



RADIO TEST REPORT

FCC ID : 2AHBN-AP17
Equipment : Wi-Fi 7 Wireless Access Point
Brand Name : Juniper
Model Name : AP17
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. 21, 2025, and testing was started from Oct. 21, 2025 and completed on Jan. 03, 2026. 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 C63.10-2020 and shown compliance with the applicable technical standards.

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

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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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:

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

Reviewed by: Sam Chen**Report Producer: Muse Chan**



1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4G	802.15.4	3	1

Note:

- ♦ 802.15.4 uses a O-QPSK (250kbps) modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ The device supports Zigbee and Thread protocols over an IEEE 802.15.4 radio operating in the 2.4 GHz band using O-QPSK modulation.
- ♦ Since Zigbee and Thread share identical 802.15.4 PHY/RF characteristics, testing was performed in IEEE 802.15.4 mode to represent both Zigbee and Thread operation.

1.1.2 Antenna Information

Ant.	RF Port	Brand Name	Model Name	Ant. Type	Connector	Gain (dBi)	Modes of Operation
1	1	Juniper	AP17	PIFA	I-PEX	Note 1	WLAN 2.4GHz (Radio 2)
2	2	Juniper	AP17	PIFA	I-PEX		WLAN 5GHz UNII 1-3 (Radio 1)
3	1	Juniper	AP17	PIFA	I-PEX		WLAN 6GHz UNII 5-8 (Radio 0) IEEE 802.15.4 (Radio 4)
4	2	Juniper	AP17	PIFA	I-PEX		WLAN 6GHz UNII 5-8 (Radio 0) Bluetooth (Radio 4)
5	1	Juniper	AP17	PIFA	I-PEX		WLAN 2.4GHz WLAN 5GHz UNII 1-3 WLAN 6GHz UNII 5-8 (Radio 3)



Note 1:

Ant.	Antenna Gain (dBi)								
	WLAN 2.4GHz (Radio 2)		WLAN 5GHz UNII 1-3 (Radio 1)						
	2.45GHz		5.2GHz	5.3GHz	5.6GHz	5.785GHz			
1	2.20		3.25	2.86	3.52	3.57			
2	2.46		3.43	3.43	3.09	3.11			
Ant.	WLAN 6GHz UNII 5-8 (Radio 0)				Bluetooth (Radio 4)		IEEE 802.15.4 (Radio 4)		
	6.175GHz	6.475GHz	6.695GHz	6.995GHz					
3	4.46	3.21	4.02	4.34	-		3.8		
4	5.41	5.51	4.75	4.05	3.4		-		
Ant.	Scanning radio (Radio 3)								
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	6.175GHz	6.475GHz	6.695GHz	6.995GHz
5	2.75	2.98	2.89	3.07	2.33	2.96	4.13	2.21	4.07

Directional Gain (dBi)									
Item	WLAN 2.4GHz (Radio 2)	WLAN 5GHz UNII 1-3 (Radio 1)				WLAN 6GHz UNII 5-8 (Radio 0)			
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	6.175GHz	6.475GHz	6.695GHz	6.995GHz
2T1S	2.67	4.49	5.19	5.54	5.67	7.13	7.06	7.32	6.06
2T2S	2.46	3.43	3.43	3.52	3.57	5.41	5.51	4.75	4.34

Note 2: The above information (excepting Ant. 1-5 antenna (WLAN) gain and directional gain) was declared by Manufacturer.

Note 3: Radio 0~2: Maximum Directional Gain following KDB662911 D03.

Note 4: **For Radio 0:**

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 1:

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

For Radio 2:

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

For Radio 3 (Scanning radio):

2.4GHz IEEE 802.11b/g mode (1TX/1RX)

5GHz (UNII 1-3) IEEE 802.11a mode (1TX/1RX)

6GHz (UNII 5-8) IEEE 802.11a mode (1TX/1RX)

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

For Radio 4:

Bluetooth and IEEE 802.15.4 mode (1TX/1RX)

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

**1.1.3 Mode Test Duty Cycle**

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
IEEE 802.15.4	0.933	0.3	4.24m	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	For Radiated Emission Co-location: DOS [ver 6.1.7601] For others: accessMTool(version_3_3_0_8)			

Note: The above information was declared by manufacturer.

1.1.5 Table for Radio Function

Function Radio	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Bluetooth	IEEE 802.15.4
0	-	-	V	-	-
1	-	V	-	-	-
2	V	-	-	-	-
3 (Scanning radio)	V	V	V	-	-
4	-	-	-	V	V

Note1: For WLAN 2.4GHz: The Radio 2 and Radio 3 (Scanning radio) can't operate at the same frequency simultaneously.

For WLAN 5GHz: The Radio1 and Radio 3 (Scanning radio) can't operate at the same frequency simultaneously.

For WLAN 6GHz: The Radio 0 and Radio 3 (Scanning radio) can't operate at the same frequency simultaneously.

Note 2: The above information was declared by manufacturer.



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15.247
- ♦ ANSI C63.10-2020

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

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

1.3 Testing Location Information

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	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	TH01-CB	Gino Huang	20.2~21.7 / 60~61	Nov. 13, 2025~ Nov. 24, 2025
Radiated below 1GHz	10CH01-CB	Richard Pai	23~24 / 56~57	Dec. 19, 2025
Radiated above 1GHz	03CH01-CB	Stim Sung	21.3~22.3 / 58~61	Oct. 21, 2025~ Nov. 23, 2025
Radiated co-location	03CH06-CB	George Fan	21.9~23.1 / 60~62	Jan. 02, 2026~ Jan. 03, 2026
AC Conduction	CO02-CB	Tim Chen	23~24 / 58~60	Dec. 23, 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)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.9 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.0 dB	Confidence levels of 95%
Bandwidth Measurement	1.0 %	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode
IEEE 802.15.4_1TX
2405MHz
2440MHz
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	WLAN: Normal Link / Bluetooth: CTX / 802.15.4: CTX or CRX
1	EUT_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 2.4GHz+R4: Bluetooth+PoE 1
2	EUT_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: Bluetooth+PoE 1
3	EUT_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 6GHz+R4: Bluetooth+PoE 1
Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~5 will follow this same test mode.	
4	EUT_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: IEEE 802.15.4(TX)+PoE 1
5	EUT_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: IEEE 802.15.4(RX)+PoE 1
For operating mode 2 is the worst case and it was record in this test report.	

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



The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	WLAN: Normal Link / Bluetooth: CTX / 802.15.4: CTX or CRX After evaluating, the worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.
1	EUT in Y axis_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 2.4GHz+R4: Bluetooth+PoE 1
2	EUT in Y axis_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: Bluetooth+PoE 1
3	EUT in Y axis_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 6GHz+R4: Bluetooth+PoE 1
Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~5 will follow this same test mode.	
4	EUT in Y axis_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: IEEE 802.15.4(TX)+PoE 1
5	EUT in Y axis_R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: IEEE 802.15.4(RX)+PoE 1
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX After evaluating, the worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.
1	EUT in Y axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement After evaluating, the worst case was found at Y axis, so it was selected to perform test and its test result was written in the report.
Operating Mode	WLAN&802.15.4: Normal Link / Bluetooth: CTX
1	EUT in Y axis_R0: 6GHz+R4: Bluetooth
2	EUT in Y axis_R1: 5GHz+R2: 2.4GHz
3	EUT in Y axis_R0: 6GHz+R4: IEEE 802.15.4
For operating mode 2 is the worst case and it was record in this test report.	
Refer to Appendix G for Radiated Emission Co-location.	



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 2.4GHz+R4: Bluetooth
2	R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: Bluetooth
3	R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 6GHz+R4: Bluetooth
4	R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 2.4GHz+R4: IEEE 802.15.4
5	R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 5GHz+R4: IEEE 802.15.4
6	R0: 6GHz+R1: 5GHz+R2: 2.4GHz+R3: 6GHz+R4: IEEE 802.15.4
Refer to Sporton Test Report No.: FA5N0608 for Co-location RF Exposure Evaluation.	

Note1: R means Radio.

Note2: The PoE is used for testing purpose; it will not be sold with the EUT

Power	Brand Name	Model Name
PoE 1	PHIHONG	POE60U-BTA
PoE 2	PHIHONG	POE60U-1BT-5

Note3: 6-pin connector port was used for debugging by the manufacturer only.

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Bracket*1



2.5 Support Equipment

For AC Conduction and Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE 1	PHIHONG	POE60U-BTA	N/A
B	10G ETH0/PD PC	ASUS	S300TA	TX2-RTL8821CE
C	PSE Device	Juniper	AP17	2AHBN-AP17
D	PSE Device NB	Lenovo	X260	N/A
E	ETH2 NB	Lenovo	X260	N/A
F	5G NB	Lenovo	X260	N/A
G	2.4G NB	Lenovo	X260	N/A
H	6G Device	Juniper	AP17	2AHBN-AP17
I	6G Device NB	Lenovo	X260	N/A

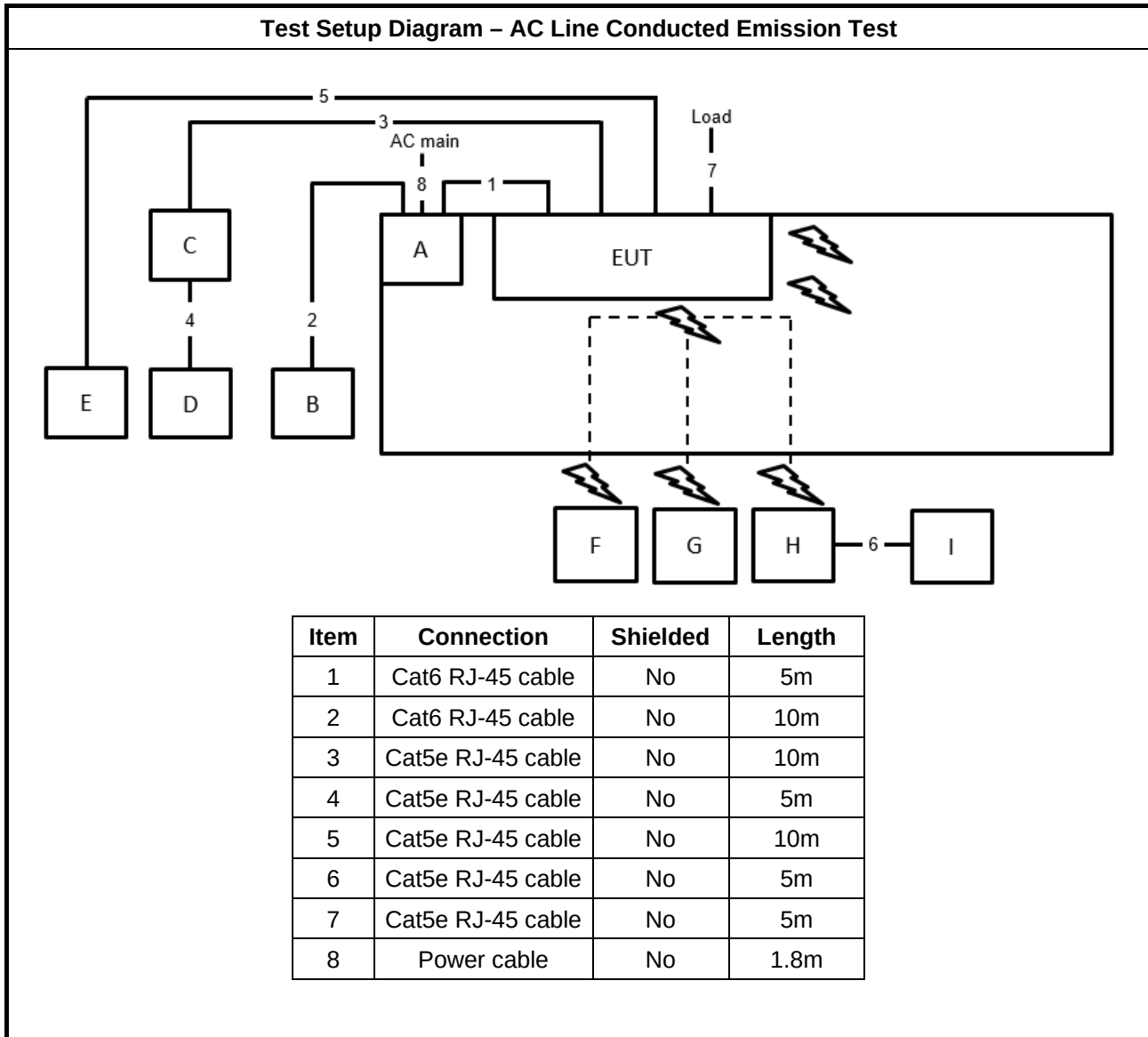
For Radiated (above 1GHz) and RF Conducted:

