



RADIO TEST REPORT

FCC ID : 2AHBN-AP47
Equipment : Wi-Fi 7 Wireless Access Point
Brand Name : Juniper
Model Name : AP47, AP47E, AP47D
Applicant : Juniper Networks, Inc.
1133 Innovation Way Sunnyvale, California 94089 USA
Manufacturer : Juniper Networks, Inc.
1133 Innovation Way Sunnyvale, California 94089 USA
Standard : 47 CFR FCC Part 15.247

The product was received on Oct. 15, 2024, and testing was started from Oct. 23, 2024 and completed on Jan. 20, 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

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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A10_9 Ver1.3



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/manufacture 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: Cathy Chiu



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(Zigbee, Thread)	2405-2480	11-26 [16]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.15.4(Zigbee, Thread)	3	1

Note:

- ♦ 802.15.4(Zigbee, Thread) uses a O-QPSK (250kbps) modulation.
- ♦ BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

For EUT 1:

Ant.	RF Port	Brand Name	Model Name	Ant. Type	Connector	Gain (dBi)	Modes of Operation
1	2	Juniper	AP47	PIFA	IPEX	Note 1	WLAN 2.4GHz, WLAN 5GHz UNII 1-2A, WLAN 6GHz UNII 7-8 (Radio 3)
2	1	Juniper	AP47	PIFA	IPEX		
3	3	Juniper	AP47	PIFA	IPEX		
4	4	Juniper	AP47	PIFA	IPEX		
5	2	Juniper	AP47	Alford loop	IPEX		WLAN 5GHz UNII 1-2A or UNII 2C-4 (Radio 2)
6	1	Juniper	AP47	Alford loop	IPEX		
7	3	Juniper	AP47	Alford loop	IPEX		
8	4	Juniper	AP47	Alford loop	IPEX		
9	2	Juniper	AP47	PIFA	IPEX		WLAN 6GHz UNII 5 or UNII 6-8 (Radio 1)
10	1	Juniper	AP47	PIFA	IPEX		
11	3	Juniper	AP47	PIFA	IPEX		
12	4	Juniper	AP47	PIFA	IPEX		
13	2	Juniper	AP47	PIFA	IPEX		WLAN 2.4GHz, WLAN 5GHz UNII 1-4, WLAN 6GHz UNII 5-8 (Radio 4) (Scanning radio)
14	1	Juniper	AP47	PIFA	IPEX		
15	1	Juniper	AP47	PIFA	I-PEX		
16	1	Juniper	AP47	Slot	I-PEX		
17	1	Juniper	AP47	PIFA	I-PEX		Bluetooth (Radio 5)
18	1	Juniper	AP47	PIFA	IPEX	4.7	
19	2	Juniper	AP47	Patch	IPEX	1.4	
	3					1.8	
	4					1.4	
	4					1.4	
20	1	Juniper	AP47	PIFA	IPEX	2.9	GPS (Radio 7)

Note 1:

Ant.	Antenna Gain (dBi)				
	WLAN 2.4GHz (Radio 3)		WLAN 5GHz UNII 1-2A (Radio 3)		WLAN 6GHz UNII 7-8 (Radio 3)
	2.45GHz	5.2GHz	5.3GHz	6.695GHz	6.995GHz
1	3.06	5.64	5.4	4.47	4.4
2	1.61	4.71	5.23	3.8	4
3	1.81	4.76	4.97	4.4	4.47
4	2.37	5.57	5.93	4.73	4.85
Ant.	WLAN 5GHz UNII 1-4 (Radio 2)				
	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz
5	2.46	2.37	3.82	3.81	4.17
6	2.43	2.15	2.98	3.49	3.81
7	2.56	2.33	2.65	3.39	3.44
8	3.28	2.61	4.3	4	3.92
Ant.	WLAN 6GHz UNII 5-8 (Radio 1)				
	6.175GHz	6.475GHz	6.695GHz	6.995GHz	
9	3.76	2.79	3.31	4.3	
10	3.16	2.9	2.57	3.68	
11	4.33	3.72	3.13	4.23	
12	4.63	3.97	3.57	5.09	



Ant.	WLAN 2.4GHz/5GHz UNII 1-4/WLAN 6GHz UNII 5-8 (Radio 4(Scanning radio))									
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz	6.175GHz	6.475GHz	6.695GHz	6.995GHz
13	2.29	3.12	3.98	4.37	4.51	5.79	4.9	3.84	4.73	4.62
14	2.28	4.62	3.66	5.76	4.67	5.83	4.73	4.72	3.36	3.72
Ant.	Bluetooth (Radio 5)									
	Bluetooth array (Beam 1-Beam 8/Omni)					Bluetooth array (Beam 9)				
15	4.2					-				
16	-					3				
Ant.	802.15.4(Zigbee, Thread) (Radio 5)									
	3.9									
17										

Item	Directional Gain (dBi)									
	WLAN 2.4GHz (Radio 3)		WLAN 5GHz UNII 1-2A (Radio 3)			WLAN 6GHz UNII 7-8 (Radio 3)				
	2.45GHz		5.2GHz	5.3GHz		6.695GHz		6.995GHz		
4T1S	5.27		7.04	7.06		8.84		9.09		
4T2S	3.06		5.64	5.93		5.84		6.09		
4T4S	3.06		5.64	5.93		4.73		4.85		
Item	WLAN 5GHz UNII 1-4 (Radio 2)									
	5.2GHz	5.3GHz		5.6GHz		5.785GHz		5.885GHz		
4T1S	7.11	6.52		7.65		7.52		7.28		
4T2S	4.11	3.52		4.65		4.52		4.28		
4T4S	3.28	2.61		4.3		4		4.17		
Item	WLAN 6GHz UNII 5-8 (Radio 1)									
	6.175GHz		6.475GHz		6.695GHz			6.995GHz		
4T1S	7.65		7.01		6.42			7.54		
4T2S	4.65		4.01		3.57			5.09		
4T4S	4.63		3.97		3.57			5.09		
Item	WLAN 2.4GHz/5GHz UNII 1-4/WLAN 6GHz UNII 5-8 (Radio 4(Scanning radio))									
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz	6.175GHz	6.475GHz	6.695GHz	6.995GHz
2T1S	4.59	5.03	5.57	6.24	5.74	6.86	5.9	5.09	4.73	4.62
2T2S	2.29	4.62	3.98	5.76	4.67	5.83	4.9	4.72	4.73	4.62

Note 2: The above information (excepting Ant. 1-14 antenna gain and directional gain) was declared by manufacturer.

Note 3: The EUT has twenty antennas.

The ant.15 is BLE array (Beam 1-Beam 8/Omni).

The ant.16 is BLE array (Beam 9).

Beam 1-Beam 8, Omni, and Beam 9 can't operate simultaneously.

Note 4: Radio 1-4: Maximum Directional Gain following KDB662911 D03.

For Radio 1:

For 6GHz (UNII 5 or UNII 6-8) IEEE 802.11ax/be mode (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 2:

For 5GHz (UNII 1-2A or UNII 2C-4) IEEE 802.11a/n/ac/ax/be mode (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:

For 2.4GHz IEEE 802.11b/g/n/VHT/ax/be mode (4TX/4RX)

For 5GHz (UNII 1-2A) IEEE 802.11a/n/ac/ax/be mode (4TX/4RX)

For 6GHz (UNII 7-8) IEEE 802.11ax/be mode (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(Scanning radio):

For 2.4GHz IEEE 802.11b/g/n/VHT/ax/be mode (2TX/2RX)

For 5GHz (UNII 1-4) IEEE 802.11a/n/ac/ax/be mode (2TX/2RX)

For 6GHz (UNII 5-8) 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 Radio 5:

For Bluetooth and 802.15.4(Zigbee, Thread) mode (1TX/1RX)

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

For Radio 6:

For UWB mode (2TX/4RX):

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For Radio 7:

For GPS (1RX)

Only Port 1 can be used as receiving antenna.


For EUT 2:

Ant.	RF Port	Brand Name	Model Name	Ant. Type	Connector	Gain (dBi)	Modes of Operation
1	2	Juniper	AP47D	Dipole	IPEX	Note 1	WLAN 2.4GHz, WLAN 5GHz UNII 1-2A, WLAN 6GHz UNII 7-8 (Radio 3)
2	1	Juniper	AP47D	Dipole	IPEX		
3	3	Juniper	AP47D	Dipole	IPEX		
4	4	Juniper	AP47D	Dipole	IPEX		WLAN 5GHz UNII 1-2A or UNII 2C-4 (Radio 2)
5	2	Juniper	AP47D	Patch	IPEX		
6	1	Juniper	AP47D	Patch	IPEX		
7	3	Juniper	AP47D	Patch	IPEX		WLAN 6GHz UNII 5 or UNII 6-8 (Radio 1)
8	4	Juniper	AP47D	Patch	IPEX		
9	2	Juniper	AP47D	Patch	IPEX		
10	1	Juniper	AP47D	Patch	IPEX		WLAN 2.4GHz, WLAN 5GHz UNII 1-4, WLAN 6GHz UNII 5-8 (Radio 4) (Scanning radio)
11	3	Juniper	AP47D	Patch	IPEX		
12	4	Juniper	AP47D	Patch	IPEX		
13	2	Juniper	AP47D	Dipole	IPEX	Note 1	Bluetooth (Radio 5)
14	1	Juniper	AP47D	Dipole	IPEX		
15	1	Juniper	AP47D	PIFA	I-PEX		
16	1	Juniper	AP47D	Slot	I-PEX		802.15.4(Zigbee, Thread) (Radio 5)
17	1	Juniper	AP47D	Dipole	I-PEX		
18	1	Juniper	AP47D	Patch	IPEX	6.7	UWB (Radio 6)
19	2	Juniper	AP47D	Patch	IPEX	3.4	
	3					0.7	
	4					3.1	
20	1	Juniper	AP47D	PIFA	IPEX	4.6	GPS (Radio 7)

Note 1:

Ant.	Antenna Gain (dBi)				
	WLAN 2.4GHz (Radio 3)		WLAN 5GHz UNII 1-2A (Radio 3)		WLAN 6GHz UNII 7-8 (Radio 3)
	2.45GHz		5.2GHz	5.3GHz	6.695GHz
1	5.34		3.6	3.6	7.65
2	5.33		4.58	4.48	8.1
3	5.53		4.05	4.27	7.93
4	5.16		5.23	4.51	8.36
Ant.	WLAN 5GHz UNII 1-4 (Radio 2)				
	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz
5	5.51	5.45	6.54	6.38	6.73
6	5.14	5.42	6.3	6.55	6.66
7	5.54	5.88	6.87	6.34	5.62
8	5.37	5.89	7.05	6.65	5.94
Ant.	WLAN 6GHz UNII 5-8 (Radio 1)				
	6.175GHz	6.475GHz	6.695GHz	6.995GHz	
9	7.86	7.99	6.72	7.15	
10	7.59	7.48	6.74	8.29	
11	5.81	6.3	5.48	6.44	
12	6.75	7.28	7.04	7.61	



Ant.	WLAN 2.4GHz/5GHz UNII 1-4/WLAN 6GHz UNII 5-8 (Radio 4(Scanning radio))									
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz	6.175GHz	6.475GHz	6.695GHz	6.995GHz
13	4.18	4.62	4.53	5.24	4.35	4.43	5.87	5.74	5.31	7.78
14	4.07	5.08	4.76	5.6	6.15	6.29	7.08	6.68	6.97	8.17
Ant.	Bluetooth (Radio 5)									
	Bluetooth array (Beam 1-Beam 8/Omni)					Bluetooth array (Beam 9)				
15	4.3					-				
16	-					3.7				
Ant.	802.15.4(Zigbee, Thread) (Radio 5)									
	6.6									
17										

Item	Directional Gain (dBi)									
	WLAN 2.4GHz (Radio 3)		WLAN 5GHz UNII 1-2A (Radio 3)			WLAN 6GHz UNII 7-8 (Radio 3)				
	2.45GHz		5.2GHz	5.3GHz		6.695GHz		6.995GHz		
4T1S	8.34		7.3		7.56	10.62		10.8		
4T2S	5.53		5.23		4.56	7.75		8.36		
4T4S	5.53		5.23		4.51	7.75		8.36		
Item	WLAN 5GHz UNII 1-4 (Radio 2)									
	5.2GHz		5.3GHz	5.6GHz		5.785GHz		5.885GHz		
	9		8.75		9.58	9.57		9.06		
4T1S	9		8.75		9.58	9.57		9.06		
4T2S	6		5.89		7.05	6.65		6.73		
4T4S	5.54		5.89		7.05	6.65		6.73		
Item	WLAN 6GHz UNII 5-8 (Radio 1)									
	6.175GHz		6.475GHz		6.695GHz		6.995GHz			
	10.14		10.42		9.72		10.76			
4T1S	10.14		10.42		9.72		10.76			
4T2S	7.86		7.99		7.04		8.29			
4T4S	7.86		7.99		7.04		8.29			
Item	WLAN 2.4GHz/5GHz UNII 1-4/WLAN 6GHz UNII 5-8 (Radio 4(Scanning radio))									
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz	6.175GHz	6.475GHz	6.695GHz	6.995GHz
	6.71	7.72	7.56	8.11	8.31	8.35	9.44	9.16	9.02	10.8
2T1S	6.71	7.72	7.56	8.11	8.31	8.35	9.44	9.16	9.02	10.8
2T2S	4.18	5.08	4.76	5.6	6.15	6.29	7.08	6.68	6.97	8.17

Note 2: The above information (excepting Ant. 1-14 antenna gain and directional gain) was declared by manufacturer.

Note 3: The EUT has twenty antennas.

The ant.15 is BLE array (Beam 1-Beam 8/Omni).

The ant.16 is BLE array (Beam 9).

Beam 1-Beam 8, Omni, and Beam 9 can't operate simultaneously.

Note 4: Radio 1-4: Maximum Directional Gain following KDB662911 D03.

For Radio 1:

For 6GHz (UNII 5 or UNII 6-8) IEEE 802.11ax/be mode (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 2:

For 5GHz (UNII 1-2A or UNII 2C-4) IEEE 802.11a/n/ac/ax/be mode (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:

For 2.4GHz IEEE 802.11b/g/n/VHT/ax/be mode (4TX/4RX)

For 5GHz (UNII 1-2A) IEEE 802.11a/n/ac/ax/be mode (4TX/4RX)

For 6GHz (UNII 7-8) IEEE 802.11ax/be mode (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(Scanning radio):

For 2.4GHz IEEE 802.11b/g/n/VHT/ax/be mode (2TX/2RX)

For 5GHz (UNII 1-4) IEEE 802.11a/n/ac/ax/be mode (2TX/2RX)

For 6GHz (UNII 5-8) 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 Radio 5:

For Bluetooth and 802.15.4(Zigbee, Thread) mode (1TX/1RX)

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

For Radio 6:

For UWB mode (2TX/4RX):

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For Radio 7:

For GPS (1RX)

Only Port 1 can be used as receiving antenna.


For EUT 3:

Ant.	RF Port	Brand Name	Model Name	Ant. Type	Connector	Gain (dBi)	Modes of Operation
1	1	AccelTex	ATS-OP-2456-81010-14MPC-36	Patch	6MPC-WHT	Note 1	WLAN 2.4GHz, WLAN 5GHz UNII 1-2A, WLAN 6GHz UNII 7 (Radio 3)
	2						WLAN 5GHz UNII 1-2A or UNII 2C-3 (Radio 2)
	3						WLAN 6GHz UNII 5 or UNII 7 (Radio 1)
	4						WLAN 2.4GHz, WLAN 5GHz UNII 1-3, WLAN 6GHz UNII 5, 7 (Radio 4) (Scanning radio)
	1				4MPC		
	2						
	3						
	4						
	1				6MPC-BLK		
	2						
	3						
	4						
	1				6MPC-BLK		
	2						
3							
4							
2	1	Juniper	AP47E	PIFA	I-PEX	Bluetooth (Radio 5)	
3	1	Juniper	AP47E	Slot	I-PEX		
4	1	Juniper	AP47E	PIFA	I-PEX		
5	1	Juniper	AP47E	PIFA	IPEX	4.7	UWB (Radio 6)
6	2	Juniper	AP47E	Patch	IPEX	1.4	
	3					2.1	
	4					1.7	
7	1	Juniper	AP47E	PIFA	IPEX	3.3	GPS (Radio 7)

Note 1:

Ant.	RF Port	Antenna Gain (dBi)		
		WLAN 2.4GHz (Radio 3)	WLAN 5GHz UNII 1-2A (Radio 3)	WLAN 6GHz UNII 7 (Radio 3)
1	1	8.46	10.01	10
	2	8.46	10.01	10
	3	8.46	10.01	10
	4	8.46	10.01	10
Ant.	RF Port	WLAN 5GHz UNII 1-3 (Radio 2)		
1	1	9.93		
	2	9.93		
	3	9.93		
	4	9.93		

Ant.	RF Port	WLAN 6GHz UNII 5 or UNII 7 (Radio 1)		
1	1	10.57		
	2	10.57		
	3	10.57		
	4	10.57		
	RF Port	WLAN 2.4GHz/5GHz UNII 1-3/WLAN 6GHz UNII 5, 7 (Radio 4(Scanning radio))		
		WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz
	1	7.8	9.5	10
	2	7.8	9.5	10
Ant.	Bluetooth (Radio 5)			
	Bluetooth array (Beam 1-Beam 8/Omni)		Bluetooth array (Beam 9)	
2	4.0		-	
3	-		2.8	
Ant.	802.15.4(Zigbee, Thread) (Radio 5)			
4	4.1			

Note 2: Directional gain information for Radio 1-3

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	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{sub}} g_{j,k} \right)^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{sub}} g_{j,k} \right)^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{sub}} g_{j,k} \right)^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{sub}} g_{j,k} \right)^2}{N_{ANT}} \right]$$

$$NSS1(g1,1) = 10^{G1/20} ; NSS1(g1,2) = 10^{G2/20} ; NSS1(g1,3) = 10^{G3/20} ; NSS1(g1,4) = 10^{G4/20}$$

$$gj,k = (NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2 / N_{ANT}] \Rightarrow 10$$

$$\log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / N_{ANT}]$$

Where ;

Radio 1:

6G UNII-5 G1 = 10.57 dBi; G2 = 10.57 dBi; G3 = 10.57 dBi; G4 = 10.57 dBi

6G UNII-7 G1 = 10.57 dBi; G2 = 10.57 dBi; G3 = 10.57 dBi; G4 = 10.57 dBi

6G UNII-5 DG = 13.58 dBi

6G UNII-7 DG = 13.58 dBi

Radio 2:

5G UNII-1 G1 = 9.93 dBi; G2 = 9.93 dBi; G3 = 9.93 dBi; G4 = 9.93 dBi

5G UNII-2A G1 = 9.93 dBi; G2 = 9.93 dBi; G3 = 9.93 dBi; G4 = 9.93 dBi

5G UNII-2C G1 = 9.93 dBi; G2 = 9.93 dBi; G3 = 9.93 dBi; G4 = 9.93 dBi

5G UNII-3 G1 = 9.93 dBi; G2 = 9.93 dBi; G3 = 9.93 dBi; G4 = 9.93 dBi

5G UNII-1 DG = 12.94 dBi

5G UNII-2A DG = 12.94 dBi

5G UNII-2C DG = 12.94 dBi

5G UNII-3 DG = 12.94 dBi

Radio 3:

2.4G G1 = 8.46 dBi; G2 = 8.46 dBi; G3 = 8.46 dBi; G4 = 8.46 dBi

5G UNII-1 G1 = 10.01 dBi; G2 = 10.01 dBi; G3 = 10.01 dBi; G4 = 10.01 dBi

5G UNII-2A G1 = 10.01 dBi; G2 = 10.01 dBi; G3 = 10.01 dBi; G4 = 10.01 dBi

6G UNII-7 G1 = 10 dBi; G2 = 10 dBi; G3 = 10 dBi; G4 = 10 dBi

2.4G DG = 11.47 dBi

5G UNII-1 DG = 13.02 dBi

5G UNII-2A DG = 13.02 dBi

6G UNII-7 DG = 13.01 dBi



Note 3: The above information was declared by manufacturer.

Note 4: The EUT has seven antennas.

The ant. 2 is BLE array (Beam 1-Beam 8/Omni).

The ant. 3 is BLE array (Beam 9).

Beam 1-Beam 8, Omni, and Beam 9 can't operate simultaneously.

Note 5: The ant. 1 is the cross-polarized antenna.

The ant. 1 (6MPC-WHT connector and 4MPC connector): Vertical*2, Horizontal*2; the array gain only add $10\log(2)$.

The ant. 1 (6MPC-BLK connector) for radio 1: Vertical*2, Horizontal*2; the array gain only add $10\log(2)$.

The ant. 1 (6MPC-BLK connector) for radio 4: Vertical*1, Horizontal*1; it doesn't need to evaluate array gain.

Note 6: Radio 1-3: Maximum Directional Gain following KDB662911 D01.

For Radio 1:

For 6GHz (UNII 5 or UNII 7) IEEE 802.11ax/be mode (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 2:

For 5GHz (UNII 1-2A or UNII 2C-3) IEEE 802.11a/n/ac/ax/be mode (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:

For 2.4GHz IEEE 802.11b/g/n/VHT/ax/be mode (4TX/4RX)

For 5GHz (UNII 1-2A) IEEE 802.11a/n/ac/ax/be mode (4TX/4RX)

For 6GHz (UNII 7) IEEE 802.11ax/be mode (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(Scanning radio):

For 2.4GHz IEEE 802.11b/g/n/VHT/ax/be mode (2TX/2RX)

For 5GHz (UNII 1-3) IEEE 802.11a/n/ac/ax/be mode (2TX/2RX)

For 6GHz (UNII 5, 7) 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 Radio 5:

For Bluetooth and 802.15.4(Zigbee, Thread) mode (1TX/1RX)

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

For Radio 6:

For UWB mode (2TX/4RX):

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For Radio 7:

For GPS (1RX)

Only Port 1 can be used as receiving antenna.



1.1.3 Mode Test Duty Cycle

For Radio 5:

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.15.4(Zigbee&Thread)_Nss 1	0.904	0.44	4.257m	300

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
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 Multiple Listing

EUT	Model Name	WLAN 5GHz UNII 4	WLAN 6GHz	Wi-Fi antenna	UWB antenna (PDoA)	UWB antenna (TWR)	802.15.4 (Zigbee, Thread) antenna	Bluetooth antenna	GPS antenna	Description
1	AP47	Support	Support	Internal Antenna	The same	AP47/ AP47E the same	AP47/ AP47E the same	The same	AP47/ AP47E the same	-
2	AP47D	Support	Support	Internal Antenna	The same	Not the same	Not the same	The same	Not the same	The difference with AP47 is only in Wi-Fi, UWB(TWR), 802.15.4(Zigbee, Thread) and GPS antenna.
3	AP47E	Non Support	Non Support	External Antenna	The same	AP47/ AP47E the same	AP47/ AP47E the same	The same	AP47/ AP47E the same	-

Note1: All models are identical to each other in all aspects except for the listing table.

Note2: The above information was declared by manufacturer.

1.1.6 Table for Radio Function

For EUT 1 and EUT 2:

Radio \ Function	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Bluetooth	802.15.4 (Zigbee, Thread)	UWB	GPS
1	-	-	V (UNII 5 or UNII 6-8)	-	-	-	-
2	-	V (UNII 1-2A or UNII2C-4)	-	-	-	-	-
3	V	V (UNII 1-2A)	V (UNII 7-8)	-	-	-	-
4 (Scanning radio)	V	V (UNII 1-4)	V (UNII 5-8)	-	-	-	-
5	-	-	-	V	V	-	-
6	-	-	-	-	-	V	-
7	-	-	-	-	-	-	V

Note1: The above information was declared by manufacturer.

