Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	QXO-AP5020
Equipment	:	Access Point
Brand Name	:	Extreme Networks
Model Name	:	AP5020
Applicant	:	Extreme Networks, Inc. 2121 RDU Center Drive Morrisville North Carolina United States 27560
Manufacturer	:	Extreme Networks, Inc. 2121 RDU Center Drive Morrisville North Carolina United States 27560
Standard	:	47 CFR FCC Part 15.247

The product was received on Dec. 14, 2023, and testing was started from Jan. 11, 2024 and completed on Apr. 03, 2024. 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
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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 12
1.3 Testing Location Information 12
1.4 Measurement Uncertainty 12

2 Test Configuration of EUT **13**

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

3 Transmitter Test Result **19**

3.1 AC Power-line Conducted Emissions 19
3.2 DTS Bandwidth 21
3.3 Maximum Conducted Output Power 22
3.4 Power Spectral Density 25
3.5 Emissions in Non-restricted Frequency Bands 27
3.6 Emissions in Restricted Frequency Bands 28

4 Test Equipment and Calibration Data **32**

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
FR410321AE	01	Initial issue of report	Apr. 30, 2024

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:
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.

Reviewed by: Sam Chen
Report Producer: Lavender Zeng

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std.	Ch. Frequency (MHz)	Channel Number
2400-2483.5	802.15.4	2405-2480	11-26 [16]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	Zigbee	3	1TX

Note:
- Zigbee uses a O-QPSK (250kbps) modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Operating Band	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.20	PIFA	I-PEX	Note 1
2	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.21	PIFA	I-PEX	
3	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.22	PIFA	I-PEX	
4	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.23	PIFA	I-PEX	
5	WLAN 6GHz	Sercomm	6172001TJH.24	PIFA	I-PEX	
6	WLAN 6GHz	Sercomm	6172001TJH.25	PIFA	I-PEX	
7	WLAN 6GHz	Sercomm	6172001TJH.26	PIFA	I-PEX	
8	WLAN 6GHz	Sercomm	6172001TJH.27	PIFA	I-PEX	
9	WLAN 5GHz / 6GHz	Sercomm	6172001TJH.28	PIFA	I-PEX	
10	WLAN 5GHz / 6GHz	Sercomm	6172001TJH.29	PIFA	I-PEX	
11	Bluetooth / Zigbee	Sercomm	6172001TJH.30	PIFA	I-PEX	4.22
12	Bluetooth / Zigbee	Sercomm	6172001TJH.31	PIFA	I-PEX	4.12
13	Bluetooth / Zigbee	Sercomm	6172001TJH.32	PIFA	I-PEX	4.19
14	GPS	Sercomm	6172001TJH.33	PIFA	I-PEX	1.176GHz: 4.50 1.575GHz: 4.20

Ant.	Port							
	2.4GHz (Radio 1)	2.4GHz (Radio 3)	5GHz (Radio 1)	5GHz (Radio 2)	6GHz (Radio 1)	6GHz (Radio 3)	Bluetooth / Zigbee	GPS
1	1	-	-	1	-	-	-	-
2	2	-	-	2	-	-	-	-
3	3	1	-	3	-	-	-	-
4	4	2	-	4	-	-	-	-
5	-	-	-	-	-	1	-	-
6	-	-	-	-	-	2	-	-
7	-	-	-	-	-	3	-	-
8	-	-	-	-	-	4	-	-
9	-	-	1	-	1	-	-	-
10	-	-	2	-	2	-	-	-
11	-	-	-	-	-	-	1	-
12	-	-	-	-	-	-	2	-
13	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	1

Note 1:

Ant.	Antenna Gain (dBi)								
	2.4GHz	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHz UNII 3	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8
1	2.91	4.88	4.99	5.07	5.29	-	-	-	-
2	3.17	3.95	3.41	5.00	5.07	-	-	-	-
3	2.98	4.49	4.06	4.40	3.93	-	-	-	-
4	2.64	4.75	4.07	4.71	4.40	-	-	-	-
5	-	-	-	-	-	5.33	4.93	5.50	4.83
6	-	-	-	-	-	5.41	4.54	5.26	5.39
7	-	-	-	-	-	5.95	5.96	4.82	4.77
8	-	-	-	-	-	5.79	5.88	5.89	5.91
9	-	3.07	2.35	2.59	3.21	2.71	2.66	4.37	3.21
10	-	3.01	2.66	3.88	4.23	4.41	3.82	3.37	4.42
11	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-

Ant.	Item	Directional gain (dBi)								
		2.4GHz	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHz UNII 3	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8
1~4 (4TX)	4T1S	6.00	8.49	7.89	8.04	7.52	-	-	-	-
	4T2S	3.17	5.49	4.99	5.07	5.29	-	-	-	-
	4T3S	3.17	4.88	4.99	5.07	5.29	-	-	-	-
1~2 (2TX)	2T1S	3.9	7.09	6.19	6.33	5.81	-	-	-	-
	2T2S	3.17	4.88	4.99	5.07	5.29	-	-	-	-
3~4 (2TX)	2T1S	3.05	5.48	5.79	6.26	5.87	-	-	-	-
	2T2S	2.98	4.75	4.07	4.71	4.40	-	-	-	-
5~8 (4TX)	4T1S	-	-	-	-	-	9.23	8.77	9.49	9.13
	4T2S	-	-	-	-	-	6.23	5.96	6.49	6.13
	4T3S	-	-	-	-	-	5.95	5.96	5.89	5.91
5~6 (2TX)	2T1S	-	-	-	-	-	7.38	6.63	8.00	7.03
	2T2S	-	-	-	-	-	5.41	4.93	5.50	5.39
9~10 (2TX)	2T1S	-	4.51	4.52	6.00	5.95	5.82	4.82	5.36	5.47
	2T2S	-	3.07	2.66	3.88	4.23	4.41	3.82	4.37	4.42

Note 2: The above information (excepting WLAN gain) was declared by manufacturer.

Note 3: The antenna gain (WLAN) and directional gain (WLAN) are measured which follow the procedure of KDB 662911 D03.
Note 4: The Bluetooth / Zigbee function of Antenna 13 is not enabled at this time.
Note 5: The DFS band is not enabled at this time.
Note 6:

<For Radio 1>
2.4GHz Function
IEEE 802.11b/g/n/VHT/ax/be
For 2TX/2RX:
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.
For 2TX/4RX:
Port 1, Port 2, Port 3 and Port 4 can be used as receiving antenna, but only Port 1 and Port 2 can be used as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously, but only Port 1 and Port 2 could transmit simultaneously.
For 4TX/4RX:
Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.
5GHz Function
IEEE 802.11a/n/ac/ax/be
UNII 1~UNII 3:
For 2RX:
Port 1 and Port 2 can be used as receiving antenna.
Port 1 and Port 2 could receive simultaneously.
UNII1~UNII 2A:
For 2TX/2RX:
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.
6GHz Function
IEEE 802.11ax/be
For 2TX/2RX:
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.

<For Radio 2>
5GHz Function
IEEE 802.11a/n/ac/ax/be
For 2TX/4RX:
Port 1, Port 2, Port 3 and Port 4 can be used as receiving antenna, but only Port 1 and Port 2 can be used as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously, but only Port 1 and Port 2 could transmit simultaneously.
For 4TX/4RX:
Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

<For Radio 3>
2.4GHz Function
IEEE 802.11b/g/n/VHT/ax/be
For 1TX/2RX:
Port 1 and Port 2 can be used as receiving antenna, but only Port 1 can be used as transmitting antenna.
Port 1 and Port 2 could receive simultaneously.
For 2TX/2RX:
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.
6GHz Function
IEEE 802.11ax/be
For 2TX/4RX:
Port 1, Port 2, Port 3 and Port 4 can be used as receiving antenna, but only Port 1 and Port 2 can be used as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously, but only Port 1 and Port 2 could transmit simultaneously.
For 4TX/4RX:
Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

<For Radio 4>
Bluetooth/Zigbee Functions
For 1TX/1RX:
The EUT supports the antenna with TX and RX diversity functions.
Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.
The Port 1 generated the worst case, so it was selected to test and record in the report.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
Zigbee	0.903	0.44	4.24m	300

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter / PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 11n/VHT/11ax/11be in 2.4GHz, 11n/11ac/11ax/11be in 5GHz and 11ax/11be in 6GHz.			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	DOS [ver 6.1.7601]			

Note: The above information was declared by manufacturer.

1.1.5 Table for EUT Information

EUT	GPS Integrated Module
1	With
2	Without

Note 1: From the above EUTs, EUT 1 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.

1.1.6 Table for Radio Function

Radio	Support Band		
	2.4GHz	5GHz	6GHz
1	BW: 20MHz	2TX: UNII 1, 2RX: UNII 1&3 (scan) BW: 20/40/80MHz	UNII 5 or UNII 5~8 (scan) BW: 20/40/80/160MHz
2	-	UNII 3 or UNII 1&3 BW: 20/40/80MHz	-
3	BW: 20MHz	-	UNII 7~8 or UNII 5~8 BW: 20/40/80/160/320MHz
4	Bluetooth / Zigbee		
5	GPS		

Note: The above information was declared by manufacturer.

1.1.7 Table for EUT Operation Mode

Mode	Radio 1	Radio 2	Radio 3	Radio 4	Radio 5	Note
1	2.4GHz 4x4	5GHz (UNII 1&3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Tri Radio
2	2.4GHz 2x2 (TX) / 5GHz (2RX) / 6GHz (2RX)	5GHz (UNII 1&3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Full Band w/Scan
3	5GHz (UNII 1) 2x2	5GHz (UNII 3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Dual 5GHz w/6GHz
4	6GHz 2x2 (TX) / 2.4GHz (2RX) / 5GHz (2RX)	5GHz (UNII 1&3) 4x4	2.4GHz 2x2	Bluetooth or Zigbee	GPS	DBDC w/Scan
5	5GHz (UNII 1) 2x2	5GHz (UNII 3) 4x4	2.4GHz 2x2	Bluetooth or Zigbee	GPS	Dual 5GHz w/2.4GHz
6	6GHz (UNII 5) 2x2	5GHz (UNII 1&3) 4x4	6GHz (UNII 7~8) 4x4	Bluetooth or Zigbee	GPS	Dual 6GHz w/5GHz

Note: 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	TH01-CB	KJ Chang	21.7~23.2 / 65~69	Jan. 15, 2024 ~ Mar. 28, 2024
Radiated below 1GHz	03CH06-CB	George Fan	21.4-22.5 / 55-58	Jan. 11, 2024 ~ Apr. 02, 2024
Radiated above 1GHz	03CH01-CB	George Fan	21.2-22.3 / 56-59	Jan. 11, 2024 ~ Apr. 02, 2024
	03CH02-CB	George Fan	21.9-22.4 / 55-58	Jan. 11, 2024 ~ Apr. 02, 2024
AC Conduction	CO01-CB	Gray Lee	23~24 / 60~61	Apr. 03. 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)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 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	2.2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode
Zigbee
2405MHz
2440MHz
2475MHz
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	CTX
1	EUT 1 + Radio 1 (WLAN 2.4GHz) + Adapter
2	EUT 1 + Radio 1 (WLAN 2.4GHz) + PoE
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 ~ 9 will follow this same test mode.	
3	EUT 1 + Radio 1 (WLAN 5GHz) + PoE
4	EUT 1 + Radio 1 (WLAN 6GHz) + PoE
5	EUT 1 + Radio 2 (WLAN 5GHz) + PoE
6	EUT 1 + Radio 3 (WLAN 2.4GHz) + PoE
7	EUT 1 + Radio 3 (WLAN 6GHz) + PoE
8	EUT 1 + Radio 4 (Bluetooth) + PoE
9	EUT 1 + Radio 4 (Zigbee) + PoE
For operating mode 8 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
1	EUT 1 + Radio 4