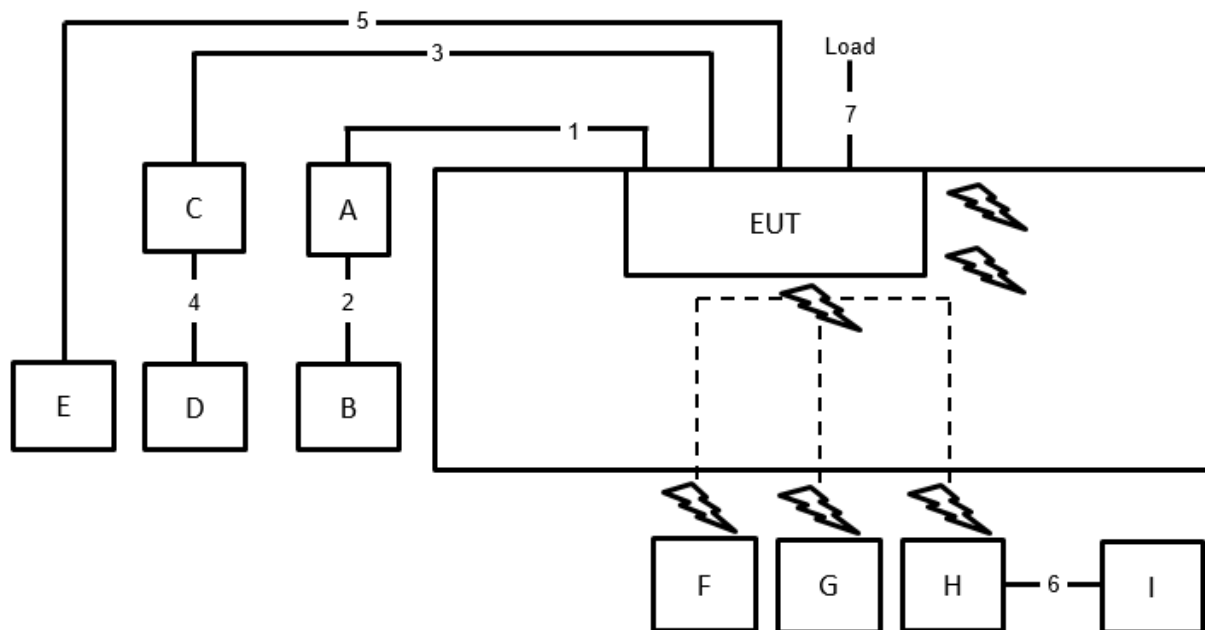
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	PoE 2	PHIHONG	POE60U-1BT-5	N/A

For Radiated (Emission Co-location):

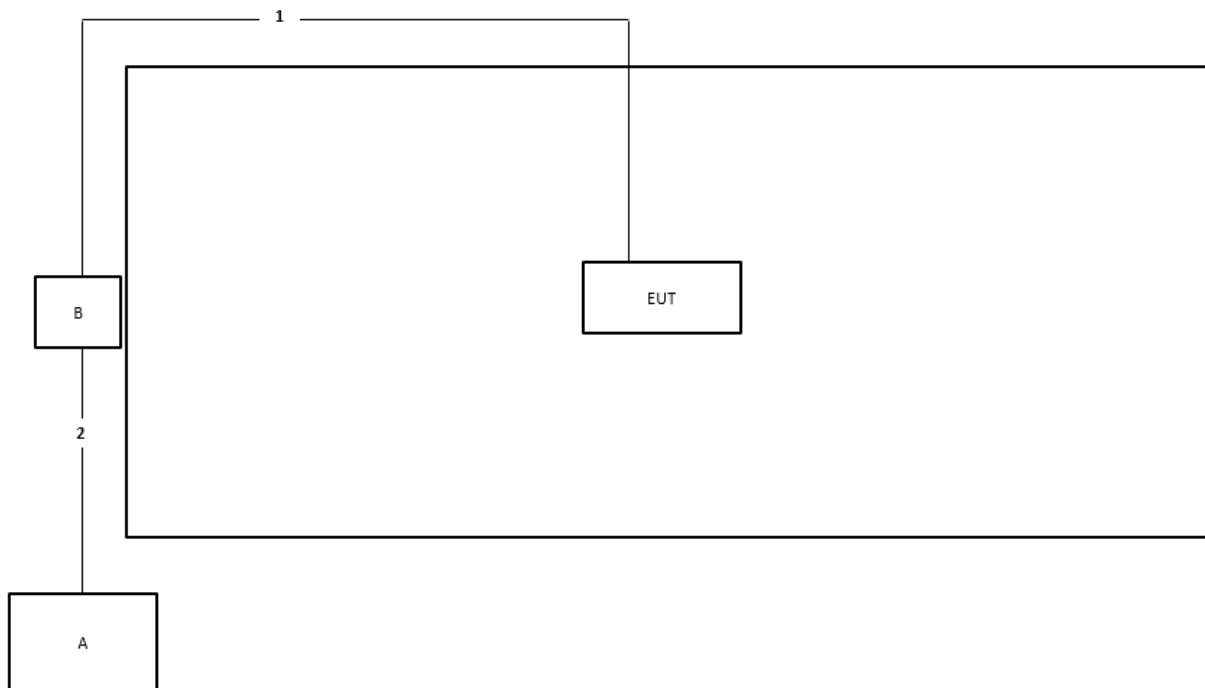
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	10G PC	ASUS	S300TA	N/A
B	PoE 2	PHIHONG	POE60U-1BT-5	N/A
C	PSE Device	Juniper	AP17	2AHBN-AP17
D	PSE Device NB	Lenovo	X260	N/A
E	ETH 2 NB	DELL	E4300	N/A
F	5G NB	DELL	E4300	N/A
G	2.4G NB	DELL	E4300	N/A

2.6 Test Setup Diagram

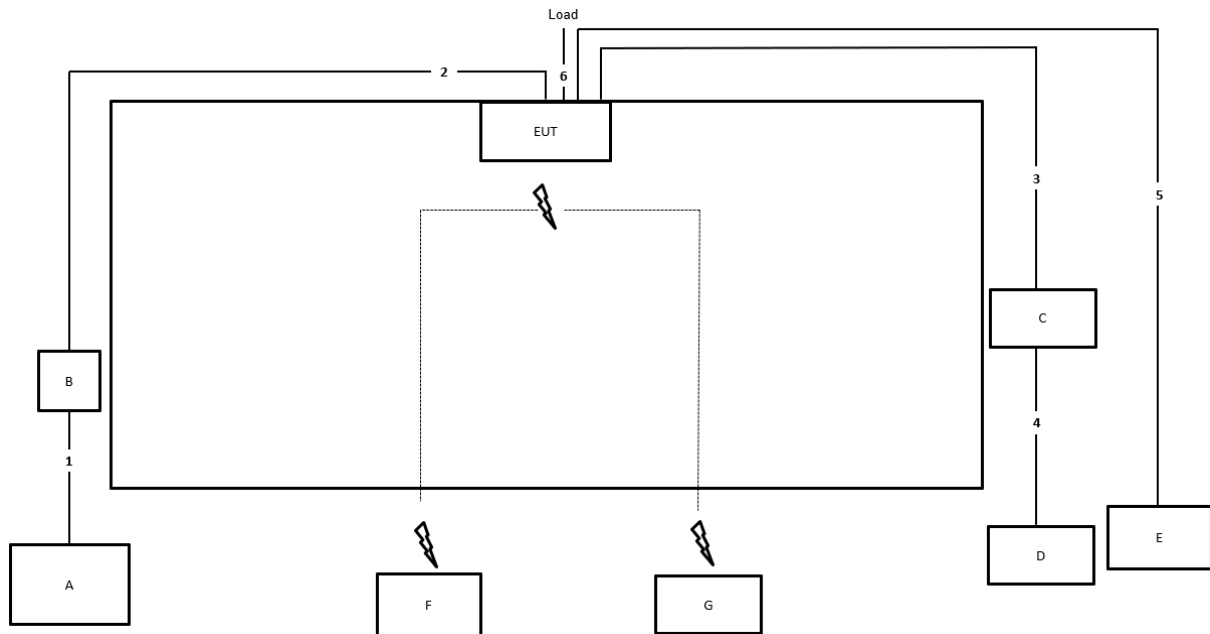


Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	Cat6 RJ-45 cable	No	10m
2	Cat6 RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Emission Co-location Test


Item	Connection	Shielded	Length
1	Cat6 RJ-45 cable	No	1.5m
2	Cat6 RJ-45 cable	No	10m
3	Cat6 RJ-45 cable	No	10m
4	Cat6 RJ-45 cable	No	1.5m
5	Cat6 RJ-45 cable	No	5m
6	Cat6 RJ-45 cable	No	1.5m



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.

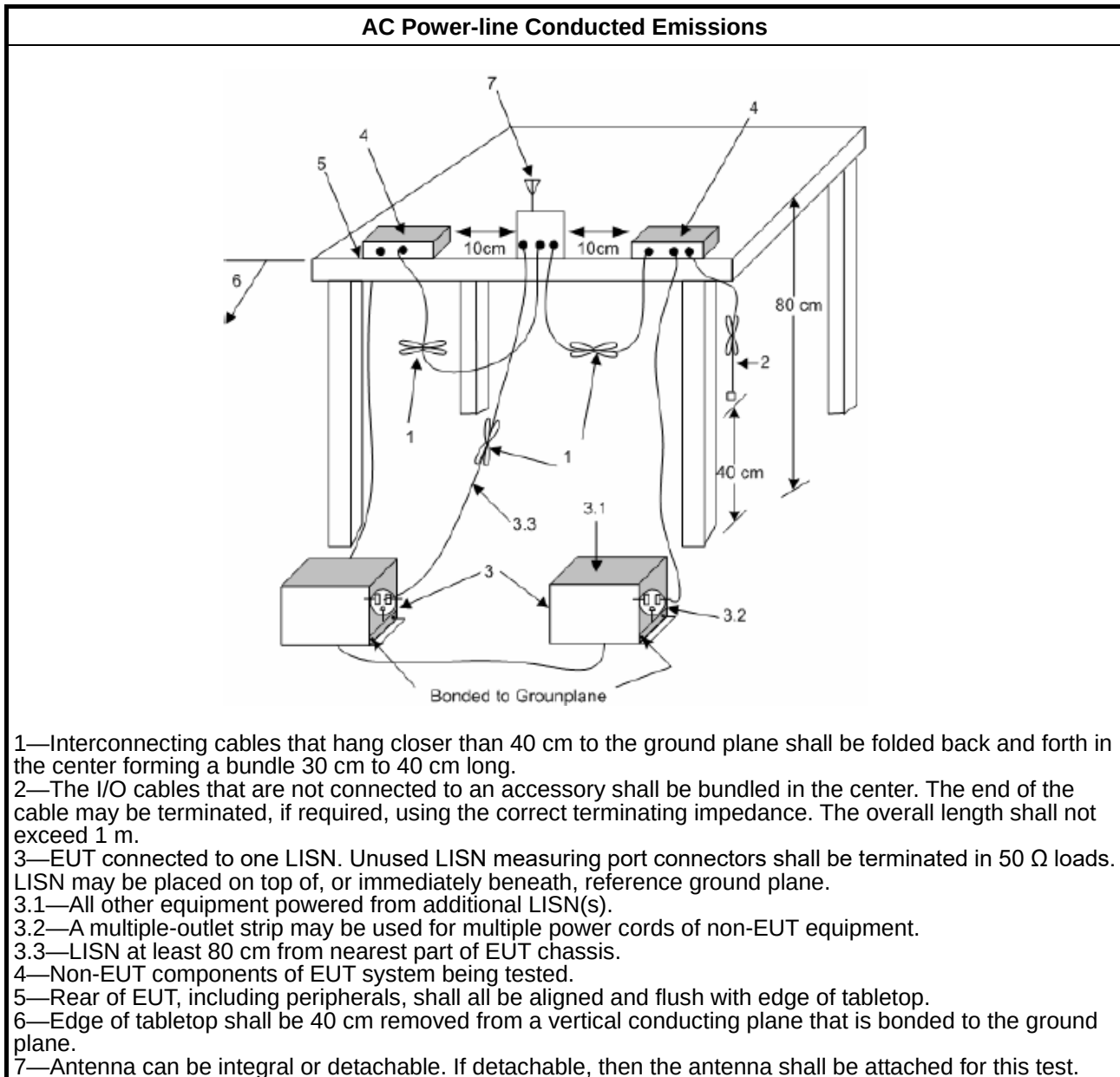
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2020, 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:

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

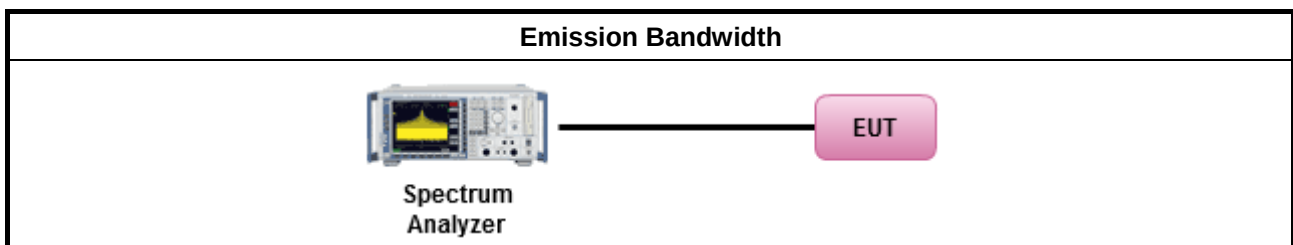
3.2.2 Measuring Instruments

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.	