Note2: For WLAN 2.4GHz: The Radio 3 and Radio 4(Scanning radio) can't operate at the same frequency simultaneously.

For WLAN 5GHz: The Radio 2, 3 and Radio 4(Scanning radio) can't operate at the same frequency simultaneously.

For WLAN 6GHz: The Radio 1, 3 and Radio 4(Scanning radio) can't operate at the same frequency simultaneously.

For EUT 3:

Radio \ Function	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Bluetooth	802.15.4 (Zigbee, Thread)	UWB	GPS
1	-	-	-	-	-	-	-
2	-	V (UNII 1-2A or UNII2C-3)	-	-	-	-	-
3	V	V (UNII 1-2A)	-	-	-	-	-
4 (Scanning radio)	V	V (UNII 1-3)	-	-	-	-	-
5	-	-	-	V	V	-	-
6	-	-	-	-	-	V	-
7	-	-	-	-	-	-	V

Note1: The above information was declared by manufacturer.

Note2: The Radio 1 is not enabled.

Note3: For WLAN 2.4GHz: The Radio 3 and Radio 4(Scanning radio) can't operate at the same frequency simultaneously.

For WLAN 5GHz: The Radio 2, 3 and Radio 4(Scanning radio) can't operate at the same frequency simultaneously.

1.1.7 Table for EUT Operation Function

Mode	Operation Function
1	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Bluetooth+R6:UWB
2	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
3	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
4	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth+R6:UWB
5	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
6	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
7	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
8	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
9	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
10	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
11	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
12	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
13	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
14	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
15	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
16	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
17	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
18	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
19	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
20	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
21	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
22	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
23	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
24	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
25	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Bluetooth+R6:UWB
26	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
27	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
28	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Zigbee+R6:UWB
29	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
30	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
31	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Bluetooth+R6:UWB
32	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
33	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
34	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Zigbee+R6:UWB
35	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
36	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
37	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Bluetooth+R6:UWB
38	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
39	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB

40	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Zigbee+R6:UWB
41	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
42	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
43	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Bluetooth+R6:UWB
44	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
45	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
46	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Zigbee+R6:UWB
47	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
48	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
49	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Bluetooth+R6:UWB
50	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
51	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
52	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth+R6:UWB
53	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
54	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
55	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
56	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
57	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
58	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
59	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
60	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
61	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
62	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
63	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
64	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
65	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
66	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
67	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
68	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
69	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
70	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
71	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
72	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
73	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Bluetooth+R6:UWB
74	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
75	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
76	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Zigbee+R6:UWB
77	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
78	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
79	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Bluetooth+R6:UWB
80	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
81	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
82	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Zigbee+R6:UWB



83	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
84	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
85	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Bluetooth+R6:UWB
86	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
87	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
88	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Zigbee+R6:UWB
89	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
90	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
91	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Bluetooth+R6:UWB
92	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
93	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
94	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Zigbee+R6:UWB
95	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
96	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
97	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth+R6:UWB
98	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Bluetooth+R6:UWB
99	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth+R6:UWB
100	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Bluetooth+R6:UWB
101	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
102	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Zigbee+R6:UWB
103	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
104	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Zigbee+R6:UWB
105	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:2.4GHz+R5:Bluetooth+R6:UWB
106	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-3+R5:Bluetooth+R6:UWB
107	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:2.4GHz+R5:Zigbee+R6:UWB
108	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-3+R5:Zigbee+R6:UWB

Note1: R means Radio.

Note2: 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 ISCED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH02-CB	Gino Huang	20.1~21.4 / 60~62	Jan. 17, 2025~Jan. 20, 2025
Radiated (Below 1GHz)	03CH05-CB	Gordon Hung	21.9-22.4 / 60-62	Jan. 16, 2025
Radiated (Above 1GHz_For EUT 1)	03CH02-CB	Viola Huang	22-23 / 61-63	Oct. 23, 2024 ~ Jan. 16, 2025
Radiated (Above 1GHz_For EUT 2)	03CH02-CB	Viola Huang	22-23 / 61-63	Oct. 23, 2024 / Jan. 16, 2025~Jan. 17, 2025
	03CH05-CB		21.9-22.4 / 60-62	
Radiated (Above 1GHz_For EUT 3)	03CH01-CB	Viola Huang	22.1-23.1 / 60-62	Nov. 20, 2024 / Jan. 17, 2025
	03CH02-CB		22-23 / 61-63	
AC Conduction	CO02-CB	Gray Lee	23~24 / 52~53	Dec. 31, 2024~Jan. 17, 2025



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

For Radio 5:

Mode
802.15.4(Zigbee&Thread)_1TX
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	Normal Link
1	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
2	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
3	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
4	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
5	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
6	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
7	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
8	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
9	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
10	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
11	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R5:Zigbee(TX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
12	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R5:Zigbee(RX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
13	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R5:Zigbee(TX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
14	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R5:Zigbee(RX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
15	EUT 1_R1:6GHz UNII 5+R4:5GHz UNII 1-4+R5:Zigbee(TX)+ R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
16	EUT 1_R1:6GHz UNII 5+R4:5GHz UNII 1-4+R5:Zigbee(RX)+ R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
17	EUT 1_R2:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+ R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
Mode 8 has been evaluated to be the worst case among Mode 1~17, thus measurement for Mode 18 will	



follow this same test mode.	
18	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth1+PoE port)
19	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
20	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
21	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
22	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
23	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
24	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
25	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
26	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
27	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
28	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
29	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R5:Zigbee(TX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
30	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R5:Zigbee(RX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
31	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R5:Zigbee(TX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
32	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R5:Zigbee(RX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
33	EUT 2_R1:6GHz UNII 5+R4:5GHz UNII 1-4+R5:Zigbee(TX)+ R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
34	EUT 2_R1:6GHz UNII 5+R4:5GHz UNII 1-4+R5:Zigbee(RX)+ R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
35	EUT 2_R2:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+ R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
Mode 20 has been evaluated to be the worst case among Mode 19~35, thus measurement for Mode 36 will follow this same test mode.	
36	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth1+PoE port)



37	EUT 3_R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
38	EUT 3_R2:5GHz UNII 2C-3+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
39	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
40	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
41	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
42	EUT 3_R2:5GHz UNII 1,2A+R5:Zigbee(TX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
43	EUT 3_R2:5GHz UNII 1,2A+R5:Zigbee(RX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
44	EUT 3_R2:5GHz UNII 2C-3+R5:Zigbee(TX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
45	EUT 3_R2:5GHz UNII 2C-3+R5:Zigbee(RX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
46	EUT 3_R4:5GHz UNII 1-3+R5:Zigbee(TX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
47	EUT 3_R4:5GHz UNII 1-3+R5:Zigbee(RX)+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
48	EUT 3_R2:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
Mode 41 has been evaluated to be the worst case among Mode 37~48, thus measurement for Mode 49 will follow this same test mode.	
49	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS+PoE(Powered from Eth1+PoE port)
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
Only the highest gain antenna was selected to test from EUT 1~3.	
Operating Mode	CTX
1	EUT 2_R5



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	Normal Link
For EUT 1~3: - After evaluating, the worst case was found at Z axis, so it was selected to perform test and its test result was written in the report. - The EUT has two powered modes, one is "PoE(Powered from Eth0+PoE port)" mode and the other is "PoE(Powered from Eth1+PoE port)" mode. After evaluating, the worst case was found at "PoE(Powered from Eth0+PoE port)" mode, so the measurement will follow this same test. For EUT 1, 2: The EUTs have 17 modes as below: Mode 1: EUT_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS Mode 2: EUT_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS Mode 3: EUT_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R4:2.4GHz+R6:UWB+R7:GPS Mode 4: EUT_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R4:2.4GHz+R6:UWB+R7:GPS Mode 5: EUT_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS Mode 6: EUT_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS Mode 7: EUT_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R6:UWB+R7:GPS Mode 8: EUT_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R6:UWB+R7:GPS Mode 9: EUT_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS Mode 10: EUT_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS Mode 11: EUT_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R5:Zigbee(TX)+R6:UWB+R7:GPS Mode 12: EUT_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R5:Zigbee(RX)+R6:UWB+R7:GPS Mode 13: EUT_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R5:Zigbee(TX)+R6:UWB+R7:GPS Mode 14: EUT_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R5:Zigbee(RX)+R6:UWB+R7:GPS Mode 15: EUT_R1:6GHz UNII 5+R2:5GHz UNII 1-4+R5:Zigbee(TX)+R6:UWB+R7:GPS Mode 16: EUT_R1:6GHz UNII 5+R2:5GHz UNII 1-4+R5:Zigbee(RX)+R6:UWB+R7:GPS Mode 17: EUT_R2:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+ R6:UWB+R7:GPS And, from above the worst case was found at Mode 1. So the measurement will follow this same test configuration. For EUT 3: The EUT has 12 modes as below: Mode 1: EUT_R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS Mode 2: EUT_R2:5GHz UNII 2C-3+R4:2.4GHz+R6:UWB+R7:GPS Mode 3: EUT_R2:5GHz UNII 1,2A+R3:2.4GHz+R6:UWB+R7:GPS Mode 4: EUT_R2:5GHz UNII 2C-3+R3:2.4GHz+R6:UWB+R7:GPS Mode 5: EUT_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R5:Bluetooth+R6:UWB+R7:GPS Mode 6: EUT_R2:5GHz UNII 1,2A+R5:Zigbee(TX)+R6:UWB+R7:GPS Mode 7: EUT_R2:5GHz UNII 1,2A+R5:Zigbee(RX)+R6:UWB+R7:GPS Mode 8: EUT_R2:5GHz UNII 2C-3+R5:Zigbee(TX)+R6:UWB+R7:GPS Mode 9: EUT_R2:5GHz UNII 2C-3+R5:Zigbee(RX)+R6:UWB+R7:GPS	



Mode 10: EUT_R2:5GHz UNII 1-3+R5:Zigbee(TX)+R6:UWB+R7:GPS

Mode 11: EUT_R2:5GHz UNII 1-3+R5:Zigbee(RX)+R6:UWB+R7:GPS

Mode 12: EUT_R2:5GHz UNII 1,2A+R5:Bluetooth+ R6:UWB+R7:GPS

And, from above the worst case was found at Mode 1. So the measurement will follow this same test configuration.

1	EUT 1 in Z axis_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
2	EUT 2 in Z axis_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)
3	EUT 3 in Z axis_R2:5GHz UNII 1,2A+R4:2.4GHz+R6:UWB+R7:GPS+PoE(Powered from Eth0+PoE port)

For operating mode 2 is the worst case and it was record in this test report.

Operating Mode > 1GHz	CTX
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After evaluating, the worst-case axis was found as below. So the measurement will follow this same test configuration.

1	EUT 1 in Z axis_R5
2	EUT 2 in Y axis_R5
3	EUT 3 in Y axis_R5



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Bluetooth +R6:UWB
2	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
3	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
4	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth +R6:UWB
5	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
6	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
7	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Zigbee +R6:UWB
8	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
9	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
10	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+ R6:UWB
11	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
12	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
13	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth +R6:UWB
14	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
15	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
16	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth +R6:UWB
17	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
18	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB



19	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
20	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
21	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
22	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
23	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
24	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
25	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Bluetooth+R6:UWB
26	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
27	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
28	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Zigbee+R6:UWB
29	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
30	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
31	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Bluetooth+R6:UWB
32	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
33	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB
34	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+R5:Zigbee+R6:UWB
35	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+R5:Zigbee+R6:UWB
36	EUT 1_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+R5:Zigbee+R6:UWB
37	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+R5:Bluetooth+R6:UWB
38	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+R5:Bluetooth+R6:UWB
39	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+R5:Bluetooth+R6:UWB



40	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+ R5:Zigbee+R6:UWB
41	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
42	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
43	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
44	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
45	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
46	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+ R5:Zigbee+R6:UWB
47	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
48	EUT 1_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
49	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Bluetooth +R6:UWB
50	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
51	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
52	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth +R6:UWB
53	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
54	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
55	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Zigbee +R6:UWB
56	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
57	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
58	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+ R6:UWB
59	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
60	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB



61	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
62	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
63	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
64	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
65	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
66	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
67	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
68	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
69	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 1,2A+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
70	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+ R4:2.4GHz+R5:Zigbee+R6:UWB
71	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
72	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:2.4GHz+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
73	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
74	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
75	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
76	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+ R5:Zigbee+R6:UWB
77	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
78	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
79	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
80	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
81	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB



82	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+ R4:2.4GHz+ R5:Zigbee+R6:UWB
83	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
84	EUT 2_R1:6GHz UNII 6-8+R2:5GHz UNII 2C-4+R3:5GHz UNII 1,2A+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
85	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
86	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
87	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
88	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+ R4:2.4GHz+ R5:Zigbee+R6:UWB
89	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
90	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 1,2A+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
91	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+ R5:Bluetooth+R6:UWB
92	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+ R5:Bluetooth+R6:UWB
93	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+ R5:Bluetooth+R6:UWB
94	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+ R4:2.4GHz+ R5:Zigbee+R6:UWB
95	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:5GHz UNII 1-4+ R5:Zigbee+R6:UWB
96	EUT 2_R1:6GHz UNII 5+R2:5GHz UNII 2C-4+R3:6GHz UNII 7,8+R4:6GHz UNII 5-8+ R5:Zigbee+R6:UWB
97	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth+R6:UWB
98	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Bluetooth+R6:UWB
99	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:2.4GHz+R5:Bluetooth+R6:UWB
100	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Bluetooth+R6:UWB
101	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
102	EUT 3_R2:5GHz UNII 1,2A+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Zigbee+R6:UWB
103	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:2.4GHz+R5:Zigbee+R6:UWB
104	EUT 3_R2:5GHz UNII 2C-3+R3:2.4GHz+R4:5GHz UNII 1-3+R5:Zigbee+R6:UWB



105	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:2.4GHz+R5:Bluetooth+R6:UWB
106	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-3+R5:Bluetooth+R6:UWB
107	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:2.4GHz+R5:Zigbee+R6:UWB
108	EUT 3_R2:5GHz UNII 2C-3+R3:5GHz UNII 1,2A+R4:5GHz UNII 1-3+R5:Zigbee+R6:UWB
Refer to Sporton Test Report No.: FA4O0708 for Co-location RF Exposure Evaluation.	

Note1: R means Radio.

Note2: The PoE is for measurement only, would not be marketed.

The information of PoE as below:

Power	Brand Name	Model Name
PoE	PHIHONG	POE60U-BTA

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

Accessories
Bracket*1
Antenna Bracket of Ant. 1 (Used for EUT 3) Note

Note: Optional, not sold with EUT.

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	PHIHONG	POE60U-BTA	N/A
B	Flash disk3.0	Transcend	JetFlash-703	N/A
C	ETH0 PC	ASUS	S300TA	TX2-RTL8821CE
D	ETH1 PC	ASUS	S300TA	TX2-RTL8821CE
E	6GH NB	DELL	E6230	N/A
F	5GH NB	DELL	E6430	N/A
G	2.4G NB	DELL	E6430	N/A
H	6G module	INTEL	BE200	PD9BE200NG
I	GPS Simulator	WELNAVIGATE	GS-100	N/A
J	Device	Juniper	AP47	N/A
K	Device PC	ASUS	S300TA	TX2-RTL8821CE

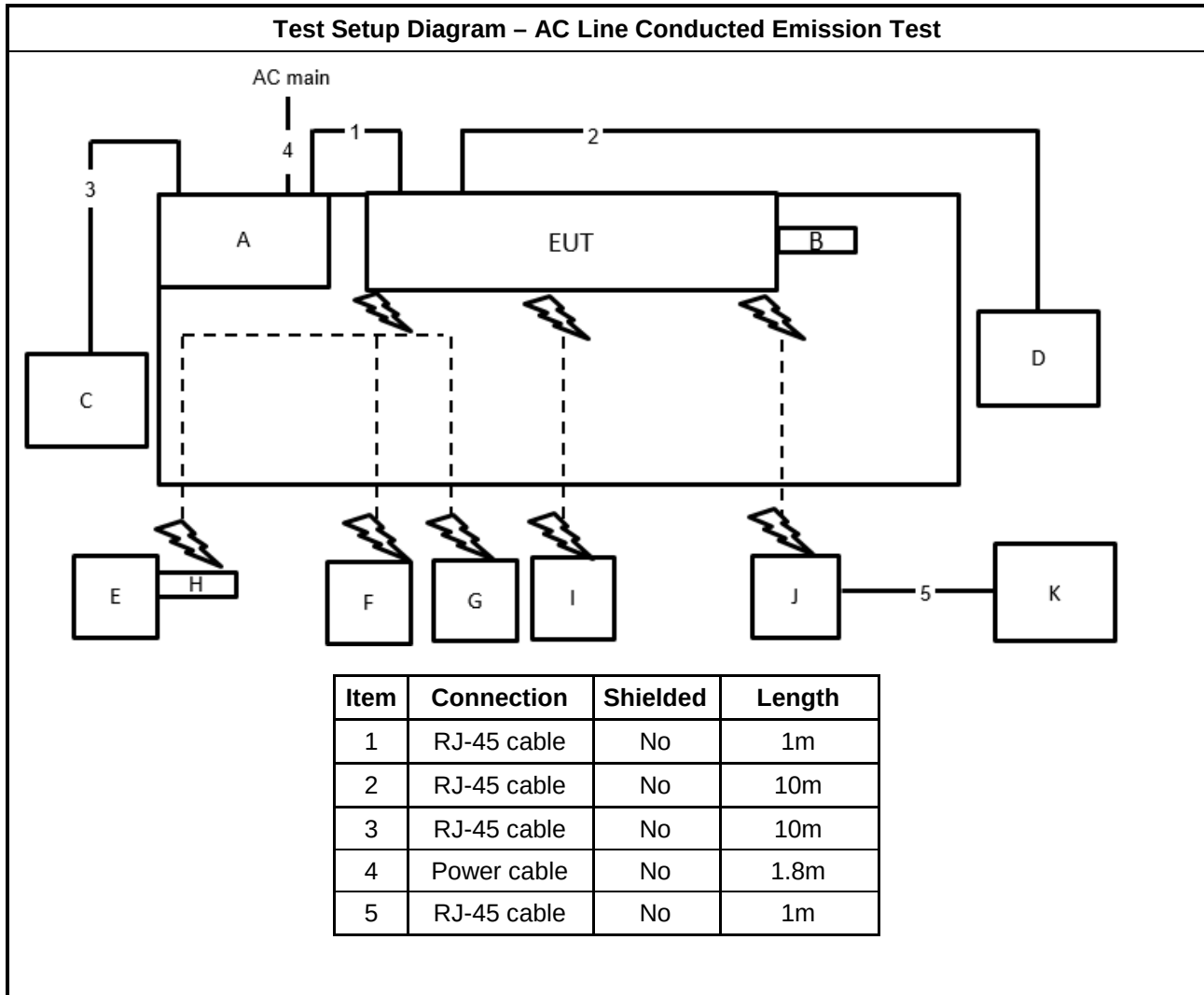
**For Radiated (below 1GHz):**

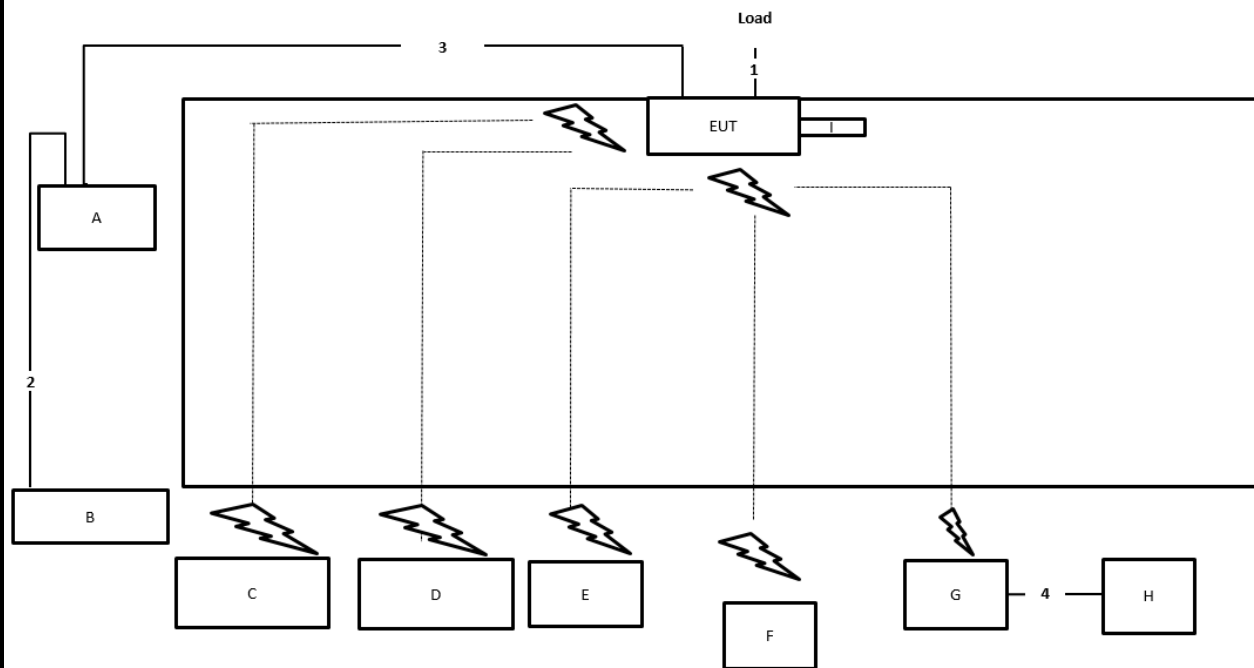
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	PHIHONG	POE60U-BTA	N/A
B	10G PC	DELL	T3400	N/A
C	2.4G NB	DELL	E4300	N/A
D	5G NB	DELL	E4300	N/A
E	6G NB	DELL	E4300	N/A
F	GPS Simulator	WELNAVIGATE	GS-100	N/A
G	Device	Juniper	AP47	N/A
H	10G PC	DELL	T3400	N/A
I	Flash disk3.0	Silicon Power	B06	N/A

For Radiated (above 1GHz) and RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	PoE	PHIHONG	POE60U-BTA	N/A

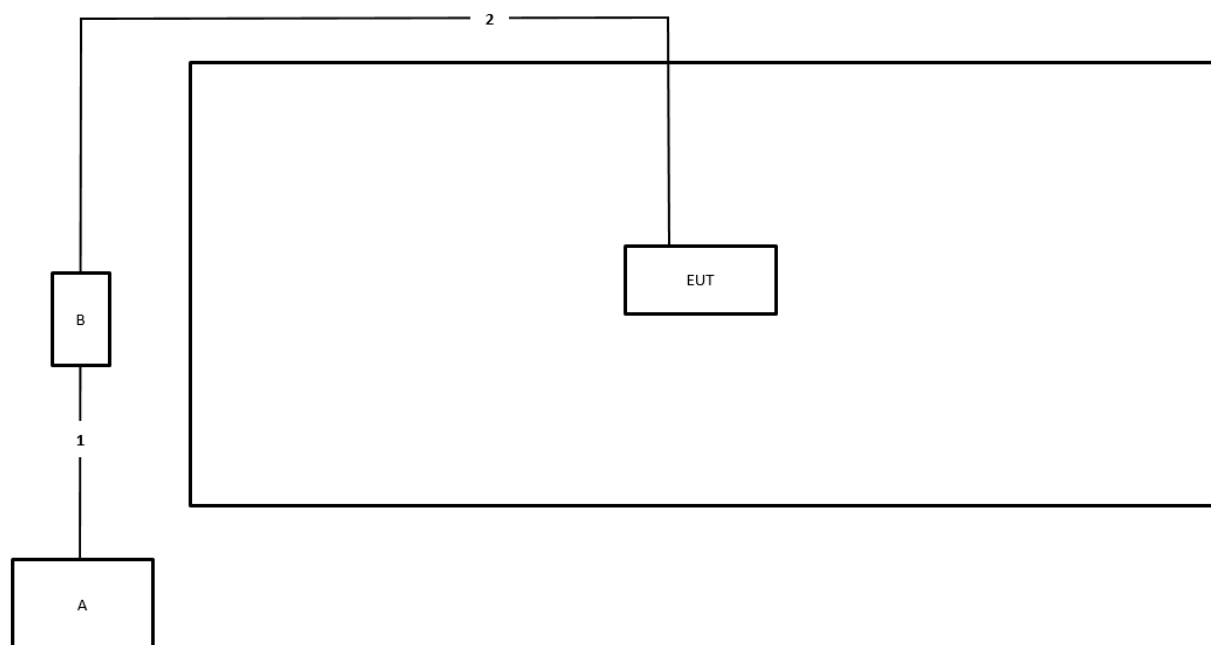
2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable(Load*1)	No	1.5m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
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.