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
	The EUT was performed at X axis, Y axis and Z axis position, and the worst case as below for Emissions in Restricted Frequency Bands above 1GHz. Thus, the measurement will follow this same test configuration.
1	EUT 1 in X axis + Radio 1 (WLAN 2.4GHz) + Adapter
2	EUT 1 in X axis + Radio 1 (WLAN 2.4GHz) + PoE
Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 ~ 9 will follow this same test mode.	
3	EUT 1 in Z axis + Radio 1 (WLAN 5GHz) + Adapter
4	EUT 1 in Z axis + Radio 1 (WLAN 6GHz) + Adapter
5	EUT 1 in Y axis + Radio 2 (WLAN 5GHz) + Adapter
6	EUT 1 in Y axis + Radio 3 (WLAN 2.4GHz) + Adapter
7	EUT 1 in Z axis + Radio 3 (WLAN 6GHz) + Adapter
8	EUT 1 in Z axis + Radio 4 (Bluetooth) + Adapter
9	EUT 1 in Z aixs + Radio 4 (Zigbee) + Adapter
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	EUT 1 in Z axis + Radio 4

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Zigbee)
2	Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Bluetooth)
3	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Zigbee)
4	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Bluetooth)
5	Radio 1 (WLAN 6GHz/UNII 5~8) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Zigbee)
6	Radio 1 (WLAN 6GHz/UNII 5~8) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Bluetooth)
7	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Zigbee)
8	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Bluetooth)
9	Radio 1 (WLAN 6GHz/UNII 5) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 7~8) + Radio 4 (Zigbee)
10	Radio 1 (WLAN 6GHz/UNII 5) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 7~8) + Radio 4 (Bluetooth)
Refer to Sporton Test Report No.: FA410321 for Co-location RF Exposure Evaluation.	

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

Power	Brand Name	Model Name
PoE	PHIHONG	POE60U-1BT-X
Adapter	Powertron	PA1045-120HIB300

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories
Mount bracket *1

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	PHIHONG	POE60U-1BT-X	N/A
B	PC	ASUS	S300TA	TX2-RTL8821CE
C	Flash disk3.0	Transcend	JetFlash-703	N/A

For Radiated:

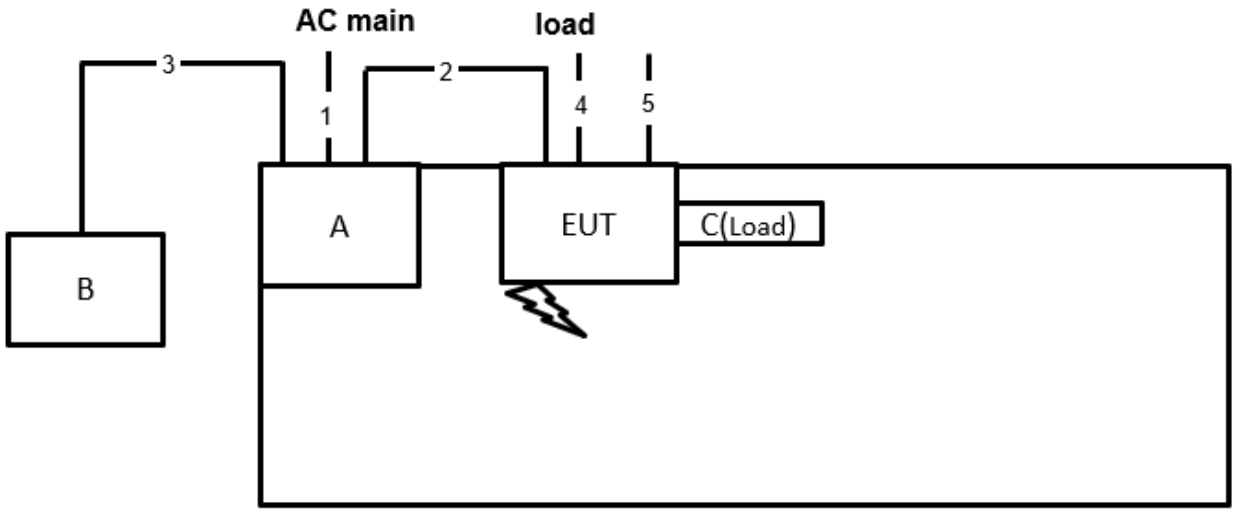
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	AC Adapter	Powertron	PA1045-120HIB300	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	AC Adapter	Powertron	PA1045-120HIB300	N/A

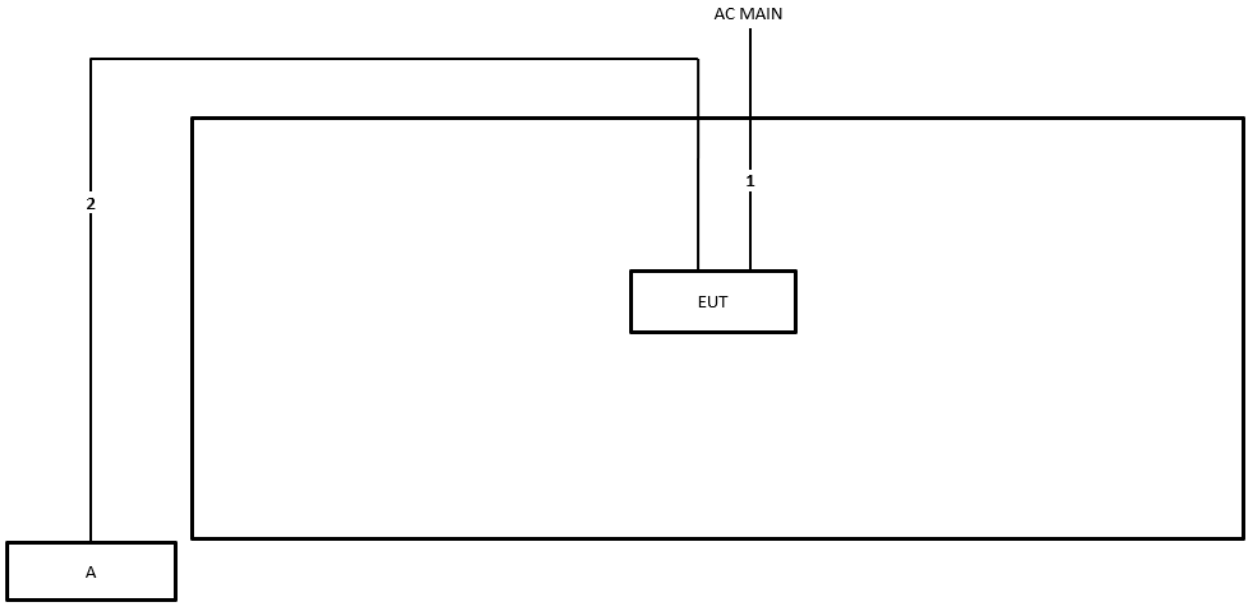
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	0.8m
2	RJ-45 Cable	No	1.5m
3	RJ-45 Cable	No	10m
4	RJ-45 Cable	No	1.5m
5	Console cable	No	1.5m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	1.2m
2	RJ-45 cable	No	10m

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

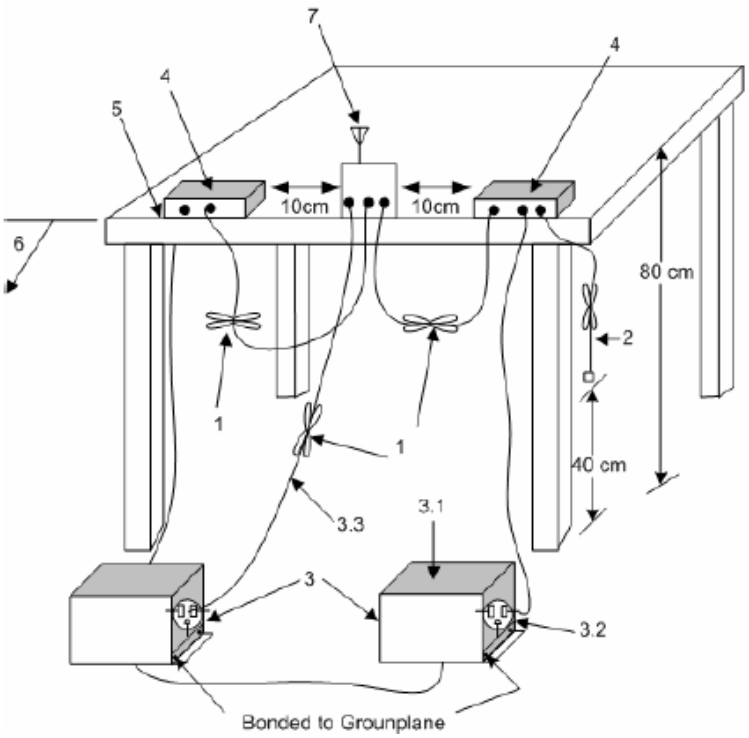
Refer a test equipment and calibration data table in this test report.

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.

3.1.5 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

3.1.6 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 ≥ 500 kHz.

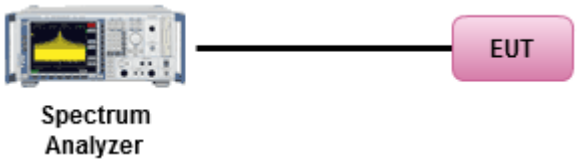
3.2.2 Measuring Instruments

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

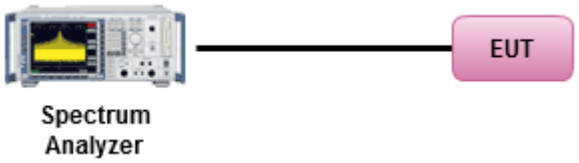
3.4.2 Measuring Instruments

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.	
▪ 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

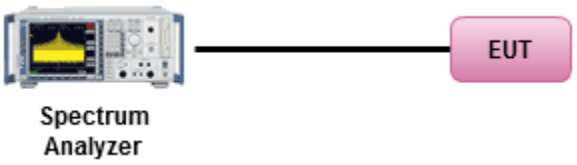
Refer a test equipment and calibration data table in this test report.

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 below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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

3.6.2 Measuring Instruments

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

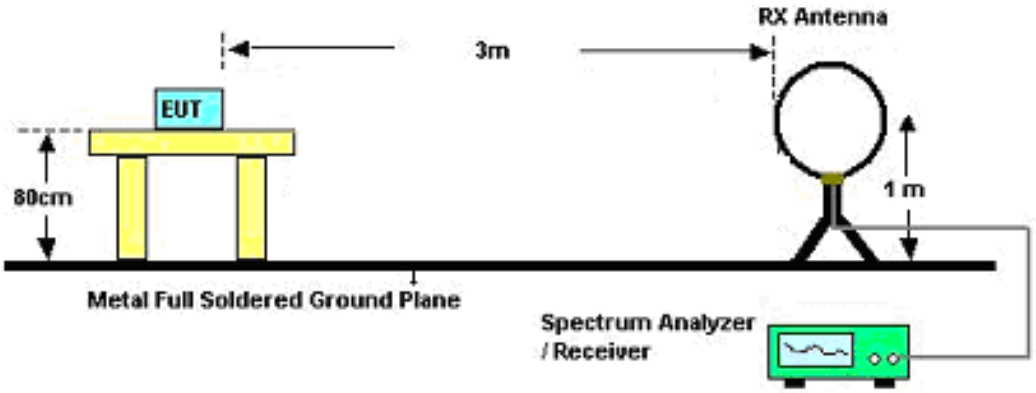
3.6.3 Test Procedures

Test Method			
▪ The average emission levels shall be measured in [duty cycle ≥ 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.		

