Testing Laboratory
3787

RADIO TEST REPORT

FCC ID	:	TVE-241101
Equipment	:	Secured Wireless Access Point
Brand Name	:	FORTINET
Model Name	:	FAP-23JKxxxxxxxxxx, FortiAP 23JKxxxxxxxxxx, FORTIAP-23JKxxxxxxxxxx (Please refer to section 1.1.5 for detailed information.)
Applicant	:	Fortinet, Inc. 909 Kifer Road, Sunnyvale, CA 94086, USA
Manufacturer	:	Fortinet, Inc. 909 Kifer Road, Sunnyvale, CA 94086, USA
Standard	:	47 CFR FCC Part 15.247

The product was received on Nov. 26, 2024, and testing was started from Dec. 03, 2024 and completed on Feb. 13, 2025. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

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

Table of Contents

History of this test report **3**

Summary of Test Result **4**

1 General Description **5**

1.1 Information 5
1.2 Applicable Standards 10
1.3 Testing Location Information 10
1.4 Measurement Uncertainty 11

2 Test Configuration of EUT **12**

2.1 Test Channel Mode 12
2.2 The Worst Case Measurement Configuration 13
2.3 EUT Operation during Test 15
2.4 Accessories 15
2.5 Support Equipment 16
2.6 Test Setup Diagram 17

3 Transmitter Test Result **20**

3.1 AC Power-line Conducted Emissions 20
3.2 DTS Bandwidth 22
3.3 Maximum Conducted Output Power 23
3.4 Power Spectral Density 26
3.5 Emissions in Non-restricted Frequency Bands 28
3.6 Emissions in Restricted Frequency Bands 29

4 Test Equipment and Calibration Data **33**

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

Appendix B. Test Results of DTS Bandwidth

Appendix C. Test Results of Maximum Conducted Output Power

Appendix D. Test Results of Power Spectral Density

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

Appendix F. Test Results of Emissions in Restricted Frequency Bands

Appendix G. Test Results of Radiated Emission Co-location

Appendix H. Test Photos

Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR4N2218AE	01	Initial issue of report	Mar. 12, 2025

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	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

1. The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.
2. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.

Reviewed by: Sam Chen
Report Producer: Sandy Chuang

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
2.4G	BT-LE(1Mbps)	1	1
2.4G	BT-LE(500Kb/s)	1	1
2.4G	BT-LE(125Kb/s)	1	1
2.4G	BT-LE(2Mbps)	2	1

Note:
- Bluetooth LE uses a GFSK modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port				Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Bluetooth Zigbee					
1	2	2	-	-	WNC	95XPAD15.G78	Dipole	IPEX MHF1	Note 1
2	1	1	-	-	WNC	95XPAD15.G79	Dipole	IPEX MHF1	
3	-	-	2	1	WNC	95XPAD15.G82	Dipole	IPEX MHF1	
4	-	-	1	-	WNC	95XPAD15.G83	Dipole	IPEX MHF1	

Note 1:

Ant.	Gain (dBi)			
	WLAN 2.4GHz	WLAN 5GHz UNII1~4	WLAN 6GHz UNII5~8	Bluetooth Zigbee
1	3.6	6.3	-	-
2	3.6	6.3	-	-
3	-	-	4.2	4.2
4	-	-	4.2	-

Note 2: The above information was declared by manufacturer.

Note 3: Directional gain information

<For 2.4GHz and 5GHz>

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$
BF	$Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$	$Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$

Ex.

Directional Gain (NSS1) formula : $Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left[\sum_{k=1}^{N_{ANT}} g_{j,k}\right]^2}{N_{ANT}}\right]$

NSS1(g1,1) = $10^{G1/20}$; NSS1(g1,2)= $10^{G2/20}$; NSS1(g1,2)= $10^{G3/20}$; NSS1(g1,2)= $10^{G4/20}$

gj,k =(Nss1(g1,1) + Nss1(g1,2) + Nss1(g1,3) + Nss1(g1,4))^2

DG = 10 log[(Nss1(g1,1) + Nss1(g1,2) + Nss1(g1,3) + Nss1(g1,4))^2 / N_{ANT}] => 10 log[($10^{G1/20}$ + $10^{G2/20}$ + $10^{G3/20}$ + $10^{G4/20}$)^2 / N_{ANT}]

Where ;

2.4G G1= 3.6 dBi ;G2= 3.6 dBi ;

5G UNII-1 G1 = 6.3 dBi; G2 = 6.3 dBi;

5G UNII-2A G1 = 6.3 dBi; G2 = 6.3 dBi;

5G UNII-2C G1 = 6.3 dBi; G2 = 6.3 dBi;

5G UNII-3 G1 = 6.3 dBi; G2 = 6.3 dBi;

5G UNII-4 G1 = 6.3 dBi; G2 = 6.3 dBi;

2.4G DG = 6.61 dBi

5G UNII-1 DG = 9.31 dBi

5G UNII-2A DG = 9.31 dBi

5G UNII-2C DG = 9.31 dB

5G UNII-3 DG = 9.31 dBi

5G UNII-4 DG = 9.31 dBi

<For WLAN 2.4GHz>

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

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

<For WLAN 5GHz UNII1~4>

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

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

<For WLAN 6GHz UNII 5~8>

For IEEE 802.11ax/be mode (2TX/2RX)

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

<For Bluetooth or Zigbee> mode (1TX/1RX)

Only Port 1 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
BT-LE(1Mbps)	0.682	1.66	426.25u	3k
BT-LE(2Mbps)	0.386	4.13	241.25u	10k

Note:
- DC is Duty Cycle.DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QSPR (Version 6.00.00142.1)			
Support Mode	☒	LE 1M PHY: 1 Mb/s		
	☒	LE Coded PHY (S=2): 500 Kb/s		
	☒	LE Coded PHY (S=8): 125 Kb/s		
	☒	LE 2M PHY: 2 Mb/s		

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

Model Name	Description
FAP-23JKxxxxxxxxxx, FortiAP 23JKxxxxxxxxxx, FORTIAP-23JKxxxxxxxxxx	Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only

Note 1: From the above models, model: FAP-23JK was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.2 Applicable Standards

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

- 47 CFR FCC Part 15.247
- ANSI C63.10-2013

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

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

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Serway Lee	22.7~24.6 / 61~65	Dec. 05, 2024~ Jan. 09, 2025
Radiated Below 1GHz	03CH03-CB 03CH05-CB	Gordon Hung	22.2-22.6 / 59-61 21.9-22.4 / 60-62	Dec. 03, 2024~ Feb. 13, 2025
Radiated Above 1GHz	03CH03-CB 03CH04-CB	Gordon Hung	22.2-22.6 / 59-61 22.7-23.8 / 58-60	Dec. 03, 2024~ Feb. 13, 2025
Radiated Co-location	03CH01-CB	Gordon Hung	22.1-23.1 / 60-62	Dec. 03, 2024~ Feb. 13, 2025
AC Conduction	CO01-CB	Elvin Yeh	23~24 / 52~53	Dec. 30, 2024

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)	3.8 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.0 dB	Confidence levels of 95%
Conducted Emission	3.1 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.1 dB	Confidence levels of 95%
Bandwidth Measurement	2.1 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode
BT-LE(1Mbps)
2402MHz
2440MHz
2478MHz
2480MHz
BT-LE(2Mbps)
2402MHz
2440MHz
2478MHz
2480MHz

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	Normal Link
1	EUT_WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz+Bluetooth+powered by Adapter
2	EUT_WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz+Zigbee (TX)+powered by Adapter
3	EUT_WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz+Zigbee (RX)+powered by Adapter
Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~5 will follow this same test mode.	
4	EUT_WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz+Zigbee (TX)+powered by PT out port with PoE
5	EUT_WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz+Zigbee (TX)+powered by WAN/PoE IN 10G with PoE
For operating mode 5 is the worst case and it was record in this test report.	

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
After evaluating, the worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.	
1	EUT in Y axis_WLAN 2.4GHz+powered by Adapter
2	EUT in Y axis_WLAN 2.4GHz+powered by PT out port with PoE
3	EUT in Y axis_WLAN 2.4GHz+powered by WAN/PoE IN 10G with PoE
Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~7 will follow this same test mode.	
4	EUT in Y axis_WLAN 5GHz+powered by PT out port with PoE
5	EUT in Y axis_WLAN 6GHz+powered by PT out port with PoE
6	EUT in Y axis_Bluetooth+powered by PT out port with PoE
7	EUT in Y axis_Zibgee+powered by PT out port with PoE
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
After evaluating, the worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.	
1	EUT in Y axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
After evaluating, the worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.	
1	EUT in Y axis_WLAN 2.4GHz+WLAN 5GHz
2	EUT in Y axis_WLAN 6GHz+Bluetooth
3	EUT in Y axis_WLAN 6GHz+Zigbee
For operating mode 1 is the worst case and it was record in this test report.	
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT_WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz+Bluetooth
2	EUT_WLAN 2.4GHz+WLAN 5GHz+WLAN 6GHz+Zigbee
Refer to Sporton Test Report No.: FA4N2218 for Co-location RF Exposure Evaluation.	

Note: The Adapter and PoE below are for measurement only, would not be marketed.

The Adapter and PoE information as below:

Support Unit	Brand	Model Name
Adapter	FSP	FSP065-DWAN3
PoE	Microsemi	PD9501-10GC/AC

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

Wall-mounted*1

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	WAN/PoE IN 10G PC	ASUS	S300TA	TX2-RTL8821CE
B	2.4G NB	DELL	E6430	N/A
C	5G NB	DELL	E6430	N/A
D	6G Device	MediaTek	MT7927	N/A
E	6G NB	DELL	E7240	N/A
F	LAN1 NB	DELL	E6430	N/A
G	Device	FORTINET	FAP-23JK	N/A
H	PoE	Microsemi	PD9501-10GC/AC	N/A

For Radiated:

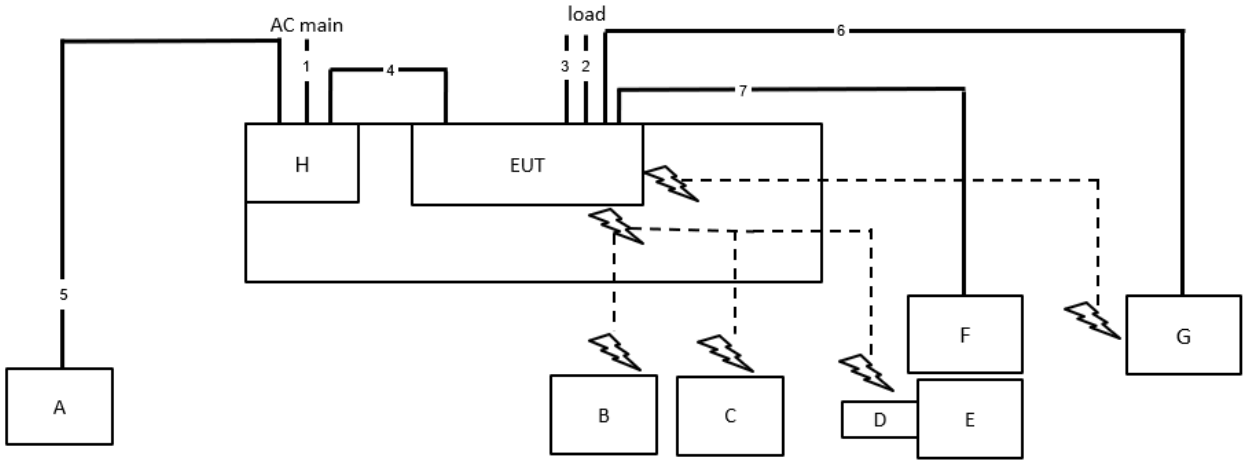
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	PoE	Microsemi	PD9501-10GC/AC	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Adapter	FSP	FSP065-DWAN3	N/A

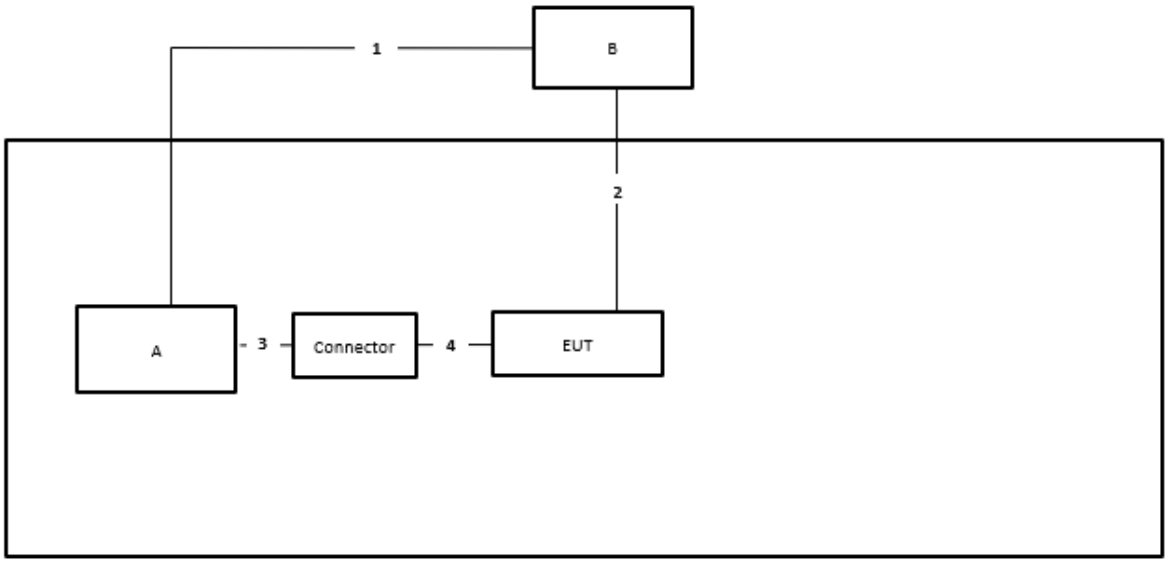
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



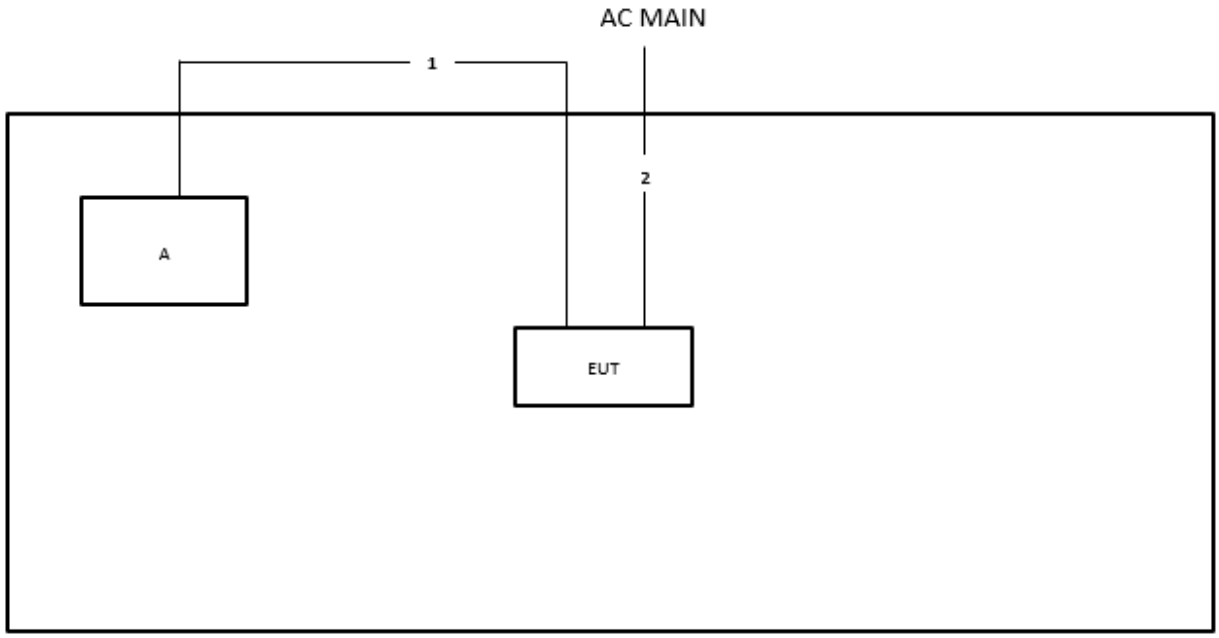
Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	Cat5e RJ-45 cable	No	1.5m
3	RJ-45 Console cable	No	1.5m
4	Cat6 RJ-45 cable	No	1m
5	Cat6 RJ-45 cable	No	10m
6	Cat5e RJ-45 cable	No	10m
7	Cat5e RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	10m
3	Console cable (RS232 to USB)	No	1m
4	Console cable (RS232 to RJ45)	No	1m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	1m
2	Power cable	No	1.2m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

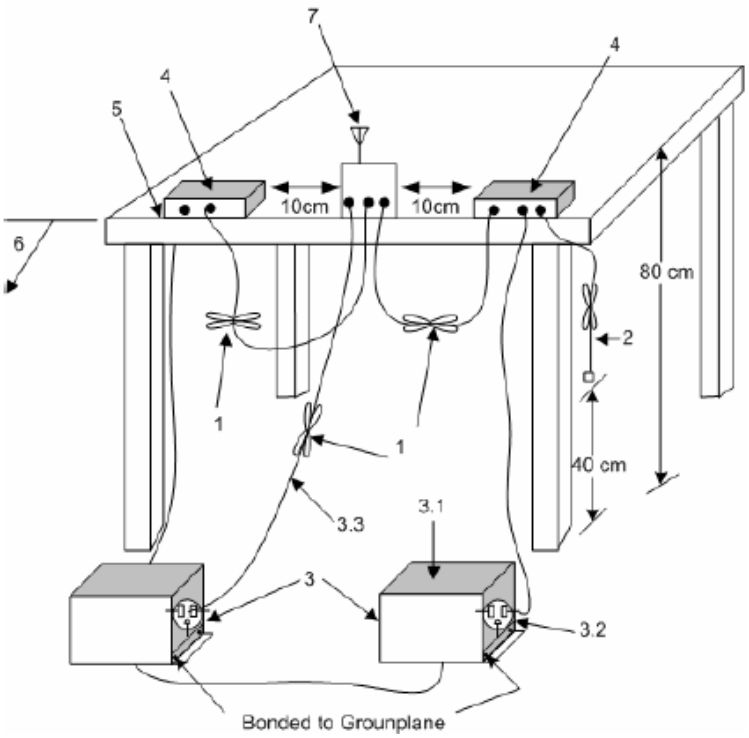
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

1.1.1. Measurement Results Calculation

The measured Level is calculated using:

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

b. Margin = -Limit + Level

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

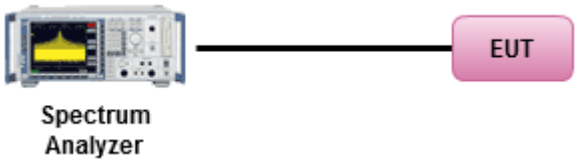
3.2.2 Measuring Instruments

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 FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


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
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 FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
	Measurement using a power meter (PM)
	☐ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
	☒ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC 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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


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

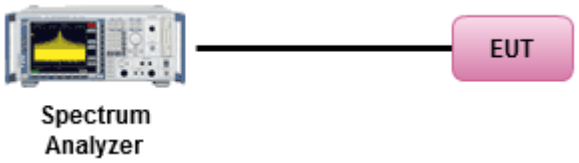
3.4.2 Measuring Instruments

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 FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.		
	[duty cycle ≥ 98% or external video / power trigger]		
▪ For conducted measurement.			
	▪ If The EUT supports multiple transmit chains using options given below:		
		☐	Option 1: Measure and sum the spectra across the outputs. Refer as FCC 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.
		☐	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density


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 (dBc)**
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 PSD 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 PSD level.	