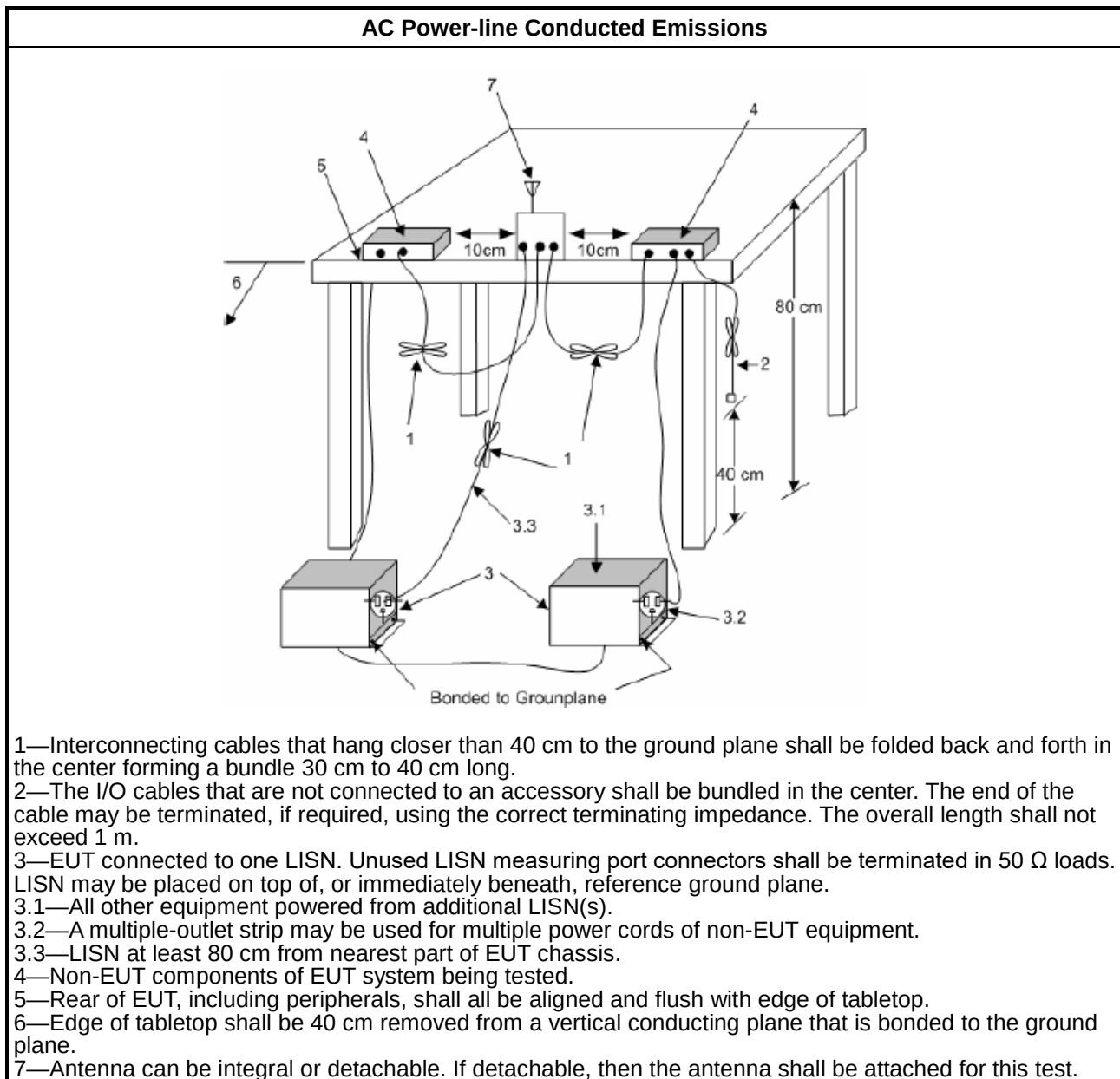
3.1.2 Measuring Instruments

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



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 $\geq$ 500 kHz.

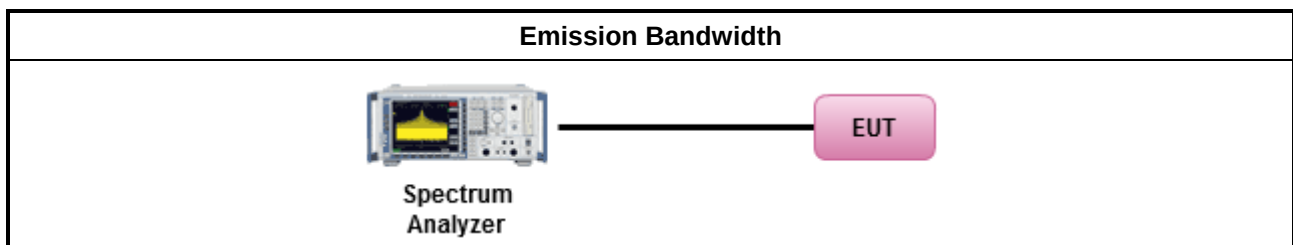
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as 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



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.	

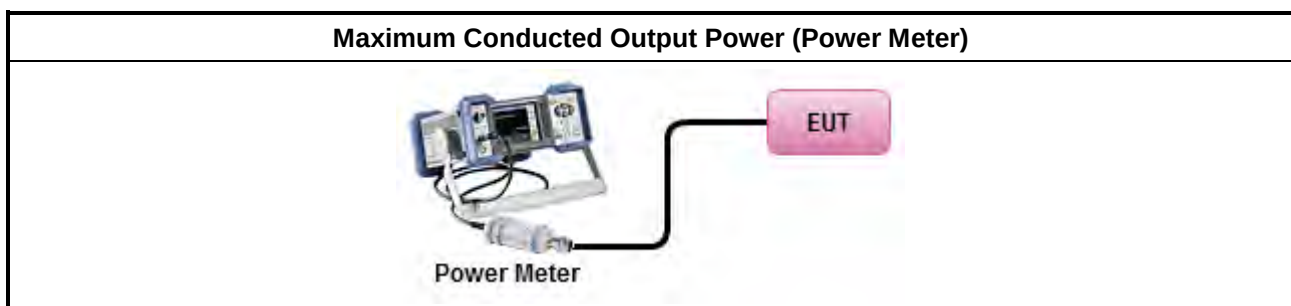
3.3.2 Measuring Instruments

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: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$	

3.3.4 Test Setup





3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

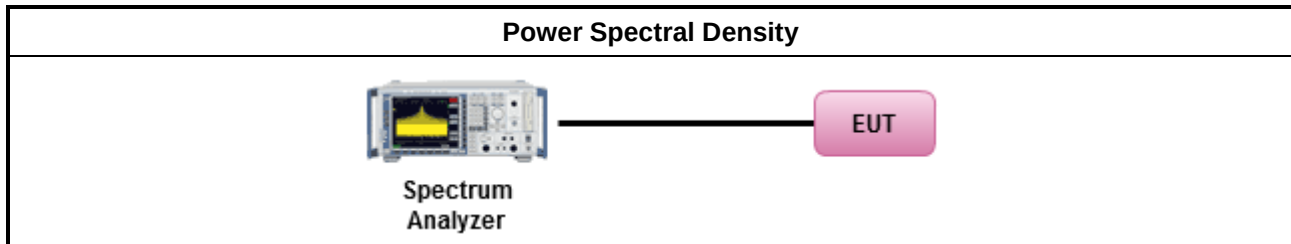
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).	
☒	Refer as 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



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.	

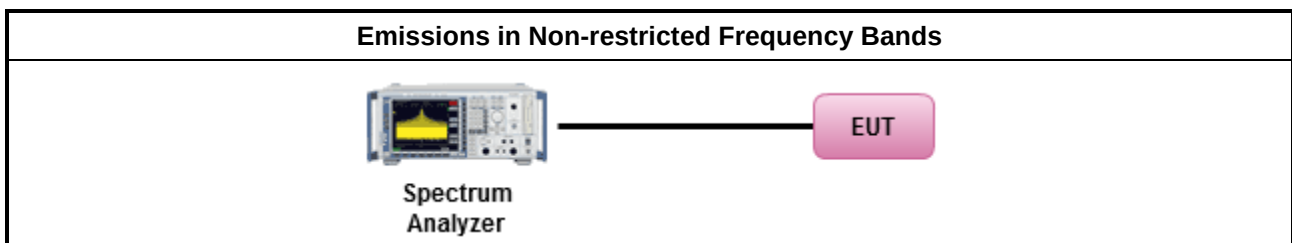
3.5.2 Measuring Instruments

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



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

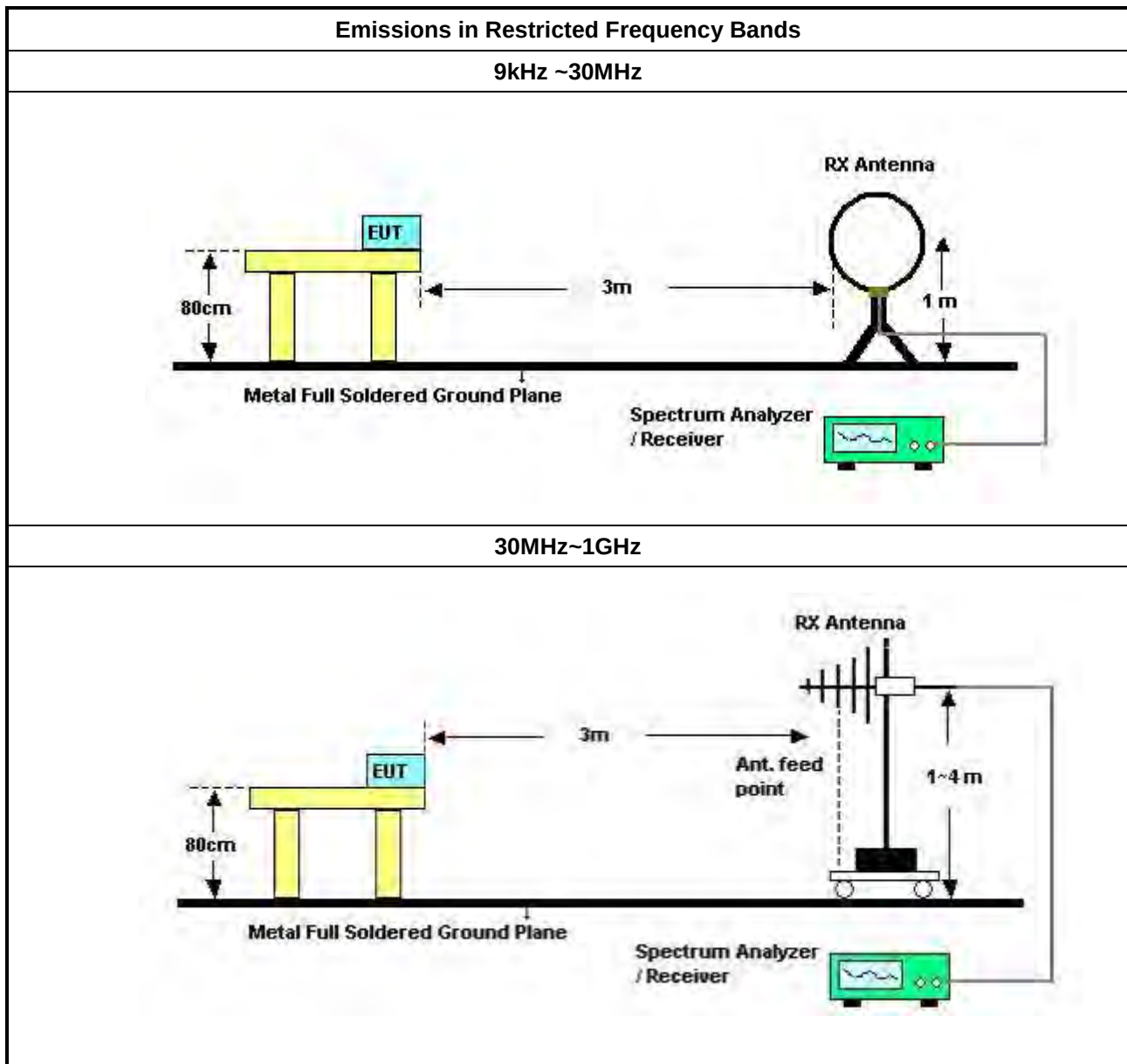
Refer a test equipment and calibration data table in this test report.

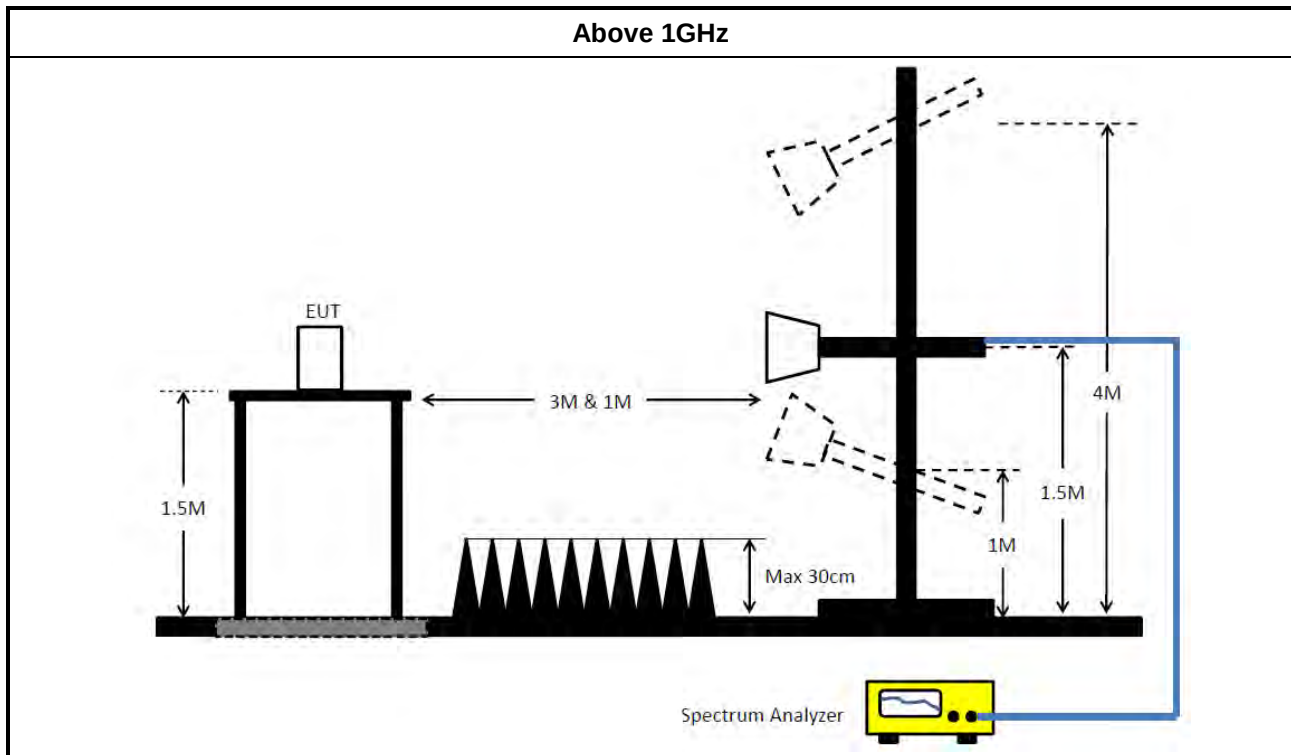


3.6.3 Test Procedures

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 $\geq 98\%$).
	☐ 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 $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, 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





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
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Apr. 15, 2024	Apr. 14, 2025	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 24, 2024	Apr. 23, 2025	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 15, 2024	May 14, 2025	Conduction (CO02-CB)
COND Cable	Woken	Cable	02	0.15MHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO02-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO02-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 9120 D	BBHA 9120 D 1370	1GHz~18GHz	Jul. 11, 2024	Jul. 10, 2025	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 17, 2024	May 16, 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	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH01-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. 12, 2024	Apr. 11, 2025	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jun. 29, 2024	Jun. 28, 2025	Radiation (03CH02-CB)
Signal Analyzer	R&S	FSV3044	101536	10kHz ~ 44GHz	Aug. 14, 2024	Aug. 13, 2025	Radiation (03CH02-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Jun. 20, 2024	Jun. 19, 2025	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Jun. 20, 2024	Jun. 19, 2025	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH02-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)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Sep. 28, 2024	Sep. 27, 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)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 20, 2024	Jun. 19, 2025	Radiation (03CH05-CB)
Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 02, 2024	May 01, 2025	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Jun. 29, 2024	Jun. 28, 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)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	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)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Aug. 27, 2024	Aug. 26, 2025	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Oct. 18, 2024	Oct. 17, 2025	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Oct. 18, 2024	Oct. 17, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz ~ 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz ~ 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)

**RADIO TEST REPORT****Report No. : FR4O0708AF**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
Switch	SPTCB	SP-SWI	SWI-02	1–18 GHz	Oct. 02, 2024	Oct. 01, 2025	Conducted (TH02-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Conducted (TH02-CB)

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



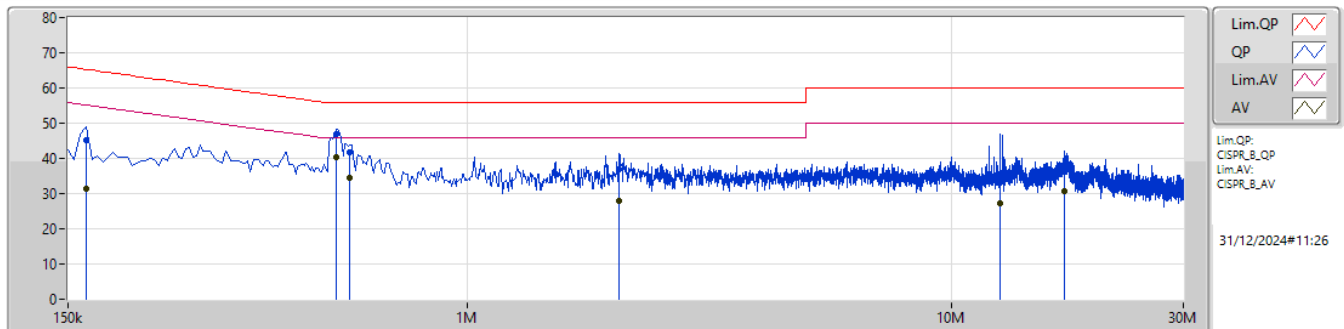
Conducted Emissions at Powerline

Appendix A

Summary

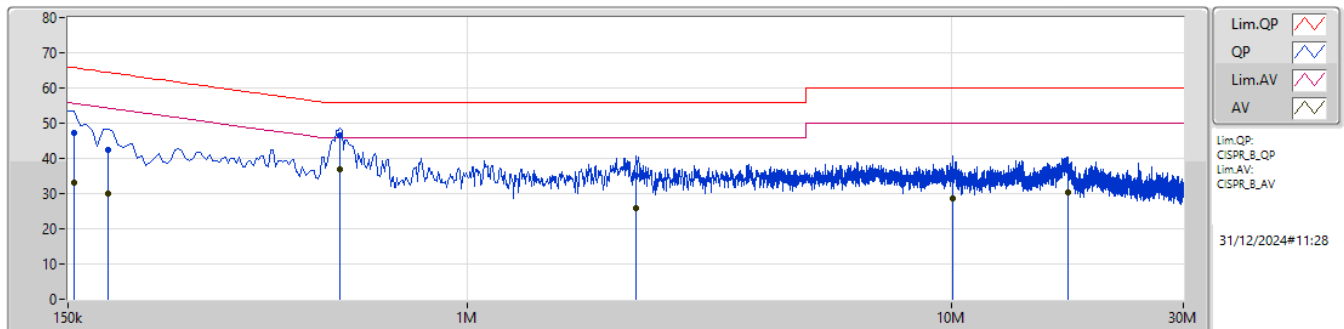
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 8	Pass	AV	537k	40.48	46.00	-5.52	Line

Mode 8



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	163.5k	45.28	65.27	-19.99	10.15	Line	-	35.13	0.05	0.08	10.02						
AV	163.5k	31.53	55.27	-23.74	10.15	Line	-	21.38	0.05	0.08	10.02						
QP	537k	46.85	56.00	-9.15	10.19	Line	-	36.66	0.06	0.10	10.03						
AV	537k	40.48	46.00	-5.52	10.19	Line	"Worst"	30.29	0.06	0.10	10.03						
QP	573k	41.79	56.00	-14.21	10.19	Line	-	31.60	0.06	0.10	10.03						
AV	573k	34.50	46.00	-11.50	10.19	Line	-	24.31	0.06	0.10	10.03						
QP	2.058M	36.96	56.00	-19.04	10.24	Line	-	26.72	0.09	0.14	10.01						
AV	2.058M	27.83	46.00	-18.17	10.24	Line	-	17.59	0.09	0.14	10.01						
QP	12.566M	33.43	60.00	-26.57	10.51	Line	-	22.92	0.30	0.19	10.02						
AV	12.566M	27.33	50.00	-22.67	10.51	Line	-	16.82	0.30	0.19	10.02						
QP	17.039M	37.03	60.00	-22.97	10.65	Line	-	26.38	0.36	0.27	10.02						
AV	17.039M	30.70	50.00	-19.30	10.65	Line	-	20.05	0.36	0.27	10.02						

Mode 8



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	154.5k	47.41	65.75	-18.34	10.15	Neutral	-	37.26	0.05	0.08	10.02						
AV	154.5k	33.04	55.75	-22.71	10.15	Neutral	-	22.89	0.05	0.08	10.02						
QP	181.5k	42.38	64.41	-22.03	10.14	Neutral	-	32.24	0.05	0.07	10.02						
AV	181.5k	29.89	54.41	-24.52	10.14	Neutral	-	19.75	0.05	0.07	10.02						
QP	546k	46.68	56.00	-9.32	10.18	Neutral	-	36.50	0.05	0.10	10.03						
AV	546k	36.77	46.00	-9.23	10.18	Neutral	"Worst"	26.59	0.05	0.10	10.03						
QP	2.234M	35.34	56.00	-20.66	10.24	Neutral	-	25.10	0.08	0.14	10.02						
AV	2.234M	25.99	46.00	-20.01	10.24	Neutral	-	15.75	0.08	0.14	10.02						
QP	10.05M	35.92	60.00	-24.08	10.37	Neutral	-	25.55	0.21	0.15	10.01						
AV	10.05M	28.56	50.00	-21.44	10.37	Neutral	-	18.19	0.21	0.15	10.01						
QP	17.3M	36.67	60.00	-23.33	10.54	Neutral	-	26.13	0.25	0.27	10.02						
AV	17.3M	30.34	50.00	-19.66	10.54	Neutral	-	19.80	0.25	0.27	10.02						