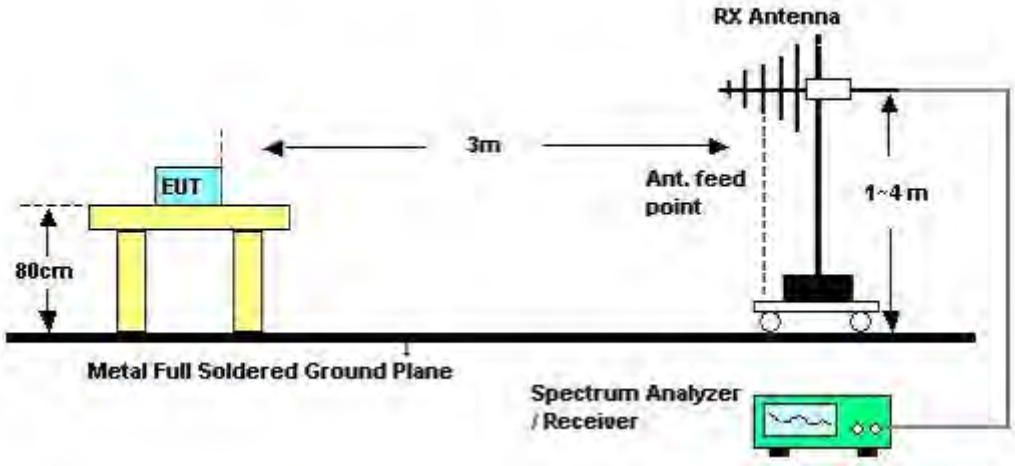
3.6.4 Test Setup

Emissions in Restricted Frequency Bands

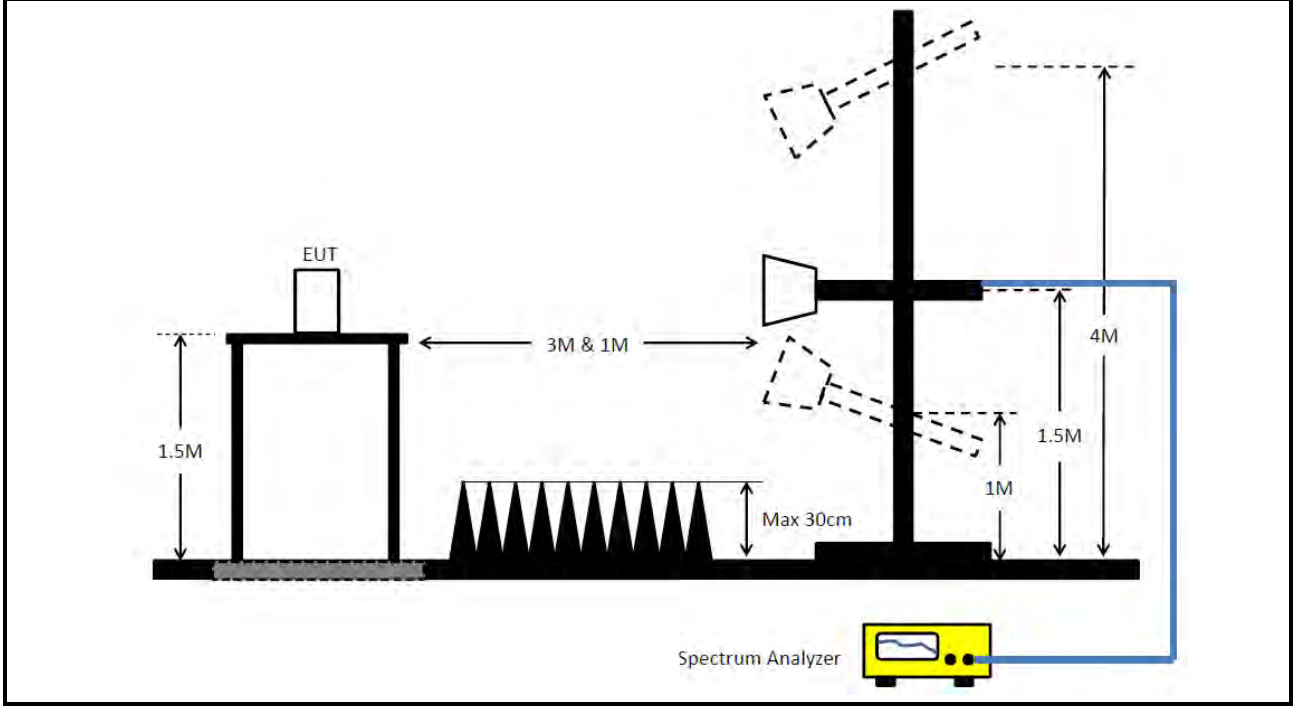
9kHz ~30MHz



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. 27, 2023	Apr. 26, 2024	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 08, 2024	Feb. 07, 2025	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 17, 2023	Oct. 16, 2024	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 05, 2023	May 04, 2024	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120D-01816	1GHz~18GHz	Dec. 20, 2023	Dec. 19, 2024	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 18, 2023	May 17, 2024	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV3044	101437	10kHz ~ 44GHz	Nov. 28, 2023	Nov. 27, 2024	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Nov. 06, 2023	Nov. 05, 2024	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Nov. 06, 2023	Nov. 05, 2024	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 25, 2023	Mar. 24, 2024	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 24, 2024	Mar. 23, 2025	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 18, 2023	Apr. 17, 2024	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH02-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH02-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	May 29, 2023	May 28, 2024	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30 MHz	Oct. 13, 2023	Oct. 12, 2024	Radiation (03CH06-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 03, 2023	Aug. 02, 2024	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Jul. 30, 2023	Jul. 29, 2024	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 03, 2023	Nov. 02, 2024	Radiation (03CH06-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 21, 2023	Apr. 20, 2024	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 13, 2023	Jun. 12, 2024	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-24+68	30MHz~1GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 29, 2023	May 28, 2024	Conducted (TH01-CB)
Band Rejector	MTJ	6G Band Rejector	6G-BRJ-01	1 ~ 18GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH01-CB)
Band Rejector	MTJ	6G Band Rejector	6G-BRJ-02	1~ 18GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1~26.5 GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)

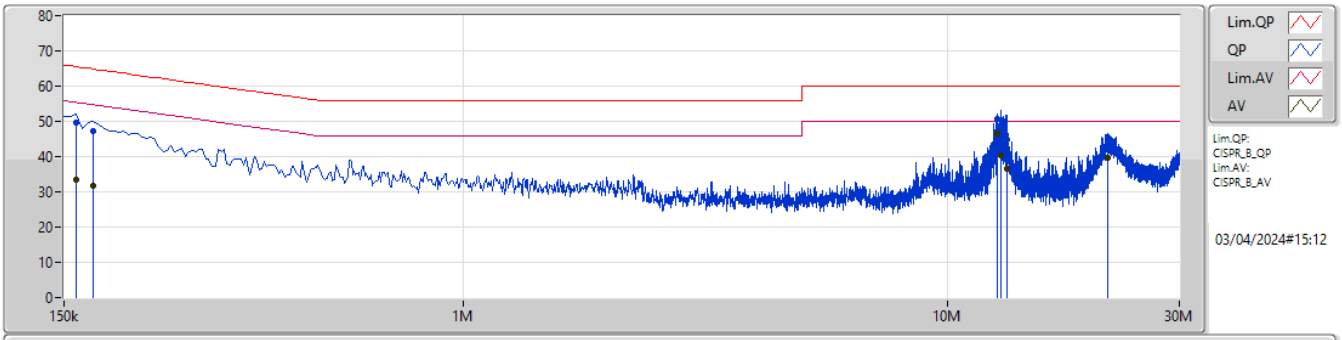
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Power Sensor	Anritsu	MA2411B	1339408	300MHz~40GHz	Sep. 12, 2023	Sep. 11, 2024	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1517009	300MHz~40GHz	Sep. 12, 2023	Sep. 11, 2024	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

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

Summary

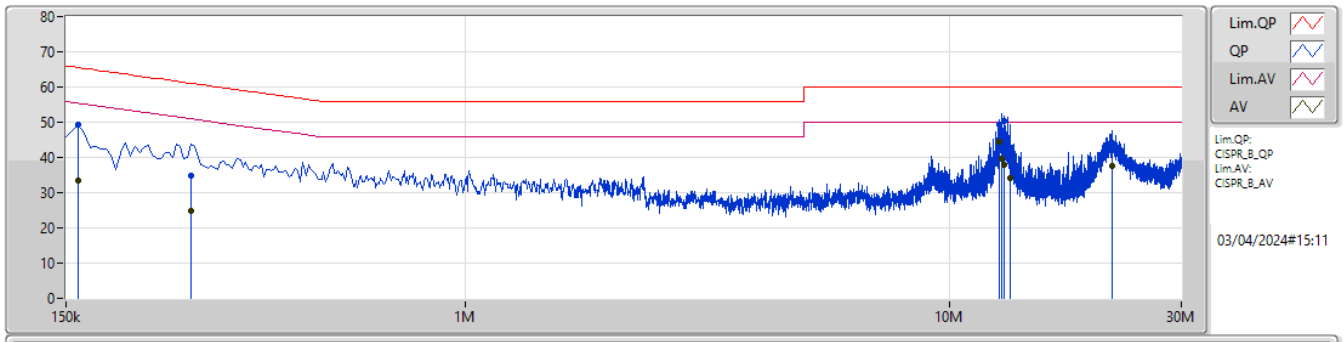
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 8	Pass	AV	12.638M	46.38	50.00	-3.62	Line

Mode 8



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	159k	49.59	65.52	-15.93	9.97	Line	-	39.62	0.09	0.02	9.86
AV	159k	33.52	55.52	-22.00	9.97	Line	-	23.55	0.09	0.02	9.86
QP	172.5k	47.33	64.83	-17.50	9.97	Line	-	37.36	0.09	0.02	9.86
AV	172.5k	31.73	54.83	-23.10	9.97	Line	-	21.76	0.09	0.02	9.86
QP	12.638M	50.77	60.00	-9.23	10.36	Line	-	40.41	0.27	0.16	9.93
AV	12.638M	46.38	50.00	-3.62	10.36	Line	"Worst"	36.02	0.27	0.16	9.93
QP	12.854M	50.27	60.00	-9.73	10.36	Line	-	39.91	0.27	0.16	9.93
AV	12.854M	40.39	50.00	-9.61	10.36	Line	-	30.03	0.27	0.16	9.93
QP	13.236M	44.91	60.00	-15.09	10.38	Line	-	34.53	0.27	0.17	9.94
AV	13.236M	36.68	50.00	-13.32	10.38	Line	-	26.30	0.27	0.17	9.94
QP	21.404M	45.61	60.00	-14.39	10.56	Line	-	35.05	0.30	0.23	10.03
AV	21.404M	39.67	50.00	-10.33	10.56	Line	-	29.11	0.30	0.23	10.03

