Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	2AHKM-ARIA2513
Equipment	:	ARIA2513 4x4 11ax wifi router
Brand Name	:	Hitron
Model Name	:	ARIA2513/OS2513
Applicant	:	Hitron Technologies Inc. No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park, Hsinchu 30078, Taiwan
Manufacturer	:	Hitron Technologies Inc. No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park, Hsinchu 30078, Taiwan
Standard	:	47 CFR FCC Part 15.247

The product was received on May 16, 2022, and testing was started from Jun. 08, 2022 and completed on Aug. 26, 2022. 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.)

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR251330AC	01	Initial issue of report	Sep. 29, 2022
FR251330AC	02	Revising the model name in section 1.1.5	Mar. 01, 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: Vicky Huang

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	1
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1

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)
1	1	PSA	RFPCA311513IMLB701	PCB	I-PEX	Note 1
2	4	PSA	RFPCA311513IMLB701	PCB	I-PEX	
3	3	PSA	RFPCA311513IMLB701	PCB	I-PEX	
4	2	PSA	RFPCA311513IMLB701	PCB	I-PEX	
5	1	PSA	RFPCA311513IMLB701	PCB	I-PEX	

Note 1:

Ant.	Port	Antenna Gain (dBi)					
		WLAN 2.4GHz	WLAN 5GHz UNII 1	WLAN 5GHz UNII 2A	WLAN 5GHz UNII 2C	WLAN 5GHz UNII 3	Bluetooth
1	1	2.33	2.59	2.18	2.68	2.17	-
2	4	3.59	2.25	2.84	2.78	2.8	-
3	3	2.52	2.65	2.72	2.43	2.57	-
4	2	2.58	2.61	3.31	2.32	2.67	-
5	1	-	-	-	-	-	2.75

Ant.	Port	Directional Gain (dBi)														
		WLAN 2.4GHz			WLAN 5GHz UNII 1			WLAN 5GHz UNII 2A			WLAN 5GHz UNII 2C			WLAN 5GHz UNII 3		
		4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S
1	1	3.95	3.59	3.59	3.96	2.65	2.65	4.18	3.31	3.31	3.99	2.78	2.78	3.95	2.8	2.8
2	4															
3	3															
4	2															

Note 2: The EUT has five antennas.
Note 3: The above information (excepting antenna gain of 2.4GHz, 5GHz UNII 1~UNII 3) was declared by manufacturer.
Note 4: 2.4GHz, 5GHz UNII 1~UNII 3: Maximum Directional Gain following KDB662911 D03.

For 2.4GHz function:
For IEEE 802.11b/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.
For 5GHz function:
For IEEE 802.11a/n/ac/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.
For Bluetooth Function:
For Bluetooth mode (1TX/1RX)
Only Port 1 can be use as transmit and receive antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	0.852	0.7	2.129m	1k
BT-LE(2Mbps)	0.584	2.34	1.074m	1k

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	RadioControlConsole 4.0.0.0			
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
ARIA2513	All the models are identical, the difference model served as marketing strategy.
OS2513	

Note 1: From the above models, model: ARIA2513 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.

1.1.6 Table for EUT Supports Function

Function
AP Router
Repeater

Note1: The above information was declared by manufacturer.

Note2: After evaluating, the “AP Router” have been selected to test and recorded in the test report for AC power-line conducted emissions and Emissions in Restricted Frequency Bands below 1GHz.

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 (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	TH01-CB	Sean Ku	21.3~23.9 / 61~66	Jun. 10, 2022~ Jun. 22, 2022
Radiated (Below 1GHz)	03CH05-CB	Chris Lee	23.4~25.4 / 64~68	Aug. 23, 2022
Radiated (Above 1GHz)	03CH01-CB	RJ Huang	24.2-26.1 / 55-58	Jun. 08, 2022~ Jul. 07, 2022
	03CH04-CB	RJ Huang	23.8-24.9 / 55-58	Jun. 08, 2022~ Jul. 07, 2022
AC Conduction	CO02-CB	Ryan Huang	22~23 / 55~56	Aug. 26, 2022

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
BT-LE(1Mbps)	-
2402MHz	20
2440MHz	20
2480MHz	19
BT-LE(2Mbps)	-
2402MHz	20
2440MHz	20
2478MHz	20
2480MHz	14

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 (AP Router) + Adapter

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density
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	Normal Link
1	EUT in X axis (AP Router) + Adapter
2	EUT in Y axis (AP Router) + Adapter
3	EUT in Z axis (AP Router) + Adapter
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 was found at Y axis. So the measurement will follow this same test configuration.
1	EUT in Y axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth
Refer to Sporton Test Report No.: FA251330 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	MOSO	MS-V3000R120-036H0-US	INPUT: 100-240V, 50/60Hz, 1.0A max OUPUT: 12.0V, 3A
Other			
RJ-45 cable*1, non-shielded, 1.5m			

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	WAN NB	DELL	E6430	N/A
B	LAN NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A
E	I Phone	Apple	A1332	N/A

For Radiated (below 1GHz):

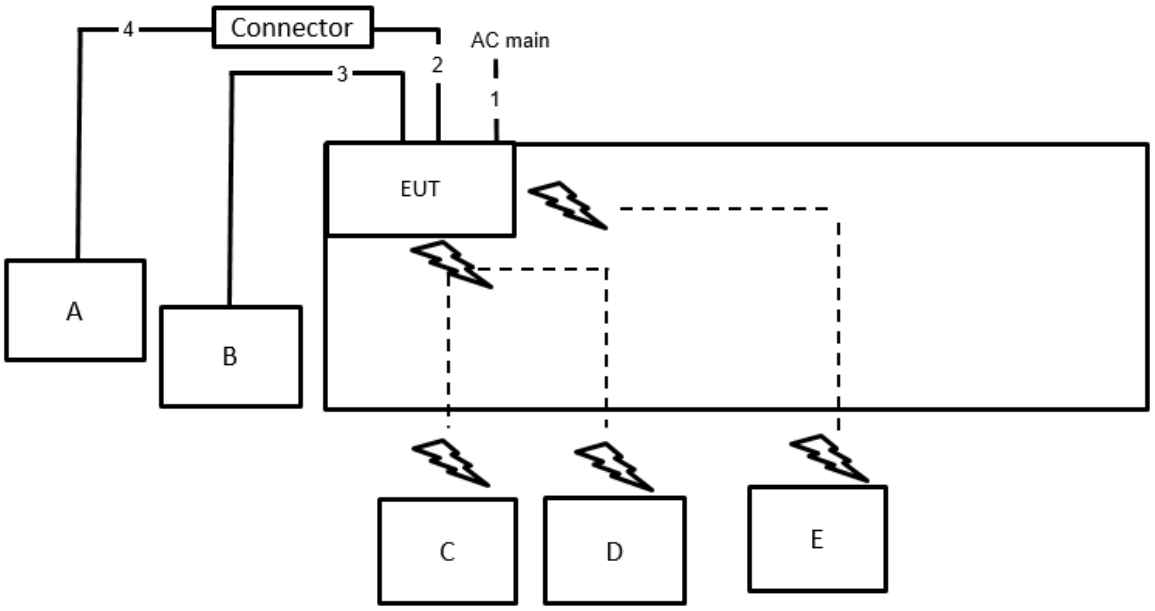
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB (LAN)	DELL	E4300	N/A
B	NB (WiFi 2.4G)	DELL	E4300	N/A
C	NB (WiFi 5G)	DELL	E4300	N/A
D	I Pod(BT)	Apple	Nano	N/A
E	NB (WAN)	DELL	E4300	N/A

For Radiated (above 1GHz) and RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	USB console	Merecury Electronics Technologies	mcs-71 LV	N/A

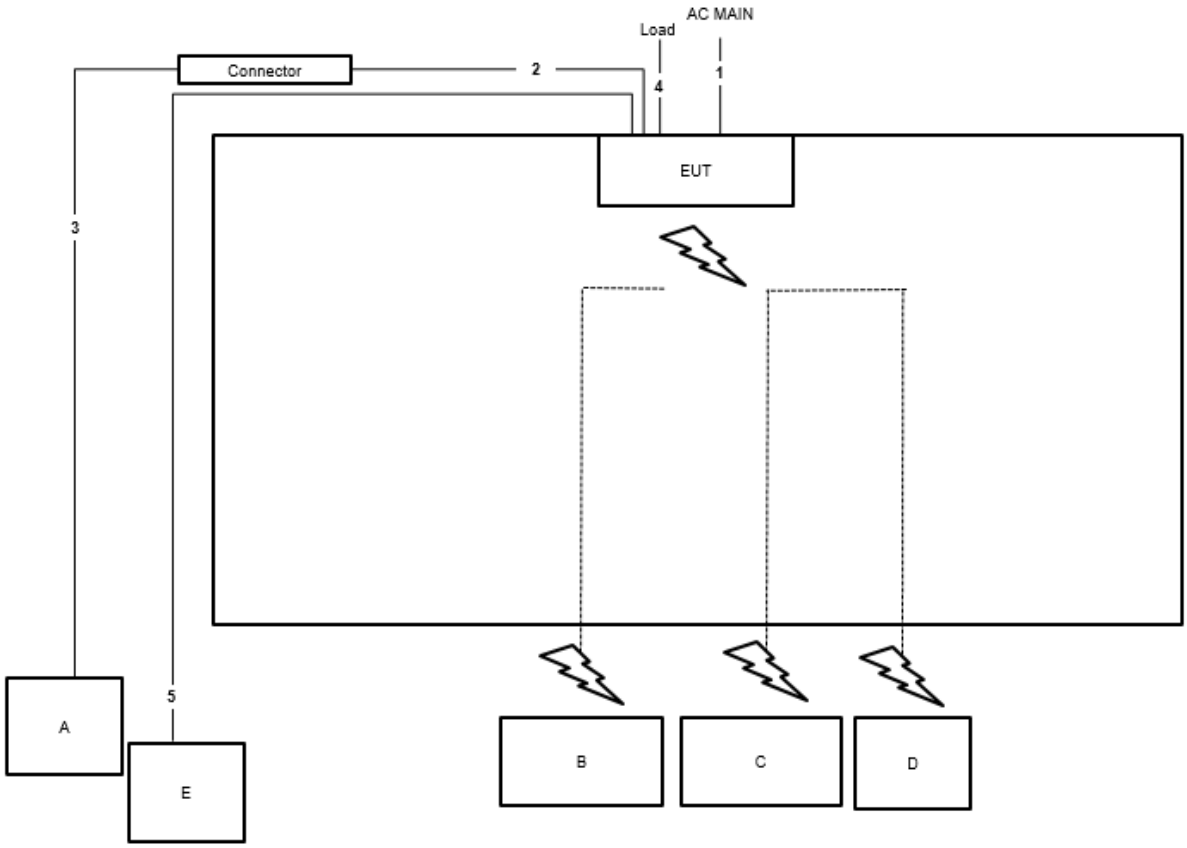
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



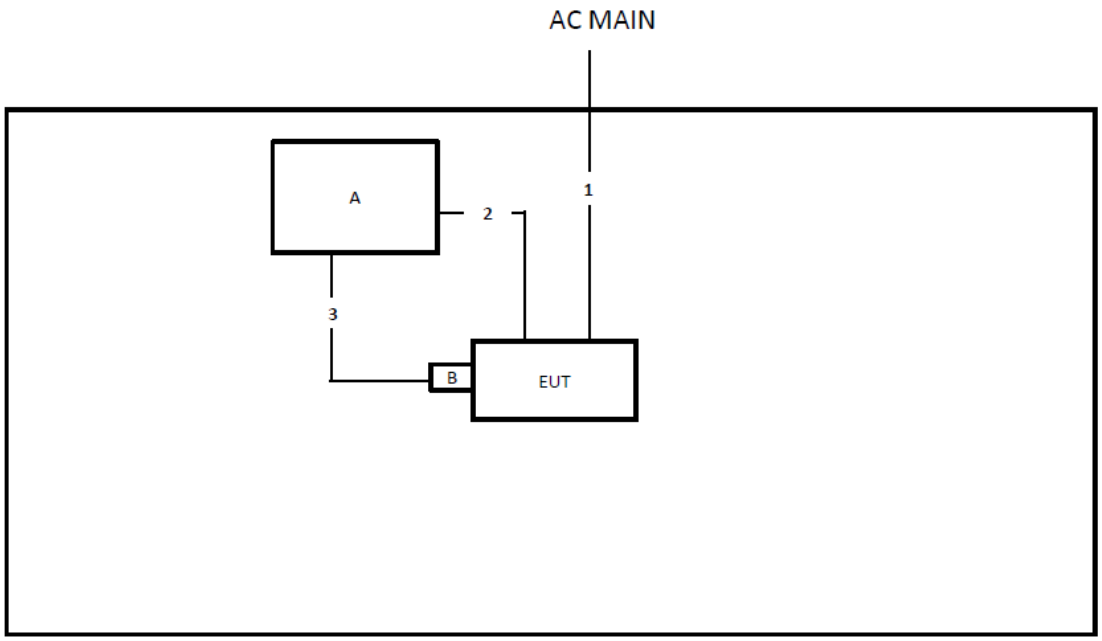
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m

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	10m
4	RJ-45 cable*2	No	1.5m
5	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	0.6m
3	Console cable	No	0.2m

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

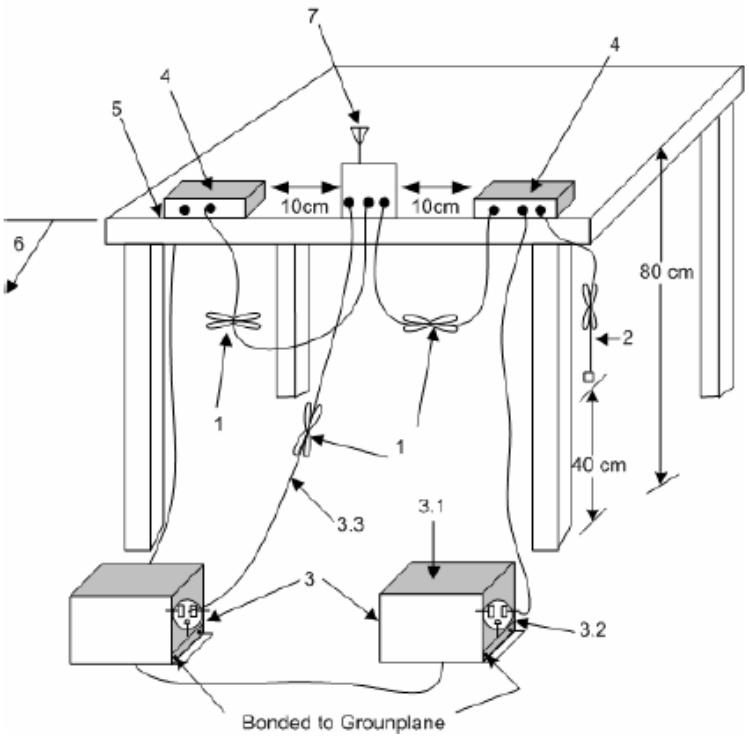
Refer a test equipment and calibration data table in this test report.

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.

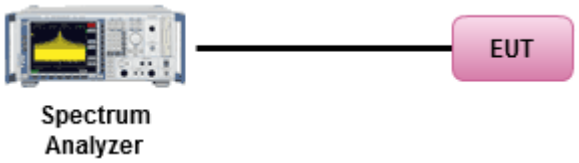
3.2.2 Measuring Instruments

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

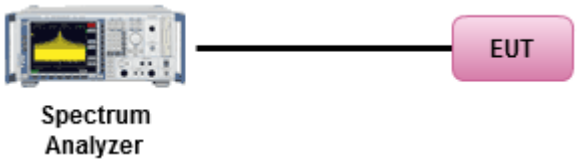
3.4.2 Measuring Instruments

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.	

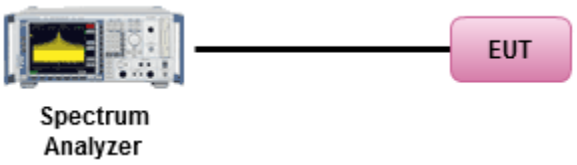
3.5.2 Measuring Instruments

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.

