



RADIO TEST REPORT

FCC ID : RRK-W1700A3
Equipment : Wi-Fi 7 Router
Brand Name : Quantum Fiber from AT&T / Lumen
Model Name : W1700A
Applicant : Alpha Networks Inc.
No.8 Li-Hsin 7th Rd., Hsinchu Science Park,
Hsinchu 300094. Taiwan, R.O.C.
Standard : 47 CFR FCC Part 15.247

The product was received on Feb. 04, 2026, and testing was started from Apr. 08, 2026 and completed on May 19, 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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History of this test report

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

Page Number : 3 of 29
Issued Date : Jul. 15, 2026
Report Version : 01



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: 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	Zigbee	3	1

Note:

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

1.1.2 Antenna Information

Ant.	RF Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	AOT	ANT-M2458-AL17	PIFA	I-PEX(MHF)	Note 1
2	2	AOT	ANT-M2458-AL15	PIFA	I-PEX(MHF)	
3	3	AOT	ANT-M2458-AL14	PIFA	I-PEX(MHF)	
4	4	AOT	ANT-M2458-AL16	PIFA	I-PEX(MHF)	
5	1	AOT	ANT-P5972-AL21	PIFA	I-PEX(MHF)	
6	2	AOT	ANT-M5972-AL18	PIFA	I-PEX(MHF)	
7	3	AOT	ANT-M5972-AL19	PIFA	I-PEX(MHF)	
8	4	AOT	ANT-P5972-AL20	PIFA	I-PEX(MHF)	
9	1	AOT	ANT-GPSL1-AL22	PIFA	I-PEX(MHF)	
10	1	N/A	Print on board	Monopole	I-PEX	



Note1:

Ant.	Antenna Gain (dBi)					
	WLAN 2.4GHz	WLAN 5GHz UNII 1-3				
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	
1	3.08	3.28	3.12	2.53	2.49	
2	2.69	2.18	2.2	4.18	4.13	
3	2.1	2.11	2.04	3.04	3.35	
4	2.09	2.14	2.33	2.87	4.32	
Ant.	WLAN 6GHz UNII 5-8				Bluetooth / Zigbee	GPS
	6.175GHz	6.475GHz	6.695GHz	6.995GHz		
5	5.27	4.43	3.07	3.59	-	-
6	2.61	2.85	3.72	2.91	-	-
7	3.62	2.06	3.4	3.55	-	-
8	5.1	4.94	3.46	3.8	-	-
9	-	-	-	-	-	5.2
10	-	-	-	-	1.5	-

Directional Gain (dBi)									
Item	WLAN 2.4GHz	WLAN 5GHz UNII 1-3				WLAN 6GHz UNII 5-8			
	2.45GHz	5.2GHz	5.3GHz	5.6GHz	5.785GHz	6.175GHz	6.475GHz	6.695GHz	6.995GHz
4T1S	6.75	5.06	4.96	6.14	5.96	5.56	5.31	4.62	5.33
4T2S	3.75	3.28	3.12	4.18	4.32	5.27	4.94	3.72	3.8
4T4S	3.08	3.28	3.12	4.18	4.32	5.27	4.94	3.72	3.8

Note 2: The above information (excepting Ant. 1-8 antenna gain and directional gain) was declared by Manufacturer.

Note 3: Maximum Directional Gain following KDB662911 D03.

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

Port 1~4 can be used as transmitting/receiving antenna.

Port 1~4 could transmit/receive simultaneously.

5GHz (UNII 1-3) IEEE 802.11a/n/ac/ax/be mode (4TX/4RX)

Port 1~4 can be used as transmitting/receiving antenna.

Port 1~4 could transmit/receive simultaneously.

6GHz (UNII 5-8) IEEE 802.11ax/be mode (4TX/4RX)

Port 1~4 can be used as transmitting/receiving antenna.

Port 1~4 could transmit/receive simultaneously.

Bluetooth and Zigbee mode (1TX/1RX)

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

GPS mode (1RX)

Only Port 1 can be used as receiving antenna.

**1.1.3 Mode Test Duty Cycle**

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
Zigbee_Nss 1	0.44	3.57	880.625u	2k

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	Power from Adapter			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	Radiated below 1GHz: QSPR 6.00.00232.1 Others: Teraterm V5.4.0			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

Equipment Name	Brand Name	Model Name	Description of Models
Wi-Fi 7 Router	Quantum Fiber by AT&T	W1700A	1. For different marketing purposes. 2. The hardware and software of the product are identical; the only difference is the brand printed on the enclosure.
	Lumen		

Note 1: From the above models, Brand: Lumen and model: W1700A was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.



1.2 Applicable Standards

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

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

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 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	TH03-CB	Black Lu	20~21.3 / 64~68	Apr. 15, 2026~ Apr. 16, 2026
Radiated Below 1GHz	03CH06-CB	Sean Ku	21.9~23.1 / 60~62	Apr. 08, 2026~ May 04, 2026
Radiated Above 1GHz	03CH05-CB	George Fan	21.5~22.9 / 57~60	Apr. 14, 2026
AC Conduction	CO01-CB	Ryan Huang	22~23 / 55~56	May 13, 2026~ May 19, 2026

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)	3.8 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.7 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
Zigbee
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	CTX
1	EUT + Bluetooth + Adapter 1
2	EUT + Bluetooth + Adapter 2
3	EUT + Bluetooth + Adapter 3
4	EUT + Bluetooth + Adapter 4
Mode 1 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~8 will follow this same test mode.	
5	EUT + Zigbee + Adapter 1
6	EUT + WLAN 2.4GHz + Adapter 1
7	EUT + WLAN 5GHz + Adapter 1
8	EUT + WLAN 6GHz + Adapter 1
For operating mode 5 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
	After evaluating, the worst axis was found at Z axis for Bluetooth and Zigbee mode, Y axis for WLAN 2.4GHz, WLAN 5GHz and WLAN 6GHz mode from radiated emission above 1GHz, so the measurement will follow this same test configuration.
1	EUT in Z axis + Bluetooth + Adapter 1
2	EUT in Z axis + Bluetooth + Adapter 2
3	EUT in Z axis + Bluetooth + Adapter 3
4	EUT in Z axis + Bluetooth + Adapter 4
Mode 1 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~8 will follow this same test mode.	
5	EUT in Z axis + Zigbee + Adapter 1
6	EUT in Y axis + WLAN 2.4GHz + Adapter 1
7	EUT in Y axis + WLAN 5GHz + Adapter 1
8	EUT in Y axis + WLAN 6GHz + Adapter 1
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
	After evaluating, and the worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.
1	EUT in Z axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + WLAN 6GHz + Bluetooth
2	WLAN 2.4GHz + WLAN 5GHz + WLAN 6GHz + Zigbee
Refer to Sporton Test Report No.: FA5D3015 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.



2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter 1	LUCENT TRANS	1A133-LHHL	Input: 100-125V~1.4A, 50/60Hz Output: 12.0V, 4.0A, 48.0W
Adapter 2	Frecom	F48L1-120400SPAU	Input: 100-240V~50/60Hz, 1.4A Output: 12.0V, 4.0A, 48.0W
Adapter 3	LEI	ML48-8120400-A1	Input: 100-120V~ 50/60Hz, 1.5A Output: 12V, 4A
Adapter 4	mentech	MAUS-1204004811	Input: 100-240V~50/60Hz, 1.2A Output: 12V, 4.0A

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E6430	N/A

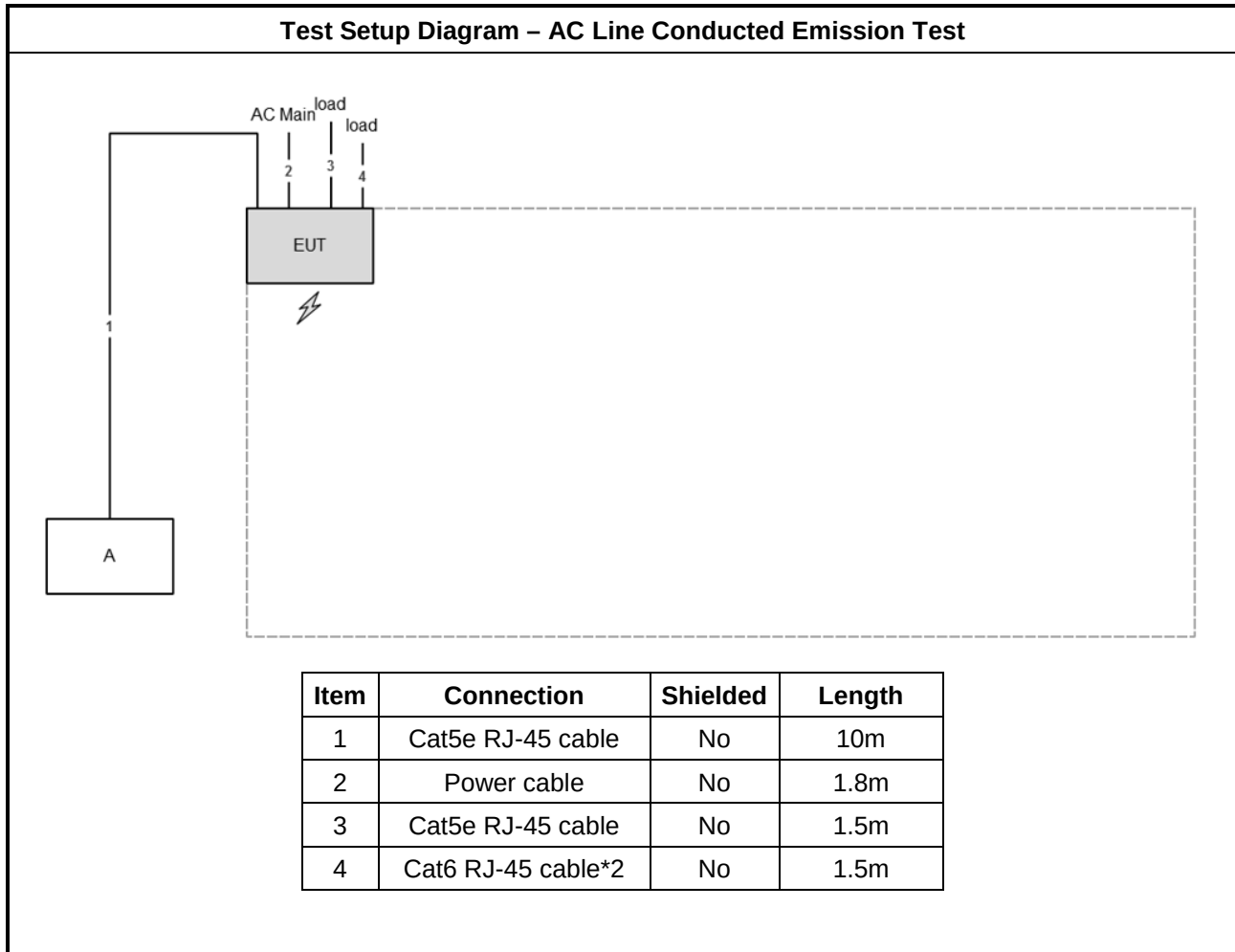
For Radiated:

