

NCC Radio Test Report

Equipment : Secured Wireless Access Point
Brand Name : FORTINET
Model Name : FAP-831F
Applicant : 英屬蓋曼群島商防特網股份有限公司台灣分公司
台北市內湖區行愛路 176 號 2 樓
Manufacturer : Fortinet, Inc.
899 Kifer Road, Sunnyvale, CA 94086, USA
Standard : LP0002 Section 4.10 (2020-07-01)

The product was received on Jan. 26, 2021, and testing was started from Feb. 05, 2021 and completed on Aug. 20, 2021. We, SPORTON INTERNATIONAL INC. Hsinhua 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. Hsinhua Laboratory, the test report shall not be reproduced except in full.



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)

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Summary of Test Result

Report Clause	Ref.Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	4.10.1.4	Antenna Requirement	PASS	-
3.1	3.3	AC Power-line Conducted Emissions	PASS	-
3.2	4.10.1.6	DTS Bandwidth	PASS	-
3.3	4.10.1.2	Maximum Conducted Output Power	PASS	-
3.4	4.10.1.6	Power Spectral Density	PASS	-
3.5	4.10.1.5	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	4.10.1.5	Emissions in Restricted Frequency Bands	PASS	-
3.7	3.9	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: Debby Hung

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	Senao	5718A0607300	PIFA	I-Pex
2	Senao	5718A0608300	PIFA	I-Pex
3	Senao	5718A0609300	PIFA	I-Pex
4	Senao	5718A0610300	PIFA	I-Pex
5	Senao	5718A0611300	PIFA	I-Pex
6	Senao	5718A0612300	PIFA	I-Pex
7	Senao	5718A0613300	PIFA	I-Pex
8	Senao	5718A0614300	PIFA	I-Pex
9	Senao	5718A0611300	PIFA	I-Pex
10	Senao	5718A0612300	PIFA	I-Pex
11	Senao	5718A0613300	PIFA	I-Pex
12	Senao	5718A0614300	PIFA	I-Pex
13	Senao	5718A0615300	PIFA	I-Pex
14	Senao	5718A0616300	Dipole	I-Pex

Ant.	2.4GHz		5GHz			BT LE Zigbee	Remark				
	Max. Peak Gain(dBi)	Correlated Gain(dBi)	Max. Peak Gain(dBi)	Correlated Gain(dBi)		Antenna Gain(dBi)					
1	4.4	6.7	-	-		-	Radio 2, 4*4				
2	4.49	6.7					Radio 2, 4*4				
3	4.32	6.7					Radio 2, 4*4				
4	4.14	6.7					Radio 2, 4*4				
5	-	-	6.10	Band1:9.52 Band2:9.01 Band3:7.95 Band4:7.84	Band1:7.23 Band2:7.18	-	Radio 1 8*8 mode	Radio 1 4*4 mode Low Band Mode			
6			6.21								
7			6.11								
8			6.12								
9			6.24					Band3:6.09 Band4:7.44	-	-	Radio 1 4*4 mode Hi Band mode
10			6.20								
11			6.27								
12			6.13								
13	4.69	-	4.60	-		-	Radio 3				
14	-	-	-			5.20	BT+ Zigbee				

For 2.4 GHz function:

Radio 2

For IEEE 802.11b/g/n/VHT/ax mode (4TX/4RX)

Ant.1, Ant.2, Ant.3, and Ant.4 could transmit/receive simultaneously.

Radio 3(Scan radio)

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

Only Ant.13 can be used as transmitting/receiving.

For 5 GHz function:

Radio 1

For IEEE 802.11a/n/ac/ax mode (8TX/8RX)

Ant.5, Ant.6, Ant.7, Ant.8, Ant.9, Ant.10, Ant.11 and Ant.12 could transmit/receive simultaneously.

For IEEE 802.11a/n/ac/ax mode (4TX/4RX) (Low Band mode)

Ant.5, Ant.6, Ant.7, and Ant.8 could transmit/receive simultaneously.

For IEEE 802.11a/n/ac/ax mode (4TX/4RX) (Hi Band mode)

Ant.9, Ant.10, Ant.11 and Ant.12 could transmit/receive simultaneously.

Radio 3(Scan radio)

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

Only Ant.13 can be used as transmitting/receiving.

For Bluetooth function:

For Bluetooth mode (1TX/1RX)

Only Ant.14 can be used as transmitting/receiving.

For Zigbee function:

For Zigbee mode (1TX/1RX)

Only Ant.14 can be used as transmitting/receiving.

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter / PoE		
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)	1	0	10m	10
BT-LE(2Mbps)	1	0	10m	10

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 (2020-07-01)
- ♦ 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

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward Wang	23.5~24.6°C / 65~68%	20/Aug/2021
RF Conduction	TH06-HY	Vivi Jiang	20.1~26.9°C / 50~65%	05/Feb/2021~14/Apr/2021
Radiated	03CH02-HY	Tony Chang	21.7~25.8°C / 51~61%	12/Feb/2021~12/Aug/2021
☐ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		FAX: 886-3-318-0287	

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 Channel Mode

Test Software Version	Setup_SmartRF_Studio_7-2.17.0
------------------------------	-------------------------------

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	10
2440MHz	10
2480MHz	10
BT-LE(2Mbps)	-
2402MHz	10
2440MHz	10
2480MHz	9

2.2 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 Test Voltage: 110Vac / 60Hz
Operating Mode	CTX/CRX
1	Adapter mode; TX
2	Adapter mode; RX
3	PoE mode ; TX
4	PoE mode ; RX

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.		
Operating Mode < 1GHz	CTX/CRX		
1	Adapter mode		
2	PoE mode		
Operating Mode > 1GHz	CTX/CRX		
1	Adapter mode		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT		V	

2.3 Accessories

Accessories				
Bracket ceiling mount 1	Brand Name	Senao Networks, Inc.	Model Name	CLIP CEILING 9/16 LFP
Bracket ceiling mount 2	Brand Name	Senao Networks, Inc.	Model Name	CLIP CEILING 15/16 LFP

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

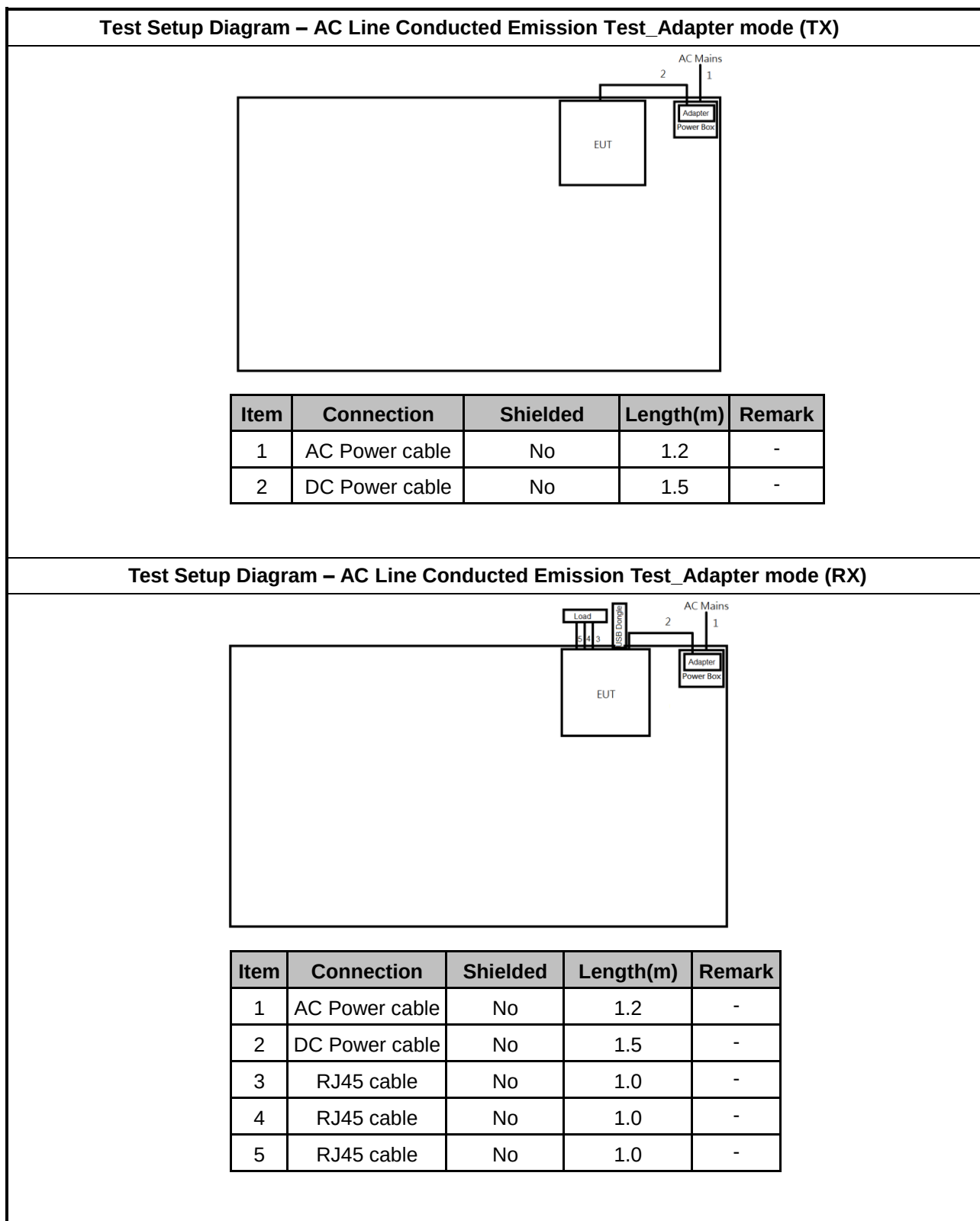
2.4 Support Equipment

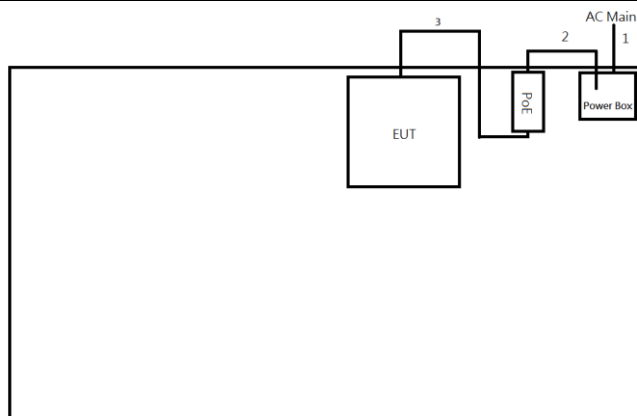
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	PoE	SENAO	EPA5006GPR	-	Provided by Customer
2	AC Power Cable	EnGenius	7003A0051000	-	Provided by Customer
3	Adapter	ASIAN POWER DEVICES INC.	WA-48A12R	-	Provided by Customer
4	RJ45 Cable	Power Sync	CAT-6E-10	-	-
5	RJ45 Cable	Power Sync	CAT-6E-01	-	-
6	RJ45 Cable	Power Sync	CAT-6E-01	-	-
7	USB Dongle	Transcend	D24425 2101	-	-
8	Load	Sporton	Sporton	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Notebook	DELL	PP13S	-	-
4	Adapter for NB	DELL	AA90PM111	-	-

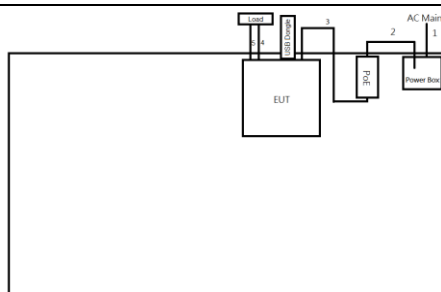
Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	PoE	SENAO	EPA5006GPR	-	Provided by Customer
2	AC Power Cable	EnGenius	7003A0051000	-	Provided by Customer
3	Adapter	ASIAN POWER DEVICES INC.	WA-48A12R	-	Provided by Customer
4	RJ45 Cable	Power Sync	CAT-6E-10	-	-
5	RJ45 Cable	Power Sync	CAT-6E-01	-	-
6	RJ45 Cable	Power Sync	CAT-6E-01	-	-
7	RJ45 Cable	Power Sync	CAT-6E-01	-	-
8	USB Dongle	Transcend	D24425 2101	-	-
9	Load	Sporton	Sporton	-	-

2.5 Test Setup Diagram

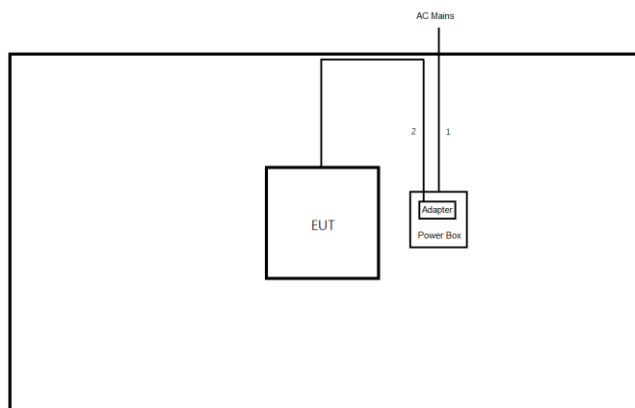


Test Setup Diagram – AC Line Conducted Emission Test_PoE mode (TX)


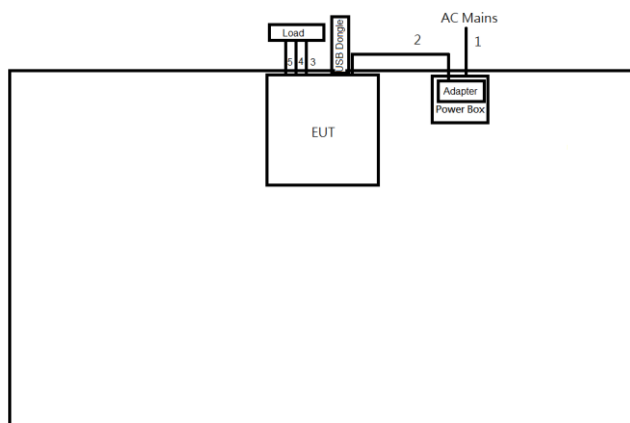
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.2	-
2	AC Power cable	No	0.5	-
3	RJ45 cable	No	10.0	-

Test Setup Diagram – AC Line Conducted Emission Test_PoE mode (RX)


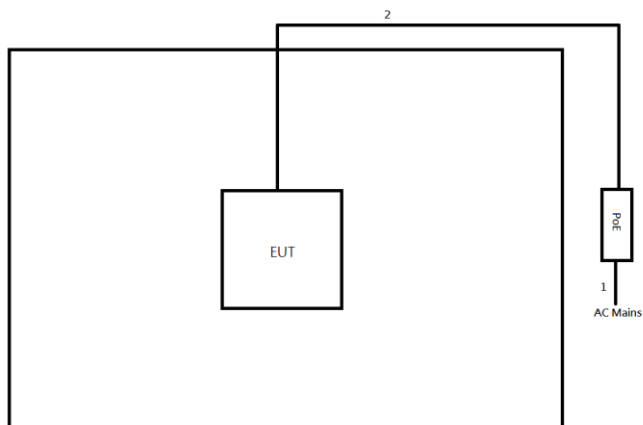
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.2	-
2	AC Power cable	No	0.5	-
3	RJ45 cable	No	10.0	-
4	RJ45 cable	No	1.0	-
5	RJ45 cable	No	1.0	-

Test Setup Diagram –Radiated Test_Adapter mode (TX)


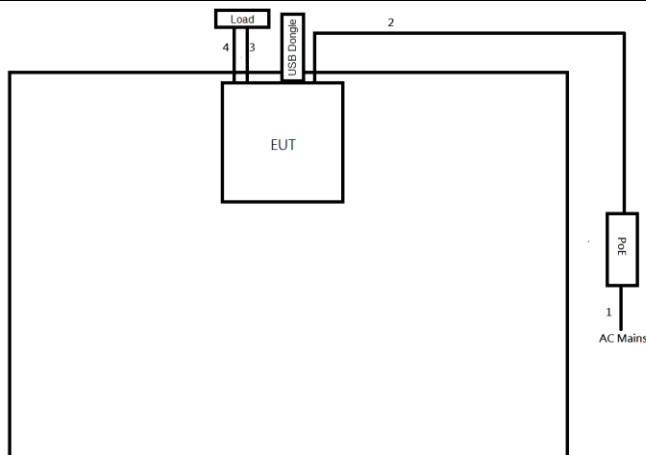
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.5	-

Test Setup Diagram –Radiated Test_Adapter mode (RX)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.2	-
2	DC Power cable	No	1.5	-
3	RJ45 cable	No	1.0	-
4	RJ45 cable	No	1.0	-
5	RJ45 cable	No	1.0	-

Test Setup Diagram –Radiated Test_PoE mode (TX)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	0.5	-
2	RJ45 cable	No	10.0	-

Test Setup Diagram –Radiated Test_PoE mode (RX)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	0.5	-
2	RJ45 cable	No	10.0	-
3	RJ45 cable	No	1.0	-
4	RJ45 cable	No	1.0	-

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

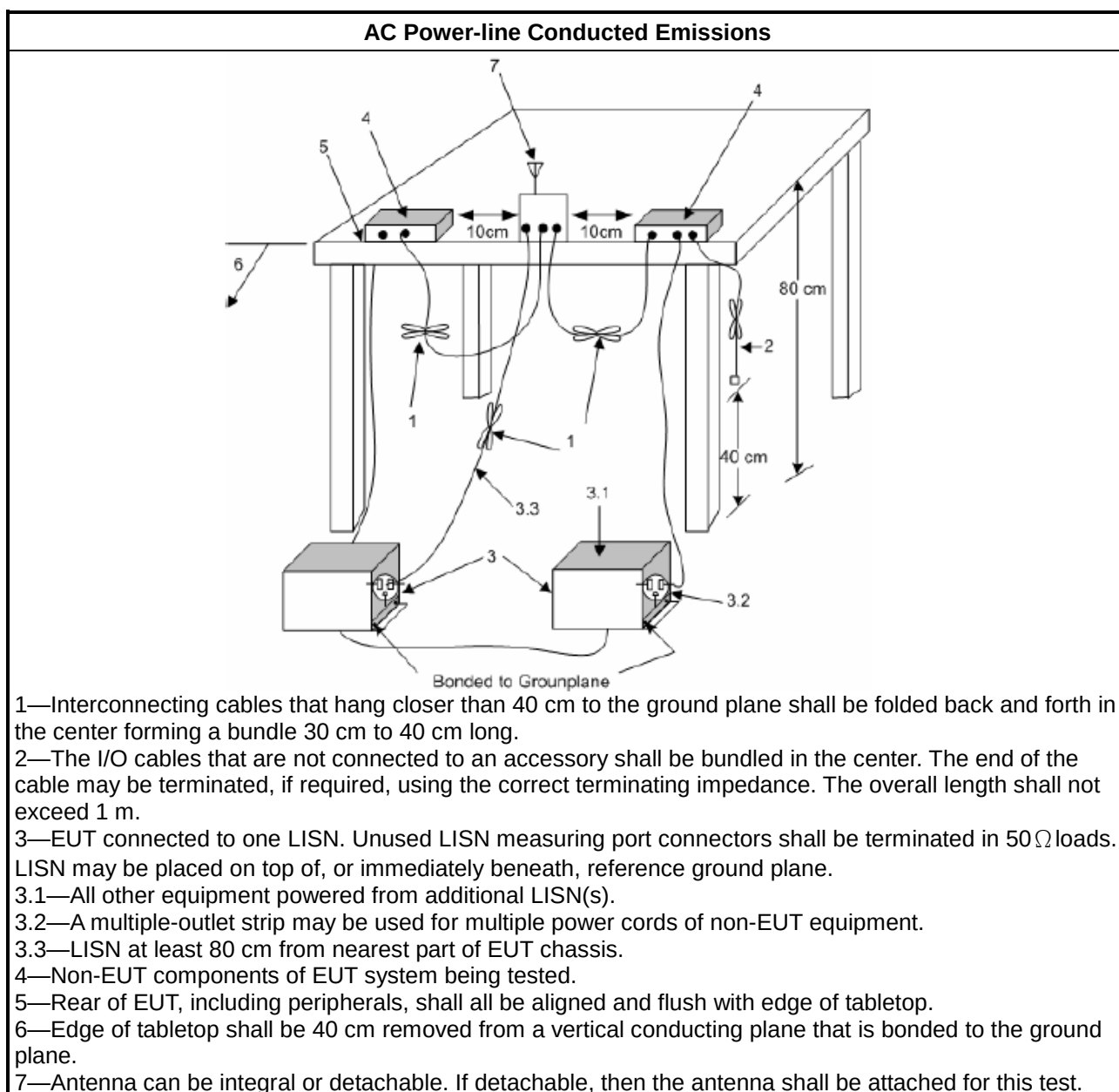
Test Method
▪ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions.

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.

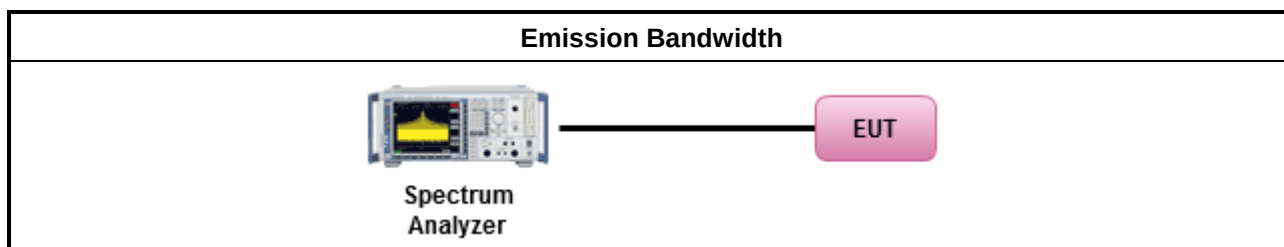
3.2.2 Measuring Instruments

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.	

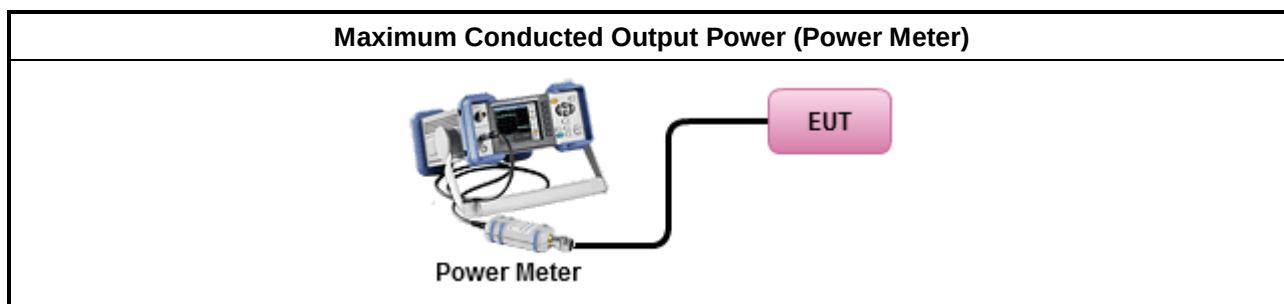
3.3.2 Measuring Instruments

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

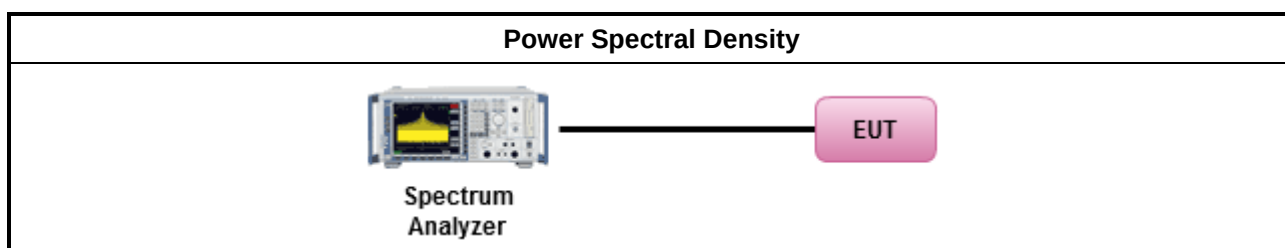
3.4.2 Measuring Instruments

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.	

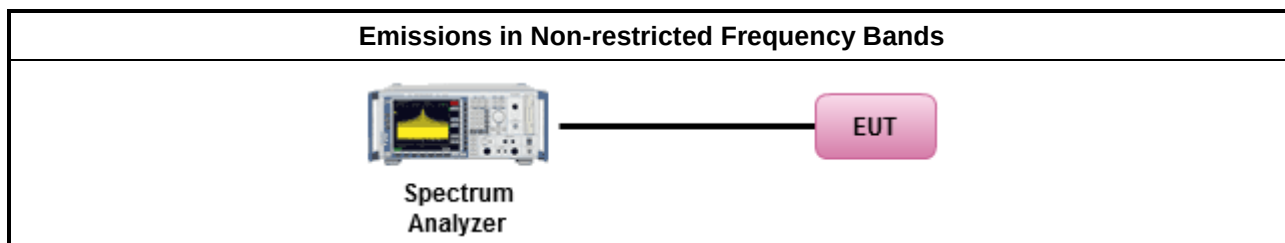
3.5.2 Measuring Instruments

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

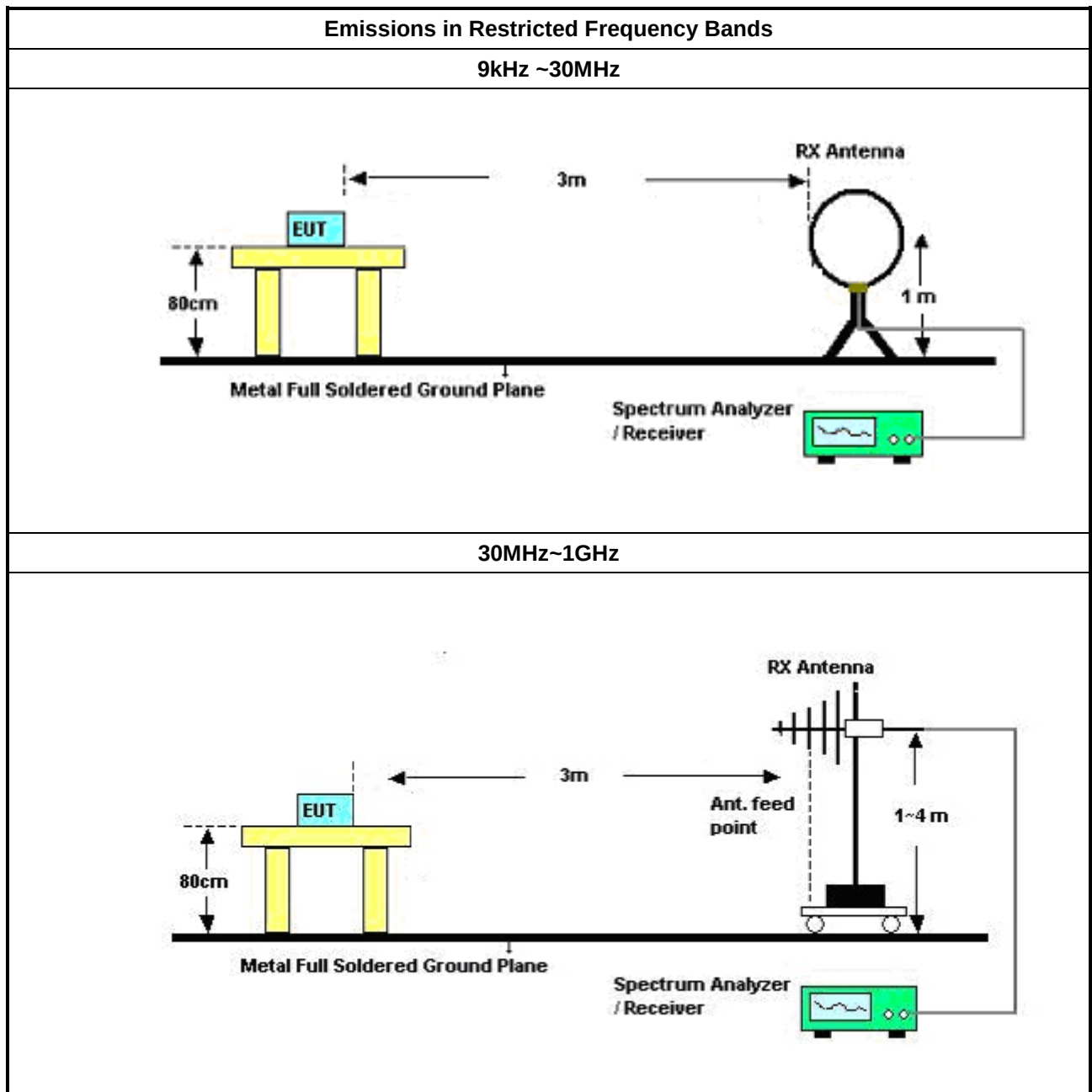
Test Method	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted 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 6.5.2: 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.

