Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	UDX-600130010
Equipment	:	SMART Camera
Brand Name	:	CISCO
Model Name	:	MV13-HW
Applicant	:	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Manufacturer	:	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Standard	:	47 CFR FCC Part 15.247

The product was received on Mar. 15, 2023, and testing was started from Mar. 16, 2023 and completed on Jul. 19, 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
FR291332-02AD	01	Initial issue of report	Oct. 04, 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	-

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

Reviewed by: Sam Chen
Report Producer: Sophia Shiung

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 (Coded S=2)	1.0	1TX
2.4-2.4835GHz	BT-LE (Coded S=8)	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)
	WLAN 2.4GHz	WLAN 5GHz	Bluetooth					
1	1	1	1	SERCOMM	Ant1	PIFA Antenna	I-PEX	Note 1
2	2	2	2	SERCOMM	Ant2	PIFA Antenna	I-PEX	

Note 1:

Ant.	Antenna Gain (dBi)			
	2.4GHz	5GHz UNII 1~2A	5GHz UNII 2C	5GHz UNII 3
1	3.82	4.21	4.51	3.94
2	1.98	2.62	2.11	2.32

Note 2: The above information was declared by manufacturer.

Note 3: The EUT support TX/RX diversity function.
The Port 1 generated the worst case. Thus it was selected to test and record in the report.

Note 4: **For 2.4GHz function**
For IEEE 802.11 b/g/n/VHT (1TX/1RX):
Both Port 1 and Port 2 can be used as transmitting/receiving antenna.
But only one of them can transmit and receive signal at the same time.
For 5GHz function
For IEEE 802.11a/n/ac (1TX/1RX):
Both Port 1 and Port 2 can be used as transmitting/receiving antenna.
But only one of them can transmit and receive signal at the same time.
For bluetooth function
For bluetooth (1TX/1RX):
Both Port 1 and Port 2 can be used as transmitting/receiving antenna.
But only one of them can transmit and receive signal at the same time.

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)	0.333	4.78	208.125u	10k

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

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QRCT V4.0.00201.0			
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 Multiple Sources of Component Information

The EUT has second source verify for DDR4, UFS-3.1 256GB, PoE Transformer, LAN Transformer, ACT2, RF Connector, CMOS Coaxial Cable, LED Board Cable.
Note: The above information was declared by manufacturer.

1.1.6 EUT Combination Information

Item	Type	EUT 1	EUT 2
1	DDR4	Main Source	Second Source
2	UFS-3.1 256GB	Main Source	Second Source
3	PoE Transformer	Main Source	Second Source
4	LAN Transformer	Main Source	Second Source
5	ACT2	Main Source	Second Source
6	RF Connector	Main Source	Second Source
7	CMOS Coaxial Cable	Main Source	Second Source
8	LED Board Cable	Main Source	Second Source
9	Mic Board Cable	Main Source	Second Source

Note 1: After evaluating, the EUT 1 was selected to test all the test items and recorded in the report; the EUT 2 was selected to test AC power-line conducted emissions and Emissions in Restricted Frequency Bands below 1GHz.

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	Brian Sun	23.5~24.2 / 62~69	Mar. 21, 2023~ May 05, 2023
Radiated < 1GHz	03CH05-CB	Black Lu	21.2-22.3 / 56-59	Jun. 23, 2023~ Jul. 10, 2023
Radiated > 1GHz	03CH06-CB	Roy Mai	21.7~22.8 / 56~59	Mar. 16, 2023~ May 10, 2023
Radiated (For Co-location)	03CH05-CB	Roy Mai	21.2~22.3 / 56~59	Mar. 16, 2023~ May 10, 2023
AC Conduction	CO01-CB	Gray Lee	21~22 / 54~55	Jul. 19, 2023

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.1 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	Maximum
2440MHz	Maximum
2480MHz	Maximum
BT-LE(2Mbps)	-
2402MHz	Maximum
2440MHz	Maximum
2478MHz	Maximum
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 1 connected via Ethernet - Day mode + PoE 1
2	EUT 1 connected via Ethernet - Night mode + PoE 1
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3~6 will follow this same test mode.	
3	EUT 1 connected via WLAN 2.4GHz - Night mode + PoE 1
4	EUT 1 connected via WLAN 2.4GHz - Night mode + PoE 2
5	EUT 1 connected via WLAN 5GHz - Night mode + PoE 1
6	EUT 1 connected via WLAN 5GHz - Night mode + PoE 2
Mode 2 has been evaluated to be the worst case among Mode 1~6, thus measurement for Mode 7 will follow this same test mode.	
7	EUT 2 connected via Ethernet - Night mode + PoE 1
For operating, Mode 2 is the worst case and it was recorded 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
1	EUT 1

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 1 in Z axis connected via Ethernet - Day mode + PoE 1
2	EUT 1 in Y axis connected via Ethernet - Day mode + PoE 1
3	EUT 1 in X axis connected via Ethernet - Day mode + PoE 1
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	EUT 1 in Z axis connected via Ethernet - Night mode + PoE 1
Mode 4 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~8 will follow this same test mode.	
5	EUT 1 in Z axis connected via WLAN 2.4GHz - Night mode + PoE 1
6	EUT 1 in Z axis connected via WLAN 2.4GHz - Night mode + PoE 2
7	EUT 1 in Z axis connected via WLAN 5GHz - Night mode + PoE 1
8	EUT 1 in Z axis connected via WLAN 5GHz - Night mode + PoE 2
Mode 7 has been evaluated to be the worst case among Mode 1~8, thus measurement for Mode 9 will follow this same test mode.	
9	EUT 2 in Z axis connected via WLAN 5GHz - Night mode + PoE 1
For operating, mode 9 is the worst case and it was recorded 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 Z axis. Thus, the measurement will follow this same test configuration.
1	EUT 1 in Z axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
	EUT in Y axis generated the worst case at Radiated measurement above 1GHz (CTX – Harmonic) for WLAN 2.4GHz and 5GHz. Consequently, the measurement will follow this same test mode.
1	EUT 1 in Y axis + Bluetooth + WLAN 2.4GHz
2	EUT 1 in Y axis + Bluetooth + WLAN 5GHz
For operating, mode 2 is the worst case and it was recorded in this test report.	
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT 1 + Bluetooth + WLAN 2.4GHz
2	EUT 1 + Bluetooth + WLAN 5GHz
Refer to Sporton Test Report No.: FA291332-02 for Co-location RF Exposure Evaluation.	

Note: The PoEs were for measurement only and would not be marketed.
Their information is shown as below:

Support Unit	Brand	Model
PoE 1	PHIHONG	POEA33U-1ATE
PoE 2	Cisco	MA-PWR-MV-LV

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories
Wall-mounted rack 1*1
Wall-mounted rack 2*1
Wall-mounted rack 3*1

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE 1	PHIHONG	POEA30U-1AT-1	N/A
B	LAN NB	DELL	E6430	N/A
C	Smart phone	Samsung	Galaxy J2	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	Lenovo	L440	N/A
B	PoE 1	PHIHONG	POEA33U-1ATE	N/A
C	WLAN AP	ASUS	RT-AX88U	N/A
D	Smart phone	Samsung	Galaxy J2	N/A

For Radiated (above 1GHz):

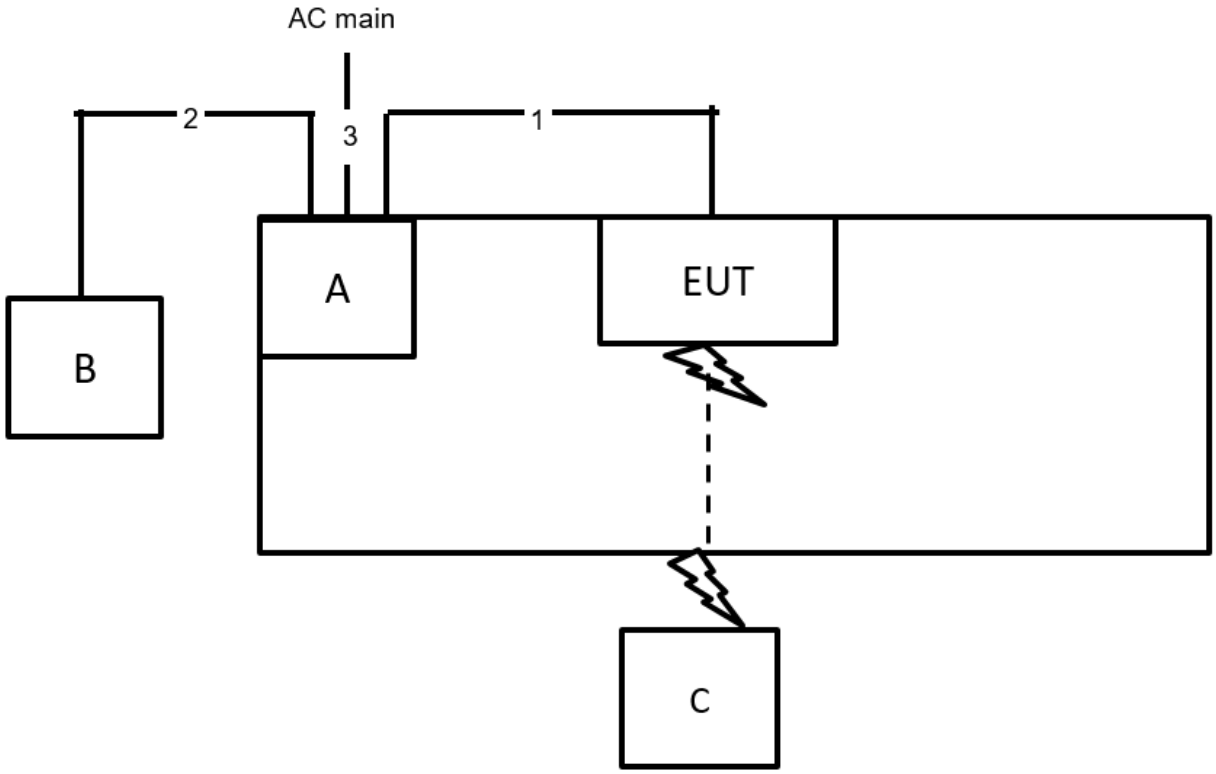
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	PoE 1	PHIHONG	POEA30U-1AT-1	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	PoE 2	Cisco	MA-PWR-MV-LV	N/A

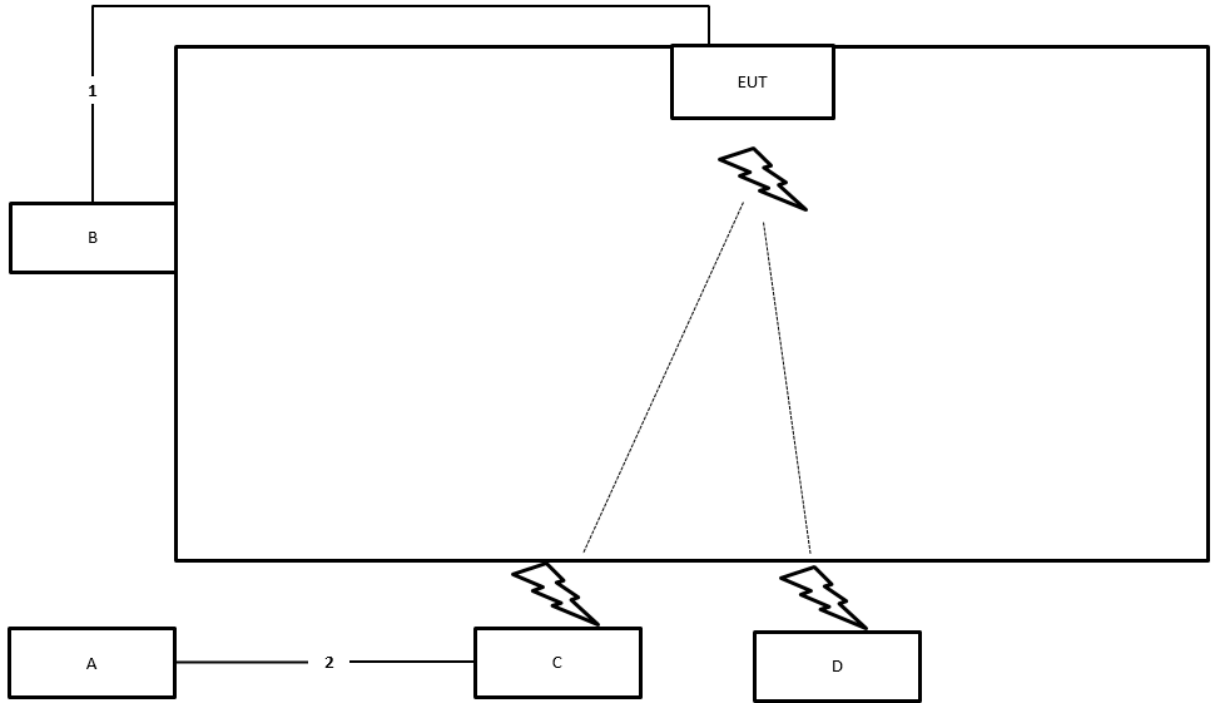
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



