Testing Laboratory
3787

RADIO TEST REPORT

FCC ID	:	**Z8H89FT0087**
Equipment	:	**X7-53X Wi-Fi 7 Indoor Access Point**
Brand Name	:	**Cambium Networks**
Model Name	:	**X7-53X**
Applicant	:	**Cambium Networks Inc.** **3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA**
Manufacturer	:	**Cambium Networks Inc.** **3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Jun. 25, 2024, and testing was started from Jul. 03, 2024 and completed on May 21, 2025. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Sam Chen
2025.06.11 11:41:46 +08'00'

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
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History of this test report

Report No.	Version	Description	Issued Date
FR462417-02AE	01	Initial issue of report	Jun. 11, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	Data Referencing
3.3	15.247(b)	Maximum Conducted Output Power	PASS	Data Referencing
3.4	15.247(e)	Power Spectral Density	PASS	Data Referencing
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	Data Referencing
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	For below 1GHz: Variant Device / FCC ID: Z8H89FT0087 For above 1GHz: Data Referencing

Data Referencing Statement:
This report references test data from the parent device (Original Sporton Report No.: FR462417AF, FCC ID: Z8H89FT0086).
The variant device (FCC ID: Z8H89FT0087) is electrically identical to the parent device for the portions of the circuitry corresponding to the data referencing.
The differences compared to the parent device are as follows:
1. Remove the hardware of the USB Port.
2. Remove the 5GHz high band and 6GHz radio hardware on Radio 4.
3. Add WLAN 5GHz UNII 4 function on Radio 2
4. Don’t support mode 2
The parent device supports modes are below:
Mode 1:
Radio 1: WLAN 2.4GHz
Radio 2: WLAN 5GHz UNII 1~3
Radio 3: Bluetooth or Zigbee
Radio 4: WLAN 6GHz UNII 5~8
Mode 2:
Radio 1: WLAN 2.4GHz
Radio 2: WLAN 5GHz UNII 1~2A
Radio 3: Bluetooth or Zigbee
Radio 4: WLAN 5GHz UNII 2C~4
The details of spot-check testing are at the discretion of the applicant’s engineering judgment. Accordingly, only the following items were spot-checked on the worst-case channel identified in the original report, and all results are included in this report:
1. Maximum Conducted Output Power
2. Emissions in Non-restricted Frequency Bands
3. Emissions in Restricted Frequency Bands
The applicant takes full responsibility that the test data as referenced in FCC ID: Z8H89FT0086 represents compliance with the new FCC ID: Z8H89FT0087.

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".
Disclaimer:
1. The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity. 2. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.

Reviewed by: Sam Chen
Report Producer: 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
2.4-2.4835GHz	Zigbee	3	1TX

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

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Modes of Operation
1	1	ACCTON	RFMTA202028IMLB901-1	Dipole	I-PEX	Note 1	WLAN 2.4GHz (Radio 1)
2	2	ACCTON	RFMTA202028IMLB901-2	Dipole	I-PEX		WLAN 2.4GHz (Radio 1)
3	1	ACCTON	RFMTA202028IMLB901-3	Dipole	I-PEX		WLAN 5GHz UNII 1-4 (Radio 2)
4	2	ACCTON	RFMTA202028IMLB901-4	Dipole	I-PEX		WLAN 5GHz UNII 1-4 (Radio 2)
5	3	ACCTON	RFMTA202028IMLB901-5	Dipole	I-PEX		WLAN 5GHz UNII 1-4 (Radio 2)
6	4	ACCTON	RFMTA202028IMLB901-6	Dipole	I-PEX		WLAN 5GHz UNII 1-4 (Radio 2)
7	1	ACCTON	GT128V007S-001-1	On board chip	N/A		Bluetooth or Zigbee (Radio 3)

Note 1:

Ant.	Antenna Gain (dBi)				
	WLAN 2.4GHz (Radio 1)				
	2.4GHz	2.45GHz	2.4835GHz		
1	5.18	5.54	4.85		
2	4.30	4.91	4.16		
Ant.	WLAN 5GHz UNII 1-4 (Radio 2)				
	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz
3	4.53	4.73	5.43	5.95	4.1
4	4.42	4.45	5.71	4.41	4.4
5	4.41	4.77	3.91	3.44	3.28
6	4.30	4.6	3.73	4.00	4.35
Bluetooth or Zigbee (Radio 3)					
7	4.3				

Item	Directional Gain (dBi)				
	WLAN 2.4GHz (Radio 1)				
	2.4GHz	2.45GHz	2.4835GHz		
2T1S	6.91	6.86	6.04		
2T2S	5.18	5.54	4.85		
Item	WLAN 5GHz UNII 1-4 (Radio 2)				
	5.2GHz	5.3GHz	5.6GHz	5.785GHz	5.885GHz
4T1S	8.62	9.31	9.18	8.43	8.05
4T2S	5.62	6.31	6.18	5.95	5.05
4T4S	4.53	4.77	5.71	5.95	4.4

Note 2: The above information (excepting Ant. 1-6 antenna gain and directional gain) was declared by manufacturer.

Note 3: Radio 1~2: Maximum Directional Gain following KDB662911 D03.

For Radio 1:

For 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 2:

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

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

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

For Radio 3:

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

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
Zigbee_Nss 1	0.445	3.52	913.125u	3k

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

1.1.4 EUT Operational Condition

EUT Power Type	Power from PoE			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	Terminal v1.93b			

Note: The above information was declared by manufacturer.

1.1.5 Table for Radio function

Function / Radio	WLAN 2.4GHz	WLAN 5GHz	Bluetooth	Zigbee
1	V	-	-	-
2	-	V (UNII 1-4)	-	-
3	-	-	V	V

Note: The above information was declared by manufacturer.

1.1.6 Table for EUT Operation Function

Mode	Operation Function
1	R1: 2.4GHz + R2: 5GHz + R3: Bluetooth
2	R1: 2.4GHz + R2: 5GHz + R3: Zigbee

Note1: The R means Radio.
Note2: The above information was declared by manufacturer.

1.2 Applicable Standards

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

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

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

- FCC KDB 558074 D01 v05r02
- FCC KDB 662911 D03 v01
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH02-CB	KJ Chang	22.8~24.8 / 61~63	Jul. 03, 2024~ Dec. 30, 2024
Radiated (Below 1GHz)	03CH06-CB	Viola Huang	22.5-22.9 / 58-60	Apr. 30, 2025
Radiated (Above 1GHz)	03CH03-CB	Gordon Hung	21.4-22.3 / 55-58	Dec. 07, 2024~ Jan. 06, 2025
AC Conduction	CO01-CB	Joe Chu	21~22 / 52~53	Dec. 25, 2024
Spot Check	TH02-CB	Chris Li	23.4~24.2 / 61~65	May 06, 2025
	03CH06-CB	Viola Huang	22.5-22.9 / 58-60	Apr. 11, 2025~ May 21, 2025

Note: The tested sample for AC Conduction, Radiated (Below 1GHz) and Spot Check tests was received on Dec. 25, 2024.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.0 dB	Confidence levels of 95%
Conducted Emission	3.1 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.1 dB	Confidence levels of 95%
Bandwidth Measurement	2.1 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode
Zigbee
2405MHz
2440MHz
2475MHz
2480MHz

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Normal Link
1	EUT_R1: 2.4GHz + R2: 5GHz + R3: Bluetooth + PoE
2	EUT_R1: 2.4GHz + R2: 5GHz + R3: Zigbee(TX) + PoE
3	EUT_R1: 2.4GHz + R2: 5GHz + R3: Zigbee(RX) + PoE
For operating mode 3 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
	1. After evaluating, EUT in Z axis was the worst case for Bluetooth and Y axis for others from radiated emission above 1GHz, so the measurement will follow this same test configuration. 2. The EUT was performed Radio 1~3 test and the worst case was found at Radio 1. Thus, the measurement will follow this same test configuration.
1	EUT in Y axis + R1: 2.4GHz + PoE
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 - Co-location RF Exposure Evaluation
Operating Mode	
1	R1: 2.4GHz + R2: 5GHz + R3: Bluetooth
2	R1: 2.4GHz + R2: 5GHz + R3: Zigbee
Refer to Sporton Test Report No.: FA462417-02 for Co-location RF Exposure Evaluation.	

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

Power	Brand	Model
PoE	Cambium	NET-P30-56IN

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories
Wall-mounted rack 1*1
Wall-mounted rack 2*1

2.5 Support Equipment

For AC Conduction:

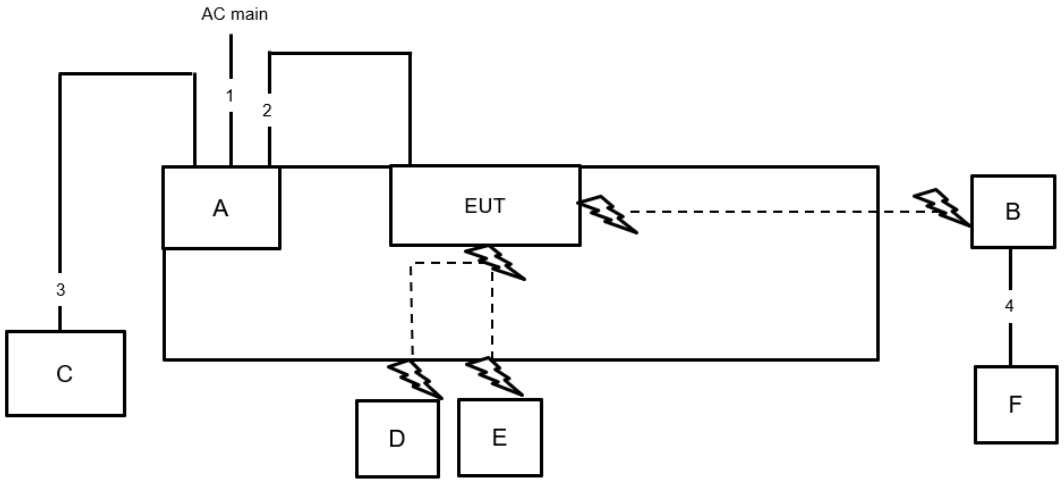
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	Cambium	NET-P30-56IN	N/A
B	Zigbee device	Cambium	X7-53X	Z8H89FT0087
C	LAN PC	ASUS	S300TA	TX2-RTL8821C
D	2.4G NB	DELL	E6430	N/A
E	5G NB	DELL	E6430	N/A
F	Zigbee device PC	ASUS	S300TA	TX2-RTL8821C

For Radiated, RF Conducted and Spot check:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	PoE	Cambium	NET-P30-56IN	N/A

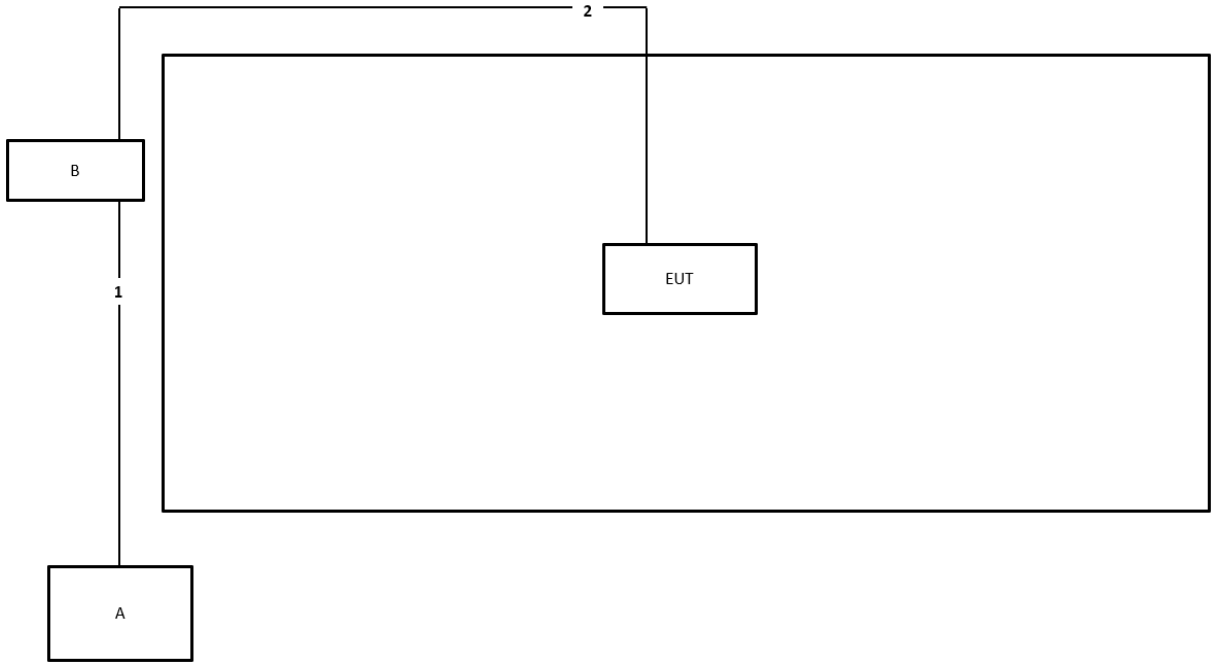
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power Cable	No	1.2m
2	RJ-45 cable	No	1m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test



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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

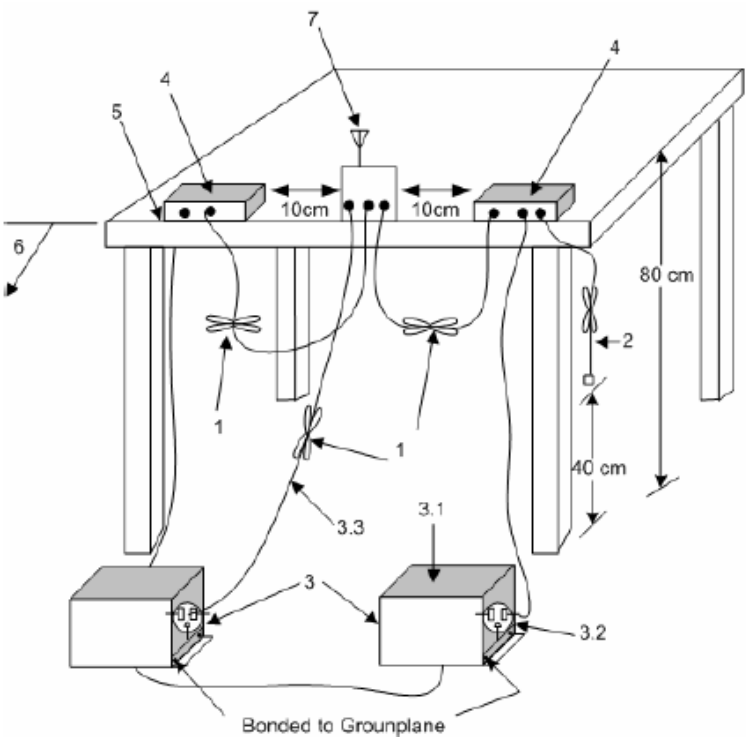
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



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

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

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

b. Margin = -Limit + Level

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

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

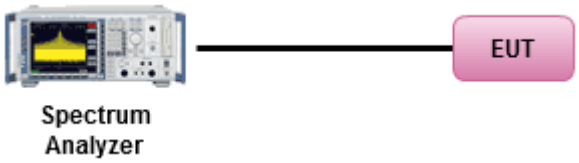
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.		

