

FCC Radio Test Report

FCC ID : NM82QCD100
Equipment : Dongle
Brand Name : VIVE
Model Name : 2QCD100
Applicant : HTC Corporation
No. 88, Section 3, Zhongxing Road, Xindian District,
New Taipei City 231, Taiwan
Manufacturer : HTC Corporation
No.88, Section 3, Zhongxing Rd., Xindian Dist,
New Taipei City 231 Taiwan
Standard : 47 CFR FCC Part 15.247

The product was received on Mar. 16, 2023, and testing was started from Apr. 06, 2023 and completed on Apr. 19, 2023. 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: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



Table of Contents

HISTORY OF THIS TEST REPORT3

SUMMARY OF TEST RESULT4

1 GENERAL DESCRIPTION5

1.1 Information.....5

1.2 Testing Applied Standards8

1.3 Testing Location Information8

1.4 Measurement Uncertainty8

2 TEST CONFIGURATION OF EUT.....9

2.1 Test Channel Mode9

2.2 The Worst Case Measurement Configuration.....10

2.3 Accessories11

2.4 Support Equipment.....11

2.5 Test Setup Diagram13

3 TRANSMITTER TEST RESULT15

3.1 AC Power-line Conducted Emissions15

3.2 DTS Bandwidth.....17

3.3 Maximum Conducted Output Power18

3.4 Power Spectral Density20

3.5 Emissions in Non-restricted Frequency Bands21

3.6 Emissions in Restricted Frequency Bands.....22

4 TEST EQUIPMENT AND CALIBRATION DATA.....26

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

APPENDIX B. TEST RESULTS OF DTS BANDWIDTH

APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER

APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY

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

APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS

APPENDIX G. TEST PHOTOS

PHOTOGRAPHS OF EUT V01



History of this test report

Report No.	Version	Description	Issued Date
FR331403AC	01	Initial issue of report	May 03, 2023



Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and explanations:
None

Reviewed by: Barry Hsiao

Report Producer: Debby Hung



1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information			
Frequency Range(MHz)	Modulation	Ch. Frequency (MHz)	Channel Number
2400 - 2483.5	GFSK	2402~2480	0-39 [40]

Channael	Frequency (MHz)	Channael	Frequency (MHz)
0	2402	21	2444
1	2404	22	2446
2	2406	23	2448
3	2408	24	2450
4	2410	25	2452
5	2412	26	2454
6	2414	27	2456
7	2416	28	2458
8	2418	29	2460
9	2420	30	2462
10	2422	31	2464
11	2424	32	2466
12	2426	33	2468
13	2428	34	2470
14	2430	35	2472
15	2432	36	2474
16	2434	37	2476
17	2436	38	2478
18	2438	39	2480
19	2440	-	-
20	2442	-	-

Band	Mode	BWch (MHz)	Nant
2.4G	Proprietary	2	1TX

Note:

- ◆ 2.4G Proprietary uses a GFSK (1Mbps) modulation.
- ◆ BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type
1	hTC	2QCD100	PIFA antenna

Ant.	Port	Gain (dBi)		
		2412	2442	2472
1	1	2.6	2.1	2.0

Note 1: The EUT has one antenna.

For SRD function:

For 2.4G Proprietary mode (1TX/1RX)

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



1.1.3 EUT Information

Operational Condition			
EUT Power Type	From Host system		
EUT Function	<input checked="" type="checkbox"/> Point-to-multipoint	<input type="checkbox"/> Point-to-point	
Beamforming Function	<input type="checkbox"/> With beamforming	<input checked="" type="checkbox"/> Without beamforming	
Type of EUT			
<input checked="" type="checkbox"/>	Stand-alone		
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:	...	
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:	...	
<input type="checkbox"/>	Other:		

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
Proprietary	0.632	1.99	395u	3k

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



1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013

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

- ♦ KDB 558074 D01 v05r02
- ♦ KDB 662911 D01 v02r01
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
<input checked="" type="checkbox"/>	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 site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Wayne Chiu	21.7~22.9°C / 52~55%	17/Apr2023~19/Apr/2023
RF Conducted	TH07-HY	Alan Chien	22.2~23.4°C / 50~52%	06/Apr2023~13/Apr/2023
Radiated (above 1GHz)	03CH03-HY	Billy Wang	22.0~23.1°C / 49~53%	18/Apr/2023~19/Apr/2023
<input type="checkbox"/>	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	
Test site Designation No. TW0008 with FCC.				

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
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Emissions in Non-restricted Frequency Bands	0.14 dB	Confidence levels of 95%
Emissions in Restricted Frequency Bands	4.8 dB	Confidence levels of 95%
Receiver Radiated Unwanted Emissions	4.8 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	Dos 6.1
-----------------------	---------

Mode	Power Setting
Proprietary	-
2402MHz	3
2440MHz	3
2480MHz	3

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: 120Vac / 60Hz
Operating Mode	CTX
1	Fixture Mode
2	USB Mode

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

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

2.3 Accessories

Accessories				
Cradle	Brand Name	VIVE	Model Name	54H20740
Type-C Cable *1	Brand Name	hTC	Model Name	73H00790
	Signal Line	1.5 meter, shielded cable		
Type-C Cable *1	Brand Name	hTC	Model Name	73H00791
	Signal Line	0.16 meter, shielded cable		

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

2.4 Support Equipment

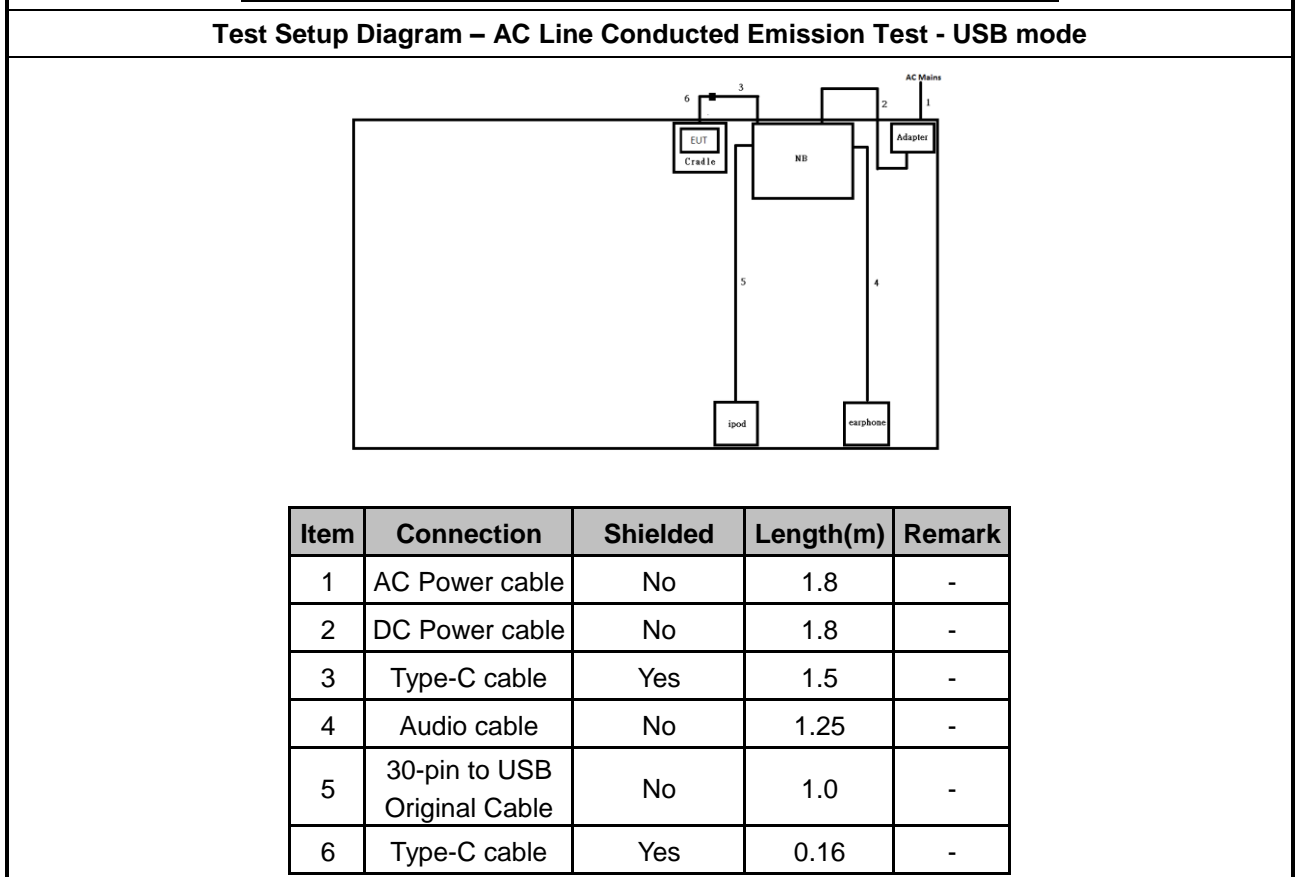
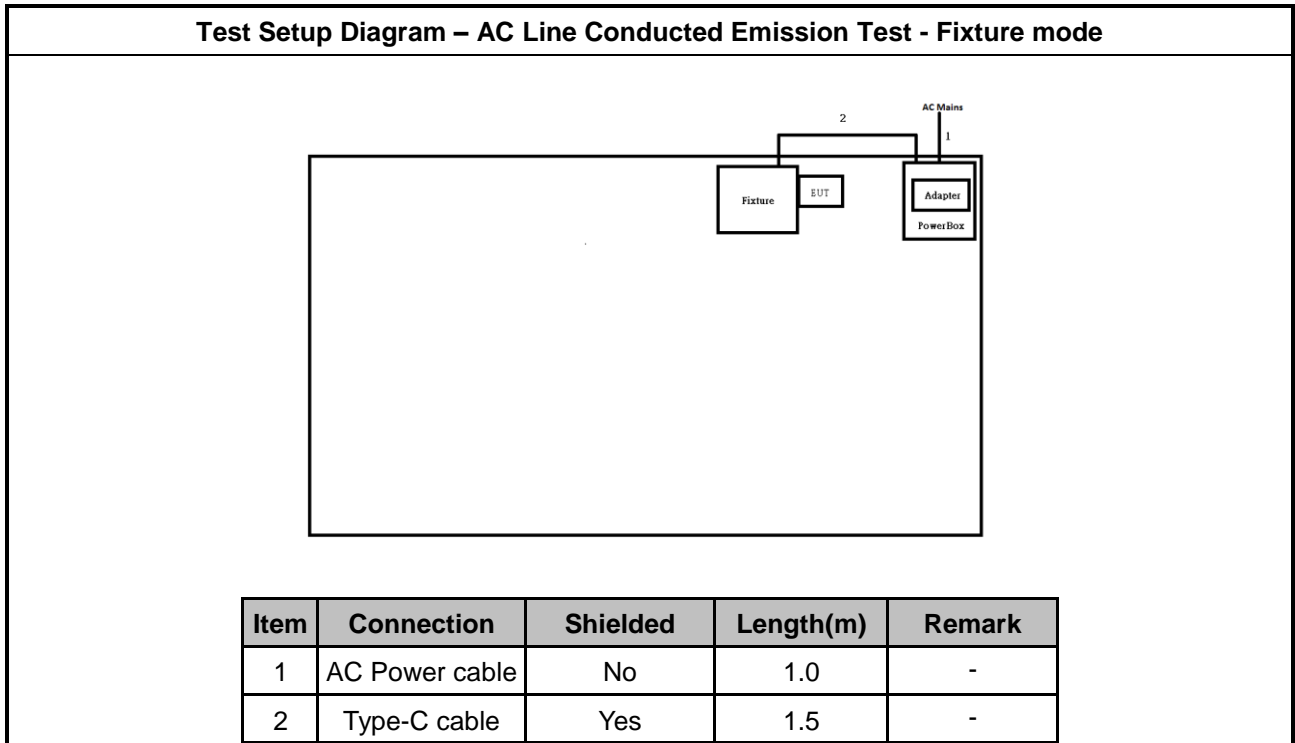
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Adapter	APPLE	A1385	-	-
2	Fixture	VIVE	Fixture-RF01	-	Provide by Customer
3	30-pin to USB Original Cable	APPLE	MA591G/C	-	-
4	iPod	APPLE	A1199	-	-
5	Earphone	APPLE	MD827FE/A	-	-
6	AC Adapter (for NB)	HP	HSTNN-CA40	-	-
7	AC Power cable	Power sync	TPCMRN0018	-	-
8	Notebook	HP	HSTNN-142C	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	HP	HSTNN-142C	-	-
2	Adapter for NB	HP	HSTNN-CA40	-	-
3	Fixture	VIVE	Fixture-RF01		Provide by Customer

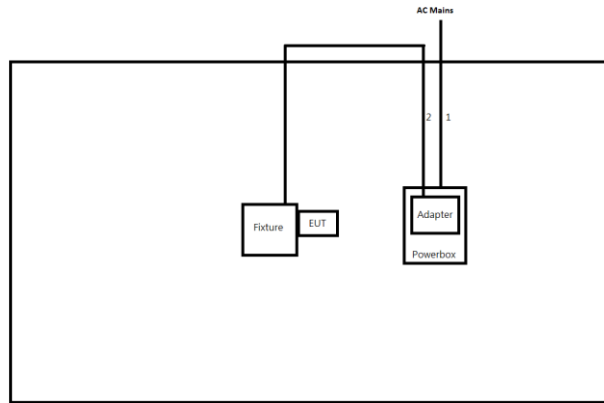


Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Adapter	APPLE	A1385	-	-
2	Fixture	VIVE	Fixture-RF01	-	Provide by Customer
3	30-pin to USB Original Cable	APPLE	MA591G/C	-	-
4	iPod	APPLE	A1199	-	-
5	Earphone	APPLE	MD827FE/A	-	-
6	AC Adapter (for NB)	HP	HSTNN-CA40	-	-
7	AC Power cable	Power sync	TPCMRN0018	-	-
8	Notebook	HP	HSTNN-142C	-	-

2.5 Test Setup Diagram

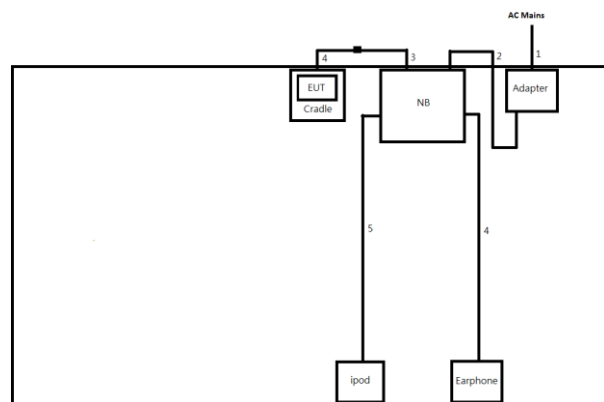


Test Setup Diagram - Radiated Test - Fixture mode



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

Test Setup Diagram - Radiated Test – USB Mode



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.5	-
3	Type-C cable	Yes	1.5	-
4	Type-C cable	Yes	0.16	-
5	Audio cable	No	1.25	-
6	30-pin to USB Original 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