Mode 8



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	159k	49.32	65.52	-16.20	9.95	Neutral	-	39.37	0.07	0.02	9.86
AV	159k	33.30	55.52	-22.22	9.95	Neutral	-	23.35	0.07	0.02	9.86
QP	271.5k	34.70	61.07	-26.37	9.96	Neutral	-	24.74	0.07	0.02	9.87
AV	271.5k	24.81	51.07	-26.26	9.96	Neutral	-	14.85	0.07	0.02	9.87
QP	12.642M	49.32	60.00	-10.68	10.34	Neutral	-	38.98	0.25	0.16	9.93
AV	12.642M	44.36	50.00	-5.64	10.34	Neutral	"Worst"	34.02	0.25	0.16	9.93
QP	12.804M	47.64	60.00	-12.36	10.34	Neutral	-	37.30	0.25	0.16	9.93
AV	12.804M	39.78	50.00	-10.22	10.34	Neutral	-	29.44	0.25	0.16	9.93
QP	12.962M	50.18	60.00	-9.82	10.36	Neutral	-	39.82	0.25	0.17	9.94
AV	12.962M	38.08	50.00	-11.92	10.36	Neutral	-	27.72	0.25	0.17	9.94
QP	13.29M	42.72	60.00	-17.28	10.36	Neutral	-	32.36	0.25	0.17	9.94
AV	13.29M	34.24	50.00	-15.76	10.36	Neutral	-	23.88	0.25	0.17	9.94
QP	21.624M	44.11	60.00	-15.89	10.57	Neutral	-	33.54	0.31	0.23	10.03
AV	21.624M	37.68	50.00	-12.32	10.57	Neutral	-	27.11	0.31	0.23	10.03

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Zigbee	1.586M	2.332M	2M33G1D	1.451M	2.326M

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

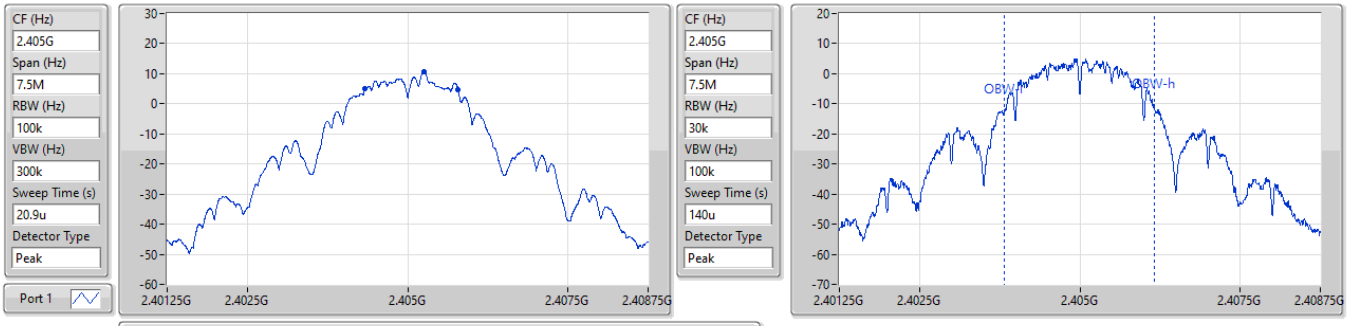
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Zigbee	-	-	-	-
2405MHz	Pass	500k	1.451M	2.326M
2440MHz	Pass	500k	1.586M	2.332M
2480MHz	Pass	500k	1.556M	2.326M

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

2.4-2.4835GHz_Zigbee **EBW**

2405MHz

15/01/2024

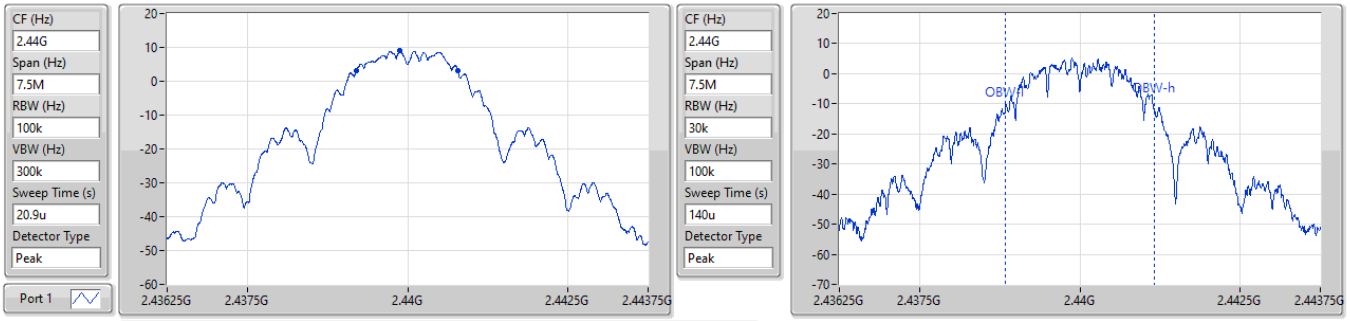


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.451M	2.404336G	2.405788G	2.326M	2.403828G	2.406154G	500k	1

2.4-2.4835GHz_Zigbee **EBW**

2440MHz

15/01/2024

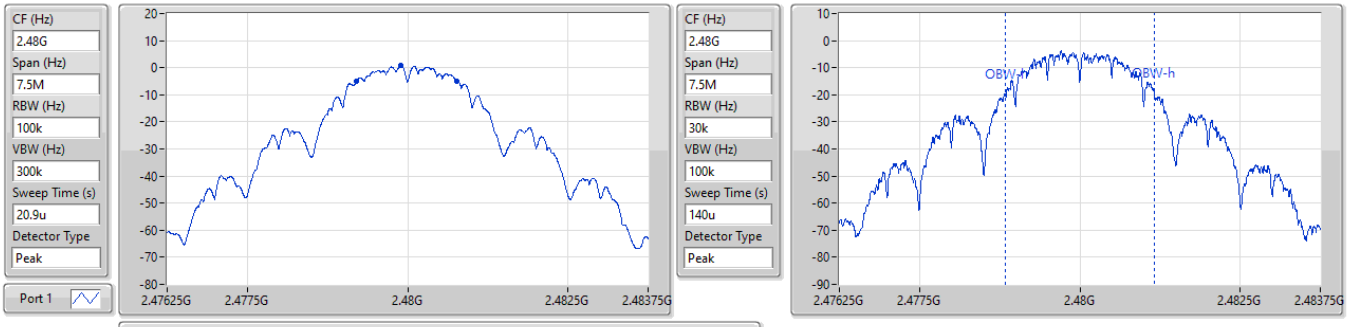


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.586M	2.439198G	2.440784G	2.332M	2.43883G	2.441162G	500k	1

2.4-2.4835GHz_Zigbee **EBW**

2480MHz

15/01/2024



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.556M	2.479205G	2.480761G	2.326M	2.47884G	2.481166G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Zigbee	14.01	0.02518

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Zigbee	-	-	-	-	-
2405MHz	Pass	4.22	13.78	13.78	30.00
2440MHz	Pass	4.22	14.01	14.01	30.00
2475MHz	Pass	4.22	13.92	13.92	30.00
2480MHz	Pass	4.22	5.71	5.71	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
Zigbee	-2.16

RBW = 3kHz;

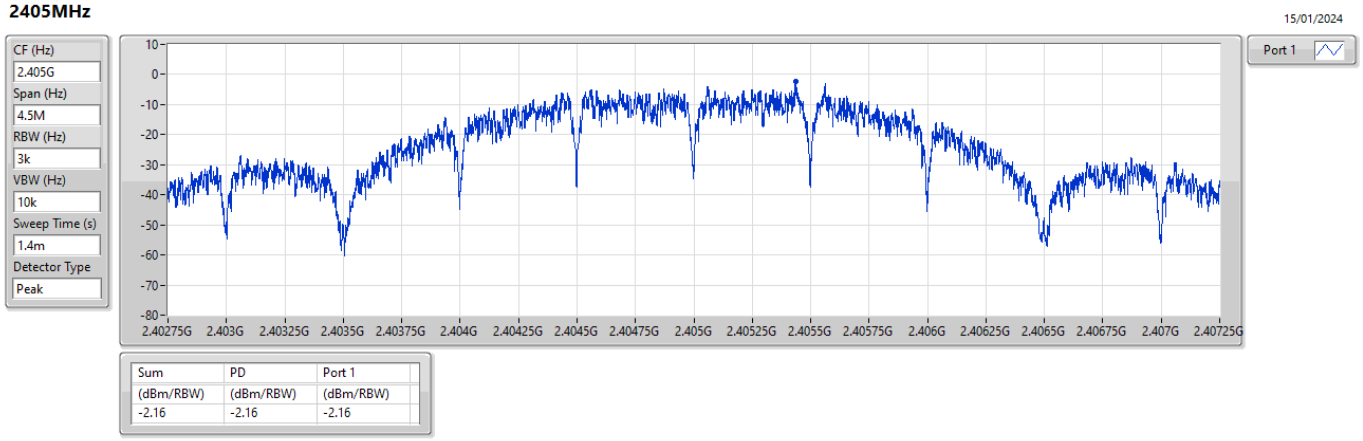
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Zigbee	-	-	-	-	-
2405MHz	Pass	4.22	-2.16	-2.16	8.00
2440MHz	Pass	4.22	-2.37	-2.37	8.00
2480MHz	Pass	4.22	-10.97	-10.97	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;

2.4-2.4835GHz_Zigbee **PSD**

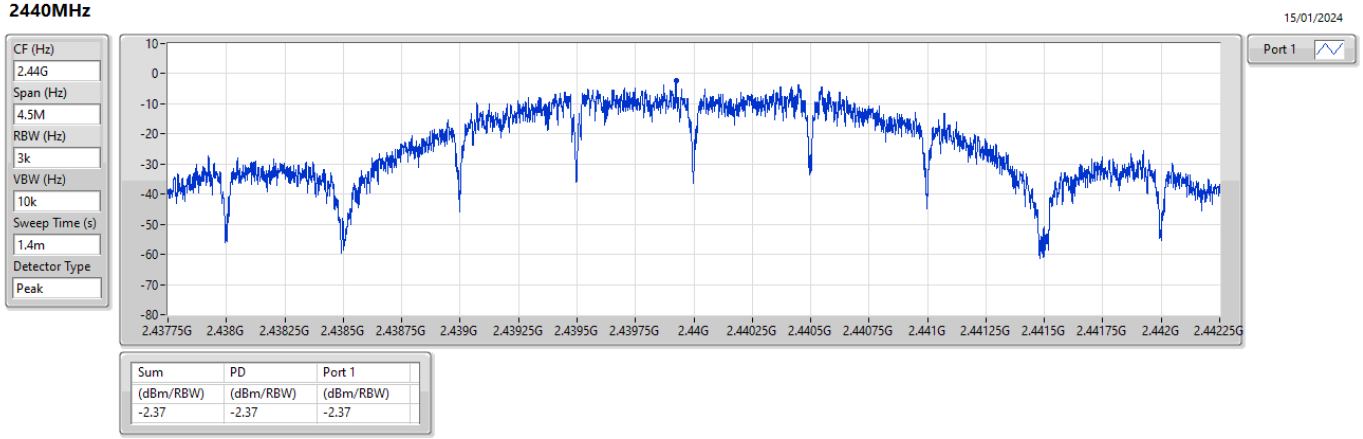
2405MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.16	-2.16	-2.16