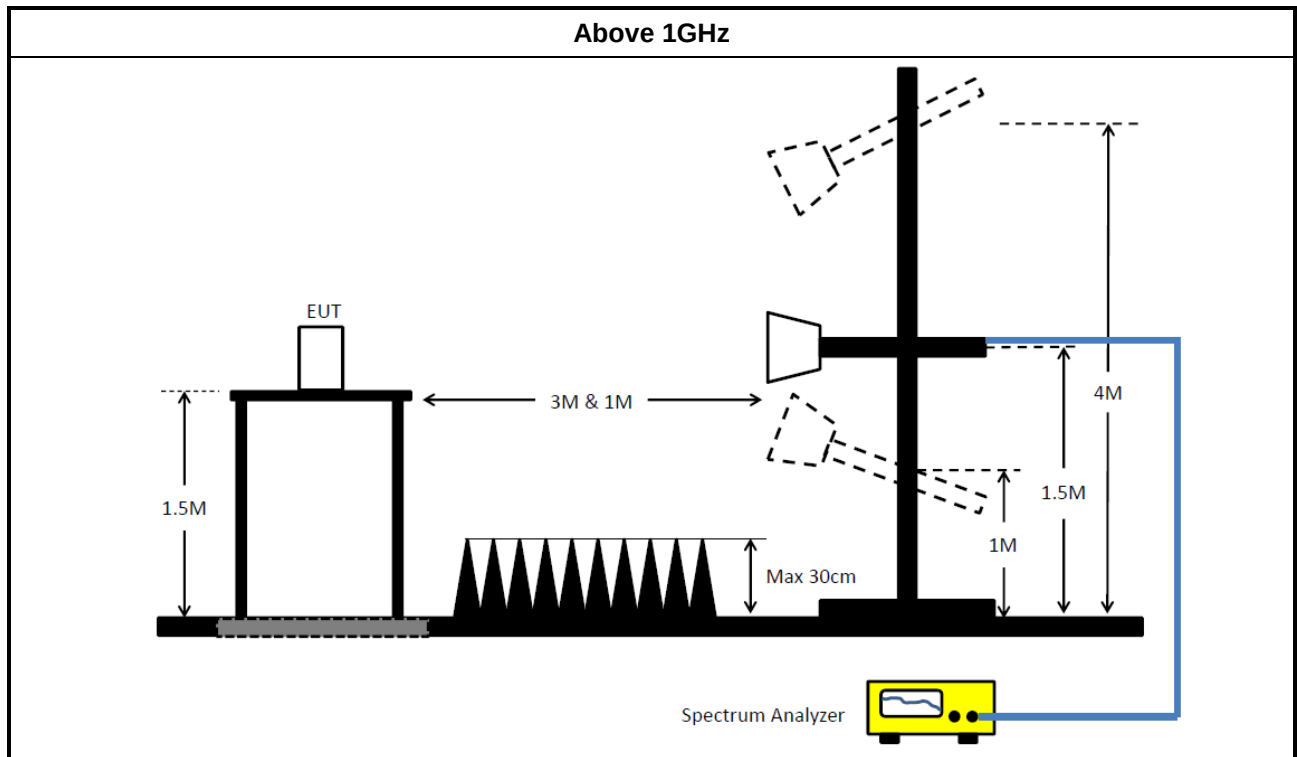
3.6.4 Measurement Results Calculation

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

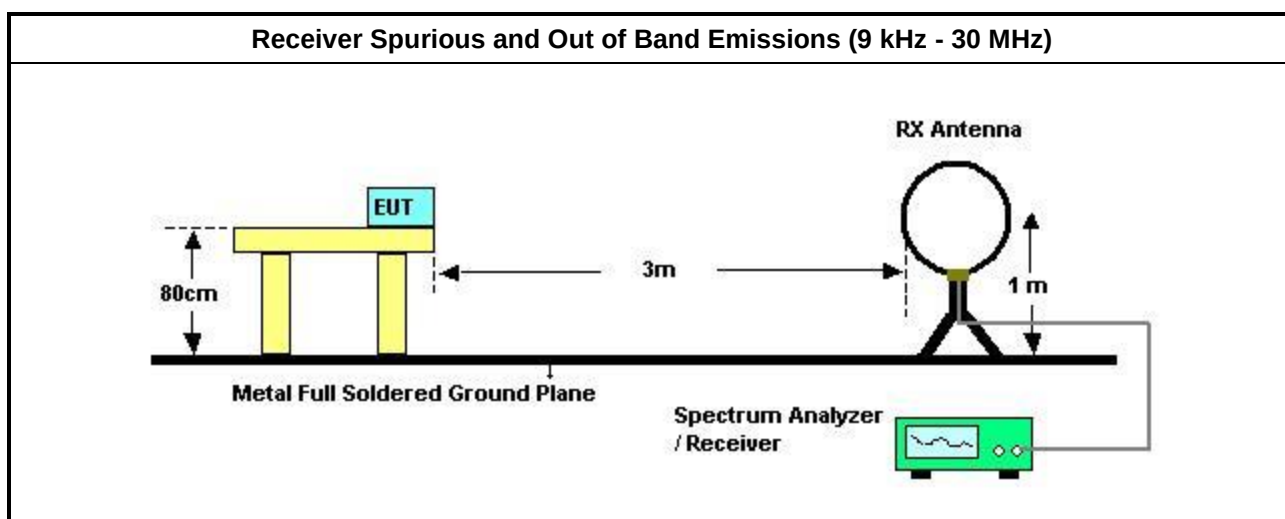
Test Method	
☒	The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is higher, to at least 3 times the highest tuneable or local oscillator frequency, whichever 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.

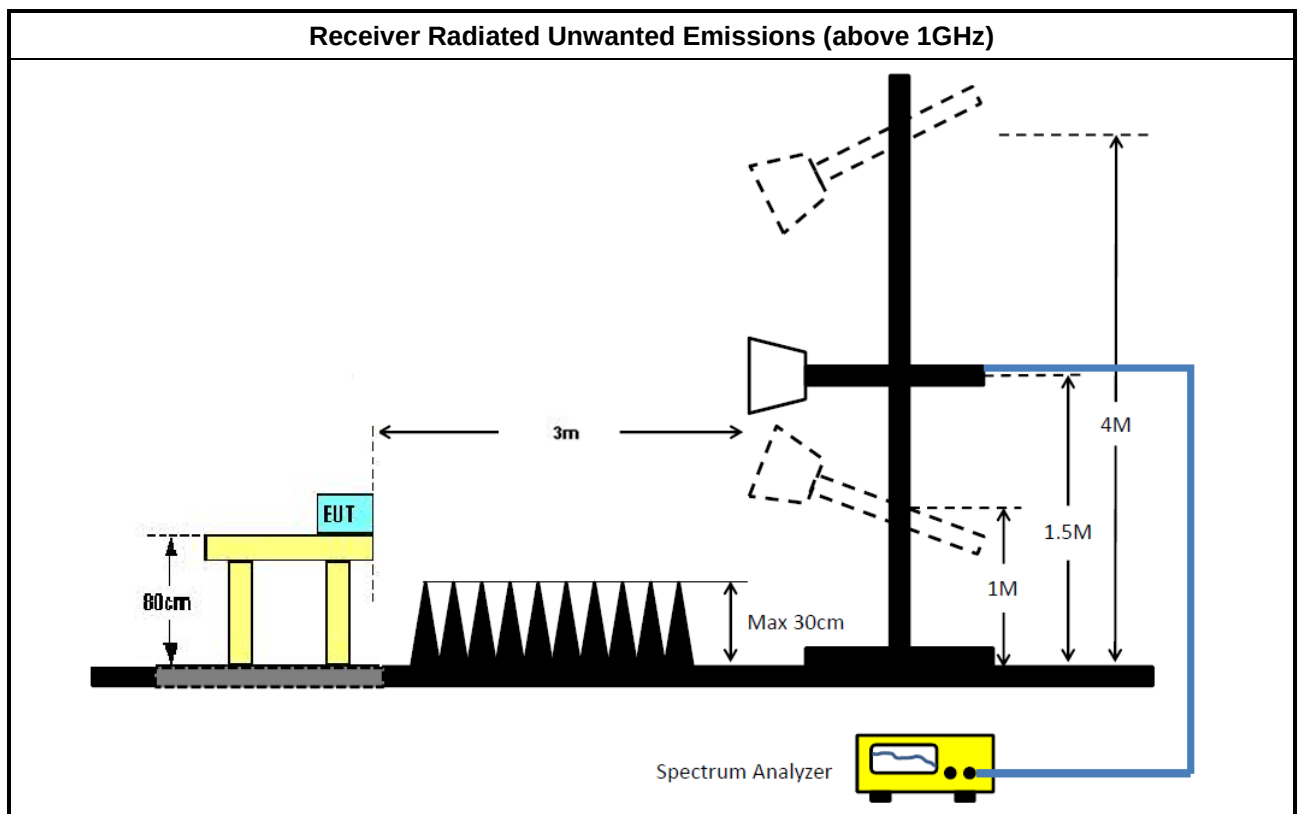
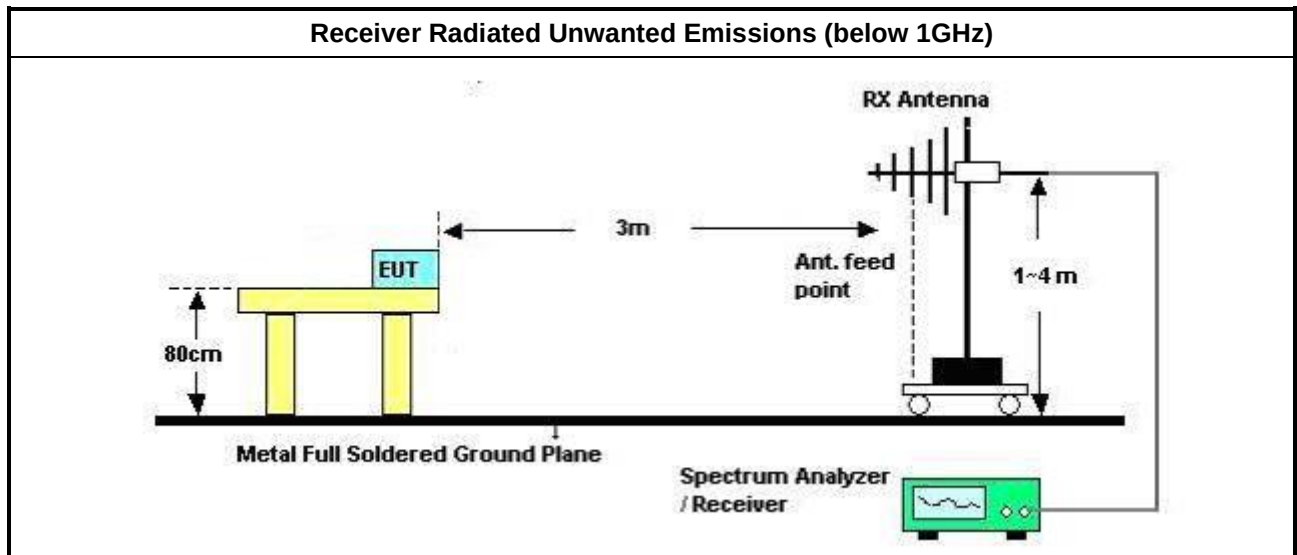
3.7.4 Measurement Results Calculation

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 /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR	102052	9kHz ~ 3.6GHz	19/Apr/2021	18/Apr/2022
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	11/Nov/2020	10/Nov/2021
RF Cable 5m	TITAN	TITAN	CO04-cable-01	0.1MHz~200MHz	03/Mar/2021	02/Mar/2022
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	21/Sep/2020	20/Sep/2021

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	19/Oct/2020	18/Oct/2021
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	20/Oct/2020	19/Oct/2021
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	18/Mar/2020	17/Mar/2021
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	18/Mar/2020	17/Mar/2021
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	23/Feb/2021	22/Feb/2022
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	23/Feb/2021	22/Feb/2022

Instrument for Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz~1GHz 3m	02/Aug/2021	01/Aug/2022
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	01/Aug/2021	31/Jul/2022
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	02/Aug/2020	01/Aug/2021
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	19/Aug/2020	18/Aug/2021
Signal Analyzer	R&S	FSP40	100593	9kHz~40GHz	12/Mar/2021	11/Mar/2022
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	29/Jun/2021	28/Jun/2022
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	23/Oct/2020	22/Oct/2021
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	06/Sep/2020	05/Sep/2021
Double Ridged Guide Horn Antenna	SCHWARZBEC	BBHA 9120 D	BBHA 9120 D 01543	1GHz~18GHz	09/Jun/2020	08/Jun/2021
Double Ridged Guide Horn Antenna	SCHWARZBEC	BBHA 9120 D	BBHA 9120 D 01543	1GHz~18GHz	04/Jun/2021	03/Jun/2022
RF Cable	MVE	400LL	MVE-1-0802	9kHz~30MHz	05/May/2021	04/May/2022
RF Cable	MVE	400LL	MVE-1-0802	30MHz~1GHz	05/May/2021	04/May/2022
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
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	10/Mar/2020	09/Mar/2021
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+80 5192/4	1GHz~40GHz	06/Apr/2021	05/Apr/2022
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2021	15/Mar/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	19/Apr/2021	18/Apr/2022



Summary

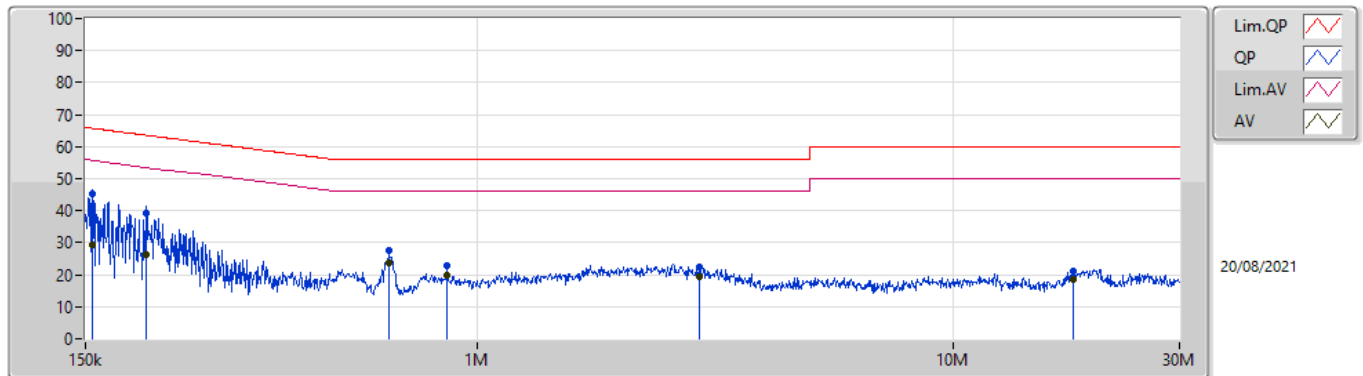
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	155.487k	45.31	65.69	-20.38	Line
Mode 2	Pass	QP	151.202k	46.14	65.92	-19.78	Neutral
Mode 3	Pass	AV	473.588k	42.27	46.46	-4.19	Line
Mode 4	Pass	AV	473.588k	42.28	46.46	-4.18	Line

Mode Configure

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	155.487k	45.31	65.69	-20.38	Line	-
Mode 1	Pass	AV	155.487k	29.37	55.69	-26.32	Line	-
Mode 1	Pass	QP	200.748k	39.24	63.57	-24.33	Line	-
Mode 1	Pass	AV	200.748k	26.15	53.57	-27.42	Line	-
Mode 1	Pass	QP	654.382k	27.39	56.00	-28.61	Line	-
Mode 1	Pass	AV	654.382k	23.60	46.00	-22.40	Line	-
Mode 1	Pass	QP	865.349k	22.71	56.00	-33.29	Line	-
Mode 1	Pass	AV	865.349k	19.96	46.00	-26.04	Line	-
Mode 1	Pass	QP	2.936M	22.22	56.00	-33.78	Line	-
Mode 1	Pass	AV	2.936M	19.37	46.00	-26.63	Line	-
Mode 1	Pass	QP	17.981M	21.22	60.00	-38.78	Line	-
Mode 1	Pass	AV	17.981M	18.57	50.00	-31.43	Line	-
Mode 1	Pass	QP	155.487k	45.22	65.69	-20.47	Neutral	-
Mode 1	Pass	AV	155.487k	28.20	55.69	-27.49	Neutral	-
Mode 1	Pass	QP	219.176k	36.79	62.85	-26.06	Neutral	-
Mode 1	Pass	AV	219.176k	21.79	52.85	-31.06	Neutral	-
Mode 1	Pass	QP	654.382k	25.49	56.00	-30.51	Neutral	-
Mode 1	Pass	AV	654.382k	21.66	46.00	-24.34	Neutral	-
Mode 1	Pass	QP	865.349k	21.58	56.00	-34.42	Neutral	-
Mode 1	Pass	AV	865.349k	19.38	46.00	-26.62	Neutral	-
Mode 1	Pass	QP	2.211M	20.48	56.00	-35.52	Neutral	-
Mode 1	Pass	AV	2.211M	17.77	46.00	-28.23	Neutral	-
Mode 1	Pass	QP	18.939M	24.48	60.00	-35.52	Neutral	-
Mode 1	Pass	AV	18.939M	21.38	50.00	-28.62	Neutral	-
Mode 2	Pass	QP	167.739k	43.81	65.06	-21.25	Line	-
Mode 2	Pass	AV	167.739k	28.55	55.06	-26.51	Line	-
Mode 2	Pass	QP	659.627k	27.07	56.00	-28.93	Line	-
Mode 2	Pass	AV	659.627k	23.70	46.00	-22.30	Line	-
Mode 2	Pass	QP	861.901k	22.91	56.00	-33.09	Line	-
Mode 2	Pass	AV	861.901k	20.27	46.00	-25.73	Line	-
Mode 2	Pass	QP	2.376M	23.24	56.00	-32.76	Line	-
Mode 2	Pass	AV	2.376M	20.27	46.00	-25.73	Line	-
Mode 2	Pass	QP	3.444M	20.98	56.00	-35.02	Line	-
Mode 2	Pass	AV	3.444M	18.15	46.00	-27.85	Line	-
Mode 2	Pass	QP	19.789M	21.50	60.00	-38.50	Line	-
Mode 2	Pass	AV	19.789M	18.84	50.00	-31.16	Line	-
Mode 2	Pass	QP	151.202k	46.14	65.92	-19.78	Neutral	-
Mode 2	Pass	AV	151.202k	29.60	55.92	-26.32	Neutral	-
Mode 2	Pass	QP	175.269k	42.42	64.70	-22.28	Neutral	-
Mode 2	Pass	AV	175.269k	26.50	54.70	-28.20	Neutral	-
Mode 2	Pass	QP	646.592k	25.16	56.00	-30.84	Neutral	-
Mode 2	Pass	AV	646.592k	21.54	46.00	-24.46	Neutral	-
Mode 2	Pass	QP	861.901k	21.60	56.00	-34.40	Neutral	-
Mode 2	Pass	AV	861.901k	19.66	46.00	-26.34	Neutral	-
Mode 2	Pass	QP	1.726M	22.58	56.00	-33.42	Neutral	-
Mode 2	Pass	AV	1.726M	19.99	46.00	-26.01	Neutral	-
Mode 2	Pass	QP	18.939M	24.53	60.00	-35.47	Neutral	-
Mode 2	Pass	AV	18.939M	21.29	50.00	-28.71	Neutral	-
Mode 3	Pass	QP	163.117k	47.66	65.31	-17.65	Line	-
Mode 3	Pass	AV	163.117k	34.08	55.31	-21.23	Line	-

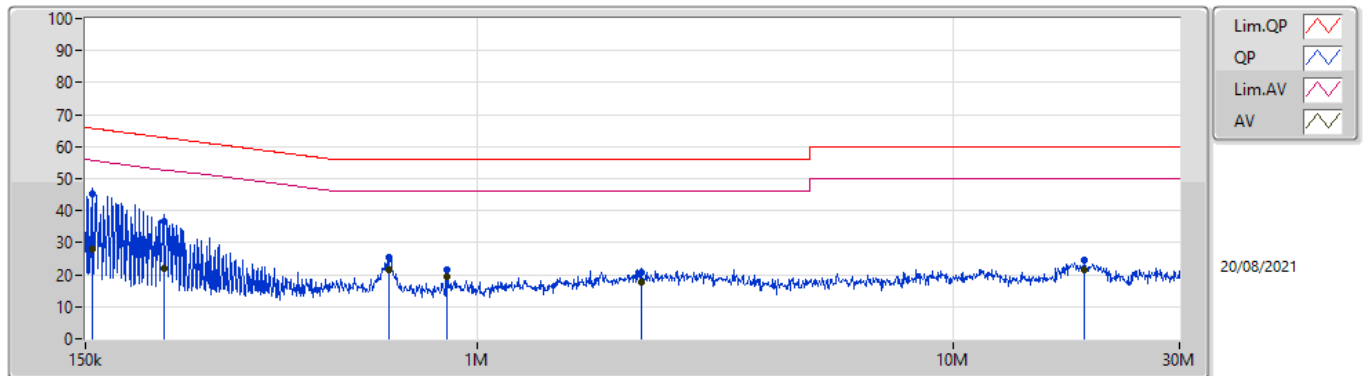
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Mode 3	Pass	QP	473.588k	47.38	56.46	-9.08	Line	-
Mode 3	Pass	AV	473.588k	42.27	46.46	-4.19	Line	-
Mode 3	Pass	QP	944.785k	35.93	56.00	-20.07	Line	-
Mode 3	Pass	AV	944.785k	32.23	46.00	-13.77	Line	-
Mode 3	Pass	QP	1.804M	36.16	56.00	-19.84	Line	-
Mode 3	Pass	AV	1.804M	31.31	46.00	-14.69	Line	-
Mode 3	Pass	QP	4.188M	32.25	56.00	-23.75	Line	-
Mode 3	Pass	AV	4.188M	27.26	46.00	-18.74	Line	-
Mode 3	Pass	QP	11.182M	29.50	60.00	-30.50	Line	-
Mode 3	Pass	AV	11.182M	24.96	50.00	-25.04	Line	-
Mode 3	Pass	QP	171.121k	46.65	64.91	-18.26	Neutral	-
Mode 3	Pass	AV	171.121k	31.56	54.91	-23.35	Neutral	-
Mode 3	Pass	QP	485.068k	46.47	56.25	-9.78	Neutral	-
Mode 3	Pass	AV	485.068k	40.37	46.25	-5.88	Neutral	-
Mode 3	Pass	QP	937.272k	34.63	56.00	-21.37	Neutral	-
Mode 3	Pass	AV	937.272k	30.95	46.00	-15.05	Neutral	-
Mode 3	Pass	QP	1.215M	32.00	56.00	-24.00	Neutral	-
Mode 3	Pass	AV	1.215M	28.58	46.00	-17.42	Neutral	-
Mode 3	Pass	QP	5.279M	27.94	60.00	-32.06	Neutral	-
Mode 3	Pass	AV	5.279M	22.88	50.00	-27.12	Neutral	-
Mode 3	Pass	QP	11.453M	29.19	60.00	-30.81	Neutral	-
Mode 3	Pass	AV	11.453M	24.89	50.00	-25.11	Neutral	-
Mode 4	Pass	QP	172.493k	46.33	64.83	-18.50	Line	-
Mode 4	Pass	AV	172.493k	31.71	54.83	-23.12	Line	-
Mode 4	Pass	QP	473.588k	47.32	56.46	-9.14	Line	-
Mode 4	Pass	AV	473.588k	42.28	46.46	-4.18	Line	-
Mode 4	Pass	QP	956.168k	35.86	56.00	-20.14	Line	-
Mode 4	Pass	AV	956.168k	31.32	46.00	-14.68	Line	-
Mode 4	Pass	QP	1.761M	36.80	56.00	-19.20	Line	-
Mode 4	Pass	AV	1.761M	32.59	46.00	-13.41	Line	-
Mode 4	Pass	QP	4.272M	32.56	56.00	-23.44	Line	-
Mode 4	Pass	AV	4.272M	27.35	46.00	-18.65	Line	-
Mode 4	Pass	QP	12.554M	29.51	60.00	-30.49	Line	-
Mode 4	Pass	AV	12.554M	25.08	50.00	-24.92	Line	-
Mode 4	Pass	QP	158.622k	48.86	65.54	-16.68	Neutral	-
Mode 4	Pass	AV	158.622k	33.72	55.54	-21.82	Neutral	-
Mode 4	Pass	QP	481.211k	47.04	56.33	-9.29	Neutral	-
Mode 4	Pass	AV	481.211k	40.95	46.33	-5.38	Neutral	-
Mode 4	Pass	QP	952.358k	35.09	56.00	-20.91	Neutral	-
Mode 4	Pass	AV	952.358k	30.65	46.00	-15.35	Neutral	-
Mode 4	Pass	QP	1.466M	32.78	56.00	-23.22	Neutral	-
Mode 4	Pass	AV	1.466M	29.22	46.00	-16.78	Neutral	-
Mode 4	Pass	QP	5.343M	27.96	60.00	-32.04	Neutral	-
Mode 4	Pass	AV	5.343M	22.87	50.00	-27.13	Neutral	-
Mode 4	Pass	QP	9.38M	28.01	60.00	-31.99	Neutral	-
Mode 4	Pass	AV	9.38M	23.88	50.00	-26.12	Neutral	-

Conducted Emissions at Powerline_Mode 1



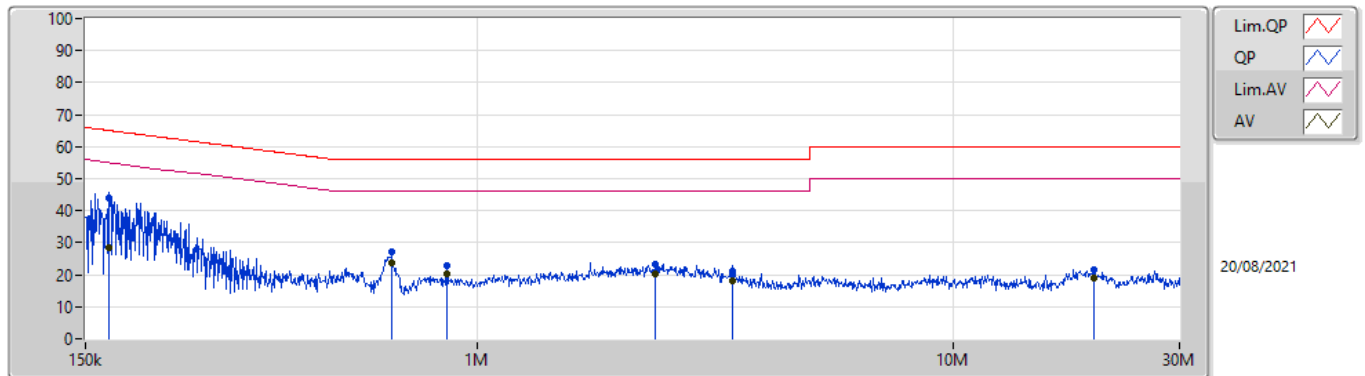
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QP	155.487k	45.31	65.69	-20.38	19.63	Line	-	25.68	9.69	0.04	9.90			
AV	155.487k	29.37	55.69	-26.32	19.63	Line	-	9.74	9.69	0.04	9.90			
QP	200.748k	39.24	63.57	-24.33	19.62	Line	-	19.62	9.68	0.04	9.90			
AV	200.748k	26.15	53.57	-27.42	19.62	Line	-	6.53	9.68	0.04	9.90			
QP	654.382k	27.39	56.00	-28.61	19.59	Line	-	7.80	9.67	0.07	9.85			
AV	654.382k	23.60	46.00	-22.40	19.59	Line	-	4.01	9.67	0.07	9.85			
QP	865.349k	22.71	56.00	-33.29	19.57	Line	-	3.14	9.67	0.08	9.82			
AV	865.349k	19.96	46.00	-26.04	19.57	Line	-	0.39	9.67	0.08	9.82			
QP	2.936M	22.22	56.00	-33.78	19.67	Line	-	2.55	9.69	0.12	9.86			
AV	2.936M	19.37	46.00	-26.63	19.67	Line	-	-0.30	9.69	0.12	9.86			
QP	17.981M	21.22	60.00	-38.78	19.86	Line	-	1.36	9.68	0.28	9.90			
AV	17.981M	18.57	50.00	-31.43	19.86	Line	-	-1.29	9.68	0.28	9.90			

Conducted Emissions at Powerline_Mode 1



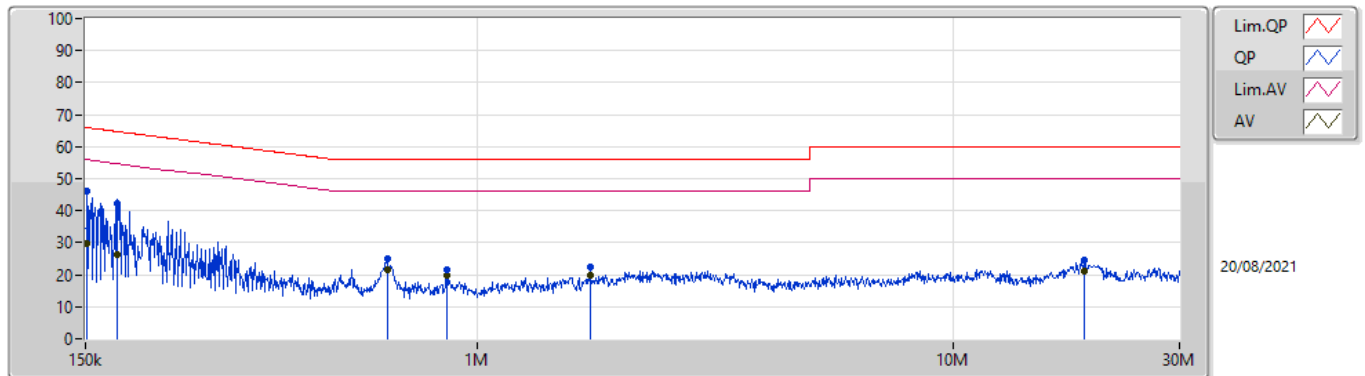
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	155.487k	45.22	65.69	-20.47	19.63	Neutral	-	25.59	9.69	0.04	9.90			
AV	155.487k	28.20	55.69	-27.49	19.63	Neutral	-	8.57	9.69	0.04	9.90			
QP	219.176k	36.79	62.85	-26.06	19.62	Neutral	-	17.17	9.68	0.04	9.90			
AV	219.176k	21.79	52.85	-31.06	19.62	Neutral	-	2.17	9.68	0.04	9.90			
QP	654.382k	25.49	56.00	-30.51	19.59	Neutral	-	5.90	9.67	0.07	9.85			
AV	654.382k	21.66	46.00	-24.34	19.59	Neutral	-	2.07	9.67	0.07	9.85			
QP	865.349k	21.58	56.00	-34.42	19.57	Neutral	-	2.01	9.67	0.08	9.82			
AV	865.349k	19.38	46.00	-26.62	19.57	Neutral	-	-0.19	9.67	0.08	9.82			
QP	2.211M	20.48	56.00	-35.52	19.60	Neutral	-	0.88	9.68	0.11	9.81			
AV	2.211M	17.77	46.00	-28.23	19.60	Neutral	-	-1.83	9.68	0.11	9.81			
QP	18.939M	24.48	60.00	-35.52	19.94	Neutral	-	4.54	9.75	0.29	9.90			
AV	18.939M	21.38	50.00	-28.62	19.94	Neutral	-	1.44	9.75	0.29	9.90			

Conducted Emissions at Powerline_Mode 2



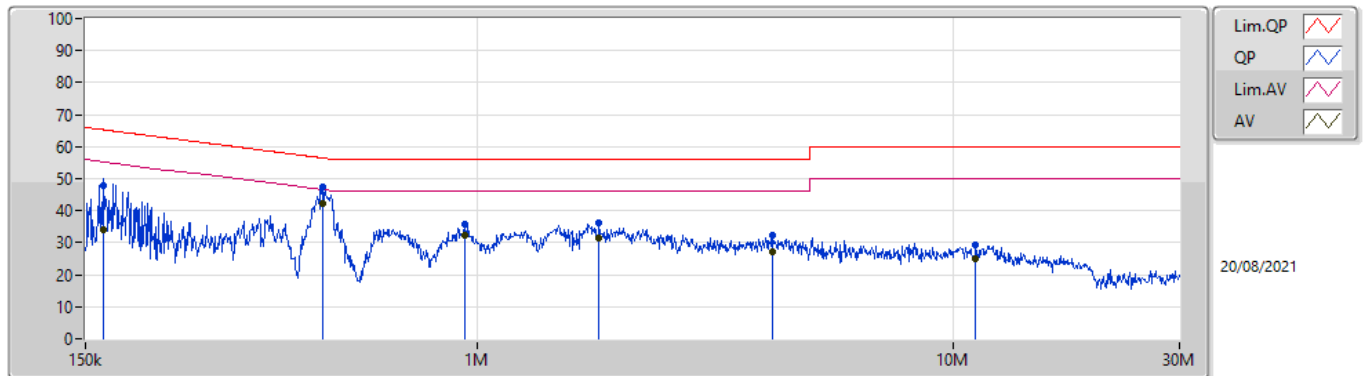
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	167.739k	43.81	65.06	-21.25	19.63	Line	-	24.18	9.69	0.04	9.90			
AV	167.739k	28.55	55.06	-26.51	19.63	Line	-	8.92	9.69	0.04	9.90			
QP	659.627k	27.07	56.00	-28.93	19.59	Line	-	7.48	9.67	0.07	9.85			
AV	659.627k	23.70	46.00	-22.30	19.59	Line	-	4.11	9.67	0.07	9.85			
QP	861.901k	22.91	56.00	-33.09	19.57	Line	-	3.34	9.67	0.08	9.82			
AV	861.901k	20.27	46.00	-25.73	19.57	Line	-	0.70	9.67	0.08	9.82			
QP	2.376M	23.24	56.00	-32.76	19.61	Line	-	3.63	9.68	0.11	9.82			
AV	2.376M	20.27	46.00	-25.73	19.61	Line	-	0.66	9.68	0.11	9.82			
QP	3.444M	20.98	56.00	-35.02	19.70	Line	-	1.28	9.69	0.13	9.88			
AV	3.444M	18.15	46.00	-27.85	19.70	Line	-	-1.55	9.69	0.13	9.88			
QP	19.789M	21.50	60.00	-38.50	19.87	Line	-	1.63	9.67	0.30	9.90			
AV	19.789M	18.84	50.00	-31.16	19.87	Line	-	-1.03	9.67	0.30	9.90			