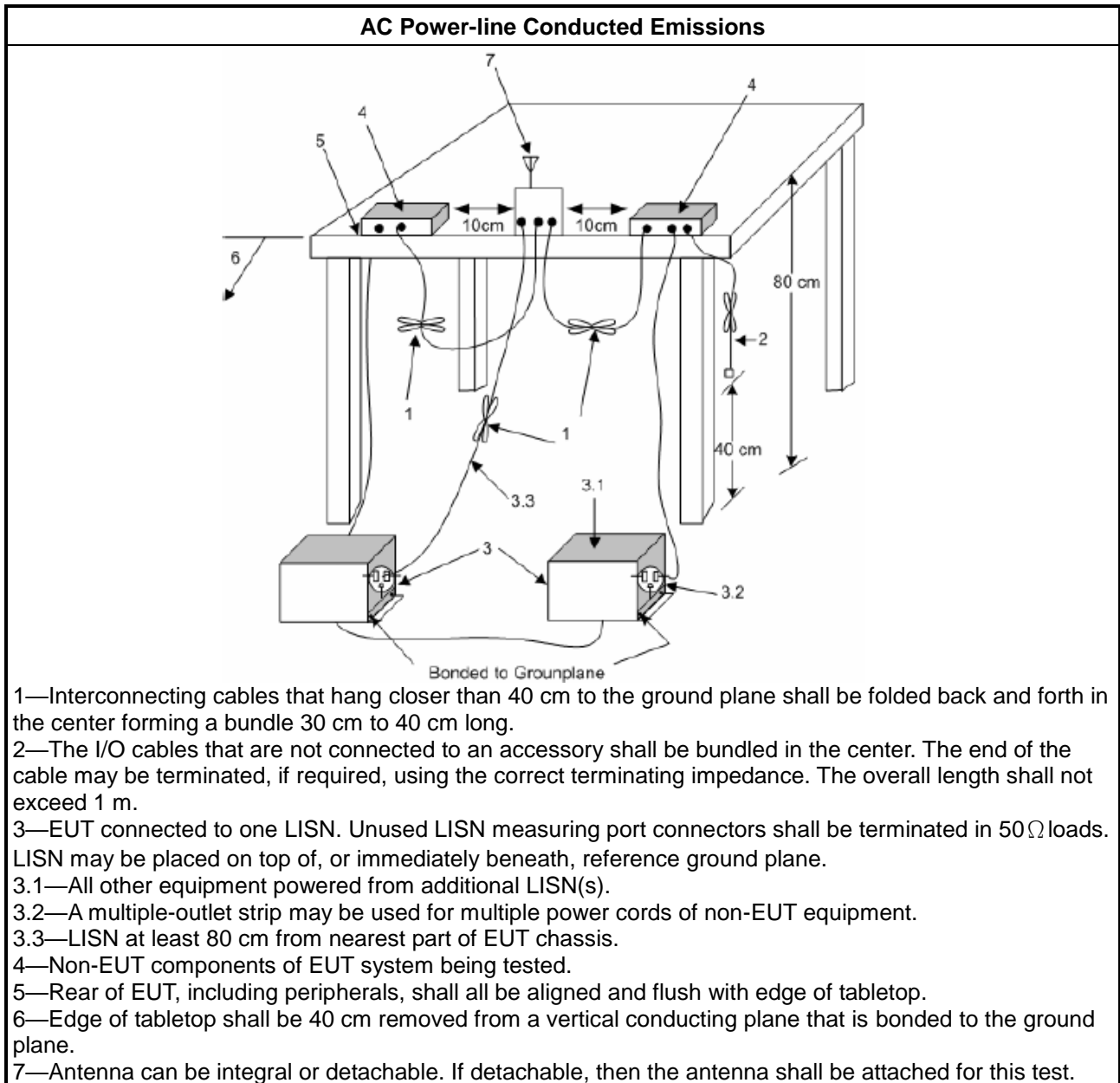
Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

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.

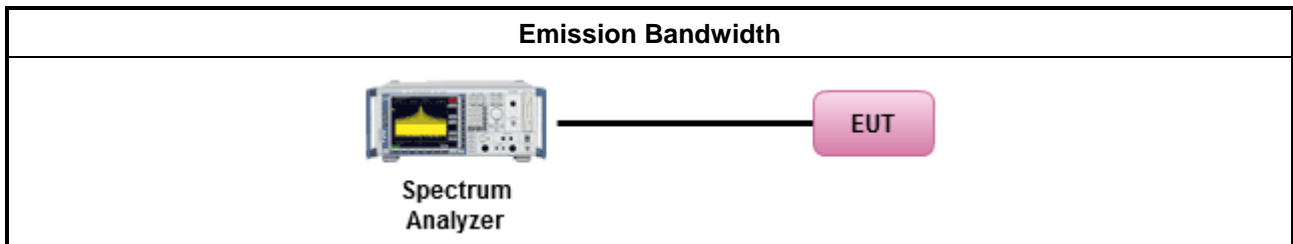
3.2.2 Measuring Instruments

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:
<input checked="" type="checkbox"/>	Refer as KDB 558074. clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
<input type="checkbox"/>	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

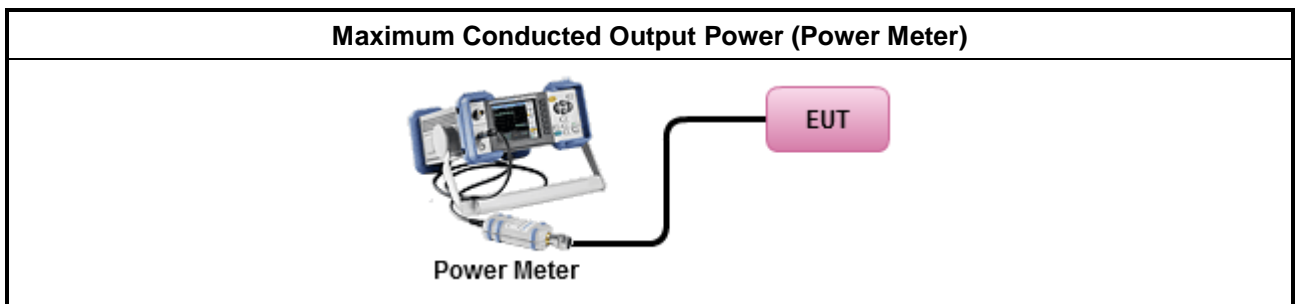
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

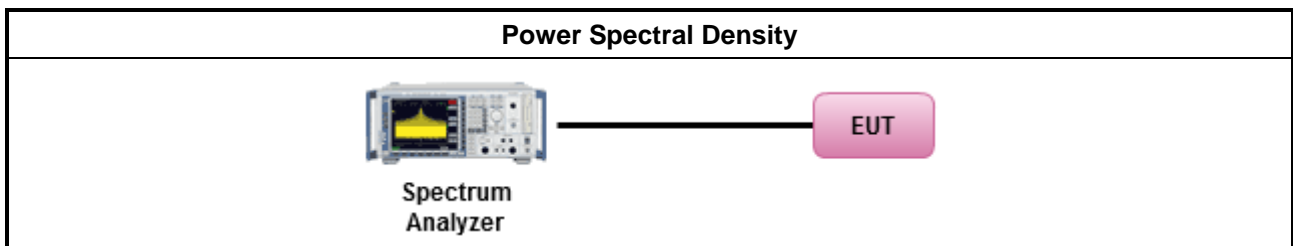
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak level.

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

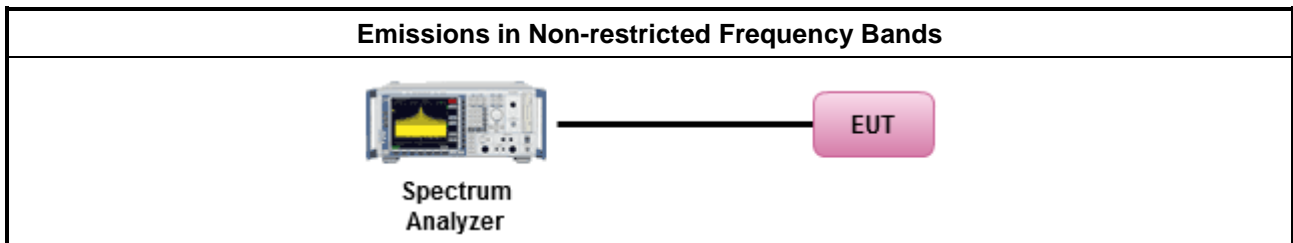
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

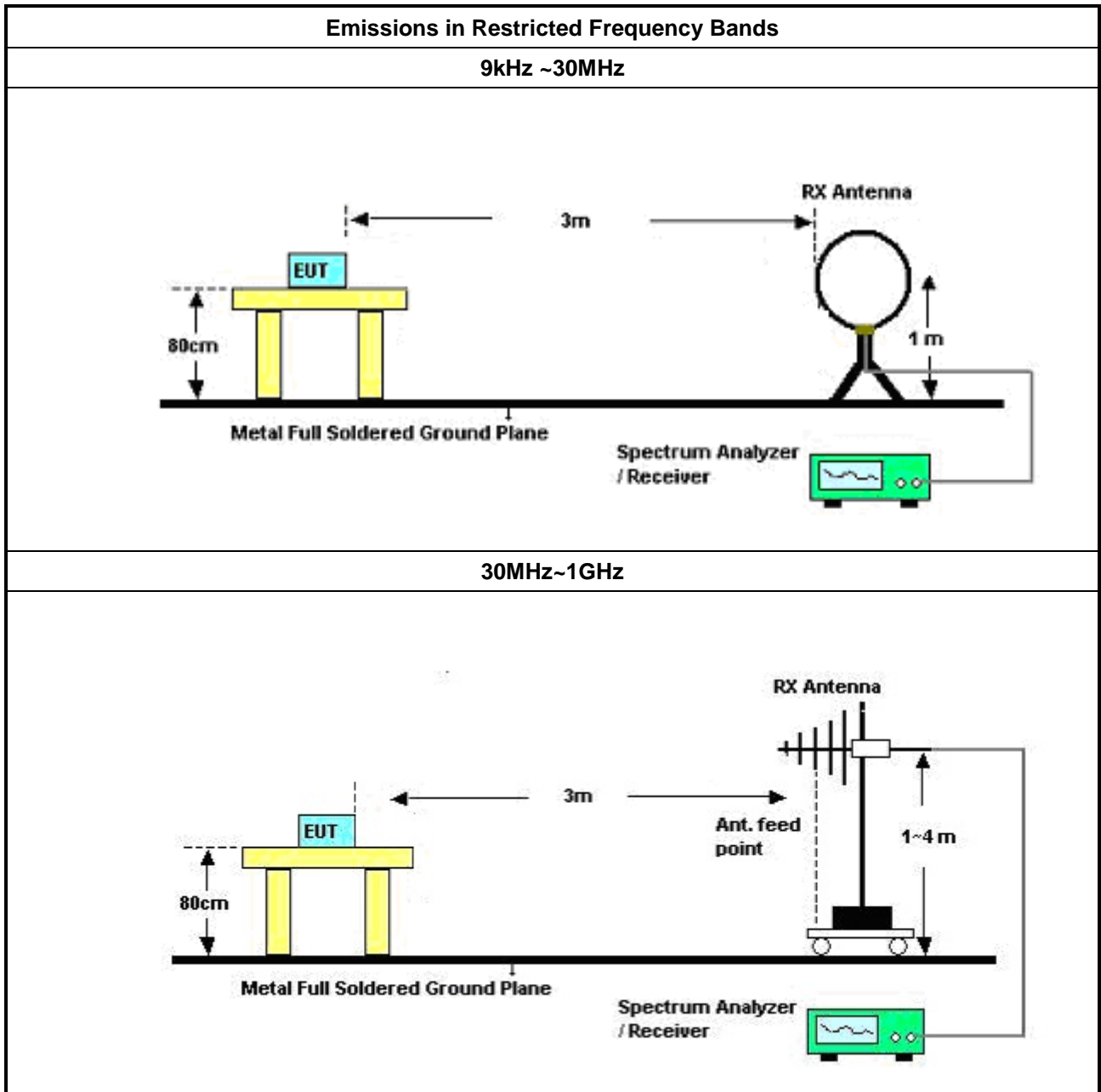
Test Method	
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency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

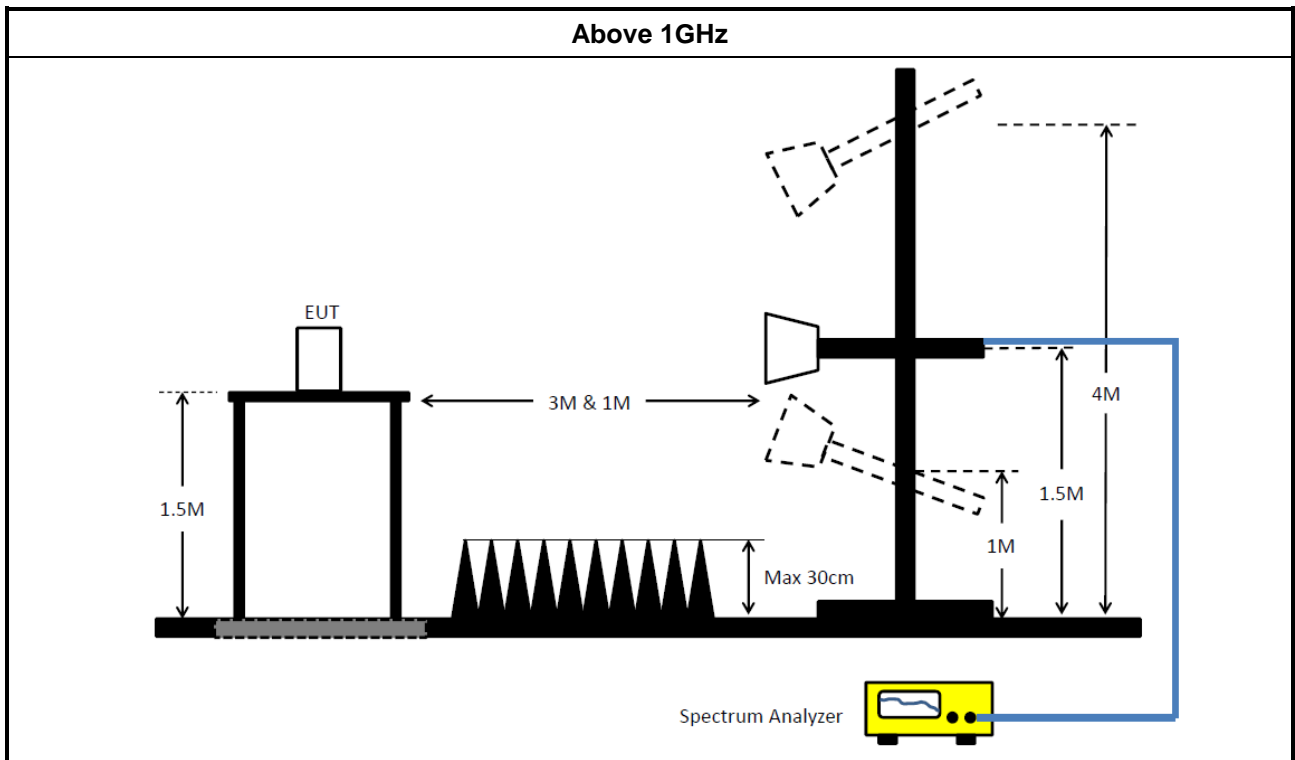
3.6.4 Measurement Results Calculation

The measured Level is calculated using:

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

3.6.5 Test Setup





3.6.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR	102051	9kHz ~ 3.6GHz	13/May/2022	12/May/2023
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	16/Feb/2023	15/Feb/2024
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	28/Feb/2023	27/Feb/2024
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	25/Oct/2022	24/Oct/2023
Software	Sporton	SENSE-EMI	V5.10.8.7	-	NCR	NCR

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101515	10Hz~40GHz	14/Feb/2023	13/Feb/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2022	20/Oct/2023
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	14/Dec/2022	13/Dec/2023
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	14/Dec/2022	13/Dec/2023
SENSE-15247_DTS	Sporton	V5.11.3	N/A	N/A	N/A	N/A



Instrument for Radiated Test (Fixture mode)

Table with 7 columns: Instrument, Manufacturer /Brand, Model No., Serial No., Spec., Calibration Date, Calibration Due Date. Contains 17 rows of instrument details.