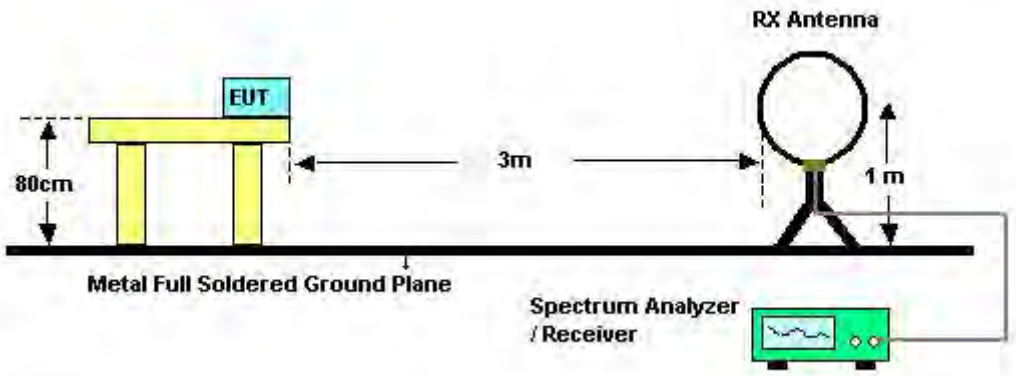
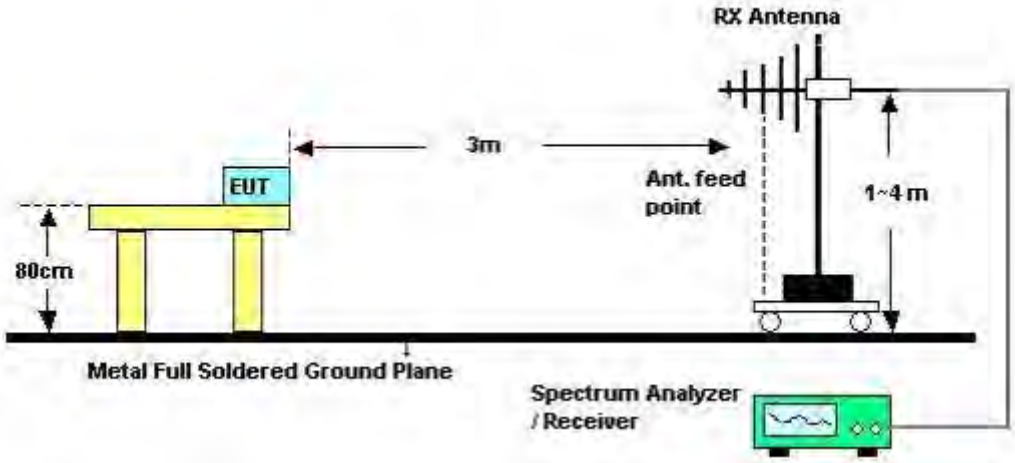
3.6.2 Measuring Instruments

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

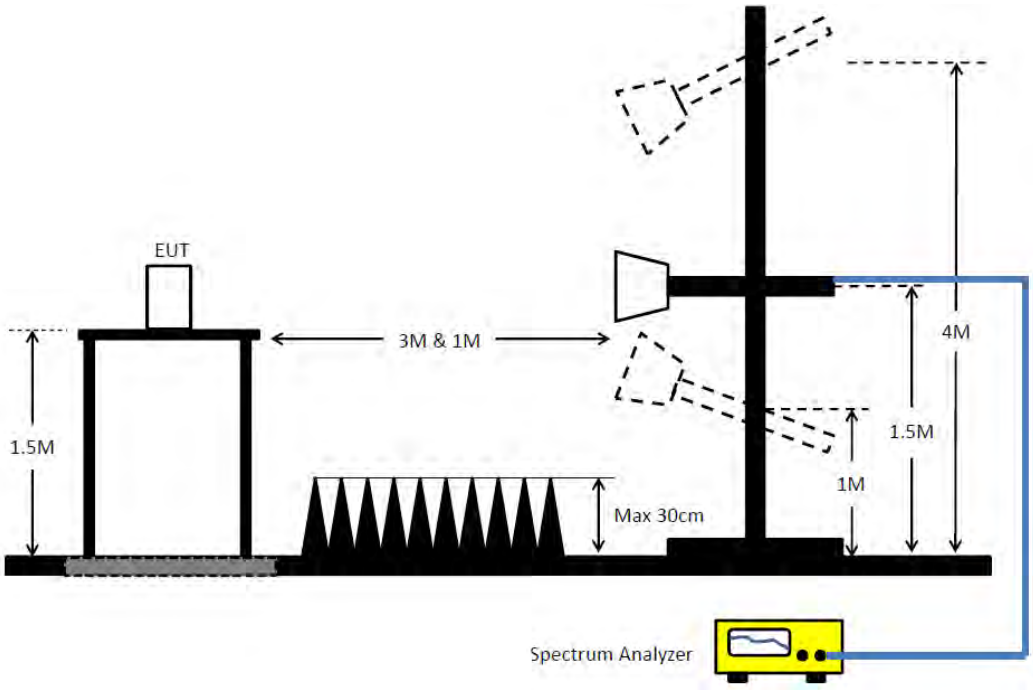
3.6.3 Test Procedures

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
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Jan. 07, 2022	Jan. 06, 2023	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Dec. 22, 2021	Dec. 21, 2022	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 06, 2022	May 05, 2023	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 19, 2021	Oct. 18, 2022	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 18, 2022	Mar. 17, 2023	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 03, 2022	Aug. 02, 2023	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 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. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 06, 2022	May 05, 2023	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2021	Nov. 05, 2022	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 19, 2022	May 18, 2023	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 06, 2022	May 05, 2023	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH04-CB)
Horn Antenna	ETS・Lindgren	3115	00143147	750MHz~18GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 28, 2022	Mar. 27, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 27, 2022	May 26, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)

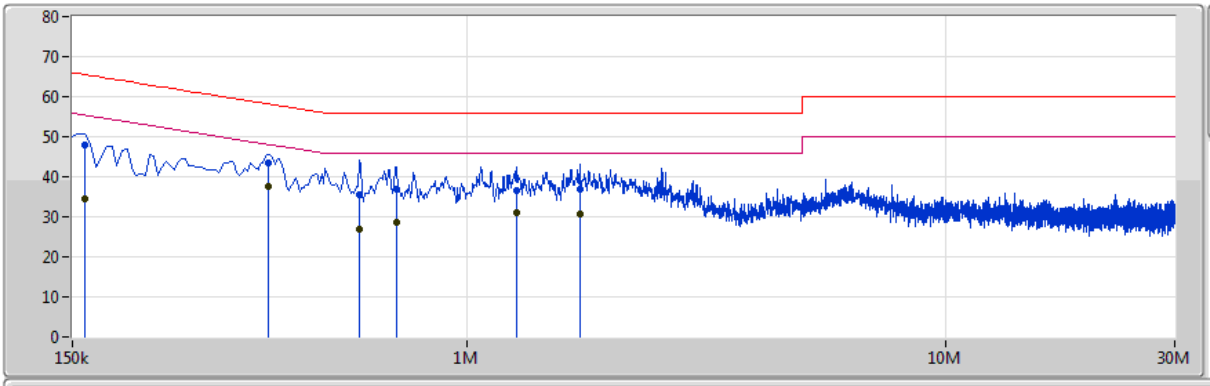
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)

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

Summary

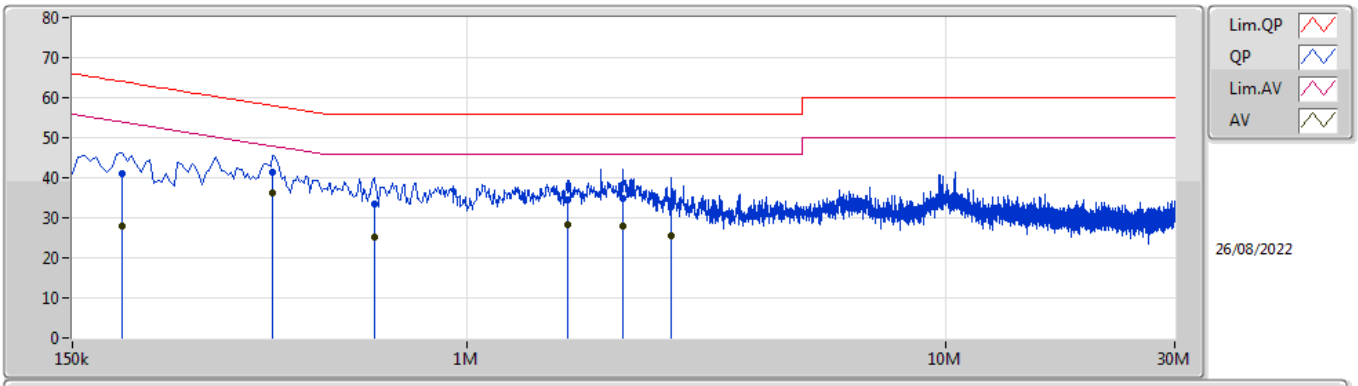
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	384k	37.62	48.20	-10.58	Line

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	159k	47.77	65.52	-17.75	10.24	Line	-	37.53	0.12	0.02	10.10
AV	159k	34.51	55.52	-21.01	10.24	Line	-	24.27	0.12	0.02	10.10
QP	384k	43.60	58.20	-14.60	10.25	Line	-	33.35	0.12	0.02	10.11
AV	384k	37.62	48.20	-10.58	10.25	Line	"Worst"	27.37	0.12	0.02	10.11
QP	595.5k	35.55	56.00	-20.45	10.27	Line	-	25.28	0.13	0.02	10.12
AV	595.5k	27.01	46.00	-18.99	10.27	Line	-	16.74	0.13	0.02	10.12
QP	712.5k	36.95	56.00	-19.05	10.28	Line	-	26.67	0.13	0.02	10.13
AV	712.5k	28.47	46.00	-17.53	10.28	Line	-	18.19	0.13	0.02	10.13
QP	1.271M	36.65	56.00	-19.35	10.32	Line	-	26.33	0.15	0.03	10.14
AV	1.271M	30.87	46.00	-15.13	10.32	Line	-	20.55	0.15	0.03	10.14
QP	1.716M	36.96	56.00	-19.04	10.35	Line	-	26.61	0.16	0.04	10.15
AV	1.716M	30.55	46.00	-15.45	10.35	Line	-	20.20	0.16	0.04	10.15

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT			
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)			
QP	190.5k	40.97	64.01	-23.04	10.25	Neutral	-	30.72	0.16	0.02	10.07			
AV	190.5k	27.81	54.01	-26.20	10.25	Neutral	-	17.56	0.16	0.02	10.07			
QP	393k	41.54	58.01	-16.47	10.29	Neutral	-	31.25	0.16	0.02	10.11			
AV	393k	36.26	48.01	-11.75	10.29	Neutral	"Worst"	25.97	0.16	0.02	10.11			
QP	640.5k	33.43	56.00	-22.57	10.32	Neutral	-	23.11	0.17	0.02	10.13			
AV	640.5k	25.09	46.00	-20.91	10.32	Neutral	-	14.77	0.17	0.02	10.13			
QP	1.626M	34.58	56.00	-21.42	10.37	Neutral	-	24.21	0.18	0.04	10.15			
AV	1.626M	28.31	46.00	-17.69	10.37	Neutral	-	17.94	0.18	0.04	10.15			
QP	2.108M	34.95	56.00	-21.05	10.39	Neutral	-	24.56	0.19	0.05	10.15			
AV	2.108M	27.95	46.00	-18.05	10.39	Neutral	-	17.56	0.19	0.05	10.15			
QP	2.674M	32.80	56.00	-23.20	10.43	Neutral	-	22.37	0.20	0.06	10.17			
AV	2.674M	25.66	46.00	-20.34	10.43	Neutral	-	15.23	0.20	0.06	10.17			

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)	702.5k	1.058M	1M06F1D	697.5k	1.051M
BT-LE(2Mbps)	1.428M	2.104M	2M10F1D	1.325M	2.094M

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

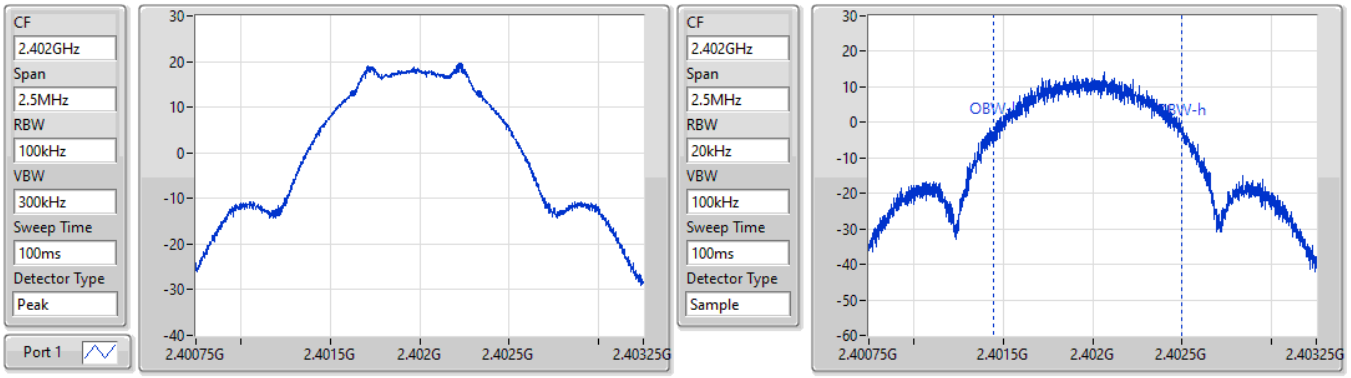
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	702.5k	1.051M
2440MHz	Pass	500k	697.5k	1.058M
2480MHz	Pass	500k	697.5k	1.052M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.385M	2.096M
2440MHz	Pass	500k	1.325M	2.094M
2478MHz	Pass	500k	1.328M	2.104M
2480MHz	Pass	500k	1.428M	2.096M

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

BT-LE(1Mbps) EBW-DTS

2402MHz

20/06/2022

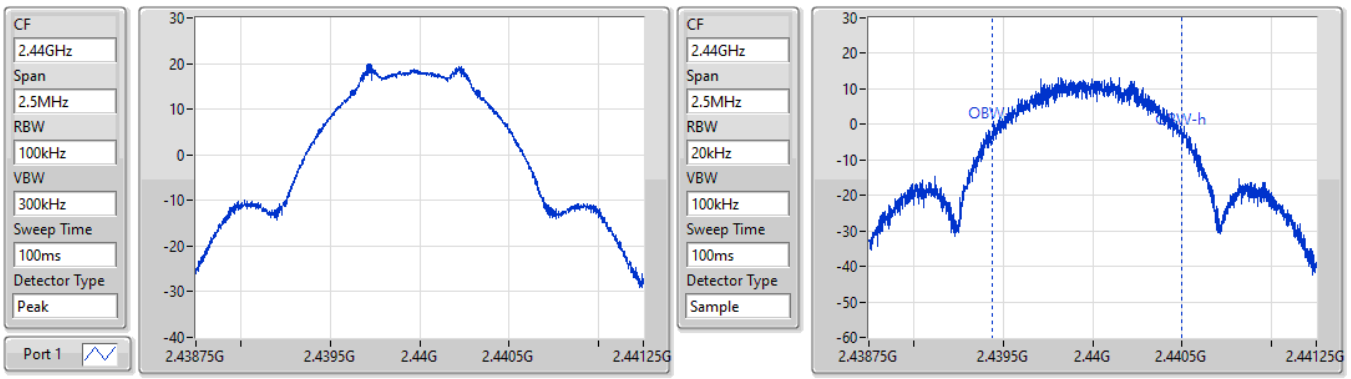


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
702.5k	2.401626G	2.402329G	1.051M	2.401445G	2.402496G	500k	1

BT-LE(1Mbps) EBW-DTS

2440MHz

20/06/2022

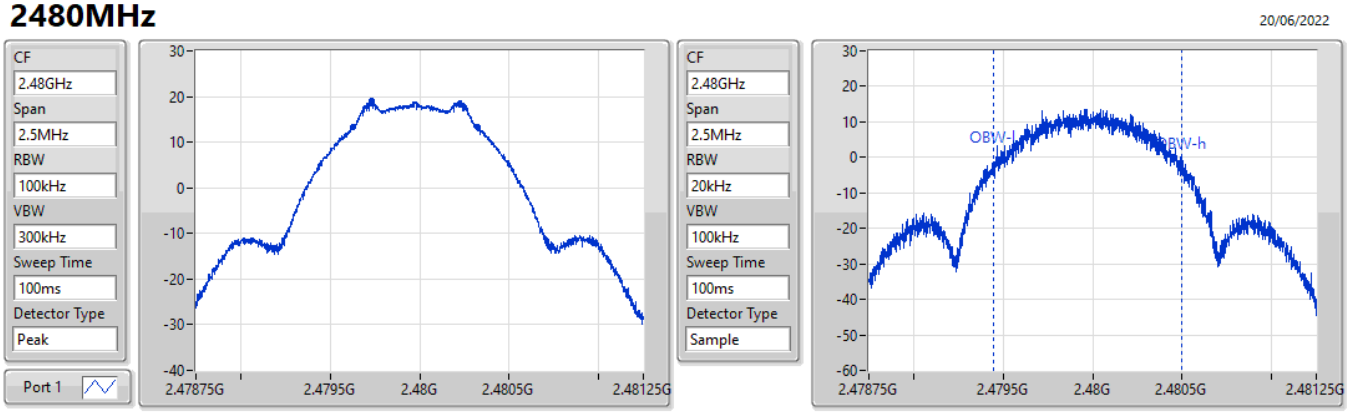


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
697.5k	2.439626G	2.440324G	1.058M	2.43944G	2.440499G	500k	1

BT-LE(1Mbps)

EBW-DTS

2480MHz

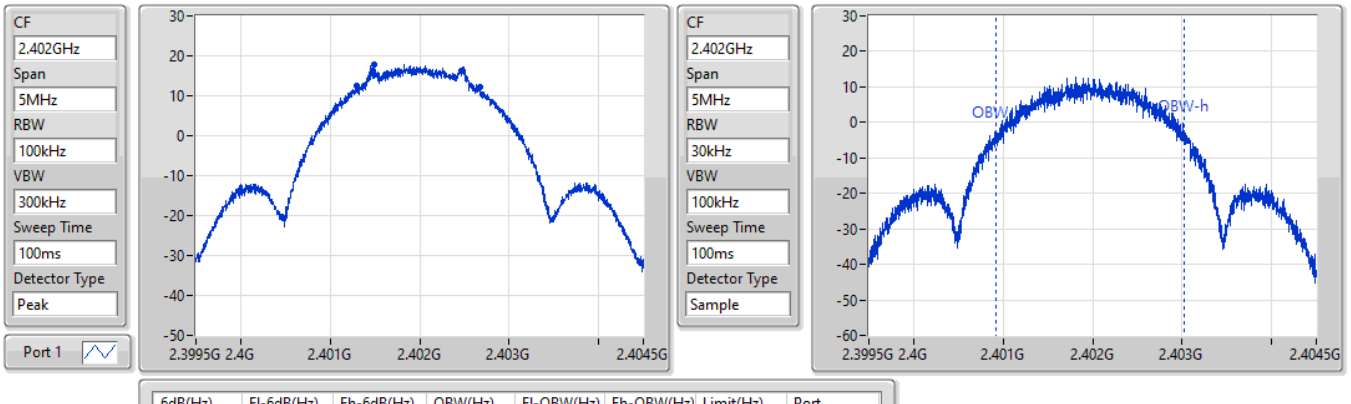


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
697.5k	2.479628G	2.480325G	1.052M	2.479444G	2.480496G	500k	1

BT-LE(2Mbps)