Summary

Mode	Max-N dB	Max-OBW	ITU-Code	Min-N dB	Min-OBW
	(Hz)	(Hz)		(Hz)	(Hz)
2.4-2.4835GHz	-	-	-	-	-
802.15.4(Zigbee&Thread)_1TX	1.643M	2.349M	2M35G1D	1.549M	2.322M

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

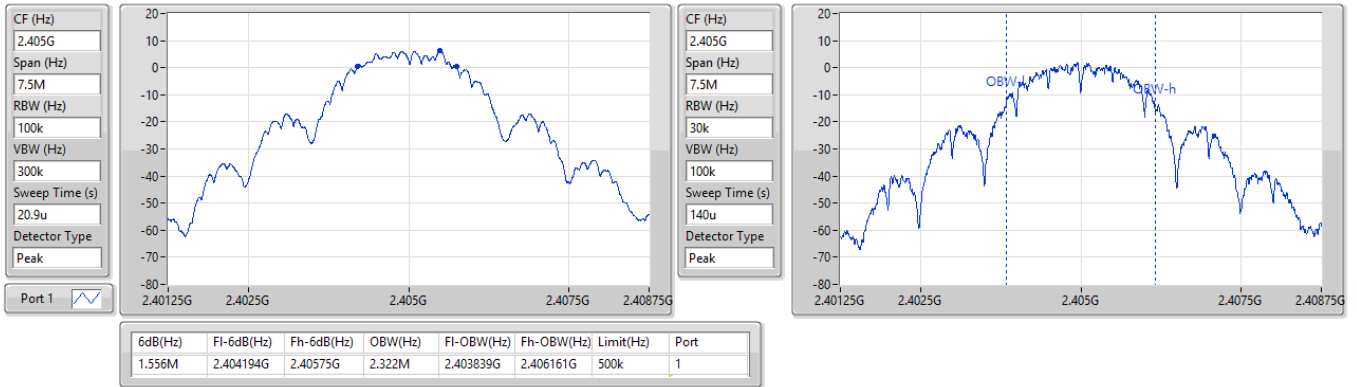
Result

Mode	Result	Limit	Port 1-N dB	Port 1-OBW
		(Hz)	(Hz)	(Hz)
802.15.4(Zigbee&Thread)_1TX	-	-	-	-
2405MHz	Pass	500k	1.556M	2.322M
2440MHz	Pass	500k	1.643M	2.348M
2475MHz	Pass	500k	1.549M	2.349M
2480MHz	Pass	500k	1.586M	2.322M

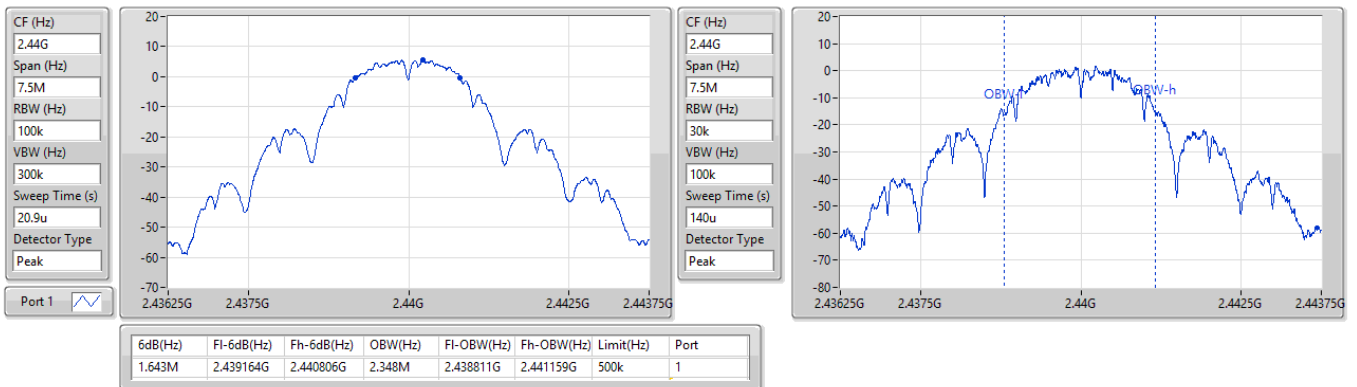
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX
EBW
2405MHz

17/01/2025

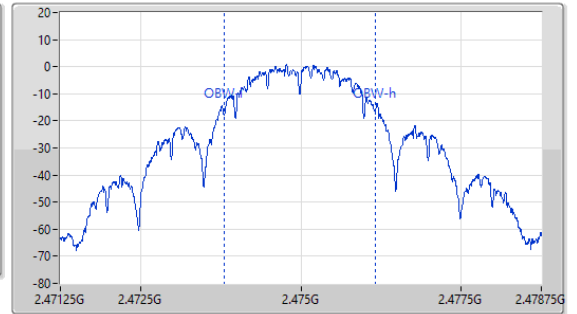
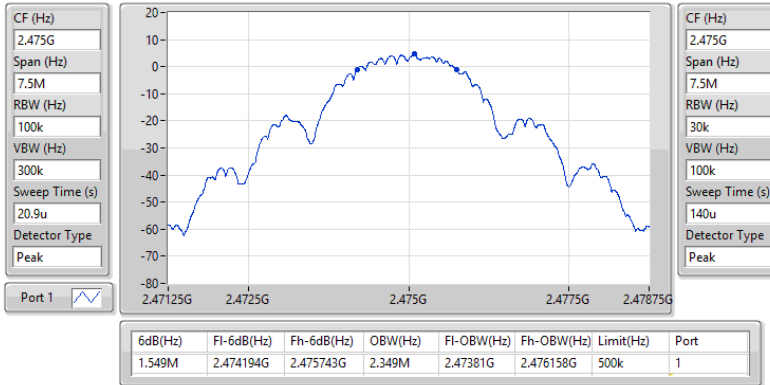

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX
EBW
2440MHz

17/01/2025

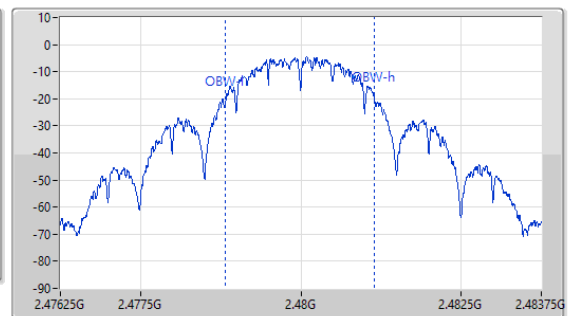
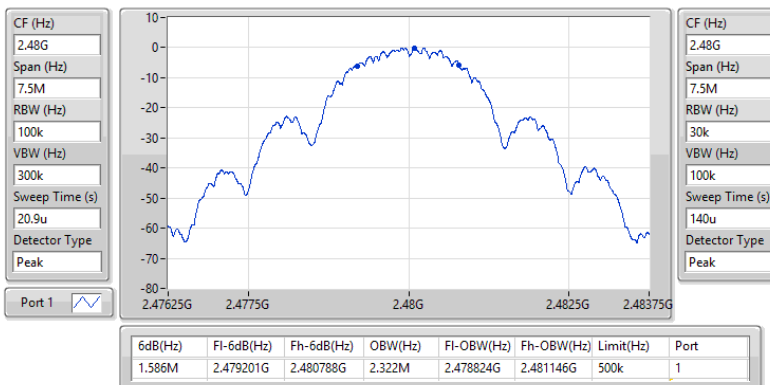


2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX
EBW
2475MHz

20/01/2025


2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX
EBW
2480MHz

17/01/2025





Average Power

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.15.4(Zigbee&Thread)_1TX	10.84	0.01213



Average Power

Appendix C

Result

Mode	Result	DG	Port 1	Total Power	Power Limit
		(dBi)	(dBm)	(dBm)	(dBm)
802.15.4(Zigbee&Thread)_1TX	-	-	-	-	-
2405MHz	Pass	6.60	10.84	10.84	29.40
2440MHz	Pass	6.60	10.50	10.50	29.40
2475MHz	Pass	6.60	9.77	9.77	29.40
2480MHz	Pass	6.60	4.89	4.89	29.40

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	-
802.15.4(Zigbee&Thread)_1TX	-5.19

RBW = 3kHz;

Result

Mode	Result	DG	Port 1	PD	PD Limit
		(dBi)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
802.15.4(Zigbee&Thread)_1TX	-	-	-	-	-
2405MHz	Pass	6.60	-5.19	-5.19	7.40
2440MHz	Pass	6.60	-6.92	-6.92	7.40
2475MHz	Pass	6.60	-6.80	-6.80	7.40
2480MHz	Pass	6.60	-11.93	-11.93	7.40

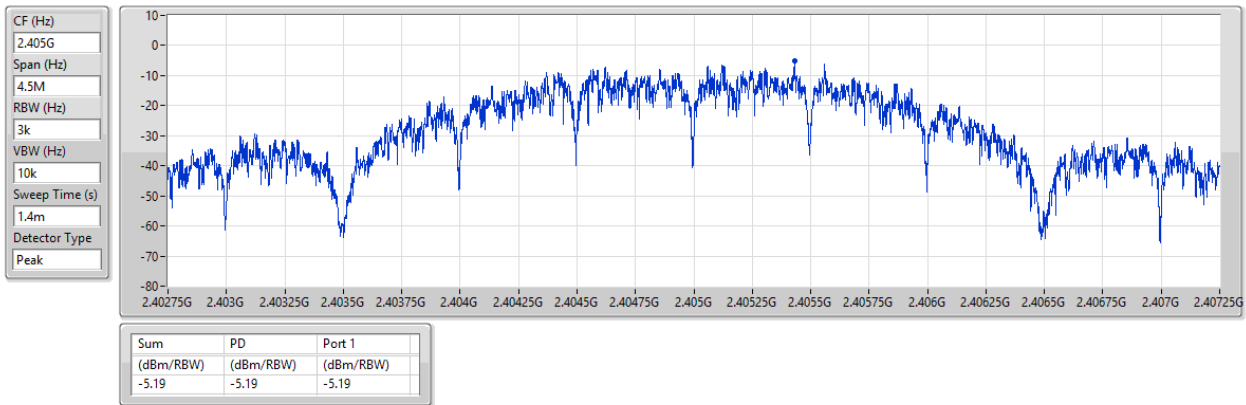
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

PSD

2405MHz

17/01/2025

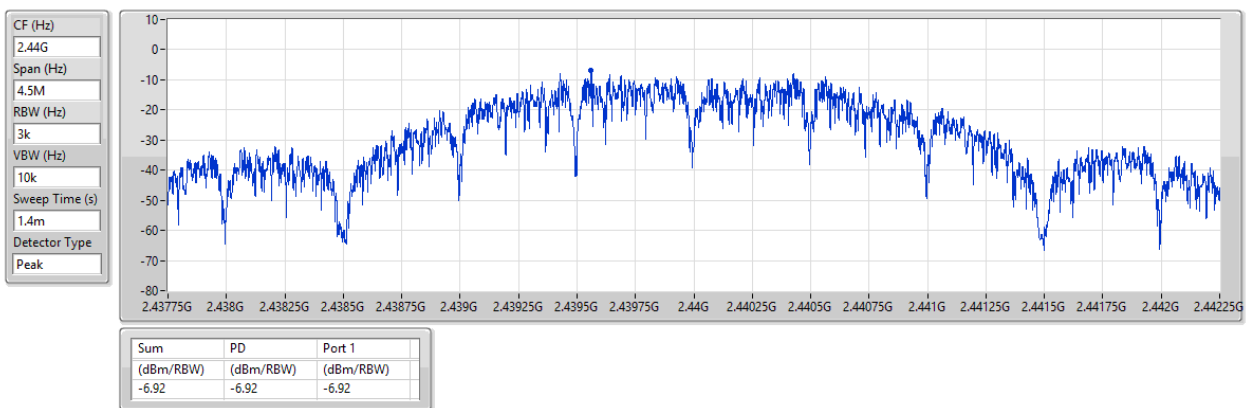


2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

PSD

2440MHz

17/01/2025

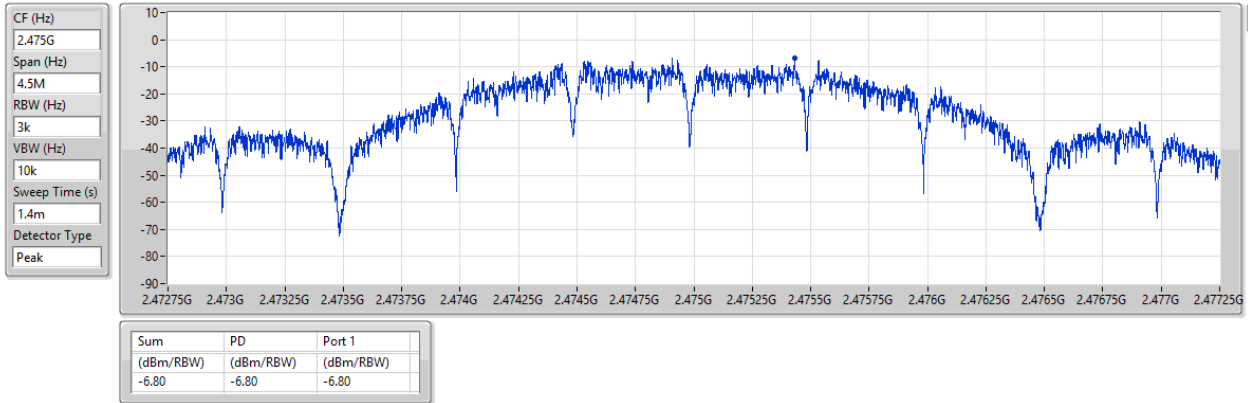


2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

PSD

2475MHz

20/01/2025

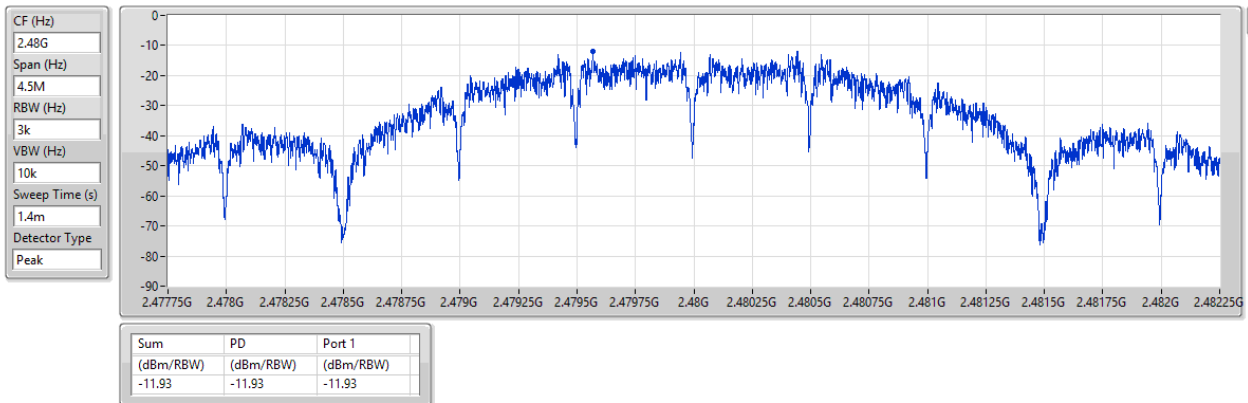


2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

PSD

2480MHz

17/01/2025





Summary

Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.15.4(Zigbee&Thread)_1TX	Pass	2.40434G	6.31	-23.69	2.1576G	-54.46	2.39752G	-52.69	2.4G	-57.30	21.65156G	-44.73	1



Result

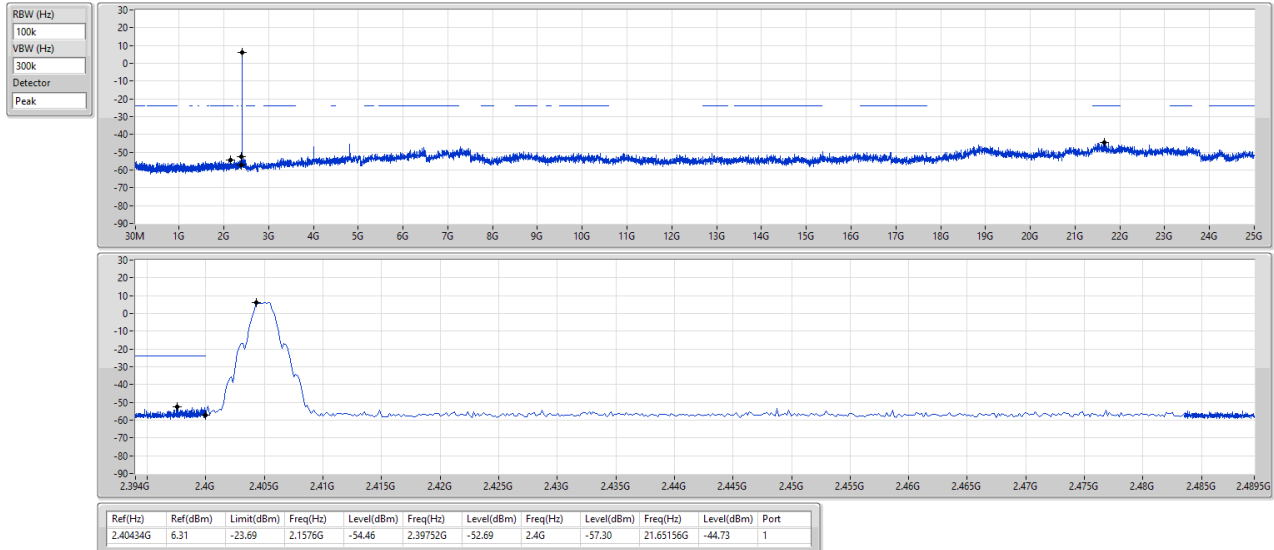
Mode	Result	Ref	Ref	Limit	Freq	Level	Freq	Level	Freq	Level	Freq	Level	Port
		(Hz)	(dBm)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	(Hz)	(dBm)	
802.15.4(Zigbee&Thread)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.40434G	6.31	-23.69	2.1576G	-54.46	2.39752G	-52.69	2.4G	-57.30	21.65156G	-44.73	1
2440MHz	Pass	2.40434G	6.31	-23.69	1.78291G	-54.54	2.39888G	-54.49	2.4G	-58.10	21.55589G	-44.95	1
2475MHz	Pass	2.40434G	6.31	-23.69	2.13514G	-54.28	2.39729G	-54.96	2.4G	-56.85	21.50243G	-45.22	1
2480MHz	Pass	2.40434G	6.31	-23.69	2.10914G	-54.54	2.39527G	-54.37	2.4G	-57.87	21.93857G	-45.12	1