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
	Measurement using a power meter (PM)
	☐ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
	☒ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

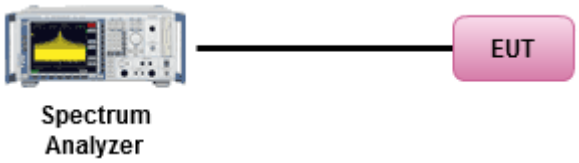
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dBc)**
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.
Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

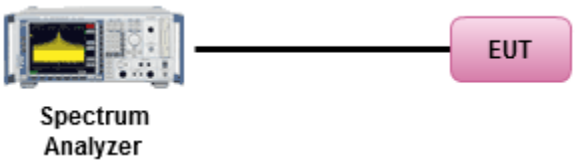
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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

3.6.2 Measuring Instruments

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

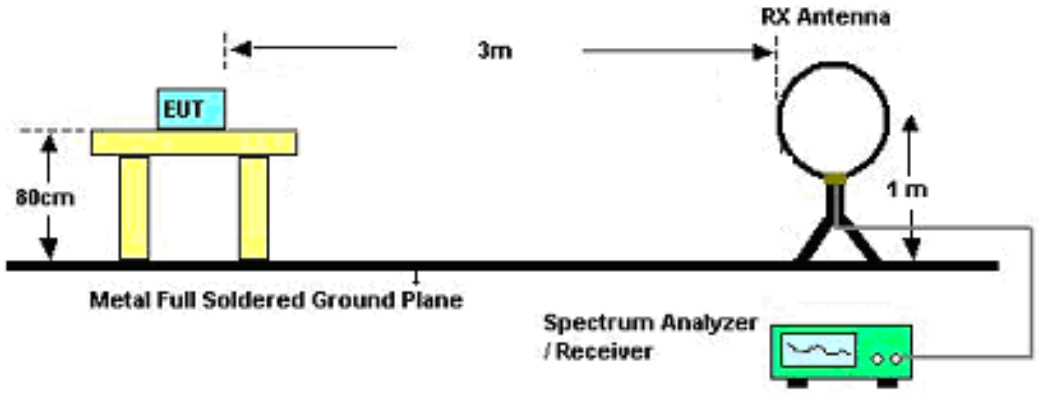
3.6.3 Test Procedures

Test Method		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).
		☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
		☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).
		☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
		☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074 clause 8.7 & c63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.	
	▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.	
	▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).	
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB	
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.	

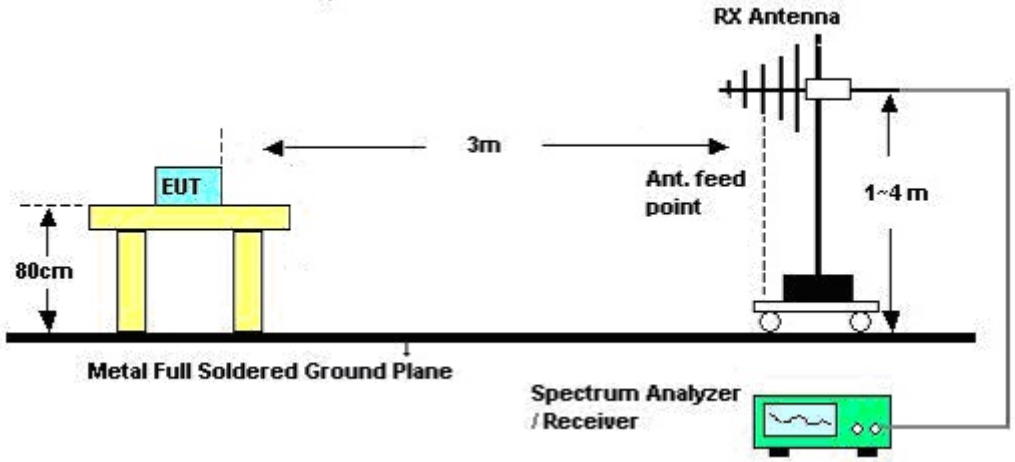
3.6.4 Test Setup

Emissions in Restricted Frequency Bands

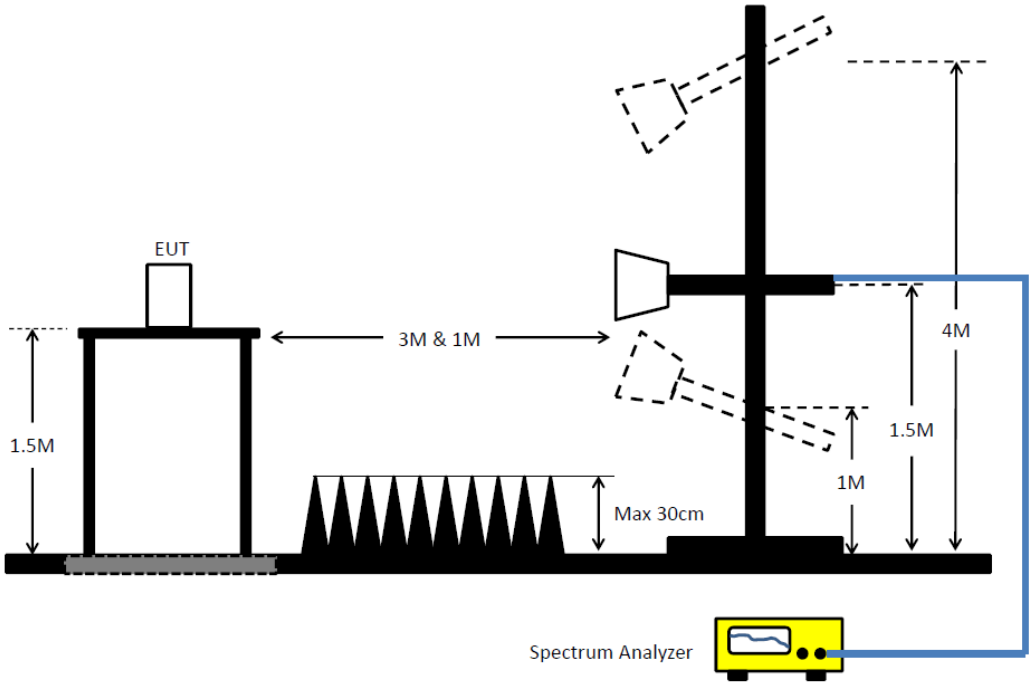
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Measurement Results Calculation

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

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 01, 2024	Feb. 28, 2025	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50 -16-2	04083	150kHz ~ 100MHz	Feb. 19, 2024	Feb. 18, 2025	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 24, 2024	Apr. 23, 2025	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO01-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30MHz	Oct. 16, 2024	Oct. 15, 2025	Radiation (03CH06-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 02, 2024	Aug. 01, 2025	Radiation (03CH06-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 08, 2024	Oct. 07, 2025	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Jul. 29, 2024	Jul. 28, 2025	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Jul. 29, 2024	Jul. 28, 2025	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 02, 2024	Nov. 01, 2025	Radiation (03CH06-CB)
Pre-Amplifier	EMCI	EMC12630S E	980383	1GHz ~ 18GHz	Jul. 31, 2024	Jul. 30, 2025	Radiation (03CH06-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH06-CB)
Signal analyzer	R&S	FSV3044	101667	9kHz~44GHz	Aug. 20, 2024	Aug. 19, 2025	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 21, 2024	Oct. 20, 2025	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-05+68	30MHz~1GHz	Oct. 24, 2024	Oct. 23, 2025	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+68	1GHz~18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE-1524 7_DTS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Test Software	SPORTON	SENSE-EMI	V5.11.8	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 03, 2024	May 02, 2025	Radiation (03CH03-CB)
Horn Antenna	ETS·Lindgren	3115	6821	750MHz~18GHz	Jan. 24, 2024	Jan. 23, 2025	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jun. 29, 2024	Jun. 28, 2025	Radiation (03CH03-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 11, 2024	Jun. 10, 2025	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Radiation (03CH03-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Jun. 11, 2024	Jun. 10, 2025	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Oct. 19, 2023	Oct. 18, 2024	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Oct. 18, 2024	Oct. 17, 2025	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Oct. 19, 2023	Oct. 18, 2024	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Oct. 18, 2024	Oct. 17, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH02-CB)

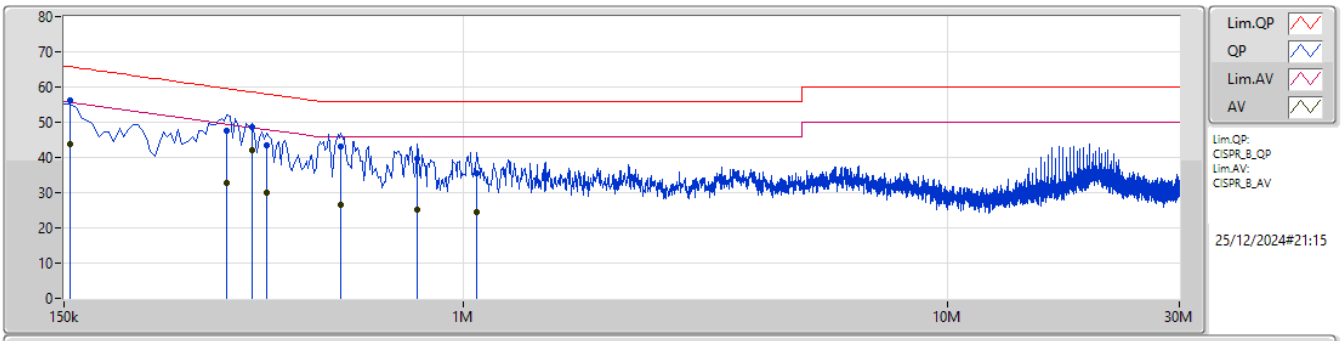
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH02-CB)
Switch	SPTCB	SP-SWI	SWI-02	1 –26.5 GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH02-CB)
Switch	SPTCB	SP-SWI	SWI-02	1–18 GHz	Oct. 02, 2024	Oct. 01, 2025	Conducted (TH02-CB)
Test Software	SPORTON	SENSE-15247_DTS	V5.11.23	2.4GHz-2.4835GHz	N.C.R.	N.C.R.	Conducted (TH02-CB)

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

Summary

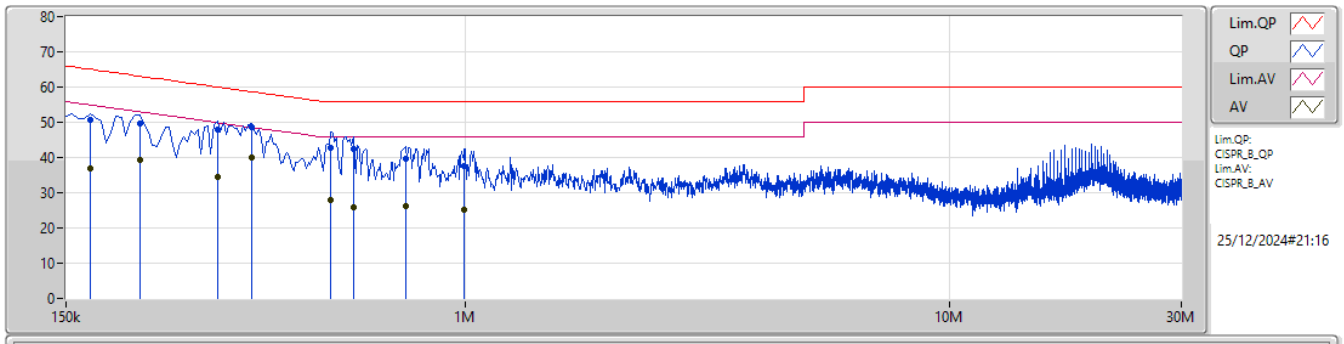
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 3	Pass	AV	366k	42.05	48.60	-6.55	Line