2.4-2.4835GHz_Zigbee **PSD**

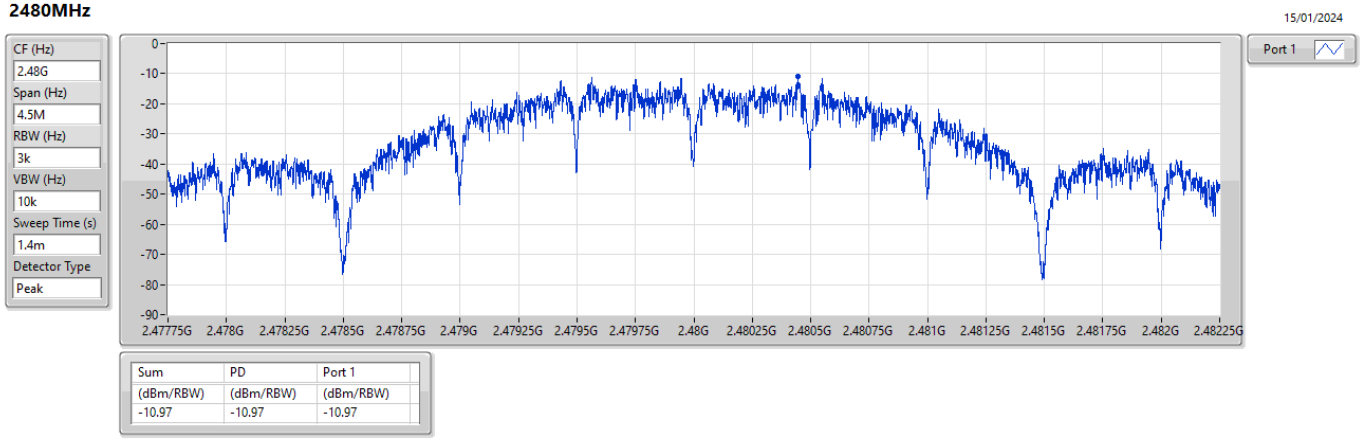
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.37	-2.37	-2.37

2.4-2.4835GHz_Zigbee **PSD**

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.97	-10.97	-10.97

Summary

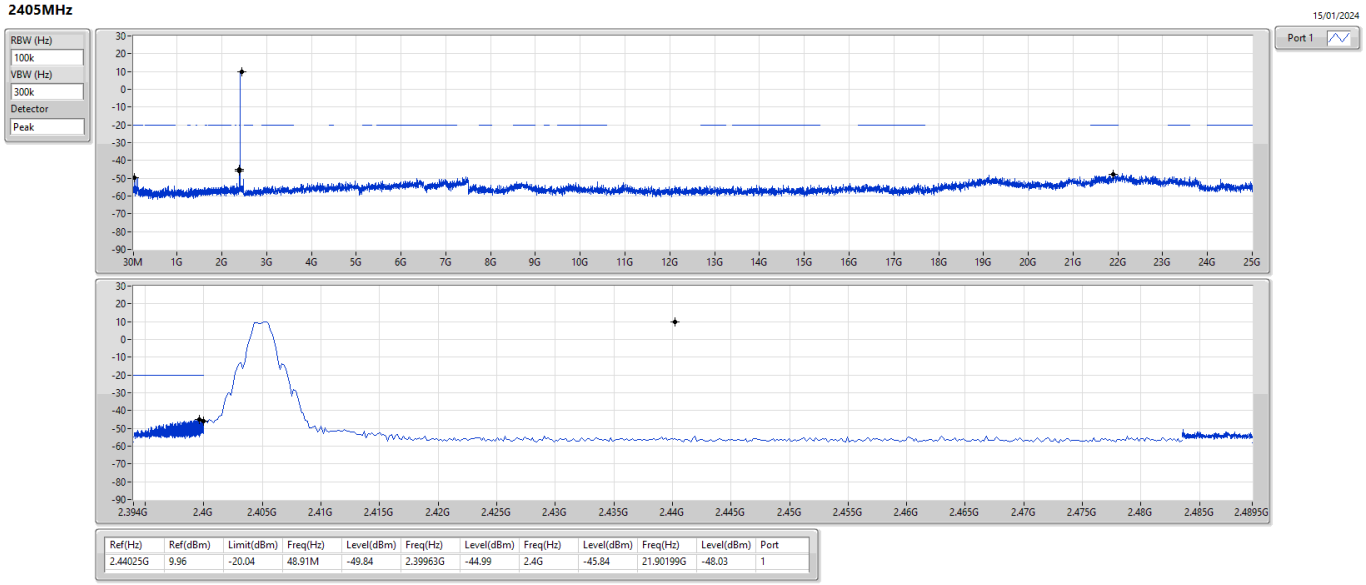
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	2.44025G	9.96	-20.04	48.91M	-49.84	2.39963G	-44.99	2.4G	-45.84	21.90199G	-48.03	1

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)	Port
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.44025G	9.96	-20.04	48.91M	-49.84	2.39963G	-44.99	2.4G	-45.84	21.90199G	-48.03	1
2440MHz	Pass	2.44025G	9.96	-20.04	83.19M	-50.33	2.39414G	-50.84	2.4G	-56.71	21.97797G	-47.09	1
2480MHz	Pass	2.44025G	9.96	-20.04	48.91M	-48.94	2.39699G	-51.28	2.4G	-56.83	21.62905G	-47.50	1

2.4-2.4835GHz_Zigbee CSENdB

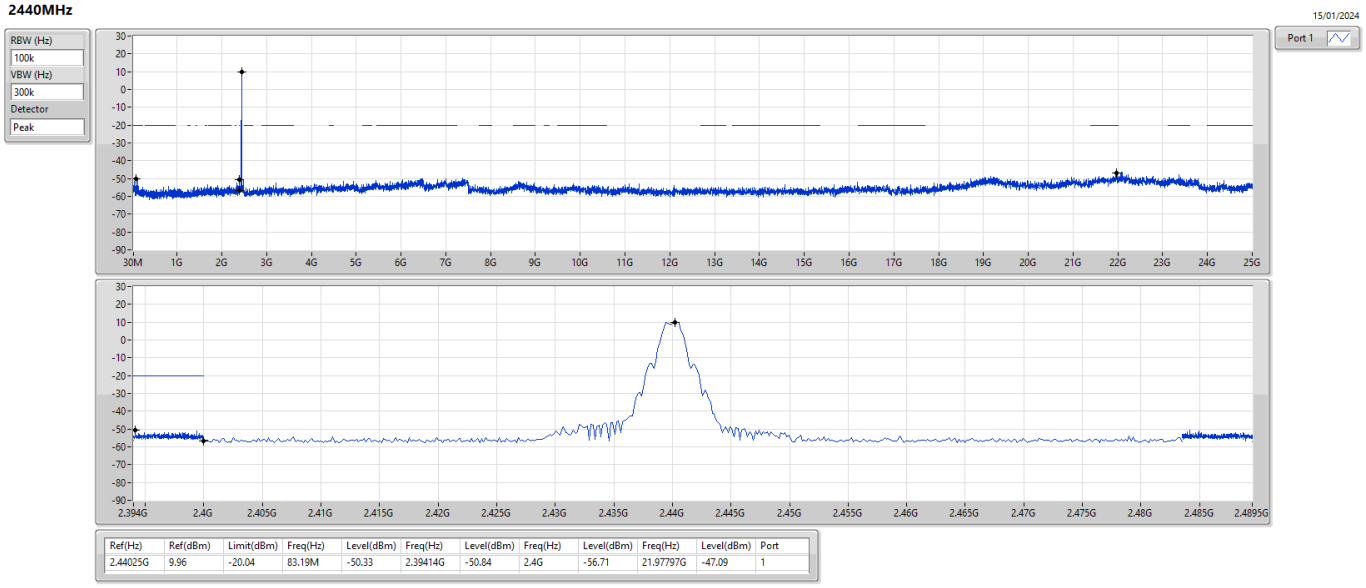
2405MHz



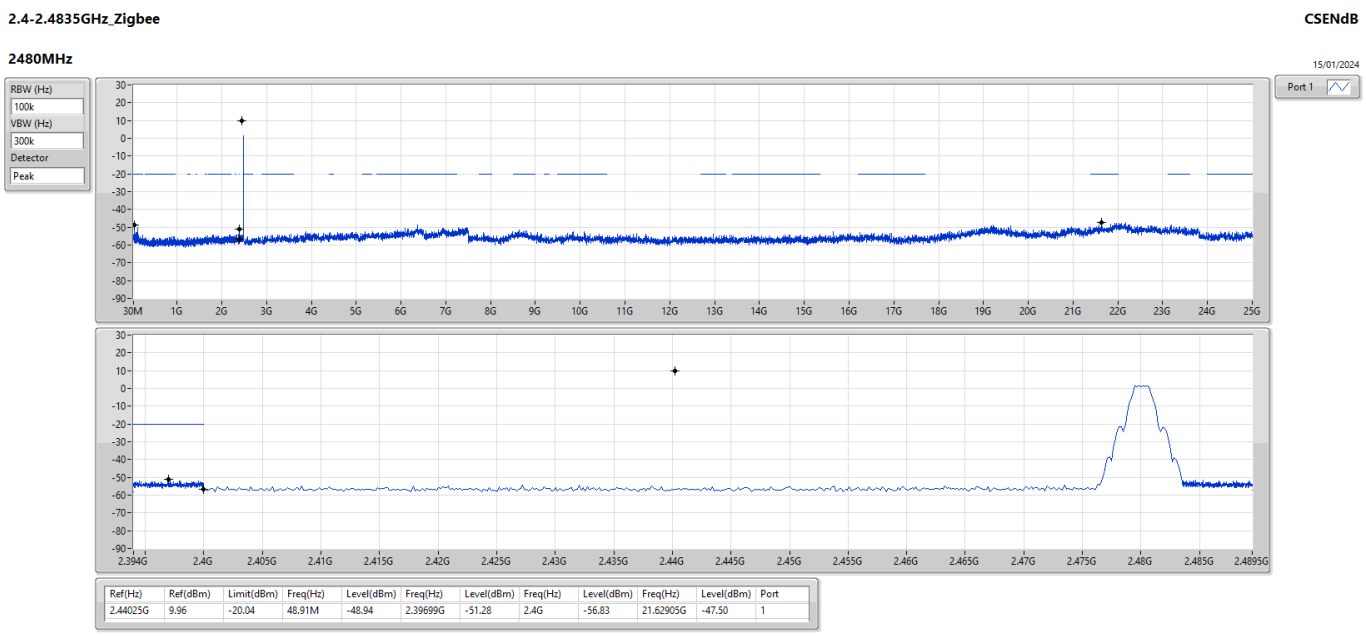
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44025G	9.96	-20.04	48.91M	-49.84	2.39963G	-44.99	2.4G	-45.84	21.90199G	-48.03	1

2.4-2.4835GHz_Zigbee CSENdB

2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44025G	9.96	-20.04	83.19M	-50.33	2.39414G	-50.84	2.4G	-56.71	21.97797G	-47.09	1

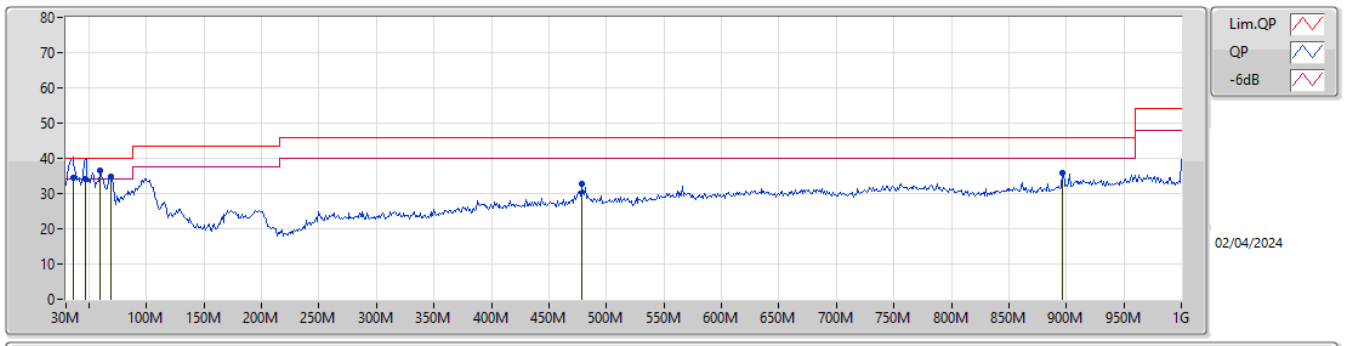


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44025G	9.96	-20.04	48.91M	-48.94	2.39699G	-51.28	2.4G	-56.83	21.62905G	-47.50	1