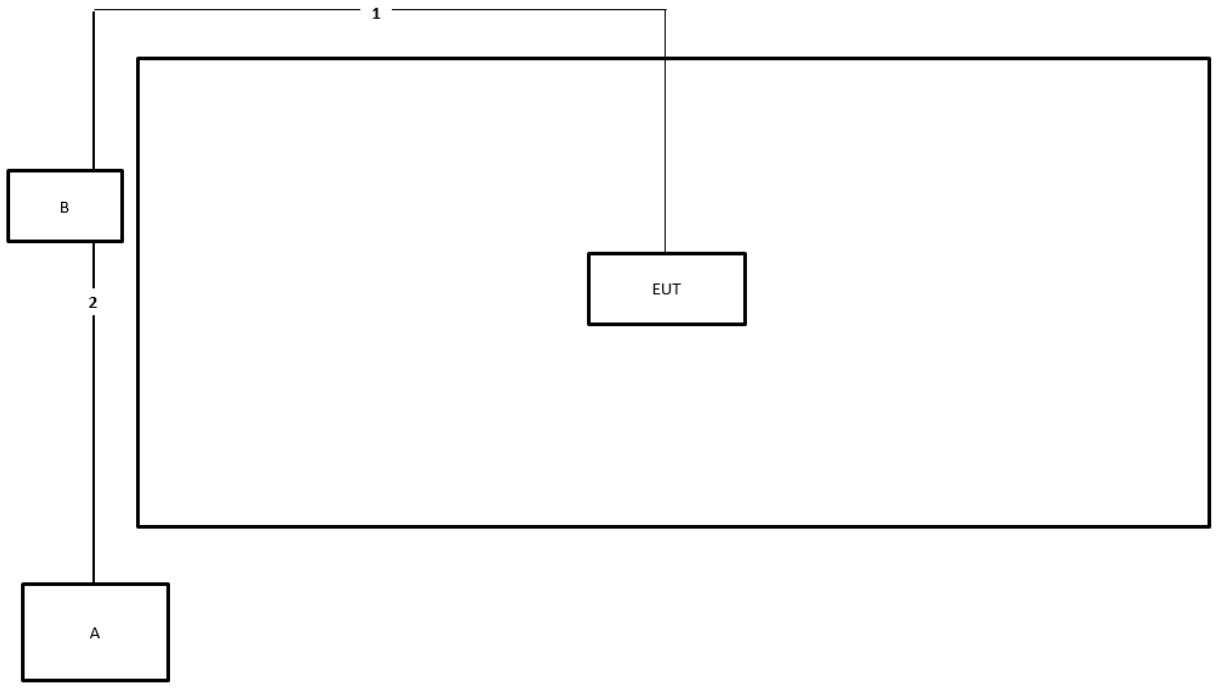
Item	Connection	Shielded	Length
1	RJ-45 cable	No	1.5m
2	RJ-45 cable	No	10m
3	Power cable	No	1m

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



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

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

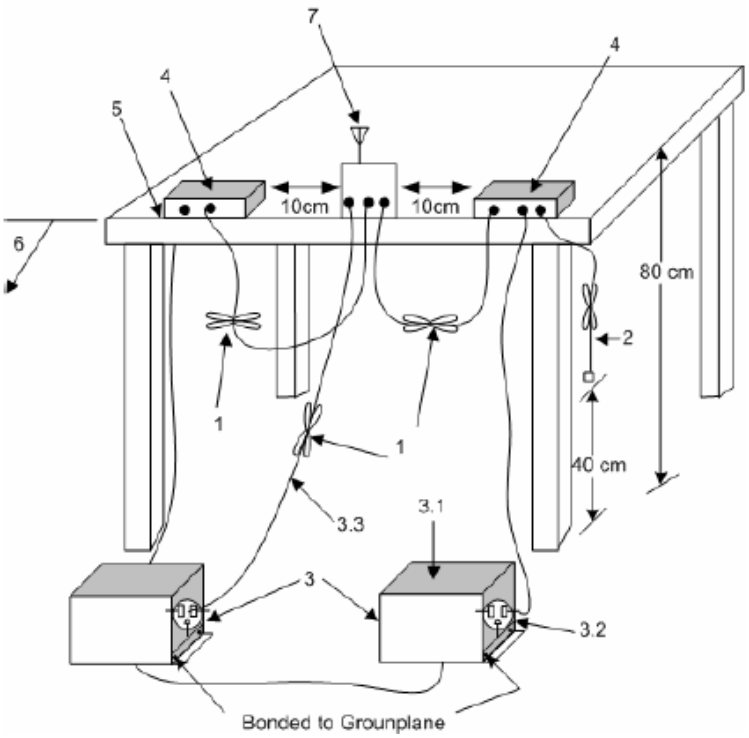
Refer a test equipment and calibration data table in this test report.

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.

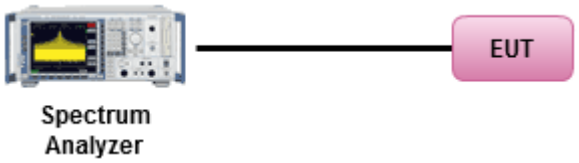
3.2.2 Measuring Instruments

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

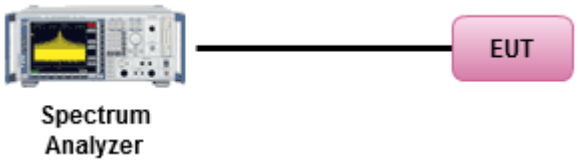
3.4.2 Measuring Instruments

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.	

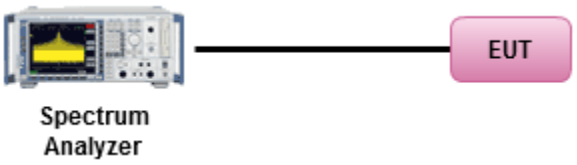
3.5.2 Measuring Instruments

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.

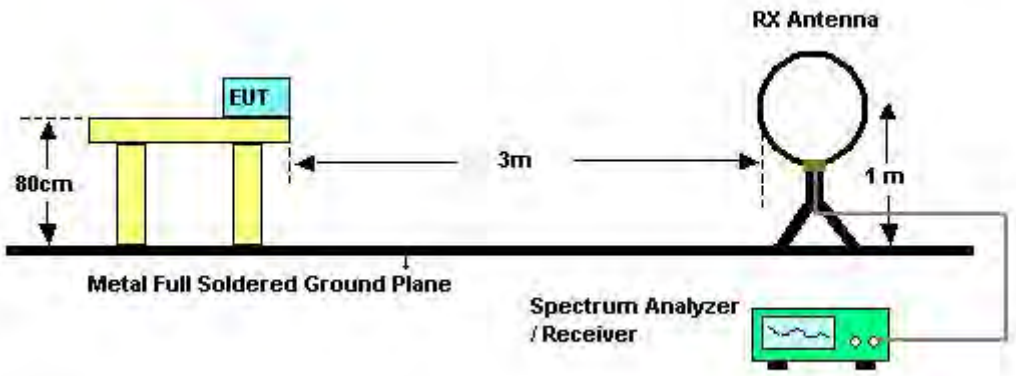
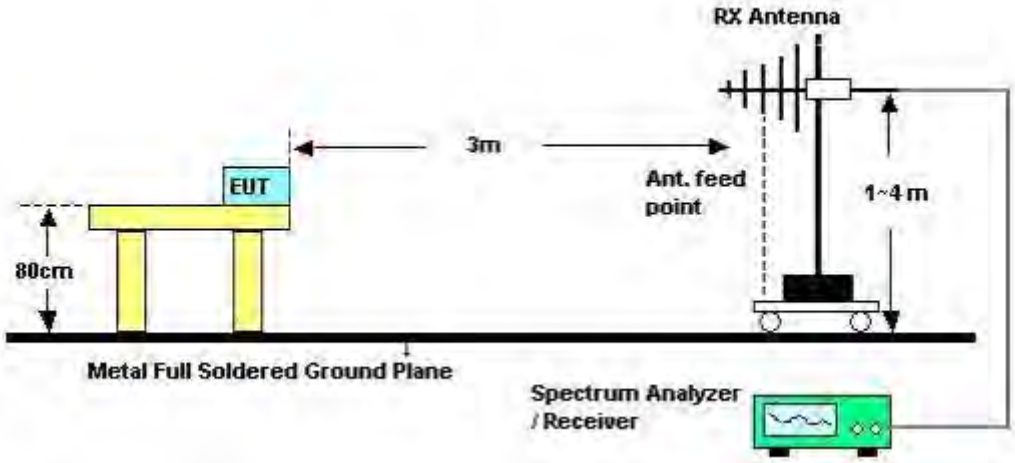
3.6.2 Measuring Instruments

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

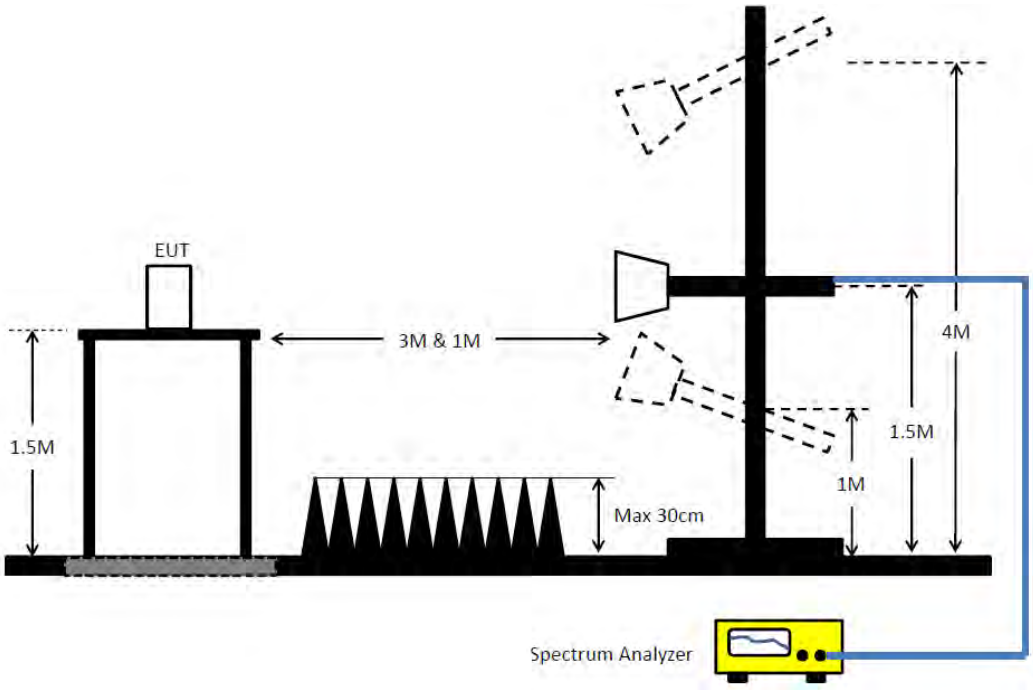
3.6.3 Test Procedures

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. 20, 2023	Feb. 19, 2024	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 16, 2023	Feb. 15, 2024	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 27, 2023	Apr. 26, 2024	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 09, 2023	Feb. 08, 2024	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	31244	9kHz - 30 MHz	Mar. 23, 2023	Mar. 22, 2024	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 03, 2022	Aug. 02, 2023	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 24, 2023	Mar. 23, 2024	Radiation (03CH05-CB)
Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 03, 2023	May 02, 2024	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 06, 2022	Nov. 05, 2023	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 23, 2022	Jun. 22, 2023	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH05-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 16, 2022	Nov. 15, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH05-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	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	03CH06-CB	1GHz ~18GHz 3m	Sep. 30, 2022	Sep. 29, 2023	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Aug. 09, 2022	Aug. 08, 2023	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	Aug 02, 2022	Aug 01, 2023	Radiation (03CH06-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 16, 2022	Nov. 15, 2023	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 21, 2022	Dec. 20, 2023	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-68	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+68	1GHz~18GHz	Dec. 21, 2022	Dec. 20, 2023	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	May 27, 2022	May 26, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1531344	300MHz~ 40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1728002	300MHz~ 40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
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)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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)

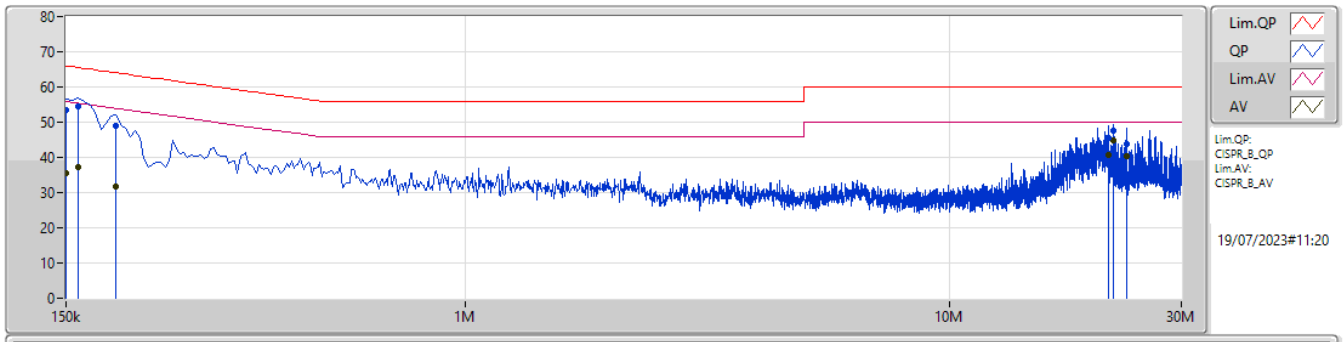
Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.