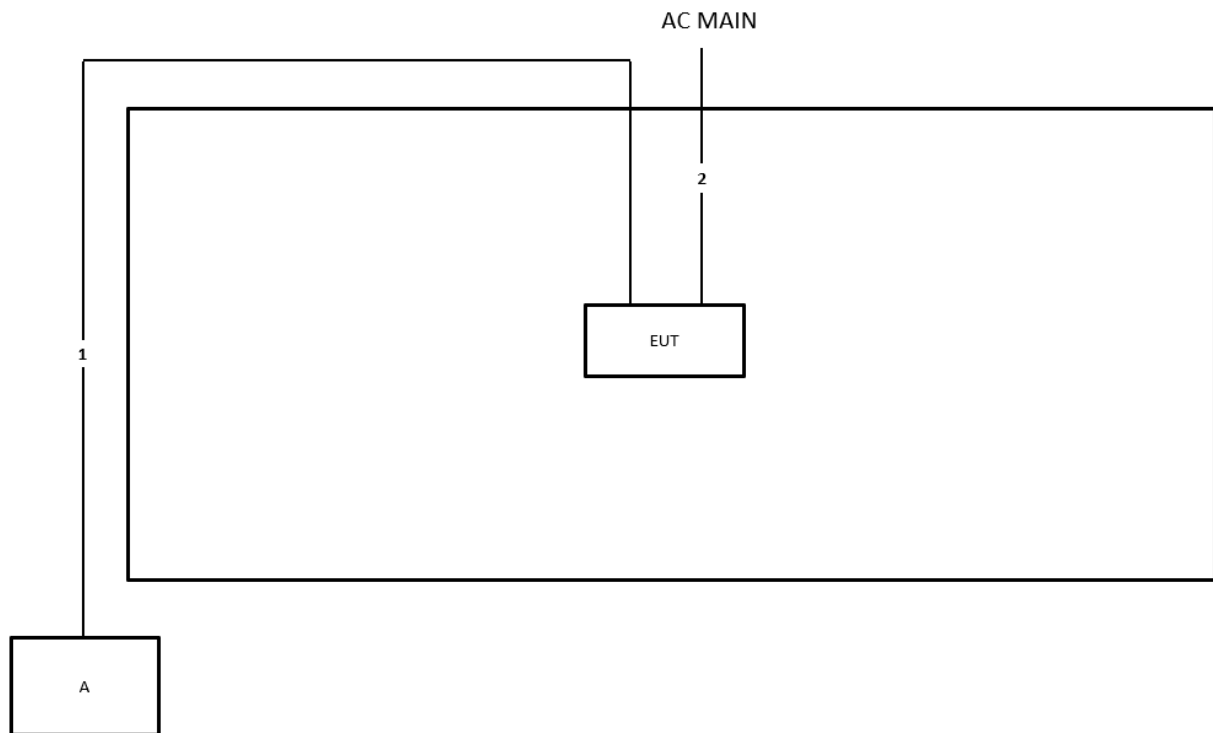
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

For RF Conducted:

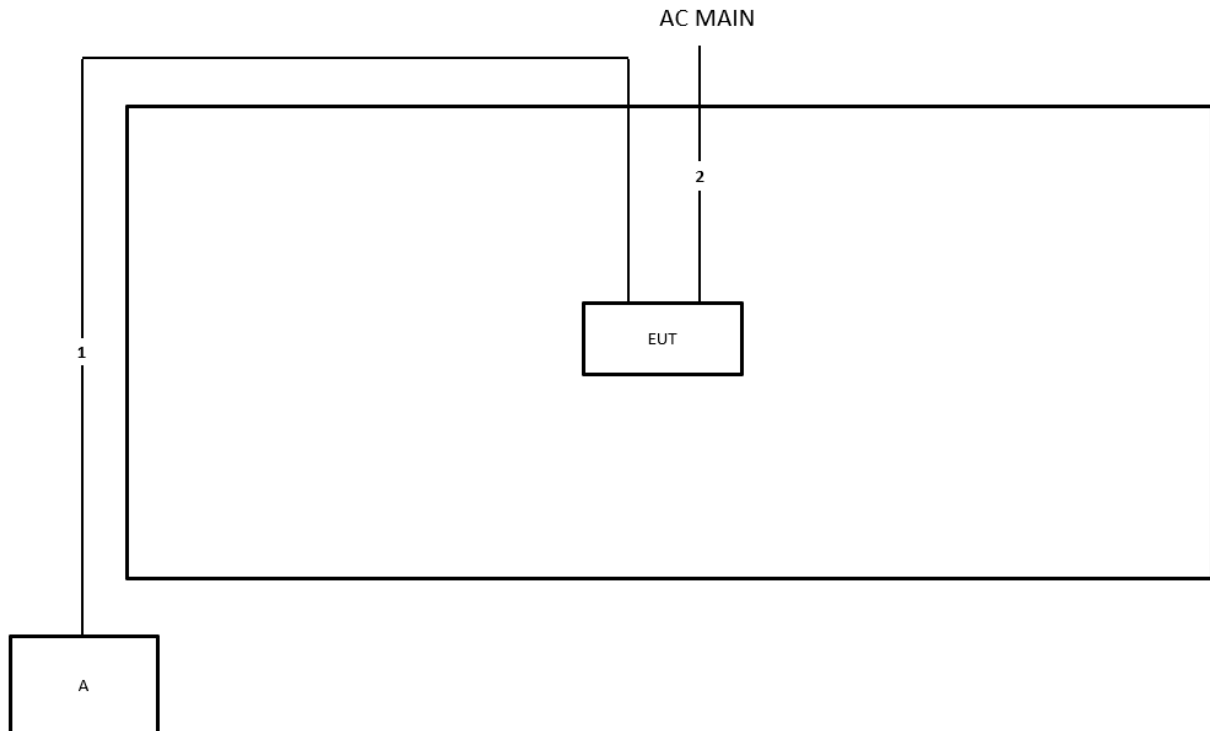
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	Lenovo	T470	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.8m

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.8m



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.

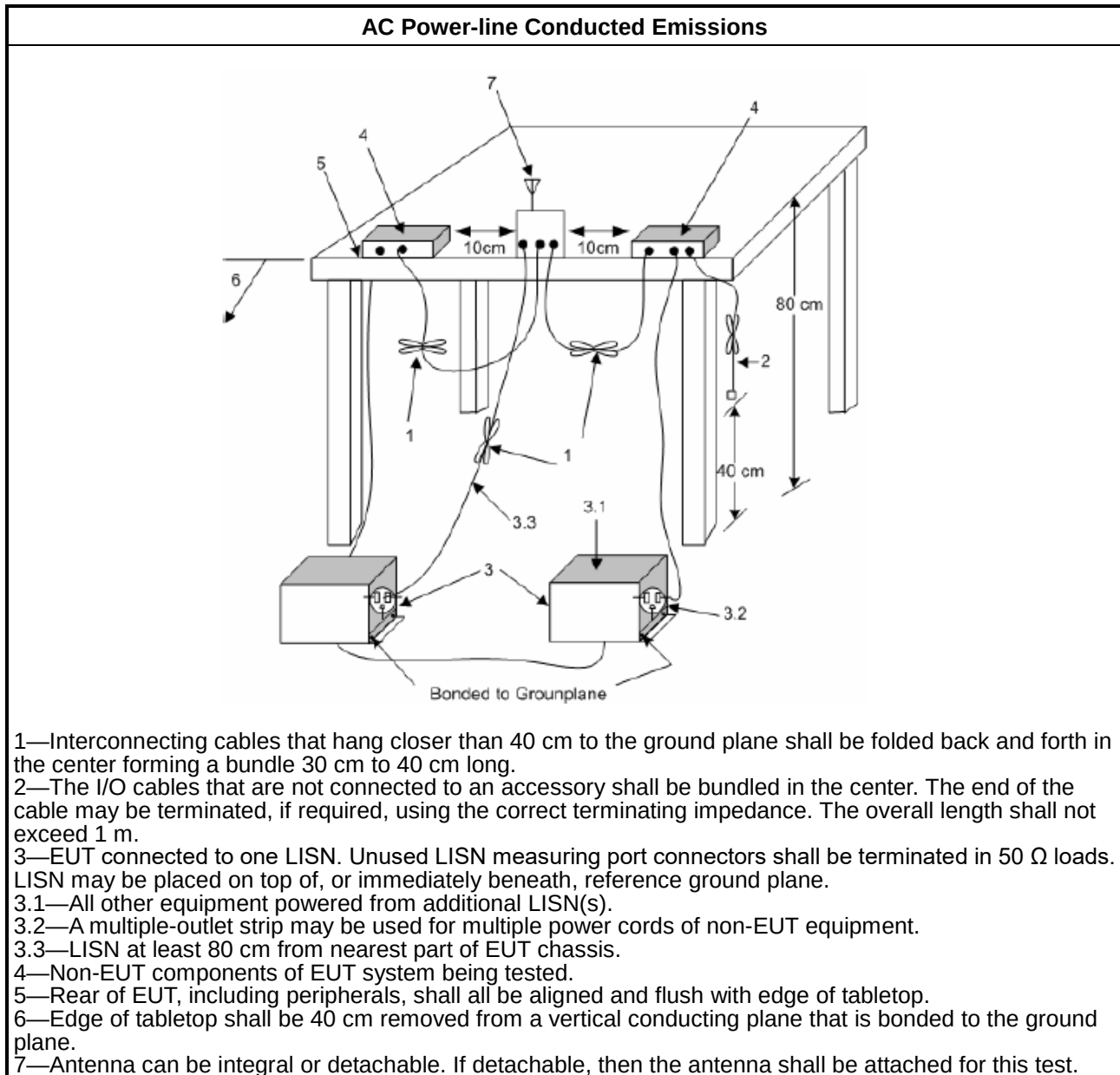
3.1.2 Measuring Instruments

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:

- 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.