Conducted Emissions at Powerline_Mode 2



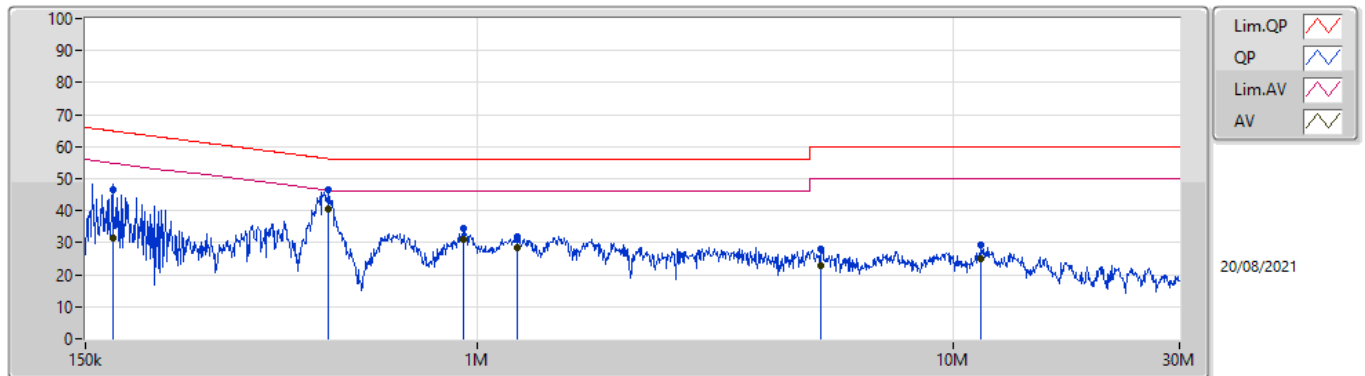
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	151.202k	46.14	65.92	-19.78	19.63	Neutral	-	26.51	9.69	0.04	9.90			
AV	151.202k	29.60	55.92	-26.32	19.63	Neutral	-	9.97	9.69	0.04	9.90			
QP	175.269k	42.42	64.70	-22.28	19.62	Neutral	-	22.80	9.68	0.04	9.90			
AV	175.269k	26.50	54.70	-28.20	19.62	Neutral	-	6.88	9.68	0.04	9.90			
QP	646.592k	25.16	56.00	-30.84	19.59	Neutral	-	5.57	9.67	0.07	9.85			
AV	646.592k	21.54	46.00	-24.46	19.59	Neutral	-	1.95	9.67	0.07	9.85			
QP	861.901k	21.60	56.00	-34.40	19.57	Neutral	-	2.03	9.67	0.08	9.82			
AV	861.901k	19.66	46.00	-26.34	19.57	Neutral	-	0.09	9.67	0.08	9.82			
QP	1.726M	22.58	56.00	-33.42	19.58	Neutral	-	3.00	9.68	0.10	9.80			
AV	1.726M	19.99	46.00	-26.01	19.58	Neutral	-	0.41	9.68	0.10	9.80			
QP	18.939M	24.53	60.00	-35.47	19.94	Neutral	-	4.59	9.75	0.29	9.90			
AV	18.939M	21.29	50.00	-28.71	19.94	Neutral	-	1.35	9.75	0.29	9.90			

Conducted Emissions at Powerline_Mode 3



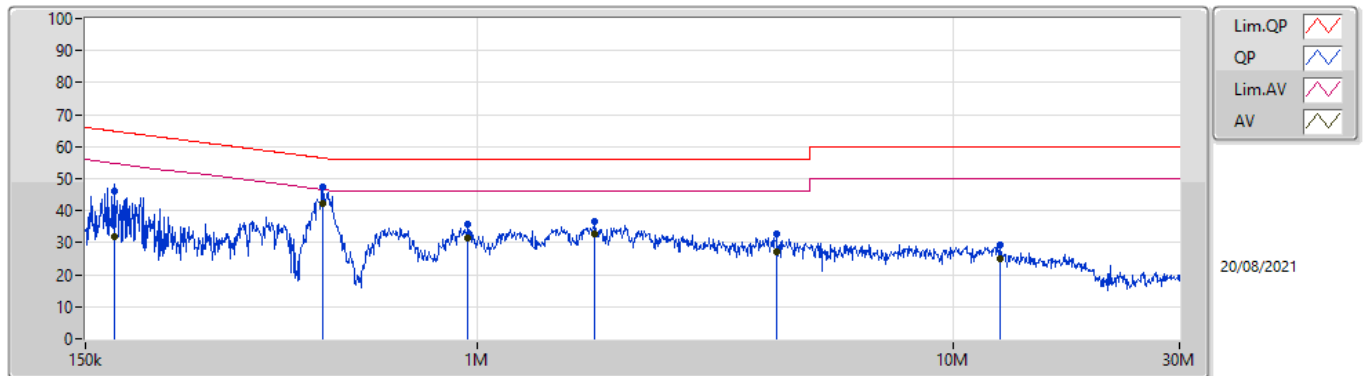
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	163.117k	47.66	65.31	-17.65	19.63	Line	-	28.03	9.69	0.04	9.90			
AV	163.117k	34.08	55.31	-21.23	19.63	Line	-	14.45	9.69	0.04	9.90			
QP	473.588k	47.38	56.46	-9.08	19.61	Line	-	27.77	9.67	0.06	9.88			
AV	473.588k	42.27	46.46	-4.19	19.61	Line	-	22.66	9.67	0.06	9.88			
QP	944.785k	35.93	56.00	-20.07	19.56	Line	-	16.37	9.67	0.08	9.81			
AV	944.785k	32.23	46.00	-13.77	19.56	Line	-	12.67	9.67	0.08	9.81			
QP	1.804M	36.16	56.00	-19.84	19.58	Line	-	16.58	9.68	0.10	9.80			
AV	1.804M	31.31	46.00	-14.69	19.58	Line	-	11.73	9.68	0.10	9.80			
QP	4.188M	32.25	56.00	-23.75	19.73	Line	-	12.52	9.69	0.14	9.90			
AV	4.188M	27.26	46.00	-18.74	19.73	Line	-	7.53	9.69	0.14	9.90			
QP	11.182M	29.50	60.00	-30.50	19.82	Line	-	9.68	9.71	0.21	9.90			
AV	11.182M	24.96	50.00	-25.04	19.82	Line	-	5.14	9.71	0.21	9.90			

Conducted Emissions at Powerline_Mode 3



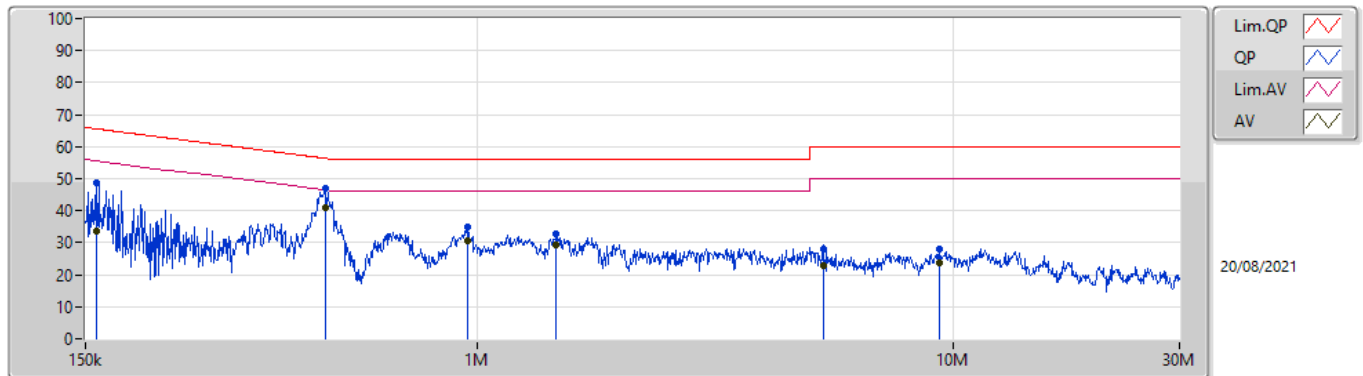
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	171.121k	46.65	64.91	-18.26	19.63	Neutral	-	27.02	9.69	0.04	9.90			
AV	171.121k	31.56	54.91	-23.35	19.63	Neutral	-	11.93	9.69	0.04	9.90			
QP	485.068k	46.47	56.25	-9.78	19.61	Neutral	-	26.86	9.67	0.06	9.88			
AV	485.068k	40.37	46.25	-5.88	19.61	Neutral	-	20.76	9.67	0.06	9.88			
QP	937.272k	34.63	56.00	-21.37	19.56	Neutral	-	15.07	9.67	0.08	9.81			
AV	937.272k	30.95	46.00	-15.05	19.56	Neutral	-	11.39	9.67	0.08	9.81			
QP	1.215M	32.00	56.00	-24.00	19.56	Neutral	-	12.44	9.67	0.09	9.80			
AV	1.215M	28.58	46.00	-17.42	19.56	Neutral	-	9.02	9.67	0.09	9.80			
QP	5.279M	27.94	60.00	-32.06	19.76	Neutral	-	8.18	9.70	0.16	9.90			
AV	5.279M	22.88	50.00	-27.12	19.76	Neutral	-	3.12	9.70	0.16	9.90			
QP	11.453M	29.19	60.00	-30.81	19.85	Neutral	-	9.34	9.73	0.22	9.90			
AV	11.453M	24.89	50.00	-25.11	19.85	Neutral	-	5.04	9.73	0.22	9.90			

Conducted Emissions at Powerline_Mode 4



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	172.493k	46.33	64.83	-18.50	19.63	Line	-	26.70	9.69	0.04	9.90			
AV	172.493k	31.71	54.83	-23.12	19.63	Line	-	12.08	9.69	0.04	9.90			
QP	473.588k	47.32	56.46	-9.14	19.61	Line	-	27.71	9.67	0.06	9.88			
AV	473.588k	42.28	46.46	-4.18	19.61	Line	-	22.67	9.67	0.06	9.88			
QP	956.168k	35.86	56.00	-20.14	19.55	Line	-	16.31	9.67	0.08	9.80			
AV	956.168k	31.32	46.00	-14.68	19.55	Line	-	11.77	9.67	0.08	9.80			
QP	1.761M	36.80	56.00	-19.20	19.58	Line	-	17.22	9.68	0.10	9.80			
AV	1.761M	32.59	46.00	-13.41	19.58	Line	-	13.01	9.68	0.10	9.80			
QP	4.272M	32.56	56.00	-23.44	19.73	Line	-	12.83	9.69	0.14	9.90			
AV	4.272M	27.35	46.00	-18.65	19.73	Line	-	7.62	9.69	0.14	9.90			
QP	12.554M	29.51	60.00	-30.49	19.83	Line	-	9.68	9.70	0.23	9.90			
AV	12.554M	25.08	50.00	-24.92	19.83	Line	-	5.25	9.70	0.23	9.90			

Conducted Emissions at Powerline_Mode 4



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	158.622k	48.86	65.54	-16.68	19.63	Neutral	-	29.23	9.69	0.04	9.90			
AV	158.622k	33.72	55.54	-21.82	19.63	Neutral	-	14.09	9.69	0.04	9.90			
QP	481.211k	47.04	56.33	-9.29	19.61	Neutral	-	27.43	9.67	0.06	9.88			
AV	481.211k	40.95	46.33	-5.38	19.61	Neutral	-	21.34	9.67	0.06	9.88			
QP	952.358k	35.09	56.00	-20.91	19.56	Neutral	-	15.53	9.67	0.08	9.81			
AV	952.358k	30.65	46.00	-15.35	19.56	Neutral	-	11.09	9.67	0.08	9.81			
QP	1.466M	32.78	56.00	-23.22	19.57	Neutral	-	13.21	9.68	0.09	9.80			
AV	1.466M	29.22	46.00	-16.78	19.57	Neutral	-	9.65	9.68	0.09	9.80			
QP	5.343M	27.96	60.00	-32.04	19.76	Neutral	-	8.20	9.70	0.16	9.90			
AV	5.343M	22.87	50.00	-27.13	19.76	Neutral	-	3.11	9.70	0.16	9.90			
QP	9.38M	28.01	60.00	-31.99	19.83	Neutral	-	8.18	9.73	0.20	9.90			
AV	9.38M	23.88	50.00	-26.12	19.83	Neutral	-	4.05	9.73	0.20	9.90			



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)	690k	1.054M	1M05F1D	678.75k	1.043M
BT-LE(2Mbps)	1.36M	2.076M	2M08F1D	1.338M	2.051M

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

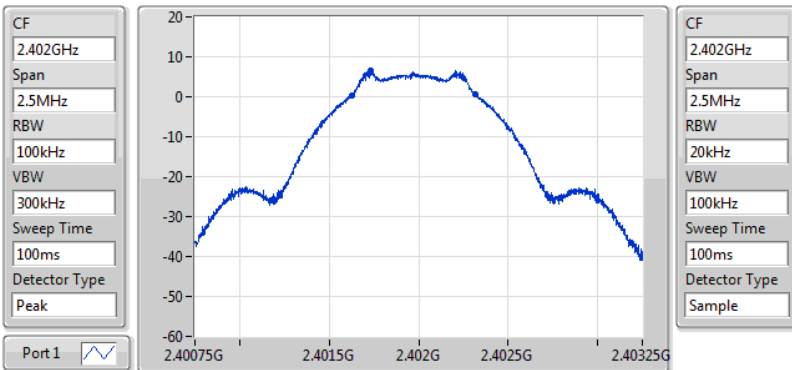
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	690k	1.054M
2440MHz	Pass	500k	682.5k	1.052M
2480MHz	Pass	500k	678.75k	1.043M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.338M	2.076M
2440MHz	Pass	500k	1.36M	2.059M
2480MHz	Pass	500k	1.345M	2.051M

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

BT-LE(1Mbps)

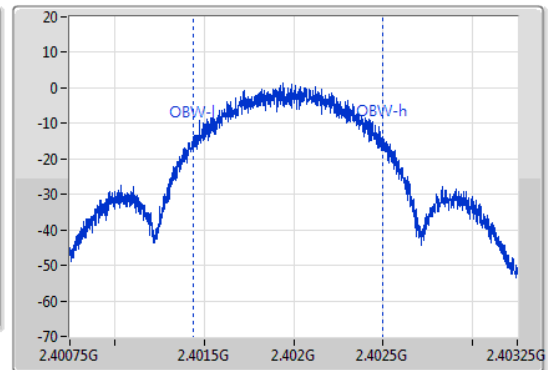
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
690k	2.401625G	2.402315G	1.054M	2.401442G	2.402496G	500k	1

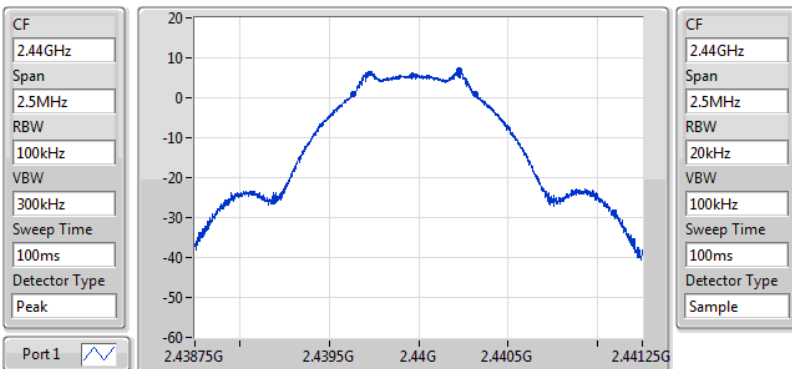
EBW-DTS

08/03/2021



BT-LE(1Mbps)

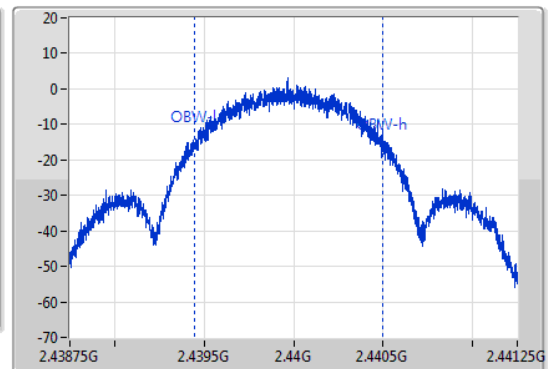
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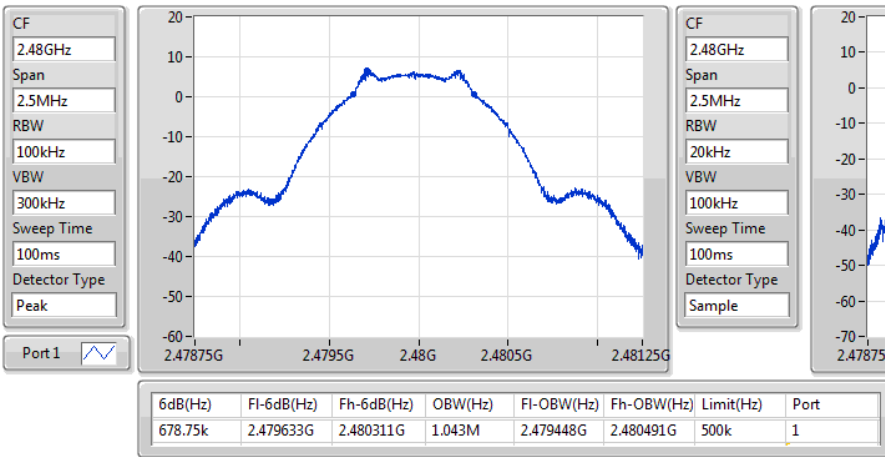


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
682.5k	2.439635G	2.440318G	1.052M	2.439447G	2.440499G	500k	1

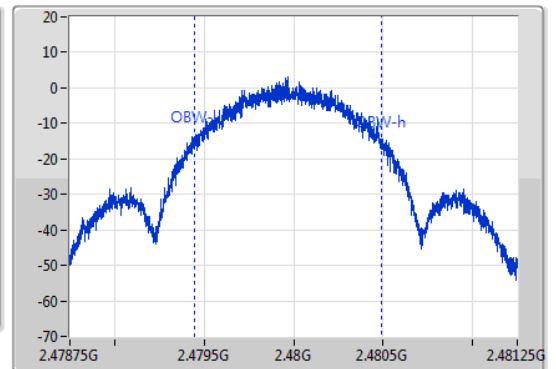
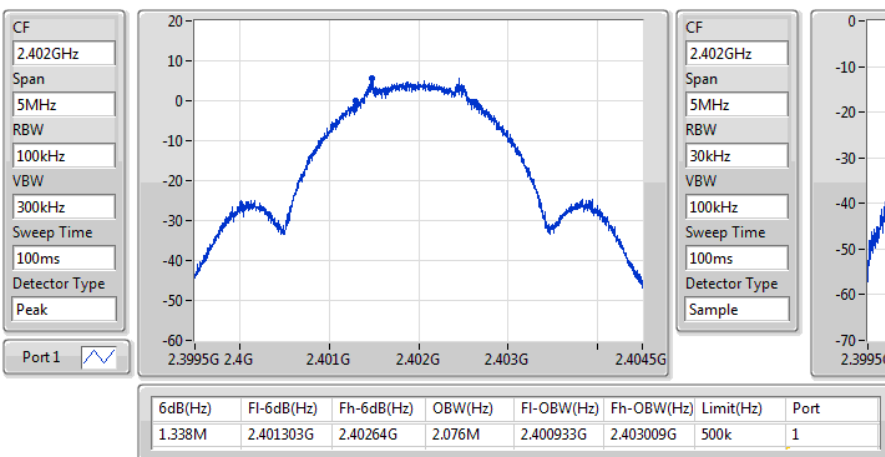
EBW-DTS

08/03/2021

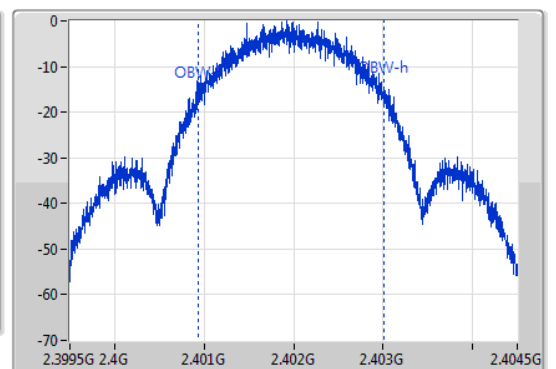


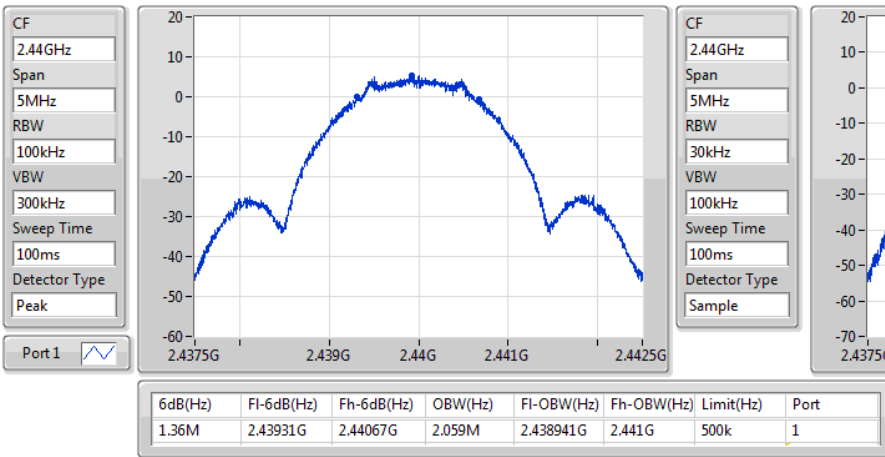
BT-LE(1Mbps)
2480MHz

EBW-DTS

08/03/2021

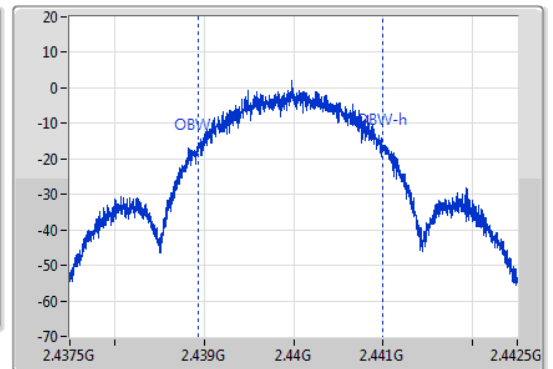
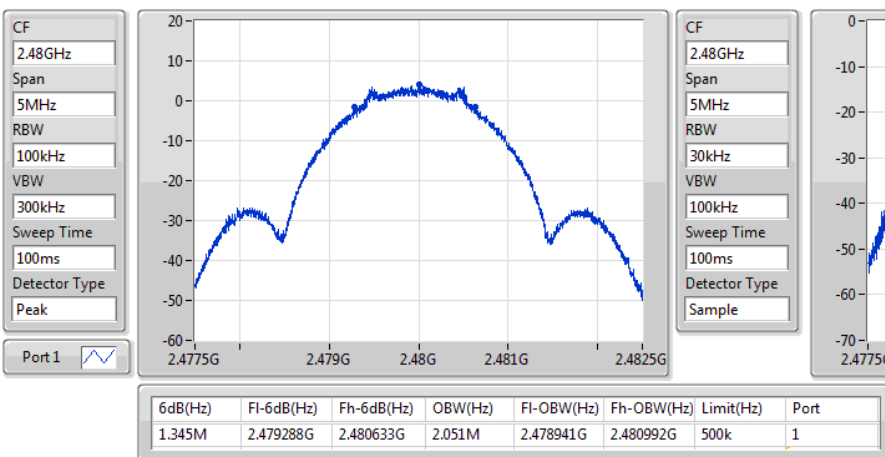

BT-LE(2Mbps)
2402MHz

EBW-DTS

08/03/2021

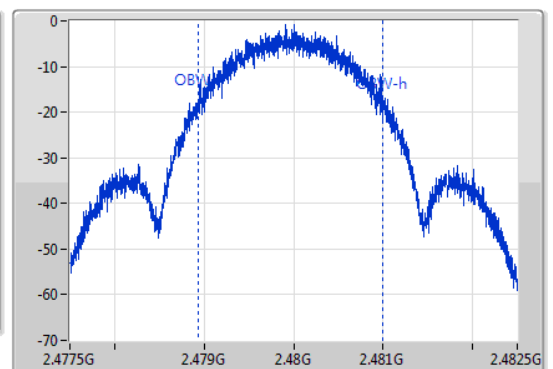


BT-LE(2Mbps)
2440MHz

EBW-DTS

08/03/2021


BT-LE(2Mbps)
2480MHz

EBW-DTS

08/03/2021





Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LF(1Mbps)	7.10	0.00513
BT-LF(2Mbps)	6.98	0.00499



Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	5.20	6.90	30.00
2440MHz	Pass	5.20	6.98	30.00
2480MHz	Pass	5.20	7.10	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	5.20	6.89	30.00
2440MHz	Pass	5.20	6.98	30.00
2480MHz	Pass	5.20	5.57	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-4.61
BT-LE(2Mbps)	-9.64

RBW = 3kHz;



Result

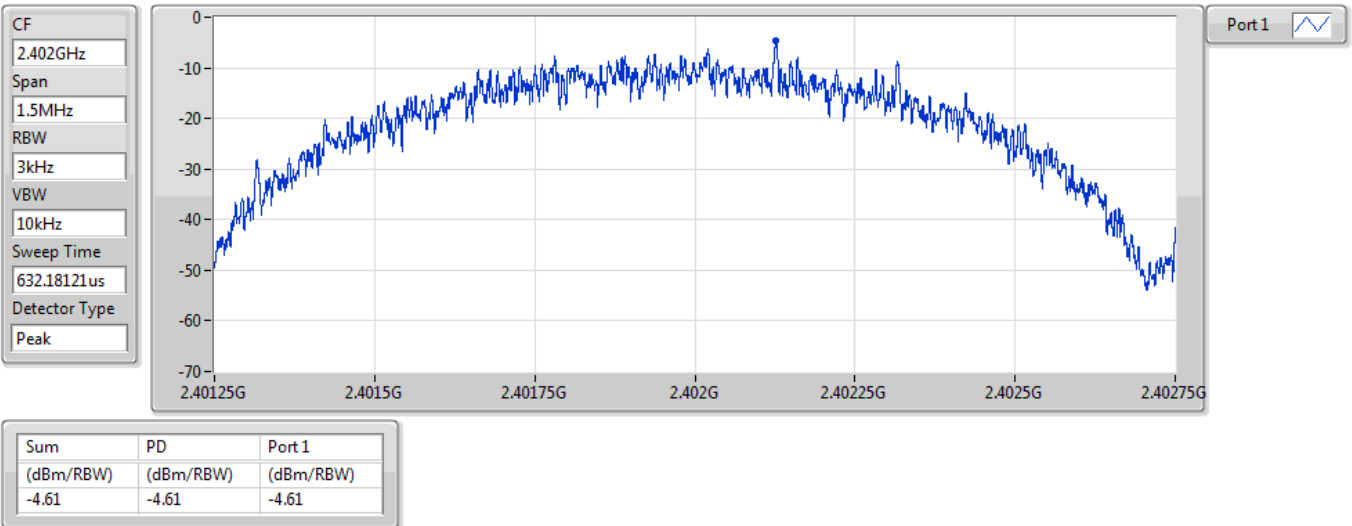
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	5.20	-4.61	8.00
2440MHz	Pass	5.20	-7.03	8.00
2480MHz	Pass	5.20	-7.73	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	5.20	-9.64	8.00
2440MHz	Pass	5.20	-10.04	8.00
2480MHz	Pass	5.20	-10.44	8.00

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

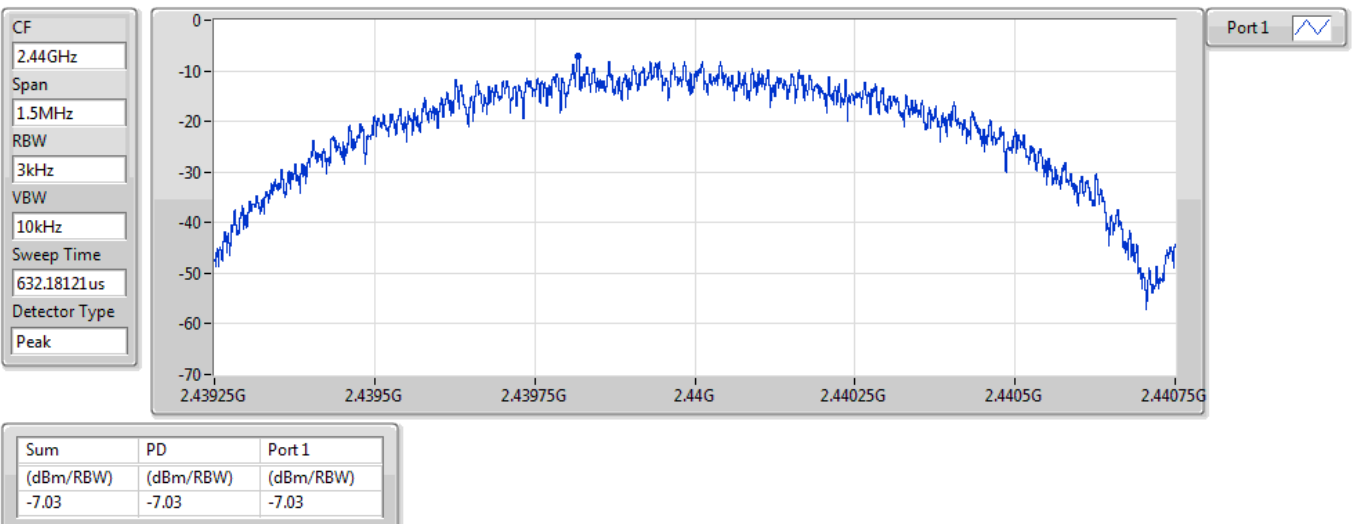
08/03/2021



BT-LE(1Mbps)