EBW-DTS

2402MHz

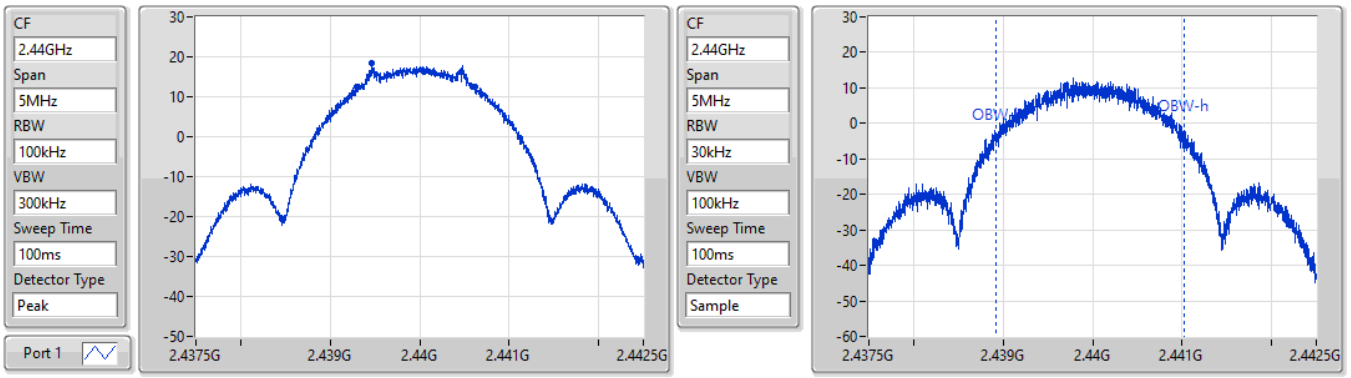


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.385M	2.40129G	2.402675G	2.096M	2.400923G	2.403019G	500k	1

BT-LE(2Mbps) EBW-DTS

2440MHz

20/06/2022

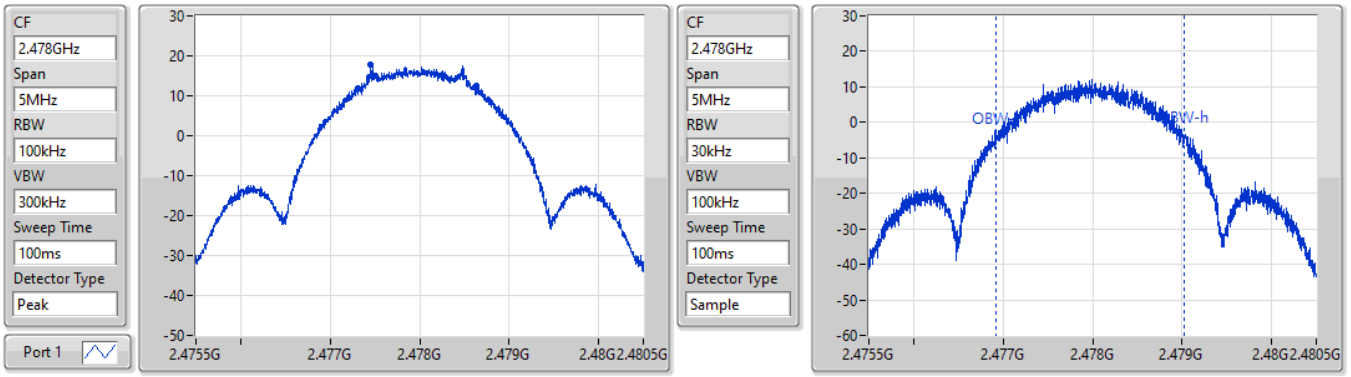


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.325M	2.439295G	2.44062G	2.094M	2.438923G	2.441017G	500k	1

BT-LE(2Mbps) EBW-DTS

2478MHz

22/06/2022

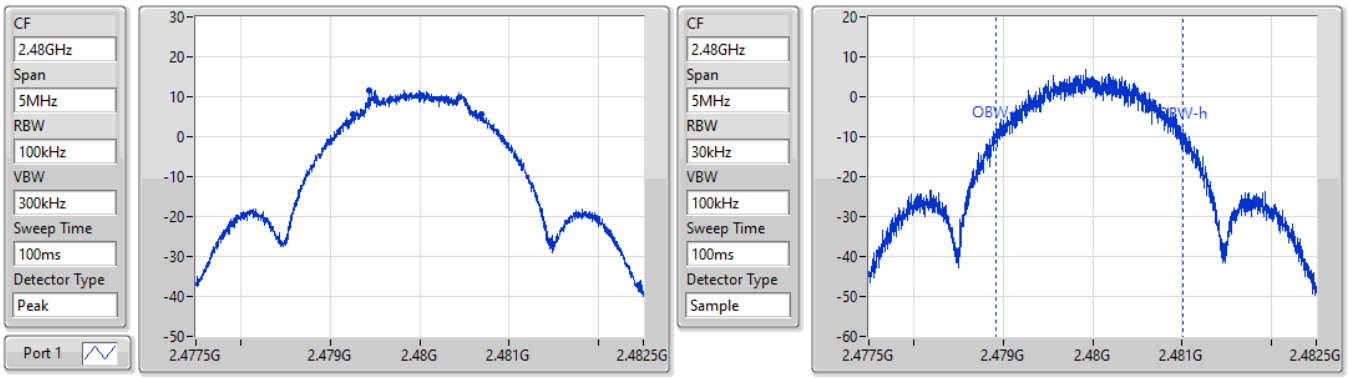


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.328M	2.477308G	2.478635G	2.104M	2.476918G	2.479022G	500k	1

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

2480MHz

22/06/2022



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.428M	2.479258G	2.480685G	2.096M	2.478918G	2.481014G	500k	1

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	19.33	0.08570
BT-LE(2Mbps)	19.32	0.08551

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.75	19.12	30.00
2440MHz	Pass	2.75	19.33	30.00
2480MHz	Pass	2.75	19.19	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.75	19.13	30.00
2440MHz	Pass	2.75	19.32	30.00
2478MHz	Pass	2.75	18.94	30.00
2480MHz	Pass	2.75	13.25	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	6.14
BT-LE(2Mbps)	4.06

RBW = 3kHz;

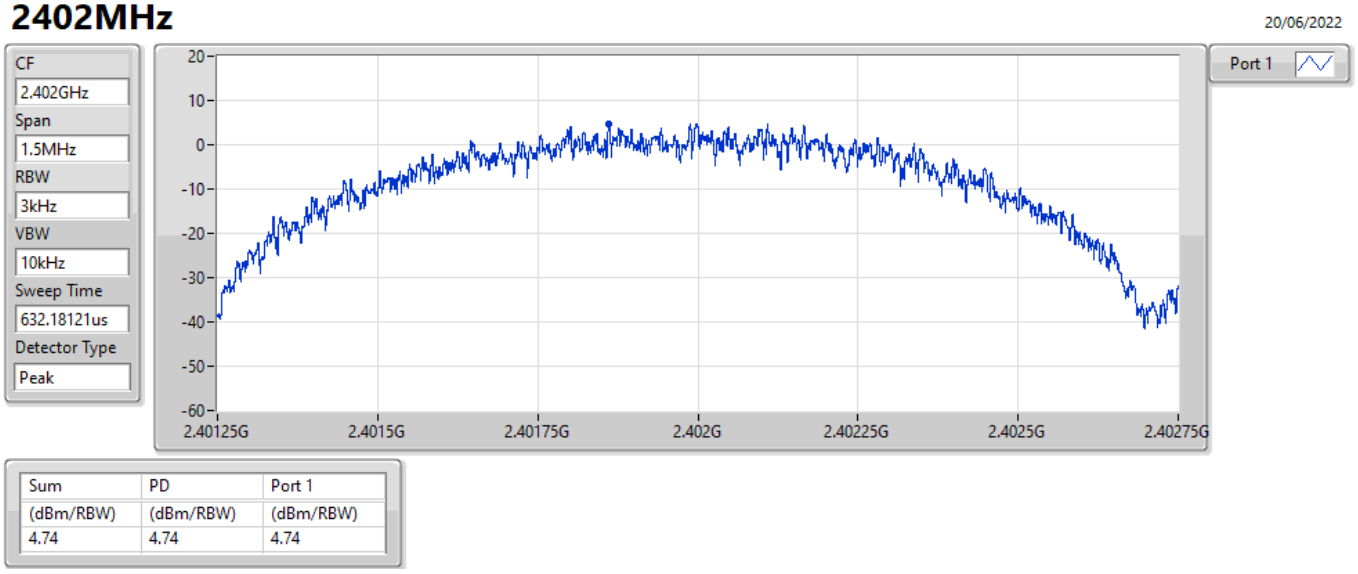
Result

Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	2.75	4.74	8.00
2440MHz	Pass	2.75	5.05	8.00
2480MHz	Pass	2.75	6.14	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	2.75	4.06	8.00
2440MHz	Pass	2.75	3.08	8.00
2478MHz	Pass	2.75	2.83	8.00
2480MHz	Pass	2.75	-2.93	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

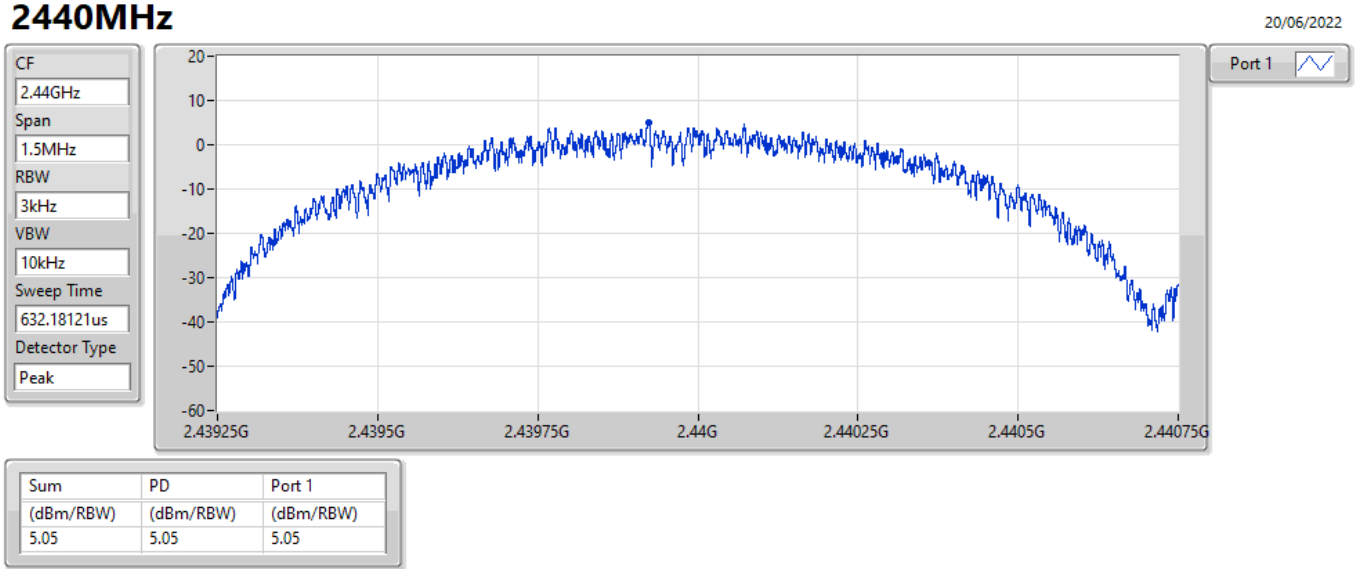
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.74	4.74	4.74

BT-LE(1Mbps) PSD

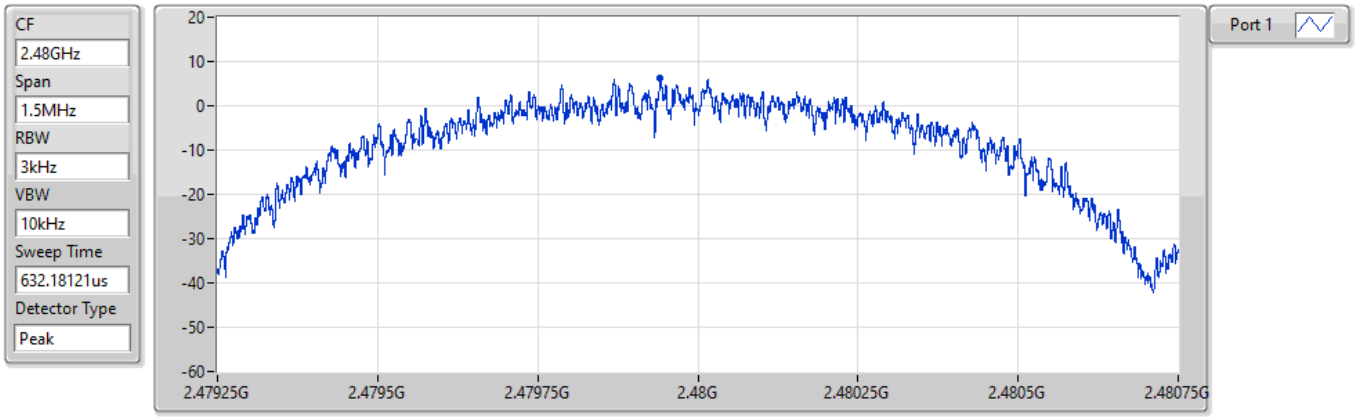
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.05	5.05	5.05

BT-LE(1Mbps) PSD

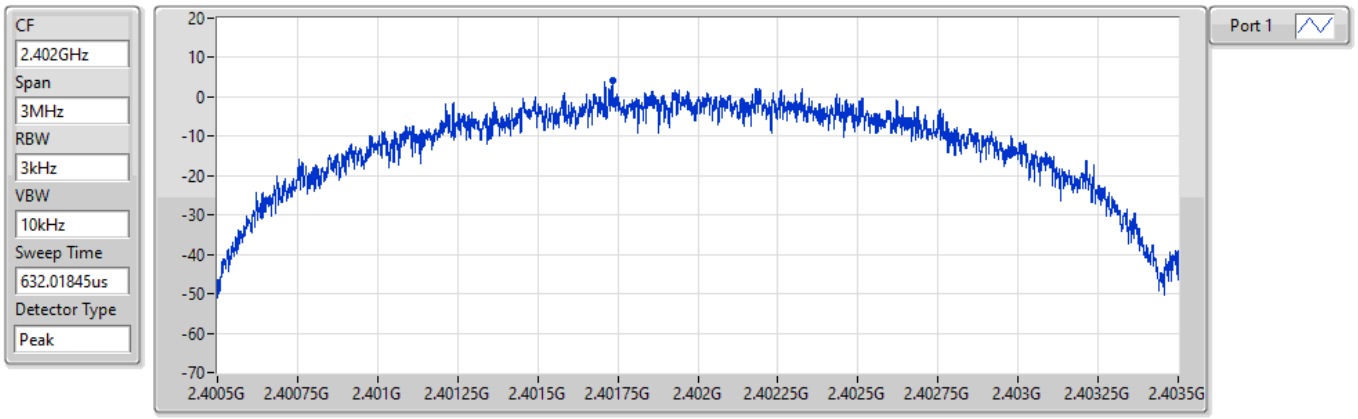
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.14	6.14	6.14

BT-LE(2Mbps) PSD

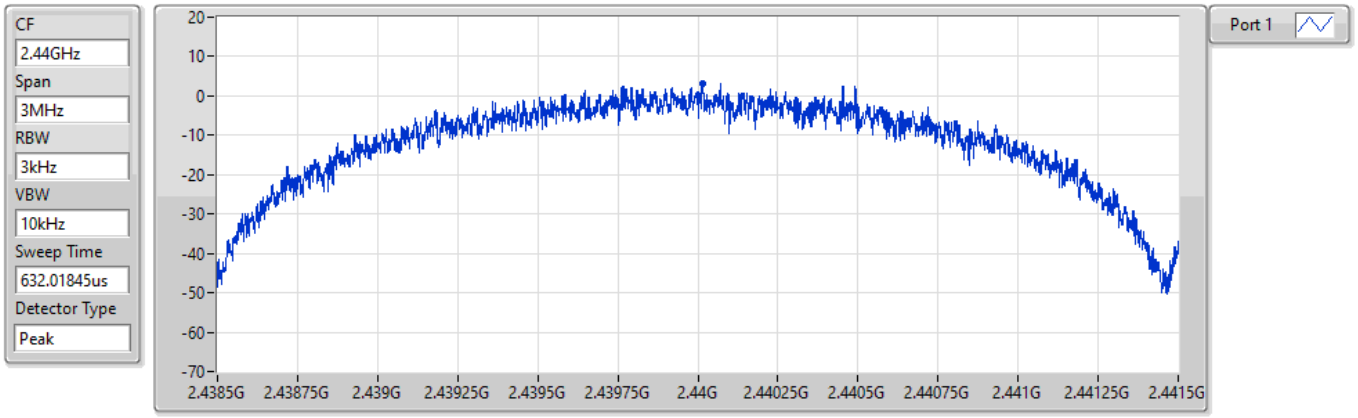
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.06	4.06	4.06

BT-LE(2Mbps) PSD

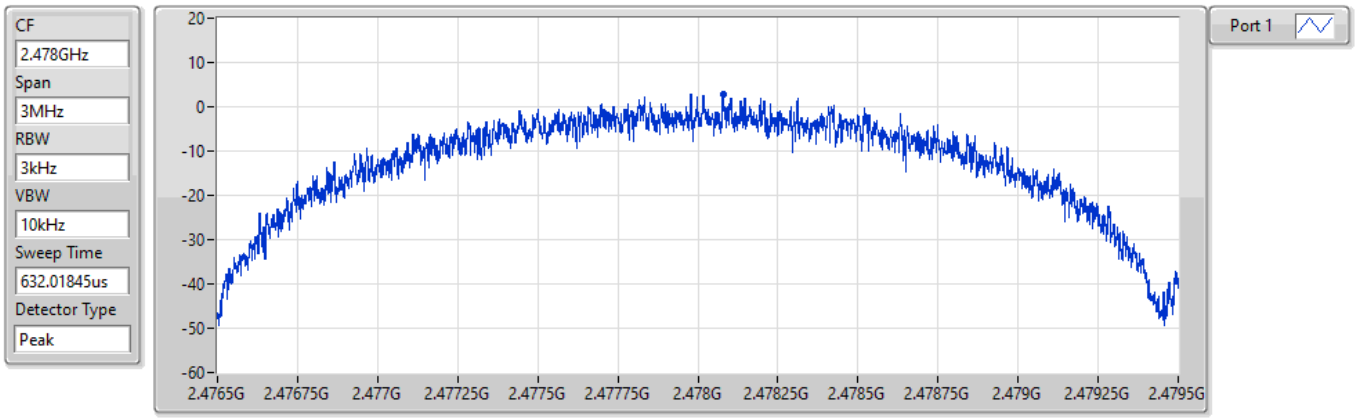
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.08	3.08	3.08

