Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	2AYRA-08436
Equipment	:	Linksys Velop Pro 6E
Brand Name	:	LINKSYS
Model Name	:	MX6200, MX62EC, MX62WH, MX62MS, SPNMX62, MX6203, MX6202, MX6201, MX62
Applicant	:	Linksys USA, Inc. 121 Theory, Irvine, CA. 92617, USA
Standard	:	47 CFR FCC Part 15.247

The product was received on Nov. 28, 2022, and testing was started from Nov. 29, 2022 and completed on Feb. 16, 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 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
FR2N2822AC	01	Initial issue of report	Mar. 22, 2023
FR2N2822AC	02	Changing the address of Applicant to “121 Theory, Irvine, CA. 92617, USA” from “121 Theory, Suite 150, Irvine, CA. 92617, USA”.	Mar. 30, 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: Cathy Chiu

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE	2402-2480	0-39 [40]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(500Kb/s)	1.0	1TX
2.4-2.4835GHz	BT-LE(125Kb/s)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:
- Bluetooth LE uses a GFSK modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port				Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	2.4GHz	5GHz	6GHz	Bluetooth					
1	1	1	-	-	Galtronics	02102140-07691-4	PCB Antenna	I-PEX	Note1
2	2	2	-	-	Galtronics	02102140-07691-3	PCB Antenna	I-PEX	
3	-	-	1	-	Galtronics	02102475-07691-3	PCB Antenna	I-PEX	
4	-	-	2	-	Galtronics	02102475-07691-4	PCB Antenna	I-PEX	
5	-	-	-	1	Galtronics	02102073-07691	PCB Antenna	I-PEX	

Note1:

Ant.	Antenna Gain (dBi)									
	WLAN 2.4GHz	WLAN 5GHz UNII 1	WLAN 5GHz UNII 2A	WLAN 5GHz UNII 2C	WLAN 5GHz UNII 3	WLAN 6GHz UNII 5	WLAN 6GHz UNII 6	WLAN 6GHz UNII 7	WLAN 6GHz UNII 8	Bluetooth
1	2.626	3.600	3.535	3.323	3.333	-	-	-	-	-
2	2.626	3.600	3.535	3.323	3.333	-	-	-	-	-
3	-	-	-	-	-	3.076	3.246	3.429	3.429	-
4	-	-	-	-	-	3.076	3.246	3.429	3.429	-
5	-	-	-	-	-	-	-	-	-	2.562

Note2: The above information was declared by manufacturer.

Note3: Directional gain information

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ANT}}\right]$
BF	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ANT}}\right]$	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ANT}}\right]$

Ex.

Directional Gain (NSS1) formula : $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ANT}}\right]$

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

$g_{j,k}$ =(Nss1(g1,1) + Nss1(g1,2))^2

DG = 10 log[(Nss1(g1,1) + Nss1(g1,2))^2 / N_{ANT}] => 10 log[($10^{G1/20}$ + $10^{G2/20}$)^2 / N_{ANT}]

Where ;

2.4G G1= 2.626 dBi ;2.4G G2= 2.626 dBi ;DG= 5.636dBi

5G UNII-1 G1= 3.6 dBi ;5G Band1 G2= 3.6 dBi ;DG= 6.610dBi

5G UNII-2A G1= 3.535 dBi ;5G Band2 G2= 3.535 dBi ;DG= 6.545dBi

5G UNII-2C G1= 3.323 dBi ;5G Band3 G2= 3.323 dBi ;DG= 6.333dBi

5G UNII-3 G1= 3.333 dBi ;5G Band4 G2= 3.333 dBi ;DG= 6.343dBi

6G UNII-5 G1= 3.076 dBi ;6.2G G2= 3.076 dBi ;DG= 6.086dBi

6G UNII-6 G1= 3.246 dBi ;6.4G G2= 3.246 dBi ;DG= 6.256dBi

6G UNII-7 G1= 3.429 dBi ;6.7G G2= 3.429 dBi ;DG= 6.439dBi

6G UNII-8 G1= 3.429 dBi ;7G G2= 3.429 dBi ;DG= 6.439dBi

<For 2.4GHz function>

For IEEE 802.11b/g/n/VHT/ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For 5GHz function>

For IEEE 802.11a/n/ac/ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For 6GHz function>

For IEEE 802.11ax (2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For Bluetooth function> (1TX/1RX):

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

Port 1 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	0.629	2.01	393.125u	3k
BT-LE(2Mbps)	0.332	4.79	208.125u	10k

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QRCT version 4.0.209.0			
Support Mode	☒	LE 1M PHY: 1 Mb/s		
	☒	LE Coded PHY (S=2): 500 Kb/s		
	☒	LE Coded PHY (S=8): 125 Kb/s		
	☒	LE 2M PHY: 2 Mb/s		

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

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

Model Name	Description
MX6200	All the models are identical, the difference model for difference model served as marketing strategy.
MX62EC	
MX62WH	
MX62MS	
SPNMX62	
MX6203	
MX6202	
MX6201	
MX62	

Note 1: From the above models, model: MX6200 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.2 Applicable Standards

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

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

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

- FCC KDB 558074 D01 v05r02
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Owen Hsu	16.5~17.5 / 61~64	Jan. 31, 2023~ Feb. 02, 2023
Radiated (below 1GHz)	10CH01-CB	Tim Chen	19~20 / 56~57	Feb. 15, 2023 ~ Feb. 16, 2023
Radiated (above 1GHz)	03CH02-CB	Ken Yeh	21.5~22.6 / 59~63	Nov. 29, 2022~ Feb. 13, 2023
AC Conduction	CO01-CB	Tim Chen	22~23 / 56~57	Jan. 12, 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)	5.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.4 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
BT-LE(1Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default
BT-LE(2Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default

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 + Adapter 3 + plug
2	EUT + Adapter 4 + plug
3	EUT + Adapter 1
4	EUT + Adapter 2
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.
After evaluating, the worst case was found at Z axis from Radiated Emission test Above 1GHz. So the measurement will follow this same test configuration.	
Operating Mode < 1GHz	CTX
1	EUT in Z axis + WLAN 2.4GHz + Adapter 1
2	EUT in Z axis + WLAN 2.4GHz + Adapter 2
3	EUT in Z axis + WLAN 2.4GHz + Adapter 4 + plug
4	EUT in Z axis + WLAN 2.4GHz + Adapter 3 + plug
Mode 3 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~7 will follow this same test mode.	
5	EUT in Z axis + WLAN 5GHz + Adapter 4 + plug
6	EUT in Z axis + WLAN 6GHz + Adapter 4 + plug
7	EUT in Z axis + Bluetooth + Adapter 4 + plug
For operating mode 3 is the worst case and it was record in this test report.	

Operating Mode > 1GHz	CTX
After evaluating, the worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.	
1	EUT in Z axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Bluetooth + WLAN 2.4GHz + WLAN 5GHz + WLAN 6GHz
Refer to Sporton Test Report No.: FA2N2822 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**
Adapter 1	Ktec	KSA-30W-120250VU	Input: 100-240V~50/60Hz, 1.0A Output: 12.0V, 2.5A
Adapter 2	APD	WA-30P12FU	Input: 100-240V~, 50-60Hz, 0.9A Max. Output: 12.0V, 2.5A
Adapter 3	Ktec	KSA-30W-120250D5	Input: 100-240V~50/60Hz, 1.0A Output: 12.0V, 2.5A, 30.0W
Adapter 4	APD	WA-30P12R	Input: 100-240V~, 50-60Hz, 0.9A Max. Output: 12.0V, 2.5A, 30.0W
Others			
RJ-45 cable*1, non-shielded, 0.9m			
Plug 1*1 (Equip with Adapter 3 use only)			
Plug 2*1 (Equip with Adapter 4 use only)			

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN1 NB	DELL	T3400	N/A
B	LAN2 NB	DELL	E6430	N/A
C	2.4G NB	DELL	T3400	N/A
D	5G NB	DELL	T3400	N/A
E	6G NB	DELL	T3400	N/A
F	Smart phone	Samsung	Galaxy J2	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	T3400	N/A

For Radiated (above 1GHz):

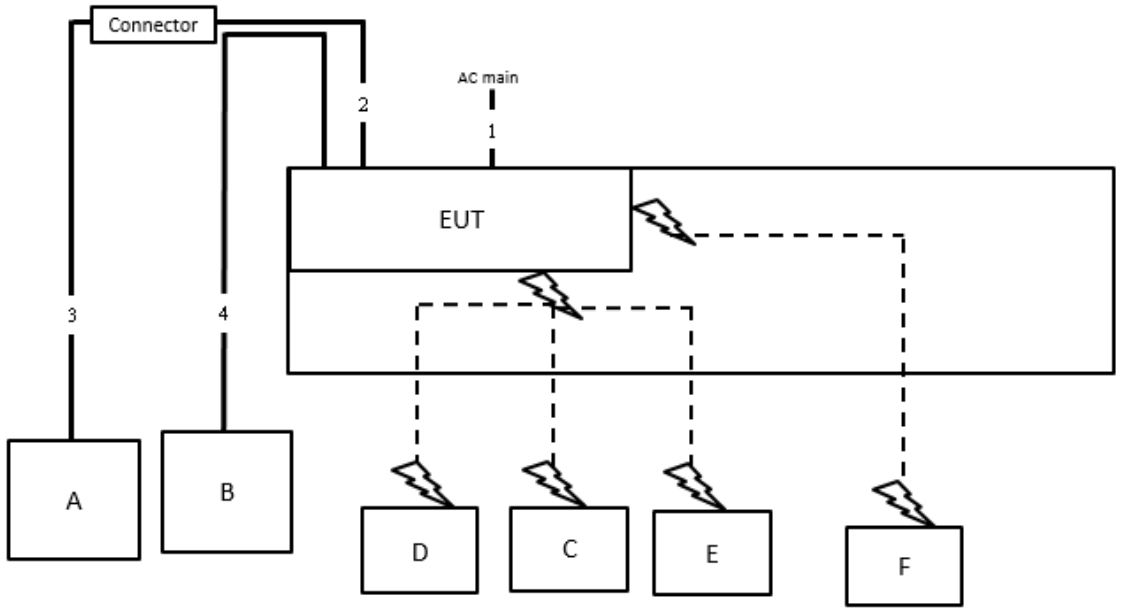
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	Lenovo	L440	N/A

For RF Conducted:

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

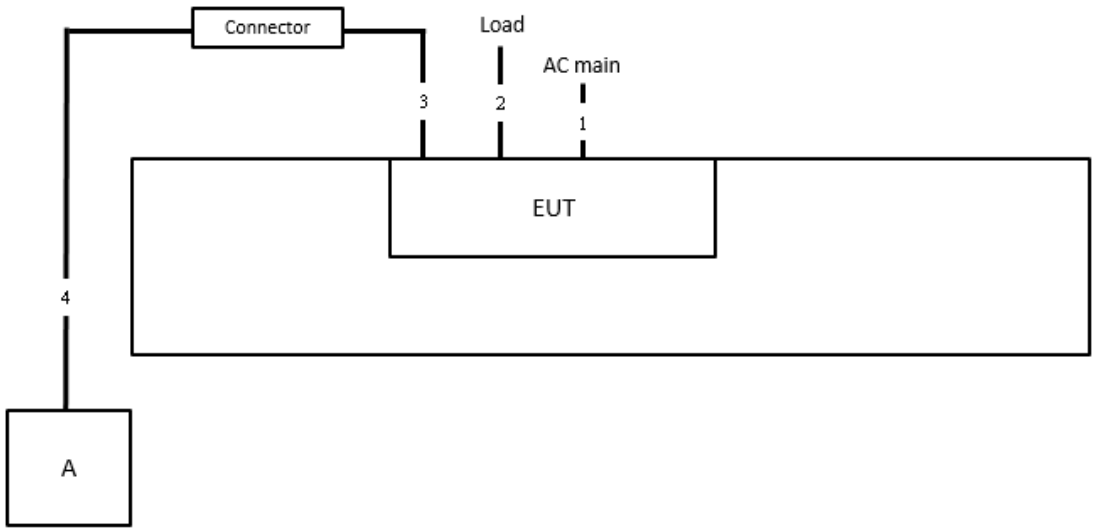
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



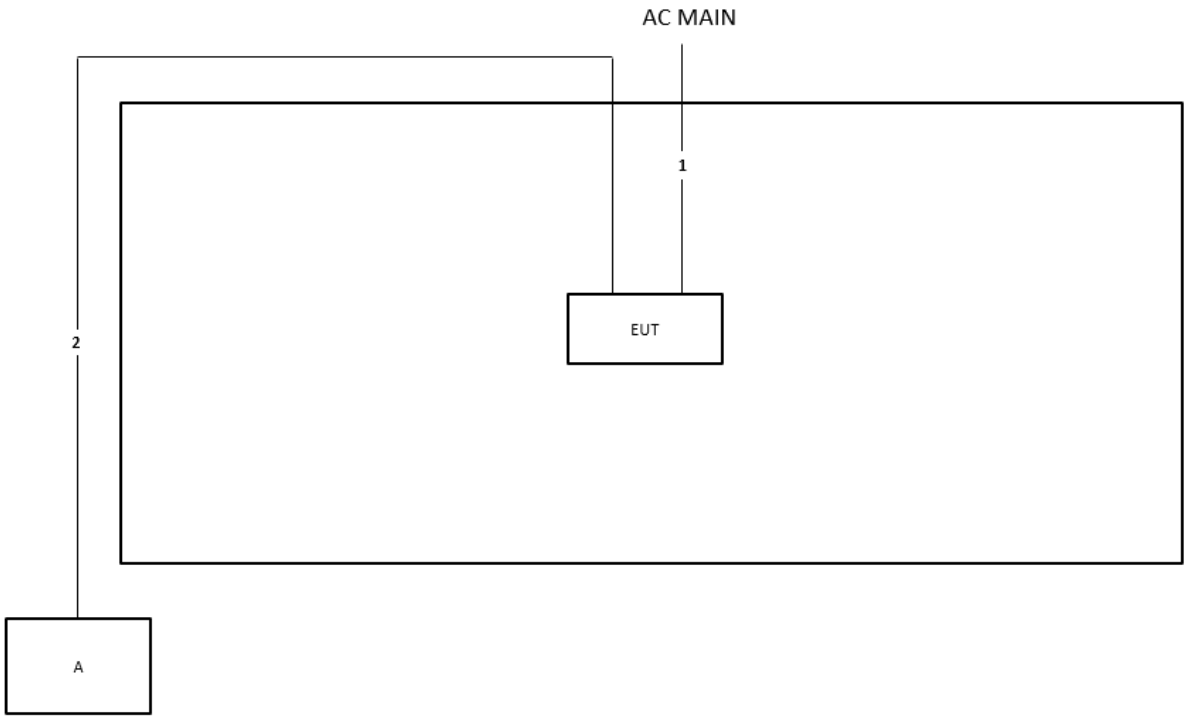
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	0.9m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	0.9m
4	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz



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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

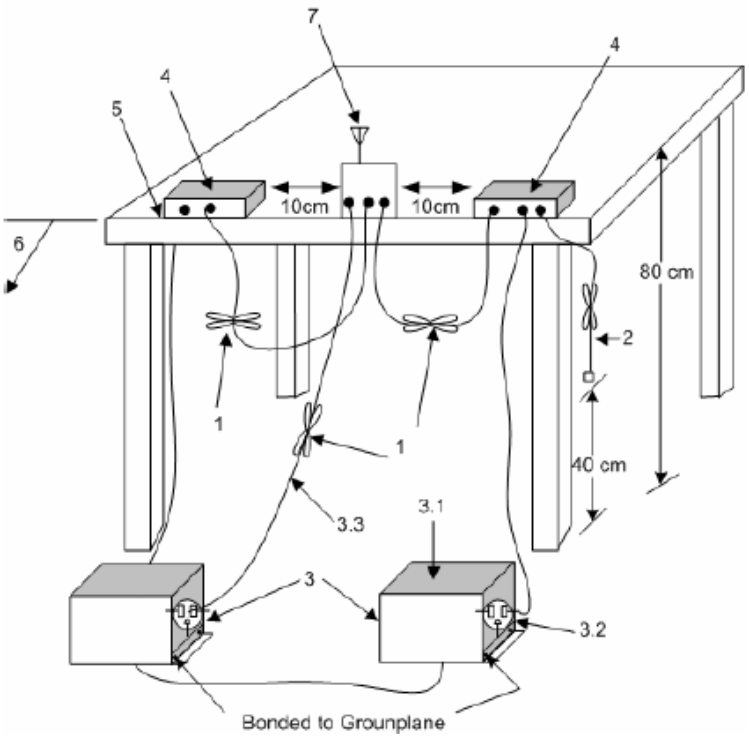
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

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.

1.1.1. 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

3.1.5 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.

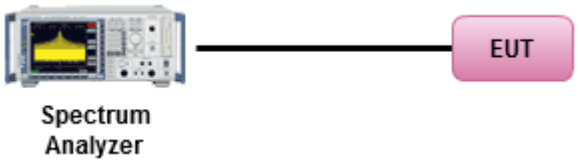
3.2.2 Measuring Instruments

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

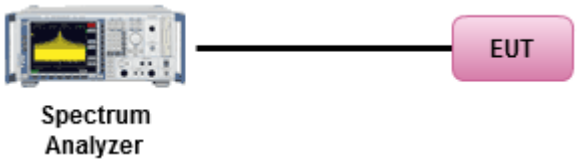
3.4.2 Measuring Instruments

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.	
	[duty cycle ≥ 98% or external video / power trigger]	
▪ 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.	

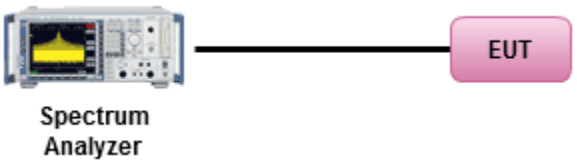
3.5.2 Measuring Instruments

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 below30 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.

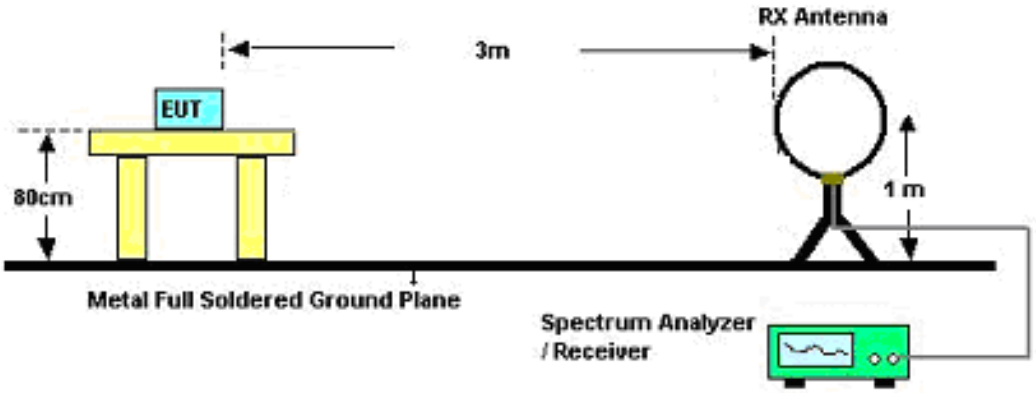
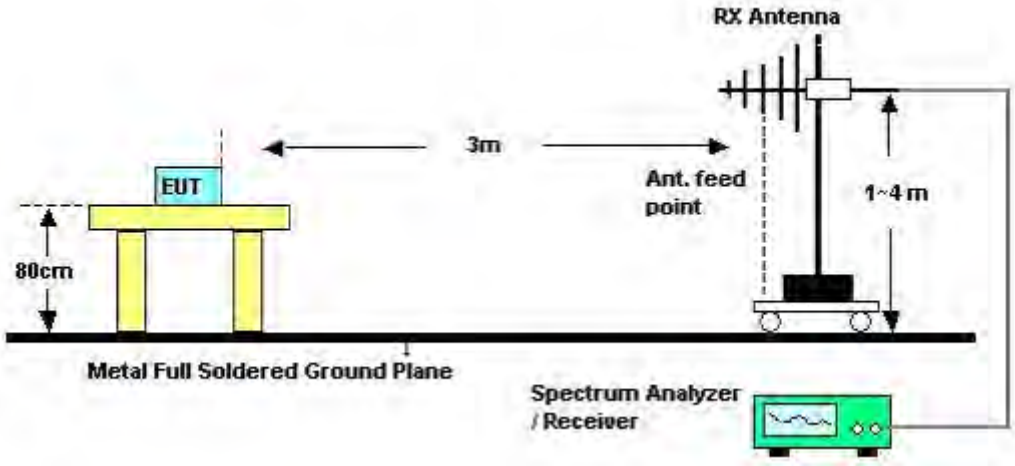
3.6.2 Measuring Instruments

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

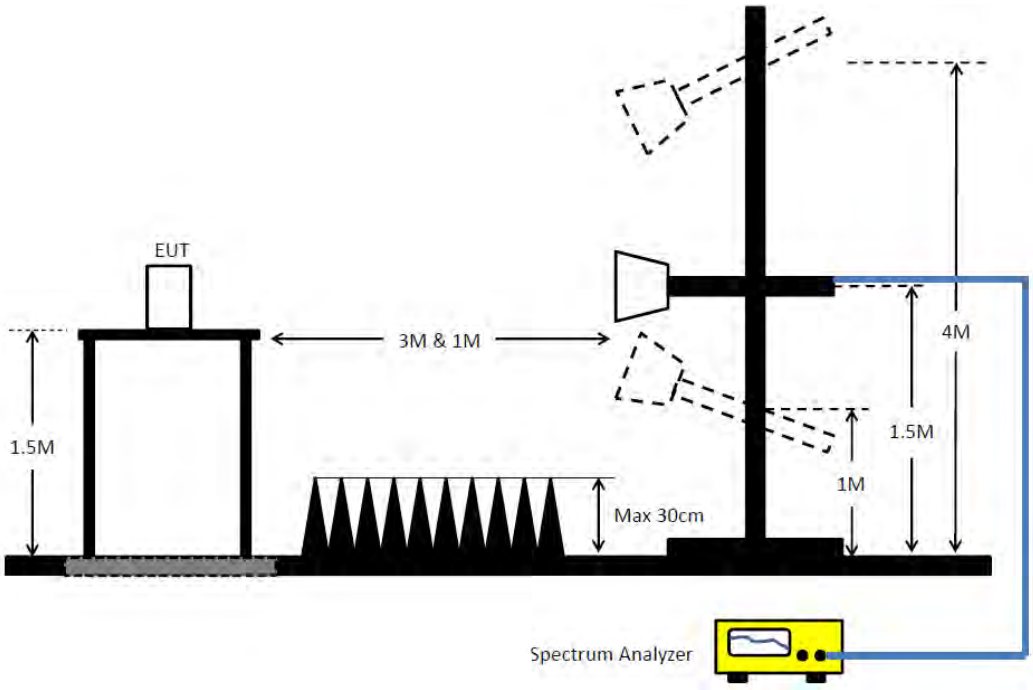
3.6.3 Test Procedures

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)
10m Semi Anechoic Chamber NSA	TDK	SAC-10M	10CH01-CB	30MHz~1GHz 10m,3m	Jan. 18, 2023	Jan. 17, 2024	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10783	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10784	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-01	25MHz ~ 1GHz	Oct. 18, 2022	Oct. 17, 2023	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-02	25MHz ~ 1GHz	Oct. 18, 2022	Oct. 17, 2023	Radiation (10CH01-CB)
EMI Test Receiver	Rohde&Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 11, 2022	Jul. 10, 2023	Radiation (10CH01-CB)
Spectrum Analyzer	Rohde&Schwarz	FSV30	101026	9kHz ~ 30GHz	Apr. 22, 2022	Apr. 21, 2023	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCI	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jun. 25, 2022	Jun. 24, 2023	Radiation (10CH01-CB)
Amplifier	EM	EM101	060703	10MHz ~ 1GHz	Oct. 19, 2022	Oct. 18, 2023	Radiation (10CH01-CB)
Low Cable	TITAN	T318E	low cable-03	30MHz ~ 1GHz	Oct. 18, 2022	Oct. 17, 2023	Radiation (10CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (10CH01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (10CH01-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)