Mode 3



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	56.33	65.75	-9.42	10.04	Line	-	46.29	0.04	0.08	9.92
AV	154.5k	43.89	55.75	-11.86	10.04	Line	-	33.85	0.04	0.08	9.92
QP	325.5k	47.69	59.56	-11.87	10.17	Line	-	37.52	0.05	0.09	10.03
AV	325.5k	32.82	49.56	-16.74	10.17	Line	-	22.65	0.05	0.09	10.03
QP	366k	48.74	58.60	-9.86	10.20	Line	-	38.54	0.05	0.10	10.05
AV	366k	42.05	48.60	-6.55	10.20	Line	"Worst"	31.85	0.05	0.10	10.05
QP	393k	43.35	58.01	-14.66	10.21	Line	-	33.14	0.05	0.10	10.06
AV	393k	30.06	48.01	-17.95	10.21	Line	-	19.85	0.05	0.10	10.06
QP	559.5k	43.15	56.00	-12.85	10.26	Line	-	32.89	0.06	0.10	10.10
AV	559.5k	26.69	46.00	-19.31	10.26	Line	-	16.43	0.06	0.10	10.10
QP	802.5k	39.69	56.00	-16.31	10.30	Line	-	29.39	0.07	0.09	10.14
AV	802.5k	25.21	46.00	-20.79	10.30	Line	-	14.91	0.07	0.09	10.14
QP	1.068M	35.47	56.00	-20.53	10.30	Line	-	25.17	0.07	0.09	10.14
AV	1.068M	24.40	46.00	-21.60	10.30	Line	-	14.10	0.07	0.09	10.14

Mode 3



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	168k	50.79	65.06	-14.27	10.07	Neutral	-	40.72	0.06	0.08	9.93
AV	168k	36.85	55.06	-18.21	10.07	Neutral	-	26.78	0.06	0.08	9.93
QP	213k	49.78	63.09	-13.31	10.09	Neutral	-	39.69	0.06	0.07	9.96
AV	213k	39.29	53.09	-13.80	10.09	Neutral	-	29.20	0.06	0.07	9.96
QP	307.5k	47.99	60.03	-12.04	10.17	Neutral	-	37.82	0.06	0.09	10.02
AV	307.5k	34.63	50.03	-15.40	10.17	Neutral	-	24.46	0.06	0.09	10.02
QP	361.5k	48.47	58.70	-10.23	10.20	Neutral	-	38.27	0.06	0.10	10.04
AV	361.5k	39.95	48.70	-8.75	10.20	Neutral	"Worst"	29.75	0.06	0.10	10.04
QP	528k	42.78	56.00	-13.22	10.26	Neutral	-	32.52	0.07	0.10	10.09
AV	528k	27.87	46.00	-18.13	10.26	Neutral	-	17.61	0.07	0.10	10.09
QP	586.5k	42.37	56.00	-13.63	10.27	Neutral	-	32.10	0.07	0.10	10.10
AV	586.5k	25.79	46.00	-20.21	10.27	Neutral	-	15.52	0.07	0.10	10.10
QP	753k	39.60	56.00	-16.40	10.29	Neutral	-	29.31	0.07	0.09	10.13
AV	753k	26.34	46.00	-19.66	10.29	Neutral	-	16.05	0.07	0.09	10.13
QP	996k	37.42	56.00	-18.58	10.33	Neutral	-	27.09	0.08	0.09	10.16
AV	996k	25.07	46.00	-20.93	10.33	Neutral	-	14.74	0.08	0.09	10.16

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	2.223M	2M22G1D	855k	2.151M

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

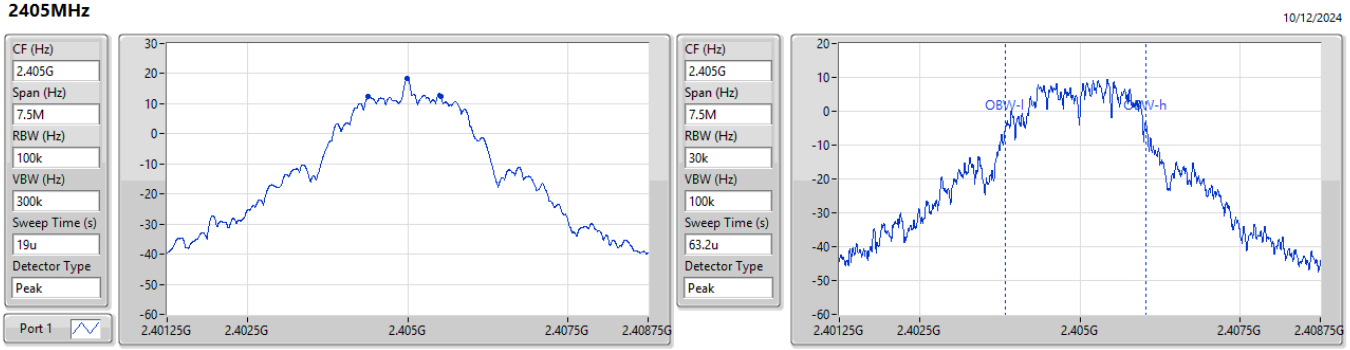
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Zigbee	-	-	-	-
2405MHz	Pass	500k	1.144M	2.196M
2440MHz	Pass	500k	1.74M	2.151M
2480MHz	Pass	500k	855k	2.223M

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

2.4-2.4835GHz_Zigbee **EBW**

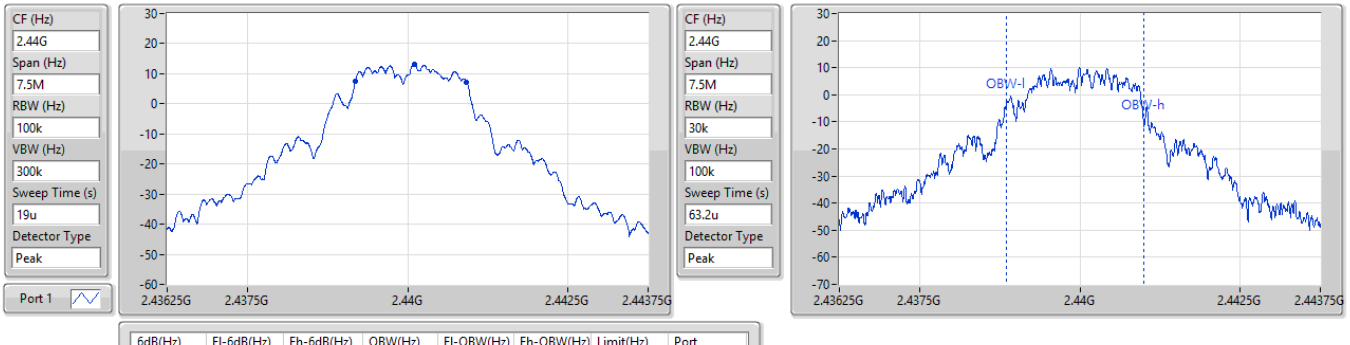
2405MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.144M	2.404381G	2.405525G	2.196M	2.403842G	2.406038G	500k	1

2.4-2.4835GHz_Zigbee **EBW**

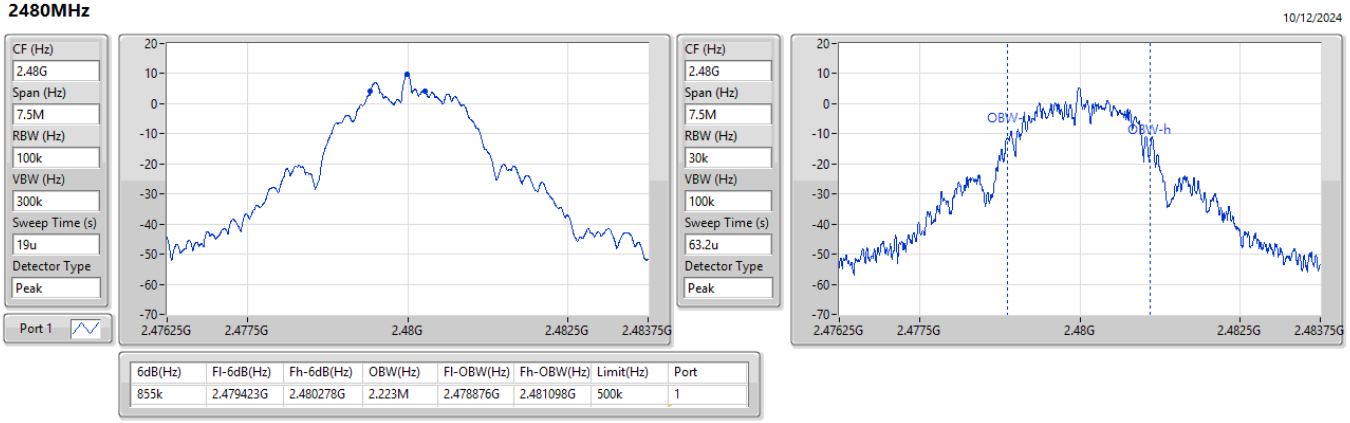
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.74M	2.439183G	2.440923G	2.151M	2.438853G	2.441004G	500k	1

2.4-2.4835GHz_Zigbee **EBW**

2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
855k	2.479423G	2.480278G	2.223M	2.478876G	2.481098G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Zigbee	19.01	0.07962

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Zigbee	-	-	-	-	-
2405MHz	Pass	4.30	19.01	19.01	30.00
2440MHz	Pass	4.30	18.94	18.94	30.00
2475MHz	Pass	4.30	18.81	18.81	30.00
2480MHz	Pass	4.30	10.54	10.54	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	4.57

RBW = 3kHz;

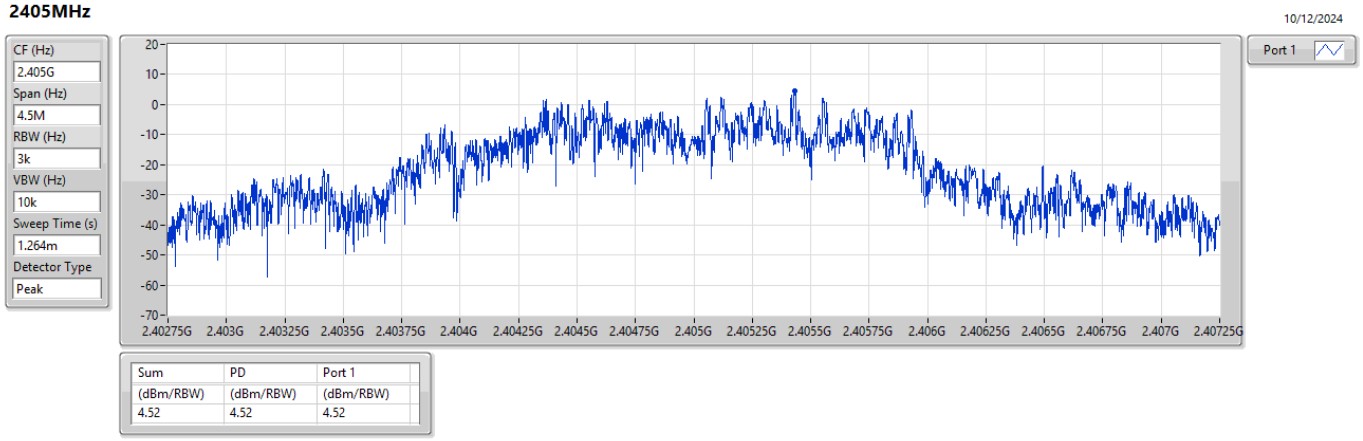
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Zigbee	-	-	-	-	-
2405MHz	Pass	4.30	4.52	4.52	8.00
2440MHz	Pass	4.30	4.57	4.57	8.00
2480MHz	Pass	4.30	-3.92	-3.92	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**

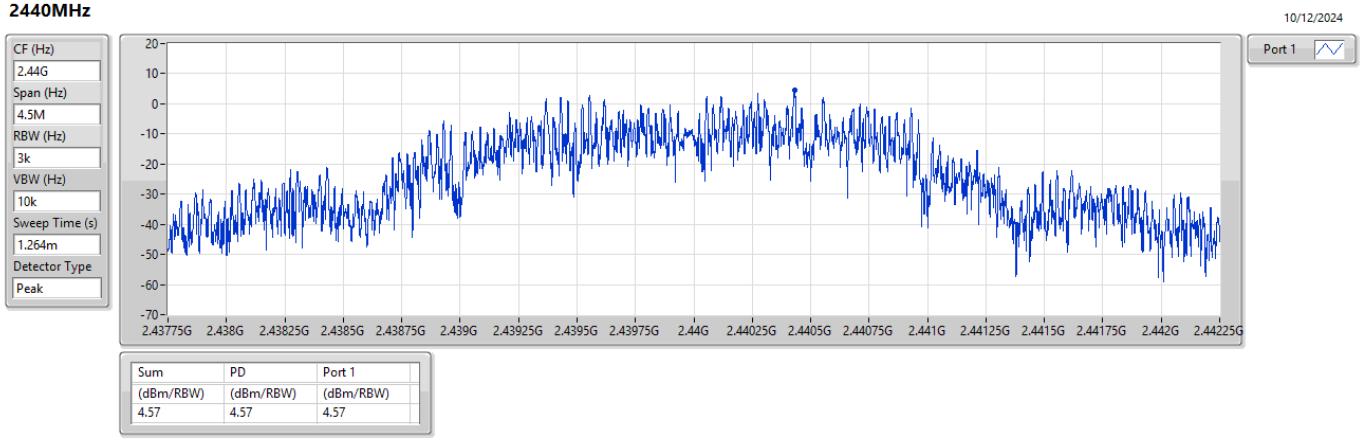
2405MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.52	4.52	4.52

2.4-2.4835GHz_Zigbee **PSD**

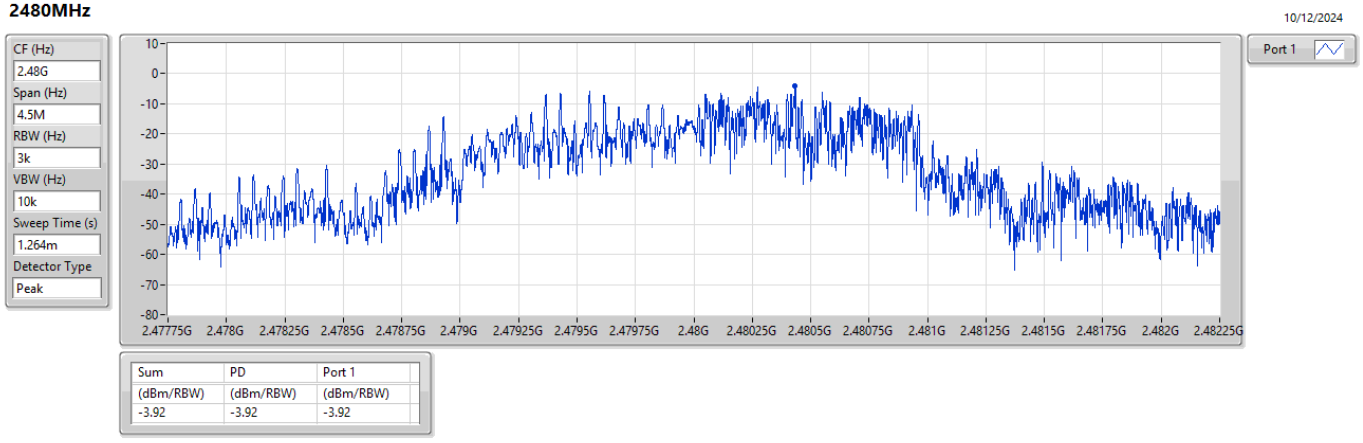
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.57	4.57	4.57