BT-LE(2Mbps) PSD

2478MHz

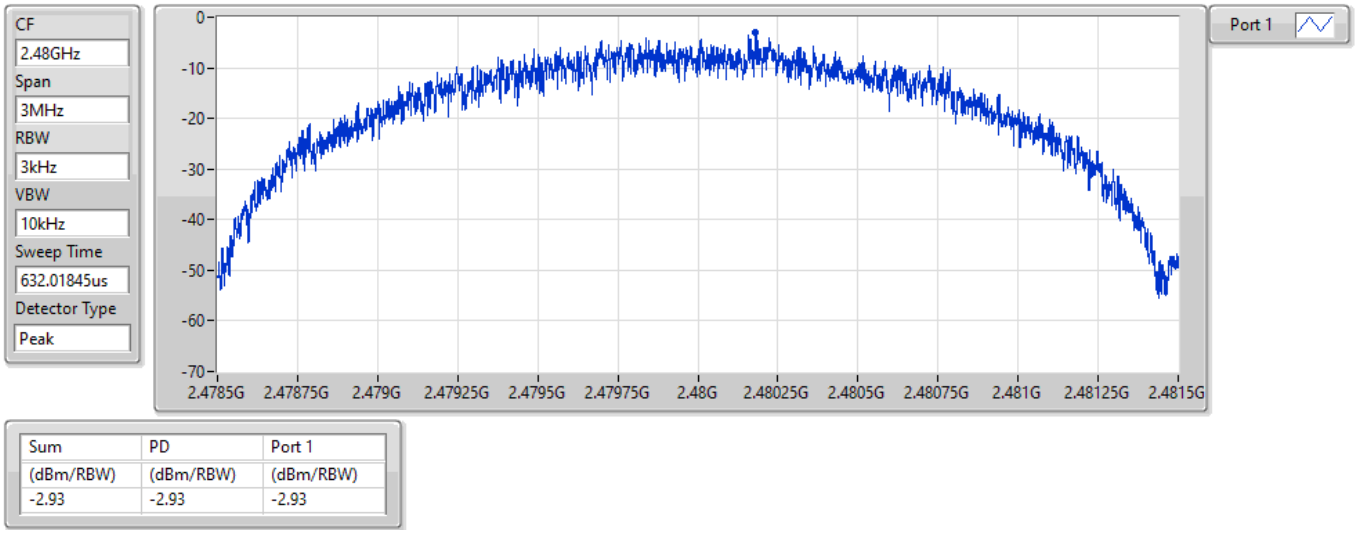


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.83	2.83	2.83

BT-LE(2Mbps) **PSD**

2480MHz

22/06/2022



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.93	-2.93	-2.93

Summary

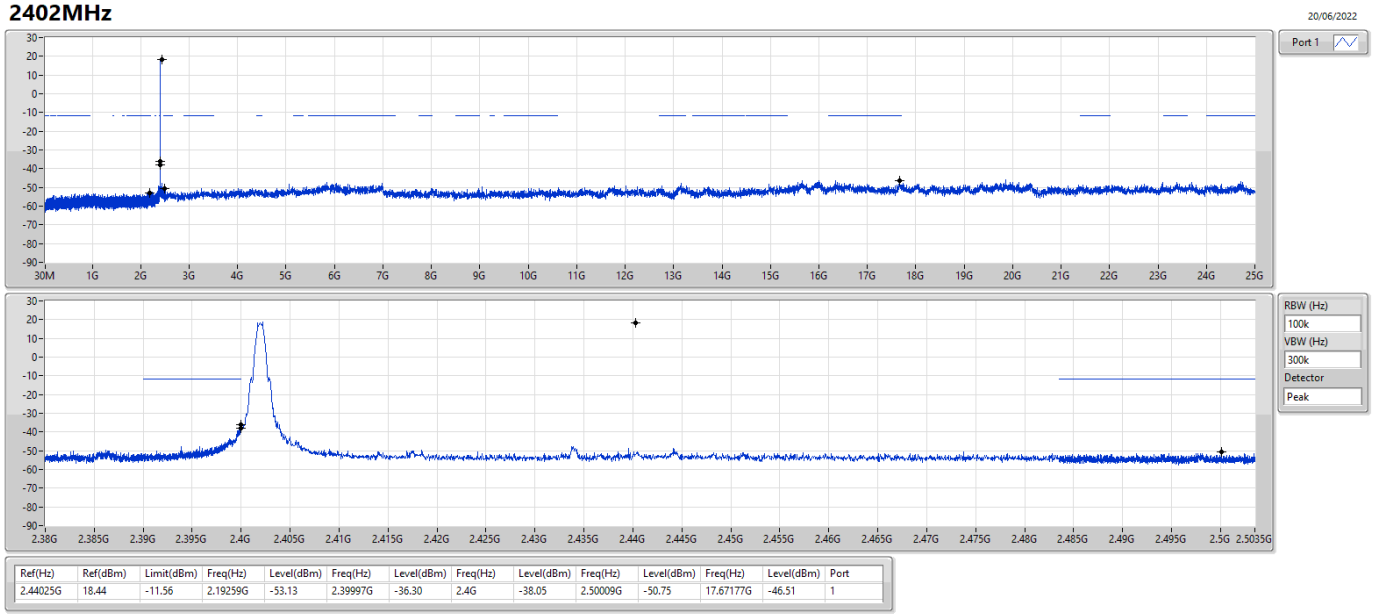
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.44025G	18.44	-11.56	2.19259G	-53.13	2.39997G	-36.30	2.4G	-38.05	2.50009G	-50.75	17.67177G	-46.51	1
BT-LE(2Mbps)	Pass	2.43987G	17.26	-12.74	2.30098G	-53.13	2.39997G	-13.07	2.4G	-13.39	2.48876G	-50.89	6.94093G	-46.75	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	2.44025G	18.44	-11.56	2.19259G	-53.13	2.39997G	-36.30	2.4G	-38.05	2.50009G	-50.75	17.67177G	-46.51	1
2440MHz	Pass	2.44025G	18.44	-11.56	2.17173G	-52.19	2.39784G	-50.25	2.4835G	-53.52	2.49779G	-50.31	16.55538G	-46.69	1
2480MHz	Pass	2.44025G	18.44	-11.56	2.13589G	-50.81	2.39943G	-51.17	2.4835G	-43.47	2.48366G	-42.82	17.64083G	-45.86	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.43987G	17.26	-12.74	2.30098G	-53.13	2.39997G	-13.07	2.4G	-13.39	2.48876G	-50.89	6.94093G	-46.75	1
2440MHz	Pass	2.43987G	17.26	-12.74	792.58M	-53.59	2.39725G	-50.55	2.4835G	-53.12	2.50136G	-50.69	5.80205G	-47.47	1
2478MHz	Pass	2.43987G	17.26	-12.74	2.18466G	-53.05	2.39728G	-51.94	2.4835G	-50.39	2.48364G	-49.07	17.69426G	-47.17	1
2480MHz	Pass	2.43987G	17.26	-12.74	767.02M	-53.38	2.39199G	-51.84	2.4835G	-47.31	2.48356G	-47.30	17.67458G	-47.42	1

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

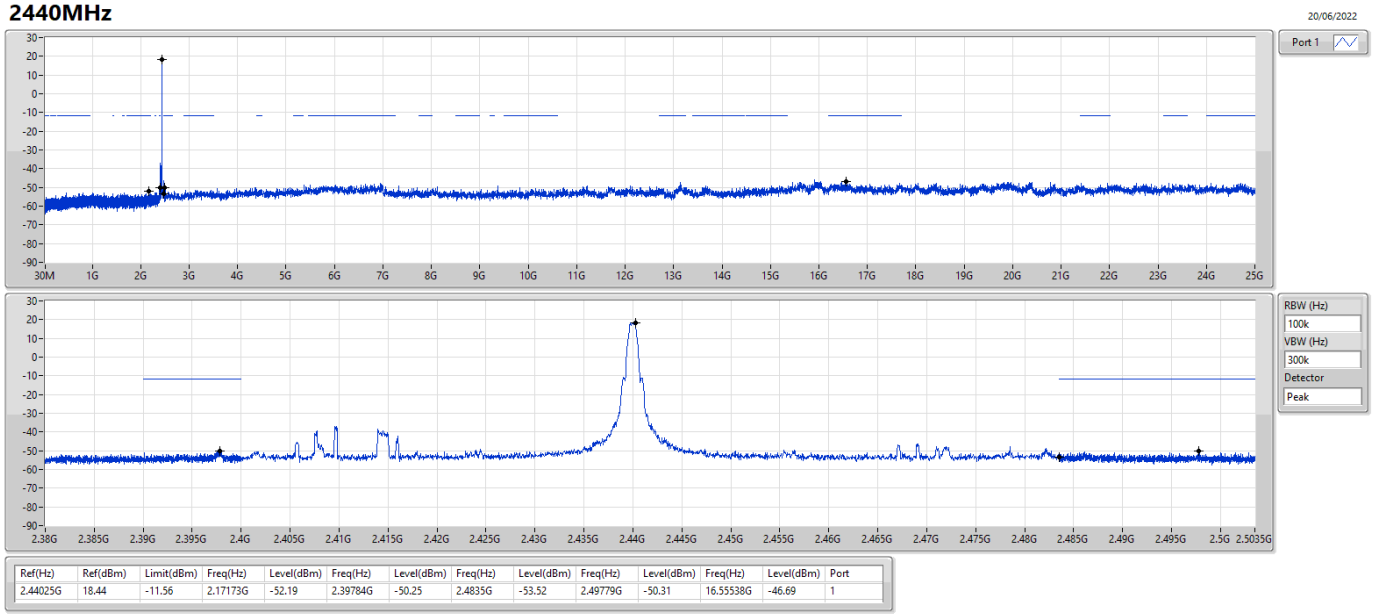
2402MHz



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
2.44025G	18.44	-11.56	2.19259G	-53.13	2.39997G	-36.30	2.4G	-38.05	2.50009G	-50.75	17.67177G	-46.51	1

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

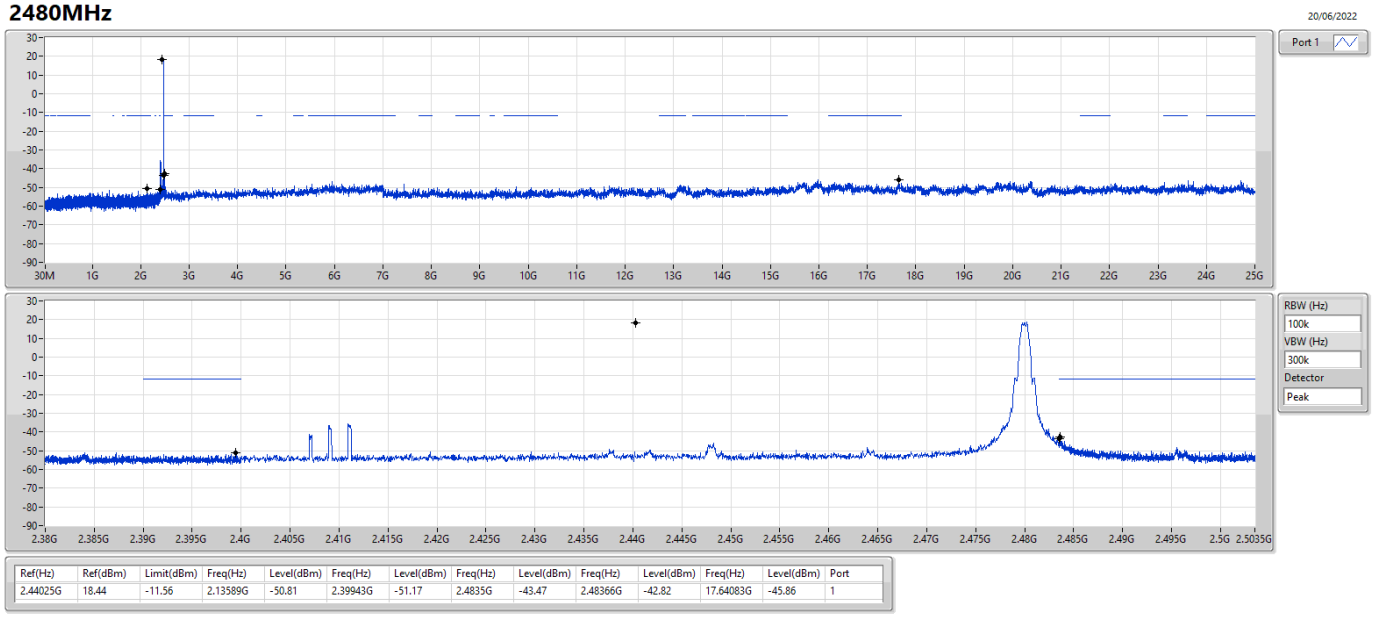
2440MHz



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
2.44025G	18.44	-11.56	2.17173G	-52.19	2.39784G	-50.25	2.4835G	-53.52	2.49779G	-50.31	16.55538G	-46.69	1

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

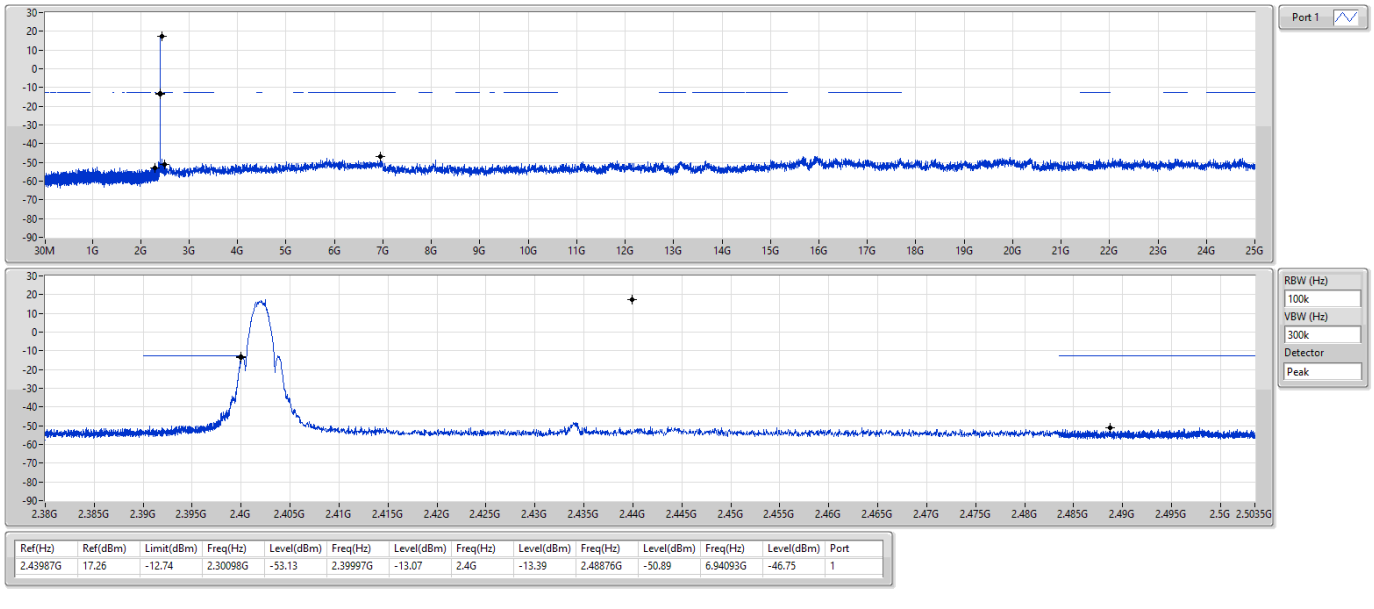
2480MHz



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
2.44025G	18.44	-11.56	2.13589G	-50.81	2.39943G	-51.17	2.4835G	-43.47	2.48366G	-42.82	17.64083G	-45.86	1

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

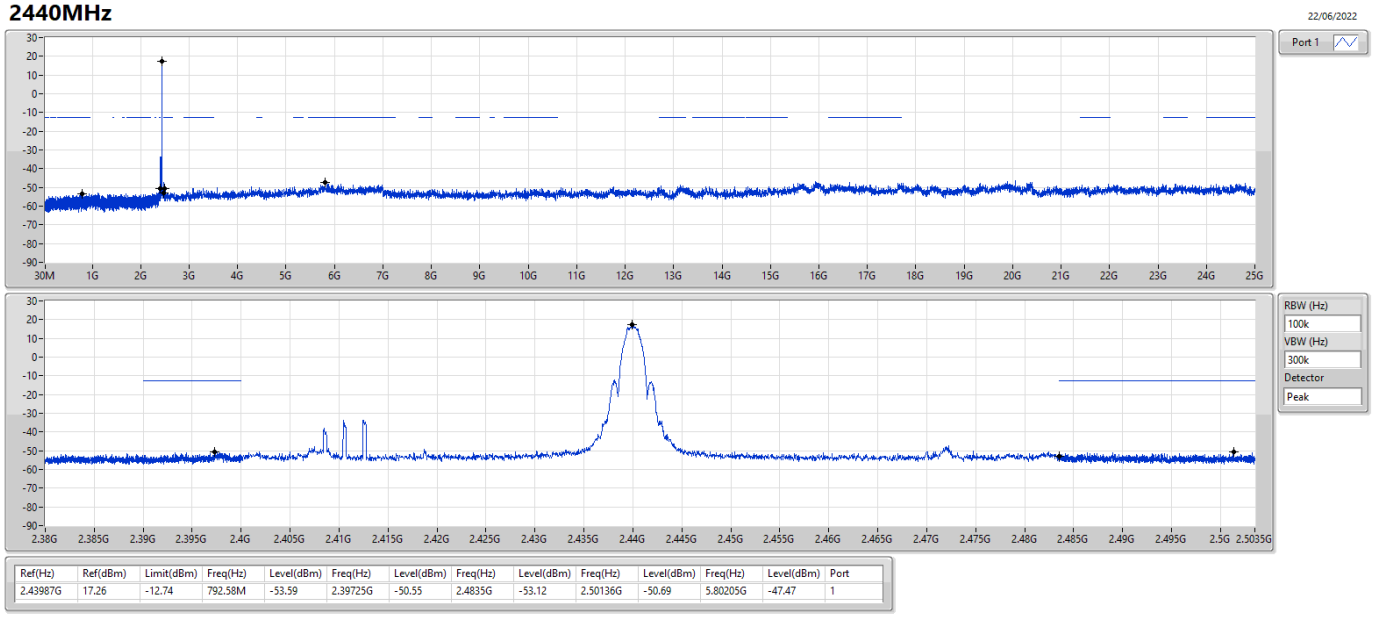
2402MHz



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
2.43987G	17.26	-12.74	2.30098G	-53.13	2.39997G	-13.07	2.4G	-13.39	2.48876G	-50.89	6.94093G	-46.75	1