2440MHz

08/03/2021

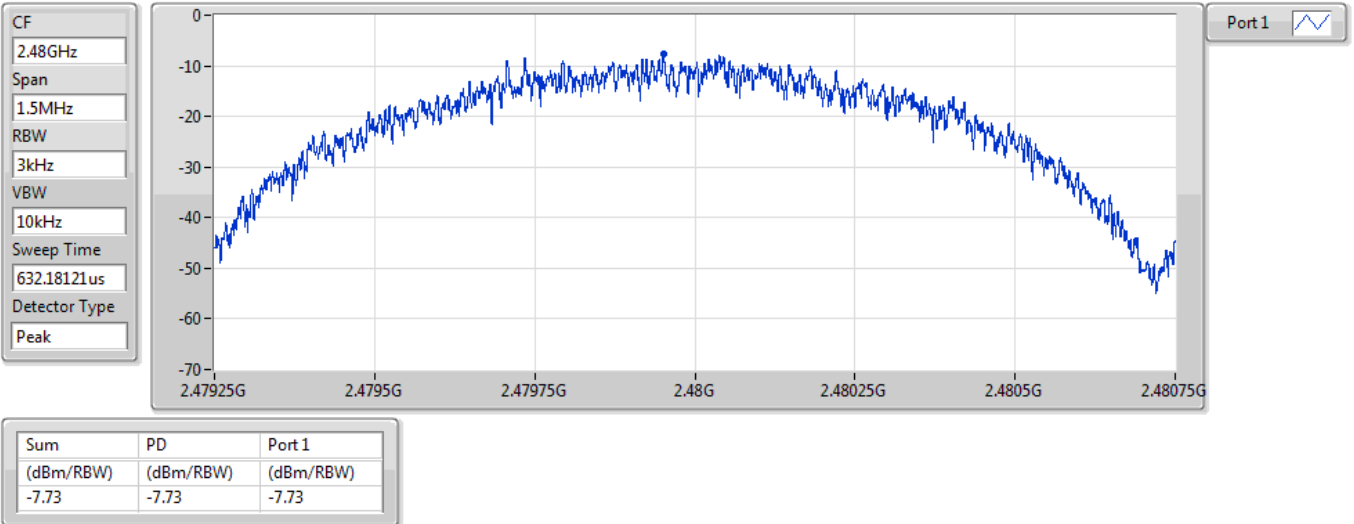


BT-LE(1Mbps)

PSD

2480MHz

08/03/2021

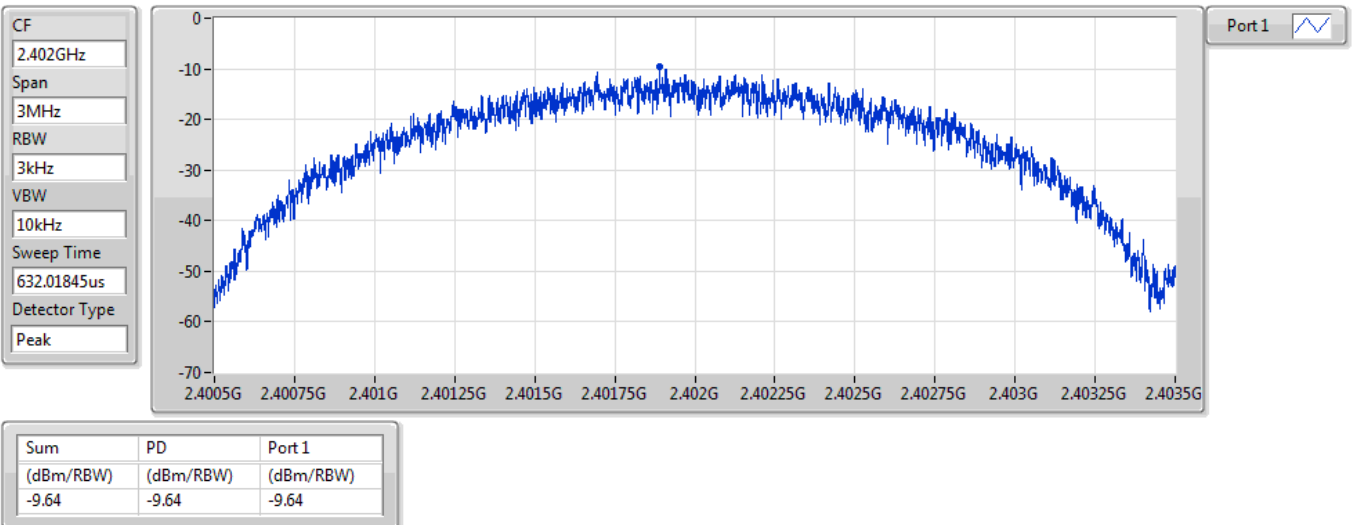


BT-LE(2Mbps)

PSD

2402MHz

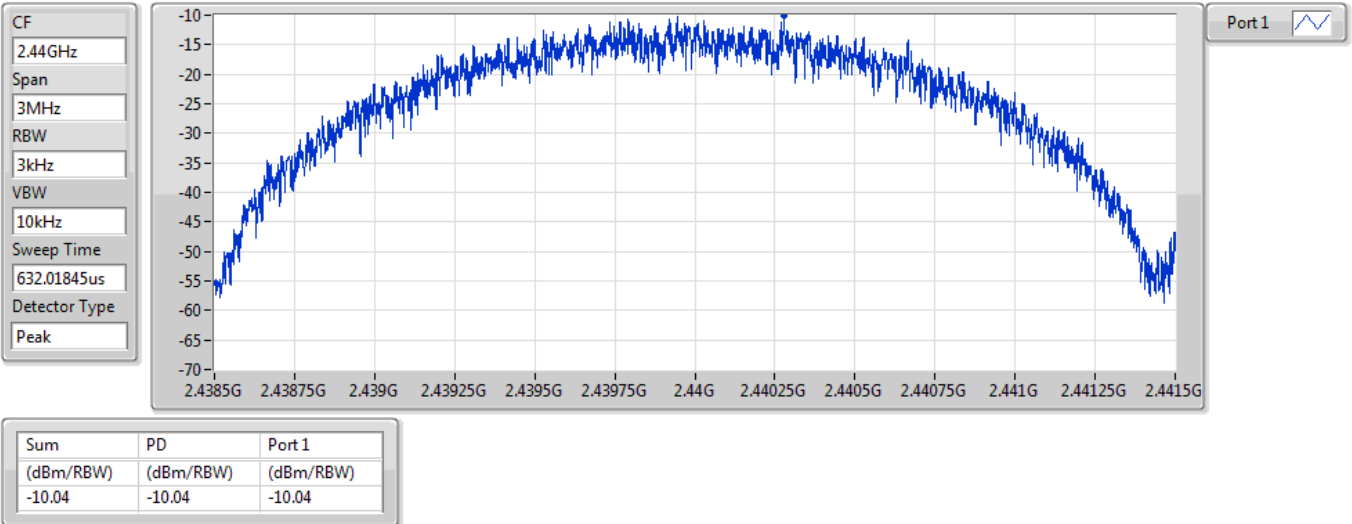
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BT-LE(2Mbps)

2440MHz

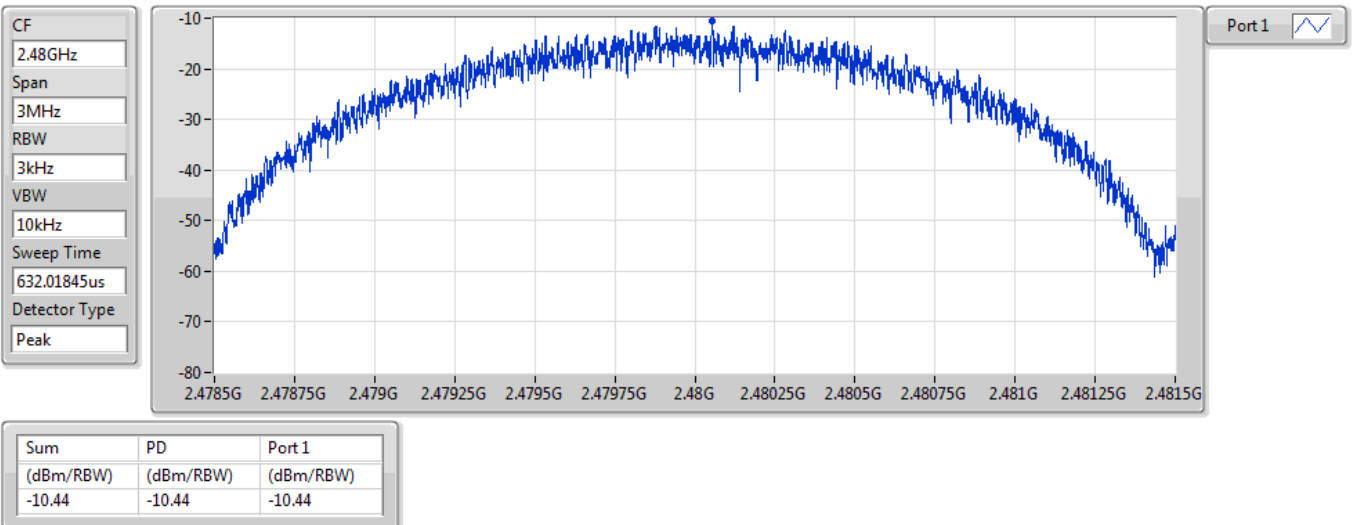
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BT-LE(2Mbps)

2480MHz

08/03/2021





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	2.48024G	6.79	-23.21	2.30598G	-53.02	2.39999G	-40.95	2.4G	-41.23	2.49796G	-51.45	23.54335G	-42.91	1
BT-LE(2Mbps)	Pass	2.44046G	5.31	-24.69	2.1309G	-54.88	2.4G	-27.71	2.4G	-27.05	2.49762G	-51.33	23.56866G	-42.55	1

Result

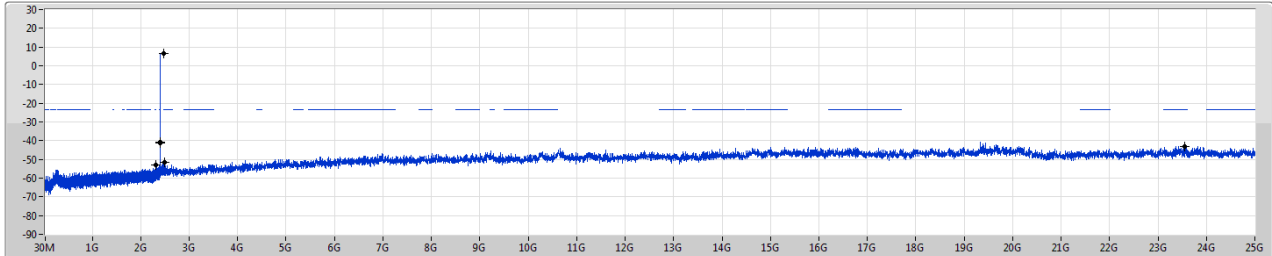
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.48024G	6.79	-23.21	2.30598G	-53.02	2.39999G	-40.95	2.4G	-41.23	2.49796G	-51.45	23.54335G	-42.91	1
2440MHz	Pass	2.48024G	6.79	-23.21	2.11856G	-54.83	2.39209G	-50.14	2.4G	-56.23	2.48785G	-52.14	23.40275G	-42.79	1
2480MHz	Pass	2.48024G	6.79	-23.21	239.74M	-53.60	2.39994G	-53.47	2.4835G	-52.74	2.48684G	-50.30	23.48992G	-42.75	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.44046G	5.31	-24.69	2.1309G	-54.88	2.4G	-27.71	2.4G	-27.05	2.49762G	-51.33	23.56866G	-42.55	1
2440MHz	Pass	2.44046G	5.31	-24.69	1.84626G	-53.67	2.39613G	-52.36	2.4G	-54.54	2.48808G	-52.28	17.6577G	-43.20	1
2480MHz	Pass	2.44046G	5.31	-24.69	239.74M	-53.23	2.39378G	-52.79	2.4835G	-53.25	2.48375G	-50.06	23.41118G	-42.47	1

BT-LE(1Mbps)

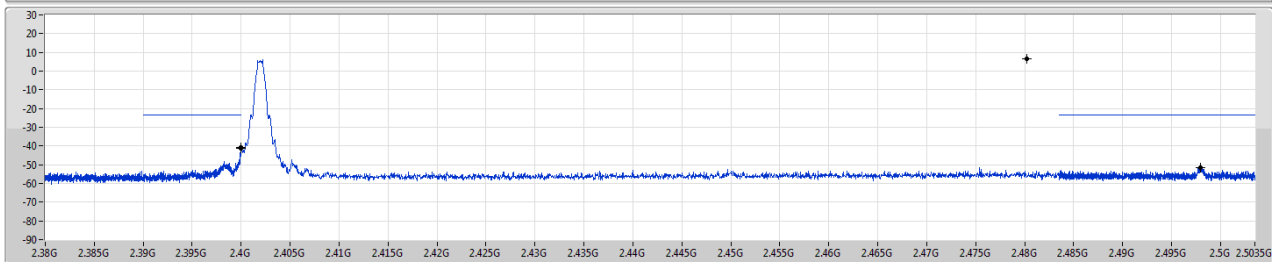
CSEndB-DTS

2402MHz

08/03/2021



Port1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

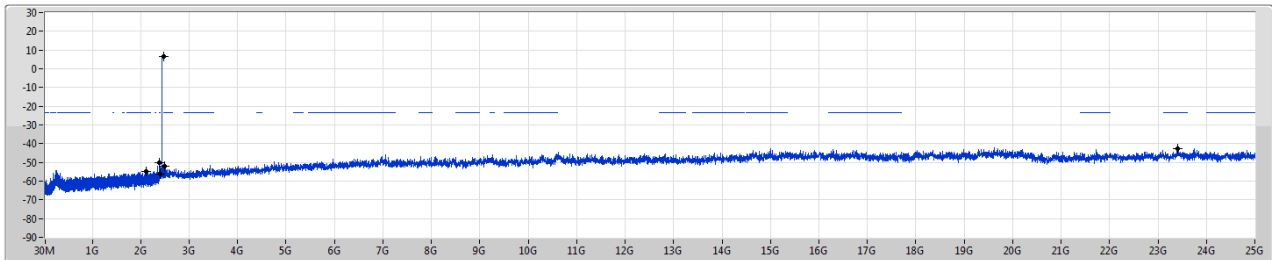
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48024G	6.79	-23.21	2.30598G	-53.02	2.39999G	-40.95	2.4G	-41.23	2.49796G	-51.45	23.54335G	-42.91	1

BT-LE(1Mbps)

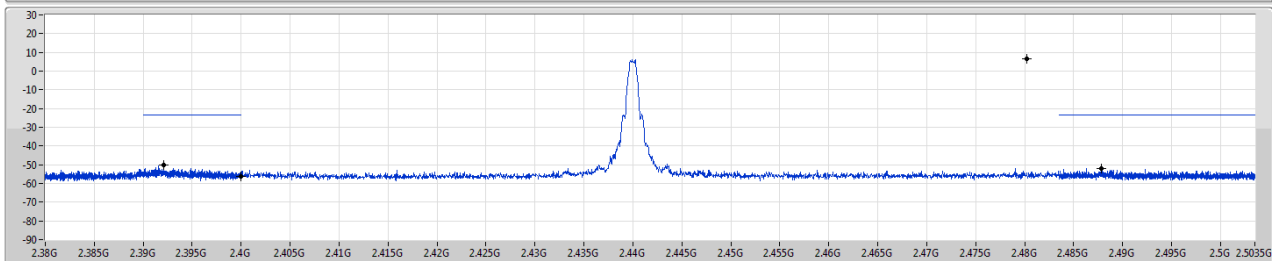
CSEndB-DTS

2440MHz

08/03/2021



Port1



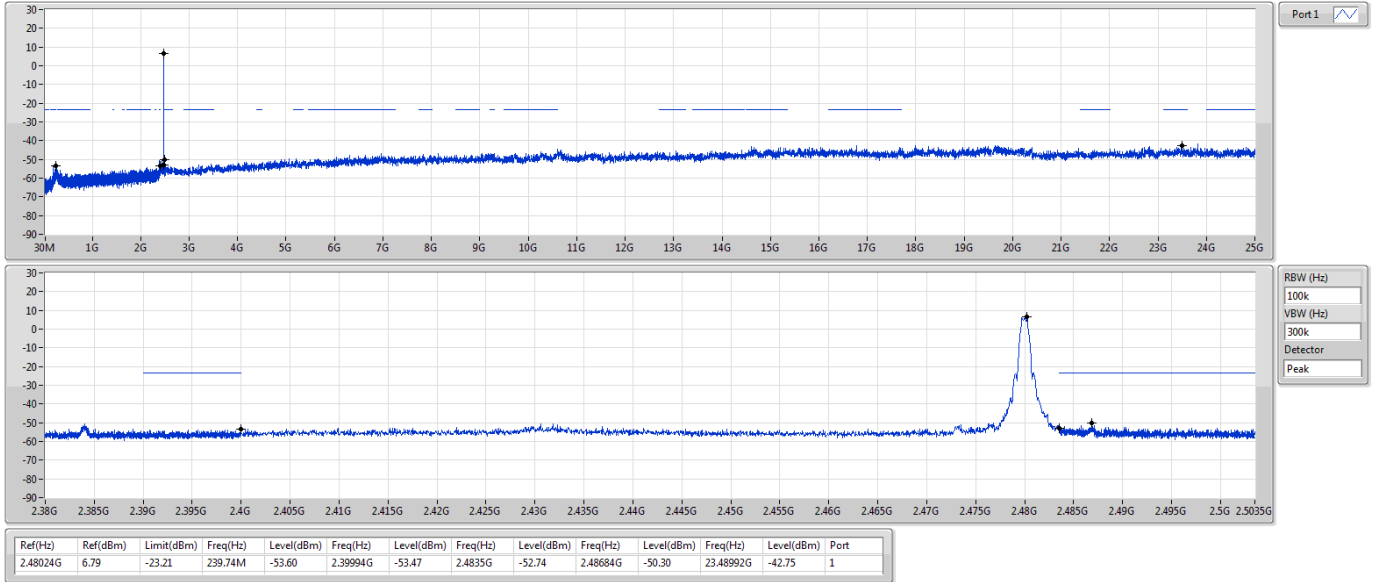
RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

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
2.48024G	6.79	-23.21	2.11856G	-54.83	2.39209G	-50.14	2.4G	-56.23	2.48785G	-52.14	23.40275G	-42.79	1

BT-LE(1Mbps)

CSEndB-DTS

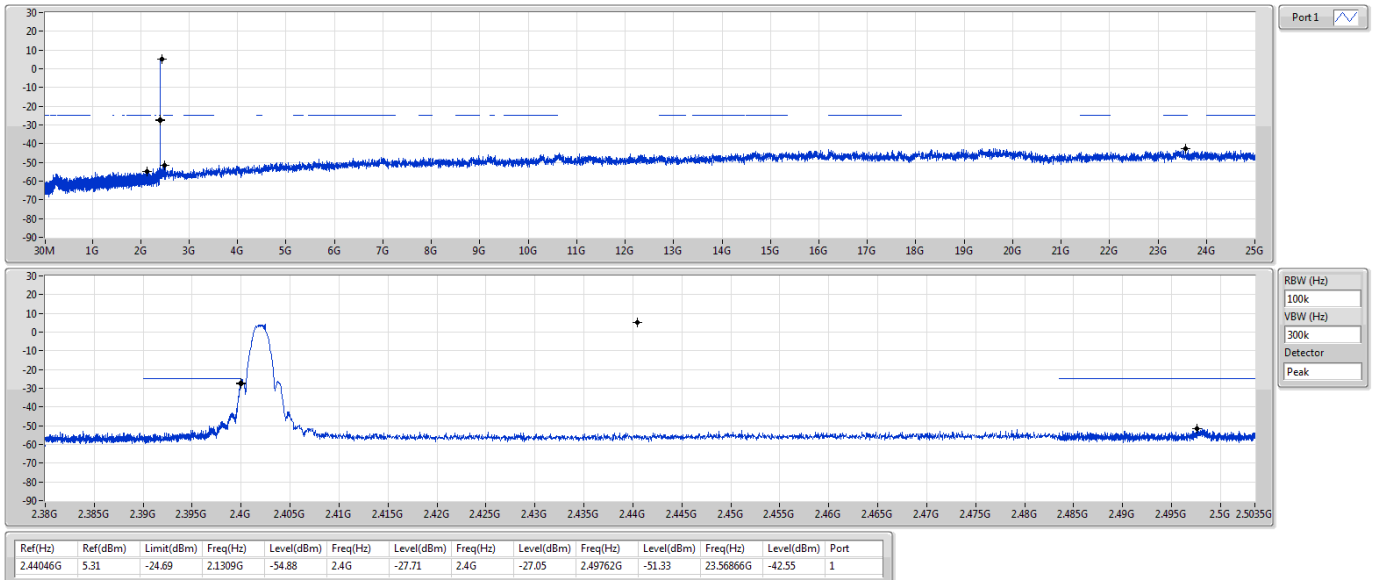
2480MHz



BT-LE(2Mbps)

CSEndB-DTS

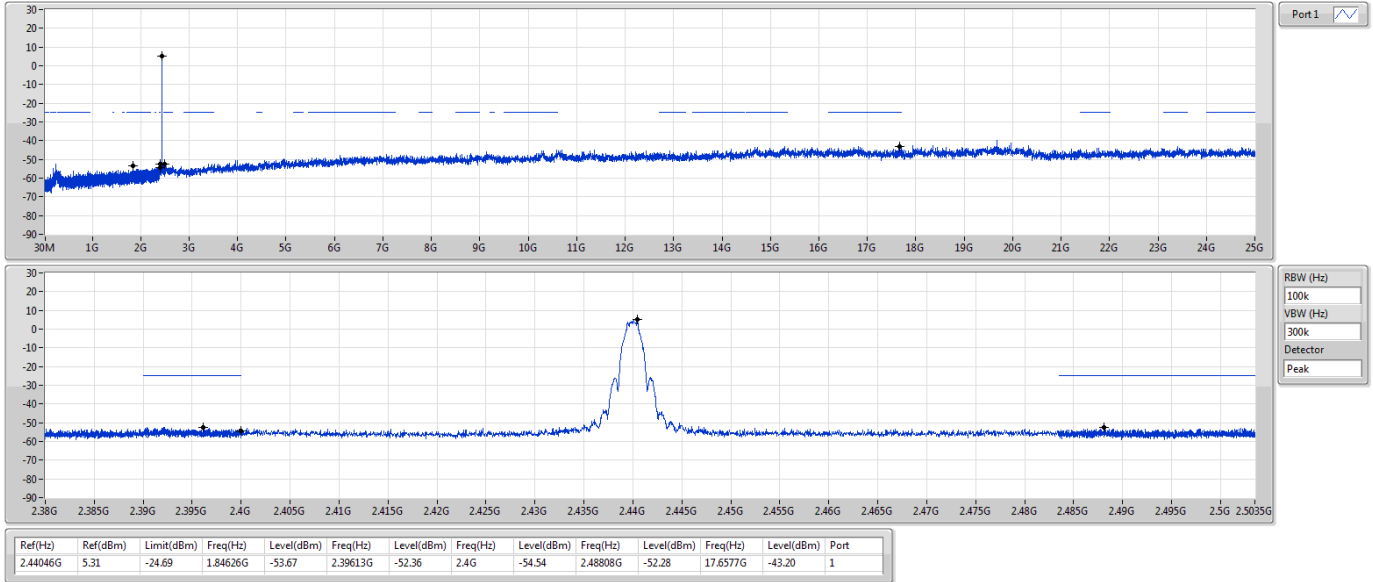
2402MHz



BT-LE(2Mbps)

CSEndB-DTS

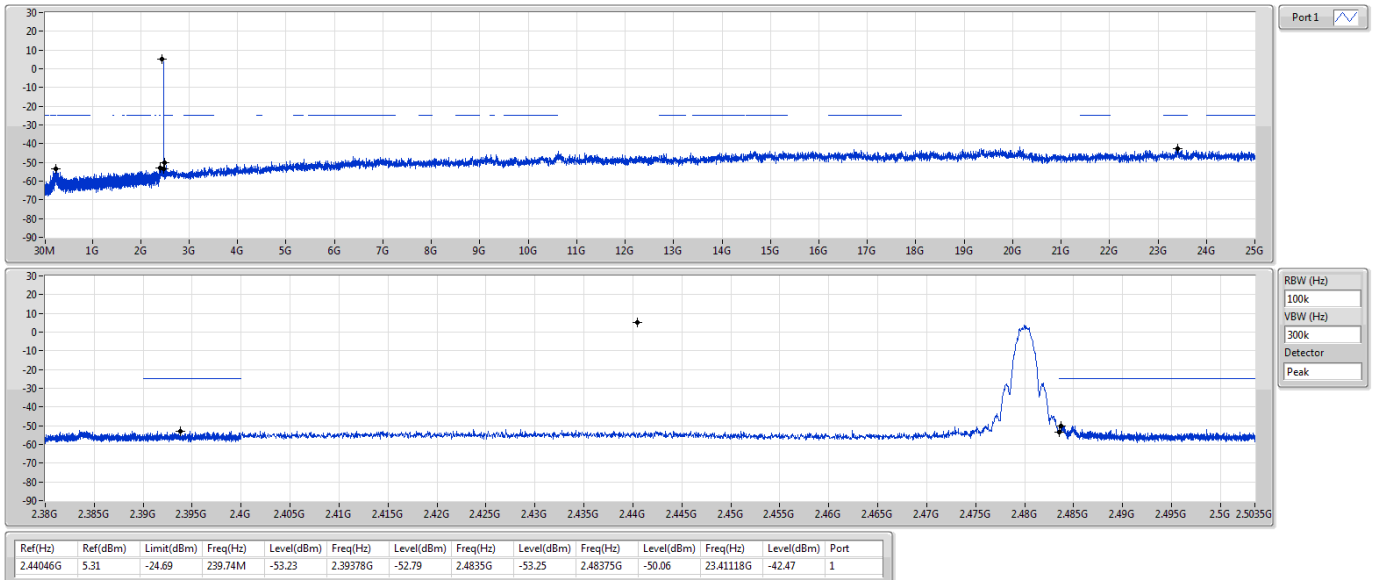
2440MHz



BT-LE(2Mbps)

CSEndB-DTS

2480MHz





Summary

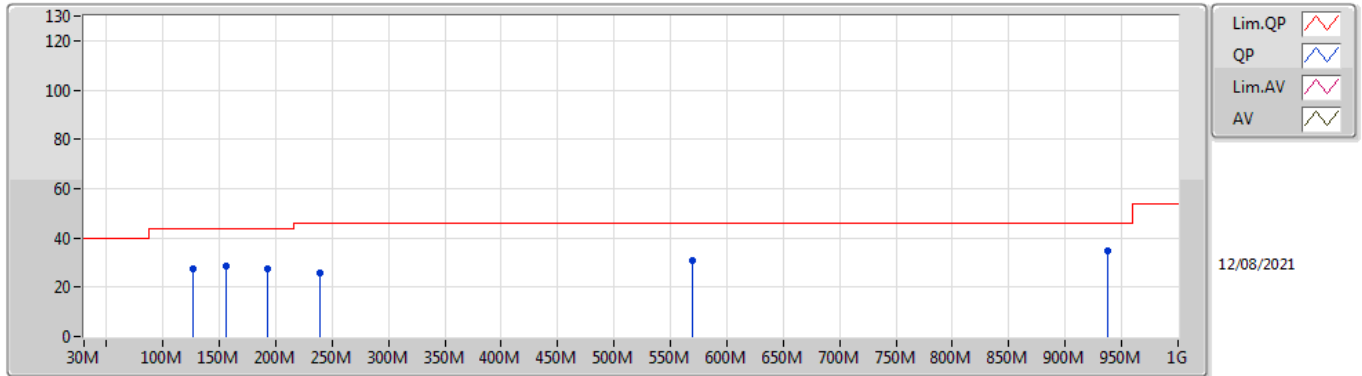
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	899.12M	39.03	46.00	-6.97	3	Horizontal	360	1.00	-

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	PK	127M	27.51	43.50	-15.99	3	Vertical	0	1.00	-
2440MHz	Pass	PK	156.1M	28.40	43.50	-15.10	3	Vertical	0	1.00	-
2440MHz	Pass	PK	192.96M	27.25	43.50	-16.25	3	Vertical	0	1.00	-
2440MHz	Pass	PK	239.52M	26.04	46.00	-19.96	3	Vertical	0	1.00	-
2440MHz	Pass	PK	569.32M	30.68	46.00	-15.32	3	Vertical	0	1.00	-
2440MHz	Pass	PK	937.92M	34.62	46.00	-11.38	3	Vertical	0	1.00	-
2440MHz	Pass	PK	152.22M	23.85	43.50	-19.65	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	222.06M	29.87	46.00	-16.13	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	274.44M	28.38	46.00	-17.62	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	423.82M	37.56	46.00	-8.44	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	899.12M	39.03	46.00	-6.97	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	934.04M	34.27	46.00	-11.73	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	132.82M	24.26	43.50	-19.24	3	Vertical	360	1.00	-
2440MHz	Pass	PK	173.56M	23.40	43.50	-20.10	3	Vertical	360	1.00	-
2440MHz	Pass	PK	278.32M	26.58	46.00	-19.42	3	Vertical	360	1.00	-
2440MHz	Pass	PK	299.66M	27.95	46.00	-18.05	3	Vertical	360	1.00	-
2440MHz	Pass	PK	414.12M	28.69	46.00	-17.31	3	Vertical	360	1.00	-
2440MHz	Pass	PK	879.72M	33.31	46.00	-12.69	3	Vertical	360	1.00	-
2440MHz	Pass	PK	127M	24.57	43.50	-18.93	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	169.68M	22.20	43.50	-21.30	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	280.26M	27.17	46.00	-18.83	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	352.04M	27.68	46.00	-18.32	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	571.26M	30.64	46.00	-15.36	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	935.98M	34.24	46.00	-11.76	3	Horizontal	0	1.00	-

BT-LE(2Mbps)

