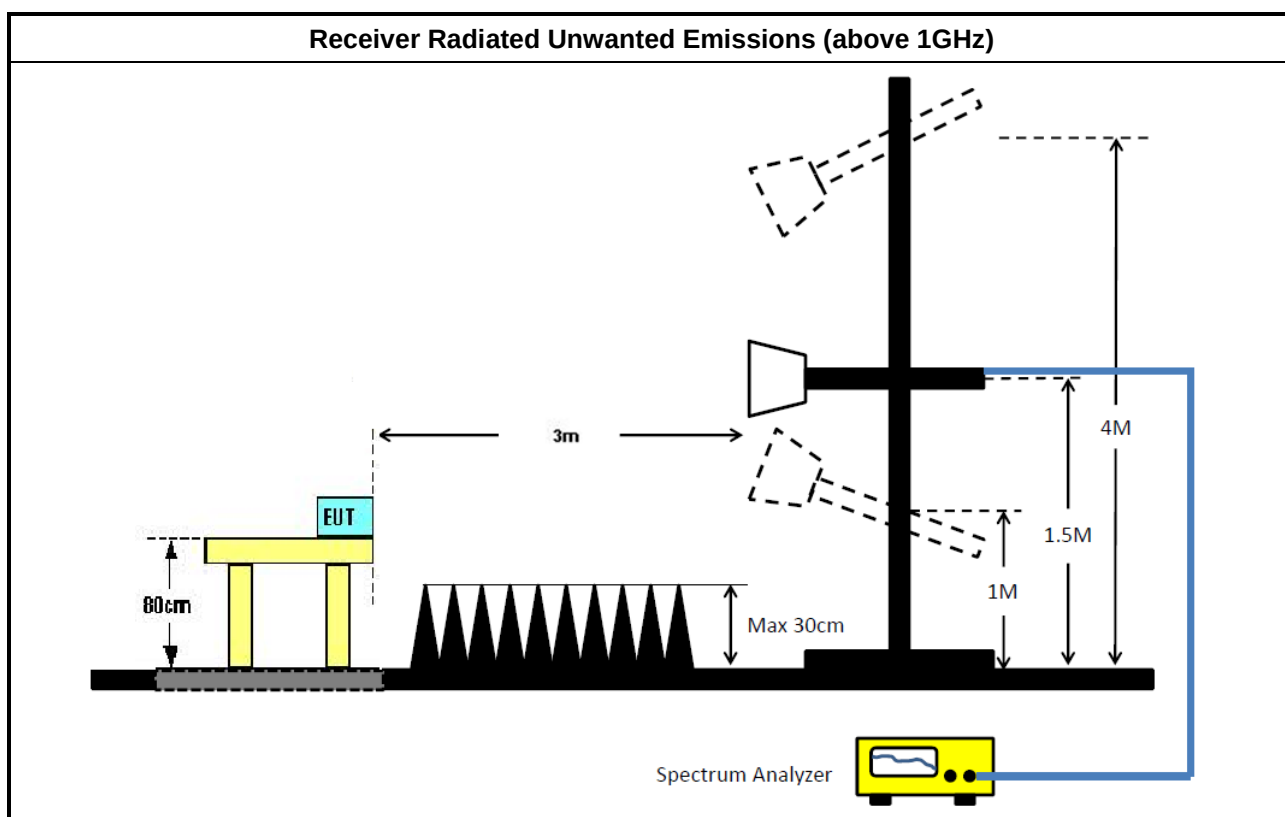
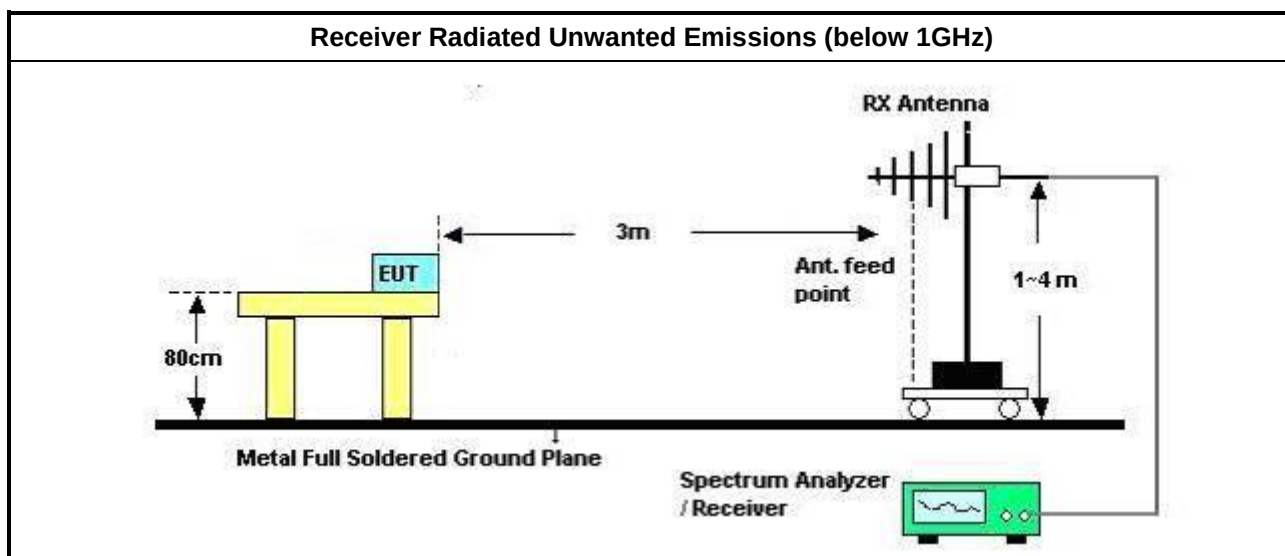
3.7.4 Measurement Results Calculation

The measured Level is calculated using:

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

3.7.5 Test Setup





3.7.6 Receiver Radiated Unwanted Emissions (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

3.7.7 Test Result of Receiver Radiated Unwanted Emissions

Refer as Appendix G

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
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
Signal Analyzer	R&S	FSP 40	100305	9kHz ~ 40GHz	10/Mar/2020	09/Mar/2021
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz ~ 40GHz	25/Nov/2019	24/Nov/2020
Power Meter	Anritsu	ML2495A	1517010	300MHz ~ 40GHz	25/Nov/2019	24/Nov/2020
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz ~ 40GHz	12/Nov/2018	11/Nov/2020

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz 3m	27/Mar/2020	26/Mar/2021
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz 3m	19/Mar/2020	18/Mar/2021
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	17/Aug/2020	16/Aug/2021
Amplifier	EMC	EMC9135	980232	9kHz ~ 1GHz	14/Apr/2020	13/Apr/2021
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	24/Jun/2020	23/Jun/2021
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D&MT J6102-05	35418 & 3	30MHz ~ 1GHz	30/Sep/2019	29/Sep/2020
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz ~ 18GHz	28/May/2020	27/May/2021
RF Cable-low	Jye Bao	RG142	CB031+3245 30/4	9kHz ~ 30MHz	03/Sep/2020	02/Sep/2021
RF Cable-low	Jye Bao	RG142	CB031+3245 30/4	30MHz ~ 1GHz	12/Feb/2020	11/Feb/2021
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	324530/4+17 173/4	1GHz ~ 40GHz	12/Feb/2020	11/Feb/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz ~ 40GHz	13/Mar/2020	12/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

**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	371.231k	36.02	48.47	-12.45	Neutral
Mode 2	Pass	AV	372.716k	35.58	48.45	-12.87	Neutral

Mode Configure

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	150.6k	29.15	65.96	-36.81	Line	-
Mode 1	Pass	AV	150.6k	24.65	55.96	-31.31	Line	-
Mode 1	Pass	QP	371.231k	36.58	58.47	-21.89	Line	-
Mode 1	Pass	AV	371.231k	35.61	48.47	-12.86	Line	"Worst"
Mode 1	Pass	QP	686.493k	20.61	56.00	-35.39	Line	-
Mode 1	Pass	AV	686.493k	18.09	46.00	-27.91	Line	-
Mode 1	Pass	QP	2.142M	21.58	56.00	-34.42	Line	-
Mode 1	Pass	AV	2.142M	18.62	46.00	-27.38	Line	-
Mode 1	Pass	QP	3.499M	22.18	56.00	-33.82	Line	-
Mode 1	Pass	AV	3.499M	18.59	46.00	-27.41	Line	-
Mode 1	Pass	QP	17.004M	24.39	60.00	-35.61	Line	-
Mode 1	Pass	AV	17.004M	19.56	50.00	-30.44	Line	-
Mode 1	Pass	QP	154.868k	32.07	65.73	-33.66	Neutral	-
Mode 1	Pass	AV	154.868k	28.40	55.73	-27.33	Neutral	-
Mode 1	Pass	QP	371.231k	37.30	58.47	-21.17	Neutral	-
Mode 1	Pass	AV	371.231k	36.02	48.47	-12.45	Neutral	"Worst"
Mode 1	Pass	QP	506.843k	15.24	56.00	-40.76	Neutral	-
Mode 1	Pass	AV	506.843k	13.00	46.00	-33.00	Neutral	-
Mode 1	Pass	QP	2.009M	23.30	56.00	-32.70	Neutral	-
Mode 1	Pass	AV	2.009M	19.79	46.00	-26.21	Neutral	-
Mode 1	Pass	QP	3.671M	24.24	56.00	-31.76	Neutral	-
Mode 1	Pass	AV	3.671M	19.14	46.00	-26.86	Neutral	-
Mode 1	Pass	QP	16.208M	22.22	60.00	-37.78	Neutral	-
Mode 1	Pass	AV	16.208M	18.48	50.00	-31.52	Neutral	-
Mode 2	Pass	QP	154.868k	30.48	65.73	-35.25	Line	-
Mode 2	Pass	AV	154.868k	26.94	55.73	-28.79	Line	-
Mode 2	Pass	QP	371.231k	36.34	58.47	-22.13	Line	-
Mode 2	Pass	AV	371.231k	33.97	48.47	-14.50	Line	"Worst"
Mode 2	Pass	QP	548.969k	16.47	56.00	-39.53	Line	-
Mode 2	Pass	AV	548.969k	14.24	46.00	-31.76	Line	-
Mode 2	Pass	QP	2.066M	21.86	56.00	-34.14	Line	-
Mode 2	Pass	AV	2.066M	18.25	46.00	-27.75	Line	-
Mode 2	Pass	QP	3.656M	22.88	56.00	-33.12	Line	-
Mode 2	Pass	AV	3.656M	19.22	46.00	-26.78	Line	-
Mode 2	Pass	QP	16.273M	23.22	60.00	-36.78	Line	-
Mode 2	Pass	AV	16.273M	19.14	50.00	-30.86	Line	-
Mode 2	Pass	QP	154.251k	31.80	65.77	-33.97	Neutral	-
Mode 2	Pass	AV	154.251k	26.52	55.77	-29.25	Neutral	-
Mode 2	Pass	QP	372.716k	37.39	58.45	-21.06	Neutral	-
Mode 2	Pass	AV	372.716k	35.58	48.45	-12.87	Neutral	"Worst"
Mode 2	Pass	QP	592.227k	21.21	56.00	-34.79	Neutral	-
Mode 2	Pass	AV	592.227k	17.00	46.00	-29.00	Neutral	-
Mode 2	Pass	QP	1.985M	23.99	56.00	-32.01	Neutral	-



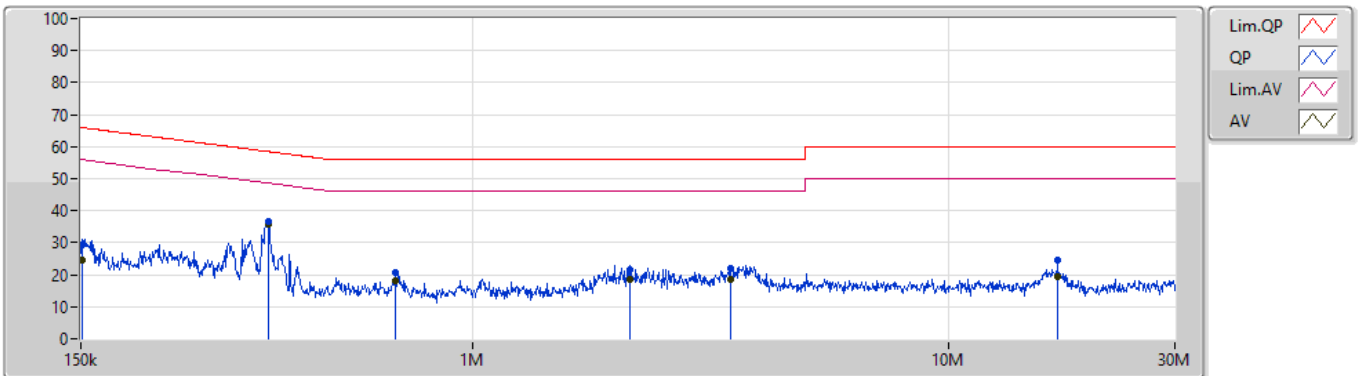
AC Power-line Conducted Emissions_Test fixture mode

Appendix A.1

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 2	Pass	AV	1.985M	20.59	46.00	-25.41	Neutral	-
Mode 2	Pass	QP	3.76M	23.80	56.00	-32.20	Neutral	-
Mode 2	Pass	AV	3.76M	19.96	46.00	-26.04	Neutral	-
Mode 2	Pass	QP	16.273M	22.48	60.00	-37.52	Neutral	-
Mode 2	Pass	AV	16.273M	18.65	50.00	-31.35	Neutral	-

Conducted Emissions at Powerline_Mode 1

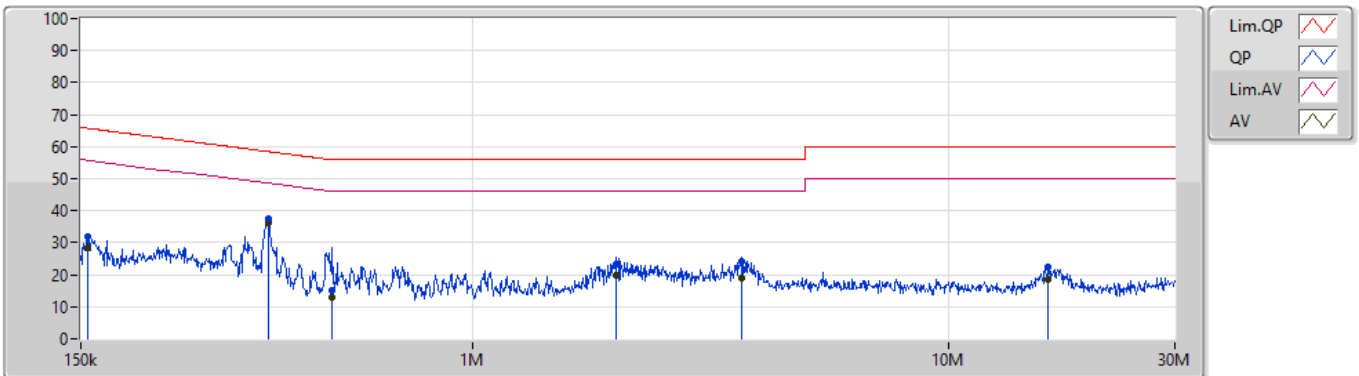
15/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	150.6k	29.15	65.96	-36.81	19.54	Line	-	9.61	9.66	0.01	9.87			
AV	150.6k	24.65	55.96	-31.31	19.54	Line	-	5.11	9.66	0.01	9.87			
QP	371.231k	36.58	58.47	-21.89	19.53	Line	-	17.05	9.64	0.02	9.87			
AV	371.231k	35.61	48.47	-12.86	19.53	Line	"Worst"	16.08	9.64	0.02	9.87			
QP	686.493k	20.61	56.00	-35.39	19.55	Line	-	1.06	9.64	0.04	9.87			
AV	686.493k	18.09	46.00	-27.91	19.55	Line	-	-1.46	9.64	0.04	9.87			
QP	2.142M	21.58	56.00	-34.42	19.60	Line	-	1.98	9.65	0.08	9.87			
AV	2.142M	18.62	46.00	-27.38	19.60	Line	-	-0.98	9.65	0.08	9.87			
QP	3.499M	22.18	56.00	-33.82	19.65	Line	-	2.53	9.66	0.11	9.88			
AV	3.499M	18.59	46.00	-27.41	19.65	Line	-	-1.06	9.66	0.11	9.88			
QP	17.004M	24.39	60.00	-35.61	19.80	Line	-	4.59	9.65	0.27	9.88			
AV	17.004M	19.56	50.00	-30.44	19.80	Line	-	-0.24	9.65	0.27	9.88			

Conducted Emissions at Powerline_Mode 1

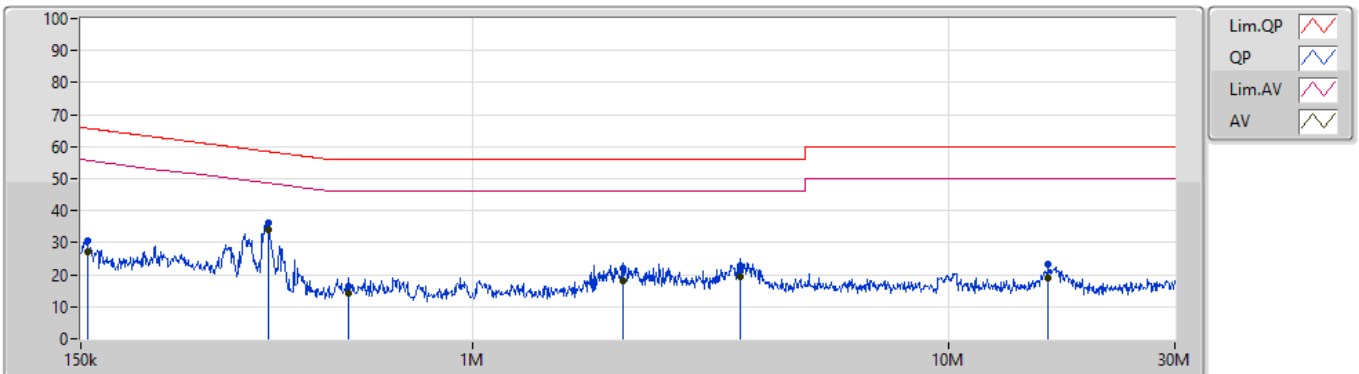
15/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.868k	32.07	65.73	-33.66	19.53	Neutral	-	12.54	9.65	0.01	9.87			
AV	154.868k	28.40	55.73	-27.33	19.53	Neutral	-	8.87	9.65	0.01	9.87			
QP	371.231k	37.30	58.47	-21.17	19.52	Neutral	-	17.78	9.63	0.02	9.87			
AV	371.231k	36.02	48.47	-12.45	19.52	Neutral	"Worst"	16.50	9.63	0.02	9.87			
QP	506.843k	15.24	56.00	-40.76	19.53	Neutral	-	-4.29	9.63	0.03	9.87			
AV	506.843k	13.00	46.00	-33.00	19.53	Neutral	-	-6.53	9.63	0.03	9.87			
QP	2.009M	23.30	56.00	-32.70	19.60	Neutral	-	3.70	9.65	0.08	9.87			
AV	2.009M	19.79	46.00	-26.21	19.60	Neutral	-	0.19	9.65	0.08	9.87			
QP	3.671M	24.24	56.00	-31.76	19.66	Neutral	-	4.58	9.66	0.12	9.88			
AV	3.671M	19.14	46.00	-26.86	19.66	Neutral	-	-0.52	9.66	0.12	9.88			
QP	16.208M	22.22	60.00	-37.78	19.85	Neutral	-	2.37	9.71	0.26	9.88			
AV	16.208M	18.48	50.00	-31.52	19.85	Neutral	-	-1.37	9.71	0.26	9.88			

Conducted Emissions at Powerline_Mode 2

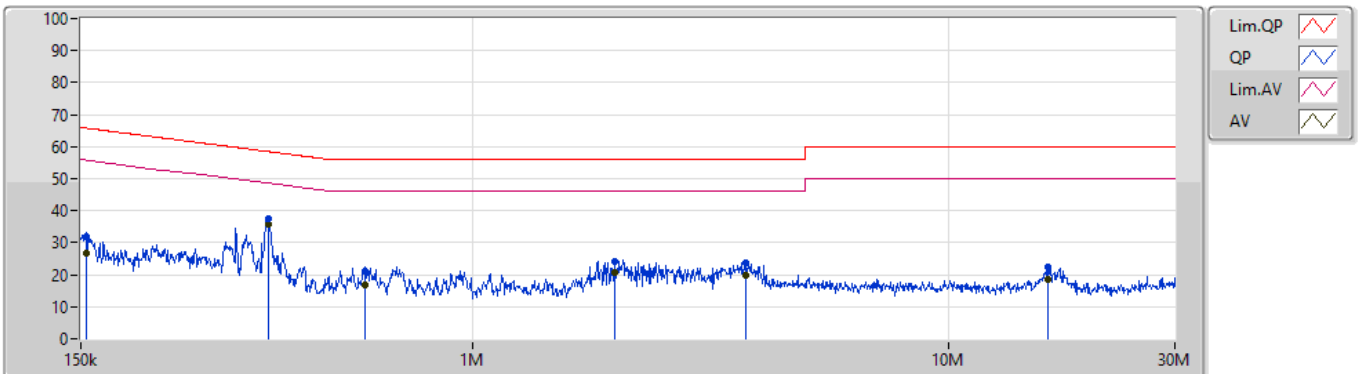
15/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.868k	30.48	65.73	-35.25	19.54	Line	-	10.94	9.66	0.01	9.87			
AV	154.868k	26.94	55.73	-28.79	19.54	Line	-	7.40	9.66	0.01	9.87			
QP	371.231k	36.34	58.47	-22.13	19.53	Line	-	16.81	9.64	0.02	9.87			
AV	371.231k	33.97	48.47	-14.50	19.53	Line	"Worst"	14.44	9.64	0.02	9.87			
QP	548.969k	16.47	56.00	-39.53	19.54	Line	-	-3.07	9.64	0.03	9.87			
AV	548.969k	14.24	46.00	-31.76	19.54	Line	-	-5.30	9.64	0.03	9.87			
QP	2.066M	21.86	56.00	-34.14	19.60	Line	-	2.26	9.65	0.08	9.87			
AV	2.066M	18.25	46.00	-27.75	19.60	Line	-	-1.35	9.65	0.08	9.87			
QP	3.656M	22.88	56.00	-33.12	19.65	Line	-	3.23	9.66	0.11	9.88			
AV	3.656M	19.22	46.00	-26.78	19.65	Line	-	-0.43	9.66	0.11	9.88			
QP	16.273M	23.22	60.00	-36.78	19.79	Line	-	3.43	9.65	0.26	9.88			
AV	16.273M	19.14	50.00	-30.86	19.79	Line	-	-0.65	9.65	0.26	9.88			