Summary

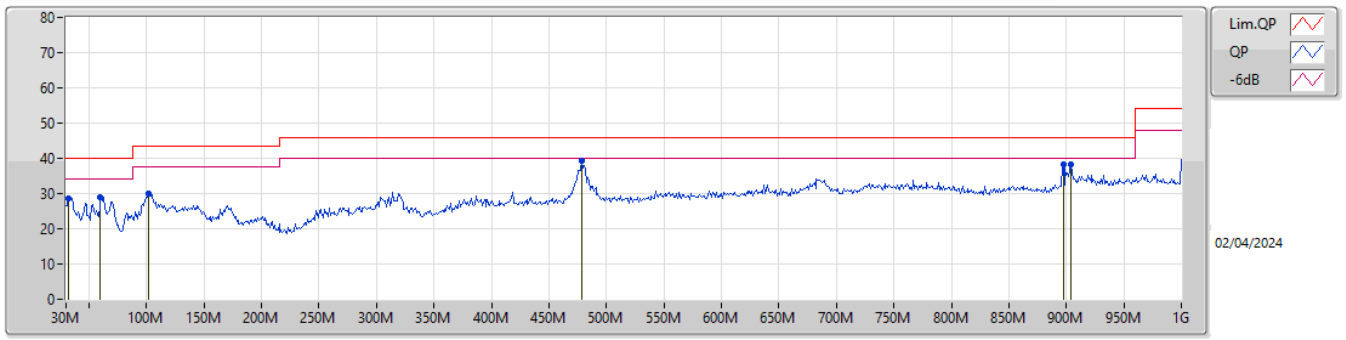
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	60.07M	36.71	40.00	-3.29	Vertical

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)
QP	35.82M	34.63	40.00	-5.37	-10.07	3	Vertical	262	1.00	"	44.70	21.13	1.21	32.41
QP	46.49M	34.28	40.00	-5.72	-15.02	3	Vertical	162	1.00	-	49.30	16.02	1.31	32.35
PK	60.07M	36.71	40.00	-3.29	-18.33	3	Vertical	0	1.25	"Worst"	55.04	12.53	1.41	32.27
PK	68.8M	34.98	40.00	-5.02	-18.45	3	Vertical	265	2.00	-	53.43	12.37	1.47	32.29
PK	479.11M	32.80	46.00	-13.20	-5.69	3	Vertical	66	2.00	-	38.49	23.17	3.19	32.05
PK	896.21M	35.94	46.00	-10.06	-0.83	3	Vertical	255	1.25	-	36.77	26.44	4.31	31.58

Mode 1



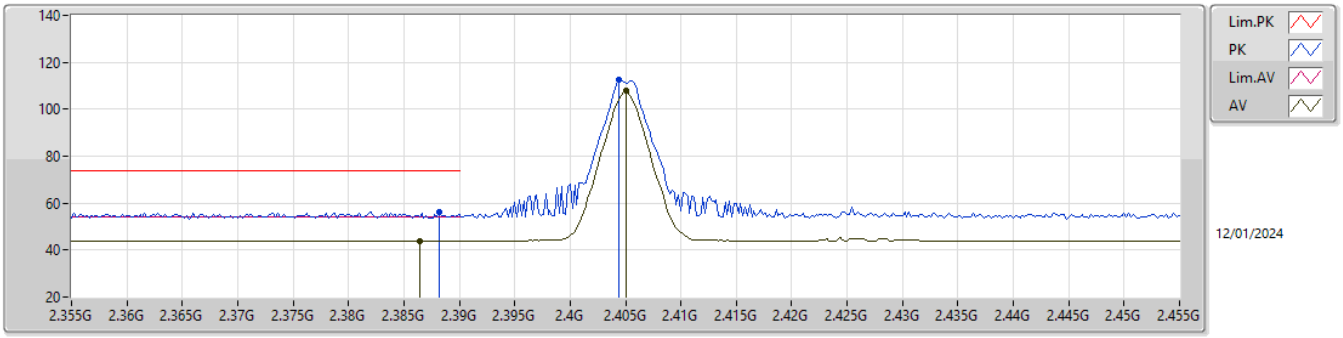
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	31.94M	28.75	40.00	-11.25	-8.14	3	Horizontal	0	1.50	-	36.89	23.10	1.16	32.40
PK	60.07M	29.00	40.00	-11.00	-18.33	3	Horizontal	87	2.00	-	47.33	12.53	1.41	32.27
PK	101.78M	29.85	43.50	-13.65	-13.57	3	Horizontal	291	3.00	-	43.42	17.10	1.68	32.35
PK	479.11M	39.32	46.00	-6.68	-5.69	3	Horizontal	360	2.00	"Worst"	45.01	23.17	3.19	32.05
PK	897.18M	38.33	46.00	-7.67	-0.80	3	Horizontal	96	1.50	-	39.13	26.46	4.31	31.57
PK	903.97M	38.34	46.00	-7.66	-0.70	3	Horizontal	360	1.25	-	39.04	26.42	4.33	31.45

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	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	AV	2.4835G	53.07	54.00	-0.93	3	Vertical	316	2.31	-

2.4-2.4835GHz_Zigbee

2405MHz_TX

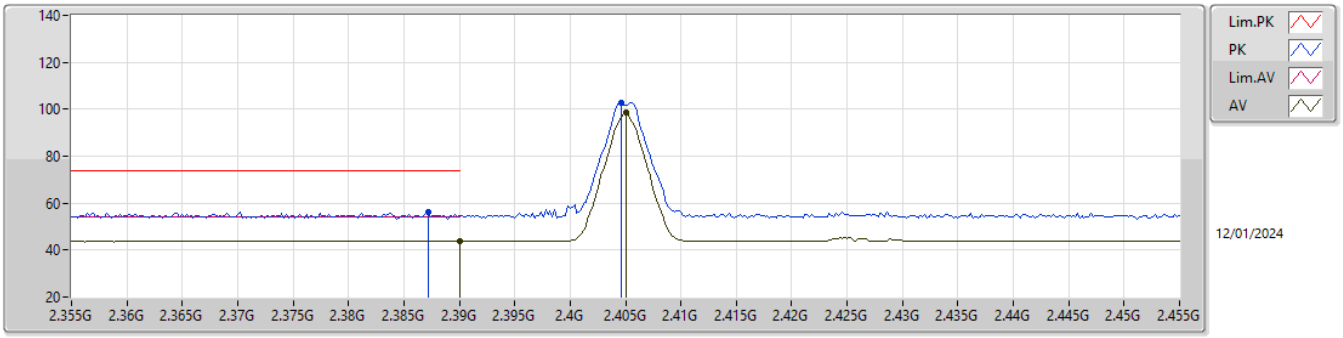


EUT Z_1TX
Setting 0C 0C
02-C-G-5

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	2.3882G	56.18	74.00	-17.82	24.73	3	Vertical	312	1.37	-	28.40	3.05	-
AV	2.3864G	43.90	54.00	-10.10	12.45	3	Vertical	312	1.37	-	28.40	3.05	-
PK	2.4044G	112.35	Inf	-Inf	80.89	3	Vertical	312	1.37	-	28.40	3.06	-
AV	2.405G	107.80	Inf	-Inf	76.34	3	Vertical	312	1.37	-	28.40	3.06	-

2.4-2.4835GHz_Zigbee

2405MHz_TX

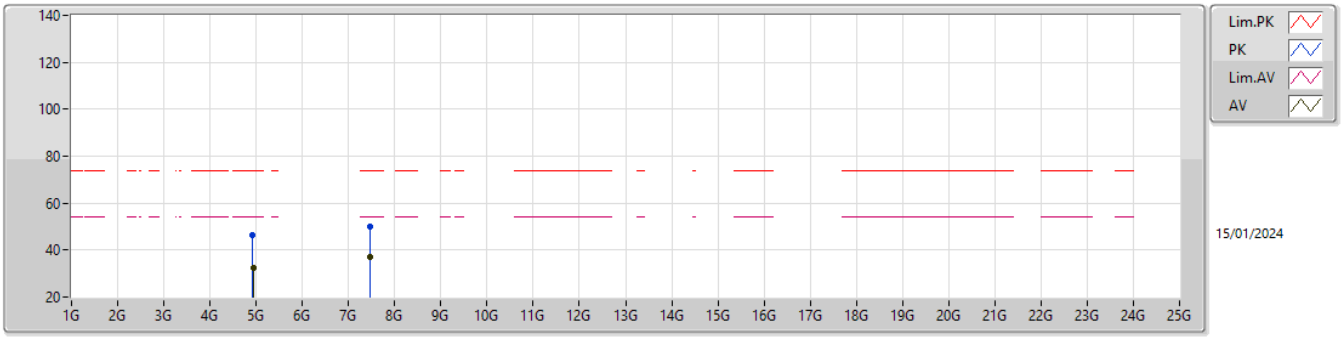


EUT Z_1TX
Setting 0C 0C
02-C-G-5

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	2.3872G	56.11	74.00	-17.89	24.66	3	Horizontal	146	2.46	-	28.40	3.05	-
AV	2.39G	43.85	54.00	-10.15	12.39	3	Horizontal	146	2.46	-	28.40	3.06	-
PK	2.4046G	102.96	Inf	-Inf	71.50	3	Horizontal	146	2.46	-	28.40	3.06	-
AV	2.405G	98.43	Inf	-Inf	66.97	3	Horizontal	146	2.46	-	28.40	3.06	-

2.4-2.4835GHz_Zigbee

2475MHz_TX

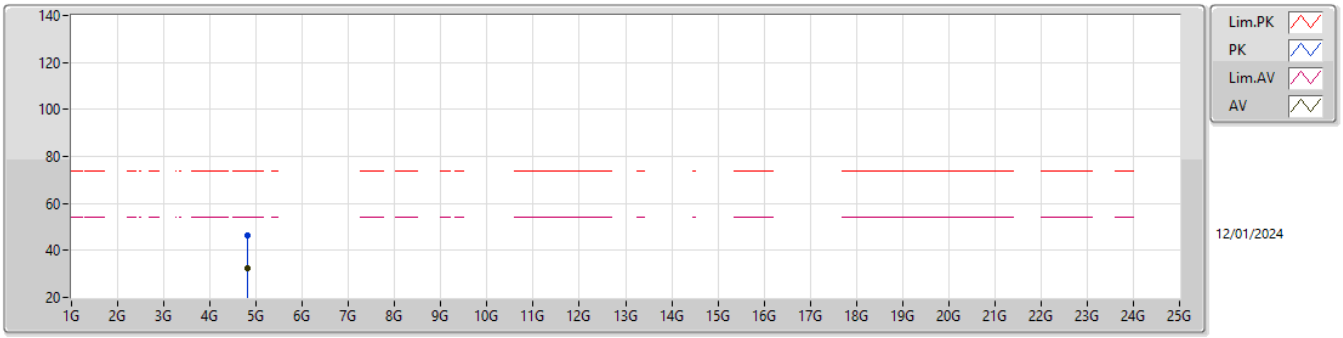


EUT Z_1TX
Setting 0C 0C
02-C-V-1

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	4.9244G	46.15	74.00	-27.85	38.38	3	Horizontal	192	1.80	-	33.25	5.13	30.61
AV	4.9506G	32.54	54.00	-21.46	24.69	3	Horizontal	192	1.80	-	33.30	5.14	30.59
PK	7.4712G	50.23	74.00	-23.77	39.13	3	Horizontal	134	2.79	-	36.70	6.60	32.20
AV	7.4722G	37.17	54.00	-16.83	26.07	3	Horizontal	134	2.79	-	36.70	6.60	32.20