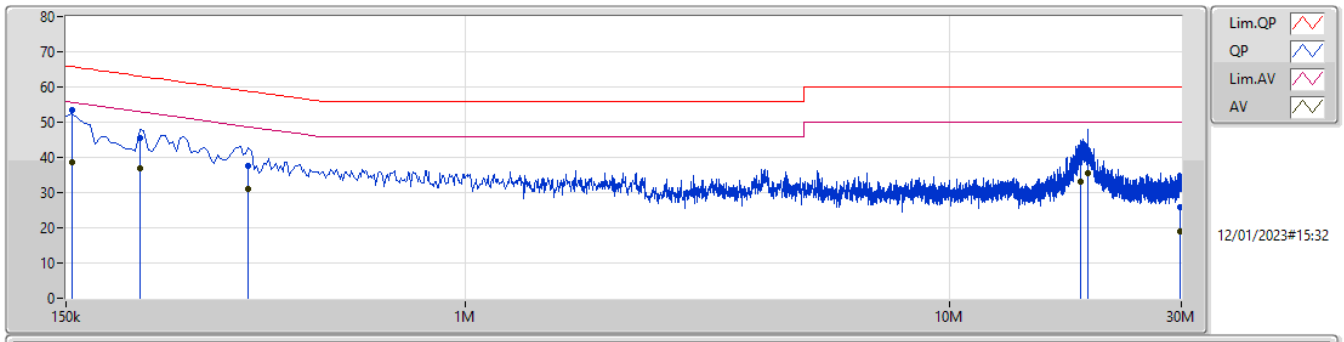
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSP	100593	9kHz~40GHz	Apr. 08, 2022	Apr. 07, 2023	Radiation (03CH02-CB)
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+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	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. 08, 2021	Dec. 07, 2022	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#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	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)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 30, 2022	Dec. 29, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Sep. 04, 2022	Sep. 03, 2023	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Sep. 04, 2022	Sep. 03, 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)
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

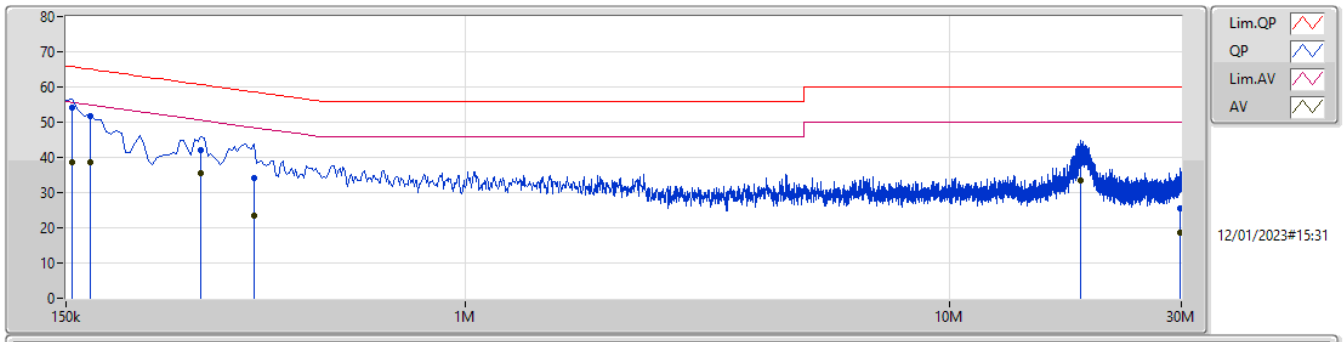
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	QP	154.5k	54.07	65.75	-11.68	Neutral

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	53.58	65.75	-12.17	9.99	Line	"Worst"	43.59	0.06	0.04	9.89
AV	154.5k	38.66	55.75	-17.09	9.99	Line	-	28.67	0.06	0.04	9.89
QP	213k	45.68	63.09	-17.41	9.99	Line	-	35.69	0.06	0.04	9.89
AV	213k	36.97	53.09	-16.12	9.99	Line	-	26.98	0.06	0.04	9.89
QP	357k	37.46	58.79	-21.33	10.01	Line	-	27.45	0.06	0.06	9.89
AV	357k	30.93	48.79	-17.86	10.01	Line	-	20.92	0.06	0.06	9.89
QP	18.569M	41.13	60.00	-18.87	10.45	Line	-	30.68	0.29	0.21	9.95
AV	18.569M	33.09	50.00	-16.91	10.45	Line	-	22.64	0.29	0.21	9.95
QP	19.239M	42.19	60.00	-17.81	10.47	Line	-	31.72	0.30	0.21	9.96
AV	19.239M	35.65	50.00	-14.35	10.47	Line	-	25.18	0.30	0.21	9.96
QP	29.895M	25.94	60.00	-34.06	10.76	Line	-	15.18	0.40	0.34	10.02
AV	29.895M	19.09	50.00	-30.91	10.76	Line	-	8.33	0.40	0.34	10.02

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	54.07	65.75	-11.68	10.00	Neutral	"Worst"	44.07	0.07	0.04	9.89
AV	154.5k	38.70	55.75	-17.05	10.00	Neutral	-	28.70	0.07	0.04	9.89
QP	168k	51.86	65.06	-13.20	10.00	Neutral	-	41.86	0.07	0.04	9.89
AV	168k	38.49	55.06	-16.57	10.00	Neutral	-	28.49	0.07	0.04	9.89
QP	285k	42.21	60.67	-18.46	10.01	Neutral	-	32.20	0.07	0.05	9.89
AV	285k	35.61	50.67	-15.06	10.01	Neutral	-	25.60	0.07	0.05	9.89
QP	366k	34.08	58.60	-24.52	10.02	Neutral	-	24.06	0.07	0.06	9.89
AV	366k	23.55	48.60	-25.05	10.02	Neutral	-	13.53	0.07	0.06	9.89
QP	18.564M	40.91	60.00	-19.09	10.45	Neutral	-	30.46	0.29	0.21	9.95
AV	18.564M	33.49	50.00	-16.51	10.45	Neutral	-	23.04	0.29	0.21	9.95
QP	29.814M	25.52	60.00	-34.48	10.67	Neutral	-	14.85	0.31	0.34	10.02
AV	29.814M	18.58	50.00	-31.42	10.67	Neutral	-	7.91	0.31	0.34	10.02

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	680k	1.025M	1M03F1D	677.5k	1.023M
BT-LE(2Mbps)	1.158M	2.023M	2M02F1D	1.155M	2.015M

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

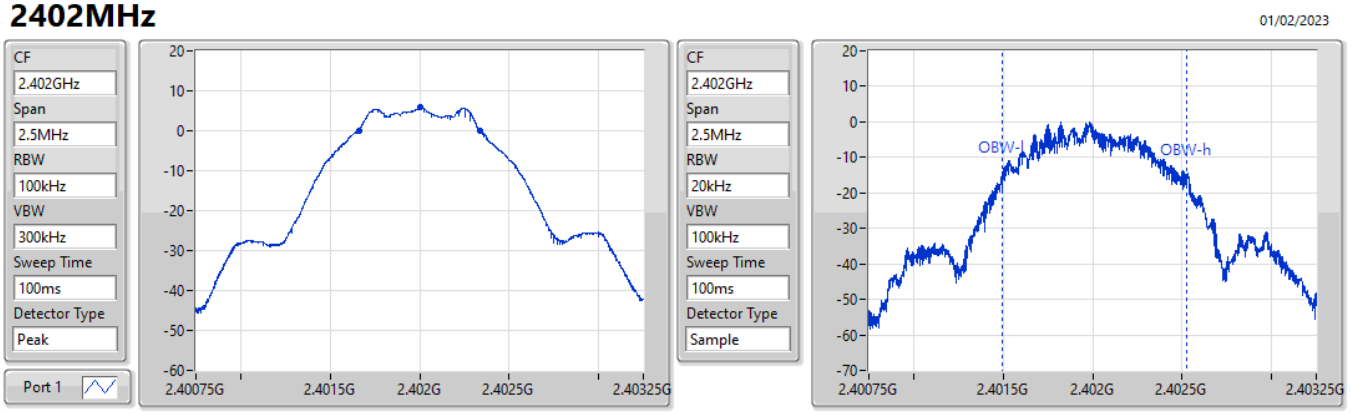
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	680k	1.025M
2440MHz	Pass	500k	678.75k	1.023M
2480MHz	Pass	500k	677.5k	1.024M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.155M	2.015M
2440MHz	Pass	500k	1.158M	2.023M
2480MHz	Pass	500k	1.158M	2.017M

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

BT-LE(1Mbps) **EBW-DTS**

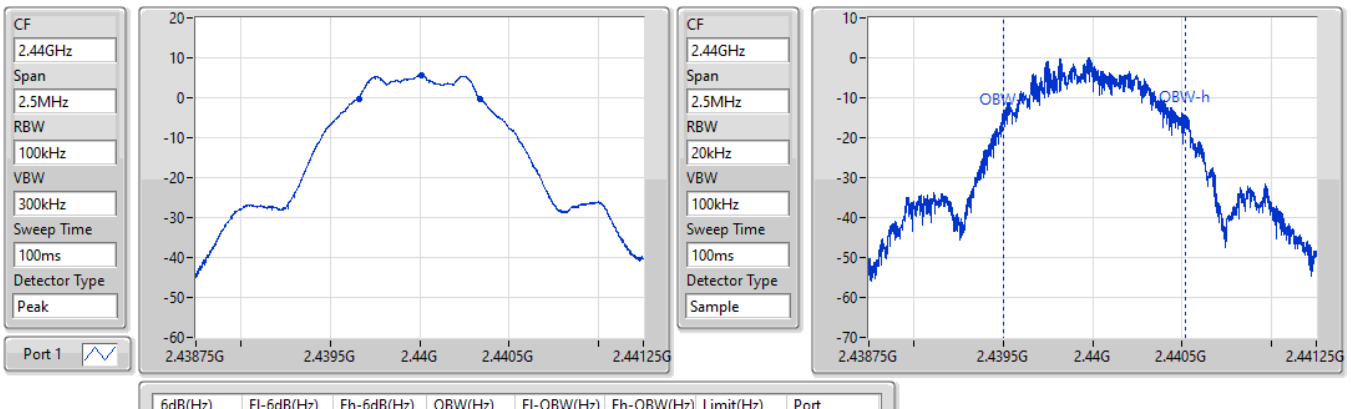
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
680k	2.40166G	2.40234G	1.025M	2.401498G	2.402523G	500k	1

BT-LE(1Mbps) **EBW-DTS**

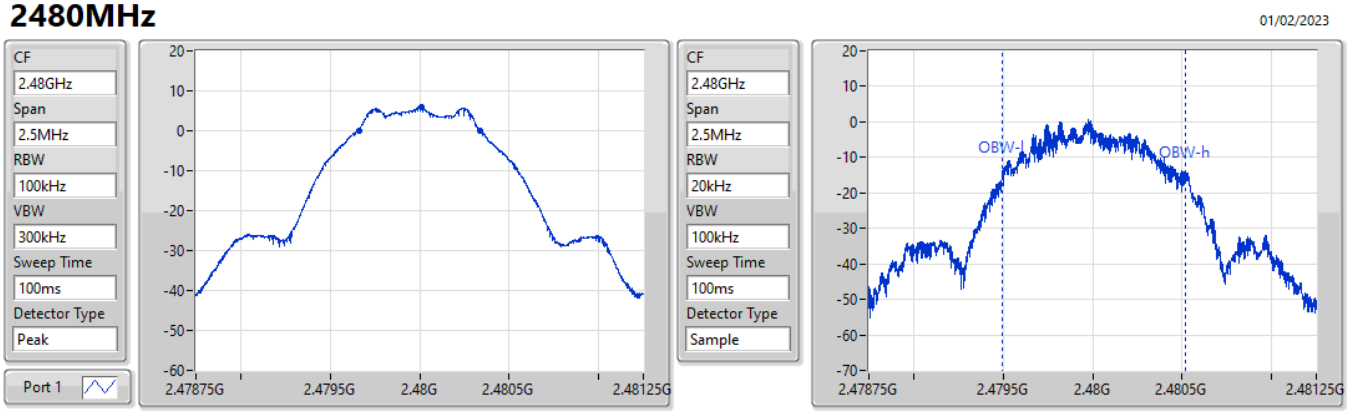
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
678.75k	2.439661G	2.44034G	1.023M	2.439499G	2.440522G	500k	1

BT-LE(1Mbps) EBW-DTS

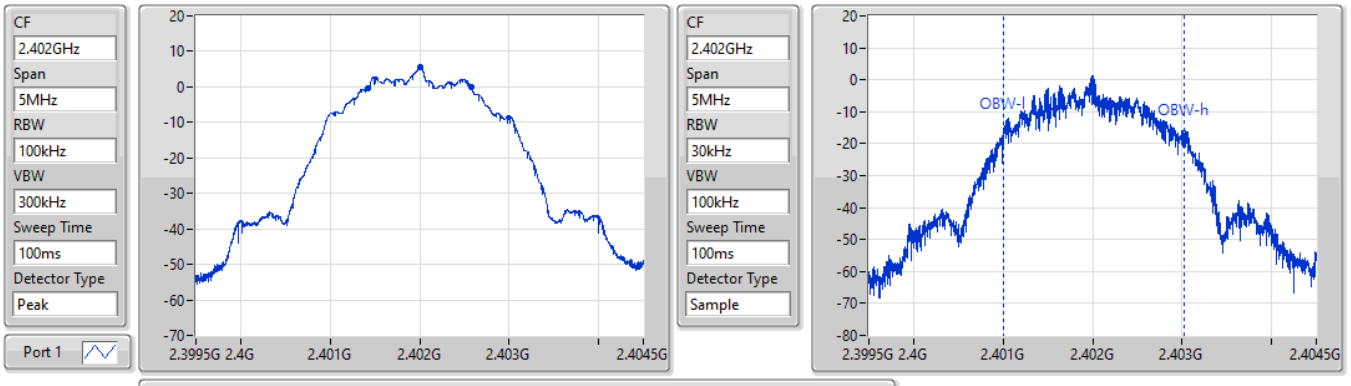
2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
677.5k	2.479661G	2.480339G	1.024M	2.479498G	2.480522G	500k	1

BT-LE(2Mbps) EBW-DTS

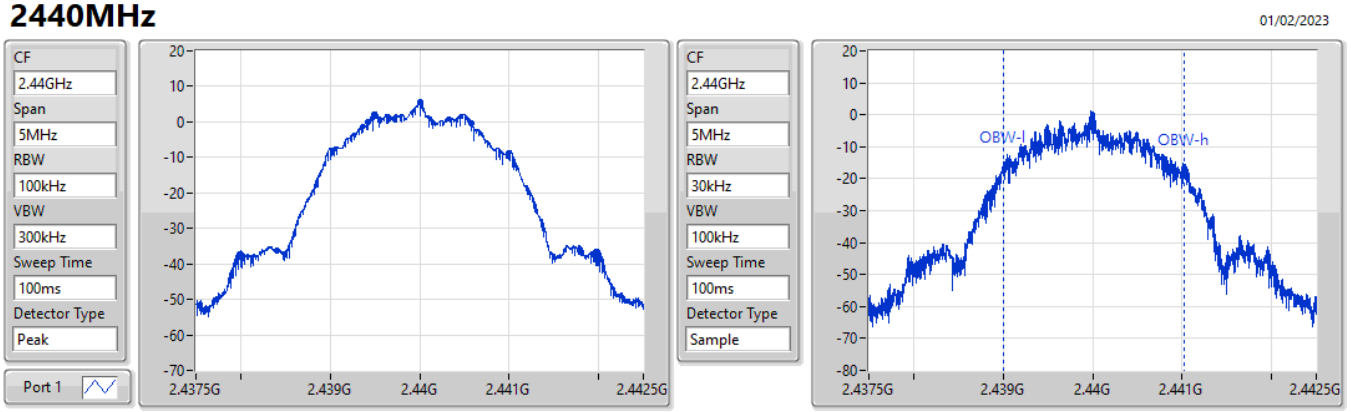
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.155M	2.401423G	2.402578G	2.015M	2.401007G	2.403022G	500k	1

BT-LE(2Mbps) **EBW-DTS**

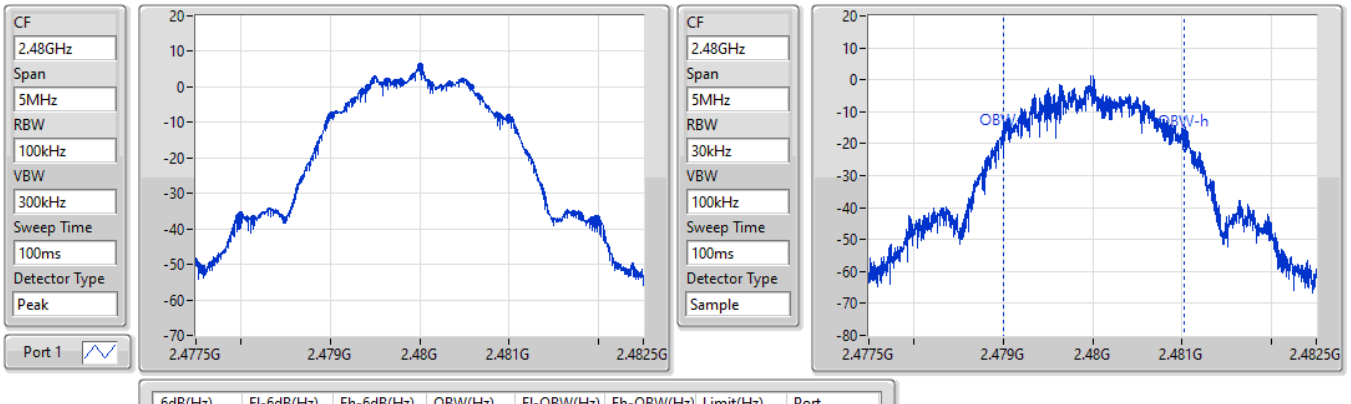
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.158M	2.439423G	2.44058G	2.023M	2.439003G	2.441026G	500k	1

BT-LE(2Mbps) **EBW-DTS**

2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.158M	2.47942G	2.480578G	2.017M	2.479005G	2.481022G	500k	1

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	7.12	0.00515
BT-LE(2Mbps)	6.82	0.00481

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.562	7.12	30.00
2440MHz	Pass	2.562	6.89	30.00
2480MHz	Pass	2.562	6.92	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.562	6.82	30.00
2440MHz	Pass	2.562	6.61	30.00
2480MHz	Pass	2.562	6.81	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-8.51
BT-LE(2Mbps)	-11.34

RBW = 3kHz;

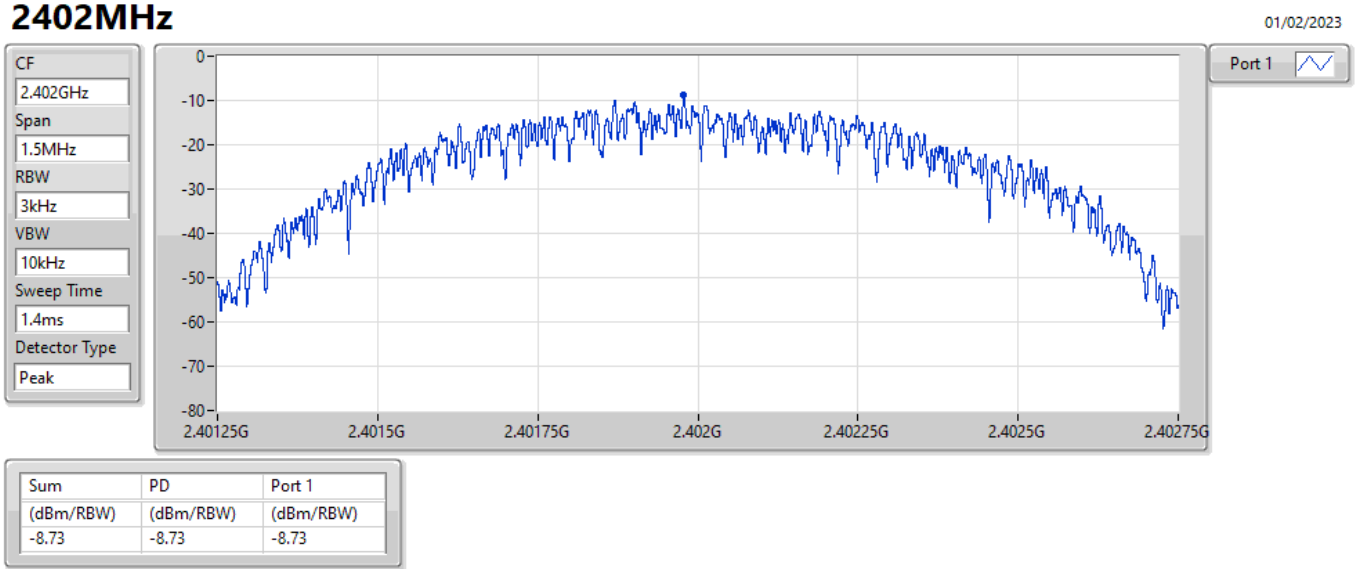
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.562	-8.73	8.00
2440MHz	Pass	2.562	-8.82	8.00
2480MHz	Pass	2.562	-8.51	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.562	-12.19	8.00
2440MHz	Pass	2.562	-11.90	8.00
2480MHz	Pass	2.562	-11.34	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;