2.4-2.4835GHz_Zigbee PSD

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.92	-3.92	-3.92

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	2.40501G	18.54	-11.46	2.12332G	-52.16	2.39983G	-39.75	2.4G	-37.83	15.19386G	-44.85	1

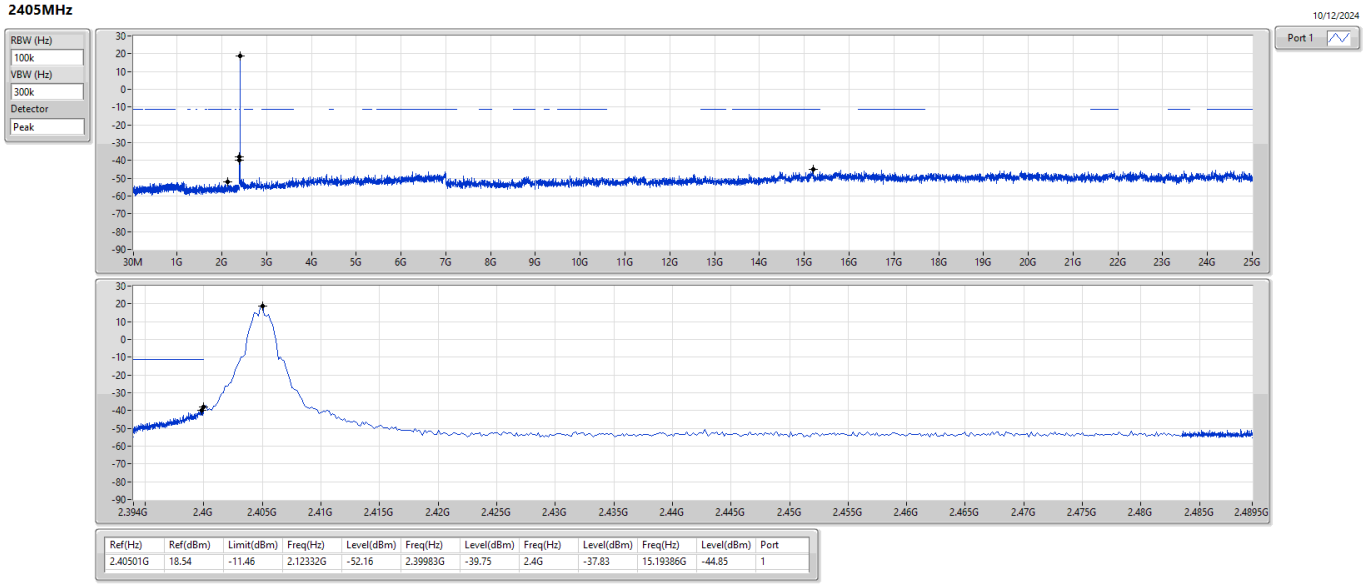
Result

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	2.40501G	18.54	-11.46	2.12332G	-52.16	2.39983G	-39.75	2.4G	-37.83	15.19386G	-44.85	1
2440MHz	Pass	2.40501G	18.54	-11.46	346.78M	-52.12	2.39952G	-51.13	2.4G	-54.73	24.09677G	-45.39	1
2480MHz	Pass	2.40501G	18.54	-11.46	897.59M	-52.15	2.39452G	-51.33	2.4G	-54.52	15.19386G	-45.28	1

2.4-2.4835GHz_Zigbee

CSENdB

2405MHz

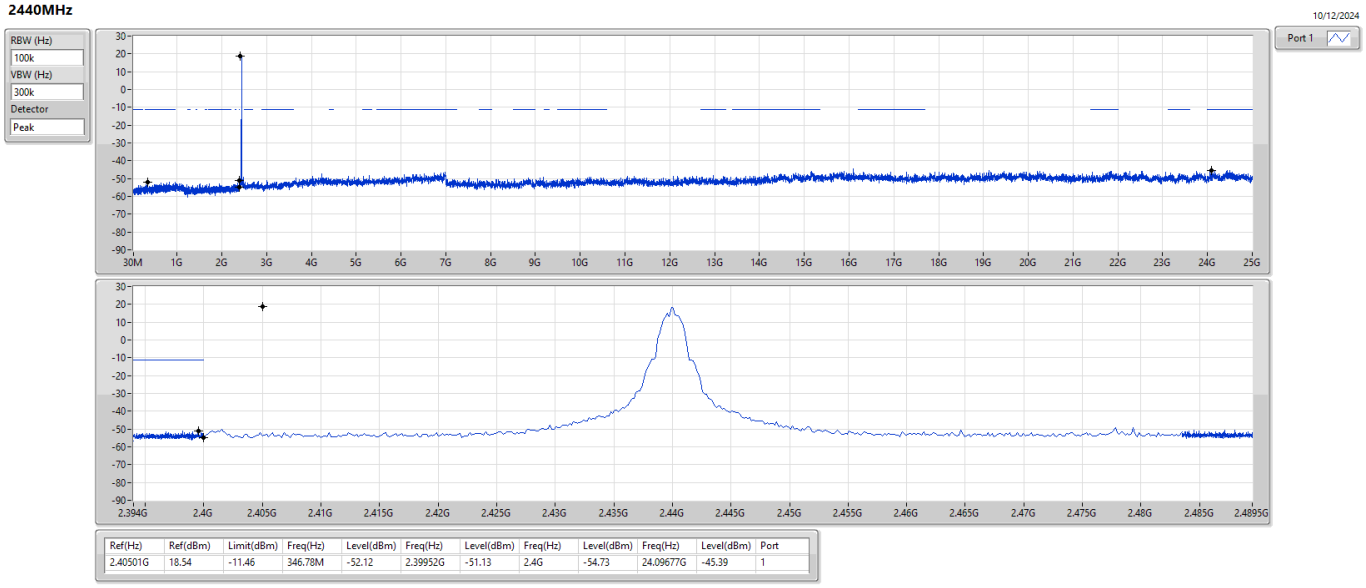


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40501G	18.54	-11.46	2.12332G	-52.16	2.39983G	-39.75	2.4G	-37.83	15.19386G	-44.85	1

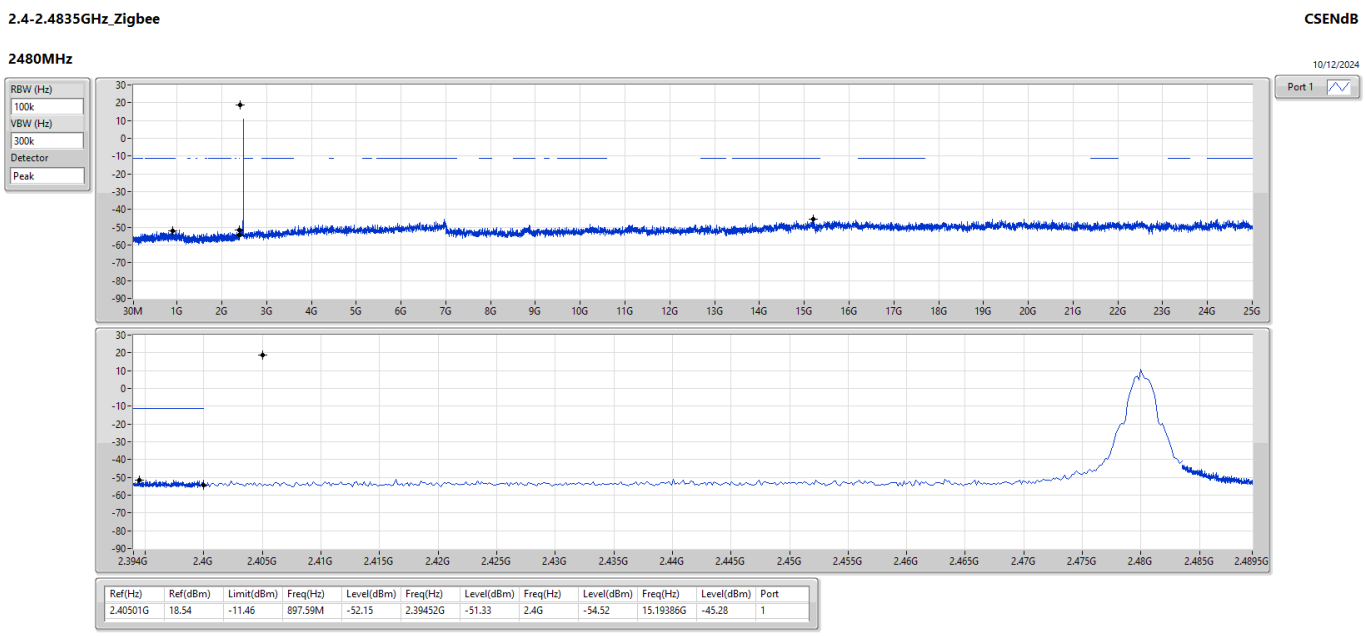
2.4-2.4835GHz_Zigbee

CSENdB

2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40501G	18.54	-11.46	346.78M	-52.12	2.39952G	-51.13	2.4G	-54.73	24.09677G	-45.39	1

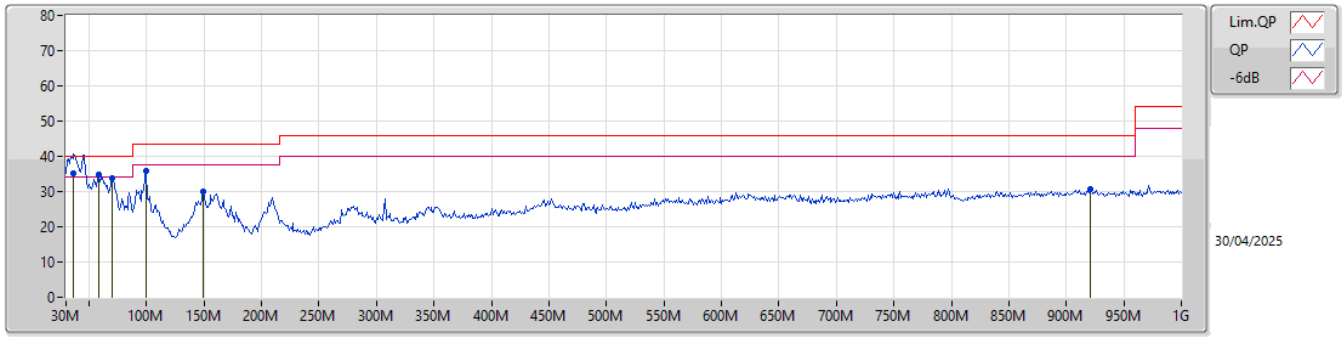


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40501G	18.54	-11.46	897.59M	-52.15	2.39452G	-51.33	2.4G	-54.52	15.19386G	-45.28	1

Summary

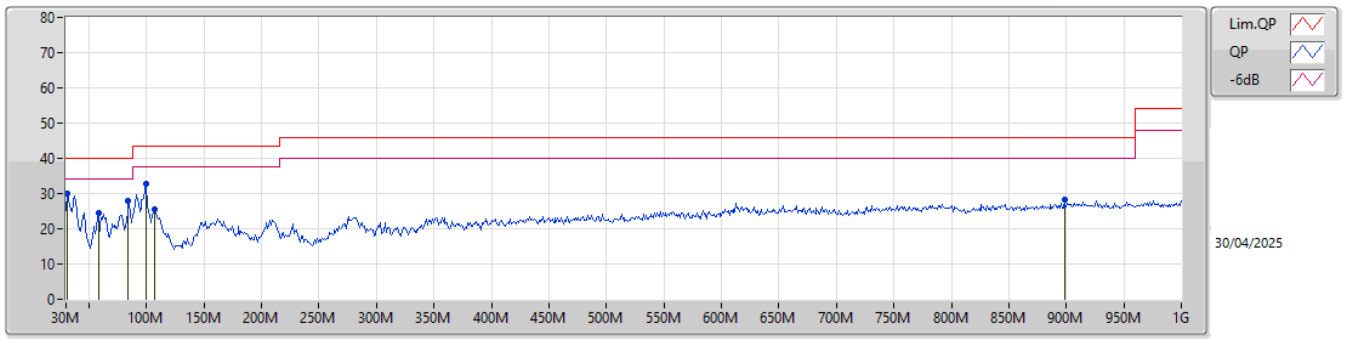
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	36.79M	35.21	40.00	-4.79	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
QP	36.79M	35.21	40.00	-4.79	-11.13	3	Vertical	-1	1.00	"Worst"	46.34	20.57	0.58	32.28
PK	58.13M	34.68	40.00	-5.32	-19.28	3	Vertical	8	1.25	-	53.96	12.32	0.74	32.34
PK	69.77M	33.94	40.00	-6.06	-19.42	3	Vertical	78	1.25	-	53.36	12.18	0.87	32.47
PK	99.84M	35.90	43.50	-7.60	-14.48	3	Vertical	333	1.25	-	50.38	16.59	1.02	32.09
PK	149.31M	29.98	43.50	-13.52	-14.63	3	Vertical	179	1.00	-	44.61	16.44	1.22	32.29
PK	920.46M	30.74	46.00	-15.26	-1.14	3	Vertical	24	1.25	-	31.88	26.40	3.06	30.60