Instrument for Radiated Test (USB mode)

Table with 7 columns: Instrument, Manufacturer /Brand, Model No., Serial No., Spec., Calibration Date, Calibration Due Date. Contains 10 rows of instrument details.



Summary

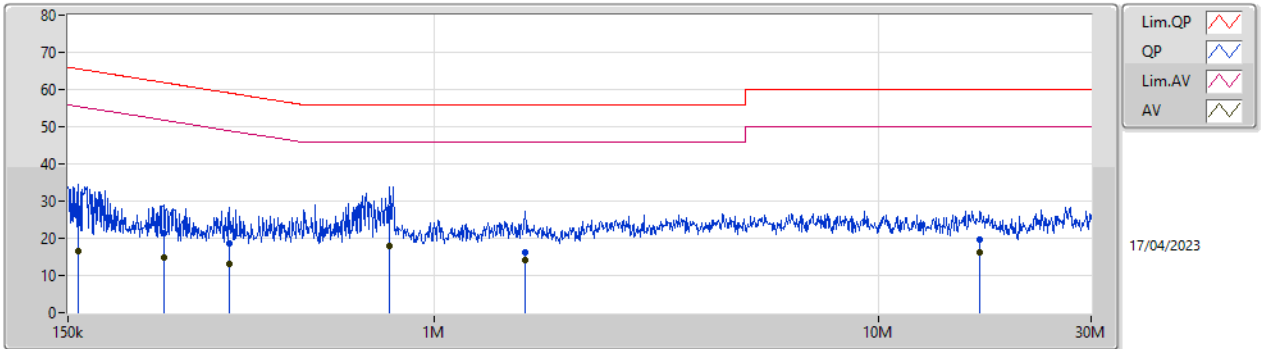
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	789.434k	18.46	46.00	-27.54	Neutral
Mode 2	Pass	QP	176.674k	52.78	64.64	-11.86	Line



Result

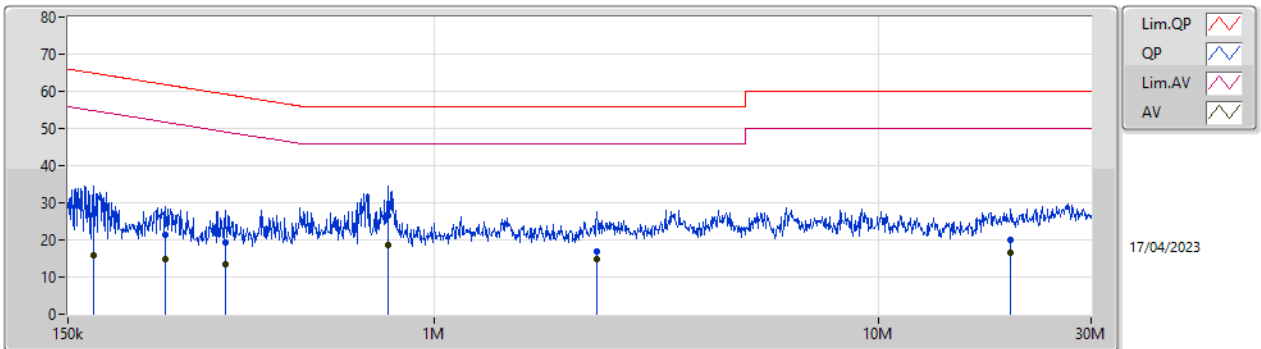
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	158.622k	27.51	65.54	-38.03	Line	-
Mode 1	Pass	AV	158.622k	16.62	55.54	-38.92	Line	-
Mode 1	Pass	QP	246.077k	21.54	61.89	-40.35	Line	-
Mode 1	Pass	AV	246.077k	14.89	51.89	-37.00	Line	-
Mode 1	Pass	QP	346.873k	18.76	59.04	-40.28	Line	-
Mode 1	Pass	AV	346.873k	13.24	49.04	-35.80	Line	-
Mode 1	Pass	QP	792.592k	27.86	56.00	-28.14	Line	-
Mode 1	Pass	AV	792.592k	17.78	46.00	-28.22	Line	-
Mode 1	Pass	QP	1.6M	16.33	56.00	-39.67	Line	-
Mode 1	Pass	AV	1.6M	14.03	46.00	-31.97	Line	-
Mode 1	Pass	QP	16.868M	19.59	60.00	-40.41	Line	-
Mode 1	Pass	AV	16.868M	16.29	50.00	-33.71	Line	-
Mode 1	Pass	QP	171.806k	26.84	64.87	-38.03	Neutral	-
Mode 1	Pass	AV	171.806k	16.00	54.87	-38.87	Neutral	-
Mode 1	Pass	QP	249.042k	21.22	61.79	-40.57	Neutral	-
Mode 1	Pass	AV	249.042k	14.80	51.79	-36.99	Neutral	-
Mode 1	Pass	QP	338.664k	19.20	59.23	-40.03	Neutral	-
Mode 1	Pass	AV	338.664k	13.54	49.23	-35.69	Neutral	-
Mode 1	Pass	QP	789.434k	26.72	56.00	-29.28	Neutral	-
Mode 1	Pass	AV	789.434k	18.46	46.00	-27.54	Neutral	-
Mode 1	Pass	QP	2.32M	16.98	56.00	-39.02	Neutral	-
Mode 1	Pass	AV	2.32M	14.68	46.00	-31.32	Neutral	-
Mode 1	Pass	QP	19.789M	19.91	60.00	-40.09	Neutral	-
Mode 1	Pass	AV	19.789M	16.47	50.00	-33.53	Neutral	-
Mode 2	Pass	QP	176.674k	52.78	64.64	-11.86	Line	-
Mode 2	Pass	AV	176.674k	34.65	54.64	-19.99	Line	-
Mode 2	Pass	QP	215.704k	44.56	62.98	-18.42	Line	-
Mode 2	Pass	AV	215.704k	24.08	52.98	-28.90	Line	-
Mode 2	Pass	QP	500k	33.53	56.00	-22.47	Line	-
Mode 2	Pass	AV	500k	25.10	46.00	-20.90	Line	-
Mode 2	Pass	QP	2.924M	31.98	56.00	-24.02	Line	-
Mode 2	Pass	AV	2.924M	26.86	46.00	-19.14	Line	-
Mode 2	Pass	QP	5.56M	32.81	60.00	-27.19	Line	-
Mode 2	Pass	AV	5.56M	28.17	50.00	-21.83	Line	-
Mode 2	Pass	QP	15.825M	32.54	60.00	-27.46	Line	-
Mode 2	Pass	AV	15.825M	25.03	50.00	-24.97	Line	-
Mode 2	Pass	QP	167.739k	51.57	65.06	-13.49	Neutral	-
Mode 2	Pass	AV	167.739k	29.74	55.06	-25.32	Neutral	-
Mode 2	Pass	QP	208.925k	43.79	63.25	-19.46	Neutral	-
Mode 2	Pass	AV	208.925k	24.82	53.25	-28.43	Neutral	-
Mode 2	Pass	QP	508.871k	34.26	56.00	-21.74	Neutral	-
Mode 2	Pass	AV	508.871k	23.24	46.00	-22.76	Neutral	-
Mode 2	Pass	QP	3.349M	28.87	56.00	-27.13	Neutral	-
Mode 2	Pass	AV	3.349M	23.97	46.00	-22.03	Neutral	-
Mode 2	Pass	QP	5.494M	27.99	60.00	-32.01	Neutral	-
Mode 2	Pass	AV	5.494M	23.70	50.00	-26.30	Neutral	-
Mode 2	Pass	QP	16.079M	28.71	60.00	-31.29	Neutral	-
Mode 2	Pass	AV	16.079M	21.41	50.00	-28.59	Neutral	-

Conducted Emissions at Powerline_Mode 1



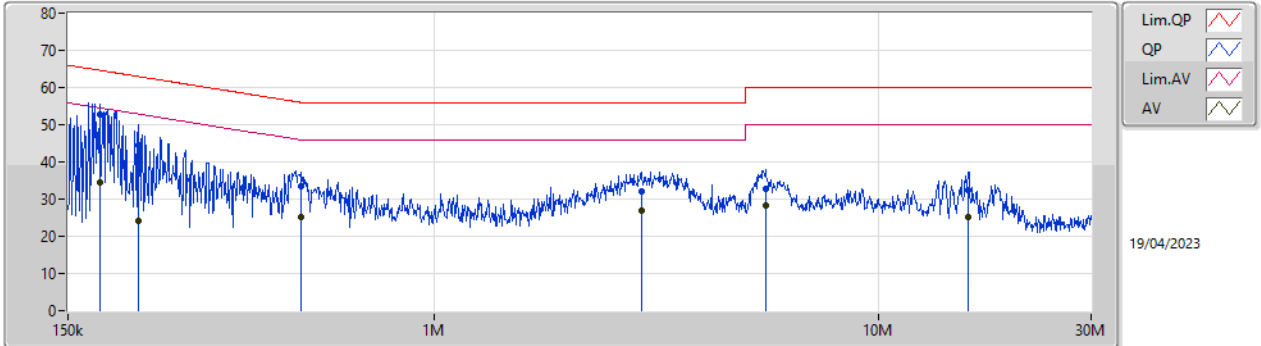
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	158.622k	27.51	65.54	-38.03	19.61	Line	-	7.90	9.65	0.03	9.93
AV	158.622k	16.62	55.54	-38.92	19.61	Line	-	-2.99	9.65	0.03	9.93
QP	246.077k	21.54	61.89	-40.35	19.62	Line	-	1.92	9.65	0.03	9.94
AV	246.077k	14.89	51.89	-37.00	19.62	Line	-	-4.73	9.65	0.03	9.94
QP	346.873k	18.76	59.04	-40.28	19.63	Line	-	-0.87	9.64	0.04	9.95
AV	346.873k	13.24	49.04	-35.80	19.63	Line	-	-6.39	9.64	0.04	9.95
QP	792.592k	27.86	56.00	-28.14	19.65	Line	-	8.21	9.65	0.05	9.95
AV	792.592k	17.78	46.00	-28.22	19.65	Line	-	-1.87	9.65	0.05	9.95
QP	1.6M	16.33	56.00	-39.67	19.68	Line	-	-3.35	9.67	0.07	9.94
AV	1.6M	14.03	46.00	-31.97	19.68	Line	-	-5.65	9.67	0.07	9.94
QP	16.868M	19.59	60.00	-40.41	20.01	Line	-	-0.42	9.79	0.25	9.97
AV	16.868M	16.29	50.00	-33.71	20.01	Line	-	-3.72	9.79	0.25	9.97

Conducted Emissions at Powerline_Mode 1



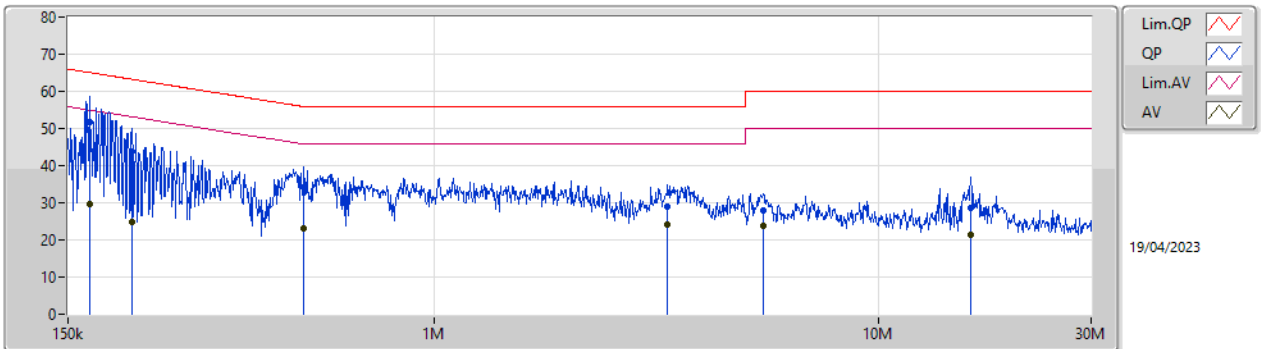
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	171.806k	26.84	64.87	-38.03	19.59	Neutral	-	7.25	9.63	0.03	9.93
AV	171.806k	16.00	54.87	-38.87	19.59	Neutral	-	-3.59	9.63	0.03	9.93
QP	249.042k	21.22	61.79	-40.57	19.59	Neutral	-	1.63	9.62	0.03	9.94
AV	249.042k	14.80	51.79	-36.99	19.59	Neutral	-	-4.79	9.62	0.03	9.94
QP	338.664k	19.20	59.23	-40.03	19.62	Neutral	-	-0.42	9.63	0.04	9.95
AV	338.664k	13.54	49.23	-35.69	19.62	Neutral	-	-6.08	9.63	0.04	9.95
QP	789.434k	26.72	56.00	-29.28	19.64	Neutral	-	7.08	9.64	0.05	9.95
AV	789.434k	18.46	46.00	-27.54	19.64	Neutral	-	-1.18	9.64	0.05	9.95
QP	2.32M	16.98	56.00	-39.02	19.69	Neutral	-	-2.71	9.66	0.09	9.94
AV	2.32M	14.68	46.00	-31.32	19.69	Neutral	-	-5.01	9.66	0.09	9.94
QP	19.789M	19.91	60.00	-40.09	20.19	Neutral	-	-0.28	9.95	0.27	9.97
AV	19.789M	16.47	50.00	-33.53	20.19	Neutral	-	-3.72	9.95	0.27	9.97

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	176.674k	52.78	64.64	-11.86	19.61	Line	-	33.17	9.65	0.03	9.93
AV	176.674k	34.65	54.64	-19.99	19.61	Line	-	15.04	9.65	0.03	9.93
QP	215.704k	44.56	62.98	-18.42	19.61	Line	-	24.95	9.65	0.03	9.93
AV	215.704k	24.08	52.98	-28.90	19.61	Line	-	4.47	9.65	0.03	9.93
QP	500k	33.53	56.00	-22.47	19.64	Line	-	13.89	9.64	0.04	9.96
AV	500k	25.10	46.00	-20.90	19.64	Line	-	5.46	9.64	0.04	9.96
QP	2.924M	31.98	56.00	-24.02	19.73	Line	-	12.25	9.69	0.11	9.93
AV	2.924M	26.86	46.00	-19.14	19.73	Line	-	7.13	9.69	0.11	9.93
QP	5.56M	32.81	60.00	-27.19	19.83	Line	-	12.98	9.74	0.15	9.94
AV	5.56M	28.17	50.00	-21.83	19.83	Line	-	8.34	9.74	0.15	9.94
QP	15.825M	32.54	60.00	-27.46	20.01	Line	-	12.53	9.79	0.25	9.97
AV	15.825M	25.03	50.00	-24.97	20.01	Line	-	5.02	9.79	0.25	9.97