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

CSEndB

2405MHz

20/01/2025

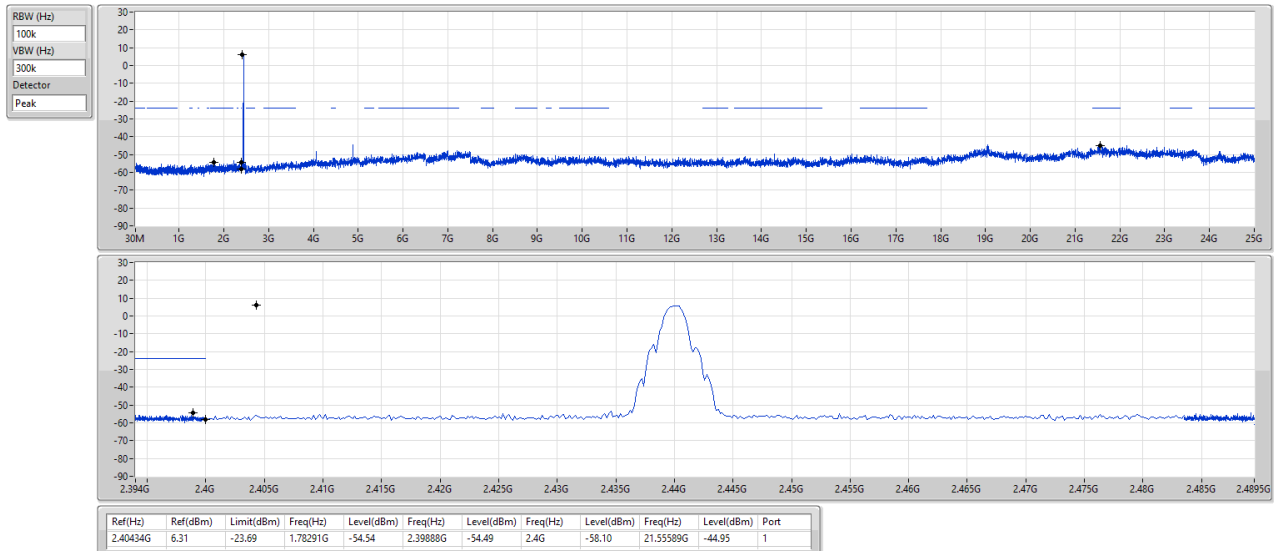


2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

CSEndB

2440MHz

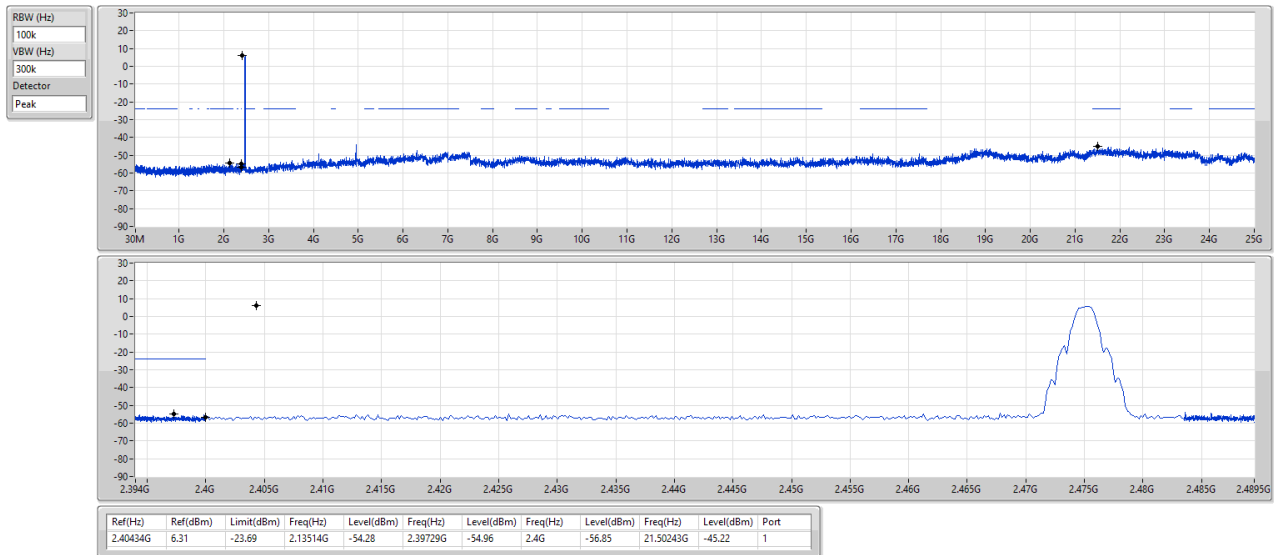
20/01/2025



2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

CSEndB

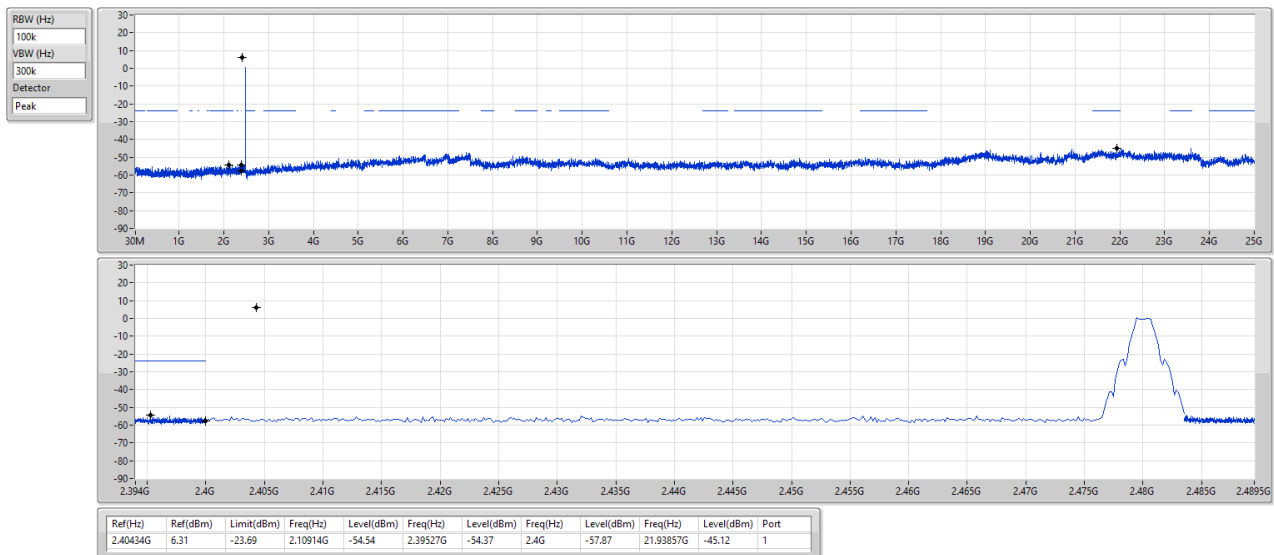
2475MHz



2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

CSEndB

2480MHz





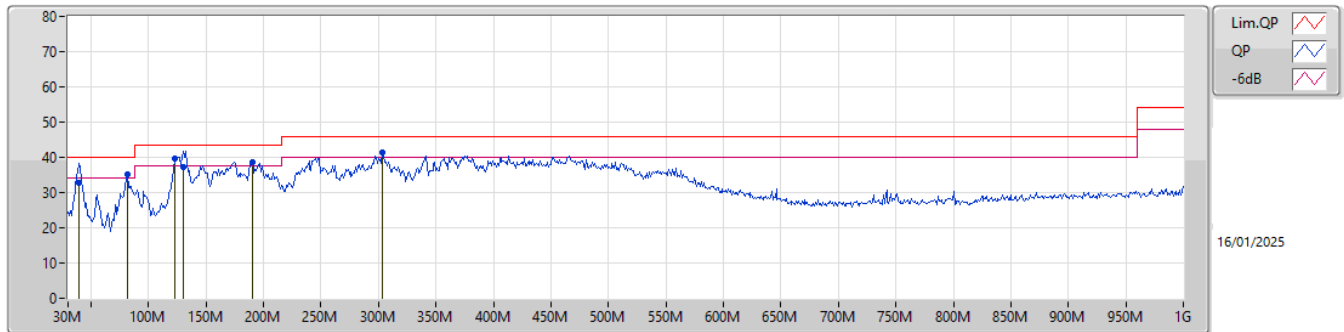
Radiated Emissions below 1GHz

Appendix F.1

Summary

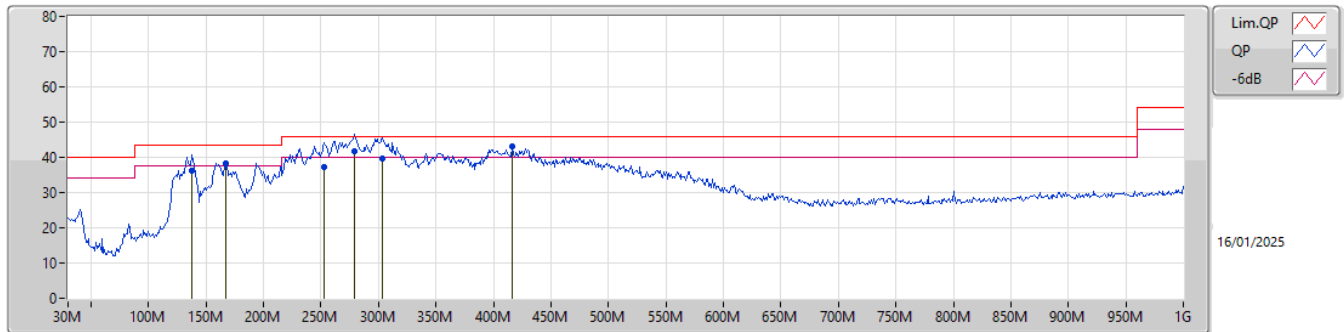
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	PK	416.06M	42.94	46.00	-3.06	Horizontal

Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
QP	39.7M	32.87	40.00	-7.13	-11.25	3	Vertical	12	1.00	-	44.12	19.23	1.07	31.55		
PK	81.41M	35.34	40.00	-4.66	-17.05	3	Vertical	187	1.50	-	52.39	13.25	1.42	31.72		
PK	123.12M	39.59	43.50	-3.91	-11.87	3	Vertical	360	1.25	"Worst"	51.46	18.19	1.69	31.75		
QP	129.91M	37.11	43.50	-6.39	-12.04	3	Vertical	7	1.00	-	49.15	17.98	1.73	31.75		
PK	190.05M	38.72	43.50	-4.78	-14.71	3	Vertical	245	1.25	-	53.43	14.98	2.08	31.77		
PK	303.54M	41.49	46.00	-4.51	-9.91	3	Vertical	313	1.00	-	51.40	19.28	2.66	31.85		

Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
QP	137.67M	36.26	43.50	-7.24	-12.50	3	Horizontal	60	1.50	-	48.76	17.47	1.78	31.75		
PK	166.77M	38.38	43.50	-5.12	-14.00	3	Horizontal	211	2.00	-	52.38	15.83	1.94	31.77		
QP	253.1M	37.26	46.00	-8.74	-10.79	3	Horizontal	87	1.50	-	48.05	18.62	2.41	31.82		
QP	279.29M	41.78	46.00	-4.22	-10.50	3	Horizontal	267	1.50	-	52.28	18.79	2.54	31.83		
QP	303.54M	39.79	46.00	-6.21	-9.91	3	Horizontal	279	1.00	-	49.70	19.28	2.66	31.85		
PK	416.06M	42.94	46.00	-3.06	-6.57	3	Horizontal	271	1.00	"Worst"	49.51	22.31	3.13	32.01		



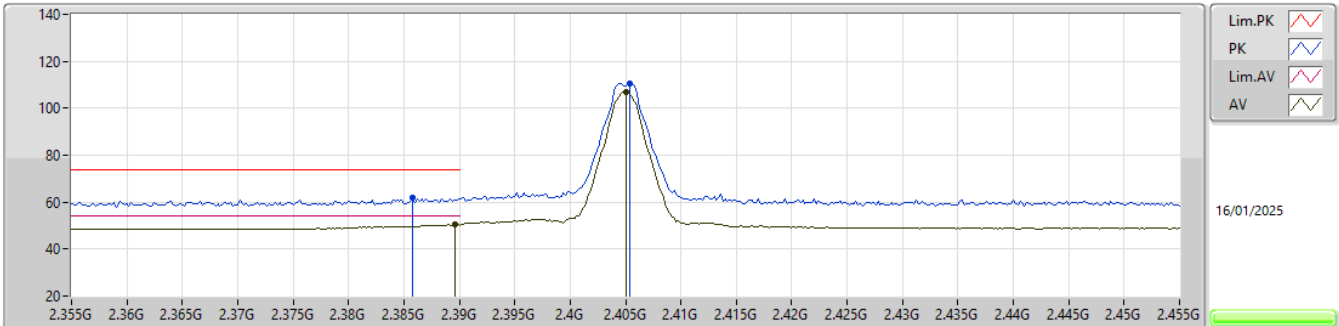
Test Mode: Mode 1

Summary

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.15.4(Zigbee&Thread)_1TX	Pass	AV	2.4835G	53.10	54.00	-0.90	3	Vertical	192	2.58	-

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

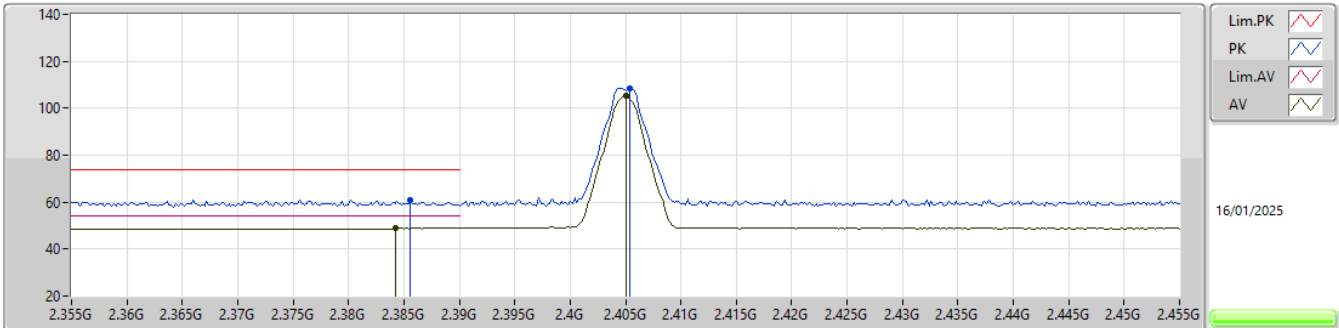


EUT_Z_1TX
Setting 14
02-R-G-5
Bypass Mode

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	2.3858G	61.91	74.00	-12.09	29.39	3	Vertical	359	3.00	-	28.46	4.06	-				
AV	2.3896G	50.65	54.00	-3.35	18.09	3	Vertical	359	3.00	-	28.50	4.06	-				
PK	2.4054G	110.52	Inf	-Inf	78.00	3	Vertical	359	3.00	-	28.45	4.07	-				
AV	2.405G	107.11	Inf	-Inf	74.59	3	Vertical	359	3.00	-	28.45	4.07	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

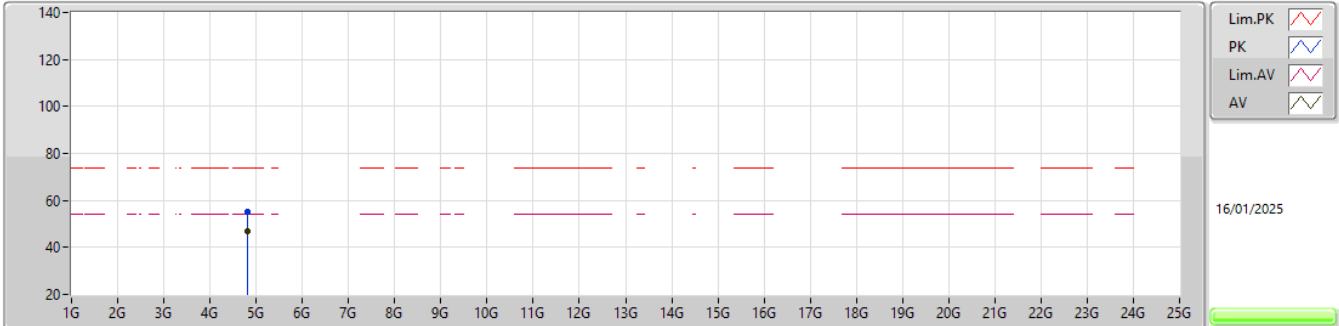


EUT_Z_1TX
Setting 14
02-R-G-5
Bypass Mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3856G	61.02	74.00	-12.98	28.50	3	Horizontal	214	2.93	-	28.46	4.06	-				
AV	2.3842G	48.99	54.00	-5.01	16.49	3	Horizontal	214	2.93	-	28.44	4.06	-				
PK	2.4054G	108.61	Inf	-Inf	76.09	3	Horizontal	214	2.93	-	28.45	4.07	-				
AV	2.405G	105.22	Inf	-Inf	72.70	3	Horizontal	214	2.93	-	28.45	4.07	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

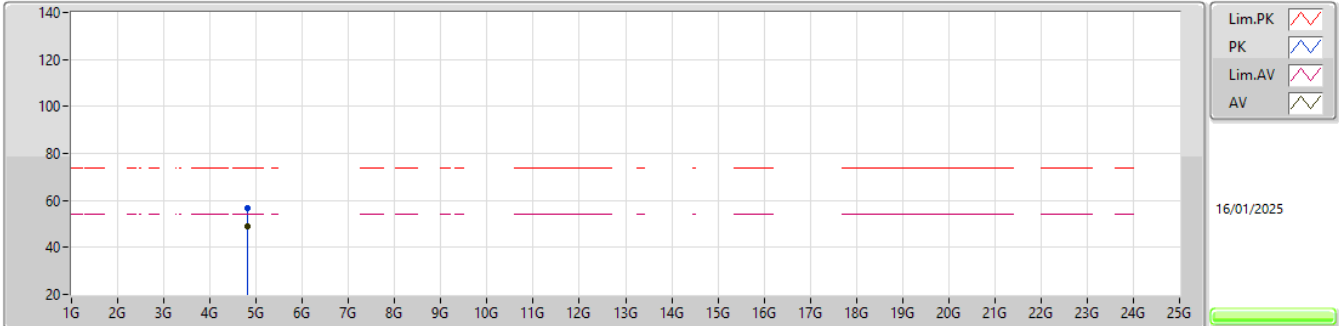


EUT_Z_1TX
Setting 14
02-R-J-8
Bypass Mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.8107G	55.16	74.00	-18.84	46.26	3	Vertical	305	3.00	-	33.12	6.78	31.00			
AV	4.8109G	46.82	54.00	-7.18	37.92	3	Vertical	305	3.00	-	33.12	6.78	31.00			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

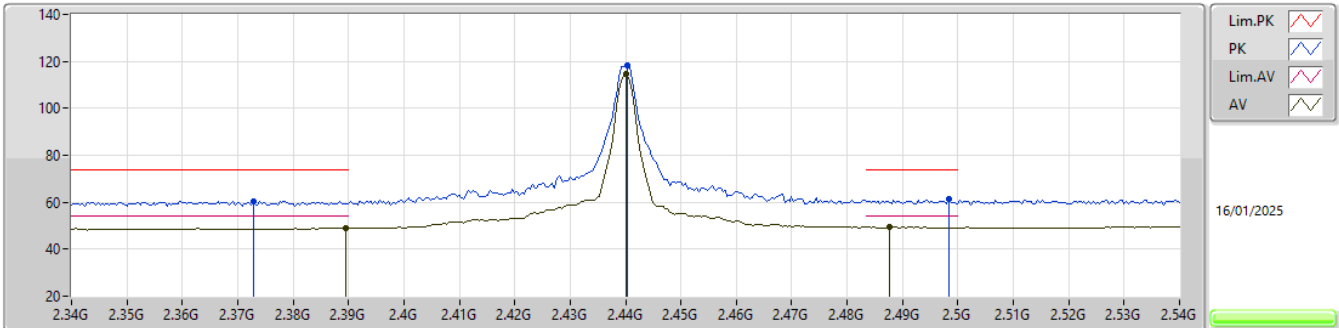


EUT_Z_1TX
Setting 14
02-R-J-8
Bypass Mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.8108G	56.88	74.00	-17.12	47.98	3	Horizontal	275	2.38	-	33.12	6.78	31.00			
AV	4.811G	49.09	54.00	-4.91	40.19	3	Horizontal	275	2.38	-	33.12	6.78	31.00			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

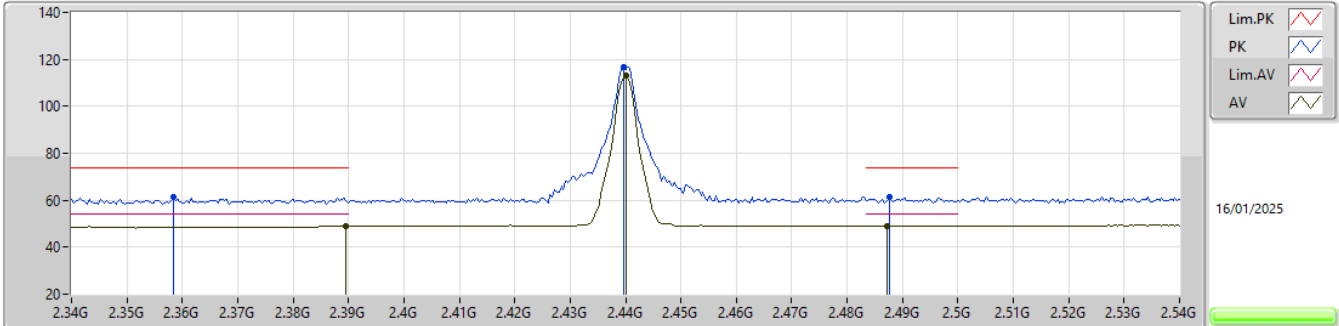


EUT_Z_1TX
Setting 22
02-R-G-5
PA Mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3728G	60.47	74.00	-13.53	28.02	3	Vertical	357	2.66	-	28.40	4.05	-				
AV	2.3896G	49.06	54.00	-4.94	16.50	3	Vertical	357	2.66	-	28.50	4.06	-				
PK	2.4404G	118.07	Inf	-Inf	85.47	3	Vertical	357	2.66	-	28.50	4.10	-				
AV	2.44G	114.64	Inf	-Inf	82.04	3	Vertical	357	2.66	-	28.50	4.10	-				
PK	2.4984G	61.25	74.00	-12.75	28.51	3	Vertical	357	2.66	-	28.60	4.14	-				
AV	2.4876G	49.33	54.00	-4.67	16.59	3	Vertical	357	2.66	-	28.60	4.14	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

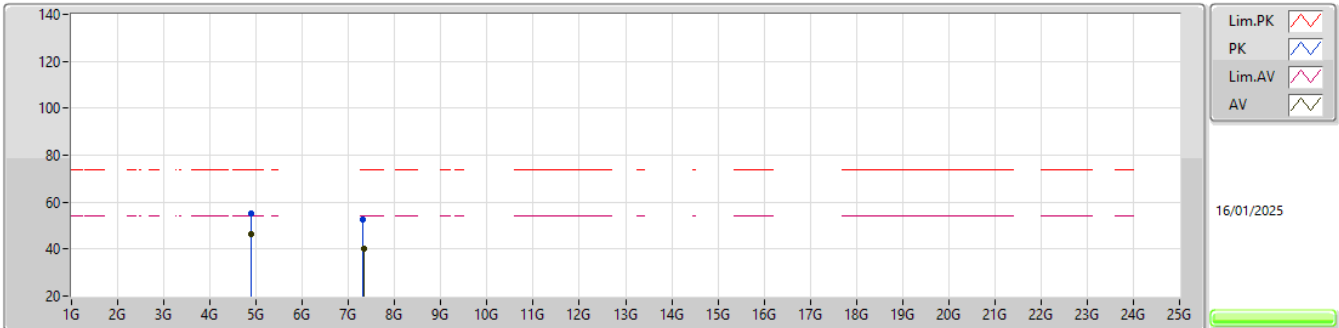


EUT_Z_1TX
Setting 22
02-R-G-5
PA Mode

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	2.3584G	61.13	74.00	-12.87	28.71	3	Horizontal	239	2.86	-	28.38	4.04	-					
AV	2.3896G	48.77	54.00	-5.23	16.21	3	Horizontal	239	2.86	-	28.50	4.06	-					
PK	2.4396G	116.56	Inf	-Inf	83.96	3	Horizontal	239	2.86	-	28.50	4.10	-					
AV	2.44G	113.12	Inf	-Inf	80.52	3	Horizontal	239	2.86	-	28.50	4.10	-					
PK	2.4876G	61.40	74.00	-12.60	28.66	3	Horizontal	239	2.86	-	28.60	4.14	-					
AV	2.4872G	49.03	54.00	-4.97	16.29	3	Horizontal	239	2.86	-	28.60	4.14	-					

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

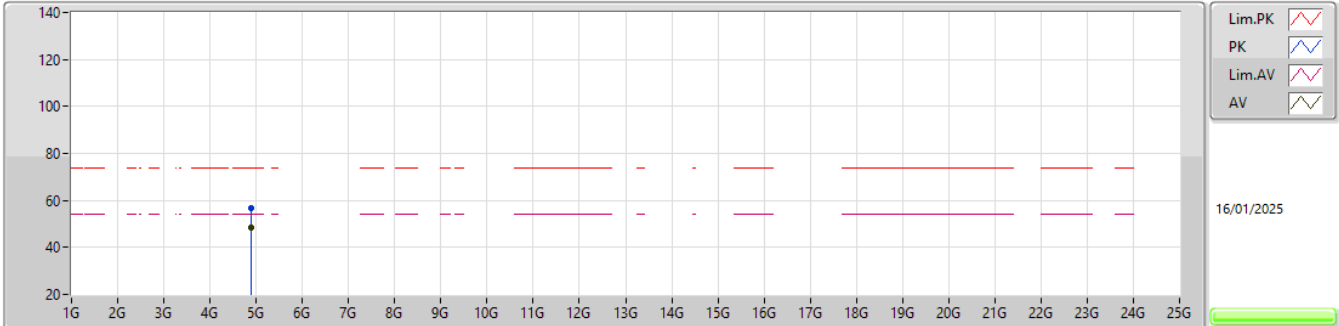


EUT_Z_1TX
Setting 14
02-R-J-8
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.87892G	55.20	74.00	-18.80	46.13	3	Vertical	309	2.36	-	33.26	6.81	31.00				
AV	4.88088G	46.19	54.00	-7.81	37.12	3	Vertical	309	2.36	-	33.26	6.81	31.00				
PK	7.31936G	52.43	74.00	-21.57	38.01	3	Vertical	300	2.31	-	36.48	9.37	31.43				
AV	7.32908G	40.40	54.00	-13.60	25.94	3	Vertical	300	2.31	-	36.52	9.37	31.43				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

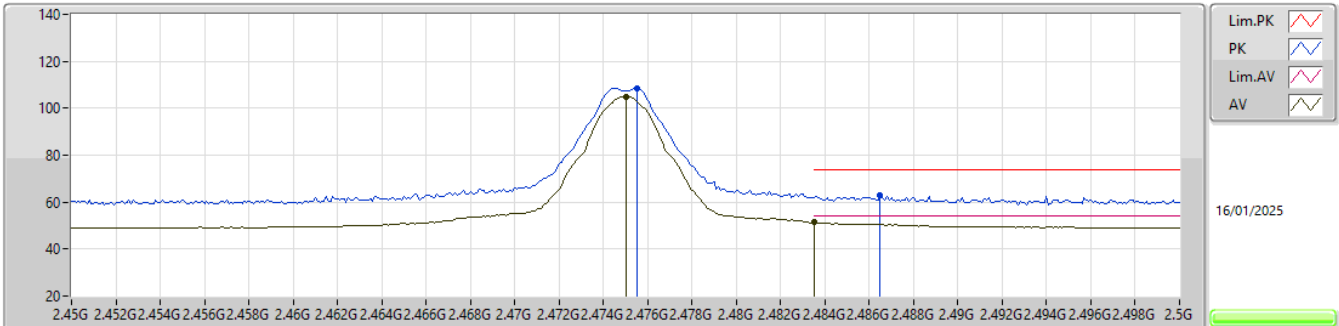


EUT_Z_1TX
Setting 14
02-R-J-8
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.8792G	56.70	74.00	-17.30	47.63	3	Horizontal	280	2.45	-	33.26	6.81	31.00			
AV	4.879G	48.57	54.00	-5.43	39.50	3	Horizontal	280	2.45	-	33.26	6.81	31.00			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