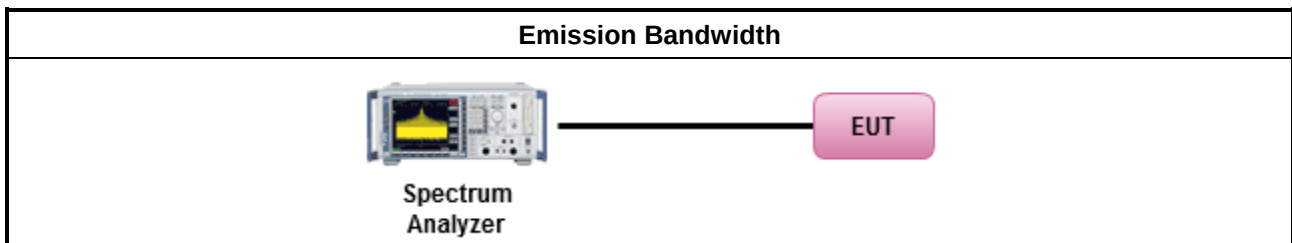
3.2.2 Measuring Instruments

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

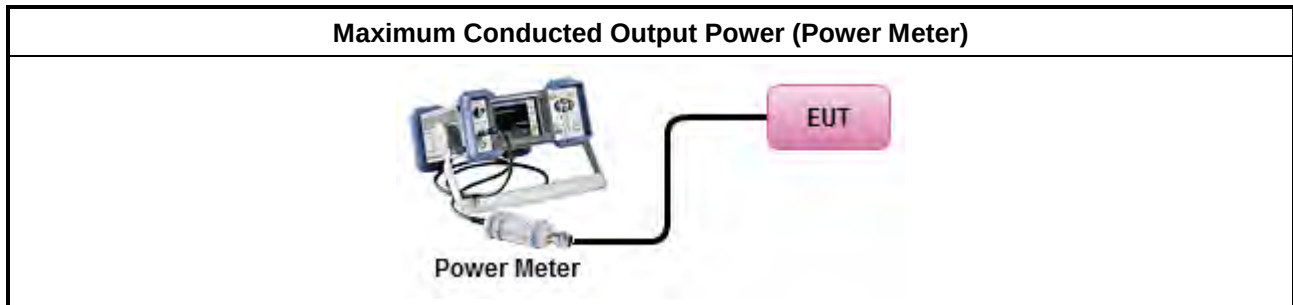
Refer a test equipment and calibration data table in this test report.



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: $P_{total} = P_1 + P_2 + \dots + P_n$ (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

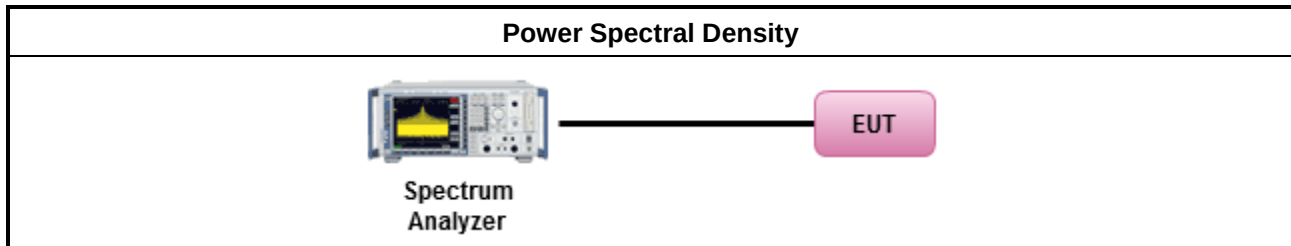
3.4.2 Measuring Instruments

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.	

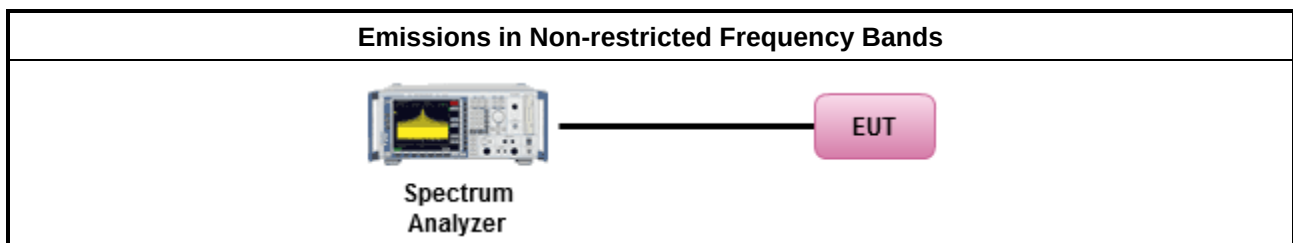
3.5.2 Measuring Instruments

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.

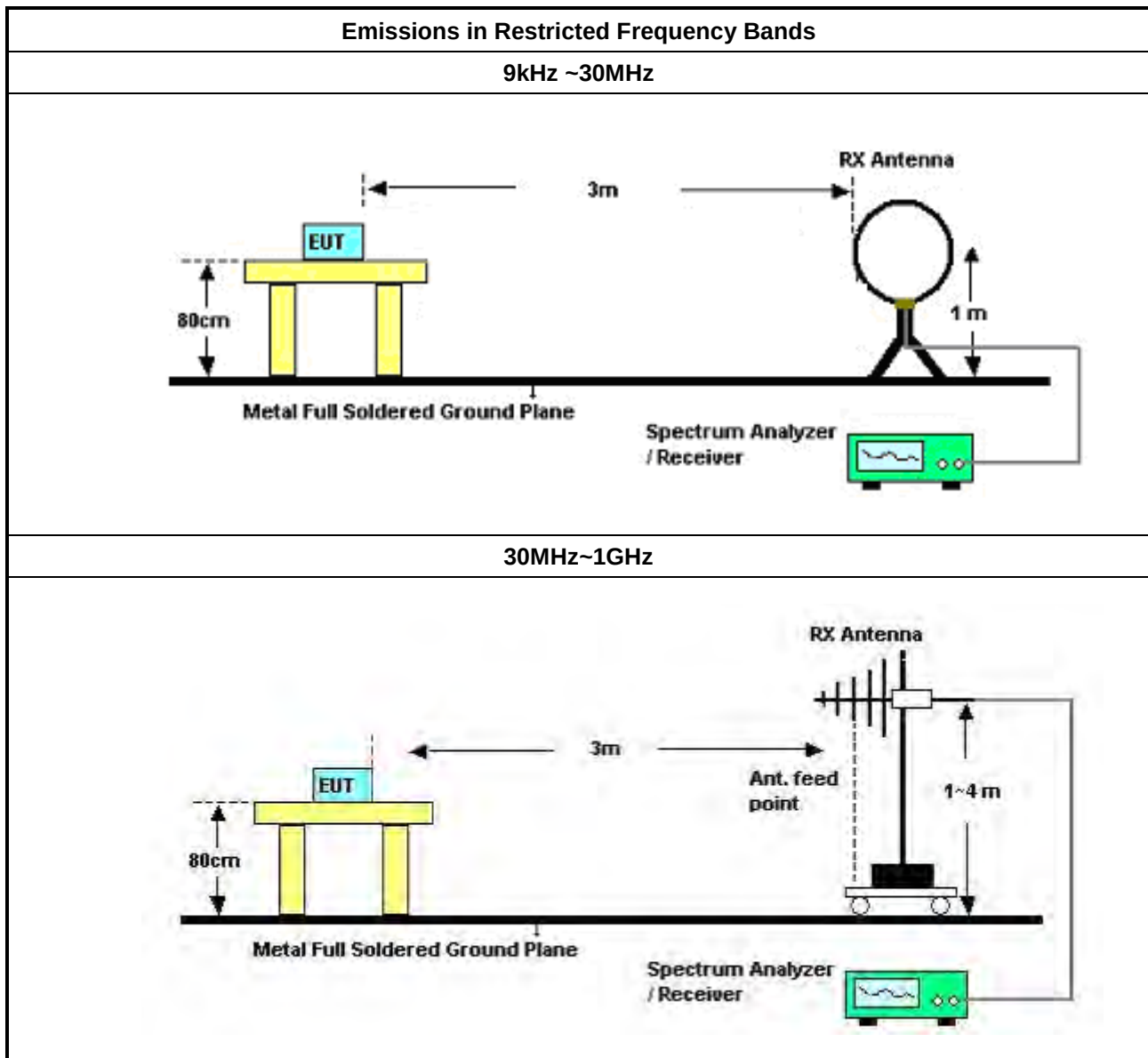
3.6.2 Measuring Instruments

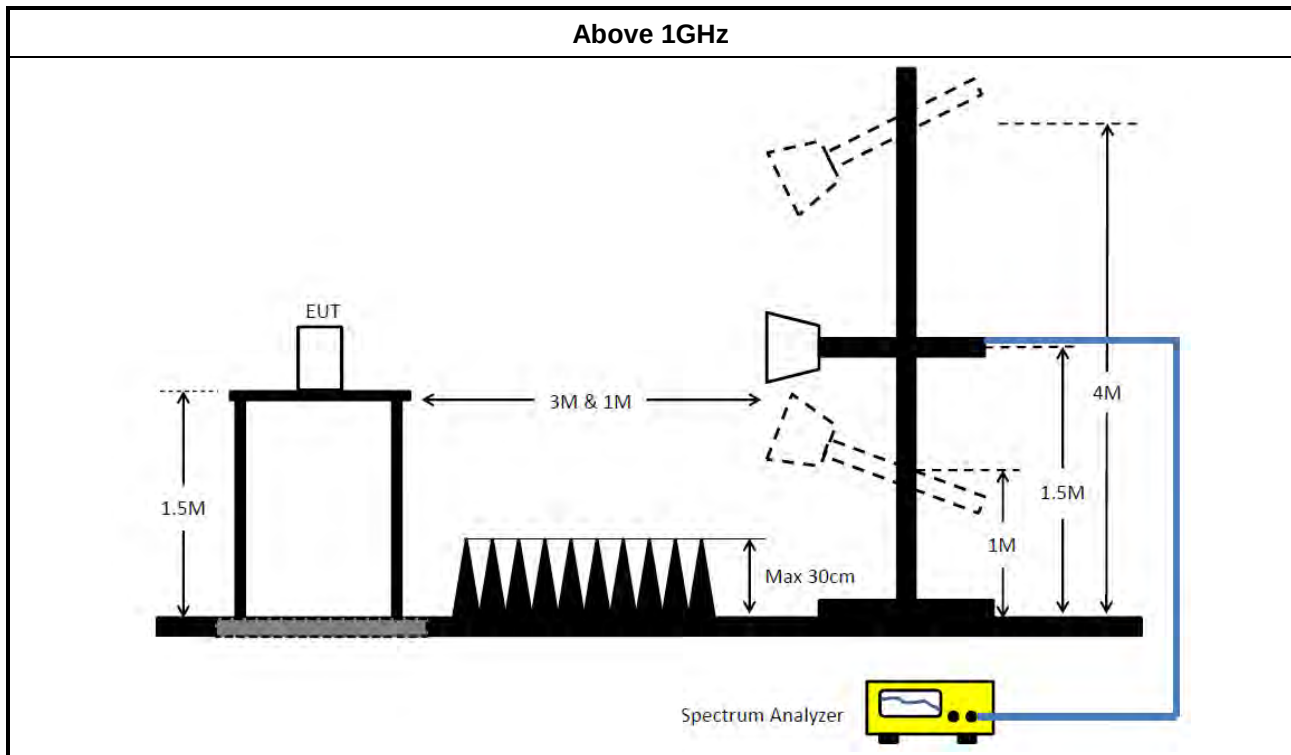
Refer a test equipment and calibration data table in this test report.