Mode 1



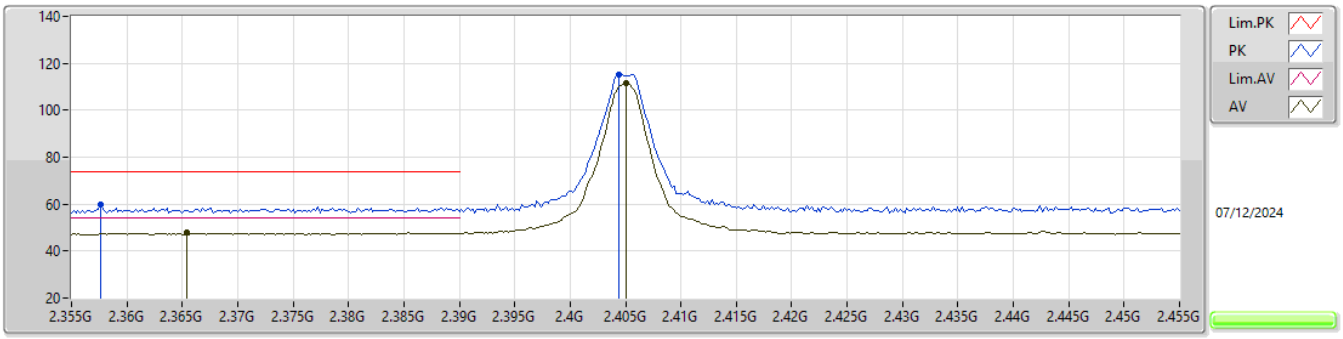
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	30.97M	30.10	40.00	-9.90	-8.06	3	Horizontal	228	1.25	"Worst"	38.16	23.70	0.55	32.31
PK	58.13M	24.53	40.00	-15.47	-19.28	3	Horizontal	110	3.00	-	43.81	12.32	0.74	32.34
PK	84.32M	28.09	40.00	-11.91	-17.83	3	Horizontal	60	2.00	-	45.92	13.55	0.97	32.35
PK	99.84M	32.69	43.50	-10.81	-14.48	3	Horizontal	104	2.00	-	47.17	16.59	1.02	32.09
PK	106.63M	25.53	43.50	-17.97	-13.95	3	Horizontal	268	3.00	-	39.48	17.16	1.02	32.13
PK	898.15M	28.28	46.00	-17.72	-1.24	3	Horizontal	0	3.00	-	29.52	26.36	3.04	30.64

Summary

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	AV	2.4835G	53.79	54.00	-0.21	3	Horizontal	338	2.07	-

2.4-2.4835GHz_Zigbee

2405MHz_TX

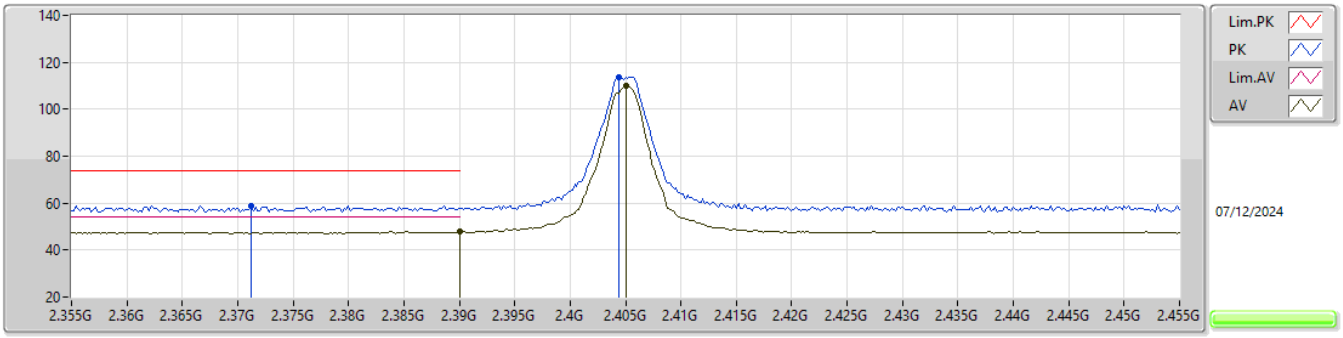


EUT Y_1TX
Setting 20
03-V-K-5

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	2.3576G	59.90	74.00	-14.10	26.96	3	Vertical	340	2.08	-	28.18	4.76	-
AV	2.3654G	47.78	54.00	-6.22	14.81	3	Vertical	340	2.08	-	28.20	4.77	-
PK	2.4044G	114.95	Inf	-Inf	81.83	3	Vertical	340	2.08	-	28.30	4.82	-
AV	2.405G	111.68	Inf	-Inf	78.55	3	Vertical	340	2.08	-	28.30	4.83	-

2.4-2.4835GHz_Zigbee

2405MHz_TX

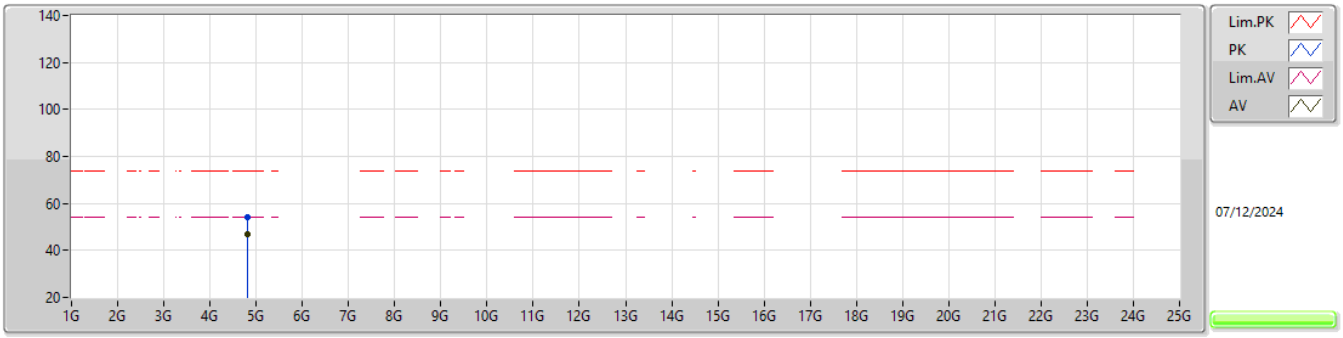


EUT Y_1TX
Setting 20
03-V-K-5

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	2.3712G	59.04	74.00	-14.96	26.06	3	Horizontal	239	1.80	-	28.20	4.78	-
AV	2.39G	47.83	54.00	-6.17	14.72	3	Horizontal	239	1.80	-	28.30	4.81	-
PK	2.4044G	113.48	Inf	-Inf	80.36	3	Horizontal	239	1.80	-	28.30	4.82	-
AV	2.405G	110.20	Inf	-Inf	77.07	3	Horizontal	239	1.80	-	28.30	4.83	-

2.4-2.4835GHz_Zigbee

2405MHz_TX

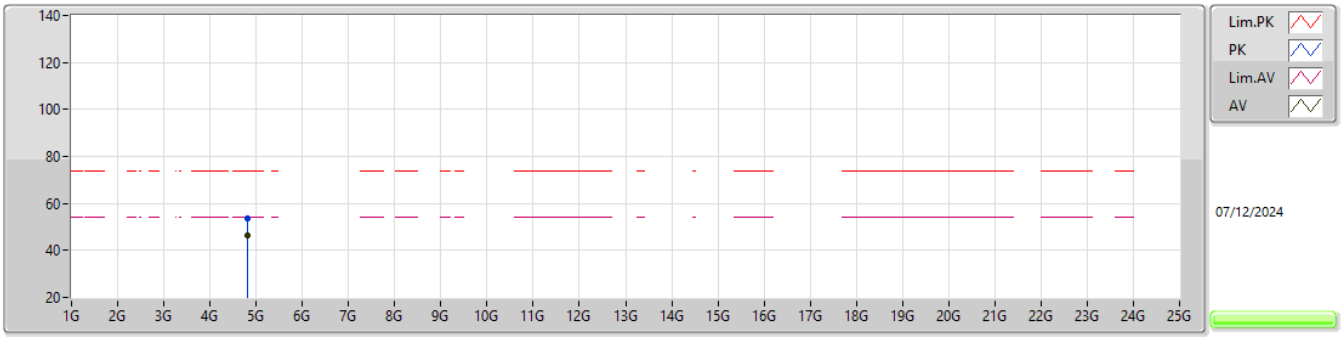


EUT Y_1TX
Setting 20
03-V-K-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80876G	54.10	74.00	-19.90	49.00	3	Vertical	20	2.34	-	33.22	7.21	35.33
AV	4.80892G	46.66	54.00	-7.34	41.56	3	Vertical	20	2.34	-	33.22	7.21	35.33

2.4-2.4835GHz_Zigbee

2405MHz_TX

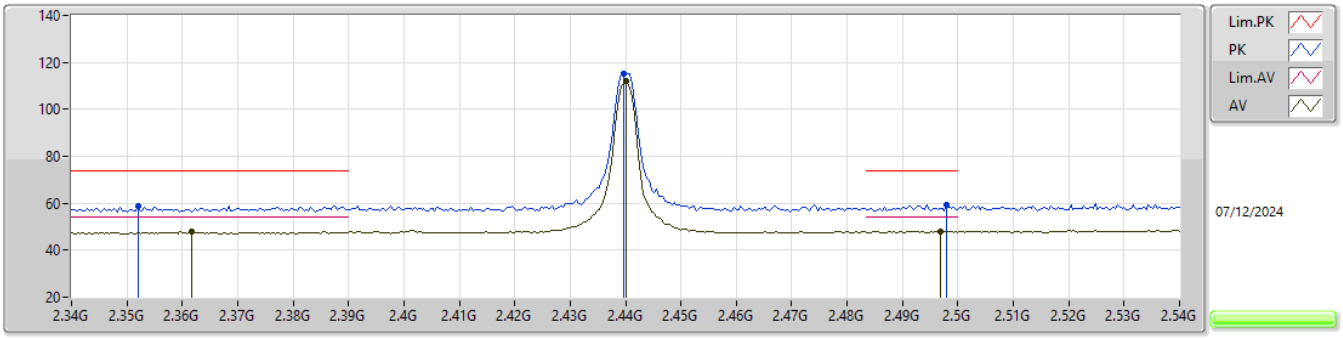


EUT Y_1TX
Setting 20
03-V-K-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80892G	53.84	74.00	-20.16	48.74	3	Horizontal	33	2.96	-	33.22	7.21	35.33
AV	4.80892G	46.22	54.00	-7.78	41.12	3	Horizontal	33	2.96	-	33.22	7.21	35.33

2.4-2.4835GHz_Zigbee

2440MHz_TX

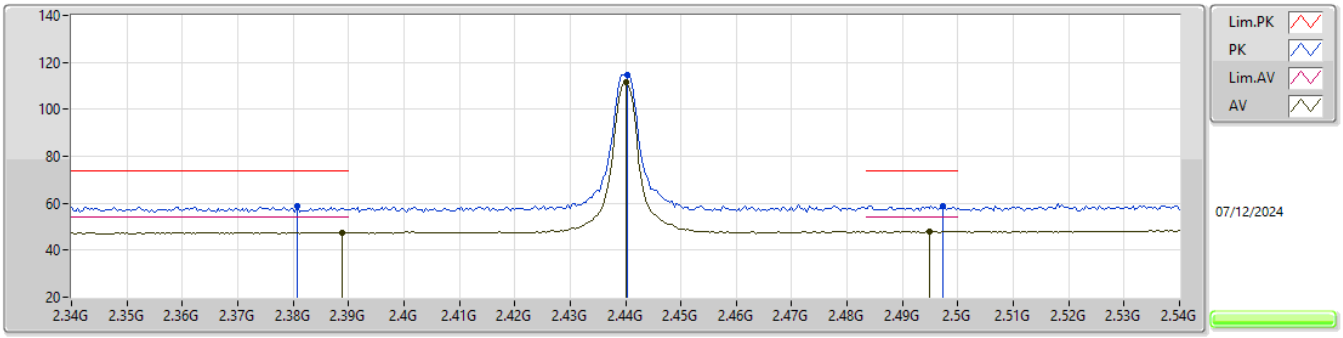


EUT Y_1TX
Setting 20
03-V-K-5

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	2.352G	58.88	74.00	-15.12	26.00	3	Vertical	346	2.32	-	28.12	4.76	-
AV	2.3616G	47.78	54.00	-6.22	14.81	3	Vertical	346	2.32	-	28.20	4.77	-
PK	2.4396G	115.35	Inf	-Inf	82.19	3	Vertical	346	2.32	-	28.30	4.86	-
AV	2.44G	112.04	Inf	-Inf	78.88	3	Vertical	346	2.32	-	28.30	4.86	-
PK	2.498G	59.40	74.00	-14.60	26.07	3	Vertical	346	2.32	-	28.40	4.93	-
AV	2.4968G	47.96	54.00	-6.04	14.63	3	Vertical	346	2.32	-	28.40	4.93	-