Conducted Emissions at Powerline_Mode 2

15/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.251k	31.80	65.77	-33.97	19.53	Neutral	-	12.27	9.65	0.01	9.87			
AV	154.251k	26.52	55.77	-29.25	19.53	Neutral	-	6.99	9.65	0.01	9.87			
QP	372.716k	37.39	58.45	-21.06	19.52	Neutral	-	17.87	9.63	0.02	9.87			
AV	372.716k	35.58	48.45	-12.87	19.52	Neutral	"Worst"	16.06	9.63	0.02	9.87			
QP	592.227k	21.21	56.00	-34.79	19.53	Neutral	-	1.68	9.63	0.03	9.87			
AV	592.227k	17.00	46.00	-29.00	19.53	Neutral	-	-2.53	9.63	0.03	9.87			
QP	1.985M	23.99	56.00	-32.01	19.60	Neutral	-	4.39	9.65	0.08	9.87			
AV	1.985M	20.59	46.00	-25.41	19.60	Neutral	-	0.99	9.65	0.08	9.87			
QP	3.76M	23.80	56.00	-32.20	19.66	Neutral	-	4.14	9.66	0.12	9.88			
AV	3.76M	19.96	46.00	-26.04	19.66	Neutral	-	0.30	9.66	0.12	9.88			
QP	16.273M	22.48	60.00	-37.52	19.85	Neutral	-	2.63	9.71	0.26	9.88			
AV	16.273M	18.65	50.00	-31.35	19.85	Neutral	-	-1.20	9.71	0.26	9.88			

**Summary**

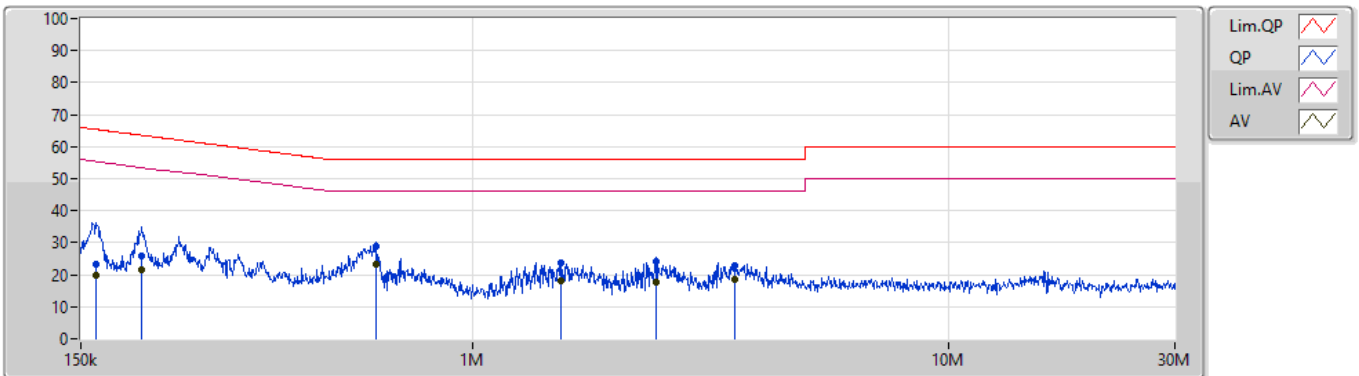
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 3	Pass	AV	592.227k	25.06	46.00	-20.94	Neutral

Mode Configure

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 3	Pass	QP	161.82k	23.36	65.37	-42.01	Line	-
Mode 3	Pass	AV	161.82k	19.77	55.37	-35.60	Line	-
Mode 3	Pass	QP	201.551k	26.04	63.55	-37.51	Line	-
Mode 3	Pass	AV	201.551k	21.40	53.55	-32.15	Line	-
Mode 3	Pass	QP	628.773k	28.87	56.00	-27.13	Line	-
Mode 3	Pass	AV	628.773k	23.30	46.00	-22.70	Line	"Worst"
Mode 3	Pass	QP	1.538M	23.53	56.00	-32.47	Line	-
Mode 3	Pass	AV	1.538M	17.98	46.00	-28.02	Line	-
Mode 3	Pass	QP	2.433M	23.99	56.00	-32.01	Line	-
Mode 3	Pass	AV	2.433M	17.63	46.00	-28.37	Line	-
Mode 3	Pass	QP	3.57M	22.63	56.00	-33.37	Line	-
Mode 3	Pass	AV	3.57M	18.34	46.00	-27.66	Line	-
Mode 3	Pass	QP	178.803k	33.40	64.55	-31.15	Neutral	-
Mode 3	Pass	AV	178.803k	30.14	54.55	-24.41	Neutral	-
Mode 3	Pass	QP	213.989k	31.16	63.06	-31.90	Neutral	-
Mode 3	Pass	AV	213.989k	26.87	53.06	-26.19	Neutral	-
Mode 3	Pass	QP	592.227k	33.63	56.00	-22.37	Neutral	-
Mode 3	Pass	AV	592.227k	25.06	46.00	-20.94	Neutral	"Worst"
Mode 3	Pass	QP	1.519M	27.38	56.00	-28.62	Neutral	-
Mode 3	Pass	AV	1.519M	18.86	46.00	-27.14	Neutral	-
Mode 3	Pass	QP	2.414M	25.81	56.00	-30.19	Neutral	-
Mode 3	Pass	AV	2.414M	17.64	46.00	-28.36	Neutral	-
Mode 3	Pass	QP	3.686M	23.56	56.00	-32.44	Neutral	-
Mode 3	Pass	AV	3.686M	18.12	46.00	-27.88	Neutral	-

Conducted Emissions at Powerline

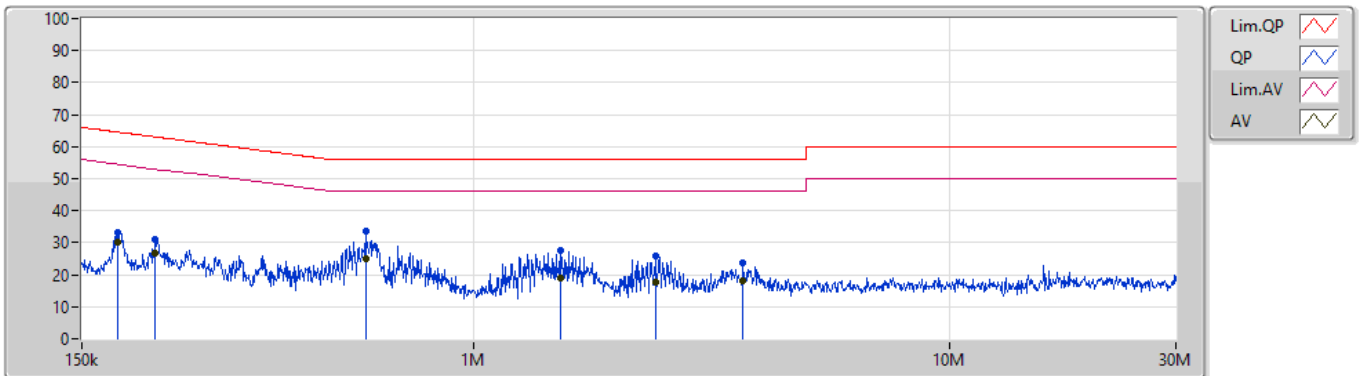
15/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	161.82k	23.36	65.37	-42.01	19.54	Line	-	3.82	9.66	0.01	9.87			
AV	161.82k	19.77	55.37	-35.60	19.54	Line	-	0.23	9.66	0.01	9.87			
QP	201.551k	26.04	63.55	-37.51	19.53	Line	-	6.51	9.65	0.01	9.87			
AV	201.551k	21.40	53.55	-32.15	19.53	Line	-	1.87	9.65	0.01	9.87			
QP	628.773k	28.87	56.00	-27.13	19.54	Line	-	9.33	9.64	0.03	9.87			
AV	628.773k	23.30	46.00	-22.70	19.54	Line	"Worst"	3.76	9.64	0.03	9.87			
QP	1.538M	23.53	56.00	-32.47	19.59	Line	-	3.94	9.65	0.07	9.87			
AV	1.538M	17.98	46.00	-28.02	19.59	Line	-	-1.61	9.65	0.07	9.87			
QP	2.433M	23.99	56.00	-32.01	19.61	Line	-	4.38	9.65	0.09	9.87			
AV	2.433M	17.63	46.00	-28.37	19.61	Line	-	-1.98	9.65	0.09	9.87			
QP	3.57M	22.63	56.00	-33.37	19.65	Line	-	2.98	9.66	0.11	9.88			
AV	3.57M	18.34	46.00	-27.66	19.65	Line	-	-1.31	9.66	0.11	9.88			

Conducted Emissions at Powerline

15/09/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	178.803k	33.40	64.55	-31.15	19.52	Neutral	-	13.88	9.64	0.01	9.87			
AV	178.803k	30.14	54.55	-24.41	19.52	Neutral	-	10.62	9.64	0.01	9.87			
QP	213.989k	31.16	63.06	-31.90	19.52	Neutral	-	11.64	9.64	0.01	9.87			
AV	213.989k	26.87	53.06	-26.19	19.52	Neutral	-	7.35	9.64	0.01	9.87			
QP	592.227k	33.63	56.00	-22.37	19.53	Neutral	-	14.10	9.63	0.03	9.87			
AV	592.227k	25.06	46.00	-20.94	19.53	Neutral	"Worst"	5.53	9.63	0.03	9.87			
QP	1.519M	27.38	56.00	-28.62	19.58	Neutral	-	7.80	9.64	0.07	9.87			
AV	1.519M	18.86	46.00	-27.14	19.58	Neutral	-	-0.72	9.64	0.07	9.87			
QP	2.414M	25.81	56.00	-30.19	19.61	Neutral	-	6.20	9.65	0.09	9.87			
AV	2.414M	17.64	46.00	-28.36	19.61	Neutral	-	-1.97	9.65	0.09	9.87			
QP	3.686M	23.56	56.00	-32.44	19.66	Neutral	-	3.90	9.66	0.12	9.88			
AV	3.686M	18.12	46.00	-27.88	19.66	Neutral	-	-1.54	9.66	0.12	9.88			

**Summary**

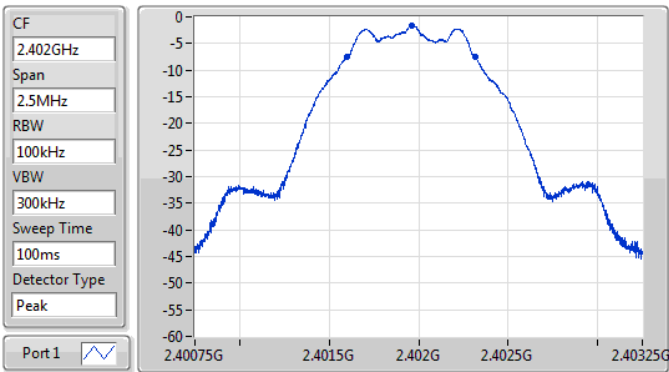
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	721.25k	1.036M	1M04F1D	720k	1.032M
BT-LE(2Mbps)	1.258M	2.046M	2M05F1D	1.255M	2.042M

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	720k	1.036M
2440MHz	Pass	500k	721.25k	1.034M
2480MHz	Pass	500k	720k	1.032M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.258M	2.042M
2440MHz	Pass	500k	1.258M	2.042M
2480MHz	Pass	500k	1.255M	2.046M

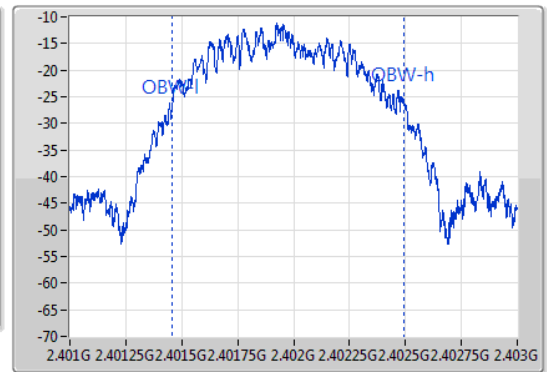
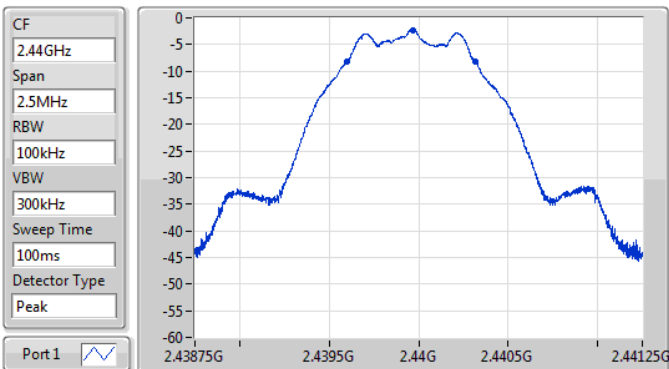
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

BT-LE(1Mbps)
2402MHz


6dB(Hz)	FI-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
720k	2.401598G	2.402318G	1.036M	2.401455G	2.402491G	500k	1

EBW-DTS

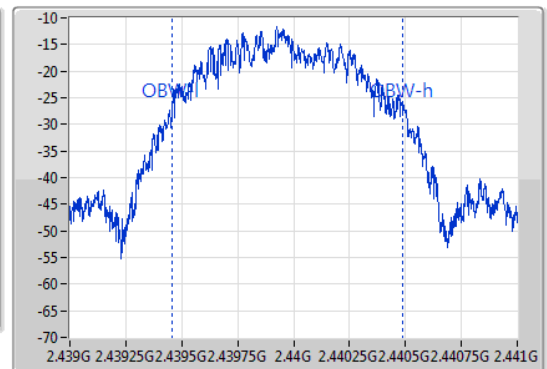
15/09/2020

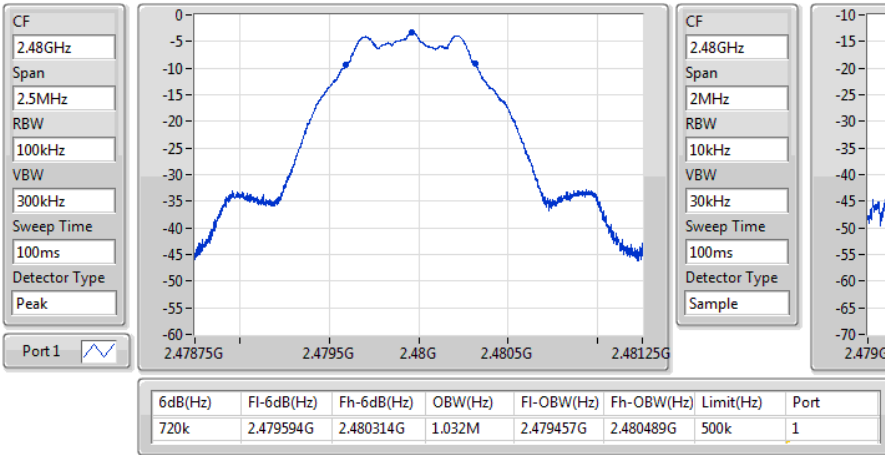

BT-LE(1Mbps)
2440MHz


6dB(Hz)	FI-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
721.25k	2.439596G	2.440318G	1.034M	2.439456G	2.44049G	500k	1

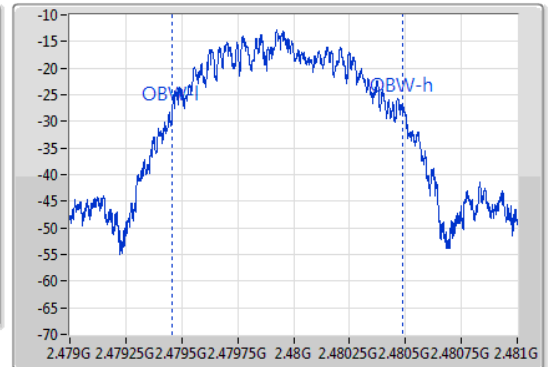
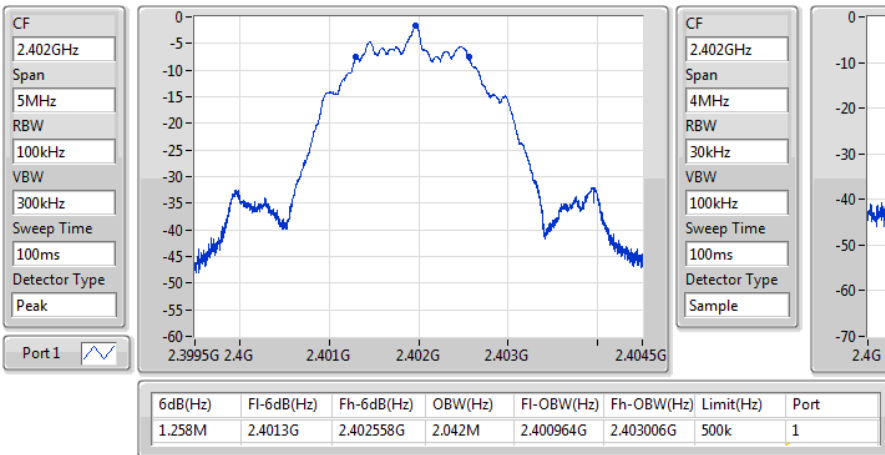
EBW-DTS

15/09/2020

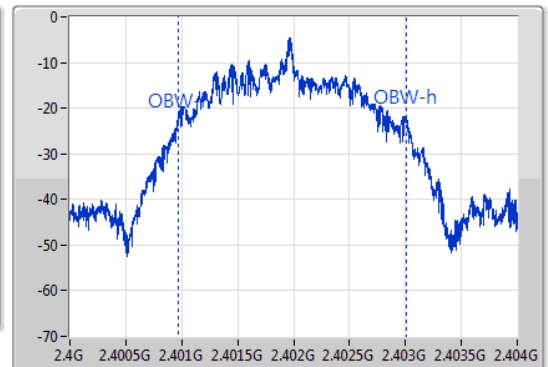


BT-LE(1Mbps)
2480MHz

EBW-DTS

15/09/2020

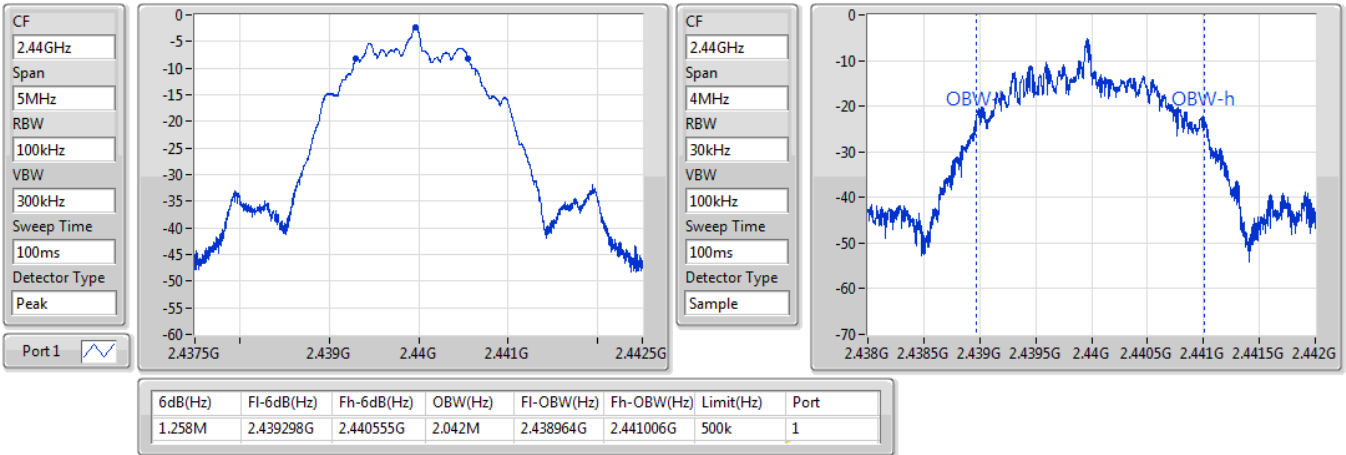

BT-LE(2Mbps)
2402MHz

EBW-DTS

15/09/2020

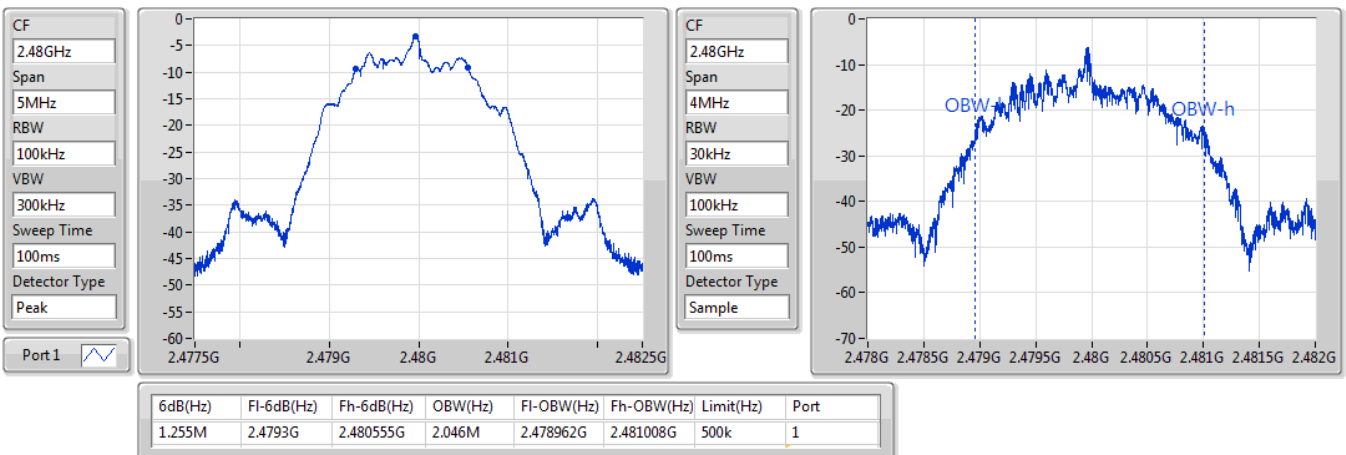


BT-LE(2Mbps)
EBW-DTS
2440MHz

15/09/2020


BT-LE(2Mbps)
EBW-DTS
2480MHz

15/09/2020





Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	-1.49	0.00071
BT-LE(2Mbps)	-1.66	0.00068



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.50	-1.49	30.00
2440MHz	Pass	2.50	-2.16	30.00
2480MHz	Pass	2.50	-3.25	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.50	-1.66	30.00
2440MHz	Pass	2.50	-2.32	30.00
2480MHz	Pass	2.50	-3.41	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-17.07
BT-LE(2Mbps)	-19.73

RBW = 3kHz;



Result

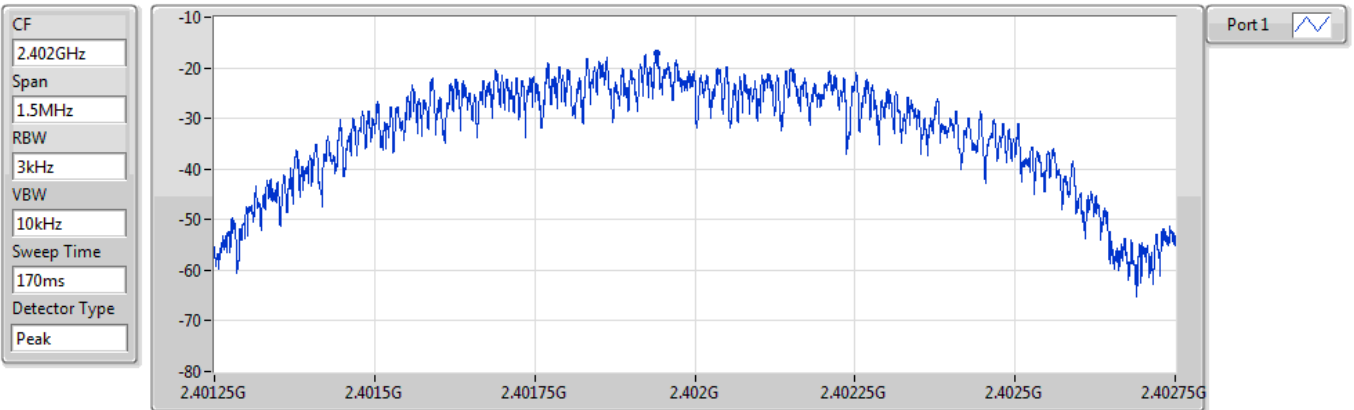
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.50	-17.07	8.00
2440MHz	Pass	2.50	-17.76	8.00
2480MHz	Pass	2.50	-18.81	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.50	-19.73	8.00
2440MHz	Pass	2.50	-20.19	8.00
2480MHz	Pass	2.50	-21.21	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