BT-LE(1Mbps) PSD

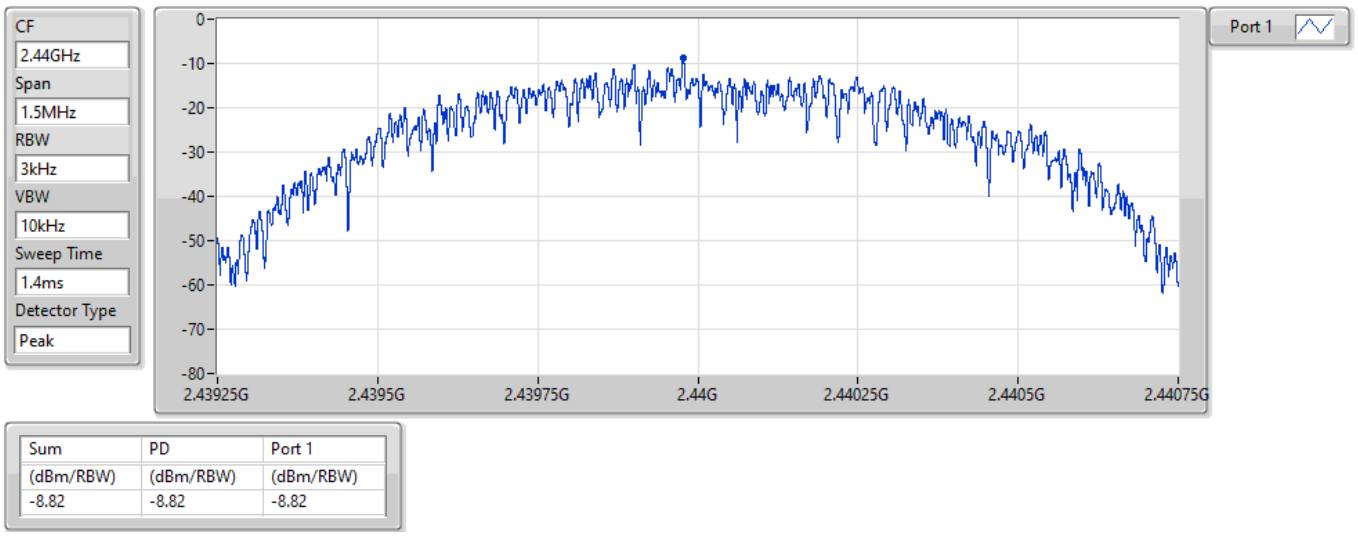
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.73	-8.73	-8.73

BT-LE(1Mbps) PSD

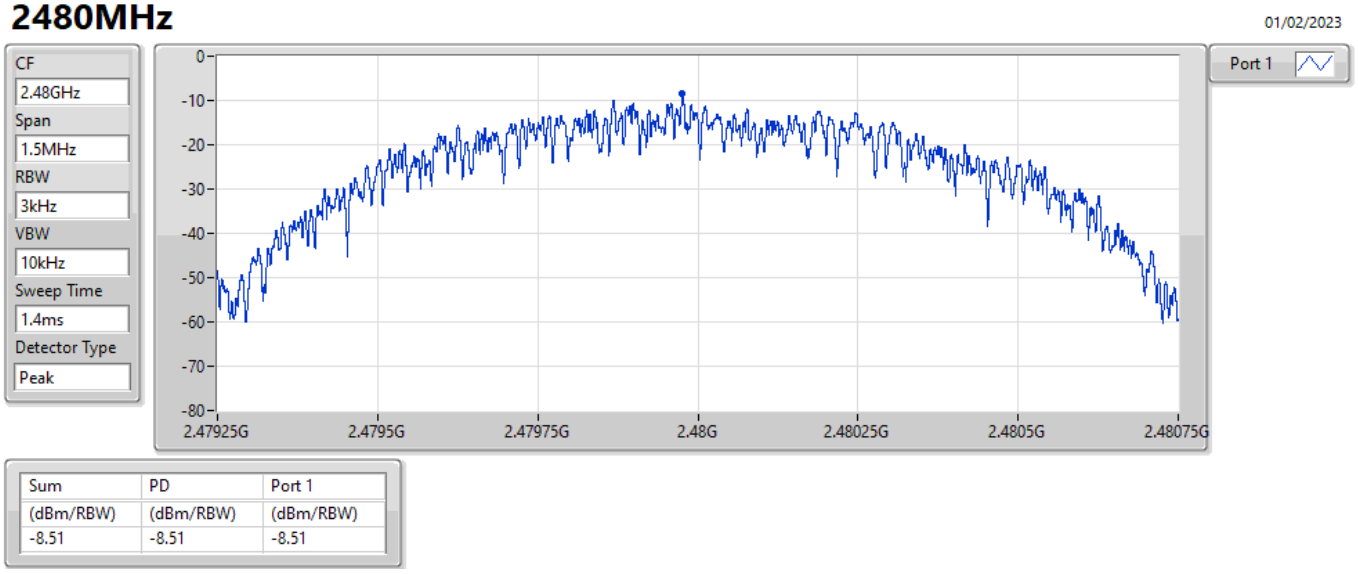
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.82	-8.82	-8.82

BT-LE(1Mbps) PSD

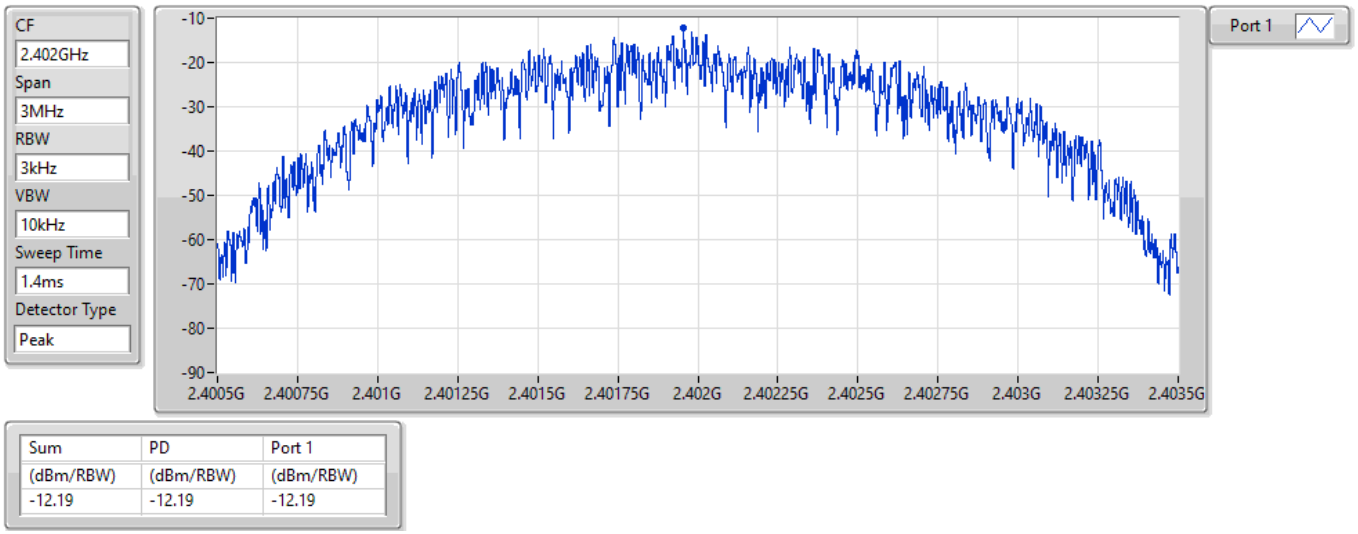
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.51	-8.51	-8.51

BT-LE(2Mbps) PSD

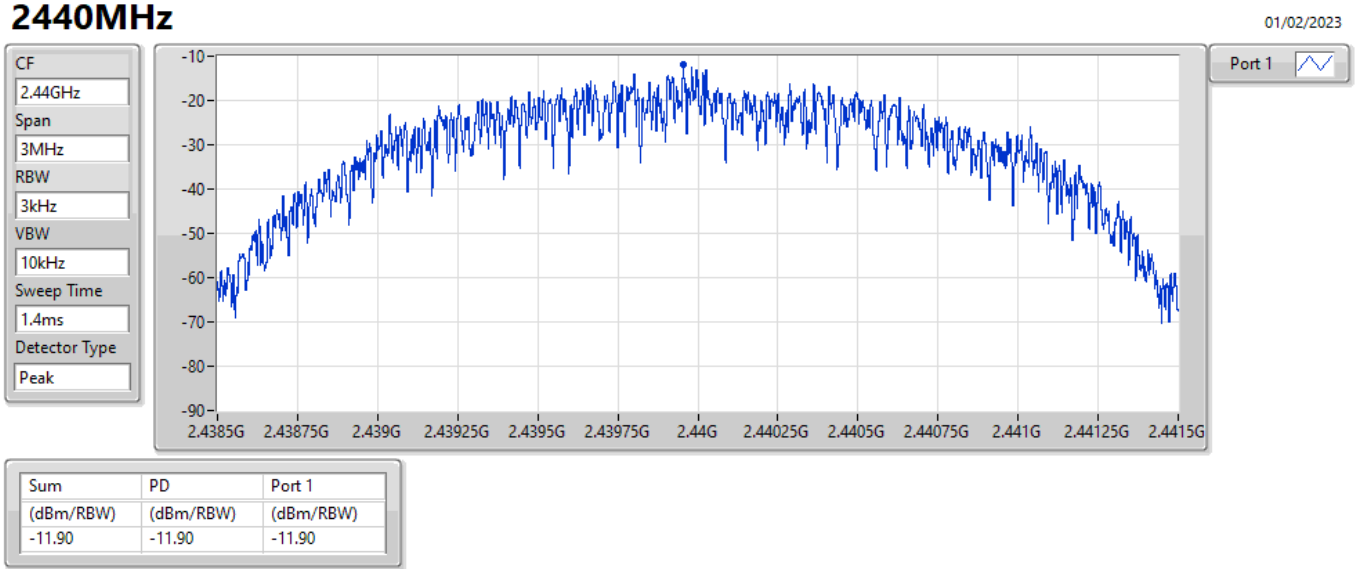
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.19	-12.19	-12.19

BT-LE(2Mbps) PSD

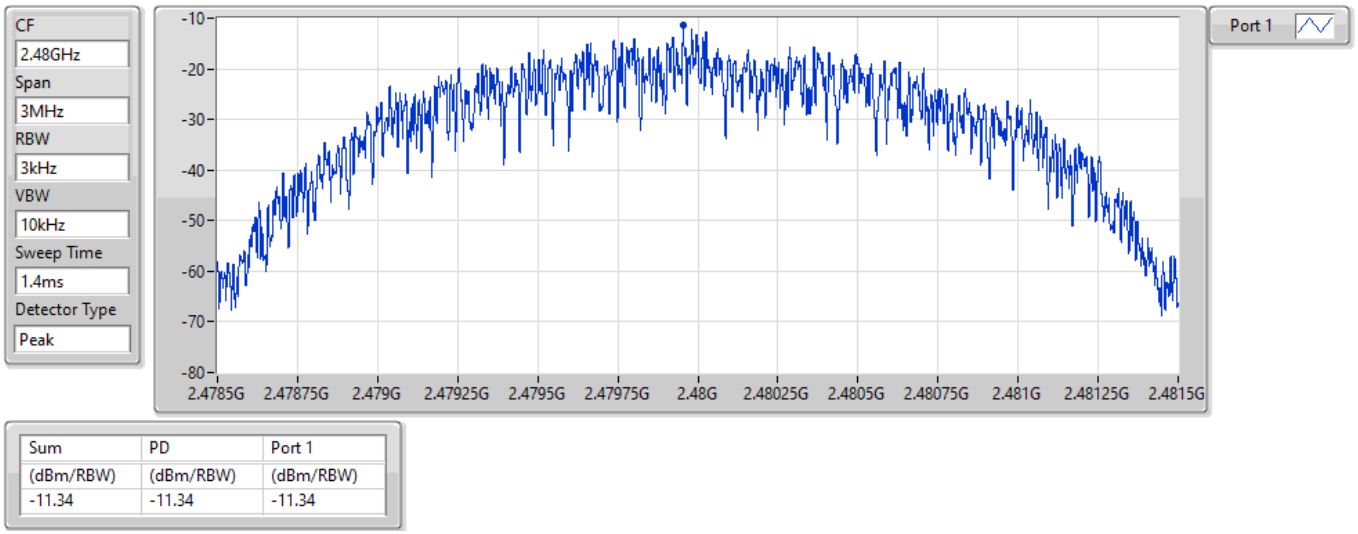
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.90	-11.90	-11.90

BT-LE(2Mbps) PSD

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.34	-11.34	-11.34

Summary

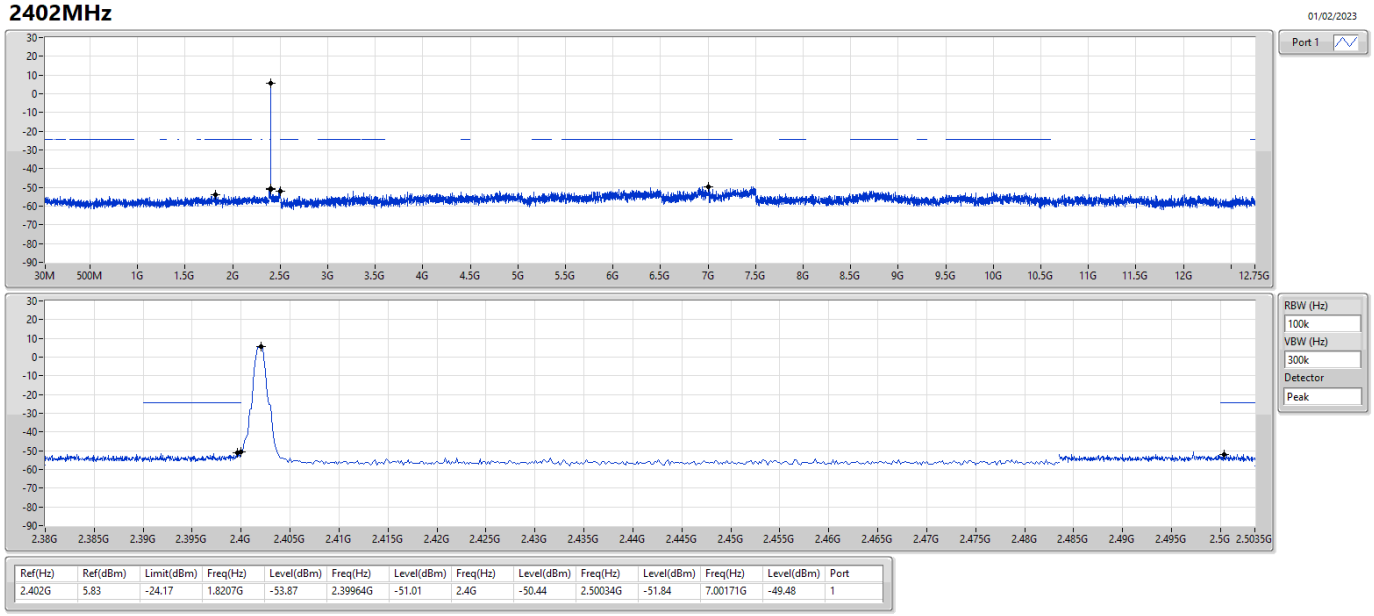
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.402G	5.83	-24.17	1.8207G	-53.87	2.39964G	-51.01	2.4G	-50.44	2.50034G	-51.84	7.00171G	-49.48	1
BT-LE(2Mbps)	Pass	2.402G	5.77	-24.23	2.1262G	-53.67	2.4G	-37.51	2.4G	-38.37	2.50278G	-52.04	21.48773G	-46.92	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
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	5.83	-24.17	1.8207G	-53.87	2.39964G	-51.01	2.4G	-50.44	2.50034G	-51.84	7.00171G	-49.48	1
2440MHz	Pass	2.402G	5.83	-24.17	44.1M	-54.04	2.39596G	-51.48	2.4G	-55.96	2.50074G	-51.87	21.49617G	-47.33	1
2480MHz	Pass	2.402G	5.83	-24.17	2.11445G	-52.99	2.3974G	-51.49	2.4G	-56.87	2.50242G	-51.72	21.48773G	-47.68	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	5.77	-24.23	2.1262G	-53.67	2.4G	-37.51	2.4G	-38.37	2.50278G	-52.04	21.48773G	-46.92	1
2440MHz	Pass	2.402G	5.77	-24.23	1.77018G	-53.51	2.39976G	-51.73	2.4G	-55.14	2.50222G	-52.05	21.41181G	-47.41	1
2480MHz	Pass	2.402G	5.77	-24.23	2.03455G	-53.81	2.39128G	-51.33	2.4G	-56.94	2.50222G	-51.62	21.52148G	-45.90	1

BT-LE(1Mbps) **CSENdB-DTS**

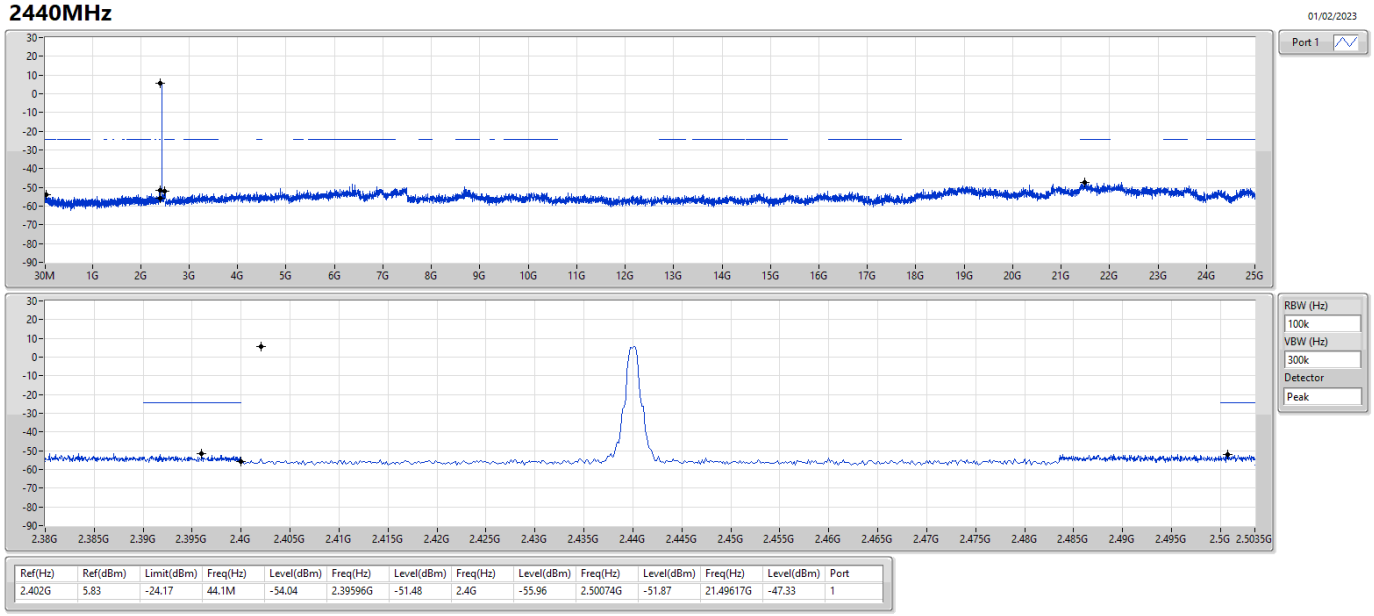
2402MHz



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
2.402G	5.83	-24.17	1.8207G	-53.87	2.39964G	-51.01	2.4G	-50.44	2.50034G	-51.84	7.00171G	-49.48	1

BT-LE(1Mbps) **CSENdB-DTS**

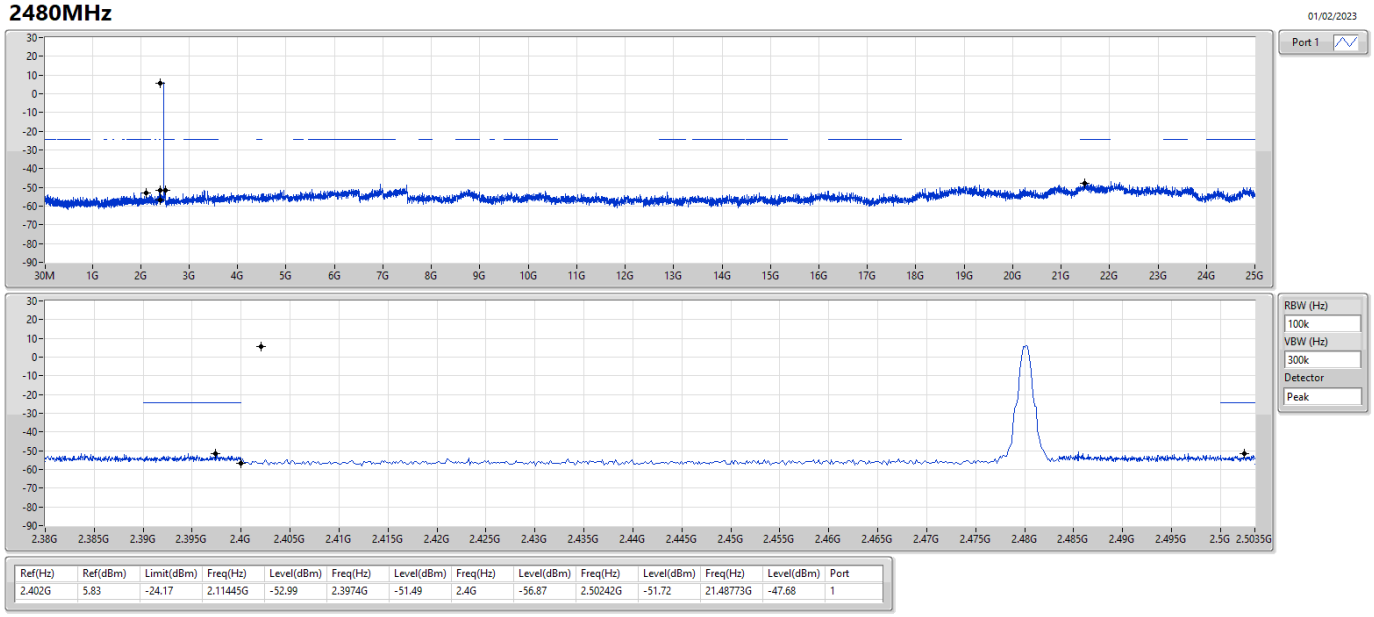
2440MHz



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
2.402G	5.83	-24.17	44.1M	-54.04	2.39596G	-51.48	2.4G	-55.96	2.50074G	-51.87	21.49617G	-47.33	1