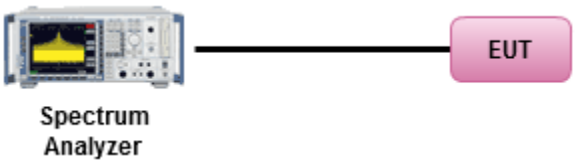
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


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 below30 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.

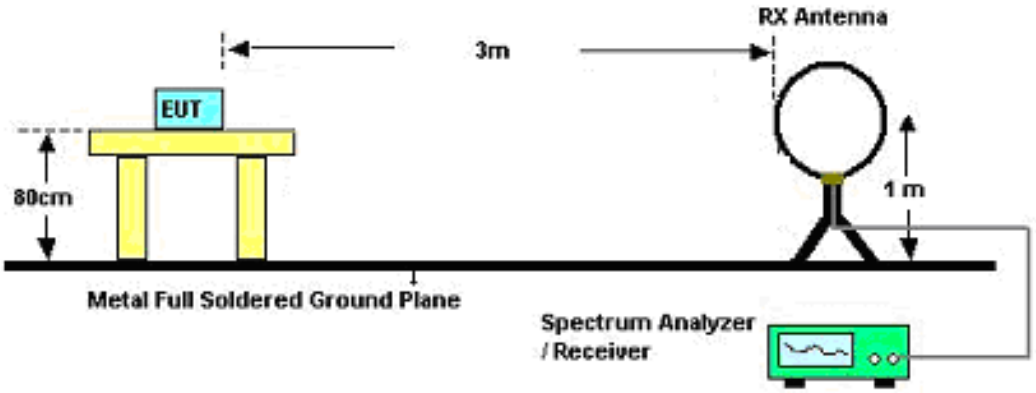
3.6.3 Test Procedures

Test Method
▪ The average emission levels shall be measured in [duty cycle ≥ 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 FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).
☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).
☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:
▪ Refer as FCC KDB 558074 clause 8.7 & c63.10 clause 11.13.1, 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 FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

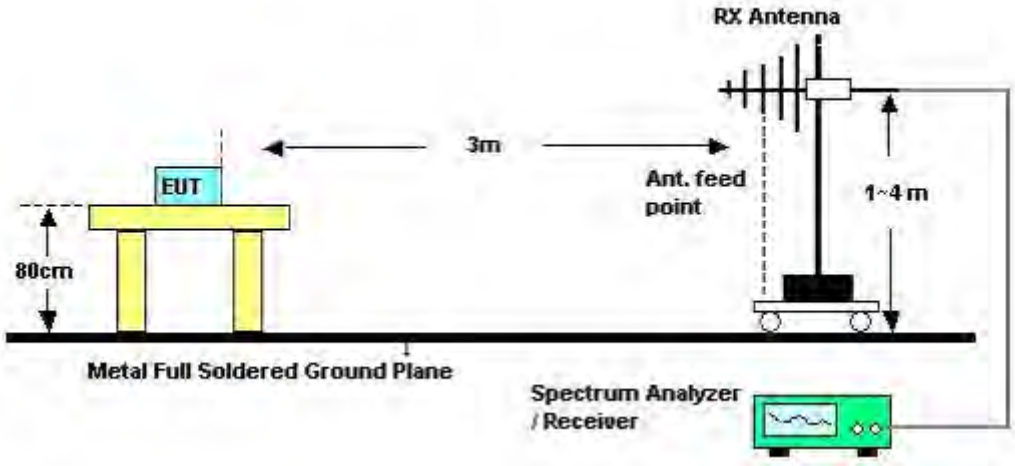
3.6.4 Test Setup

Emissions in Restricted Frequency Bands

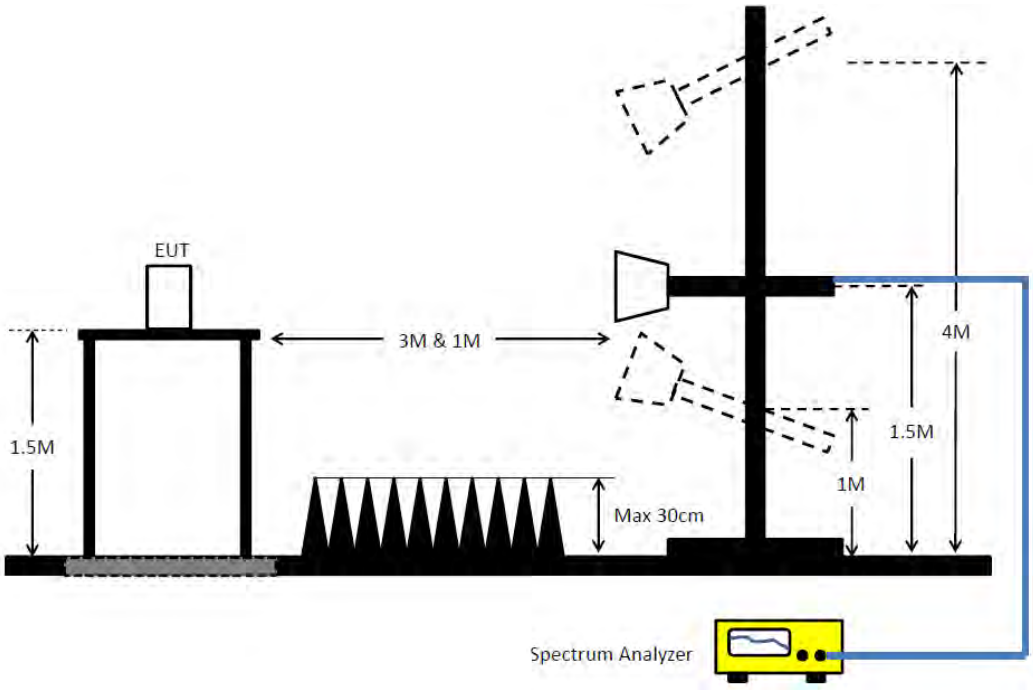
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Measurement Results Calculation

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

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 01, 2024	Feb. 28, 2025	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 19, 2024	Feb. 18, 2025	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 24, 2024	Apr. 23, 2025	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO01-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30 MHz	Oct. 16, 2024	Oct. 15, 2025	Radiation (03CH03-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH03-CB	30 MHz ~ 1 GHz	Jan. 18, 2024	Jan. 17, 2025	Radiation (03CH03-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH03-CB	30 MHz ~ 1 GHz	Jan. 17, 2025	Jan. 16, 2026	Radiation (03CH03-CB)
Bilog Antenna with 6dB Attenator	Schaffner & EMCI	CBL6112B& N-6-06	2888&AT-N0 605	30MHz ~ 1GHz	Jan. 18, 2024	Jan. 17, 2025	Radiation (03CH03-CB)
Bilog Antenna with 6dB Attenator	Schaffner & EMCI	CBL6112B& N-6-06	2888&AT-N0 605	30MHz ~ 1GHz	Jan. 17, 2025	Jan. 16, 2026	Radiation (03CH03-CB)
Amplifier	SGH	SGH301	20240606-1	30MHz ~ 1GHz	Jun. 04, 2024	Jun. 03, 2025	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 11, 2024	Jun. 10, 2025	Radiation (03CH03-CB)
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 21, 2024	Oct. 20, 2025	Radiation (03CH03-CB)
RF Cable-low	Woken	RG402	Low Cable-02+29	30MHz ~ 1GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE-EMI	V5.11.8	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH03-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 03, 2024	May 02, 2025	Radiation (03CH03-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1370	1GHz~18GHz	Jul. 11, 2024	Jul. 10, 2025	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA91702 52	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jun. 29, 2024	Jun. 28, 2025	Radiation (03CH03-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 11, 2024	Jun. 10, 2025	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH03-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE-15247 _FS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH03-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30 MHz	Oct. 16, 2024	Oct. 15, 2025	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 01, 2024	Jul. 31, 2025	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 23, 2024	Mar. 22, 2025	Radiation (03CH05-CB)
Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 02, 2024	May 01, 2025	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Apr. 17, 2024	Apr. 16, 2025	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 21, 2024	Oct. 20, 2025	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE-EMI	V5.11.8	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 22, 2024	Feb. 21, 2025	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1370	1GHz~18GHz	Jul. 11, 2024	Jul. 10, 2025	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH04-CB)
Pre-Amplifier	SGH	SGH5265	20211115-1	1~ 26.5GHz	Jan. 17, 2024	Jan. 16, 2025	Radiation (03CH04-CB)
Pre-Amplifier	SGH	SGH5265	20211115-1	1~ 26.5GHz	Jan. 16, 2025	Jan. 15, 2026	Radiation (03CH04-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH04-CB
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 19, 2024	Mar. 18, 2025	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH04-CB
Test Software	SPORTON	SENSE-15247 _FS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 04, 2024	May 03, 2025	Radiation (03CH01-CB)
Horn Antenna	ETS·Lindgren	3115	00143147	750MHz~18GHz	Oct. 18, 2024	Oct. 17, 2025	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH01-CB)

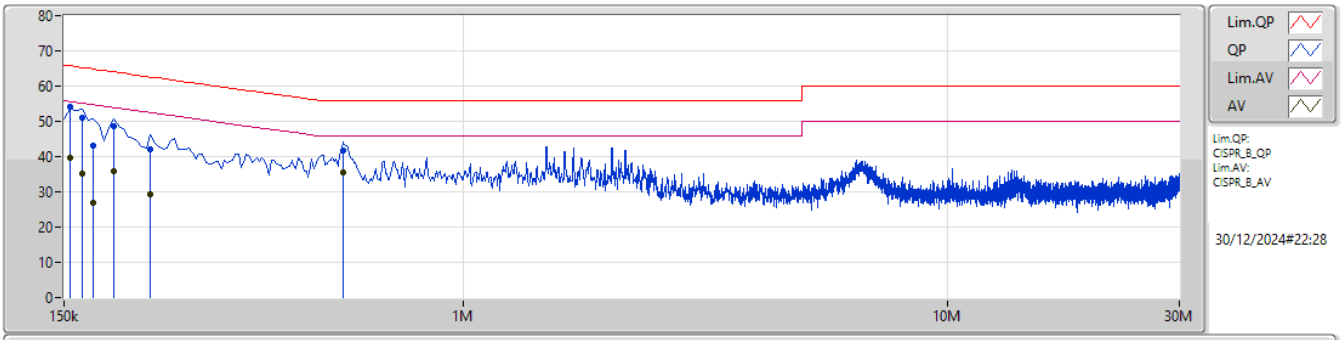
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 17, 2024	May 16, 2025	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 26, 2024	Apr. 25, 2025	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE-15247 _DTS	V5.11.18	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Jun. 11, 2024	Jun. 10, 2025	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Sep. 06, 2024	Sep. 05, 2025	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Sep. 06, 2024	Sep. 05, 2025	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-11	30MHz –18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-12	30MHz –18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-13	30MHz –18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz –18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1~18GHz	Oct. 02, 2024	Oct. 01, 2025	Conducted (TH03-CB)
Test Software	SPORTON	SENSE-15247 _FS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Conducted (TH03-CB)

Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

Summary

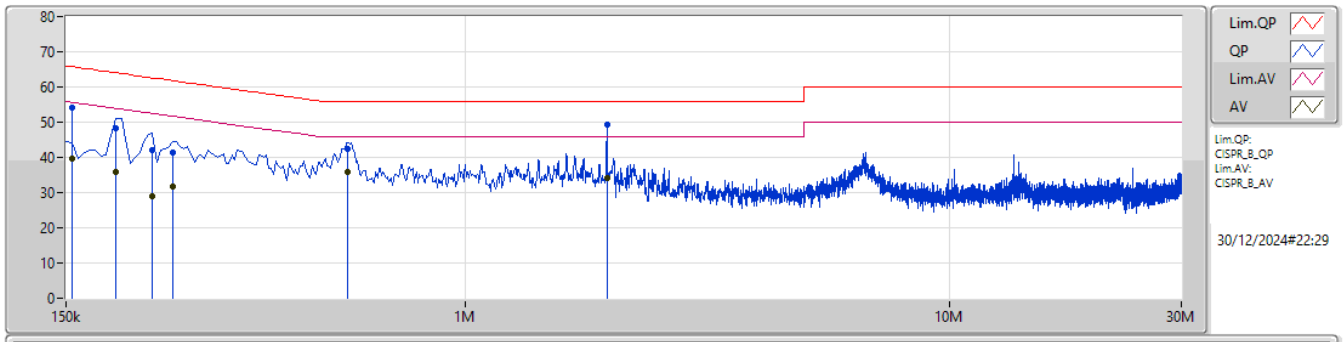
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 5	Pass	QP	1.959M	49.34	56.00	-6.66	Neutral

Mode 5



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	54.12	65.75	-11.63	10.04	Line	-	44.08	0.04	0.08	9.92
AV	154.5k	39.64	55.75	-16.11	10.04	Line	-	29.60	0.04	0.08	9.92
QP	163.5k	51.03	65.27	-14.24	10.04	Line	-	40.99	0.04	0.08	9.92
AV	163.5k	35.18	55.27	-20.09	10.04	Line	-	25.14	0.04	0.08	9.92
QP	172.5k	43.16	64.83	-21.67	10.04	Line	-	33.12	0.04	0.07	9.93
AV	172.5k	26.95	54.83	-27.88	10.04	Line	-	16.91	0.04	0.07	9.93
QP	190.5k	48.51	64.01	-15.50	10.05	Line	-	38.46	0.04	0.07	9.94
AV	190.5k	35.95	54.01	-18.06	10.05	Line	-	25.90	0.04	0.07	9.94
QP	226.5k	42.23	62.58	-20.35	10.09	Line	-	32.14	0.04	0.08	9.97
AV	226.5k	29.25	52.58	-23.33	10.09	Line	-	19.16	0.04	0.08	9.97
QP	564k	41.86	56.00	-14.14	10.26	Line	-	31.60	0.06	0.10	10.10
AV	564k	35.67	46.00	-10.33	10.26	Line	"Worst"	25.41	0.06	0.10	10.10

Mode 5



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	54.02	65.75	-11.73	10.06	Neutral	-	43.96	0.06	0.08	9.92
AV	154.5k	39.74	55.75	-16.01	10.06	Neutral	-	29.68	0.06	0.08	9.92
QP	190.5k	48.41	64.01	-15.60	10.07	Neutral	-	38.34	0.06	0.07	9.94
AV	190.5k	35.79	54.01	-18.22	10.07	Neutral	-	25.72	0.06	0.07	9.94
QP	226.5k	42.13	62.58	-20.45	10.11	Neutral	-	32.02	0.06	0.08	9.97
AV	226.5k	29.12	52.58	-23.46	10.11	Neutral	-	19.01	0.06	0.08	9.97
QP	249k	41.53	61.79	-20.26	10.12	Neutral	-	31.41	0.06	0.08	9.98
AV	249k	31.84	51.79	-19.95	10.12	Neutral	-	21.72	0.06	0.08	9.98
QP	573k	42.53	56.00	-13.47	10.27	Neutral	-	32.26	0.07	0.10	10.10
AV	573k	36.02	46.00	-9.98	10.27	Neutral	-	25.75	0.07	0.10	10.10
QP	1.959M	49.34	56.00	-6.66	10.20	Neutral	"Worst"	39.14	0.10	0.14	9.96
AV	1.959M	34.03	46.00	-11.97	10.20	Neutral	-	23.83	0.10	0.14	9.96

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)	637.5k	1.04M	1M04F1D	580k	1.038M
BT-LE(2Mbps)	560k	2.083M	2M08F1D	542.5k	2.071M

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

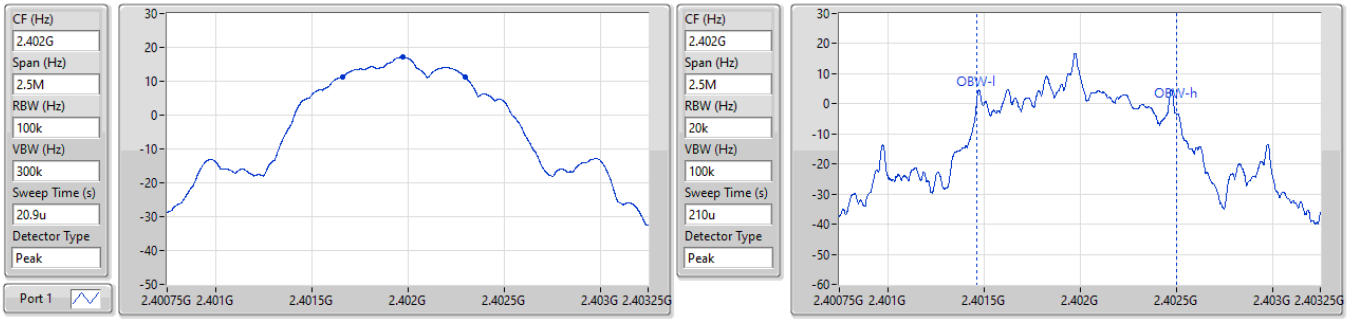
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	637.5k	1.04M
2440MHz	Pass	500k	580k	1.039M
2480MHz	Pass	500k	580k	1.038M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	542.5k	2.077M
2440MHz	Pass	500k	560k	2.071M
2480MHz	Pass	500k	550k	2.083M

