Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	VW3FAST5295
Equipment	:	WiFi 6E Router
Brand Name	:	SAGEMCOM
Model Name	:	SAX2V1S
Applicant	:	SAGEMCOM BROADBAND SAS 250 Route de l'Empereur - 92848 RUEIL MALMAISON CEDEX- FRANCE
Manufacturer	:	SAGEMCOM BROADBAND SAS 250 Route de l'Empereur - 92848 RUEIL MALMAISON CEDEX- FRANCE
Standard	:	47 CFR FCC Part 15.247

The product was received on Oct. 22, 2022, and testing was started from Jan. 04, 2023 and completed on Jan. 10, 2023. 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 variant 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

Report No.	Version	Description	Issued Date
FR263031-01AC	01	Initial issue of report	Feb. 16, 2023

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	-

Declaration of Conformity:
1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results. 2. The measurement uncertainty please refer to report "Measurement Uncertainty".
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Sandy Chuang

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	IEEE 802.15.4	2405-2480	11-26 [16]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	IEEE 802.15.4	5	1

Note:
- IEEE 802.15.4 uses a O-QPSK (250kbps) modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port					Brand	Model Name	Ant. Type	Connector	Modes of Operation
	2.4GHz	5GHz	6GHz	IEEE 802.15.4 / Bluetooth	GPS					
1	1	1	-	-	-	GALTRONICS	DB1	PIFA	I-PEX	2.4GHz and 5GHz UNII1~UNII4
2	2	3	-	-	-	GALTRONICS	DB2	PIFA	I-PEX	
3	3	2	-	-	-	GALTRONICS	DB3	PIFA	I-PEX	
4	4	4	-	-	-	GALTRONICS	DB4	PIFA	I-PEX	
5	-	5	1	-	-	GALTRONICS	ANT1	PIFA	I-PEX	5GHz UNII1~UNII4 and 6GHz UNII5~8
6	-	6	2	-	-	GALTRONICS	ANT2	PIFA	I-PEX	
7	-	7	3	-	-	GALTRONICS	ANT3	PIFA	I-PEX	
8	-	8	4	-	-	GALTRONICS	ANT4	PIFA	I-PEX	
9	-	-	5	-	-	GALTRONICS	6G1	PIFA	I-PEX	6GHz UNII5~8 (for ant. 9~12)、IEEE 802.15.4 and BT (for ant. 11~12)
10	-	-	6	-	-	GALTRONICS	6G2	PIFA	I-PEX	
11	-	-	7	1	-	GALTRONICS	6G3	PIFA	I-PEX	
12	-	-	8	2	-	GALTRONICS	6G4	PIFA	I-PEX	
13	-	-	-	-	1	GALTRONICS	GNSS	PIFA	I-PEX	GPS

<Antenna Gain>

Ant.	Antenna Gain (dBi)											
	2.4GHz	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHz UNII 3	5GHz UNII 4	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8	IEEE 802.15.4 / Bluetooth	GPS
1	1.86	2.95	1.8	2.24	2.33	2.14	-	-	-	-	-	-
2	1.63	2.31	3.25	3.39	3.62	3.56	-	-	-	-	-	-
3	4.5	4.86	4.24	3.23	3.43	3.43	-	-	-	-	-	-
4	4.78	3.95	3.04	2.54	3.38	2.73	-	-	-	-	-	-
5	-	4.89	4.29	3.5	3.99	4.43	4.46	4.1	4.5	3.33	-	-
6	-	2.94	2.93	3.09	4.31	3.75	2.63	2.79	2.83	2.96	-	-
7	-	3.55	3.53	4.34	3.5	4.11	3.71	2.18	3.63	2.99	-	-
8	-	5.48	5.08	5.06	5.28	6.24	4.66	4.23	5.31	4.77	-	-
9	-	-	-	-	-	-	1.06	1.02	1.1	1.1	-	-
10	-	-	-	-	-	-	1.45	1.02	1.12	1.65	-	-
11	-	-	-	-	-	-	3.34	1.84	2.05	2	4.078	-
12	-	-	-	-	-	-	3.37	2.58	4	3.68	5.064	-
13	-	-	-	-	-	-	-	-	-	-	-	3.82

<Directional Gain>

DG	Directional Gain (dBi)
	2.4GHz
DG [1SS]	4.98

DG	Directional Gain (dBi)				
	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHzUNII 3	5GHzUNII 4
DG [1SS] (dBi) option1	5.25	5.26	4.44	5.26	5.59
DG [1SS] (dBi) option2	4.55	3.75	3.74	4.17	4.69
DG [1SS] (dBi) option3	4.91	4.31	3.85	4.32	5.08
DG [1SS] (dBi) option4	4.24	3.9	3.94	4.18	3.74
DG [1SS] (dBi) option5	5.68	5.35	5.23	5.66	5.09
DG [1SS] (dBi) option6	4.33	3.54	4.19	4.43	4.65
DG [1SS] (dBi) option7	4.69	4.96	5.17	4.77	5.18
DG [1SS] (dBi) option8	5.57	4.88	3.91	4.79	3.91
DG [1SS] (dBi) option9	5.29	5.67	5.86	7.08	7.24
DG [1SS] (dBi) option10	5.4	5.15	4.82	5.9	6.13
DG [1SS] (dBi) option11	3.19	2.89	3.34	4.23	4.55
DG [1SS] (dBi) option12	3.92	3.82	4.46	4.85	3.91
DG [1SS] (dBi) option13	5.09	5.35	6.02	6.53	6.68
DG [1SS] (dBi) option14	5.38	5.06	4.88	5.52	5.48
DG [1SS] (dBi) option15	4.98	3.51	3.36	3.45	3.78
DG [1SS] (dBi) option16	5.18	4.17	3.71	4.56	4.08

DG	Directional Gain (dBi)			
	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8
DG [1SS] (dBi) option1	3.24	4.73	5.38	4.81
DG [1SS] (dBi) option2	3.18	2.58	2.24	2.9
DG [1SS] (dBi) option3	4.66	4.96	5.5	4.76
DG [1SS] (dBi) option4	3.85	2.63	1.94	2.67
DG [1SS] (dBi) option5	3.51	4.15	5.24	4.73
DG [1SS] (dBi) option6	2.15	1.96	3.14	3.58
DG [1SS] (dBi) option7	4.02	4.2	5.36	4.74
DG [1SS] (dBi) option8	3.54	2.12	3.2	3.37
DG [1SS] (dBi) option9	3.44	4.17	4.41	4.33
DG [1SS] (dBi) option10	3.2	2.38	2.87	2.45
DG [1SS] (dBi) option11	5.12	4.52	4.55	5.1
DG [1SS] (dBi) option12	4.71	2.62	3.8	4.36
DG [1SS] (dBi) option13	3.46	3.87	4.44	4.12
DG [1SS] (dBi) option14	2.19	1.77	3.2	3.21
DG [1SS] (dBi) option15	5.9	4.24	4.58	5.05
DG [1SS] (dBi) option16	5.52	2.37	3.47	4.3

Note1: Maximum Directional Gain following KDB662911 D03.

Note2: The Ant. 13 for GPS used.

Note3: **<WLAN 2.4GHz function>**

For IEEE 802.11 b/g/n/VHT/ax (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.

<WLAN 5GHz function>

For IEEE 802.11a/n/ac/ax (4TX/4RX):

Port 1~8 can be used as transmitting/receiving antenna.

There are only four ports to be used at the same time.

UNII1

Port 1, Port 3, Port 6 and Port 7 generated the worst case, so it was selected to perform the test and its test result was written in the report.

UNII2C

Port 1, Port 3, Port 6 and Port 8 generated the worst case, so it was selected to perform the test and its test result was written in the report.

UNII2A and UNII3~4

Port 1, Port 3, Port 5 and Port 8 generated the worst case, so it was selected to perform the test and its test result was written in the report.

<WLAN 6GHz function>

For IEEE 802.11ax (4TX/4RX):

Port 1~8 can be used as transmitting/receiving antenna.

There are only four ports to be used at the same time.

UNII5

Port 1, Port 4, Port 6 and Port 8 generated the worst case, so it was selected to perform the test and its test result was written in the report.

UNII6~7

Port 1, Port 4, Port 5 and Port 7 generated the worst case, so it was selected to perform the test and its test result was written in the report.

UNII8

Port 1, Port 4, Port 5 and Port 8 generated the worst case, so it was selected to perform the test and its test result was written in the report.

<IEEE 802.15.4 and Bluetooth >

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 2 generated the worst case, so it was selected to test and record in the report.

1.1.3 Table of Antenna Configuration

The configuration of antenna option 1~16 are follows:

<For Ant.1~Ant.8>

Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
Ant.1	Ant.2	Ant.1	Ant.3	Ant.1	Ant.2	Ant.1	Ant.3
Ant.2	Ant.3	Ant.4	Ant.4	Ant.2	Ant.2	Ant.4	Ant.4
Ant.5	Ant.5	Ant.5	Ant.5	Ant.6	Ant.6	Ant.6	Ant.6
Ant.7	Ant.7	Ant.7	Ant.7	Ant.7	Ant.7	Ant.7	Ant.7
Option 9	**Option 10**	**Option 11**	**Option 12**	**Option 13**	**Option 14**	**Option 15**	**Option 16**
Ant.1	Ant.2	Ant.1	Ant.3	Ant.1	Ant.2	Ant.1	Ant.3
Ant.2	Ant.3	Ant.4	Ant.4	Ant.2	Ant.3	Ant.4	Ant.4
Ant.5	Ant.5	Ant.5	Ant.5	Ant.6	Ant.6	Ant.6	Ant.6
Ant.8	Ant.8	Ant.8	Ant.8	Ant.8	Ant.8	Ant.8	Ant.8

<For Ant.5~Ant.12>

Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
Ant.5	Ant.6	Ant.5	Ant.6	Ant.5	Ant.6	Ant.5	Ant.6
Ant.7	Ant.7	Ant.8	Ant.8	Ant.7	Ant.7	Ant.8	Ant.8
Ant.9	Ant.9	Ant.9	Ant.9	Ant.10	Ant.10	Ant.10	Ant.10
Ant.11	Ant.11	Ant.11	Ant.11	Ant.11	Ant.11	Ant.11	Ant.11
Option 9	**Option 10**	**Option 11**	**Option 12**	**Option 13**	**Option 14**	**Option 15**	**Option 16**
Ant.5	Ant.6	Ant.5	Ant.6	Ant.5	Ant.6	Ant.5	Ant.6
Ant.7	Ant.7	Ant.8	Ant.8	Ant.7	Ant.7	Ant.8	Ant.8
Ant.9	Ant.9	Ant.9	Ant.9	Ant.10	Ant.10	Ant.10	Ant.10
Ant.12	Ant.12	Ant.12	Ant.12	Ant.12	Ant.12	Ant.12	Ant.12

Note 1: The above information was declared by the manufacturer.

Note 2:

The directional gain of the maximum was selected to test.

<For Ant.1~Ant.8> Option 5 for 5GHz UNII1, option 13 for 5GHz UNII 2C and option 9 for 5GHz UNII 2A, 3~4 have been tested and recorded in the test report.

<For Ant.5~Ant.12> Option 15 for 6GHz UNII5, Option 3 for 6GHz UNII6~7 and Option 11 for 6GHz UNII8 have been tested and recorded in the test report.

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
IEEE 802.15.4	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

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

1.1.5 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	DOS [ver 6.1.7601]			

Note: The above information was declared by manufacturer.

1.1.6 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: 263031

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Adding IEEE 802.15.4 & Bluetooth function for this device.	All test items
2. Adding U-NII-2A and U-NII-2C bands (5250~5350 MHz, 5470~5725 MHz) for this device. 3. Enabling the 160MHz for 5GHz UNII 1~2C.	After evaluation, the test results don't be affected

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 D01 v02r01
- 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	TH03-CB	Mason Chan	21.5~23.3 / 63~66	Jan. 05, 2023
Radiated <Below 1GHz>	03CH05-CB	KJ Chang	19.7~21.1 / 66~70	Jan. 09, 2023
Radiated <Above 1GHz>	03CH03-CB	KJ Chang	21.7~22.5 / 64~70	Jan. 04, 2023
Radiated <Co-location>	03CH02-CB	KJ Chang	21.3~22.4 / 63~68	Jan. 09, 2023
AC Conduction	CO01-CB	Tim Chen	22~23 / 62~63	Jan. 10, 2023

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%
Conducted Emission	3.2 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.2 dB	Confidence levels of 95%
Bandwidth Measurement	2.0 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
IEEE 802.15.4_Nss1_1TX	-
2405MHz	200
2440MHz	200
2475MHz	200
2480MHz	120

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
The Adapter 1 ~ 3 were performed testing. After evaluation, Adapter 3 has been evaluated to be the worst case. Consequently, measurement will follow this same test mode.	
1	EUT + Bluetooth + Adapter 3
2	EUT + IEEE 802.15.4+ Adapter 3
For operating mode 2 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1. The Adapter 1 ~ 3 were performed testing. After evaluation, Adapter 3 has been evaluated to be the worst case. Consequently, measurement will follow this same test mode. 2. The EUT was performed at X axis, Y axis and Z axis position. EUT Y axis has been evaluated to be the worst case at Emissions in Restricted Frequency Bands <Above 1GHz> ; thus, the measurement will follow this same test configuration.	
1	EUT in Y axis + Bluetooth + Adapter 3
2	EUT in Y axis + IEEE 802.15.4+ Adapter 3
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at X axis, Y axis and Z axis position, and the worst case as below:	
1	EUT in Y axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
After evaluation, Y axis has been evaluated to be the worst case. Consequently, measurement will follow this same test mode.	
1	EUT in Y axis + 6GHz (UNII5~8) + Bluetooth + IEEE 802.15.4
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	2.4GHz + 5GHz (UNII1~4) + 6GHz (UNII5~8) + Bluetooth + IEEE 802.15.4
Refer to Sporton Test Report No.: FA263031-01 for Co-location RF Exposure Evaluation.	