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

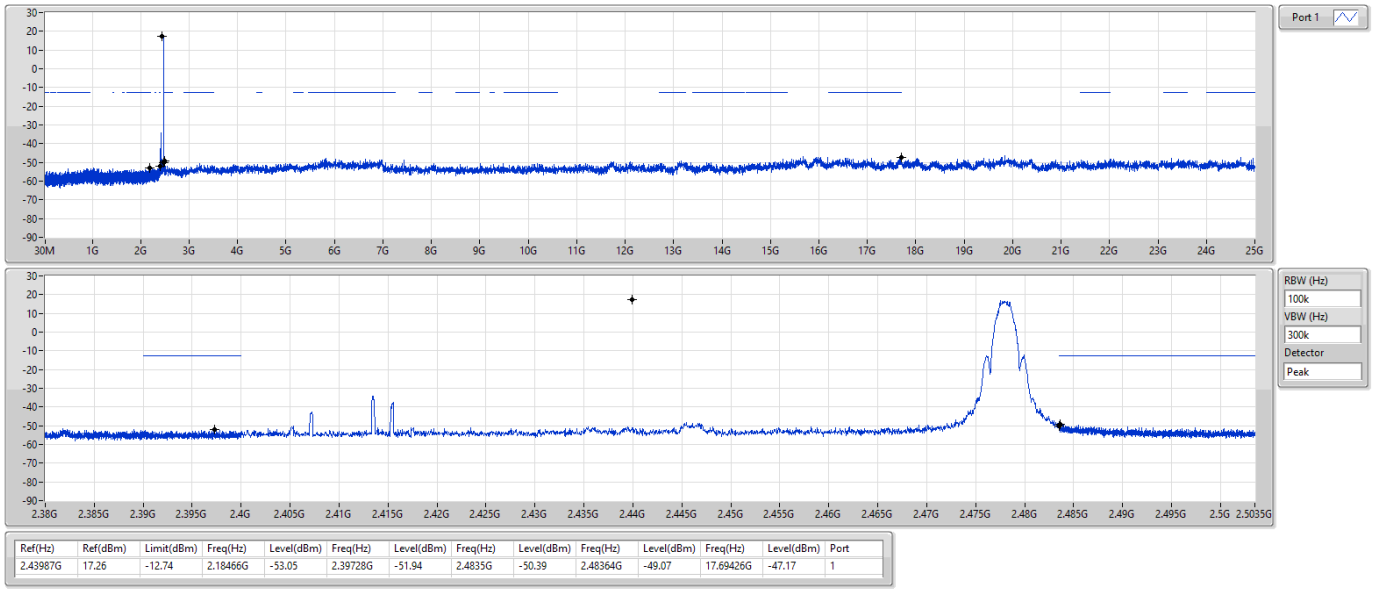
2440MHz



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
2.43987G	17.26	-12.74	792.58M	-53.59	2.39725G	-50.55	2.4835G	-53.12	2.50136G	-50.69	5.80205G	-47.47	1

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

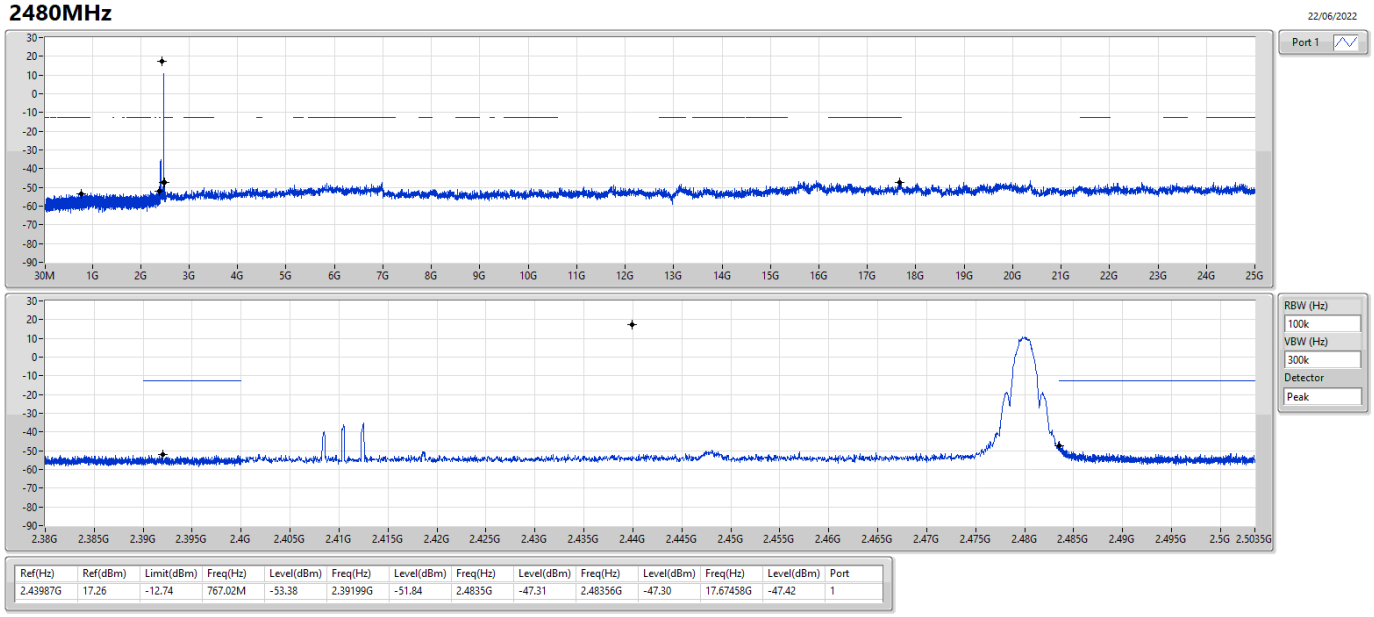
2478MHz



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
2.43987G	17.26	-12.74	2.18466G	-53.05	2.39728G	-51.94	2.4835G	-50.39	2.48364G	-49.07	17.69426G	-47.17	1

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

2480MHz

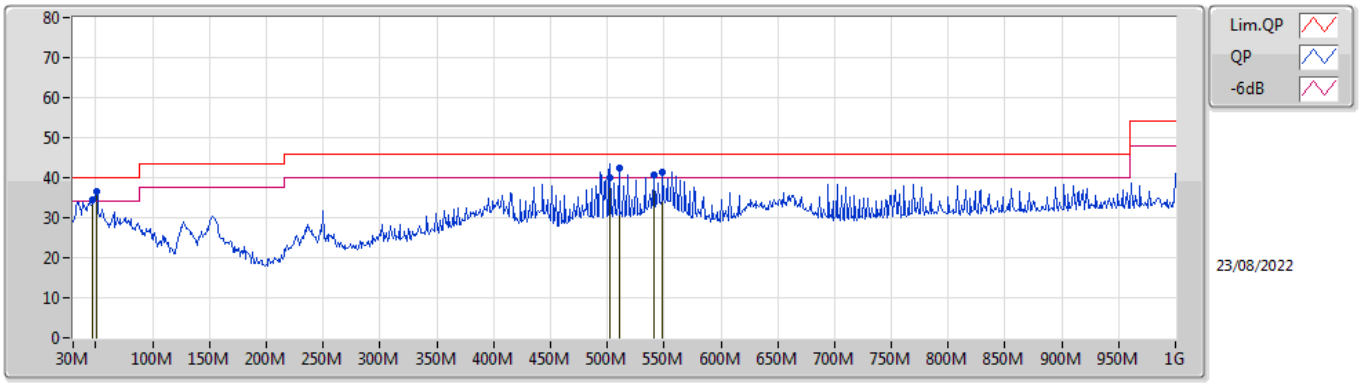


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43987G	17.26	-12.74	767.02M	-53.38	2.39199G	-51.84	2.4835G	-47.31	2.48356G	-47.30	17.67458G	-47.42	1

Summary

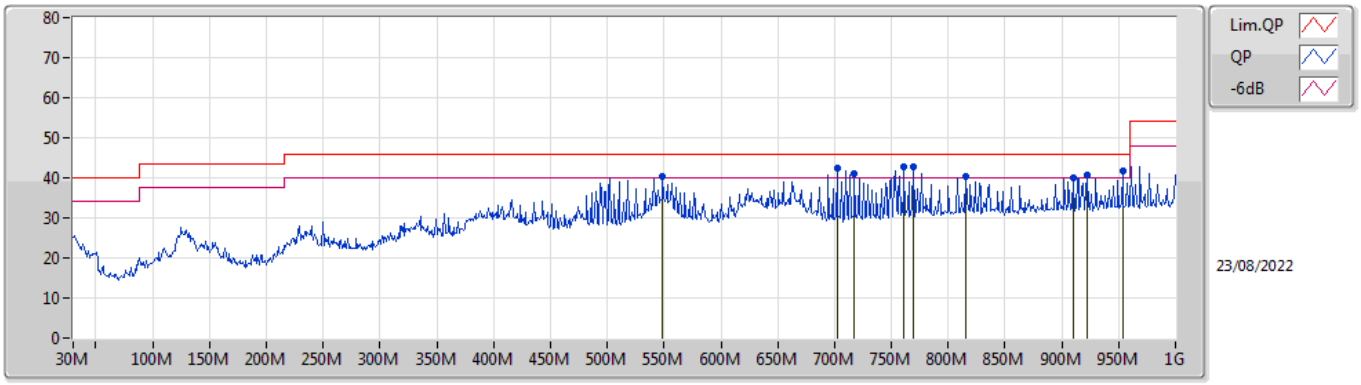
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	PK	761.38M	42.86	46.00	-3.14	Horizontal

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	47.46M	34.40	40.00	-5.60	-15.88	3	Vertical	335	1.00	-	50.28	14.91	1.05	31.84
PK	50.37M	36.50	40.00	-3.50	-16.84	3	Vertical	53	1.00	"Worst"	53.34	13.92	1.10	31.86
QP	502.39M	39.97	46.00	-6.03	-5.58	3	Vertical	93	1.25	-	45.55	23.21	3.61	32.40
PK	510.15M	42.47	46.00	-3.53	-5.55	3	Vertical	86	1.25	-	48.02	23.21	3.64	32.40
PK	541.19M	40.65	46.00	-5.35	-4.57	3	Vertical	309	1.25	-	45.22	24.05	3.76	32.38
PK	548.95M	41.46	46.00	-4.54	-4.14	3	Vertical	292	1.00	-	45.60	24.44	3.80	32.38

Mode 2



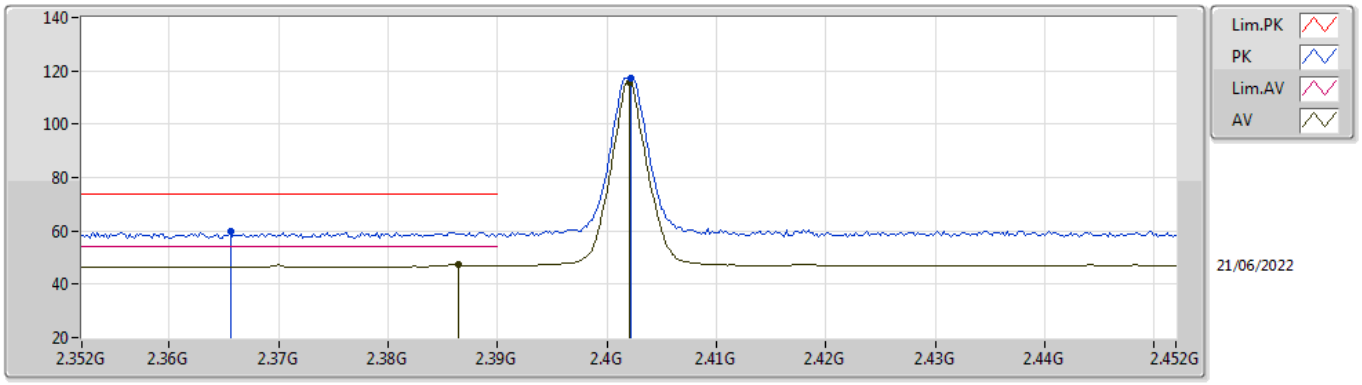
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	548.95M	40.30	46.00	-5.70	-4.14	3	Horizontal	104	2.00	-	44.44	24.44	3.80	32.38
PK	702.21M	42.43	46.00	-3.57	-3.54	3	Horizontal	221	1.25	-	45.97	24.51	4.51	32.56
PK	717.73M	41.09	46.00	-4.91	-3.33	3	Horizontal	229	1.25	-	44.42	24.68	4.57	32.58
PK	761.38M	42.86	46.00	-3.14	-2.51	3	Horizontal	117	1.25	"Worst"	45.37	25.33	4.75	32.59
PK	769.14M	42.68	46.00	-3.32	-2.42	3	Horizontal	117	1.25	-	45.10	25.37	4.78	32.57
PK	815.7M	40.28	46.00	-5.72	-2.03	3	Horizontal	137	1.25	-	42.31	25.51	4.96	32.50
PK	909.79M	40.10	46.00	-5.90	-0.92	3	Horizontal	215	1.00	-	41.02	26.21	5.36	32.49
PK	922.4M	40.60	46.00	-5.40	-0.90	3	Horizontal	221	1.00	-	41.50	26.16	5.43	32.49
PK	953.44M	41.62	46.00	-4.38	-0.32	3	Horizontal	221	1.00	-	41.94	26.55	5.60	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	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	AV	2.4835G	53.92	54.00	-0.08	3	Vertical	111	2.14	-

BT-LE(1Mbps)

2402MHz_TX

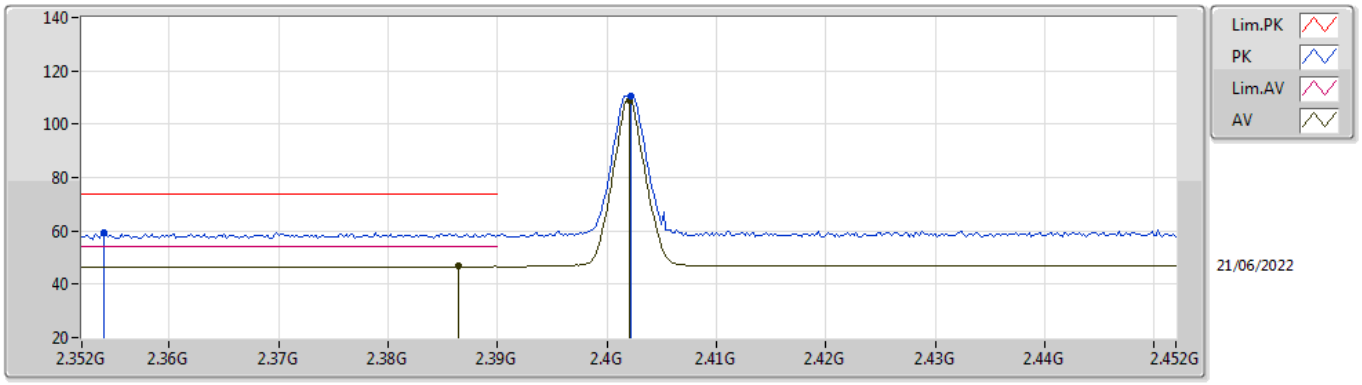


EUT Y_1TX
Setting 20
02-B-C-6

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	2.3656G	60.01	74.00	-13.99	28.90	3	Vertical	233	1.52	-	28.33	2.78	-
AV	2.3864G	47.22	54.00	-6.78	16.06	3	Vertical	233	1.52	-	28.37	2.79	-
PK	2.4022G	117.44	Inf	-Inf	86.24	3	Vertical	233	1.52	-	28.40	2.80	-
AV	2.402G	115.87	Inf	-Inf	84.67	3	Vertical	233	1.52	-	28.40	2.80	-

BT-LE(1Mbps)

2402MHz_TX

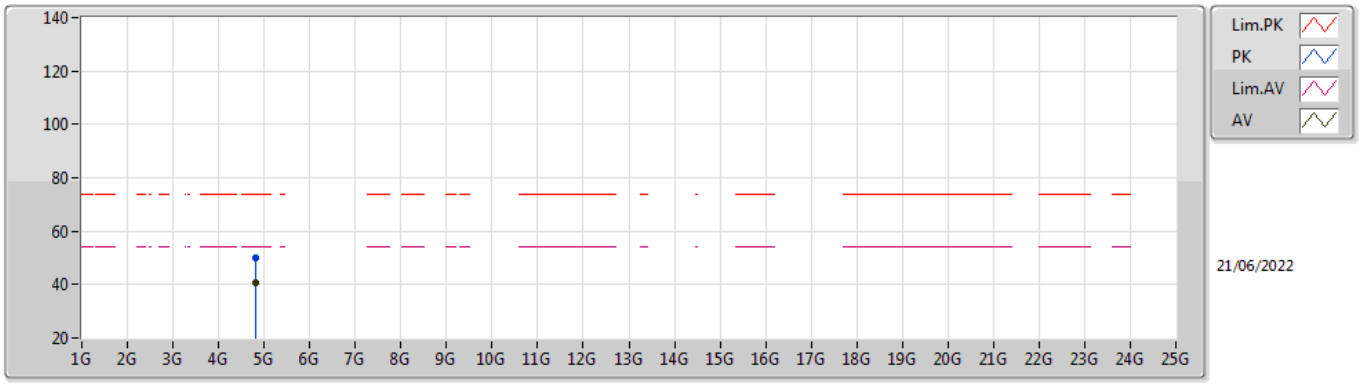


EUT Y_1TX
Setting 20
02-B-C-6

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	2.354G	59.50	74.00	-14.50	28.41	3	Horizontal	122	2.32	-	28.31	2.78	-
AV	2.3864G	46.65	54.00	-7.35	15.49	3	Horizontal	122	2.32	-	28.37	2.79	-
PK	2.4022G	110.64	Inf	-Inf	79.44	3	Horizontal	122	2.32	-	28.40	2.80	-
AV	2.402G	109.05	Inf	-Inf	77.85	3	Horizontal	122	2.32	-	28.40	2.80	-