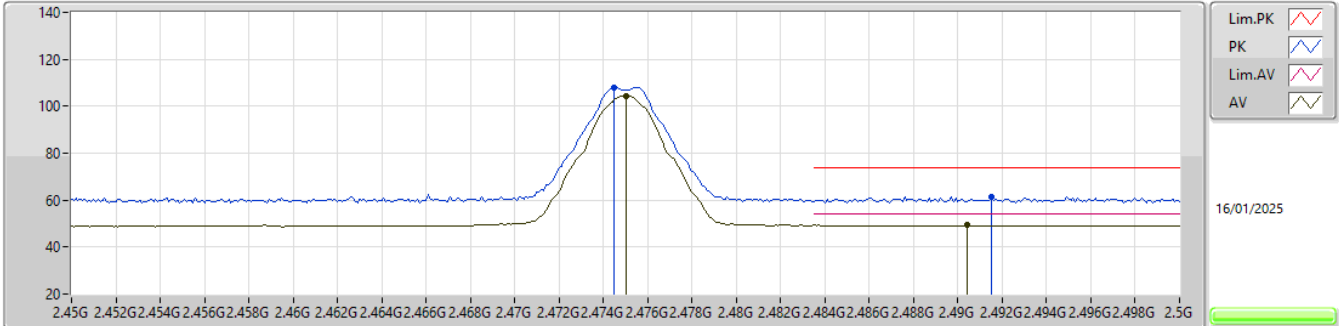


EUT_Z_1TX
Setting 14
02-R-J-8
Bypass mode

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	2.4755G	108.48	Inf	-Inf	75.79	3	Vertical	202	2.95	-	28.56	4.13	-				
AV	2.475G	104.96	Inf	-Inf	72.28	3	Vertical	202	2.95	-	28.55	4.13	-				
PK	2.4865G	62.84	74.00	-11.16	30.11	3	Vertical	202	2.95	-	28.60	4.13	-				
AV	2.4835G	51.37	54.00	-2.63	18.64	3	Vertical	202	2.95	-	28.60	4.13	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

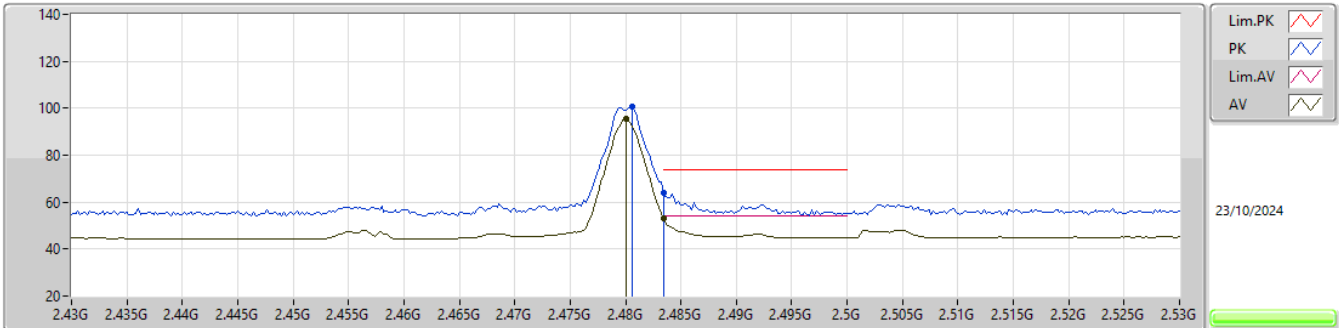


EUT_Z_1TX
Setting 14
02-R-J-8
Bypass mode

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	2.4745G	107.95	Inf	-Inf	75.28	3	Horizontal	230	3.00	-	28.54	4.13	-				
AV	2.475G	104.44	Inf	-Inf	71.76	3	Horizontal	230	3.00	-	28.55	4.13	-				
PK	2.4915G	61.54	74.00	-12.46	28.80	3	Horizontal	230	3.00	-	28.60	4.14	-				
AV	2.4904G	49.33	54.00	-4.67	16.59	3	Horizontal	230	3.00	-	28.60	4.14	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX

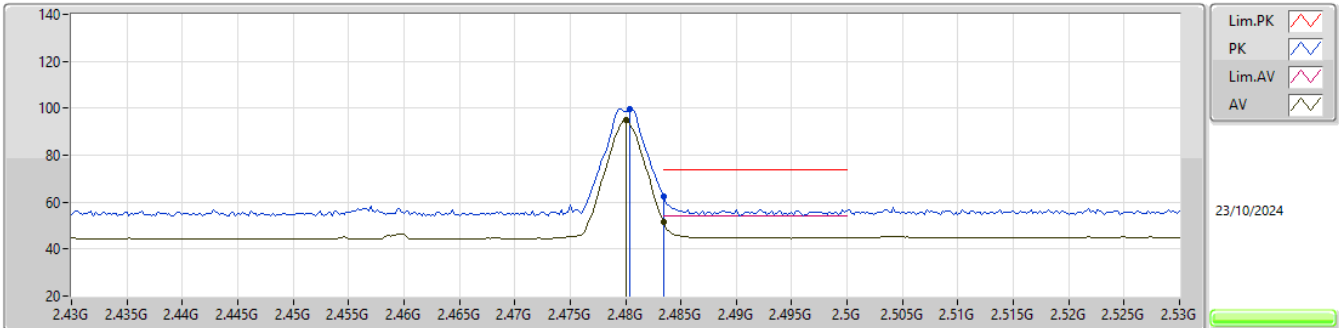


EUT_Z_1TX
Setting 6
02-E-A-4
Bypass Mode

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	2.4806G	100.61	Inf	-Inf	67.88	3	Vertical	192	2.58	-	28.60	4.13	-					
AV	2.48G	95.73	Inf	-Inf	63.00	3	Vertical	192	2.58	-	28.60	4.13	-					
PK	2.4835G	63.85	74.00	-10.15	31.12	3	Vertical	192	2.58	-	28.60	4.13	-					
AV	2.4835G	53.10	54.00	-0.90	20.37	3	Vertical	192	2.58	-	28.60	4.13	-					

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX

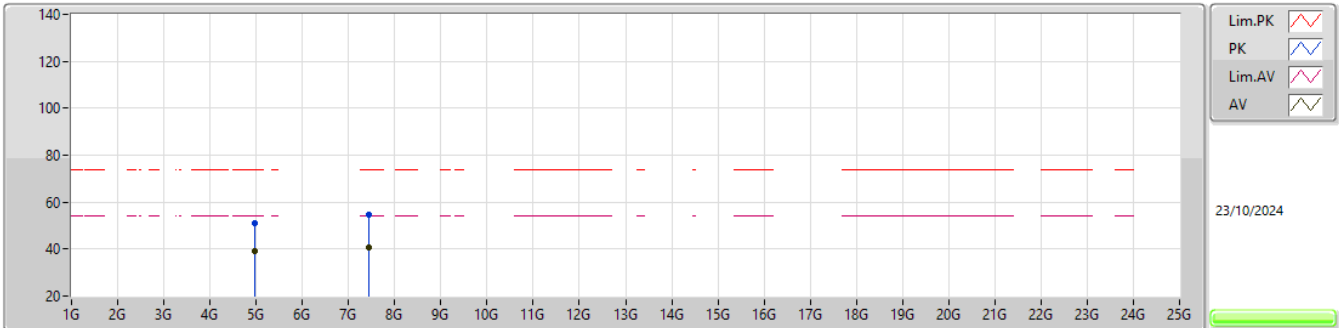


EUT_Z_1TX
Setting 6
02-E-A-4
Bypass Mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.4804G	99.48	Inf	-Inf	66.75	3	Horizontal	232	2.74	-	28.60	4.13	-				
AV	2.48G	95.13	Inf	-Inf	62.40	3	Horizontal	232	2.74	-	28.60	4.13	-				
PK	2.4835G	62.49	74.00	-11.51	29.76	3	Horizontal	232	2.74	-	28.60	4.13	-				
AV	2.4835G	51.78	54.00	-2.22	19.05	3	Horizontal	232	2.74	-	28.60	4.13	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX

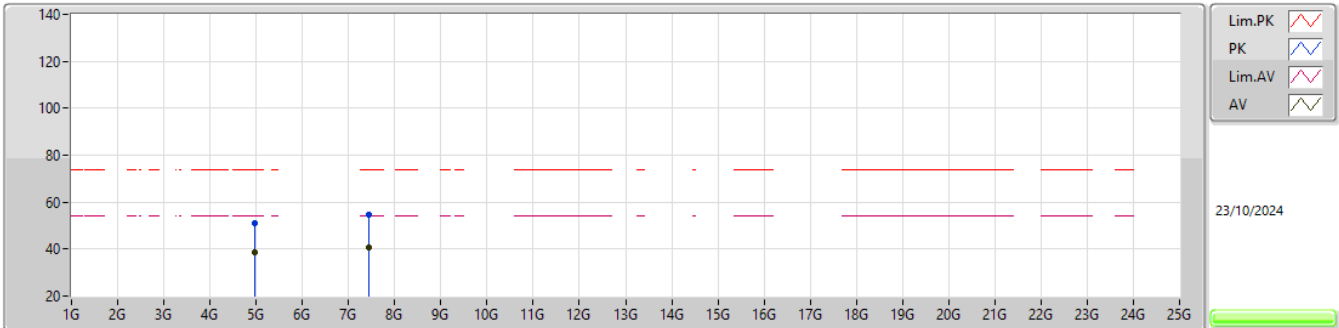


EUT_Z_1TX
Setting 6
02-E-A-4
Bypass Mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.96084G	50.85	74.00	-23.15	41.60	3	Vertical	123	2.74	-	33.40	6.86	31.01				
AV	4.96094G	39.04	54.00	-14.96	29.79	3	Vertical	123	2.74	-	33.40	6.86	31.01				
PK	7.4406G	54.65	74.00	-19.35	40.12	3	Vertical	244	2.94	-	36.60	9.36	31.43				
AV	7.43528G	40.59	54.00	-13.41	26.06	3	Vertical	244	2.94	-	36.60	9.36	31.43				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX



EUT_Z_1TX
Setting 6
02-E-A-4
Bypass Mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.96076G	50.91	74.00	-23.09	41.66	3	Horizontal	268	2.65	-	33.40	6.86	31.01				
AV	4.96096G	38.65	54.00	-15.35	29.40	3	Horizontal	268	2.65	-	33.40	6.86	31.01				
PK	7.4415G	54.61	74.00	-19.39	40.08	3	Horizontal	96	2.70	-	36.60	9.36	31.43				
AV	7.44422G	40.69	54.00	-13.31	26.17	3	Horizontal	96	2.70	-	36.60	9.35	31.43				



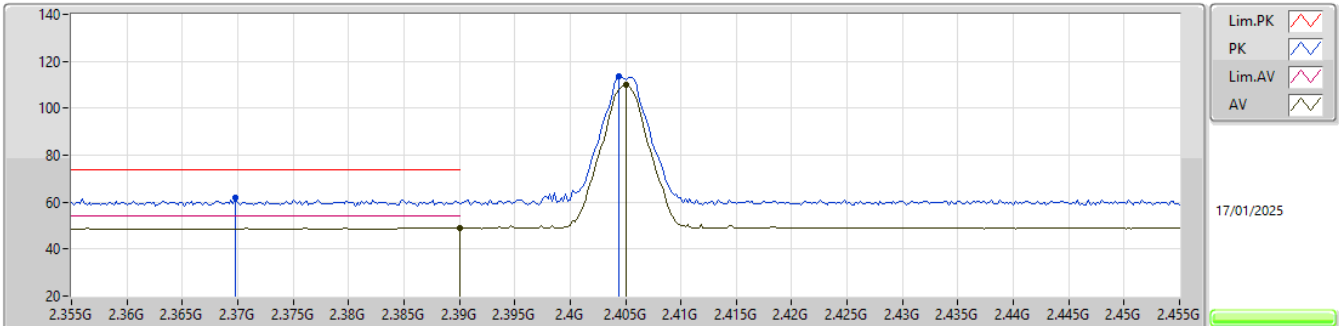
Test Mode: Mode 2

Summary

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.15.4(Zigbee&Thread)_1TX	Pass	AV	4.81104G	53.83	54.00	-0.17	3	Vertical	32	1.02	-

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

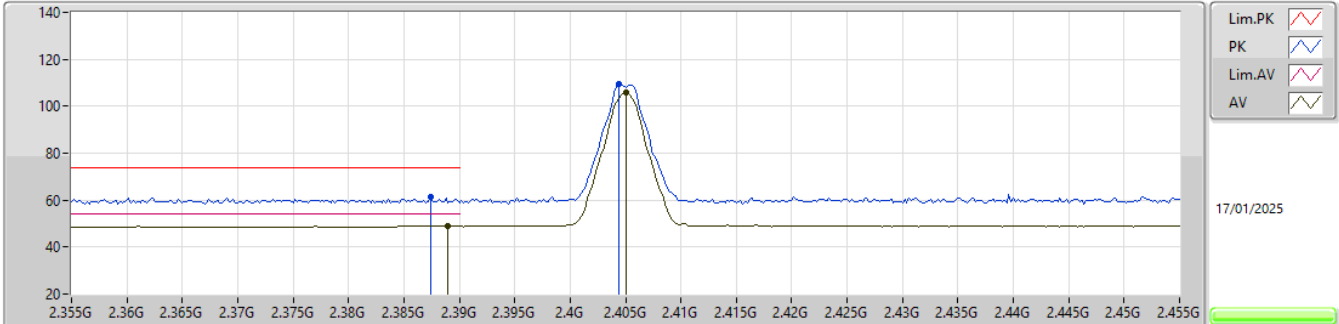


EUT_Y_1TX
Setting 14
02-R-Y-1
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3698G	61.73	74.00	-12.27	29.28	3	Vertical	2	2.21	-	28.40	4.05	-				
AV	2.39G	49.07	54.00	-4.93	16.51	3	Vertical	2	2.21	-	28.50	4.06	-				
PK	2.4044G	113.58	Inf	-Inf	81.05	3	Vertical	2	2.21	-	28.46	4.07	-				
AV	2.405G	109.96	Inf	-Inf	77.44	3	Vertical	2	2.21	-	28.45	4.07	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

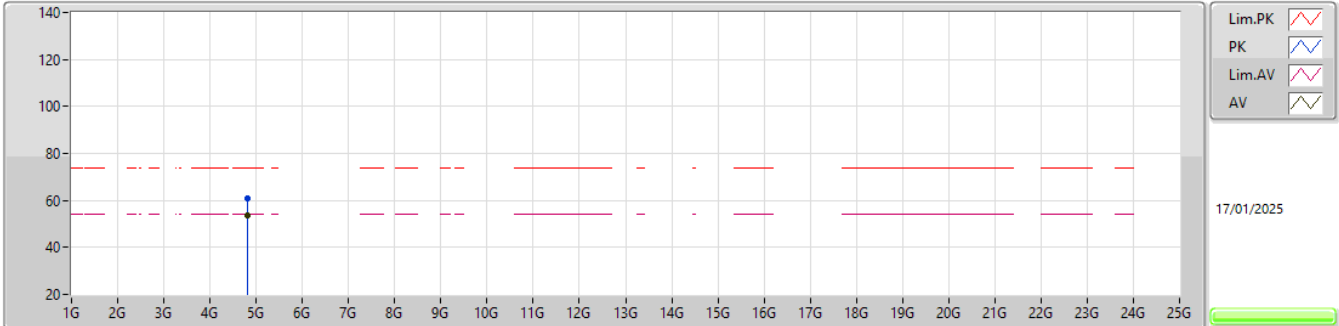


EUT_Y_1TX
Setting 14
02-R-Y-1
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3874G	61.53	74.00	-12.47	29.00	3	Horizontal	345	1.12	-	28.47	4.06	-				
AV	2.389G	49.05	54.00	-4.95	16.50	3	Horizontal	345	1.12	-	28.49	4.06	-				
PK	2.4044G	109.32	Inf	-Inf	76.79	3	Horizontal	345	1.12	-	28.46	4.07	-				
AV	2.405G	105.66	Inf	-Inf	73.14	3	Horizontal	345	1.12	-	28.45	4.07	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

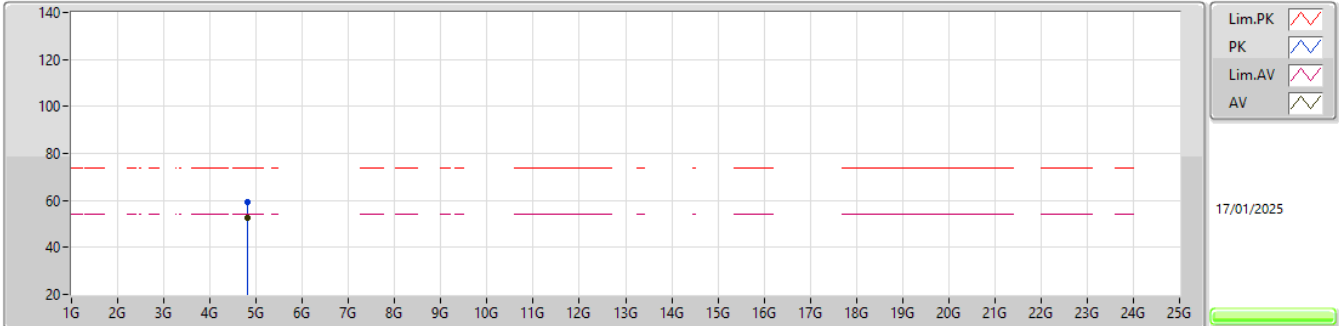


EUT_Y_1TX
Setting 11
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.81092G	60.66	74.00	-13.34	51.76	3	Vertical	32	1.02	-	33.12	6.78	31.00			
AV	4.81104G	53.83	54.00	-0.17	44.93	3	Vertical	32	1.02	-	33.12	6.78	31.00			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

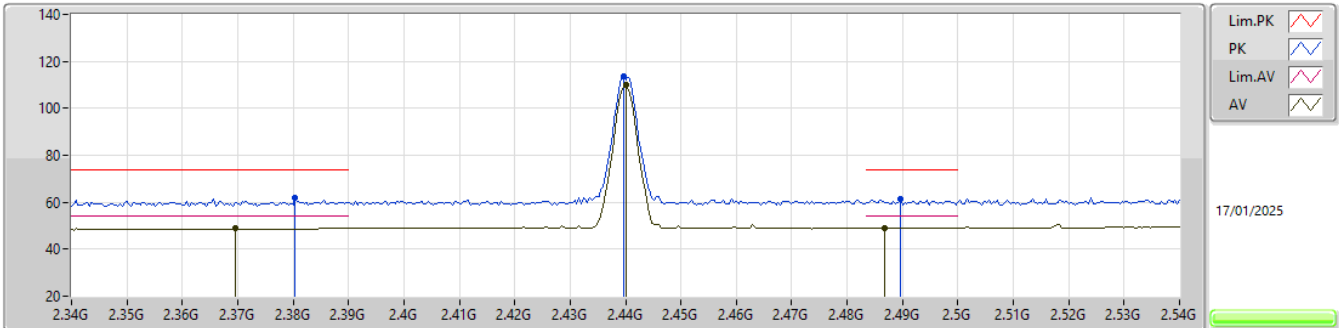


EUT_Y_1TX
Setting 11
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.81092G	59.50	74.00	-14.50	50.60	3	Horizontal	350	2.62	-	33.12	6.78	31.00			
AV	4.811G	52.57	54.00	-1.43	43.67	3	Horizontal	350	2.62	-	33.12	6.78	31.00			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

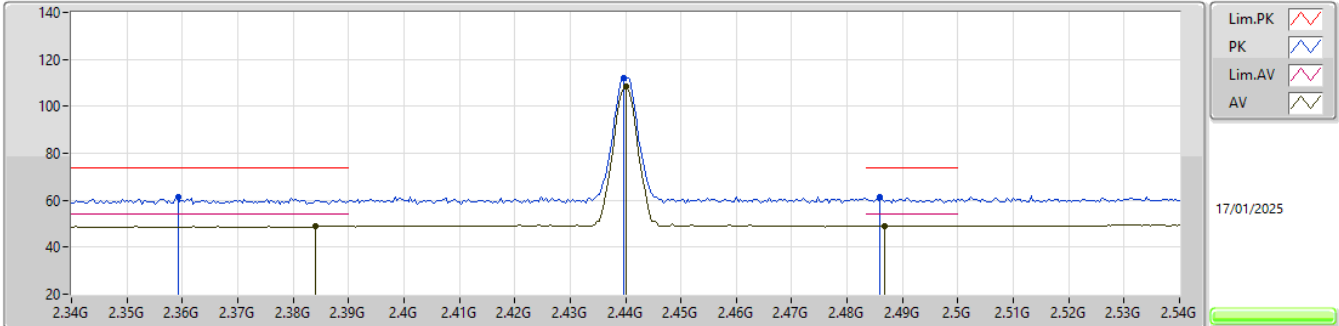


EUT_Y_1TX
Setting 14
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3804G	61.77	74.00	-12.23	29.31	3	Vertical	360	2.43	-	28.40	4.06	-				
AV	2.3696G	48.90	54.00	-5.10	16.45	3	Vertical	360	2.43	-	28.40	4.05	-				
PK	2.4396G	113.37	Inf	-Inf	80.77	3	Vertical	360	2.43	-	28.50	4.10	-				
AV	2.44G	109.77	Inf	-Inf	77.17	3	Vertical	360	2.43	-	28.50	4.10	-				
PK	2.4896G	61.18	74.00	-12.82	28.44	3	Vertical	360	2.43	-	28.60	4.14	-				
AV	2.4868G	49.03	54.00	-4.97	16.29	3	Vertical	360	2.43	-	28.60	4.14	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

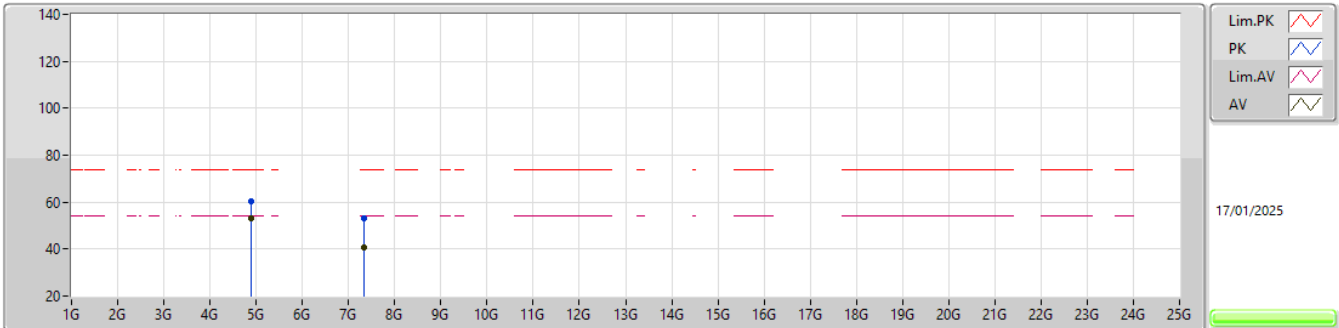


EUT_Y_1TX
Setting 14
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3592G	61.49	74.00	-12.51	29.06	3	Horizontal	347	2.71	-	28.39	4.04	-				
AV	2.384G	48.99	54.00	-5.01	16.49	3	Horizontal	347	2.71	-	28.44	4.06	-				
PK	2.4396G	112.00	Inf	-Inf	79.40	3	Horizontal	347	2.71	-	28.50	4.10	-				
AV	2.44G	108.47	Inf	-Inf	75.87	3	Horizontal	347	2.71	-	28.50	4.10	-				
PK	2.486G	61.25	74.00	-12.75	28.52	3	Horizontal	347	2.71	-	28.60	4.13	-				
AV	2.4868G	49.03	54.00	-4.97	16.29	3	Horizontal	347	2.71	-	28.60	4.14	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