BT-LE(1Mbps) **CSENdB-DTS**

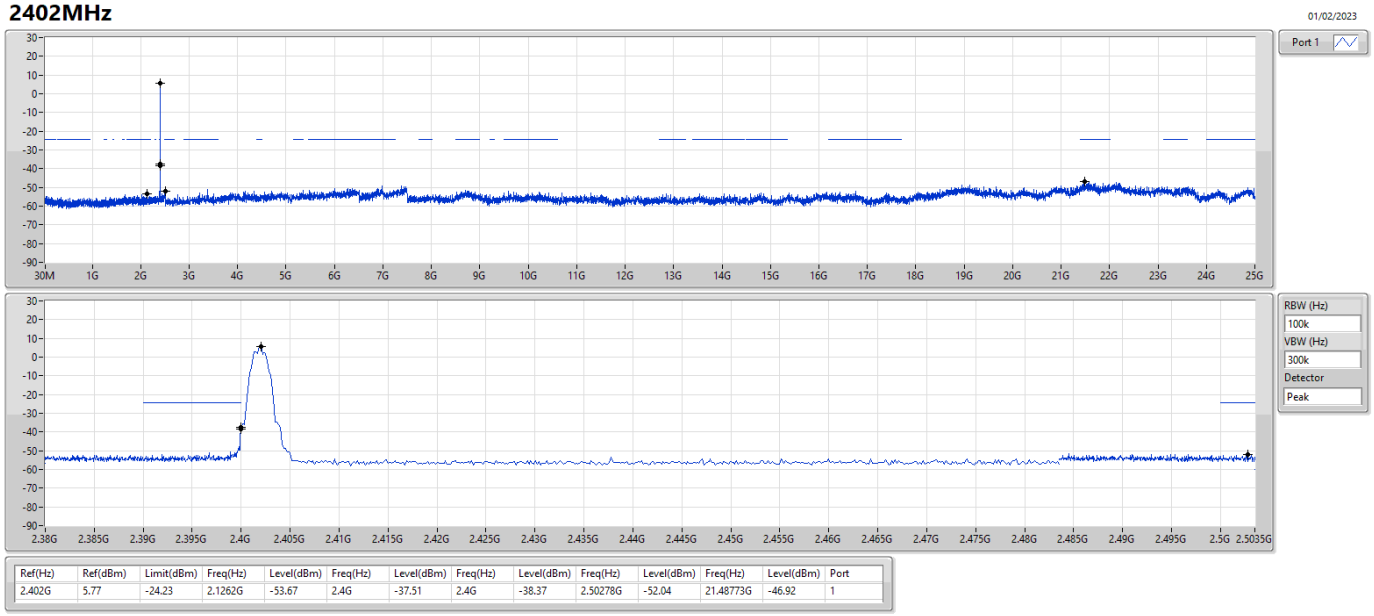
2480MHz



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
2.402G	5.83	-24.17	2.11445G	-52.99	2.3974G	-51.49	2.4G	-56.87	2.50242G	-51.72	21.48773G	-47.68	1

BT-LE(2Mbps) **CSENdB-DTS**

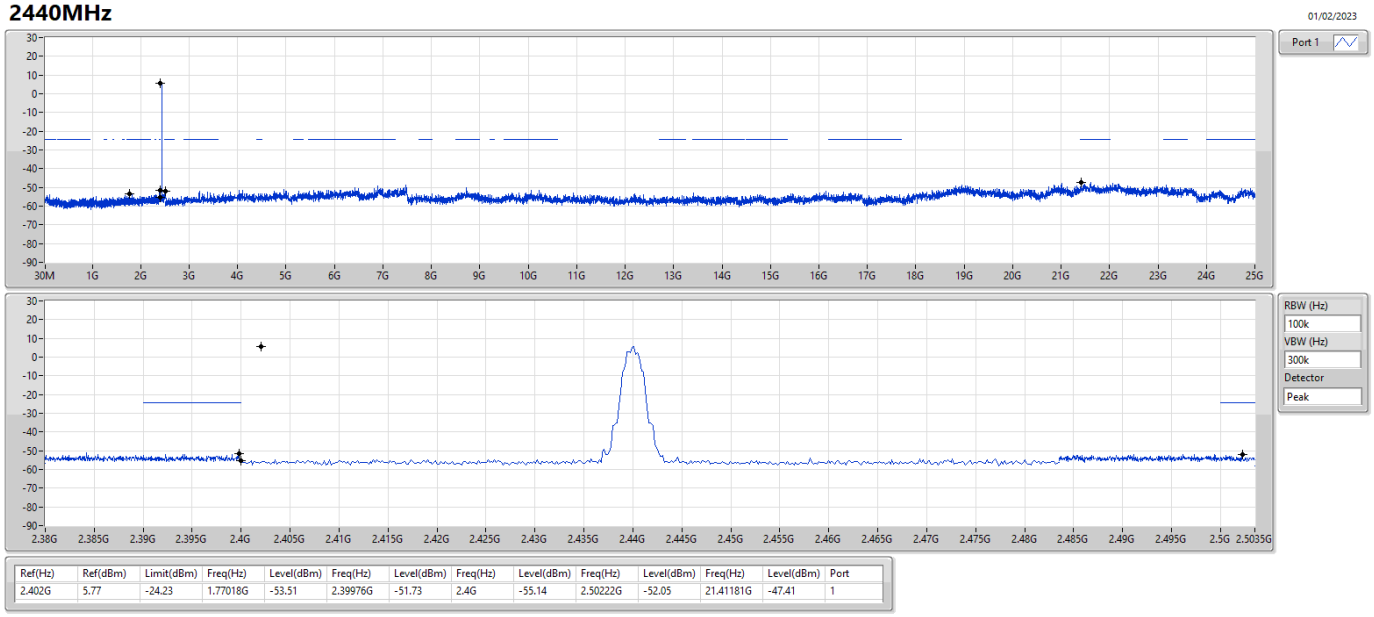
2402MHz



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
2.402G	5.77	-24.23	2.1262G	-53.67	2.4G	-37.51	2.4G	-38.37	2.50278G	-52.04	21.48773G	-46.92	1

BT-LE(2Mbps) **CSENdB-DTS**

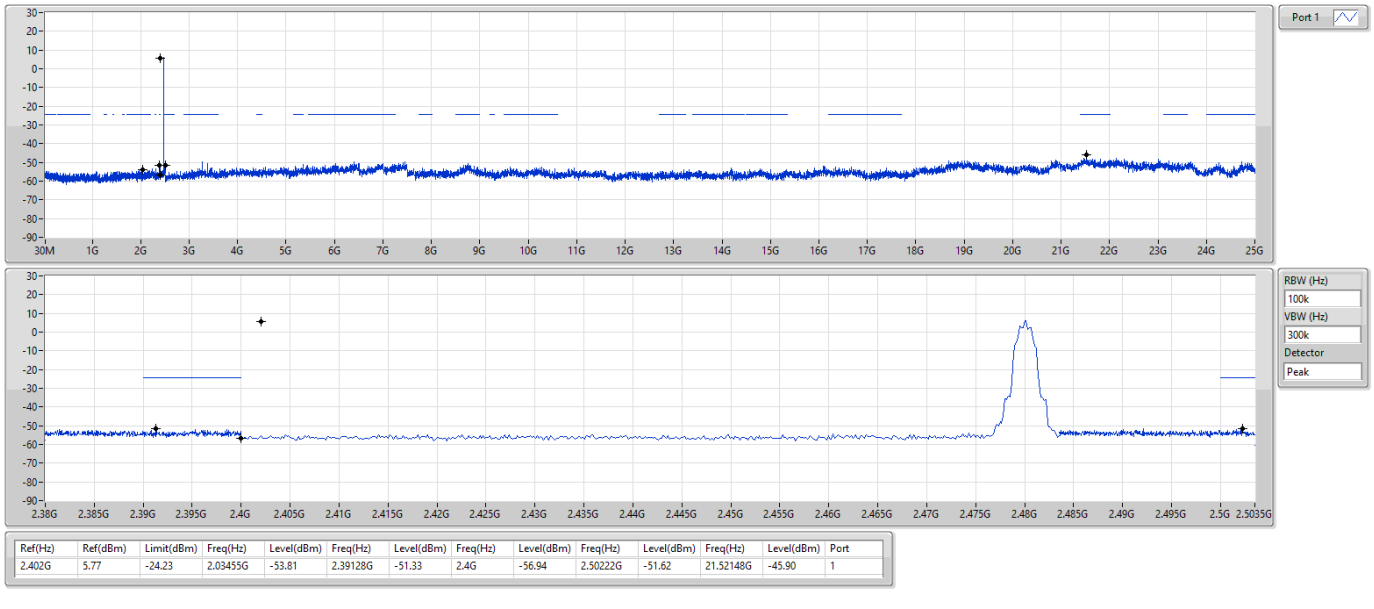
2440MHz



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
2.402G	5.77	-24.23	1.77018G	-53.51	2.39976G	-51.73	2.4G	-55.14	2.50222G	-52.05	21.41181G	-47.41	1

BT-LE(2Mbps) **CSENdB-DTS**

2480MHz



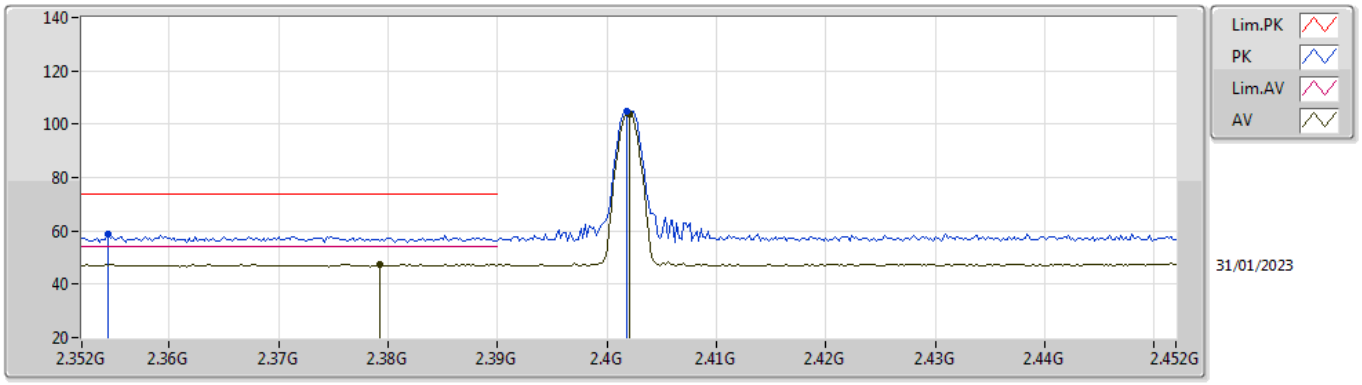
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	5.77	-24.23	2.03455G	-53.81	2.39128G	-51.33	2.4G	-56.94	2.50222G	-51.62	21.52148G	-45.90	1

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	-	-	-	-	-	-	-	-	-	-	-
BT-LE(2Mbps)	Pass	AV	2.493G	49.80	54.00	-4.20	3	Vertical	158	1.92	-

BT-LE(1Mbps)

2402MHz_TX

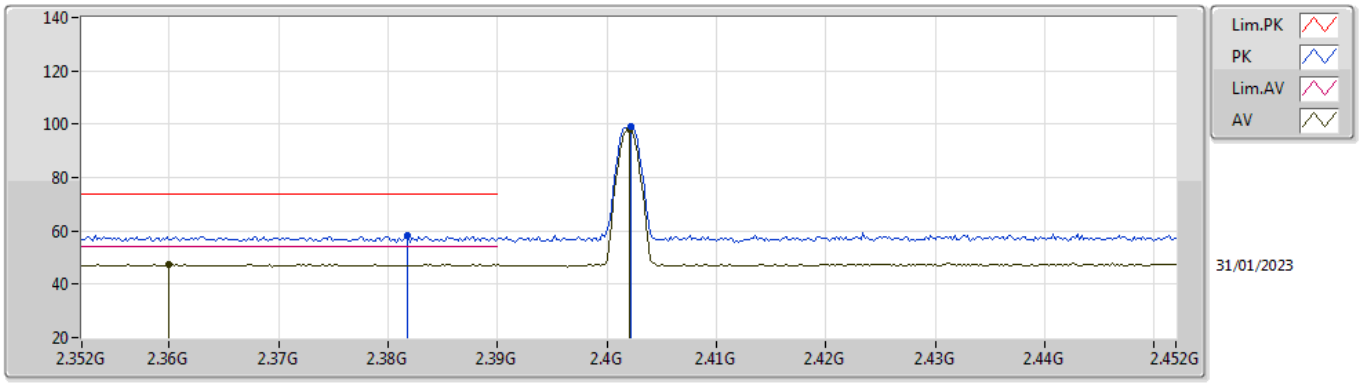


EUT Z_1TX
Setting Default
02-H-K-5

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	2.3544G	58.76	74.00	-15.24	27.27	3	Vertical	359	2.52	-	28.31	3.18	-
AV	2.3792G	47.47	54.00	-6.53	15.92	3	Vertical	359	2.52	-	28.36	3.19	-
PK	2.4018G	104.87	Inf	-Inf	73.27	3	Vertical	359	2.52	-	28.40	3.20	-
AV	2.402G	104.00	Inf	-Inf	72.40	3	Vertical	359	2.52	-	28.40	3.20	-

BT-LE(1Mbps)

2402MHz_TX

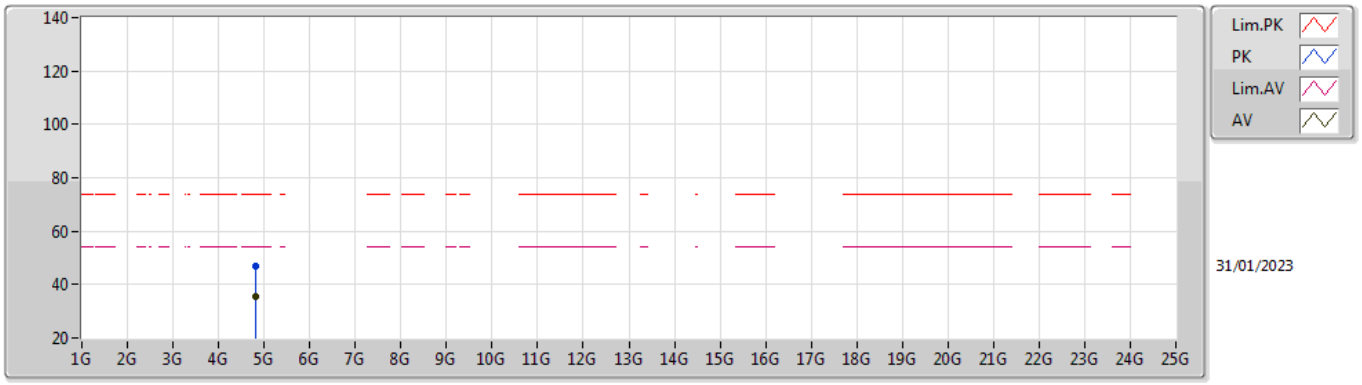


EUT Z_1TX
Setting Default
02-H-K-5

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	2.3818G	58.17	74.00	-15.83	26.62	3	Horizontal	225	2.06	-	28.36	3.19	-
AV	2.36G	47.52	54.00	-6.48	16.02	3	Horizontal	225	2.06	-	28.32	3.18	-
PK	2.4022G	98.88	Inf	-Inf	67.28	3	Horizontal	225	2.06	-	28.40	3.20	-
AV	2.402G	97.99	Inf	-Inf	66.39	3	Horizontal	225	2.06	-	28.40	3.20	-

BT-LE(1Mbps)

2402MHz_TX

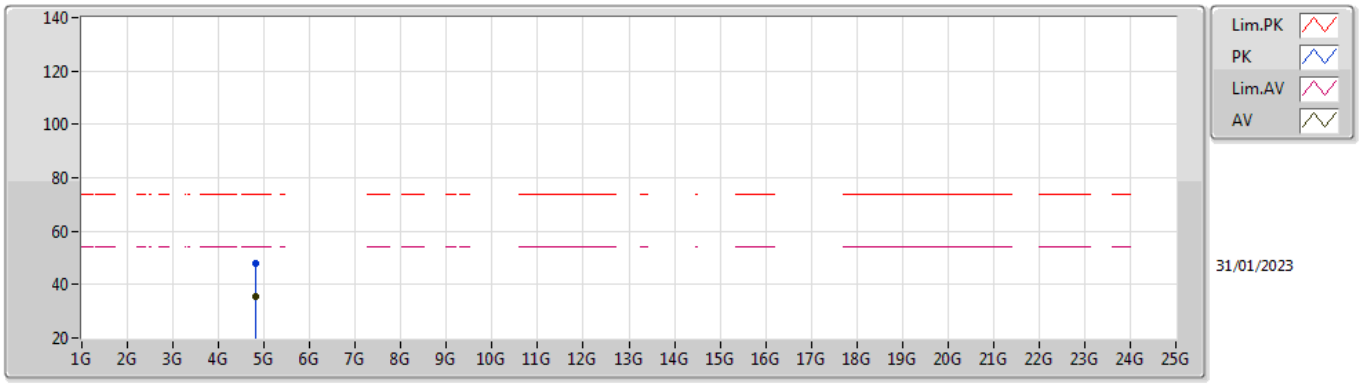


EUT Z_1TX
Setting Default
02-H-K-5

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	4.80316G	46.78	74.00	-27.22	39.17	3	Vertical	109	1.76	-	32.82	5.60	30.81
AV	4.80154G	35.70	54.00	-18.30	28.10	3	Vertical	109	1.76	-	32.81	5.60	30.81

BT-LE(1Mbps)

2402MHz_TX

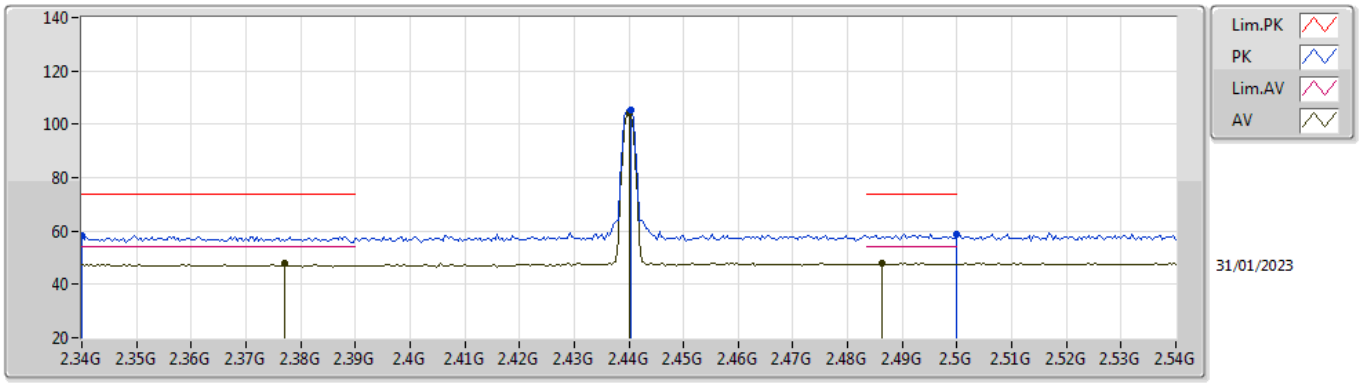


EUT Z_1TX
Setting Default
02-H-K-5

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	4.80536G	47.77	74.00	-26.23	40.15	3	Horizontal	245	2.52	-	32.83	5.60	30.81
AV	4.80424G	35.55	54.00	-18.45	27.93	3	Horizontal	245	2.52	-	32.83	5.60	30.81

BT-LE(1Mbps)

2440MHz_TX

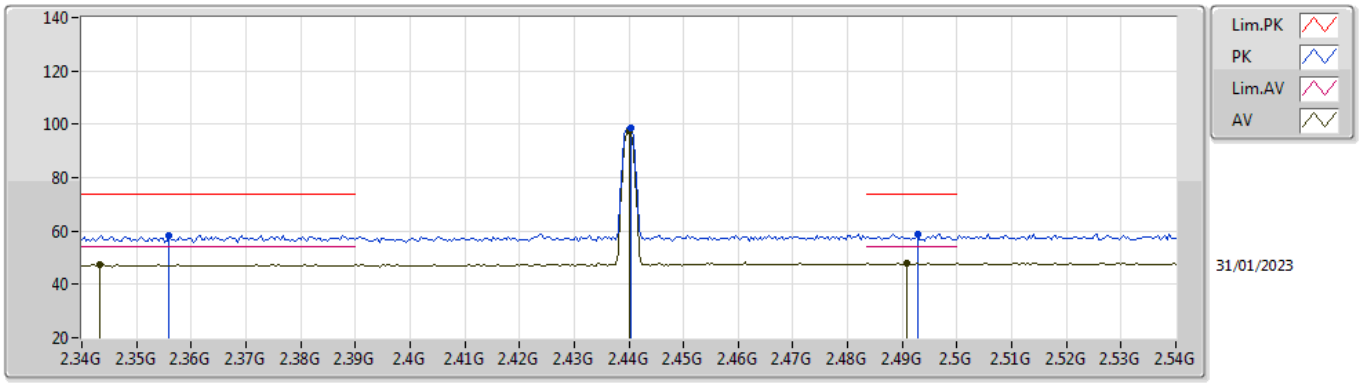


EUT Z_1TX
Setting Default
02-H-K-5

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	2.34G	58.31	74.00	-15.69	26.88	3	Vertical	150	2.11	-	28.26	3.17	-	
AV	2.3772G	47.70	54.00	-6.30	16.16	3	Vertical	150	2.11	-	28.35	3.19	-	
PK	2.4404G	105.28	Inf	-Inf	73.66	3	Vertical	150	2.11	-	28.40	3.22	-	
AV	2.44G	104.42	Inf	-Inf	72.80	3	Vertical	150	2.11	-	28.40	3.22	-	
PK	2.5G	58.98	74.00	-15.02	27.13	3	Vertical	150	2.11	-	28.60	3.25	-	
AV	2.4864G	48.14	54.00	-5.86	16.35	3	Vertical	150	2.11	-	28.55	3.24	-	

BT-LE(1Mbps)