**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





3.6.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 12, 2026	Mar. 11, 2027	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 04, 2026	Feb. 03, 2027	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 10, 2026	Apr. 09, 2027	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Sep. 14, 2025	Sep. 13, 2026	Conduction (CO01-CB)
COND Cable	Woken	Cable	CO01	9kHz ~ 30MHz	Sep. 14, 2025	Sep. 13, 2026	Conduction (CO01-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30MHz	Oct. 20, 2025	Oct. 19, 2026	Radiation (03CH06-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 01, 2025	Jul. 31, 2026	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Jul. 28, 2025	Jul. 27, 2026	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 27, 2025	Nov. 26, 2026	Radiation (03CH06-CB)
Signal analyzer	R&S	FSV3044	101667	9kHz~44GHz	Aug. 27, 2025	Aug. 26, 2026	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 29, 2025	Oct. 28, 2026	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-05+68	30MHz~1GHz	Sep. 25, 2025	Sep. 24, 2026	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE-EMI	V5.11.10	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz~18GHz 3m	Sep. 27, 2025	Sep. 26, 2026	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 06, 2025	Jun. 05, 2026	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Oct. 07, 2025	Oct. 06, 2026	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Jun. 28, 2025	Jun. 27, 2026	Radiation (03CH05-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 21, 2025	Nov. 20, 2026	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Apr. 21, 2025	Apr. 20, 2026	Radiation (03CH05-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Sep. 25, 2025	Sep. 24, 2026	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Sep. 25, 2025	Sep. 24, 2026	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Feb. 11, 2026	Feb. 10, 2027	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.27	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 14, 2026	Jan. 13, 2027	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Sep. 12, 2025	Sep. 11, 2026	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Sep. 12, 2025	Sep. 11, 2026	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-11	30MHz ~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-12	30MHz ~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH03-CB)
RF Cable	Woken	RG402	High Cable-13	30MHz ~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1~18GHz	Sep. 20, 2025	Sep. 19, 2026	Conducted (TH03-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.27	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Conducted (TH03-CB)

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

NCR means Non-Calibration required.



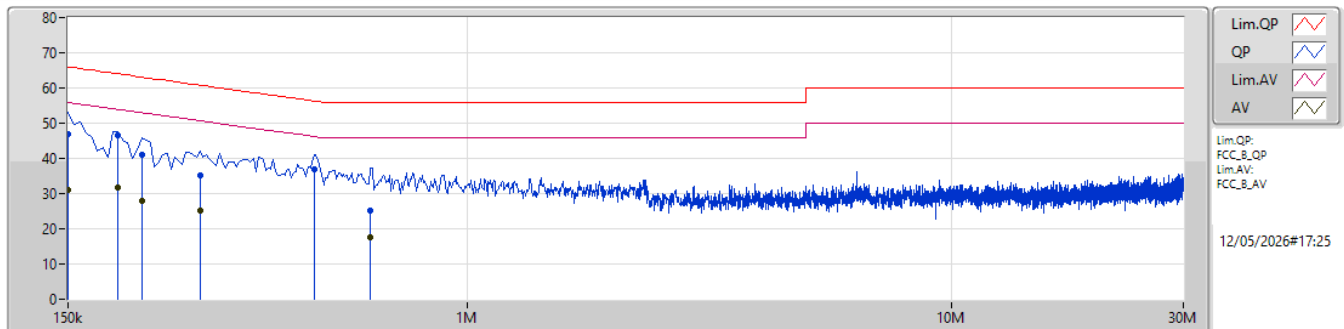
Conducted Emissions at Powerline

Appendix A

Summary

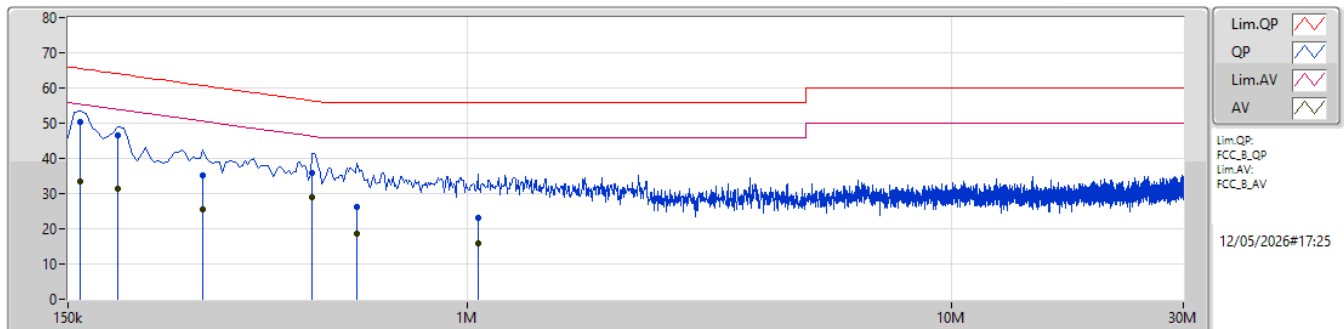
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 5	Pass	AV	483k	36.83	46.29	-9.46	Line

Mode 5



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	150k	46.91	66.00	-19.09	10.13	Line	-	36.78	0.15	0.10	9.88						
AV	150k	31.11	56.00	-24.89	10.13	Line	-	20.98	0.15	0.10	9.88						
QP	190.5k	46.43	64.01	-17.58	9.99	Line	-	36.44	0.14	0.07	9.78						
AV	190.5k	31.61	54.01	-22.40	9.99	Line	-	21.62	0.14	0.07	9.78						
QP	213k	41.18	63.09	-21.91	9.98	Line	-	31.20	0.14	0.07	9.77						
AV	213k	27.80	53.09	-25.29	9.98	Line	-	17.82	0.14	0.07	9.77						
QP	280.5k	35.27	60.80	-25.53	10.07	Line	-	25.20	0.15	0.09	9.83						
AV	280.5k	25.27	50.80	-25.53	10.07	Line	-	15.20	0.15	0.09	9.83						
QP	483k	36.73	56.29	-19.56	10.20	Line	-	26.53	0.17	0.13	9.90						
AV	483k	36.83	46.29	-9.46	10.20	Line	"Worst"	26.63	0.17	0.13	9.90						
QP	631.5k	25.13	56.00	-30.87	10.21	Line	-	14.92	0.18	0.13	9.90						
AV	631.5k	17.70	46.00	-28.30	10.21	Line	-	7.49	0.18	0.13	9.90						

Mode 5



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	159k	50.40	65.52	-15.12	10.08	Neutral	"Worst"	40.32	0.14	0.09	9.85						
AV	159k	33.60	55.52	-21.92	10.08	Neutral	-	23.52	0.14	0.09	9.85						
QP	190.5k	46.44	64.01	-17.57	9.99	Neutral	-	36.45	0.14	0.07	9.78						
AV	190.5k	31.35	54.01	-22.66	9.99	Neutral	-	21.36	0.14	0.07	9.78						
QP	285k	35.33	60.67	-25.34	10.06	Neutral	-	25.27	0.14	0.09	9.83						
AV	285k	25.57	50.67	-25.10	10.06	Neutral	-	15.51	0.14	0.09	9.83						
QP	478.5k	35.85	56.36	-20.51	10.18	Neutral	-	25.67	0.15	0.13	9.90						
AV	478.5k	28.97	46.36	-17.39	10.18	Neutral	-	18.79	0.15	0.13	9.90						
QP	591k	26.22	56.00	-29.78	10.18	Neutral	-	16.04	0.15	0.13	9.90						
AV	591k	18.69	46.00	-27.31	10.18	Neutral	-	8.51	0.15	0.13	9.90						
QP	1.05M	23.03	56.00	-32.97	10.20	Neutral	-	12.83	0.17	0.15	9.88						
AV	1.05M	15.97	46.00	-30.03	10.20	Neutral	-	5.77	0.17	0.15	9.88						

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Zigbee	1.74M	2.218M	2M22G1D	881.25k	2.181M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Zigbee	-	-	-	-
2405MHz	Pass	500k	1.028M	2.181M
2440MHz	Pass	500k	881.25k	2.218M
2480MHz	Pass	500k	1.74M	2.197M

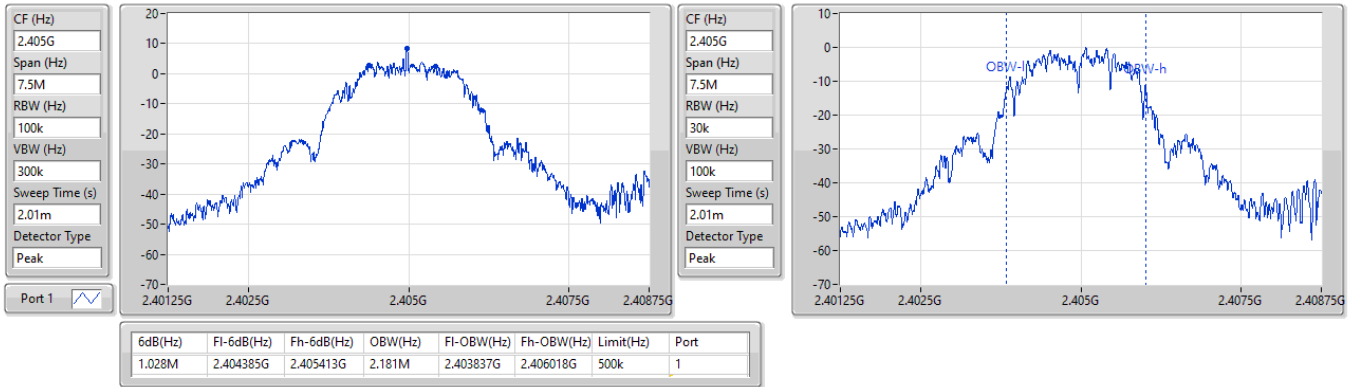
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_Zigbee

EBW

2405MHz

15/04/2026

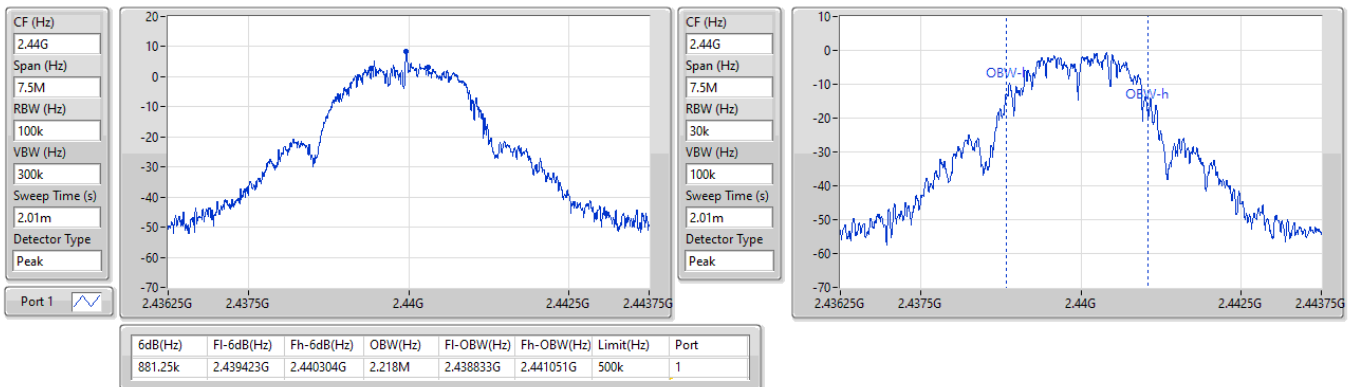


2.4-2.4835GHz_Zigbee

EBW

2440MHz

15/04/2026

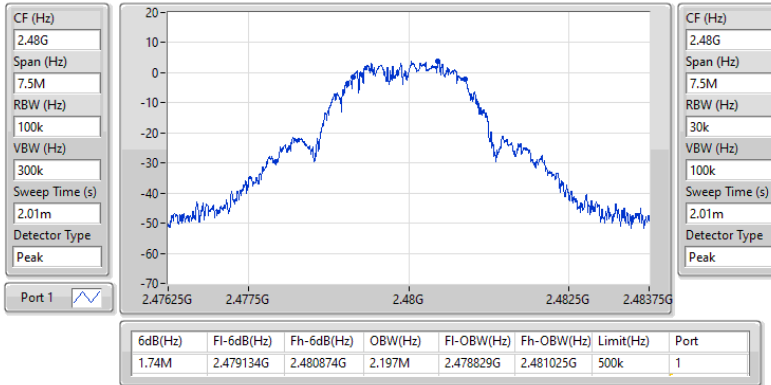


2.4-2.4835GHz Zigbee

EBW

2480MHz

15/04/2026





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Zigbee	9.48	0.00887



Average Power

Appendix C

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Zigbee	-	-	-	-	-
2405MHz	Pass	1.50	9.45	9.45	30.00
2440MHz	Pass	1.50	9.48	9.48	30.00
2480MHz	Pass	1.50	9.28	9.28	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	-
Zigbee	-5.16