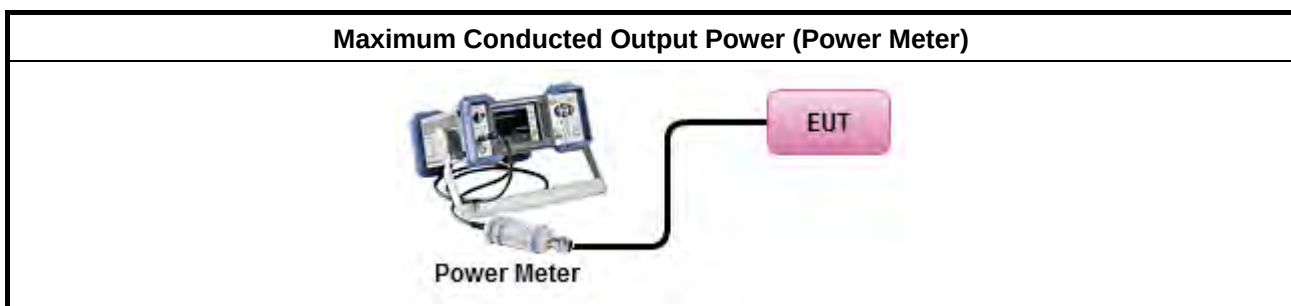
3.3.2 Measuring Instruments

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

3.3.4 Test Setup





3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

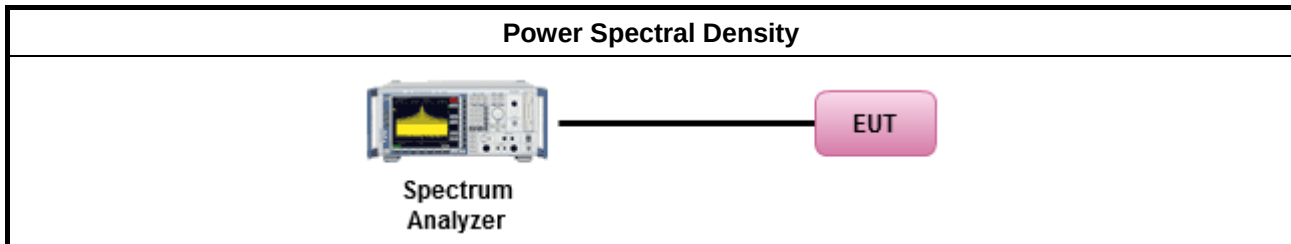
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

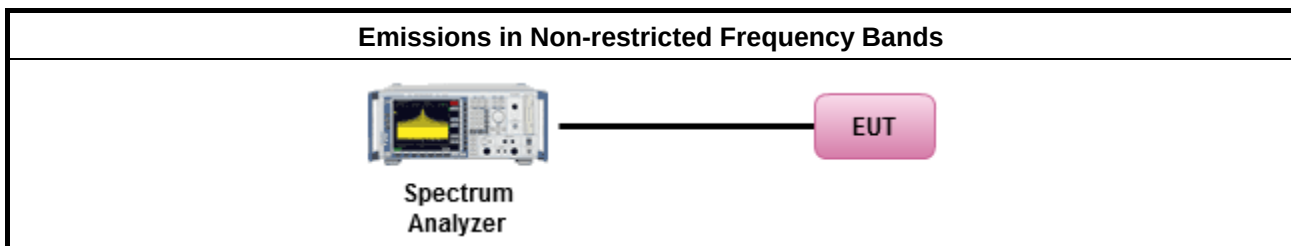
3.5.2 Measuring Instruments

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.

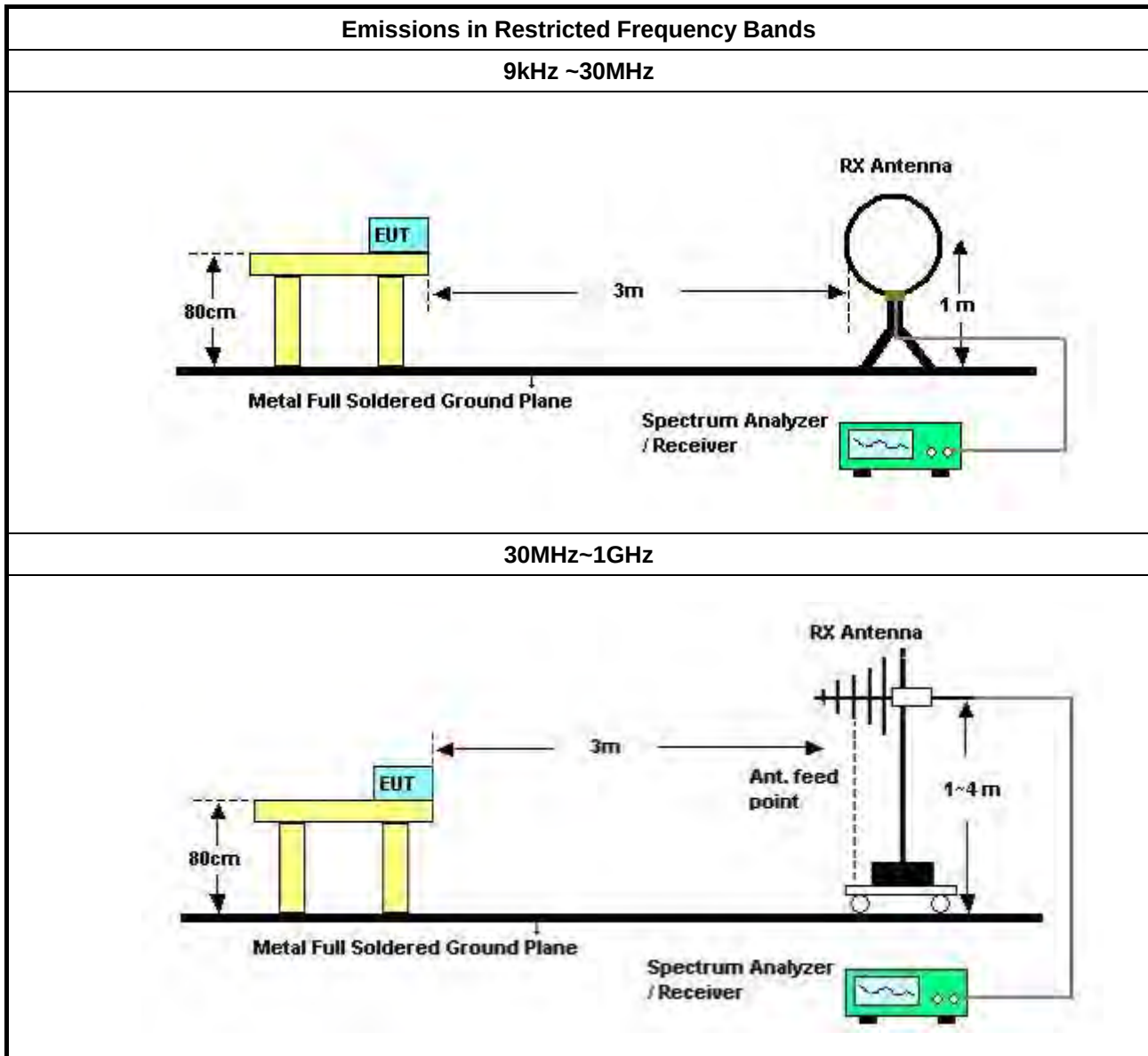
3.6.2 Measuring Instruments

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.

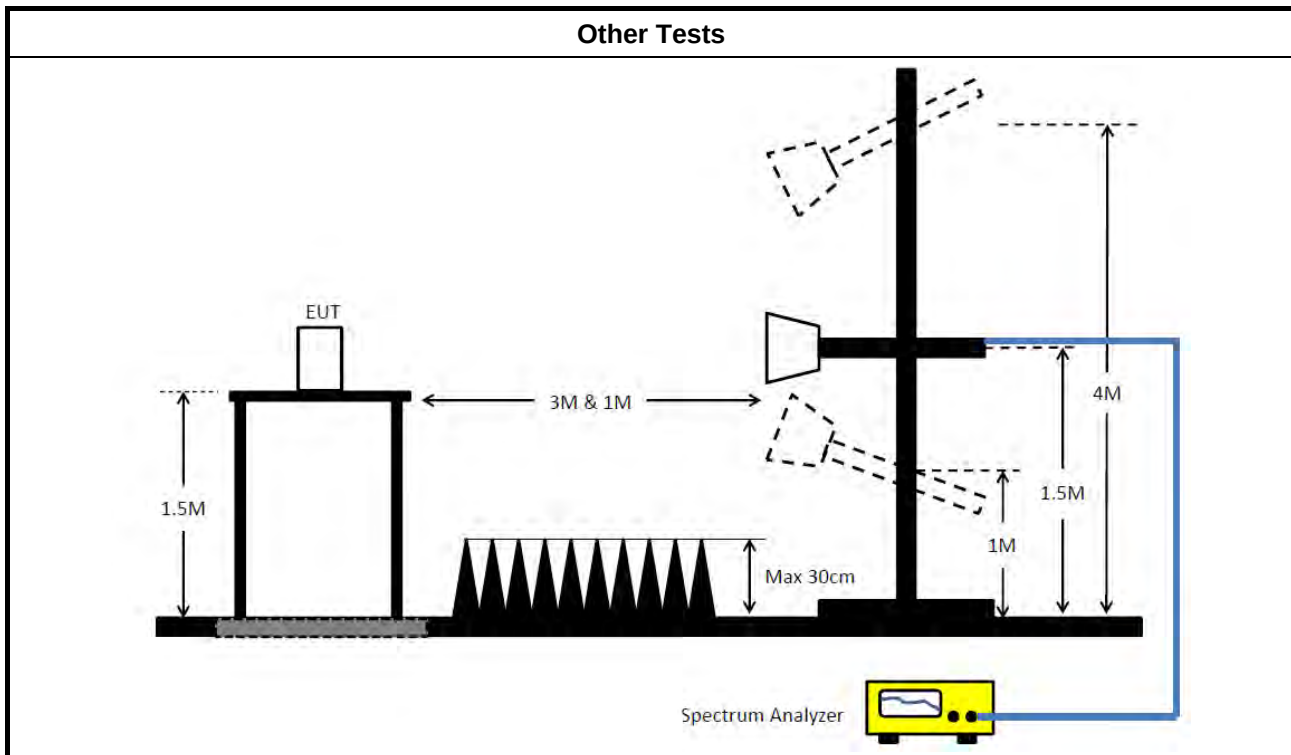
3.6.4 Test Setup



Co-location

The diagram illustrates the experimental setup. A participant is seated at a table, viewing a screen. On the table is a box labeled 'EUT' (Experimental Unit) and a small object. A horizontal distance of 3M is indicated between the participant and the screen. The screen displays a 3D model of a structure. A vertical scale on the right indicates a height of 4M, with a 1M segment marked. A horizontal scale at the bottom indicates a width of Max 30cm. A dashed line indicates the participant's line of sight.

The diagram illustrates the experimental setup. A subject is seated at a table, viewing a screen. The screen displays a target (a small rectangle) and a starting point (a small circle). The distance between the starting point and the target is labeled as 1M. The screen is positioned at a height of 80 cm from the floor. The target is located at a height of 4M from the floor. The starting point is located at a height of 1M from the floor. The screen is tilted at an angle. The distance from the floor to the top of the screen is labeled as Max 30cm. The distance from the floor to the bottom of the screen is labeled as 1M. The distance from the floor to the top of the screen is labeled as 4M. The distance from the floor to the bottom of the screen is labeled as 1M. The distance from the floor to the top of the screen is labeled as 4M. The distance from the floor to the bottom of the screen is labeled as 1M.