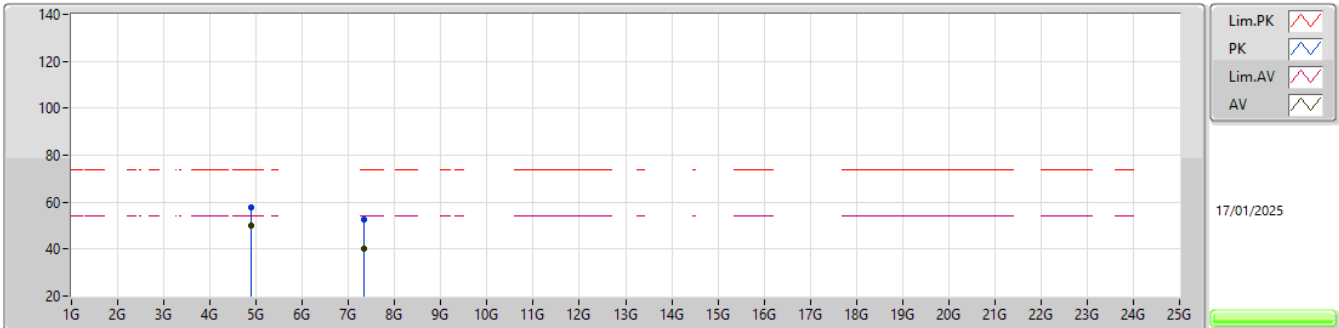


EUT_Y_1TX
Setting 10
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.88088G	60.34	74.00	-13.66	51.27	3	Vertical	28	1.79	-	33.26	6.81	31.00				
AV	4.88092G	53.22	54.00	-0.78	44.15	3	Vertical	28	1.79	-	33.26	6.81	31.00				
PK	7.3288G	53.33	74.00	-20.67	38.87	3	Vertical	242	1.66	-	36.52	9.37	31.43				
AV	7.3292G	40.50	54.00	-13.50	26.04	3	Vertical	242	1.66	-	36.52	9.37	31.43				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

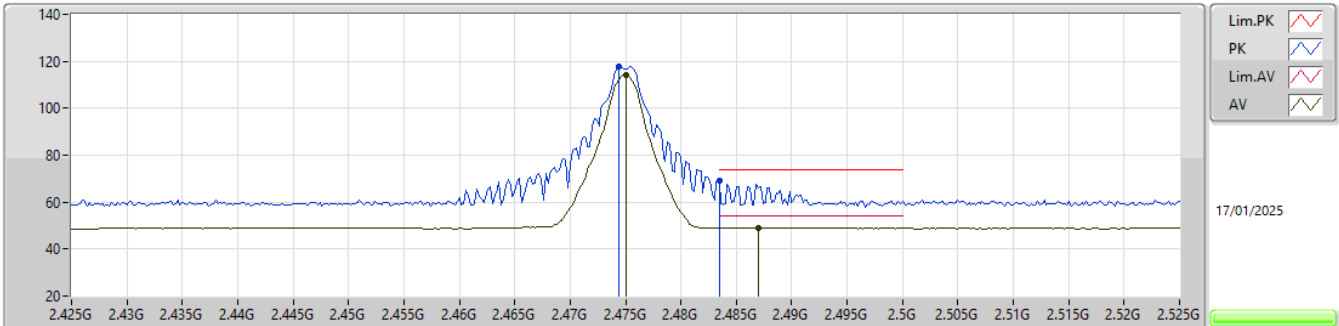


EUT_Y_1TX
Setting 10
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.87892G	57.66	74.00	-16.34	48.59	3	Horizontal	331	1.80	-	33.26	6.81	31.00				
AV	4.88092G	49.98	54.00	-4.02	40.91	3	Horizontal	331	1.80	-	33.26	6.81	31.00				
PK	7.32536G	52.73	74.00	-21.27	38.29	3	Horizontal	206	2.58	-	36.50	9.37	31.43				
AV	7.32896G	40.26	54.00	-13.74	25.80	3	Horizontal	206	2.58	-	36.52	9.37	31.43				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

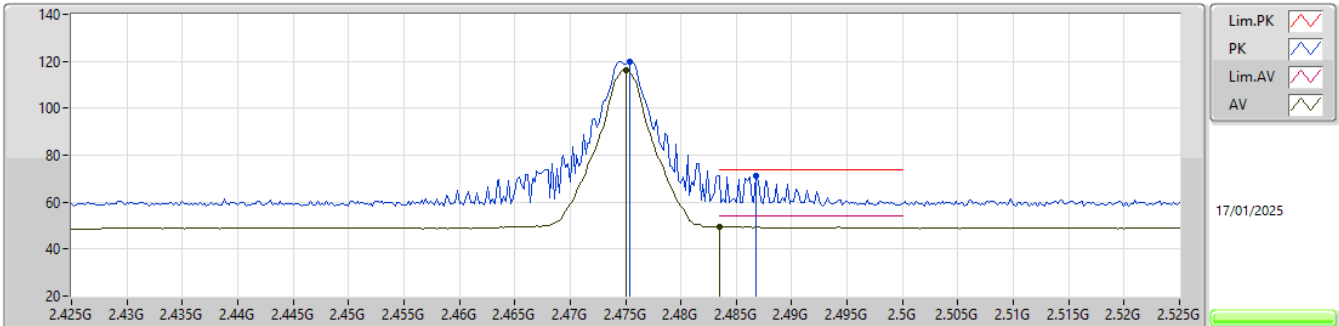


EUT Y_1TX
Setting 22
02-R-G-5
PA mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.4744G	117.72	Inf	-Inf	85.05	3	Vertical	6	2.34	-	28.54	4.13	-				
AV	2.475G	114.23	Inf	-Inf	81.55	3	Vertical	6	2.34	-	28.55	4.13	-				
PK	2.4835G	68.88	74.00	-5.12	36.15	3	Vertical	6	2.34	-	28.60	4.13	-				
AV	2.487G	49.19	54.00	-4.81	16.45	3	Vertical	6	2.34	-	28.60	4.14	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

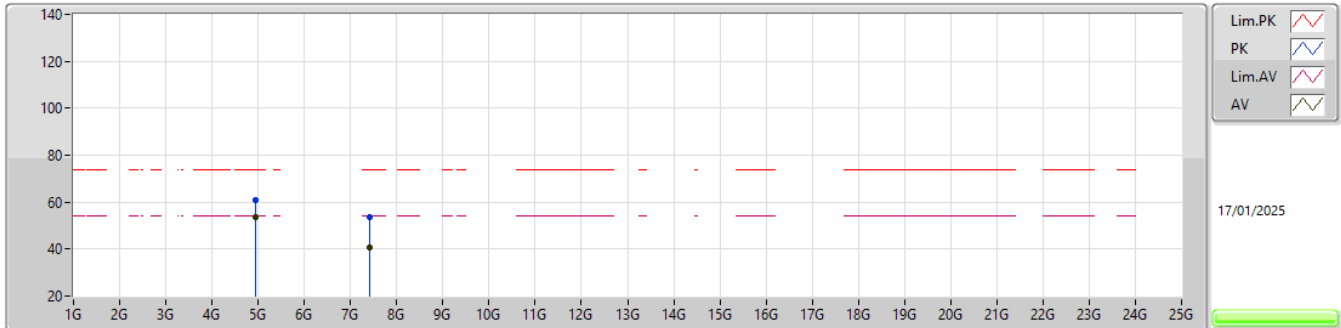


EUT_Y_1TX
Setting 22
02-R-G-5
PA mode

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	2.4754G	119.82	Inf	-Inf	87.14	3	Horizontal	342	2.68	-	28.55	4.13	-				
AV	2.475G	116.42	Inf	-Inf	83.74	3	Horizontal	342	2.68	-	28.55	4.13	-				
PK	2.4868G	71.36	74.00	-2.64	38.62	3	Horizontal	342	2.68	-	28.60	4.14	-				
AV	2.4835G	49.74	54.00	-4.26	17.01	3	Horizontal	342	2.68	-	28.60	4.13	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

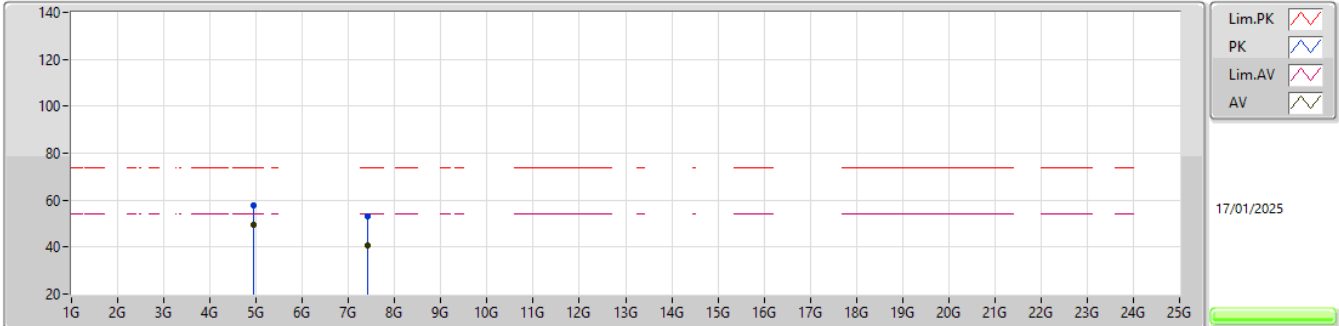


EUT_Y_1TX
Setting 10
02-R-G-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.94929G	60.95	74.00	-13.05	51.71	3	Vertical	163	2.05	-	33.40	6.85	31.01				
AV	4.9502G	53.40	54.00	-0.60	44.16	3	Vertical	163	2.05	-	33.40	6.85	31.01				
PK	7.4236G	53.75	74.00	-20.25	39.22	3	Vertical	355	2.46	-	36.60	9.36	31.43				
AV	7.42311G	40.86	54.00	-13.14	26.33	3	Vertical	355	2.46	-	36.60	9.36	31.43				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

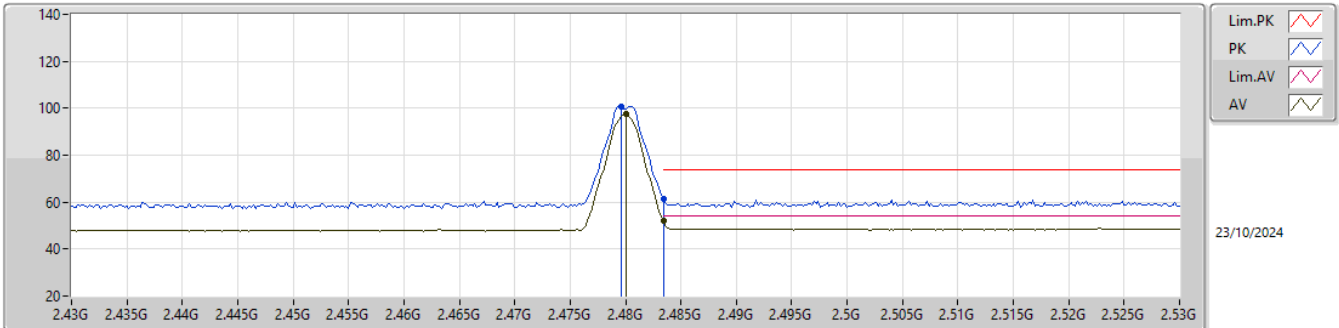


EUT_Y_1TX
Setting 10
02-R-G-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.94837G	57.67	74.00	-16.33	48.43	3	Horizontal	18	1.79	-	33.40	6.85	31.01			
AV	4.94807G	49.54	54.00	-4.46	40.30	3	Horizontal	18	1.79	-	33.40	6.85	31.01			
PK	7.42503G	52.97	74.00	-21.03	38.44	3	Horizontal	32	2.03	-	36.60	9.36	31.43			
AV	7.42356G	40.83	54.00	-13.17	26.30	3	Horizontal	32	2.03	-	36.60	9.36	31.43			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX

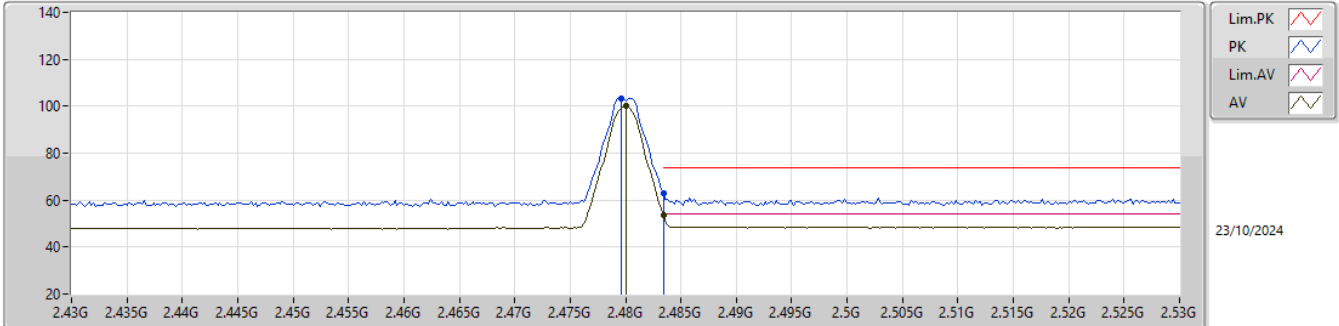


EUT_Y_1TX
Setting 4 dBm
05-P-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.4796G	100.84	Inf	-Inf	68.86	3	Vertical	0	1.80	-	27.90	4.08	-				
AV	2.48G	97.33	Inf	-Inf	65.35	3	Vertical	0	1.80	-	27.90	4.08	-				
PK	2.4835G	61.48	74.00	-12.52	29.47	3	Vertical	0	1.80	-	27.93	4.08	-				
AV	2.4835G	51.83	54.00	-2.17	19.82	3	Vertical	0	1.80	-	27.93	4.08	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX

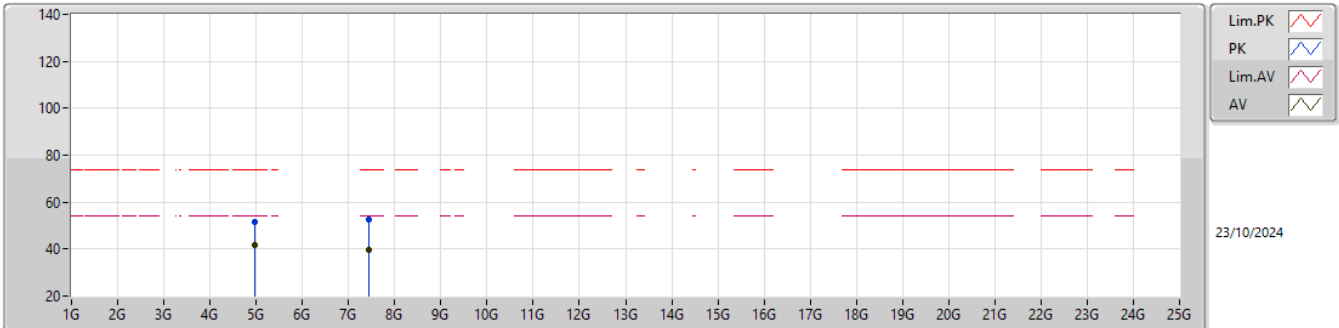


EUT Y_1TX
Setting 4 dBm
05-P-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.4796G	103.47	Inf	-Inf	71.49	3	Horizontal	354	2.30	-	27.90	4.08	-				
AV	2.48G	100.01	Inf	-Inf	68.03	3	Horizontal	354	2.30	-	27.90	4.08	-				
PK	2.4835G	62.77	74.00	-11.23	30.76	3	Horizontal	354	2.30	-	27.93	4.08	-				
AV	2.4835G	53.73	54.00	-0.27	21.72	3	Horizontal	354	2.30	-	27.93	4.08	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX

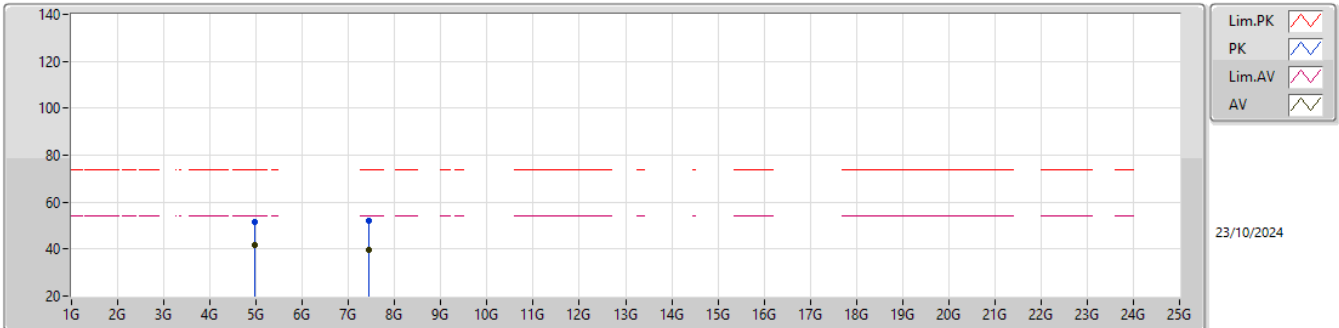


EUT_Y_1TX
Setting 4 dBm
05-P-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.95896G	51.42	74.00	-22.58	45.81	3	Vertical	27	1.80	-	33.22	7.96	35.57				
AV	4.96093G	41.92	54.00	-12.08	36.31	3	Vertical	27	1.80	-	33.22	7.96	35.57				
PK	7.44074G	52.46	74.00	-21.54	40.99	3	Vertical	160	1.16	-	36.52	9.49	34.54				
AV	7.44053G	39.78	54.00	-14.22	28.31	3	Vertical	160	1.16	-	36.52	9.49	34.54				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2480MHz_TX



EUT_Y_1TX
Setting 4 dBm
05-P-G-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.9589G	51.71	74.00	-22.29	46.10	3	Horizontal	355	3.00	-	33.22	7.96	35.57			
AV	4.96094G	41.72	54.00	-12.28	36.11	3	Horizontal	355	3.00	-	33.22	7.96	35.57			
PK	7.43564G	52.11	74.00	-21.89	40.64	3	Horizontal	62	2.69	-	36.53	9.49	34.55			
AV	7.43076G	39.85	54.00	-14.15	28.39	3	Horizontal	62	2.69	-	36.54	9.48	34.56			



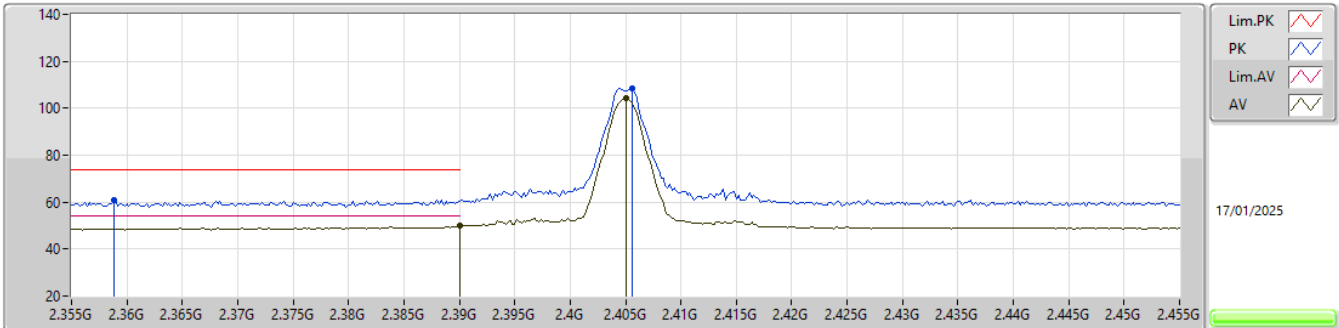
Test Mode: Mode 3

Summary

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.15.4(Zigbee&Thread)_1TX	Pass	AV	2.4835G	53.73	54.00	-0.27	3	Horizontal	354	2.30	-

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

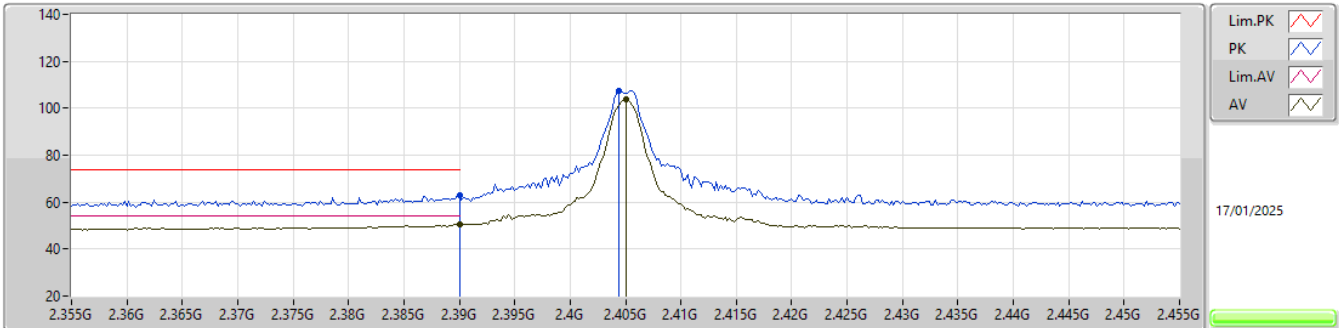


EUT Y_1TX
Setting 13
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.3588G	61.00	74.00	-13.00	28.57	3	Vertical	332	2.98	-	28.39	4.04	-			
AV	2.39G	49.76	54.00	-4.24	17.20	3	Vertical	332	2.98	-	28.50	4.06	-			
PK	2.4056G	108.35	Inf	-Inf	75.84	3	Vertical	332	2.98	-	28.44	4.07	-			
AV	2.405G	104.45	Inf	-Inf	71.93	3	Vertical	332	2.98	-	28.45	4.07	-			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