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Zigbee	-	-	-	-	-
2405MHz	Pass	1.50	-5.16	-5.16	8.00
2440MHz	Pass	1.50	-7.14	-7.14	8.00
2480MHz	Pass	1.50	-6.04	-6.04	8.00

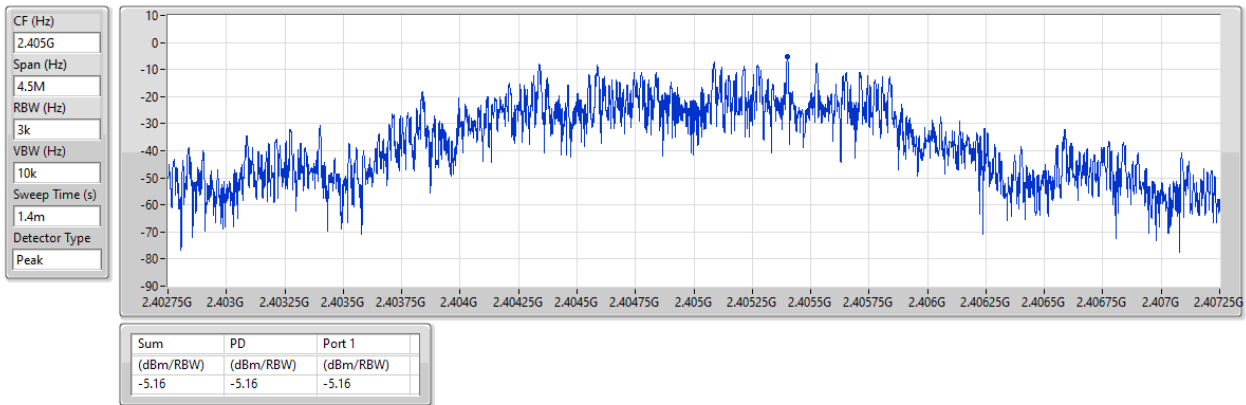
DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

2.4-2.4835GHz_Zigbee

PSD

2405MHz

15/04/2026

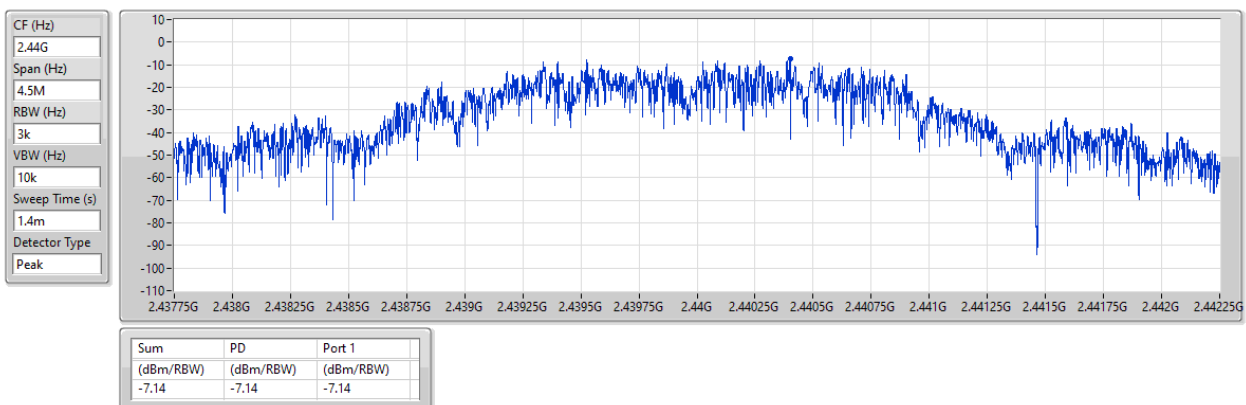


2.4-2.4835GHz_Zigbee

PSD

2440MHz

15/04/2026

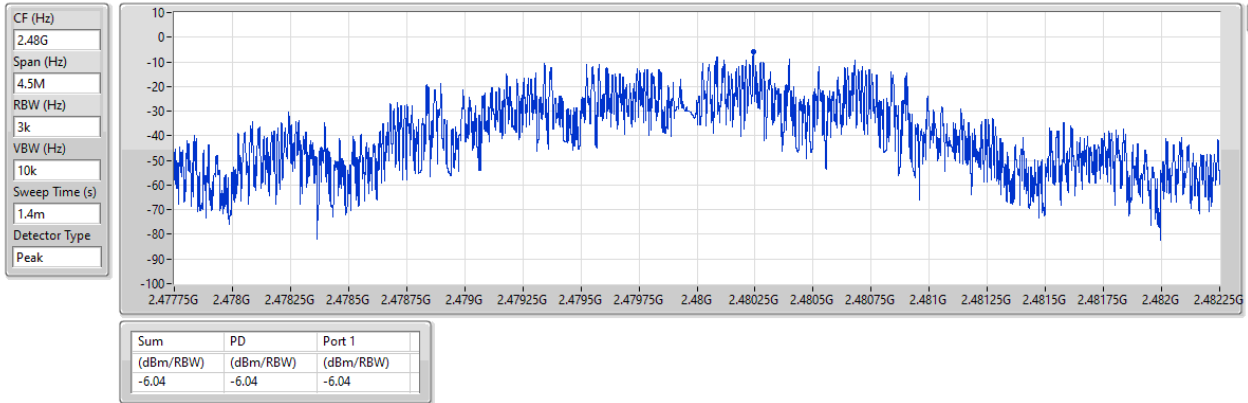


2.4-2.4835GHz_Zigbee

PSD

2480MHz

15/04/2026





Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	2.43991G	8.82	-21.18	33.55M	-54.16	2.39741G	-53.76	2.4G	-55.93	21.98359G	-45.62	1



Result

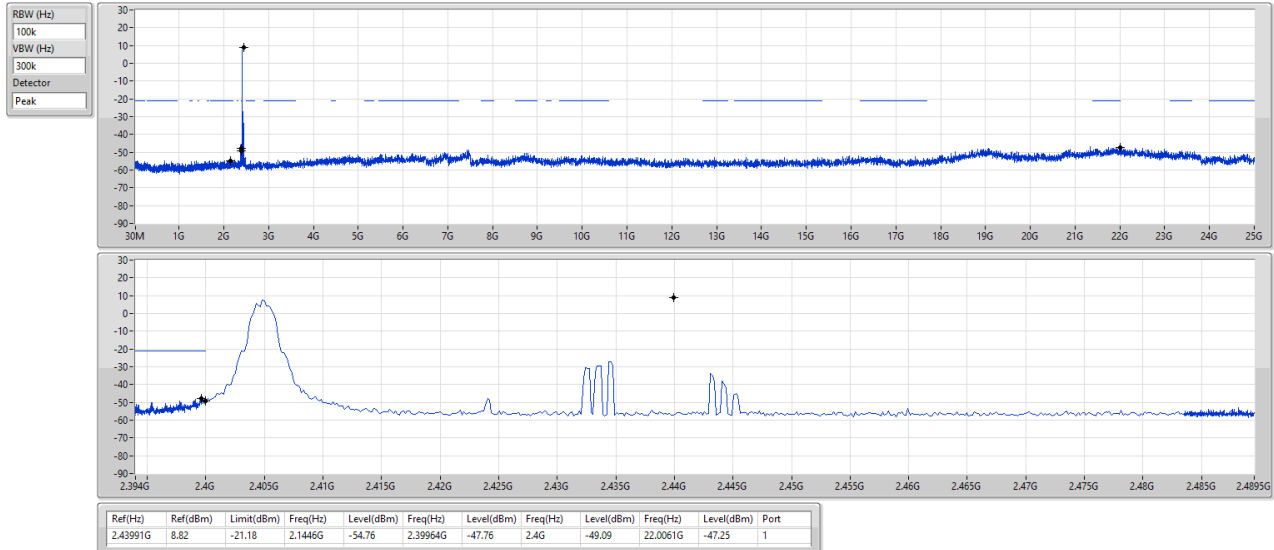
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.43991G	8.82	-21.18	2.1446G	-54.76	2.39964G	-47.76	2.4G	-49.09	22.0061G	-47.25	1
2440MHz	Pass	2.43991G	8.82	-21.18	2.04295G	-54.07	2.39706G	-54.14	2.4G	-57.30	21.96108G	-46.30	1
2480MHz	Pass	2.43991G	8.82	-21.18	33.55M	-54.16	2.39741G	-53.76	2.4G	-55.93	21.98359G	-45.62	1