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

2.4-2.4835GHz_BT-LE(1Mbps) **EBW-DTS**

2402MHz

05/12/2024

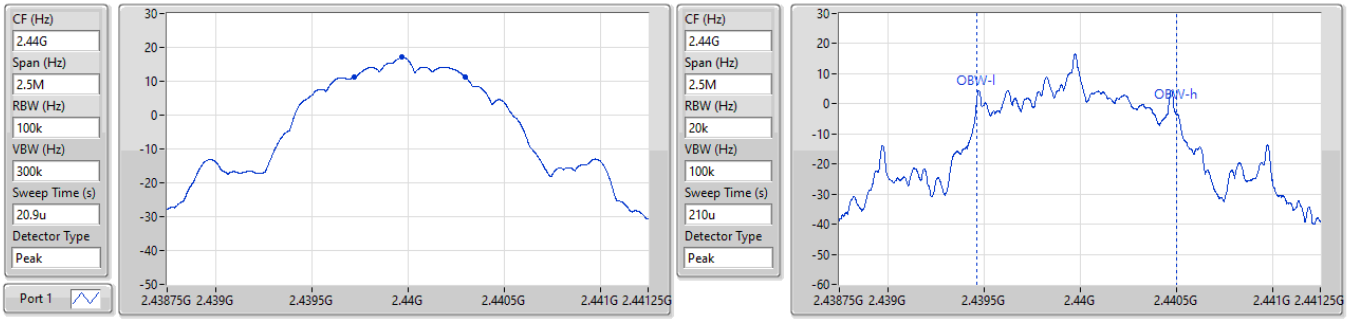


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
637.5k	2.40166G	2.402298G	1.04M	2.401464G	2.402504G	500k	1

2.4-2.4835GHz_BT-LE(1Mbps) **EBW-DTS**

2440MHz

05/12/2024

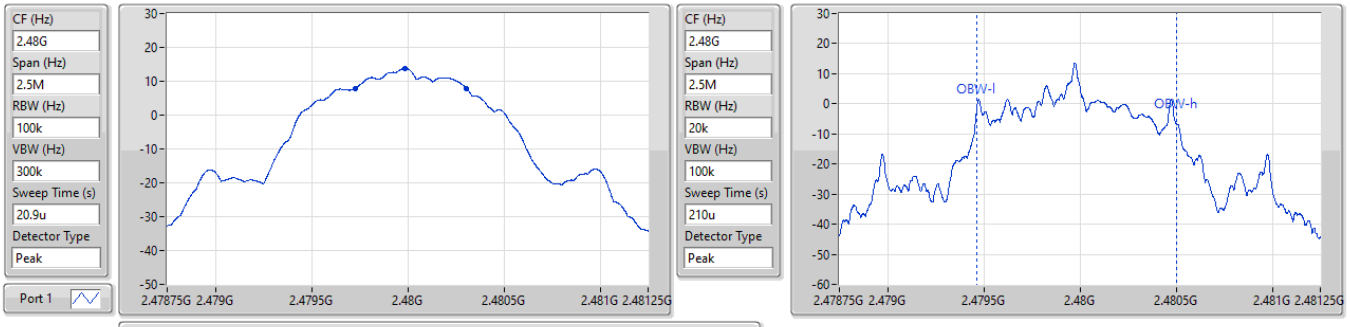


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
580k	2.439721G	2.440301G	1.039M	2.439464G	2.440503G	500k	1

2.4-2.4835GHz_BT-LE(1Mbps) **EBW-DTS**

2480MHz

05/12/2024

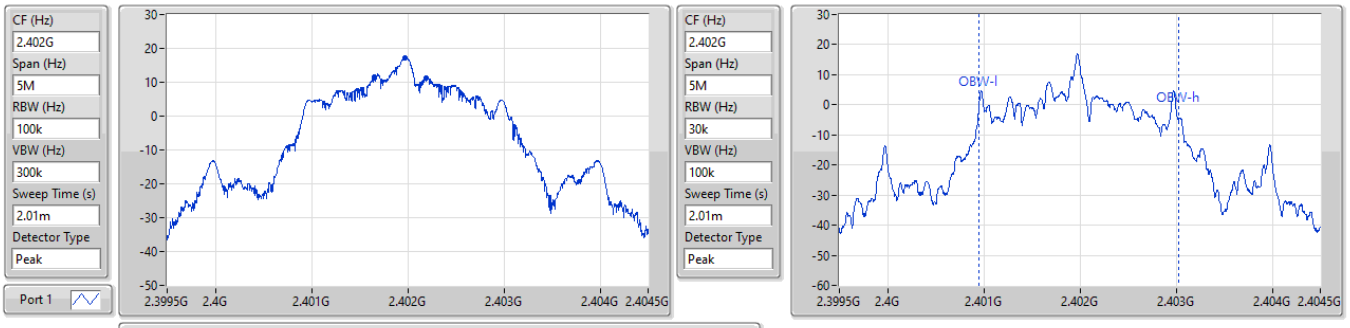


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
580k	2.479726G	2.480306G	1.038M	2.479464G	2.480502G	500k	1

2.4-2.4835GHz_BT-LE(2Mbps) **EBW-DTS**

2402MHz

05/12/2024

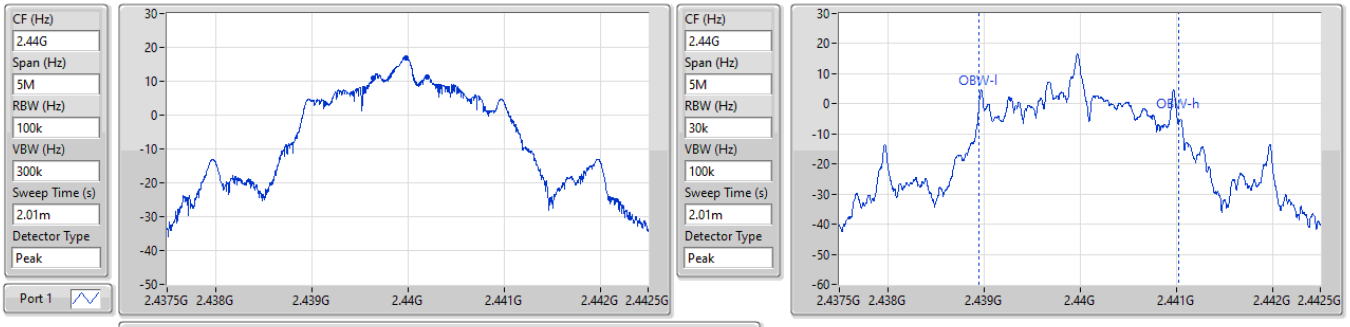


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
542.5k	2.401655G	2.402198G	2.077M	2.400956G	2.403032G	500k	1

2.4-2.4835GHz_BT-LE(2Mbps) **EBW-DTS**

2440MHz

05/12/2024

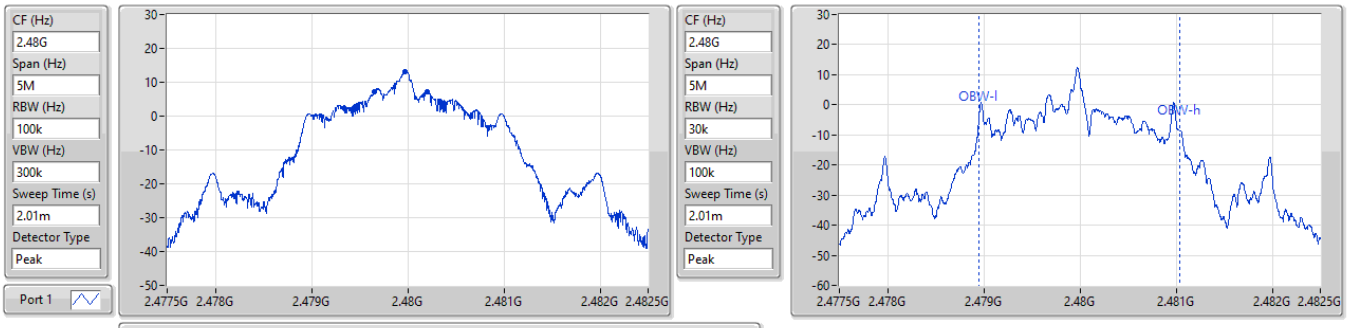


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
560k	2.439648G	2.440208G	2.071M	2.438954G	2.441025G	500k	1

2.4-2.4835GHz_BT-LE(2Mbps) **EBW-DTS**

2480MHz

05/12/2024



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
550k	2.47965G	2.4802G	2.083M	2.478954G	2.481037G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	17.19	0.05236
BT-LE(2Mbps)	16.96	0.04966

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.20	17.19	30.00
2440MHz	Pass	4.20	16.89	30.00
2478MHz	Pass	4.20	16.75	30.00
2480MHz	Pass	4.20	14.07	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.20	16.96	30.00
2440MHz	Pass	4.20	16.92	30.00
2478MHz	Pass	4.20	16.66	30.00
2480MHz	Pass	4.20	12.85	30.00

DG = Directional Gain; Port X = Port X output power;
Inf = There's no restriction for the limit.

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	6.18
BT-LE(2Mbps)	7.54

RBW = 3kHz;

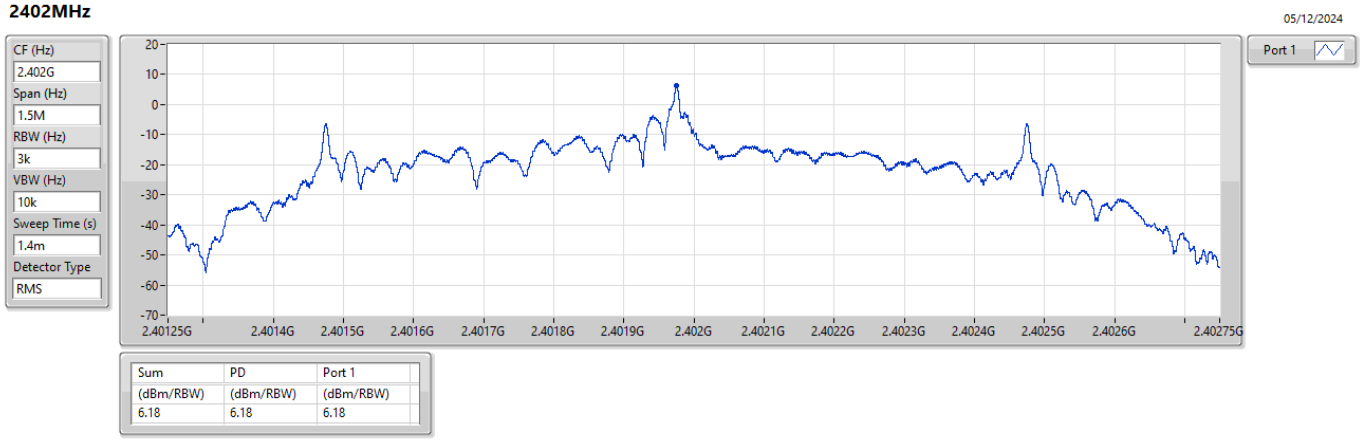
Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	4.20	6.18	8.00
2440MHz	Pass	4.20	4.96	8.00
2480MHz	Pass	4.20	4.71	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	4.20	6.33	8.00
2440MHz	Pass	4.20	1.42	8.00
2480MHz	Pass	4.20	7.54	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;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_BT-LE(1Mbps) **PSD**

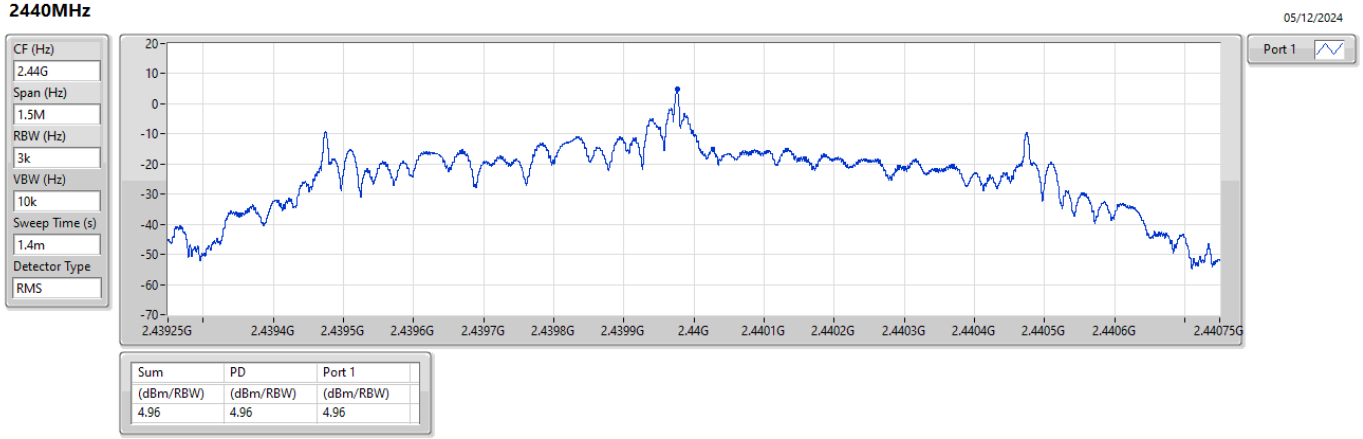
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.18	6.18	6.18

2.4-2.4835GHz_BT-LE(1Mbps) **PSD**

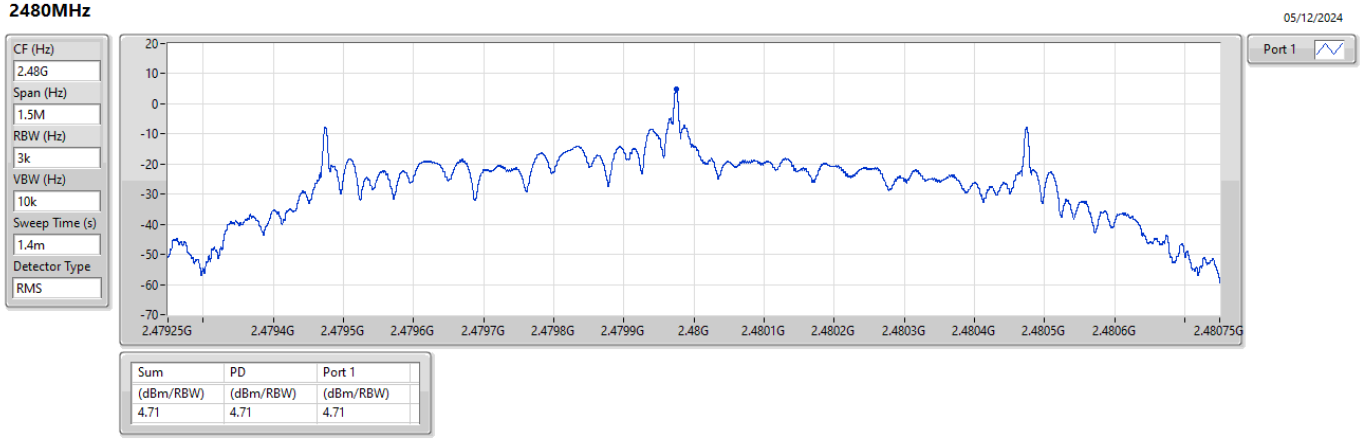
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.96	4.96	4.96

2.4-2.4835GHz_BT-LE(1Mbps) **PSD**

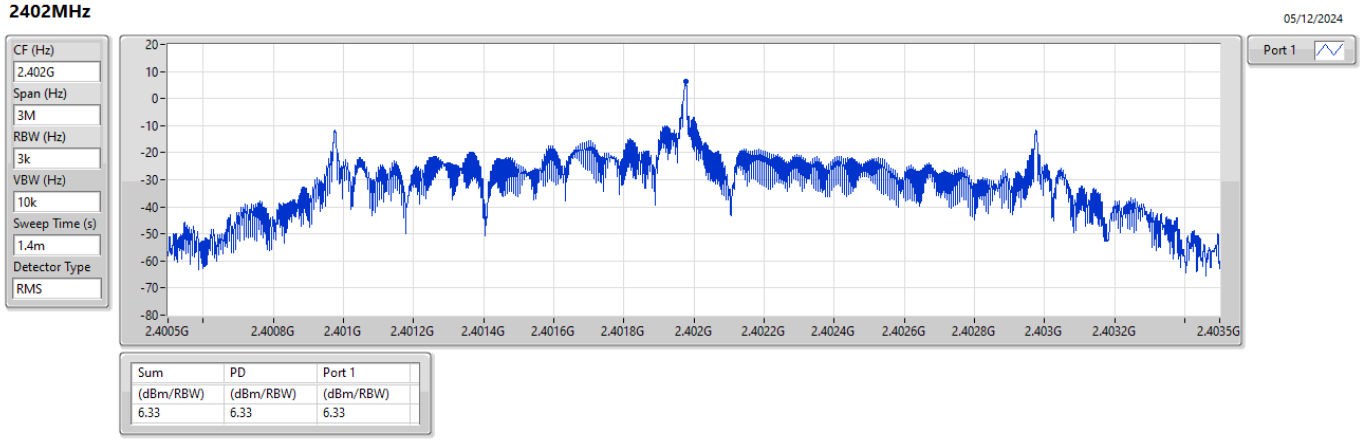
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.71	4.71	4.71

2.4-2.4835GHz_BT-LE(2Mbps) **PSD**

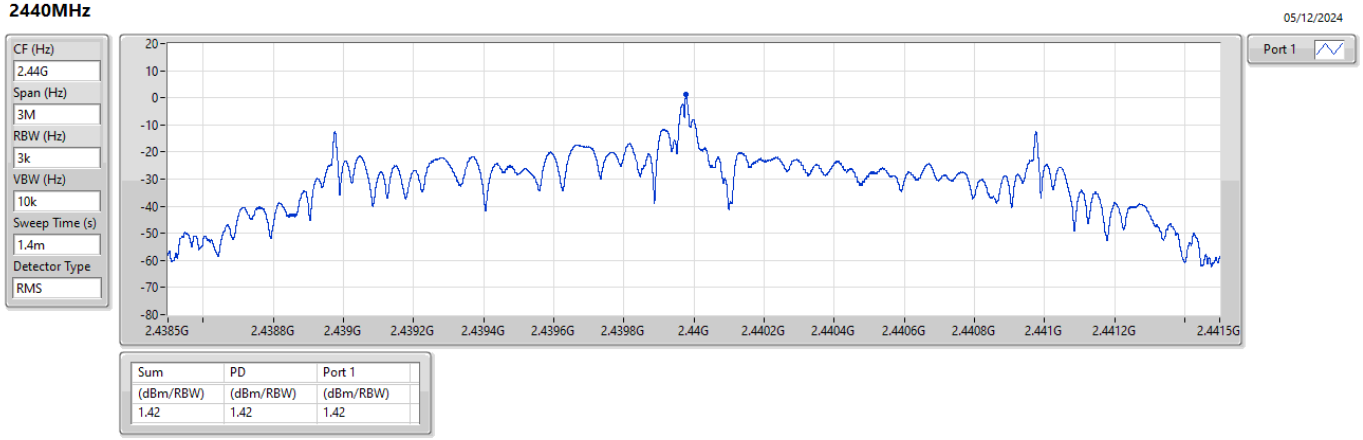
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.33	6.33	6.33