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				
Equipment Name	**Brand Name**	**Model Name**	**Rating**	**Remark**
Adapter 1	Challenger Cable Sales	PS-2.5-12-3WT3	INPUT: 100-120V~50/60Hz, 1.0A OUTPUT: 12V, 3.0A	-
Adapter 2	NetBit	NBS36J120300VU	INPUT: 100-120V~, 50/60Hz, 1.0A OUTPUT: 12.0V, 3.0A	NB06
Adapter 3	NetBit	NBS36J120300VU	INPUT: 100-120V~, 50/60Hz, 1.0A OUTPUT: 12.0V, 3.0A	NB01

2.5 Support Equipment

For AC Conduction:

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

For Radiated:

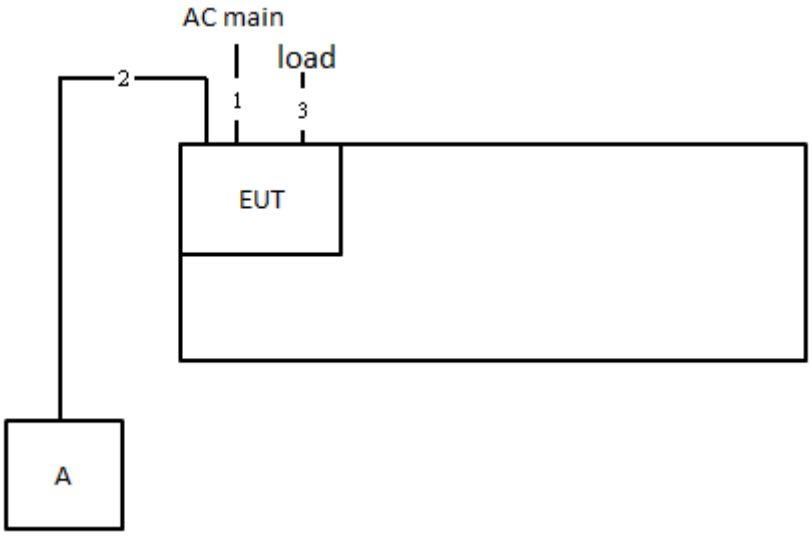
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	Lanovo	X1 Carbon	PD962205ANSU

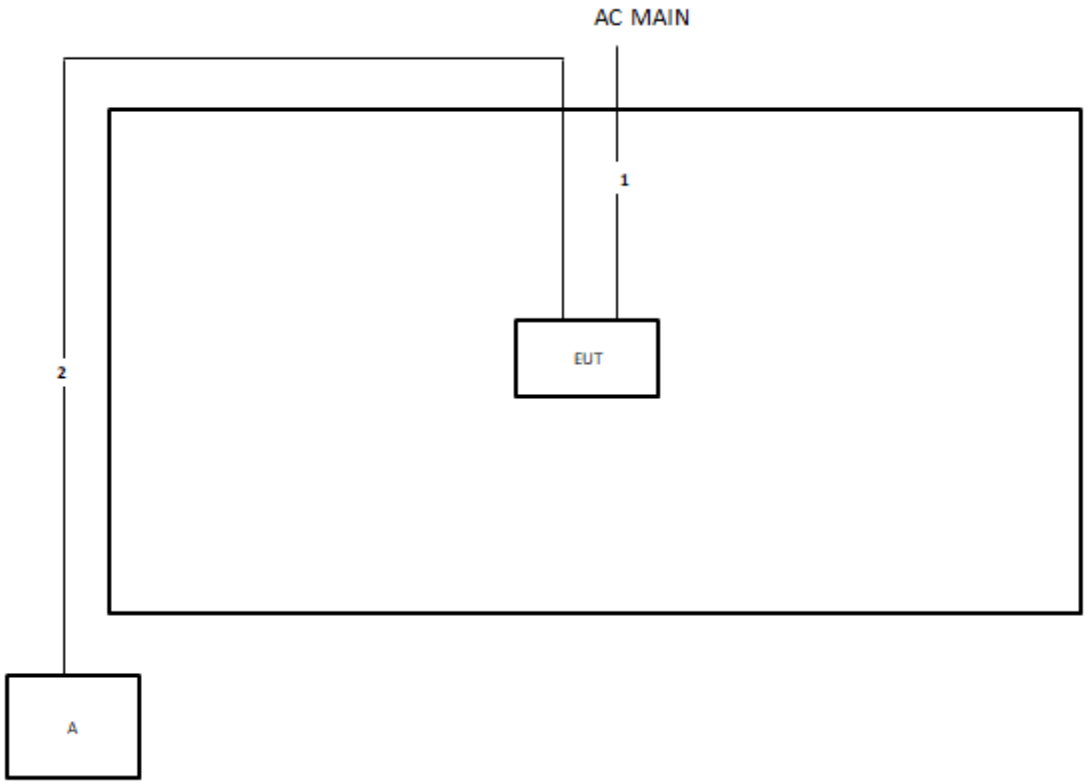
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable*3	No	1m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
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

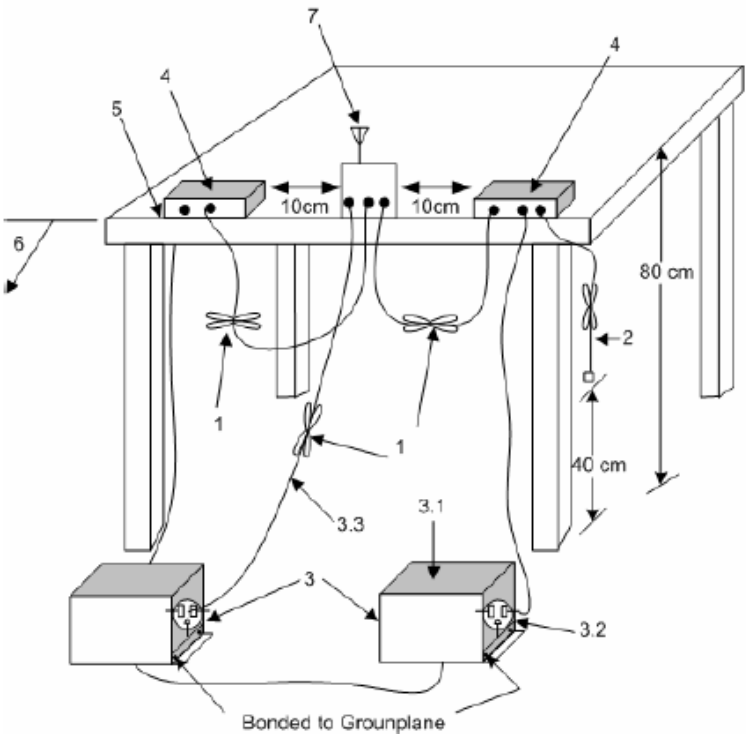
Refer a test equipment and calibration data table in this test report.

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

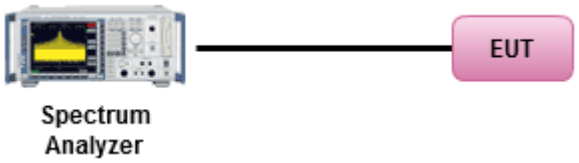
Refer a test equipment and calibration data table in this test report.

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

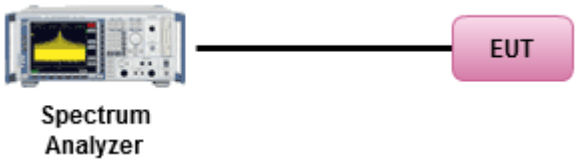
3.4.2 Measuring Instruments

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

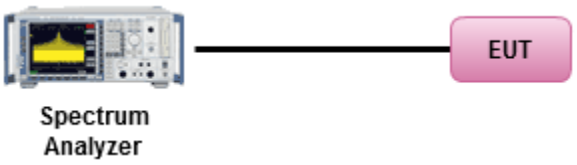
Refer a test equipment and calibration data table in this test report.

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.

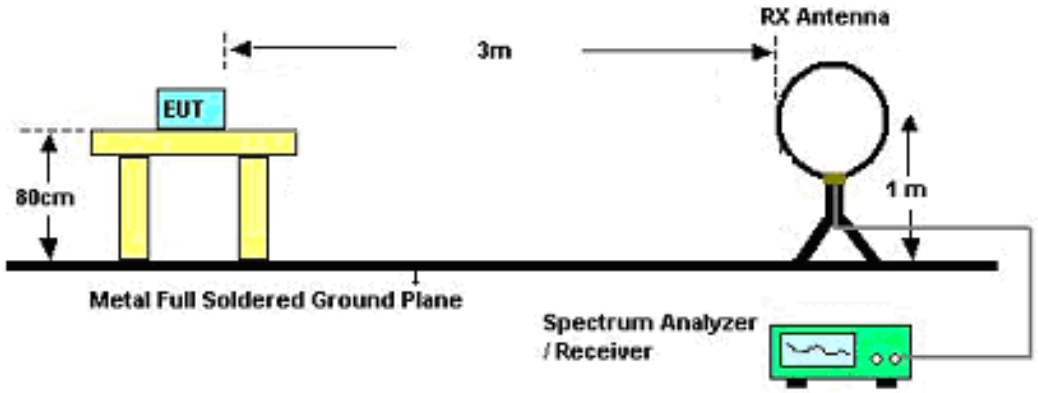
3.6.3 Test Procedures

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.		