BT-LE(1Mbps)

2402MHz_TX

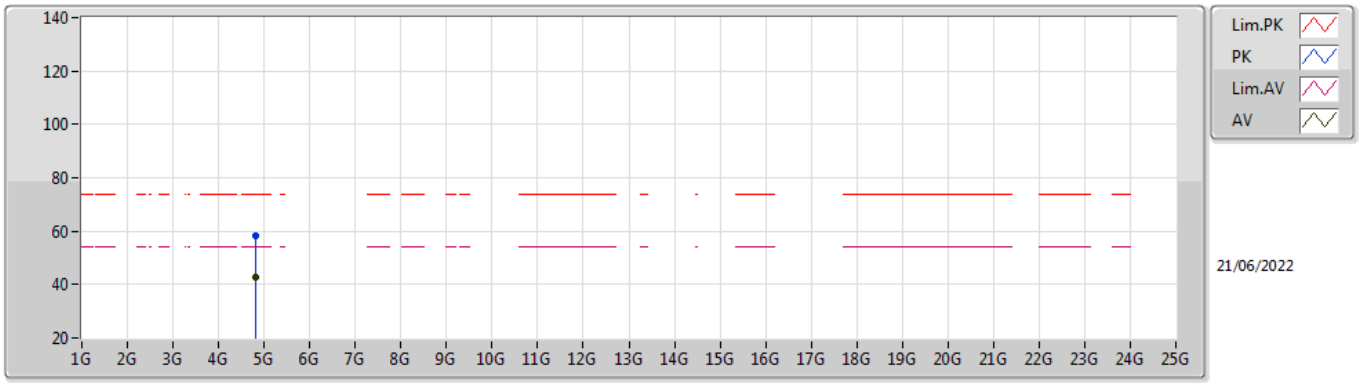


EUT Y_1TX
Setting 20
02-B-C-6

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	4.80454G	50.16	74.00	-23.84	44.46	3	Vertical	238	1.38	-	32.83	5.10	32.23
AV	4.804G	40.83	54.00	-13.17	35.14	3	Vertical	238	1.38	-	32.82	5.10	32.23

BT-LE(1Mbps)

2402MHz_TX

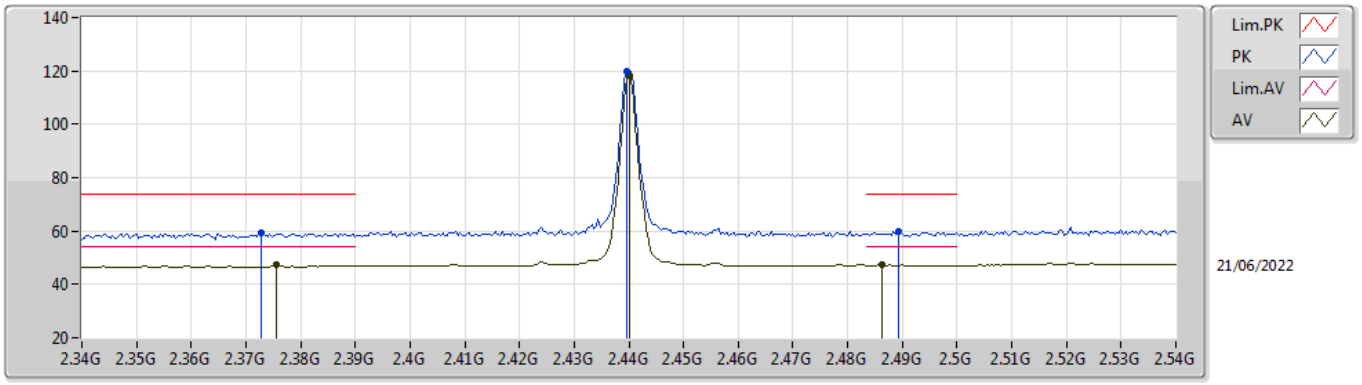


EUT Y_1TX
Setting 20
02-B-C-6

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	4.80412G	58.20	74.00	-15.80	52.51	3	Horizontal	115	2.66	-	32.82	5.10	32.23
AV	4.804G	43.01	54.00	-10.99	37.32	3	Horizontal	115	2.66	-	32.82	5.10	32.23

BT-LE(1Mbps)

2440MHz_TX

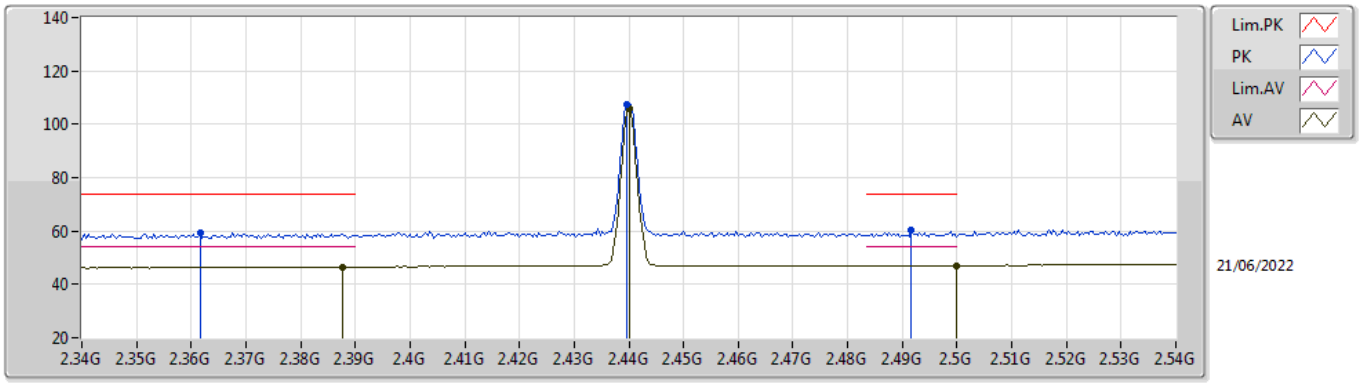


EUT Y_1TX
Setting 20
02-B-C-6

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	2.3728G	59.42	74.00	-14.58	28.28	3	Vertical	111	2.21	-	28.35	2.79	-
AV	2.3756G	47.48	54.00	-6.52	16.34	3	Vertical	111	2.21	-	28.35	2.79	-
PK	2.4396G	119.70	Inf	-Inf	88.46	3	Vertical	111	2.21	-	28.40	2.84	-
AV	2.44G	118.07	Inf	-Inf	86.83	3	Vertical	111	2.21	-	28.40	2.84	-
PK	2.4892G	59.65	74.00	-14.35	28.20	3	Vertical	111	2.21	-	28.56	2.89	-
AV	2.4864G	47.46	54.00	-6.54	16.02	3	Vertical	111	2.21	-	28.55	2.89	-

BT-LE(1Mbps)

2440MHz_TX

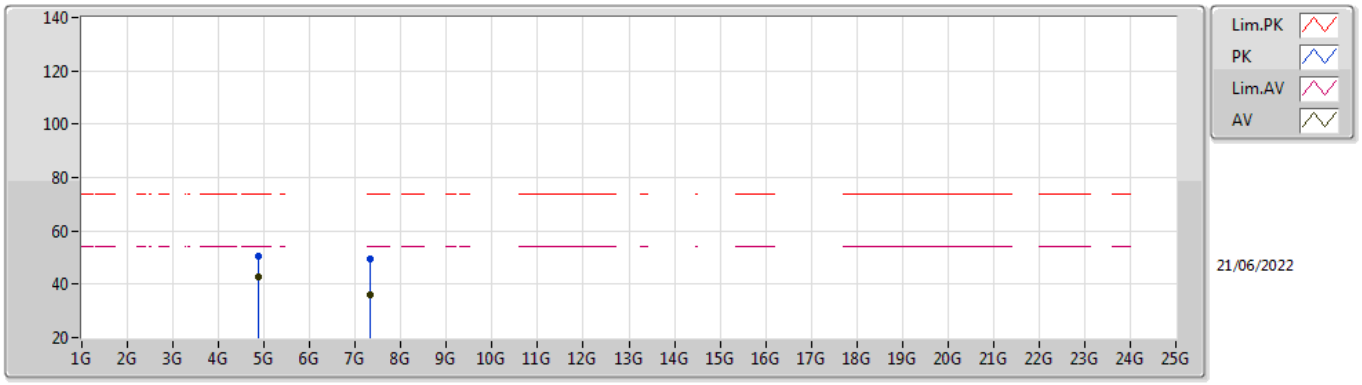


EUT Y_1TX
Setting 20
02-B-C-6

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	2.3616G	59.45	74.00	-14.55	28.35	3	Horizontal	124	1.85	-	28.32	2.78	-
AV	2.3876G	46.55	54.00	-7.45	15.38	3	Horizontal	124	1.85	-	28.38	2.79	-
PK	2.4396G	107.38	Inf	-Inf	76.14	3	Horizontal	124	1.85	-	28.40	2.84	-
AV	2.44G	105.77	Inf	-Inf	74.53	3	Horizontal	124	1.85	-	28.40	2.84	-
PK	2.4916G	60.17	74.00	-13.83	28.71	3	Horizontal	124	1.85	-	28.57	2.89	-
AV	2.5G	46.98	54.00	-7.02	15.48	3	Horizontal	124	1.85	-	28.60	2.90	-

BT-LE(1Mbps)

2440MHz_TX

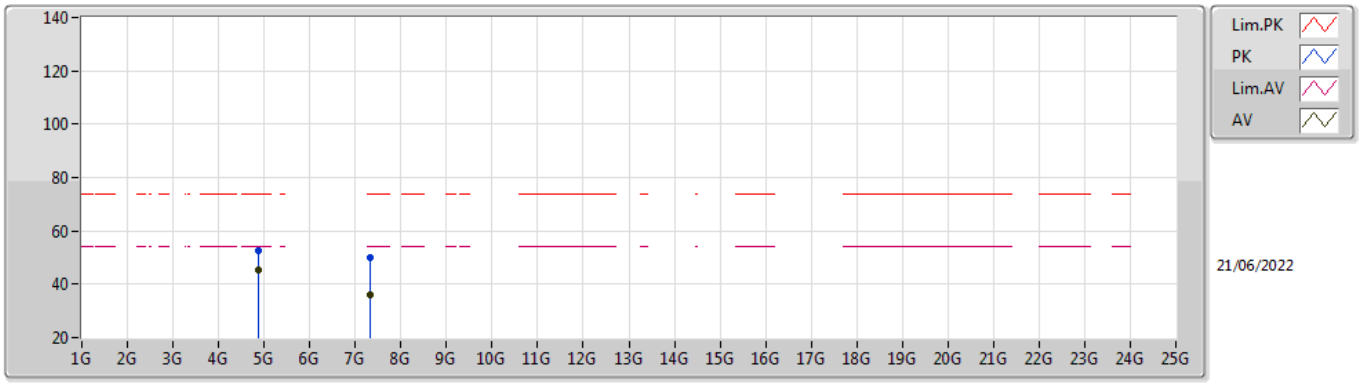


EUT Y_1TX
Setting 20
02-B-C-6

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	4.8794G	50.75	74.00	-23.25	44.69	3	Vertical	121	2.54	-	33.16	5.10	32.20
AV	4.87994G	42.82	54.00	-11.18	36.76	3	Vertical	121	2.54	-	33.16	5.10	32.20
PK	7.32054G	49.70	74.00	-24.30	39.94	3	Vertical	168	1.09	-	36.44	6.16	32.84
AV	7.33134G	35.84	54.00	-18.16	26.07	3	Vertical	168	1.09	-	36.46	6.17	32.86

BT-LE(1Mbps)

2440MHz_TX

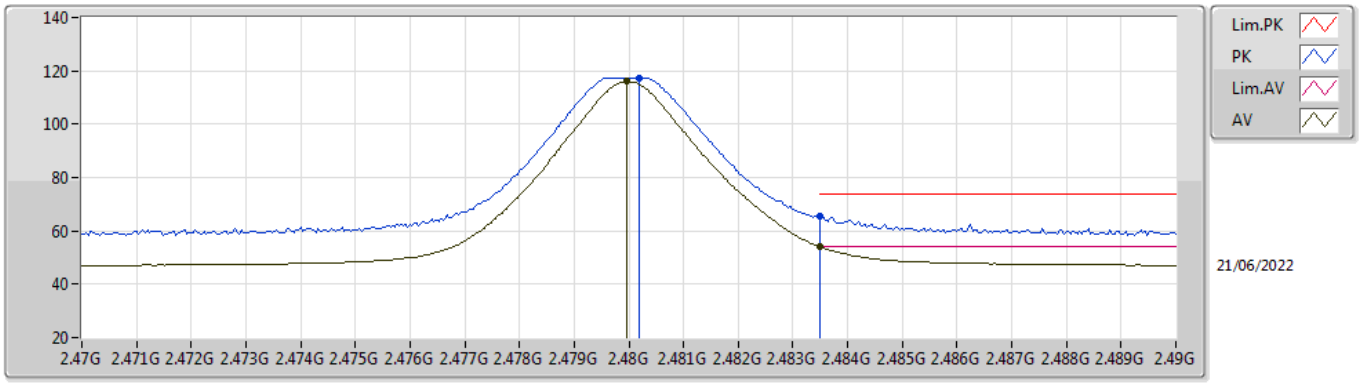


EUT Y_1TX
Setting 20
02-B-C-6

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	4.8794G	52.66	74.00	-21.34	46.60	3	Horizontal	111	2.14	-	33.16	5.10	32.20
AV	4.87994G	45.23	54.00	-8.77	39.17	3	Horizontal	111	2.14	-	33.16	5.10	32.20
PK	7.32816G	50.22	74.00	-23.78	40.45	3	Horizontal	80	1.90	-	36.46	6.16	32.85
AV	7.31916G	35.94	54.00	-18.06	26.18	3	Horizontal	80	1.90	-	36.44	6.16	32.84

BT-LE(1Mbps)

2480MHz_TX

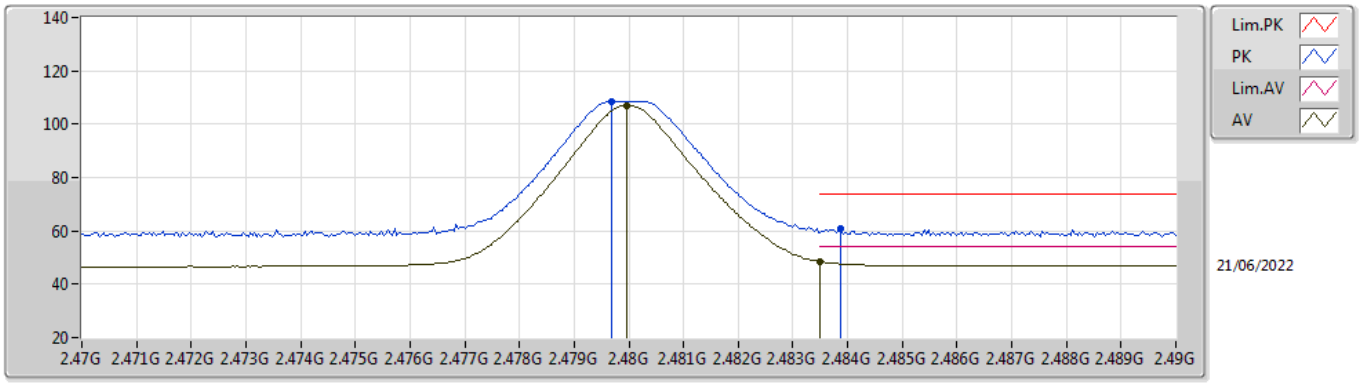


EUT Y_1TX
Setting 19
02-B-C-6

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	117.44	Inf	-Inf	86.04	3	Vertical	111	2.14	-	28.52	2.88	-
AV	2.47996G	116.00	Inf	-Inf	84.60	3	Vertical	111	2.14	-	28.52	2.88	-
PK	2.4835G	65.37	74.00	-8.63	33.96	3	Vertical	111	2.14	-	28.53	2.88	-
AV	2.4835G	53.92	54.00	-0.08	22.51	3	Vertical	111	2.14	-	28.53	2.88	-

BT-LE(1Mbps)