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. 29, 2025	Apr. 28, 2026	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Feb. 06, 2025	Feb. 05, 2026	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 14, 2025	May 13, 2026	Conduction (CO02-CB)
COND Cable	Woken	Cable	CO02	0.15MHz ~ 30MHz	Sep.14, 2025	Sep.13, 2026	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Sep.14, 2025	Sep.13, 2026	Conduction (CO02-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30MHz	Oct. 20, 2025	Oct. 19, 2026	Radiation (10CH01-CB)
10m Semi Anechoic Chamber NSA	TDK	SAC-10M	10CH01-CB	30MHz~1GHz 10m,3m	Jan. 15, 2025	Jan. 14, 2026	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10783	9kHz ~ 1.3GHz	Mar. 08, 2025	Mar. 07, 2026	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10784	9kHz ~ 1.3GHz	Mar. 08, 2025	Mar. 07, 2026	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-01	25MHz ~ 1GHz	Oct. 14, 2025	Oct. 13, 2026	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-02	25MHz ~ 1GHz	Oct. 14, 2025	Oct. 13, 2026	Radiation (10CH01-CB)
EMI Test Receiver	Rohde&Schwarz	ESCI	100186	9kHz ~ 3GHz	Sep. 17, 2025	Sep. 16, 2026	Radiation (10CH01-CB)
Spectrum Analyzer	Rohde&Schwarz	FSV30	101026	9kHz ~ 30GHz	Apr. 16, 2025	Apr. 15, 2026	Radiation (10CH01-CB)
Bilog Ant & 6dB Attenuator	SCHWARZBECK & EMCI	VULB 9168 & N-6-06	1469 & AT-N06021	30MHz ~ 1GHz	Jan. 09, 2025	Jan. 08, 2026	Radiation (10CH01-CB)
Amplifier	EM	EM101	060703	10MHz ~ 1GHz	Oct. 15, 2025	Oct. 14, 2026	Radiation (10CH01-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (10CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 03, 2025	May 02, 2026	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1370	1GHz~18GHz	Aug. 22, 2025	Aug. 21, 2026	Radiation (03CH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Oct. 07, 2025	Oct. 06, 2026	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 16, 2025	May 15, 2026	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV3044	101321	9kHz ~ 44GHz	Jul. 01, 2025	Jun. 30, 2026	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Sep. 25, 2025	Sep. 24, 2026	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Sep. 25, 2025	Sep. 24, 2026	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Apr. 30, 2025	Apr. 29, 2026	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.27	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 07, 2025	Oct. 06, 2026	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Aug. 22, 2025	Aug. 21, 2026	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Oct. 07, 2025	Oct. 06, 2026	Radiation (03CH06-CB)
Pre-Amplifier	EMCI	EMC12630SE	980383	1GHz ~ 18GHz	Jul. 30, 2025	Jul. 29, 2026	Radiation (03CH06-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 21, 2025	Nov. 20, 2026	Radiation (03CH06-CB)
Signal analyzer	R&S	FSV3044	101667	9kHz~44GHz	Aug. 27, 2025	Aug. 26, 2026	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+68	1GHz~18GHz	Sep. 25, 2025	Sep. 24, 2026	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Apr. 30, 2025	Apr. 29, 2026	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE-EMI	V5.11.10	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 27, 2025	May 26, 2026	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1~18 GHz	Sep. 20, 2025	Sep. 19, 2026	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz – 18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz – 18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH01-CB)

**RADIO TEST REPORT****Report No. : FR5N0608AE**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-09	1 GHz – 18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Jul. 04, 2025	Jul. 03, 2026	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	MY45100745	50MHz~18GHz	Jul. 04, 2025	Jul. 03, 2026	Conducted (TH01-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.27	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.



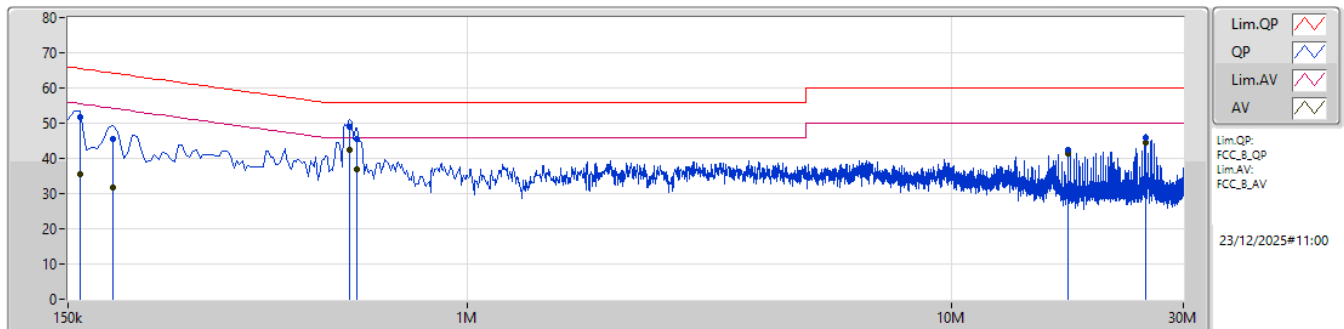
Conducted Emissions at Powerline

Appendix A

Summary

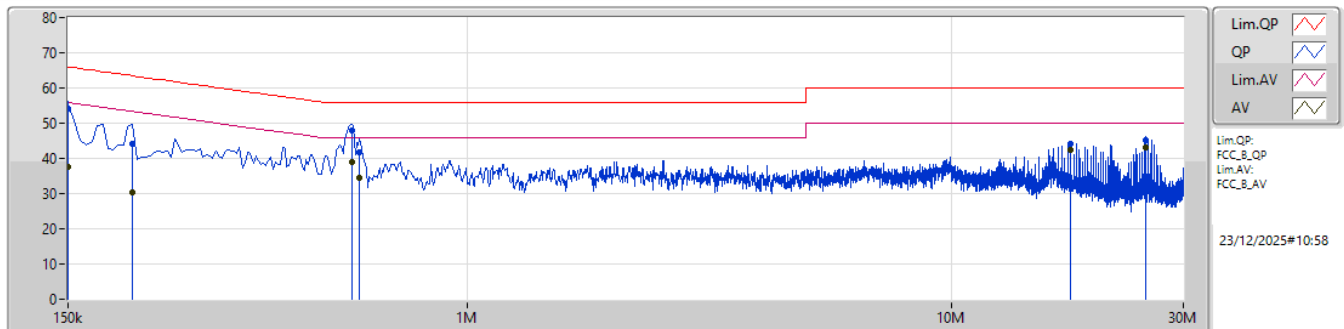
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	573k	42.50	46.00	-3.50	Line

Mode 2



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	159k	51.65	65.52	-13.87	10.39	Line	-	41.26	0.06	0.26	10.07						
AV	159k	35.62	55.52	-19.90	10.39	Line	-	25.23	0.06	0.26	10.07						
QP	186k	45.51	64.20	-18.69	10.28	Line	-	35.23	0.06	0.22	10.00						
AV	186k	31.71	54.20	-22.49	10.28	Line	-	21.43	0.06	0.22	10.00						
QP	573k	49.06	56.00	-6.94	10.43	Line	-	38.63	0.06	0.26	10.11						
AV	573k	42.50	46.00	-3.50	10.43	Line	"Worst"	32.07	0.06	0.26	10.11						
QP	591k	45.65	56.00	-10.35	10.43	Line	-	35.22	0.06	0.26	10.11						
AV	591k	36.93	46.00	-9.07	10.43	Line	-	26.50	0.06	0.26	10.11						
QP	17.327M	42.57	60.00	-17.43	11.24	Line	-	31.33	0.34	0.36	10.54						
AV	17.327M	41.43	50.00	-8.57	11.24	Line	-	30.19	0.34	0.36	10.54						
QP	25.139M	45.70	60.00	-14.30	11.34	Line	-	34.36	0.49	0.39	10.46						
AV	25.139M	44.46	50.00	-5.54	11.34	Line	-	33.12	0.49	0.39	10.46						

Mode 2



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	150k	53.97	66.00	-12.03	10.43	Neutral	-	43.54	0.07	0.27	10.09						
AV	150k	37.70	56.00	-18.30	10.43	Neutral	-	27.27	0.07	0.27	10.09						
QP	204k	44.25	63.44	-19.19	10.25	Neutral	-	34.00	0.07	0.21	9.97						
AV	204k	30.34	53.44	-23.10	10.25	Neutral	-	20.09	0.07	0.21	9.97						
QP	577.5k	47.86	56.00	-8.14	10.44	Neutral	-	37.42	0.07	0.26	10.11						
AV	577.5k	38.84	46.00	-7.16	10.44	Neutral	-	28.40	0.07	0.26	10.11						
QP	600k	41.70	56.00	-14.30	10.44	Neutral	-	31.26	0.07	0.26	10.11						
AV	600k	34.61	46.00	-11.39	10.44	Neutral	-	24.17	0.07	0.26	10.11						
QP	17.574M	44.01	60.00	-15.99	11.14	Neutral	-	32.87	0.24	0.36	10.54						
AV	17.574M	42.39	50.00	-7.61	11.14	Neutral	-	31.25	0.24	0.36	10.54						
QP	25.139M	45.26	60.00	-14.74	11.16	Neutral	-	34.10	0.31	0.39	10.46						
AV	25.139M	43.15	50.00	-6.85	11.16	Neutral	"Worst"	31.99	0.31	0.39	10.46						

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.15.4_1TX	1.556M	2.365M	2M37G1D	1.459M	2.346M

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

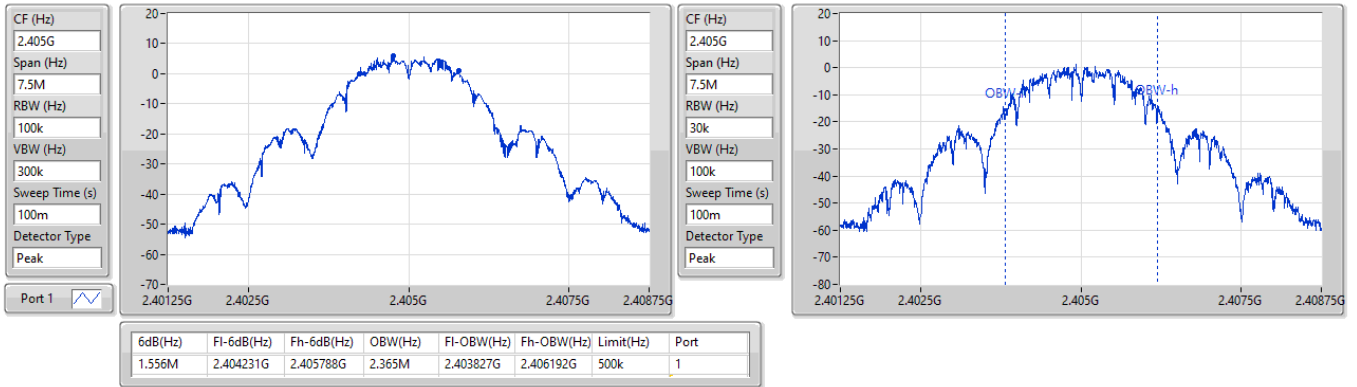
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.15.4_TX	-	-	-	-
2405MHz	Pass	500k	1.556M	2.365M
2440MHz	Pass	500k	1.541M	2.346M
2480MHz	Pass	500k	1.459M	2.346M

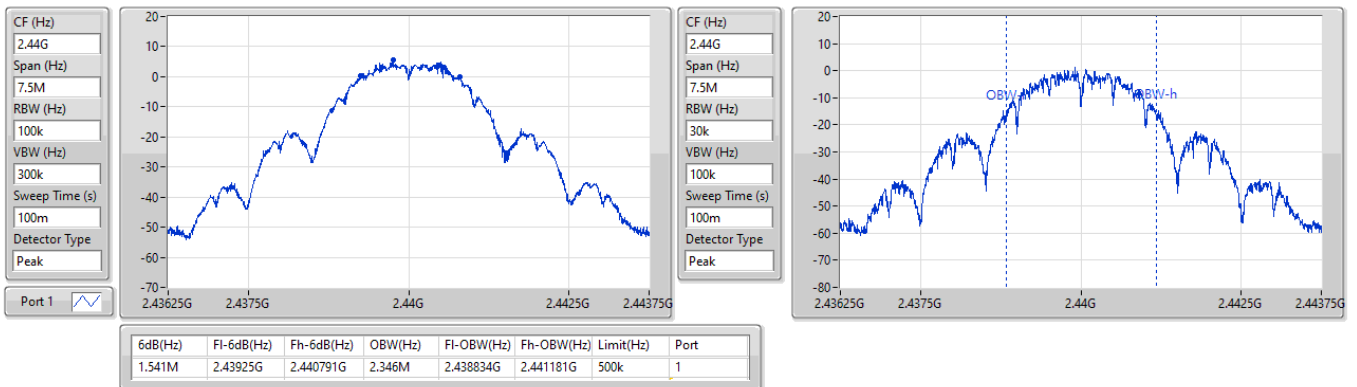
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_802.15.4_1TX
EBW
2405MHz