2440MHz_TX

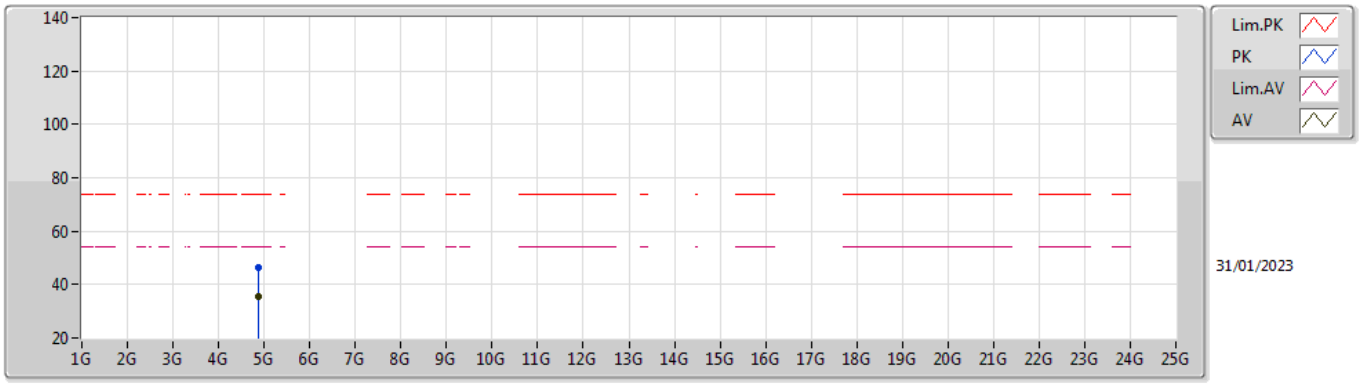


EUT Z_1TX
Setting Default
02-H-K-5

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	2.356G	58.43	74.00	-15.57	26.94	3	Horizontal	226	1.84	-	28.31	3.18	-
AV	2.3432G	47.53	54.00	-6.47	16.09	3	Horizontal	226	1.84	-	28.27	3.17	-
PK	2.4404G	98.69	Inf	-Inf	67.07	3	Horizontal	226	1.84	-	28.40	3.22	-
AV	2.44G	97.82	Inf	-Inf	66.20	3	Horizontal	226	1.84	-	28.40	3.22	-
PK	2.4928G	58.85	74.00	-15.15	27.03	3	Horizontal	226	1.84	-	28.57	3.25	-
AV	2.4908G	47.91	54.00	-6.09	16.10	3	Horizontal	226	1.84	-	28.56	3.25	-

BT-LE(1Mbps)

2440MHz_TX

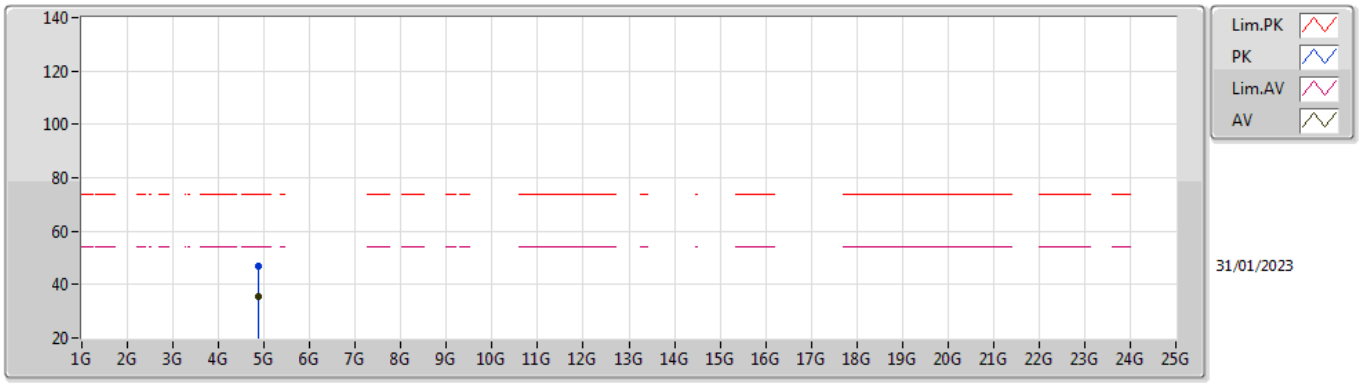


EUT Z_1TX
Setting Default
02-H-K-5

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	4.87852G	46.51	74.00	-27.49	38.49	3	Vertical	34	1.85	-	33.16	5.64	30.78
AV	4.88288G	35.71	54.00	-18.29	27.68	3	Vertical	34	1.85	-	33.17	5.64	30.78

BT-LE(1Mbps)

2440MHz_TX

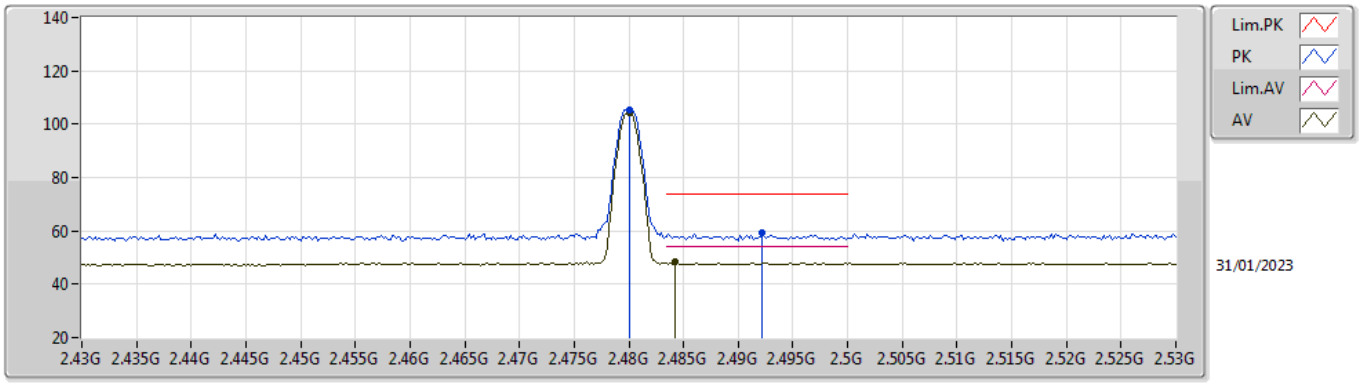


EUT Z_1TX
Setting Default
02-H-K-5

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	4.8769G	46.65	74.00	-27.35	38.64	3	Horizontal	94	2.75	-	33.15	5.64	30.78
AV	4.88372G	35.63	54.00	-18.37	27.60	3	Horizontal	94	2.75	-	33.17	5.64	30.78

BT-LE(1Mbps)

2480MHz_TX

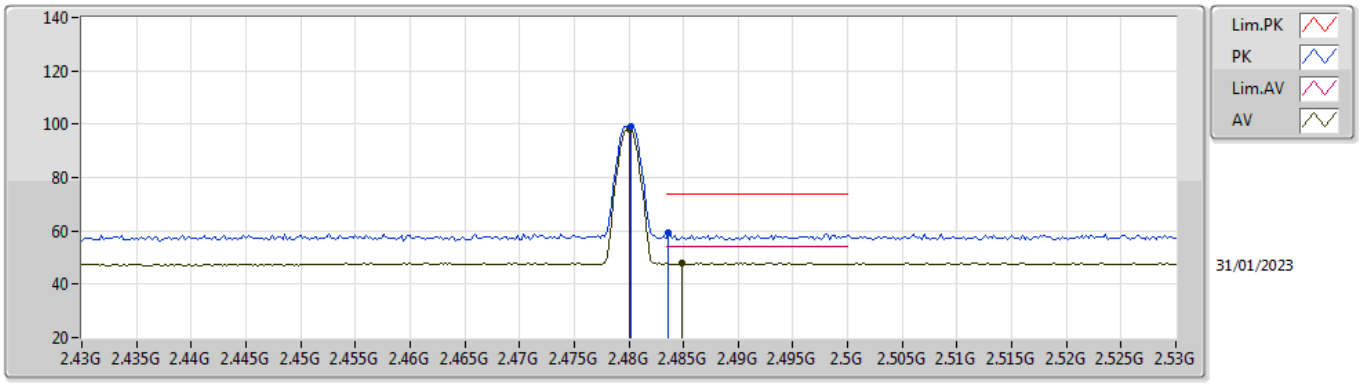


EUT Z_1TX
Setting Default
02-H-K-5

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	105.18	Inf	-Inf	73.42	3	Vertical	157	1.92	-	28.52	3.24	-
AV	2.48G	104.32	Inf	-Inf	72.56	3	Vertical	157	1.92	-	28.52	3.24	-
PK	2.4922G	59.37	74.00	-14.63	27.55	3	Vertical	157	1.92	-	28.57	3.25	-
AV	2.4842G	48.36	54.00	-5.64	16.58	3	Vertical	157	1.92	-	28.54	3.24	-

BT-LE(1Mbps)

2480MHz_TX

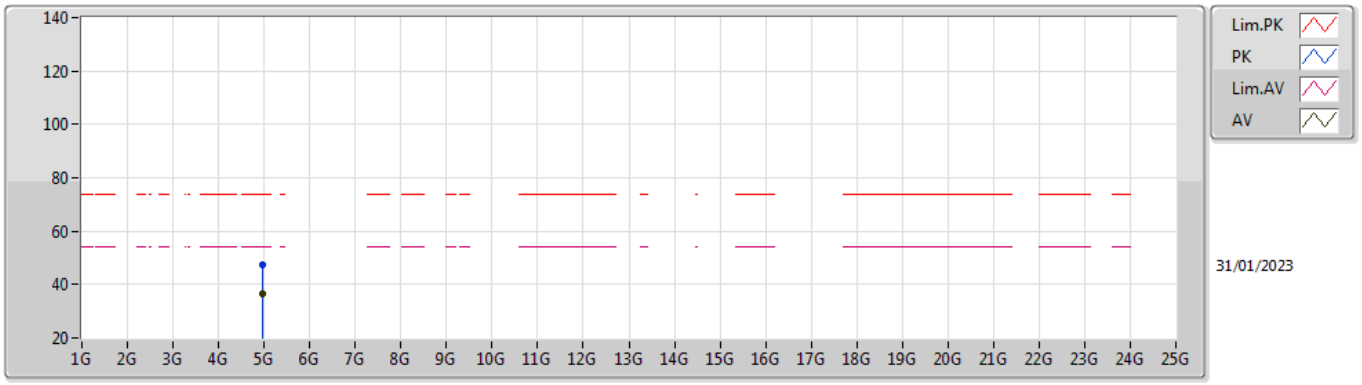


EUT Z_1TX
Setting Default
02-H-K-5

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	2.4802G	99.02	Inf	-Inf	67.26	3	Horizontal	222	1.95	-	28.52	3.24	-
AV	2.48G	98.16	Inf	-Inf	66.40	3	Horizontal	222	1.95	-	28.52	3.24	-
PK	2.4836G	59.28	74.00	-14.72	27.51	3	Horizontal	222	1.95	-	28.53	3.24	-
AV	2.4848G	48.13	54.00	-5.87	16.35	3	Horizontal	222	1.95	-	28.54	3.24	-

BT-LE(1Mbps)

2480MHz_TX

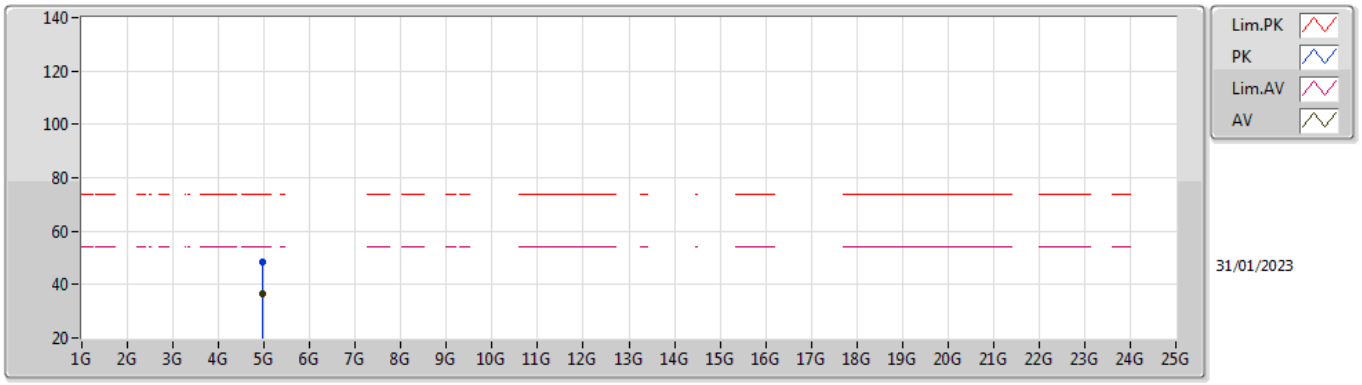


EUT Z_1TX
Setting Default
02-H-K-5

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	4.95738G	47.40	74.00	-26.60	39.16	3	Vertical	310	2.26	-	33.31	5.68	30.75
AV	4.95634G	36.37	54.00	-17.63	28.13	3	Vertical	310	2.26	-	33.31	5.68	30.75

BT-LE(1Mbps)

2480MHz_TX

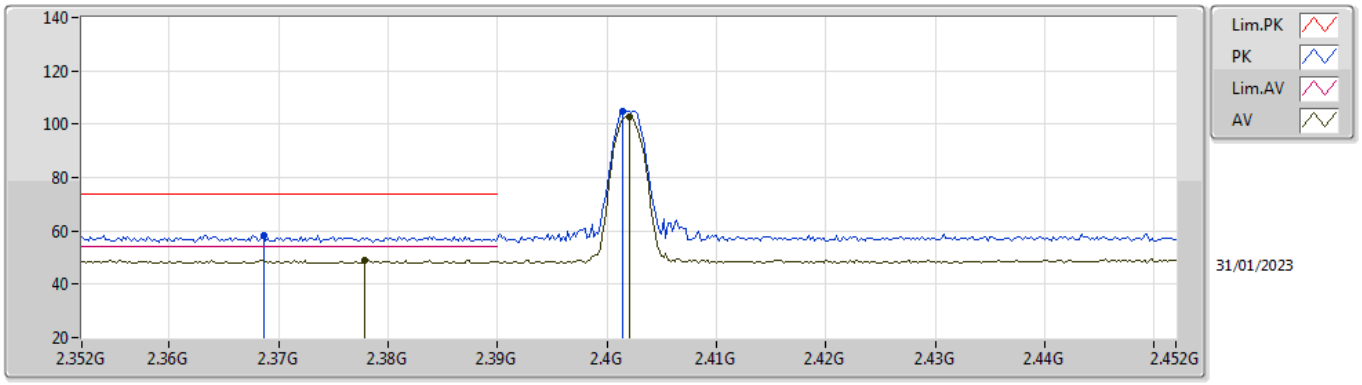


EUT Z_1TX
Setting Default
02-H-K-5

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	4.9582G	48.46	74.00	-25.54	40.21	3	Horizontal	32	2.93	-	33.32	5.68	30.75
AV	4.95592G	36.37	54.00	-17.63	28.13	3	Horizontal	32	2.93	-	33.31	5.68	30.75

BT-LE(2Mbps)

2402MHz_TX

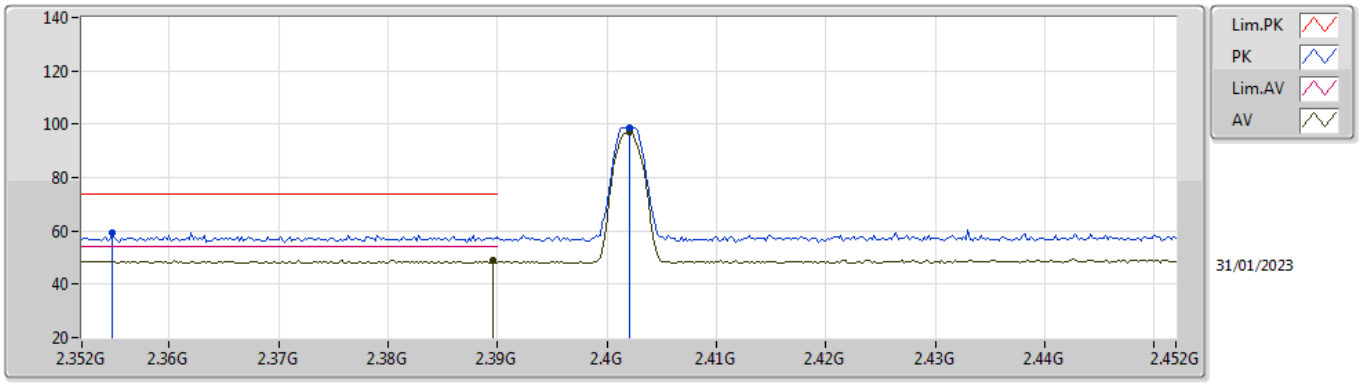


EUT Z_1TX
Setting Default
02-H-K-5

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	2.3686G	58.53	74.00	-15.47	27.01	3	Vertical	358	2.52	-	28.34	3.18	-
AV	2.3778G	49.14	54.00	-4.86	17.59	3	Vertical	358	2.52	-	28.36	3.19	-
PK	2.4014G	104.93	Inf	-Inf	73.33	3	Vertical	358	2.52	-	28.40	3.20	-
AV	2.402G	102.91	Inf	-Inf	71.31	3	Vertical	358	2.52	-	28.40	3.20	-

BT-LE(2Mbps)

2402MHz_TX

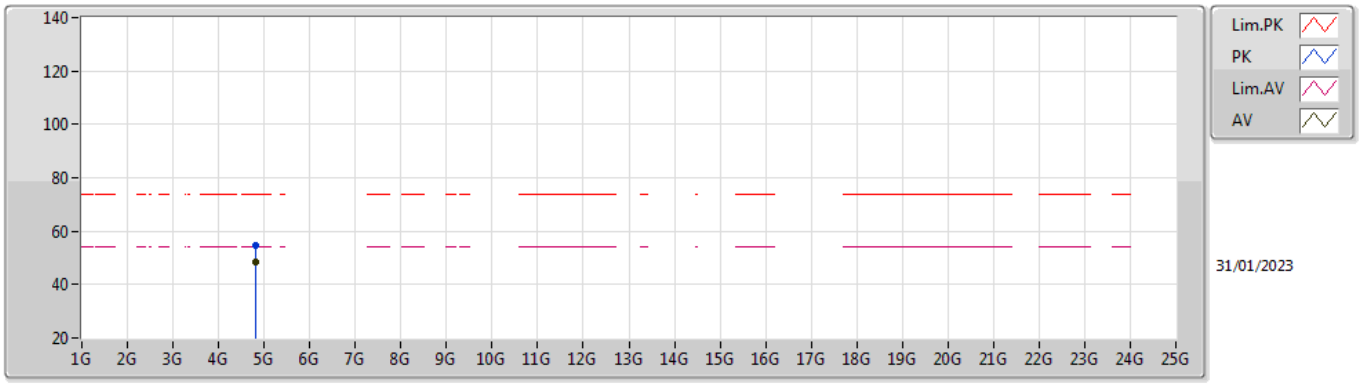


EUT Z_1TX
Setting Default
02-H-K-5

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	2.3548G	59.18	74.00	-14.82	27.69	3	Horizontal	225	2.06	-	28.31	3.18	-
AV	2.3896G	48.94	54.00	-5.06	17.37	3	Horizontal	225	2.06	-	28.38	3.19	-
PK	2.402G	98.83	Inf	-Inf	67.23	3	Horizontal	225	2.06	-	28.40	3.20	-
AV	2.402G	96.86	Inf	-Inf	65.26	3	Horizontal	225	2.06	-	28.40	3.20	-

BT-LE(2Mbps)

2402MHz_TX

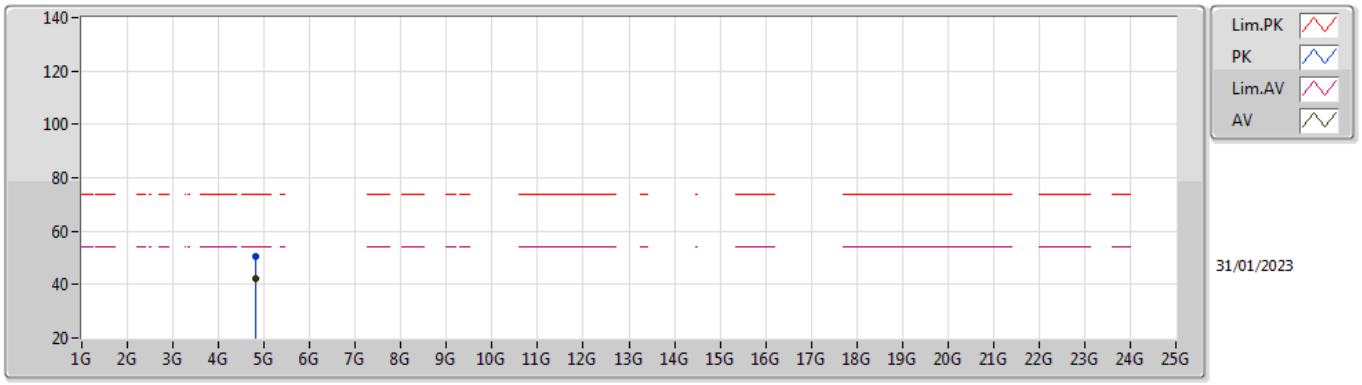


EUT Z_1TX
Setting Default
02-H-K-5

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	4.80491G	54.44	74.00	-19.56	46.82	3	Vertical	52	1.80	-	32.83	5.60	30.81
AV	4.80309G	48.27	54.00	-5.73	40.66	3	Vertical	52	1.80	-	32.82	5.60	30.81

BT-LE(2Mbps)

2402MHz_TX

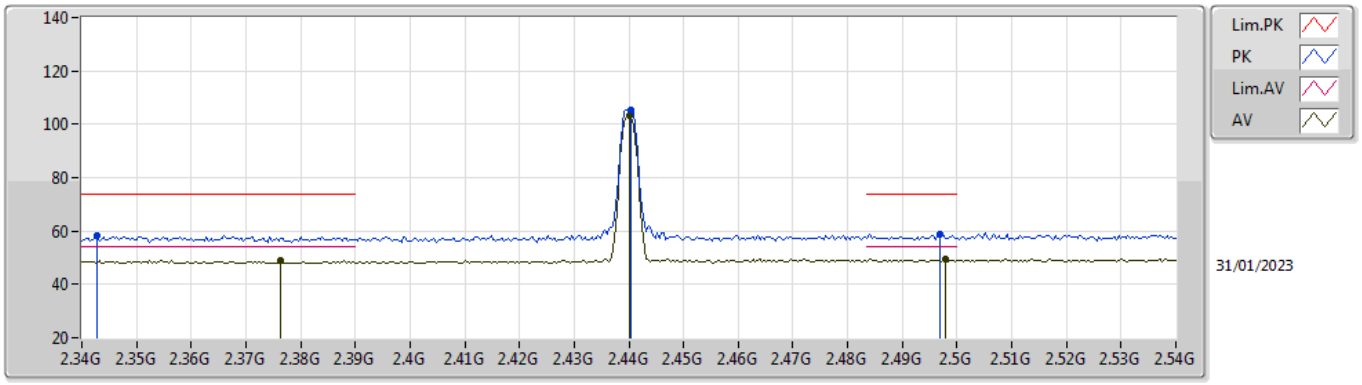


EUT Z_1TX
Setting Default
02-H-K-5

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	4.80312G	50.35	74.00	-23.65	42.74	3	Horizontal	16	1.62	-	32.82	5.60	30.81
AV	4.80305G	42.40	54.00	-11.60	34.79	3	Horizontal	16	1.62	-	32.82	5.60	30.81

BT-LE(2Mbps)