Summary

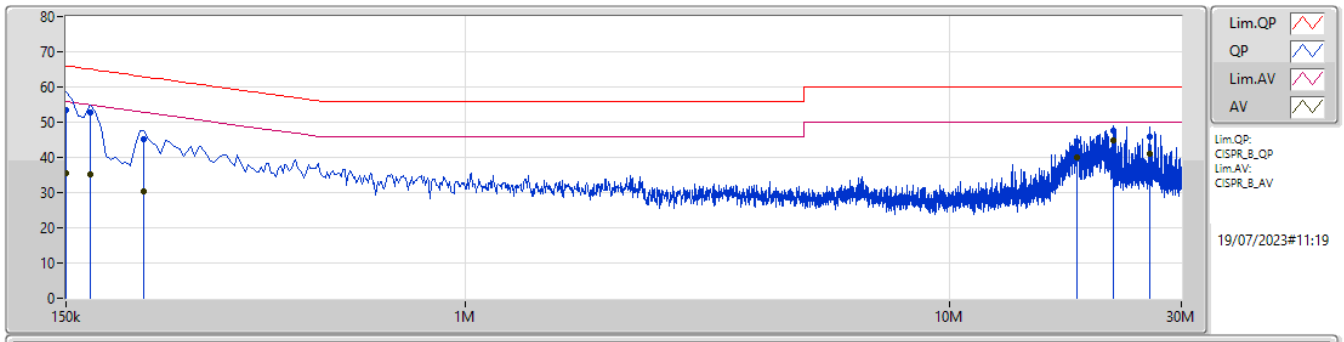
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	21.665M	44.89	50.00	-5.11	Neutral

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	53.43	66.00	-12.57	10.00	Line	-	43.43	0.09	0.04	9.87
AV	150k	35.50	56.00	-20.50	10.00	Line	-	25.50	0.09	0.04	9.87
QP	159k	54.60	65.52	-10.92	10.00	Line	-	44.60	0.09	0.04	9.87
AV	159k	37.13	55.52	-18.39	10.00	Line	-	27.13	0.09	0.04	9.87
QP	190.5k	49.09	64.01	-14.92	9.98	Line	-	39.11	0.08	0.04	9.86
AV	190.5k	31.66	54.01	-22.35	9.98	Line	-	21.68	0.08	0.04	9.86
QP	21.174M	45.47	60.00	-14.53	10.56	Line	-	34.91	0.30	0.24	10.02
AV	21.174M	40.55	50.00	-9.45	10.56	Line	-	29.99	0.30	0.24	10.02
QP	21.665M	47.60	60.00	-12.40	10.57	Line	-	37.03	0.31	0.24	10.02
AV	21.665M	44.87	50.00	-5.13	10.57	Line	"Worst"	34.30	0.31	0.24	10.02
QP	23.132M	43.92	60.00	-16.08	10.61	Line	-	33.31	0.31	0.26	10.04
AV	23.132M	40.18	50.00	-9.82	10.61	Line	-	29.57	0.31	0.26	10.04

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	53.40	66.00	-12.60	9.98	Neutral	-	43.42	0.07	0.04	9.87
AV	150k	35.62	56.00	-20.38	9.98	Neutral	-	25.64	0.07	0.04	9.87
QP	168k	52.65	65.06	-12.41	9.98	Neutral	-	42.67	0.07	0.04	9.87
AV	168k	35.02	55.06	-20.04	9.98	Neutral	-	25.04	0.07	0.04	9.87
QP	217.5k	45.04	62.92	-17.88	9.97	Neutral	-	35.07	0.07	0.04	9.86
AV	217.5k	30.21	52.92	-22.71	9.97	Neutral	-	20.24	0.07	0.04	9.86
QP	18.303M	44.49	60.00	-15.51	10.47	Neutral	-	34.02	0.27	0.20	10.00
AV	18.303M	39.94	50.00	-10.06	10.47	Neutral	-	29.47	0.27	0.20	10.00
QP	21.665M	47.65	60.00	-12.35	10.57	Neutral	-	37.08	0.31	0.24	10.02
AV	21.665M	44.89	50.00	-5.11	10.57	Neutral	"Worst"	34.32	0.31	0.24	10.02
QP	25.877M	45.82	60.00	-14.18	10.71	Neutral	-	35.11	0.36	0.29	10.06
AV	25.877M	40.96	50.00	-9.04	10.71	Neutral	-	30.25	0.36	0.29	10.06

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)	667.5k	1.029M	1M03F1D	662.5k	1.026M
BT-LE(2Mbps)	1.145M	2.039M	2M04F1D	1.14M	2.03M

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

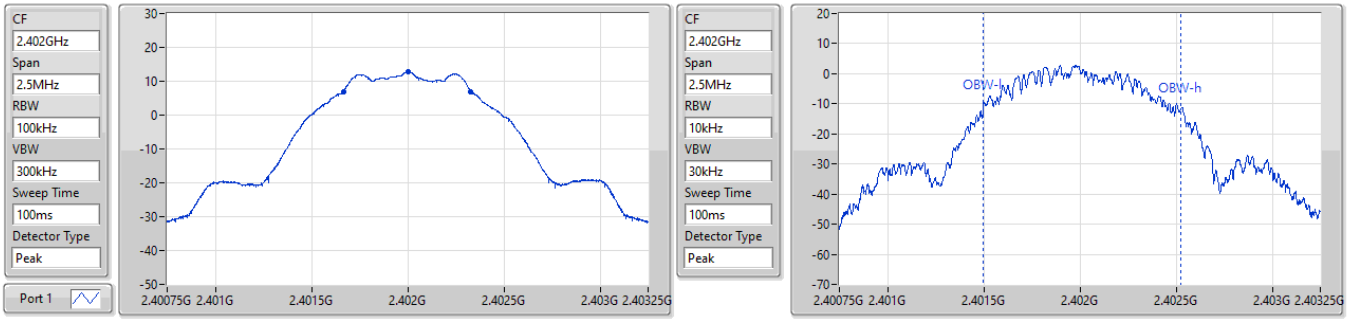
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	662.5k	1.026M
2440MHz	Pass	500k	667.5k	1.026M
2480MHz	Pass	500k	666.25k	1.029M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.14M	2.039M
2440MHz	Pass	500k	1.145M	2.036M
2480MHz	Pass	500k	1.14M	2.03M

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

2.4-2.4835GHz_BT-LE(1Mbps) **EBW-DTS**

2402MHz

05/05/2023

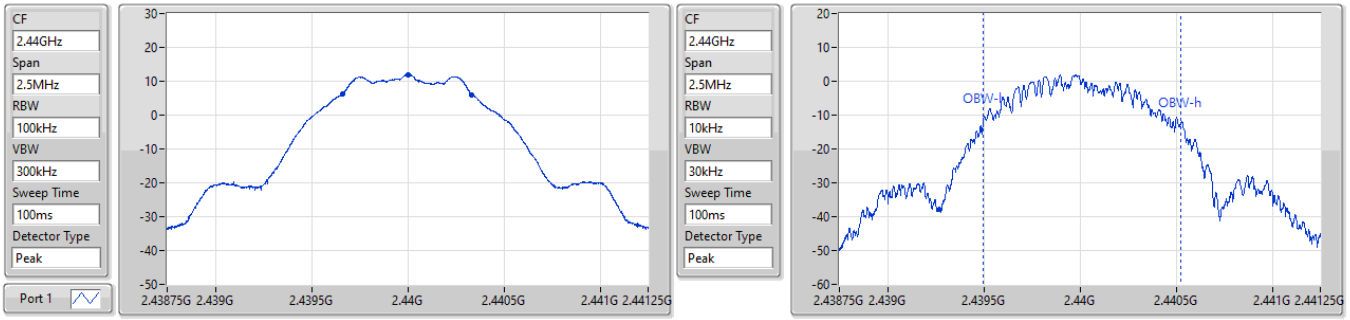


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
662.5k	2.401665G	2.402328G	1.026M	2.401498G	2.402525G	500k	1

2.4-2.4835GHz_BT-LE(1Mbps) **EBW-DTS**

2440MHz

05/05/2023



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
667.5k	2.439663G	2.44033G	1.026M	2.439498G	2.440524G	500k	1

2.4-2.4835GHz_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
666.25k	2.479663G	2.480329G	1.029M	2.479496G	2.480525G	500k	1

2.4-2.4835GHz_BT-LE(2Mbps) **EBW-DTS**

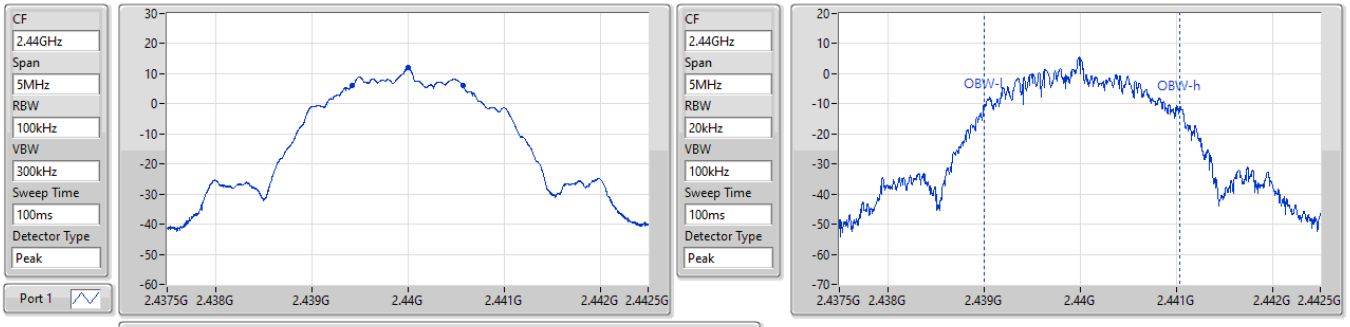
2402MHz

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.14M	2.401433G	2.402573G	2.039M	2.401001G	2.40304G	500k	1

2.4-2.4835GHz_BT-LE(2Mbps) **EBW-DTS**

2440MHz

05/05/2023

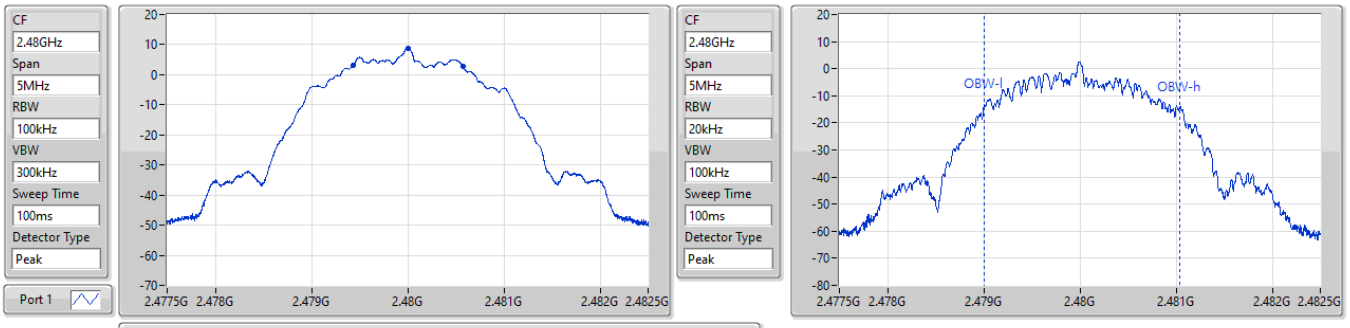


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.145M	2.439428G	2.440573G	2.036M	2.439002G	2.441038G	500k	1

2.4-2.4835GHz_BT-LE(2Mbps) **EBW-DTS**

2480MHz

05/05/2023



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.14M	2.479435G	2.480575G	2.03M	2.479005G	2.481035G	500k	1

Summary

Mode	Total Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	12.55	0.01799
BT-LE(2Mbps)	11.93	0.01560

Result

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.82	12.55	30.00
2440MHz	Pass	3.82	11.46	30.00
2480MHz	Pass	3.82	12.27	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	3.82	11.93	30.00
2440MHz	Pass	3.82	11.16	30.00
2478MHz	Pass	3.82	11.81	30.00
2480MHz	Pass	3.82	7.99	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-2.62
BT-LE(2Mbps)	-5.78

RBW = 3kHz;