BT-LE(1Mbps)

2402MHz

15/09/2020

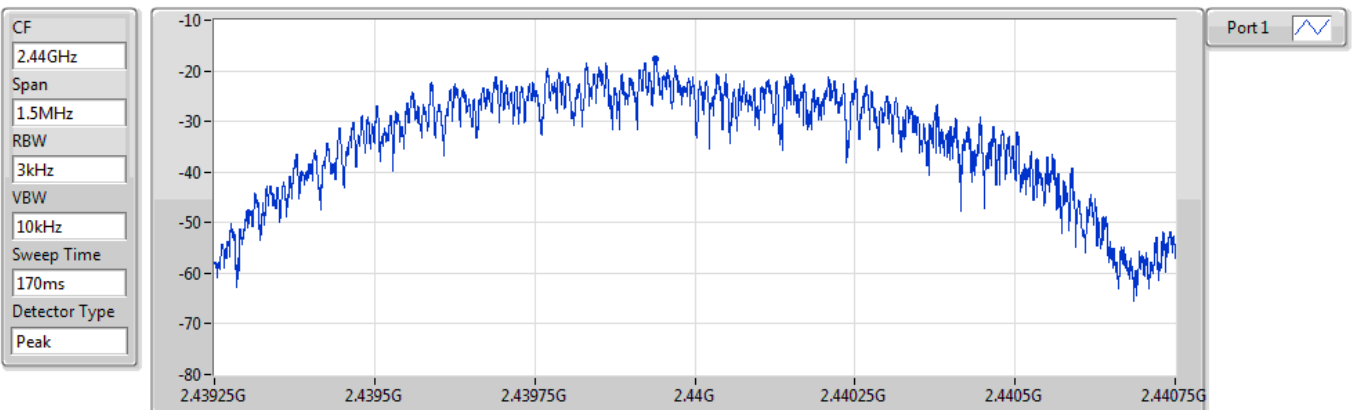


Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-17.07	-17.07	-17.07

BT-LE(1Mbps)

2440MHz

15/09/2020

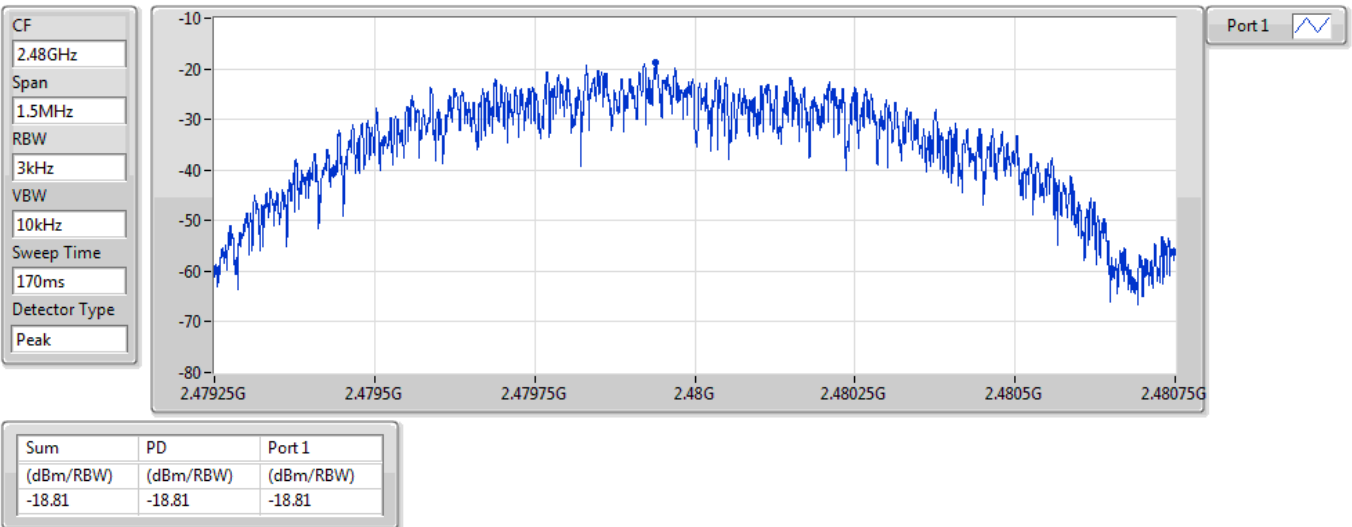


Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-17.76	-17.76	-17.76

BT-LE(1Mbps)

2480MHz

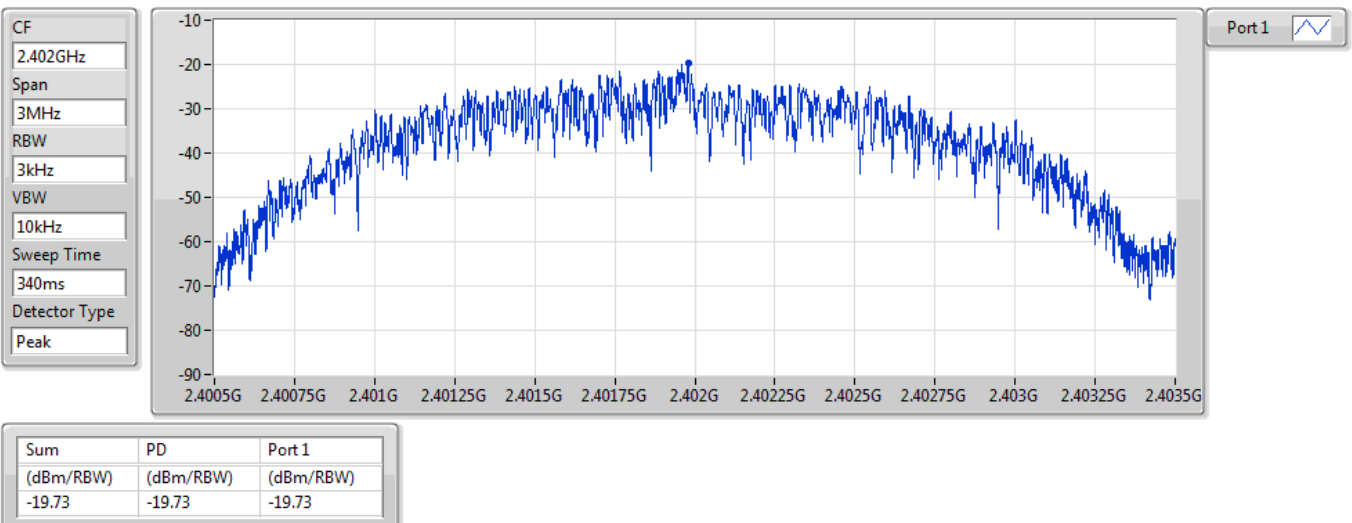
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BT-LE(2Mbps)

2402MHz

15/09/2020

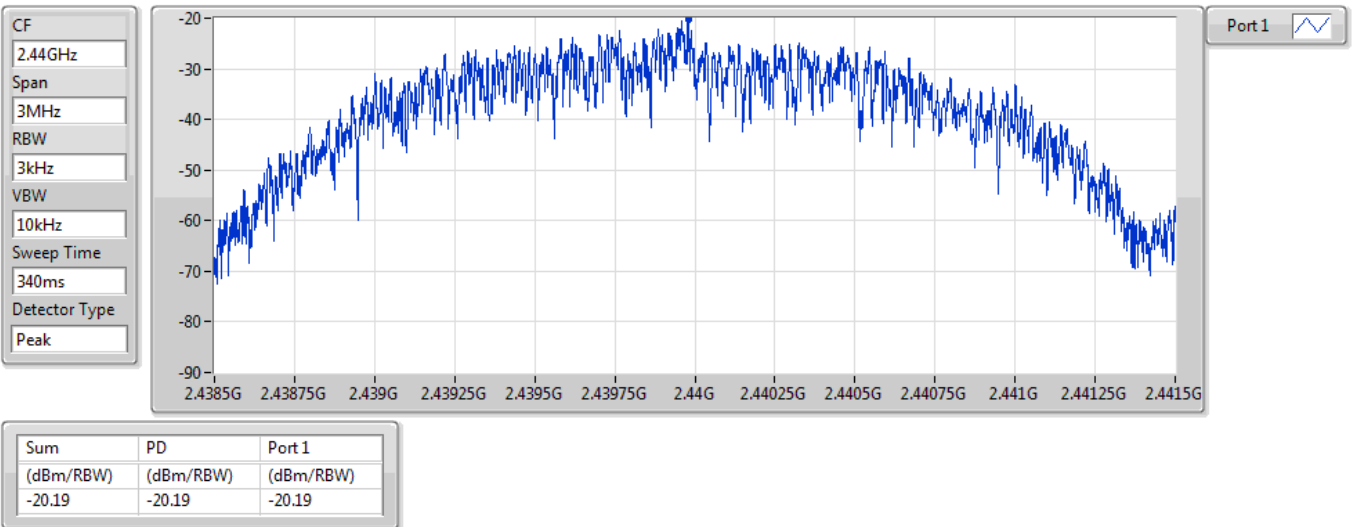


BT-LE(2Mbps)

PSD

2440MHz

15/09/2020

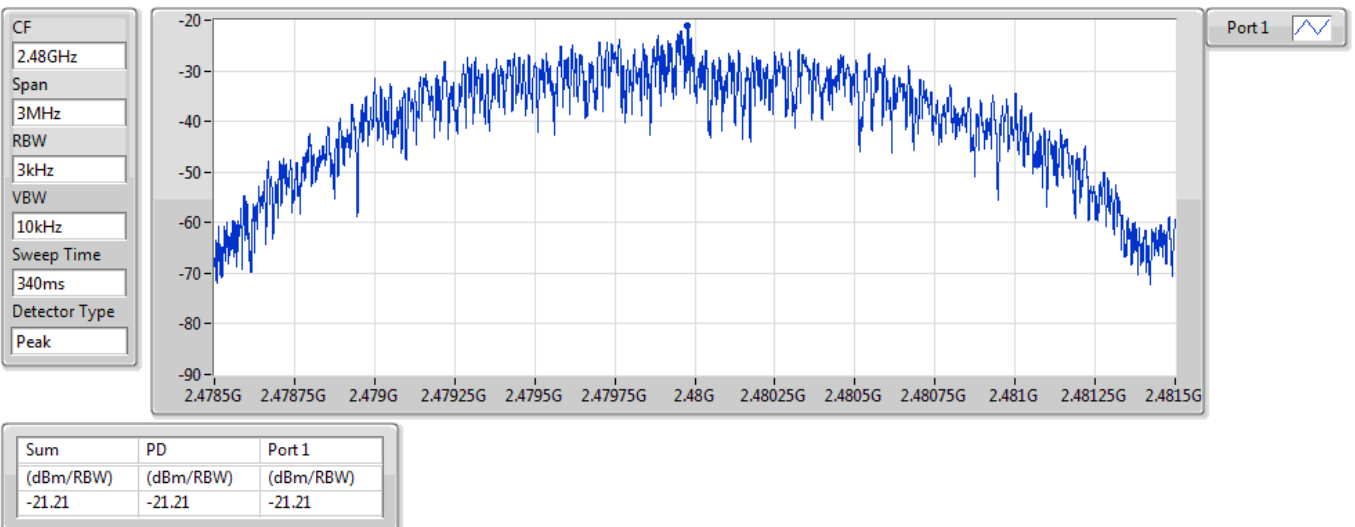


BT-LE(2Mbps)

PSD

2480MHz

15/09/2020



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	2.40196G	-1.71	-31.71	1.72347G	-45.26	2.39123G	-43.90	2.4G	-47.04	2.49326G	-43.69	21.97141G	-35.65	1
BT-LE(2Mbps)	Pass	2.40192G	-1.91	-31.91	1.95994G	-45.28	2.39995G	-32.78	2.4G	-36.90	2.50139G	-43.25	21.89267G	-35.45	1

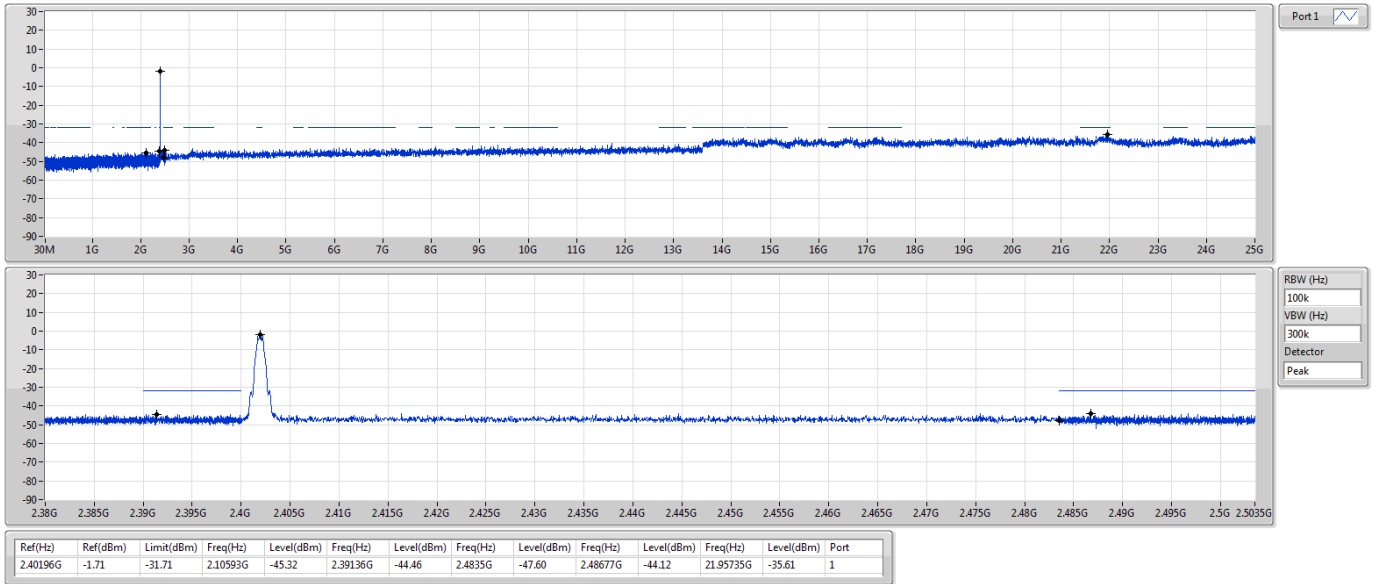
Result

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	2.40196G	-1.71	-31.71	2.10593G	-45.32	2.39136G	-44.46	2.4835G	-47.60	2.48677G	-44.12	21.95735G	-35.61	1
2440MHz	Pass	2.40196G	-1.71	-31.71	1.72347G	-45.26	2.39123G	-43.90	2.4G	-47.04	2.49326G	-43.69	21.97141G	-35.65	1
2480MHz	Pass	2.40196G	-1.71	-31.71	2.30833G	-44.94	2.39085G	-44.29	2.4835G	-46.10	2.50334G	-44.02	21.89267G	-36.17	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40192G	-1.91	-31.91	1.95994G	-45.28	2.39995G	-32.78	2.4G	-36.90	2.50139G	-43.25	21.89267G	-35.45	1
2440MHz	Pass	2.40192G	-1.91	-31.91	2.11974G	-45.26	2.39439G	-43.32	2.4G	-46.22	2.50018G	-43.45	21.90111G	-35.76	1
2480MHz	Pass	2.40192G	-1.91	-31.91	2.00429G	-43.94	2.39028G	-44.04	2.4835G	-46.35	2.49999G	-44.13	21.92923G	-35.35	1

BT-LE(1Mbps)

CSEndB-DTS

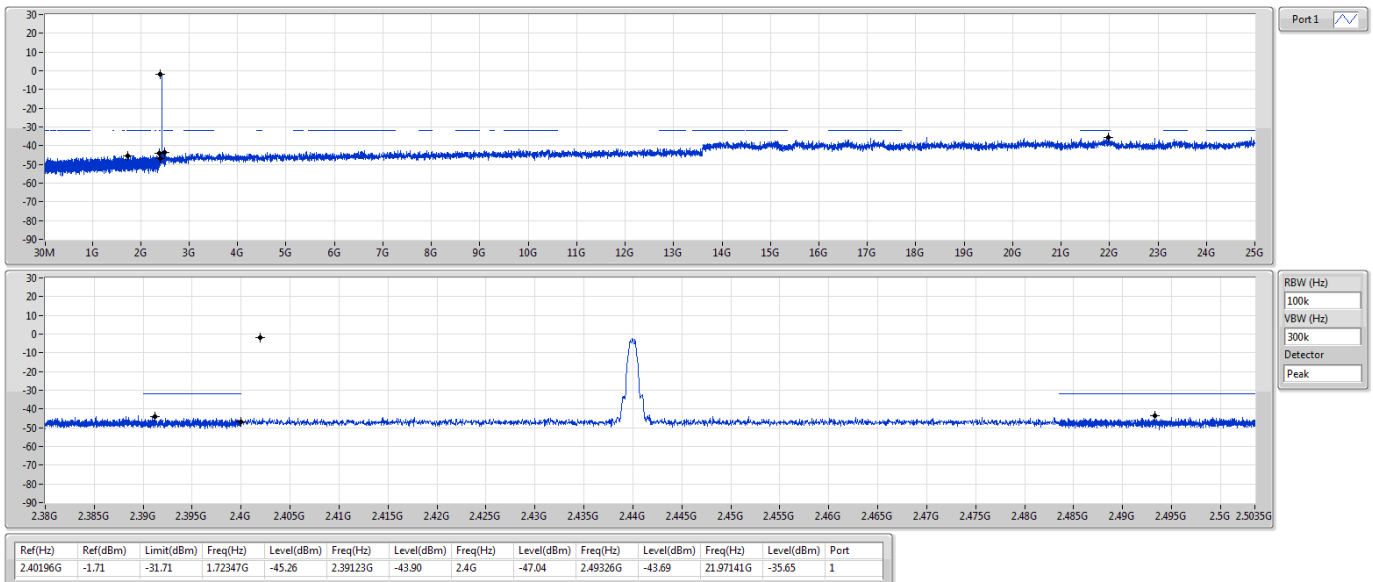
2402MHz



BT-LE(1Mbps)

CSEndB-DTS

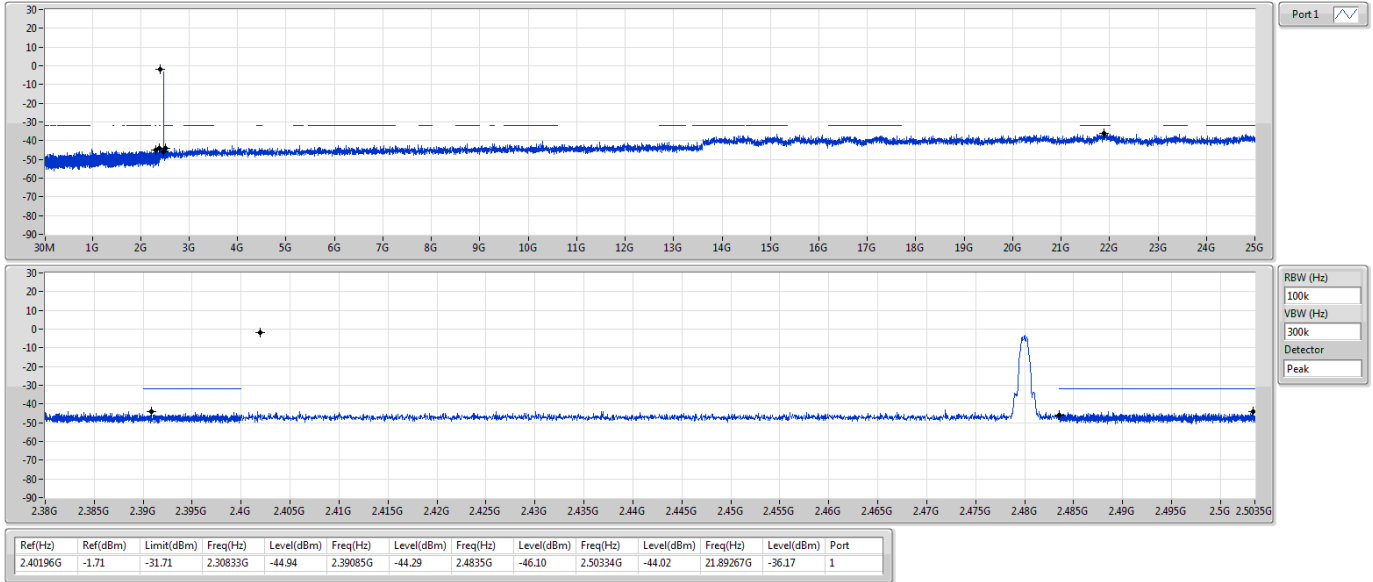
2440MHz



BT-LE(1Mbps)

CSEndB-DTS

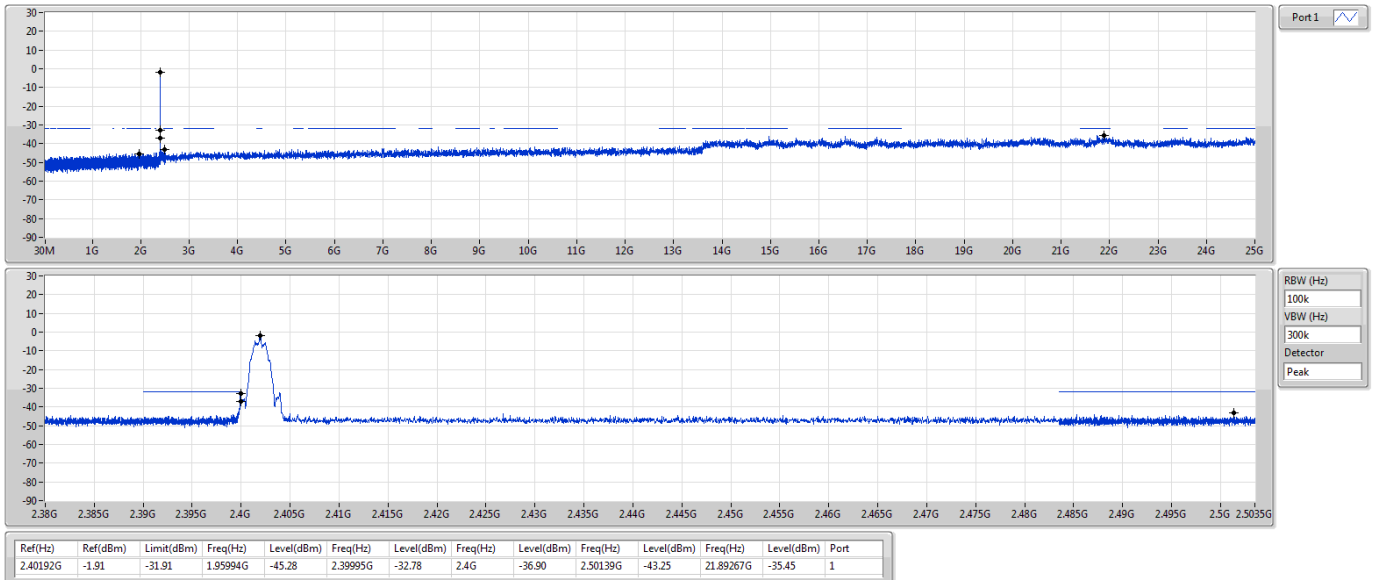
2480MHz



BT-LE(2Mbps)