2.4-2.4835GHz_BT-LE(2Mbps) **PSD**

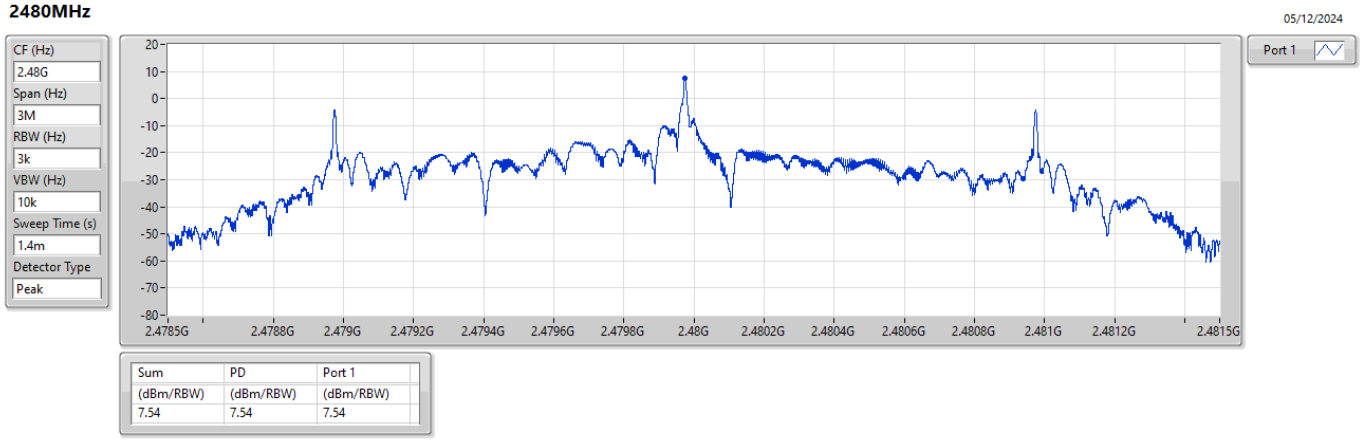
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.42	1.42	1.42

2.4-2.4835GHz_BT-LE(2Mbps) **PSD**

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.54	7.54	7.54

Summary

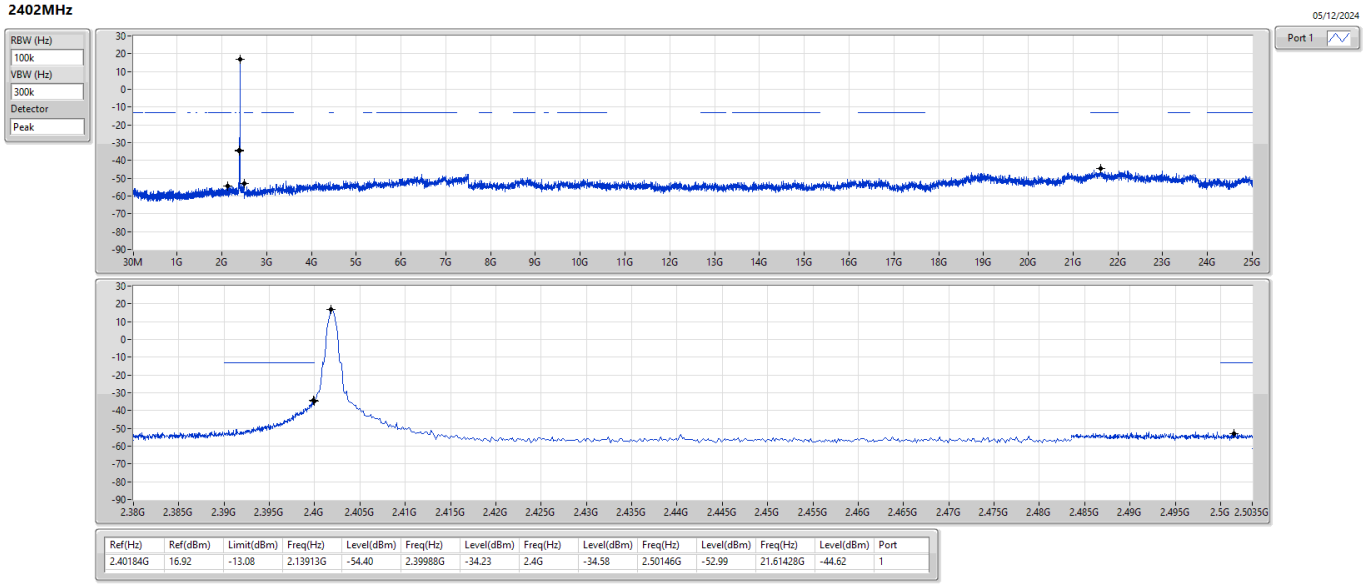
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.40184G	16.92	-13.08	2.13913G	-54.40	2.39988G	-34.23	2.4G	-34.58	2.50146G	-52.99	21.61428G	-44.62	1
BT-LE(2Mbps)	Pass	2.40184G	17.16	-12.84	1.9758G	-54.85	2.4G	-13.17	2.4G	-13.74	2.5023G	-52.24	21.58334G	-44.68	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	2.40184G	16.92	-13.08	2.13913G	-54.40	2.39988G	-34.23	2.4G	-34.58	2.50146G	-52.99	21.61428G	-44.62	1
2440MHz	Pass	2.40184G	16.92	-13.08	2.3001G	-54.38	2.39724G	-52.35	2.4G	-57.69	2.50322G	-53.09	21.63396G	-44.94	1
2480MHz	Pass	2.40184G	16.92	-13.08	1.91823G	-54.54	2.39068G	-51.85	2.4G	-57.69	2.50094G	-52.14	21.60865G	-45.57	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.40184G	17.16	-12.84	1.9758G	-54.85	2.4G	-13.17	2.4G	-13.74	2.5023G	-52.24	21.58334G	-44.68	1
2440MHz	Pass	2.40184G	17.16	-12.84	2.01928G	-54.91	2.39708G	-52.39	2.4G	-57.49	2.5035G	-51.90	22.00797G	-44.68	1
2480MHz	Pass	2.40184G	17.16	-12.84	2.19905G	-54.69	2.39484G	-52.32	2.4G	-56.72	2.50302G	-52.41	21.55804G	-45.36	1

2.4-2.4835GHz_BT-LE(1Mbps) CSENdB-DTS

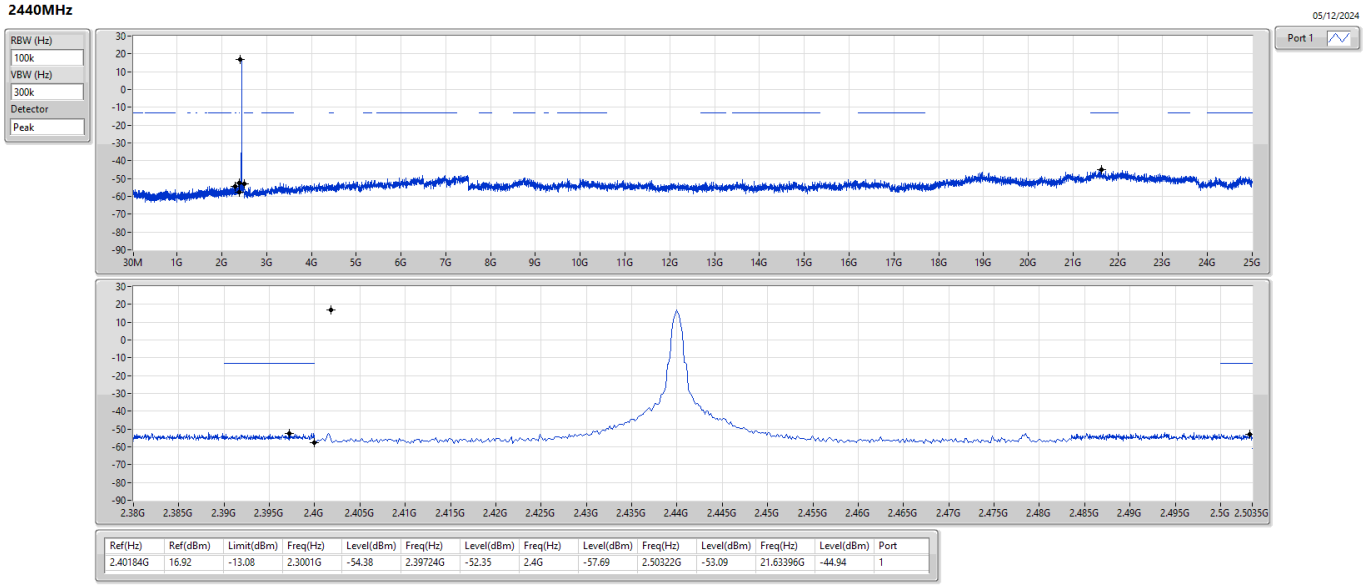
2402MHz



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
2.40184G	16.92	-13.08	2.13913G	-54.40	2.39988G	-34.23	2.4G	-34.58	2.50146G	-52.99	21.61428G	-44.62	1

2.4-2.4835GHz_BT-LE(1Mbps) CSENdB-DTS

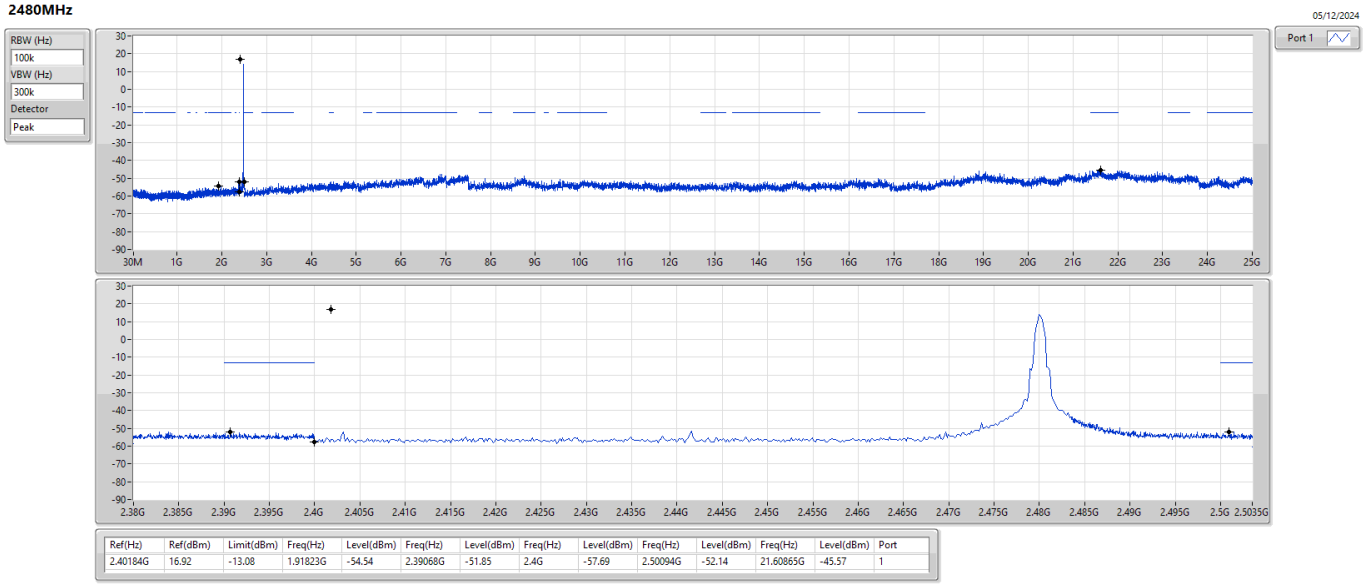
2440MHz



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
2.40184G	16.92	-13.08	2.3001G	-54.38	2.39724G	-52.35	2.4G	-57.69	2.50322G	-53.09	21.63396G	-44.94	1

2.4-2.4835GHz_BT-LE(1Mbps) CSENdB-DTS

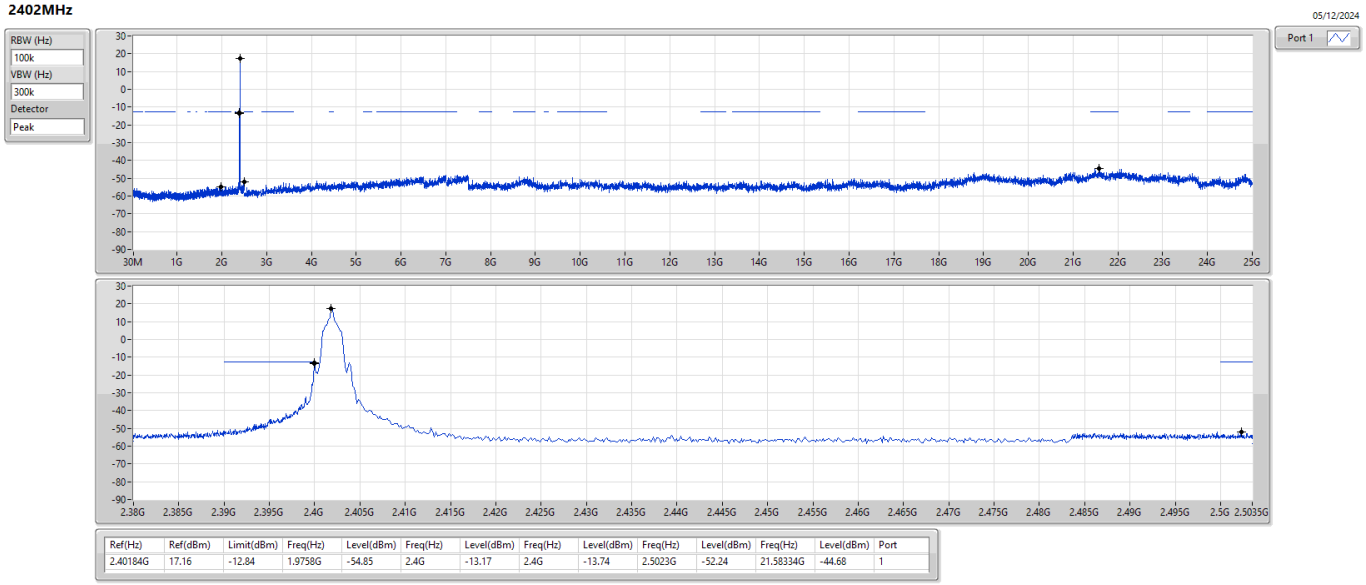
2480MHz



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
2.40184G	16.92	-13.08	1.91823G	-54.54	2.39068G	-51.85	2.4G	-57.69	2.50094G	-52.14	21.60865G	-45.57	1

2.4-2.4835GHz_BT-LE(2Mbps) CSENdB-DTS

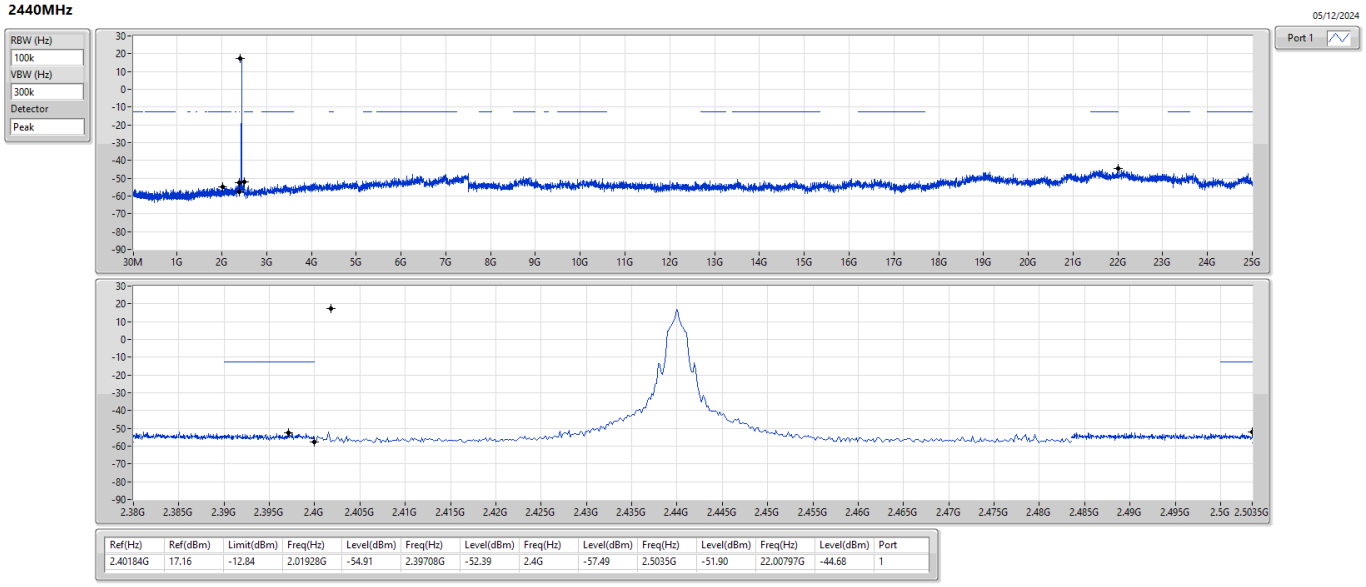
2402MHz



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
2.40184G	17.16	-12.84	1.9758G	-54.85	2.4G	-13.17	2.4G	-13.74	2.5023G	-52.24	21.58334G	-44.68	1