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	51.57	65.06	-13.49	19.59	Neutral	-	31.98	9.63	0.03	9.93
AV	167.739k	29.74	55.06	-25.32	19.59	Neutral	-	10.15	9.63	0.03	9.93
QP	208.925k	43.79	63.25	-19.46	19.58	Neutral	-	24.21	9.62	0.03	9.93
AV	208.925k	24.82	53.25	-28.43	19.58	Neutral	-	5.24	9.62	0.03	9.93
QP	508.871k	34.26	56.00	-21.74	19.63	Neutral	-	14.63	9.64	0.04	9.95
AV	508.871k	23.24	46.00	-22.76	19.63	Neutral	-	3.61	9.64	0.04	9.95
QP	3.349M	28.87	56.00	-27.13	19.72	Neutral	-	9.15	9.67	0.12	9.93
AV	3.349M	23.97	46.00	-22.03	19.72	Neutral	-	4.25	9.67	0.12	9.93
QP	5.494M	27.99	60.00	-32.01	19.82	Neutral	-	8.17	9.73	0.15	9.94
AV	5.494M	23.70	50.00	-26.30	19.82	Neutral	-	3.88	9.73	0.15	9.94
QP	16.079M	28.71	60.00	-31.29	20.13	Neutral	-	8.58	9.91	0.25	9.97
AV	16.079M	21.41	50.00	-28.59	20.13	Neutral	-	1.28	9.91	0.25	9.97



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Proprietary	697.5k	1.047M	1M05D1D	685k	1.042M

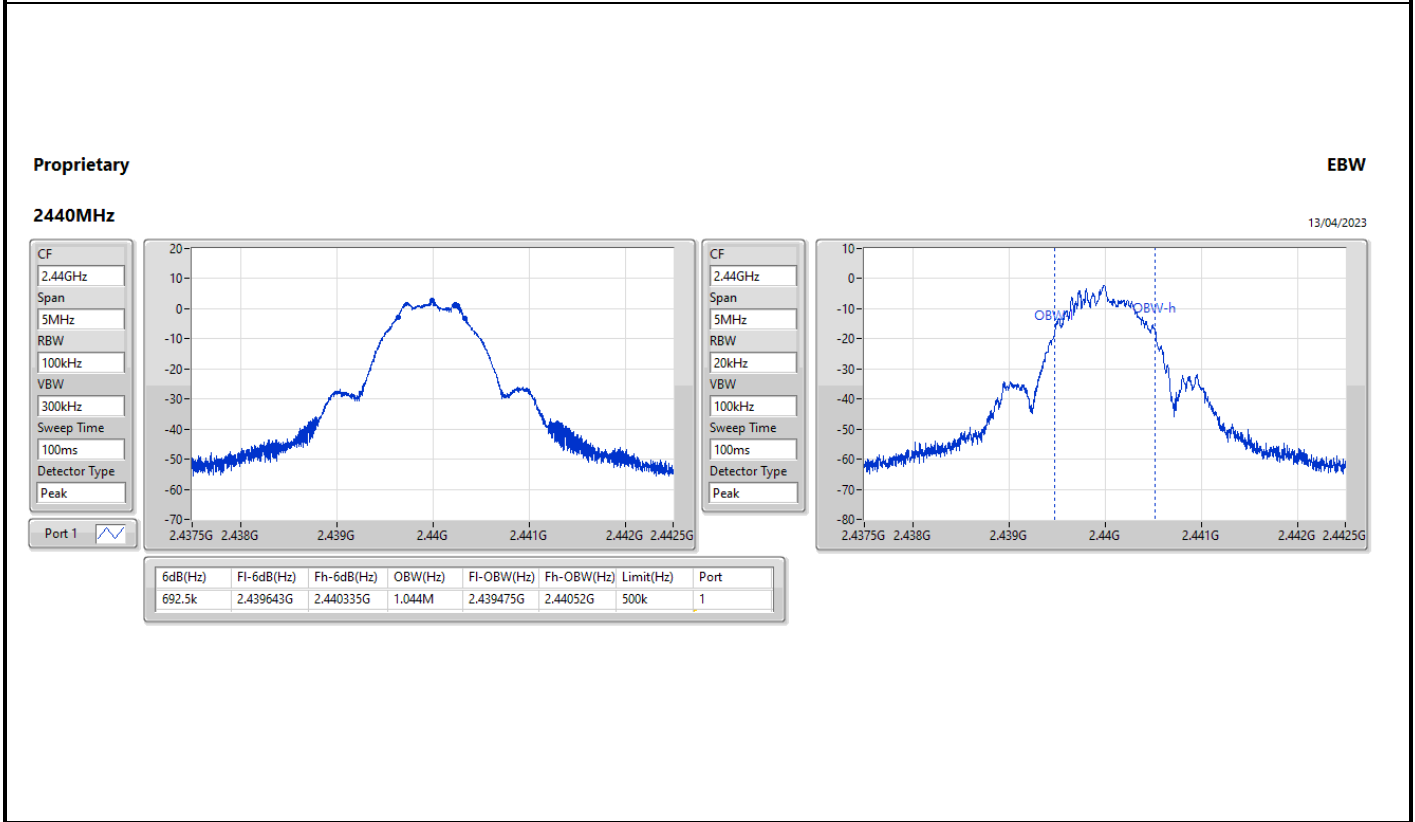
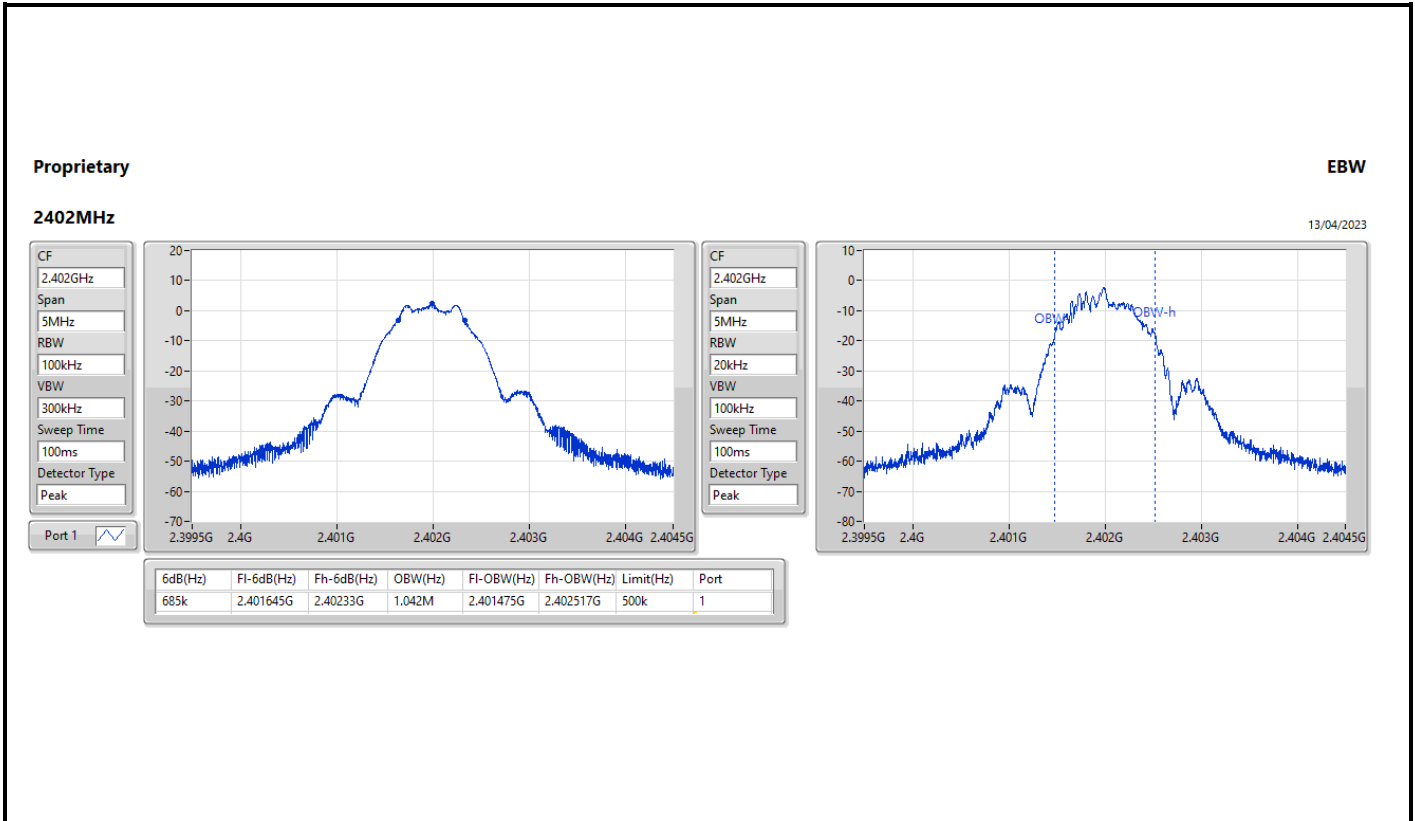
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

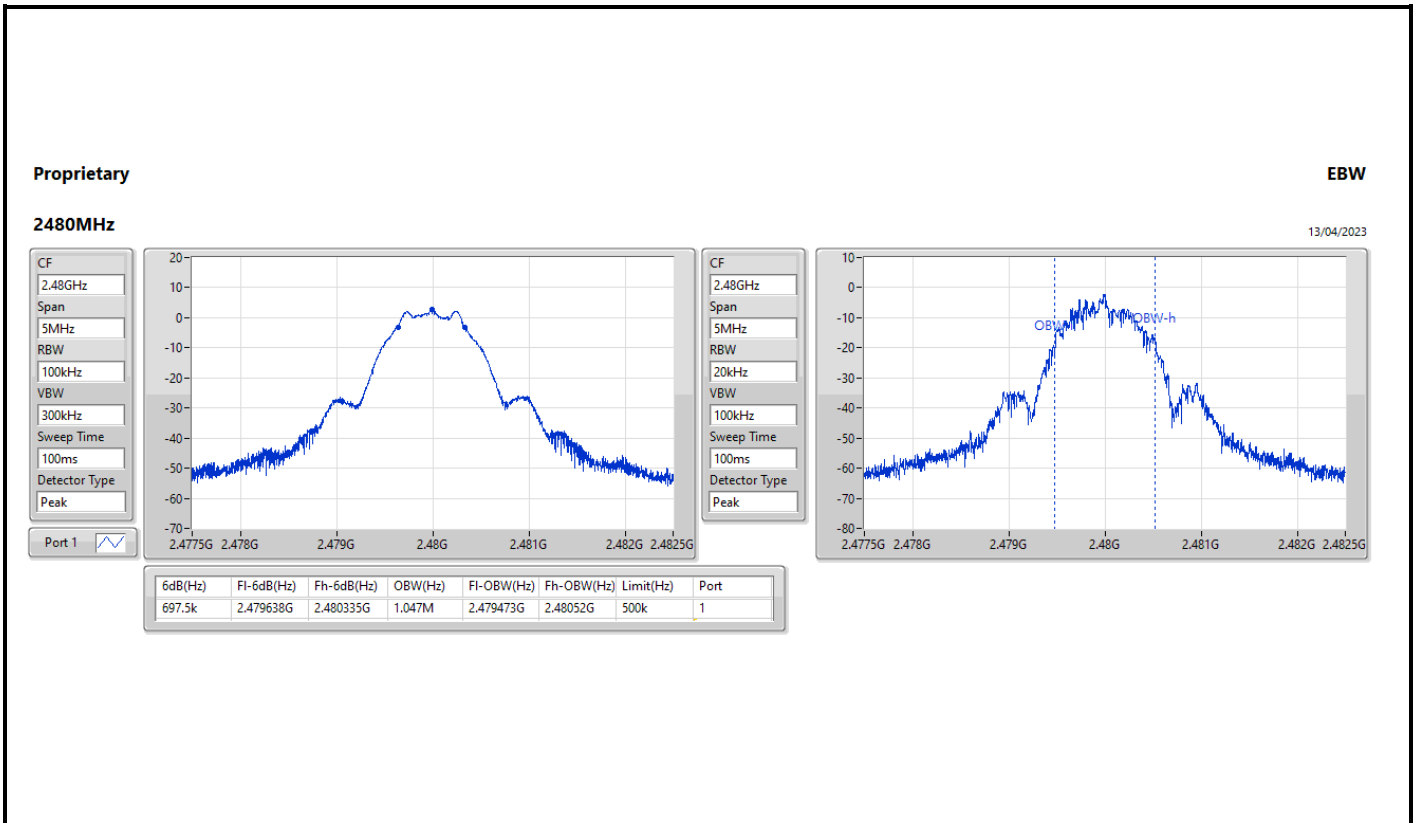


Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Proprietary	-	-	-	-
2402MHz	Pass	500k	685k	1.042M
2440MHz	Pass	500k	692.5k	1.044M
2480MHz	Pass	500k	697.5k	1.047M

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







Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Proprietary	3.58	0.00228



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Proprietary	-	-	-	-	-
2402MHz	Pass	2.60	3.21	3.21	30.00
2440MHz	Pass	2.10	3.47	3.47	30.00
2480MHz	Pass	2.00	3.58	3.58	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
Proprietary	-12.74