CSEndB-DTS

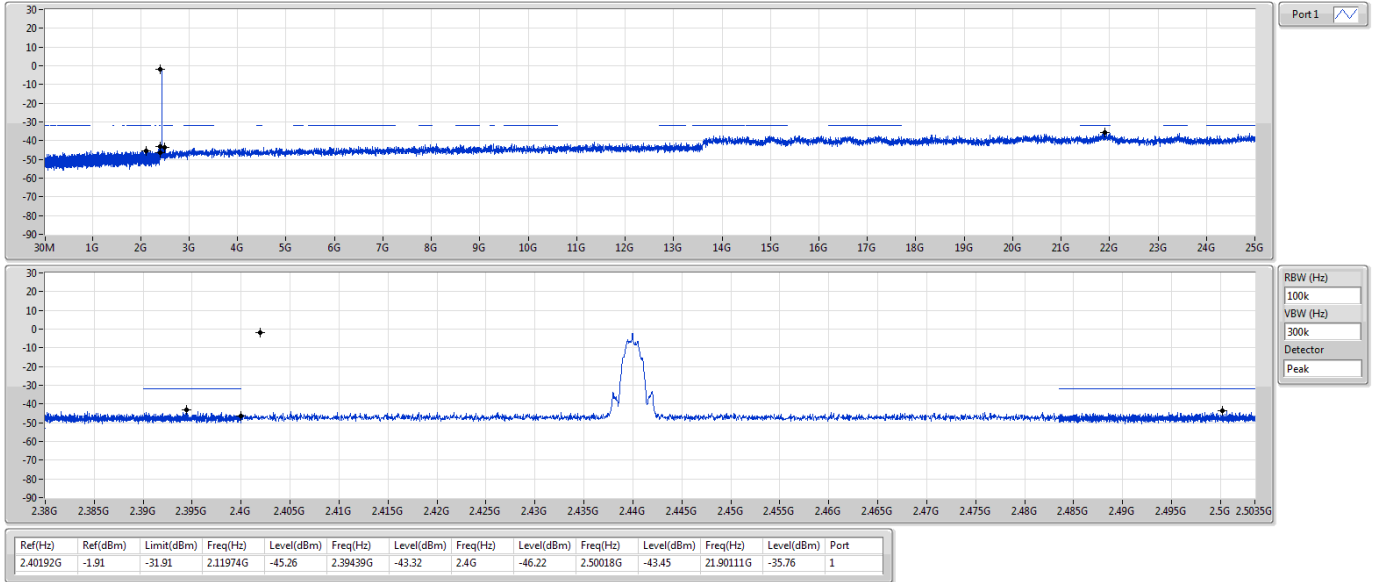
2402MHz



BT-LE(2Mbps)

CSEndB-DTS

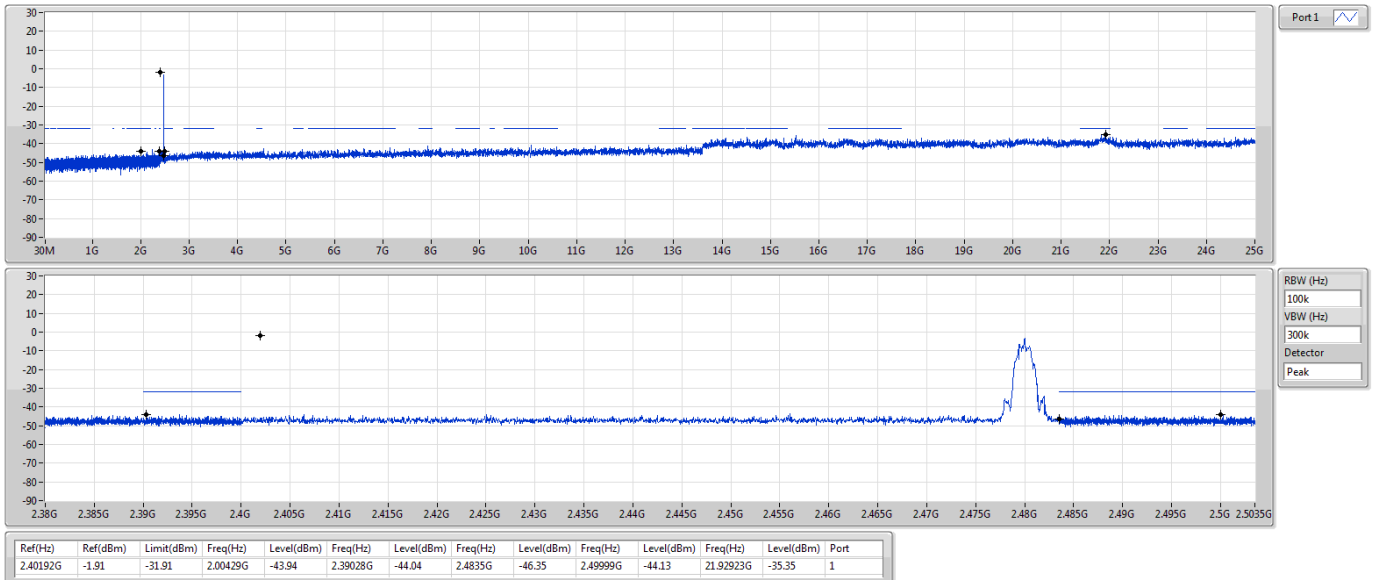
2440MHz



BT-LE(2Mbps)

CSEndB-DTS

2480MHz





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	PK	297.72M	40.84	46.00	-5.16	3	Horizontal	0	1.00	-

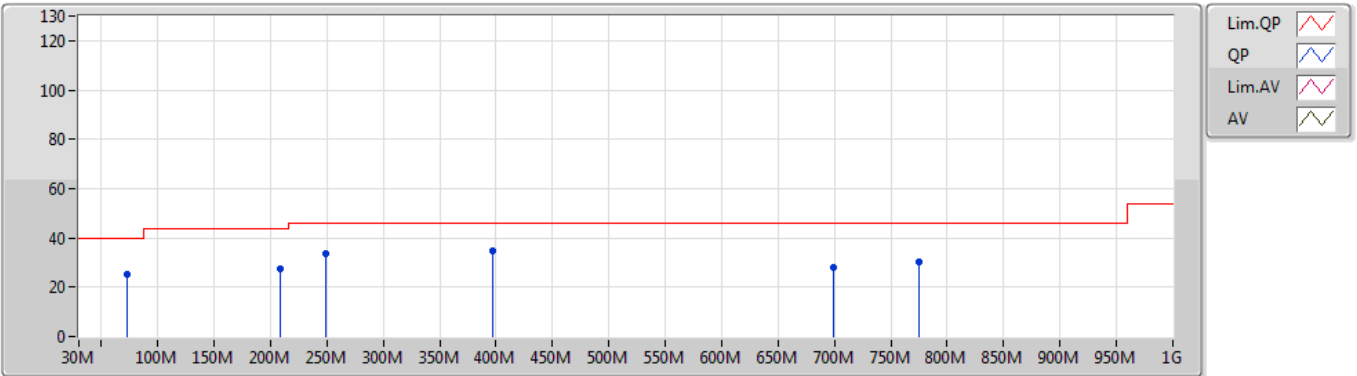
**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	72.68M	25.47	40.00	-14.53	3	Vertical	360	1.00	-
2440MHz	Pass	PK	208.48M	27.40	43.50	-16.10	3	Vertical	360	1.00	-
2440MHz	Pass	PK	249.22M	33.90	46.00	-12.10	3	Vertical	360	1.00	-
2440MHz	Pass	PK	396.66M	34.73	46.00	-11.27	3	Vertical	360	1.00	-
2440MHz	Pass	PK	699.3M	27.74	46.00	-18.26	3	Vertical	360	1.00	-
2440MHz	Pass	PK	774.96M	30.35	46.00	-15.65	3	Vertical	360	1.00	-
2440MHz	Pass	PK	175.5M	24.42	43.50	-19.08	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	231.76M	26.14	46.00	-19.86	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	297.72M	40.84	46.00	-5.16	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	398.6M	29.39	46.00	-16.61	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	747.8M	40.43	46.00	-5.57	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	943.74M	31.86	46.00	-14.14	3	Horizontal	0	1.00	-

BT-LE(2Mbps)

14/09/2020

2440MHz_Test Fixture

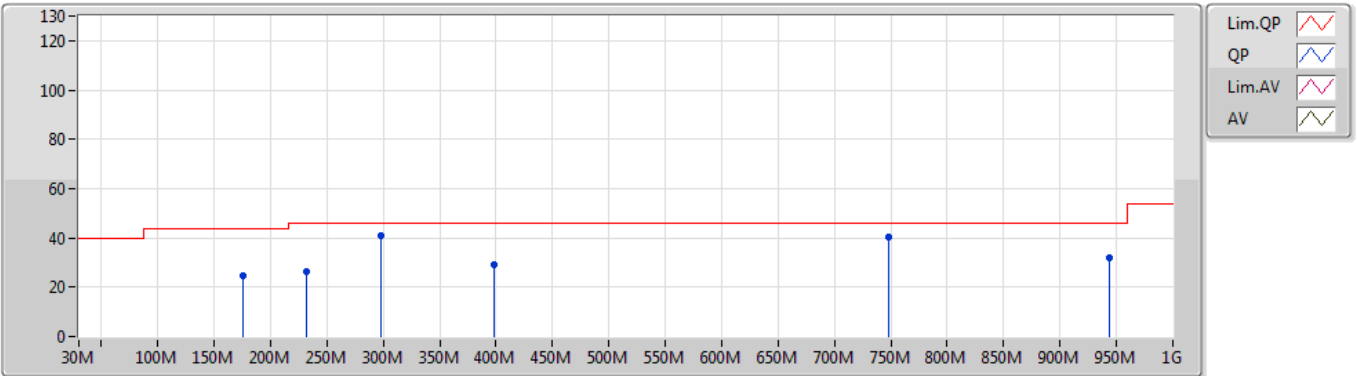


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	72.68M	25.47	40.00	-14.53	-24.76	3	Vertical	360	1.00	-	50.23	11.42	0.65	36.83
PK	208.48M	27.40	43.50	-16.10	-20.88	3	Vertical	360	1.00	-	48.28	14.21	1.13	36.22
PK	249.22M	33.90	46.00	-12.10	-17.62	3	Vertical	360	1.00	-	51.52	17.51	1.30	36.43
PK	396.66M	34.73	46.00	-11.27	-13.96	3	Vertical	360	1.00	-	48.69	20.78	1.69	36.43
PK	699.3M	27.74	46.00	-18.26	-9.38	3	Vertical	360	1.00	-	37.12	25.49	2.40	37.27
PK	774.96M	30.35	46.00	-15.65	-7.62	3	Vertical	360	1.00	-	37.97	27.18	2.55	37.35

BT-LE(2Mbps)

14/09/2020

2440MHz_Test Fixture



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	175.5M	24.42	43.50	-19.08	-20.95	3	Horizontal	0	1.00	-	45.37	14.35	1.08	36.38
PK	231.76M	26.14	46.00	-19.86	-19.67	3	Horizontal	0	1.00	-	45.81	15.44	1.23	36.34
PK	297.72M	40.84	46.00	-5.16	-16.72	3	Horizontal	0	1.00	-	57.56	18.23	1.40	36.35
PK	398.6M	29.39	46.00	-16.61	-13.87	3	Horizontal	0	1.00	-	43.26	20.86	1.69	36.42
PK	747.8M	40.43	46.00	-5.57	-7.64	3	Horizontal	0	1.00	-	48.07	27.06	2.50	37.20
PK	943.74M	31.86	46.00	-14.14	-5.10	3	Horizontal	0	1.00	-	36.96	29.39	2.89	37.38



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	2.4862G	45.67	54.00	-8.33	3	Horizontal	208	2.42	-
BT-LE(2Mbps)	Pass	AV	2.4858G	47.14	54.00	-6.86	3	Horizontal	233	3.00	-

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	2.3584G	44.61	54.00	-9.39	3	Vertical	98	2.45	-
2402MHz	Pass	AV	2.402G	90.53	Inf	-Inf	3	Vertical	98	2.45	-
2402MHz	Pass	PK	2.388G	56.57	74.00	-17.43	3	Vertical	98	2.45	-
2402MHz	Pass	PK	2.4022G	91.60	Inf	-Inf	3	Vertical	98	2.45	-
2402MHz	Pass	AV	2.3588G	44.83	54.00	-9.17	3	Horizontal	218	1.91	-
2402MHz	Pass	AV	2.402G	84.60	Inf	-Inf	3	Horizontal	218	1.91	-
2402MHz	Pass	PK	2.3532G	56.60	74.00	-17.40	3	Horizontal	218	1.91	-
2402MHz	Pass	PK	2.4018G	86.00	Inf	-Inf	3	Horizontal	218	1.91	-
2402MHz	Pass	AV	4.804G	42.25	54.00	-11.75	3	Vertical	345	1.25	-
2402MHz	Pass	PK	4.8044G	50.53	74.00	-23.47	3	Vertical	345	1.25	-
2402MHz	Pass	AV	4.804G	41.62	54.00	-12.38	3	Horizontal	176	1.33	-
2402MHz	Pass	PK	4.80452G	49.49	74.00	-24.51	3	Horizontal	176	1.33	-
2440MHz	Pass	AV	2.3564G	44.76	54.00	-9.24	3	Vertical	102	2.64	-
2440MHz	Pass	AV	2.44G	89.45	Inf	-Inf	3	Vertical	102	2.64	-
2440MHz	Pass	AV	2.4896G	45.18	54.00	-8.82	3	Vertical	102	2.64	-
2440MHz	Pass	PK	2.3624G	56.70	74.00	-17.30	3	Vertical	102	2.64	-
2440MHz	Pass	PK	2.4396G	90.47	Inf	-Inf	3	Vertical	102	2.64	-
2440MHz	Pass	PK	2.4964G	56.61	74.00	-17.39	3	Vertical	102	2.64	-
2440MHz	Pass	AV	2.358G	44.63	54.00	-9.37	3	Horizontal	221	2.03	-
2440MHz	Pass	AV	2.44G	83.93	Inf	-Inf	3	Horizontal	221	2.03	-
2440MHz	Pass	AV	2.4944G	45.19	54.00	-8.81	3	Horizontal	221	2.03	-
2440MHz	Pass	PK	2.3732G	56.33	74.00	-17.67	3	Horizontal	221	2.03	-
2440MHz	Pass	PK	2.4396G	84.97	Inf	-Inf	3	Horizontal	221	2.03	-
2440MHz	Pass	PK	2.4908G	57.33	74.00	-16.67	3	Horizontal	221	2.03	-
2440MHz	Pass	AV	4.88001G	44.80	54.00	-9.20	3	Vertical	325	2.49	-
2440MHz	Pass	AV	7.31922G	41.11	54.00	-12.89	3	Vertical	98	2.03	-
2440MHz	Pass	PK	4.8794G	51.53	74.00	-22.47	3	Vertical	325	2.49	-
2440MHz	Pass	PK	7.31927G	51.87	74.00	-22.13	3	Vertical	98	2.03	-
2440MHz	Pass	AV	4.87999G	42.44	54.00	-11.56	3	Horizontal	177	1.29	-
2440MHz	Pass	AV	7.31928G	43.48	54.00	-10.52	3	Horizontal	197	1.03	-
2440MHz	Pass	PK	4.87944G	49.70	74.00	-24.30	3	Horizontal	177	1.29	-
2440MHz	Pass	PK	7.31925G	53.00	74.00	-21.00	3	Horizontal	197	1.03	-
2480MHz	Pass	AV	2.48G	88.93	Inf	-Inf	3	Vertical	25	1.25	-
2480MHz	Pass	AV	2.4844G	45.22	54.00	-8.78	3	Vertical	25	1.25	-
2480MHz	Pass	PK	2.4798G	89.97	Inf	-Inf	3	Vertical	25	1.25	-
2480MHz	Pass	PK	2.4942G	56.95	74.00	-17.05	3	Vertical	25	1.25	-
2480MHz	Pass	AV	2.48G	83.28	Inf	-Inf	3	Horizontal	208	2.42	-
2480MHz	Pass	AV	2.4862G	45.67	54.00	-8.33	3	Horizontal	208	2.42	-
2480MHz	Pass	PK	2.4798G	84.48	Inf	-Inf	3	Horizontal	208	2.42	-
2480MHz	Pass	PK	2.4886G	57.41	74.00	-16.59	3	Horizontal	208	2.42	-
2480MHz	Pass	AV	4.96006G	43.97	54.00	-10.03	3	Vertical	157	1.00	-
2480MHz	Pass	AV	7.43922G	43.56	54.00	-10.44	3	Vertical	58	1.08	-
2480MHz	Pass	PK	4.96056G	51.32	74.00	-22.68	3	Vertical	157	1.00	-
2480MHz	Pass	PK	7.43928G	53.51	74.00	-20.49	3	Vertical	58	1.08	-
2480MHz	Pass	AV	4.95998G	42.97	54.00	-11.03	3	Horizontal	176	1.24	-
2480MHz	Pass	AV	7.43933G	41.15	54.00	-12.85	3	Horizontal	198	1.04	-
2480MHz	Pass	PK	4.95951G	50.37	74.00	-23.63	3	Horizontal	176	1.24	-
2480MHz	Pass	PK	7.4391G	52.84	74.00	-21.16	3	Horizontal	198	1.04	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3744G	46.79	54.00	-7.21	3	Vertical	98	2.45	-
2402MHz	Pass	AV	2.402G	89.22	Inf	-Inf	3	Vertical	98	2.45	-
2402MHz	Pass	PK	2.386G	56.81	74.00	-17.19	3	Vertical	98	2.45	-
2402MHz	Pass	PK	2.4024G	91.62	Inf	-Inf	3	Vertical	98	2.45	-
2402MHz	Pass	AV	2.3642G	46.39	54.00	-7.61	3	Horizontal	220	1.30	-
2402MHz	Pass	AV	2.402G	83.55	Inf	-Inf	3	Horizontal	220	1.30	-
2402MHz	Pass	PK	2.3752G	57.79	74.00	-16.21	3	Horizontal	220	1.30	-
2402MHz	Pass	PK	2.4026G	86.09	Inf	-Inf	3	Horizontal	220	1.30	-
2402MHz	Pass	AV	4.80296G	42.75	54.00	-11.25	3	Vertical	235	2.84	-
2402MHz	Pass	PK	4.80277G	49.70	74.00	-24.30	3	Vertical	235	2.84	-
2402MHz	Pass	AV	4.80296G	41.93	54.00	-12.07	3	Horizontal	343	3.00	-



RSE TX above 1GHz

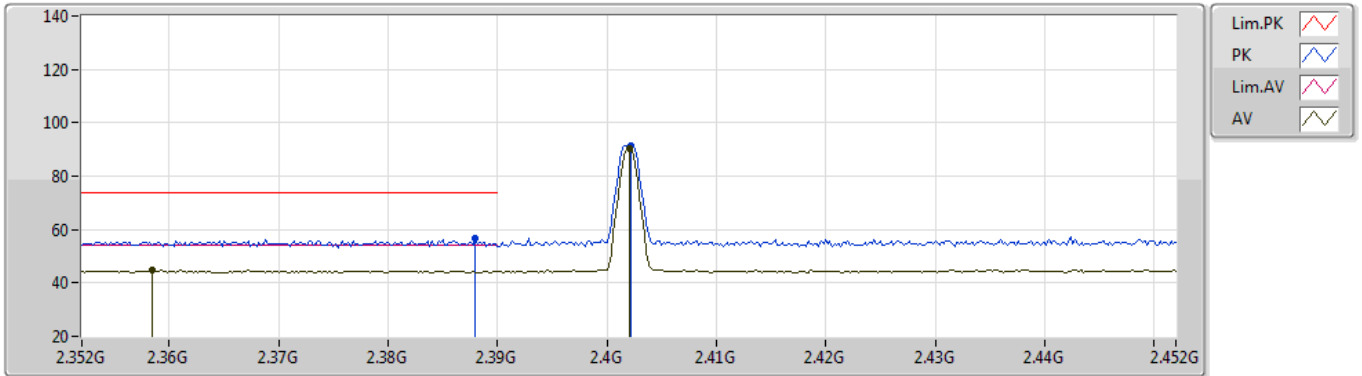
Appendix F.2

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2402MHz	Pass	PK	4.80293G	47.74	74.00	-26.26	3	Horizontal	343	3.00	-
2440MHz	Pass	AV	2.3552G	46.64	54.00	-7.36	3	Vertical	104	2.97	-
2440MHz	Pass	AV	2.44G	87.87	Inf	-Inf	3	Vertical	104	2.97	-
2440MHz	Pass	AV	2.494G	46.48	54.00	-7.52	3	Vertical	104	2.97	-
2440MHz	Pass	PK	2.3708G	56.88	74.00	-17.12	3	Vertical	104	2.97	-
2440MHz	Pass	PK	2.4396G	90.30	Inf	-Inf	3	Vertical	104	2.97	-
2440MHz	Pass	PK	2.4908G	56.40	74.00	-17.60	3	Vertical	104	2.97	-
2440MHz	Pass	AV	2.3404G	46.57	54.00	-7.43	3	Horizontal	219	2.04	-
2440MHz	Pass	AV	2.44G	82.94	Inf	-Inf	3	Horizontal	219	2.04	-
2440MHz	Pass	AV	2.4968G	46.93	54.00	-7.07	3	Horizontal	219	2.04	-
2440MHz	Pass	PK	2.372G	56.65	74.00	-17.35	3	Horizontal	219	2.04	-
2440MHz	Pass	PK	2.4396G	85.50	Inf	-Inf	3	Horizontal	219	2.04	-
2440MHz	Pass	PK	2.4964G	57.33	74.00	-16.67	3	Horizontal	219	2.04	-
2440MHz	Pass	AV	4.87891G	45.03	54.00	-8.97	3	Vertical	323	2.48	-
2440MHz	Pass	AV	7.32008G	38.75	54.00	-15.25	3	Vertical	90	1.09	-
2440MHz	Pass	PK	4.87894G	51.87	74.00	-22.13	3	Vertical	323	2.48	-
2440MHz	Pass	PK	7.3177G	49.70	74.00	-24.30	3	Vertical	90	1.09	-
2440MHz	Pass	AV	4.87899G	40.22	54.00	-13.78	3	Horizontal	345	2.74	-
2440MHz	Pass	AV	7.32203G	38.72	54.00	-15.28	3	Horizontal	163	2.08	-
2440MHz	Pass	PK	4.87902G	48.72	74.00	-25.28	3	Horizontal	345	2.74	-
2440MHz	Pass	PK	7.31821G	49.12	74.00	-24.88	3	Horizontal	163	2.08	-
2480MHz	Pass	AV	2.48G	87.39	Inf	-Inf	3	Vertical	25	1.24	-
2480MHz	Pass	AV	2.4856G	46.76	54.00	-7.24	3	Vertical	25	1.24	-
2480MHz	Pass	PK	2.4794G	89.78	Inf	-Inf	3	Vertical	25	1.24	-
2480MHz	Pass	PK	2.4848G	56.82	74.00	-17.18	3	Vertical	25	1.24	-
2480MHz	Pass	AV	2.4802G	82.58	Inf	-Inf	3	Horizontal	233	3.00	-
2480MHz	Pass	AV	2.4858G	47.14	54.00	-6.86	3	Horizontal	233	3.00	-
2480MHz	Pass	PK	2.4794G	85.08	Inf	-Inf	3	Horizontal	233	3.00	-
2480MHz	Pass	PK	2.4835G	58.13	74.00	-15.87	3	Horizontal	233	3.00	-
2480MHz	Pass	AV	4.95909G	43.87	54.00	-10.13	3	Vertical	307	1.14	-
2480MHz	Pass	AV	7.43882G	43.66	54.00	-10.34	3	Vertical	57	1.08	-
2480MHz	Pass	PK	4.96098G	51.30	74.00	-22.70	3	Vertical	307	1.14	-
2480MHz	Pass	PK	7.4415G	53.40	74.00	-20.60	3	Vertical	57	1.08	-
2480MHz	Pass	AV	4.95898G	42.17	54.00	-11.83	3	Horizontal	175	1.29	-
2480MHz	Pass	AV	7.43867G	41.84	54.00	-12.16	3	Horizontal	196	1.06	-
2480MHz	Pass	PK	4.96107G	49.69	74.00	-24.31	3	Horizontal	175	1.29	-
2480MHz	Pass	PK	7.4387G	52.21	74.00	-21.79	3	Horizontal	196	1.06	-