15/11/2025


2.4-2.4835GHz_802.15.4_1TX
EBW
2440MHz

15/11/2025

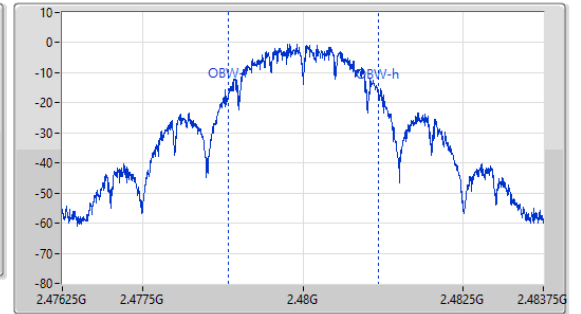
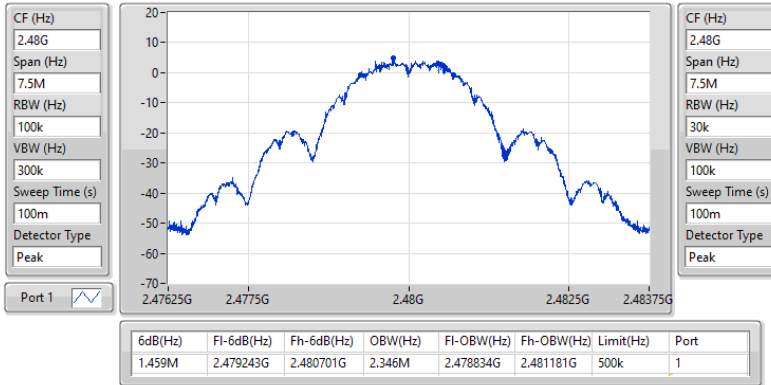


2.4-2.4835GHz_802.15.4_1TX

EBW

2480MHz

15/11/2025





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.15.4_1TX	11.25	0.01334



Average Power

Appendix C

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.15.4_1TX	-	-	-	-	-
2405MHz	Pass	3.80	11.25	11.25	30.00
2440MHz	Pass	3.80	10.87	10.87	30.00
2480MHz	Pass	3.80	8.66	8.66	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.15.4_1TX	-0.72

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.15.4_1TX	-	-	-	-	-
2405MHz	Pass	3.80	-0.72	-0.72	8.00
2440MHz	Pass	3.80	-1.16	-1.16	8.00
2480MHz	Pass	3.80	-1.86	-1.86	8.00

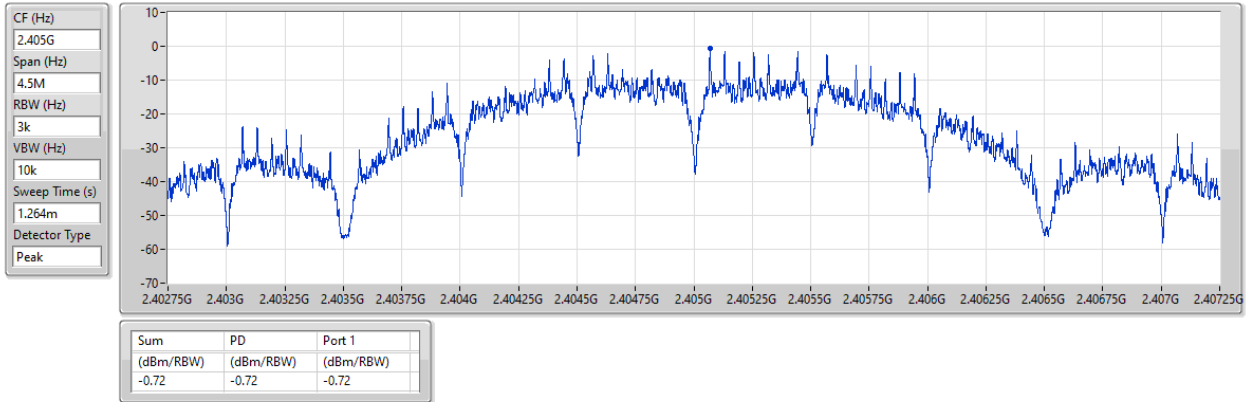
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_802.15.4_1TX

PSD

2405MHz

15/11/2025

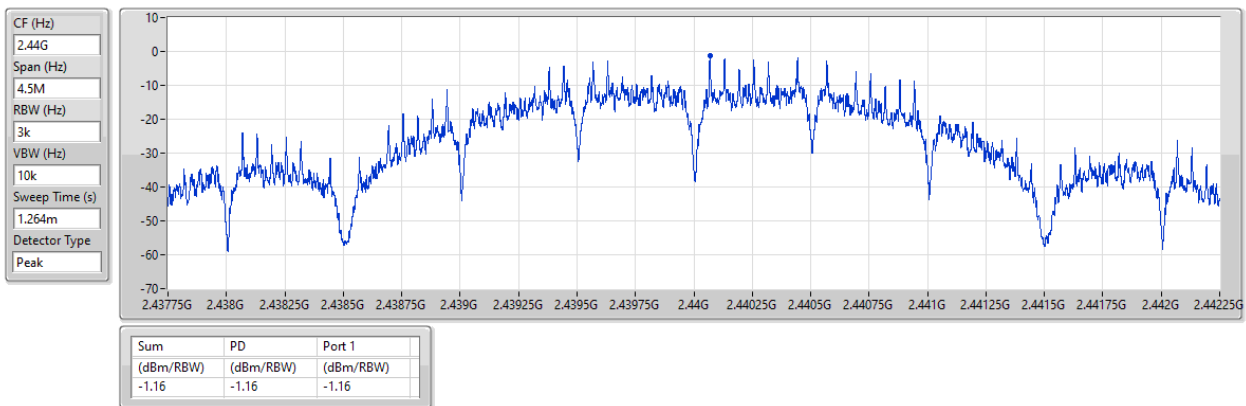


2.4-2.4835GHz_802.15.4_1TX

PSD

2440MHz

15/11/2025

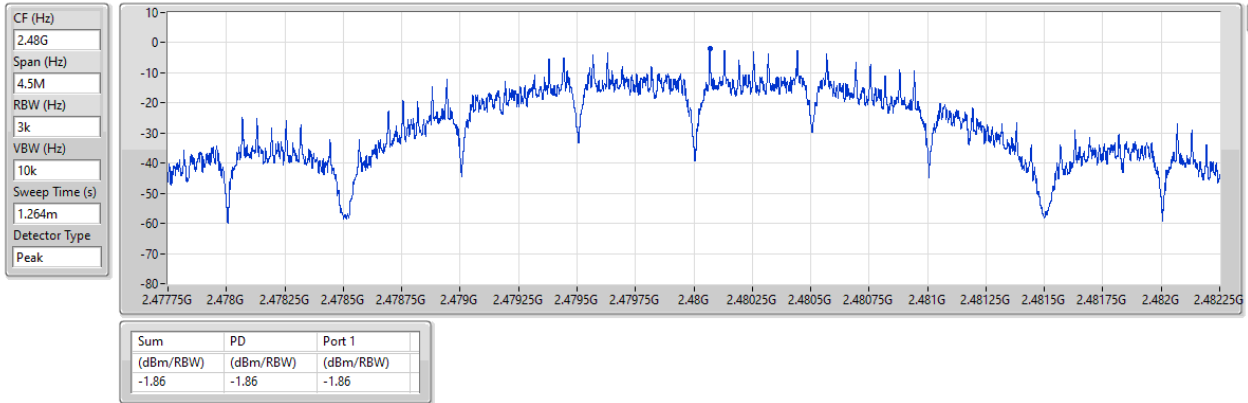


2.4-2.4835GHz_802.15.4_1TX

PSD

2480MHz

15/11/2025





Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.15.4_1TX	Pass	2.40518G	5.92	-24.08	862.13M	-52.85	2.39874G	-51.58	2.4G	-54.75	15.19668G	-43.72	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.15.4_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.40518G	5.92	-24.08	793.57M	-52.37	2.39825G	-51.43	2.4G	-52.45	24.5104G	-44.58	1
2440MHz	Pass	2.40518G	5.92	-24.08	862.13M	-52.85	2.39874G	-51.58	2.4G	-54.75	15.19668G	-43.72	1
2480MHz	Pass	2.40518G	5.92	-24.08	864.49M	-52.45	2.39958G	-51.73	2.4G	-54.41	24.92121G	-43.96	1

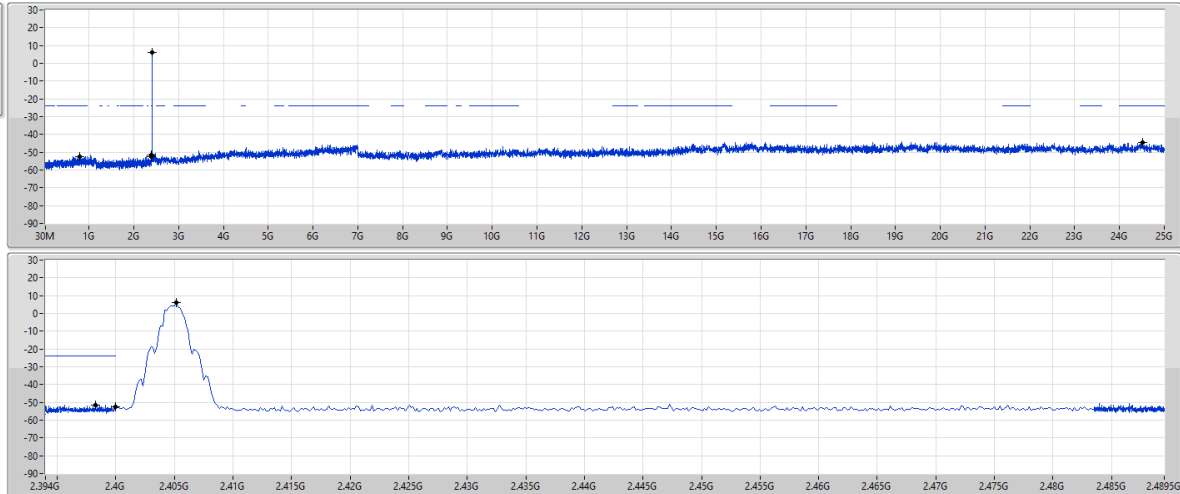
2.4-2.4835GHz_802.15.4_1TX

CSEndB

2405MHz

15/11/2025

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



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40518G	5.92	-24.08	793.57M	-52.37	2.39825G	-51.43	2.4G	-52.45	2.45104G	-44.58	1

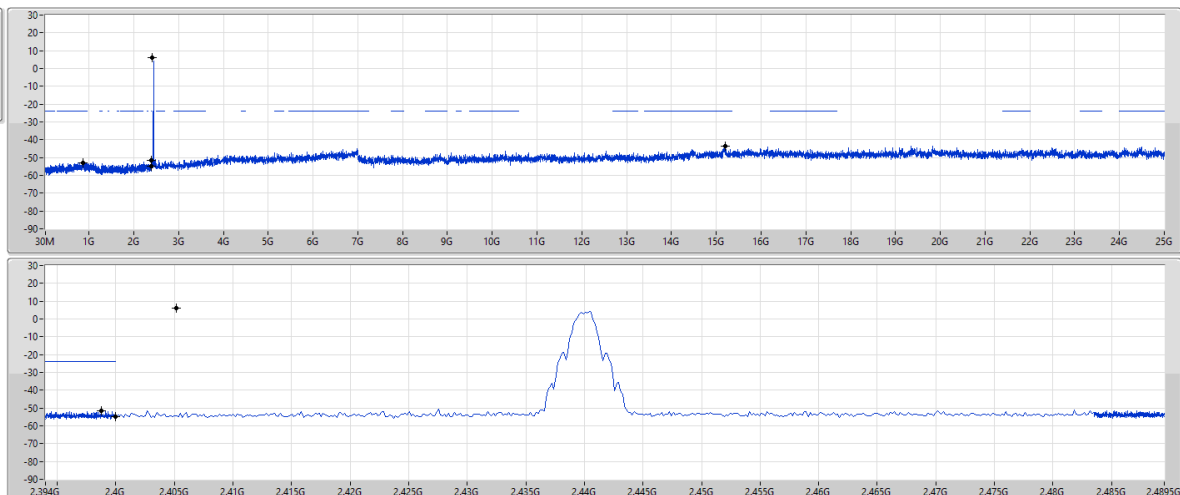
2.4-2.4835GHz_802.15.4_1TX

CSEndB

2440MHz

15/11/2025

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



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40518G	5.92	-24.08	862.13M	-52.85	2.39874G	-51.38	2.4G	-54.75	15.19668G	-43.72	1