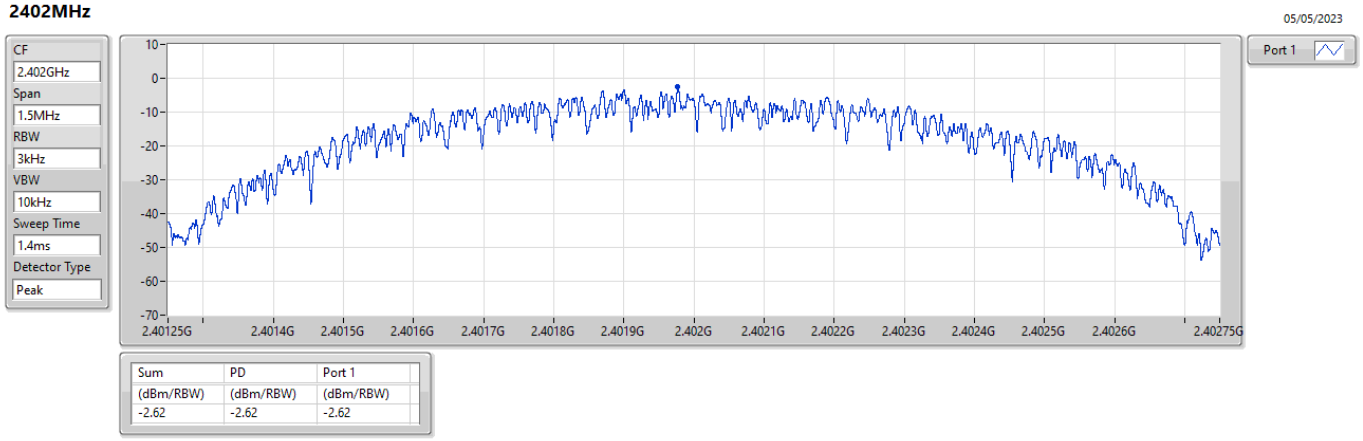
Result

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.82	-2.62	8.00
2440MHz	Pass	3.82	-2.83	8.00
2480MHz	Pass	3.82	-3.77	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	3.82	-5.78	8.00
2440MHz	Pass	3.82	-6.39	8.00
2480MHz	Pass	3.82	-10.20	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;

2.4-2.4835GHz_BT-LE(1Mbps) **PSD**

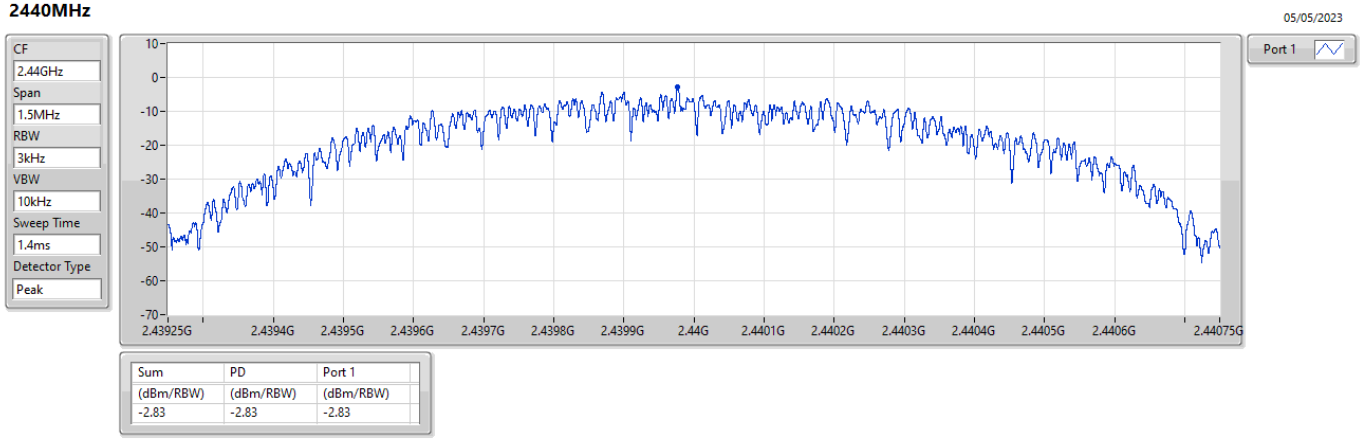
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.62	-2.62	-2.62

2.4-2.4835GHz_BT-LE(1Mbps) **PSD**

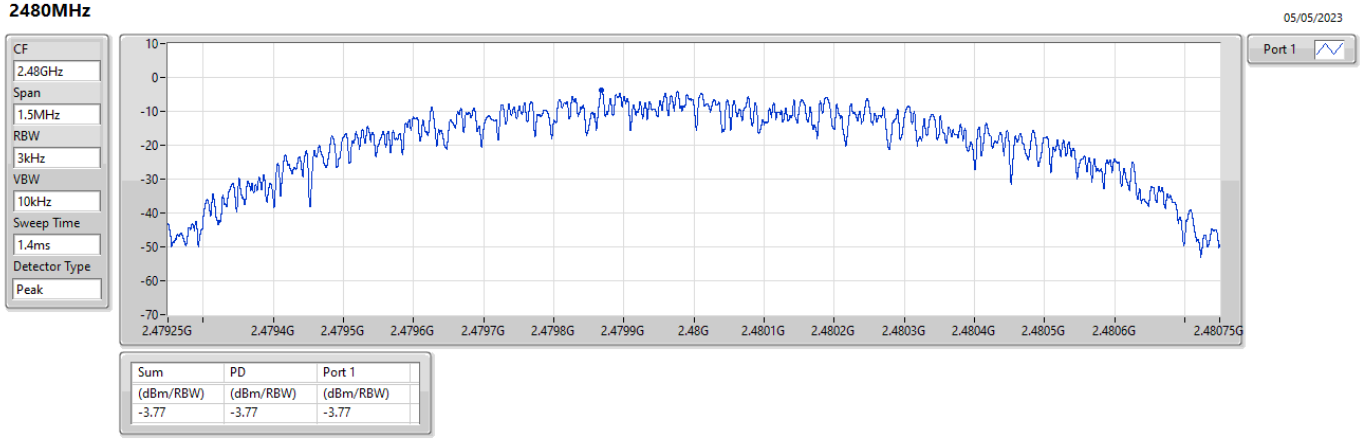
2440MHz



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

2.4-2.4835GHz_BT-LE(1Mbps) **PSD**

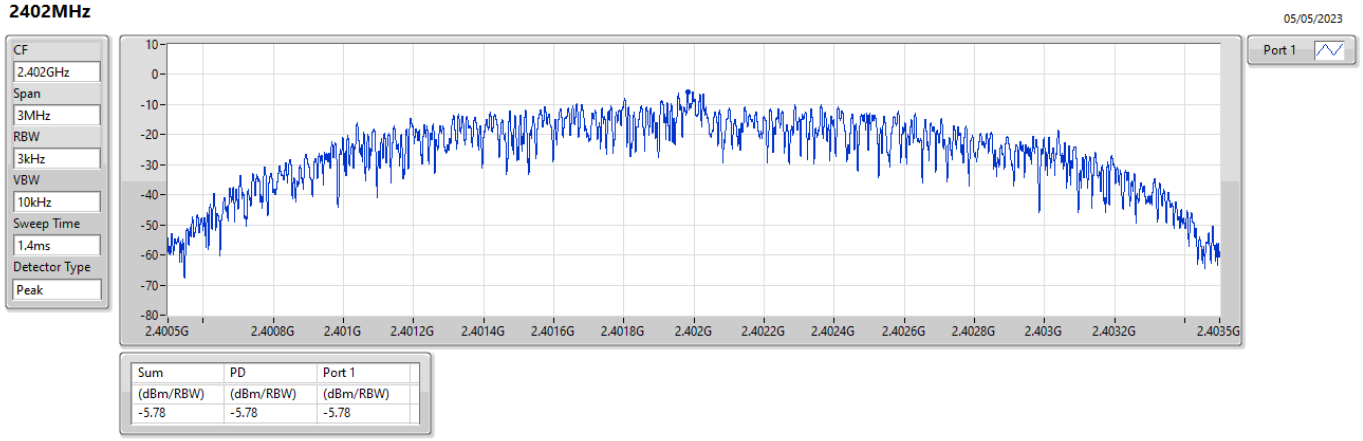
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.77	-3.77	-3.77

2.4-2.4835GHz_BT-LE(2Mbps) **PSD**

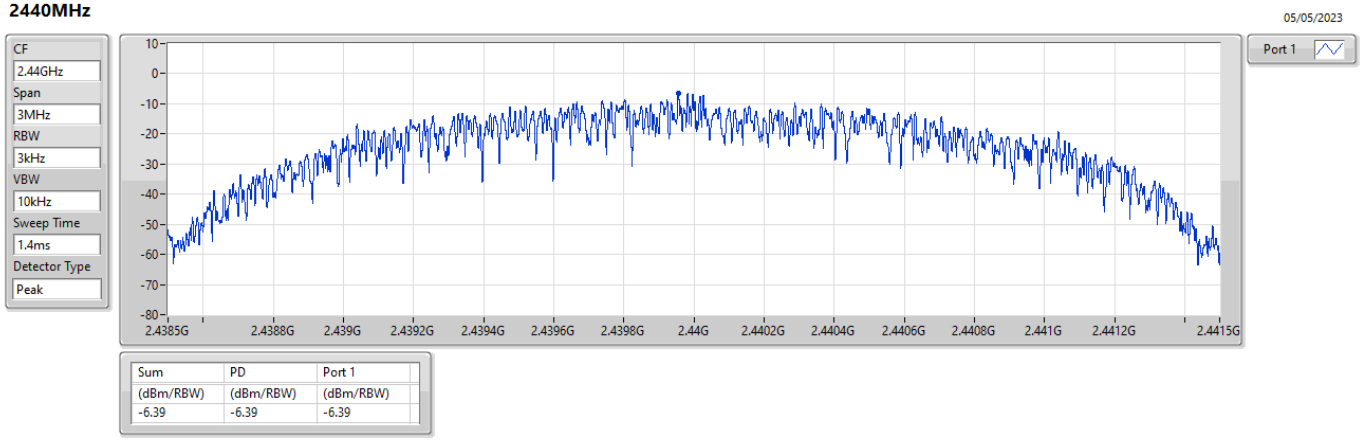
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.78	-5.78	-5.78

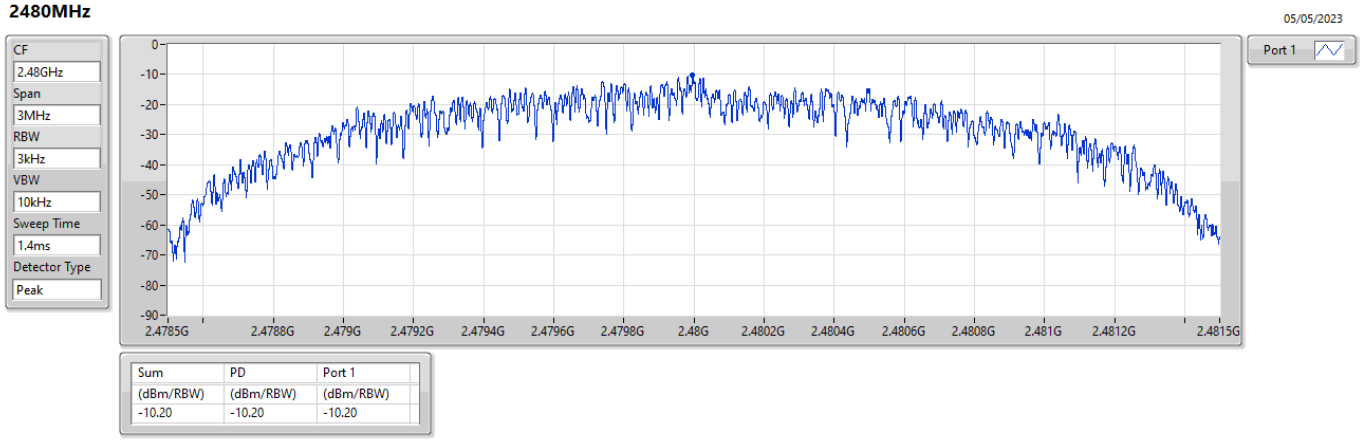
2.4-2.4835GHz_BT-LE(2Mbps) **PSD**

2440MHz



2.4-2.4835GHz_BT-LE(2Mbps) **PSD**

2480MHz



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	2.40184G	12.57	-17.43	1.96053G	-53.74	2.4G	-41.19	2.4G	-39.18	2.5017G	-51.68	21.70989G	-46.49	1
BT-LE(2Mbps)	Pass	2.402G	12.72	-17.28	1.65385G	-53.35	2.4G	-22.51	2.4G	-22.91	2.50154G	-51.71	21.74363G	-46.19	1