BT-LE(1Mbps)

2402MHz_TX

14/09/2020

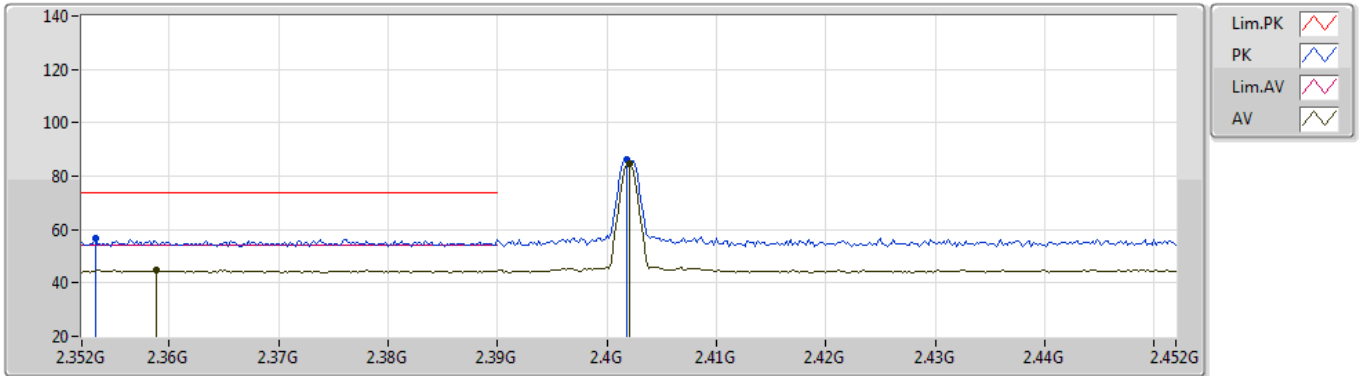


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3584G	44.61	54.00	-9.39	31.61	3	Vertical	98	2.45	-	13.00	27.77	3.84	-
AV	2.402G	90.53	Inf	-Inf	31.50	3	Vertical	98	2.45	-	59.03	27.60	3.90	-
PK	2.388G	56.57	74.00	-17.43	31.53	3	Vertical	98	2.45	-	25.04	27.65	3.88	-
PK	2.402G	91.60	Inf	-Inf	31.50	3	Vertical	98	2.45	-	60.10	27.60	3.90	-

BT-LE(1Mbps)

2402MHz_TX

14/09/2020

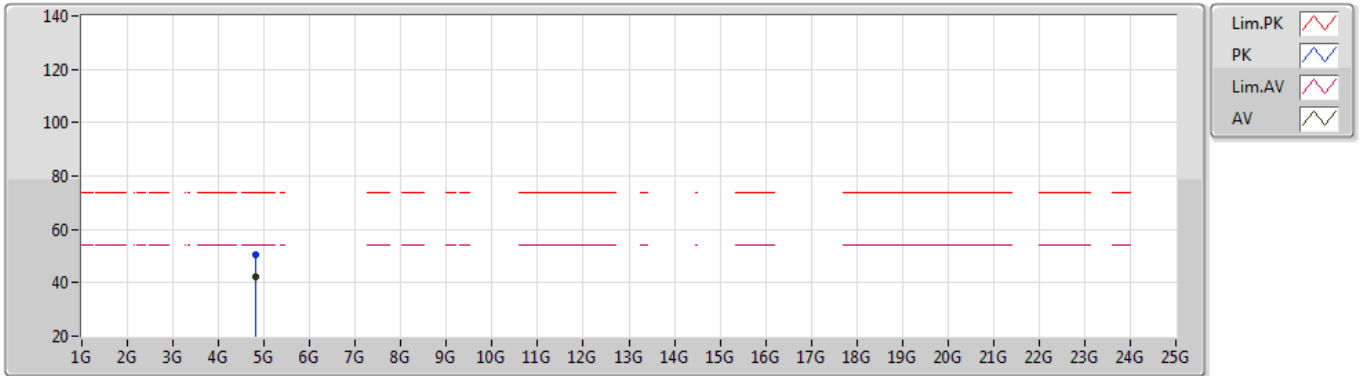


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3588G	44.83	54.00	-9.17	31.60	3	Horizontal	218	1.91	-	13.23	27.76	3.84	-
AV	2.402G	84.60	Inf	-Inf	31.50	3	Horizontal	218	1.91	-	53.10	27.60	3.90	-
PK	2.3532G	56.60	74.00	-17.40	31.62	3	Horizontal	218	1.91	-	24.98	27.79	3.83	-
PK	2.4018G	86.00	Inf	-Inf	31.50	3	Horizontal	218	1.91	-	54.50	27.60	3.90	-

BT-LE(1Mbps)

2402MHz_TX

14/09/2020

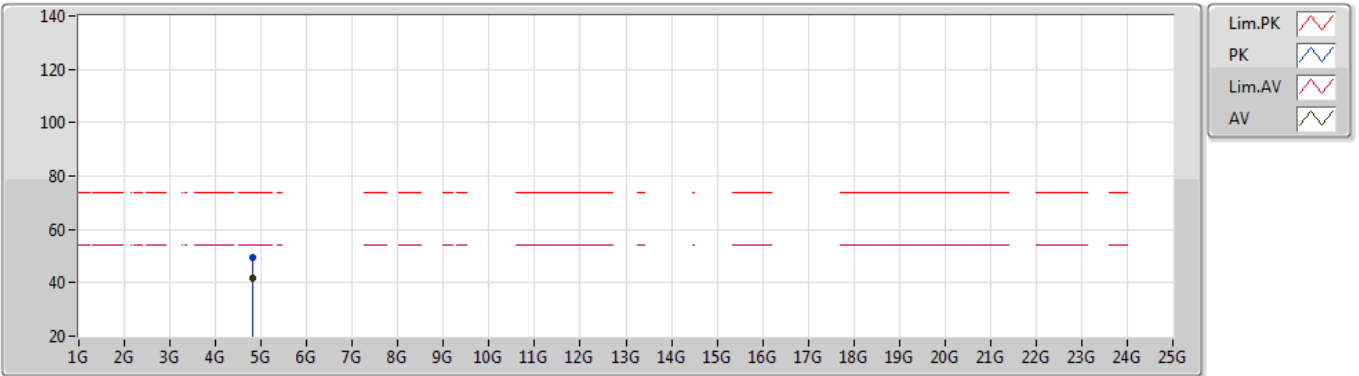


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.804G	42.25	54.00	-11.75	1.49	3	Vertical	345	1.25	-	40.76	31.12	5.30	34.93
PK	4.80444G	50.53	74.00	-23.47	1.49	3	Vertical	345	1.25	-	49.04	31.12	5.30	34.93

BT-LE(1Mbps)

14/09/2020

2402MHz_TX

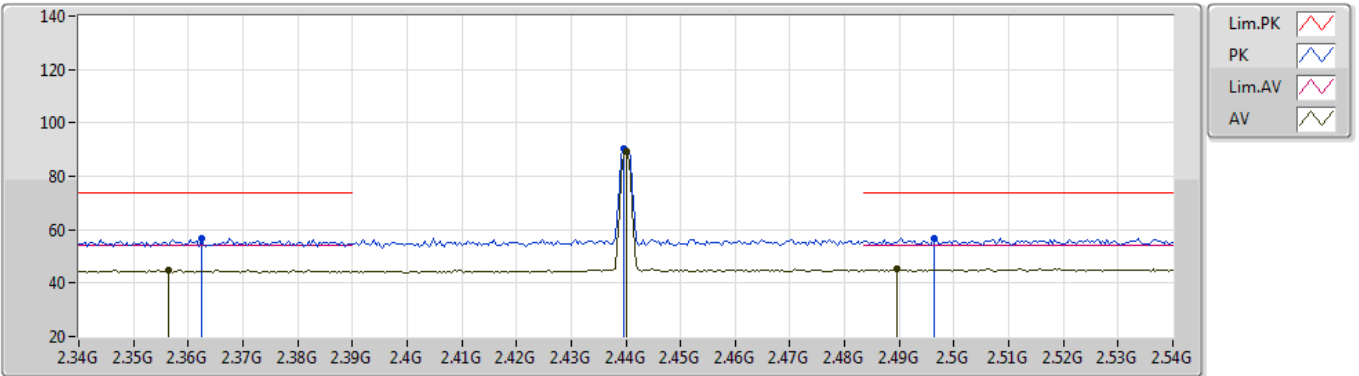


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.804G	41.62	54.00	-12.38	1.49	3	Horizontal	176	1.33	-	40.13	31.12	5.30	34.93
PK	4.80452G	49.49	74.00	-24.51	1.49	3	Horizontal	176	1.33	-	48.00	31.12	5.30	34.93

BT-LE(1Mbps)

2440MHz_TX

14/09/2020

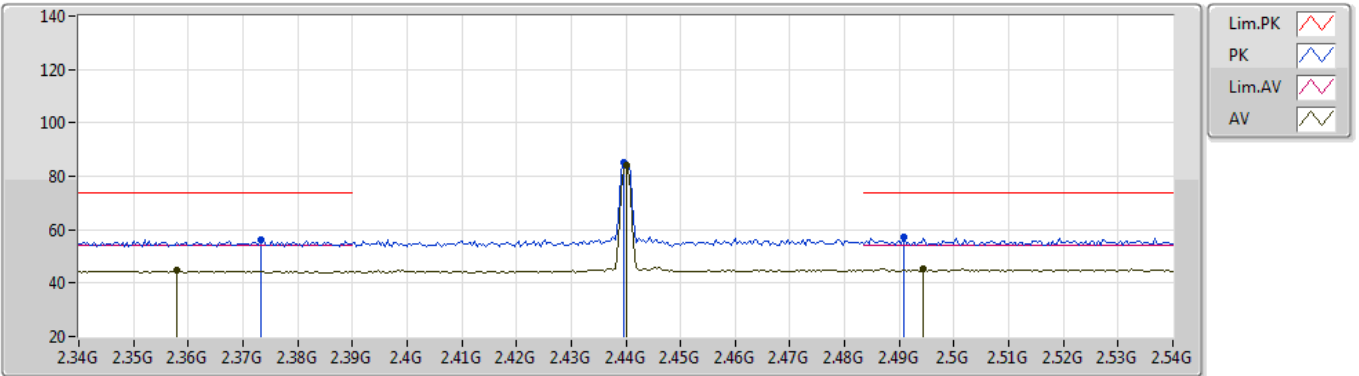


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3564G	44.76	54.00	-9.24	31.60	3	Vertical	102	2.64	-	13.16	27.77	3.83	-
AV	2.44G	89.45	Inf	-Inf	31.56	3	Vertical	102	2.64	-	57.89	27.60	3.96	-
AV	2.4896G	45.18	54.00	-8.82	31.63	3	Vertical	102	2.64	-	13.55	27.60	4.03	-
PK	2.3624G	56.70	74.00	-17.30	31.59	3	Vertical	102	2.64	-	25.11	27.75	3.84	-
PK	2.4396G	90.47	Inf	-Inf	31.56	3	Vertical	102	2.64	-	58.91	27.60	3.96	-
PK	2.4964G	56.61	74.00	-17.39	31.64	3	Vertical	102	2.64	-	24.97	27.60	4.04	-

BT-LE(1Mbps)

2440MHz_TX

14/09/2020

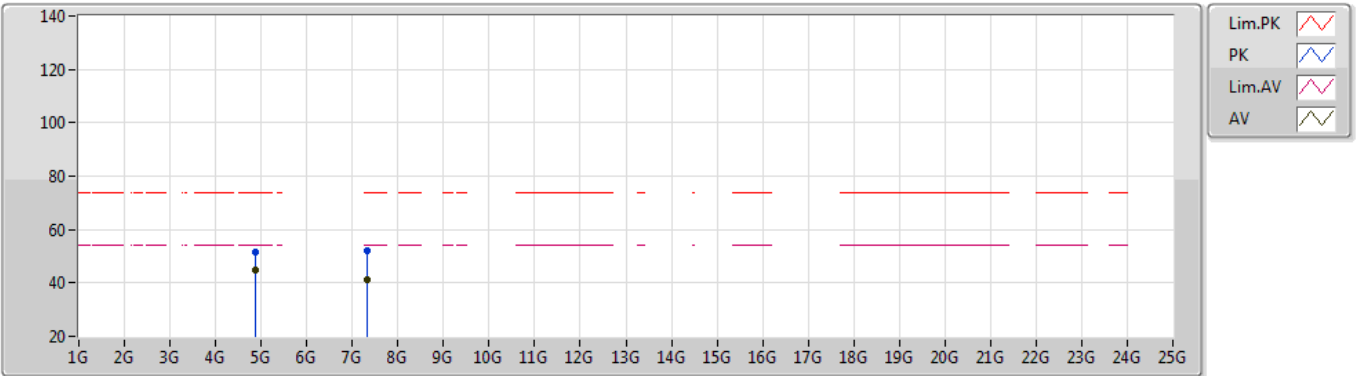


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.358G	44.63	54.00	-9.37	31.61	3	Horizontal	221	2.03	-	13.02	27.77	3.84	-
AV	2.44G	83.93	Inf	-Inf	31.56	3	Horizontal	221	2.03	-	52.37	27.60	3.96	-
AV	2.4944G	45.19	54.00	-8.81	31.64	3	Horizontal	221	2.03	-	13.55	27.60	4.04	-
PK	2.3732G	56.33	74.00	-17.67	31.57	3	Horizontal	221	2.03	-	24.76	27.71	3.86	-
PK	2.4396G	84.97	Inf	-Inf	31.56	3	Horizontal	221	2.03	-	53.41	27.60	3.96	-
PK	2.4908G	57.33	74.00	-16.67	31.64	3	Horizontal	221	2.03	-	25.69	27.60	4.04	-

BT-LE(1Mbps)

14/09/2020

2440MHz_TX

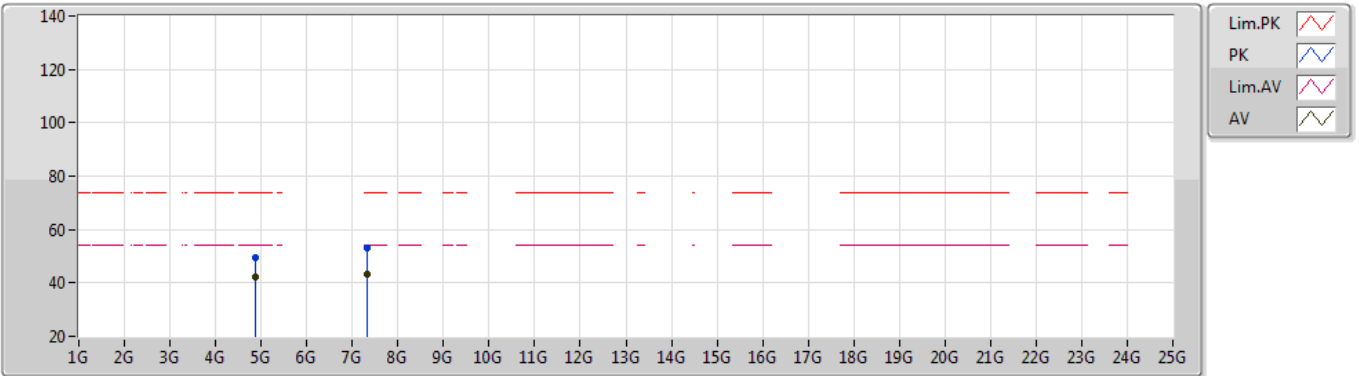


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.88001G	44.80	54.00	-9.20	1.65	3	Vertical	325	2.49	-	43.15	31.24	5.34	34.93
AV	7.31922G	41.11	54.00	-12.89	8.18	3	Vertical	98	2.03	-	32.93	36.56	6.80	35.18
PK	4.8794G	51.53	74.00	-22.47	1.65	3	Vertical	325	2.49	-	49.88	31.24	5.34	34.93
PK	7.31927G	51.87	74.00	-22.13	8.18	3	Vertical	98	2.03	-	43.69	36.56	6.80	35.18

BT-LE(1Mbps)

2440MHz_TX

14/09/2020

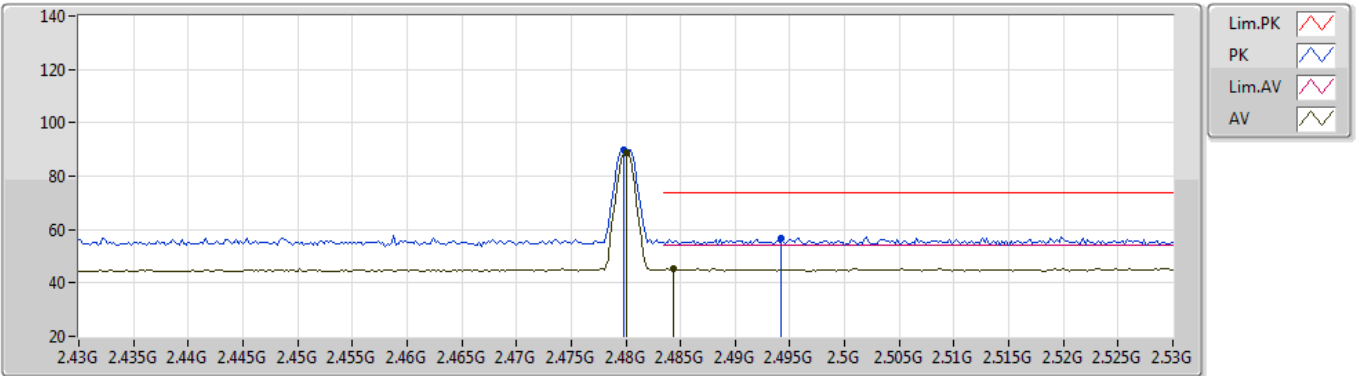


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87999G	42.44	54.00	-11.56	1.65	3	Horizontal	177	1.29	-	40.79	31.24	5.34	34.93
AV	7.31928G	43.48	54.00	-10.52	8.18	3	Horizontal	197	1.03	-	35.30	36.56	6.80	35.18
PK	4.87944G	49.70	74.00	-24.30	1.65	3	Horizontal	177	1.29	-	48.05	31.24	5.34	34.93
PK	7.31925G	53.00	74.00	-21.00	8.18	3	Horizontal	197	1.03	-	44.82	36.56	6.80	35.18

BT-LE(1Mbps)

2480MHz_TX

14/09/2020

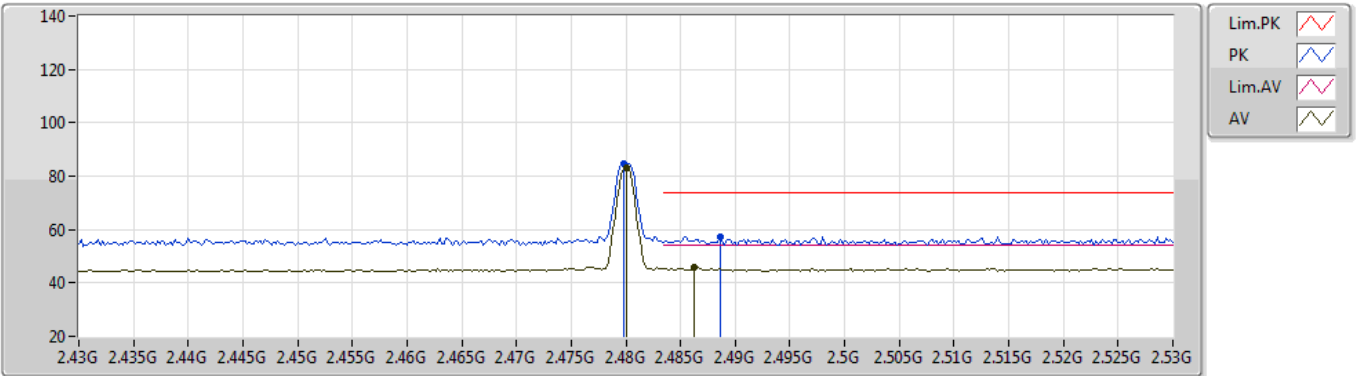


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	88.93	Inf	-Inf	31.62	3	Vertical	25	1.25	-	57.31	27.60	4.02	-
AV	2.4844G	45.22	54.00	-8.78	31.63	3	Vertical	25	1.25	-	13.59	27.60	4.03	-
PK	2.4798G	89.97	Inf	-Inf	31.62	3	Vertical	25	1.25	-	58.35	27.60	4.02	-
PK	2.4942G	56.95	74.00	-17.05	31.64	3	Vertical	25	1.25	-	25.31	27.60	4.04	-

BT-LE(1Mbps)

14/09/2020

2480MHz_TX

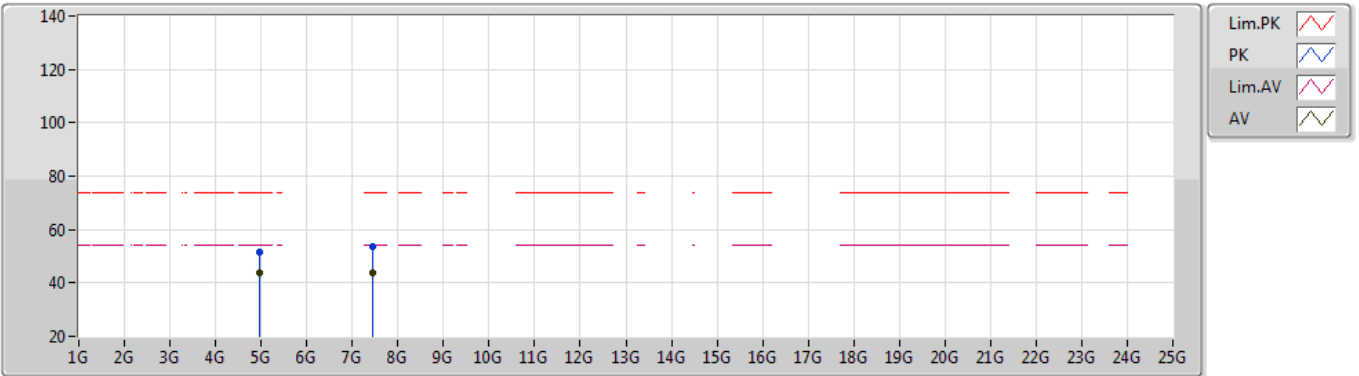


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	83.28	Inf	-Inf	31.62	3	Horizontal	208	2.42	-	51.66	27.60	4.02	-
AV	2.4862G	45.67	54.00	-8.33	31.63	3	Horizontal	208	2.42	-	14.04	27.60	4.03	-
PK	2.4798G	84.48	Inf	-Inf	31.62	3	Horizontal	208	2.42	-	52.86	27.60	4.02	-
PK	2.4886G	57.41	74.00	-16.59	31.63	3	Horizontal	208	2.42	-	25.78	27.60	4.03	-