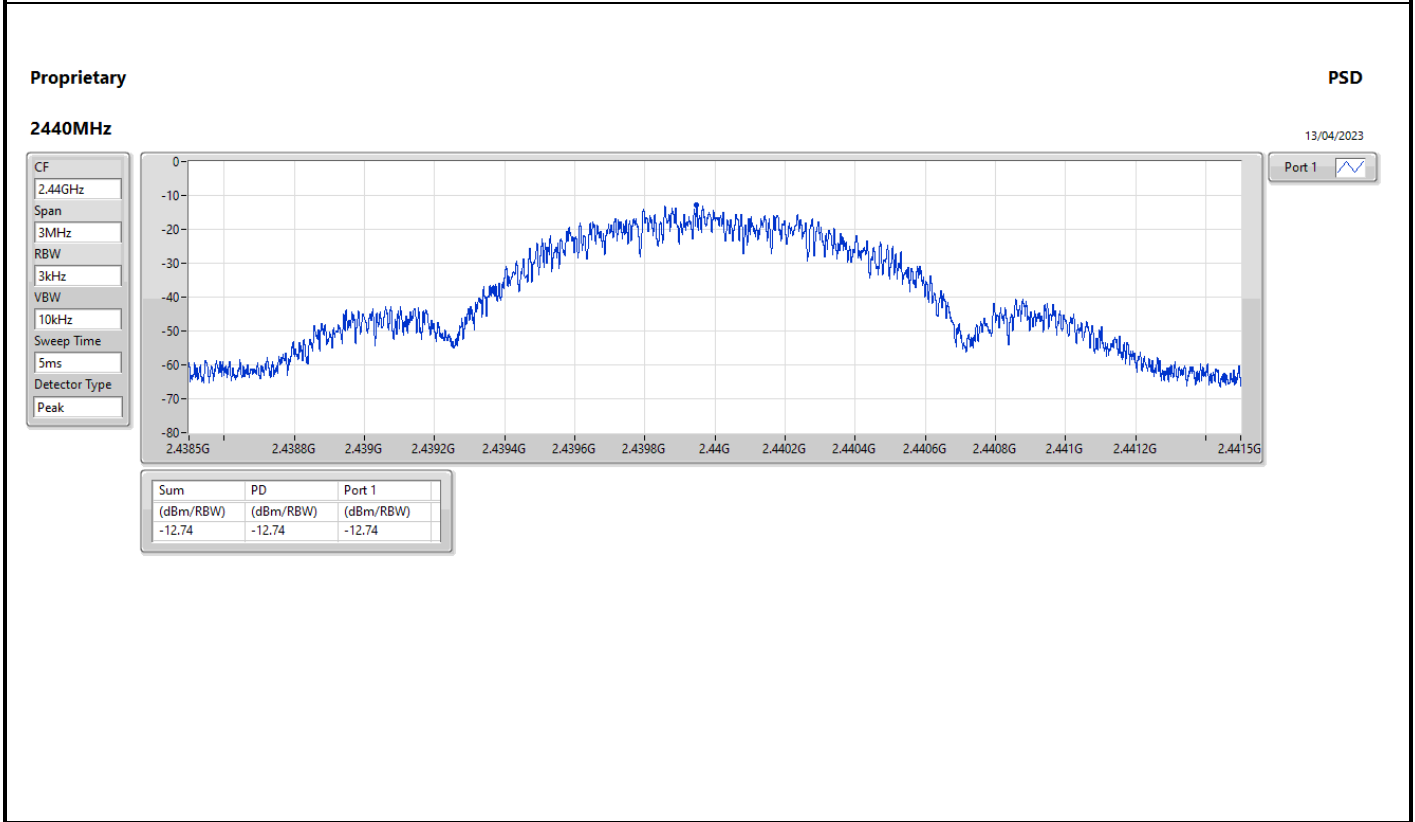
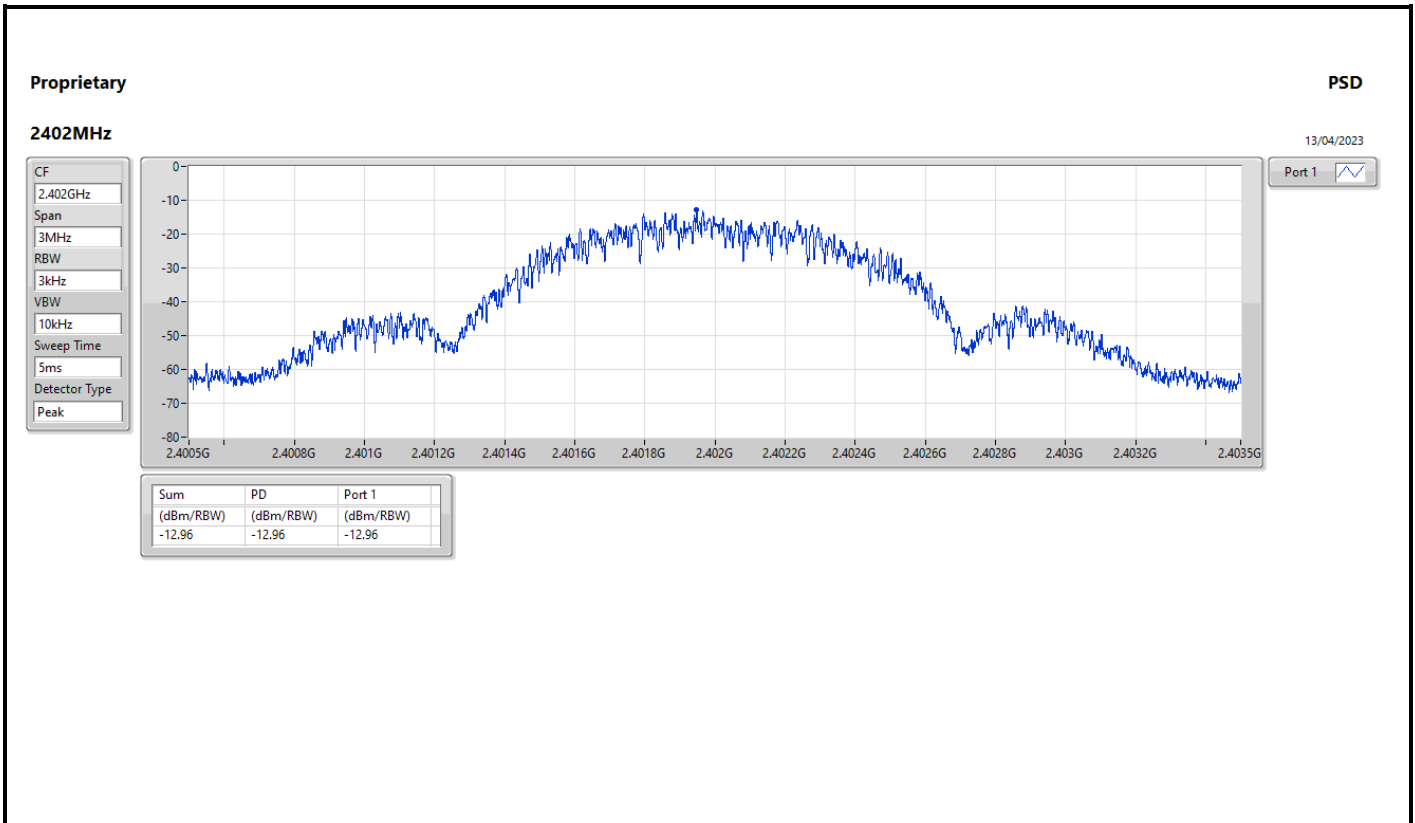
RBW = 3kHz;

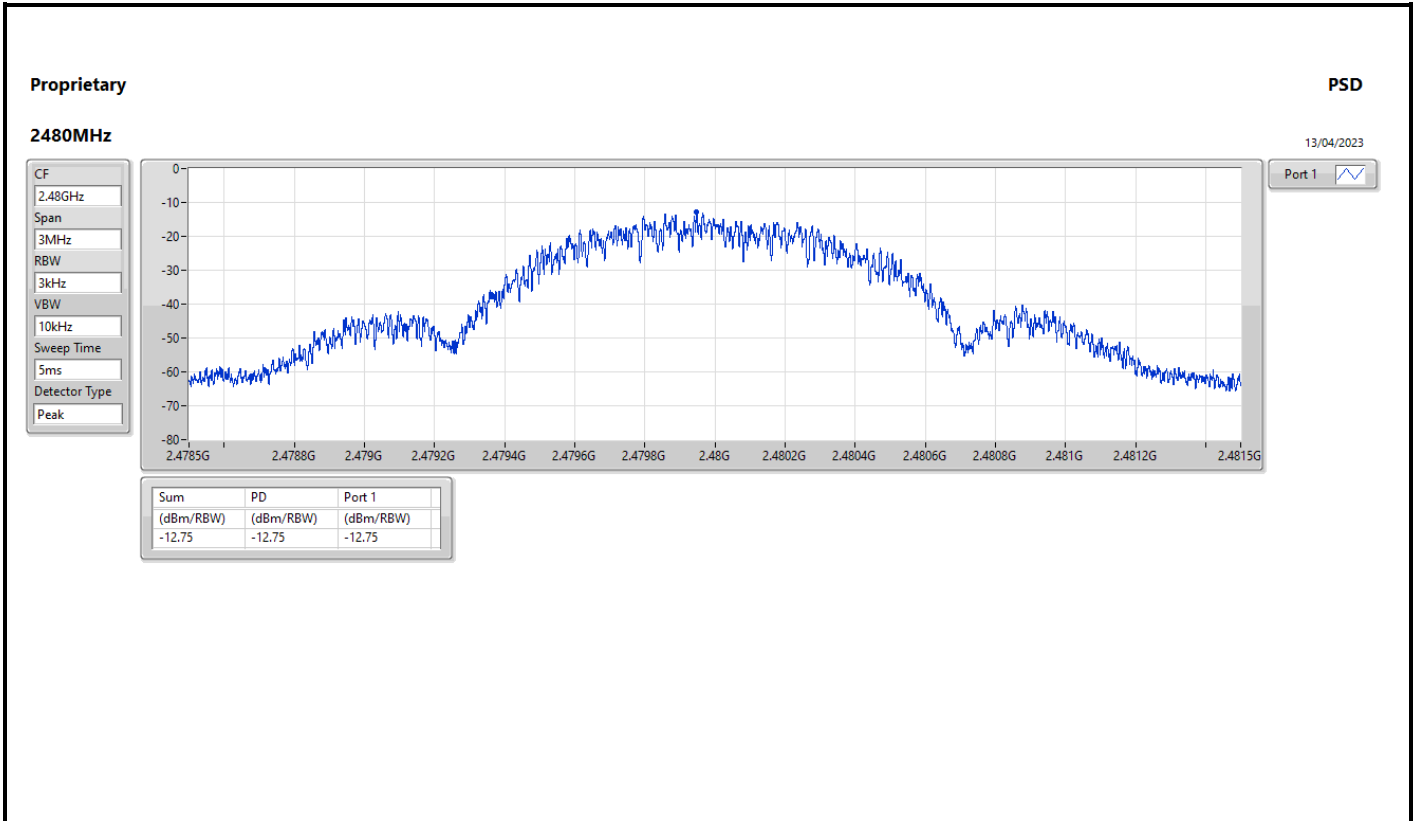


Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Proprietary	-	-	-	-	-
2402MHz	Pass	2.60	-12.96	-12.96	8.00
2440MHz	Pass	2.10	-12.74	-12.74	8.00
2480MHz	Pass	2.00	-12.75	-12.75	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;







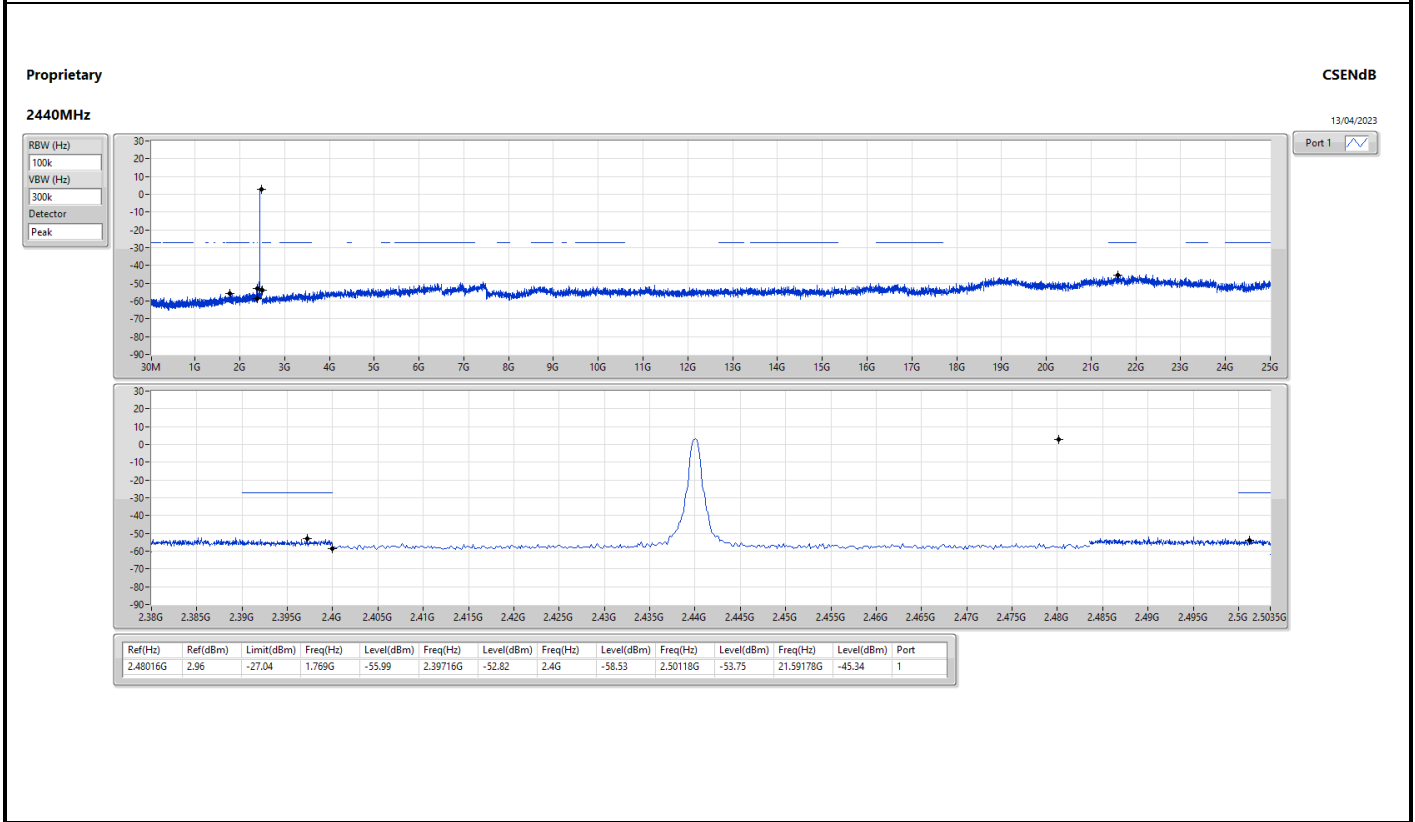
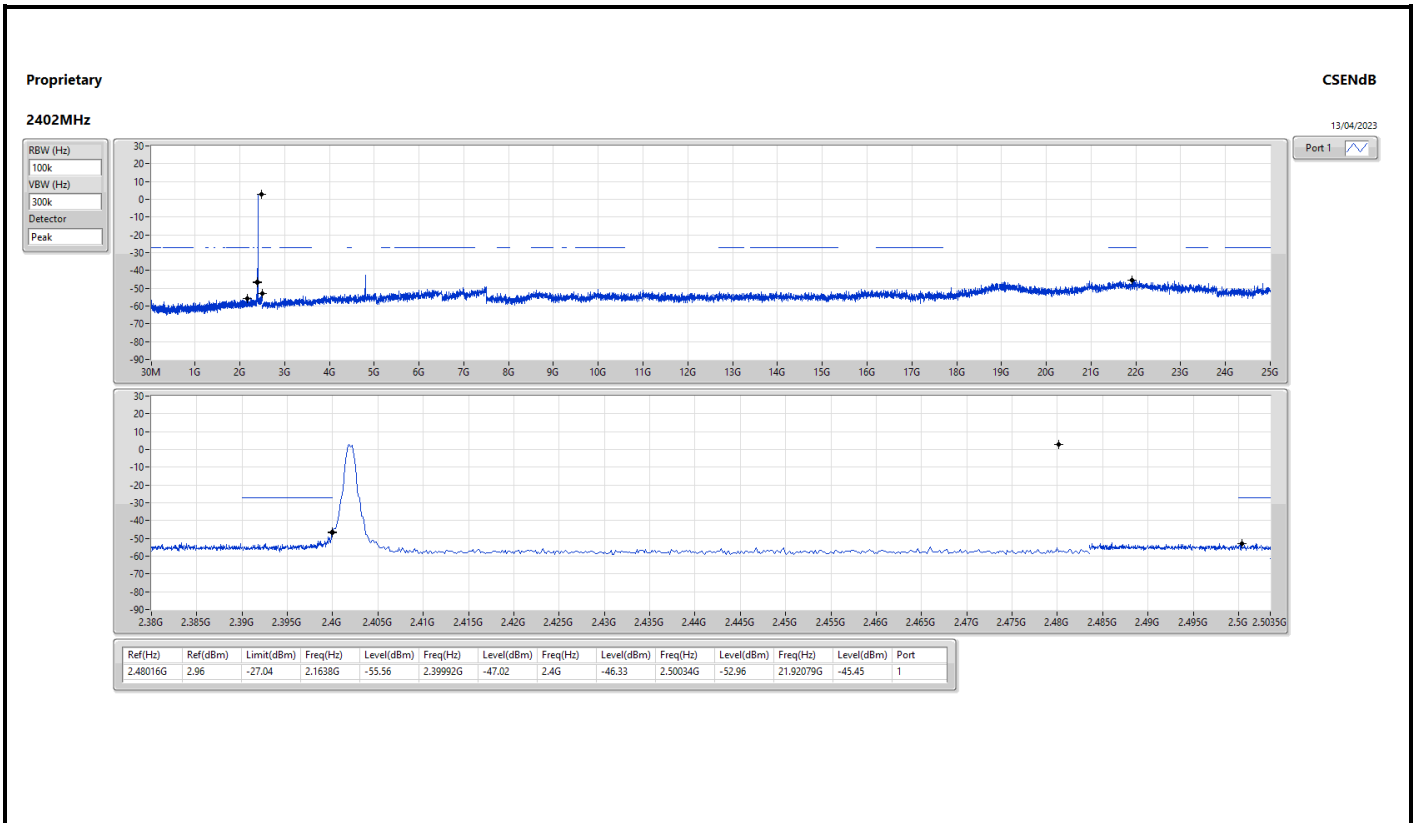
Summary