2.4-2.4835GHz_Zigbee

2440MHz_TX

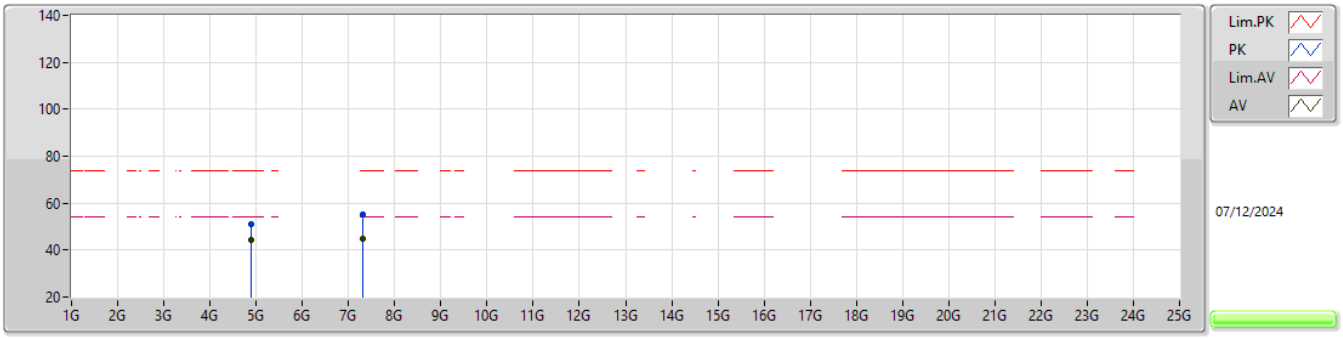


EUT Y_1TX
Setting 20
03-V-K-5

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	2.3808G	58.54	74.00	-15.46	25.54	3	Horizontal	307	1.69	-	28.21	4.79	-
AV	2.3888G	47.60	54.00	-6.40	14.51	3	Horizontal	307	1.69	-	28.29	4.80	-
PK	2.4404G	114.64	Inf	-Inf	81.48	3	Horizontal	307	1.69	-	28.30	4.86	-
AV	2.44G	111.35	Inf	-Inf	78.19	3	Horizontal	307	1.69	-	28.30	4.86	-
PK	2.4972G	58.92	74.00	-15.08	25.59	3	Horizontal	307	1.69	-	28.40	4.93	-
AV	2.4948G	47.99	54.00	-6.01	14.67	3	Horizontal	307	1.69	-	28.40	4.92	-

2.4-2.4835GHz_Zigbee

2440MHz_TX

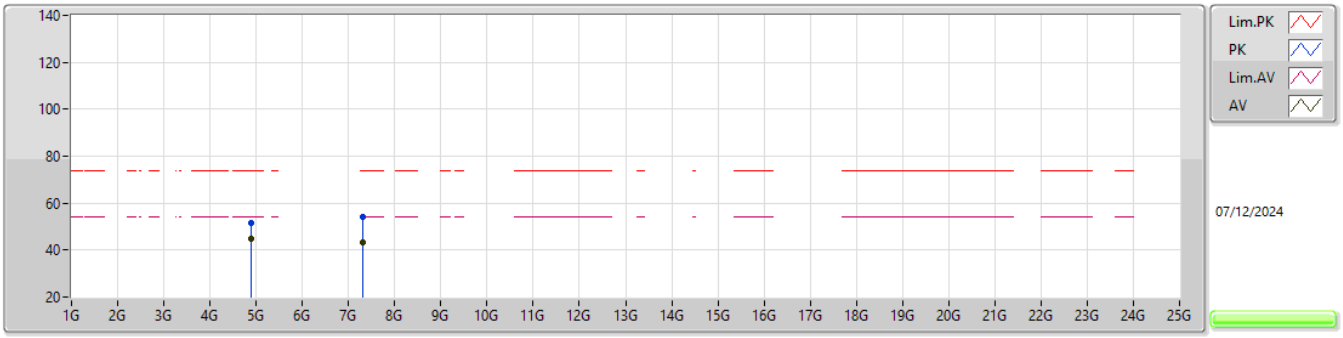


EUT Y_1TX
Setting 20
03-V-K-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.8828G	51.16	74.00	-22.84	45.94	3	Vertical	320	2.42	-	33.37	7.18	35.33
AV	4.88276G	44.30	54.00	-9.70	39.08	3	Vertical	320	2.42	-	33.37	7.18	35.33
PK	7.32132G	54.94	74.00	-19.06	44.69	3	Vertical	360	1.15	-	36.79	8.62	35.16
AV	7.31848G	44.71	54.00	-9.29	34.48	3	Vertical	360	1.15	-	36.77	8.62	35.16

2.4-2.4835GHz_Zigbee

2440MHz_TX

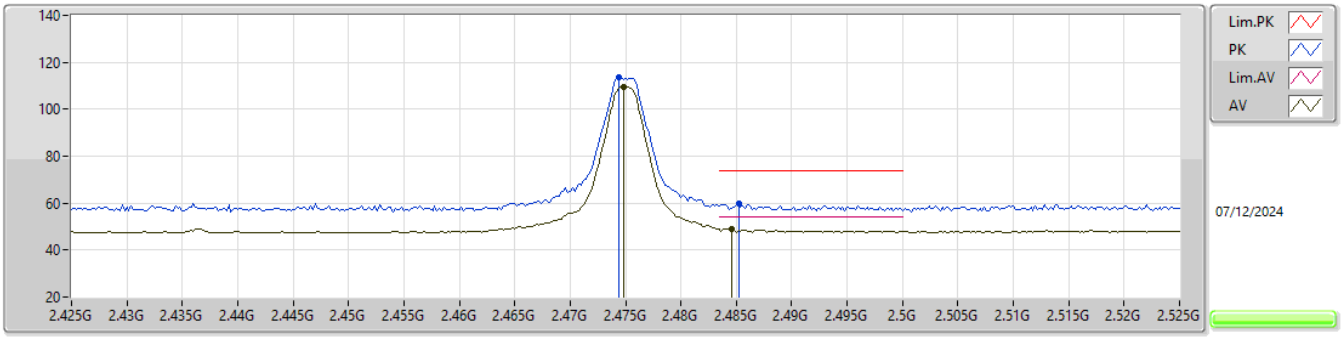


EUT Y_1TX
Setting 20
03-V-K-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.87972G	51.44	74.00	-22.56	46.23	3	Horizontal	321	2.74	-	33.36	7.18	35.33
AV	4.88268G	44.94	54.00	-9.06	39.72	3	Horizontal	321	2.74	-	33.37	7.18	35.33
PK	7.31844G	54.21	74.00	-19.79	43.98	3	Horizontal	119	1.76	-	36.77	8.62	35.16
AV	7.32168G	43.43	54.00	-10.57	33.18	3	Horizontal	119	1.76	-	36.79	8.62	35.16

2.4-2.4835GHz_Zigbee

2475MHz_TX

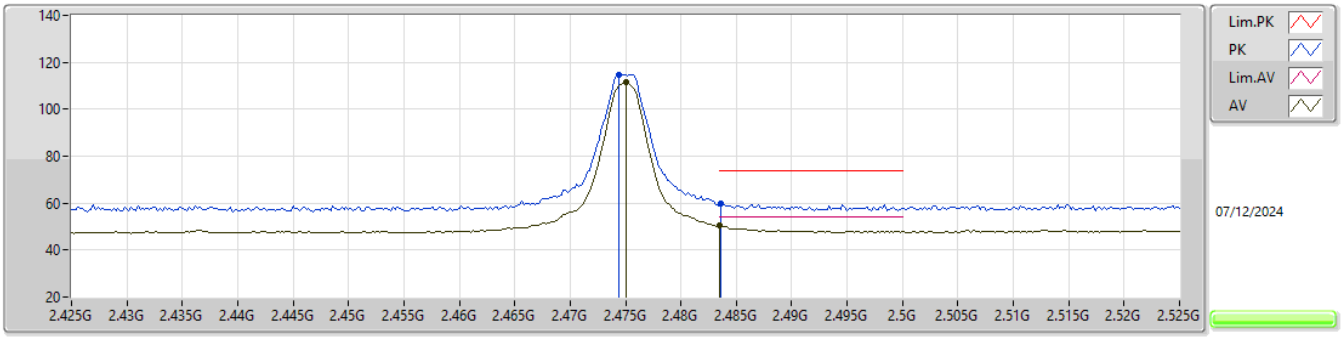


EUT Y_1TX
Setting 20
03-V-K-5

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	2.4744G	113.45	Inf	-Inf	80.25	3	Vertical	337	2.52	-	28.30	4.90	-
AV	2.4748G	109.65	Inf	-Inf	76.45	3	Vertical	337	2.52	-	28.30	4.90	-
PK	2.4852G	59.86	74.00	-14.14	26.60	3	Vertical	337	2.52	-	28.35	4.91	-
AV	2.4846G	49.05	54.00	-4.95	15.79	3	Vertical	337	2.52	-	28.35	4.91	-

2.4-2.4835GHz_Zigbee

2475MHz_TX

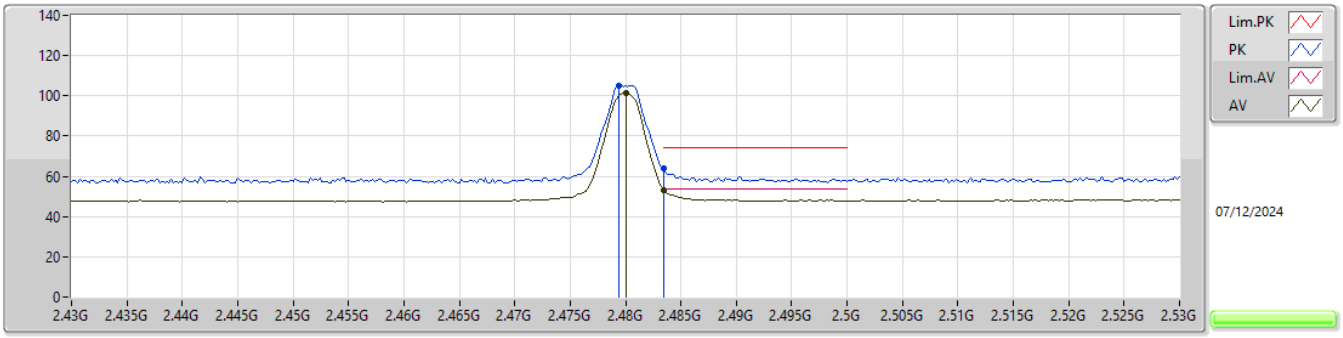


EUT Y_1TX
Setting 20
03-V-K-5

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	2.4744G	114.76	Inf	-Inf	81.56	3	Horizontal	340	2.06	-	28.30	4.90	-
AV	2.475G	111.50	Inf	-Inf	78.30	3	Horizontal	340	2.06	-	28.30	4.90	-
PK	2.4836G	59.77	74.00	-14.23	26.52	3	Horizontal	340	2.06	-	28.34	4.91	-
AV	2.4835G	50.65	54.00	-3.35	17.40	3	Horizontal	340	2.06	-	28.34	4.91	-

2.4-2.4835GHz_Zigbee

2480MHz_TX

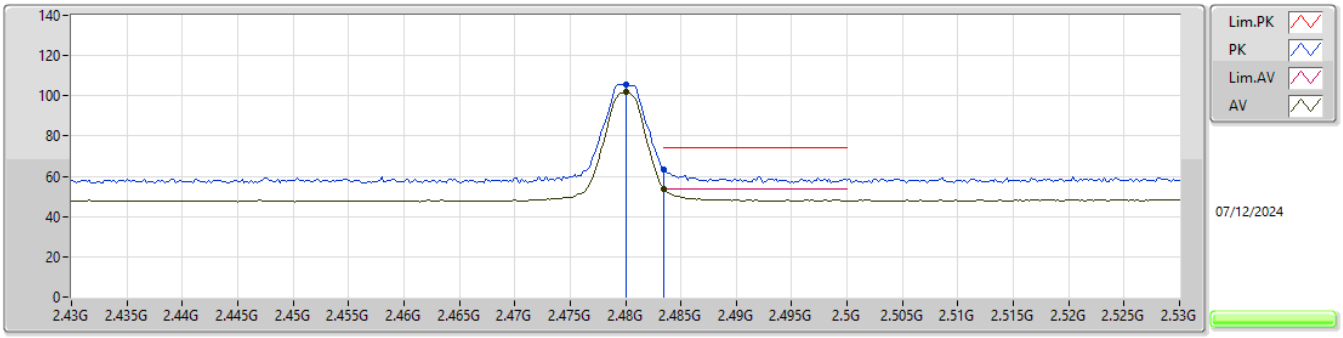


EUT Y_1TX
Setting 12.5
03-V-K-5

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	2.4794G	104.81	Inf	-Inf	71.60	3	Vertical	337	2.28	-	28.30	4.91	-
AV	2.48G	101.48	Inf	-Inf	68.27	3	Vertical	337	2.28	-	28.30	4.91	-
PK	2.4835G	63.76	74.00	-10.24	30.51	3	Vertical	337	2.28	-	28.34	4.91	-
AV	2.4835G	53.15	54.00	-0.85	19.90	3	Vertical	337	2.28	-	28.34	4.91	-

2.4-2.4835GHz_Zigbee

2480MHz_TX

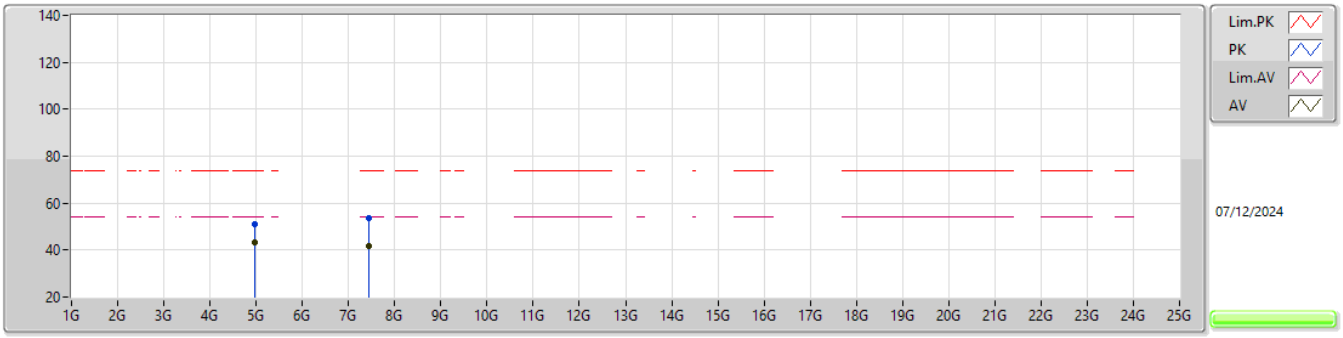


EUT Y_1TX
Setting 12.5
03-V-K-5

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	2.48G	105.33	Inf	-Inf	72.12	3	Horizontal	338	2.07	-	28.30	4.91	-
AV	2.48G	102.04	Inf	-Inf	68.83	3	Horizontal	338	2.07	-	28.30	4.91	-
PK	2.4835G	63.43	74.00	-10.57	30.18	3	Horizontal	338	2.07	-	28.34	4.91	-
AV	2.4835G	53.79	54.00	-0.21	20.54	3	Horizontal	338	2.07	-	28.34	4.91	-