2.4-2.4835GHz_Zigbee

2405MHz_TX

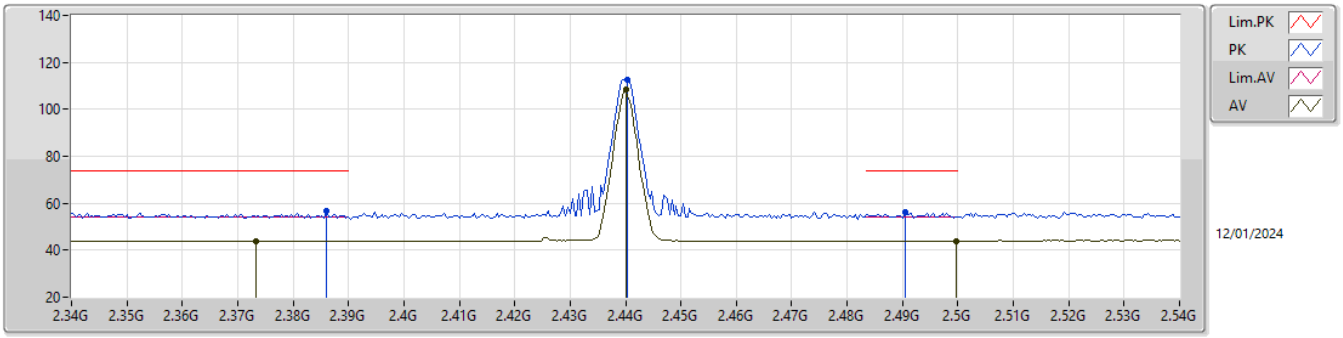


EUT Z_1TX
Setting 0C 0C
02-C-G-5

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	4.80958G	46.57	74.00	-27.43	39.31	3	Horizontal	289	2.64	-	32.86	5.09	30.69
AV	4.8084G	32.60	54.00	-21.40	25.35	3	Horizontal	289	2.64	-	32.85	5.09	30.69

2.4-2.4835GHz_Zigbee

2440MHz_TX

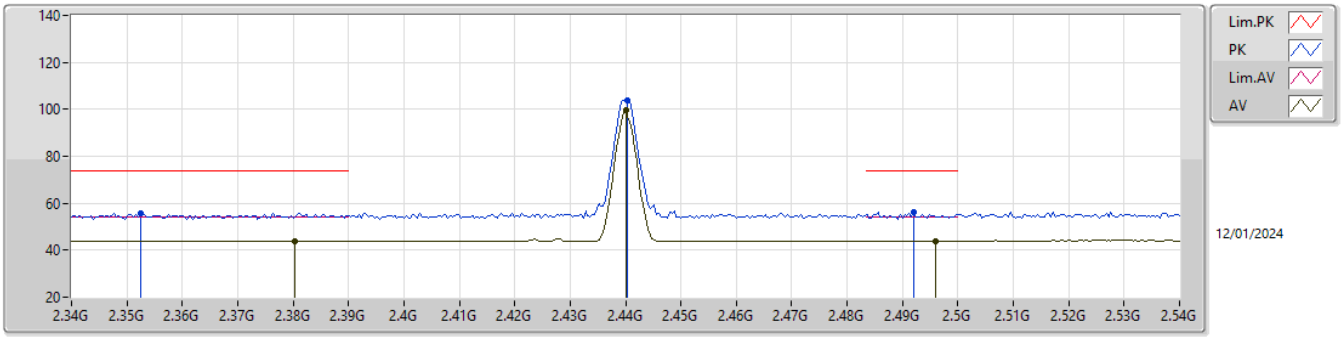


EUT Z_1TX
Setting 0C 0C
02-C-G-5

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	2.386G	56.47	74.00	-17.53	25.02	3	Vertical	289	2.64	-	28.40	3.05	-
AV	2.3732G	43.91	54.00	-10.09	12.53	3	Vertical	289	2.64	-	28.33	3.05	-
PK	2.4404G	112.65	Inf	-Inf	81.17	3	Vertical	289	2.64	-	28.40	3.08	-
AV	2.44G	108.25	Inf	-Inf	76.77	3	Vertical	289	2.64	-	28.40	3.08	-
PK	2.4904G	55.98	74.00	-18.02	24.38	3	Vertical	289	2.64	-	28.50	3.10	-
AV	2.4996G	44.03	54.00	-9.97	12.33	3	Vertical	289	2.64	-	28.60	3.10	-

2.4-2.4835GHz_Zigbee

2440MHz_TX

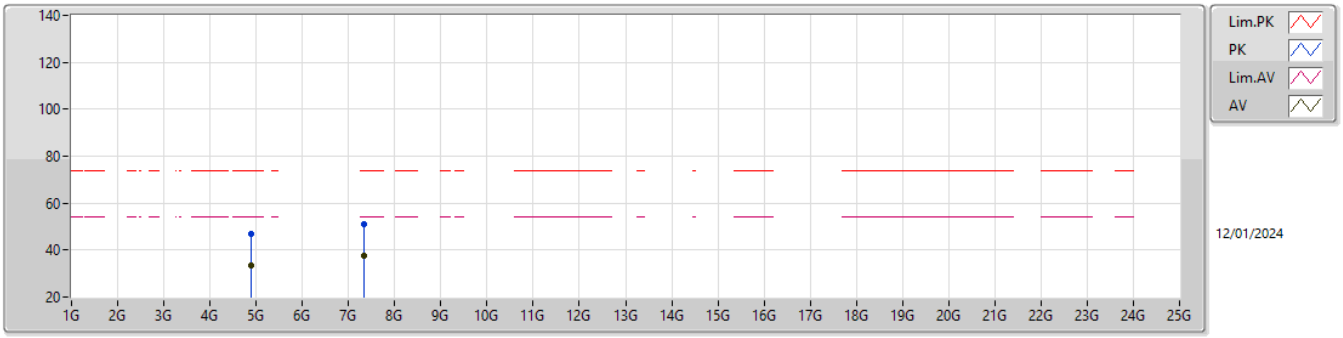


EUT Z_1TX
Setting 0C 0C
02-C-G-5

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	2.3524G	55.84	74.00	-18.16	24.60	3	Horizontal	360	1.24	-	28.20	3.04	-
AV	2.3804G	43.89	54.00	-10.11	12.44	3	Horizontal	360	1.24	-	28.40	3.05	-
PK	2.4404G	104.04	Inf	-Inf	72.56	3	Horizontal	360	1.24	-	28.40	3.08	-
AV	2.44G	99.40	Inf	-Inf	67.92	3	Horizontal	360	1.24	-	28.40	3.08	-
PK	2.492G	56.22	74.00	-17.78	24.60	3	Horizontal	360	1.24	-	28.52	3.10	-
AV	2.496G	44.04	54.00	-9.96	12.38	3	Horizontal	360	1.24	-	28.56	3.10	-

2.4-2.4835GHz_Zigbee

2440MHz_TX

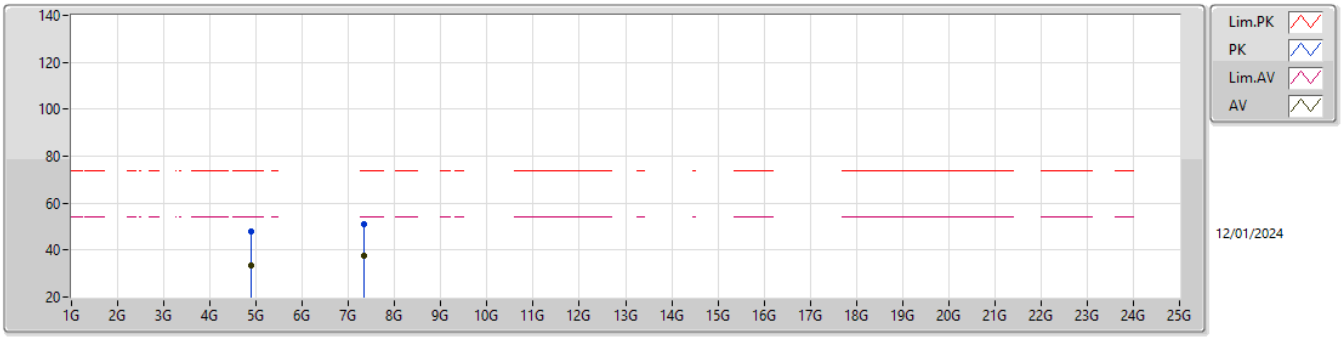


EUT Z_1TX
Setting 0C 0C
02-C-G-5

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	4.88108G	47.01	74.00	-26.99	39.38	3	Vertical	74	2.84	-	33.16	5.11	30.64
AV	4.87936G	33.62	54.00	-20.38	25.99	3	Vertical	74	2.84	-	33.16	5.11	30.64
PK	7.32556G	51.01	74.00	-22.99	39.96	3	Vertical	350	2.84	-	36.65	6.52	32.12
AV	7.32904G	37.50	54.00	-16.50	26.44	3	Vertical	350	2.84	-	36.66	6.52	32.12

2.4-2.4835GHz_Zigbee

2440MHz_TX

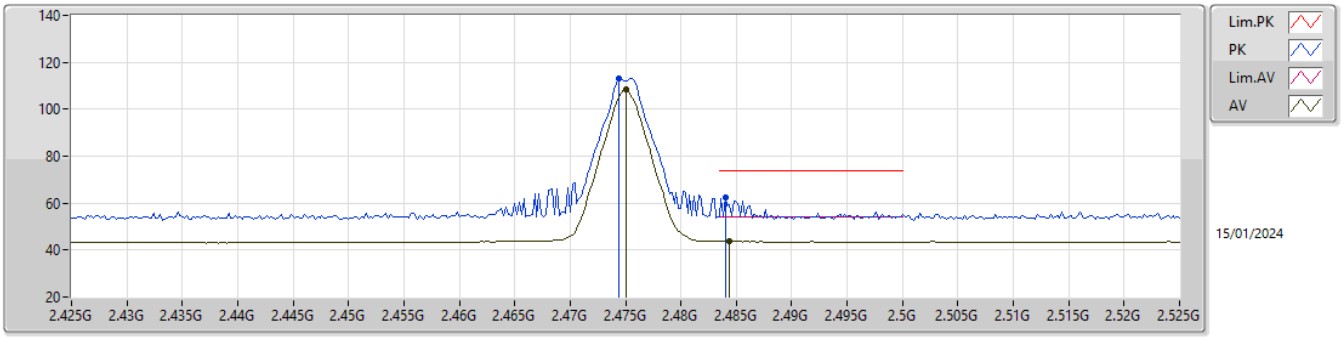


EUT Z_1TX
Setting 0C 0C
02-C-G-5

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	4.87824G	48.17	74.00	-25.83	40.54	3	Horizontal	206	2.64	-	33.16	5.11	30.64
AV	4.87956G	33.56	54.00	-20.44	25.93	3	Horizontal	206	2.64	-	33.16	5.11	30.64
PK	7.32536G	51.09	74.00	-22.91	40.04	3	Horizontal	213	2.13	-	36.65	6.52	32.12
AV	7.32804G	37.48	54.00	-16.52	26.42	3	Horizontal	213	2.13	-	36.66	6.52	32.12