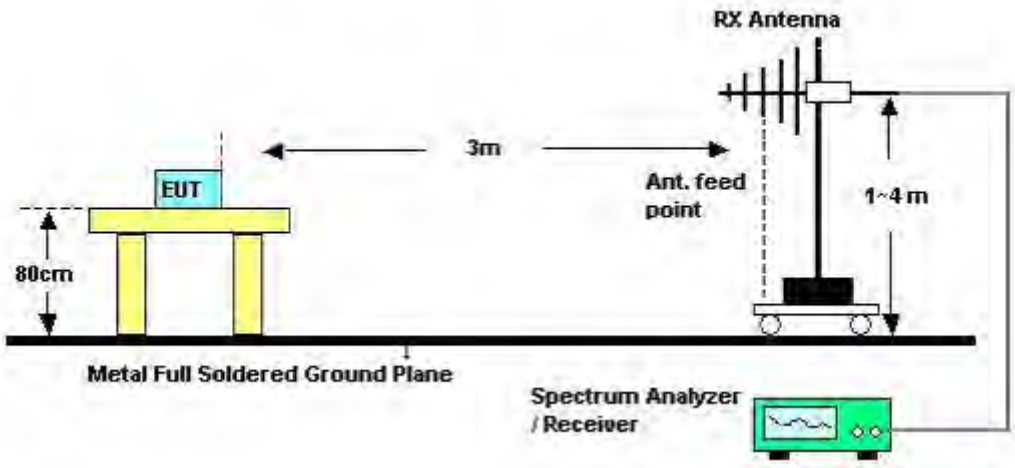
3.6.4 Test Setup

Emissions in Restricted Frequency Bands

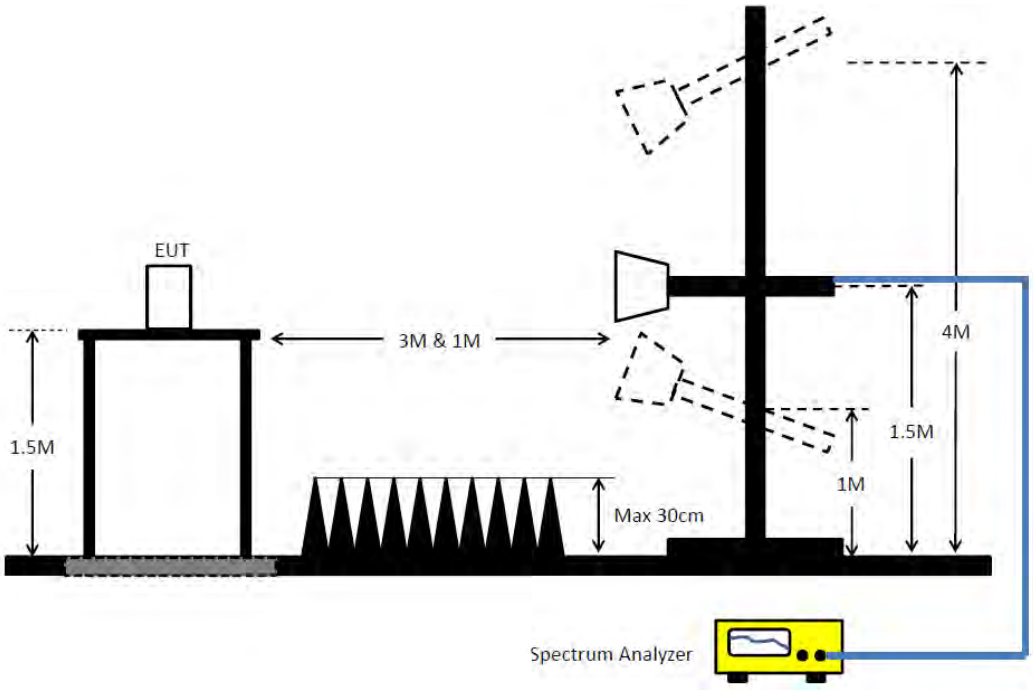
9kHz ~30MHz



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	Feb. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 12, 2022	Apr. 11, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 03, 2022	Aug. 02, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 06, 2022	Nov. 05, 2023	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 25, 2022	Mar. 24, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Mar. 14, 2022	Mar. 13, 2023	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 26, 2022	Mar. 25, 2023	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 19, 2022	Apr. 18, 2023	Radiation (03CH02-CB)
Horn Antenna	SCHWARZBEAK	BBHA9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH02-CB)
Pre-Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	Aug. 23 2022	Aug. 22 2023	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Dec. 05, 2022	Dec. 04, 2023	Radiation (03CH02-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 05, 2022	May 04, 2023	Radiation (03CH03-CB)
Horn Antenna	ETS・Lindgren	3115	6821	750MHz~18GHz	Jan. 21, 2022	Jan. 20, 2023	Radiation (03CH03-CB)
Horn Antenna	SCHWARZBEAK	BBHA9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH03-CB)
Pre-Amplifier	EM	EM18G40GA	060874	18GHz ~ 40GHz	Aug. 23 2022	Aug. 22 2023	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 10, 2022	Jun. 09, 2023	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 07, 2022	Jan. 06, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1531344	300MHz~40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1728002	300MHz~40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-14	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Oct. 04, 2022	Oct. 03, 2023	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

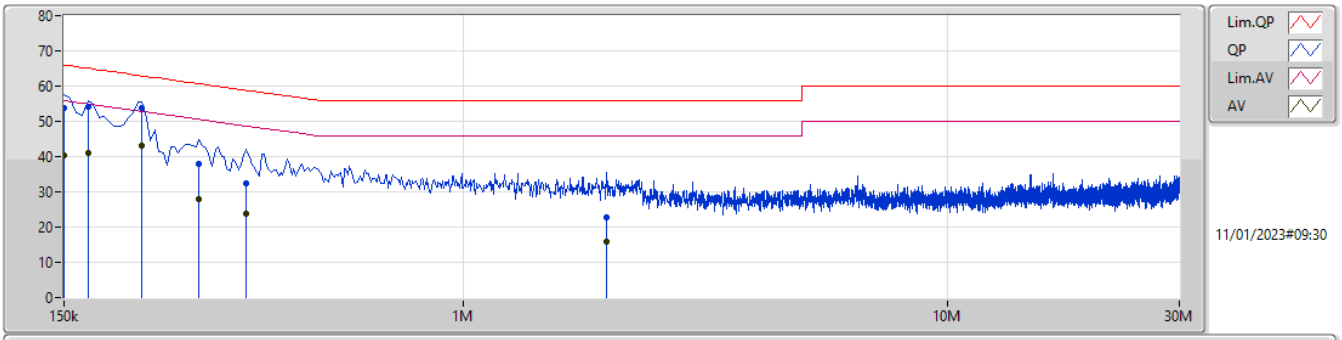
Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.

Summary

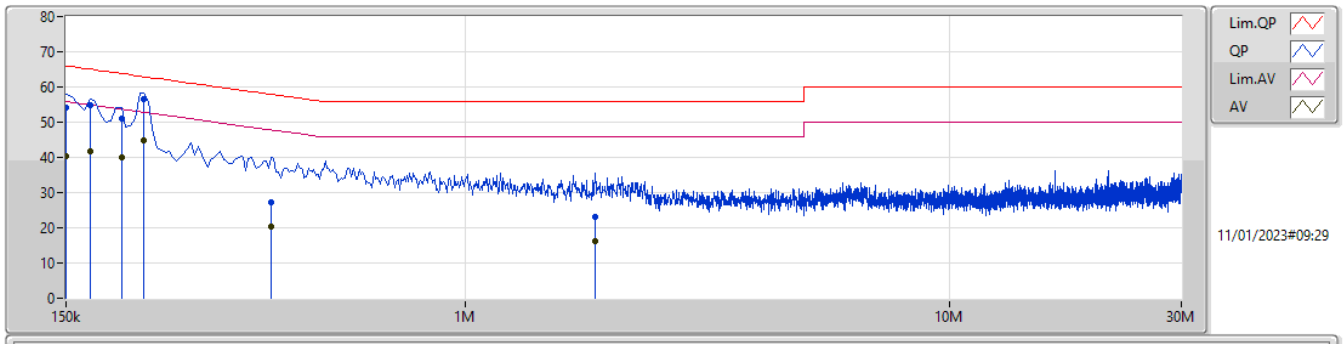
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	QP	217.5k	56.46	62.92	-6.46	Neutral

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	53.76	66.00	-12.24	9.99	Line	-	43.77	0.06	0.04	9.89
AV	150k	40.27	56.00	-15.73	9.99	Line	-	30.28	0.06	0.04	9.89
QP	168k	54.29	65.06	-10.77	9.99	Line	-	44.30	0.06	0.04	9.89
AV	168k	41.17	55.06	-13.89	9.99	Line	-	31.18	0.06	0.04	9.89
QP	217.5k	53.95	62.92	-8.97	9.99	Line	"Worst"	43.96	0.06	0.04	9.89
AV	217.5k	43.00	52.92	-9.92	9.99	Line	-	33.01	0.06	0.04	9.89
QP	285k	37.94	60.67	-22.73	10.00	Line	-	27.94	0.06	0.05	9.89
AV	285k	28.07	50.67	-22.60	10.00	Line	-	18.07	0.06	0.05	9.89
QP	357k	32.29	58.79	-26.50	10.01	Line	-	22.28	0.06	0.06	9.89
AV	357k	23.86	48.79	-24.93	10.01	Line	-	13.85	0.06	0.06	9.89
QP	1.977M	22.64	56.00	-33.36	10.07	Line	-	12.57	0.09	0.09	9.89
AV	1.977M	16.02	46.00	-29.98	10.07	Line	-	5.95	0.09	0.09	9.89

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	54.22	66.00	-11.78	10.00	Neutral	-	44.22	0.07	0.04	9.89
AV	150k	40.51	56.00	-15.49	10.00	Neutral	-	30.51	0.07	0.04	9.89
QP	168k	54.66	65.06	-10.40	10.00	Neutral	-	44.66	0.07	0.04	9.89
AV	168k	41.68	55.06	-13.38	10.00	Neutral	-	31.68	0.07	0.04	9.89
QP	195k	51.05	63.82	-12.77	10.00	Neutral	-	41.05	0.07	0.04	9.89
AV	195k	40.13	53.82	-13.69	10.00	Neutral	-	30.13	0.07	0.04	9.89
QP	217.5k	56.46	62.92	-6.46	10.00	Neutral	"Worst"	46.46	0.07	0.04	9.89
AV	217.5k	44.98	52.92	-7.94	10.00	Neutral	-	34.98	0.07	0.04	9.89
QP	397.5k	27.12	57.91	-30.79	10.02	Neutral	-	17.10	0.07	0.06	9.89
AV	397.5k	20.34	47.91	-27.57	10.02	Neutral	-	10.32	0.07	0.06	9.89
QP	1.856M	23.03	56.00	-32.97	10.07	Neutral	-	12.96	0.10	0.08	9.89
AV	1.856M	16.36	46.00	-29.64	10.07	Neutral	-	6.29	0.10	0.08	9.89

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.15.4_Nss1_1TX	1.64M	2.186M	2M19G1D	1.634M	2.184M

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

Result

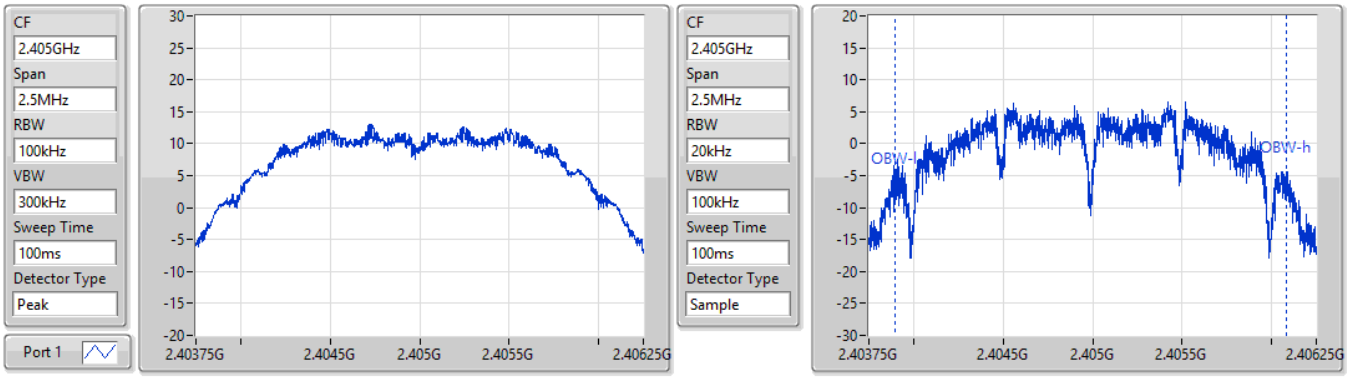
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.15.4_Nss1_1TX	-	-	-	-
2405MHz	Pass	500k	1.638M	2.184M
2440MHz	Pass	500k	1.634M	2.184M
2480MHz	Pass	500k	1.64M	2.186M

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

EBW-DTS

2405MHz

05/01/2023

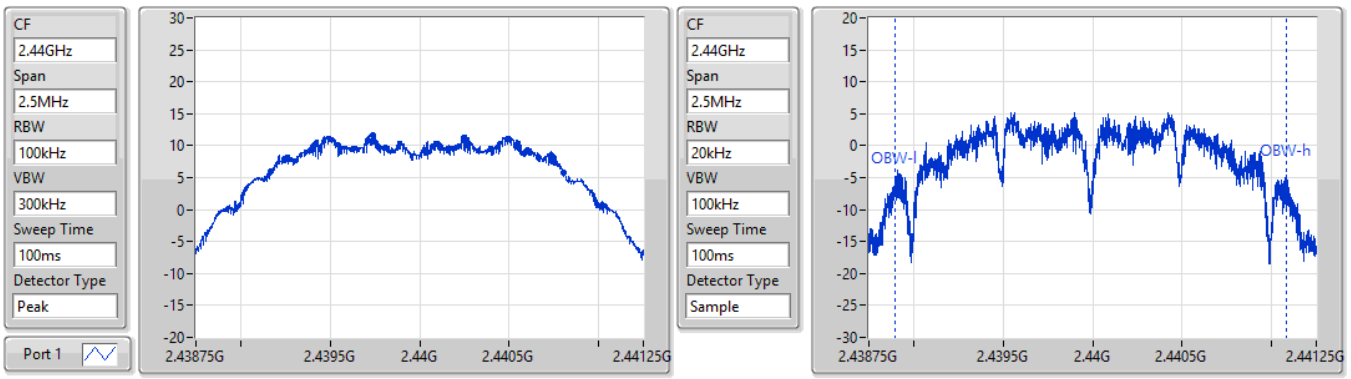


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.638M	2.404169G	2.405806G	2.184M	2.403897G	2.406081G	500k	1