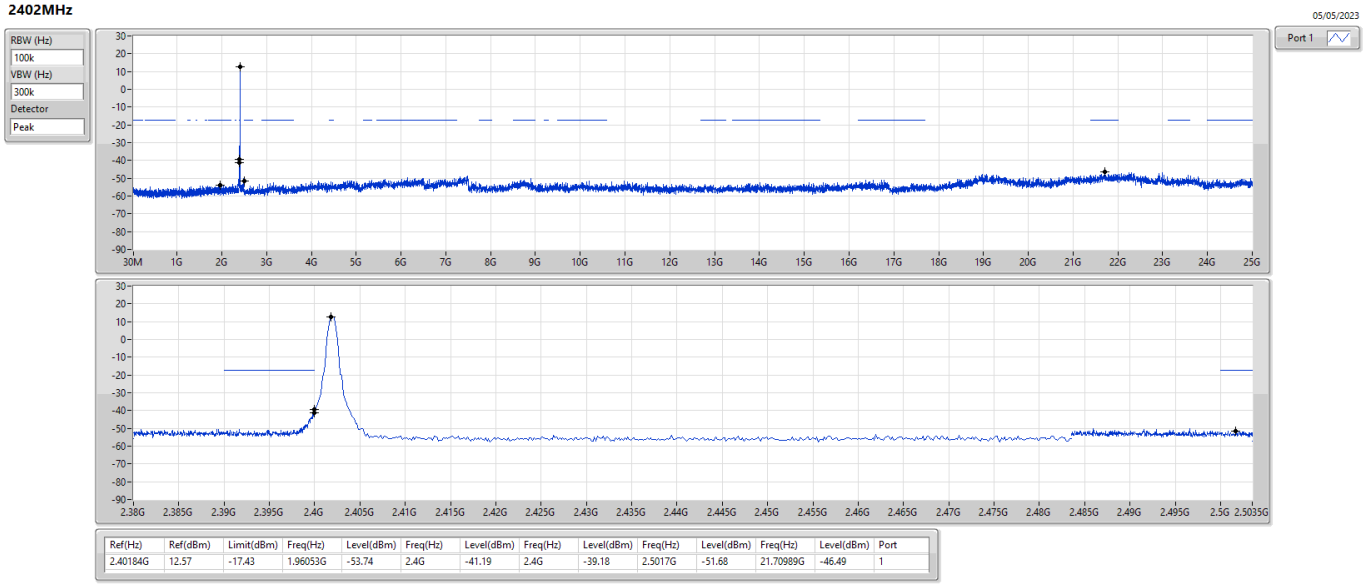
Result

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	2.40184G	12.57	-17.43	1.96053G	-53.74	2.4G	-41.19	2.4G	-39.18	2.5017G	-51.68	21.70989G	-46.49	1
2440MHz	Pass	2.40184G	12.57	-17.43	1.89943G	-52.82	2.39268G	-51.07	2.4G	-56.71	2.50286G	-50.95	21.70989G	-46.51	1
2480MHz	Pass	2.40184G	12.57	-17.43	2.02045G	-53.59	2.3936G	-51.01	2.4G	-55.84	2.50194G	-50.85	21.96016G	-47.15	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	12.72	-17.28	1.65385G	-53.35	2.4G	-22.51	2.4G	-22.91	2.50154G	-51.71	21.74363G	-46.19	1
2440MHz	Pass	2.402G	12.72	-17.28	1.7972G	-54.27	2.39056G	-50.76	2.4G	-56.19	2.50298G	-51.16	21.61146G	-46.97	1
2480MHz	Pass	2.402G	12.72	-17.28	1.92998G	-53.22	2.39396G	-50.26	2.4G	-56.73	2.50266G	-51.65	21.64802G	-46.90	1

2.4-2.4835GHz_BT-LE(1Mbps)

CSENdB-DTS

2402MHz

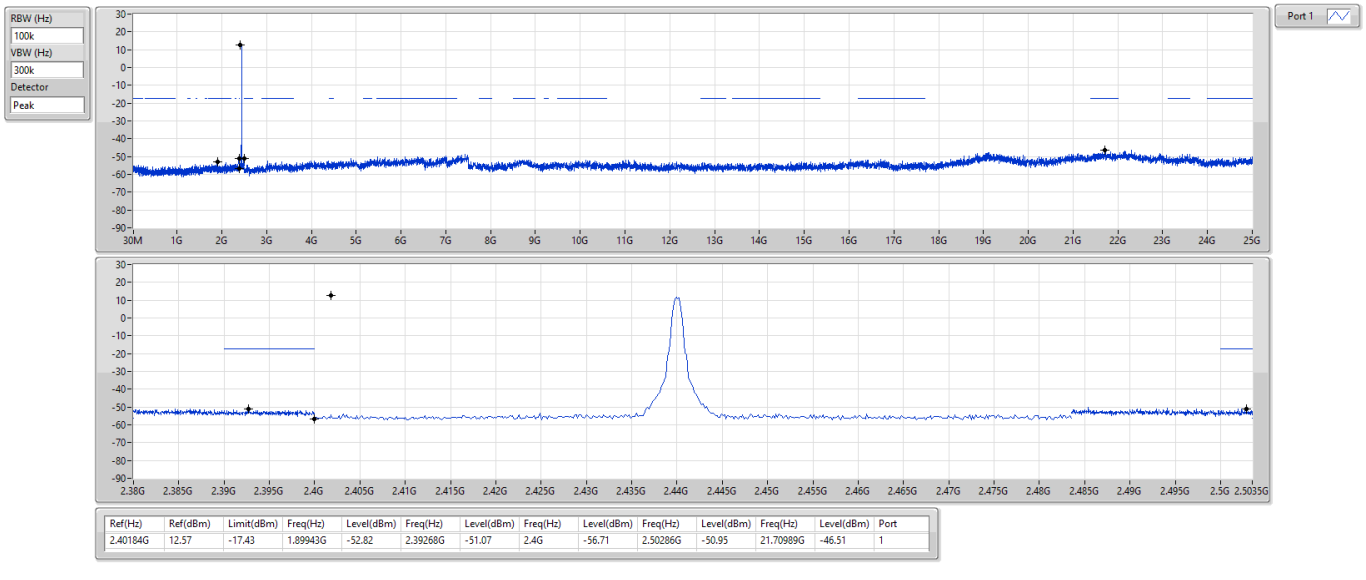


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40184G	12.57	-17.43	1.96053G	-53.74	2.4G	-41.19	2.4G	-39.18	2.5017G	-51.68	21.70989G	-46.49	1

2.4-2.4835GHz_BT-LE(1Mbps)

CSENdB-DTS

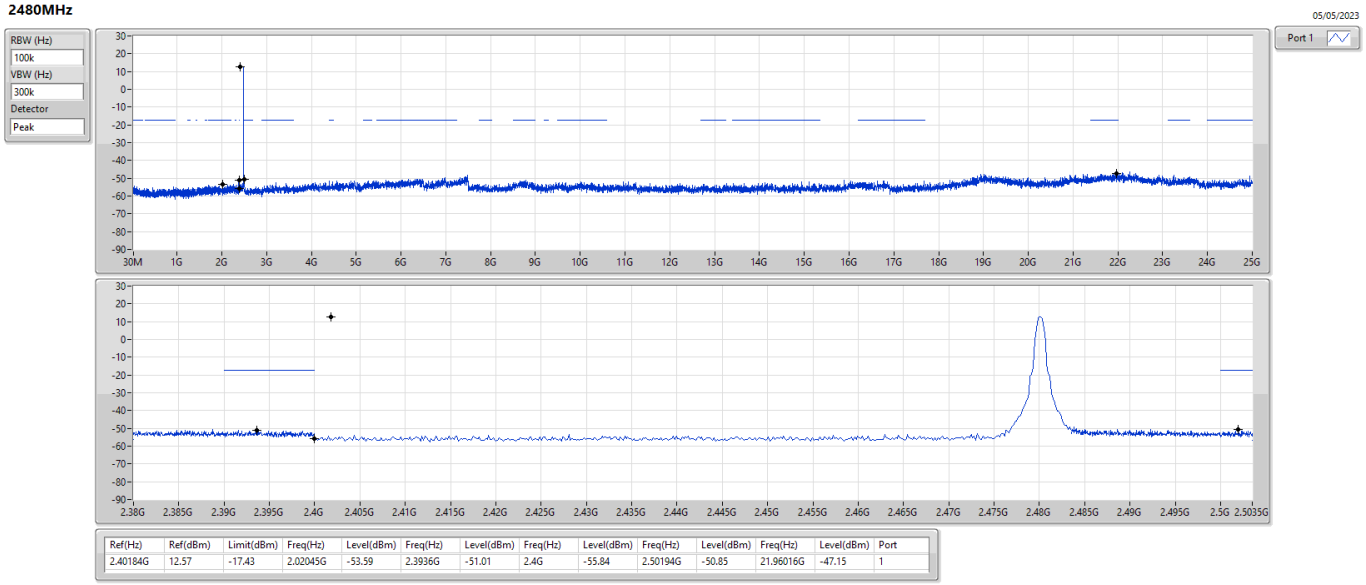
2440MHz



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
2.40184G	12.57	-17.43	1.89943G	-52.82	2.39268G	-51.07	2.4G	-56.71	2.50286G	-50.95	21.70989G	-46.51	1

2.4-2.4835GHz_BT-LE(1Mbps) CSENdB-DTS

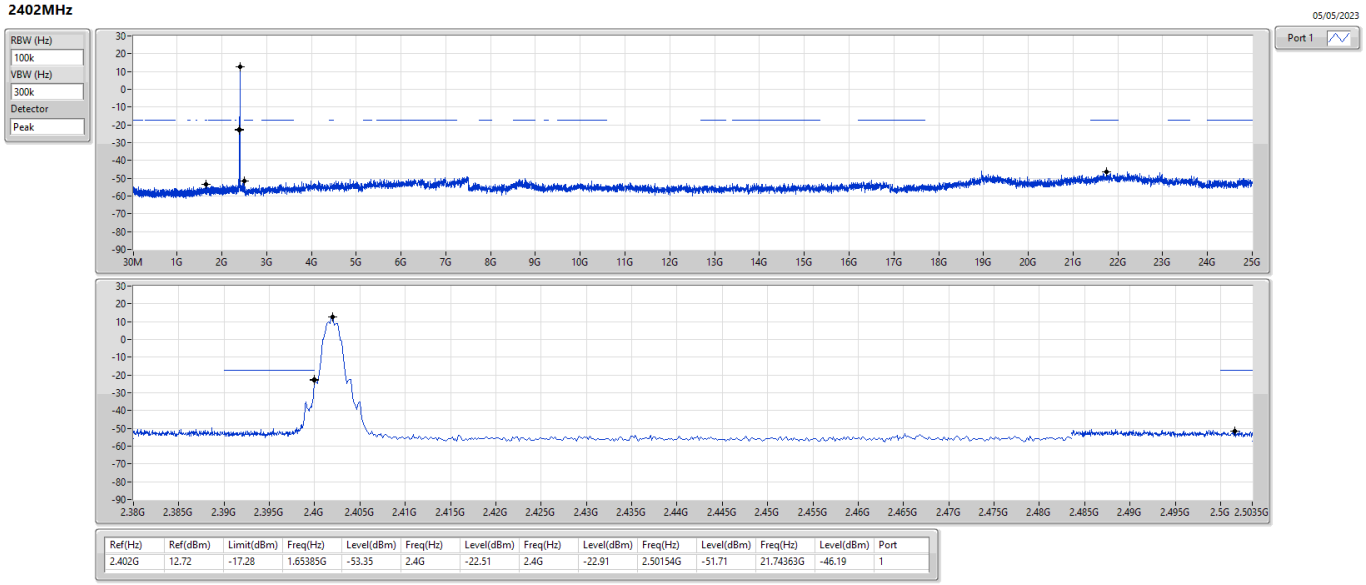
2480MHz



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
2.40184G	12.57	-17.43	2.02045G	-53.59	2.3936G	-51.01	2.4G	-55.84	2.50194G	-50.85	21.96016G	-47.15	1

2.4-2.4835GHz_BT-LE(2Mbps) CSENdB-DTS

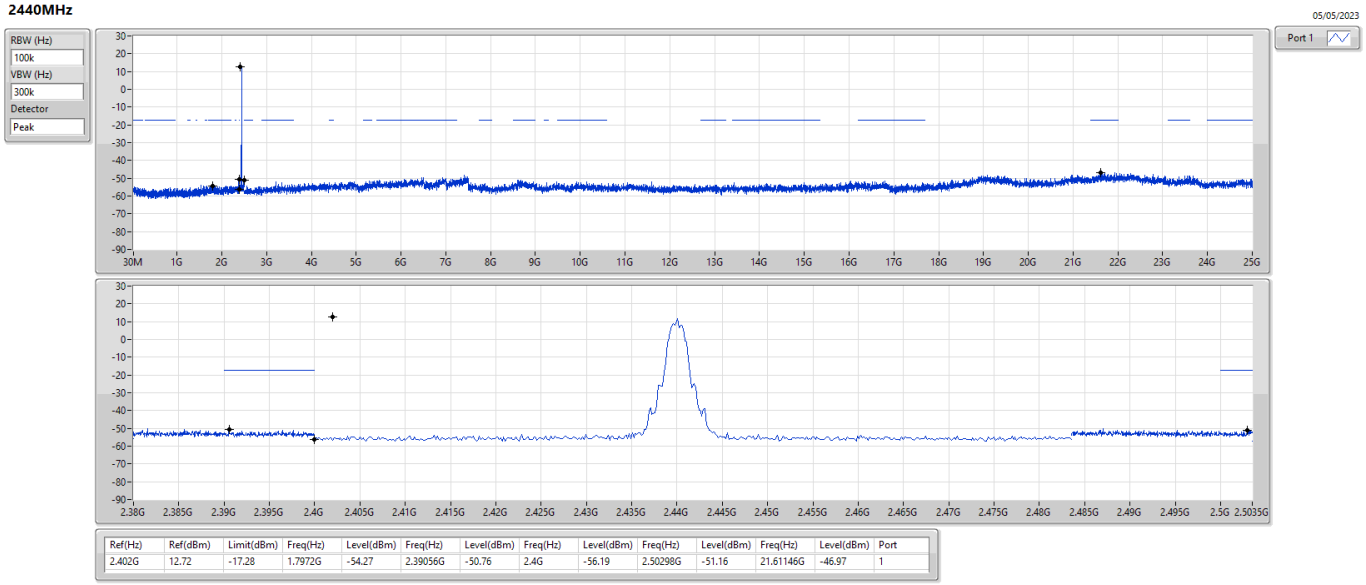
2402MHz



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	12.72	-17.28	1.65385G	-53.35	2.4G	-22.51	2.4G	-22.91	2.50154G	-51.71	21.74363G	-46.19	1