2.4-2.4835GHz_BT-LE(2Mbps) CSENdB-DTS

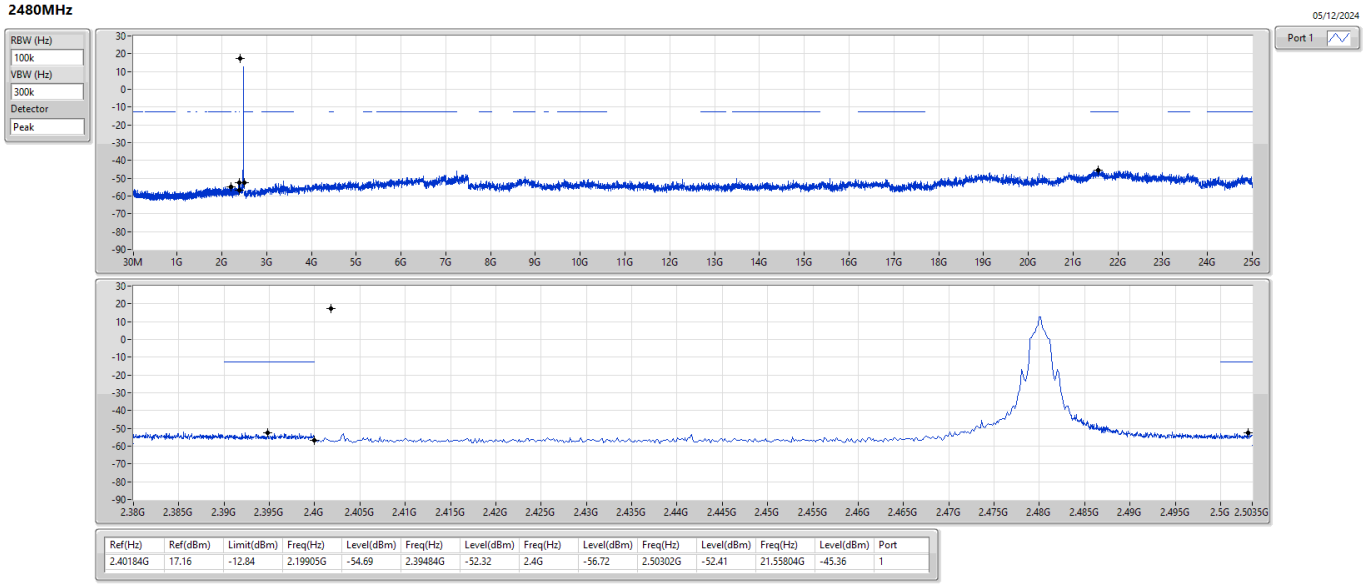
2440MHz



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
2.40184G	17.16	-12.84	2.01928G	-54.91	2.39708G	-52.39	2.4G	-57.49	2.5035G	-51.90	22.00797G	-44.68	1

2.4-2.4835GHz_BT-LE(2Mbps) CSENdB-DTS

2480MHz

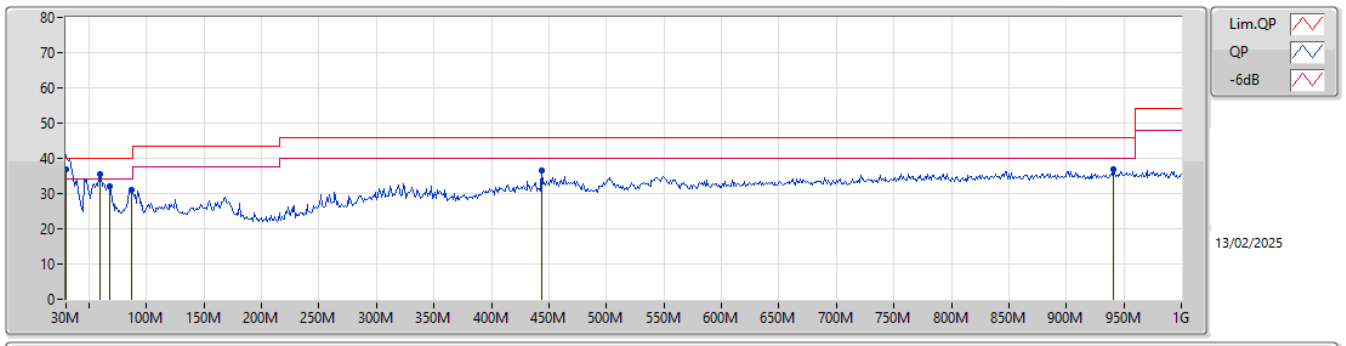


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40184G	17.16	-12.84	2.19905G	-54.69	2.39484G	-52.32	2.4G	-56.72	2.50302G	-52.41	21.55804G	-45.36	1

Summary

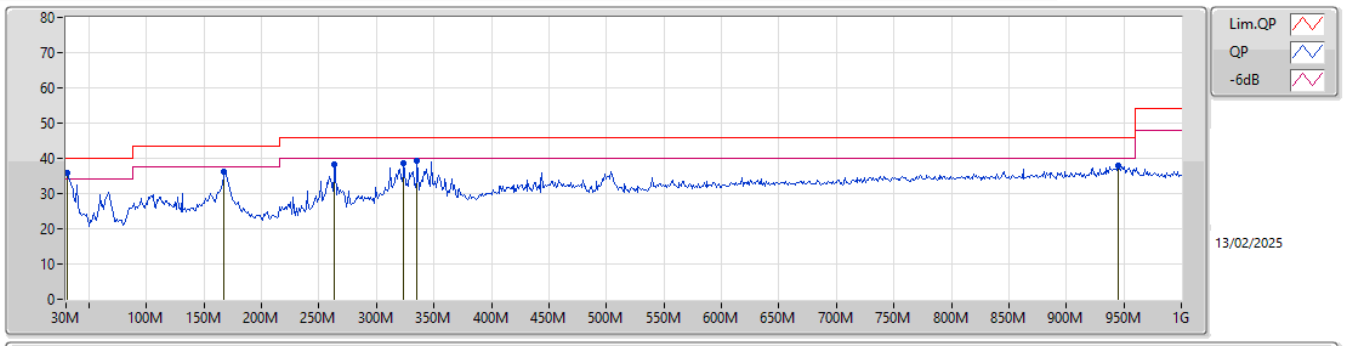
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	PK	30M	36.74	40.00	-3.26	Vertical

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	30M	36.74	40.00	-3.26	-19.15	3	Vertical	112	1.25	"Worst"	55.89	23.86	1.15	44.16
PK	59.1M	35.50	40.00	-4.50	-30.32	3	Vertical	9	1.50	-	65.82	12.46	1.62	44.40
PK	67.83M	32.06	40.00	-7.94	-30.54	3	Vertical	360	1.00	-	62.60	12.25	1.65	44.44
PK	87.23M	31.14	40.00	-8.86	-27.98	3	Vertical	134	1.50	-	59.12	14.68	1.85	44.51
PK	444.19M	36.59	46.00	-9.41	-16.70	3	Vertical	198	1.25	-	53.29	22.60	4.55	43.85
PK	940.83M	36.95	46.00	-9.05	-10.34	3	Vertical	214	1.00	-	47.29	26.53	6.57	43.44

Mode 2



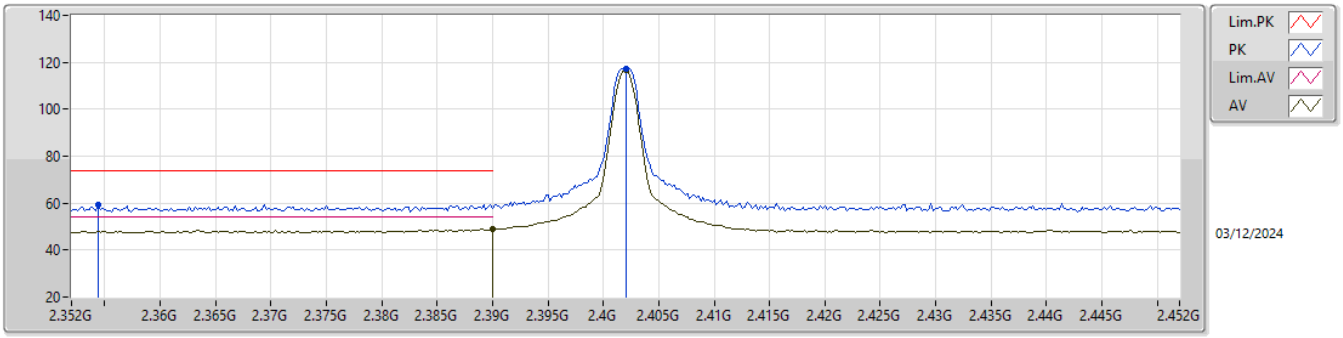
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	30.97M	35.98	40.00	-4.02	-19.80	3	Horizontal	244	1.50	"Worst"	55.78	23.23	1.15	44.18
PK	167.74M	36.04	43.50	-7.46	-25.85	3	Horizontal	105	2.00	-	61.89	15.86	2.73	44.44
PK	263.77M	38.40	46.00	-7.60	-21.28	3	Horizontal	316	1.25	-	59.68	19.50	3.50	44.28
PK	323.91M	38.51	46.00	-7.49	-20.84	3	Horizontal	321	1.00	-	59.35	19.40	3.92	44.16
PK	335.55M	39.29	46.00	-6.71	-20.57	3	Horizontal	321	1.00	-	59.86	19.58	3.98	44.13
PK	944.71M	37.80	46.00	-8.20	-10.20	3	Horizontal	202	1.50	-	48.00	26.66	6.58	43.44

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	2.484G	53.83	54.00	-0.17	3	Vertical	78	1.56	BP 1MHz

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

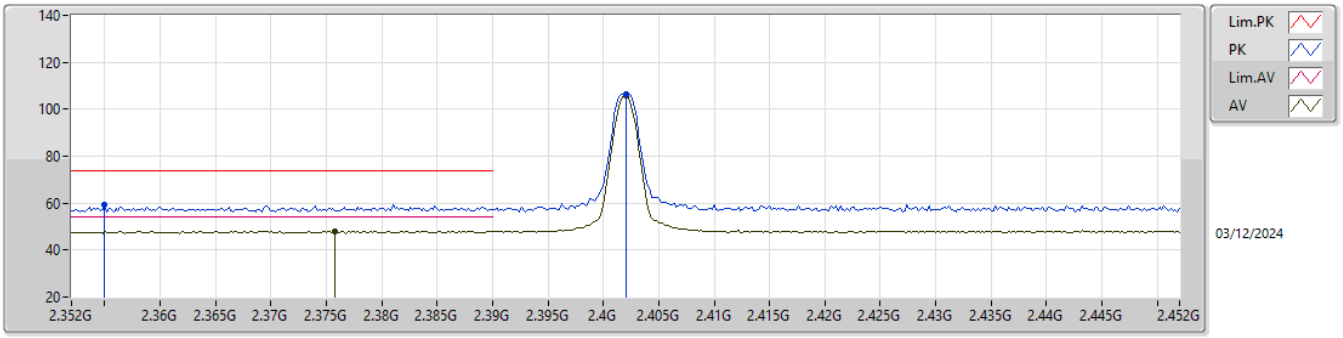


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3544G	59.23	74.00	-14.77	26.33	3	Vertical	73	1.09	-	28.14	4.76	-
AV	2.39G	49.02	54.00	-4.98	15.91	3	Vertical	73	1.09	-	28.30	4.81	-
PK	2.402G	117.25	Inf	-Inf	84.13	3	Vertical	73	1.09	-	28.30	4.82	-
AV	2.402G	116.82	Inf	-Inf	83.70	3	Vertical	73	1.09	-	28.30	4.82	-

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

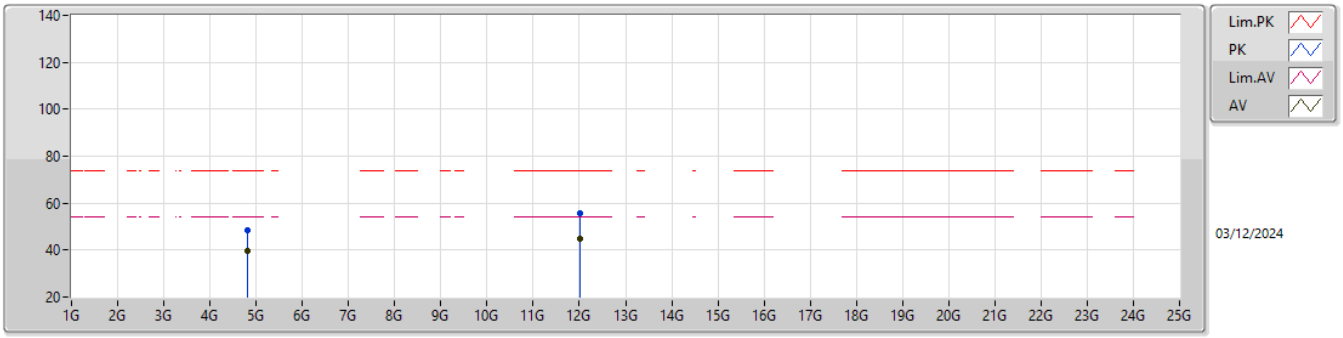


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.355G	59.09	74.00	-14.91	26.18	3	Horizontal	132	1.80	-	28.15	4.76	-
AV	2.3758G	48.07	54.00	-5.93	15.08	3	Horizontal	132	1.80	-	28.20	4.79	-
PK	2.402G	106.33	Inf	-Inf	73.21	3	Horizontal	132	1.80	-	28.30	4.82	-
AV	2.402G	105.89	Inf	-Inf	72.77	3	Horizontal	132	1.80	-	28.30	4.82	-

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

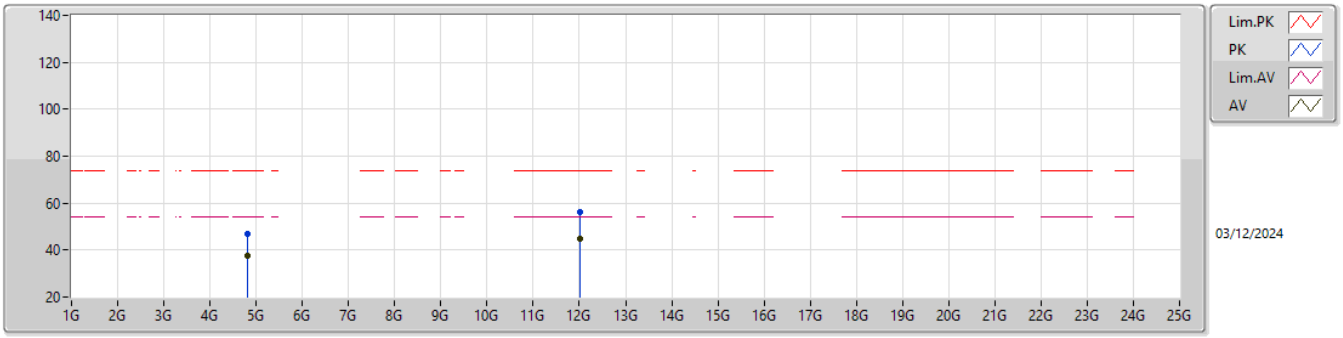


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80372G	48.26	74.00	-25.74	43.17	3	Vertical	338	2.19	-	33.21	7.21	35.33
AV	4.80392G	39.53	54.00	-14.47	34.44	3	Vertical	338	2.19	-	33.21	7.21	35.33
PK	12.00696G	55.76	74.00	-18.24	39.64	3	Vertical	321	2.95	-	39.09	11.83	34.80
AV	12.00788G	45.06	54.00	-8.94	28.95	3	Vertical	321	2.95	-	39.08	11.83	34.80

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

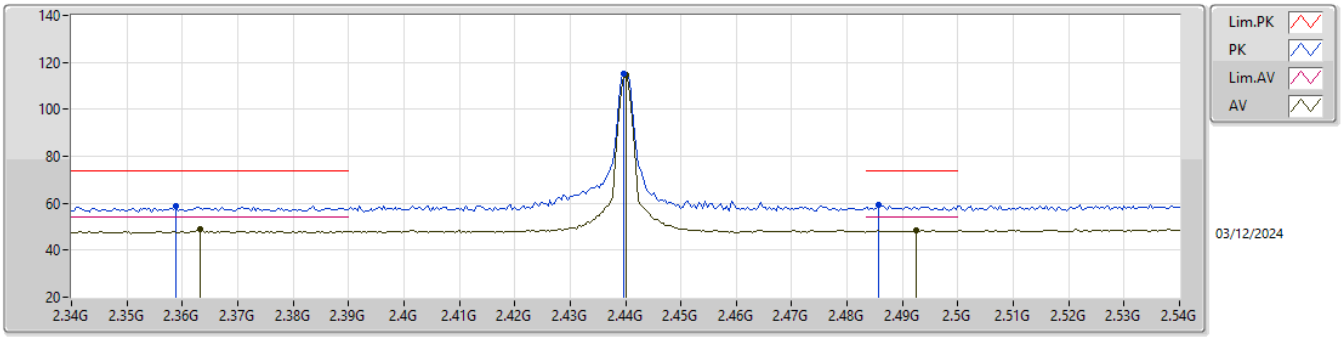


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80944G	46.64	74.00	-27.36	41.54	3	Horizontal	339	1.55	-	33.22	7.21	35.33
AV	4.80392G	37.44	54.00	-16.56	32.35	3	Horizontal	339	1.55	-	33.21	7.21	35.33
PK	12.00292G	56.04	74.00	-17.96	39.92	3	Horizontal	1	2.21	-	39.09	11.83	34.80
AV	12.01904G	44.66	54.00	-9.34	28.54	3	Horizontal	1	2.21	-	39.06	11.83	34.77

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

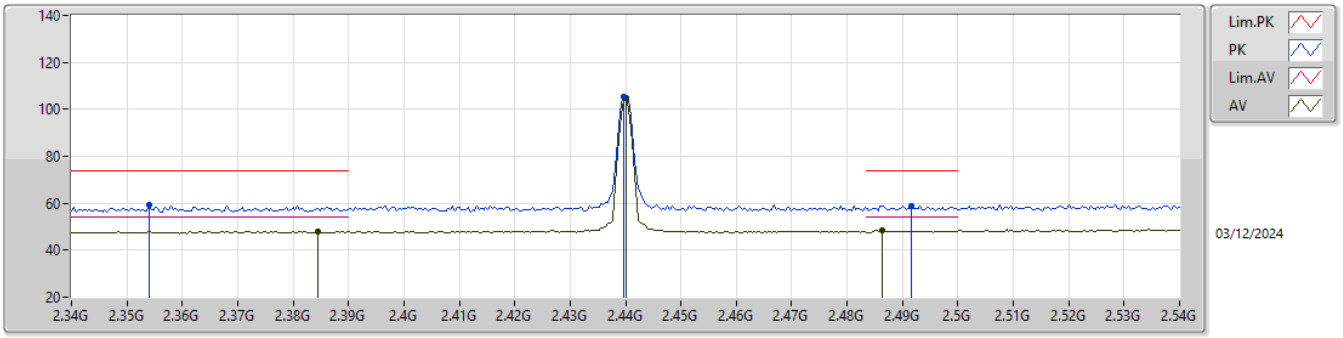


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3588G	58.62	74.00	-15.38	25.67	3	Vertical	77	1.18	-	28.19	4.76	-
AV	2.3632G	49.09	54.00	-4.91	16.12	3	Vertical	77	1.18	-	28.20	4.77	-
PK	2.4396G	115.36	Inf	-Inf	82.20	3	Vertical	77	1.18	-	28.30	4.86	-
AV	2.44G	114.91	Inf	-Inf	81.75	3	Vertical	77	1.18	-	28.30	4.86	-
PK	2.4856G	59.17	74.00	-14.83	25.90	3	Vertical	77	1.18	-	28.36	4.91	-
AV	2.4924G	48.28	54.00	-5.72	14.96	3	Vertical	77	1.18	-	28.40	4.92	-