2.4-2.4835GHz Zigbee

CSEndB

2405MHz

15/04/2026

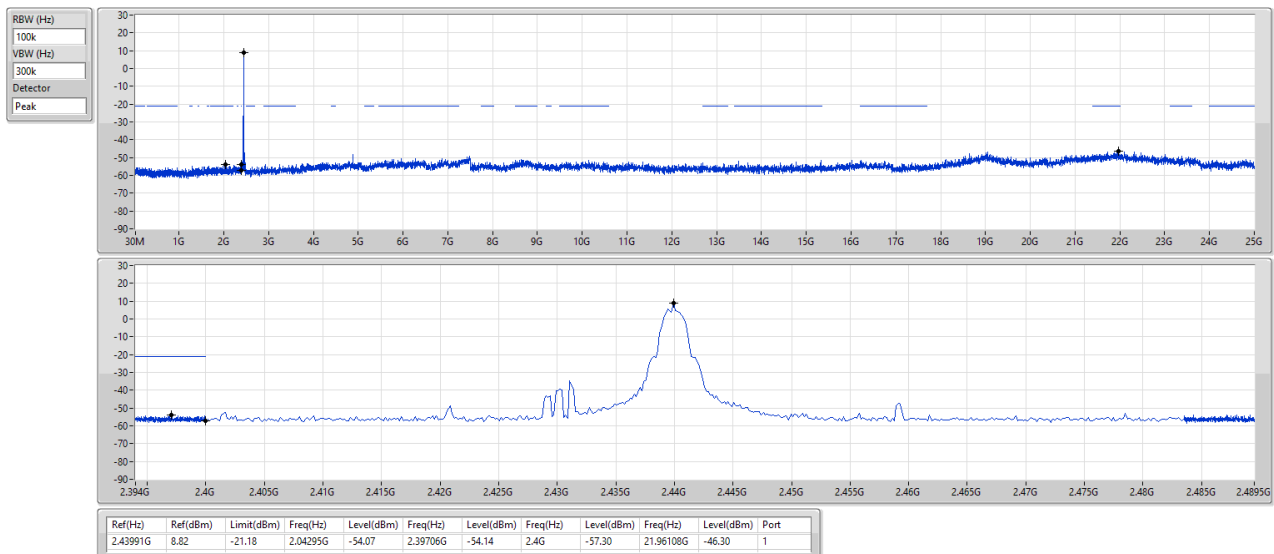


2.4-2.4835GHz Zigbee

CSEndB

2440MHz

15/04/2026



2.4-2.4835GHz_Zigbee

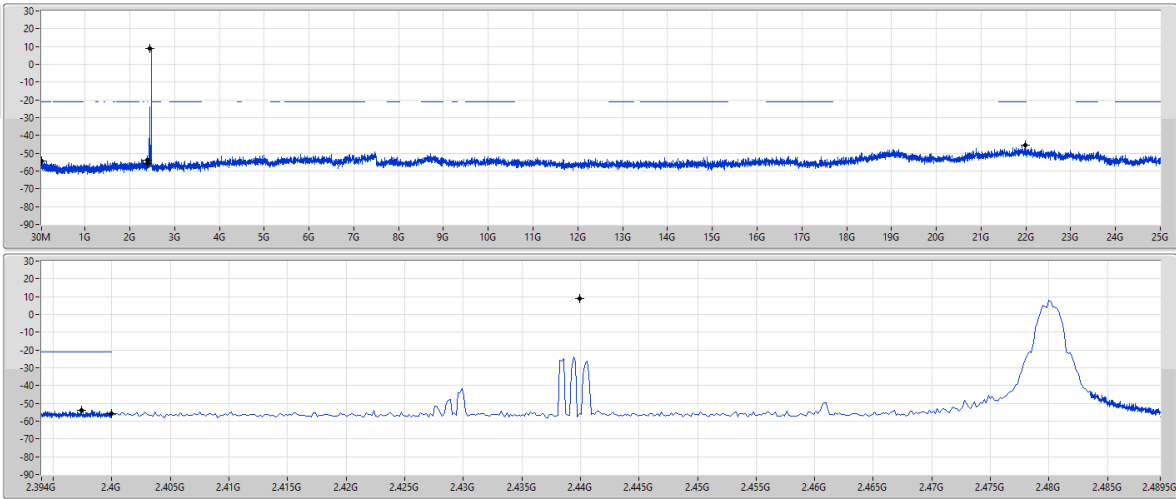
CSEndB

2480MHz

15/04/2026

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
2.43991G	8.82	-21.18	33.55M	-54.16	2.39741G	-53.76	2.4G	-55.93	2.198359G	-45.62	1



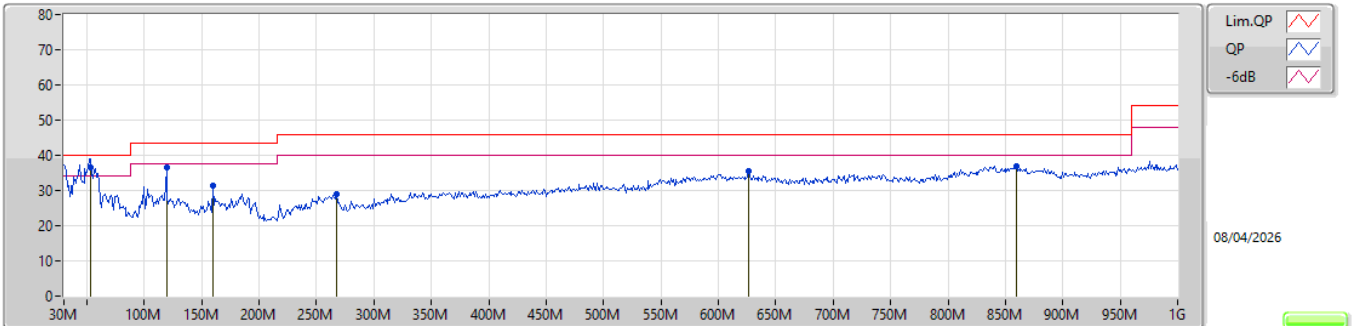
Radiated Emissions below 1GHz

Appendix F.1

Summary

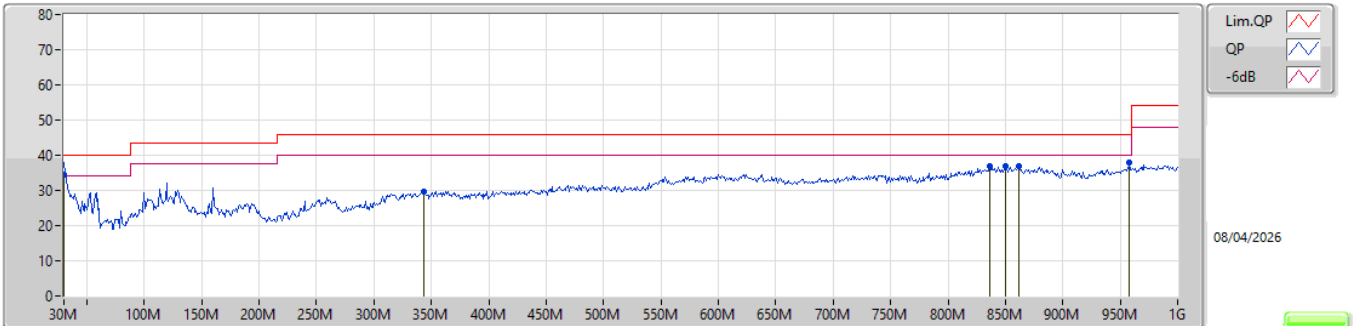
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	53.28M	36.59	40.00	-3.41	Vertical

Radiated Emissions below 1GHz_Mode 1



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	53.28M	36.59	40.00	-3.41	-29.99	3	Vertical	360	1.00	"Worst"	66.58	13.38	1.32	44.69		
PK	119.24M	36.66	43.50	-6.84	-24.66	3	Vertical	38	1.25	-	61.32	18.08	1.93	44.67		
PK	159.98M	31.35	43.50	-12.15	-26.51	3	Vertical	239	1.00	-	57.86	15.85	2.23	44.59		
PK	267.65M	28.80	46.00	-17.20	-22.27	3	Vertical	235	1.50	-	51.07	19.23	2.87	44.37		
PK	626.55M	35.36	46.00	-10.64	-14.37	3	Vertical	181	1.00	-	49.73	25.24	4.25	43.86		
PK	859.35M	36.93	46.00	-9.07	-12.09	3	Vertical	201	3.00	-	49.02	26.51	4.96	43.56		

Radiated Emissions below 1GHz_Mode 1



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	30M	34.53	40.00	-5.47	-19.12	3	Horizontal	201	2.00	"Worst"	53.65	24.35	0.96	44.43		
PK	343.31M	29.81	46.00	-16.19	-21.26	3	Horizontal	305	1.00	-	51.07	19.82	3.24	44.32		
PK	836.07M	36.78	46.00	-9.22	-12.37	3	Horizontal	313	1.25	-	49.15	26.33	4.90	43.60		
PK	850.62M	37.02	46.00	-8.98	-12.16	3	Horizontal	360	1.50	-	49.18	26.49	4.93	43.58		
PK	861.29M	36.81	46.00	-9.19	-12.08	3	Horizontal	52	1.25	-	48.89	26.52	4.96	43.56		
PK	958.29M	37.82	46.00	-8.18	-11.05	3	Horizontal	357	2.00	-	48.87	27.26	5.22	43.53		

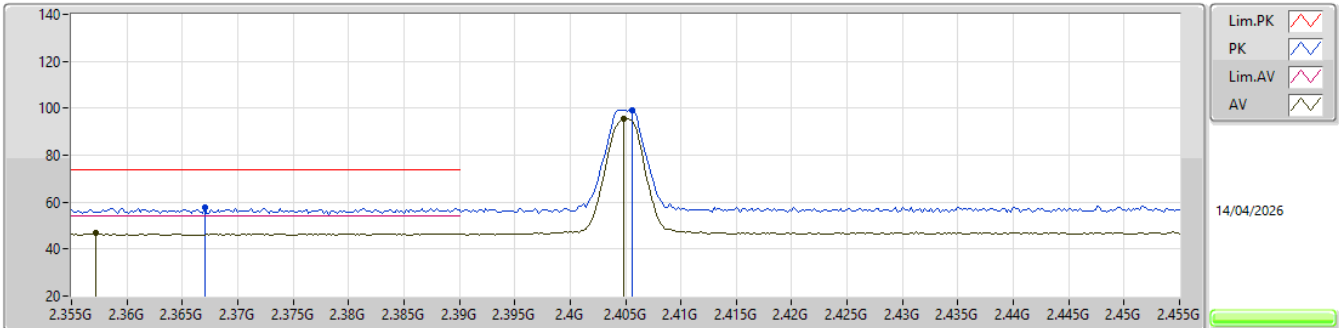


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	AV	2.4835G	53.73	54.00	-0.27	3	Horizontal	323	1.02	-

2.4-2.4835GHz_Zigbee

2405MHz_TX

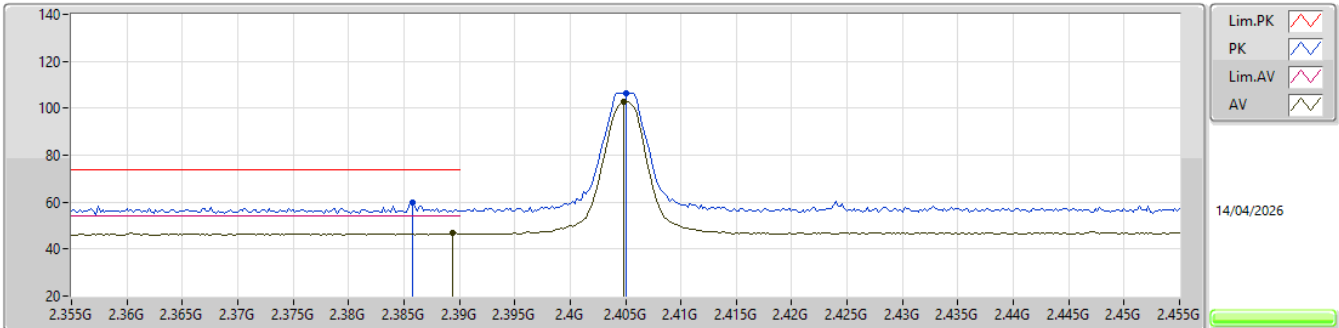


EUT_Z_1TX
Setting 100
05-X-P-5

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	2.367G	57.99	74.00	-16.01	25.81	3	Vertical	282	1.24	-	27.20	4.98	-				
AV	2.3572G	46.69	54.00	-7.31	14.52	3	Vertical	282	1.24	-	27.20	4.97	-				
PK	2.4056G	99.33	Inf	-Inf	66.85	3	Vertical	282	1.24	-	27.46	5.02	-				
AV	2.4048G	95.77	Inf	-Inf	63.30	3	Vertical	282	1.24	-	27.45	5.02	-				