2440MHz_TX

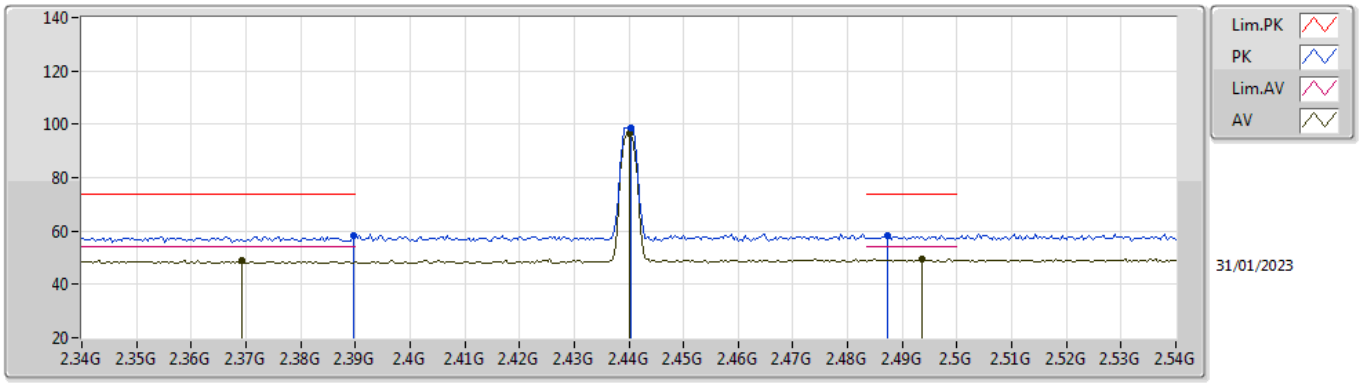


EUT Z_1TX
Setting Default
02-H-K-5

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	2.3428G	58.38	74.00	-15.62	26.94	3	Vertical	150	2.11	-	28.27	3.17	-
AV	2.3764G	48.94	54.00	-5.06	17.40	3	Vertical	150	2.11	-	28.35	3.19	-
PK	2.4404G	105.31	Inf	-Inf	73.69	3	Vertical	150	2.11	-	28.40	3.22	-
AV	2.44G	103.30	Inf	-Inf	71.68	3	Vertical	150	2.11	-	28.40	3.22	-
PK	2.4968G	58.65	74.00	-15.35	26.81	3	Vertical	150	2.11	-	28.59	3.25	-
AV	2.498G	49.41	54.00	-4.59	17.57	3	Vertical	150	2.11	-	28.59	3.25	-

BT-LE(2Mbps)

2440MHz_TX

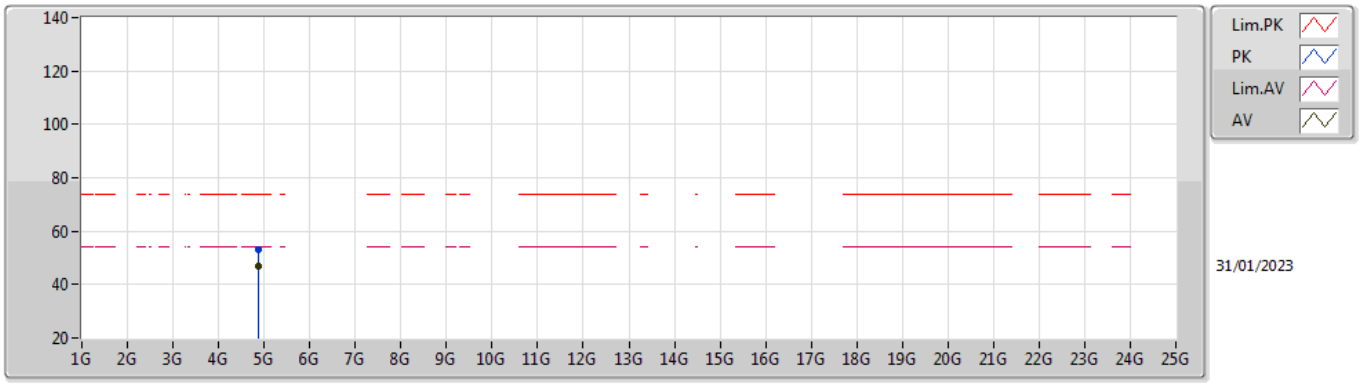


EUT Z_1TX
Setting Default
02-H-K-5

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	2.3896G	58.19	74.00	-15.81	26.62	3	Horizontal	227	1.84	-	28.38	3.19	-
AV	2.3692G	49.15	54.00	-4.85	17.63	3	Horizontal	227	1.84	-	28.34	3.18	-
PK	2.4404G	98.75	Inf	-Inf	67.13	3	Horizontal	227	1.84	-	28.40	3.22	-
AV	2.44G	96.73	Inf	-Inf	65.11	3	Horizontal	227	1.84	-	28.40	3.22	-
PK	2.4872G	58.16	74.00	-15.84	26.37	3	Horizontal	227	1.84	-	28.55	3.24	-
AV	2.4936G	49.41	54.00	-4.59	17.59	3	Horizontal	227	1.84	-	28.57	3.25	-

BT-LE(2Mbps)

2440MHz_TX

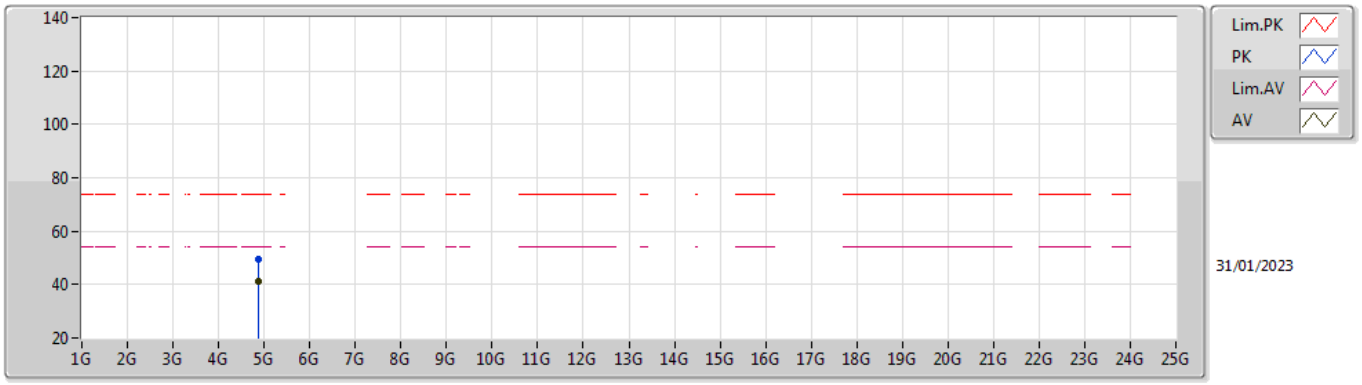


EUT Z_1TX
Setting Default
02-H-K-5

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	4.88101G	53.33	74.00	-20.67	45.31	3	Vertical	51	1.68	-	33.16	5.64	30.78
AV	4.87888G	46.87	54.00	-7.13	38.85	3	Vertical	51	1.68	-	33.16	5.64	30.78

BT-LE(2Mbps)

2440MHz_TX

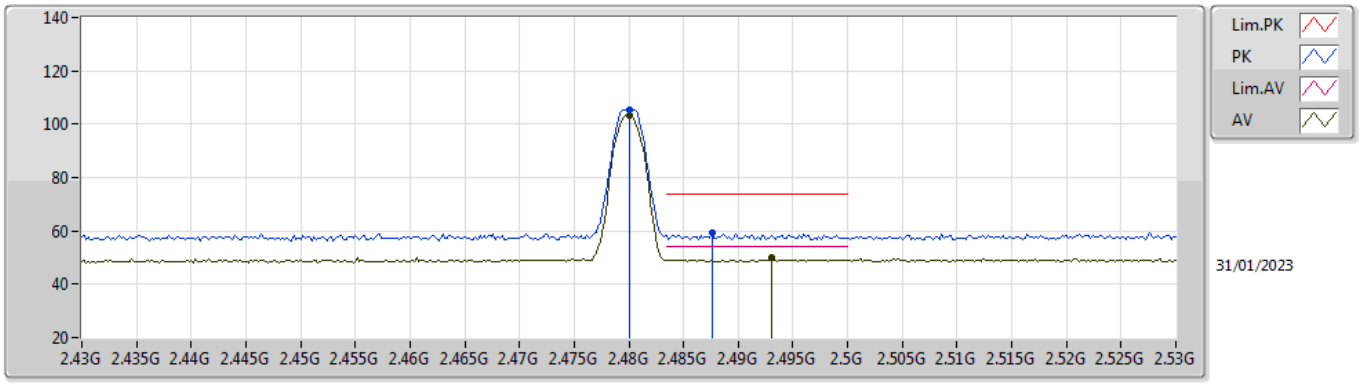


EUT Z_1TX
Setting Default
02-H-K-5

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	4.8811G	49.34	74.00	-24.66	41.32	3	Horizontal	23	1.70	-	33.16	5.64	30.78
AV	4.87908G	41.03	54.00	-12.97	33.01	3	Horizontal	23	1.70	-	33.16	5.64	30.78

BT-LE(2Mbps)

2480MHz_TX

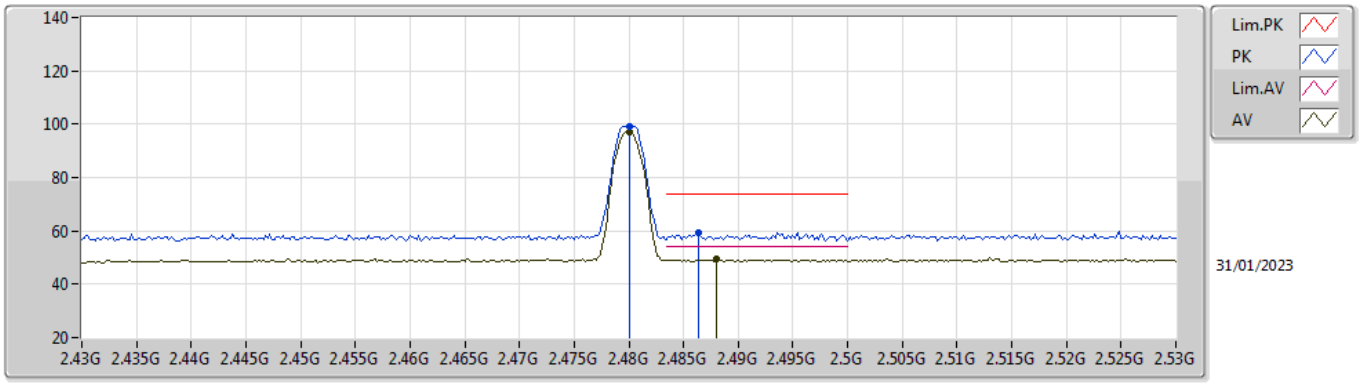


EUT Z_1TX
Setting Default
02-H-K-5

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	105.20	Inf	-Inf	73.44	3	Vertical	158	1.92	-	28.52	3.24	-
AV	2.48G	103.21	Inf	-Inf	71.45	3	Vertical	158	1.92	-	28.52	3.24	-
PK	2.4876G	59.10	74.00	-14.90	27.31	3	Vertical	158	1.92	-	28.55	3.24	-
AV	2.493G	49.80	54.00	-4.20	17.98	3	Vertical	158	1.92	-	28.57	3.25	-

BT-LE(2Mbps)

2480MHz_TX

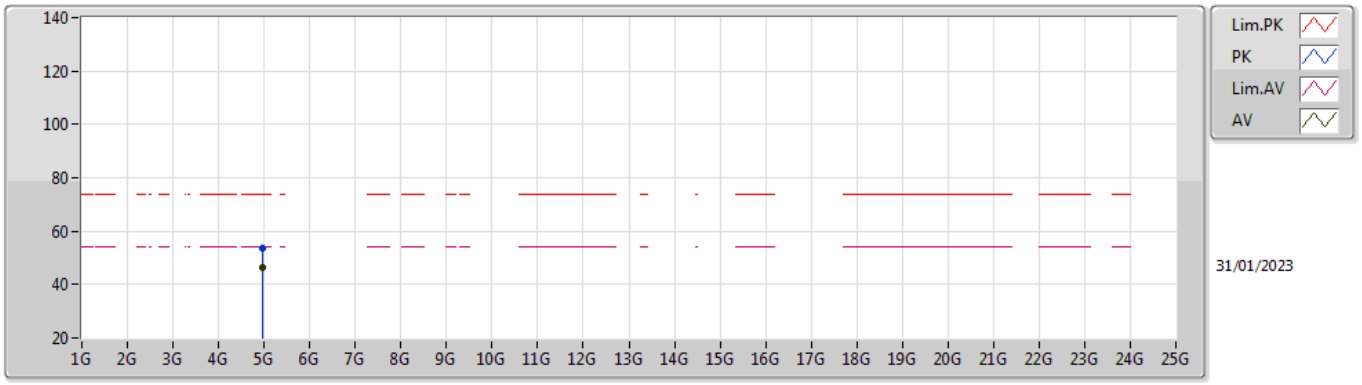


EUT Z_1TX
Setting Default
02-H-K-5

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	99.00	Inf	-Inf	67.24	3	Horizontal	222	1.95	-	28.52	3.24	-
AV	2.48G	97.00	Inf	-Inf	65.24	3	Horizontal	222	1.95	-	28.52	3.24	-
PK	2.4864G	59.55	74.00	-14.45	27.76	3	Horizontal	222	1.95	-	28.55	3.24	-
AV	2.488G	49.40	54.00	-4.60	17.61	3	Horizontal	222	1.95	-	28.55	3.24	-

BT-LE(2Mbps)

2480MHz_TX

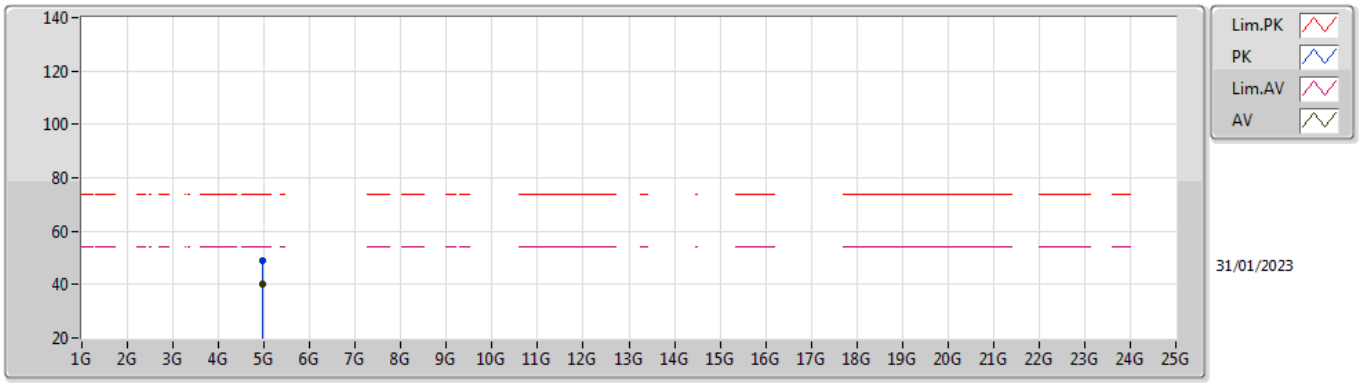


EUT Z_1TX
Setting Default
02-H-K-5

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	4.95994G	53.60	74.00	-20.40	45.35	3	Vertical	52	1.72	-	33.32	5.68	30.75
AV	4.95895G	46.60	54.00	-7.40	38.35	3	Vertical	52	1.72	-	33.32	5.68	30.75

BT-LE(2Mbps)

2480MHz_TX



EUT Z_1TX
Setting Default
02-H-K-5

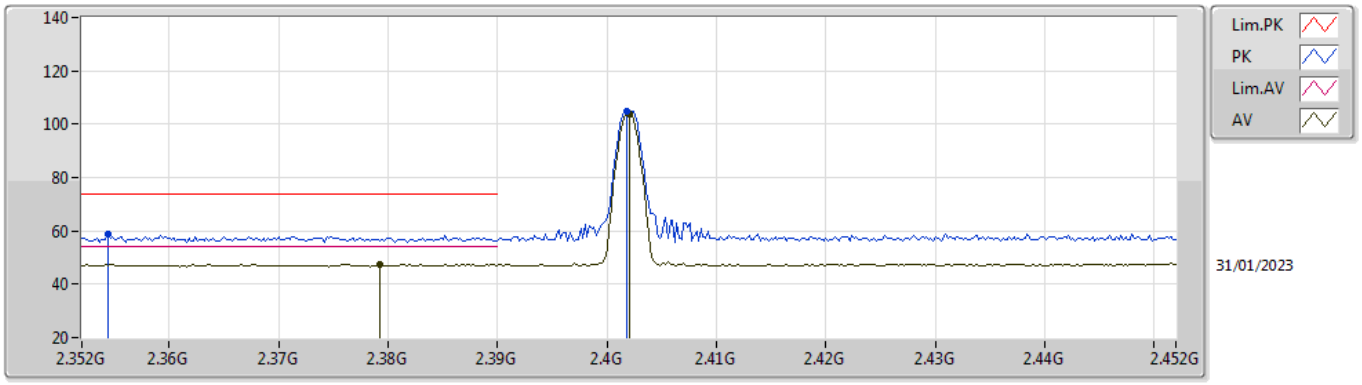
Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.95904G	49.20	74.00	-24.80	40.95	3	Horizontal	27	1.72	-	33.32	5.68	30.75
AV	4.96005G	40.39	54.00	-13.61	32.14	3	Horizontal	27	1.72	-	33.32	5.68	30.75

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	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4842G	48.36	54.00	-5.64	3	Vertical	157	1.92	-
BT-LE(2Mbps)	Pass	AV	2.493G	49.80	54.00	-4.20	3	Vertical	158	1.92	-

BT-LE(1Mbps)

2402MHz_TX

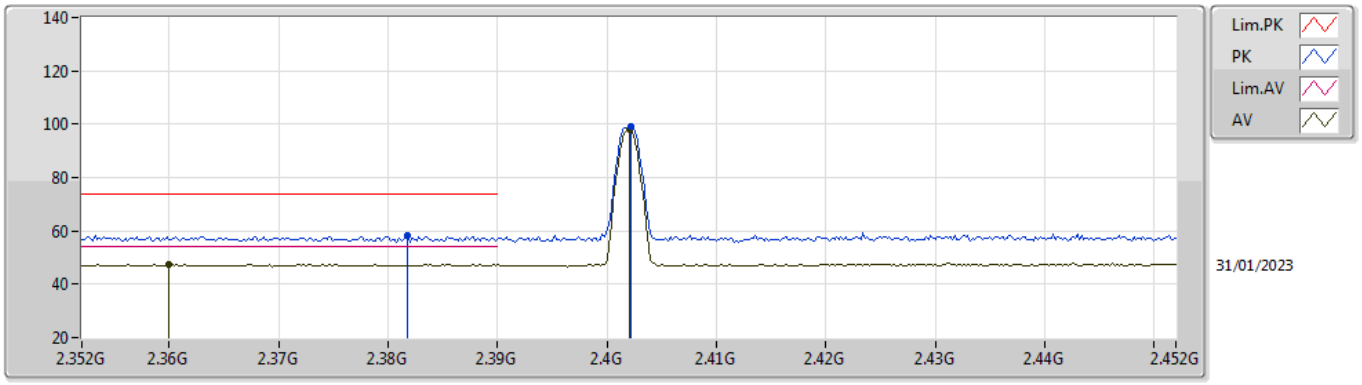


EUT Y_1TX
Setting Default
02-H-K-5

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	2.3544G	58.76	74.00	-15.24	27.27	3	Vertical	359	2.52	-	28.31	3.18	-
AV	2.3792G	47.47	54.00	-6.53	15.92	3	Vertical	359	2.52	-	28.36	3.19	-
PK	2.4018G	104.87	Inf	-Inf	73.27	3	Vertical	359	2.52	-	28.40	3.20	-
AV	2.402G	104.00	Inf	-Inf	72.40	3	Vertical	359	2.52	-	28.40	3.20	-

BT-LE(1Mbps)

2402MHz_TX

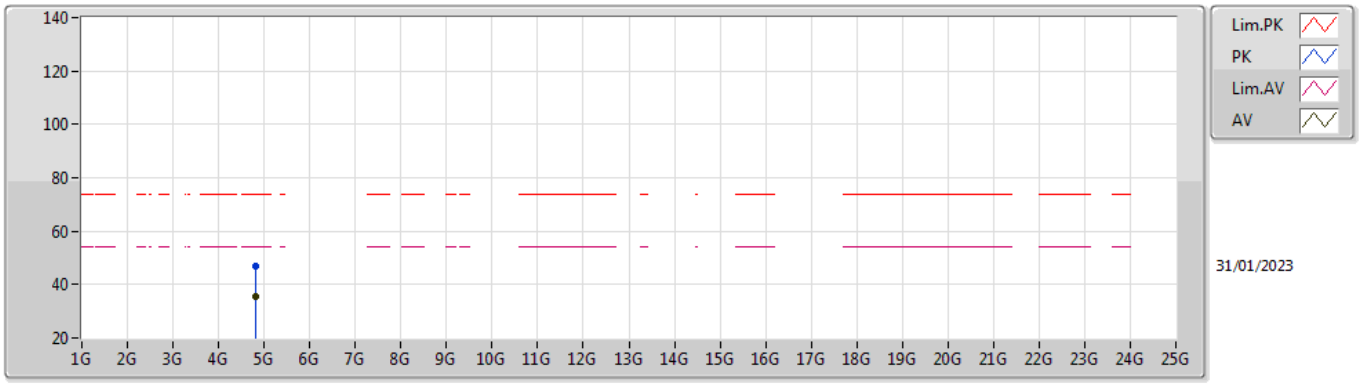


EUT Y_1TX
Setting Default
02-H-K-5

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	2.3818G	58.17	74.00	-15.83	26.62	3	Horizontal	225	2.06	-	28.36	3.19	-
AV	2.36G	47.52	54.00	-6.48	16.02	3	Horizontal	225	2.06	-	28.32	3.18	-
PK	2.4022G	98.88	Inf	-Inf	67.28	3	Horizontal	225	2.06	-	28.40	3.20	-
AV	2.402G	97.99	Inf	-Inf	66.39	3	Horizontal	225	2.06	-	28.40	3.20	-

BT-LE(1Mbps)