2.4-2.4835GHz_Zigbee

2480MHz_TX

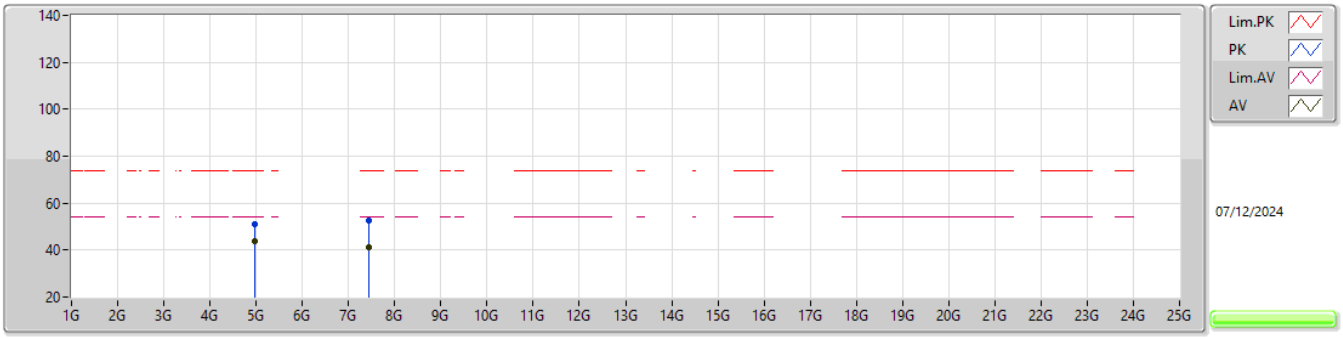


EUT Y_1TX
Setting 12.5
03-V-K-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96096G	51.17	74.00	-22.83	45.75	3	Vertical	322	2.24	-	33.60	7.15	35.33
AV	4.96276G	43.37	54.00	-10.63	37.95	3	Vertical	322	2.24	-	33.60	7.15	35.33
PK	7.44832G	53.57	74.00	-20.43	43.21	3	Vertical	88	2.90	-	36.80	8.73	35.17
AV	7.44244G	41.58	54.00	-12.42	31.20	3	Vertical	88	2.90	-	36.82	8.73	35.17

2.4-2.4835GHz_Zigbee

2480MHz_TX



EUT Y_1TX
Setting 12.5
03-V-K-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.9588G	50.93	74.00	-23.07	45.51	3	Horizontal	315	2.65	-	33.60	7.15	35.33
AV	4.96276G	43.66	54.00	-10.34	38.24	3	Horizontal	315	2.65	-	33.60	7.15	35.33
PK	7.43008G	52.56	74.00	-21.44	42.17	3	Horizontal	336	1.95	-	36.84	8.71	35.16
AV	7.43184G	41.39	54.00	-12.61	31.00	3	Horizontal	336	1.95	-	36.84	8.71	35.16

For Zigbee: 47 CFR FCC Part 15, Subpart C (Section 15.247) - DTS

Test Items	Mode (MHz)	Reference Worst-Case (R_{dB})	Variant Test (V_{dB})	dB Difference (d_{dB})	Spot-Check Parameters	Pass Criterion ($d_{dB} < d_{dBmax}(M_{dB})$)
Maximum Conducted Output Power	Zigbee 2405 MHz	19.01	18.97	-0.04	C_{dB}=30 dBm $M_{dB}=\|C_{dB}-R_{dB}\|$=10.99 $d_{dBmax}(M_{dB})$= 3.55	Pass
Emissions in Non-restricted Frequency Bands	Zigbee 2405 MHz	-39.75	-39.81	-0.06	C_{dB}=-11.46 dBm $M_{dB}=\|C_{dB}-R_{dB}\|$=28.29 $d_{dBmax}(M_{dB})$= 4.41	Pass
Emissions in Restricted Frequency Bands Harmonic	Zigbee 2405 MHz	46.66	33.31	-13.35	C_{dB}= 54 dBuV/m $M_{dB}=\|C_{dB}-R_{dB}\|$= 7.34 $d_{dBmax}(M_{dB})$= 3.37	Pass
Emissions in Restricted Frequency Bands Band-edge	Zigbee 2480 MHz	53.79	53.85	0.06	C_{dB}= 54 dBuV/m $M_{dB}=\|C_{dB}-R_{dB}\|$= 0.21 $d_{dBmax}(M_{dB})$= 3.01	Pass

Compared Test Result

Maximum Conducted Output Power

Parent Device								
Mode	**Result**	**DG (dBi)**	**Port 1 (dBm)**	**Port 2 (dBm)**	**Port 3 (dBm)**	**Port 4 (dBm)**	**Total Power (dBm)**	**Power Limit (dBm)**
Zigbee 2405 MHz	Pass	4.30	19.01	-	-	-	19.01	30.00

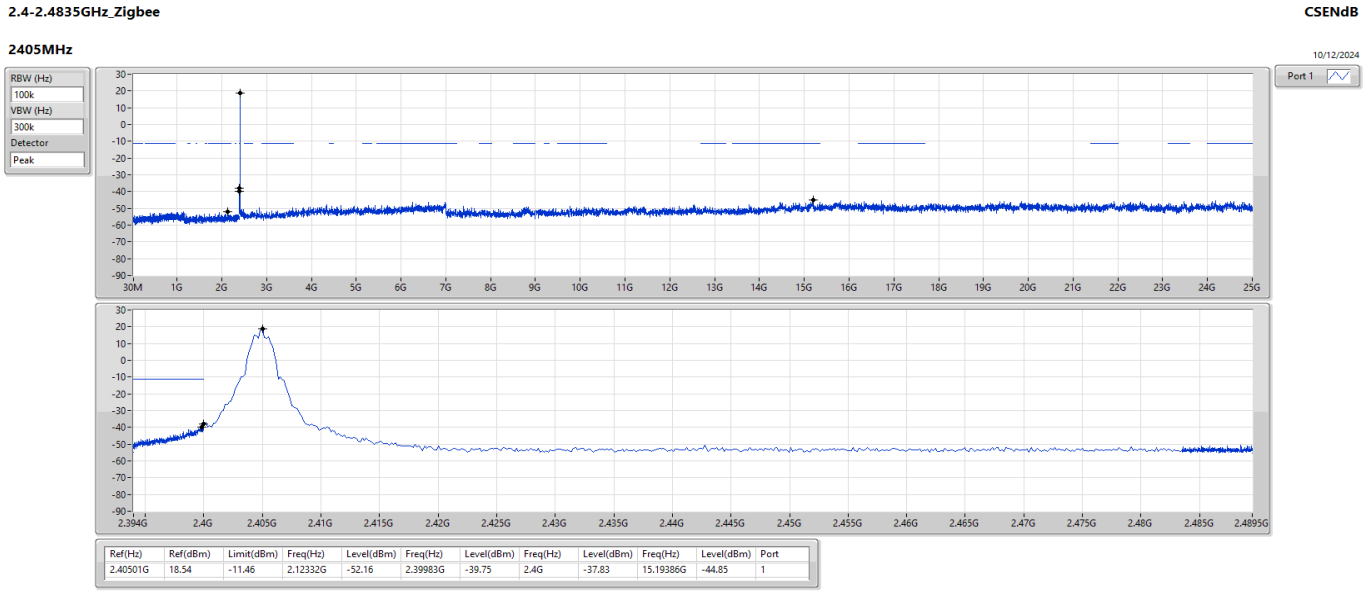
Variant Device								
Mode	**Result**	**DG (dBi)**	**Port 1 (dBm)**	**Port 2 (dBm)**	**Port 3 (dBm)**	**Port 4 (dBm)**	**Total Power (dBm)**	**Power Limit (dBm)**
Zigbee 2405 MHz	Pass	4.30	18.97	-	-	-	18.97	30.00

Emissions in Non-restricted Frequency Bands

Radio 3 / Zigbee 2405 MHz

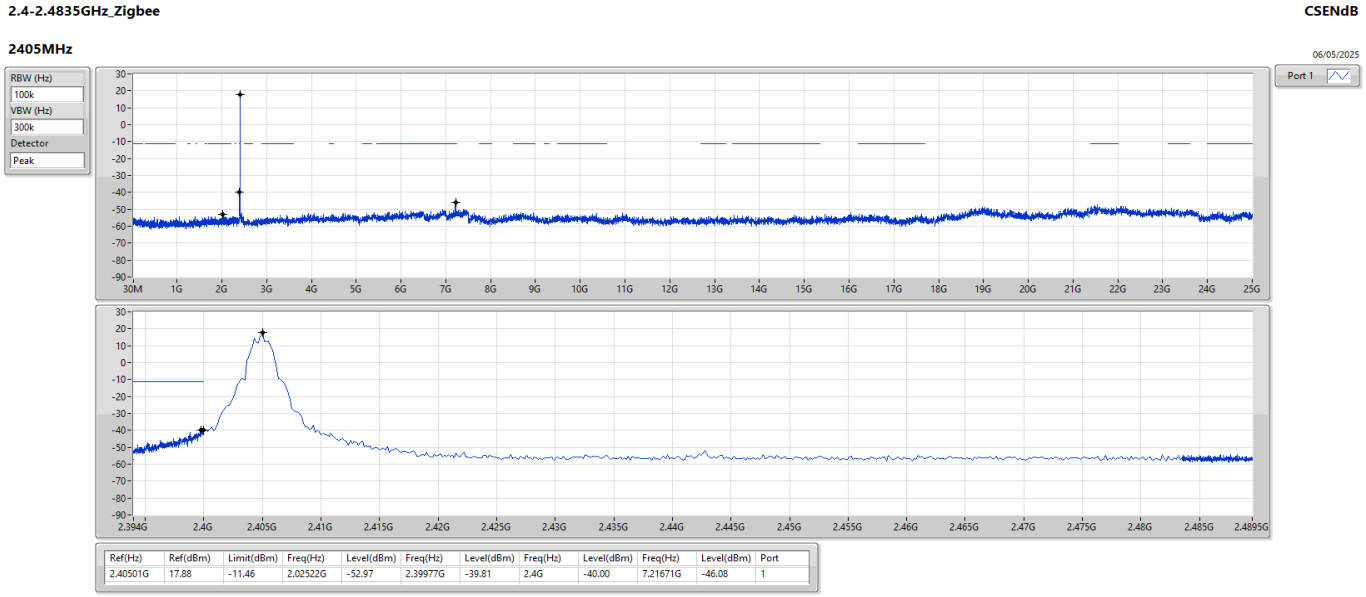
Parent Device

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	2.40501G	18.54	-11.46	2.12332G	-52.16	2.39983G	-39.75	2.4G	-37.83	15.19386G	-44.85	1



Variant Device

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	2.40501G	17.88	-11.46	2.02522G	-52.97	2.39977G	-39.81	2.4G	-40.00	7.21671G	-46.08	1



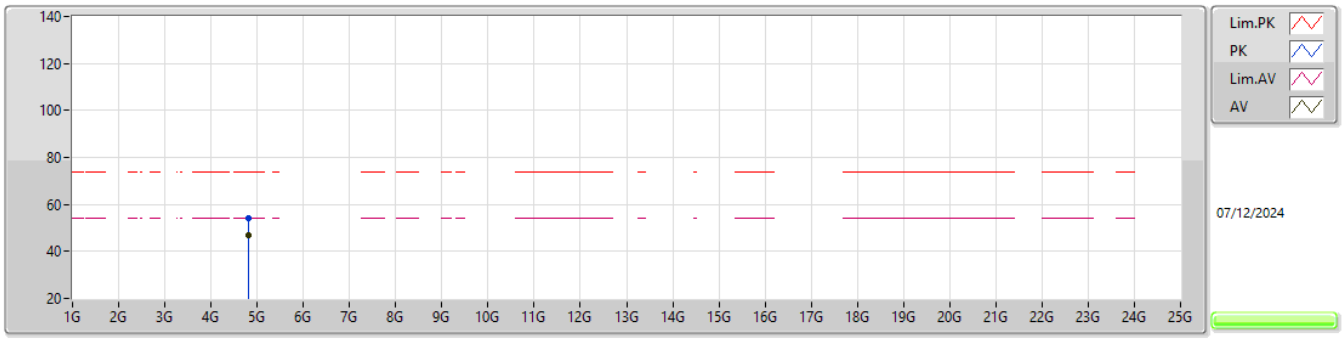
Emissions in Restricted Frequency Bands / Harmonic