2.4-2.4835GHz_Zigbee

2405MHz_TX

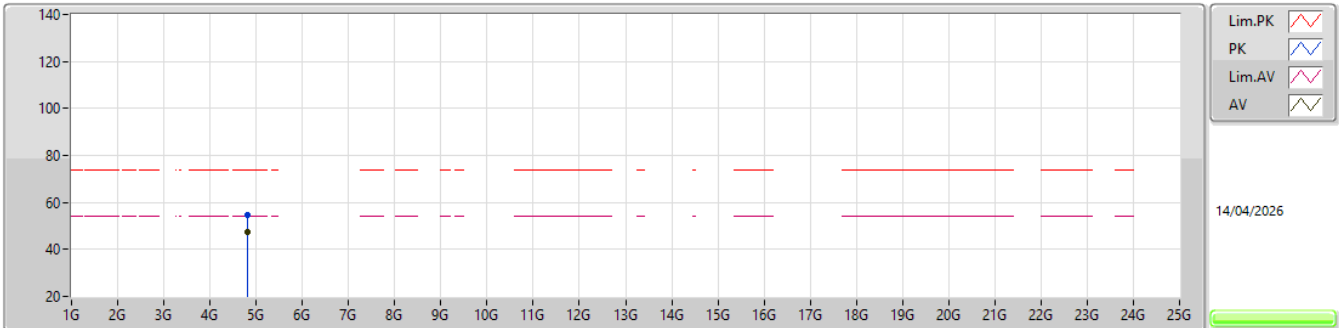


EUT_Z_1TX
Setting 100
05-X-P-5

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	2.3858G	59.67	74.00	-14.33	27.41	3	Horizontal	222	1.01	-	27.26	5.00	-			
AV	2.3894G	46.92	54.00	-7.08	14.63	3	Horizontal	222	1.01	-	27.29	5.00	-			
PK	2.405G	106.53	Inf	-Inf	74.06	3	Horizontal	222	1.01	-	27.45	5.02	-			
AV	2.4048G	102.97	Inf	-Inf	70.50	3	Horizontal	222	1.01	-	27.45	5.02	-			

2.4-2.4835GHz_Zigbee

2405MHz_TX

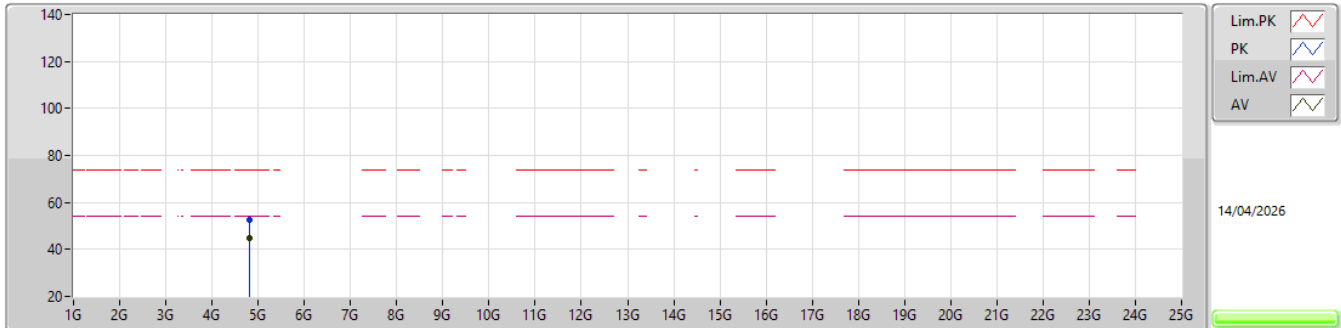


EUT_Z_1TX
Setting 100
05-X-P-5

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	4.80896G	54.52	74.00	-19.48	49.15	3	Vertical	326	2.88	-	32.37	8.18	35.18			
AV	4.81102G	47.21	54.00	-6.79	41.82	3	Vertical	326	2.88	-	32.39	8.18	35.18			

2.4-2.4835GHz_Zigbee

2405MHz_TX

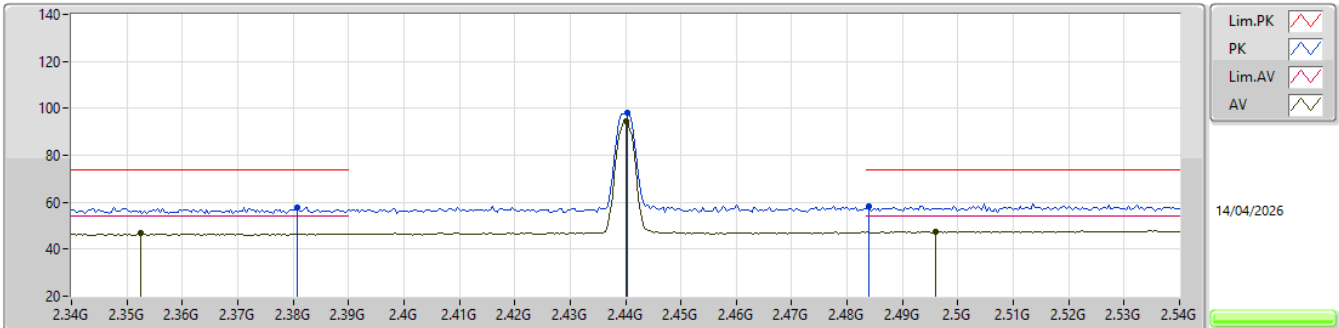


EUT_Z_1TX
Setting 100
05-X-P-5

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	4.80892G	52.72	74.00	-21.28	47.35	3	Horizontal	194	1.80	-	32.37	8.18	35.18			
AV	4.809G	44.69	54.00	-9.31	39.32	3	Horizontal	194	1.80	-	32.37	8.18	35.18			

2.4-2.4835GHz_Zigbee

2440MHz_TX

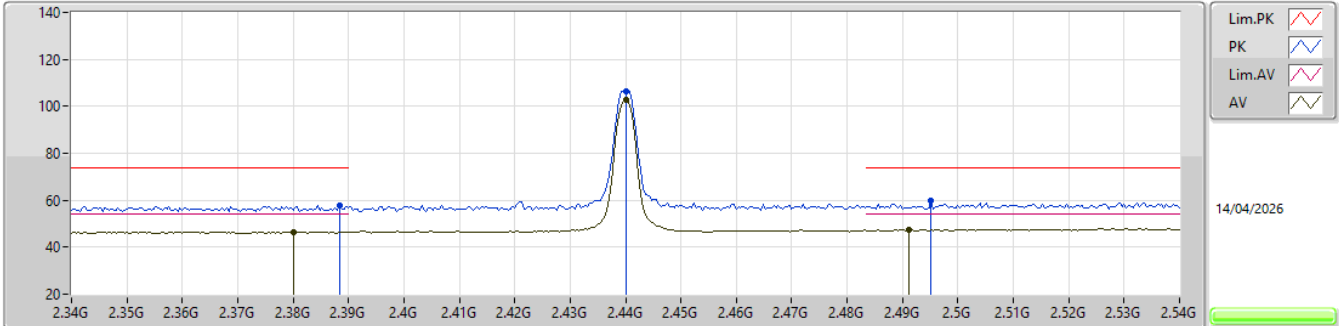


EUT_Z_1TX
Setting 100
05-X-P-5

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	2.3808G	57.79	74.00	-16.21	25.59	3	Vertical	236	2.56	-	27.21	4.99	-				
AV	2.3524G	46.64	54.00	-7.36	14.48	3	Vertical	236	2.56	-	27.20	4.96	-				
PK	2.4404G	98.09	Inf	-Inf	65.52	3	Vertical	236	2.56	-	27.50	5.07	-				
AV	2.44G	94.55	Inf	-Inf	61.98	3	Vertical	236	2.56	-	27.50	5.07	-				
PK	2.484G	58.49	74.00	-15.51	25.52	3	Vertical	236	2.56	-	27.84	5.13	-				
AV	2.496G	47.52	54.00	-6.48	14.42	3	Vertical	236	2.56	-	27.96	5.14	-				

2.4-2.4835GHz_Zigbee

2440MHz_TX

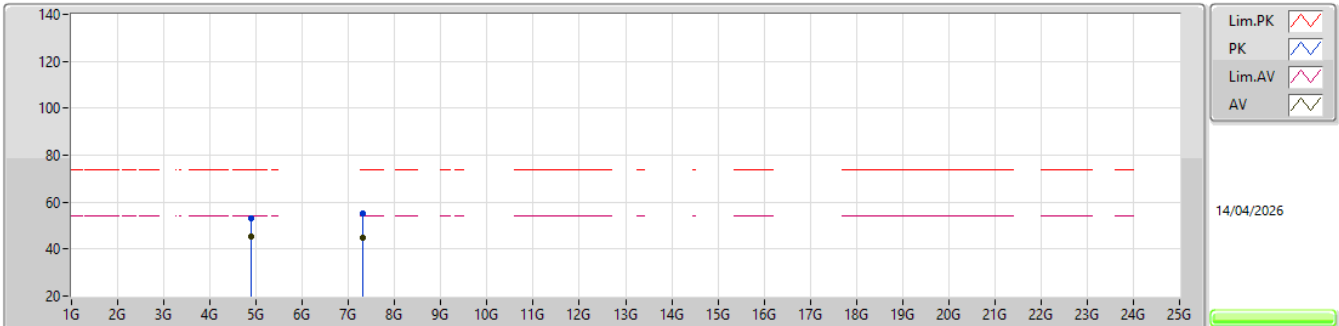


EUT_Z_1TX
Setting 100
05-X-P-5

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	2.3884G	57.56	74.00	-16.44	25.28	3	Horizontal	223	1.61	-	27.28	5.00	-				
AV	2.38G	46.51	54.00	-7.49	14.32	3	Horizontal	223	1.61	-	27.20	4.99	-				
PK	2.44G	106.42	Inf	-Inf	73.85	3	Horizontal	223	1.61	-	27.50	5.07	-				
AV	2.44G	102.96	Inf	-Inf	70.39	3	Horizontal	223	1.61	-	27.50	5.07	-				
PK	2.4952G	59.97	74.00	-14.03	26.88	3	Horizontal	223	1.61	-	27.95	5.14	-				
AV	2.4912G	47.55	54.00	-6.45	14.50	3	Horizontal	223	1.61	-	27.91	5.14	-				