2402MHz_TX

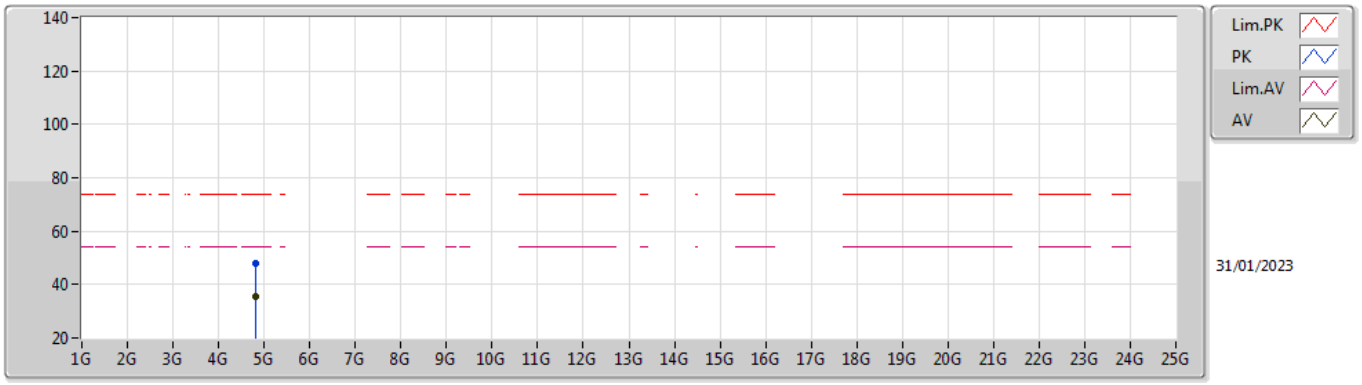


EUT Y_1TX
Setting Default
02-H-K-5

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	4.80316G	46.78	74.00	-27.22	39.17	3	Vertical	109	1.76	-	32.82	5.60	30.81
AV	4.80154G	35.70	54.00	-18.30	28.10	3	Vertical	109	1.76	-	32.81	5.60	30.81

BT-LE(1Mbps)

2402MHz_TX

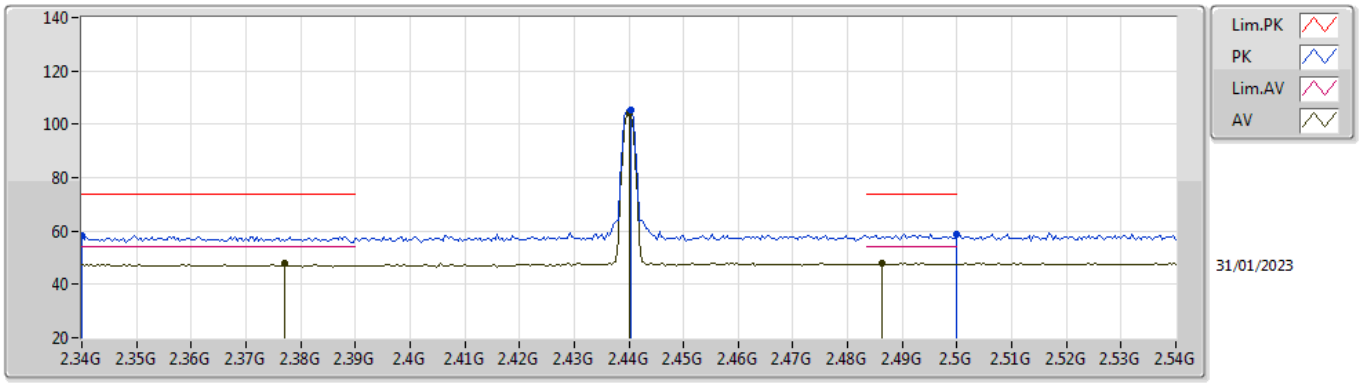


EUT Y_1TX
Setting Default
02-H-K-5

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	4.80536G	47.77	74.00	-26.23	40.15	3	Horizontal	245	2.52	-	32.83	5.60	30.81
AV	4.80424G	35.55	54.00	-18.45	27.93	3	Horizontal	245	2.52	-	32.83	5.60	30.81

BT-LE(1Mbps)

2440MHz_TX

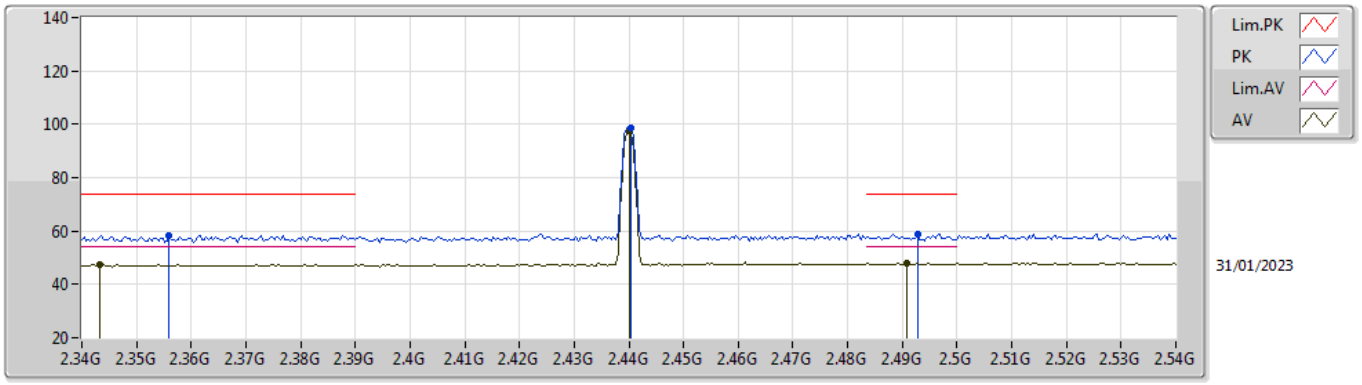


EUT Y_1TX
Setting Default
02-H-K-5

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	2.34G	58.31	74.00	-15.69	26.88	3	Vertical	150	2.11	-	28.26	3.17	-
AV	2.3772G	47.70	54.00	-6.30	16.16	3	Vertical	150	2.11	-	28.35	3.19	-
PK	2.4404G	105.28	Inf	-Inf	73.66	3	Vertical	150	2.11	-	28.40	3.22	-
AV	2.44G	104.42	Inf	-Inf	72.80	3	Vertical	150	2.11	-	28.40	3.22	-
PK	2.5G	58.98	74.00	-15.02	27.13	3	Vertical	150	2.11	-	28.60	3.25	-
AV	2.4864G	48.14	54.00	-5.86	16.35	3	Vertical	150	2.11	-	28.55	3.24	-

BT-LE(1Mbps)

2440MHz_TX

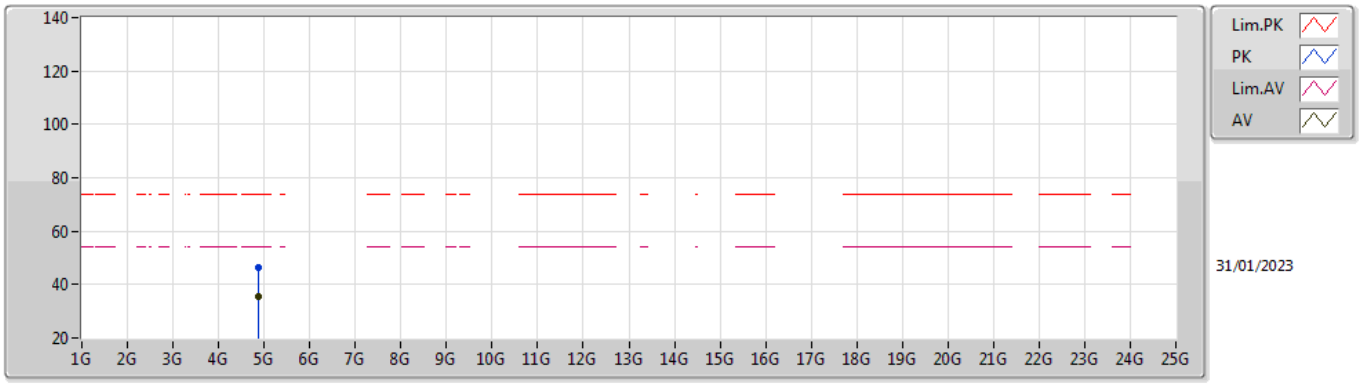


EUT Y_1TX
Setting Default
02-H-K-5

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	2.356G	58.43	74.00	-15.57	26.94	3	Horizontal	226	1.84	-	28.31	3.18	-
AV	2.3432G	47.53	54.00	-6.47	16.09	3	Horizontal	226	1.84	-	28.27	3.17	-
PK	2.4404G	98.69	Inf	-Inf	67.07	3	Horizontal	226	1.84	-	28.40	3.22	-
AV	2.44G	97.82	Inf	-Inf	66.20	3	Horizontal	226	1.84	-	28.40	3.22	-
PK	2.4928G	58.85	74.00	-15.15	27.03	3	Horizontal	226	1.84	-	28.57	3.25	-
AV	2.4908G	47.91	54.00	-6.09	16.10	3	Horizontal	226	1.84	-	28.56	3.25	-

BT-LE(1Mbps)

2440MHz_TX

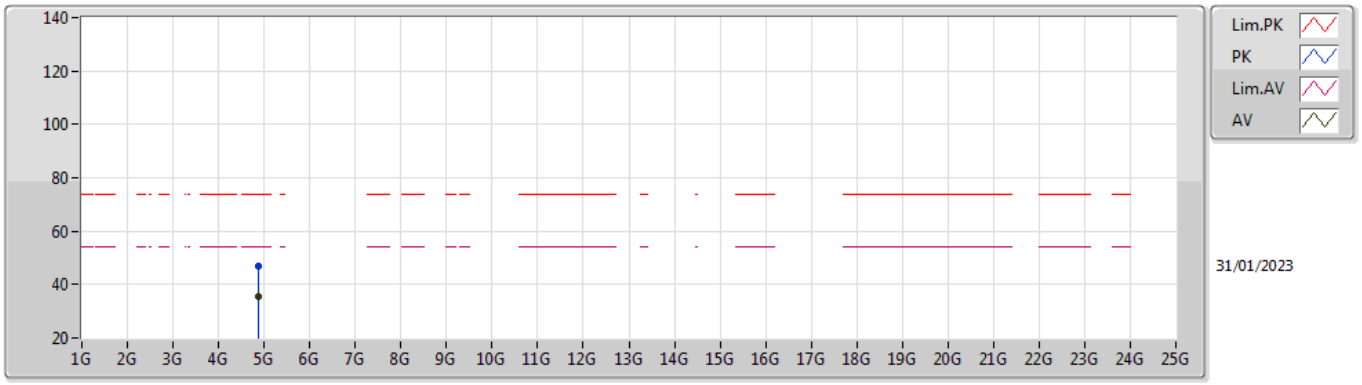


EUT Y_1TX
Setting Default
02-H-K-5

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	4.87852G	46.51	74.00	-27.49	38.49	3	Vertical	34	1.85	-	33.16	5.64	30.78
AV	4.88288G	35.71	54.00	-18.29	27.68	3	Vertical	34	1.85	-	33.17	5.64	30.78

BT-LE(1Mbps)

2440MHz_TX

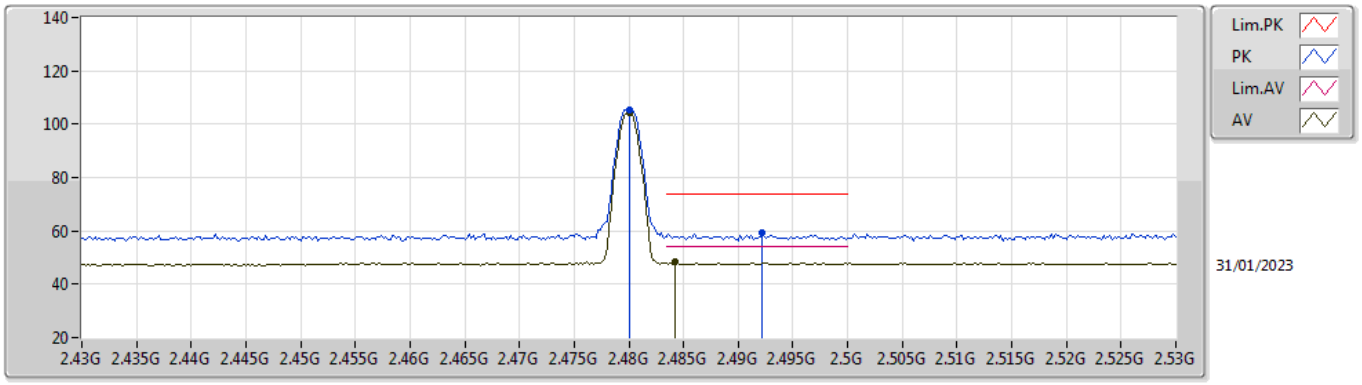


EUT Y_1TX
Setting Default
02-H-K-5

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	4.8769G	46.65	74.00	-27.35	38.64	3	Horizontal	94	2.75	-	33.15	5.64	30.78
AV	4.88372G	35.63	54.00	-18.37	27.60	3	Horizontal	94	2.75	-	33.17	5.64	30.78

BT-LE(1Mbps)

2480MHz_TX

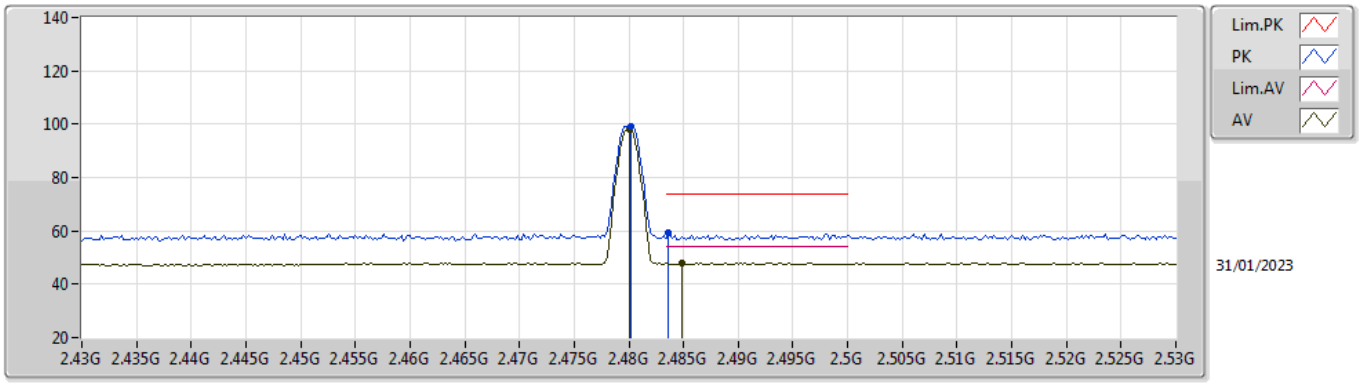


EUT Y_1TX
Setting Default
02-H-K-5

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	105.18	Inf	-Inf	73.42	3	Vertical	157	1.92	-	28.52	3.24	-
AV	2.48G	104.32	Inf	-Inf	72.56	3	Vertical	157	1.92	-	28.52	3.24	-
PK	2.4922G	59.37	74.00	-14.63	27.55	3	Vertical	157	1.92	-	28.57	3.25	-
AV	2.4842G	48.36	54.00	-5.64	16.58	3	Vertical	157	1.92	-	28.54	3.24	-

BT-LE(1Mbps)

2480MHz_TX

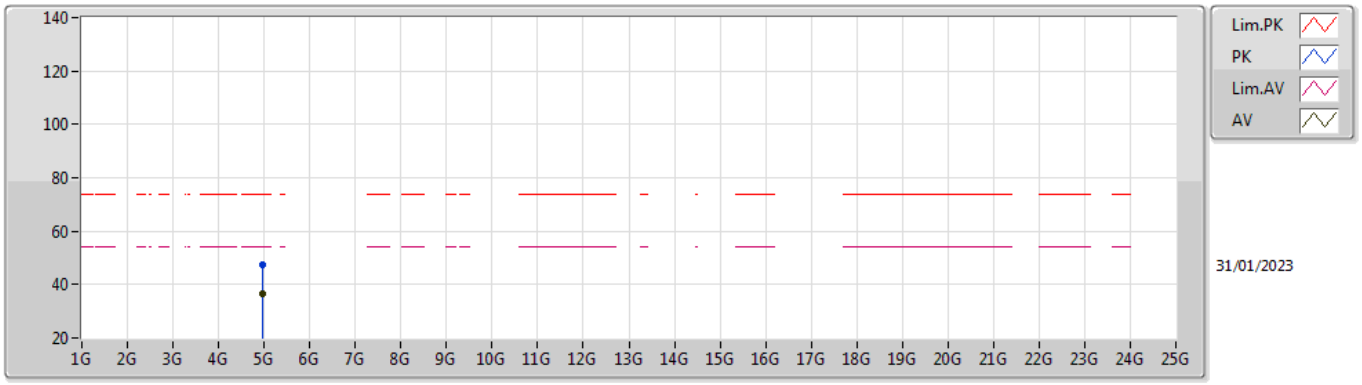


EUT Y_1TX
Setting Default
02-H-K-5

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	2.4802G	99.02	Inf	-Inf	67.26	3	Horizontal	222	1.95	-	28.52	3.24	-
AV	2.48G	98.16	Inf	-Inf	66.40	3	Horizontal	222	1.95	-	28.52	3.24	-
PK	2.4836G	59.28	74.00	-14.72	27.51	3	Horizontal	222	1.95	-	28.53	3.24	-
AV	2.4848G	48.13	54.00	-5.87	16.35	3	Horizontal	222	1.95	-	28.54	3.24	-

BT-LE(1Mbps)

2480MHz_TX

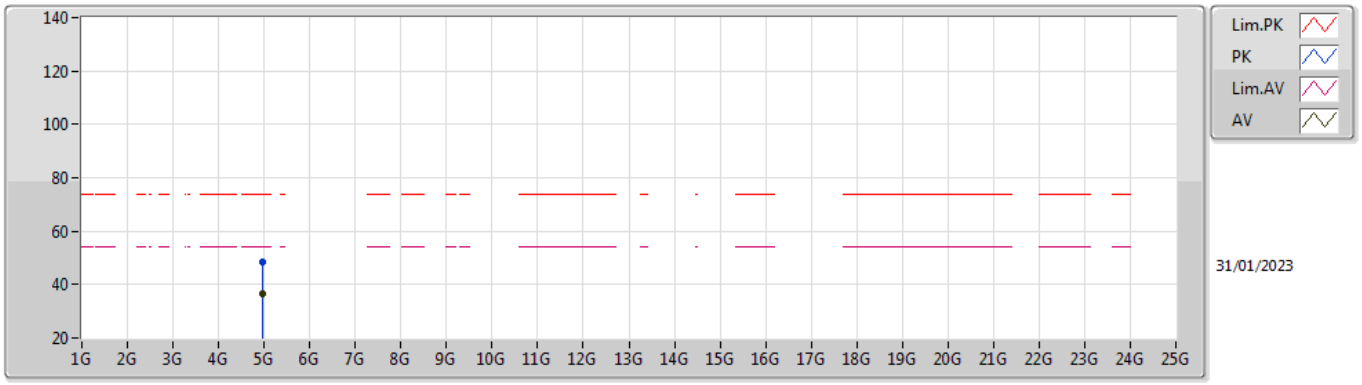


EUT Y_1TX
Setting Default
02-H-K-5

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	4.95738G	47.40	74.00	-26.60	39.16	3	Vertical	310	2.26	-	33.31	5.68	30.75
AV	4.95634G	36.37	54.00	-17.63	28.13	3	Vertical	310	2.26	-	33.31	5.68	30.75

BT-LE(1Mbps)

2480MHz_TX

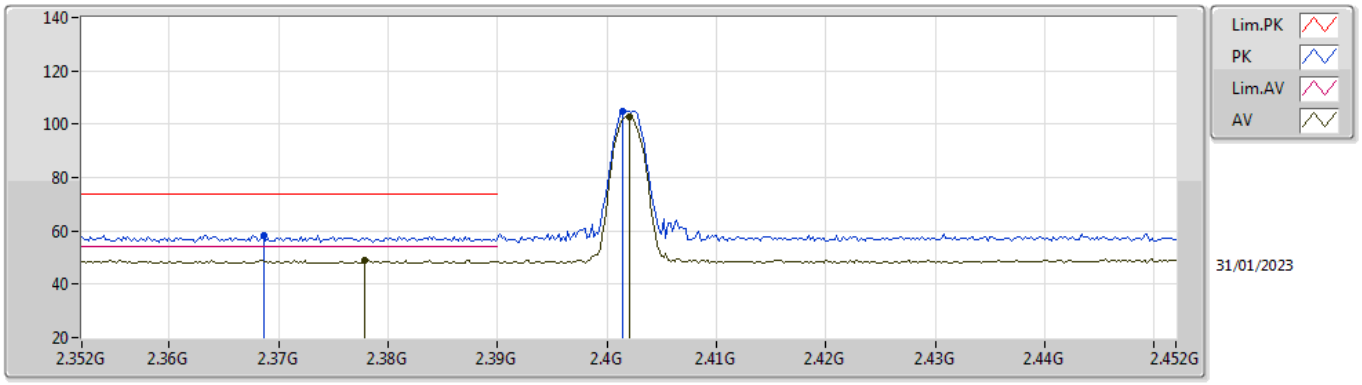


EUT Y_1TX
Setting Default
02-H-K-5

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	4.9582G	48.46	74.00	-25.54	40.21	3	Horizontal	32	2.93	-	33.32	5.68	30.75
AV	4.95592G	36.37	54.00	-17.63	28.13	3	Horizontal	32	2.93	-	33.31	5.68	30.75

BT-LE(2Mbps)

2402MHz_TX

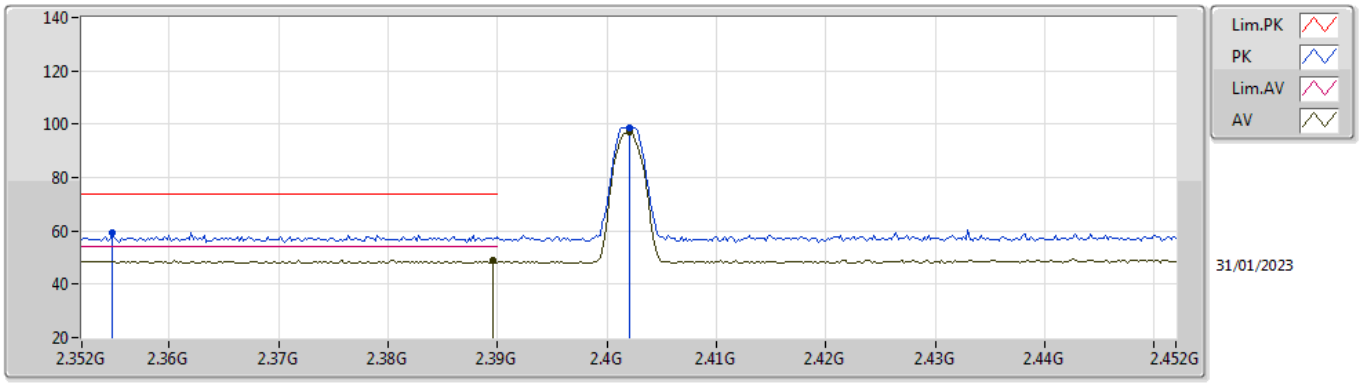


EUT Y_1TX
Setting Default
02-H-K-5

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	2.3686G	58.53	74.00	-15.47	27.01	3	Vertical	358	2.52	-	28.34	3.18	-
AV	2.3778G	49.14	54.00	-4.86	17.59	3	Vertical	358	2.52	-	28.36	3.19	-
PK	2.4014G	104.93	Inf	-Inf	73.33	3	Vertical	358	2.52	-	28.40	3.20	-
AV	2.402G	102.91	Inf	-Inf	71.31	3	Vertical	358	2.52	-	28.40	3.20	-