2.4-2.4835GHz_BT-LE(2Mbps) CSENdB-DTS

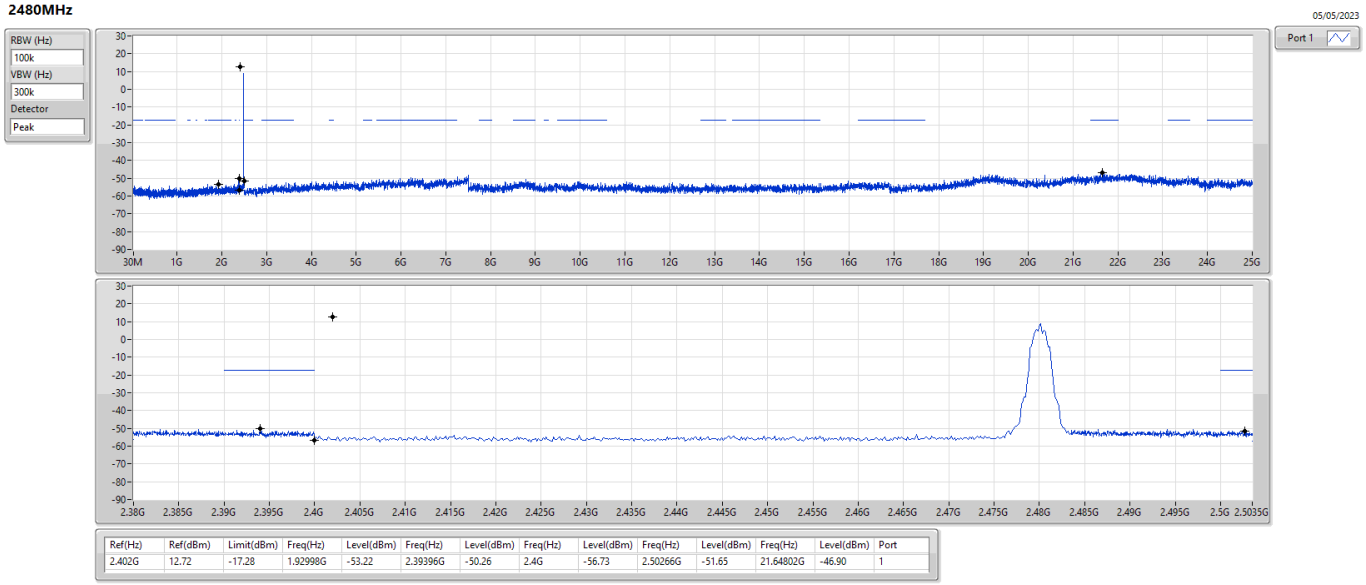
2440MHz



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	12.72	-17.28	1.7972G	-54.27	2.39056G	-50.76	2.4G	-56.19	2.50298G	-51.16	21.61146G	-46.97	1

2.4-2.4835GHz_BT-LE(2Mbps) CSENdB-DTS

2480MHz

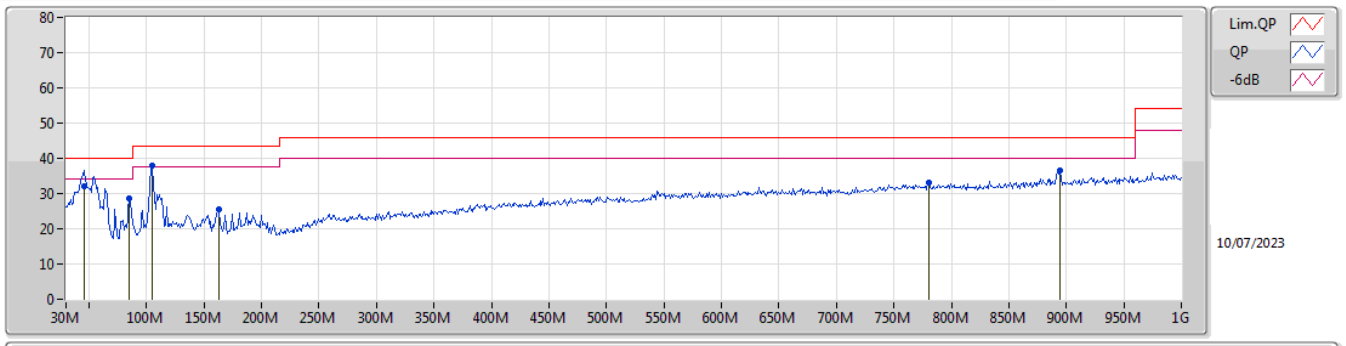


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	12.72	-17.28	1.92998G	-53.22	2.39396G	-50.26	2.4G	-56.73	2.50266G	-51.65	21.64802G	-46.90	1

Summary

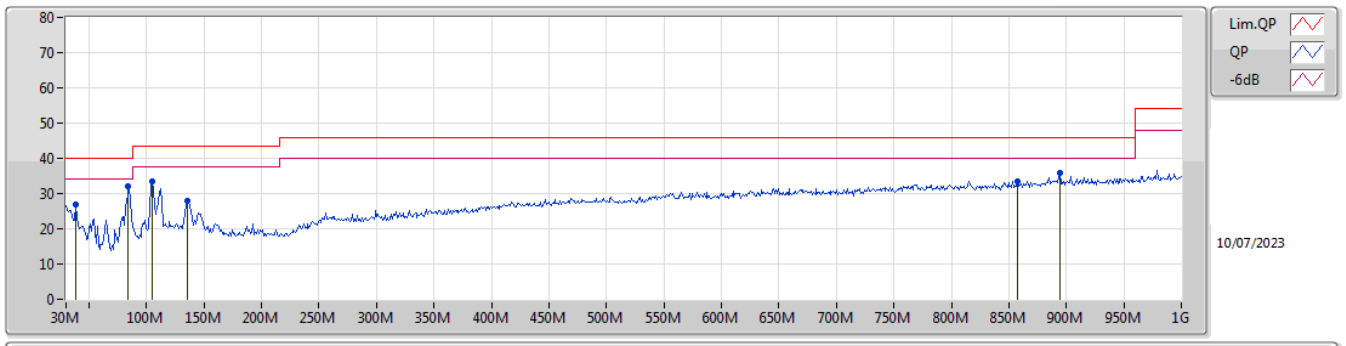
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 9	Pass	PK	104.69M	37.93	43.50	-5.57	Vertical

Mode 9



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
QP	45.52M	32.23	40.00	-7.77	-14.61	3	Vertical	2	1.00	-	46.84	15.99	1.22	31.82
PK	85.29M	28.52	40.00	-11.48	-16.43	3	Vertical	166	1.00	-	44.95	13.89	1.58	31.90
PK	104.69M	37.93	43.50	-5.57	-12.75	3	Vertical	202	1.25	"Worst"	50.68	17.45	1.75	31.95
PK	162.89M	25.49	43.50	-18.01	-14.01	3	Vertical	146	1.00	-	39.50	15.86	2.17	32.04
PK	780.78M	33.04	46.00	-12.96	-1.90	3	Vertical	5	1.00	-	34.94	25.60	5.13	32.63
PK	894.27M	36.53	46.00	-9.47	-0.46	3	Vertical	360	3.00	-	36.99	26.37	5.64	32.47

Mode 9



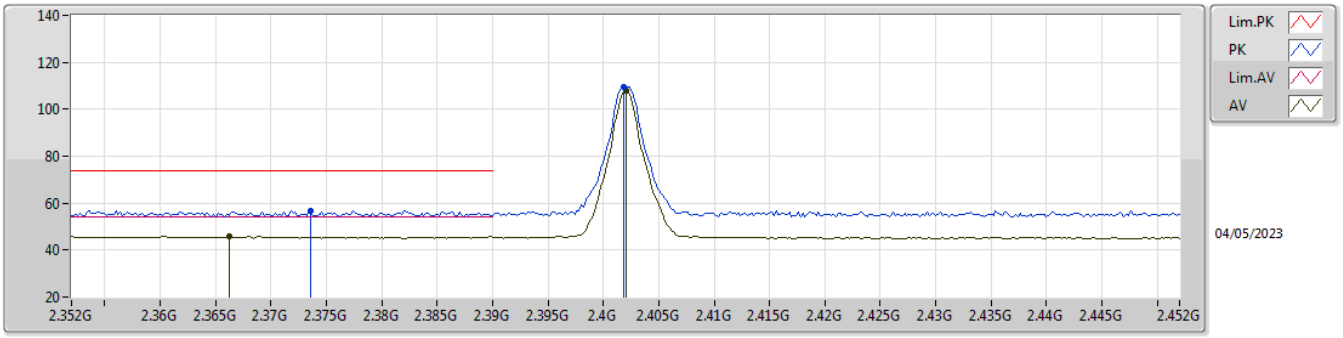
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	38.73M	26.90	40.00	-13.10	-11.18	3	Horizontal	325	1.00	-	38.08	19.45	1.13	31.76
PK	84.32M	32.16	40.00	-7.84	-16.62	3	Horizontal	320	1.00	"Worst"	48.78	13.70	1.58	31.90
PK	104.69M	33.30	43.50	-10.20	-12.75	3	Horizontal	356	1.50	-	46.05	17.45	1.75	31.95
PK	135.73M	27.87	43.50	-15.63	-12.42	3	Horizontal	241	1.50	-	40.29	17.57	1.98	31.97
PK	857.41M	33.61	46.00	-12.39	-1.14	3	Horizontal	265	2.00	-	34.75	26.02	5.44	32.60
PK	894.27M	35.74	46.00	-10.26	-0.46	3	Horizontal	285	1.50	-	36.20	26.37	5.64	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(2Mbps)	Pass	AV	2.4835G	52.90	54.00	-1.10	3	Vertical	258	1.80	-

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

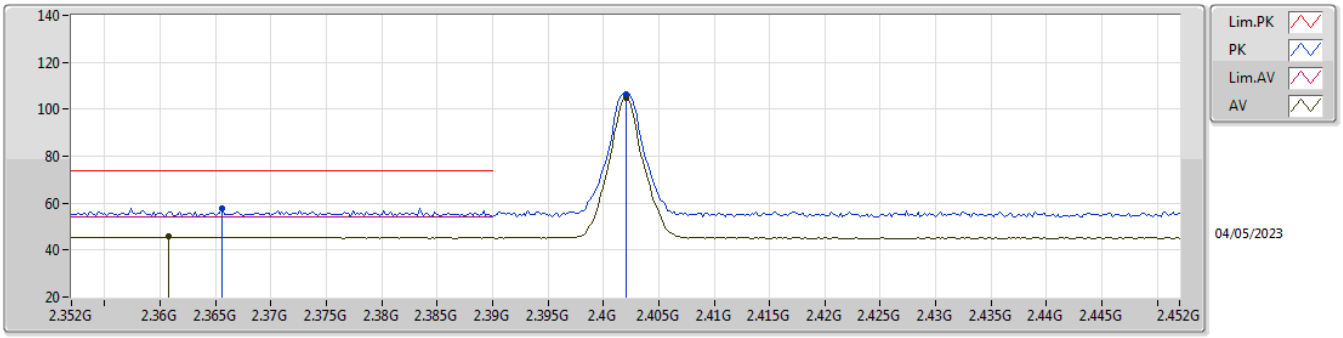


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3736G	56.90	74.00	-17.10	24.14	3	Vertical	231	1.11	-	27.71	5.05	-
AV	2.3662G	45.73	54.00	-8.27	12.96	3	Vertical	231	1.11	-	27.74	5.03	-
PK	2.4018G	109.55	Inf	-Inf	76.84	3	Vertical	231	1.11	-	27.60	5.11	-
AV	2.402G	108.14	Inf	-Inf	75.43	3	Vertical	231	1.11	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