2.4-2.4835GHz_802.15.4_1TX

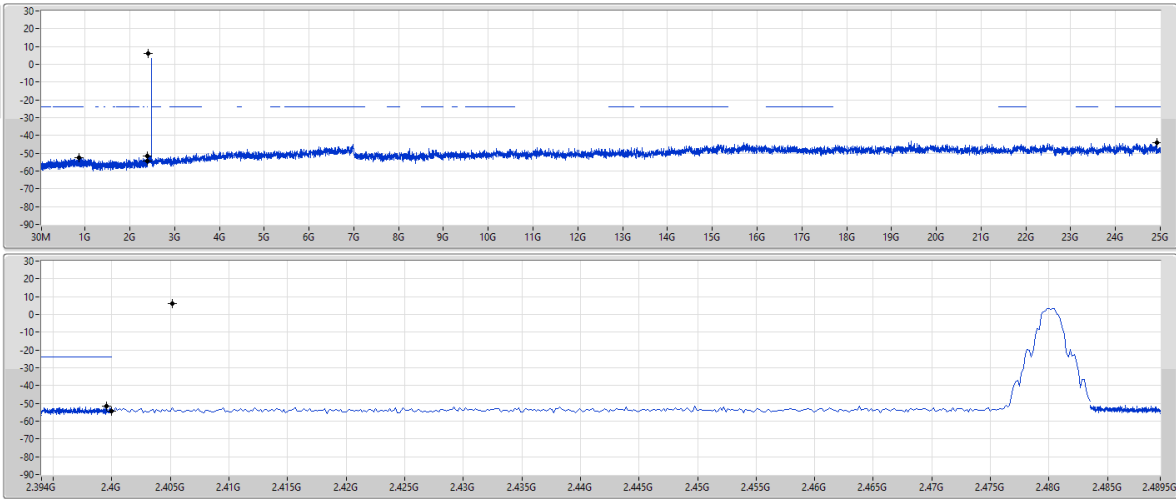
CSEndB

2480MHz

15/11/2025

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

Port 1



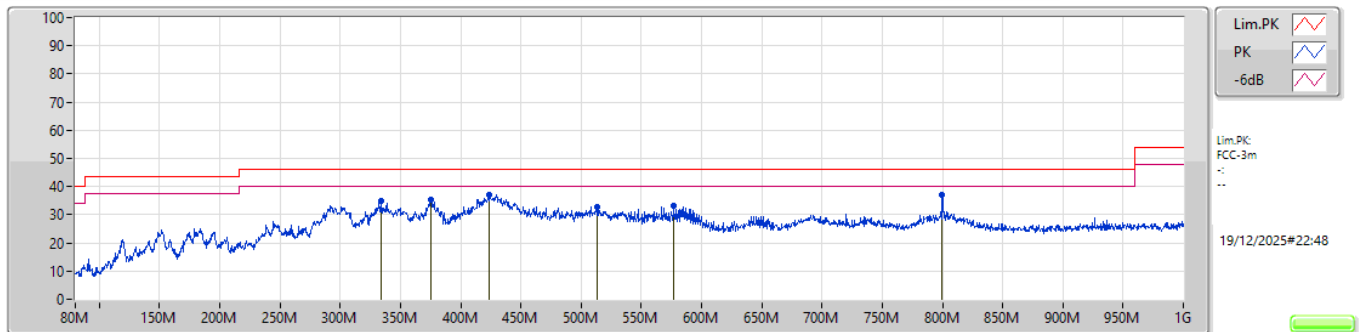
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40518G	5.92	-24.08	864.49M	-52.45	2.39958G	-51.73	2.4G	-54.41	2.492121G	-43.96	1



Summary

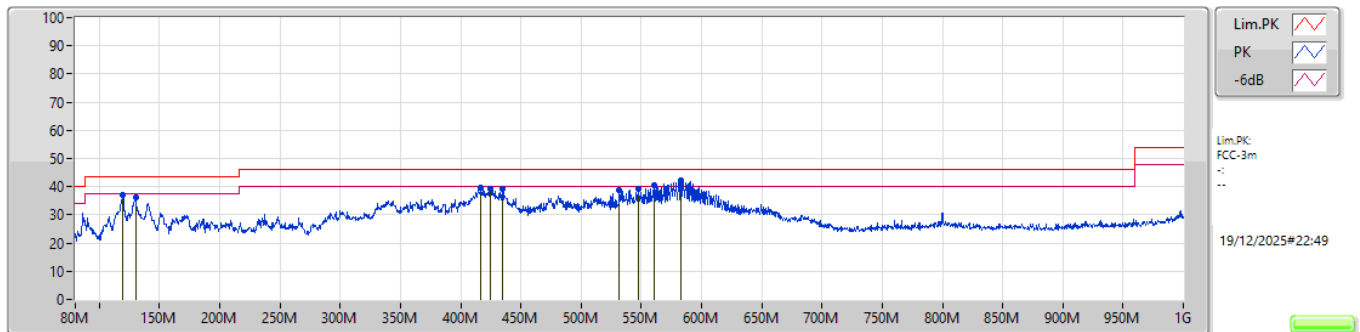
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	PK	582.78M	42.40	46.00	-3.60	Horizontal

Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)		
PK	334.38M	34.70	46.00	-11.30	-31.38	3	Vertical	5	2.00	-	66.08	20.21	2.27	53.86		
PK	374.86M	35.37	46.00	-10.63	-30.30	3	Vertical	355	2.00	-	65.67	21.18	2.41	53.89		
PK	424.08M	37.16	46.00	-8.84	-29.00	3	Vertical	281	1.00	-	66.16	22.21	2.49	53.70		
PK	513.78M	32.83	46.00	-13.17	-26.49	3	Vertical	55	2.00	-	59.32	23.97	2.88	53.34		
PK	576.8M	33.03	46.00	-12.97	-24.60	3	Vertical	130	2.00	-	57.63	25.17	3.25	53.02		
PK	799.9M	37.21	46.00	-8.79	-19.33	3	Vertical	33	1.00	"Worst"	56.54	28.50	4.04	51.87		

Mode 2



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)		
PK	119.56M	36.87	43.50	-6.63	-35.51	3	Horizontal	36	1.00	-	72.38	16.95	1.30	53.76		
PK	130.14M	36.28	43.50	-7.22	-34.50	3	Horizontal	255	1.00	-	70.78	17.99	1.39	53.88		
PK	416.72M	39.48	46.00	-6.52	-29.32	3	Horizontal	54	2.00	-	68.80	21.93	2.49	53.74		
PK	425M	39.24	46.00	-6.76	-28.97	3	Horizontal	166	2.00	-	68.21	22.24	2.49	53.70		
PK	434.2M	39.03	46.00	-6.97	-28.70	3	Horizontal	134	2.00	-	67.73	22.46	2.48	53.64		
PK	531.72M	38.71	46.00	-7.29	-25.88	3	Horizontal	57	1.00	-	64.59	24.36	2.97	53.21		
PK	547.36M	39.01	46.00	-6.99	-25.53	3	Horizontal	345	2.00	-	64.54	24.53	3.05	53.11		
PK	561.16M	40.56	46.00	-5.44	-25.17	3	Horizontal	11	2.00	-	65.73	24.75	3.14	53.06		
PK	582.78M	42.40	46.00	-3.60	-24.62	3	Horizontal	25	2.00	"Worst"	67.02	25.08	3.30	53.00		

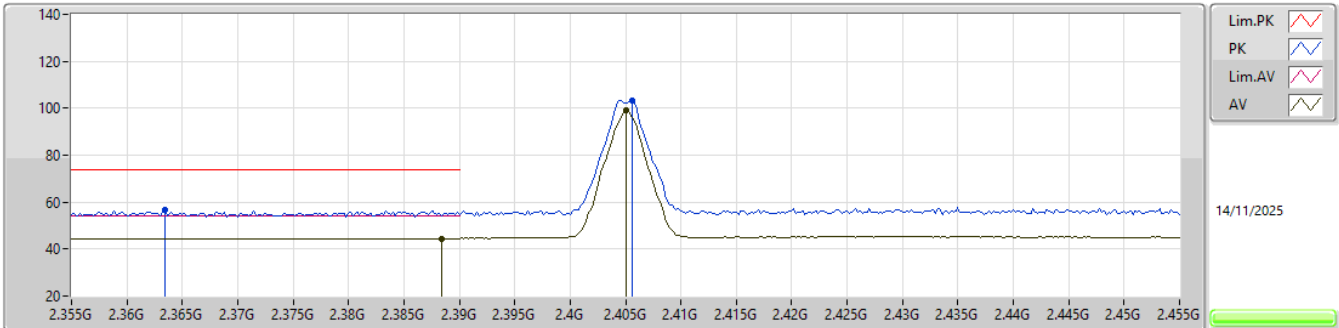


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.15.4	Pass	AV	2.4835G	53.68	54.00	-0.32	3	Horizontal	331	1.80	-

2.4-2.4835GHz_802.15.4

2405MHz_TX

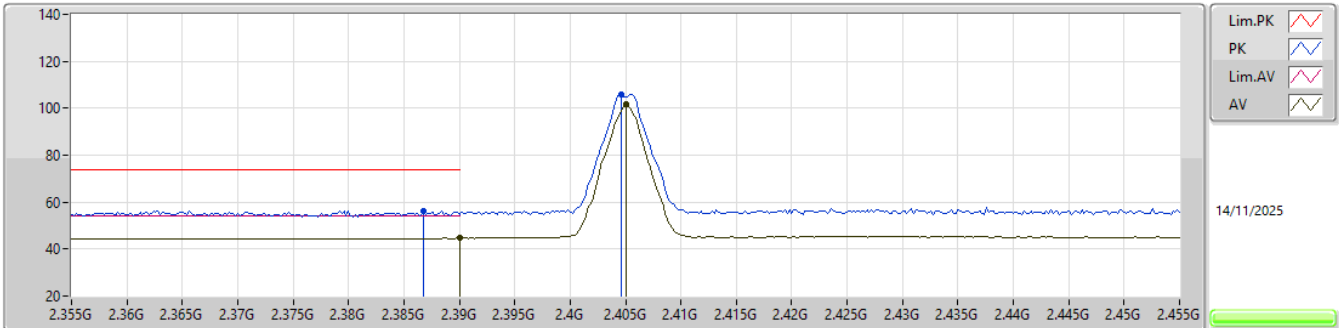


EUT Y_1TX
Setting 0C 0C
01-C-E-3

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	2.3634G	56.74	74.00	-17.26	24.08	3	Vertical	12	1.05	-	27.37	5.29	-				
AV	2.3884G	44.56	54.00	-9.44	11.83	3	Vertical	12	1.05	-	27.38	5.35	-				
PK	2.4056G	103.26	Inf	-Inf	70.38	3	Vertical	12	1.05	-	27.50	5.38	-				
AV	2.405G	99.07	Inf	-Inf	66.19	3	Vertical	12	1.05	-	27.50	5.38	-				

2.4-2.4835GHz_802.15.4

2405MHz_TX

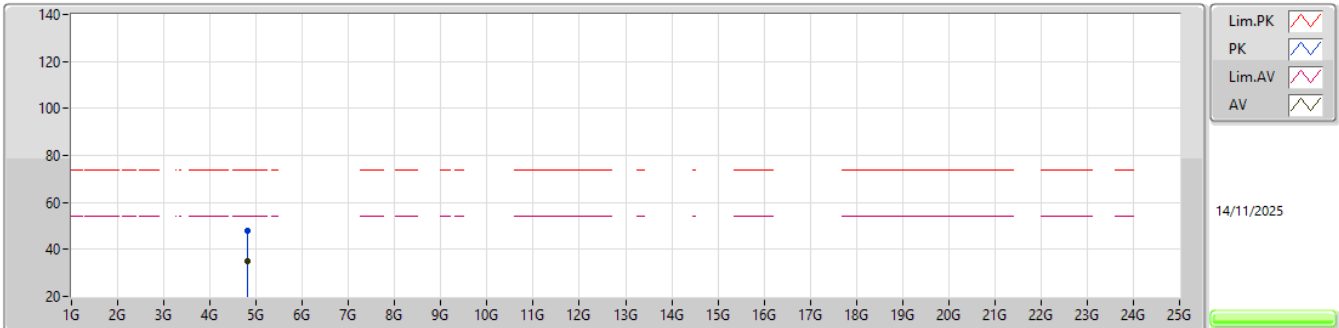


EUT Y_1TX
Setting 0C 0C
01-C-E-3

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	2.3868G	56.31	74.00	-17.69	23.60	3	Horizontal	325	1.20	-	27.37	5.34	-				
AV	2.39G	44.62	54.00	-9.38	11.87	3	Horizontal	325	1.20	-	27.40	5.35	-				
PK	2.4046G	105.97	Inf	-Inf	73.10	3	Horizontal	325	1.20	-	27.50	5.37	-				
AV	2.405G	101.63	Inf	-Inf	68.75	3	Horizontal	325	1.20	-	27.50	5.38	-				