BT-LE(2Mbps)

2402MHz_TX

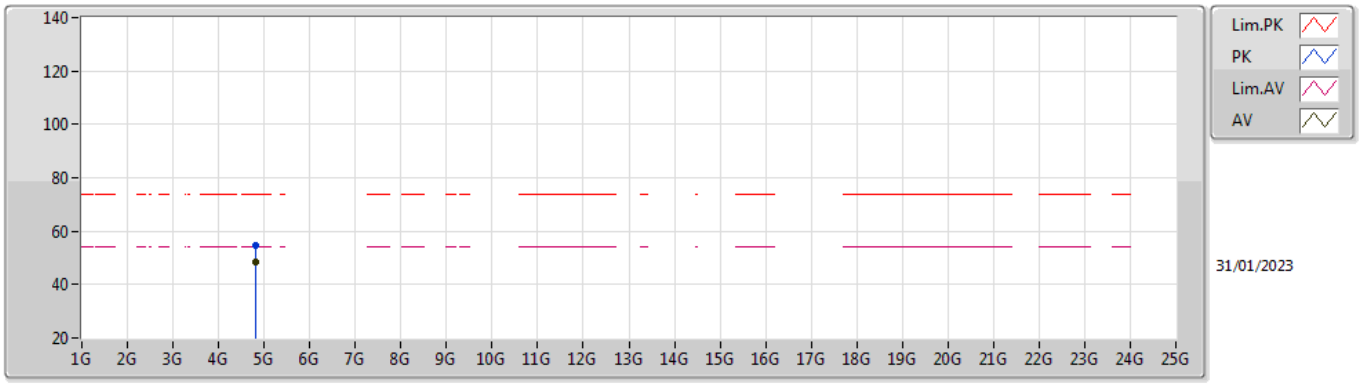


EUT Y_1TX
Setting Default
02-H-K-5

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	2.3548G	59.18	74.00	-14.82	27.69	3	Horizontal	225	2.06	-	28.31	3.18	-
AV	2.3896G	48.94	54.00	-5.06	17.37	3	Horizontal	225	2.06	-	28.38	3.19	-
PK	2.402G	98.83	Inf	-Inf	67.23	3	Horizontal	225	2.06	-	28.40	3.20	-
AV	2.402G	96.86	Inf	-Inf	65.26	3	Horizontal	225	2.06	-	28.40	3.20	-

BT-LE(2Mbps)

2402MHz_TX

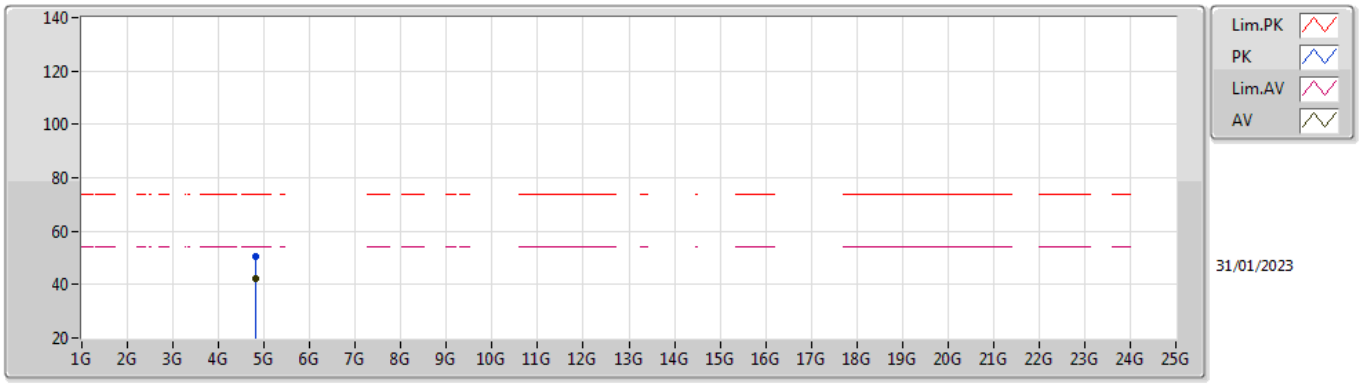


EUT Y_1TX
Setting Default
02-H-K-5

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	4.80491G	54.44	74.00	-19.56	46.82	3	Vertical	52	1.80	-	32.83	5.60	30.81
AV	4.80309G	48.27	54.00	-5.73	40.66	3	Vertical	52	1.80	-	32.82	5.60	30.81

BT-LE(2Mbps)

2402MHz_TX

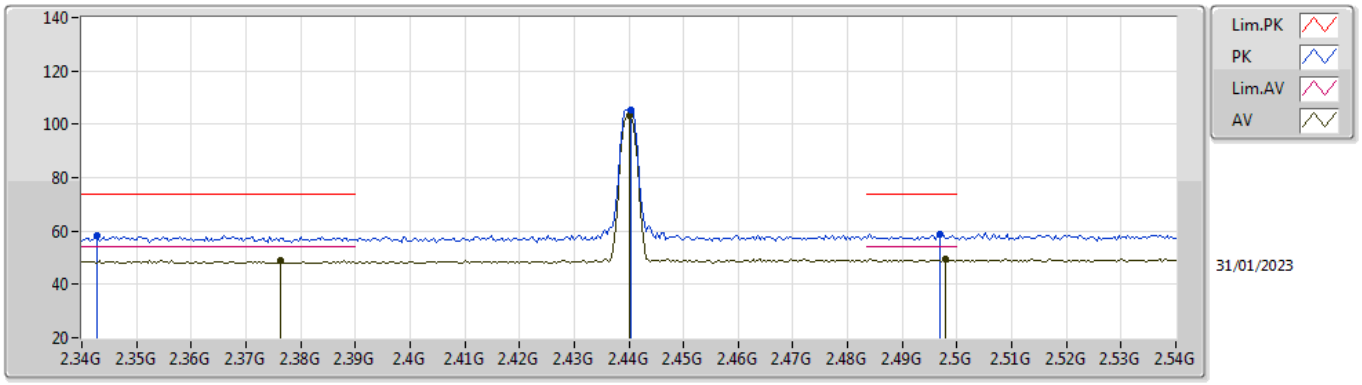


EUT Y_1TX
Setting Default
02-H-K-5

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	4.80312G	50.35	74.00	-23.65	42.74	3	Horizontal	16	1.62	-	32.82	5.60	30.81
AV	4.80305G	42.40	54.00	-11.60	34.79	3	Horizontal	16	1.62	-	32.82	5.60	30.81

BT-LE(2Mbps)

2440MHz_TX

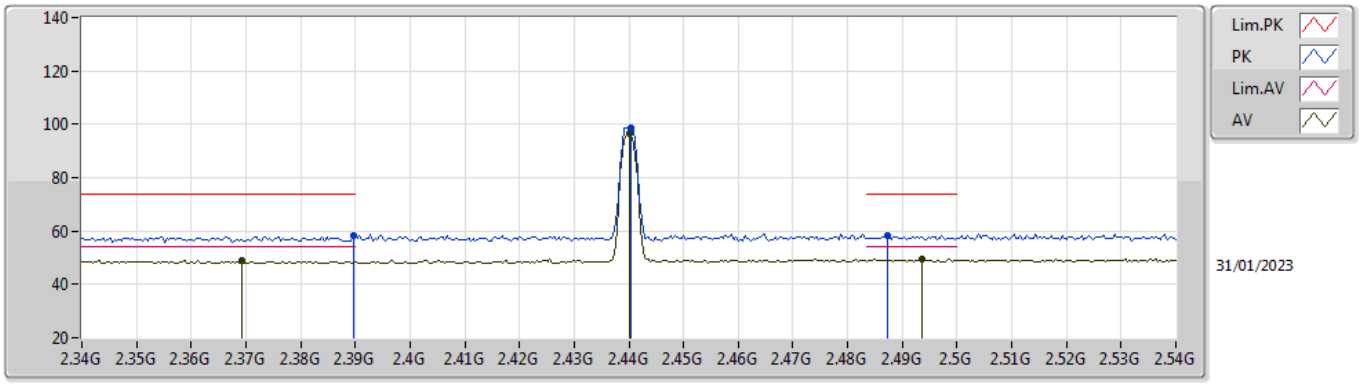


EUT Y_1TX
Setting Default
02-H-K-5

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	2.3428G	58.38	74.00	-15.62	26.94	3	Vertical	150	2.11	-	28.27	3.17	-
AV	2.3764G	48.94	54.00	-5.06	17.40	3	Vertical	150	2.11	-	28.35	3.19	-
PK	2.4404G	105.31	Inf	-Inf	73.69	3	Vertical	150	2.11	-	28.40	3.22	-
AV	2.44G	103.30	Inf	-Inf	71.68	3	Vertical	150	2.11	-	28.40	3.22	-
PK	2.4968G	58.65	74.00	-15.35	26.81	3	Vertical	150	2.11	-	28.59	3.25	-
AV	2.498G	49.41	54.00	-4.59	17.57	3	Vertical	150	2.11	-	28.59	3.25	-

BT-LE(2Mbps)

2440MHz_TX

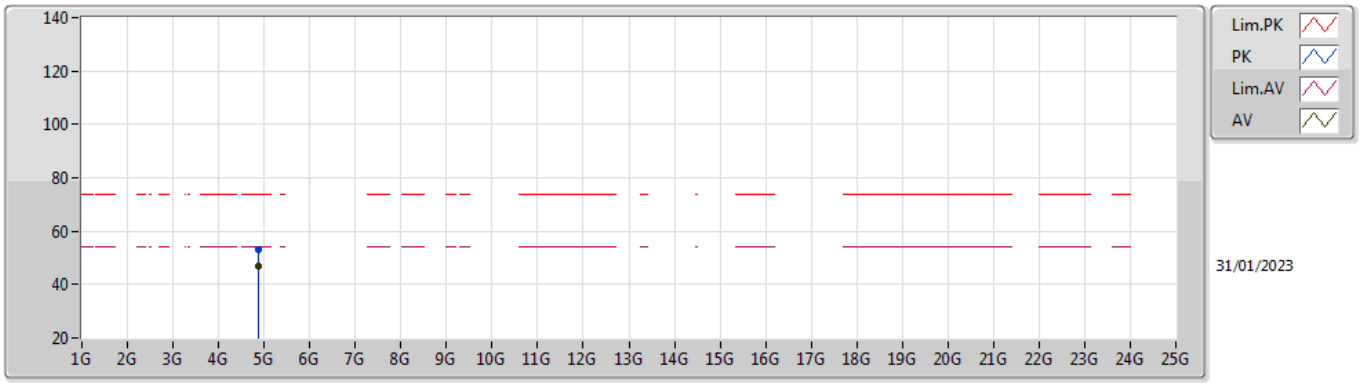


EUT Y_1TX
Setting Default
02-H-K-5

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	2.3896G	58.19	74.00	-15.81	26.62	3	Horizontal	227	1.84	-	28.38	3.19	-
AV	2.3692G	49.15	54.00	-4.85	17.63	3	Horizontal	227	1.84	-	28.34	3.18	-
PK	2.4404G	98.75	Inf	-Inf	67.13	3	Horizontal	227	1.84	-	28.40	3.22	-
AV	2.44G	96.73	Inf	-Inf	65.11	3	Horizontal	227	1.84	-	28.40	3.22	-
PK	2.4872G	58.16	74.00	-15.84	26.37	3	Horizontal	227	1.84	-	28.55	3.24	-
AV	2.4936G	49.41	54.00	-4.59	17.59	3	Horizontal	227	1.84	-	28.57	3.25	-

BT-LE(2Mbps)

2440MHz_TX

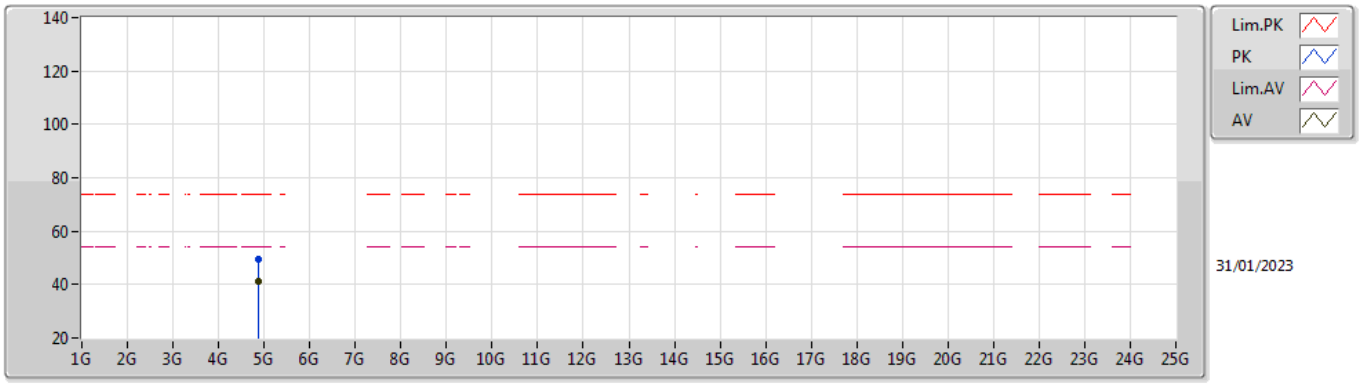


EUT Y_1TX
Setting Default
02-H-K-5

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	4.88101G	53.33	74.00	-20.67	45.31	3	Vertical	51	1.68	-	33.16	5.64	30.78
AV	4.87888G	46.87	54.00	-7.13	38.85	3	Vertical	51	1.68	-	33.16	5.64	30.78

BT-LE(2Mbps)

2440MHz_TX

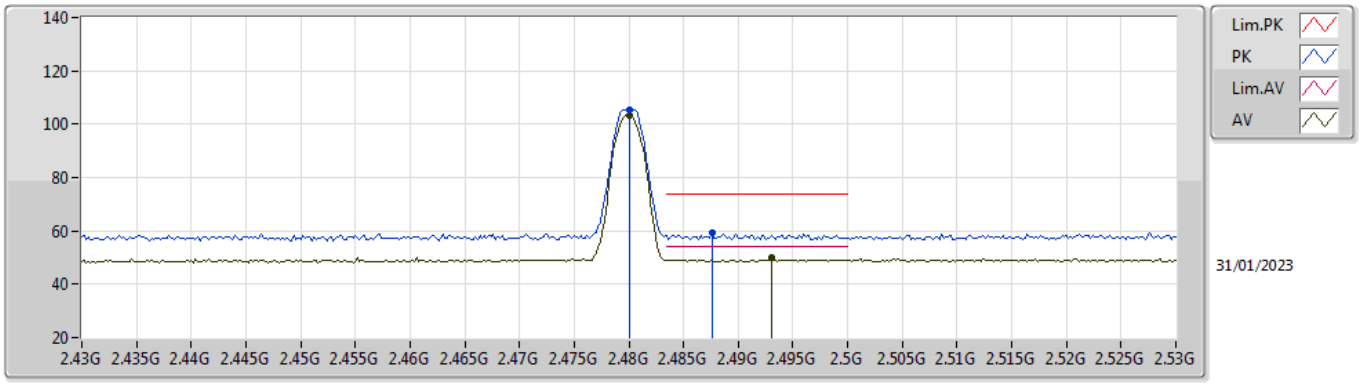


EUT Y_1TX
Setting Default
02-H-K-5

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	4.8811G	49.34	74.00	-24.66	41.32	3	Horizontal	23	1.70	-	33.16	5.64	30.78
AV	4.87908G	41.03	54.00	-12.97	33.01	3	Horizontal	23	1.70	-	33.16	5.64	30.78

BT-LE(2Mbps)

2480MHz_TX

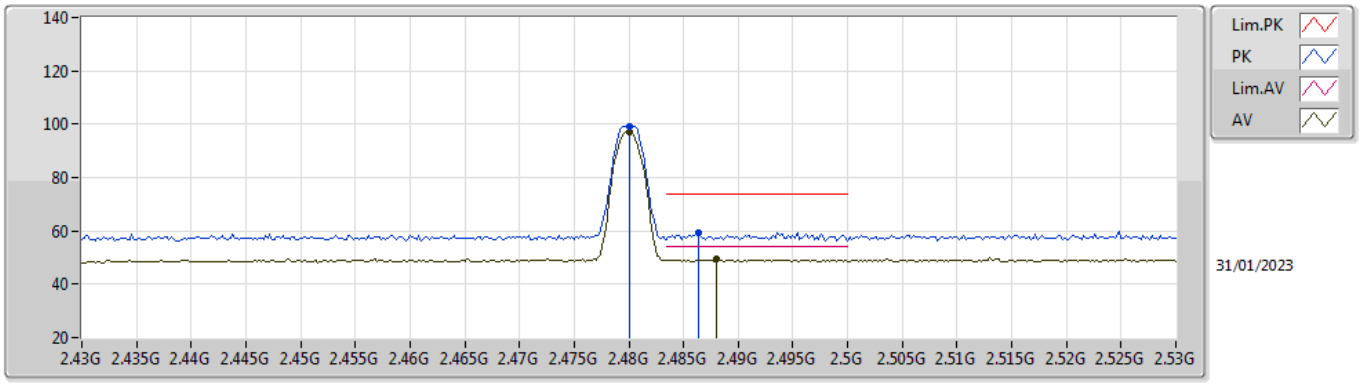


EUT Y_1TX
Setting Default
02-H-K-5

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	105.20	Inf	-Inf	73.44	3	Vertical	158	1.92	-	28.52	3.24	-
AV	2.48G	103.21	Inf	-Inf	71.45	3	Vertical	158	1.92	-	28.52	3.24	-
PK	2.4876G	59.10	74.00	-14.90	27.31	3	Vertical	158	1.92	-	28.55	3.24	-
AV	2.493G	49.80	54.00	-4.20	17.98	3	Vertical	158	1.92	-	28.57	3.25	-

BT-LE(2Mbps)

2480MHz_TX

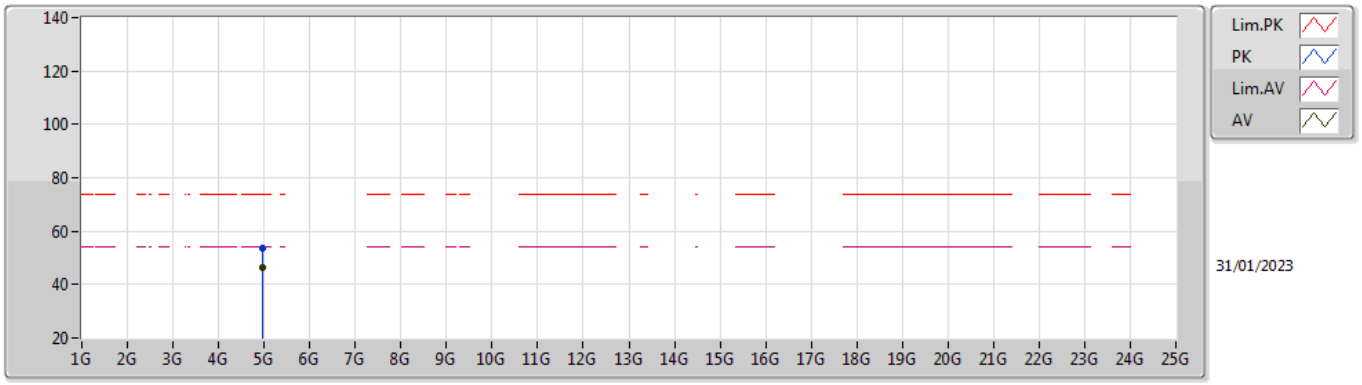


EUT Y_1TX
Setting Default
02-H-K-5

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	99.00	Inf	-Inf	67.24	3	Horizontal	222	1.95	-	28.52	3.24	-
AV	2.48G	97.00	Inf	-Inf	65.24	3	Horizontal	222	1.95	-	28.52	3.24	-
PK	2.4864G	59.55	74.00	-14.45	27.76	3	Horizontal	222	1.95	-	28.55	3.24	-
AV	2.488G	49.40	54.00	-4.60	17.61	3	Horizontal	222	1.95	-	28.55	3.24	-

BT-LE(2Mbps)

2480MHz_TX

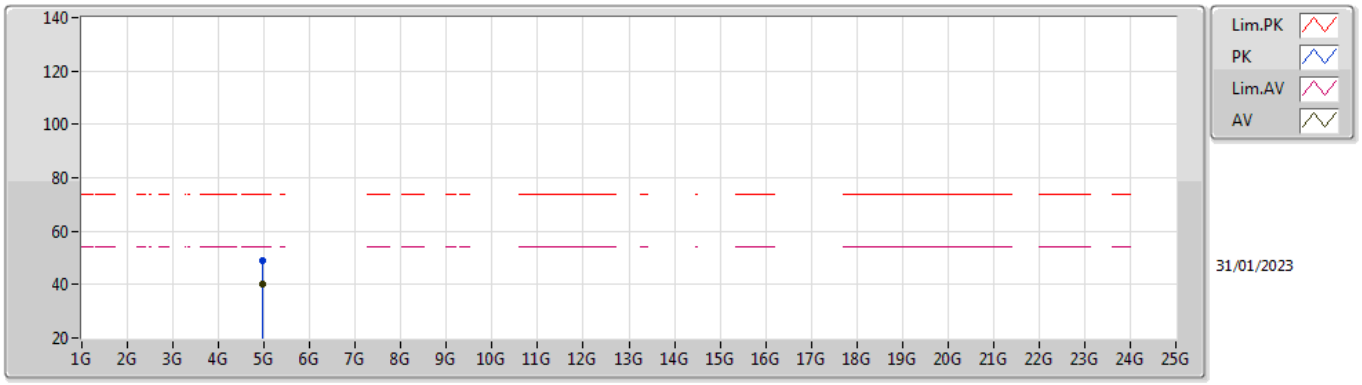


EUT Y_1TX
Setting Default
02-H-K-5

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	4.95994G	53.60	74.00	-20.40	45.35	3	Vertical	52	1.72	-	33.32	5.68	30.75
AV	4.95895G	46.60	54.00	-7.40	38.35	3	Vertical	52	1.72	-	33.32	5.68	30.75

BT-LE(2Mbps)

2480MHz_TX



EUT Y_1TX
Setting Default
02-H-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	4.95904G	49.20	74.00	-24.80	40.95	3	Horizontal	27	1.72	-	33.32	5.68	30.75
AV	4.96005G	40.39	54.00	-13.61	32.14	3	Horizontal	27	1.72	-	33.32	5.68	30.75