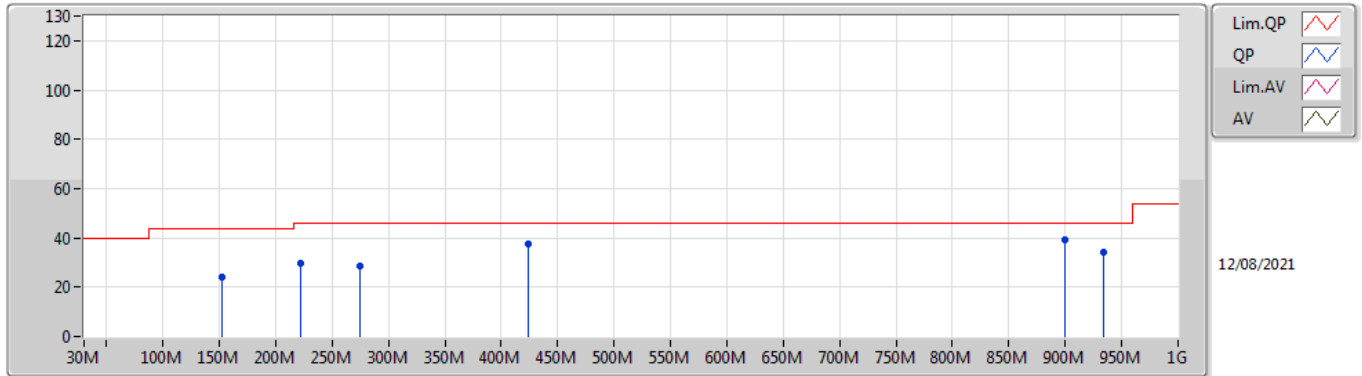
2440MHz_Adapter



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	127M	27.51	43.50	-15.99	-8.87	3	Vertical	0	1.00	-	36.38	17.29	1.57	27.73
PK	156.1M	28.40	43.50	-15.10	-10.42	3	Vertical	0	1.00	-	38.82	15.38	1.74	27.54
PK	192.96M	27.25	43.50	-16.25	-11.19	3	Vertical	0	1.00	-	38.44	14.26	1.92	27.37
PK	239.52M	26.04	46.00	-19.96	-8.55	3	Vertical	0	1.00	-	34.59	16.42	2.11	27.08
PK	569.32M	30.68	46.00	-15.32	-1.06	3	Vertical	0	1.00	-	31.74	24.04	3.26	28.36
PK	937.92M	34.62	46.00	-11.38	2.68	3	Vertical	0	1.00	-	31.94	25.85	4.16	27.33

BT-LE(2Mbps)

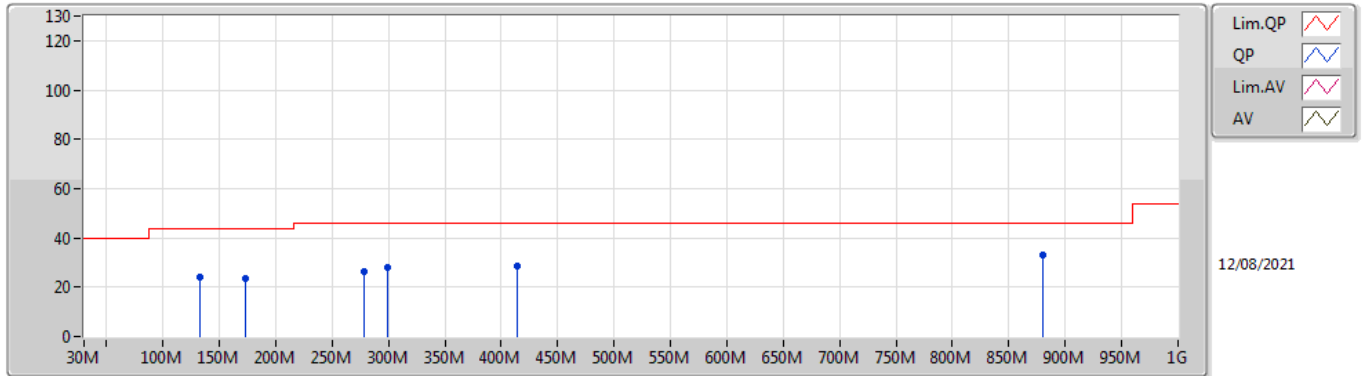
2440MHz_Adapter



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	152.22M	23.85	43.50	-19.65	-10.36	3	Horizontal	360	1.00	-	34.21	15.47	1.72	27.55
PK	222.06M	29.87	46.00	-16.13	-10.60	3	Horizontal	360	1.00	-	40.47	14.55	2.04	27.19
PK	274.44M	28.38	46.00	-17.62	-6.80	3	Horizontal	360	1.00	-	35.18	17.99	2.25	27.04
PK	423.82M	37.56	46.00	-8.44	-3.14	3	Horizontal	360	1.00	-	40.70	21.96	2.82	27.92
PK	899.12M	39.03	46.00	-6.97	2.24	3	Horizontal	360	1.00	-	36.79	25.63	4.11	27.50
PK	934.04M	34.27	46.00	-11.73	2.65	3	Horizontal	360	1.00	-	31.62	25.84	4.16	27.35

BT-LE(2Mbps)

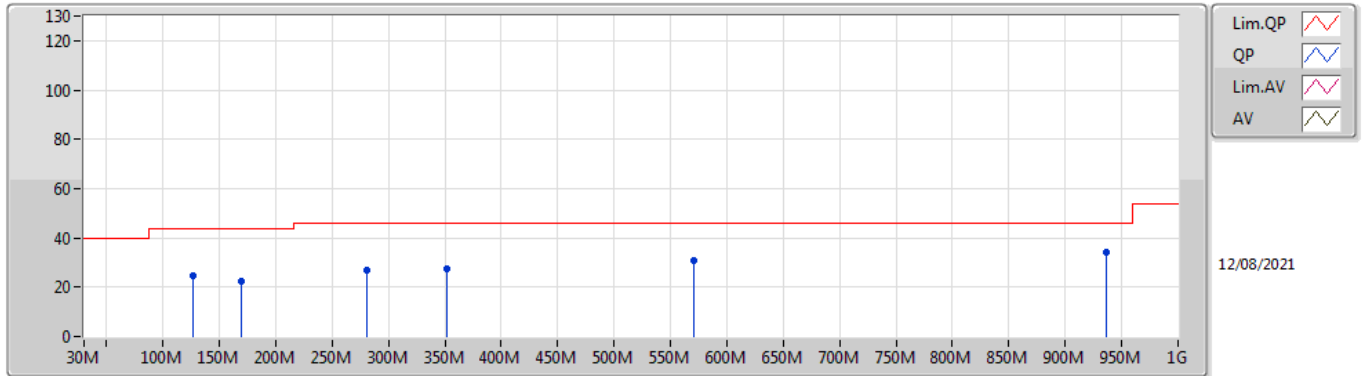
2440MHz_PoE



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	132.82M	24.26	43.50	-19.24	-9.17	3	Vertical	360	1.00	-	33.43	16.90	1.60	27.67
PK	173.56M	23.40	43.50	-20.10	-10.92	3	Vertical	360	1.00	-	34.32	14.73	1.83	27.48
PK	278.32M	26.58	46.00	-19.42	-6.72	3	Vertical	360	1.00	-	33.30	18.05	2.27	27.04
PK	299.66M	27.95	46.00	-18.05	-6.30	3	Vertical	360	1.00	-	34.25	18.40	2.36	27.06
PK	414.12M	28.69	46.00	-17.31	-3.28	3	Vertical	360	1.00	-	31.97	21.79	2.79	27.86
PK	879.72M	33.31	46.00	-12.69	2.10	3	Vertical	360	1.00	-	31.21	25.63	4.06	27.59

BT-LE(2Mbps)

2440MHz_PoE



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	127M	24.57	43.50	-18.93	-8.87	3	Horizontal	0	1.00	-	33.44	17.29	1.57	27.73
PK	169.68M	22.20	43.50	-21.30	-10.83	3	Horizontal	0	1.00	-	33.03	14.85	1.81	27.49
PK	280.26M	27.17	46.00	-18.83	-6.68	3	Horizontal	0	1.00	-	33.85	18.08	2.28	27.04
PK	352.04M	27.68	46.00	-18.32	-5.14	3	Horizontal	0	1.00	-	32.82	19.65	2.56	27.35
PK	571.26M	30.64	46.00	-15.36	-1.08	3	Horizontal	0	1.00	-	31.72	24.02	3.27	28.37
PK	935.98M	34.24	46.00	-11.76	2.67	3	Horizontal	0	1.00	-	31.57	25.85	4.16	27.34



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	2.4835G	52.15	54.00	-1.85	3	Vertical	1	2.23	-
BT-LE(2Mbps)	Pass	AV	2.4835G	53.15	54.00	-0.85	3	Vertical	0	1.50	-

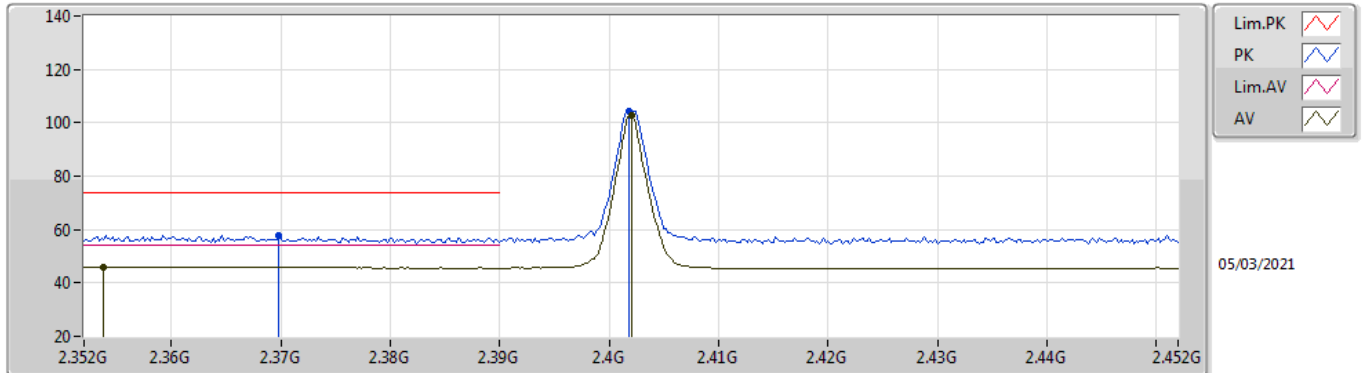
Result

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	2.3538G	45.99	54.00	-8.01	3	Vertical	7	1.50	-
2402MHz	Pass	AV	2.402G	102.72	Inf	-Inf	3	Vertical	7	1.50	-
2402MHz	Pass	PK	2.3698G	57.75	74.00	-16.25	3	Vertical	7	1.50	-
2402MHz	Pass	PK	2.4018G	104.35	Inf	-Inf	3	Vertical	7	1.50	-
2402MHz	Pass	AV	2.3532G	45.74	54.00	-8.26	3	Horizontal	313	1.06	-
2402MHz	Pass	AV	2.402G	90.64	Inf	-Inf	3	Horizontal	313	1.06	-
2402MHz	Pass	PK	2.3532G	58.23	74.00	-15.77	3	Horizontal	313	1.06	-
2402MHz	Pass	PK	2.4022G	92.40	Inf	-Inf	3	Horizontal	313	1.06	-
2402MHz	Pass	AV	4.80397G	41.81	54.00	-12.19	3	Vertical	301	1.00	-
2402MHz	Pass	PK	4.80352G	49.61	74.00	-24.39	3	Vertical	301	1.00	-
2402MHz	Pass	AV	4.80404G	42.33	54.00	-11.67	3	Horizontal	357	3.00	-
2402MHz	Pass	PK	4.8036G	49.72	74.00	-24.28	3	Horizontal	357	3.00	-
2440MHz	Pass	AV	2.3436G	46.39	54.00	-7.61	3	Vertical	7	1.50	-
2440MHz	Pass	AV	2.44G	103.00	Inf	-Inf	3	Vertical	7	1.50	-
2440MHz	Pass	AV	2.536G	48.16	54.00	-5.84	3	Vertical	7	1.50	-
2440MHz	Pass	PK	2.3808G	57.94	74.00	-16.06	3	Vertical	7	1.50	-
2440MHz	Pass	PK	2.4396G	104.63	Inf	-Inf	3	Vertical	7	1.50	-
2440MHz	Pass	PK	2.536G	58.28	74.00	-15.72	3	Vertical	7	1.50	-
2440MHz	Pass	AV	2.3432G	45.79	54.00	-8.21	3	Horizontal	304	1.03	-
2440MHz	Pass	AV	2.44G	90.96	Inf	-Inf	3	Horizontal	304	1.03	-
2440MHz	Pass	AV	2.5364G	45.51	54.00	-8.49	3	Horizontal	304	1.03	-
2440MHz	Pass	PK	2.3584G	57.15	74.00	-16.85	3	Horizontal	304	1.03	-
2440MHz	Pass	PK	2.4404G	92.52	Inf	-Inf	3	Horizontal	304	1.03	-
2440MHz	Pass	PK	2.4896G	56.90	74.00	-17.10	3	Horizontal	304	1.03	-
2440MHz	Pass	AV	4.87994G	40.68	54.00	-13.32	3	Vertical	313	1.23	-
2440MHz	Pass	PK	4.87936G	48.74	74.00	-25.26	3	Vertical	313	1.23	-
2440MHz	Pass	AV	4.88003G	40.47	54.00	-13.53	3	Horizontal	60	1.42	-
2440MHz	Pass	PK	4.88036G	48.79	74.00	-25.21	3	Horizontal	60	1.42	-
2480MHz	Pass	AV	2.48G	105.72	Inf	-Inf	3	Vertical	1	2.23	-
2480MHz	Pass	AV	2.4835G	52.15	54.00	-1.85	3	Vertical	1	2.23	-
2480MHz	Pass	PK	2.4802G	107.37	Inf	-Inf	3	Vertical	1	2.23	-
2480MHz	Pass	PK	2.4835G	61.34	74.00	-12.66	3	Vertical	1	2.23	-
2480MHz	Pass	AV	2.48G	94.19	Inf	-Inf	3	Horizontal	300	2.26	-
2480MHz	Pass	AV	2.5188G	46.38	54.00	-7.62	3	Horizontal	300	2.26	-
2480MHz	Pass	PK	2.4802G	95.87	Inf	-Inf	3	Horizontal	300	2.26	-
2480MHz	Pass	PK	2.4844G	58.24	74.00	-15.76	3	Horizontal	300	2.26	-
2480MHz	Pass	AV	4.9599G	39.65	54.00	-14.35	3	Vertical	352	1.52	-
2480MHz	Pass	PK	4.95955G	48.33	74.00	-25.67	3	Vertical	352	1.52	-
2480MHz	Pass	AV	4.95989G	41.14	54.00	-12.86	3	Horizontal	29	1.50	-
2480MHz	Pass	PK	4.9604G	49.36	74.00	-24.64	3	Horizontal	29	1.50	-
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.3544G	45.94	54.00	-8.06	3	Vertical	0	1.87	-
2402MHz	Pass	AV	2.402G	100.57	Inf	-Inf	3	Vertical	0	1.87	-
2402MHz	Pass	PK	2.358G	57.61	74.00	-16.39	3	Vertical	0	1.87	-
2402MHz	Pass	PK	2.4024G	104.12	Inf	-Inf	3	Vertical	0	1.87	-
2402MHz	Pass	AV	2.3538G	45.78	54.00	-8.22	3	Horizontal	358	1.99	-
2402MHz	Pass	AV	2.402G	90.32	Inf	-Inf	3	Horizontal	358	1.99	-
2402MHz	Pass	PK	2.3684G	57.46	74.00	-16.54	3	Horizontal	358	1.99	-
2402MHz	Pass	PK	2.4014G	93.92	Inf	-Inf	3	Horizontal	358	1.99	-
2402MHz	Pass	AV	4.80484G	37.25	54.00	-16.75	3	Vertical	311	1.34	-
2402MHz	Pass	PK	4.80477G	48.20	74.00	-25.80	3	Vertical	311	1.34	-
2402MHz	Pass	AV	4.80487G	38.59	54.00	-15.41	3	Horizontal	0	2.98	-
2402MHz	Pass	PK	4.80293G	49.27	74.00	-24.73	3	Horizontal	0	2.98	-
2440MHz	Pass	AV	2.3436G	46.21	54.00	-7.79	3	Vertical	7	1.54	-
2440MHz	Pass	AV	2.44G	103.32	Inf	-Inf	3	Vertical	7	1.54	-
2440MHz	Pass	AV	2.536G	48.10	54.00	-5.90	3	Vertical	7	1.54	-
2440MHz	Pass	PK	2.378G	58.22	74.00	-15.78	3	Vertical	7	1.54	-
2440MHz	Pass	PK	2.4396G	106.94	Inf	-Inf	3	Vertical	7	1.54	-
2440MHz	Pass	PK	2.5356G	58.42	74.00	-15.58	3	Vertical	7	1.54	-
2440MHz	Pass	AV	2.3404G	45.84	54.00	-8.16	3	Horizontal	318	1.00	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2440MHz	Pass	AV	2.44G	93.57	Inf	-Inf	3	Horizontal	318	1.00	-
2440MHz	Pass	AV	2.508G	45.51	54.00	-8.49	3	Horizontal	318	1.00	-
2440MHz	Pass	PK	2.39G	57.77	74.00	-16.23	3	Horizontal	318	1.00	-
2440MHz	Pass	PK	2.4404G	97.00	Inf	-Inf	3	Horizontal	318	1.00	-
2440MHz	Pass	PK	2.5068G	57.52	74.00	-16.48	3	Horizontal	318	1.00	-
2440MHz	Pass	AV	4.87894G	40.07	54.00	-13.93	3	Vertical	308	1.04	-
2440MHz	Pass	PK	4.88105G	50.63	74.00	-23.37	3	Vertical	308	1.04	-
2440MHz	Pass	AV	4.88088G	36.25	54.00	-17.75	3	Horizontal	2	3.00	-
2440MHz	Pass	PK	4.8808G	47.93	74.00	-26.07	3	Horizontal	2	3.00	-
2480MHz	Pass	AV	2.48G	102.06	Inf	-Inf	3	Vertical	0	1.50	-
2480MHz	Pass	AV	2.4835G	53.15	54.00	-0.85	3	Vertical	0	1.50	-
2480MHz	Pass	PK	2.4804G	105.59	Inf	-Inf	3	Vertical	0	1.50	-
2480MHz	Pass	PK	2.4835G	62.83	74.00	-11.17	3	Vertical	0	1.50	-
2480MHz	Pass	AV	2.48G	92.94	Inf	-Inf	3	Horizontal	315	1.07	-
2480MHz	Pass	AV	2.4835G	47.36	54.00	-6.64	3	Horizontal	315	1.07	-
2480MHz	Pass	PK	2.4794G	96.33	Inf	-Inf	3	Horizontal	315	1.07	-
2480MHz	Pass	PK	2.5206G	57.19	74.00	-16.81	3	Horizontal	315	1.07	-
2480MHz	Pass	AV	4.95895G	37.75	54.00	-16.25	3	Vertical	310	1.01	-
2480MHz	Pass	PK	4.95877G	48.68	74.00	-25.32	3	Vertical	310	1.01	-
2480MHz	Pass	AV	4.96085G	38.27	54.00	-15.73	3	Horizontal	356	2.65	-
2480MHz	Pass	PK	4.9608G	49.67	74.00	-24.33	3	Horizontal	356	2.65	-

BT-LE(1Mbps)

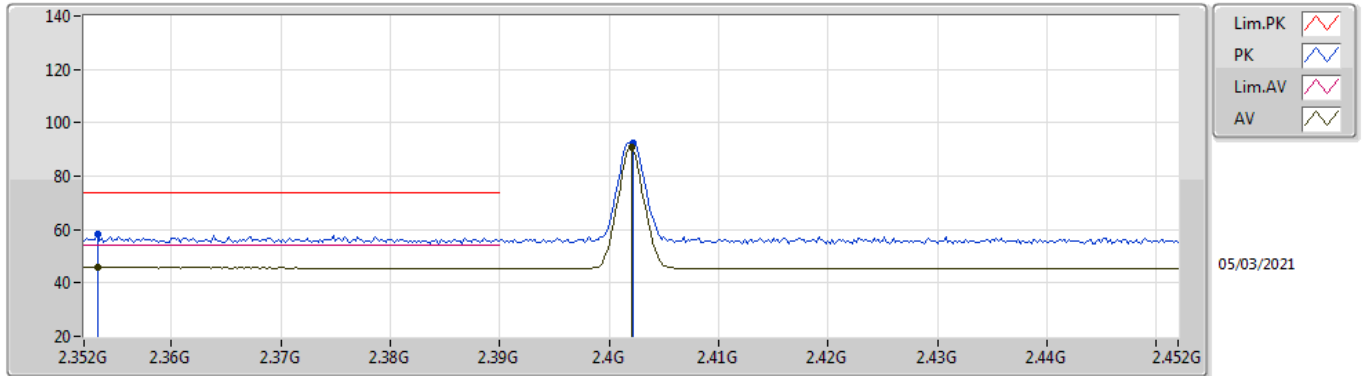
2402MHz_TX



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	2.3538G	45.99	54.00	-8.01	33.62	3	Vertical	7	1.50	-	12.37	27.69	5.93	-
AV	2.402G	102.72	Inf	-Inf	33.55	3	Vertical	7	1.50	-	69.17	27.59	5.96	-
PK	2.3698G	57.75	74.00	-16.25	33.60	3	Vertical	7	1.50	-	24.15	27.66	5.94	-
PK	2.4018G	104.35	Inf	-Inf	33.55	3	Vertical	7	1.50	-	70.80	27.59	5.96	-

BT-LE(1Mbps)

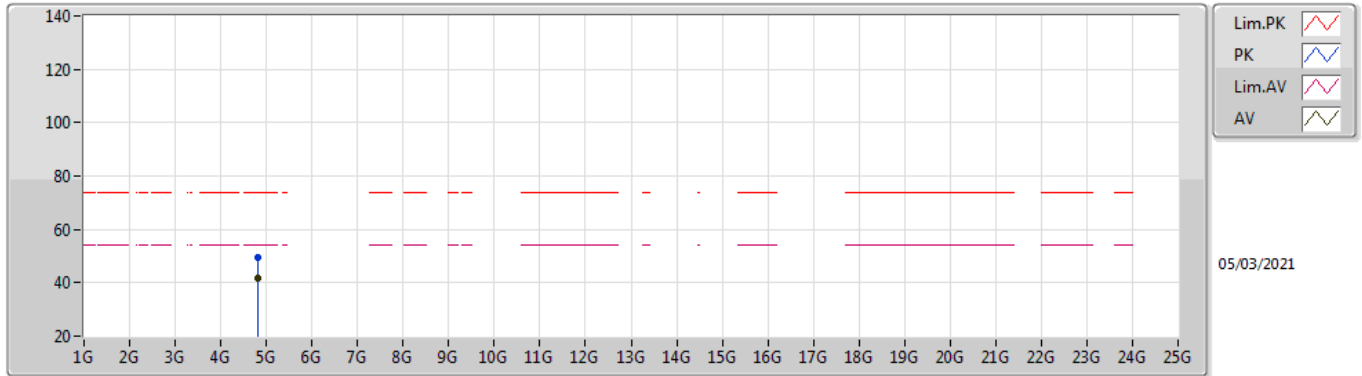
2402MHz_TX



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	2.3532G	45.74	54.00	-8.26	33.61	3	Horizontal	313	1.06	-	12.13	27.69	5.92	-
AV	2.402G	90.64	Inf	-Inf	33.55	3	Horizontal	313	1.06	-	57.09	27.59	5.96	-
PK	2.3532G	58.23	74.00	-15.77	33.61	3	Horizontal	313	1.06	-	24.62	27.69	5.92	-
PK	2.402G	92.40	Inf	-Inf	33.55	3	Horizontal	313	1.06	-	58.85	27.59	5.96	-

BT-LE(1Mbps)

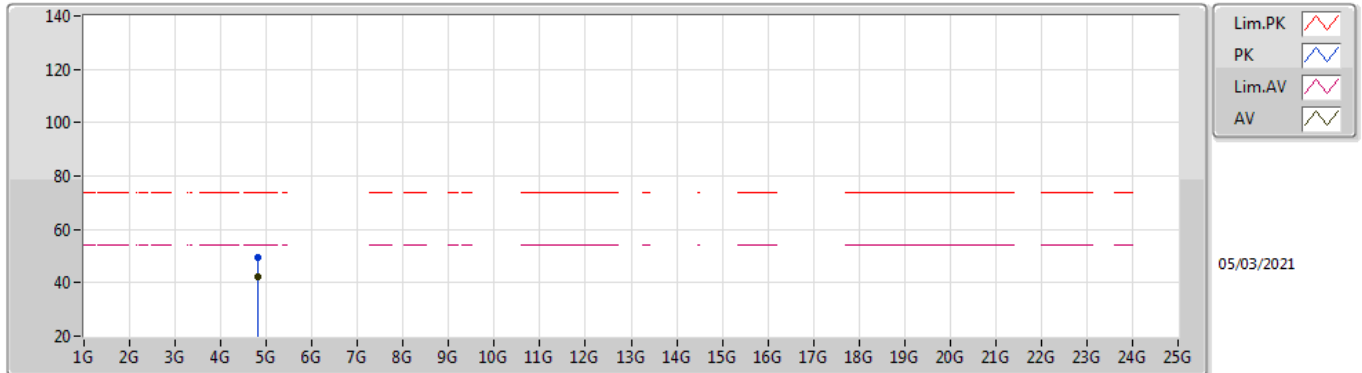
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80397G	41.81	54.00	-12.19	4.88	3	Vertical	301	1.00	-	36.93	30.92	8.25	34.29
PK	4.80352G	49.61	74.00	-24.39	4.87	3	Vertical	301	1.00	-	44.74	30.91	8.25	34.29

BT-LE(1Mbps)

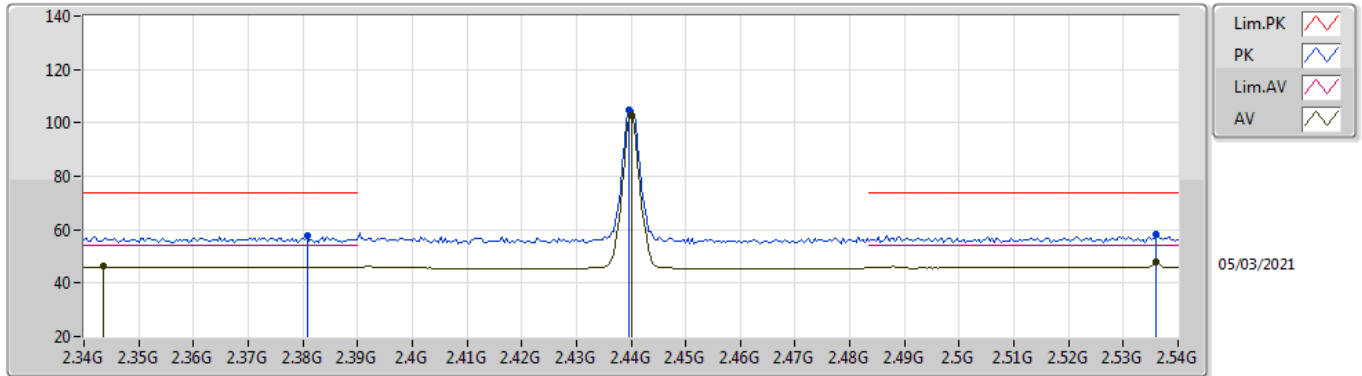
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80404G	42.33	54.00	-11.67	4.88	3	Horizontal	357	3.00	-	37.45	30.92	8.25	34.29
PK	4.8036G	49.72	74.00	-24.28	4.87	3	Horizontal	357	3.00	-	44.85	30.91	8.25	34.29

BT-LE(1Mbps)

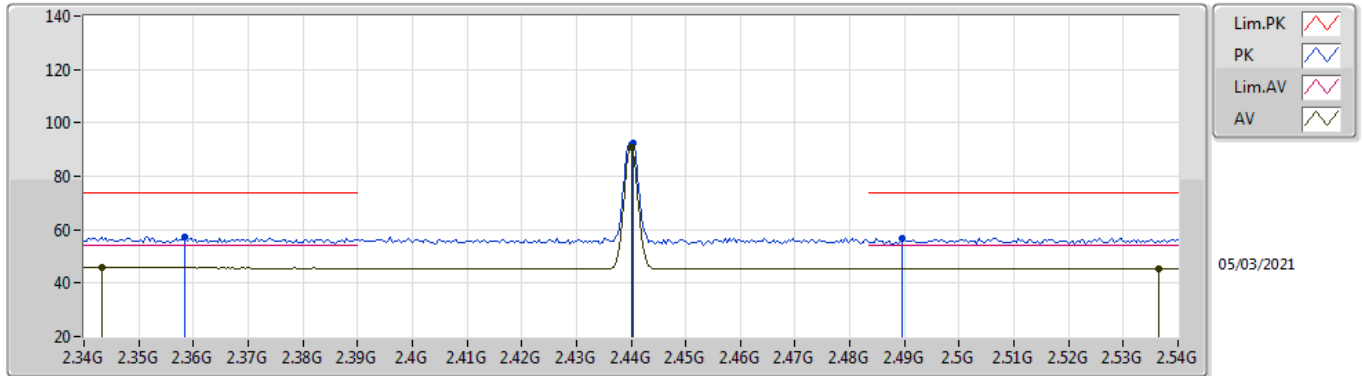
2440MHz_TX



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	2.3436G	46.39	54.00	-7.61	33.65	3	Vertical	7	1.50	-	12.74	27.73	5.92	-
AV	2.44G	103.00	Inf	-Inf	33.45	3	Vertical	7	1.50	-	69.55	27.44	6.01	-
AV	2.536G	48.16	54.00	-5.84	33.52	3	Vertical	7	1.50	-	14.64	27.40	6.12	-
PK	2.3808G	57.94	74.00	-16.06	33.59	3	Vertical	7	1.50	-	24.35	27.64	5.95	-
PK	2.4396G	104.63	Inf	-Inf	33.45	3	Vertical	7	1.50	-	71.18	27.44	6.01	-
PK	2.536G	58.28	74.00	-15.72	33.52	3	Vertical	7	1.50	-	24.76	27.40	6.12	-

BT-LE(1Mbps)

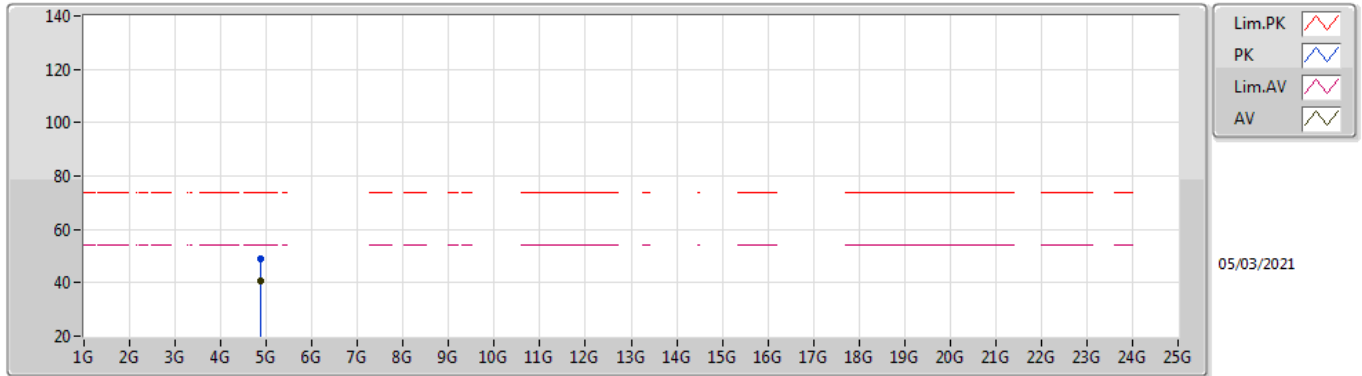
2440MHz_TX



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	2.3432G	45.79	54.00	-8.21	33.65	3	Horizontal	304	1.03	-	12.14	27.73	5.92	-
AV	2.44G	90.96	Inf	-Inf	33.45	3	Horizontal	304	1.03	-	57.51	27.44	6.01	-
AV	2.5364G	45.51	54.00	-8.49	33.52	3	Horizontal	304	1.03	-	11.99	27.40	6.12	-
PK	2.3584G	57.15	74.00	-16.85	33.61	3	Horizontal	304	1.03	-	23.54	27.68	5.93	-
PK	2.4404G	92.52	Inf	-Inf	33.45	3	Horizontal	304	1.03	-	59.07	27.44	6.01	-
PK	2.4896G	56.90	74.00	-17.10	33.47	3	Horizontal	304	1.03	-	23.43	27.40	6.07	-