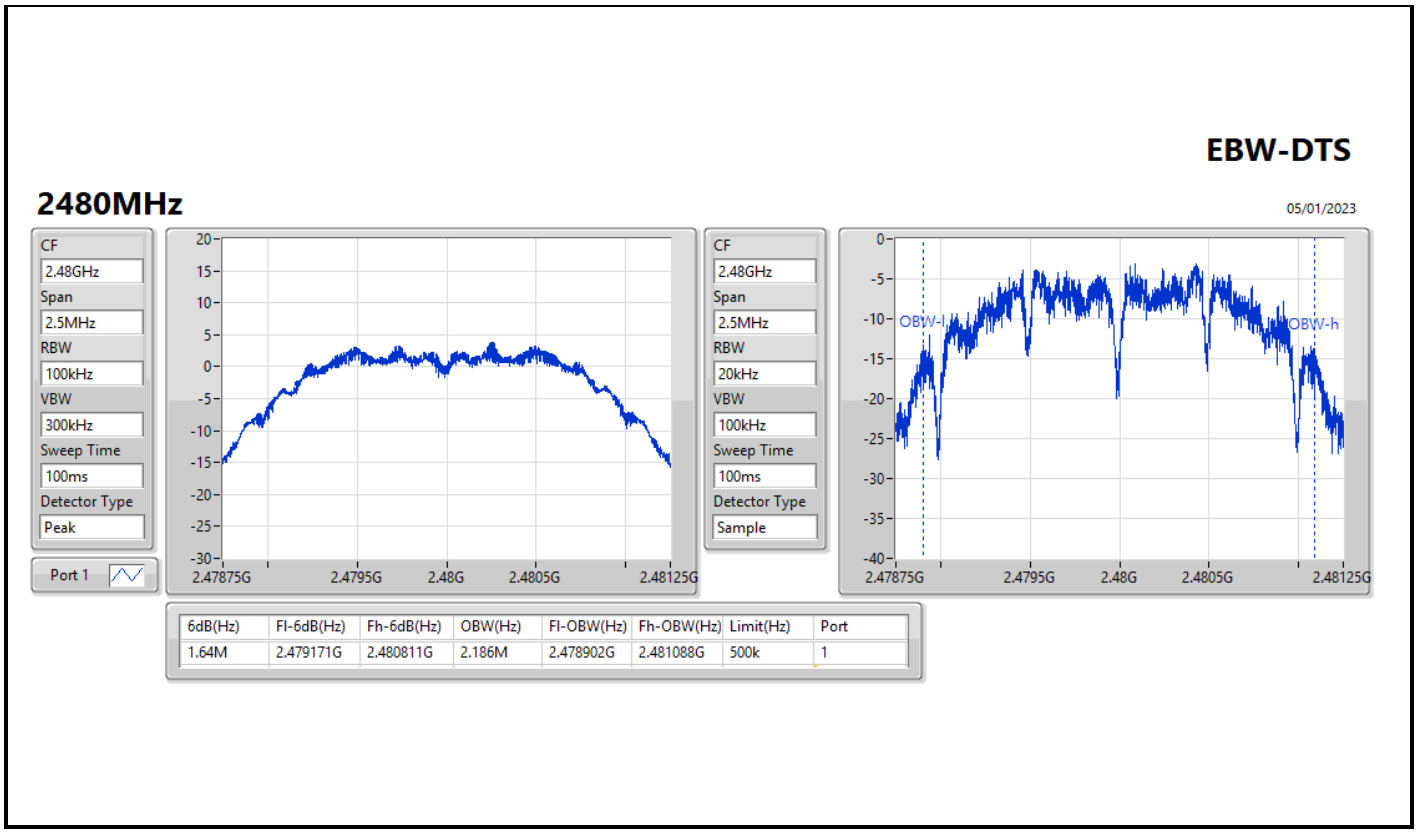
EBW-DTS

2440MHz

05/01/2023



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.634M	2.439171G	2.440805G	2.184M	2.438897G	2.441081G	500k	1


EBW-DTS
2480MHz
05/01/2023
CF
2.48GHz
Span
2.5MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1
20
15
10
5
0
-5
-10
-15
-20
-25
-30
2.47875G
2.4795G
2.48G
2.4805G
2.48125G
CF
2.48GHz
Span
2.5MHz
RBW
20kHz
VBW
100kHz
Sweep Time
100ms
Detector Type
Sample
0
-5
-10
-15
-20
-25
-30
-35
-40
OBW-l
OBW-h
2.47875G
2.4795G
2.48G
2.4805G
2.48125G
6dB(Hz) Fl-6dB(Hz) Fh-6dB(Hz) OBW(Hz) Fl-OBW(Hz) Fh-OBW(Hz) Limit(Hz) Port
1.64M 2.479171G 2.480811G 2.186M 2.478902G 2.481088G 500k 1

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
802.15.4_Nss1_1TX	16.69	0.04667

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
802.15.4_Nss1_1TX	-	-	-	-
2405MHz	Pass	5.064	16.69	30.00
2440MHz	Pass	5.064	15.87	30.00
2475MHz	Pass	5.064	15.96	30.00
2480MHz	Pass	5.064	7.33	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.15.4_Nss1_1TX	0.95

RBW = 3kHz;

Result

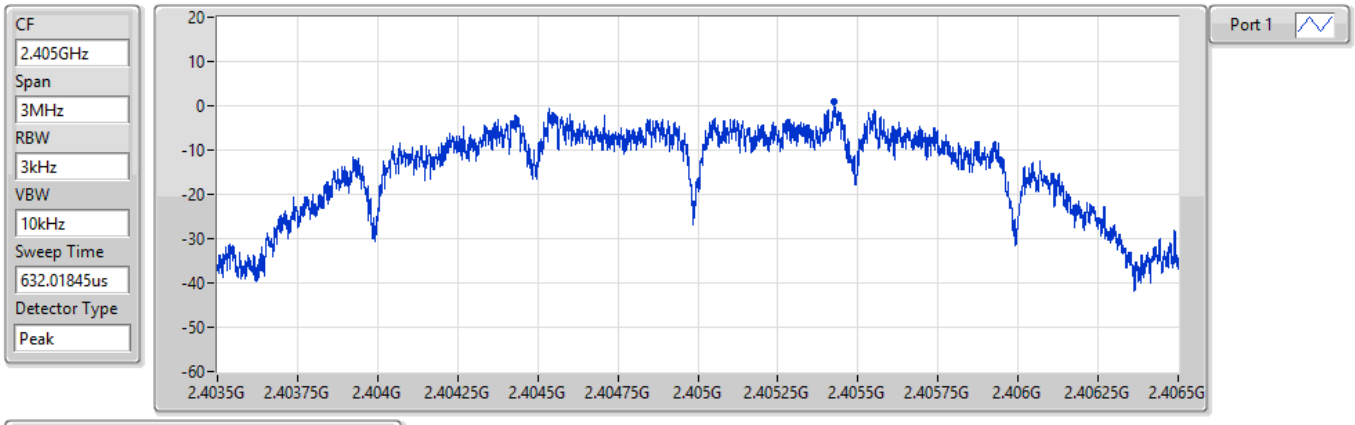
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.15.4_Nss1_1TX	-	-	-	-
2405MHz	Pass	5.064	0.95	8.00
2440MHz	Pass	5.064	-1.90	8.00
2480MHz	Pass	5.064	-9.64	8.00

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;

PSD

2405MHz

05/01/2023

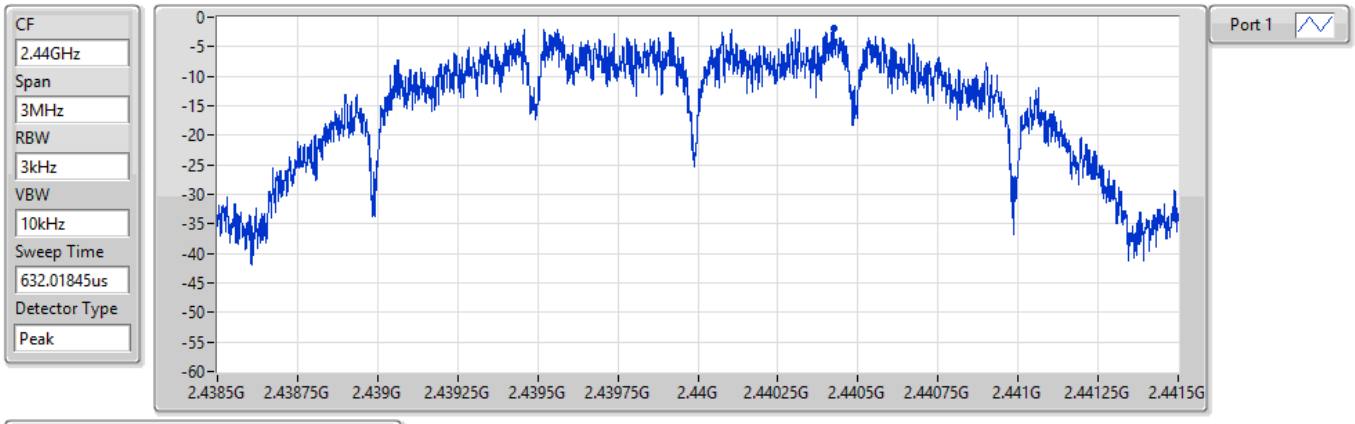


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.95	0.95	0.95

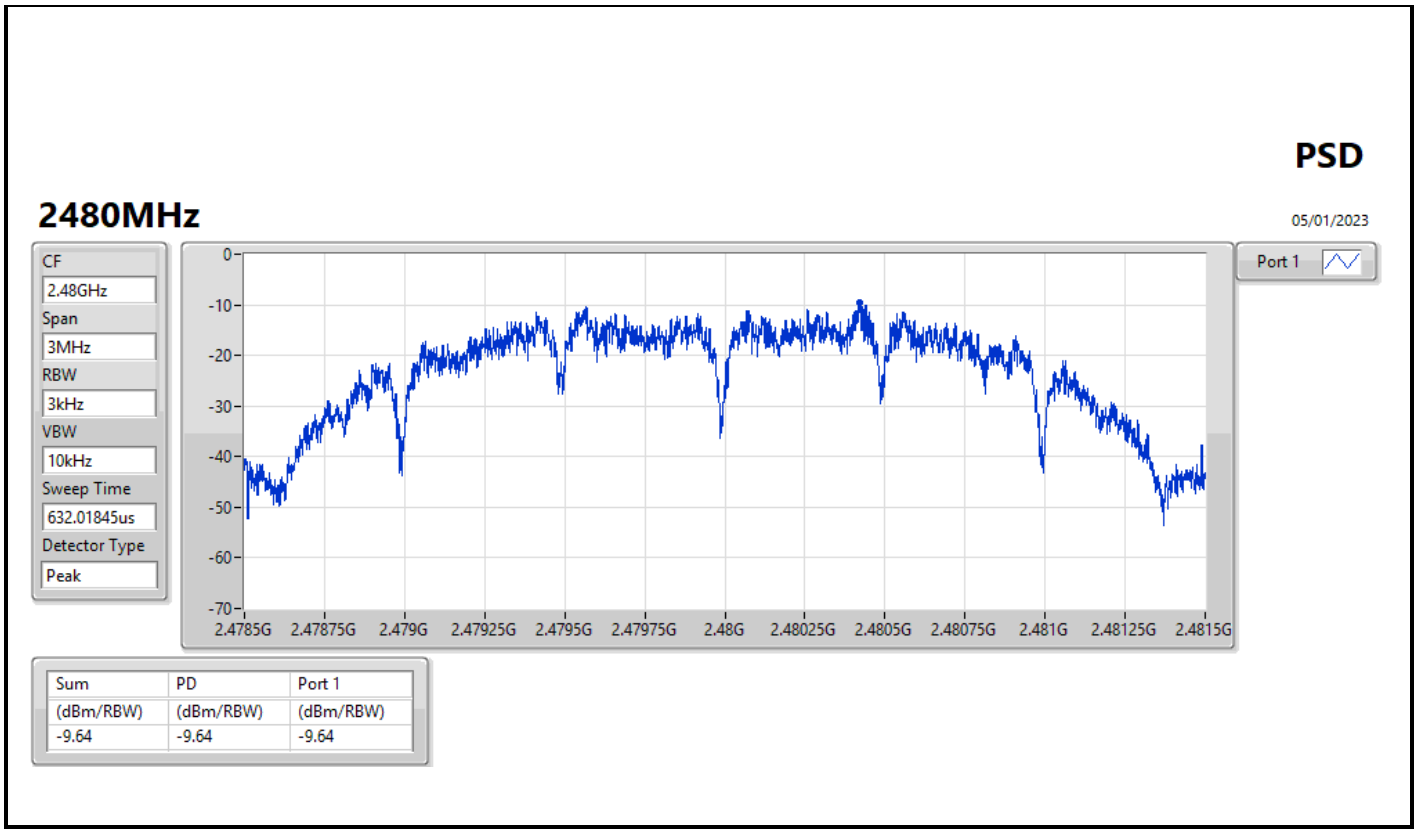
PSD

2440MHz

05/01/2023



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.90	-1.90	-1.90


PSD
2480MHz
05/01/2023
CF
2.48GHz
Span
3MHz
RBW
3kHz
VBW
10kHz
Sweep Time
632.01845us
Detector Type
Peak
Port 1
0
-10
-20
-30
-40
-50
-60
-70
2.4785G
2.47875G
2.479G
2.47925G
2.4795G
2.47975G
2.48G
2.48025G
2.4805G
2.48075G
2.481G
2.48125G
2.4815G
Sum
PD
Port 1
(dBm/RBW)
(dBm/RBW)
(dBm/RBW)
-9.64
-9.64
-9.64