2480MHz_TX

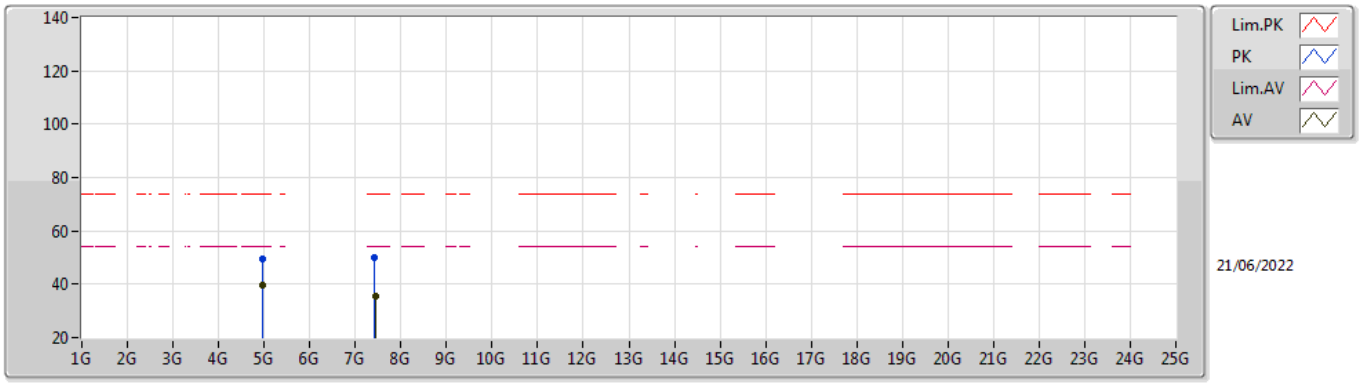


EUT Y_1TX
Setting 19
02-B-C-6

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	2.47968G	108.53	Inf	-Inf	77.13	3	Horizontal	1	1.88	-	28.52	2.88	-
AV	2.47996G	107.08	Inf	-Inf	75.68	3	Horizontal	1	1.88	-	28.52	2.88	-
PK	2.48388G	60.65	74.00	-13.35	29.23	3	Horizontal	1	1.88	-	28.54	2.88	-
AV	2.4835G	48.43	54.00	-5.57	17.02	3	Horizontal	1	1.88	-	28.53	2.88	-

BT-LE(1Mbps)

2480MHz_TX

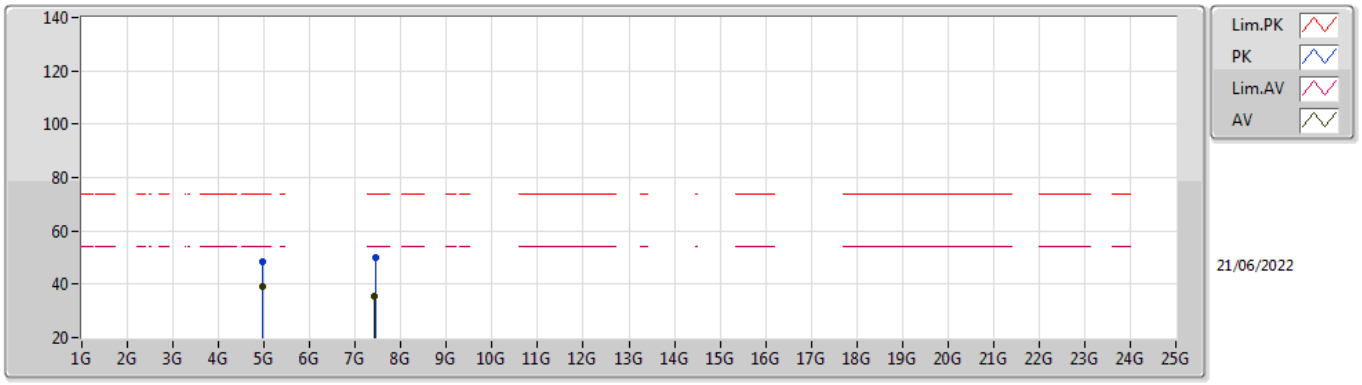


EUT Y_1TX
Setting 19
02-B-C-6

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	4.95958G	49.23	74.00	-24.77	42.98	3	Vertical	127	2.53	-	33.32	5.10	32.17
AV	4.95994G	39.69	54.00	-14.31	33.44	3	Vertical	127	2.53	-	33.32	5.10	32.17
PK	7.42524G	49.86	74.00	-24.14	40.18	3	Vertical	74	2.74	-	36.50	6.20	33.02
AV	7.43718G	35.63	54.00	-18.37	25.97	3	Vertical	74	2.74	-	36.50	6.20	33.04

BT-LE(1Mbps)

2480MHz_TX

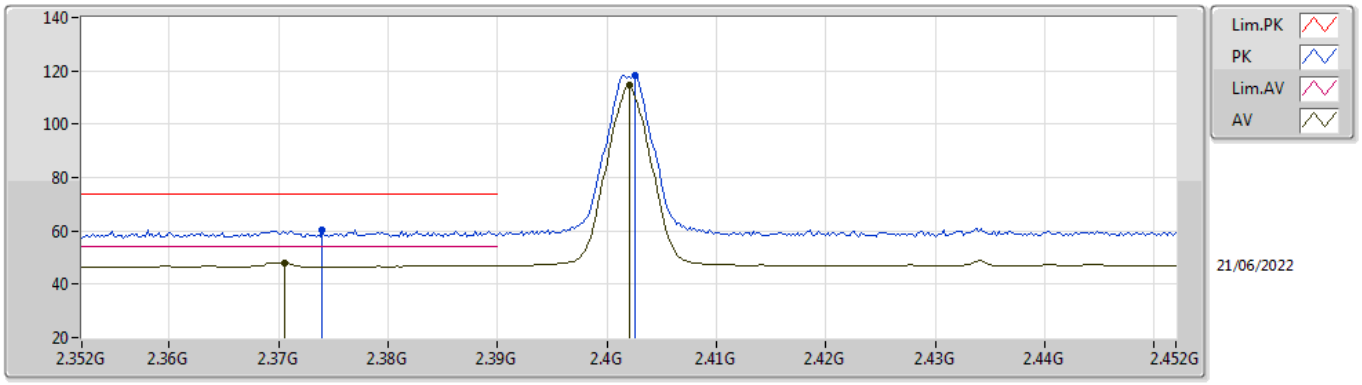


EUT Y_1TX
Setting 19
02-B-C-6

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	4.96048G	48.41	74.00	-25.59	42.16	3	Horizontal	140	2.53	-	33.32	5.10	32.17
AV	4.96G	38.97	54.00	-15.03	32.72	3	Horizontal	140	2.53	-	33.32	5.10	32.17
PK	7.4385G	49.78	74.00	-24.22	40.12	3	Horizontal	289	1.49	-	36.50	6.20	33.04
AV	7.43106G	35.59	54.00	-18.41	25.92	3	Horizontal	289	1.49	-	36.50	6.20	33.03

BT-LE(2Mbps)

2402MHz_TX

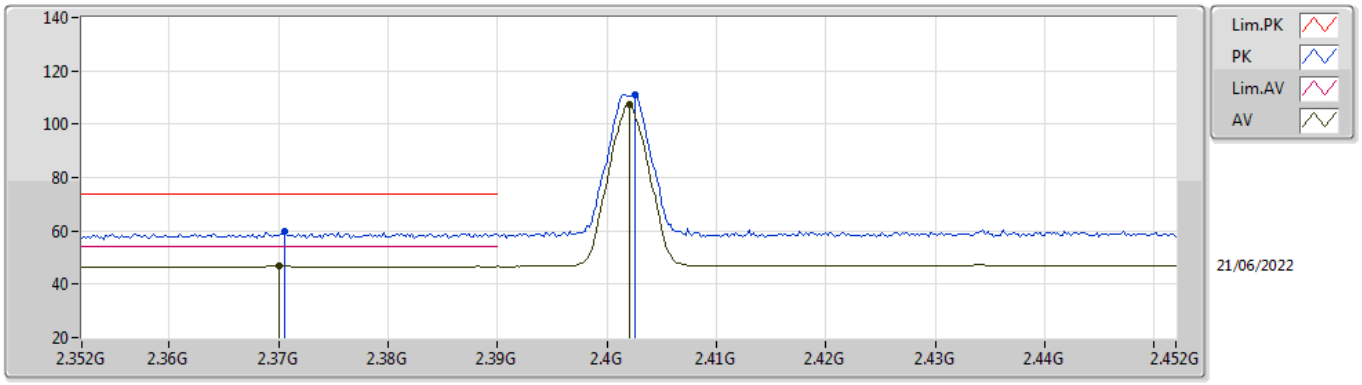


EUT Y_1TX
Setting 20
02-B-C-6

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	2.374G	60.54	74.00	-13.46	29.40	3	Vertical	235	1.85	-	28.35	2.79	-
AV	2.3706G	47.94	54.00	-6.06	16.81	3	Vertical	235	1.85	-	28.34	2.79	-
PK	2.4026G	118.13	Inf	-Inf	86.93	3	Vertical	235	1.85	-	28.40	2.80	-
AV	2.402G	114.48	Inf	-Inf	83.28	3	Vertical	235	1.85	-	28.40	2.80	-

BT-LE(2Mbps)

2402MHz_TX

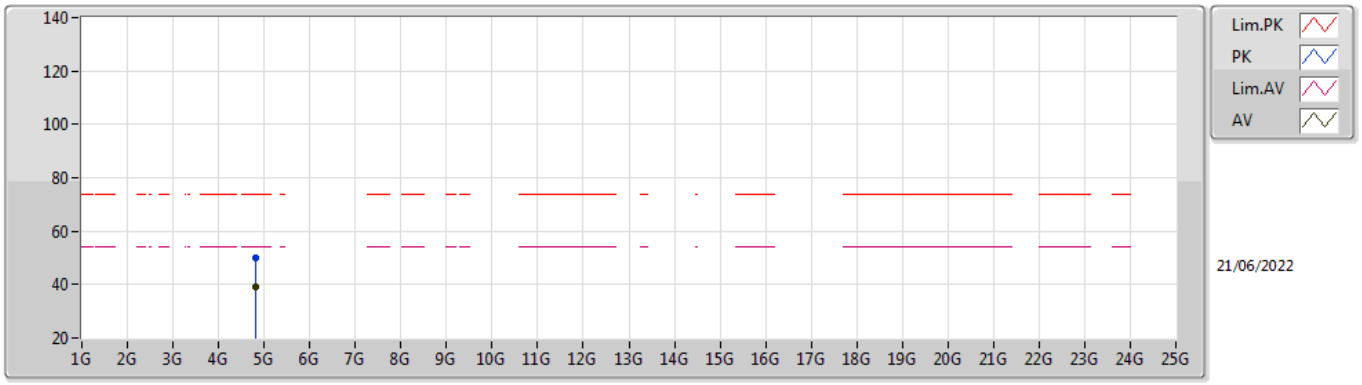


EUT Y_1TX
Setting 20
02-B-C-6

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	2.3706G	60.05	74.00	-13.95	28.92	3	Horizontal	122	2.33	-	28.34	2.79	-
AV	2.37G	46.77	54.00	-7.23	15.65	3	Horizontal	122	2.33	-	28.34	2.78	-
PK	2.4026G	111.03	Inf	-Inf	79.83	3	Horizontal	122	2.33	-	28.40	2.80	-
AV	2.402G	107.43	Inf	-Inf	76.23	3	Horizontal	122	2.33	-	28.40	2.80	-

BT-LE(2Mbps)

2402MHz_TX

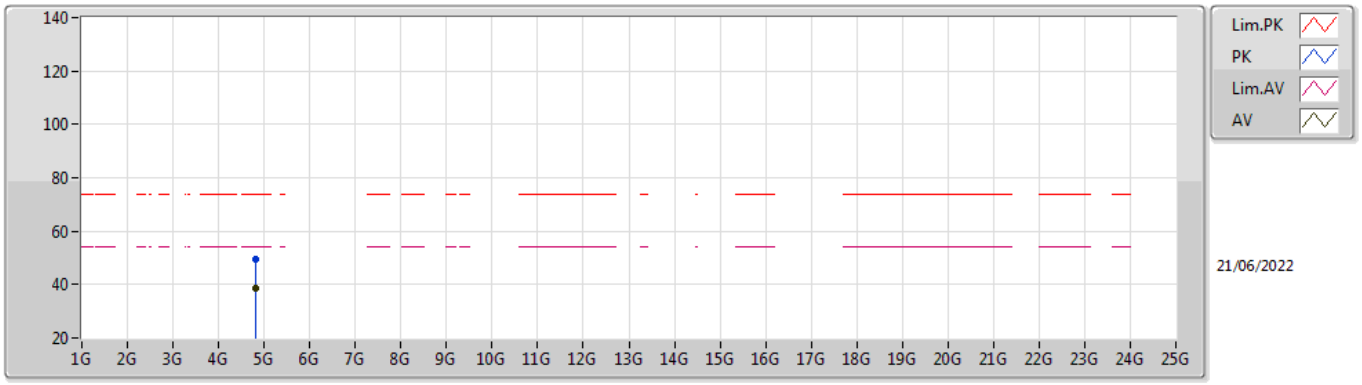


EUT Y_1TX
Setting 20
02-B-C-6

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	4.80508G	49.85	74.00	-24.15	44.15	3	Vertical	233	1.52	-	32.83	5.10	32.23
AV	4.8049G	39.21	54.00	-14.79	33.51	3	Vertical	233	1.52	-	32.83	5.10	32.23

BT-LE(2Mbps)

2402MHz_TX

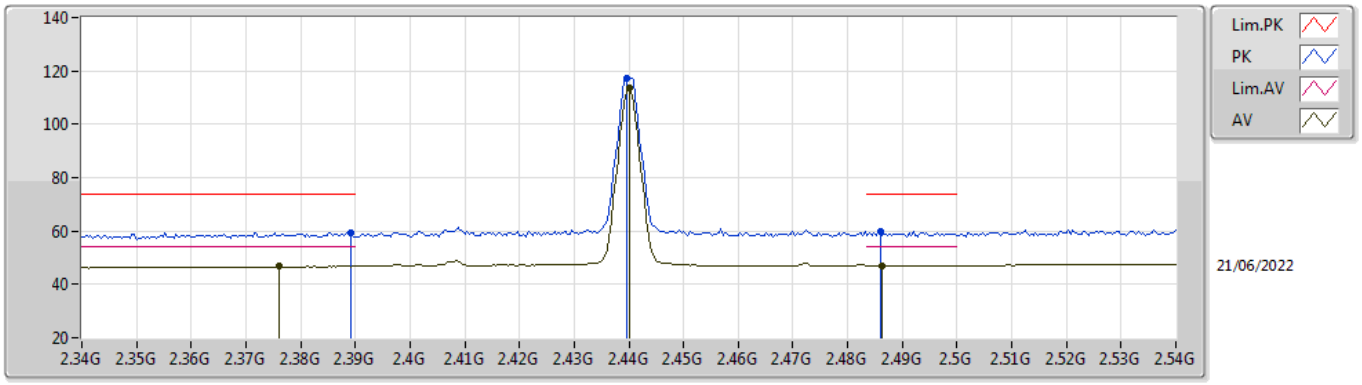


EUT Y_1TX
Setting 20
02-B-C-6

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	4.80298G	49.61	74.00	-24.39	43.92	3	Horizontal	113	1.99	-	32.82	5.10	32.23
AV	4.8049G	38.53	54.00	-15.47	32.83	3	Horizontal	113	1.99	-	32.83	5.10	32.23

BT-LE(2Mbps)

2440MHz_TX

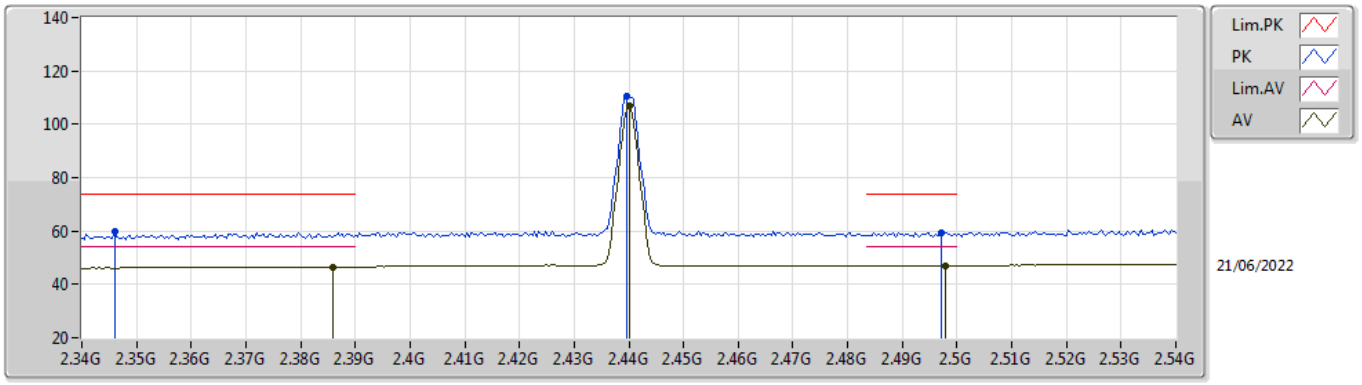


EUT Y_1TX
Setting 20
02-B-C-6

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	2.3892G	59.41	74.00	-14.59	28.24	3	Vertical	238	2.24	-	28.38	2.79	-
AV	2.376G	46.70	54.00	-7.30	15.56	3	Vertical	238	2.24	-	28.35	2.79	-
PK	2.4396G	117.16	Inf	-Inf	85.92	3	Vertical	238	2.24	-	28.40	2.84	-
AV	2.44G	113.49	Inf	-Inf	82.25	3	Vertical	238	2.24	-	28.40	2.84	-
PK	2.486G	59.67	74.00	-14.33	28.24	3	Vertical	238	2.24	-	28.54	2.89	-
AV	2.4864G	47.06	54.00	-6.94	15.62	3	Vertical	238	2.24	-	28.55	2.89	-

BT-LE(2Mbps)