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

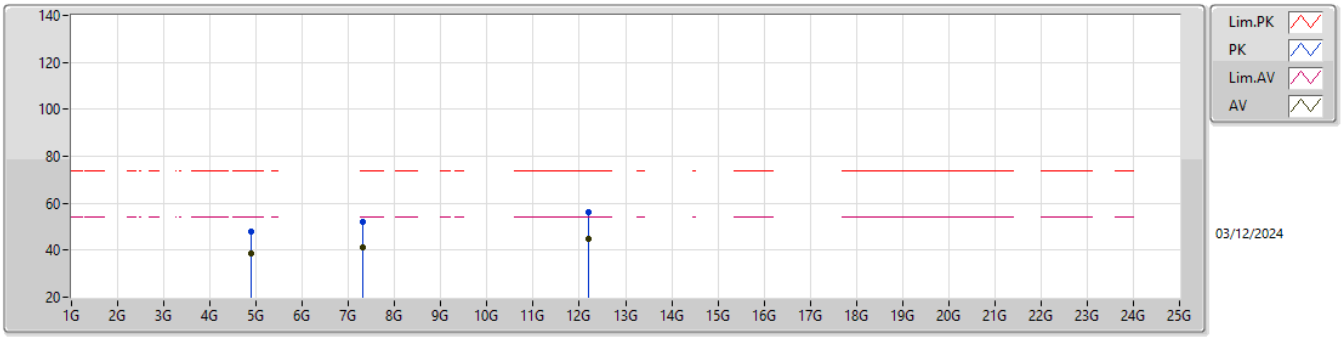


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.354G	59.15	74.00	-14.85	26.25	3	Horizontal	15	1.80	-	28.14	4.76	-
AV	2.3844G	48.10	54.00	-5.90	15.06	3	Horizontal	15	1.80	-	28.24	4.80	-
PK	2.4396G	105.13	Inf	-Inf	71.97	3	Horizontal	15	1.80	-	28.30	4.86	-
AV	2.44G	104.70	Inf	-Inf	71.54	3	Horizontal	15	1.80	-	28.30	4.86	-
PK	2.4916G	58.71	74.00	-15.29	25.39	3	Horizontal	15	1.80	-	28.40	4.92	-
AV	2.4864G	48.34	54.00	-5.66	15.06	3	Horizontal	15	1.80	-	28.36	4.92	-

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

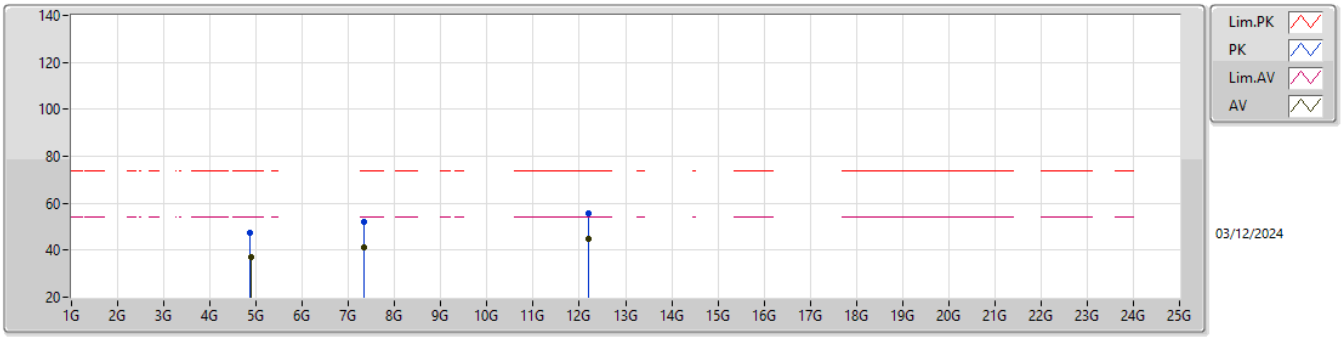


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.87996G	47.90	74.00	-26.10	42.69	3	Vertical	69	1.99	-	33.36	7.18	35.33
AV	4.87984G	38.65	54.00	-15.35	33.44	3	Vertical	69	1.99	-	33.36	7.18	35.33
PK	7.31844G	52.09	74.00	-21.91	41.86	3	Vertical	133	2.44	-	36.77	8.62	35.16
AV	7.3196G	41.10	54.00	-12.90	30.86	3	Vertical	133	2.44	-	36.78	8.62	35.16
PK	12.1984G	56.16	74.00	-17.84	40.08	3	Vertical	98	1.36	-	38.70	11.82	34.44
AV	12.19568G	44.87	54.00	-9.13	28.78	3	Vertical	98	1.36	-	38.71	11.82	34.44

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

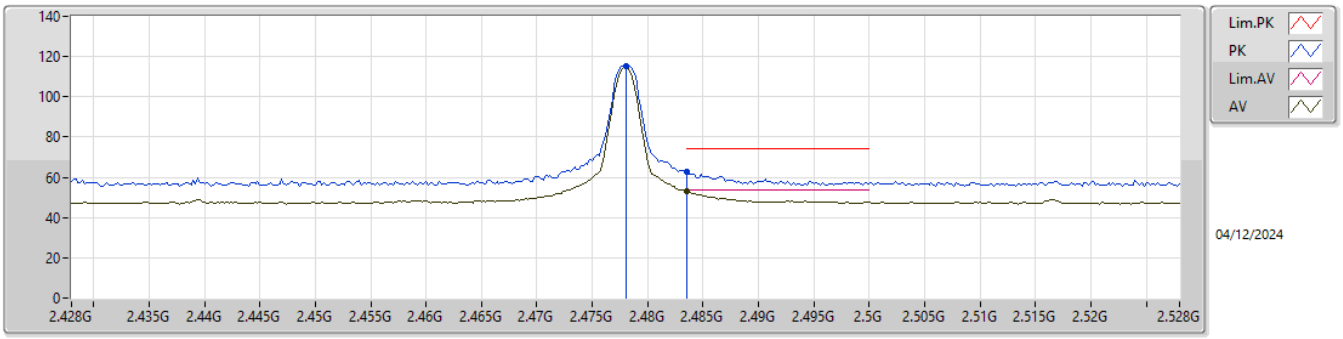


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.87652G	47.54	74.00	-26.46	42.34	3	Horizontal	47	2.91	-	33.35	7.18	35.33
AV	4.88016G	36.90	54.00	-17.10	31.69	3	Horizontal	47	2.91	-	33.36	7.18	35.33
PK	7.32792G	52.11	74.00	-21.89	41.84	3	Horizontal	330	2.39	-	36.81	8.62	35.16
AV	7.32796G	41.23	54.00	-12.77	30.96	3	Horizontal	330	2.39	-	36.81	8.62	35.16
PK	12.20444G	55.77	74.00	-18.23	39.68	3	Horizontal	61	2.26	-	38.71	11.81	34.43
AV	12.19064G	45.08	54.00	-8.92	28.99	3	Horizontal	61	2.26	-	38.72	11.82	34.45

2.4-2.4835GHz_BT-LE(1Mbps)

2478MHz_TX

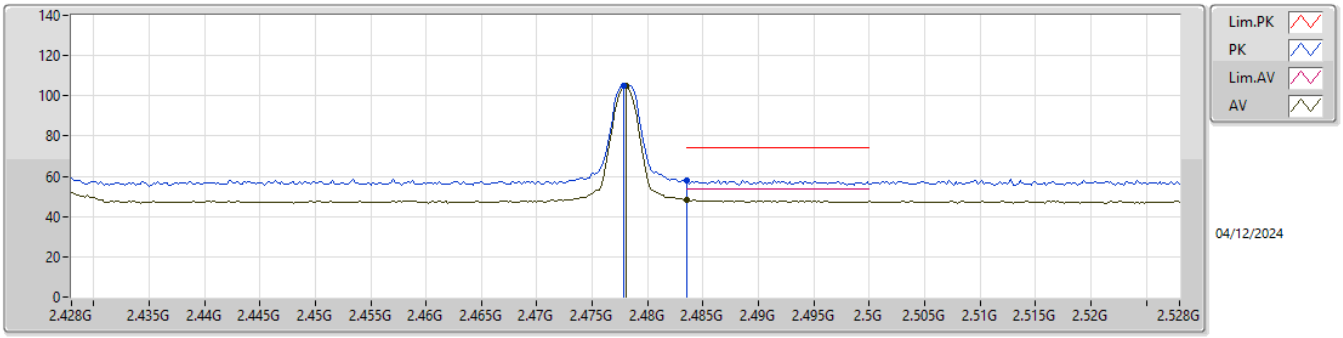


EUT Y_1TX
Setting 200
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.478G	115.46	Inf	-Inf	84.44	3	Vertical	75	1.34	-	27.48	3.54	-
AV	2.478G	115.05	Inf	-Inf	84.03	3	Vertical	75	1.34	-	27.48	3.54	-
PK	2.4835G	62.52	74.00	-11.48	31.48	3	Vertical	75	1.34	-	27.50	3.54	-
AV	2.4835G	53.31	54.00	-0.69	22.27	3	Vertical	75	1.34	-	27.50	3.54	-

2.4-2.4835GHz_BT-LE(1Mbps)

2478MHz_TX

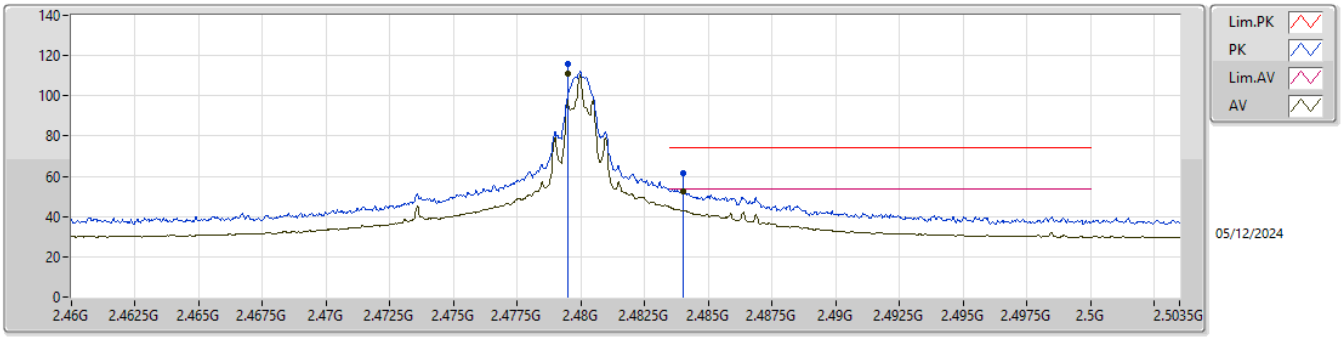


EUT Y_1TX
Setting 200
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4778G	105.29	Inf	-Inf	74.27	3	Horizontal	339	1.64	-	27.48	3.54	-
AV	2.478G	104.88	Inf	-Inf	73.86	3	Horizontal	339	1.64	-	27.48	3.54	-
PK	2.4835G	58.08	74.00	-15.92	27.04	3	Horizontal	339	1.64	-	27.50	3.54	-
AV	2.4835G	48.35	54.00	-5.65	17.31	3	Horizontal	339	1.64	-	27.50	3.54	-

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

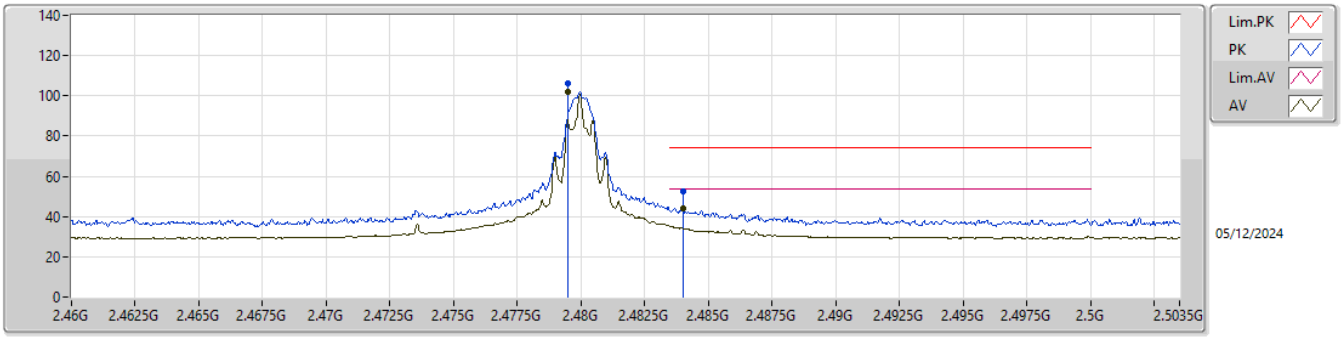


EUT Y_1TX
Setting 150
04-H-M-2-10

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4795G	116.12	Inf	-Inf	129.19	3	Vertical	76	1.54	BP 1MHz	27.49	4.04	44.60
AV	2.4795G	111.22	Inf	-Inf	124.29	3	Vertical	76	1.54	BP 1MHz	27.49	4.04	44.60
PK	2.484G	61.46	74.00	-12.54	74.52	3	Vertical	76	1.54	BP 1MHz	27.50	4.04	44.60
AV	2.484G	52.75	54.00	-1.25	65.81	3	Vertical	76	1.54	BP 1MHz	27.50	4.04	44.60

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

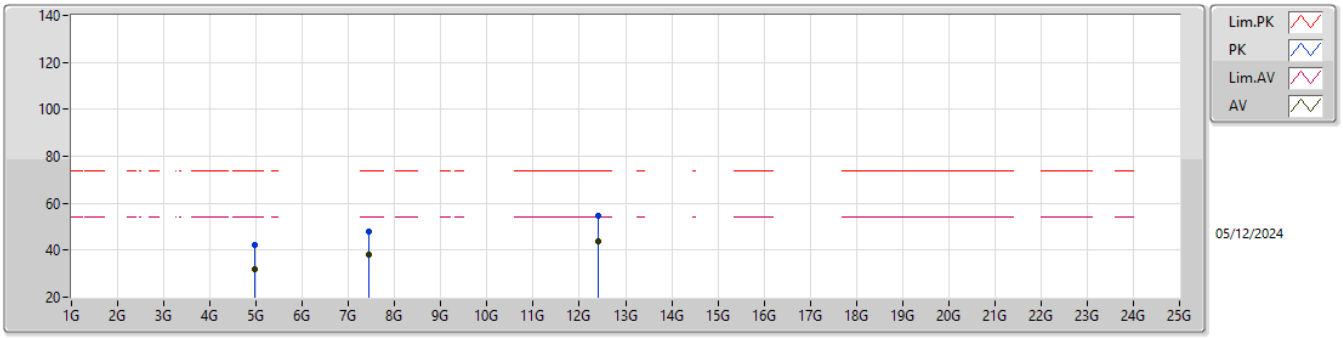


EUT Y_1TX
Setting 150
04-H-M-2-10

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4795G	105.95	Inf	-Inf	119.02	3	Horizontal	342	1.14	BP 1MHz	27.49	4.04	44.60
AV	2.4795G	101.72	Inf	-Inf	114.79	3	Horizontal	342	1.14	BP 1MHz	27.49	4.04	44.60
PK	2.484G	52.22	74.00	-21.78	65.28	3	Horizontal	342	1.14	BP 1MHz	27.50	4.04	44.60
AV	2.484G	43.83	54.00	-10.17	56.89	3	Horizontal	342	1.14	BP 1MHz	27.50	4.04	44.60

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

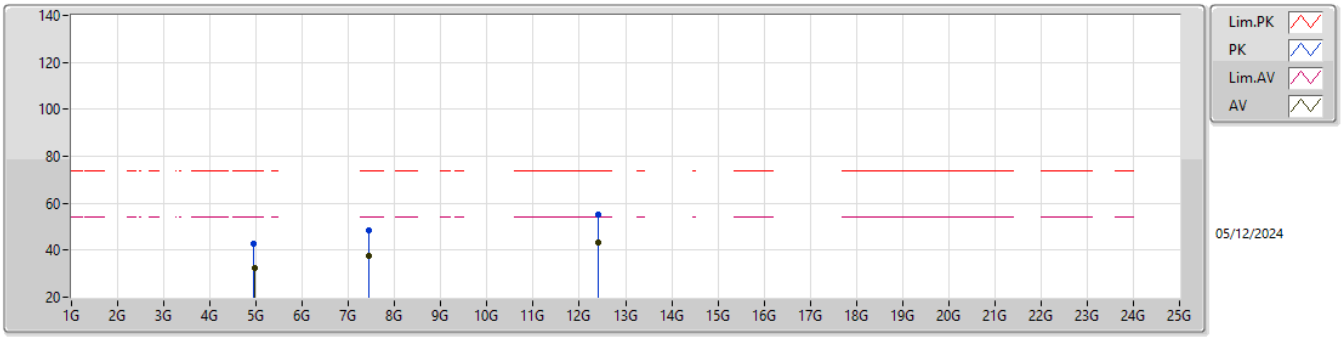


EUT Y_1TX
Setting 150
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96124G	42.36	74.00	-31.64	49.22	3	Vertical	138	2.16	-	31.54	5.50	43.90
AV	4.96032G	32.02	54.00	-21.98	38.88	3	Vertical	138	2.16	-	31.54	5.50	43.90
PK	7.44748G	47.73	74.00	-26.27	47.03	3	Vertical	34	2.72	-	36.38	7.28	42.96
AV	7.44988G	38.09	54.00	-15.91	37.38	3	Vertical	34	2.72	-	36.40	7.28	42.97
PK	12.4008G	54.48	74.00	-19.52	47.45	3	Vertical	155	1.81	-	38.80	11.26	43.03
AV	12.39612G	43.57	54.00	-10.43	36.53	3	Vertical	155	1.81	-	38.81	11.26	43.03