Radio 3 / Zigbee 2405 MHz

Parent Device

2.4-2.4835GHz_Zigbee

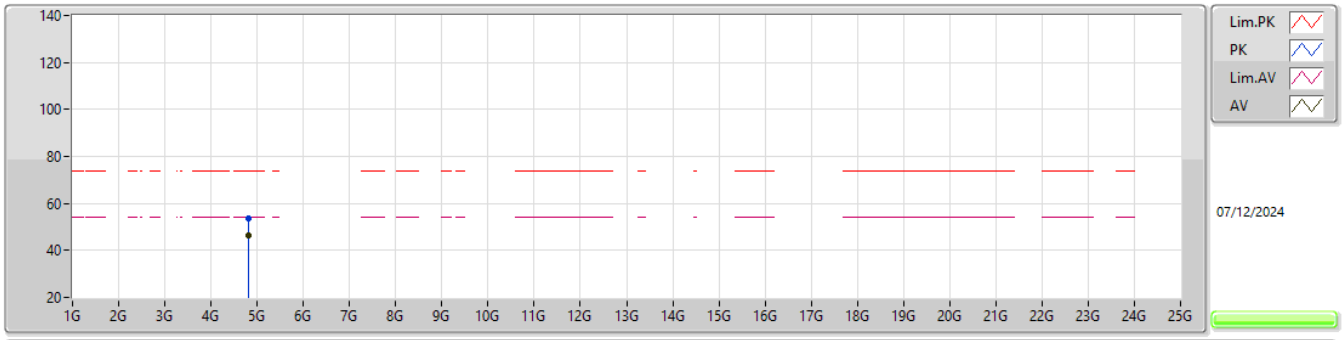
2405MHz_TX



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	4.80876G	54.10	74.00	-19.90	49.00	3	Vertical	20	2.34	-	33.22	7.21	35.33
AV	4.80892G	46.66	54.00	-7.34	41.56	3	Vertical	20	2.34	-	33.22	7.21	35.33

2.4-2.4835GHz_Zigbee

2405MHz_TX

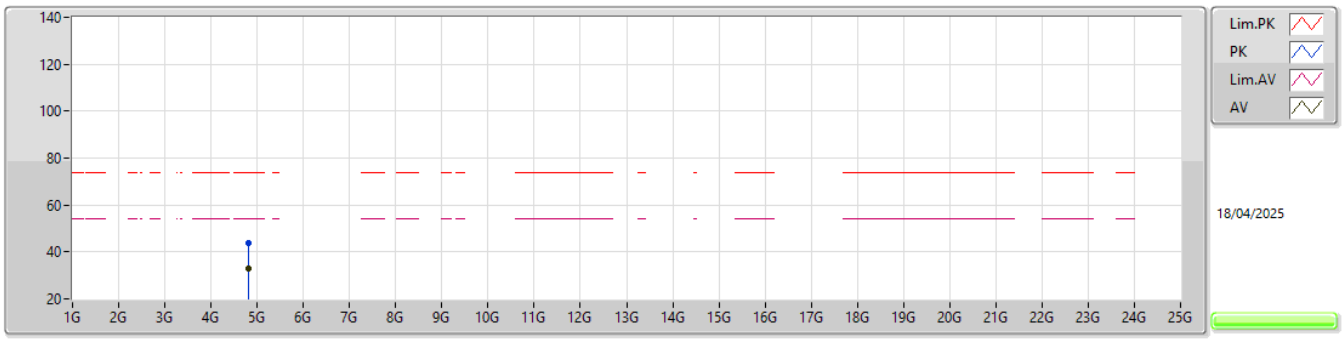


Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80892G	53.84	74.00	-20.16	48.74	3	Horizontal	33	2.96	-	33.22	7.21	35.33
AV	4.80892G	46.22	54.00	-7.78	41.12	3	Horizontal	33	2.96	-	33.22	7.21	35.33

Variant Device

2.4-2.4835GHz_Zigbee

2405MHz_TX

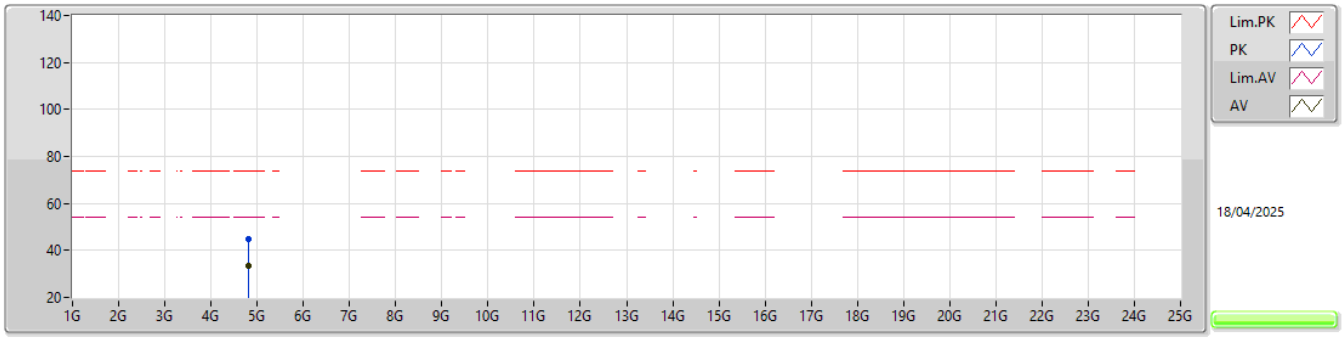


EUT Y_1TX
Setting 20
06-H-G-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.81204G	43.95	74.00	-30.05	39.98	3	Vertical	39.8	2.65	-	31.38	6.55	33.96
AV	4.81102G	33.00	54.00	-21.00	29.03	3	Vertical	39.8	2.65	-	31.38	6.55	33.96

2.4-2.4835GHz_Zigbee

2405MHz_TX



EUT Y_1TX
Setting 20
06-H-G-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.81048G	44.58	74.00	-29.42	40.61	3	Horizontal	310	2.29	-	31.38	6.55	33.96
AV	4.81102G	33.31	54.00	-20.69	29.34	3	Horizontal	310	2.29	-	31.38	6.55	33.96

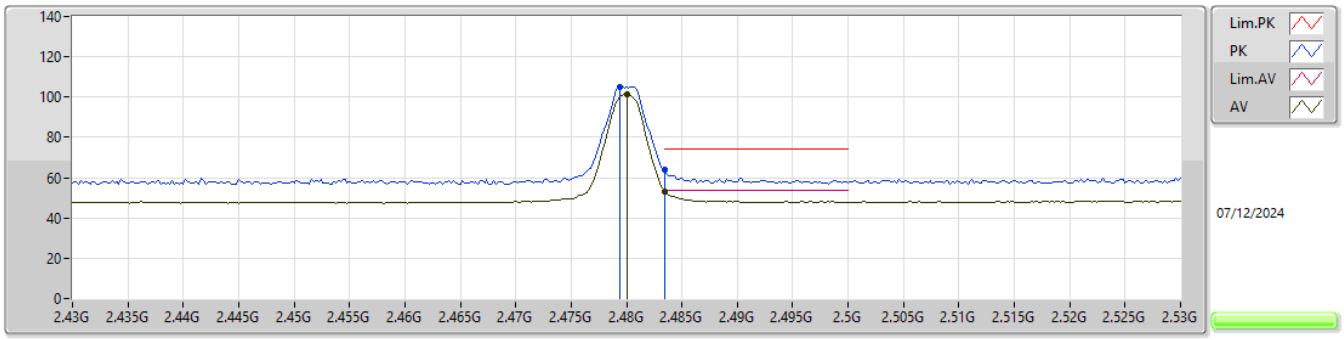
Emissions in Restricted Frequency Bands / Band-edge

Radio 3 / Zigbee 2480 MHz

Parent Device

2.4-2.4835GHz_Zigbee

2480MHz_TX

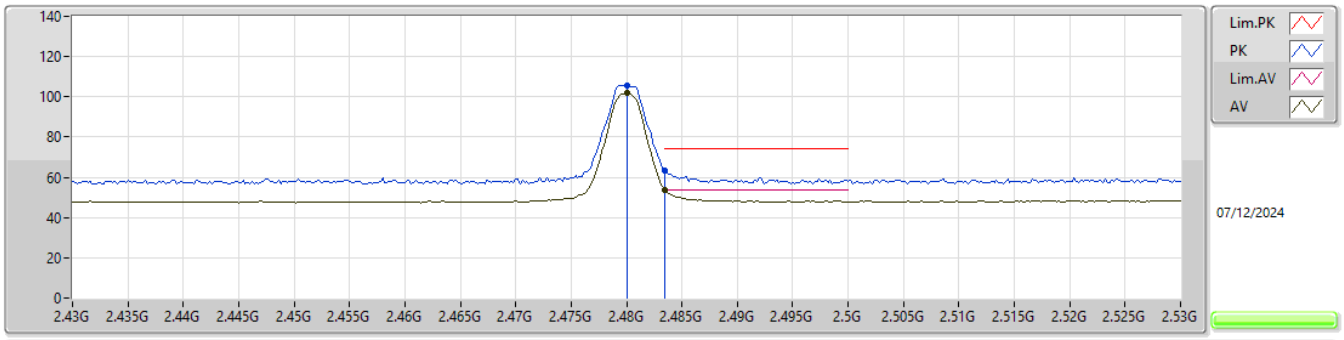


EUT Y_1TX
Setting 12.5
03-V-K-5

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	2.4794G	104.81	Inf	-Inf	71.60	3	Vertical	337	2.28	-	28.30	4.91	-
AV	2.48G	101.48	Inf	-Inf	68.27	3	Vertical	337	2.28	-	28.30	4.91	-
PK	2.4835G	63.76	74.00	-10.24	30.51	3	Vertical	337	2.28	-	28.34	4.91	-
AV	2.4835G	53.15	54.00	-0.85	19.90	3	Vertical	337	2.28	-	28.34	4.91	-

2.4-2.4835GHz_Zigbee

2480MHz_TX



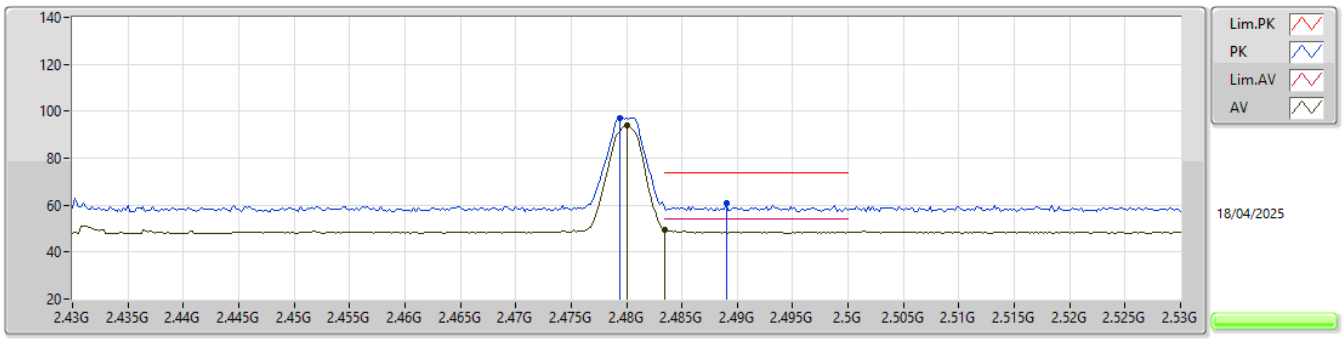
EUT Y_1TX
Setting 12.5
03-V-K-5

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	2.48G	105.33	Inf	-Inf	72.12	3	Horizontal	338	2.07	-	28.30	4.91	-
AV	2.48G	102.04	Inf	-Inf	68.83	3	Horizontal	338	2.07	-	28.30	4.91	-
PK	2.4835G	63.43	74.00	-10.57	30.18	3	Horizontal	338	2.07	-	28.34	4.91	-
AV	2.4835G	53.79	54.00	-0.21	20.54	3	Horizontal	338	2.07	-	28.34	4.91	-

Variant Device

2.4-2.4835GHz_Zigbee

2480MHz_TX

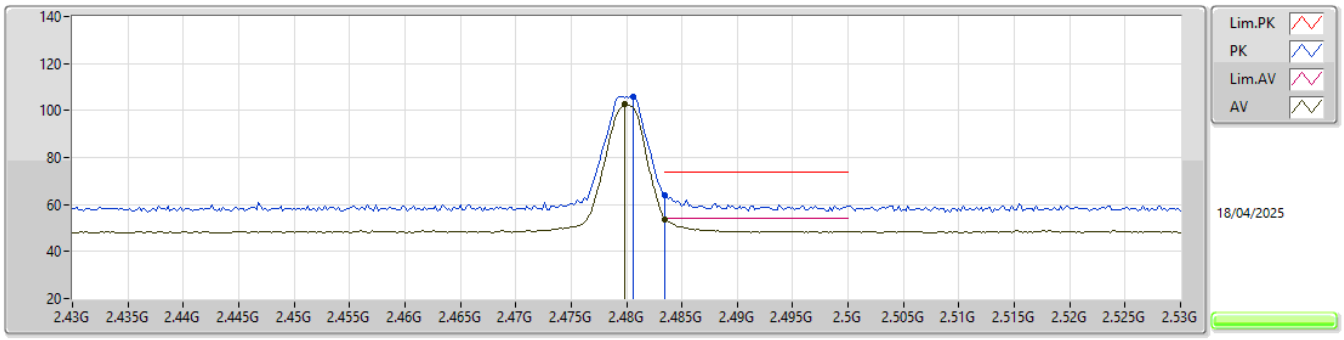


EUT Y_1TX
Setting 12
06-H-G-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4794G	97.00	Inf	-Inf	64.85	3	Vertical	344.8	1.80	-	27.39	4.76	-
AV	2.48G	93.76	Inf	-Inf	61.59	3	Vertical	344.8	1.80	-	27.40	4.77	-
PK	2.489G	60.75	74.00	-13.25	28.48	3	Vertical	344.8	1.80	-	27.49	4.78	-
AV	2.4835G	49.60	54.00	-4.40	17.39	3	Vertical	344.8	1.80	-	27.44	4.77	-

2.4-2.4835GHz_Zigbee

2480MHz_TX



EUT Y_1TX
Setting 12
06-H-G-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4806G	105.75	Inf	-Inf	73.57	3	Horizontal	334	1.87	-	27.41	4.77	-
AV	2.4798G	102.52	Inf	-Inf	70.35	3	Horizontal	334	1.87	-	27.40	4.77	-
PK	2.4835G	64.12	74.00	-9.88	31.91	3	Horizontal	334	1.87	-	27.44	4.77	-
AV	2.4835G	53.85	54.00	-0.15	21.64	3	Horizontal	334	1.87	-	27.44	4.77	-