Summary

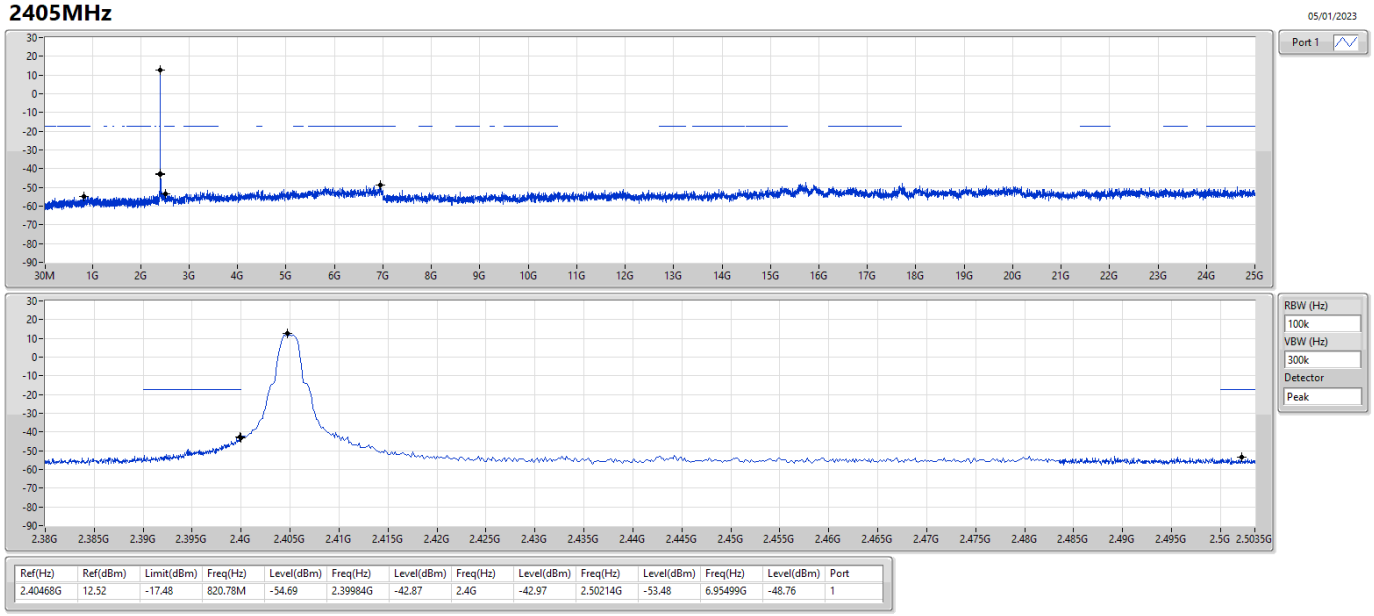
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.15.4_Nss1_1TX	Pass	2.40468G	12.52	-17.48	820.78M	-54.69	2.39984G	-42.87	2.4G	-42.97	2.50214G	-53.48	6.95499G	-48.76	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)	Freq (Hz)	Level (dBm)	Port
802.15.4_Nss1_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.40468G	12.52	-17.48	820.78M	-54.69	2.39984G	-42.87	2.4G	-42.97	2.50214G	-53.48	6.95499G	-48.76	1
2440MHz	Pass	2.43941G	11.47	-18.53	921.83M	-54.25	2.39284G	-53.55	2.4G	-55.91	2.50246G	-53.37	17.66333G	-49.09	1
2480MHz	Pass	2.48033G	3.01	-26.99	773.78M	-55.11	2.39932G	-53.99	2.4G	-55.68	2.50334G	-53.83	6.30822G	-49.36	1

CSENdB-DTS

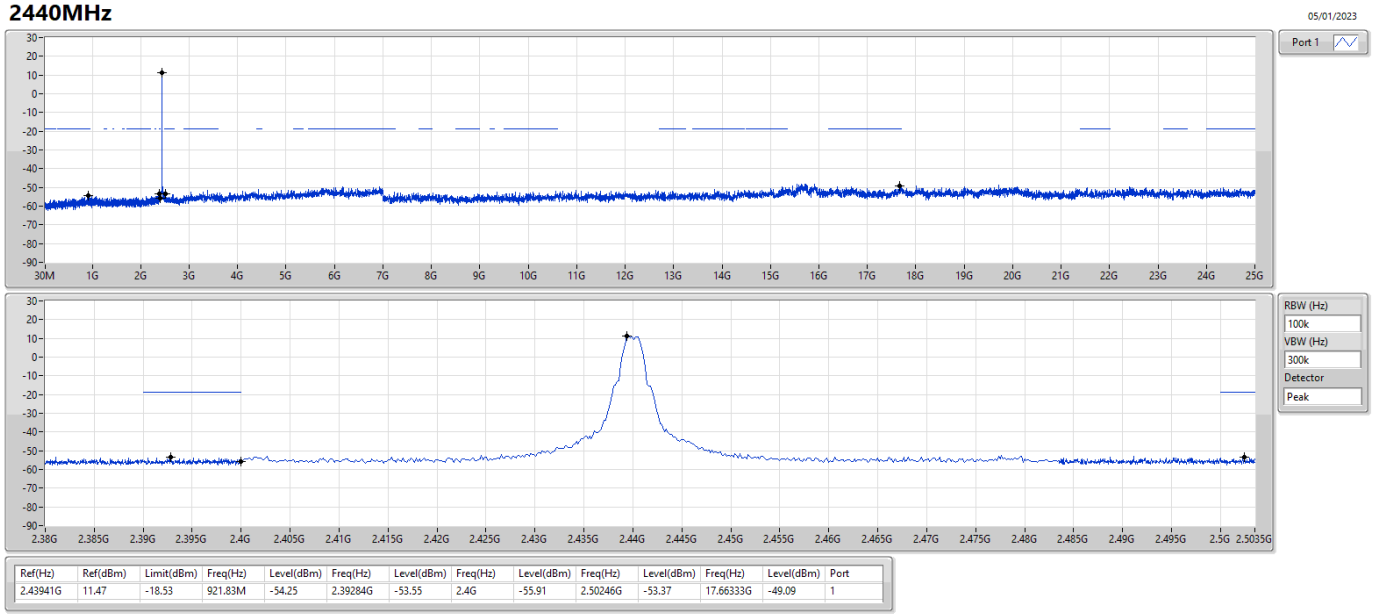
2405MHz



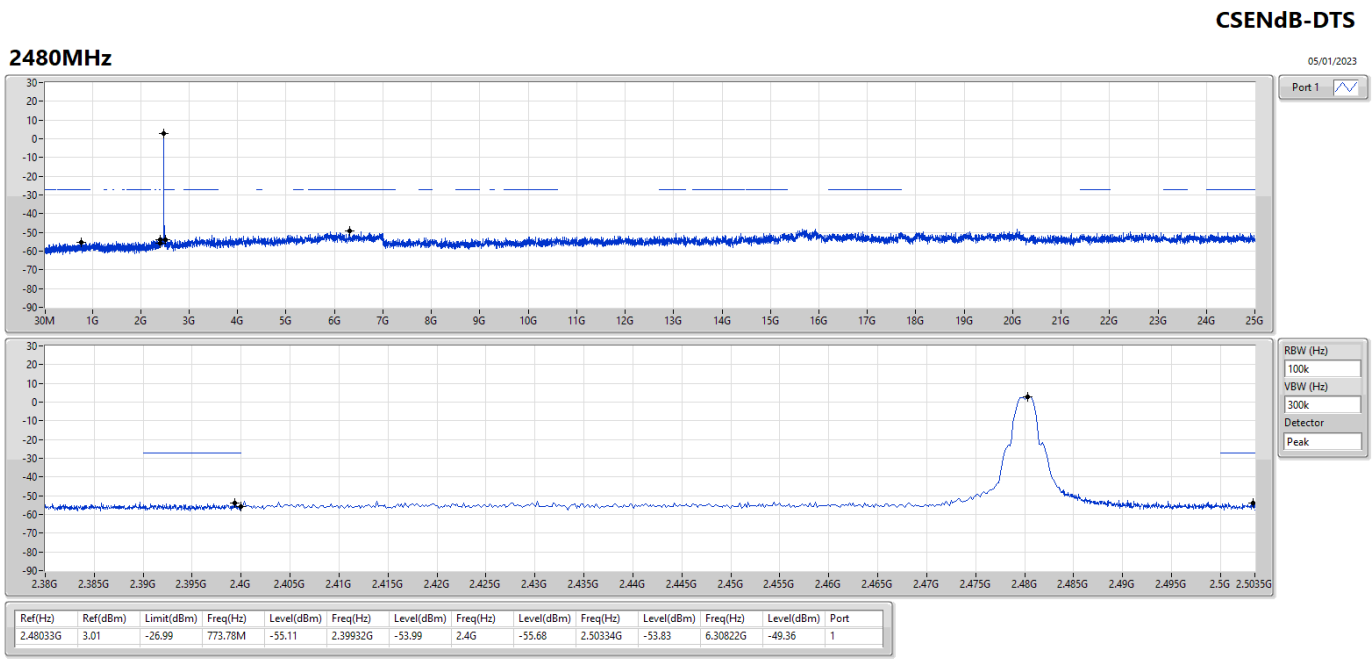
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40468G	12.52	-17.48	820.78M	-54.69	2.39984G	-42.87	2.4G	-42.97	2.50214G	-53.48	6.95499G	-48.76	1

CSENdB-DTS

2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43941G	11.47	-18.53	921.83M	-54.25	2.39284G	-53.55	2.4G	-55.91	2.50246G	-53.37	17.66333G	-49.09	1

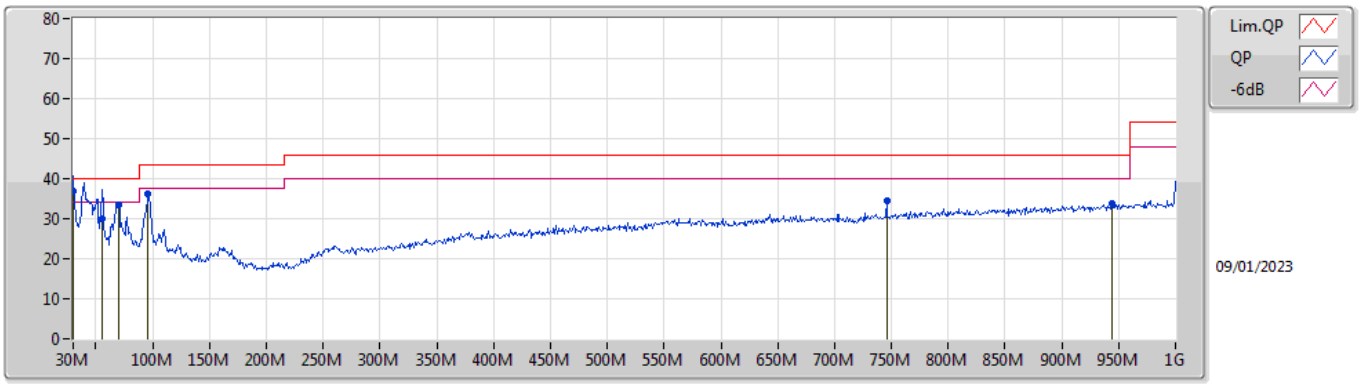


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48033G	3.01	-26.99	773.78M	-55.11	2.39932G	-53.99	2.4G	-55.68	2.50334G	-53.83	6.30822G	-49.36	1

Summary

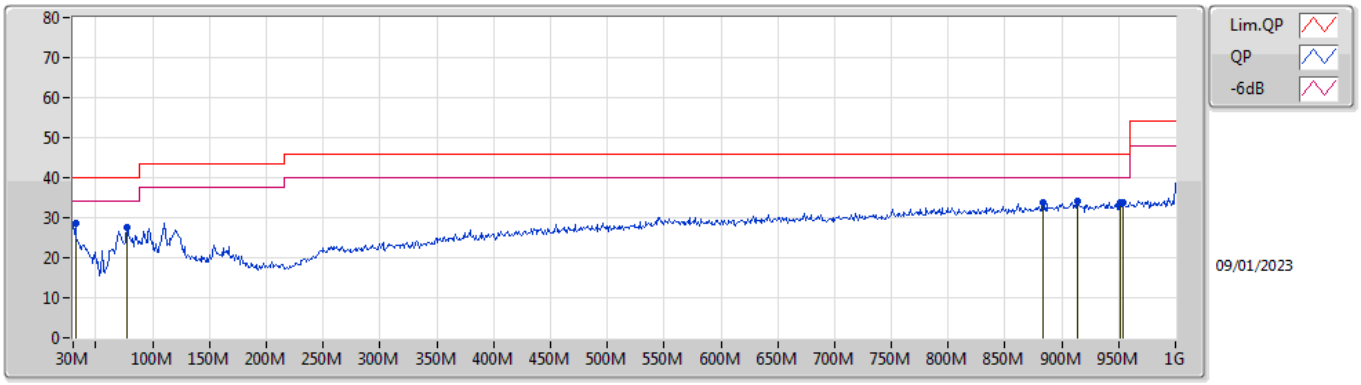
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	QP	30M	36.96	40.00	-3.04	Vertical