BT-LE(1Mbps)

14/09/2020

2480MHz_TX

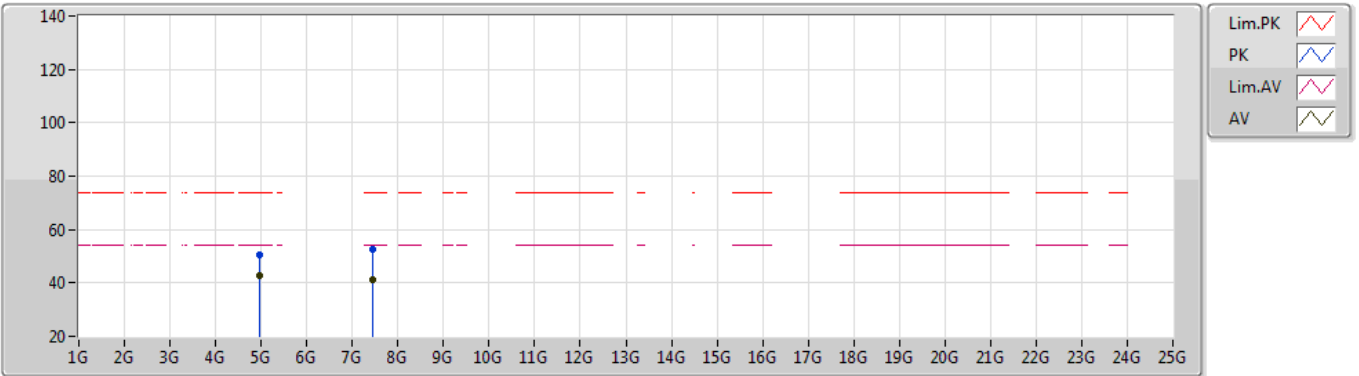


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.96006G	43.97	54.00	-10.03	1.86	3	Vertical	157	1.00	-	42.11	31.42	5.38	34.94
AV	7.43922G	43.56	54.00	-10.44	8.21	3	Vertical	58	1.08	-	35.35	36.56	6.82	35.17
PK	4.96056G	51.32	74.00	-22.68	1.86	3	Vertical	157	1.00	-	49.46	31.42	5.38	34.94
PK	7.43928G	53.51	74.00	-20.49	8.21	3	Vertical	58	1.08	-	45.30	36.56	6.82	35.17

BT-LE(1Mbps)

2480MHz_TX

14/09/2020

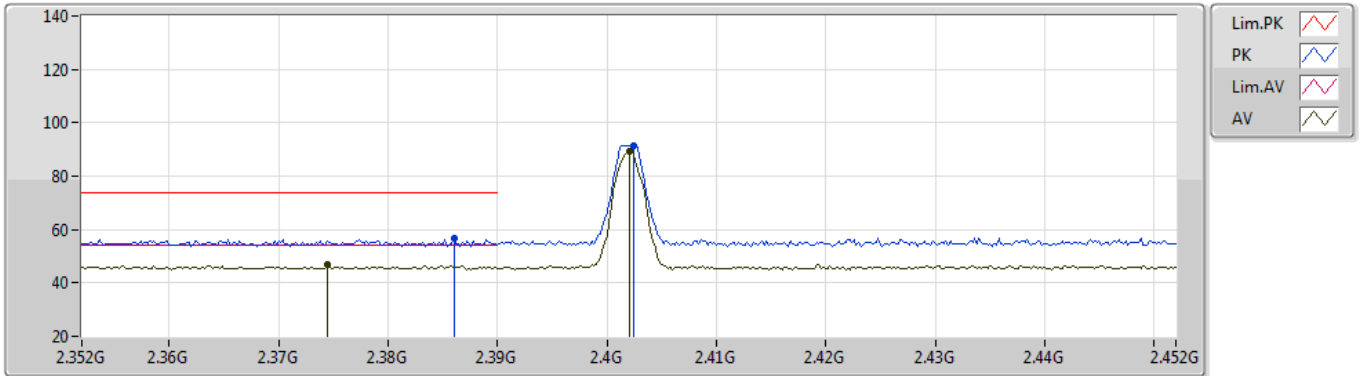


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95998G	42.97	54.00	-11.03	1.86	3	Horizontal	176	1.24	-	41.11	31.42	5.38	34.94
AV	7.43933G	41.15	54.00	-12.85	8.21	3	Horizontal	198	1.04	-	32.94	36.56	6.82	35.17
PK	4.95951G	50.37	74.00	-23.63	1.86	3	Horizontal	176	1.24	-	48.51	31.42	5.38	34.94
PK	7.4391G	52.84	74.00	-21.16	8.21	3	Horizontal	198	1.04	-	44.63	36.56	6.82	35.17

BT-LE(2Mbps)

14/09/2020

2402MHz_TX

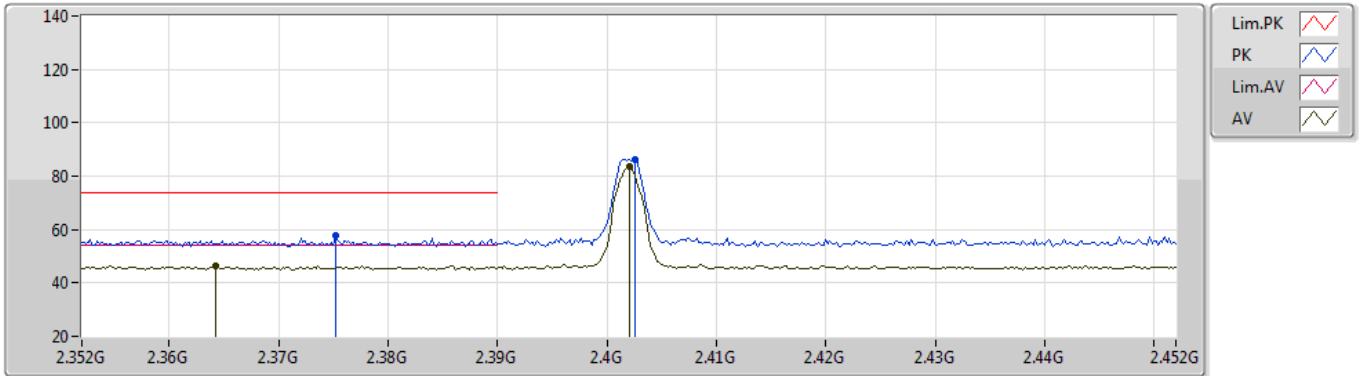


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3744G	46.79	54.00	-7.21	31.56	3	Vertical	98	2.45	-	15.23	27.70	3.86	-
AV	2.402G	89.22	Inf	-Inf	31.50	3	Vertical	98	2.45	-	57.72	27.60	3.90	-
PK	2.386G	56.81	74.00	-17.19	31.54	3	Vertical	98	2.45	-	25.27	27.66	3.88	-
PK	2.4024G	91.62	Inf	-Inf	31.50	3	Vertical	98	2.45	-	60.12	27.60	3.90	-

BT-LE(2Mbps)

2402MHz_TX

14/09/2020

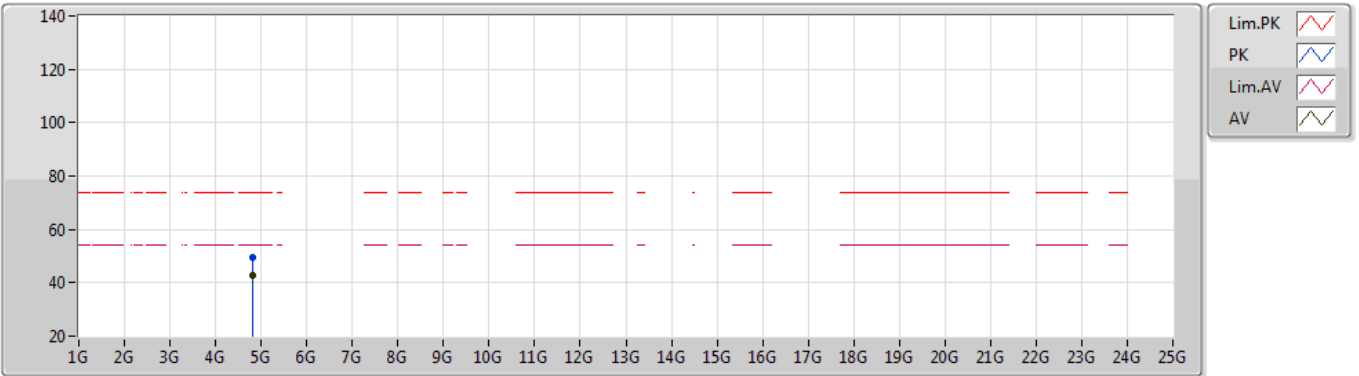


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3642G	46.39	54.00	-7.61	31.59	3	Horizontal	220	1.30	-	14.80	27.74	3.85	-
AV	2.402G	83.55	Inf	-Inf	31.50	3	Horizontal	220	1.30	-	52.05	27.60	3.90	-
PK	2.3752G	57.79	74.00	-16.21	31.56	3	Horizontal	220	1.30	-	26.23	27.70	3.86	-
PK	2.4026G	86.09	Inf	-Inf	31.50	3	Horizontal	220	1.30	-	54.59	27.60	3.90	-

BT-LE(2Mbps)

14/09/2020

2402MHz_TX

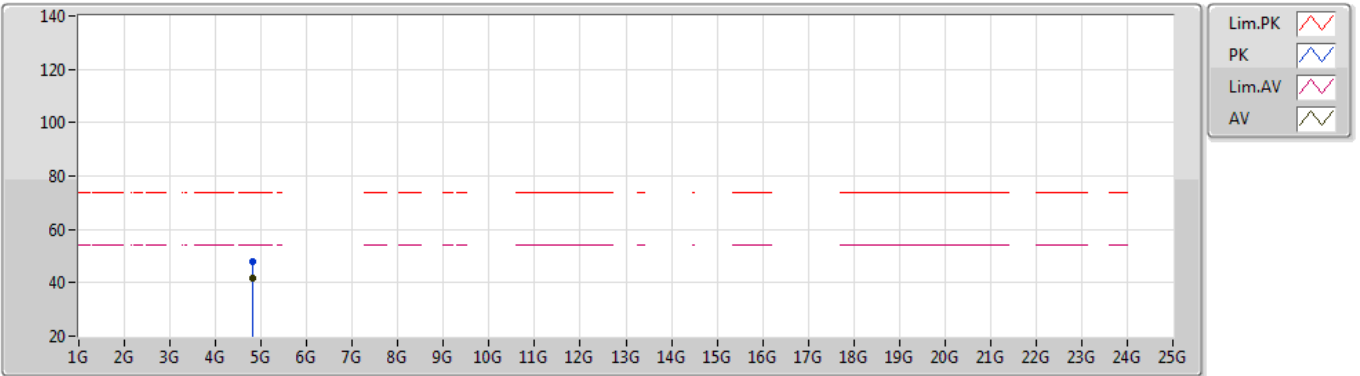


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80296G	42.75	54.00	-11.25	1.48	3	Vertical	235	2.84	-	41.27	31.11	5.30	34.93
PK	4.80277G	49.70	74.00	-24.30	1.48	3	Vertical	235	2.84	-	48.22	31.11	5.30	34.93

BT-LE(2Mbps)

14/09/2020

2402MHz_TX

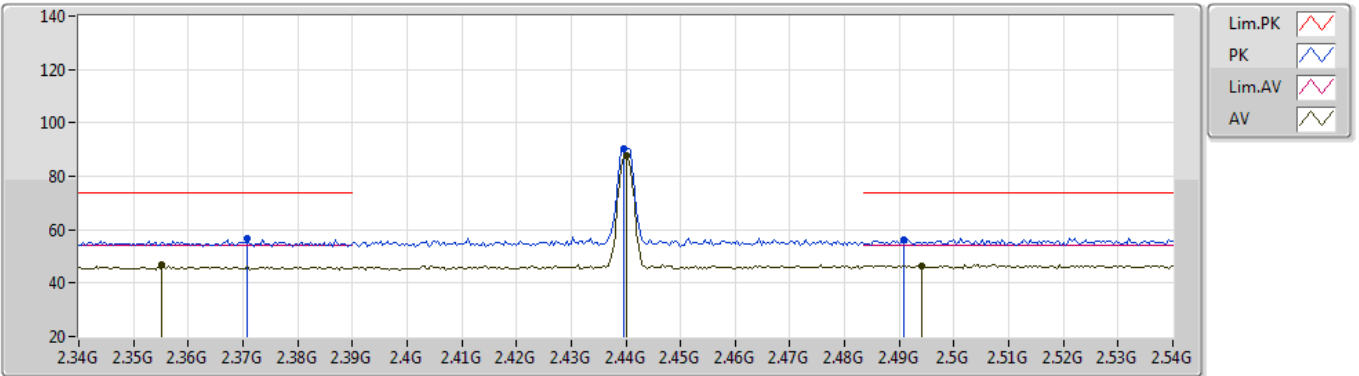


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80296G	41.93	54.00	-12.07	1.48	3	Horizontal	343	3.00	-	40.45	31.11	5.30	34.93
PK	4.80293G	47.74	74.00	-26.26	1.48	3	Horizontal	343	3.00	-	46.26	31.11	5.30	34.93

BT-LE(2Mbps)

14/09/2020

2440MHz_TX

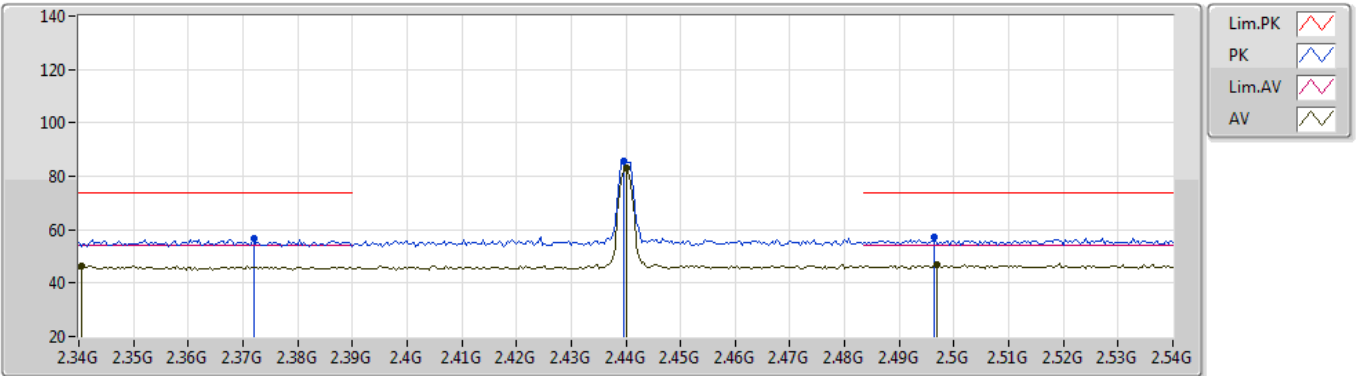


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3552G	46.64	54.00	-7.36	31.61	3	Vertical	104	2.97	-	15.03	27.78	3.83	-
AV	2.44G	87.87	Inf	-Inf	31.56	3	Vertical	104	2.97	-	56.31	27.60	3.96	-
AV	2.494G	46.48	54.00	-7.52	31.64	3	Vertical	104	2.97	-	14.84	27.60	4.04	-
PK	2.3708G	56.88	74.00	-17.12	31.58	3	Vertical	104	2.97	-	25.30	27.72	3.86	-
PK	2.4396G	90.30	Inf	-Inf	31.56	3	Vertical	104	2.97	-	58.74	27.60	3.96	-
PK	2.4908G	56.40	74.00	-17.60	31.64	3	Vertical	104	2.97	-	24.76	27.60	4.04	-

BT-LE(2Mbps)

2440MHz_TX

14/09/2020

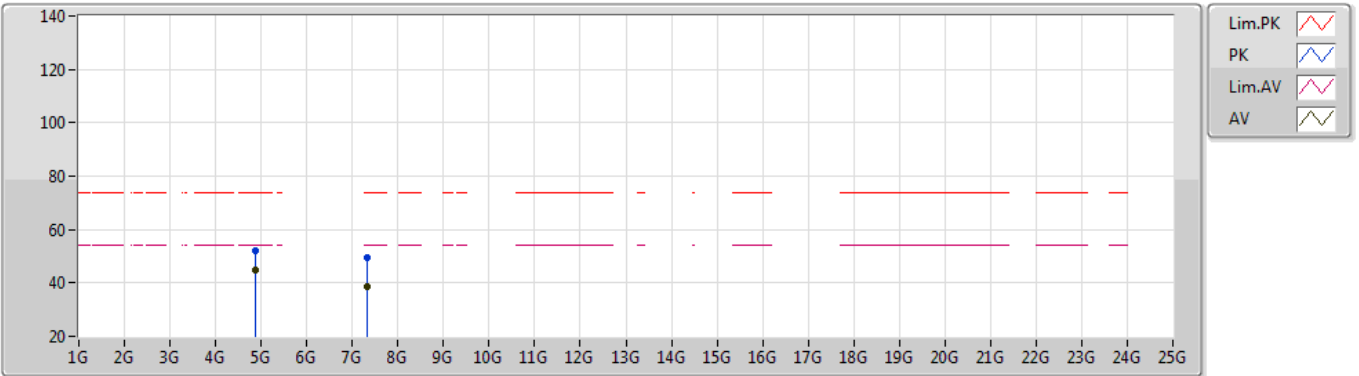


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3404G	46.57	54.00	-7.43	31.63	3	Horizontal	219	2.04	-	14.94	27.82	3.81	-
AV	2.44G	82.94	Inf	-Inf	31.56	3	Horizontal	219	2.04	-	51.38	27.60	3.96	-
AV	2.4968G	46.93	54.00	-7.07	31.65	3	Horizontal	219	2.04	-	15.28	27.60	4.05	-
PK	2.372G	56.65	74.00	-17.35	31.57	3	Horizontal	219	2.04	-	25.08	27.71	3.86	-
PK	2.4396G	85.50	Inf	-Inf	31.56	3	Horizontal	219	2.04	-	53.94	27.60	3.96	-
PK	2.4964G	57.33	74.00	-16.67	31.64	3	Horizontal	219	2.04	-	25.69	27.60	4.04	-

BT-LE(2Mbps)

14/09/2020

2440MHz_TX

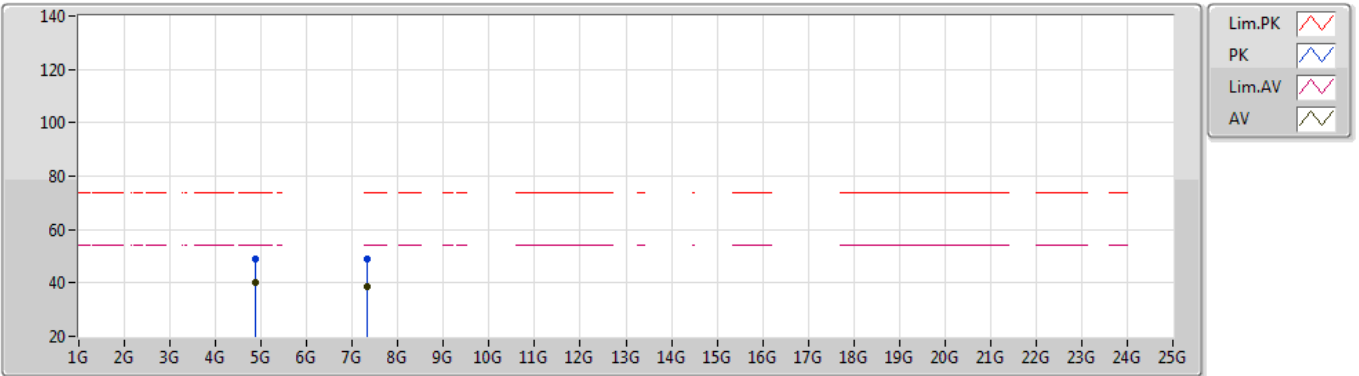


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87891G	45.03	54.00	-8.97	1.65	3	Vertical	323	2.48	-	43.38	31.24	5.34	34.93
AV	7.32008G	38.75	54.00	-15.25	8.18	3	Vertical	90	1.09	-	30.57	36.56	6.80	35.18
PK	4.87894G	51.87	74.00	-22.13	1.65	3	Vertical	323	2.48	-	50.22	31.24	5.34	34.93
PK	7.3177G	49.70	74.00	-24.30	8.18	3	Vertical	90	1.09	-	41.52	36.56	6.80	35.18

BT-LE(2Mbps)

14/09/2020

2440MHz_TX

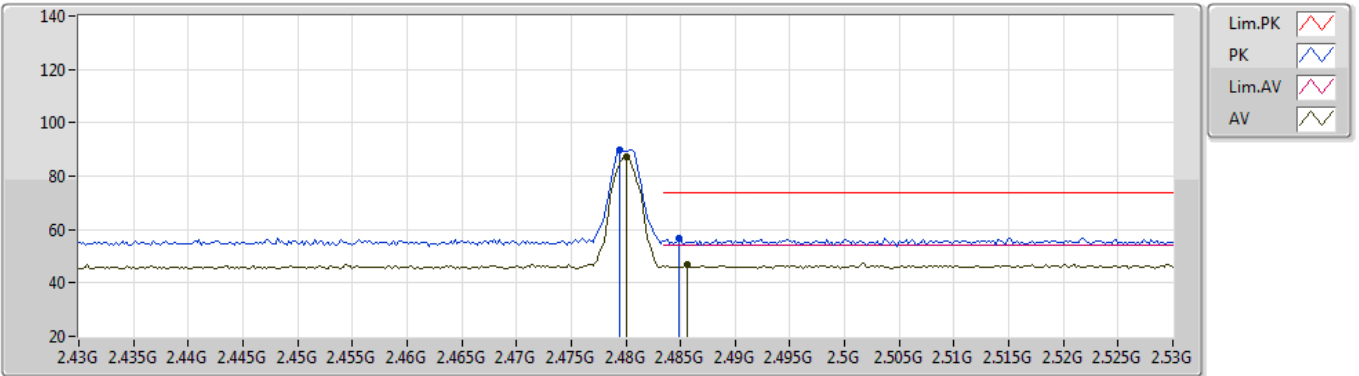


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87899G	40.22	54.00	-13.78	1.65	3	Horizontal	345	2.74	-	38.57	31.24	5.34	34.93
AV	7.32203G	38.72	54.00	-15.28	8.18	3	Horizontal	163	2.08	-	30.54	36.56	6.80	35.18
PK	4.87902G	48.72	74.00	-25.28	1.65	3	Horizontal	345	2.74	-	47.07	31.24	5.34	34.93
PK	7.31821G	49.12	74.00	-24.88	8.18	3	Horizontal	163	2.08	-	40.94	36.56	6.80	35.18

BT-LE(2Mbps)