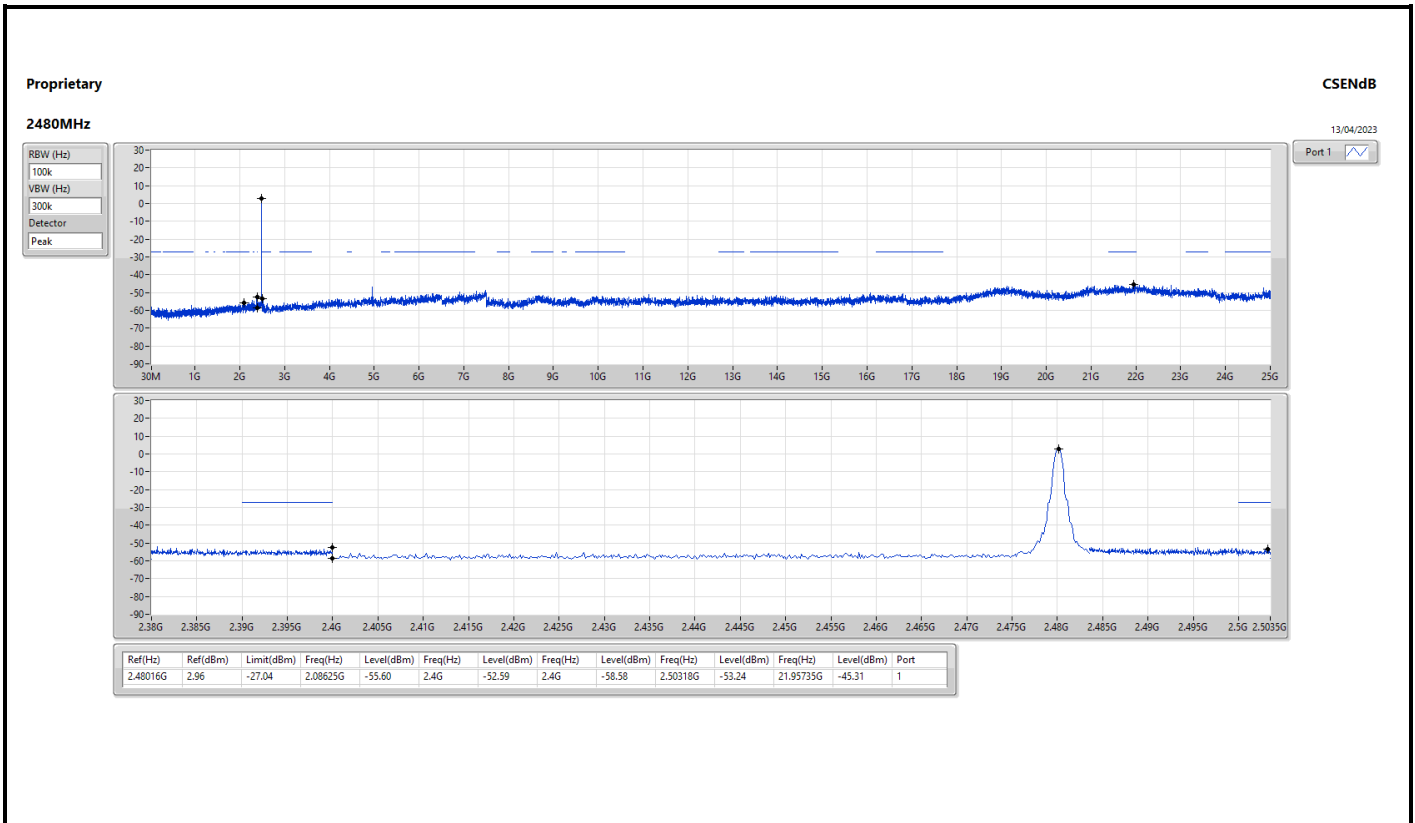
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proprietary	Pass	2.48016G	2.96	-27.04	2.1638G	-55.56	2.39992G	-47.02	2.4G	-46.33	2.50034G	-52.96	21.92079G	-45.45	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
Proprietary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.48016G	2.96	-27.04	2.1638G	-55.56	2.39992G	-47.02	2.4G	-46.33	2.50034G	-52.96	21.92079G	-45.45	1
2440MHz	Pass	2.48016G	2.96	-27.04	1.769G	-55.99	2.39716G	-52.82	2.4G	-58.53	2.50118G	-53.75	21.59178G	-45.34	1
2480MHz	Pass	2.48016G	2.96	-27.04	2.08625G	-55.60	2.4G	-52.59	2.4G	-58.58	2.50318G	-53.24	21.95735G	-45.31	1







Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
Proprietary	Pass	PK	30M	34.68	40.00	-5.32	3	Horizontal	0	1.00

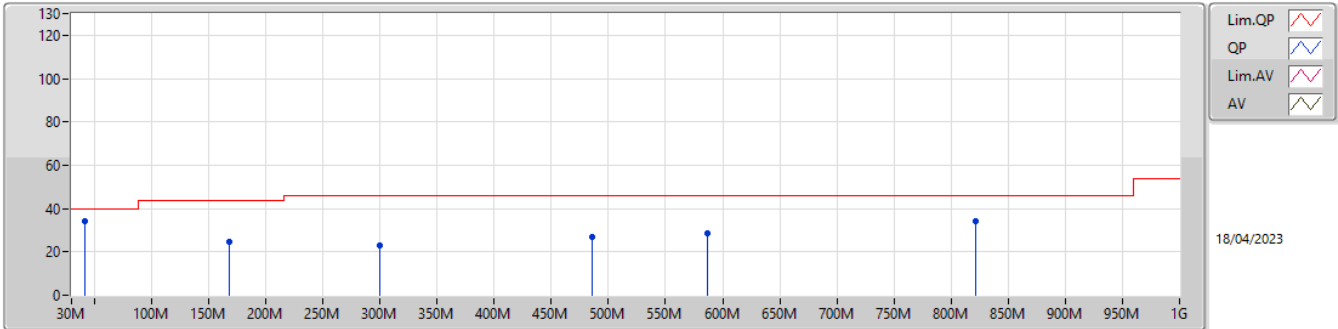


Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Proprietary	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	41.64M	34.23	40.00	-5.77	3	Vertical	360	1.00
2440MHz	Pass	PK	167.74M	24.91	43.50	-18.59	3	Vertical	360	1.00
2440MHz	Pass	PK	299.66M	23.10	46.00	-22.90	3	Vertical	360	1.00
2440MHz	Pass	PK	485.9M	27.09	46.00	-18.91	3	Vertical	360	1.00
2440MHz	Pass	PK	586.78M	28.51	46.00	-17.49	3	Vertical	360	1.00
2440MHz	Pass	PK	821.52M	33.96	46.00	-12.04	3	Vertical	360	1.00
2440MHz	Pass	PK	30M	34.68	40.00	-5.32	3	Horizontal	0	1.00
2440MHz	Pass	PK	152.22M	25.30	43.50	-18.20	3	Horizontal	0	1.00
2440MHz	Pass	PK	301.6M	26.06	46.00	-19.94	3	Horizontal	0	1.00
2440MHz	Pass	PK	627.52M	30.47	46.00	-15.53	3	Horizontal	0	1.00
2440MHz	Pass	PK	823.46M	32.13	46.00	-13.87	3	Horizontal	0	1.00
2440MHz	Pass	PK	986.42M	35.72	54.00	-18.28	3	Horizontal	0	1.00

2.4-2.4835GHz_Proprietary

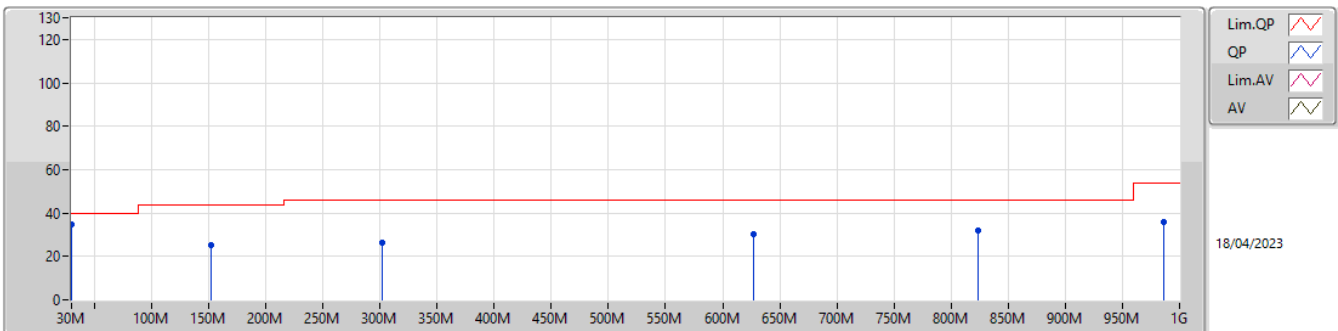
2440MHz_Fixture



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	41.64M	34.23	40.00	-5.77	-8.61	3	Vertical	360	1.00	42.84	17.86	1.06	27.53
PK	167.74M	24.91	43.50	-18.59	-9.93	3	Vertical	360	1.00	34.84	14.96	2.17	27.06
PK	299.66M	23.10	46.00	-22.90	-5.36	3	Vertical	360	1.00	28.46	18.30	2.95	26.61
PK	485.9M	27.09	46.00	-18.91	-1.08	3	Vertical	360	1.00	28.17	22.82	3.81	27.71
PK	586.78M	28.51	46.00	-17.49	1.10	3	Vertical	360	1.00	27.41	24.79	4.27	27.96
PK	821.52M	33.96	46.00	-12.04	5.09	3	Vertical	360	1.00	28.87	27.66	5.10	27.67

2.4-2.4835GHz_Proprietary

2440MHz_Fixture



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	30M	34.68	40.00	-5.32	-2.62	3	Horizontal	0	1.00	37.30	24.06	0.90	27.58
PK	152.22M	25.30	43.50	-18.20	-8.97	3	Horizontal	0	1.00	34.27	16.10	2.07	27.14
PK	301.6M	26.06	46.00	-19.94	-5.37	3	Horizontal	0	1.00	31.43	18.29	2.96	26.62
PK	627.52M	30.47	46.00	-15.53	1.95	3	Horizontal	0	1.00	28.52	25.50	4.44	27.99
PK	823.46M	32.13	46.00	-13.87	5.18	3	Horizontal	0	1.00	26.95	27.72	5.11	27.65
PK	986.42M	35.72	54.00	-18.28	8.34	3	Horizontal	0	1.00	27.38	29.94	5.59	27.19



Summary

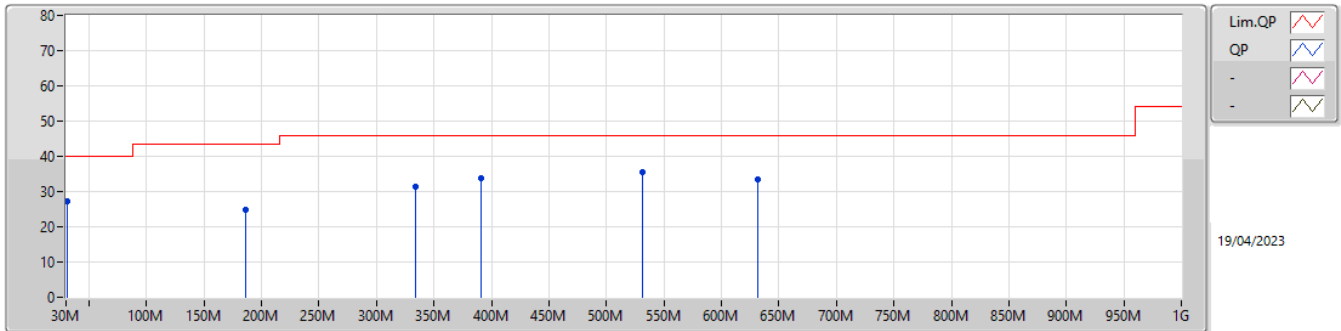
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Condition
Mode 2	Pass	PK	714.82M	37.82	46.00	-8.18	2.91	Horizontal