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
QP	30M	36.96	40.00	-3.04	-6.54	3	Vertical	117	1.00	"Worst"	43.50	23.99	1.02	31.55
QP	55.22M	30.11	40.00	-9.89	-17.89	3	Vertical	23	1.25	-	48.00	12.69	1.31	31.89
PK	69.77M	33.58	40.00	-6.42	-18.34	3	Vertical	146	1.50	-	51.92	12.18	1.45	31.97
PK	95.96M	36.17	43.50	-7.33	-14.32	3	Vertical	3	1.25	-	50.49	15.96	1.67	31.95
PK	745.86M	34.57	46.00	-11.43	-2.40	3	Vertical	155	3.00	-	36.97	25.22	4.99	32.61
PK	943.74M	33.80	46.00	-12.20	-0.38	3	Vertical	177	1.50	-	34.18	26.41	5.69	32.48

Mode 2



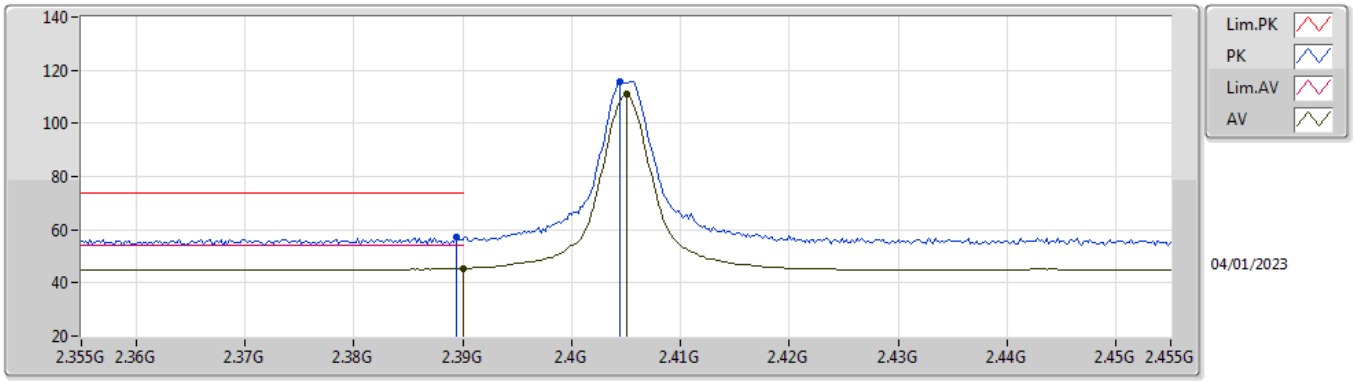
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	31.94M	28.59	40.00	-11.41	-7.59	3	Horizontal	237	2.00	"Worst"	36.18	22.97	1.04	31.60
PK	77.53M	27.54	40.00	-12.46	-17.96	3	Horizontal	74	2.00	-	45.50	12.49	1.53	31.98
PK	883.6M	33.63	46.00	-12.37	-0.81	3	Horizontal	210	3.00	-	34.44	26.10	5.58	32.49
PK	913.67M	34.07	46.00	-11.93	-0.61	3	Horizontal	133	1.50	-	34.68	26.20	5.68	32.49
PK	951.5M	33.80	46.00	-12.20	-0.27	3	Horizontal	193	1.25	-	34.07	26.51	5.70	32.48
PK	954.41M	33.77	46.00	-12.23	-0.18	3	Horizontal	248	1.25	-	33.95	26.58	5.71	32.47

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	-	-	-	-	-	-	-	-	-	-	-
IEEE 802.15.4	Pass	AV	2.4835G	53.76	54.00	-0.24	3	Vertical	3	1.62	-

IEEE 802.15.4_1TX

2405MHz_TX

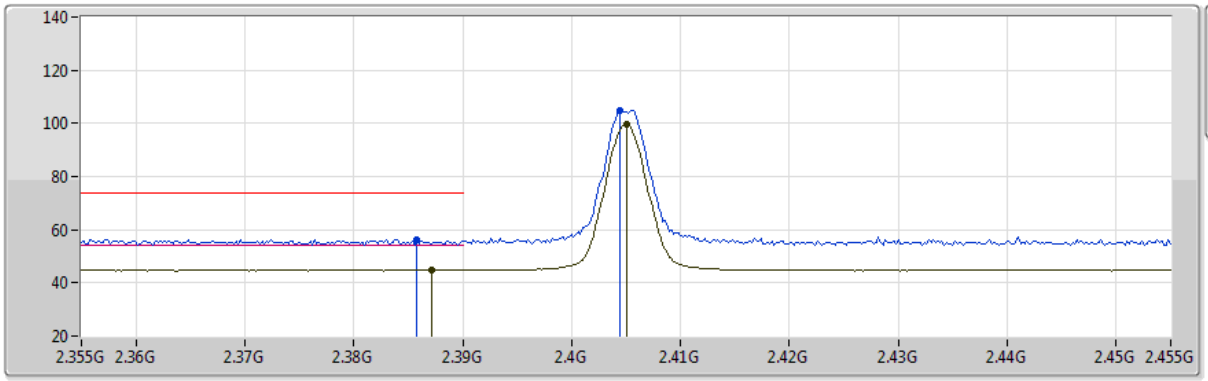


EUT Y_1TX
Setting 200
03-D-E-5

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	2.3894G	57.09	74.00	-16.91	24.84	3	Vertical	7	1.00	-	28.26	3.99	-
AV	2.39G	45.48	54.00	-8.52	13.23	3	Vertical	7	1.00	-	28.26	3.99	-
PK	2.4044G	115.80	Inf	-Inf	83.50	3	Vertical	7	1.00	-	28.30	4.00	-
AV	2.405G	110.83	Inf	-Inf	78.53	3	Vertical	7	1.00	-	28.30	4.00	-

IEEE 802.15.4_1TX

2405MHz_TX

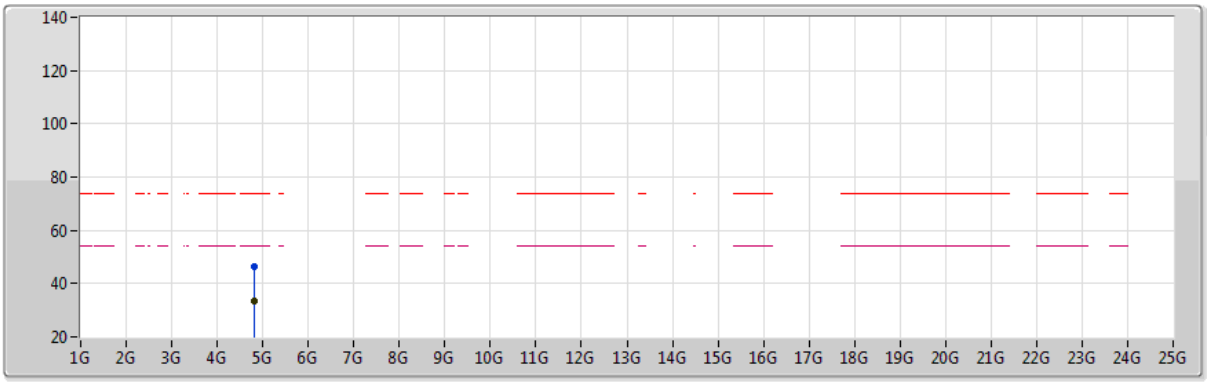


EUT Y_1TX
Setting 200
03-D-E-5

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	2.3858G	56.37	74.00	-17.63	24.14	3	Horizontal	49	2.44	-	28.24	3.99	-
AV	2.3872G	44.74	54.00	-9.26	12.50	3	Horizontal	49	2.44	-	28.25	3.99	-
PK	2.4044G	104.81	Inf	-Inf	72.51	3	Horizontal	49	2.44	-	28.30	4.00	-
AV	2.405G	99.85	Inf	-Inf	67.55	3	Horizontal	49	2.44	-	28.30	4.00	-

IEEE 802.15.4_1TX

2405MHz_TX

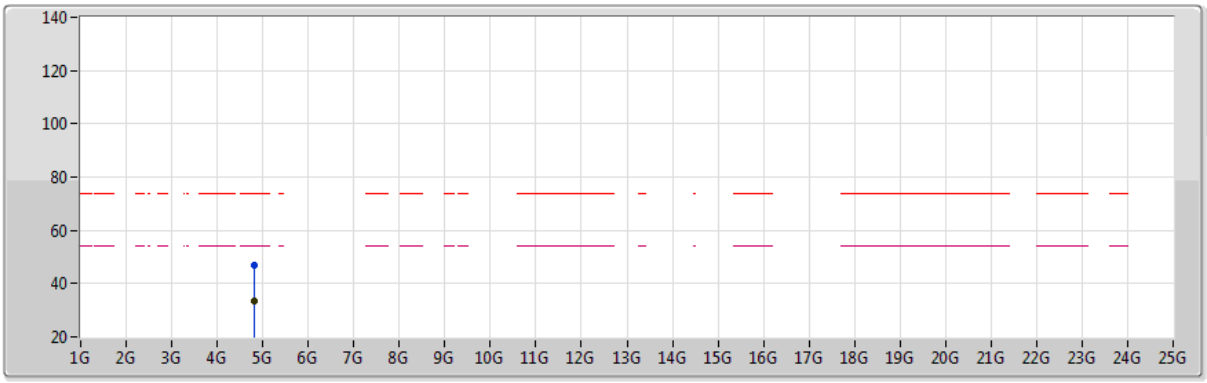


EUT Y_1TX
Setting 200
03-D-E-5

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	4.80688G	46.39	74.00	-27.61	41.55	3	Vertical	-0	1.83	-	33.24	6.50	34.90
AV	4.8244G	33.28	54.00	-20.72	28.32	3	Vertical	-0	1.83	-	33.35	6.51	34.90

IEEE 802.15.4_1TX

2405MHz_TX

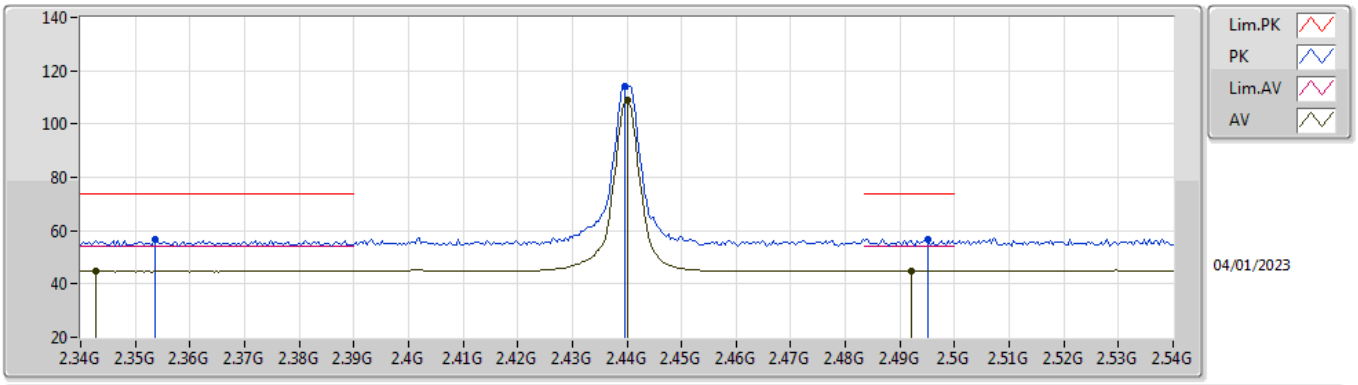


EUT Y_1TX
Setting 200
03-D-E-5

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	4.8241G	46.76	74.00	-27.24	41.81	3	Horizontal	-0	1.80	-	33.34	6.51	34.90
AV	4.82458G	33.21	54.00	-20.79	28.25	3	Horizontal	-0	1.80	-	33.35	6.51	34.90