BT-LE(1Mbps)

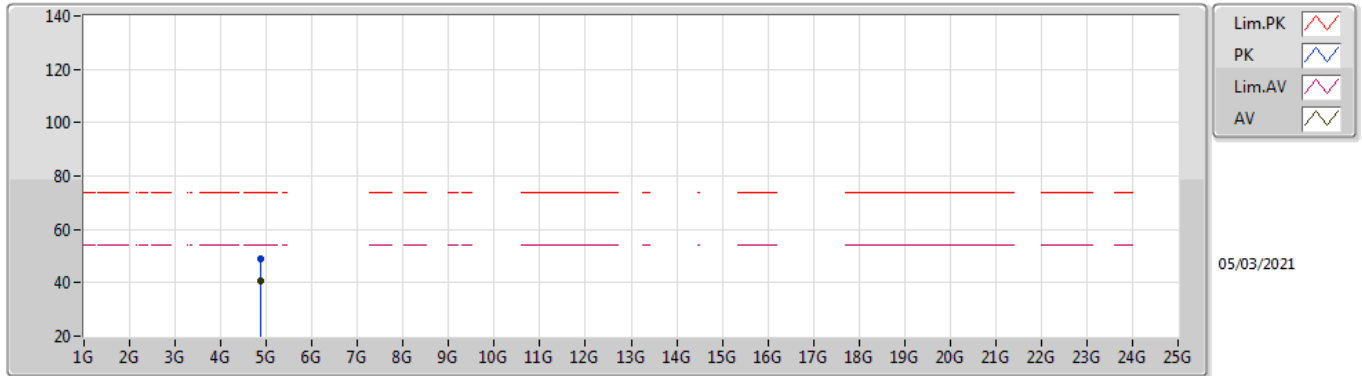
2440MHz_TX



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	4.87994G	40.68	54.00	-13.32	5.08	3	Vertical	313	1.23	-	35.60	31.04	8.30	34.26
PK	4.87936G	48.74	74.00	-25.26	5.08	3	Vertical	313	1.23	-	43.66	31.04	8.30	34.26

BT-LE(1Mbps)

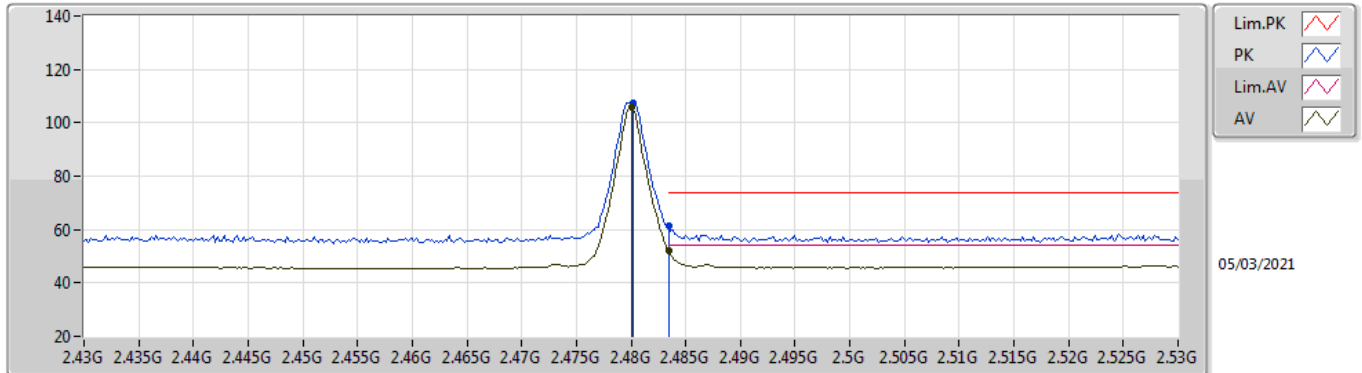
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88003G	40.47	54.00	-13.53	5.08	3	Horizontal	60	1.42	-	35.39	31.04	8.30	34.26
PK	4.88036G	48.79	74.00	-25.21	5.08	3	Horizontal	60	1.42	-	43.71	31.04	8.30	34.26

BT-LE(1Mbps)

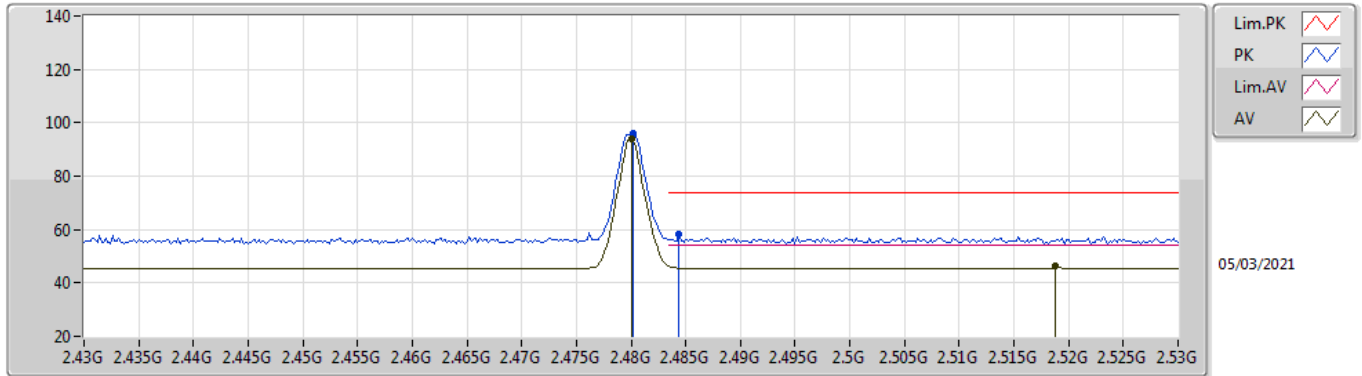
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	105.72	Inf	-Inf	33.46	3	Vertical	1	2.23	-	72.26	27.40	6.06	-
AV	2.4835G	52.15	54.00	-1.85	33.46	3	Vertical	1	2.23	-	18.69	27.40	6.06	-
PK	2.4802G	107.37	Inf	-Inf	33.46	3	Vertical	1	2.23	-	73.91	27.40	6.06	-
PK	2.4835G	61.34	74.00	-12.66	33.46	3	Vertical	1	2.23	-	27.88	27.40	6.06	-

BT-LE(1Mbps)

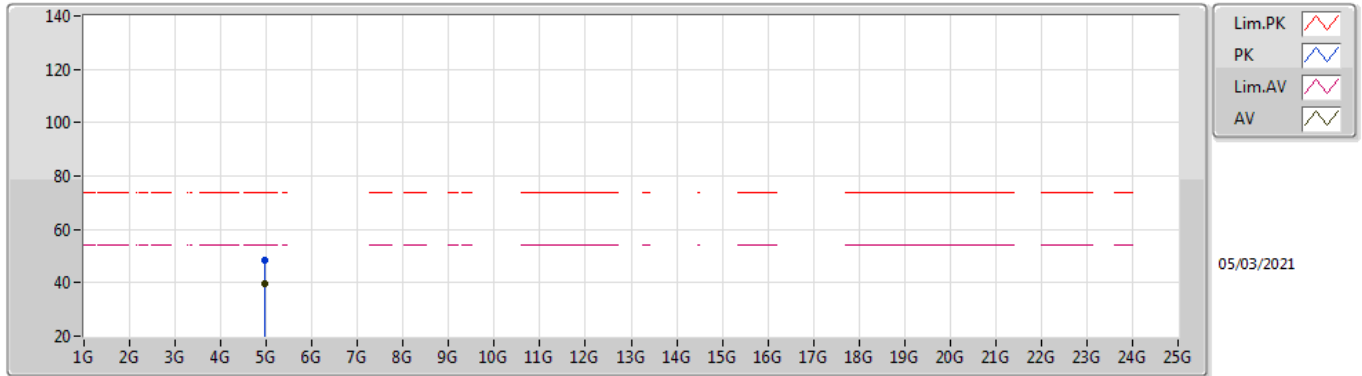
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	94.19	Inf	-Inf	33.46	3	Horizontal	300	2.26	-	60.73	27.40	6.06	-
AV	2.5188G	46.38	54.00	-7.62	33.50	3	Horizontal	300	2.26	-	12.88	27.40	6.10	-
PK	2.4802G	95.87	Inf	-Inf	33.46	3	Horizontal	300	2.26	-	62.41	27.40	6.06	-
PK	2.4844G	58.24	74.00	-15.76	33.46	3	Horizontal	300	2.26	-	24.78	27.40	6.06	-

BT-LE(1Mbps)

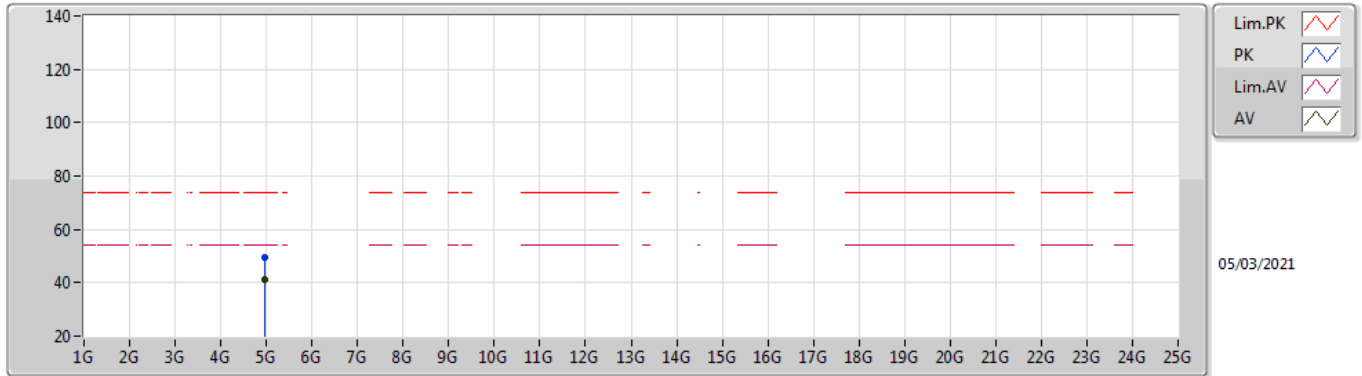
2480MHz_TX



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	4.9599G	39.65	54.00	-14.35	5.34	3	Vertical	352	1.52	-	34.31	31.22	8.35	34.23
PK	4.95955G	48.33	74.00	-25.67	5.34	3	Vertical	352	1.52	-	42.99	31.22	8.35	34.23

BT-LE(1Mbps)

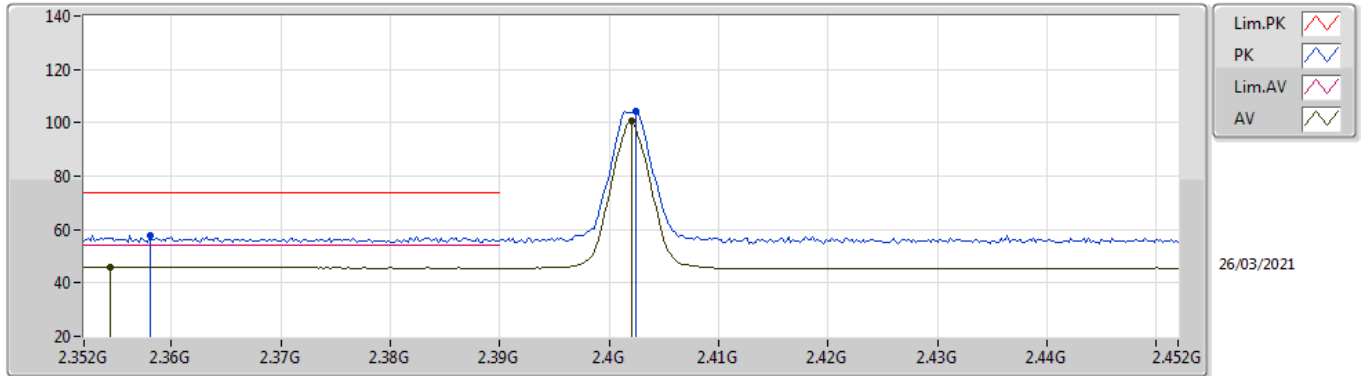
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.95989G	41.14	54.00	-12.86	5.34	3	Horizontal	29	1.50	-	35.80	31.22	8.35	34.23
PK	4.9604G	49.36	74.00	-24.64	5.34	3	Horizontal	29	1.50	-	44.02	31.22	8.35	34.23

BT-LE(2Mbps)

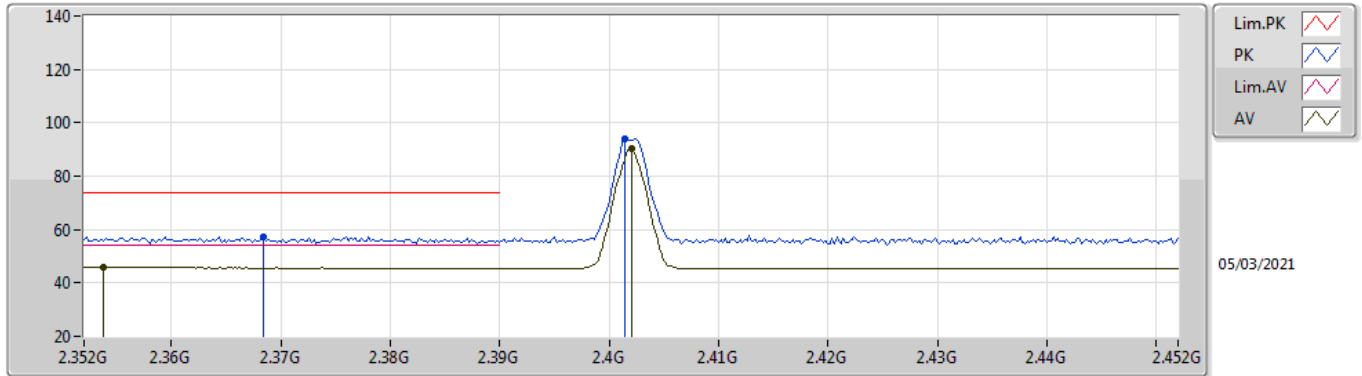
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3544G	45.94	54.00	-8.06	33.62	3	Vertical	0	1.87	-	12.32	27.69	5.93	-
AV	2.402G	100.57	Inf	-Inf	33.55	3	Vertical	0	1.87	-	67.02	27.59	5.96	-
PK	2.358G	57.61	74.00	-16.39	33.61	3	Vertical	0	1.87	-	24.00	27.68	5.93	-
PK	2.4024G	104.12	Inf	-Inf	33.55	3	Vertical	0	1.87	-	70.57	27.59	5.96	-

BT-LE(2Mbps)

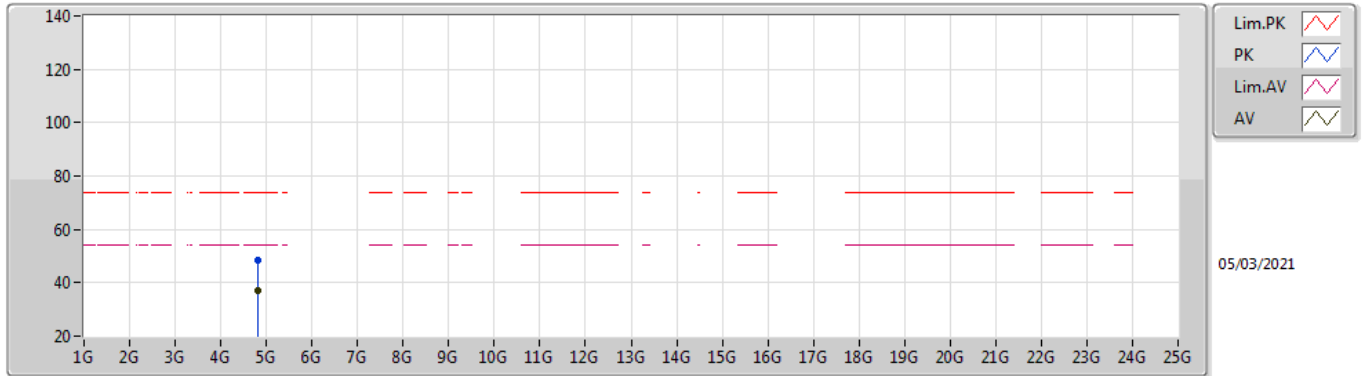
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.3538G	45.78	54.00	-8.22	33.62	3	Horizontal	358	1.99	-	12.16	27.69	5.93	-
AV	2.402G	90.32	Inf	-Inf	33.55	3	Horizontal	358	1.99	-	56.77	27.59	5.96	-
PK	2.3684G	57.46	74.00	-16.54	33.60	3	Horizontal	358	1.99	-	23.86	27.66	5.94	-
PK	2.4014G	93.92	Inf	-Inf	33.55	3	Horizontal	358	1.99	-	60.37	27.59	5.96	-

BT-LE(2Mbps)

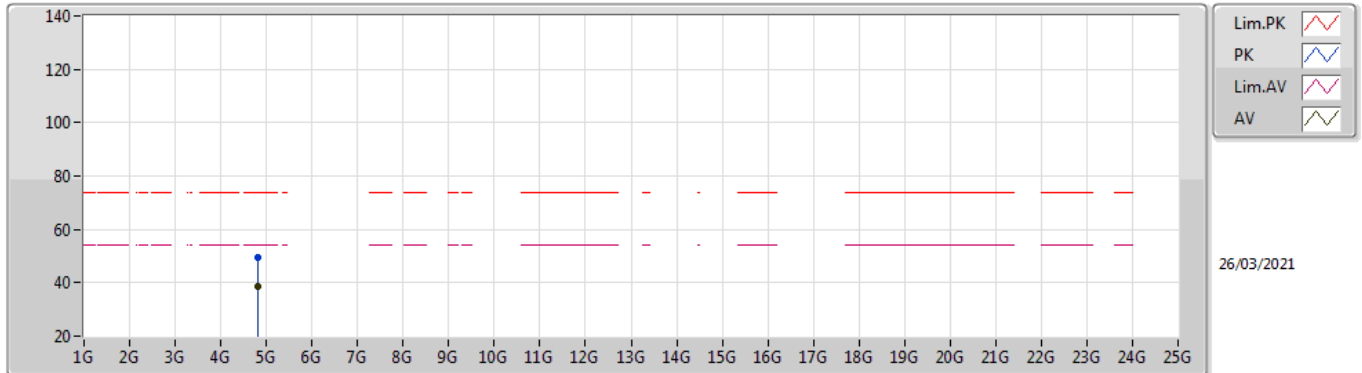
2402MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80484G	37.25	54.00	-16.75	4.88	3	Vertical	311	1.34	-	32.37	30.92	8.25	34.29
PK	4.80477G	48.20	74.00	-25.80	4.88	3	Vertical	311	1.34	-	43.32	30.92	8.25	34.29

BT-LE(2Mbps)

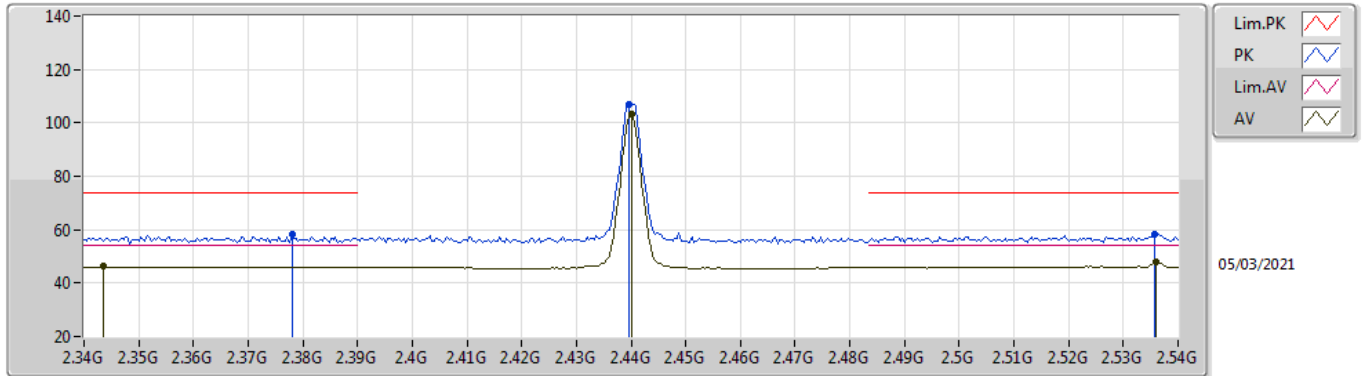
2402MHz_TX



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	4.80487G	38.59	54.00	-15.41	4.88	3	Horizontal	0	2.98	-	33.71	30.92	8.25	34.29
PK	4.80293G	49.27	74.00	-24.73	4.87	3	Horizontal	0	2.98	-	44.40	30.91	8.25	34.29

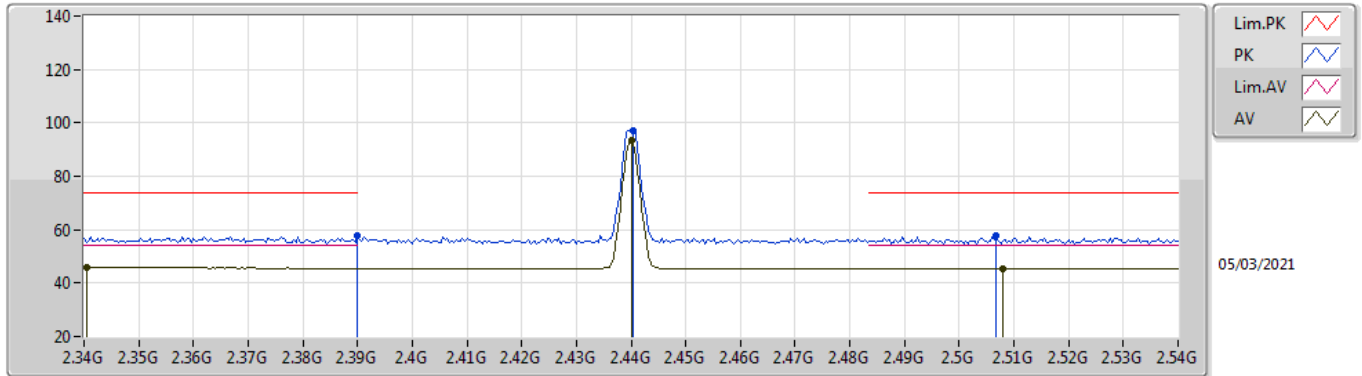
BT-LE(2Mbps)

2440MHz_TX



BT-LE(2Mbps)

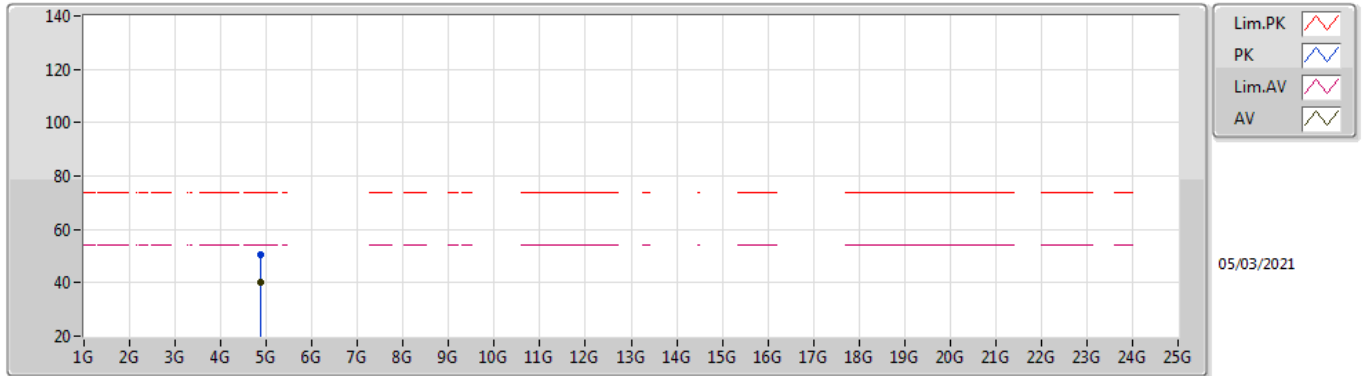
2440MHz_TX



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	2.3404G	45.84	54.00	-8.16	33.66	3	Horizontal	318	1.00	-	12.18	27.74	5.92	-
AV	2.44G	93.57	Inf	-Inf	33.45	3	Horizontal	318	1.00	-	60.12	27.44	6.01	-
AV	2.508G	45.51	54.00	-8.49	33.49	3	Horizontal	318	1.00	-	12.02	27.40	6.09	-
PK	2.39G	57.77	74.00	-16.23	33.57	3	Horizontal	318	1.00	-	24.20	27.62	5.95	-
PK	2.4404G	97.00	Inf	-Inf	33.45	3	Horizontal	318	1.00	-	63.55	27.44	6.01	-
PK	2.5068G	57.52	74.00	-16.48	33.49	3	Horizontal	318	1.00	-	24.03	27.40	6.09	-

BT-LE(2Mbps)

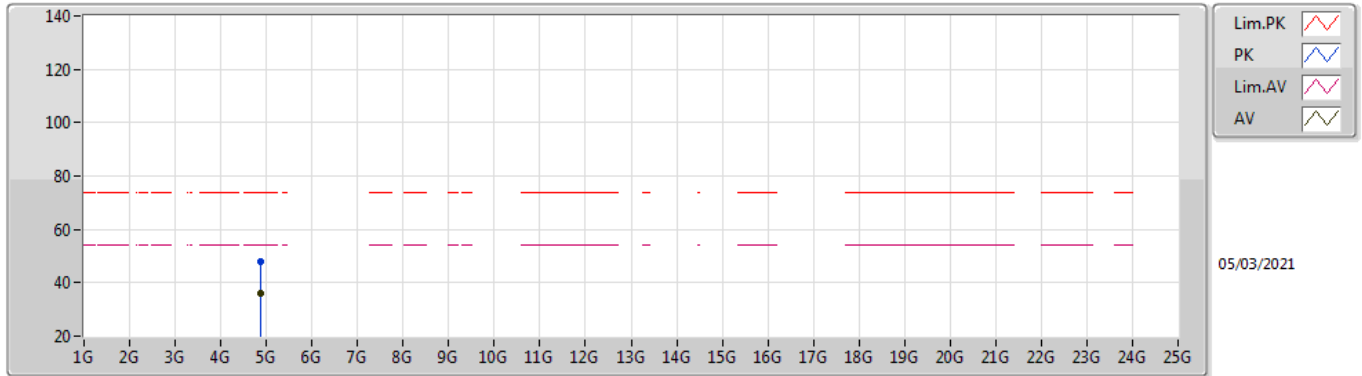
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.87894G	40.07	54.00	-13.93	5.08	3	Vertical	308	1.04	-	34.99	31.04	8.30	34.26
PK	4.88105G	50.63	74.00	-23.37	5.08	3	Vertical	308	1.04	-	45.55	31.04	8.30	34.26

BT-LE(2Mbps)

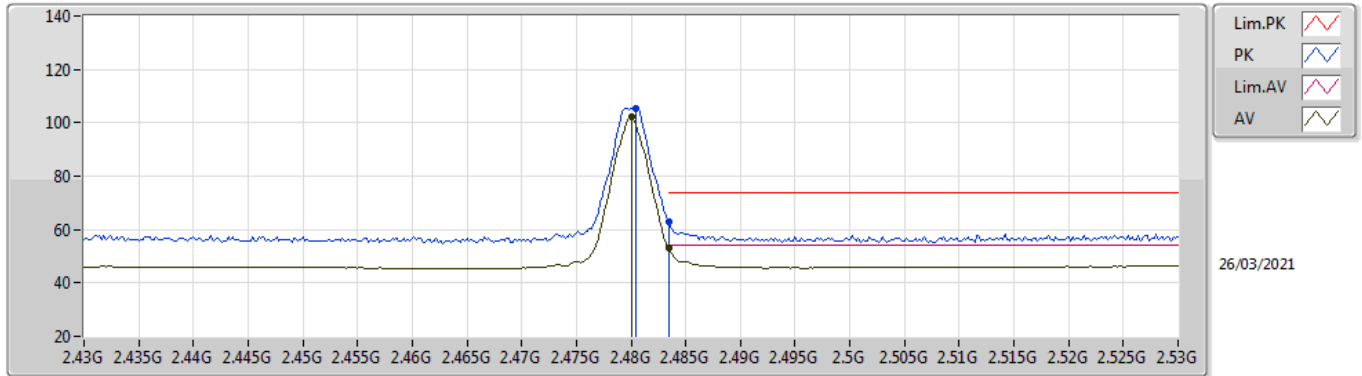
2440MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.88088G	36.25	54.00	-17.75	5.08	3	Horizontal	2	3.00	-	31.17	31.04	8.30	34.26
PK	4.8808G	47.93	74.00	-26.07	5.08	3	Horizontal	2	3.00	-	42.85	31.04	8.30	34.26

BT-LE(2Mbps)

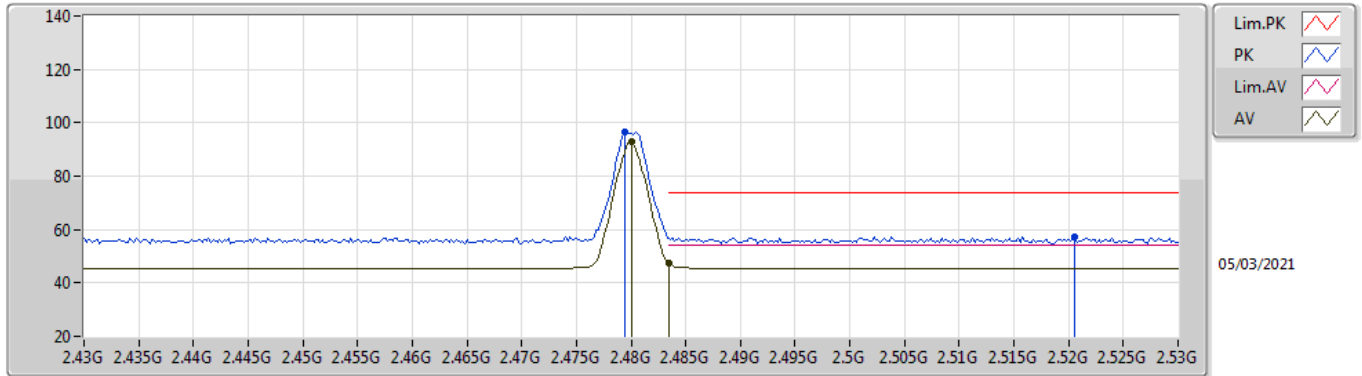
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	102.06	Inf	-Inf	33.46	3	Vertical	0	1.50	-	68.60	27.40	6.06	-
AV	2.4835G	53.15	54.00	-0.85	33.46	3	Vertical	0	1.50	-	19.69	27.40	6.06	-
PK	2.4804G	105.59	Inf	-Inf	33.46	3	Vertical	0	1.50	-	72.13	27.40	6.06	-
PK	2.4835G	62.83	74.00	-11.17	33.46	3	Vertical	0	1.50	-	29.37	27.40	6.06	-