2.4-2.4835GHz_802.15.4

2405MHz_TX

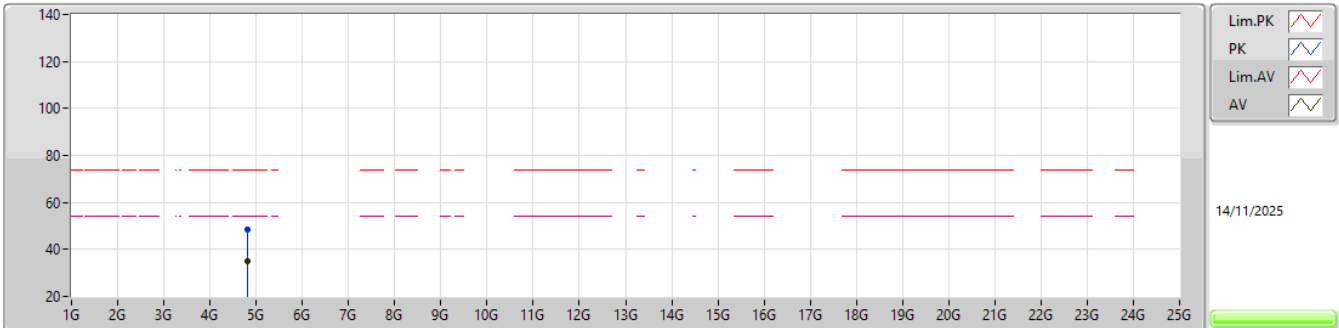


EUT_V_1TX
Setting 0C 0C
01-C-E-3

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	4.80276G	48.06	74.00	-25.94	40.33	3	Vertical	331	1.55	-	32.32	7.98	32.57			
AV	4.80156G	35.06	54.00	-18.94	27.35	3	Vertical	331	1.55	-	32.31	7.97	32.57			

2.4-2.4835GHz_802.15.4

2405MHz_TX

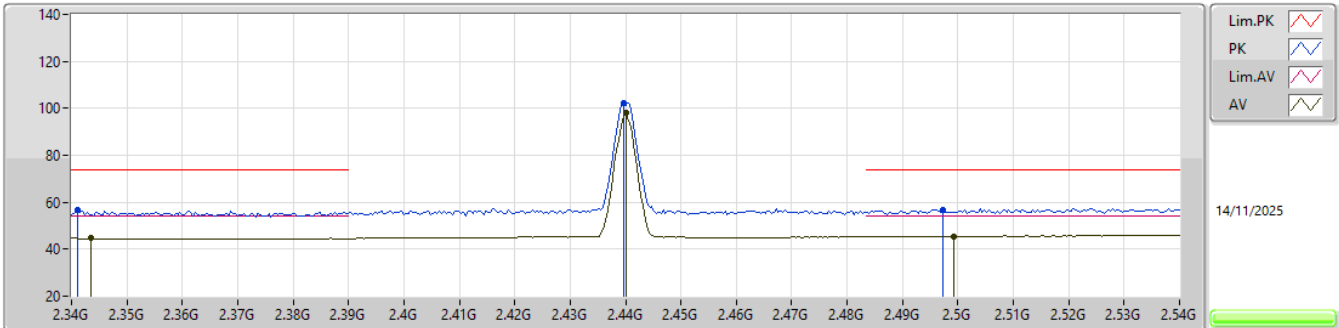


EUT_V_1TX
Setting 0C 0C
01-C-E-3

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	4.81352G	48.68	74.00	-25.32	40.87	3	Horizontal	264	1.84	-	32.38	8.00	32.57			
AV	4.81192G	35.08	54.00	-18.92	27.29	3	Horizontal	264	1.84	-	32.37	7.99	32.57			

2.4-2.4835GHz_802.15.4

2440MHz_TX

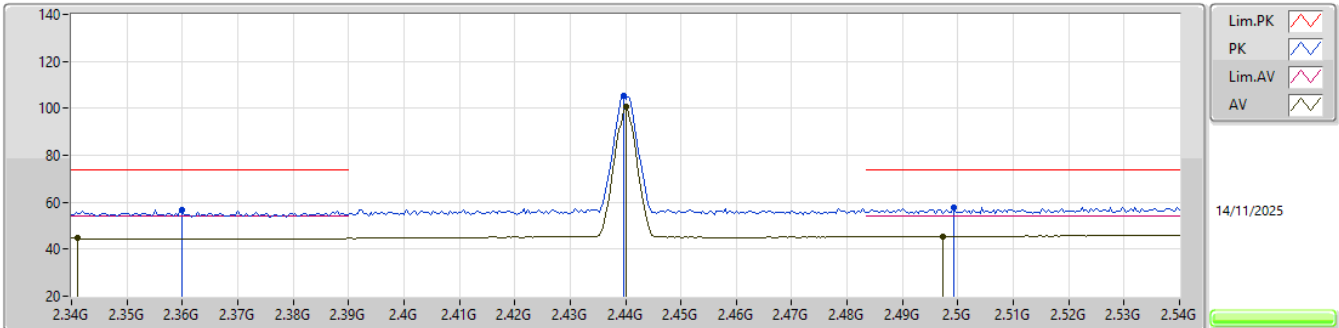


EUT V_1TX
Setting 0C 0C
01-C-E-3

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	2.3412G	56.60	74.00	-17.40	24.04	3	Vertical	11	1.00	-	27.31	5.25	-					
AV	2.3436G	44.61	54.00	-9.39	12.02	3	Vertical	11	1.00	-	27.34	5.25	-					
PK	2.4396G	102.31	Inf	-Inf	69.30	3	Vertical	11	1.00	-	27.60	5.41	-					
AV	2.44G	98.03	Inf	-Inf	65.02	3	Vertical	11	1.00	-	27.60	5.41	-					
PK	2.4972G	56.97	74.00	-17.03	23.50	3	Vertical	11	1.00	-	28.00	5.47	-					
AV	2.4992G	45.48	54.00	-8.52	12.01	3	Vertical	11	1.00	-	28.00	5.47	-					

2.4-2.4835GHz_802.15.4

2440MHz_TX

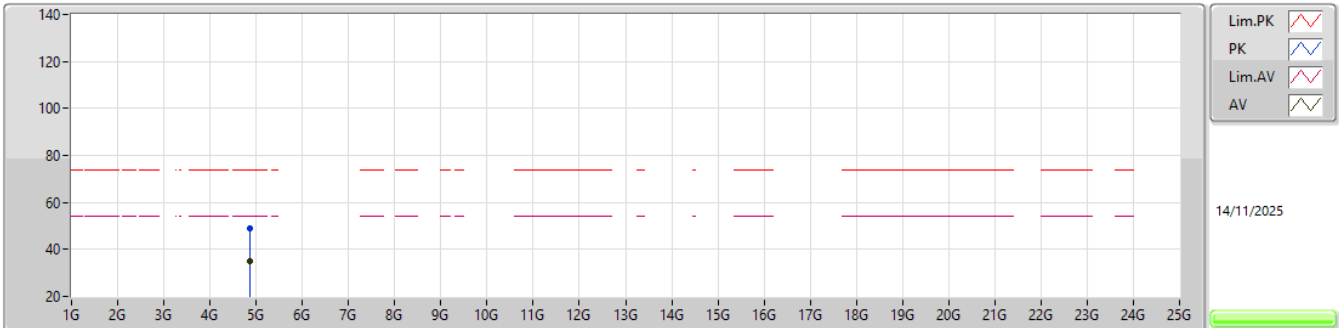


EUT Y_1TX
Setting 0C 0C
01-C-E-3

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	2.36G	56.90	74.00	-17.10	24.21	3	Horizontal	322	1.18	-	27.40	5.29	-			
AV	2.3412G	44.68	54.00	-9.32	12.12	3	Horizontal	322	1.18	-	27.31	5.25	-			
PK	2.4396G	105.18	Inf	-Inf	72.17	3	Horizontal	322	1.18	-	27.60	5.41	-			
AV	2.44G	100.75	Inf	-Inf	67.74	3	Horizontal	322	1.18	-	27.60	5.41	-			
PK	2.4992G	57.53	74.00	-16.47	24.06	3	Horizontal	322	1.18	-	28.00	5.47	-			
AV	2.4972G	45.47	54.00	-8.53	12.00	3	Horizontal	322	1.18	-	28.00	5.47	-			

2.4-2.4835GHz_802.15.4

2440MHz_TX

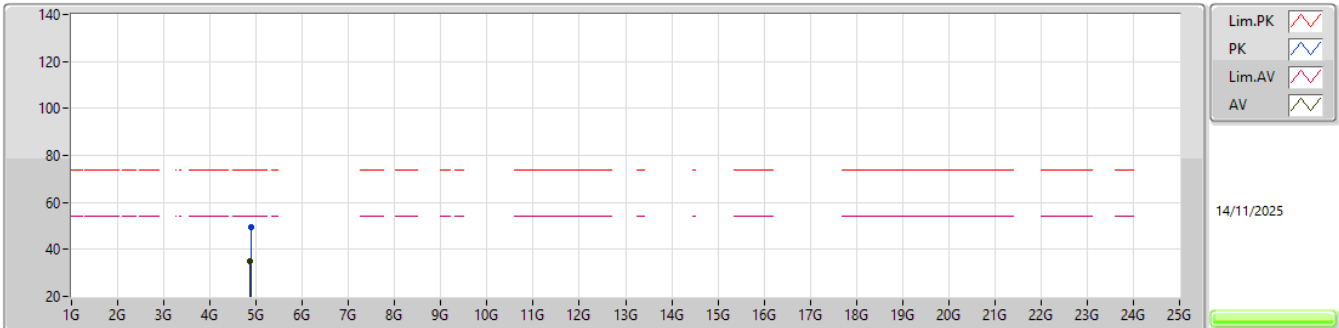


EUT V_1TX
Setting 0C 0C
01-C-E-3

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA			
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)			
PK	4.87116G	48.78	74.00	-25.22	40.60	3	Vertical	255	1.07	-	32.64	8.11	32.57			
AV	4.87512G	35.22	54.00	-18.78	27.03	3	Vertical	255	1.07	-	32.65	8.12	32.58			

2.4-2.4835GHz_802.15.4

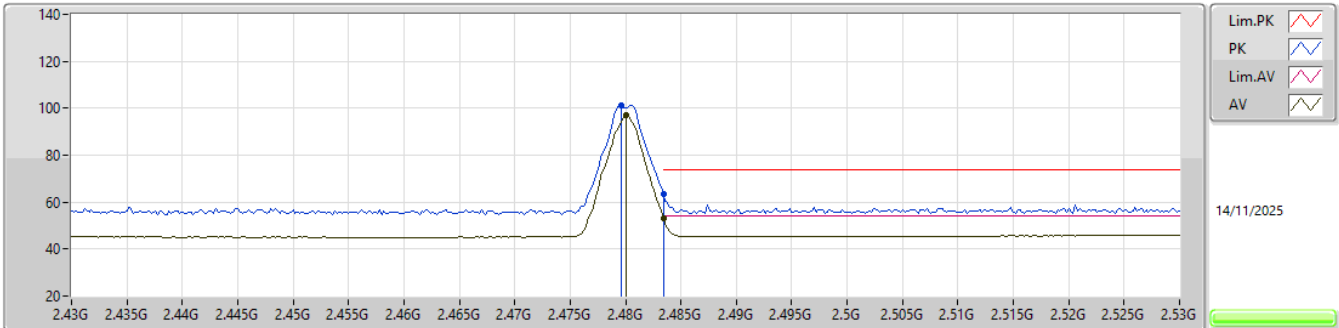
2440MHz_TX


EUT V_1TX
Setting 0C 0C
01-C-E-3

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA			
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)			
PK	4.878G	49.29	74.00	-24.71	41.09	3	Horizontal	107	1.80	-	32.66	8.12	32.58			
AV	4.87528G	35.22	54.00	-18.78	27.03	3	Horizontal	107	1.80	-	32.65	8.12	32.58			