IEEE 802.15.4_1TX

2440MHz_TX

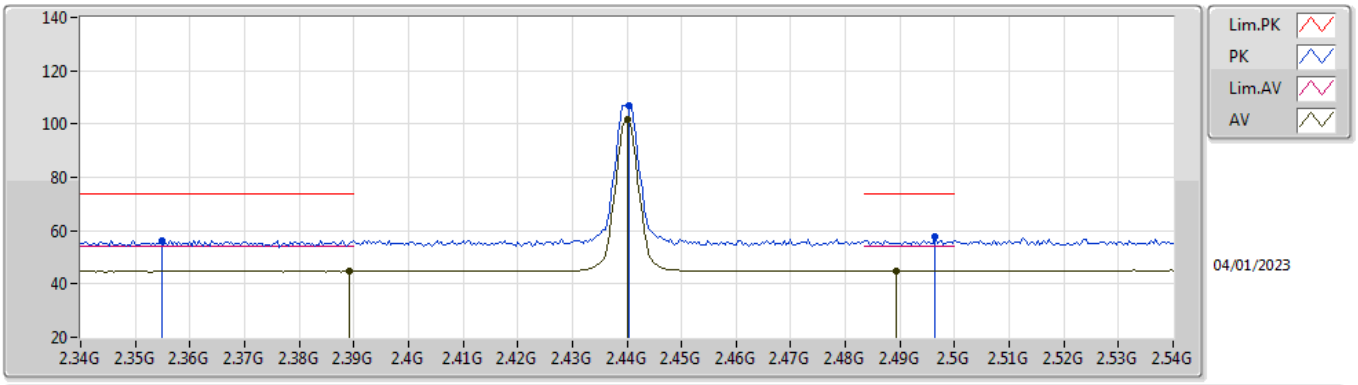


EUT Y_1TX
Setting 200
03-D-E-5

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	2.3536G	56.87	74.00	-17.13	24.81	3	Vertical	-0	1.10	-	28.11	3.95	-	
AV	2.3428G	44.72	54.00	-9.28	12.71	3	Vertical	-0	1.10	-	28.07	3.94	-	
PK	2.4396G	114.06	Inf	-Inf	81.72	3	Vertical	-0	1.10	-	28.30	4.04	-	
AV	2.44G	109.03	Inf	-Inf	76.69	3	Vertical	-0	1.10	-	28.30	4.04	-	
PK	2.4952G	56.73	74.00	-17.27	24.15	3	Vertical	-0	1.10	-	28.48	4.10	-	
AV	2.492G	44.91	54.00	-9.09	12.35	3	Vertical	-0	1.10	-	28.47	4.09	-	

IEEE 802.15.4_1TX

2440MHz_TX

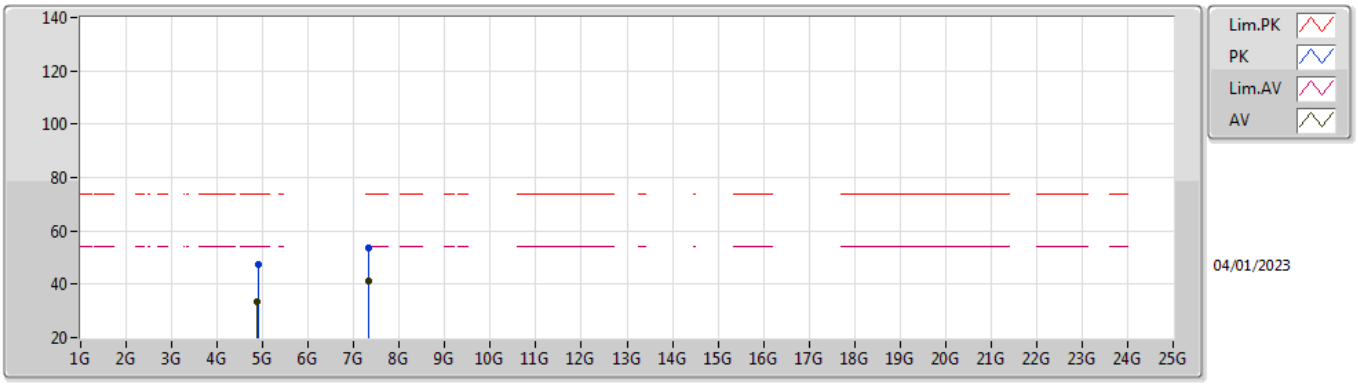


EUT Y_1TX
Setting 200
03-D-E-5

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	2.3548G	56.43	74.00	-17.57	24.36	3	Horizontal	354	1.05	-	28.12	3.95	-
AV	2.3892G	44.70	54.00	-9.30	12.45	3	Horizontal	354	1.05	-	28.26	3.99	-
PK	2.4404G	106.90	Inf	-Inf	74.56	3	Horizontal	354	1.05	-	28.30	4.04	-
AV	2.44G	101.91	Inf	-Inf	69.57	3	Horizontal	354	1.05	-	28.30	4.04	-
PK	2.4964G	57.54	74.00	-16.46	24.95	3	Horizontal	354	1.05	-	28.49	4.10	-
AV	2.4892G	44.94	54.00	-9.06	12.39	3	Horizontal	354	1.05	-	28.46	4.09	-

IEEE 802.15.4_1TX

2440MHz_TX

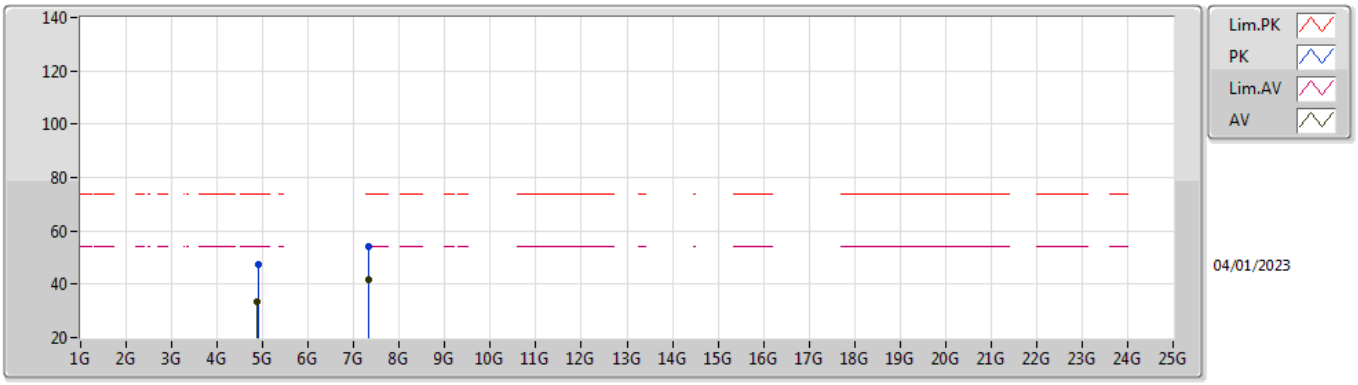


EUT Y_1TX
Setting 200
03-D-E-5

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	4.88924G	47.59	74.00	-26.41	42.28	3	Vertical	341	1.80	-	33.66	6.54	34.89
AV	4.88348G	33.40	54.00	-20.60	28.12	3	Vertical	341	1.80	-	33.63	6.54	34.89
PK	7.3182G	53.63	74.00	-20.37	43.14	3	Vertical	4	1.78	-	36.94	8.70	35.15
AV	7.31832G	41.05	54.00	-12.95	30.56	3	Vertical	4	1.78	-	36.94	8.70	35.15

IEEE 802.15.4_1TX

2440MHz_TX

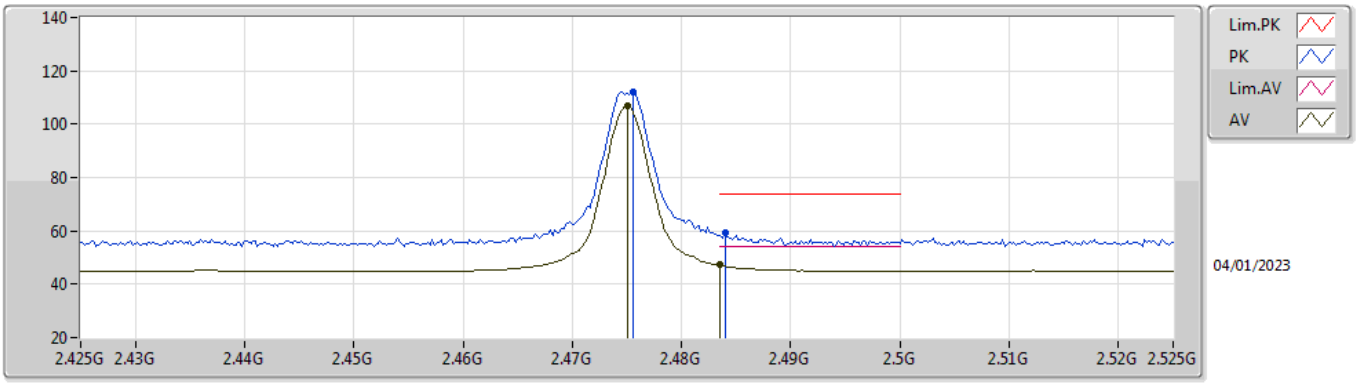


EUT Y_1TX
Setting 200
03-D-E-5

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	4.89188G	47.38	74.00	-26.62	42.05	3	Horizontal	138	1.28	-	33.67	6.55	34.89
AV	4.8827G	33.30	54.00	-20.70	28.02	3	Horizontal	138	1.28	-	33.63	6.54	34.89
PK	7.3185G	54.18	74.00	-19.82	43.69	3	Horizontal	65	1.80	-	36.94	8.70	35.15
AV	7.31832G	41.91	54.00	-12.09	31.42	3	Horizontal	65	1.80	-	36.94	8.70	35.15

IEEE 802.15.4_1TX

2475MHz_TX

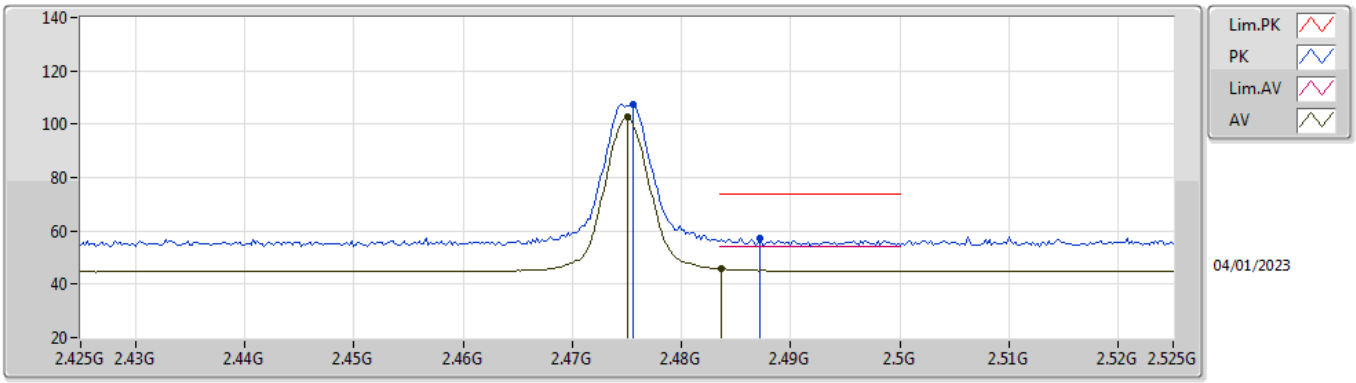


EUT Y_1TX
Setting 200
03-D-E-5

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	2.4756G	112.08	Inf	-Inf	79.60	3	Vertical	2	1.64	-	28.40	4.08	-
AV	2.475G	107.12	Inf	-Inf	74.64	3	Vertical	2	1.64	-	28.40	4.08	-
PK	2.484G	59.43	74.00	-14.57	26.91	3	Vertical	2	1.64	-	28.44	4.08	-
AV	2.4835G	47.27	54.00	-6.73	14.76	3	Vertical	2	1.64	-	28.43	4.08	-