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

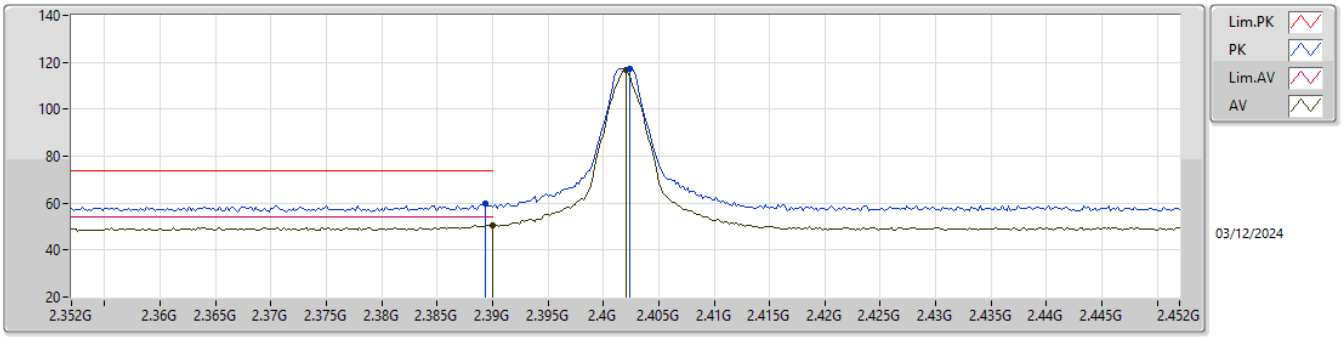


EUT Y_1TX
Setting 150
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.95492G	42.88	74.00	-31.12	49.76	3	Horizontal	57	2.75	-	31.52	5.50	43.90
AV	4.95988G	32.22	54.00	-21.78	39.08	3	Horizontal	57	2.75	-	31.54	5.50	43.90
PK	7.43932G	48.28	74.00	-25.72	47.62	3	Horizontal	81	1.62	-	36.34	7.27	42.95
AV	7.43908G	37.63	54.00	-16.37	36.98	3	Horizontal	81	1.62	-	36.33	7.27	42.95
PK	12.39596G	55.23	74.00	-18.77	48.19	3	Horizontal	216	2.09	-	38.81	11.26	43.03
AV	12.3958G	43.50	54.00	-10.50	36.46	3	Horizontal	216	2.09	-	38.81	11.26	43.03

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

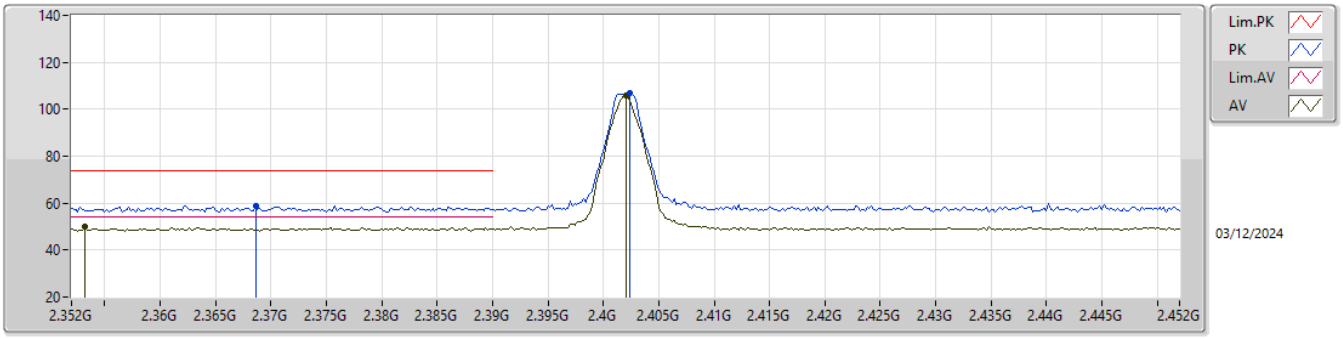


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3894G	59.72	74.00	-14.28	26.62	3	Vertical	75	1.05	-	28.29	4.81	-
AV	2.39G	50.57	54.00	-3.43	17.46	3	Vertical	75	1.05	-	28.30	4.81	-
PK	2.4024G	117.15	Inf	-Inf	84.03	3	Vertical	75	1.05	-	28.30	4.82	-
AV	2.402G	116.63	Inf	-Inf	83.51	3	Vertical	75	1.05	-	28.30	4.82	-

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

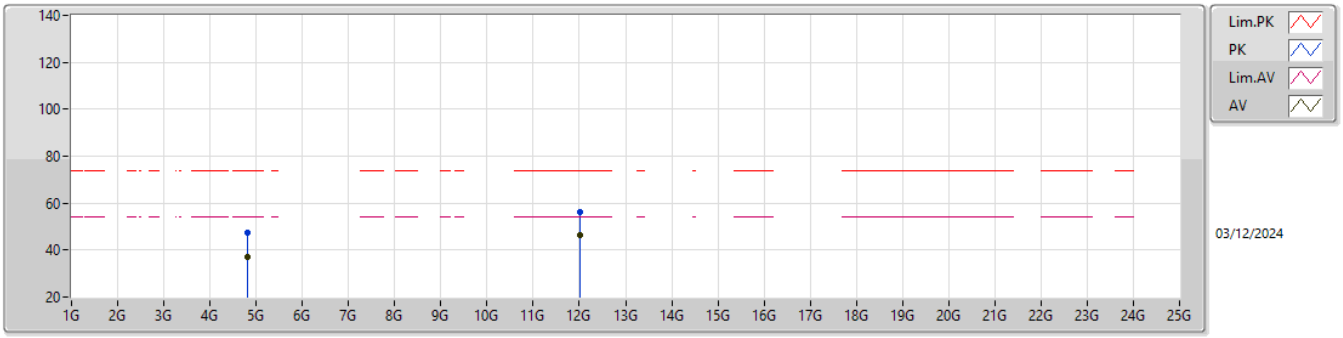


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3686G	58.87	74.00	-15.13	25.89	3	Horizontal	132	1.75	-	28.20	4.78	-
AV	2.3532G	49.75	54.00	-4.25	16.86	3	Horizontal	132	1.75	-	28.13	4.76	-
PK	2.4024G	106.68	Inf	-Inf	73.56	3	Horizontal	132	1.75	-	28.30	4.82	-
AV	2.402G	106.12	Inf	-Inf	73.00	3	Horizontal	132	1.75	-	28.30	4.82	-

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

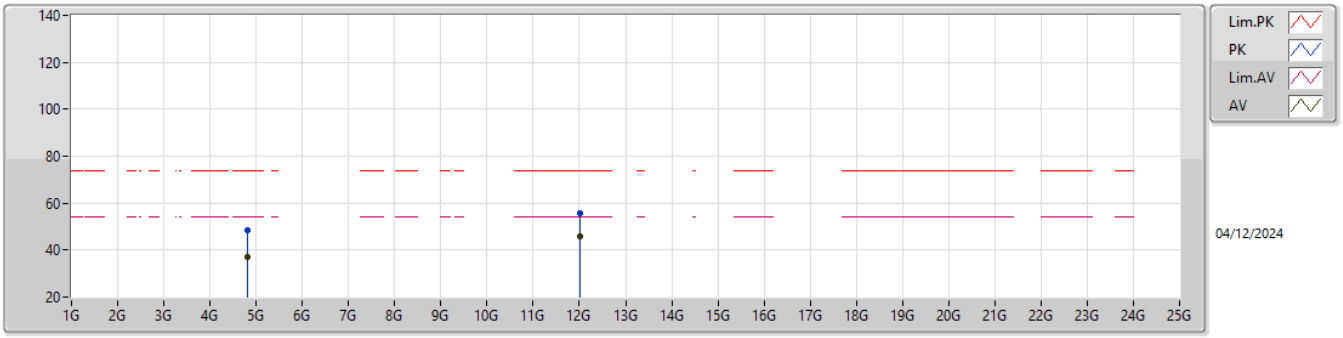


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80908G	47.26	74.00	-26.74	42.16	3	Vertical	46	2.67	-	33.22	7.21	35.33
AV	4.80872G	37.22	54.00	-16.78	32.12	3	Vertical	46	2.67	-	33.22	7.21	35.33
PK	12.00572G	56.05	74.00	-17.95	39.93	3	Vertical	207	2.55	-	39.09	11.83	34.80
AV	12.00684G	46.25	54.00	-7.75	30.13	3	Vertical	207	2.55	-	39.09	11.83	34.80

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

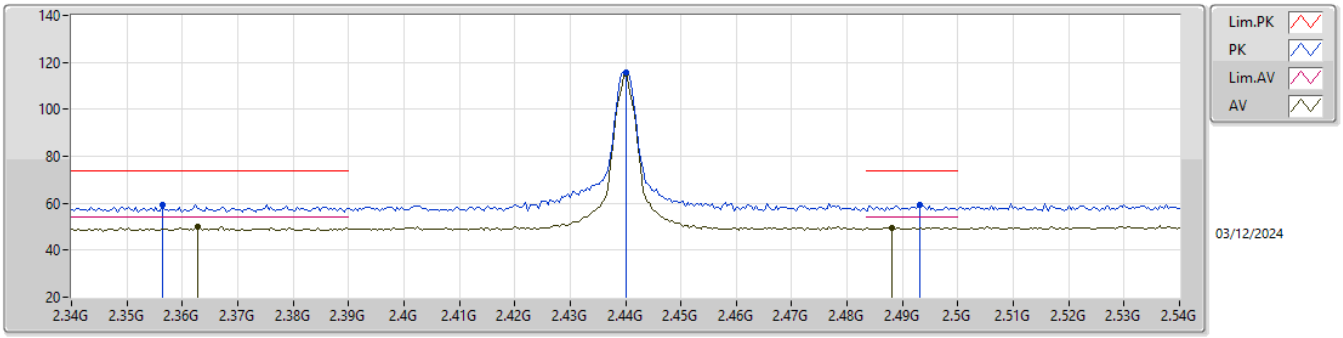


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80696G	48.40	74.00	-25.60	43.31	3	Horizontal	300	2.54	-	33.21	7.21	35.33
AV	4.80308G	37.18	54.00	-16.82	32.09	3	Horizontal	300	2.54	-	33.21	7.21	35.33
PK	12.01776G	55.73	74.00	-18.27	39.62	3	Horizontal	83	1.08	-	39.06	11.83	34.78
AV	12.00916G	46.12	54.00	-7.88	30.00	3	Horizontal	83	1.08	-	39.08	11.83	34.79

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

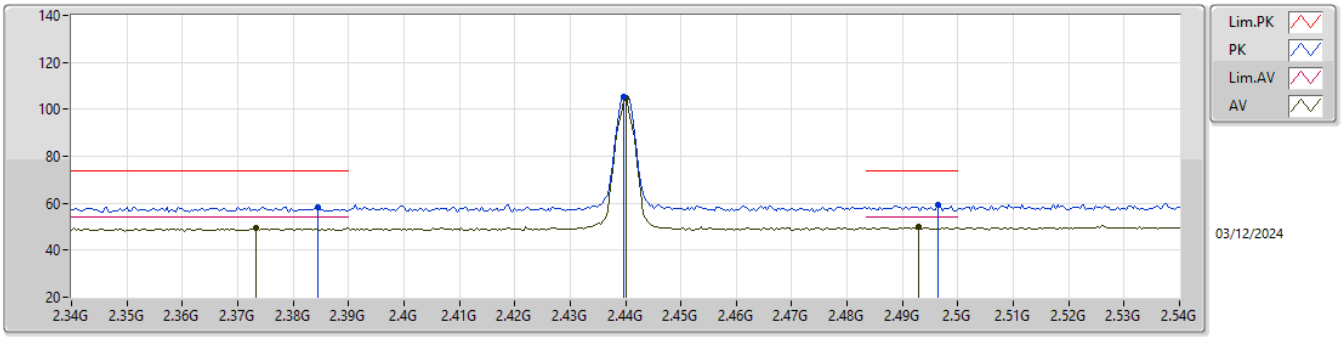


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3564G	59.50	74.00	-14.50	26.58	3	Vertical	76	1.18	-	28.16	4.76	-
AV	2.3628G	50.25	54.00	-3.75	17.28	3	Vertical	76	1.18	-	28.20	4.77	-
PK	2.44G	115.56	Inf	-Inf	82.40	3	Vertical	76	1.18	-	28.30	4.86	-
AV	2.44G	114.92	Inf	-Inf	81.76	3	Vertical	76	1.18	-	28.30	4.86	-
PK	2.4932G	59.14	74.00	-14.86	25.82	3	Vertical	76	1.18	-	28.40	4.92	-
AV	2.488G	49.71	54.00	-4.29	16.41	3	Vertical	76	1.18	-	28.38	4.92	-

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

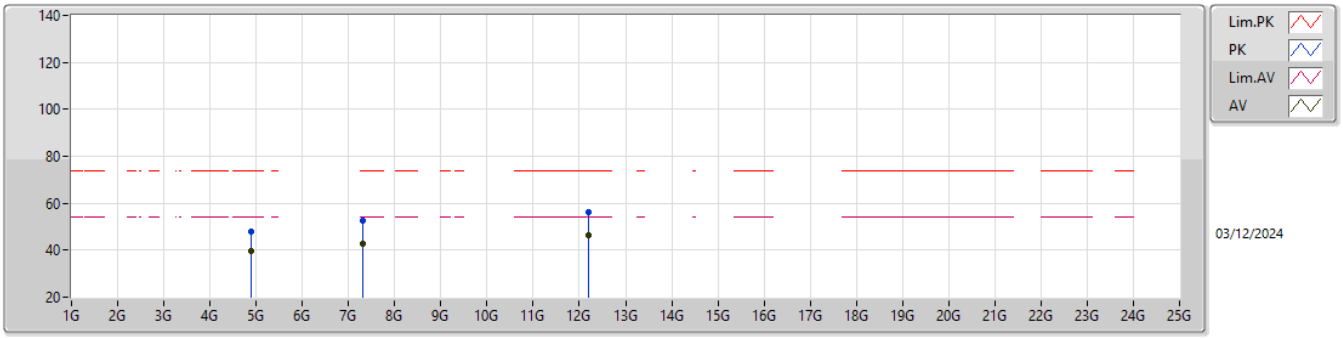


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3844G	58.49	74.00	-15.51	25.45	3	Horizontal	62	1.80	-	28.24	4.80	-
AV	2.3732G	49.45	54.00	-4.55	16.47	3	Horizontal	62	1.80	-	28.20	4.78	-
PK	2.4396G	105.26	Inf	-Inf	72.10	3	Horizontal	62	1.80	-	28.30	4.86	-
AV	2.44G	104.62	Inf	-Inf	71.46	3	Horizontal	62	1.80	-	28.30	4.86	-
PK	2.4964G	59.07	74.00	-14.93	25.74	3	Horizontal	62	1.80	-	28.40	4.93	-
AV	2.4928G	49.85	54.00	-4.15	16.53	3	Horizontal	62	1.80	-	28.40	4.92	-

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

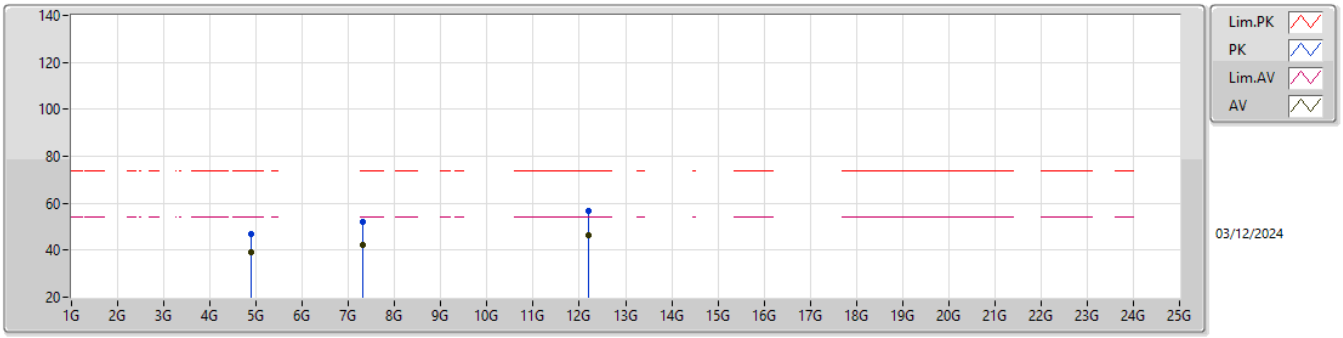


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.8808G	48.06	74.00	-25.94	42.85	3	Vertical	65	1.73	-	33.36	7.18	35.33
AV	4.8798G	39.87	54.00	-14.13	34.66	3	Vertical	65	1.73	-	33.36	7.18	35.33
PK	7.31728G	52.70	74.00	-21.30	42.47	3	Vertical	357	1.80	-	36.77	8.62	35.16
AV	7.32008G	42.95	54.00	-11.05	32.71	3	Vertical	357	1.80	-	36.78	8.62	35.16
PK	12.20804G	56.43	74.00	-17.57	40.32	3	Vertical	354	1.80	-	38.72	11.81	34.42
AV	12.20704G	46.41	54.00	-7.59	30.31	3	Vertical	354	1.80	-	38.71	11.81	34.42

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

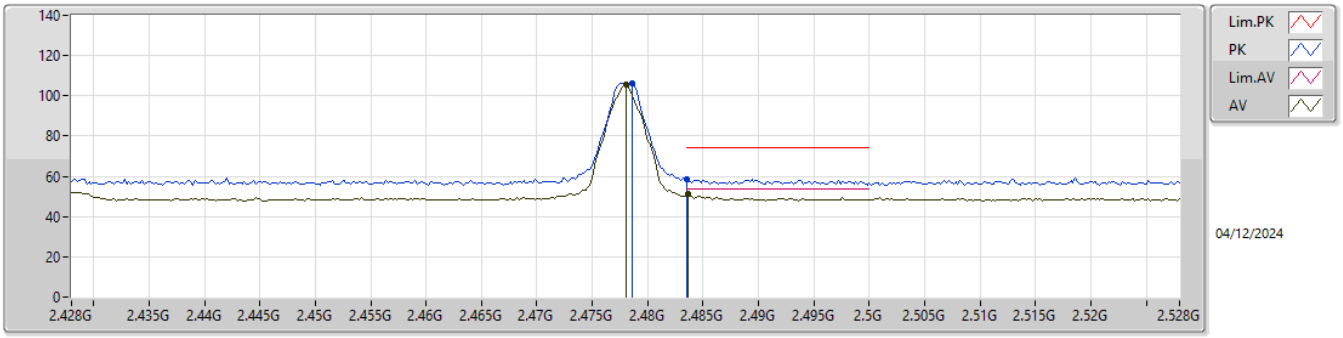


EUT Y_1TX
Setting 200
03-V-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.87996G	47.13	74.00	-26.87	41.92	3	Horizontal	16	1.78	-	33.36	7.18	35.33
AV	4.87988G	39.00	54.00	-15.00	33.79	3	Horizontal	16	1.78	-	33.36	7.18	35.33
PK	7.31888G	52.16	74.00	-21.84	41.92	3	Horizontal	85	2.56	-	36.78	8.62	35.16
AV	7.31808G	42.50	54.00	-11.50	32.27	3	Horizontal	85	2.56	-	36.77	8.62	35.16
PK	12.20608G	56.80	74.00	-17.20	40.70	3	Horizontal	40	2.25	-	38.71	11.81	34.42
AV	12.19668G	46.42	54.00	-7.58	30.33	3	Horizontal	40	2.25	-	38.71	11.82	34.44