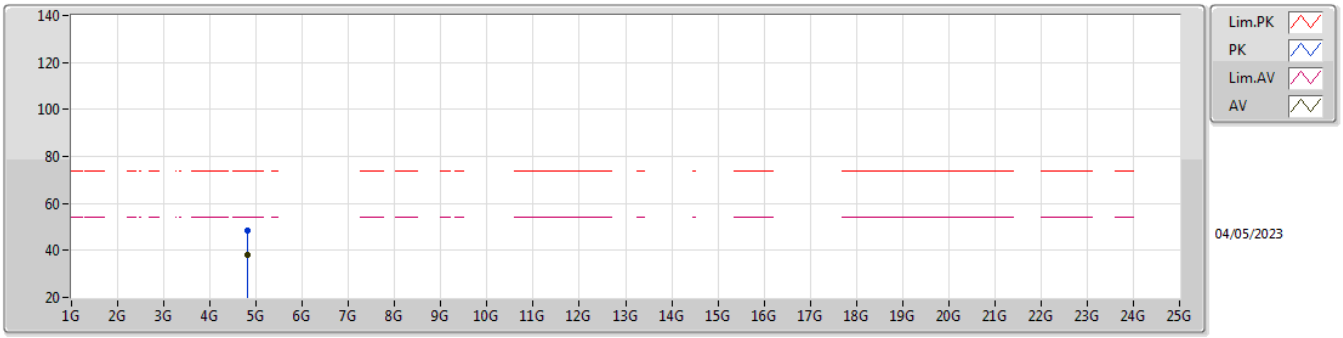


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3656G	57.99	74.00	-16.01	25.22	3	Horizontal	266	1.54	-	27.74	5.03	-
AV	2.3608G	45.63	54.00	-8.37	12.85	3	Horizontal	266	1.54	-	27.76	5.02	-
PK	2.402G	106.51	Inf	-Inf	73.80	3	Horizontal	266	1.54	-	27.60	5.11	-
AV	2.402G	105.07	Inf	-Inf	72.36	3	Horizontal	266	1.54	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

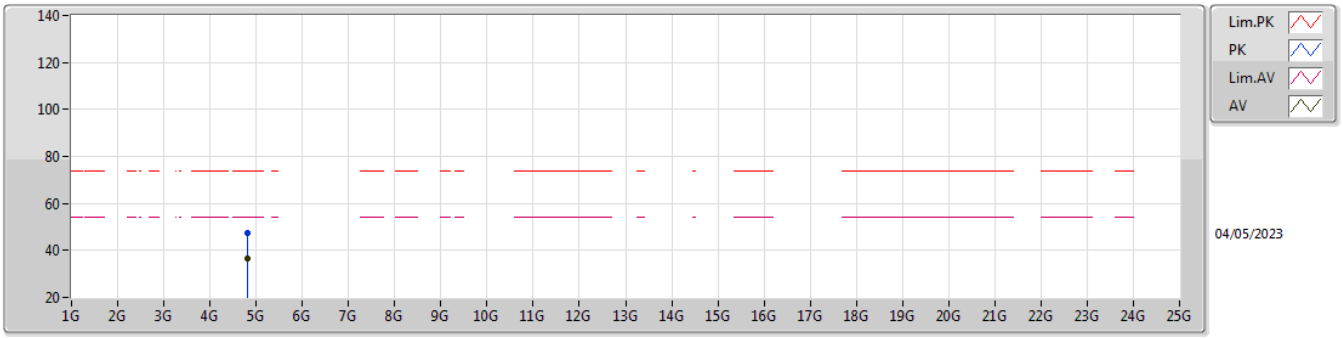


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80426G	48.63	74.00	-25.37	43.10	3	Vertical	274	1.80	-	31.31	6.75	32.53
AV	4.80376G	37.97	54.00	-16.03	32.44	3	Vertical	274	1.80	-	31.31	6.75	32.53

2.4-2.4835GHz_BT-LE(1Mbps)

2402MHz_TX

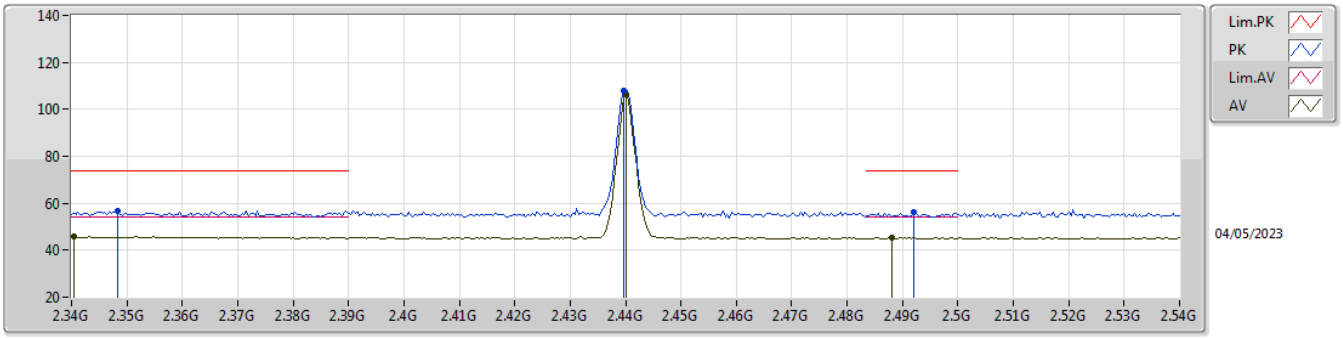


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80415G	47.44	74.00	-26.56	41.91	3	Horizontal	169	2.95	-	31.31	6.75	32.53
AV	4.80366G	36.79	54.00	-17.21	31.26	3	Horizontal	169	2.95	-	31.31	6.75	32.53

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

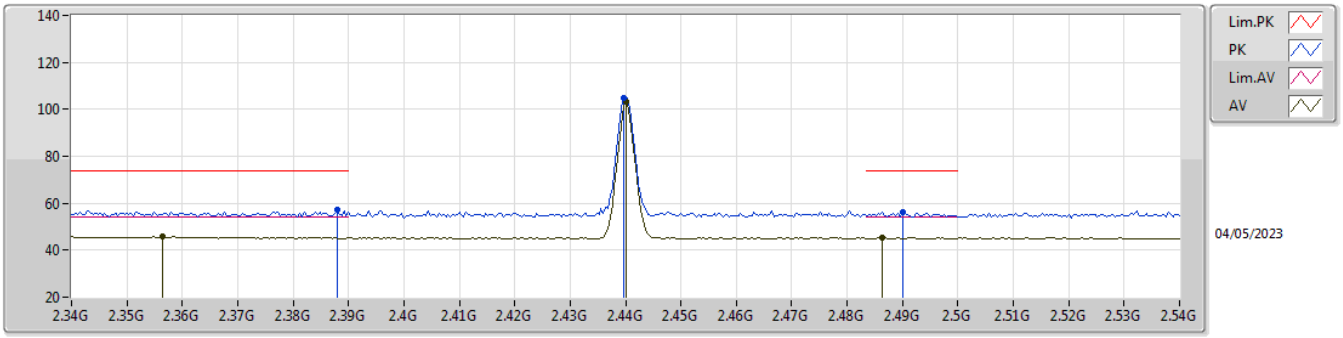


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3484G	56.88	74.00	-17.12	24.08	3	Vertical	247	1.07	-	27.81	4.99	-
AV	2.3404G	45.82	54.00	-8.18	12.98	3	Vertical	247	1.07	-	27.86	4.98	-
PK	2.4396G	108.06	Inf	-Inf	75.35	3	Vertical	247	1.07	-	27.60	5.11	-
AV	2.44G	106.50	Inf	-Inf	73.79	3	Vertical	247	1.07	-	27.60	5.11	-
PK	2.492G	55.95	74.00	-18.05	23.24	3	Vertical	247	1.07	-	27.60	5.11	-
AV	2.488G	45.32	54.00	-8.68	12.61	3	Vertical	247	1.07	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

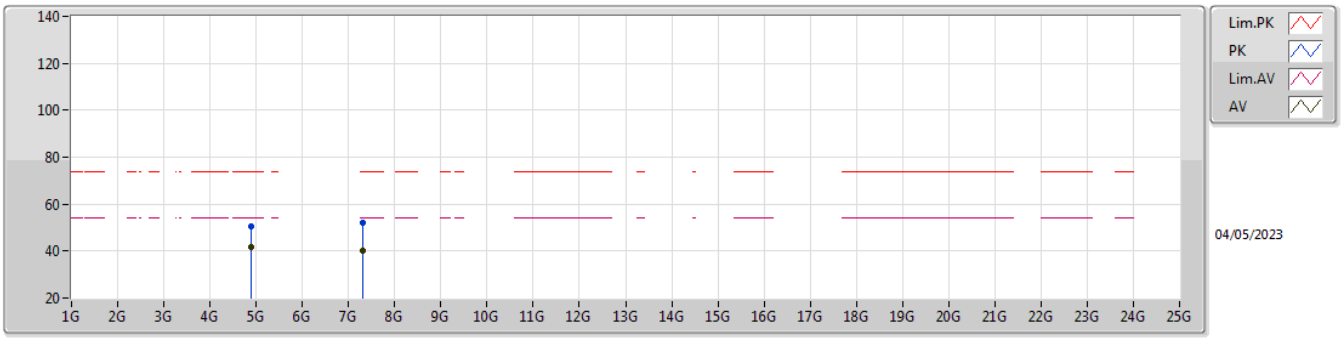


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.388G	57.42	74.00	-16.58	24.69	3	Horizontal	275	2.12	-	27.65	5.08	-
AV	2.3564G	45.78	54.00	-8.22	13.00	3	Horizontal	275	2.12	-	27.77	5.01	-
PK	2.4396G	104.70	Inf	-Inf	71.99	3	Horizontal	275	2.12	-	27.60	5.11	-
AV	2.44G	103.12	Inf	-Inf	70.41	3	Horizontal	275	2.12	-	27.60	5.11	-
PK	2.49G	56.21	74.00	-17.79	23.50	3	Horizontal	275	2.12	-	27.60	5.11	-
AV	2.4864G	45.39	54.00	-8.61	12.68	3	Horizontal	275	2.12	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

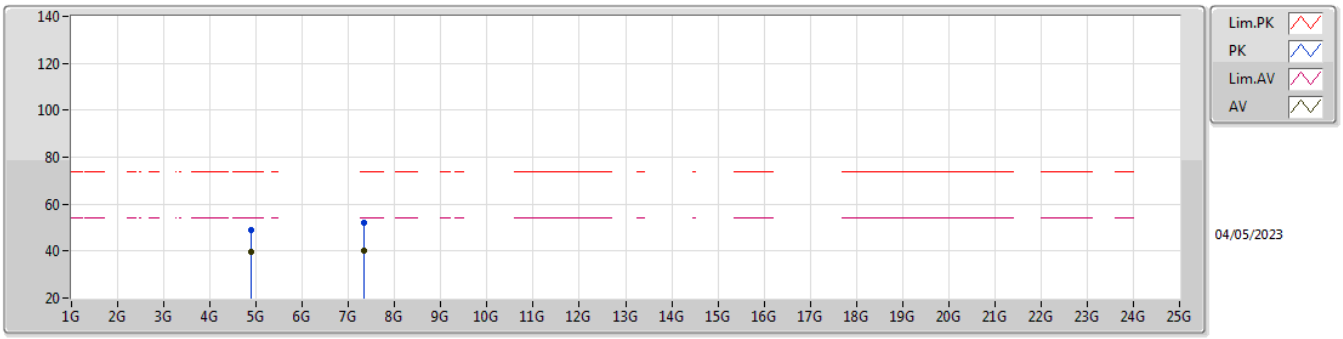


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.87949G	50.35	74.00	-23.65	44.67	3	Vertical	269	2.84	-	31.40	6.78	32.50
AV	4.88007G	41.63	54.00	-12.37	35.95	3	Vertical	269	2.84	-	31.40	6.78	32.50
PK	7.32166G	52.08	74.00	-21.92	40.76	3	Vertical	318	2.15	-	36.70	8.07	33.45
AV	7.31955G	39.93	54.00	-14.07	28.61	3	Vertical	318	2.15	-	36.70	8.07	33.45

2.4-2.4835GHz_BT-LE(1Mbps)

2440MHz_TX

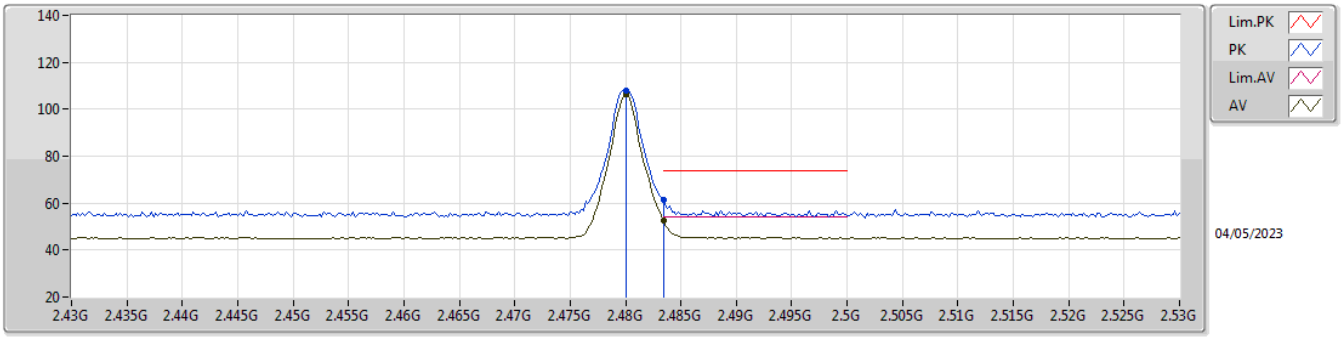


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.88048G	49.00	74.00	-25.00	43.31	3	Horizontal	236	3.00	-	31.40	6.78	32.49
AV	4.8798G	39.68	54.00	-14.32	34.00	3	Horizontal	236	3.00	-	31.40	6.78	32.50
PK	7.32221G	52.18	74.00	-21.82	40.86	3	Horizontal	216	2.27	-	36.70	8.07	33.45
AV	7.32204G	40.19	54.00	-13.81	28.87	3	Horizontal	216	2.27	-	36.70	8.07	33.45