BT-LE(2Mbps)

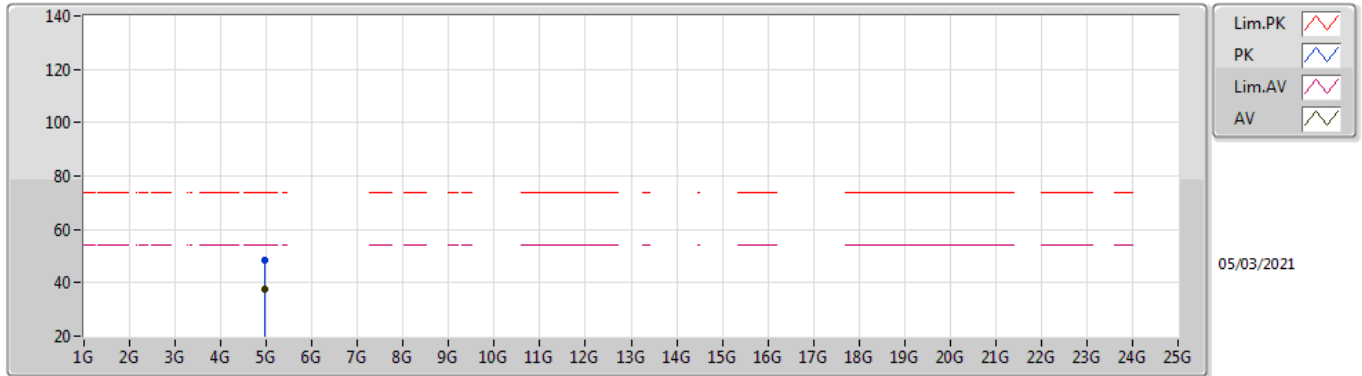
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	2.48G	92.94	Inf	-Inf	33.46	3	Horizontal	315	1.07	-	59.48	27.40	6.06	-
AV	2.4835G	47.36	54.00	-6.64	33.46	3	Horizontal	315	1.07	-	13.90	27.40	6.06	-
PK	2.4794G	96.33	Inf	-Inf	33.46	3	Horizontal	315	1.07	-	62.87	27.40	6.06	-
PK	2.5206G	57.19	74.00	-16.81	33.50	3	Horizontal	315	1.07	-	23.69	27.40	6.10	-

BT-LE(2Mbps)

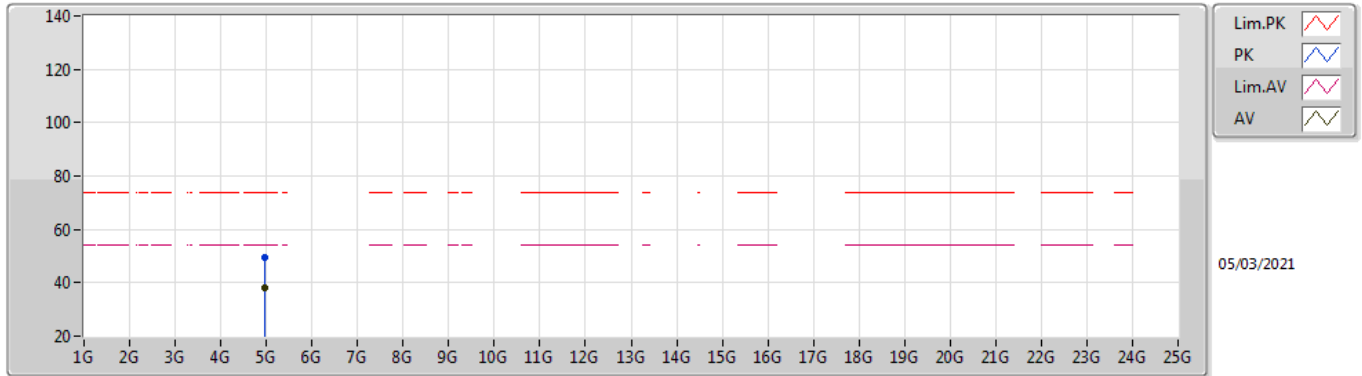
2480MHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.95895G	37.75	54.00	-16.25	5.34	3	Vertical	310	1.01	-	32.41	31.22	8.35	34.23
PK	4.95877G	48.68	74.00	-25.32	5.34	3	Vertical	310	1.01	-	43.34	31.22	8.35	34.23

BT-LE(2Mbps)

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	4.96085G	38.27	54.00	-15.73	5.34	3	Horizontal	356	2.65	-	32.93	31.22	8.35	34.23
PK	4.9608G	49.67	74.00	-24.33	5.34	3	Horizontal	356	2.65	-	44.33	31.22	8.35	34.23



Summary

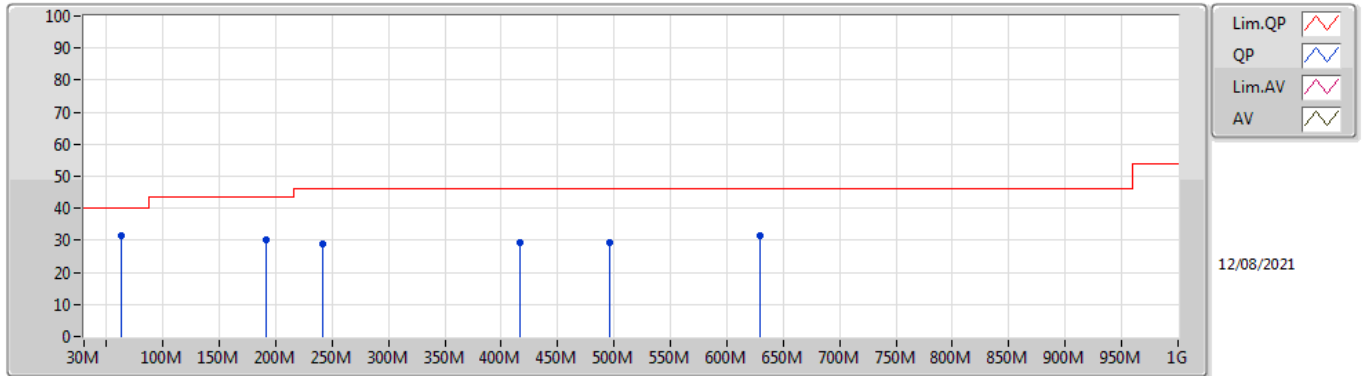
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	PK	55.22M	34.49	40.00	-5.51	3	Vertical	0	1.00	-

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	62.98M	31.29	40.00	-8.71	3	Vertical	360	1.00	-
2440MHz	Pass	PK	191.02M	30.07	43.50	-13.43	3	Vertical	360	1.00	-
2440MHz	Pass	PK	241.46M	28.73	46.00	-17.27	3	Vertical	360	1.00	-
2440MHz	Pass	PK	416.06M	29.21	46.00	-16.79	3	Vertical	360	1.00	-
2440MHz	Pass	PK	495.6M	29.51	46.00	-16.49	3	Vertical	360	1.00	-
2440MHz	Pass	PK	629.46M	31.45	46.00	-14.55	3	Vertical	360	1.00	-
2440MHz	Pass	PK	47.46M	34.36	40.00	-5.64	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	196.84M	27.71	43.50	-15.79	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	237.58M	27.14	46.00	-18.86	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	412.18M	28.47	46.00	-17.53	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	468.44M	29.71	46.00	-16.29	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	561.56M	31.11	46.00	-14.89	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	55.22M	34.49	40.00	-5.51	3	Vertical	0	1.00	-
2440MHz	Pass	PK	125.06M	26.91	43.50	-16.59	3	Vertical	0	1.00	-
2440MHz	Pass	PK	284.14M	26.07	46.00	-19.93	3	Vertical	0	1.00	-
2440MHz	Pass	PK	301.6M	29.11	46.00	-16.89	3	Vertical	0	1.00	-
2440MHz	Pass	PK	359.8M	29.68	46.00	-16.32	3	Vertical	0	1.00	-
2440MHz	Pass	PK	546.04M	31.14	46.00	-14.86	3	Vertical	0	1.00	-
2440MHz	Pass	PK	31.94M	28.12	40.00	-11.88	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	62.98M	27.35	40.00	-12.65	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	321M	28.89	46.00	-17.11	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	381.14M	28.51	46.00	-17.49	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	509.18M	30.12	46.00	-15.88	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	602.3M	30.53	46.00	-15.47	3	Horizontal	360	1.00	-

BT-LE(2Mbps)RX

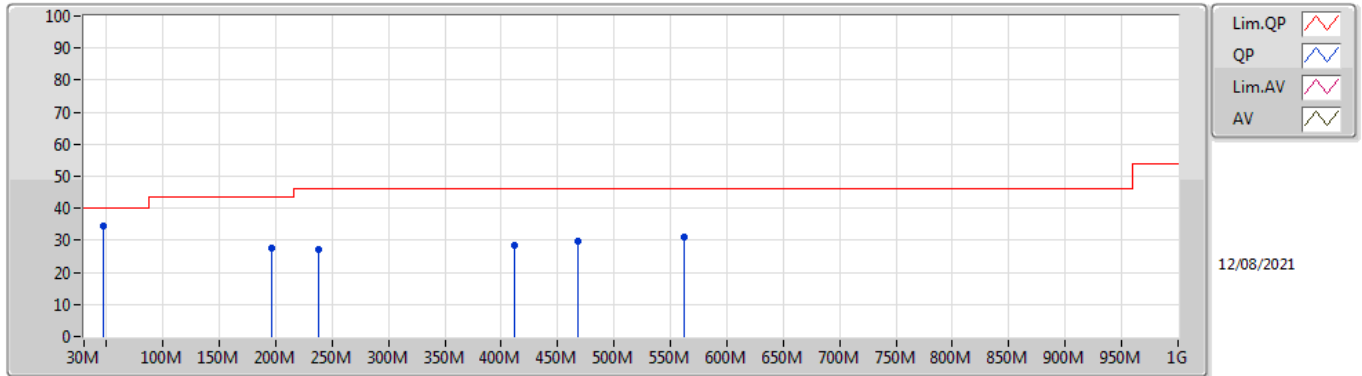
2440MHz_Adapter



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	62.98M	31.29	40.00	-8.71	-15.02	3	Vertical	360	1.00	-	46.31	11.61	1.16	27.79
PK	191.02M	30.07	43.50	-13.43	-11.18	3	Vertical	360	1.00	-	41.25	14.28	1.92	27.38
PK	241.46M	28.73	46.00	-17.27	-8.32	3	Vertical	360	1.00	-	37.05	16.63	2.12	27.07
PK	416.06M	29.21	46.00	-16.79	-3.24	3	Vertical	360	1.00	-	32.45	21.84	2.79	27.87
PK	495.6M	29.51	46.00	-16.49	-2.49	3	Vertical	360	1.00	-	32.00	22.78	3.06	28.33
PK	629.46M	31.45	46.00	-14.55	-0.50	3	Vertical	360	1.00	-	31.95	24.37	3.42	28.29

BT-LE(2Mbps)RX

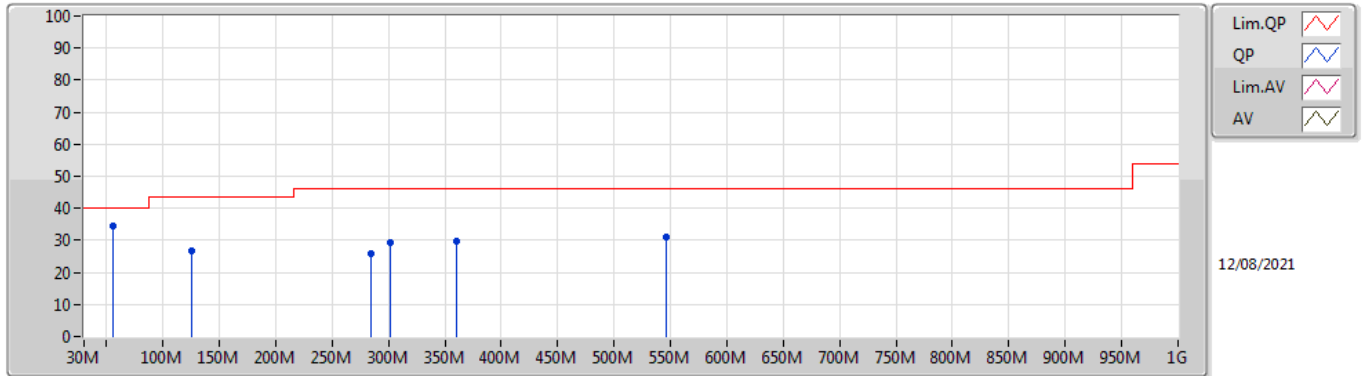
2440MHz_Adapter



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	34.36	40.00	-5.64	-12.55	3	Horizontal	0	1.00	-	46.91	14.05	1.04	27.64
PK	196.84M	27.71	43.50	-15.79	-11.02	3	Horizontal	0	1.00	-	38.73	14.38	1.94	27.34
PK	237.58M	27.14	46.00	-18.86	-8.80	3	Horizontal	0	1.00	-	35.94	16.19	2.10	27.09
PK	412.18M	28.47	46.00	-17.53	-3.36	3	Horizontal	0	1.00	-	31.83	21.71	2.78	27.85
PK	468.44M	29.71	46.00	-16.29	-2.64	3	Horizontal	0	1.00	-	32.35	22.56	2.97	28.17
PK	561.56M	31.11	46.00	-14.89	-1.00	3	Horizontal	0	1.00	-	32.11	24.12	3.23	28.35

BT-LE(2Mbps)RX

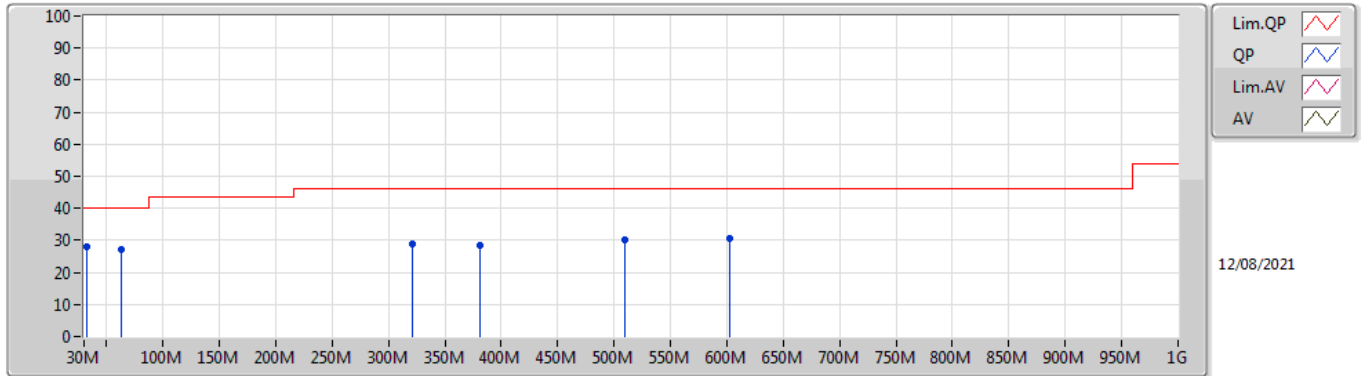
2440MHz_PoE



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	55.22M	34.49	40.00	-5.51	-14.52	3	Vertical	0	1.00	-	49.01	12.11	1.10	27.73
PK	125.06M	26.91	43.50	-16.59	-8.87	3	Vertical	0	1.00	-	35.78	17.31	1.57	27.75
PK	284.14M	26.07	46.00	-19.93	-6.66	3	Vertical	0	1.00	-	32.73	18.10	2.29	27.05
PK	301.6M	29.11	46.00	-16.89	-6.23	3	Vertical	0	1.00	-	35.34	18.47	2.37	27.07
PK	359.8M	29.68	46.00	-16.32	-4.96	3	Vertical	0	1.00	-	34.64	19.87	2.59	27.42
PK	546.04M	31.14	46.00	-14.86	-1.41	3	Vertical	0	1.00	-	32.55	23.73	3.18	28.32

BT-LE(2Mbps)RX

2440MHz_PoE



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	31.94M	28.12	40.00	-11.88	-4.14	3	Horizontal	360	1.00	-	32.26	22.03	0.88	27.05
PK	62.98M	27.35	40.00	-12.65	-15.02	3	Horizontal	360	1.00	-	42.37	11.61	1.16	27.79
PK	321M	28.89	46.00	-17.11	-5.92	3	Horizontal	360	1.00	-	34.81	18.81	2.44	27.17
PK	381.14M	28.51	46.00	-17.49	-4.72	3	Horizontal	360	1.00	-	33.23	20.22	2.67	27.61
PK	509.18M	30.12	46.00	-15.88	-2.42	3	Horizontal	360	1.00	-	32.54	22.82	3.10	28.34
PK	602.3M	30.53	46.00	-15.47	-1.06	3	Horizontal	360	1.00	-	31.59	23.99	3.37	28.42



Summary

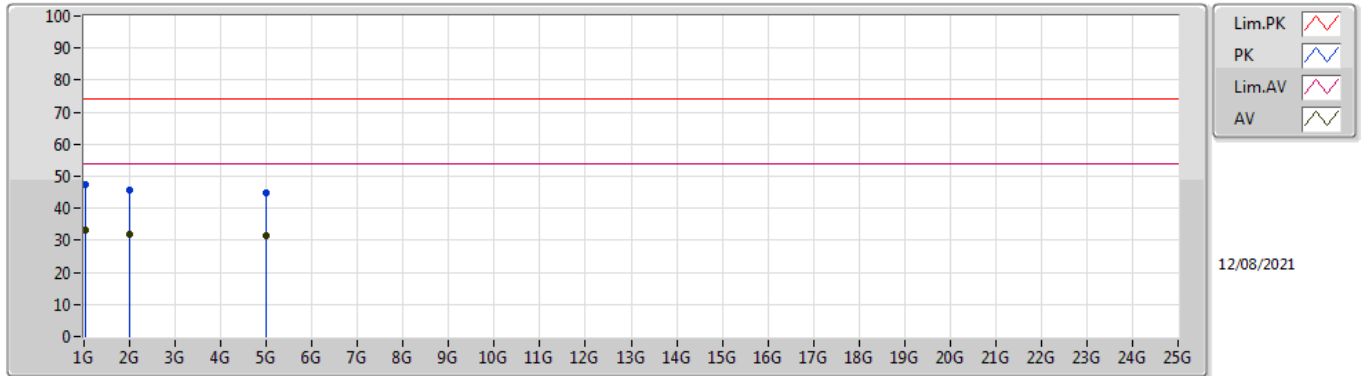
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	AV	1.04344G	33.27	54.00	-20.73	3	Vertical	0	1.00	-

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	AV	1.04344G	33.27	54.00	-20.73	3	Vertical	0	1.00	-
2440MHz	Pass	AV	2.00504G	31.98	54.00	-22.02	3	Vertical	0	1.00	-
2440MHz	Pass	AV	4.98862G	31.54	54.00	-22.46	3	Vertical	0	1.00	-
2440MHz	Pass	PK	1.04344G	47.46	74.00	-26.54	3	Vertical	0	1.00	-
2440MHz	Pass	PK	2.00504G	45.84	74.00	-28.16	3	Vertical	0	1.00	-
2440MHz	Pass	PK	4.98862G	44.86	74.00	-29.14	3	Vertical	0	1.00	-
2440MHz	Pass	AV	1.475G	24.78	54.00	-29.22	3	Horizontal	360	1.00	-
2440MHz	Pass	AV	2.00462G	26.64	54.00	-27.36	3	Horizontal	360	1.00	-
2440MHz	Pass	AV	4.97912G	29.92	54.00	-24.08	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	1.475G	38.14	74.00	-35.86	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	2.00462G	40.01	74.00	-33.99	3	Horizontal	360	1.00	-
2440MHz	Pass	PK	4.97912G	44.10	74.00	-29.90	3	Horizontal	360	1.00	-

BT-LE(2Mbps)RX

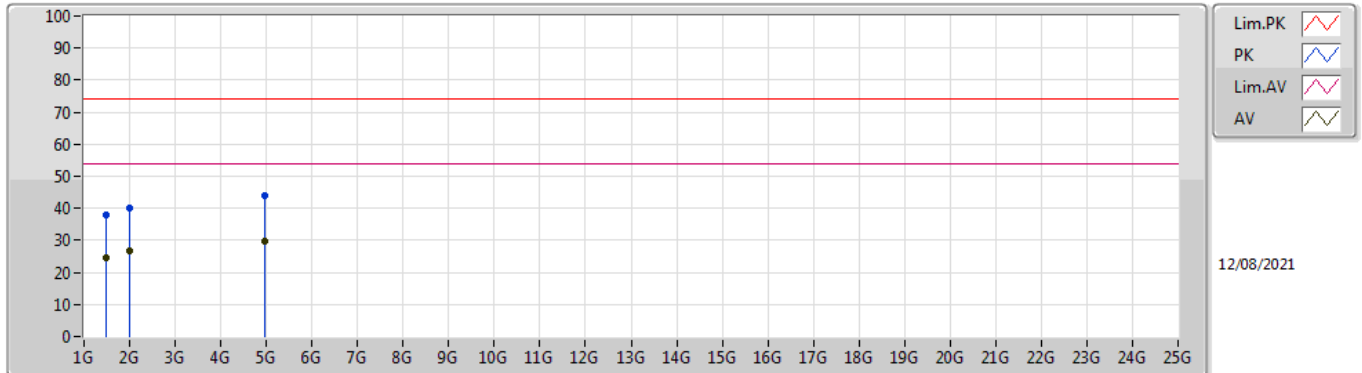
2440MHz_RX



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	1.04344G	33.27	54.00	-20.73	-5.95	3	Vertical	0	1.00	-	39.22	24.39	4.69	35.03
AV	2.00504G	31.98	54.00	-22.02	-1.10	3	Vertical	0	1.00	-	33.08	26.21	6.91	34.22
AV	4.98862G	31.54	54.00	-22.46	6.30	3	Vertical	0	1.00	-	25.24	31.48	9.04	34.22
PK	1.04344G	47.46	74.00	-26.54	-5.95	3	Vertical	0	1.00	-	53.41	24.39	4.69	35.03
PK	2.00504G	45.84	74.00	-28.16	-1.08	3	Vertical	0	1.00	-	46.92	26.22	6.92	34.22
PK	4.98862G	44.86	74.00	-29.14	6.30	3	Vertical	0	1.00	-	38.56	31.48	9.04	34.22

BT-LE(2Mbps)RX

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	1.475G	24.78	54.00	-29.22	-2.76	3	Horizontal	360	1.00	-	27.54	25.75	5.85	34.36
AV	2.00462G	26.64	54.00	-27.36	-1.04	3	Horizontal	360	1.00	-	27.68	26.25	6.93	34.22
AV	4.97912G	29.92	54.00	-24.08	6.30	3	Horizontal	360	1.00	-	23.62	31.48	9.04	34.22
PK	1.475G	38.14	74.00	-35.86	-2.77	3	Horizontal	360	1.00	-	40.91	25.72	5.86	34.35
PK	2.00462G	40.01	74.00	-33.99	-1.08	3	Horizontal	360	1.00	-	41.09	26.22	6.92	34.22
PK	4.97912G	44.10	74.00	-29.90	6.26	3	Horizontal	360	1.00	-	37.84	31.46	9.03	34.23