2440MHz_TX

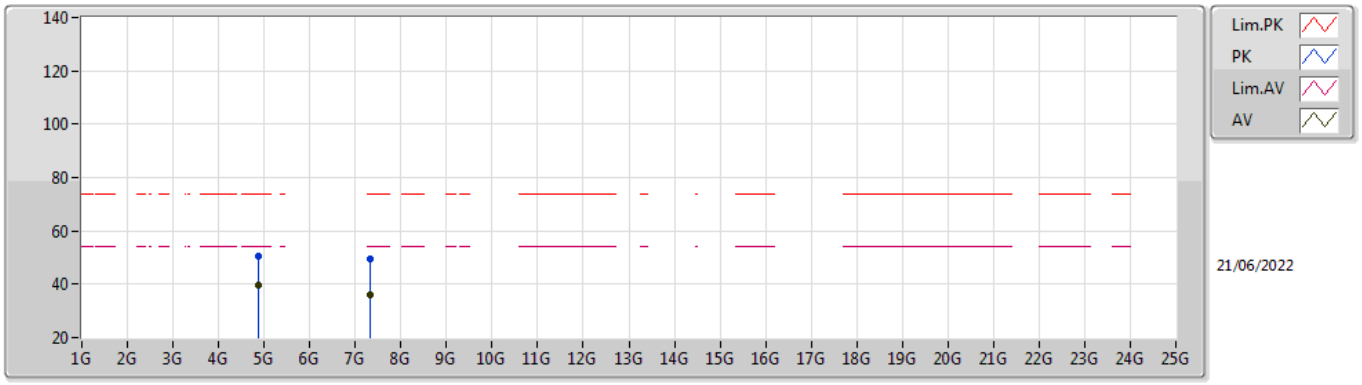


EUT Y_1TX
Setting 20
02-B-C-6

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	2.346G	59.64	74.00	-14.36	28.59	3	Horizontal	120	2.29	-	28.28	2.77	-
AV	2.386G	46.59	54.00	-7.41	15.43	3	Horizontal	120	2.29	-	28.37	2.79	-
PK	2.4396G	110.36	Inf	-Inf	79.12	3	Horizontal	120	2.29	-	28.40	2.84	-
AV	2.44G	106.64	Inf	-Inf	75.40	3	Horizontal	120	2.29	-	28.40	2.84	-
PK	2.4972G	59.51	74.00	-14.49	28.02	3	Horizontal	120	2.29	-	28.59	2.90	-
AV	2.498G	47.00	54.00	-7.00	15.51	3	Horizontal	120	2.29	-	28.59	2.90	-

BT-LE(2Mbps)

2440MHz_TX

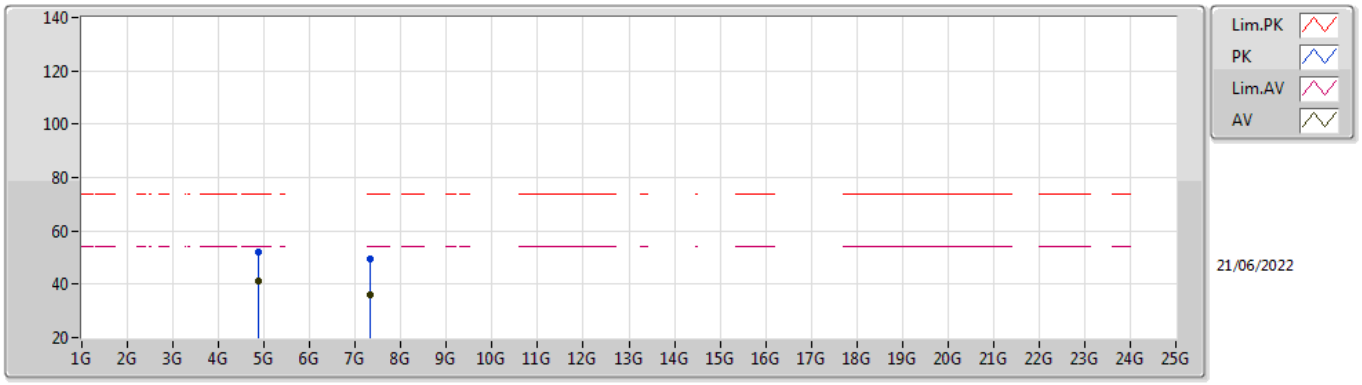


EUT Y_1TX
Setting 20
02-B-C-6

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	4.88096G	50.52	74.00	-23.48	44.46	3	Vertical	122	2.44	-	33.16	5.10	32.20
AV	4.88084G	39.45	54.00	-14.55	33.39	3	Vertical	122	2.44	-	33.16	5.10	32.20
PK	7.3245G	49.25	74.00	-24.75	39.48	3	Vertical	327	1.41	-	36.45	6.16	32.84
AV	7.32858G	35.83	54.00	-18.17	26.06	3	Vertical	327	1.41	-	36.46	6.16	32.85

BT-LE(2Mbps)

2440MHz_TX

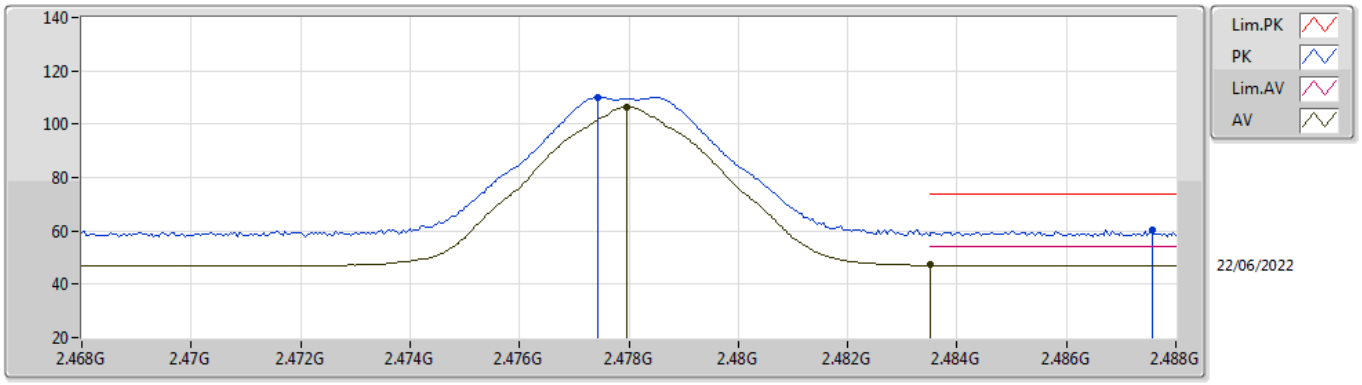


EUT Y_1TX
Setting 20
02-B-C-6

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	4.87892G	51.94	74.00	-22.06	45.88	3	Horizontal	108	2.42	-	33.16	5.10	32.20
AV	4.8809G	41.30	54.00	-12.70	35.24	3	Horizontal	108	2.42	-	33.16	5.10	32.20
PK	7.31988G	49.70	74.00	-24.30	39.94	3	Horizontal	116	1.67	-	36.44	6.16	32.84
AV	7.33044G	35.83	54.00	-18.17	26.05	3	Horizontal	116	1.67	-	36.46	6.17	32.85

BT-LE(2Mbps)

2478MHz_TX

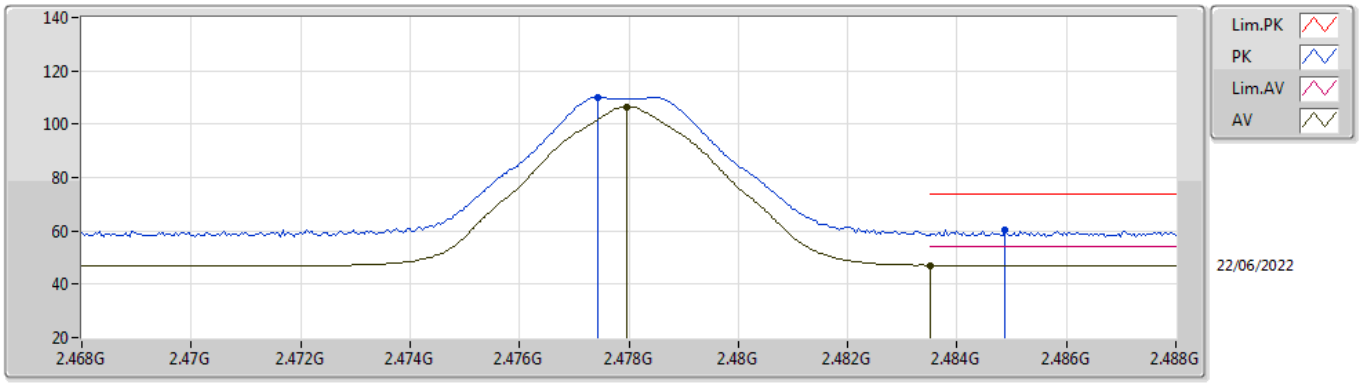


EUT Y_1TX
Setting 20
02-B-C-6

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	2.47744G	110.04	Inf	-Inf	78.65	3	Vertical	129	1.40	-	28.51	2.88	-
AV	2.47796G	106.46	Inf	-Inf	75.07	3	Vertical	129	1.40	-	28.51	2.88	-
PK	2.48756G	60.33	74.00	-13.67	28.89	3	Vertical	129	1.40	-	28.55	2.89	-
AV	2.4835G	47.17	54.00	-6.83	15.76	3	Vertical	129	1.40	-	28.53	2.88	-

BT-LE(2Mbps)

2478MHz_TX

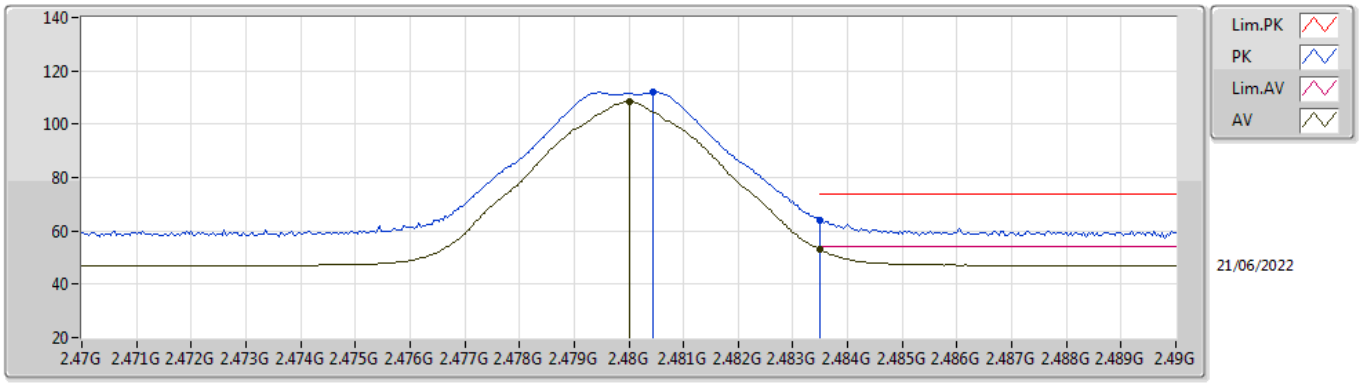


EUT Y_1TX
Setting 20
02-B-C-6

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	2.47744G	110.13	Inf	-Inf	78.74	3	Horizontal	127	1.40	-	28.51	2.88	-
AV	2.47796G	106.58	Inf	-Inf	75.19	3	Horizontal	127	1.40	-	28.51	2.88	-
PK	2.48488G	60.40	74.00	-13.60	28.98	3	Horizontal	127	1.40	-	28.54	2.88	-
AV	2.4835G	47.09	54.00	-6.91	15.68	3	Horizontal	127	1.40	-	28.53	2.88	-

BT-LE(2Mbps)

2480MHz_TX

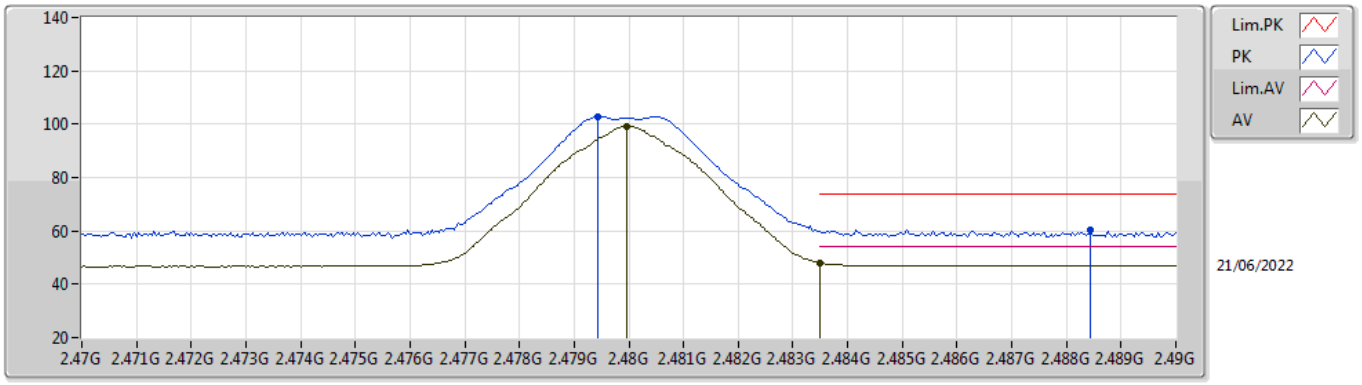


EUT Y_1TX
Setting 14
02-B-C-6

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	2.48044G	111.88	Inf	-Inf	80.48	3	Vertical	109	2.14	-	28.52	2.88	-
AV	2.48G	108.34	Inf	-Inf	76.94	3	Vertical	109	2.14	-	28.52	2.88	-
PK	2.4835G	63.72	74.00	-10.28	32.31	3	Vertical	109	2.14	-	28.53	2.88	-
AV	2.4835G	52.92	54.00	-1.08	21.51	3	Vertical	109	2.14	-	28.53	2.88	-

BT-LE(2Mbps)

2480MHz_TX

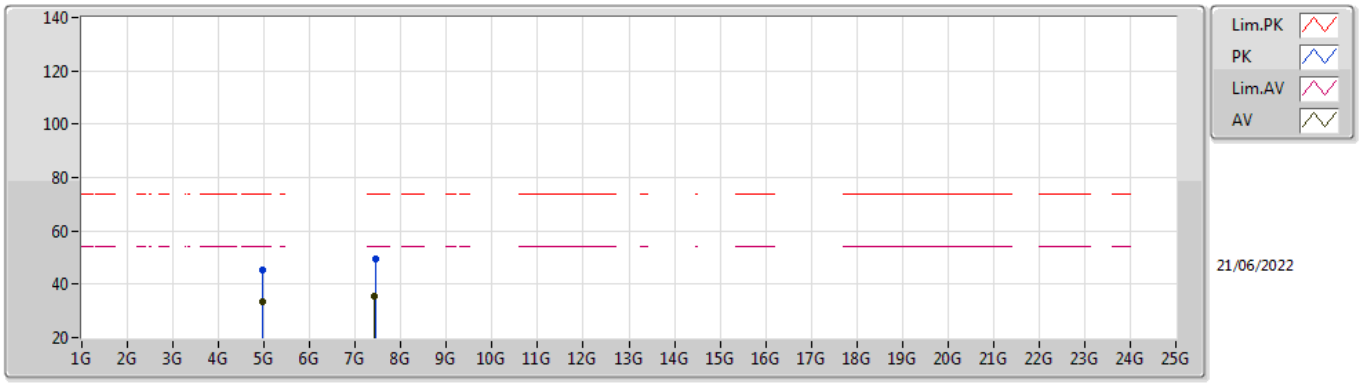


EUT Y_1TX
Setting 14
02-B-C-6

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	2.47944G	102.71	Inf	-Inf	71.31	3	Horizontal	1	1.88	-	28.52	2.88	-
AV	2.47996G	99.25	Inf	-Inf	67.85	3	Horizontal	1	1.88	-	28.52	2.88	-
PK	2.48844G	60.21	74.00	-13.79	28.77	3	Horizontal	1	1.88	-	28.55	2.89	-
AV	2.4835G	48.15	54.00	-5.85	16.74	3	Horizontal	1	1.88	-	28.53	2.88	-

BT-LE(2Mbps)

2480MHz_TX

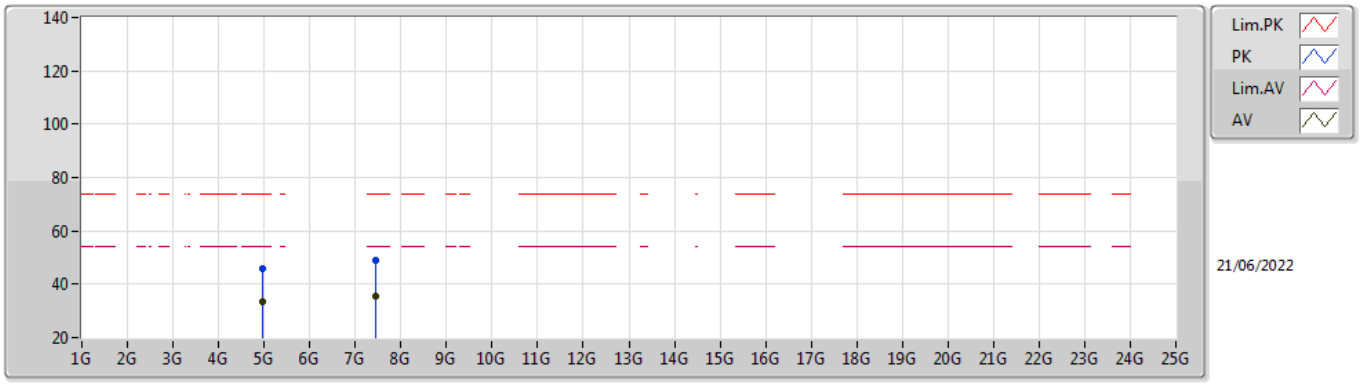


EUT Y_1TX
Setting 14
02-B-C-6

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	4.95916G	45.36	74.00	-28.64	39.11	3	Vertical	193	2.58	-	33.32	5.10	32.17
AV	4.96096G	33.23	54.00	-20.77	26.98	3	Vertical	193	2.58	-	33.32	5.10	32.17
PK	7.44426G	49.59	74.00	-24.41	39.94	3	Vertical	333	2.79	-	36.50	6.20	33.05
AV	7.42734G	35.61	54.00	-18.39	25.93	3	Vertical	333	2.79	-	36.50	6.20	33.02

BT-LE(2Mbps)

2480MHz_TX



EUT Y_1TX
Setting 14
02-B-C-6

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	4.95868G	46.10	74.00	-27.90	39.85	3	Horizontal	125	2.52	-	33.32	5.10	32.17
AV	4.9609G	33.28	54.00	-20.72	27.03	3	Horizontal	125	2.52	-	33.32	5.10	32.17
PK	7.44312G	49.20	74.00	-24.80	39.55	3	Horizontal	217	2.08	-	36.50	6.20	33.05
AV	7.43736G	35.55	54.00	-18.45	25.89	3	Horizontal	217	2.08	-	36.50	6.20	33.04