2.4-2.4835GHz_Zigbee

2475MHz_TX

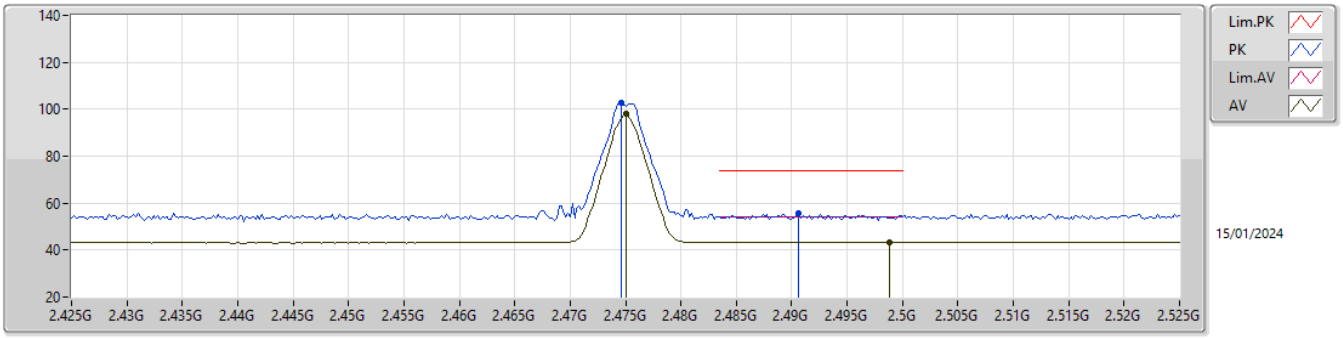


EUT Z_1TX
Setting 0C 0C
02-C-V-1

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	2.4744G	113.28	Inf	-Inf	81.69	3	Vertical	137	2.67	-	28.50	3.09	-
AV	2.475G	108.66	Inf	-Inf	77.07	3	Vertical	137	2.67	-	28.50	3.09	-
PK	2.484G	62.18	74.00	-11.82	30.59	3	Vertical	137	2.67	-	28.50	3.09	-
AV	2.4844G	43.74	54.00	-10.26	12.15	3	Vertical	137	2.67	-	28.50	3.09	-

2.4-2.4835GHz_Zigbee

2475MHz_TX

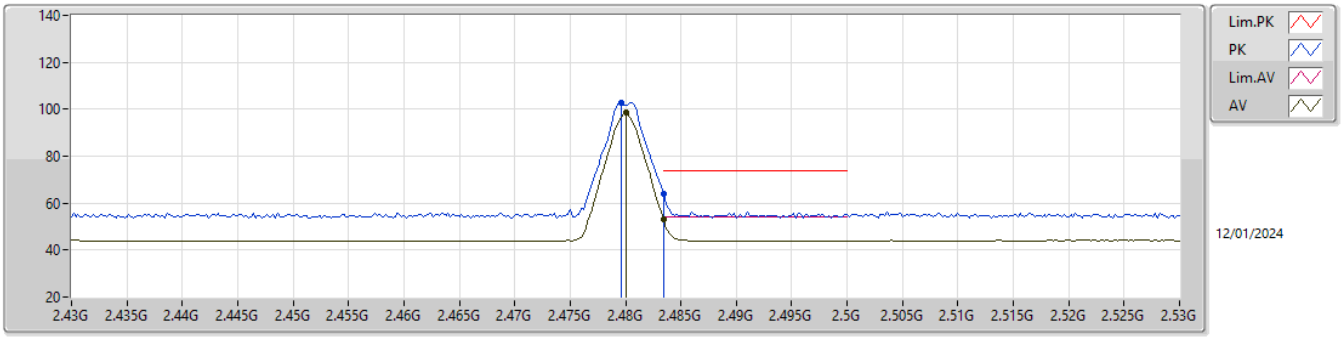


EUT Z_1TX
Setting 0C 0C
02-C-V-1

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	2.4746G	102.56	Inf	-Inf	70.97	3	Horizontal	173	2.25	-	28.50	3.09	-
AV	2.475G	98.06	Inf	-Inf	66.47	3	Horizontal	173	2.25	-	28.50	3.09	-
PK	2.4906G	55.54	74.00	-18.46	23.93	3	Horizontal	173	2.25	-	28.51	3.10	-
AV	2.4988G	43.37	54.00	-10.63	11.68	3	Horizontal	173	2.25	-	28.59	3.10	-

2.4-2.4835GHz_Zigbee

2480MHz_TX

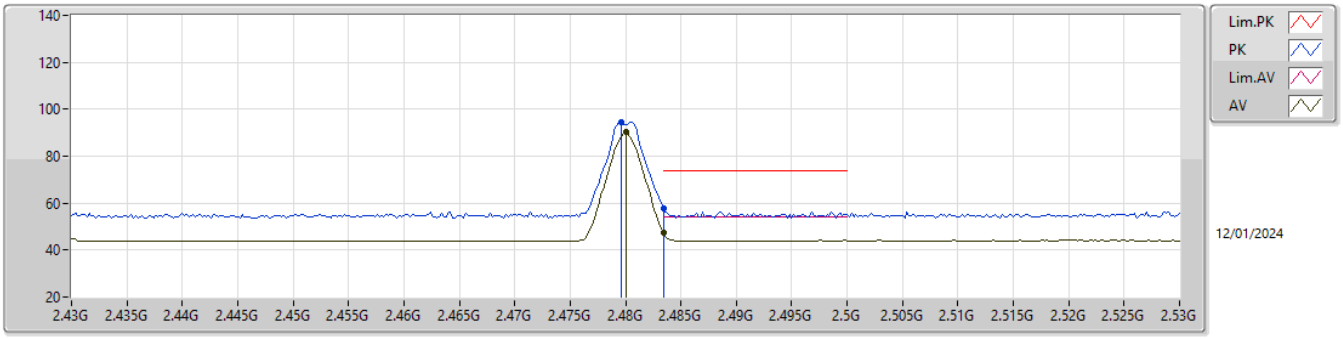


EUT Z_1TX
Setting 02 02
02-C-G-5

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	2.4796G	102.89	Inf	-Inf	71.30	3	Vertical	316	2.31	-	28.50	3.09	-
AV	2.48G	98.42	Inf	-Inf	66.83	3	Vertical	316	2.31	-	28.50	3.09	-
PK	2.4835G	63.76	74.00	-10.24	32.17	3	Vertical	316	2.31	-	28.50	3.09	-
AV	2.4835G	53.07	54.00	-0.93	21.48	3	Vertical	316	2.31	-	28.50	3.09	-

2.4-2.4835GHz_Zigbee

2480MHz_TX

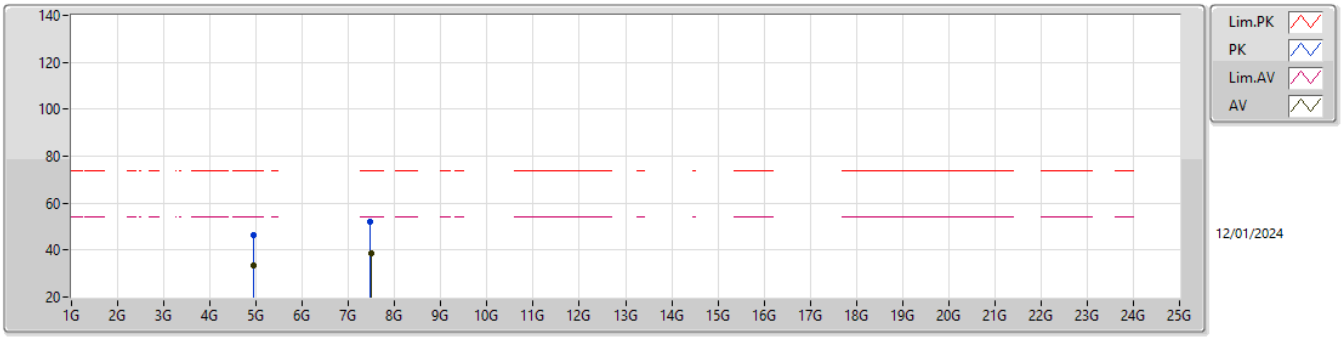


EUT Z_1TX
Setting 02 02
02-C-G-5

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	2.4796G	94.69	Inf	-Inf	63.10	3	Horizontal	140	1.76	-	28.50	3.09	-
AV	2.48G	90.28	Inf	-Inf	58.69	3	Horizontal	140	1.76	-	28.50	3.09	-
PK	2.4835G	57.95	74.00	-16.05	26.36	3	Horizontal	140	1.76	-	28.50	3.09	-
AV	2.4835G	47.21	54.00	-6.79	15.62	3	Horizontal	140	1.76	-	28.50	3.09	-

2.4-2.4835GHz_Zigbee

2480MHz_TX

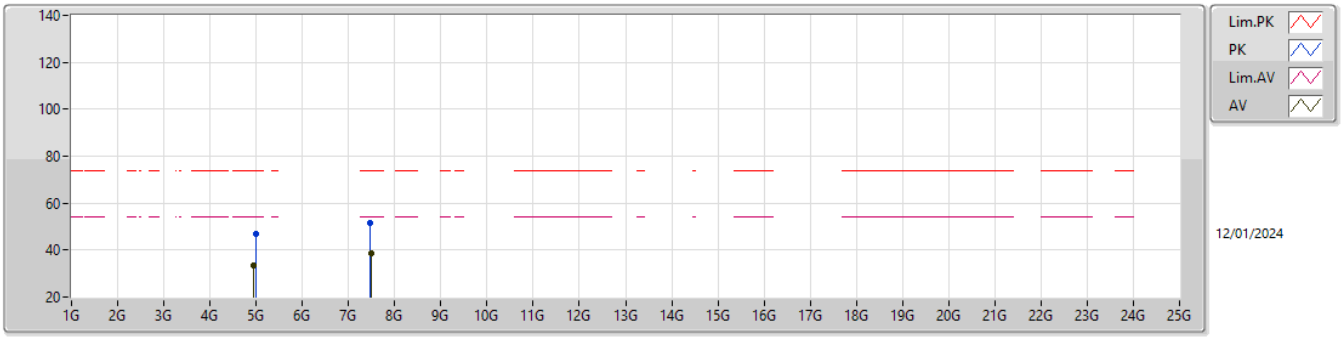


EUT Z_1TX
Setting 02 02
02-C-G-5

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	4.9502G	46.20	74.00	-27.80	38.35	3	Vertical	341	1.30	-	33.30	5.14	30.59
AV	4.9424G	33.48	54.00	-20.52	25.67	3	Vertical	341	1.30	-	33.28	5.13	30.60
PK	7.4782G	51.88	74.00	-22.12	40.79	3	Vertical	110	2.41	-	36.70	6.60	32.21
AV	7.4836G	38.72	54.00	-15.28	27.63	3	Vertical	110	2.41	-	36.70	6.60	32.21

2.4-2.4835GHz_Zigbee

2480MHz_TX



EUT Z_1TX
Setting 02 02
02-C-G-5

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	4.9972G	46.64	74.00	-27.36	38.66	3	Horizontal	296	1.63	-	33.39	5.15	30.56
AV	4.9506G	33.65	54.00	-20.35	25.80	3	Horizontal	296	1.63	-	33.30	5.14	30.59
PK	7.4566G	51.42	74.00	-22.58	40.33	3	Horizontal	167	1.45	-	36.70	6.59	32.20
AV	7.4806G	38.63	54.00	-15.37	27.54	3	Horizontal	167	1.45	-	36.70	6.60	32.21