1. Photographs of Conducted Emissions Test Configuration -TX

Adapter mode

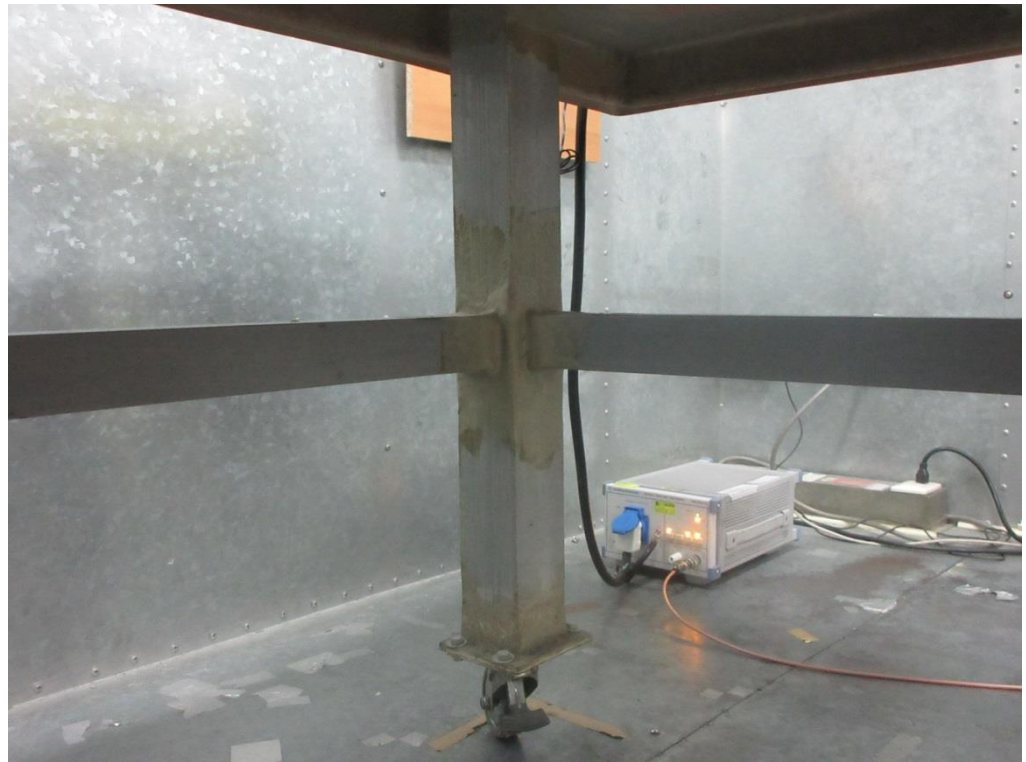
Front view



Side view



Under table view



PoE mode

Front view



Side view



Under table view



2. Photographs of Conducted Emissions Test Configuration -RX

Adapter mode

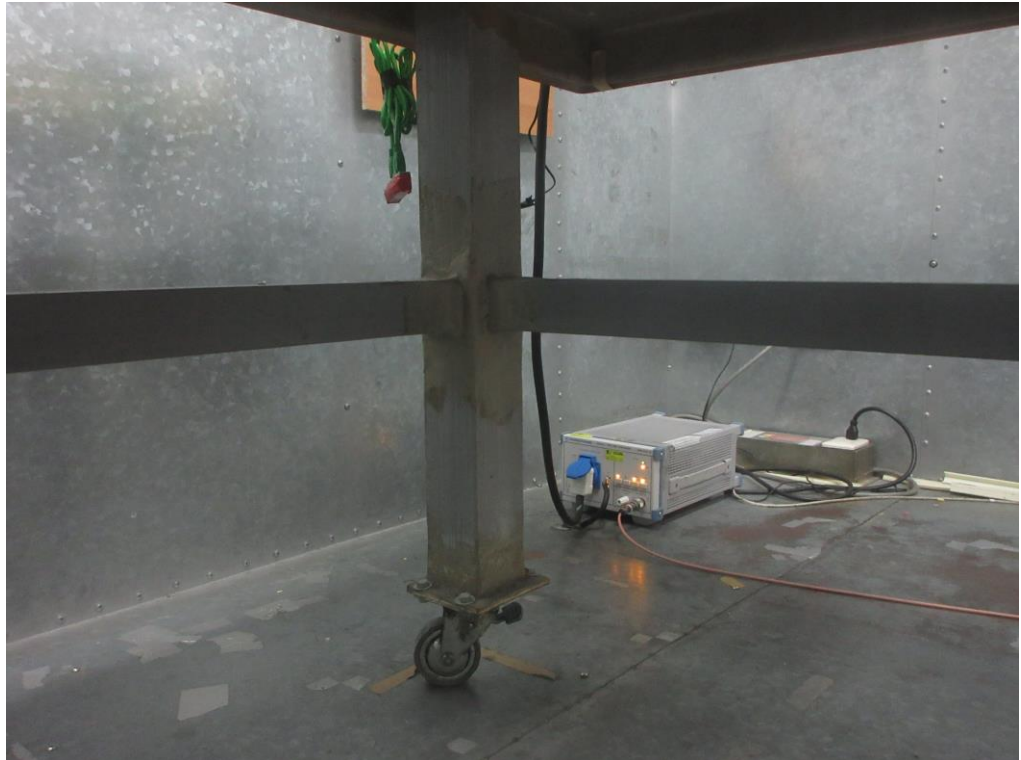
Front view



Side view



Under table view

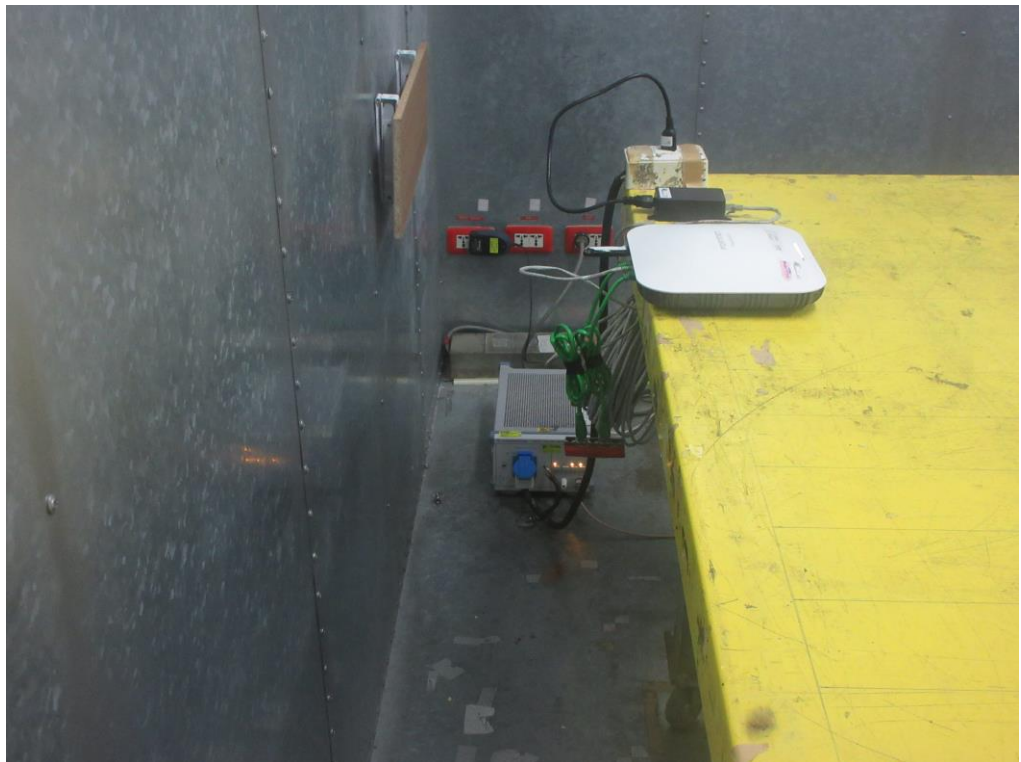


PoE mode

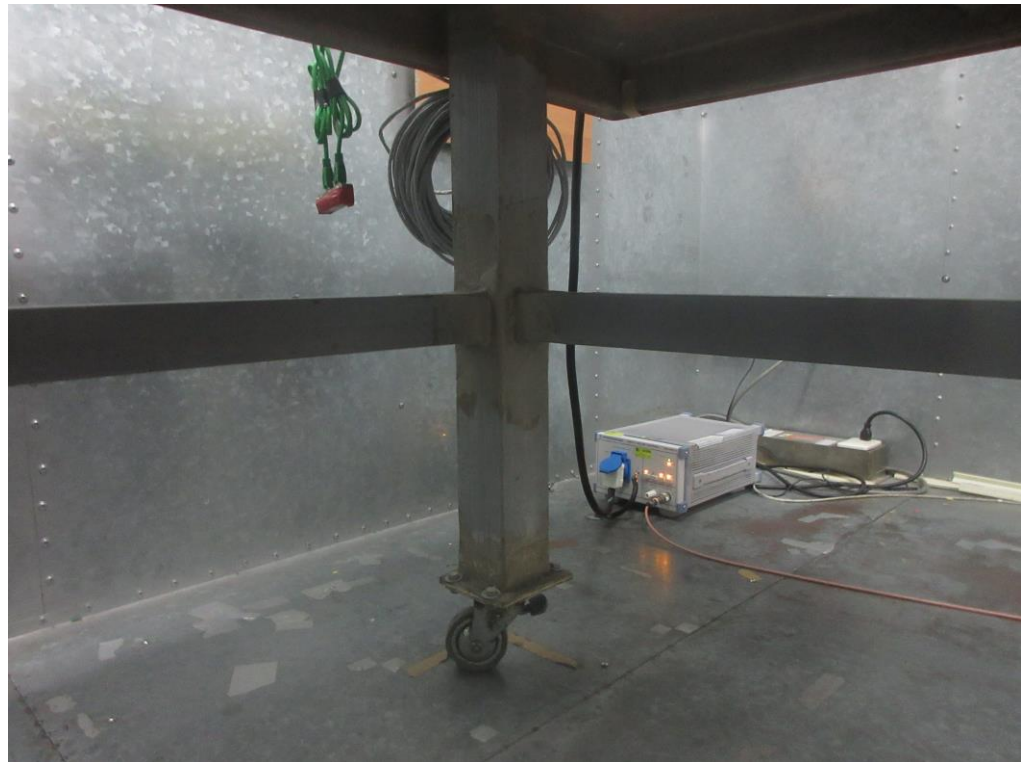
Front view



Side view



Under table view

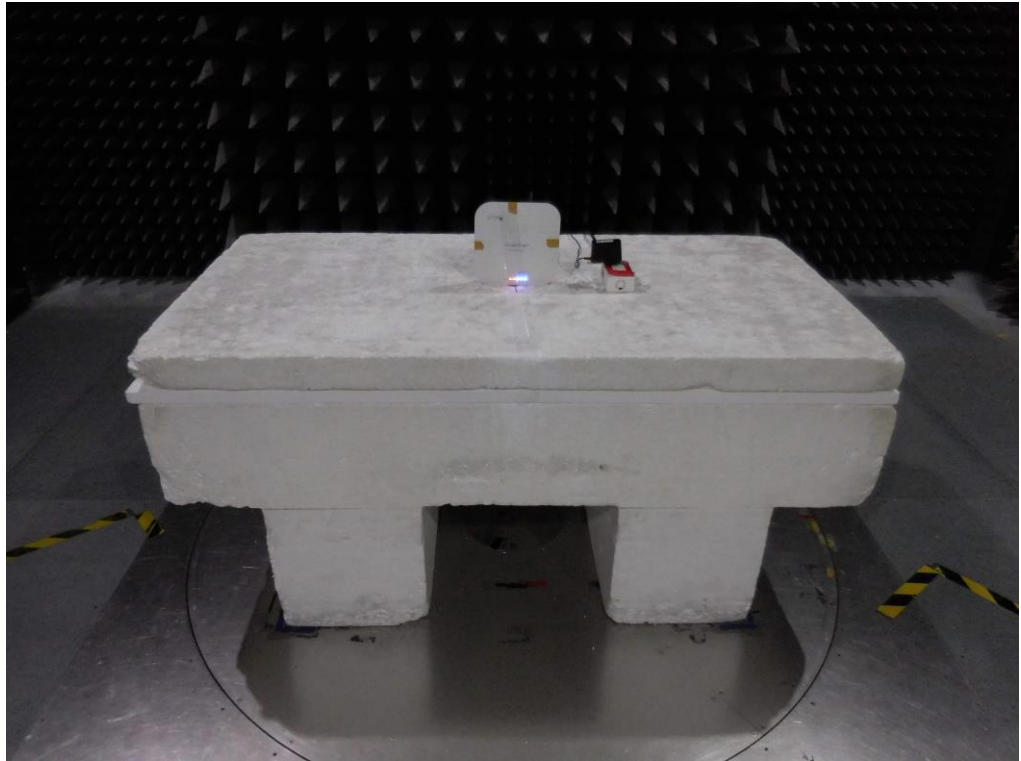


3. Photographs of Radiated Emissions Test Configuration-TX

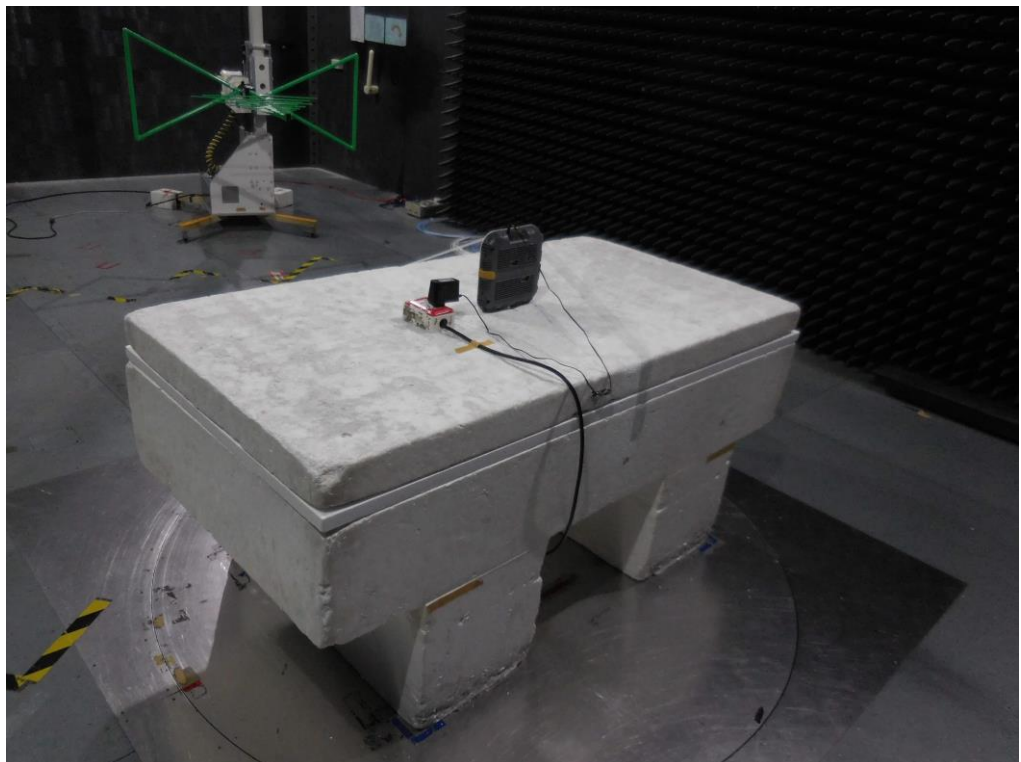
For radiated emissions 30MHz~1GHz

Adapter mode

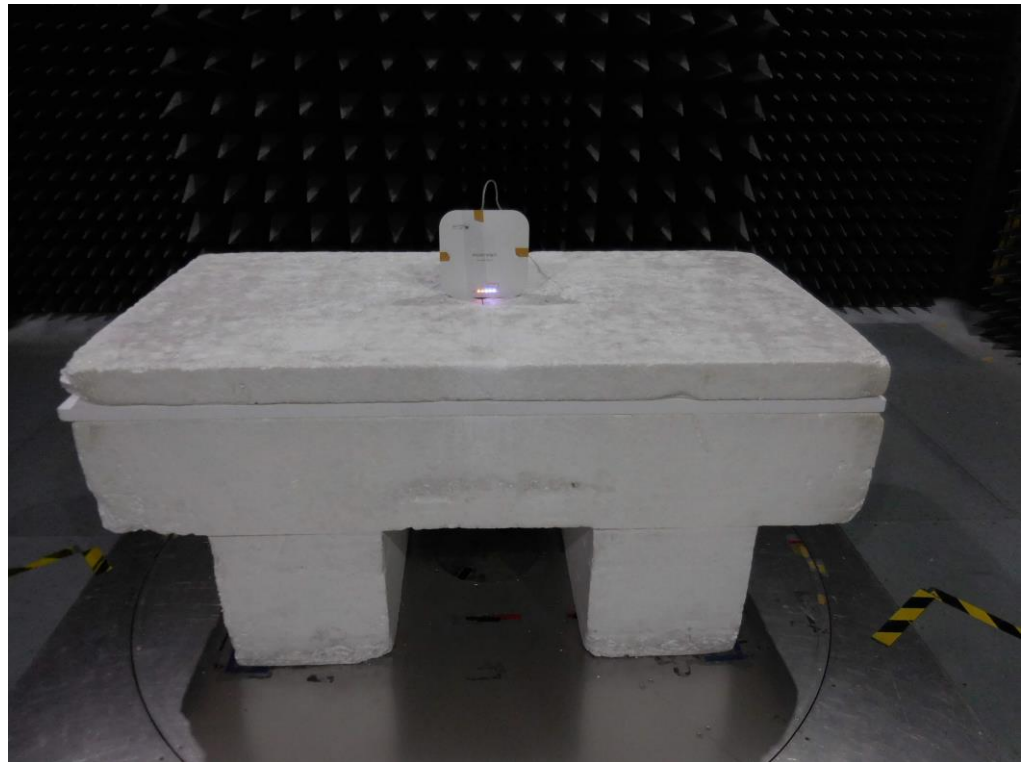
Front view



Rear view

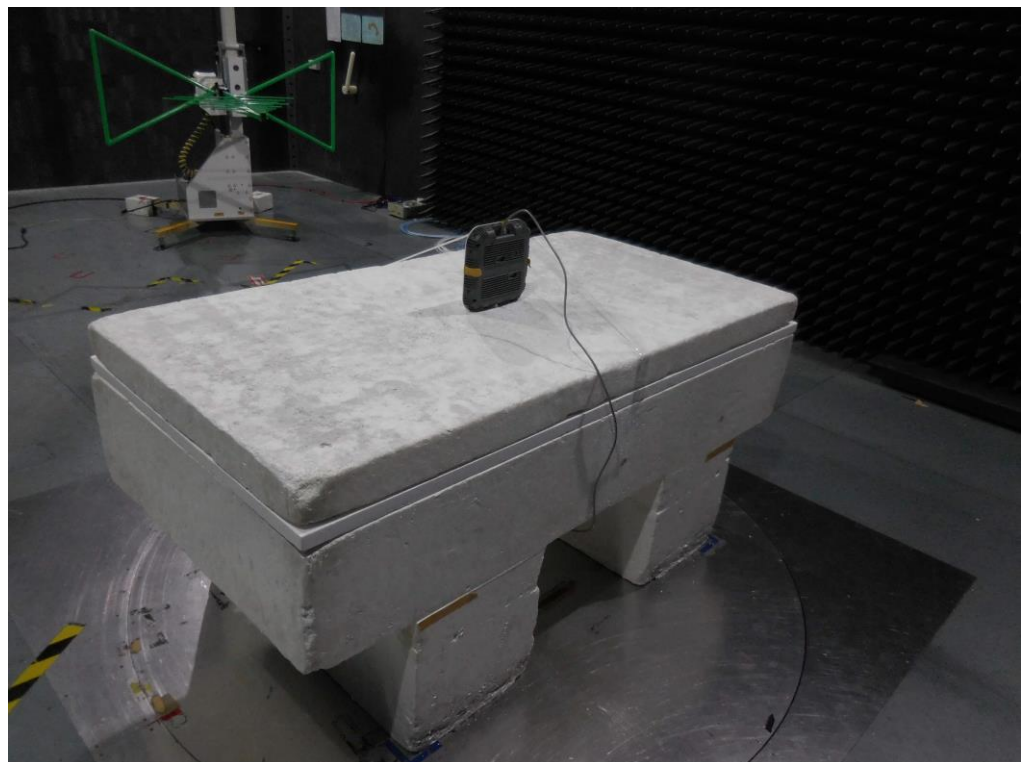


PoE mode



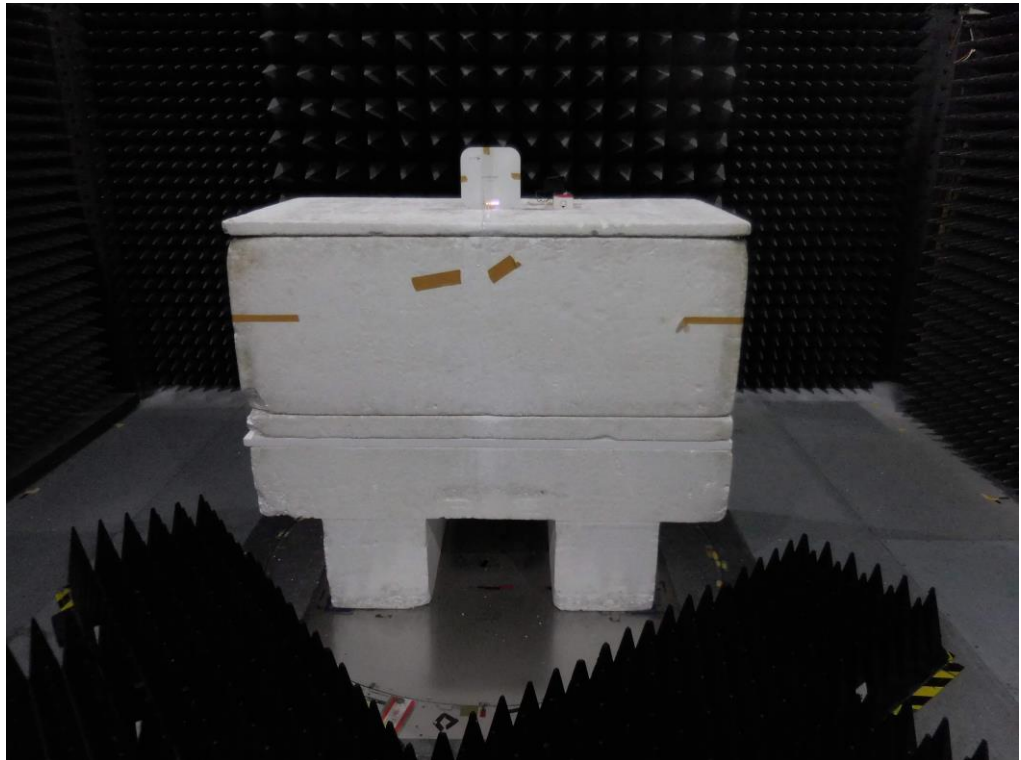
Front view

Rear view



For radiated emissions above 1GHz

Front view



Rear view

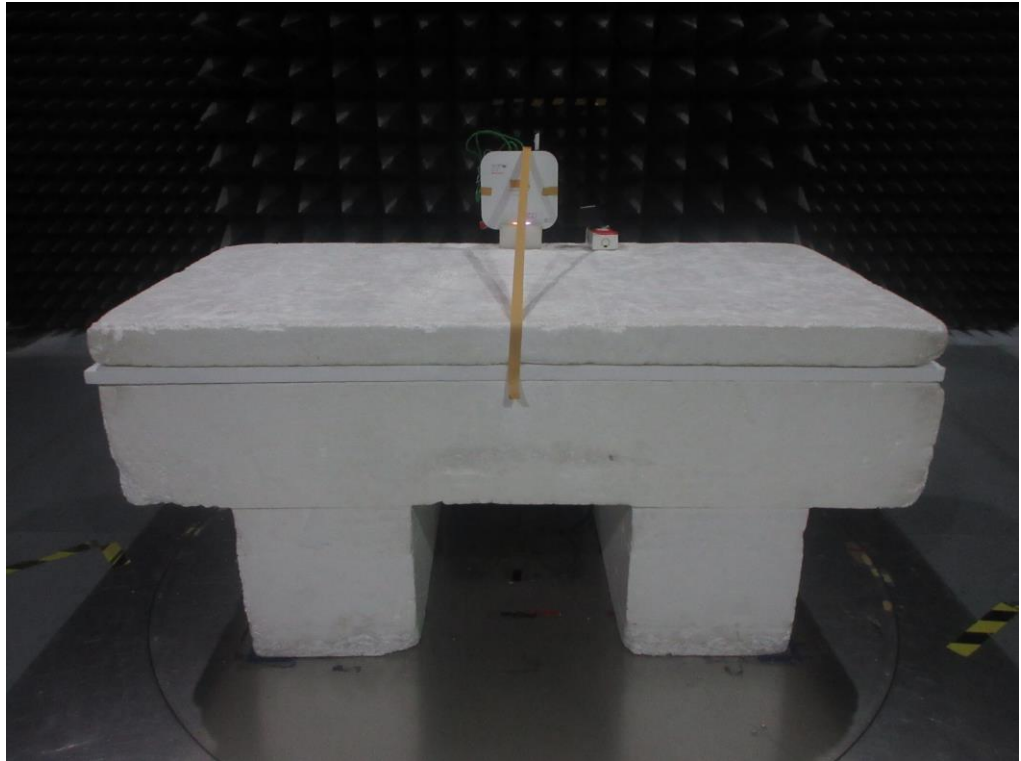


4. Photographs of Radiated Emissions Test Configuration-RX

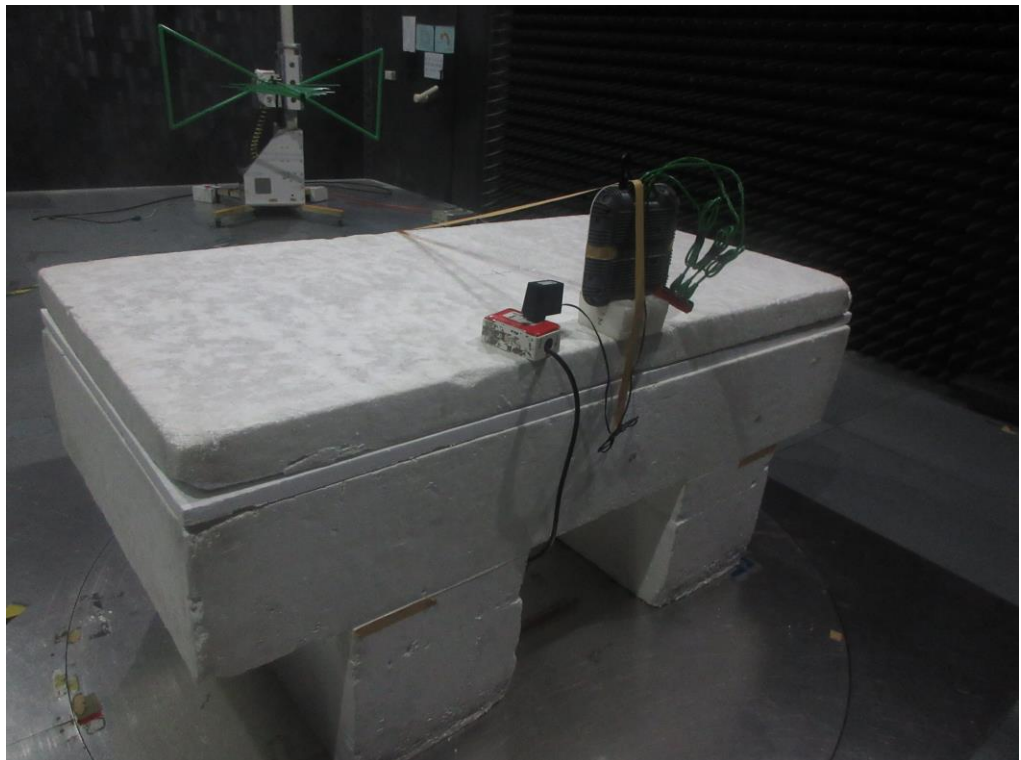
For radiated emissions 30MHz~1GHz

Adapter mode

Front view

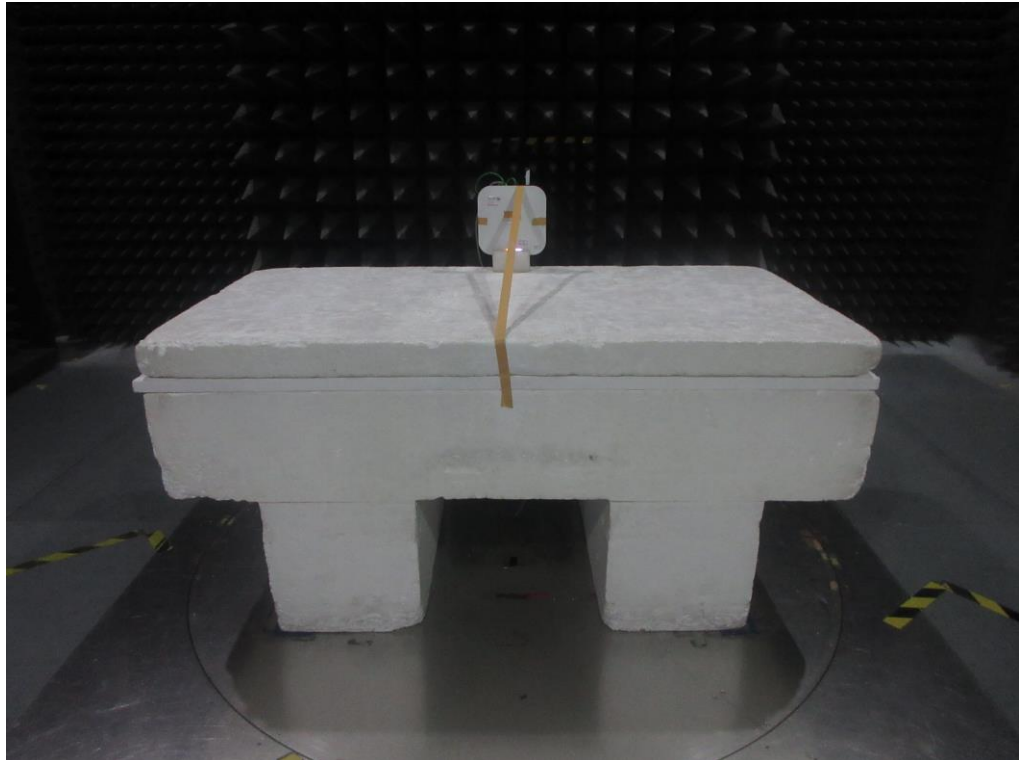


Rear view

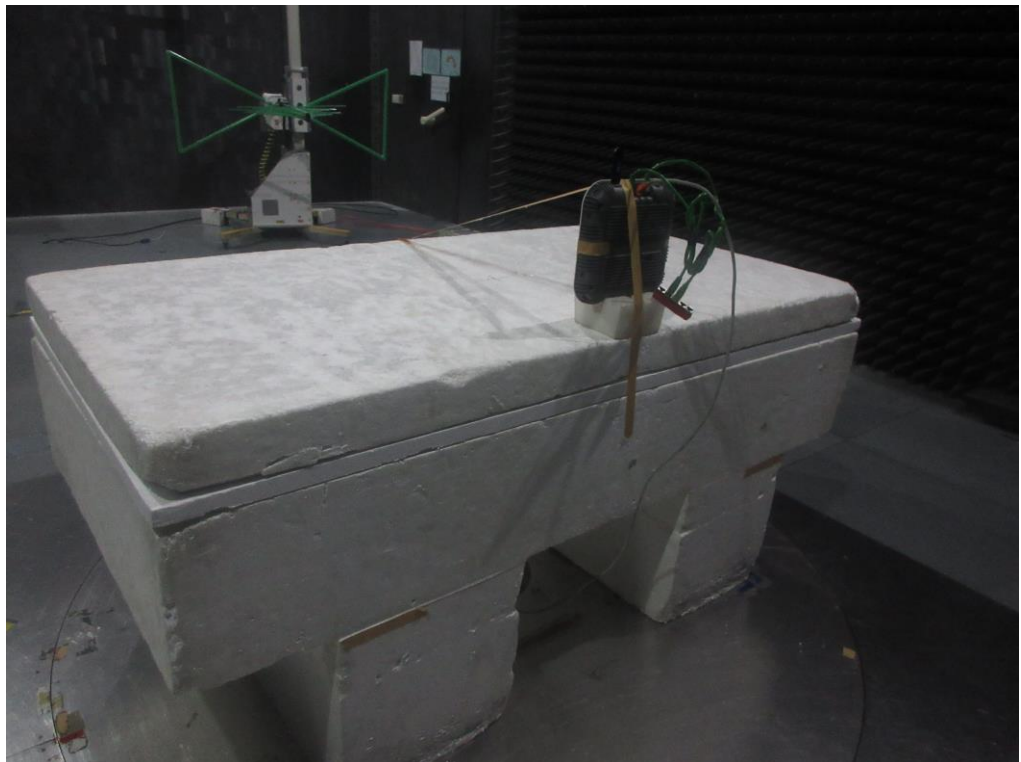


PoE mode

Front view

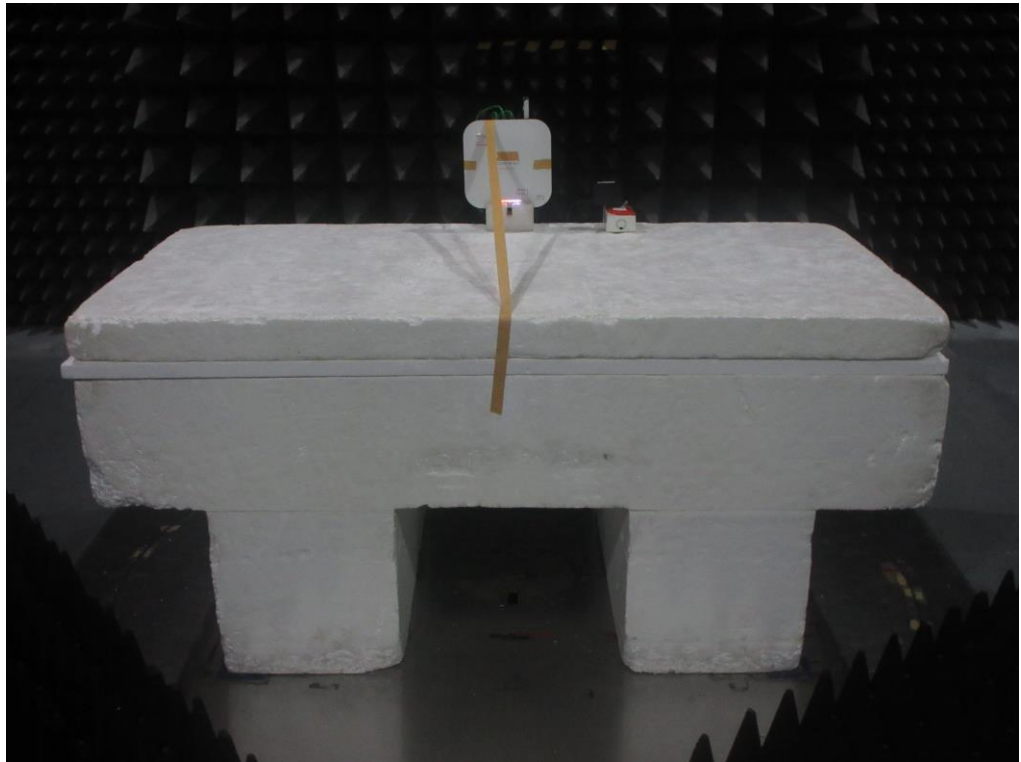


Rear view

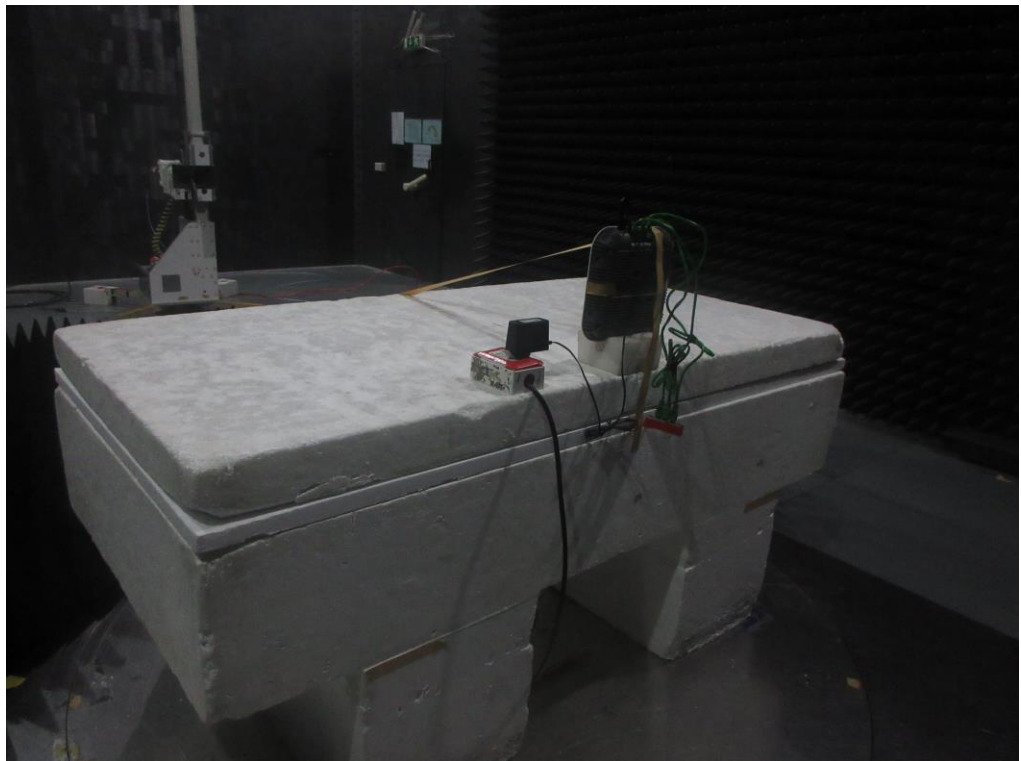


For radiated emissions above 1GHz

Front view



Rear view



————THE END————