Result

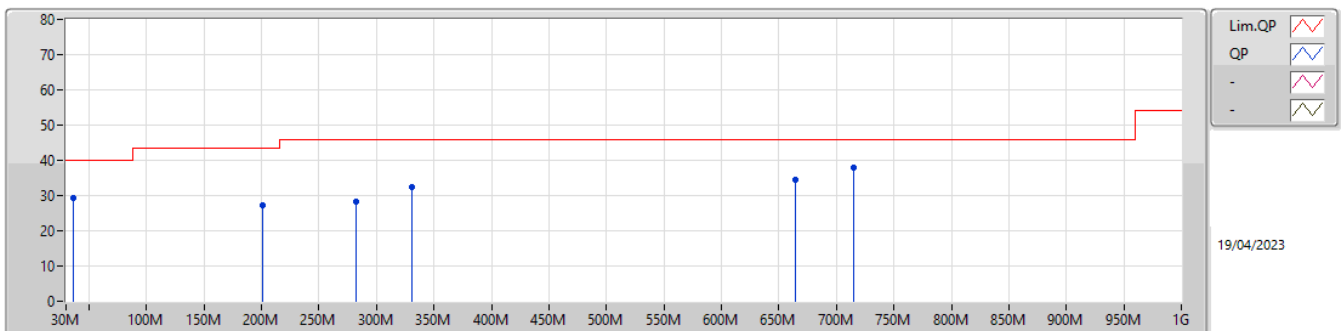
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)
Mode 2	Pass	PK	31.54M	27.26	40.00	-12.74	-3.30	3	Vertical	360	1.00
Mode 2	Pass	PK	185.69M	24.95	43.50	-18.55	-10.72	3	Vertical	360	1.00
Mode 2	Pass	PK	333.61M	31.36	46.00	-14.64	-4.75	3	Vertical	360	1.00
Mode 2	Pass	PK	391.45M	33.87	46.00	-12.13	-3.23	3	Vertical	360	1.00
Mode 2	Pass	PK	530.96M	35.47	46.00	-10.53	-0.73	3	Vertical	360	1.00
Mode 2	Pass	PK	631.4M	33.30	46.00	-12.70	2.00	3	Vertical	360	1.00
Mode 2	Pass	PK	35.82M	29.23	40.00	-10.77	-5.28	3	Horizontal	0	1.00
Mode 2	Pass	PK	200.72M	27.24	43.50	-16.26	-10.37	3	Horizontal	0	1.00
Mode 2	Pass	PK	282.2M	28.22	46.00	-17.78	-5.93	3	Horizontal	0	1.00
Mode 2	Pass	PK	330.7M	32.46	46.00	-13.54	-4.81	3	Horizontal	0	1.00
Mode 2	Pass	PK	664.38M	34.64	46.00	-11.36	1.98	3	Horizontal	0	1.00
Mode 2	Pass	PK	714.82M	37.82	46.00	-8.18	2.91	3	Horizontal	0	1.00

Radiated Emissions below 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	31.54M	27.26	40.00	-12.74	-3.30	3	Vertical	360	1.00	-	30.56	23.34	0.92	27.56
PK	185.69M	24.95	43.50	-18.55	-10.72	3	Vertical	360	1.00	-	35.67	13.94	2.30	26.96
PK	333.61M	31.36	46.00	-14.64	-4.75	3	Vertical	360	1.00	-	36.11	18.91	3.12	26.78
PK	391.45M	33.87	46.00	-12.13	-3.23	3	Vertical	360	1.00	-	37.10	20.52	3.38	27.13
PK	530.96M	35.47	46.00	-10.53	-0.73	3	Vertical	360	1.00	-	36.20	23.19	3.99	27.91
PK	631.4M	33.30	46.00	-12.70	2.00	3	Vertical	360	1.00	-	31.30	25.55	4.45	28.00

Radiated Emissions below 1GHz_Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	35.82M	29.23	40.00	-10.77	-5.28	3	Horizontal	0	1.00	-	34.51	21.25	0.99	27.52
PK	200.72M	27.24	43.50	-16.26	-10.37	3	Horizontal	0	1.00	-	37.61	14.12	2.40	26.89
PK	282.2M	28.22	46.00	-17.78	-5.93	3	Horizontal	0	1.00	-	34.15	17.85	2.85	26.63
PK	330.7M	32.46	46.00	-13.54	-4.81	3	Horizontal	0	1.00	-	37.27	18.84	3.11	26.76
PK	664.38M	34.64	46.00	-11.36	1.98	3	Horizontal	0	1.00	-	32.66	25.43	4.54	27.99
PK	714.82M	37.82	46.00	-8.18	2.91	3	Horizontal	0	1.00	-	34.91	26.09	4.66	27.84



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-
Proprietary	Pass	AV	2.4968G	46.22	54.00	-7.78	3	Horizontal	320	1.37

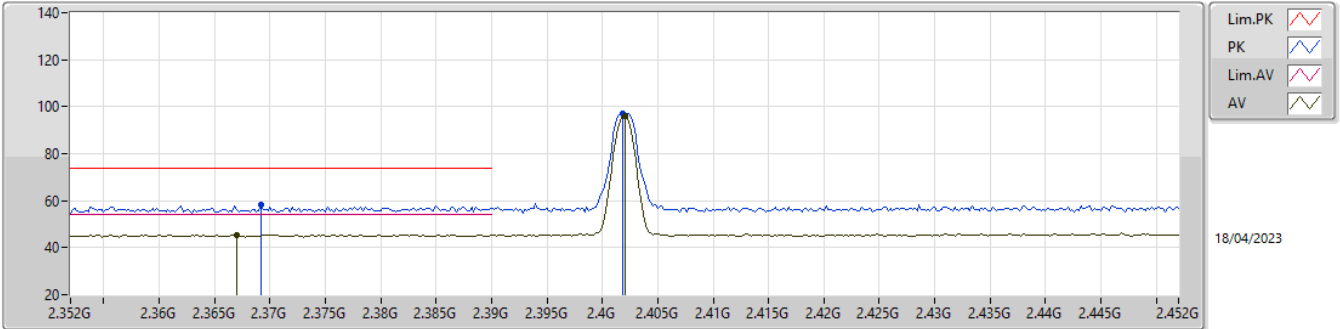


Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
Proprietary	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	AV	2.367G	45.48	54.00	-8.52	3	Vertical	149	2.43
2402MHz	Pass	AV	2.402G	95.99	Inf	-Inf	3	Vertical	149	2.43
2402MHz	Pass	PK	2.3692G	58.25	74.00	-15.75	3	Vertical	149	2.43
2402MHz	Pass	PK	2.4018G	97.08	Inf	-Inf	3	Vertical	149	2.43
2402MHz	Pass	AV	2.3856G	45.57	54.00	-8.43	3	Horizontal	334	1.41
2402MHz	Pass	AV	2.402G	100.84	Inf	-Inf	3	Horizontal	334	1.41
2402MHz	Pass	PK	2.3864G	57.63	74.00	-16.37	3	Horizontal	334	1.41
2402MHz	Pass	PK	2.4018G	101.93	Inf	-Inf	3	Horizontal	334	1.41
2402MHz	Pass	AV	4.80349G	32.59	54.00	-21.41	3	Vertical	144	1.50
2402MHz	Pass	PK	4.80348G	44.99	74.00	-29.01	3	Vertical	144	1.50
2402MHz	Pass	AV	4.80357G	34.40	54.00	-19.60	3	Horizontal	315	1.00
2402MHz	Pass	PK	4.80345G	46.95	74.00	-27.05	3	Horizontal	315	1.00
2440MHz	Pass	AV	2.364G	45.99	54.00	-8.01	3	Vertical	147	2.74
2440MHz	Pass	AV	2.44G	95.78	Inf	-Inf	3	Vertical	147	2.74
2440MHz	Pass	AV	2.4964G	46.12	54.00	-7.88	3	Vertical	147	2.74
2440MHz	Pass	PK	2.3524G	57.94	74.00	-16.06	3	Vertical	147	2.74
2440MHz	Pass	PK	2.4404G	96.86	Inf	-Inf	3	Vertical	147	2.74
2440MHz	Pass	PK	2.4992G	58.08	74.00	-15.92	3	Vertical	147	2.74
2440MHz	Pass	AV	2.3788G	45.59	54.00	-8.41	3	Horizontal	320	1.37
2440MHz	Pass	AV	2.44G	101.18	Inf	-Inf	3	Horizontal	320	1.37
2440MHz	Pass	AV	2.4968G	46.22	54.00	-7.78	3	Horizontal	320	1.37
2440MHz	Pass	PK	2.3748G	57.85	74.00	-16.15	3	Horizontal	320	1.37
2440MHz	Pass	PK	2.4404G	102.29	Inf	-Inf	3	Horizontal	320	1.37
2440MHz	Pass	PK	2.5G	58.01	74.00	-15.99	3	Horizontal	320	1.37
2440MHz	Pass	PK	4.87958G	45.67	74.00	-28.33	3	Vertical	145	2.66
2440MHz	Pass	AV	4.87978G	32.81	54.00	-21.19	3	Vertical	145	2.66
2440MHz	Pass	AV	4.87976G	36.08	54.00	-17.92	3	Horizontal	321	1.03
2440MHz	Pass	PK	4.88051G	46.96	74.00	-27.04	3	Horizontal	321	1.03
2480MHz	Pass	AV	2.48G	90.96	Inf	-Inf	3	Vertical	127	1.54
2480MHz	Pass	AV	2.4874G	46.21	54.00	-7.79	3	Vertical	127	1.54
2480MHz	Pass	PK	2.4802G	92.19	Inf	-Inf	3	Vertical	127	1.54
2480MHz	Pass	PK	2.4932G	58.27	74.00	-15.73	3	Vertical	127	1.54
2480MHz	Pass	AV	2.48G	100.18	Inf	-Inf	3	Horizontal	318	2.01
2480MHz	Pass	AV	2.4838G	46.22	54.00	-7.78	3	Horizontal	318	2.01
2480MHz	Pass	PK	2.4802G	101.28	Inf	-Inf	3	Horizontal	318	2.01
2480MHz	Pass	PK	2.4838G	58.51	74.00	-15.49	3	Horizontal	318	2.01
2480MHz	Pass	AV	4.95949G	34.33	54.00	-19.67	3	Vertical	139	1.22
2480MHz	Pass	PK	4.96058G	46.50	74.00	-27.50	3	Vertical	139	1.22
2480MHz	Pass	AV	4.95954G	36.81	54.00	-17.19	3	Horizontal	316	1.00
2480MHz	Pass	PK	4.96082G	47.32	74.00	-26.68	3	Horizontal	316	1.00

2.4-2.4835GHz_Proprietary

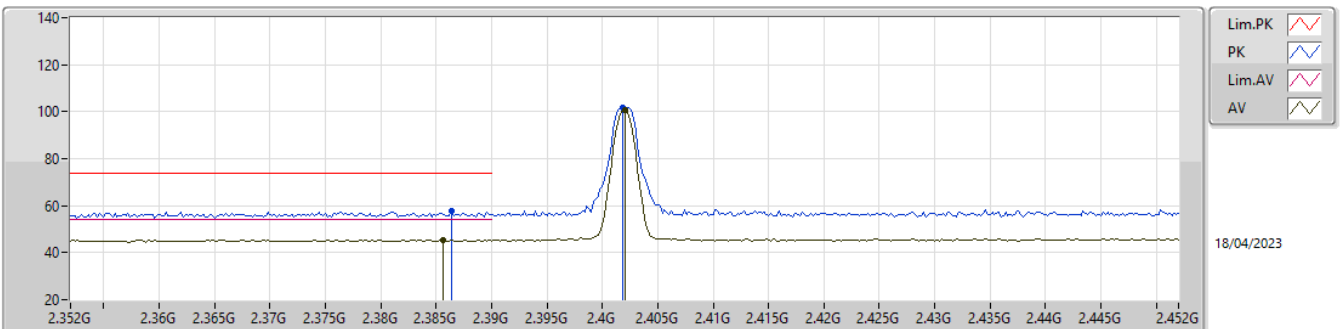
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.367G	45.48	54.00	-8.52	31.89	3	Vertical	149	2.43	13.59	27.40	4.49	-
AV	2.402G	95.99	Inf	-Inf	32.07	3	Vertical	149	2.43	63.92	27.60	4.47	-
PK	2.3692G	58.25	74.00	-15.75	31.91	3	Vertical	149	2.43	26.34	27.42	4.49	-
PK	2.4018G	97.08	Inf	-Inf	32.07	3	Vertical	149	2.43	65.01	27.60	4.47	-

2.4-2.4835GHz_Proprietary

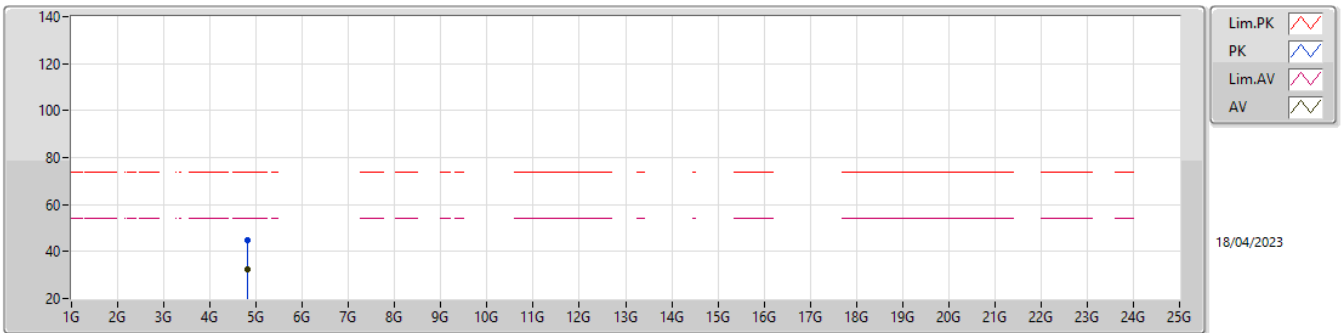
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3856G	45.57	54.00	-8.43	31.99	3	Horizontal	334	1.41	13.58	27.51	4.48	-
AV	2.402G	100.84	Inf	-Inf	32.07	3	Horizontal	334	1.41	68.77	27.60	4.47	-
PK	2.3864G	57.63	74.00	-16.37	32.00	3	Horizontal	334	1.41	25.63	27.52	4.48	-
PK	2.4018G	101.93	Inf	-Inf	32.07	3	Horizontal	334	1.41	69.86	27.60	4.47	-

2.4-2.4835GHz_Proprietary

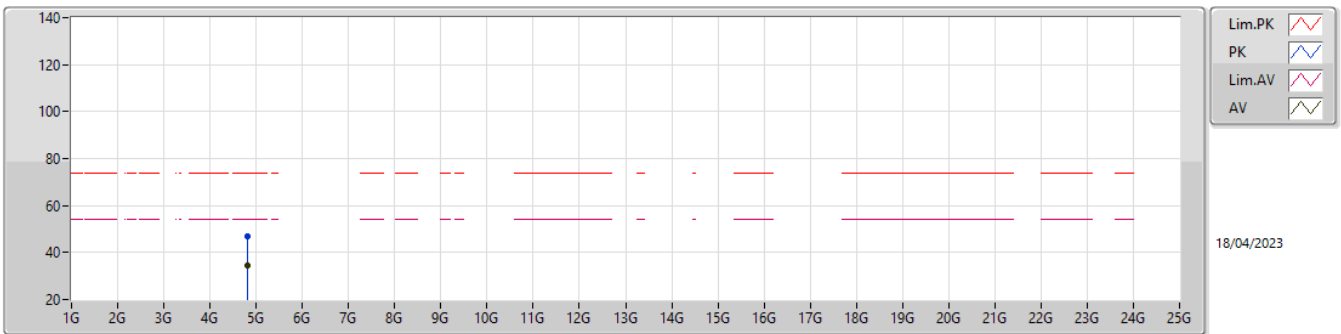
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80349G	32.59	54.00	-21.41	4.93	3	Vertical	144	1.50	27.66	32.32	6.90	34.29
PK	4.80348G	44.99	74.00	-29.01	4.93	3	Vertical	144	1.50	40.06	32.32	6.90	34.29