14/09/2020

2480MHz_TX

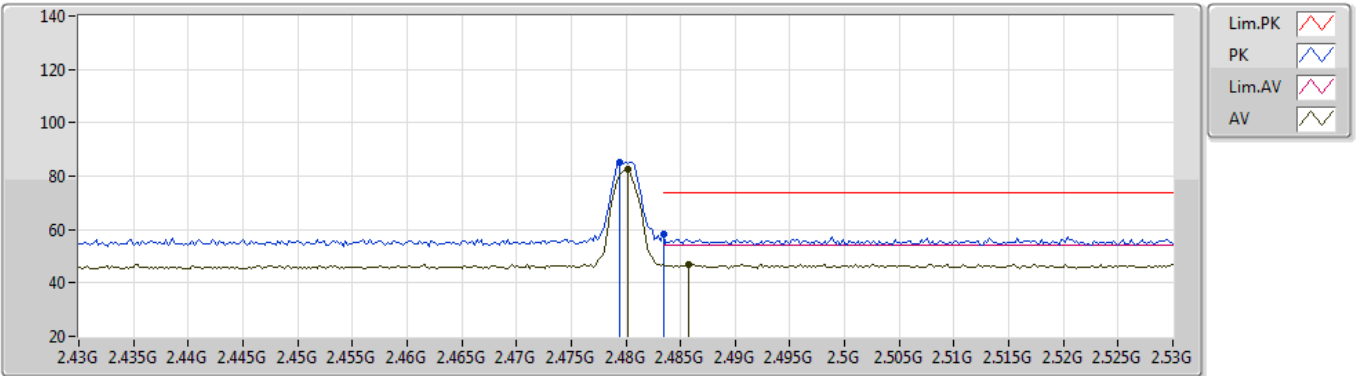


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	87.39	Inf	-Inf	31.62	3	Vertical	25	1.24	-	55.77	27.60	4.02	-
AV	2.4856G	46.76	54.00	-7.24	31.63	3	Vertical	25	1.24	-	15.13	27.60	4.03	-
PK	2.4794G	89.78	Inf	-Inf	31.62	3	Vertical	25	1.24	-	58.16	27.60	4.02	-
PK	2.4848G	56.82	74.00	-17.18	31.63	3	Vertical	25	1.24	-	25.19	27.60	4.03	-

BT-LE(2Mbps)

2480MHz_TX

14/09/2020

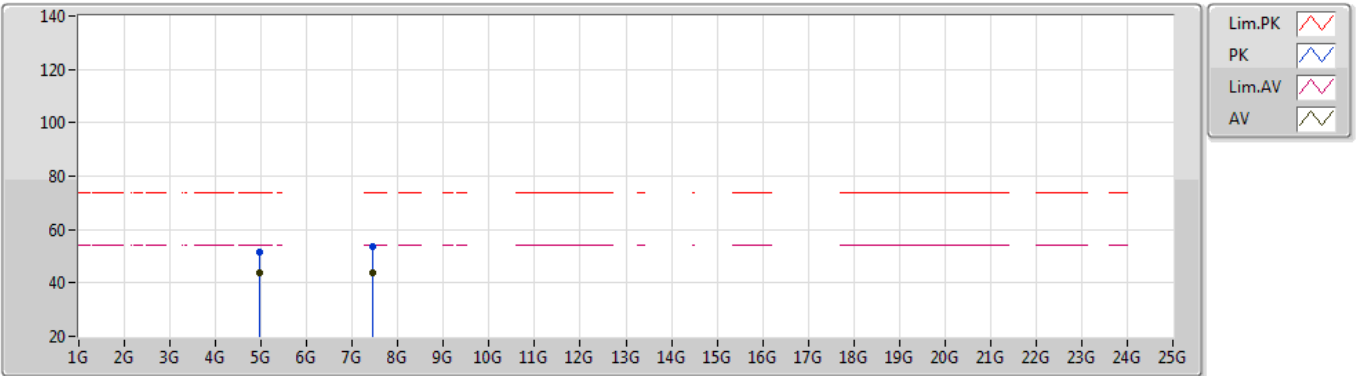


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.4802G	82.58	Inf	-Inf	31.62	3	Horizontal	233	3.00	-	50.96	27.60	4.02	-
AV	2.4858G	47.14	54.00	-6.86	31.63	3	Horizontal	233	3.00	-	15.51	27.60	4.03	-
PK	2.4794G	85.08	Inf	-Inf	31.62	3	Horizontal	233	3.00	-	53.46	27.60	4.02	-
PK	2.4835G	58.13	74.00	-15.87	31.63	3	Horizontal	233	3.00	-	26.50	27.60	4.03	-

BT-LE(2Mbps)

14/09/2020

2480MHz_TX

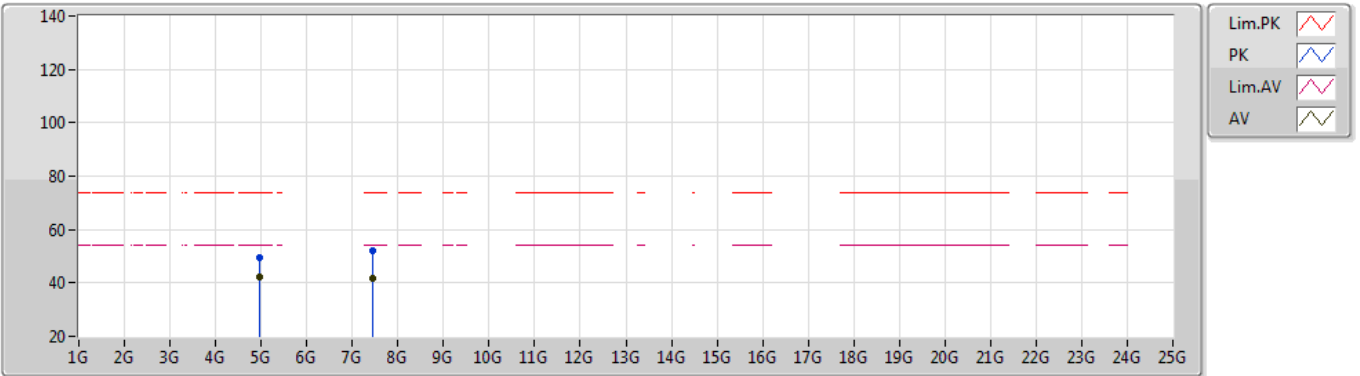


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95909G	43.87	54.00	-10.13	1.86	3	Vertical	307	1.14	-	42.01	31.42	5.38	34.94
AV	7.43882G	43.66	54.00	-10.34	8.21	3	Vertical	57	1.08	-	35.45	36.56	6.82	35.17
PK	4.96098G	51.30	74.00	-22.70	1.86	3	Vertical	307	1.14	-	49.44	31.42	5.38	34.94
PK	7.4415G	53.40	74.00	-20.60	8.22	3	Vertical	57	1.08	-	45.18	36.57	6.82	35.17

BT-LE(2Mbps)

2480MHz_TX

14/09/2020



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	4.95898G	42.17	54.00	-11.83	1.86	3	Horizontal	175	1.29	-	40.31	31.42	5.38	34.94
AV	7.43867G	41.84	54.00	-12.16	8.20	3	Horizontal	196	1.06	-	33.64	36.55	6.82	35.17
PK	4.96107G	49.69	74.00	-24.31	1.86	3	Horizontal	175	1.29	-	47.83	31.42	5.38	34.94
PK	7.4387G	52.21	74.00	-21.79	8.20	3	Horizontal	196	1.06	-	44.01	36.55	6.82	35.17



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	PK	315.18M	41.62	46.00	-4.38	3	Horizontal	0	1.00	-

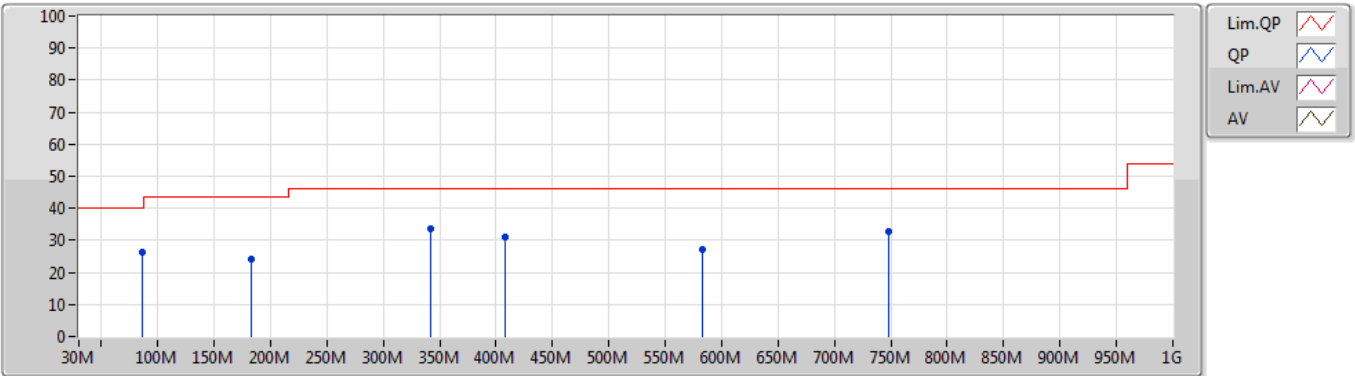
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	86.26M	26.20	40.00	-13.80	3	Vertical	0	1.00	-
2440MHz	Pass	PK	183.26M	24.05	43.50	-19.45	3	Vertical	0	1.00	-
2440MHz	Pass	PK	342.34M	33.61	46.00	-12.39	3	Vertical	0	1.00	-
2440MHz	Pass	PK	408.3M	31.08	46.00	-14.92	3	Vertical	0	1.00	-
2440MHz	Pass	PK	582.9M	27.06	46.00	-18.94	3	Vertical	0	1.00	-
2440MHz	Pass	PK	747.8M	32.88	46.00	-13.12	3	Vertical	0	1.00	-
2440MHz	Pass	PK	80.44M	26.09	40.00	-13.91	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	140.58M	21.55	43.50	-21.95	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	183.26M	23.47	43.50	-20.03	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	293.84M	35.89	46.00	-10.11	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	400.54M	27.82	46.00	-18.18	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	728.4M	38.39	46.00	-7.61	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	101.78M	20.18	43.50	-23.32	3	Vertical	360	1.00	-
2440MHz	Pass	PK	231.76M	36.87	46.00	-9.13	3	Vertical	360	1.00	-
2440MHz	Pass	PK	272.5M	33.10	46.00	-12.90	3	Vertical	360	1.00	-
2440MHz	Pass	PK	288.02M	37.42	46.00	-8.58	3	Vertical	360	1.00	-
2440MHz	Pass	PK	398.6M	31.16	46.00	-14.84	3	Vertical	360	1.00	-
2440MHz	Pass	PK	559.62M	30.47	46.00	-15.53	3	Vertical	360	1.00	-
2440MHz	Pass	PK	59.1M	32.98	40.00	-7.02	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	74.62M	32.38	40.00	-7.62	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	315.18M	41.62	46.00	-4.38	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	346.22M	37.36	46.00	-8.64	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	509.18M	33.62	46.00	-12.38	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	747.8M	39.25	46.00	-6.75	3	Horizontal	0	1.00	-

BT-LE(2Mbps)RX

14/09/2020

2440MHz_Test Fixture

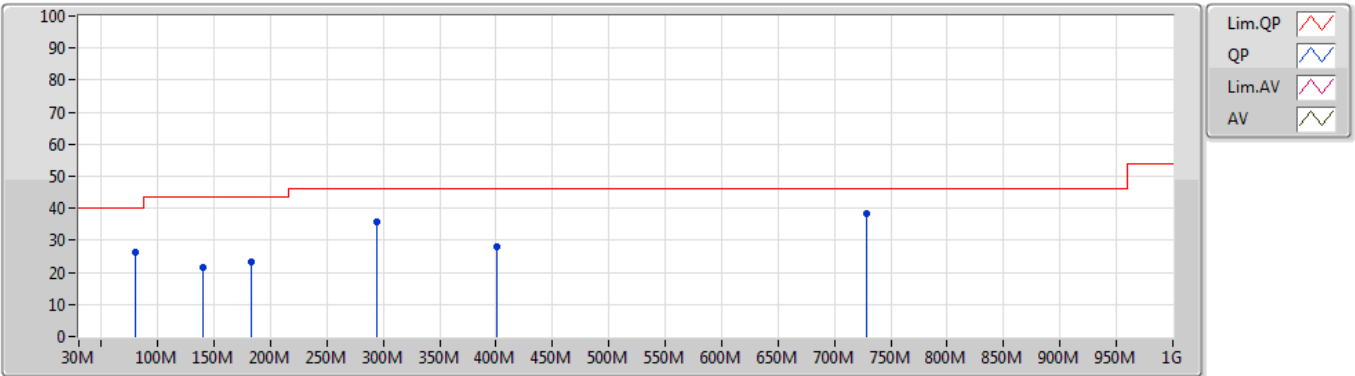


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	86.26M	26.20	40.00	-13.80	-22.59	3	Vertical	0	1.00	-	48.79	13.38	0.70	36.67
PK	183.26M	24.05	43.50	-19.45	-21.31	3	Vertical	0	1.00	-	45.36	13.95	1.10	36.36
PK	342.34M	33.61	46.00	-12.39	-15.82	3	Vertical	0	1.00	-	49.43	19.18	1.48	36.48
PK	408.3M	31.08	46.00	-14.92	-13.45	3	Vertical	0	1.00	-	44.53	21.28	1.72	36.45
PK	582.9M	27.06	46.00	-18.94	-10.18	3	Vertical	0	1.00	-	37.24	24.83	2.13	37.14
PK	747.8M	32.88	46.00	-13.12	-7.64	3	Vertical	0	1.00	-	40.52	27.06	2.50	37.20

BT-LE(2Mbps)RX

2440MHz_Test Fixture

14/09/2020



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	80.44M	26.09	40.00	-13.91	-23.51	3	Horizontal	360	1.00	-	49.60	12.52	0.70	36.73
PK	140.58M	21.55	43.50	-21.95	-18.95	3	Horizontal	360	1.00	-	40.50	16.50	0.90	36.35
PK	183.26M	23.47	43.50	-20.03	-21.31	3	Horizontal	360	1.00	-	44.78	13.95	1.10	36.36
PK	293.84M	35.89	46.00	-10.11	-16.77	3	Horizontal	360	1.00	-	52.66	18.20	1.39	36.36
PK	400.54M	27.82	46.00	-18.18	-13.79	3	Horizontal	360	1.00	-	41.61	20.93	1.70	36.42
PK	728.4M	38.39	46.00	-7.61	-8.32	3	Horizontal	360	1.00	-	46.71	26.45	2.46	37.23



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	AV	5.31G	33.74	54.00	-20.26	3	Vertical	360	1.00	-

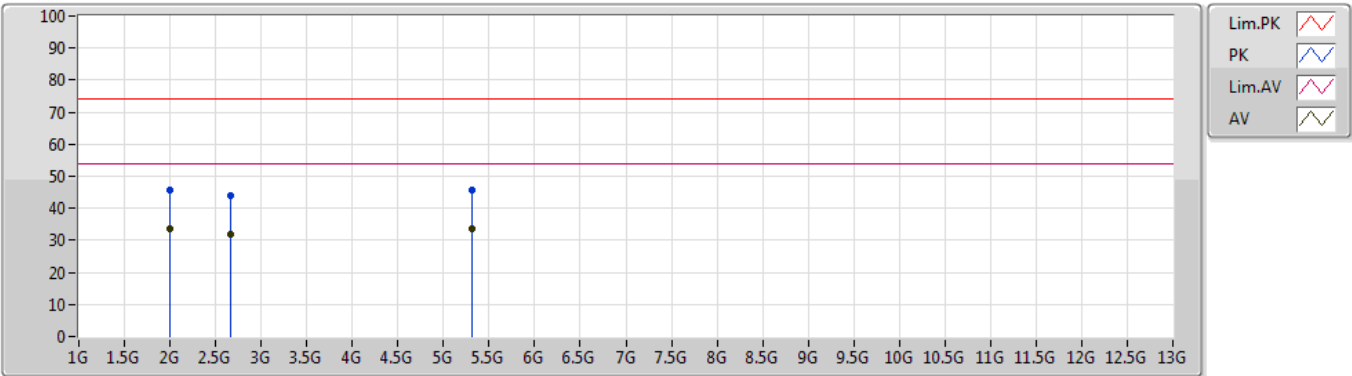
**Result**

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	AV	2G	33.67	54.00	-20.33	3	Vertical	360	1.00	-
2440MHz	Pass	AV	2.66G	31.83	54.00	-22.17	3	Vertical	360	1.00	-
2440MHz	Pass	AV	5.31G	33.74	54.00	-20.26	3	Vertical	360	1.00	-
2440MHz	Pass	PK	2G	45.76	74.00	-28.24	3	Vertical	360	1.00	-
2440MHz	Pass	PK	2.66G	44.05	74.00	-29.95	3	Vertical	360	1.00	-
2440MHz	Pass	PK	5.31G	45.54	74.00	-28.46	3	Vertical	360	1.00	-
2440MHz	Pass	AV	1.58G	32.10	54.00	-21.90	3	Horizontal	0	1.00	-
2440MHz	Pass	AV	3G	31.41	54.00	-22.59	3	Horizontal	0	1.00	-
2440MHz	Pass	AV	4.85G	31.77	54.00	-22.23	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	1.58G	43.32	74.00	-30.68	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	3G	43.48	74.00	-30.52	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	4.85G	44.00	74.00	-30.00	3	Horizontal	0	1.00	-

BT-LE(2Mbps)RX

14/09/2020

2440MHz_RX

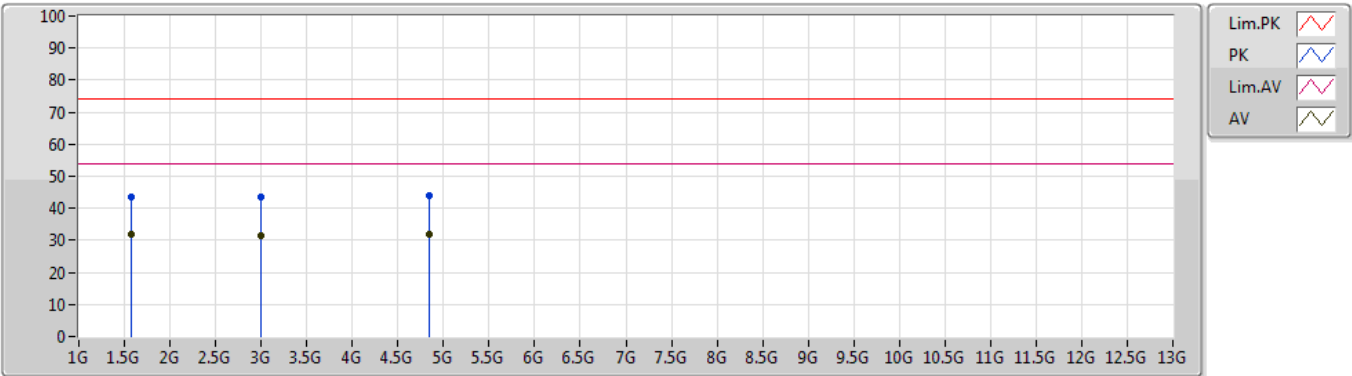


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2G	33.67	54.00	-20.33	-5.17	3	Vertical	360	1.00	-	38.84	26.10	3.40	34.67
AV	2.66G	31.83	54.00	-22.17	-2.85	3	Vertical	360	1.00	-	34.68	27.82	4.29	34.96
AV	5.31G	33.74	54.00	-20.26	2.02	3	Vertical	360	1.00	-	31.72	31.30	5.61	34.89
PK	2G	45.76	74.00	-28.24	-5.17	3	Vertical	360	1.00	-	50.93	26.10	3.40	34.67
PK	2.66G	44.05	74.00	-29.95	-2.85	3	Vertical	360	1.00	-	46.90	27.82	4.29	34.96
PK	5.31G	45.54	74.00	-28.46	2.02	3	Vertical	360	1.00	-	43.52	31.30	5.61	34.89

BT-LE(2Mbps)RX

14/09/2020

2440MHz_RX



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	1.58G	32.10	54.00	-21.90	-6.75	3	Horizontal	0	1.00	-	38.85	25.18	2.98	34.91
AV	3G	31.41	54.00	-22.59	-1.73	3	Horizontal	0	1.00	-	33.14	28.60	4.70	35.03
AV	4.85G	31.77	54.00	-22.23	1.70	3	Horizontal	0	1.00	-	30.07	31.30	5.33	34.93
PK	1.58G	43.32	74.00	-30.68	-6.75	3	Horizontal	0	1.00	-	50.07	25.18	2.98	34.91
PK	3G	43.48	74.00	-30.52	-1.73	3	Horizontal	0	1.00	-	45.21	28.60	4.70	35.03
PK	4.85G	44.00	74.00	-30.00	1.70	3	Horizontal	0	1.00	-	42.30	31.30	5.33	34.93

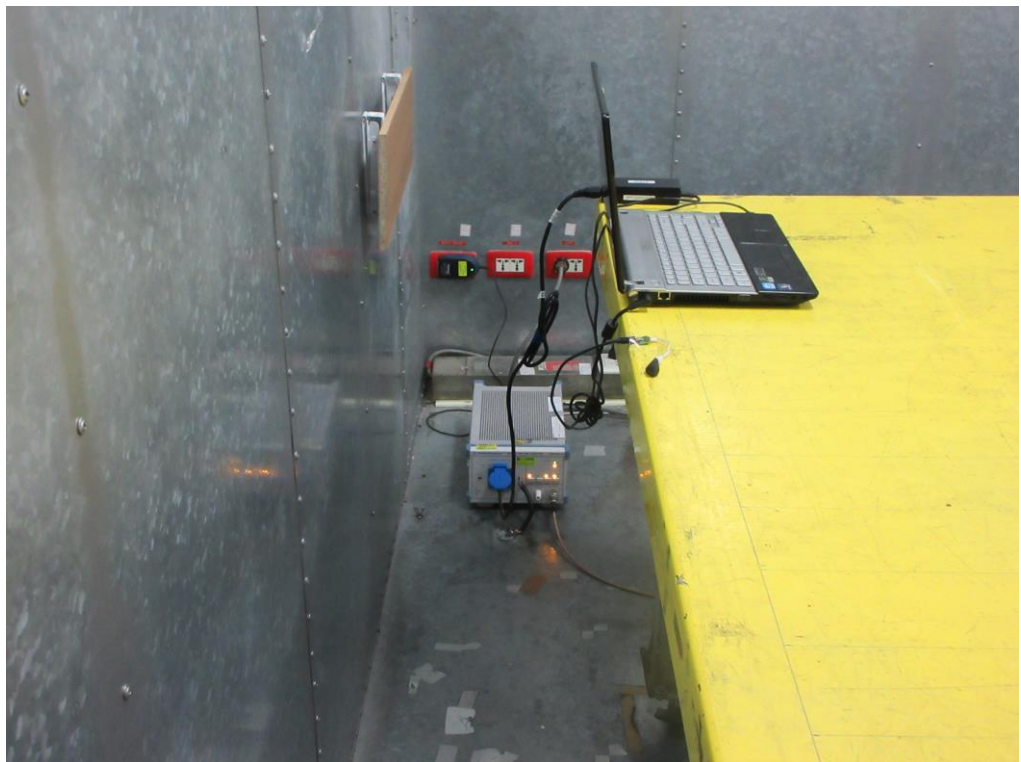
1. Photographs of Conducted Emissions Test Configuration - TX