2.4-2.4835GHz_BT-LE(2Mbps)

2478MHz_TX

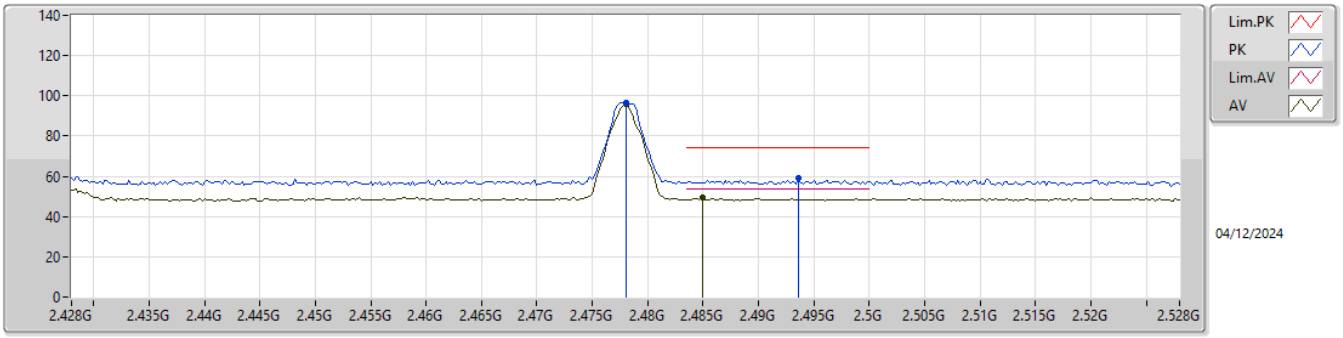


EUT Y_1TX
Setting 200
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4786G	105.98	Inf	-Inf	74.95	3	Vertical	77	1.54	-	27.49	3.54	-
AV	2.478G	105.42	Inf	-Inf	74.40	3	Vertical	77	1.54	-	27.48	3.54	-
PK	2.4835G	58.64	74.00	-15.36	27.60	3	Vertical	77	1.54	-	27.50	3.54	-
AV	2.4836G	51.18	54.00	-2.82	20.14	3	Vertical	77	1.54	-	27.50	3.54	-

2.4-2.4835GHz_BT-LE(2Mbps)

2478MHz_TX

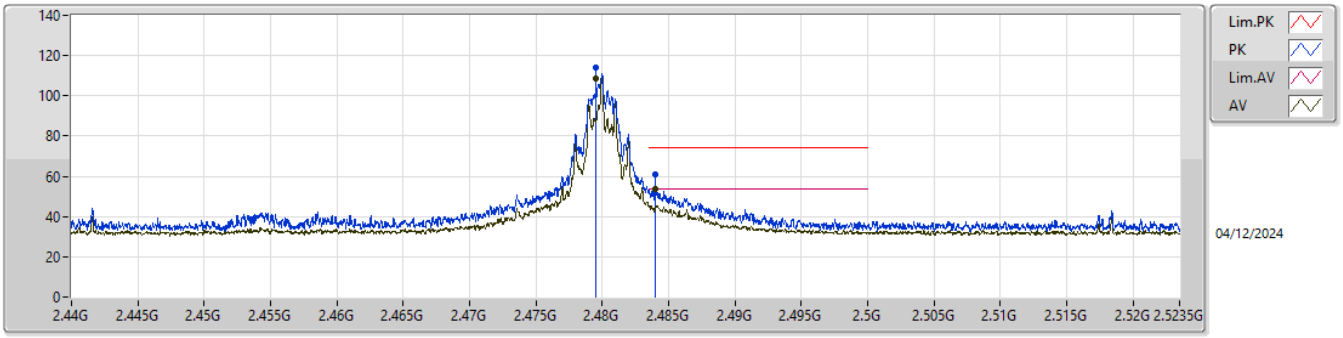


EUT Y_1TX
Setting 200
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.478G	96.29	Inf	-Inf	65.27	3	Horizontal	337	1.60	-	27.48	3.54	-
AV	2.478G	95.71	Inf	-Inf	64.69	3	Horizontal	337	1.60	-	27.48	3.54	-
PK	2.4936G	59.08	74.00	-14.92	28.03	3	Horizontal	337	1.60	-	27.50	3.55	-
AV	2.485G	49.20	54.00	-4.80	18.16	3	Horizontal	337	1.60	-	27.50	3.54	-

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

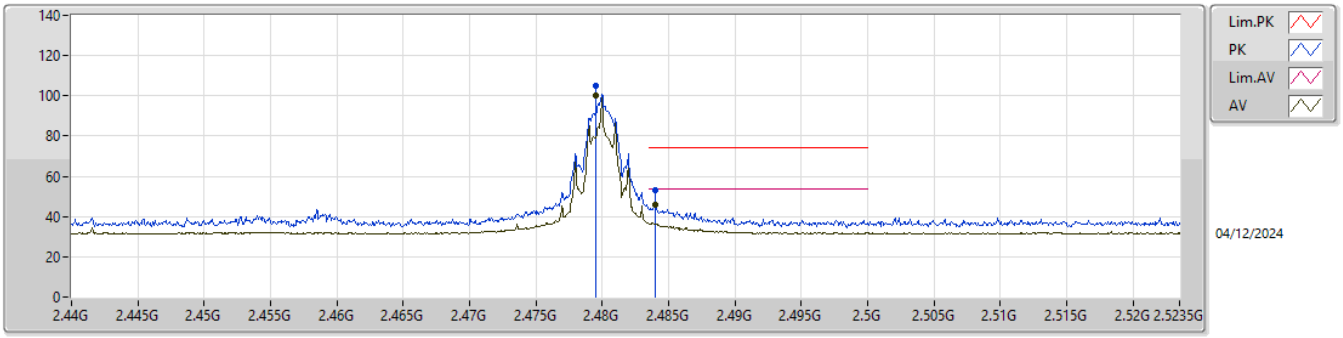


EUT Y_1TX
Setting 140
04-H-M-2-10

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4795G	113.76	Inf	-Inf	126.83	3	Vertical	78	1.56	BP 1MHz	27.49	4.04	44.60
AV	2.4795G	108.49	Inf	-Inf	121.56	3	Vertical	78	1.56	BP 1MHz	27.49	4.04	44.60
PK	2.484G	60.83	74.00	-13.17	73.89	3	Vertical	78	1.56	BP 1MHz	27.50	4.04	44.60
AV	2.484G	53.83	54.00	-0.17	66.89	3	Vertical	78	1.56	BP 1MHz	27.50	4.04	44.60

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

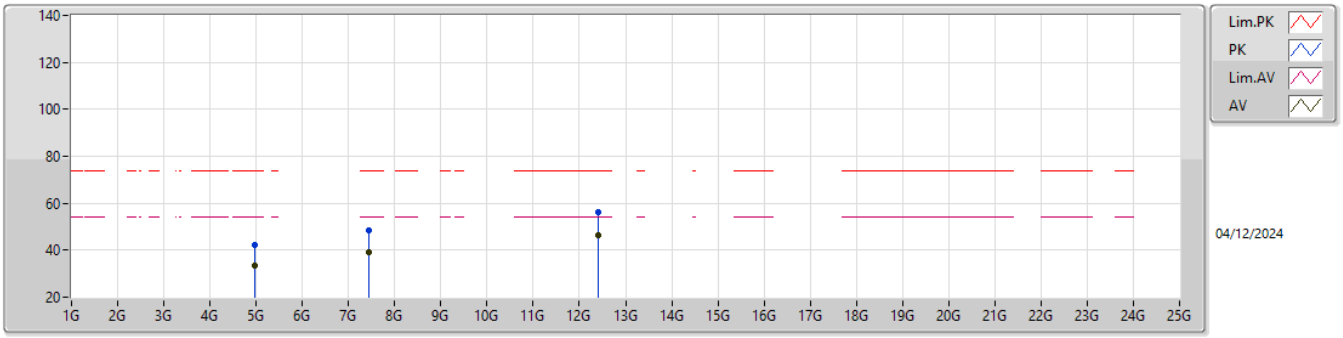


EUT Y_1TX
Setting 140
04-H-M-2-10

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4795G	104.77	Inf	-Inf	117.84	3	Horizontal	339	1.60	BP 1MHz	27.49	4.04	44.60
AV	2.4795G	99.97	Inf	-Inf	113.04	3	Horizontal	339	1.60	BP 1MHz	27.49	4.04	44.60
PK	2.484G	53.21	74.00	-20.79	66.27	3	Horizontal	339	1.60	BP 1MHz	27.50	4.04	44.60
AV	2.484G	45.87	54.00	-8.13	58.93	3	Horizontal	339	1.60	BP 1MHz	27.50	4.04	44.60

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

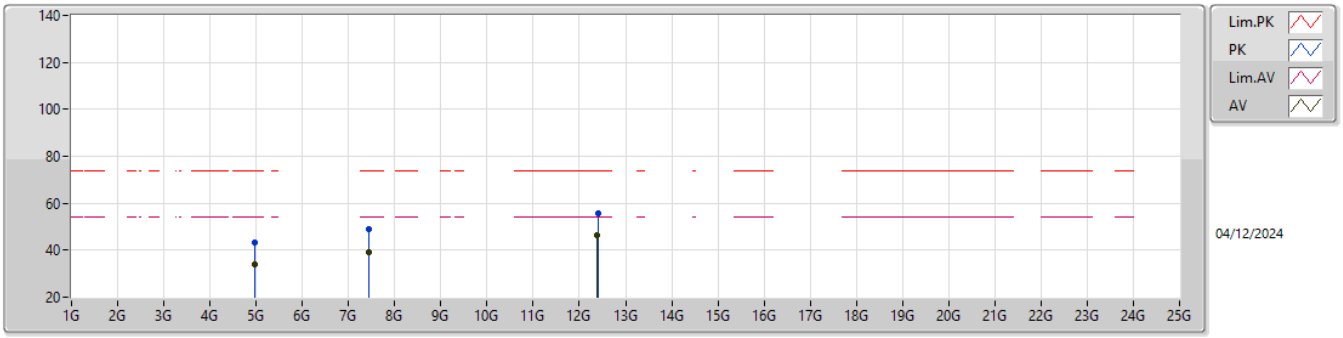


EUT Y_1TX
Setting 140
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.9602G	42.47	74.00	-31.53	49.33	3	Vertical	30	2.24	-	31.54	5.50	43.90
AV	4.96016G	33.63	54.00	-20.37	40.49	3	Vertical	30	2.24	-	31.54	5.50	43.90
PK	7.44232G	48.32	74.00	-25.68	47.66	3	Vertical	18	1.30	-	36.35	7.27	42.96
AV	7.44508G	39.31	54.00	-14.69	38.63	3	Vertical	18	1.30	-	36.37	7.27	42.96
PK	12.40508G	56.42	74.00	-17.58	49.42	3	Vertical	130	2.06	-	38.77	11.27	43.04
AV	12.40132G	46.53	54.00	-7.47	39.50	3	Vertical	130	2.06	-	38.79	11.27	43.03

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



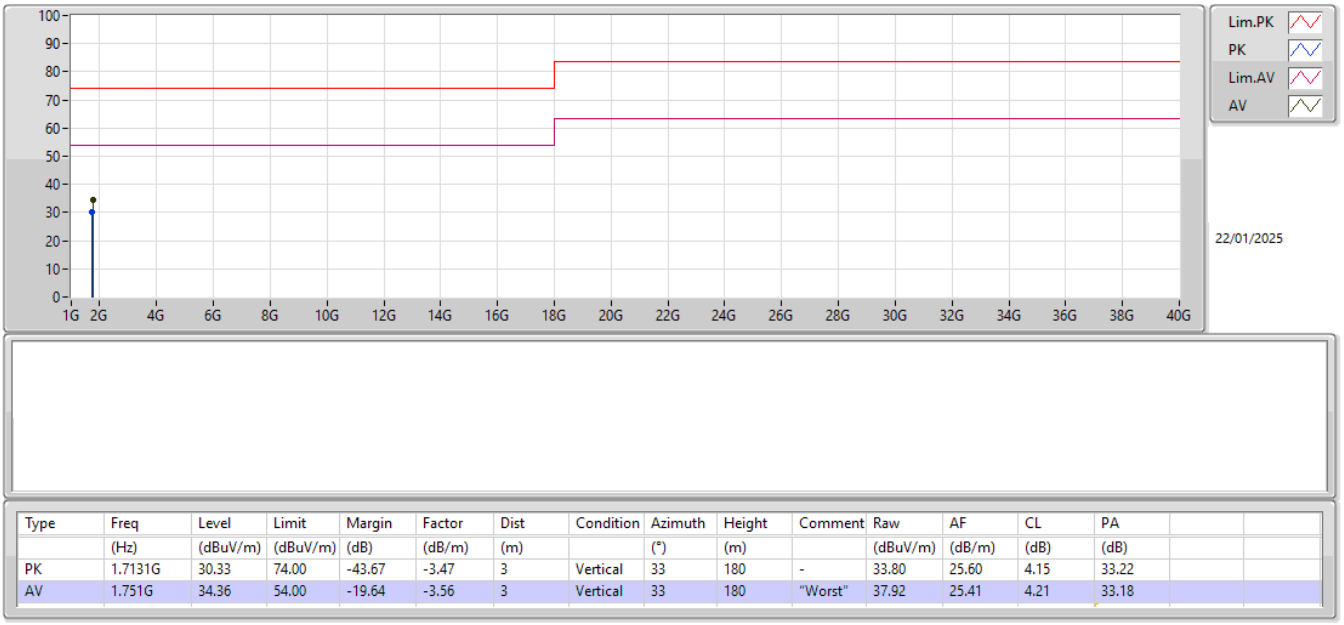
EUT Y_1TX
Setting 140
04-H-M-2

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.9599G	43.48	74.00	-30.52	50.34	3	Horizontal	53	2.93	-	31.54	5.50	43.90
AV	4.95998G	34.11	54.00	-19.89	40.97	3	Horizontal	53	2.93	-	31.54	5.50	43.90
PK	7.4368G	48.87	74.00	-25.13	48.24	3	Horizontal	2	1.80	-	36.32	7.26	42.95
AV	7.43192G	39.02	54.00	-14.98	38.41	3	Horizontal	2	1.80	-	36.29	7.26	42.94
PK	12.39768G	55.80	74.00	-18.20	48.77	3	Horizontal	150	1.80	-	38.80	11.26	43.03
AV	12.39184G	46.62	54.00	-7.38	39.57	3	Horizontal	150	1.80	-	38.82	11.26	43.03

Summary

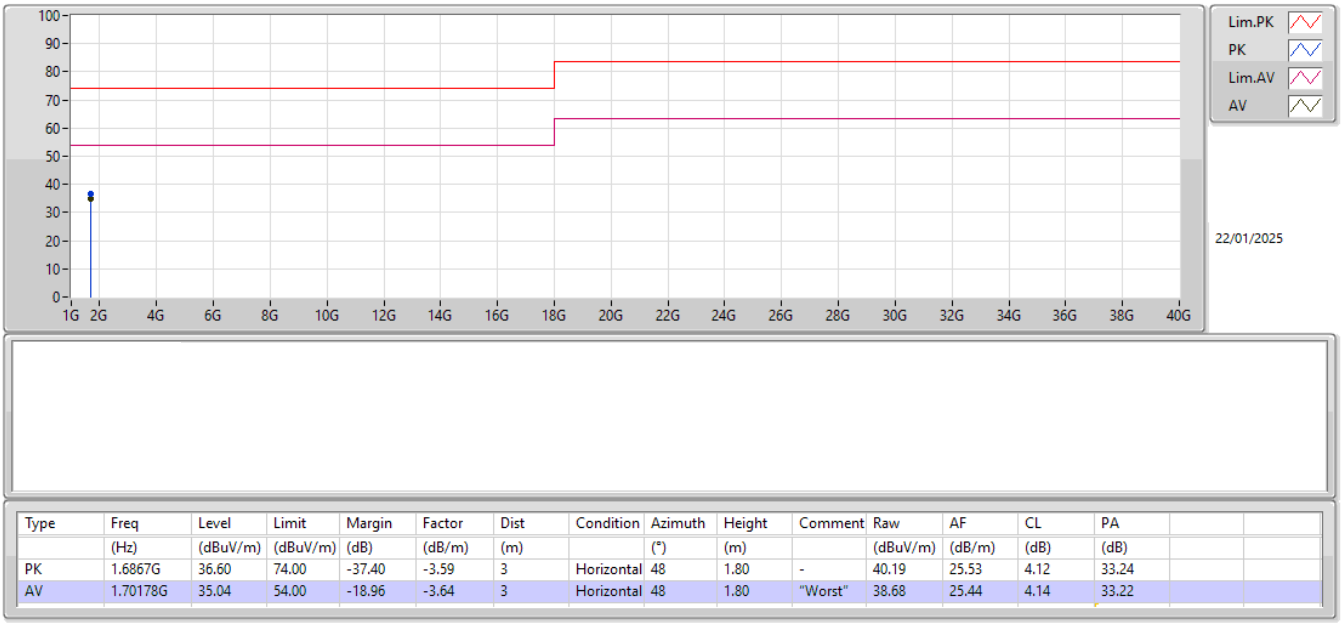
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	1.70178G	35.04	54.00	-18.96	Horizontal

Radiated Emissions above 1GHz_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	1.7131G	30.33	74.00	-43.67	-3.47	3	Vertical	33	180	-	33.80	25.60	4.15	33.22
AV	1.751G	34.36	54.00	-19.64	-3.56	3	Vertical	33	180	"Worst"	37.92	25.41	4.21	33.18

Radiated Emissions above 1GHz_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA		
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)		
PK	1.6867G	36.60	74.00	-37.40	-3.59	3	Horizontal	48	1.80	-	40.19	25.53	4.12	33.24		
AV	1.70178G	35.04	54.00	-18.96	-3.64	3	Horizontal	48	1.80	"Worst"	38.68	25.44	4.14	33.22		