2.4-2.4835GHz_Proprietary

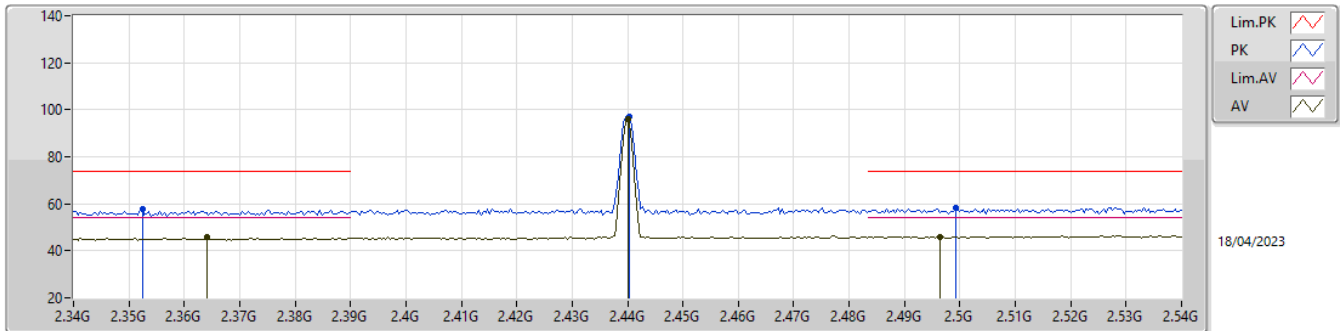
2402MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.80357G	34.40	54.00	-19.60	4.93	3	Horizontal	315	1.00	29.47	32.32	6.90	34.29
PK	4.80345G	46.95	74.00	-27.05	4.93	3	Horizontal	315	1.00	42.02	32.32	6.90	34.29

2.4-2.4835GHz_Proprietary

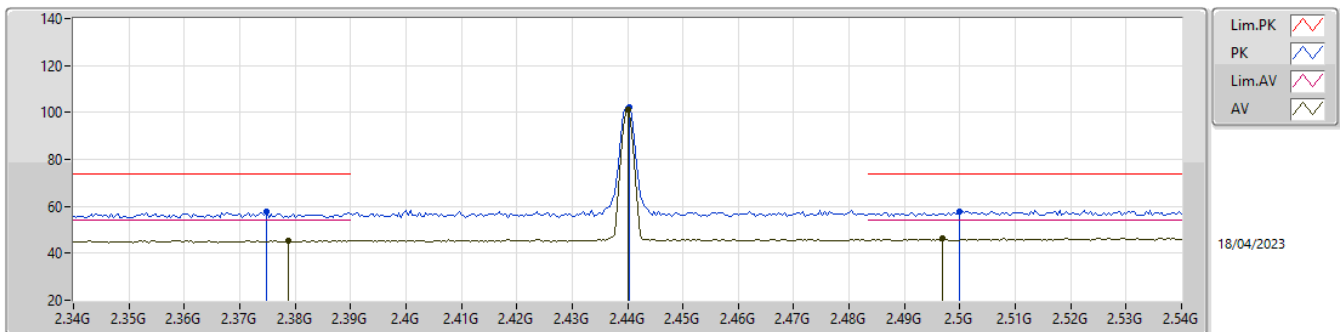
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.364G	45.99	54.00	-8.01	31.87	3	Vertical	147	2.74	14.12	27.38	4.49	-
AV	2.44G	95.78	Inf	-Inf	32.16	3	Vertical	147	2.74	63.62	27.68	4.48	-
AV	2.4964G	46.12	54.00	-7.88	32.46	3	Vertical	147	2.74	13.66	27.98	4.48	-
PK	2.3524G	57.94	74.00	-16.06	31.81	3	Vertical	147	2.74	26.13	27.31	4.50	-
PK	2.4404G	96.86	Inf	-Inf	32.16	3	Vertical	147	2.74	64.70	27.68	4.48	-
PK	2.4992G	58.08	74.00	-15.92	32.48	3	Vertical	147	2.74	25.60	28.00	4.48	-

2.4-2.4835GHz_Proprietary

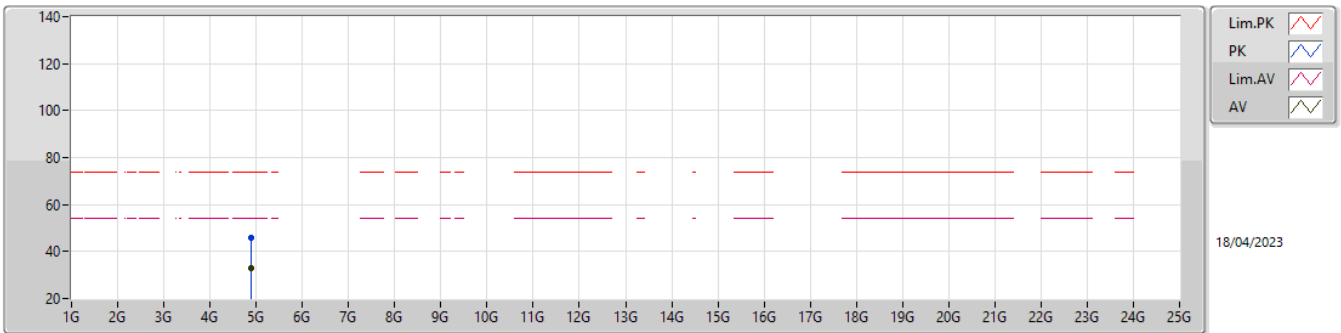
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.3788G	45.59	54.00	-8.41	31.95	3	Horizontal	320	1.37	13.64	27.47	4.48	-
AV	2.44G	101.18	Inf	-Inf	32.16	3	Horizontal	320	1.37	69.02	27.68	4.48	-
AV	2.4968G	46.22	54.00	-7.78	32.46	3	Horizontal	320	1.37	13.76	27.98	4.48	-
PK	2.3748G	57.85	74.00	-16.15	31.94	3	Horizontal	320	1.37	25.91	27.45	4.49	-
PK	2.4404G	102.29	Inf	-Inf	32.16	3	Horizontal	320	1.37	70.13	27.68	4.48	-
PK	2.5G	58.01	74.00	-15.99	32.48	3	Horizontal	320	1.37	25.53	28.00	4.48	-

2.4-2.4835GHz_Proprietary

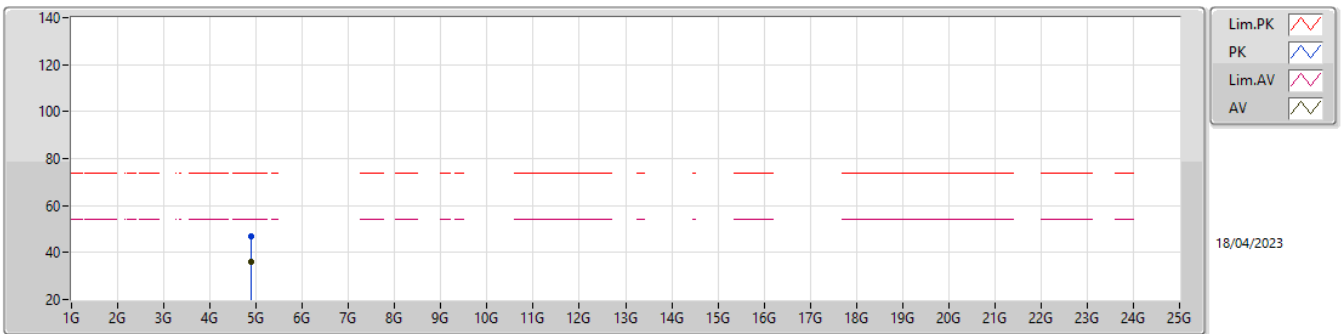
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	4.87958G	45.67	74.00	-28.33	5.34	3	Vertical	145	2.66	40.33	32.72	6.90	34.28
AV	4.87978G	32.81	54.00	-21.19	5.34	3	Vertical	145	2.66	27.47	32.72	6.90	34.28

2.4-2.4835GHz_Proprietary

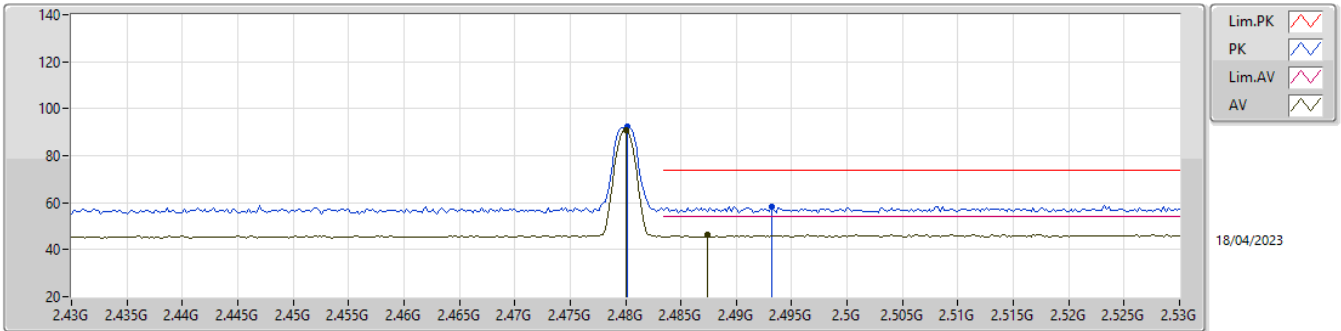
2440MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.87976G	36.08	54.00	-17.92	5.34	3	Horizontal	321	1.03	30.74	32.72	6.90	34.28
PK	4.88051G	46.96	74.00	-27.04	5.34	3	Horizontal	321	1.03	41.62	32.72	6.90	34.28

2.4-2.4835GHz_Proprietary

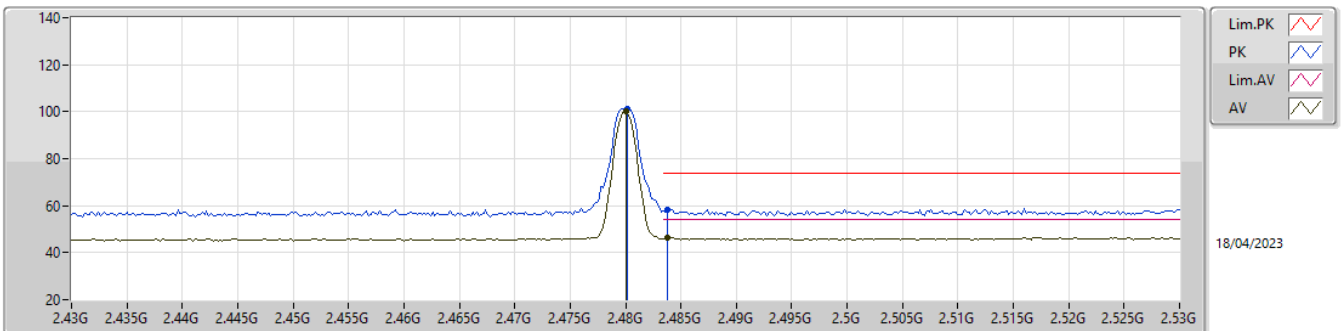
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	90.96	Inf	-Inf	32.36	3	Vertical	127	1.54	58.60	27.88	4.48	-
AV	2.4874G	46.21	54.00	-7.79	32.40	3	Vertical	127	1.54	13.81	27.92	4.48	-
PK	2.4802G	92.19	Inf	-Inf	32.36	3	Vertical	127	1.54	59.83	27.88	4.48	-
PK	2.4932G	58.27	74.00	-15.73	32.44	3	Vertical	127	1.54	25.83	27.96	4.48	-

2.4-2.4835GHz_Proprietary

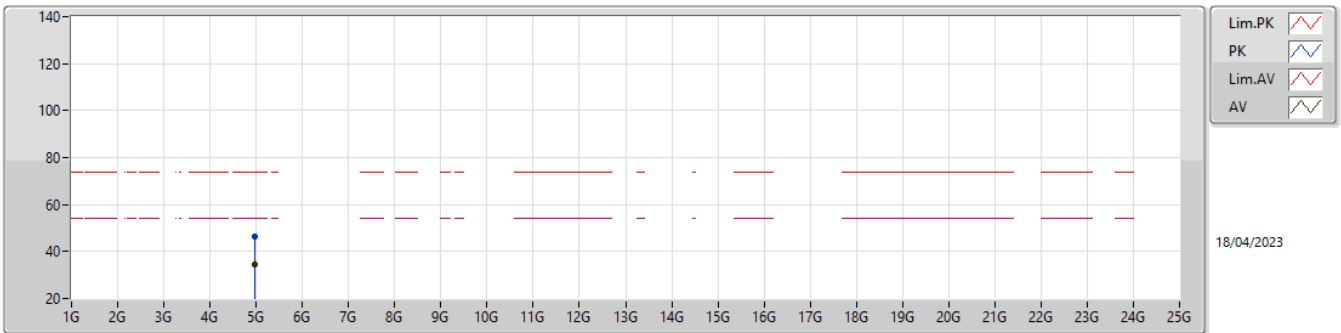
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	2.48G	100.18	Inf	-Inf	32.36	3	Horizontal	318	2.01	67.82	27.88	4.48	-
AV	2.4838G	46.22	54.00	-7.78	32.38	3	Horizontal	318	2.01	13.84	27.90	4.48	-
PK	2.4802G	101.28	Inf	-Inf	32.36	3	Horizontal	318	2.01	68.92	27.88	4.48	-
PK	2.4838G	58.51	74.00	-15.49	32.38	3	Horizontal	318	2.01	26.13	27.90	4.48	-

2.4-2.4835GHz_Proprietary

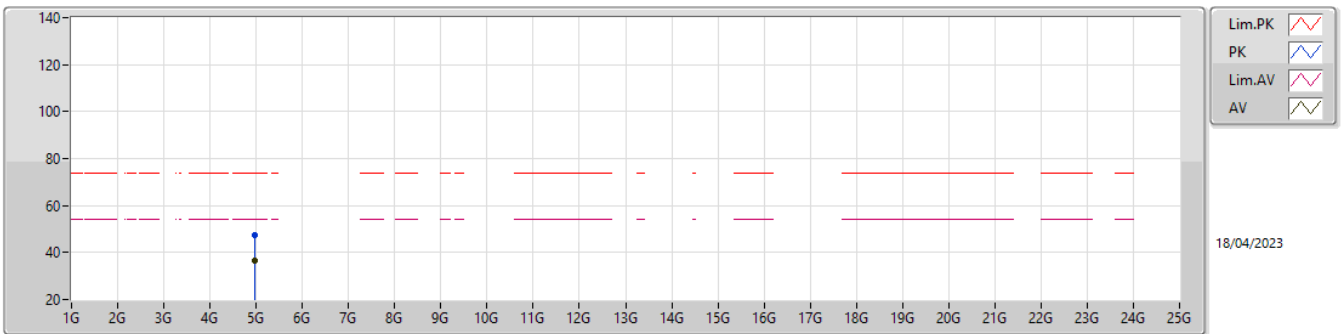
2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95949G	34.33	54.00	-19.67	5.76	3	Vertical	139	1.22	28.57	33.12	6.91	34.27
PK	4.96058G	46.50	74.00	-27.50	5.76	3	Vertical	139	1.22	40.74	33.12	6.91	34.27

2.4-2.4835GHz_Proprietary

2480MHz_TX



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	4.95954G	36.81	54.00	-17.19	5.76	3	Horizontal	316	1.00	31.05	33.12	6.91	34.27
PK	4.96082G	47.32	74.00	-26.68	5.76	3	Horizontal	316	1.00	41.56	33.12	6.91	34.27