2.4-2.4835GHz_802.15.4

2480MHz_TX

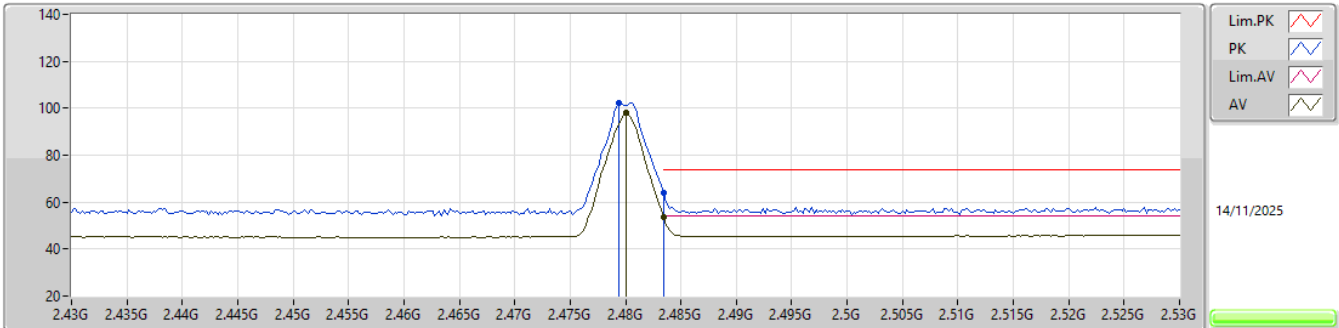


EUT Y_1TX
Setting 0A 0A
01-C-E-3

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)					
PK	2.4796G	101.12	Inf	-Inf	67.77	3	Vertical	356	1.02	-	27.90	5.45	-					
AV	2.48G	96.94	Inf	-Inf	63.59	3	Vertical	356	1.02	-	27.90	5.45	-					
PK	2.4835G	63.68	74.00	-10.32	30.29	3	Vertical	356	1.02	-	27.93	5.46	-					
AV	2.4835G	53.16	54.00	-0.84	19.77	3	Vertical	356	1.02	-	27.93	5.46	-					

2.4-2.4835GHz_802.15.4

2480MHz_TX

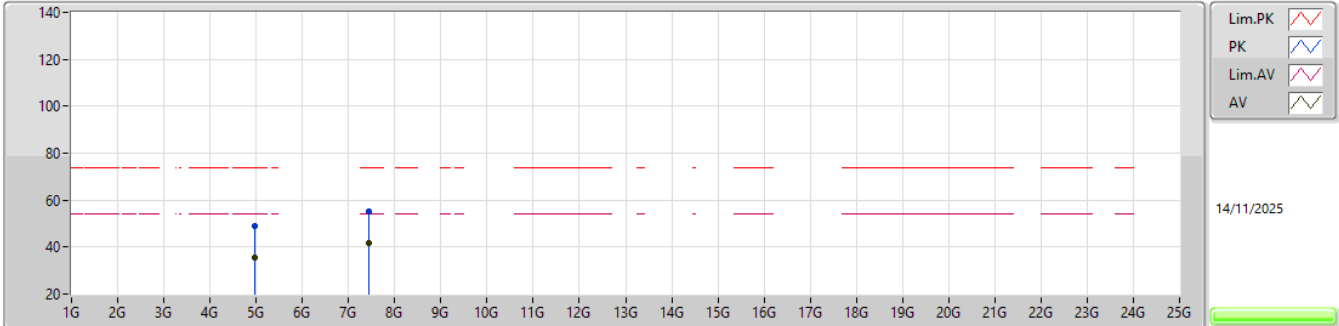


EUT Y_1TX
Setting 0A 0A
01-C-E-3

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	2.4794G	102.07	Inf	-Inf	68.73	3	Horizontal	331	1.80	-	27.89	5.45	-				
AV	2.48G	97.89	Inf	-Inf	64.54	3	Horizontal	331	1.80	-	27.90	5.45	-				
PK	2.4835G	63.97	74.00	-10.03	30.58	3	Horizontal	331	1.80	-	27.93	5.46	-				
AV	2.4835G	53.68	54.00	-0.32	20.29	3	Horizontal	331	1.80	-	27.93	5.46	-				

2.4-2.4835GHz_802.15.4

2480MHz_TX

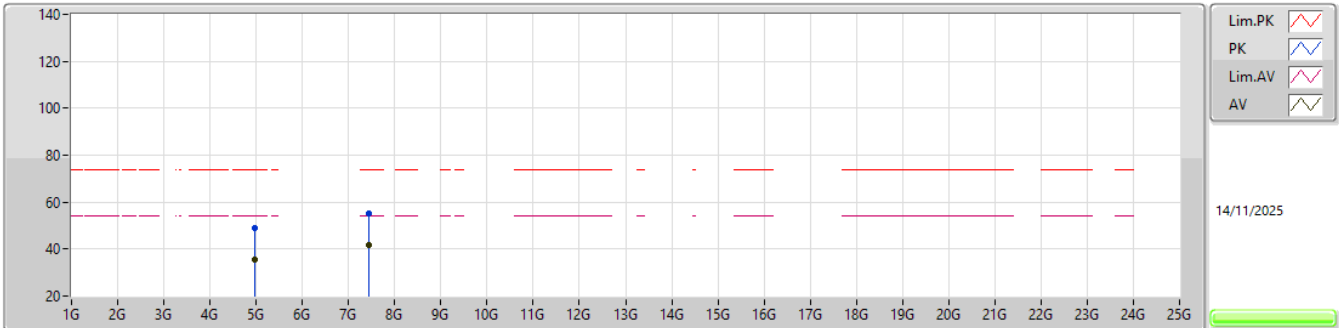


EUT Y_1TX
Setting 0A 0A
01-C-E-3

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	4.961G	48.89	74.00	-25.11	40.17	3	Vertical	216	2.25	-	33.02	8.28	32.58				
AV	4.96732G	35.58	54.00	-18.42	26.83	3	Vertical	216	2.25	-	33.03	8.30	32.58				
PK	7.43664G	55.31	74.00	-18.69	41.26	3	Vertical	134	1.80	-	36.40	10.23	32.58				
AV	7.44904G	41.89	54.00	-12.11	27.84	3	Vertical	134	1.80	-	36.40	10.23	32.58				

2.4-2.4835GHz_802.15.4

2480MHz_TX



EUT Y_1TX
Setting 0A 0A
01-C-E-3

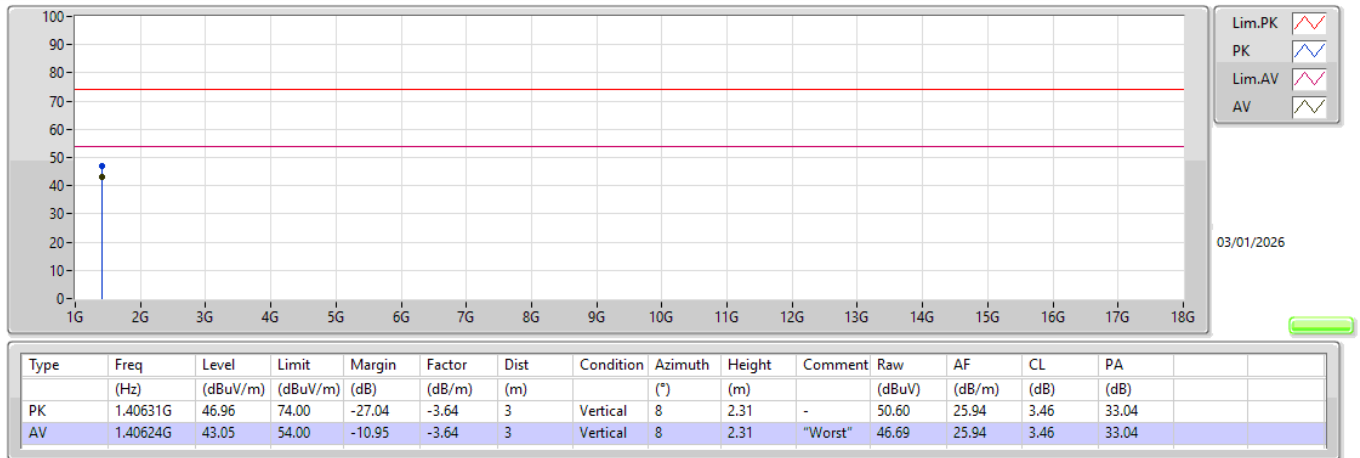
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.96268G	49.19	74.00	-24.81	40.45	3	Horizontal	254	1.12	-	33.03	8.29	32.58				
AV	4.95928G	35.72	54.00	-18.28	27.00	3	Horizontal	254	1.12	-	33.02	8.28	32.58				
PK	7.4476G	55.04	74.00	-18.96	40.99	3	Horizontal	107	1.80	-	36.40	10.23	32.58				
AV	7.44808G	41.66	54.00	-12.34	27.61	3	Horizontal	107	1.80	-	36.40	10.23	32.58				



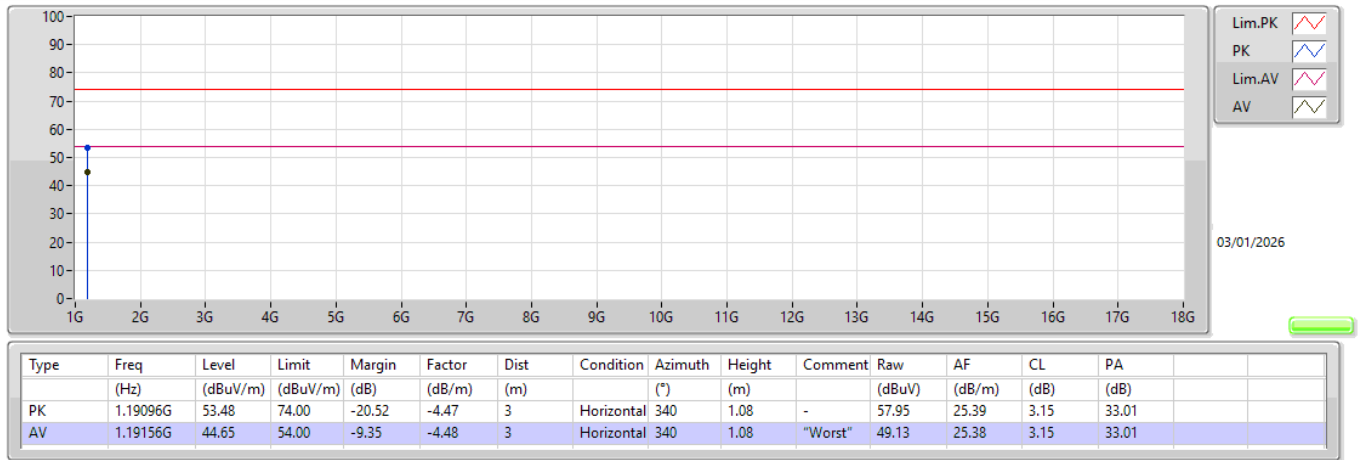
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	AV	1.19156G	44.65	54.00	-9.35	Horizontal

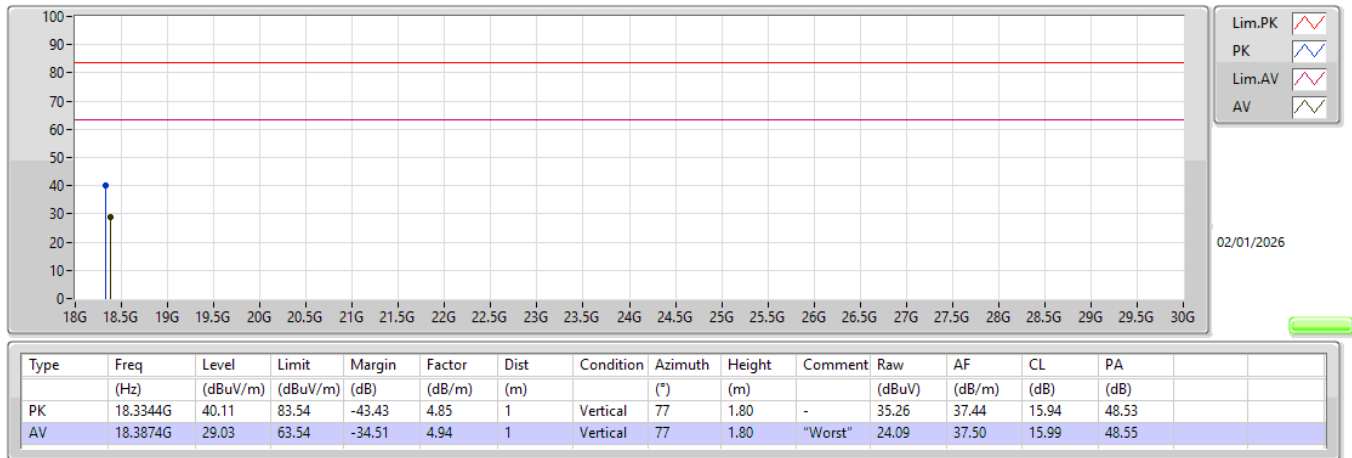
Mode 2



Mode 2



Mode 2



Mode 2