Test fixture Mode

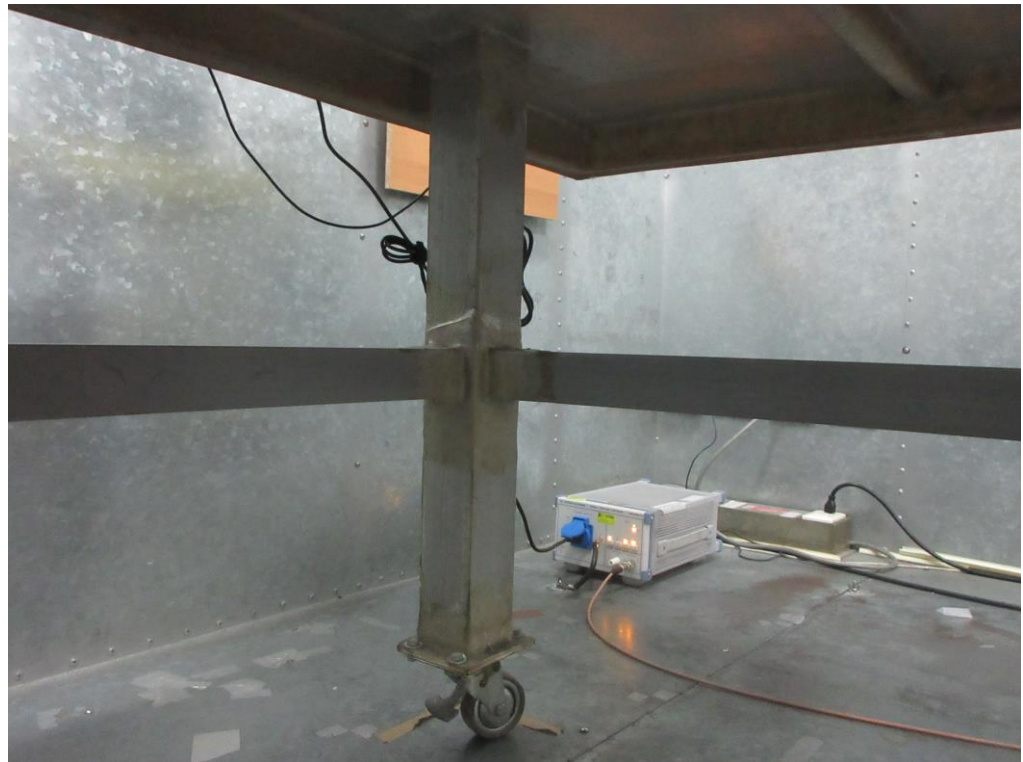
Front view



Side view



Under table view



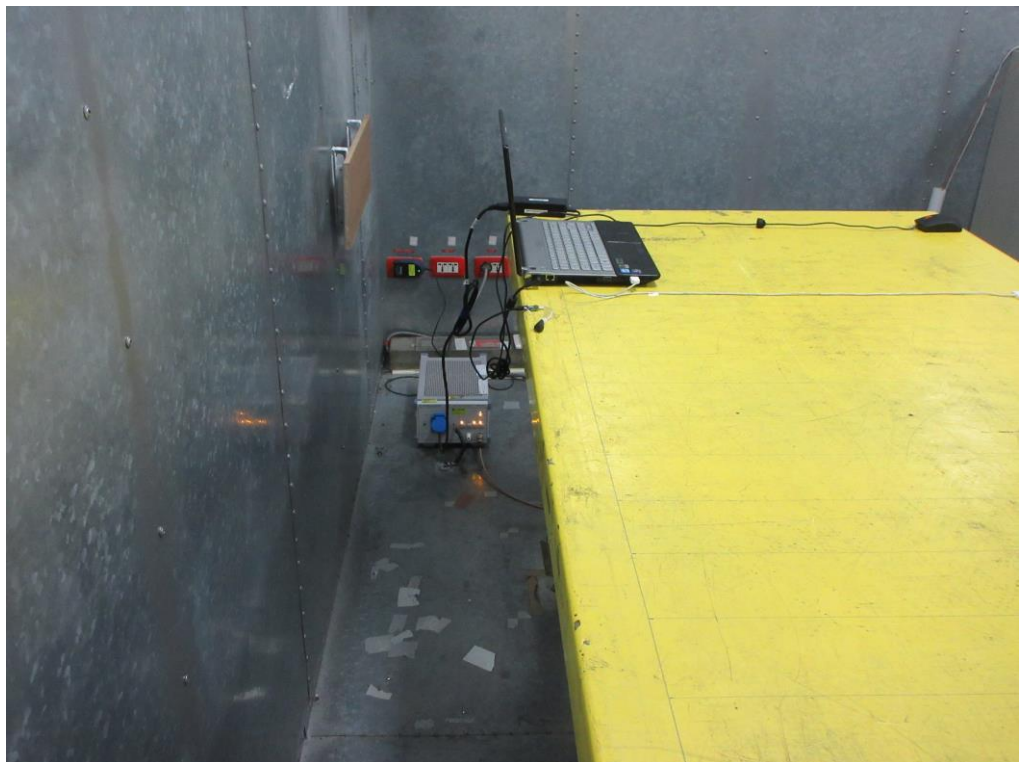
2. Photographs of Conducted Emissions Test Configuration - RX

Test fixture Mode

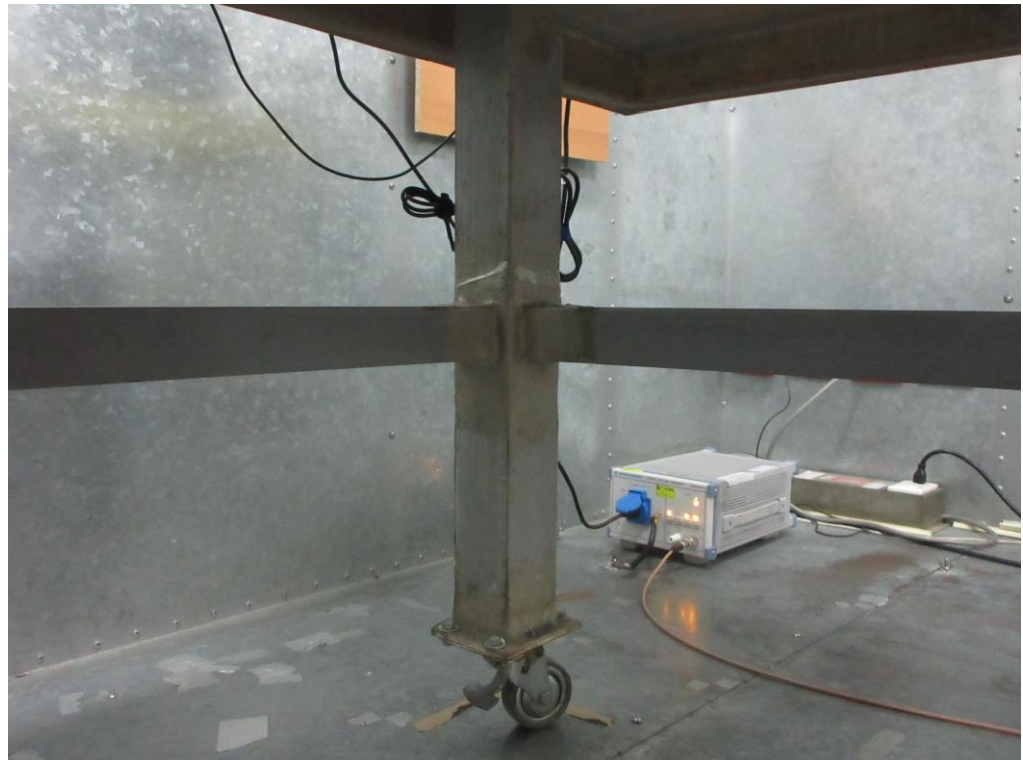
Front view



Side view



Under table view



**Adapter charging
Mode**

Front view



Side view



Under table view

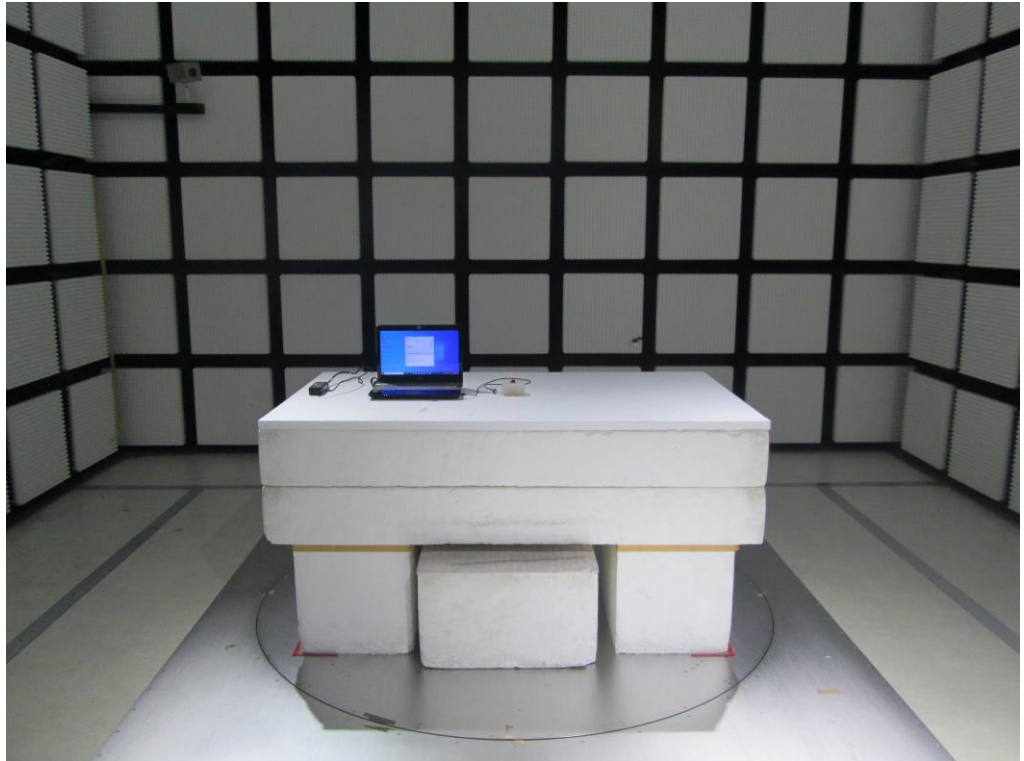


3. Photographs of Radiated Emissions Test Configuration - TX

For radiated emissions 30MHz~1GHz

Test fixture Mode

Front view

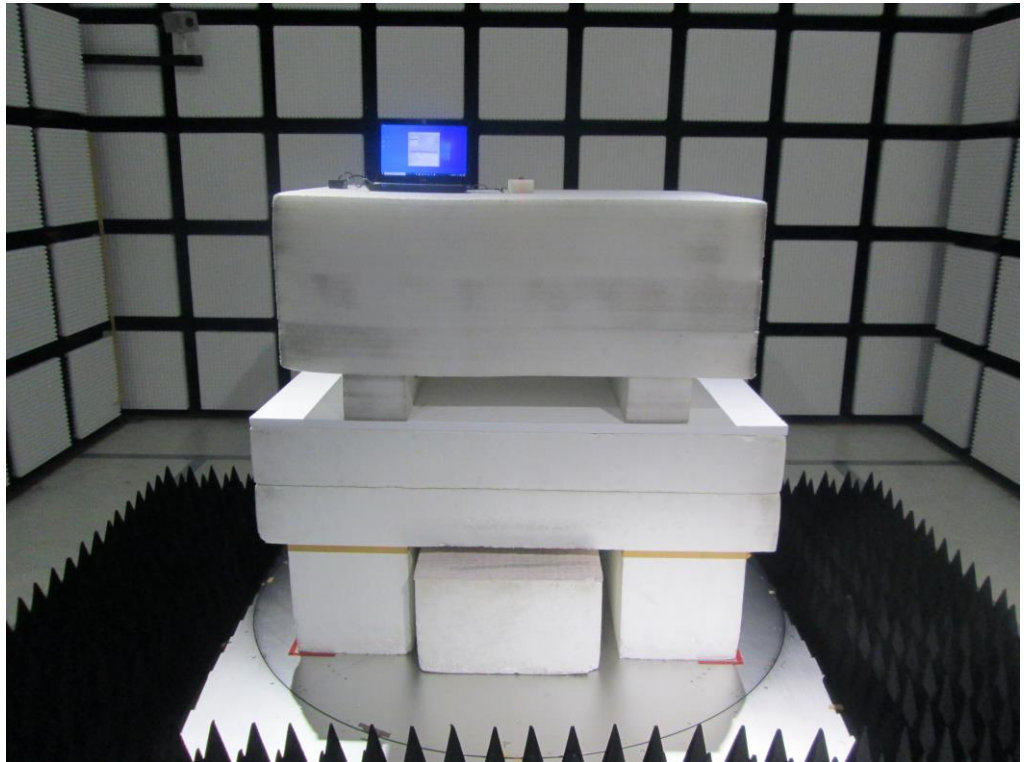


Rear view

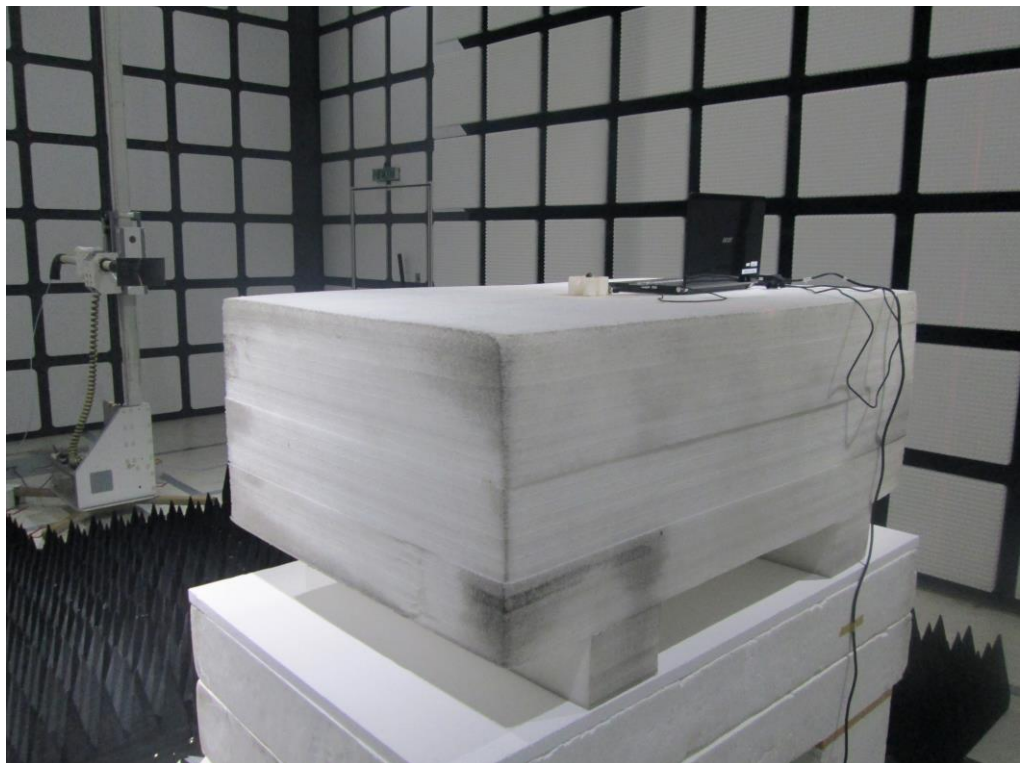


For radiated emissions above 1GHz
Test fixture Mode

Front view



Rear view

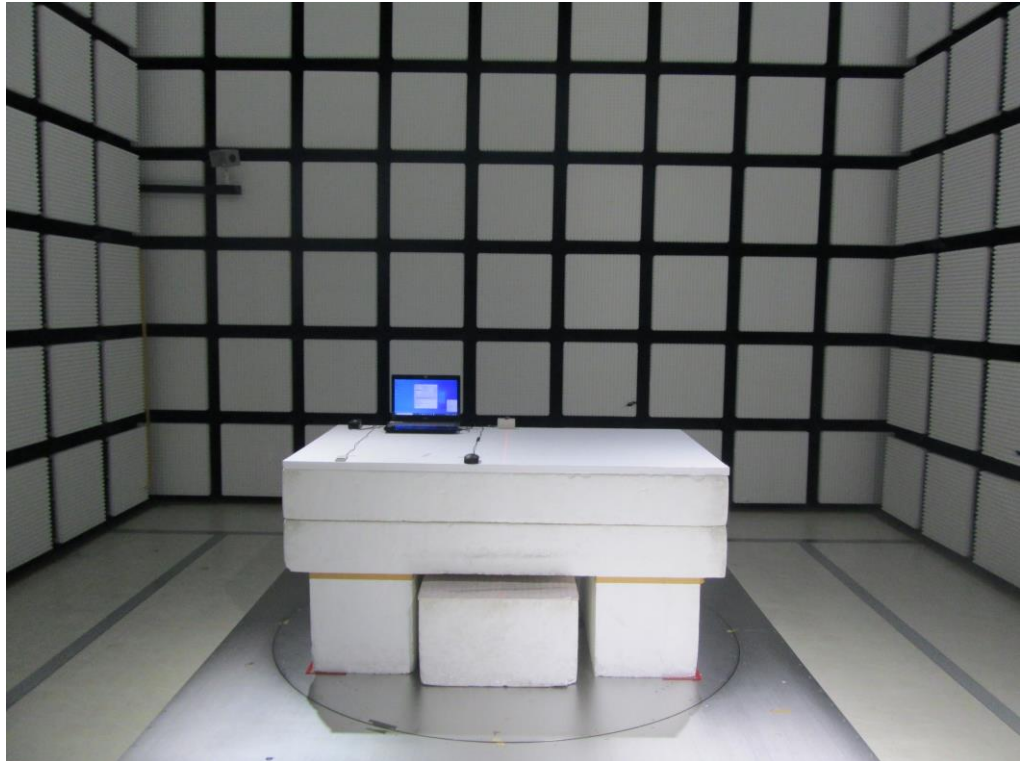


4. Photographs of Radiated Emissions Test Configuration - RX

For radiated emissions 30MHz~1GHz

Test fixture Mode

Front view



Rear view



**Adapter Charging
Mode**

Front view

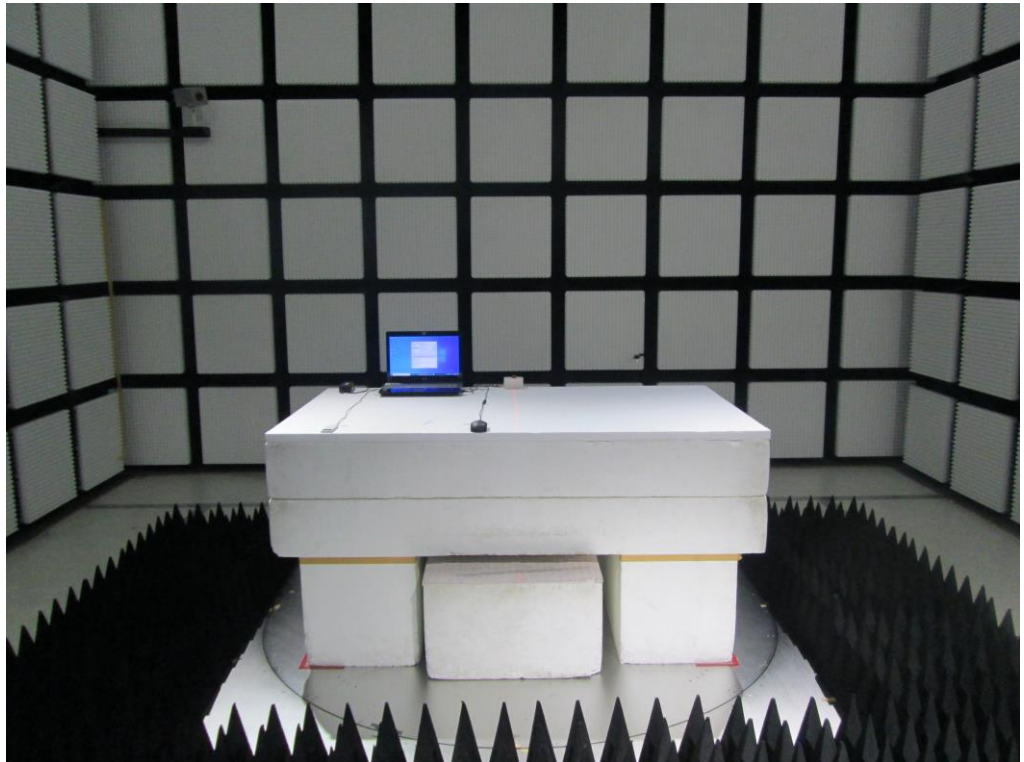


Rear view

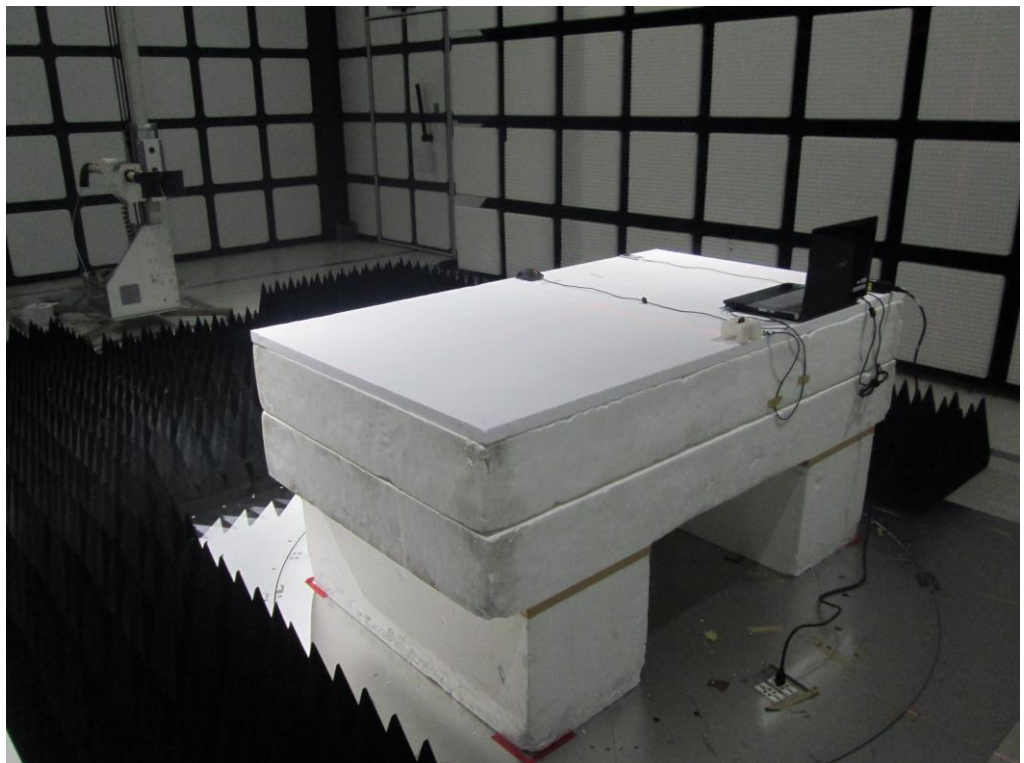


For radiated emissions above 1GHz
Test fixture Mode

Front view



Rear view



————THE END————