2.4-2.4835GHz_Zigbee

2440MHz_TX

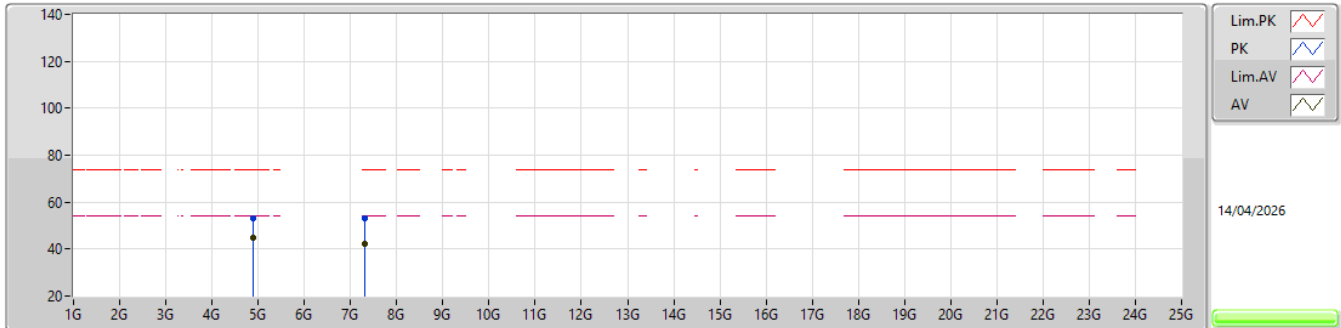


EUT_Z_1TX
Setting 100
05-X-P-5

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	4.88128G	53.00	74.00	-21.00	47.16	3	Vertical	333	3.00	-	32.83	8.18	35.17				
AV	4.88106G	45.15	54.00	-8.85	39.32	3	Vertical	333	3.00	-	32.82	8.18	35.17				
PK	7.32162G	55.34	74.00	-18.66	42.66	3	Vertical	122	1.80	-	37.06	9.70	34.08				
AV	7.32158G	44.76	54.00	-9.24	32.08	3	Vertical	122	1.80	-	37.06	9.70	34.08				

2.4-2.4835GHz_Zigbee

2440MHz_TX

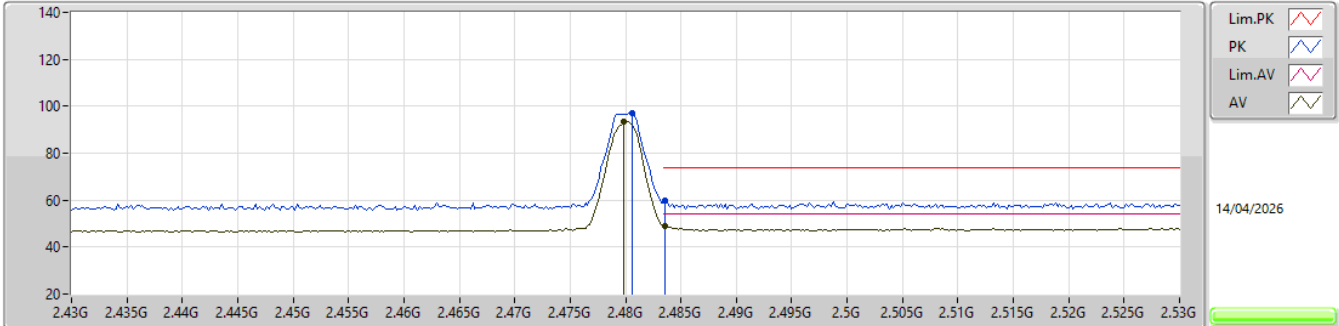


EUT_Z_1TX
Setting 100
05-X-P-5

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	4.88092G	53.12	74.00	-20.88	47.29	3	Horizontal	210.7	1.80	-	32.82	8.18	35.17				
AV	4.88088G	44.71	54.00	-9.29	38.88	3	Horizontal	210.7	1.80	-	32.82	8.18	35.17				
PK	7.32138G	53.05	74.00	-20.95	40.37	3	Horizontal	322	1.80	-	37.06	9.70	34.08				
AV	7.3218G	42.43	54.00	-11.57	29.75	3	Horizontal	322	1.80	-	37.06	9.70	34.08				

2.4-2.4835GHz_Zigbee

2480MHz_TX

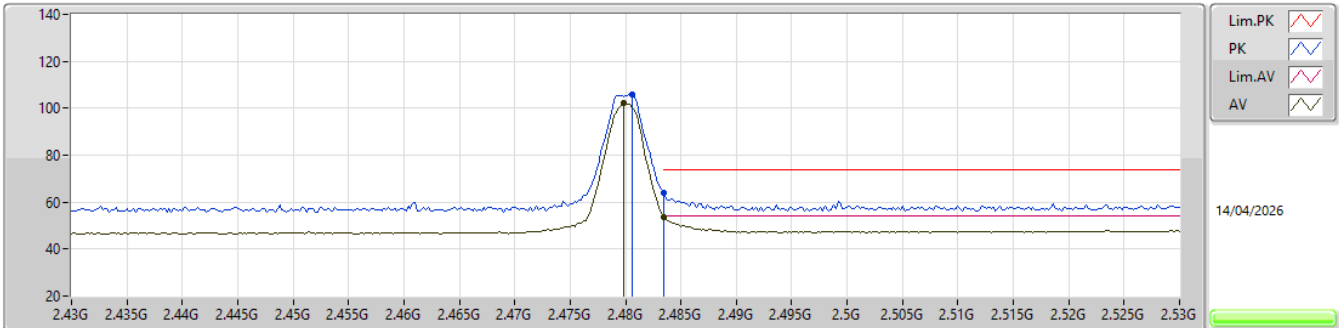


EUT_Z_1TX
Setting 100
05-X-P-5

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	2.4806G	96.95	Inf	-Inf	64.02	3	Vertical	230	1.80	-	27.81	5.12	-				
AV	2.4798G	93.44	Inf	-Inf	60.52	3	Vertical	230	1.80	-	27.80	5.12	-				
PK	2.4836G	60.04	74.00	-13.96	27.07	3	Vertical	230	1.80	-	27.84	5.13	-				
AV	2.4836G	48.79	54.00	-5.21	15.82	3	Vertical	230	1.80	-	27.84	5.13	-				

2.4-2.4835GHz_Zigbee

2480MHz_TX

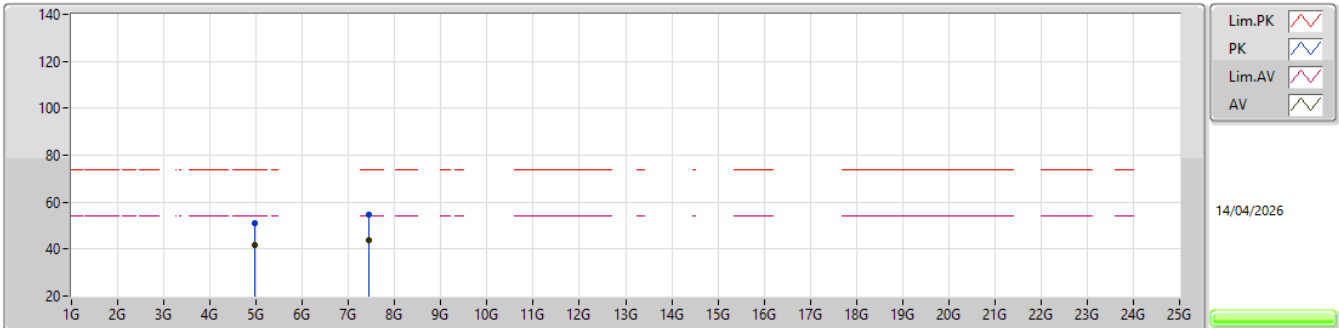


EUT_Z_1TX
Setting 100
05-X-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)				
PK	2.4806G	105.65	Inf	-Inf	72.72	3	Horizontal	323	1.02	-	27.81	5.12	-				
AV	2.4798G	102.13	Inf	-Inf	69.21	3	Horizontal	323	1.02	-	27.80	5.12	-				
PK	2.4835G	64.06	74.00	-9.94	31.09	3	Horizontal	323	1.02	-	27.84	5.13	-				
AV	2.4835G	53.73	54.00	-0.27	20.76	3	Horizontal	323	1.02	-	27.84	5.13	-				

2.4-2.4835GHz_Zigbee

2480MHz_TX

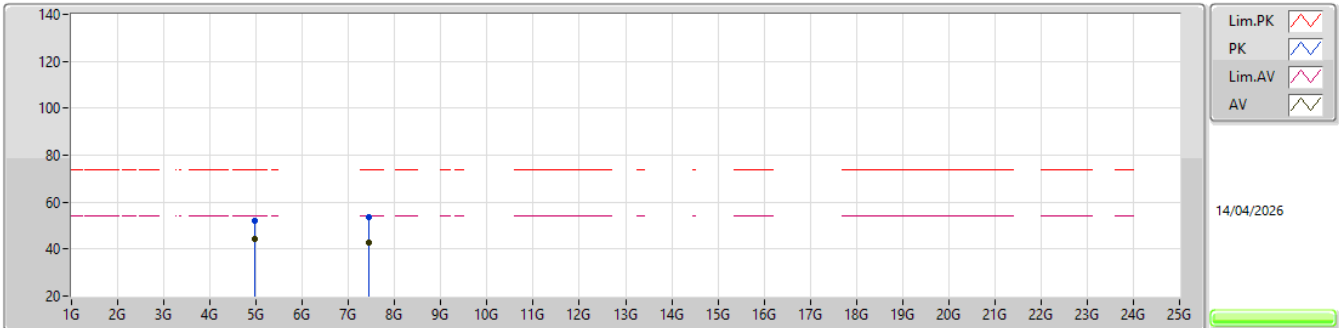


EUT_Z_1TX
Setting 100
05-X-P-5

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	4.96112G	51.07	74.00	-22.93	45.02	3	Vertical	96	3.00	-	33.04	8.17	35.16			
AV	4.96276G	41.71	54.00	-12.29	35.65	3	Vertical	96	3.00	-	33.05	8.17	35.16			
PK	7.4414G	54.40	74.00	-19.60	42.03	3	Vertical	125	1.80	-	36.52	9.79	33.94			
AV	7.44152G	43.89	54.00	-10.11	31.52	3	Vertical	125	1.80	-	36.52	9.79	33.94			

2.4-2.4835GHz_Zigbee

2480MHz_TX



EUT_Z_1TX
Setting 100
05-X-P-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	4.96102G	51.96	74.00	-22.04	45.91	3	Horizontal	193	1.01	-	33.04	8.17	35.16				
AV	4.96094G	44.08	54.00	-9.92	38.03	3	Horizontal	193	1.01	-	33.04	8.17	35.16				
PK	7.44164G	53.87	74.00	-20.13	41.50	3	Horizontal	256	1.04	-	36.52	9.79	33.94				
AV	7.44138G	42.99	54.00	-11.01	30.62	3	Horizontal	256	1.04	-	36.52	9.79	33.94				