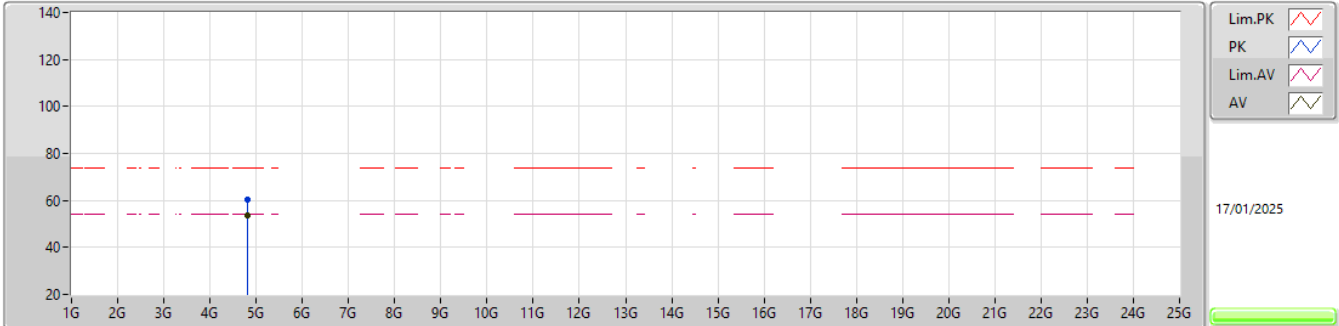


EUT Y_1TX
Setting 13
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.39G	63.10	74.00	-10.90	30.54	3	Horizontal	58	2.37	-	28.50	4.06	-				
AV	2.39G	50.51	54.00	-3.49	17.95	3	Horizontal	58	2.37	-	28.50	4.06	-				
PK	2.4044G	107.33	Inf	-Inf	74.80	3	Horizontal	58	2.37	-	28.46	4.07	-				
AV	2.405G	103.64	Inf	-Inf	71.12	3	Horizontal	58	2.37	-	28.45	4.07	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

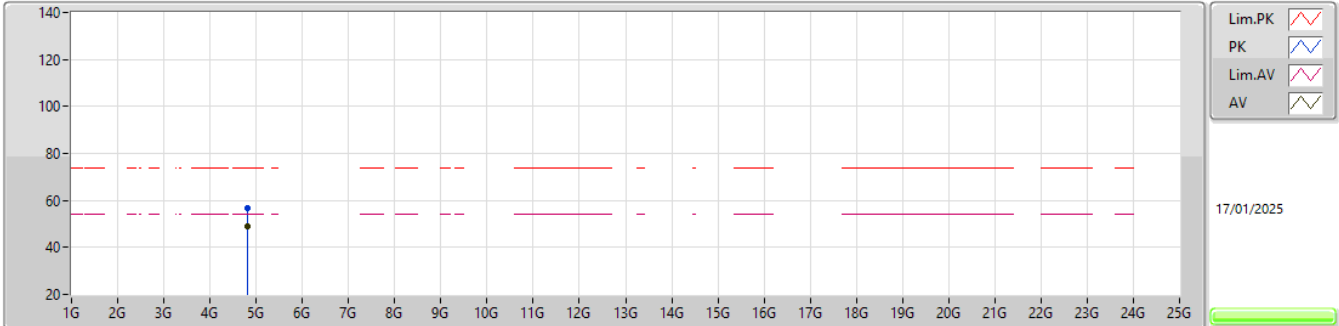


EUT V_1TX
Setting 13
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.80896G	60.46	74.00	-13.54	51.57	3	Vertical	349	2.05	-	33.12	6.77	31.00			
AV	4.81088G	53.55	54.00	-0.45	44.65	3	Vertical	349	2.05	-	33.12	6.78	31.00			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2405MHz_TX

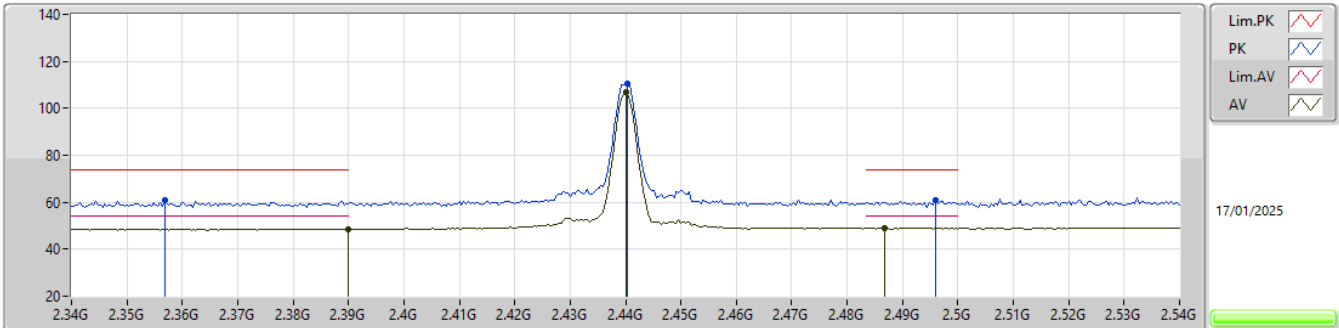


EUT_V_1TX
Setting 13
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.81092G	56.63	74.00	-17.37	47.73	3	Horizontal	300	1.85	-	33.12	6.78	31.00			
AV	4.811G	49.01	54.00	-4.99	40.11	3	Horizontal	300	1.85	-	33.12	6.78	31.00			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

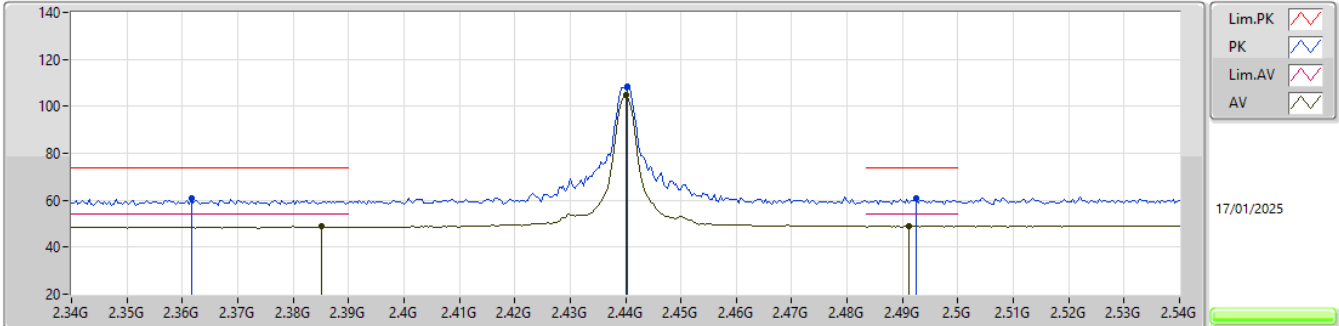


EUT_Y_1TX
Setting 14
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3568G	60.84	74.00	-13.16	28.43	3	Vertical	333	2.91	-	28.37	4.04	-				
AV	2.39G	48.63	54.00	-5.37	16.07	3	Vertical	333	2.91	-	28.50	4.06	-				
PK	2.4404G	110.28	Inf	-Inf	77.68	3	Vertical	333	2.91	-	28.50	4.10	-				
AV	2.44G	106.67	Inf	-Inf	74.07	3	Vertical	333	2.91	-	28.50	4.10	-				
PK	2.496G	60.75	74.00	-13.25	28.01	3	Vertical	333	2.91	-	28.60	4.14	-				
AV	2.4868G	48.90	54.00	-5.10	16.16	3	Vertical	333	2.91	-	28.60	4.14	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

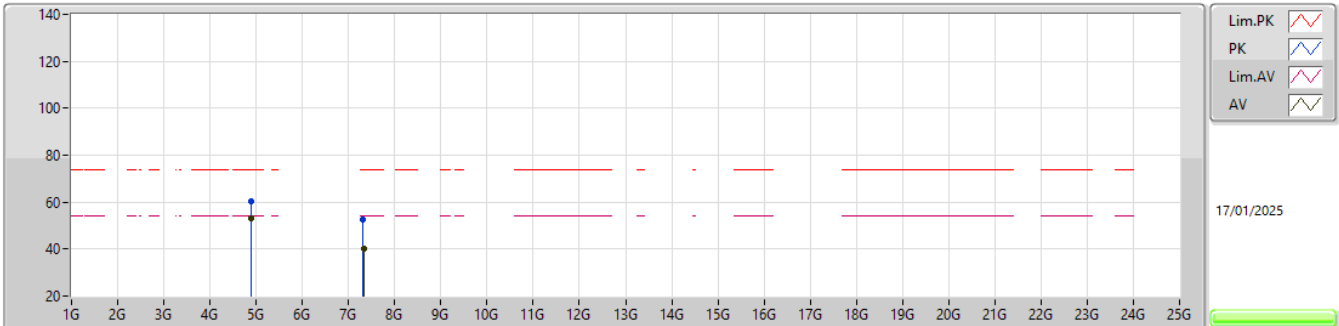


EUT_Y_1TX
Setting 14
02-R-G-5
Bypass mode

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	2.3616G	60.81	74.00	-13.19	28.37	3	Horizontal	46	1.96	-	28.40	4.04	-					
AV	2.3852G	48.87	54.00	-5.13	16.36	3	Horizontal	46	1.96	-	28.45	4.06	-					
PK	2.4404G	108.21	Inf	-Inf	75.61	3	Horizontal	46	1.96	-	28.50	4.10	-					
AV	2.44G	104.67	Inf	-Inf	72.07	3	Horizontal	46	1.96	-	28.50	4.10	-					
PK	2.4924G	60.90	74.00	-13.10	28.16	3	Horizontal	46	1.96	-	28.60	4.14	-					
AV	2.4912G	49.19	54.00	-4.81	16.45	3	Horizontal	46	1.96	-	28.60	4.14	-					

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

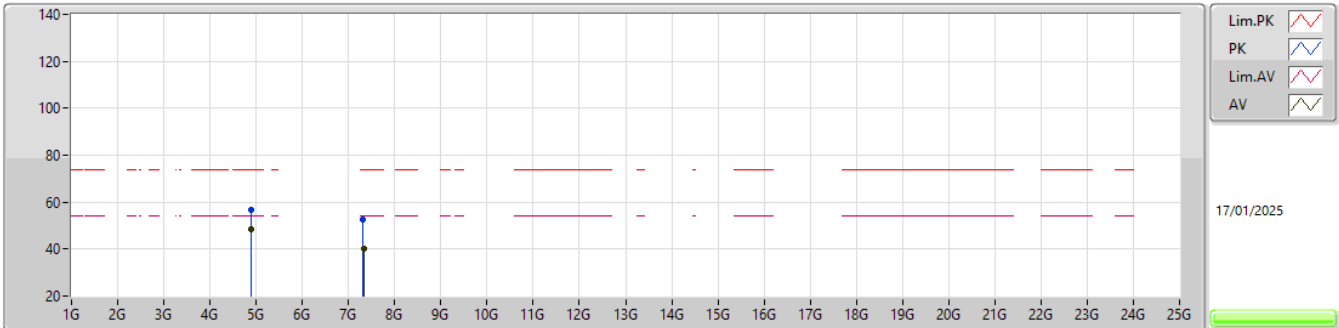


EUT_Y_1TX
Setting 14
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.881G	60.52	74.00	-13.48	51.45	3	Vertical	15	1.86	-	33.26	6.81	31.00				
AV	4.88094G	53.34	54.00	-0.66	44.27	3	Vertical	15	1.86	-	33.26	6.81	31.00				
PK	7.32066G	52.74	74.00	-21.26	38.32	3	Vertical	190	1.89	-	36.48	9.37	31.43				
AV	7.32308G	40.28	54.00	-13.72	25.85	3	Vertical	190	1.89	-	36.49	9.37	31.43				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2440MHz_TX

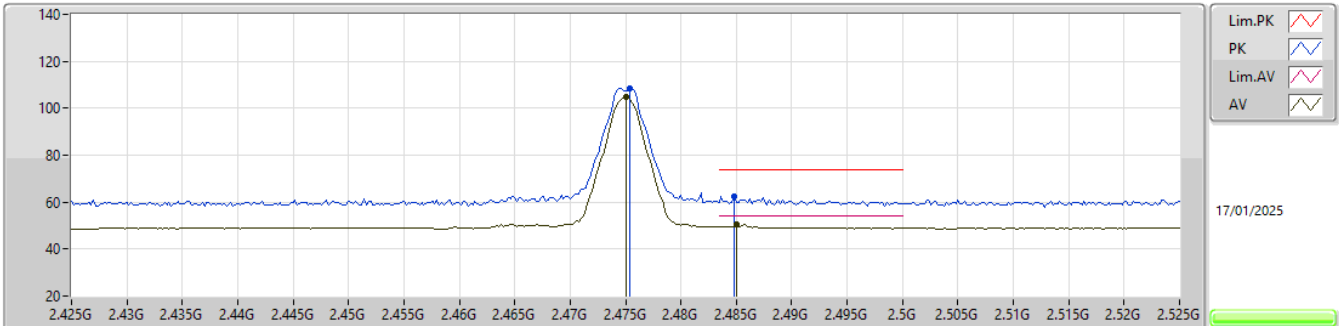


EUT Y_1TX
Setting 14
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.88084G	56.53	74.00	-17.47	47.46	3	Horizontal	306	1.80	-	33.26	6.81	31.00				
AV	4.88092G	48.51	54.00	-5.49	39.44	3	Horizontal	306	1.80	-	33.26	6.81	31.00				
PK	7.32086G	52.46	74.00	-21.54	38.04	3	Horizontal	326	2.79	-	36.48	9.37	31.43				
AV	7.32276G	40.20	54.00	-13.80	25.77	3	Horizontal	326	2.79	-	36.49	9.37	31.43				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

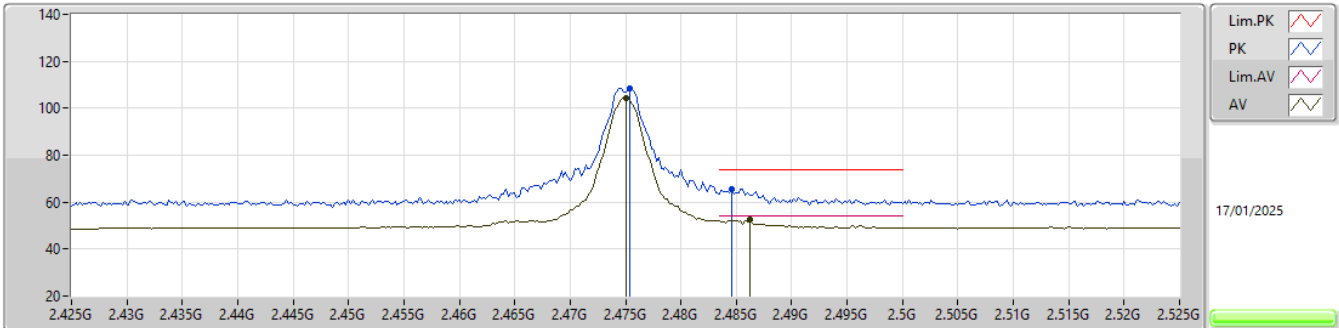


EUT_Y_1TX
Setting 14
02-R-G-5
Bypass mode

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.4754G	108.37	Inf	-Inf	75.69	3	Vertical	322	2.37	-	28.55	4.13	-			
AV	2.475G	104.77	Inf	-Inf	72.09	3	Vertical	322	2.37	-	28.55	4.13	-			
PK	2.4848G	62.34	74.00	-11.66	29.61	3	Vertical	322	2.37	-	28.60	4.13	-			
AV	2.485G	50.27	54.00	-3.73	17.54	3	Vertical	322	2.37	-	28.60	4.13	-			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)_1TX

2475MHz_TX

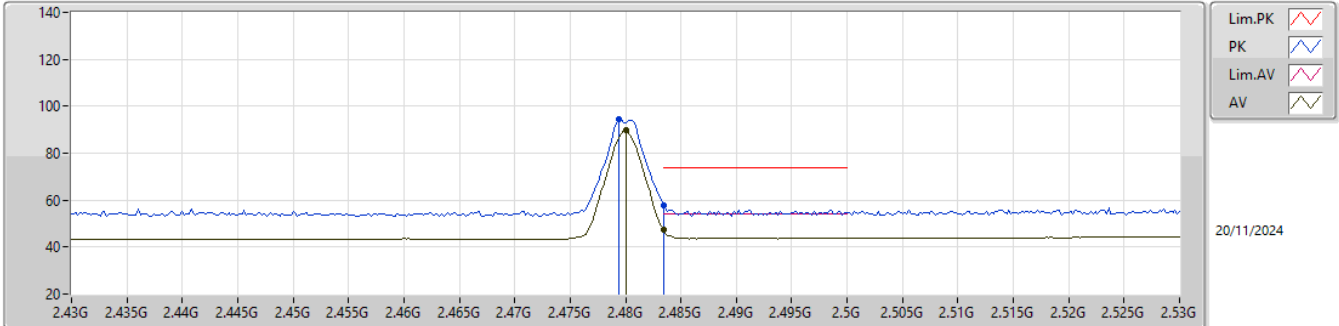


EUT_Y_1TX
Setting 14
02-R-G-5
Bypass mode

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	2.4754G	108.30	Inf	-Inf	75.62	3	Horizontal	56	1.01	-	28.55	4.13	-				
AV	2.475G	104.43	Inf	-Inf	71.75	3	Horizontal	56	1.01	-	28.55	4.13	-				
PK	2.4846G	65.53	74.00	-8.47	32.80	3	Horizontal	56	1.01	-	28.60	4.13	-				
AV	2.4862G	52.51	54.00	-1.49	19.78	3	Horizontal	56	1.01	-	28.60	4.13	-				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)

2480MHz_TX

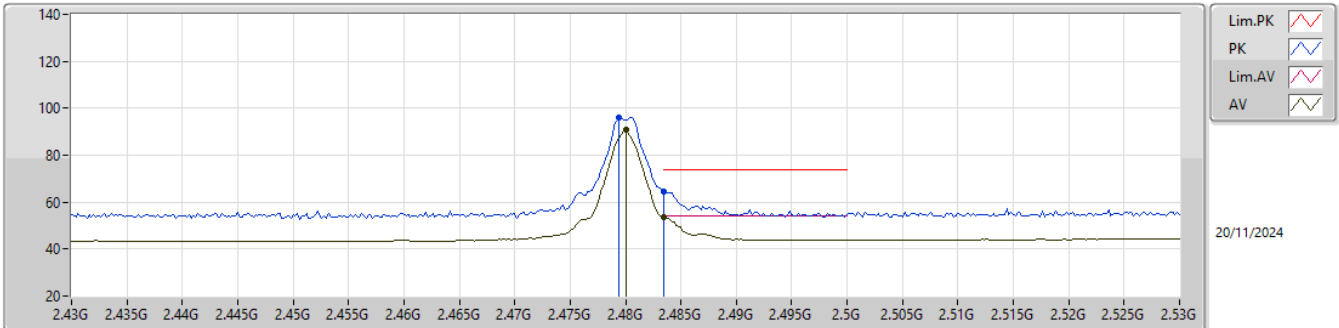


EUT_Y_1TX
Setting 4
01-C-G-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.4794G	94.26	Inf	-Inf	62.66	3	Vertical	314	1.80	-	27.79	3.81	-			
AV	2.48G	89.90	Inf	-Inf	58.29	3	Vertical	314	1.80	-	27.80	3.81	-			
PK	2.4835G	57.82	74.00	-16.18	26.17	3	Vertical	314	1.80	-	27.84	3.81	-			
AV	2.4835G	47.18	54.00	-6.82	15.53	3	Vertical	314	1.80	-	27.84	3.81	-			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)

2480MHz_TX

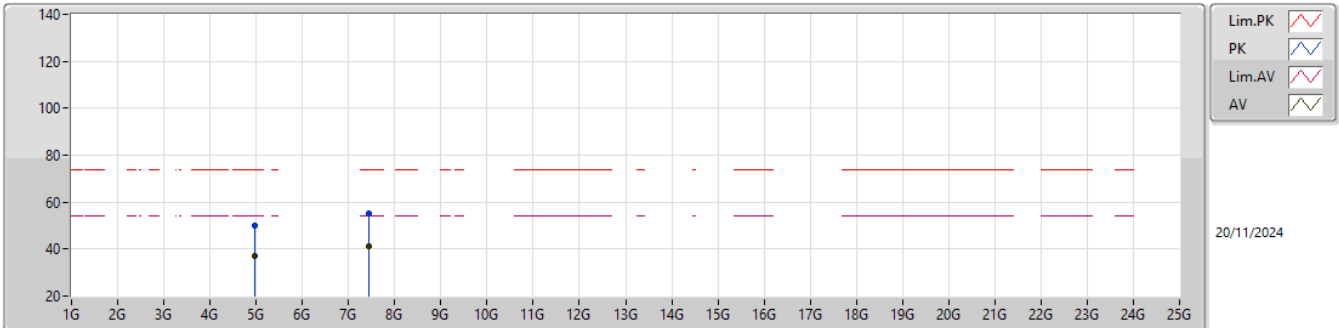


EUT_Y_1TX
Setting 4
01-C-G-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.4794G	96.03	Inf	-Inf	64.43	3	Horizontal	61	1.80	-	27.79	3.81	-			
AV	2.48G	90.70	Inf	-Inf	59.09	3	Horizontal	61	1.80	-	27.80	3.81	-			
PK	2.4835G	64.66	74.00	-9.34	33.01	3	Horizontal	61	1.80	-	27.84	3.81	-			
AV	2.4835G	53.72	54.00	-0.28	22.07	3	Horizontal	61	1.80	-	27.84	3.81	-			

2.4-2.4835GHz_802.15.4(Zigbee&Thread)

2480MHz_TX

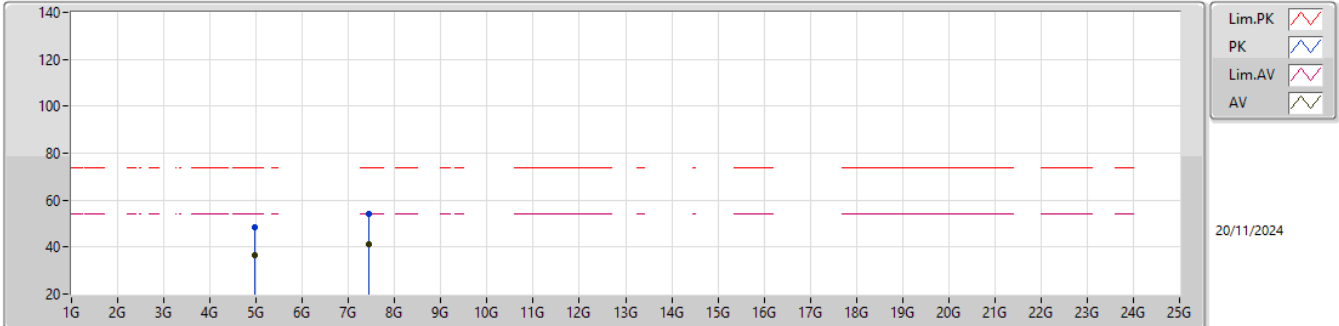


EUT_Y_1TX
Setting 4
01-C-G-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.95882G	50.00	74.00	-24.00	42.99	3	Vertical	352	1.80	-	32.98	6.61	32.58				
AV	4.96094G	37.28	54.00	-16.72	30.26	3	Vertical	352	1.80	-	32.98	6.62	32.58				
PK	7.44422G	54.92	74.00	-19.08	41.93	3	Vertical	21	1.80	-	37.51	8.06	32.58				
AV	7.44482G	41.20	54.00	-12.80	28.21	3	Vertical	21	1.80	-	37.51	8.06	32.58				

2.4-2.4835GHz_802.15.4(Zigbee&Thread)

2480MHz_TX



EUT_Y_1TX
Setting 4
01-C-G-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.95922G	48.64	74.00	-25.36	41.63	3	Horizontal	312	2.75	-	32.98	6.61	32.58			
AV	4.9609G	36.30	54.00	-17.70	29.28	3	Horizontal	312	2.75	-	32.98	6.62	32.58			
PK	7.4442G	54.35	74.00	-19.65	41.36	3	Horizontal	262	1.80	-	37.51	8.06	32.58			
AV	7.45224G	41.35	54.00	-12.65	28.36	3	Horizontal	262	1.80	-	37.50	8.07	32.58			