IEEE 802.15.4_1TX

2475MHz_TX

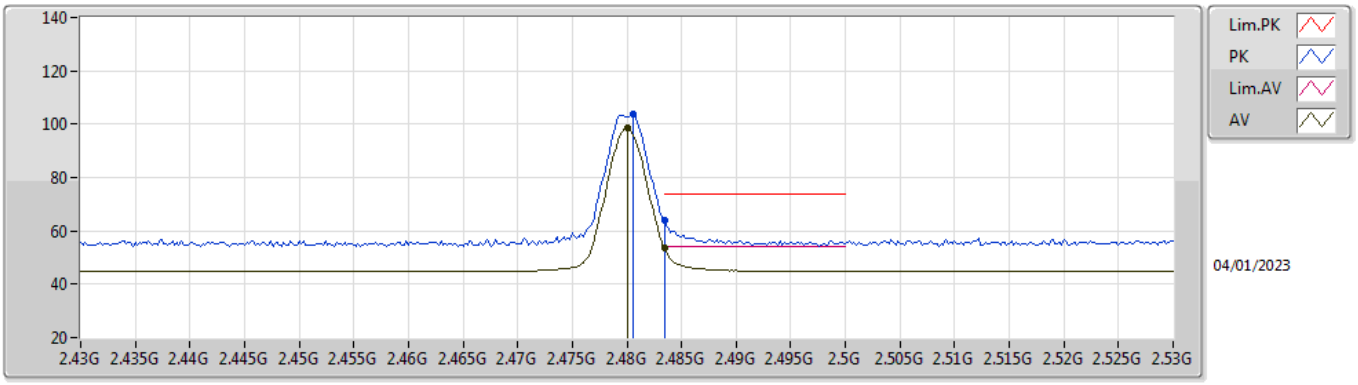


EUT Y_1TX
Setting 200
03-D-E-5

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	2.4756G	107.58	Inf	-Inf	75.10	3	Horizontal	-0	1.04	-	28.40	4.08	-
AV	2.475G	102.60	Inf	-Inf	70.12	3	Horizontal	-0	1.04	-	28.40	4.08	-
PK	2.4872G	57.08	74.00	-16.92	24.54	3	Horizontal	-0	1.04	-	28.45	4.09	-
AV	2.4836G	45.81	54.00	-8.19	13.30	3	Horizontal	-0	1.04	-	28.43	4.08	-

IEEE 802.15.4_1TX

2480MHz_TX

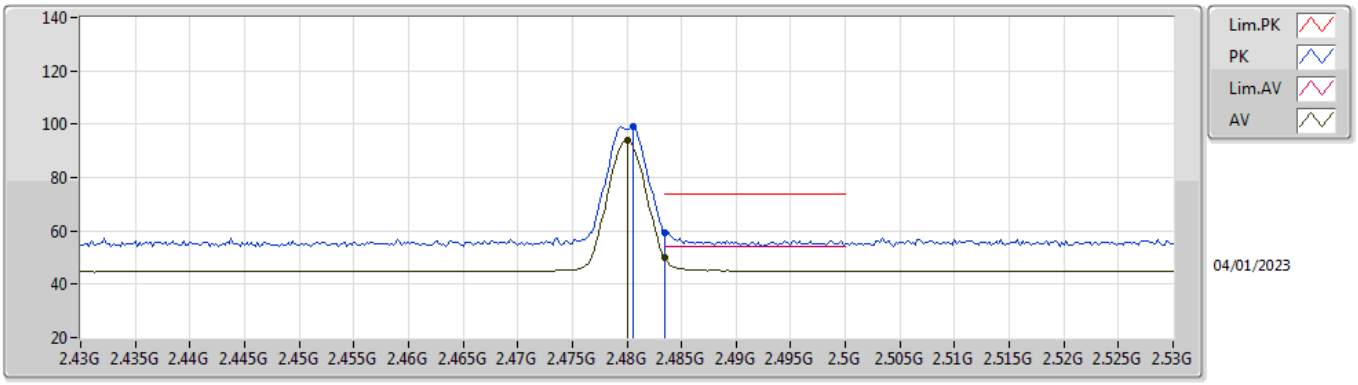


EUT Y_1TX
Setting 120
03-D-E-5

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	103.68	Inf	-Inf	71.18	3	Vertical	3	1.62	-	28.42	4.08	-
AV	2.48G	98.65	Inf	-Inf	66.15	3	Vertical	3	1.62	-	28.42	4.08	-
PK	2.4835G	64.10	74.00	-9.90	31.59	3	Vertical	3	1.62	-	28.43	4.08	-
AV	2.4835G	53.76	54.00	-0.24	21.25	3	Vertical	3	1.62	-	28.43	4.08	-

IEEE 802.15.4_1TX

2480MHz_TX

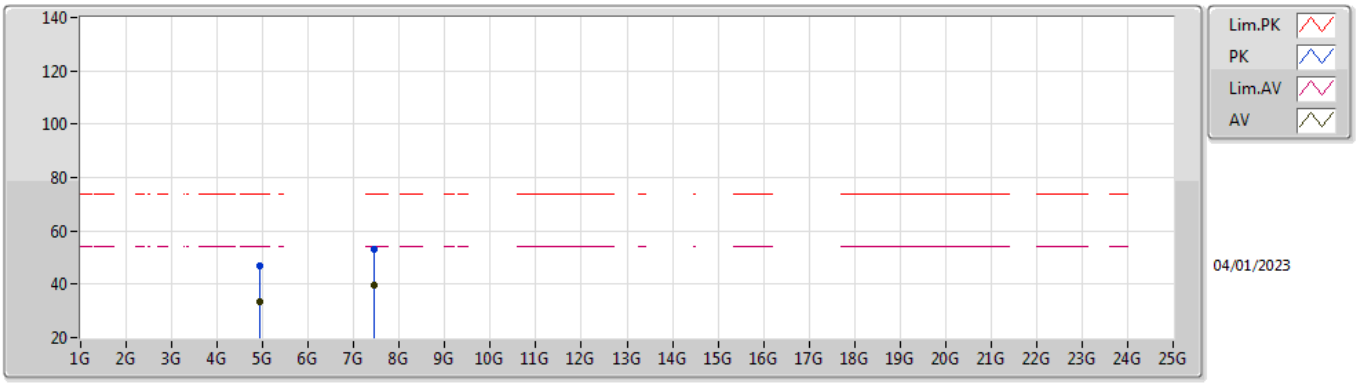


EUT Y_1TX
Setting 120
03-D-E-5

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	99.09	Inf	-Inf	66.59	3	Horizontal	352	1.02	-	28.42	4.08	-
AV	2.48G	94.09	Inf	-Inf	61.59	3	Horizontal	352	1.02	-	28.42	4.08	-
PK	2.4835G	59.55	74.00	-14.45	27.04	3	Horizontal	352	1.02	-	28.43	4.08	-
AV	2.4835G	50.12	54.00	-3.88	17.61	3	Horizontal	352	1.02	-	28.43	4.08	-

IEEE 802.15.4_1TX

2480MHz_TX

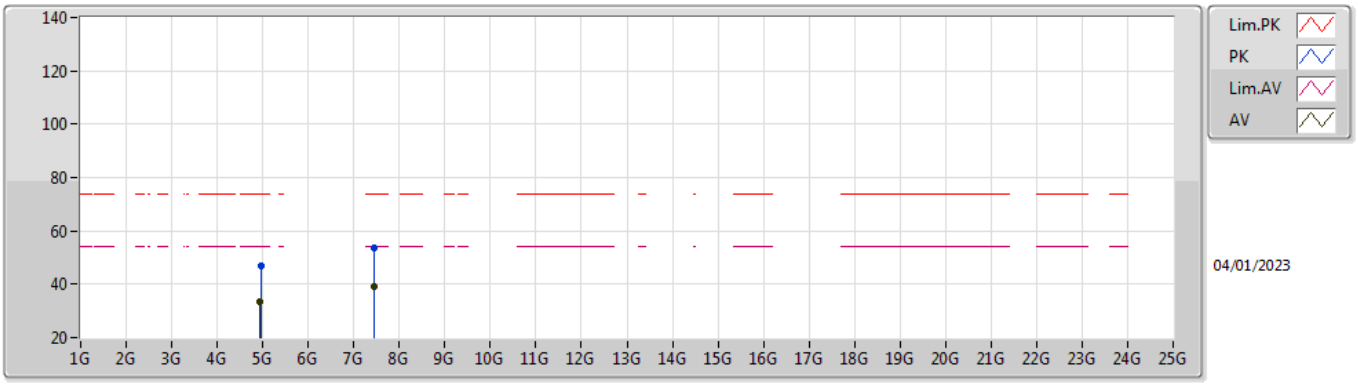


EUT Y_1TX
Setting 120
03-D-E-5

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	4.94674G	47.00	74.00	-27.00	41.53	3	Vertical	0	1.82	-	33.79	6.57	34.89
AV	4.94572G	33.33	54.00	-20.67	27.86	3	Vertical	0	1.82	-	33.79	6.57	34.89
PK	7.44186G	52.94	74.00	-21.06	42.39	3	Vertical	89	1.80	-	36.92	8.83	35.20
AV	7.45212G	39.42	54.00	-14.58	28.87	3	Vertical	89	1.80	-	36.90	8.86	35.21

IEEE 802.15.4_1TX

2480MHz_TX



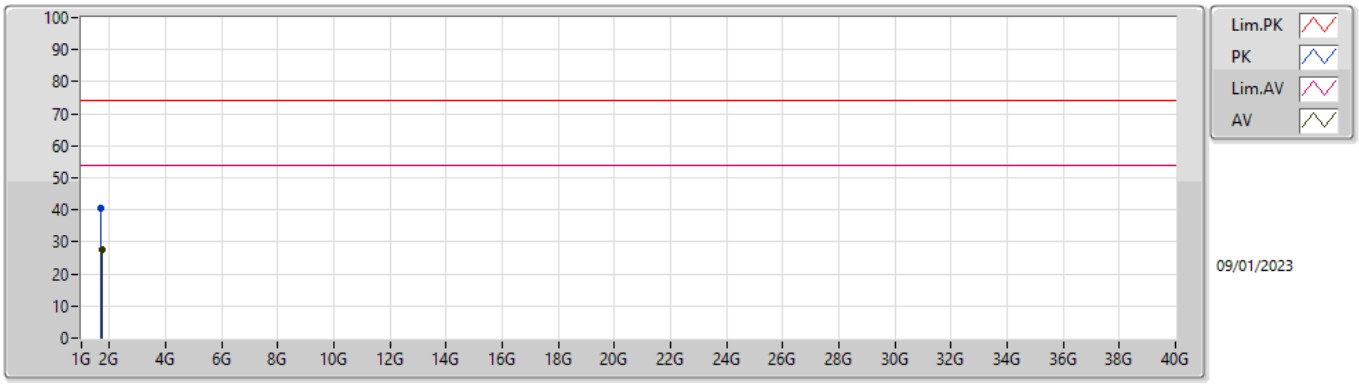
EUT Y_1TX
Setting 120
03-D-E-5

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	4.95346G	46.78	74.00	-27.22	41.30	3	Horizontal	360	1.80	-	33.79	6.58	34.89
AV	4.945G	33.33	54.00	-20.67	27.86	3	Horizontal	360	1.80	-	33.79	6.57	34.89
PK	7.45476G	53.46	74.00	-20.54	42.92	3	Horizontal	343	1.80	-	36.89	8.86	35.21
AV	7.45236G	39.36	54.00	-14.64	28.81	3	Horizontal	343	1.80	-	36.90	8.86	35.21

Summary

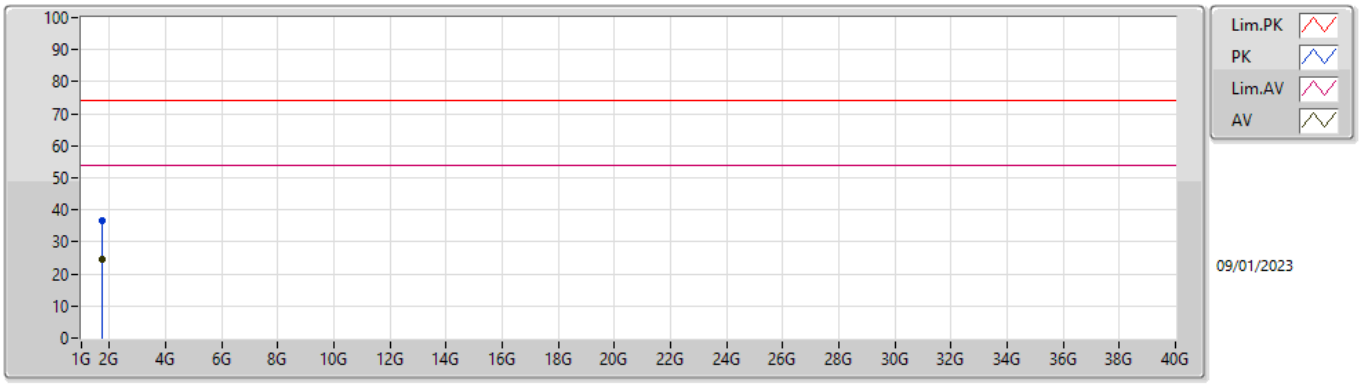
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	1.71445G	27.62	54.00	-26.38	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	1.71079G	40.36	74.00	-33.64	-3.05	3	Vertical	9	1.50	-	43.41	26.41	3.31	32.77
AV	1.71445G	27.62	54.00	-26.38	-3.01	3	Vertical	9	1.50	-	30.63	26.44	3.31	32.76

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	1.71585G	36.76	74.00	-37.24	-2.98	3	Horizontal	261	1.50	-	39.74	26.46	3.32	32.76
AV	1.71561G	24.59	54.00	-29.41	-2.98	3	Horizontal	261	1.50	-	27.57	26.46	3.32	32.76