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

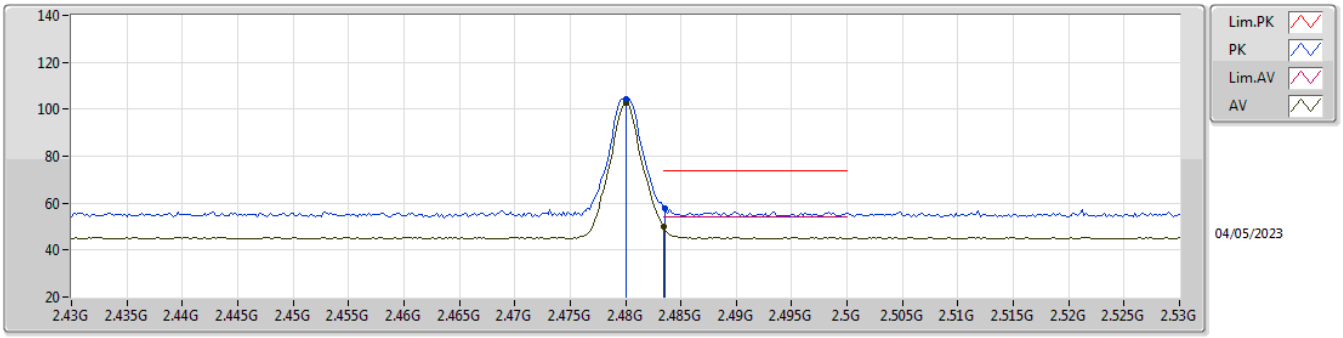


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.48G	107.72	Inf	-Inf	75.01	3	Vertical	247	1.93	-	27.60	5.11	-
AV	2.48G	106.30	Inf	-Inf	73.59	3	Vertical	247	1.93	-	27.60	5.11	-
PK	2.4835G	61.32	74.00	-12.68	28.61	3	Vertical	247	1.93	-	27.60	5.11	-
AV	2.4835G	52.53	54.00	-1.47	19.82	3	Vertical	247	1.93	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

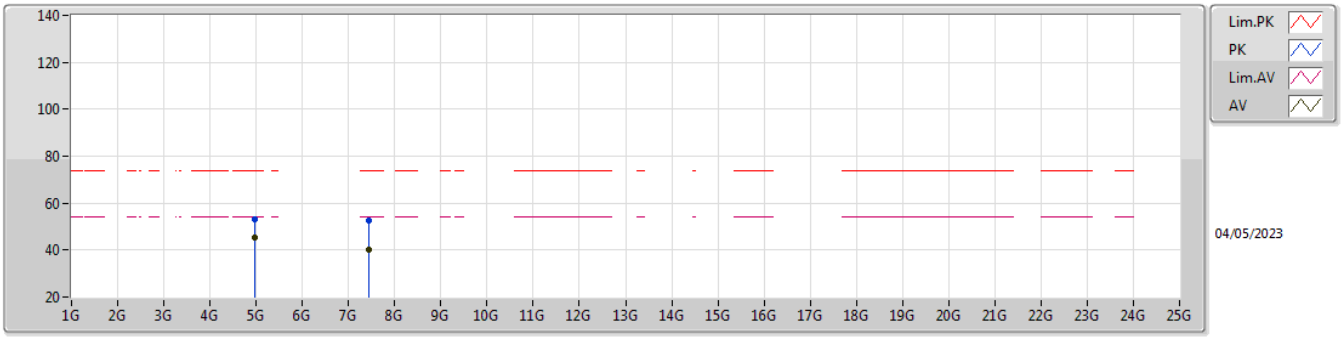


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.48G	104.46	Inf	-Inf	71.75	3	Horizontal	268	2.66	-	27.60	5.11	-
AV	2.48G	103.01	Inf	-Inf	70.30	3	Horizontal	268	2.66	-	27.60	5.11	-
PK	2.4836G	57.78	74.00	-16.22	25.07	3	Horizontal	268	2.66	-	27.60	5.11	-
AV	2.4835G	49.95	54.00	-4.05	17.24	3	Horizontal	268	2.66	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

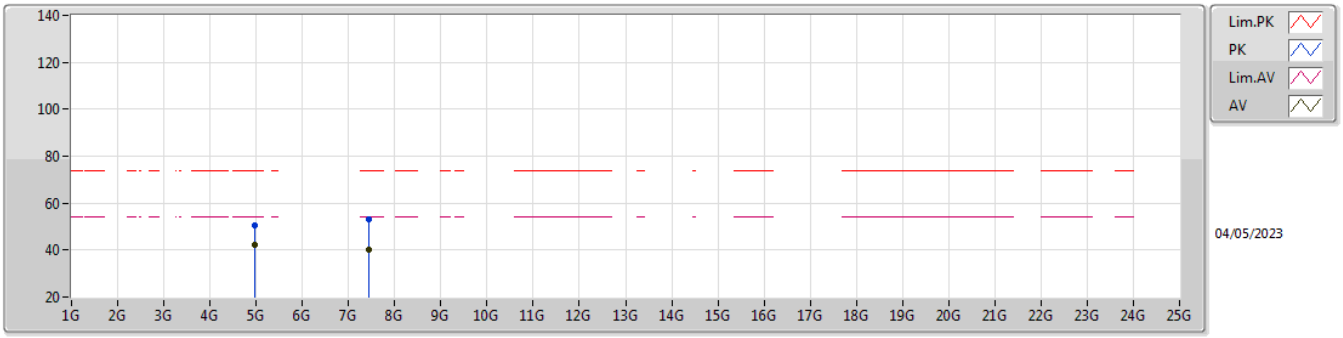


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96041G	52.86	74.00	-21.14	46.95	3	Vertical	248	2.48	-	31.56	6.81	32.46
AV	4.96001G	45.59	54.00	-8.41	39.68	3	Vertical	248	2.48	-	31.56	6.81	32.46
PK	7.44112G	52.39	74.00	-21.61	41.20	3	Vertical	73	2.42	-	36.70	8.09	33.60
AV	7.44016G	40.42	54.00	-13.58	29.24	3	Vertical	73	2.42	-	36.70	8.08	33.60

2.4-2.4835GHz_BT-LE(1Mbps)

2480MHz_TX

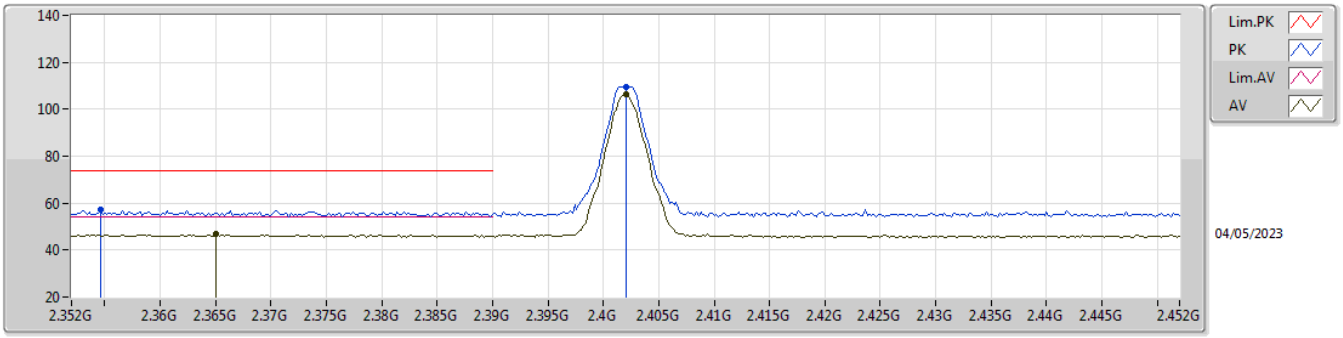


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.95933G	50.50	74.00	-23.50	44.59	3	Horizontal	174	2.47	-	31.56	6.81	32.46
AV	4.95991G	42.12	54.00	-11.88	36.21	3	Horizontal	174	2.47	-	31.56	6.81	32.46
PK	7.43789G	52.95	74.00	-21.05	41.77	3	Horizontal	75	2.68	-	36.70	8.08	33.60
AV	7.43794G	40.40	54.00	-13.60	29.22	3	Horizontal	75	2.68	-	36.70	8.08	33.60

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

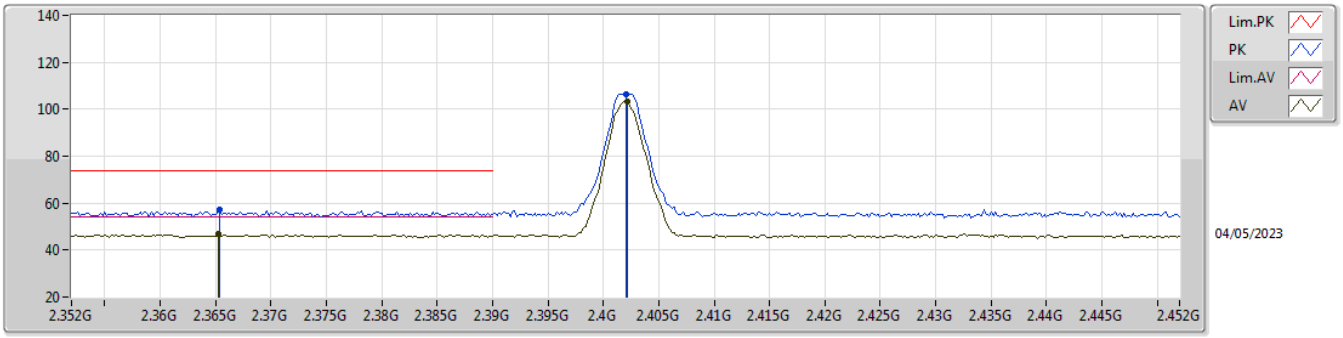


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3546G	57.22	74.00	-16.78	24.43	3	Vertical	231	1.80	-	27.78	5.01	-
AV	2.365G	46.91	54.00	-7.09	14.14	3	Vertical	231	1.80	-	27.74	5.03	-
PK	2.402G	109.51	Inf	-Inf	76.80	3	Vertical	231	1.80	-	27.60	5.11	-
AV	2.402G	106.57	Inf	-Inf	73.86	3	Vertical	231	1.80	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

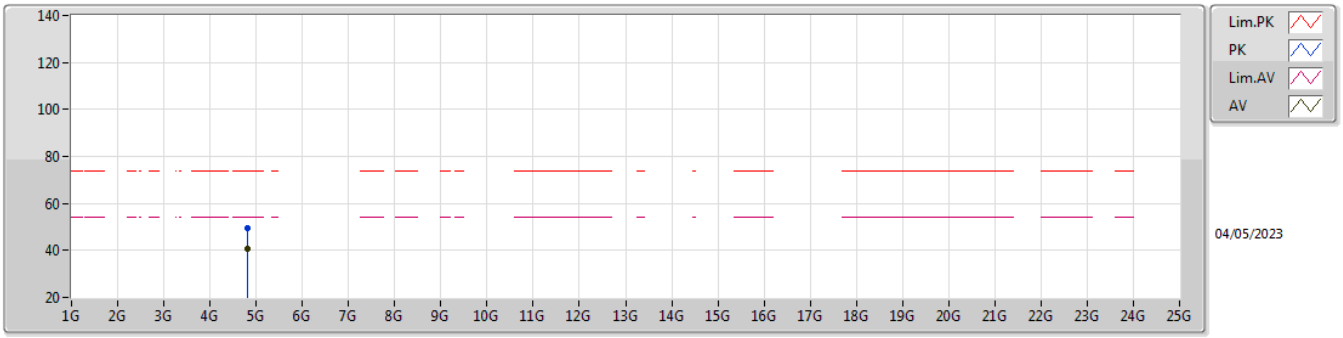


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3654G	57.22	74.00	-16.78	24.45	3	Horizontal	267	1.51	-	27.74	5.03	-
AV	2.3652G	46.91	54.00	-7.09	14.14	3	Horizontal	267	1.51	-	27.74	5.03	-
PK	2.402G	106.62	Inf	-Inf	73.91	3	Horizontal	267	1.51	-	27.60	5.11	-
AV	2.4022G	103.50	Inf	-Inf	70.79	3	Horizontal	267	1.51	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

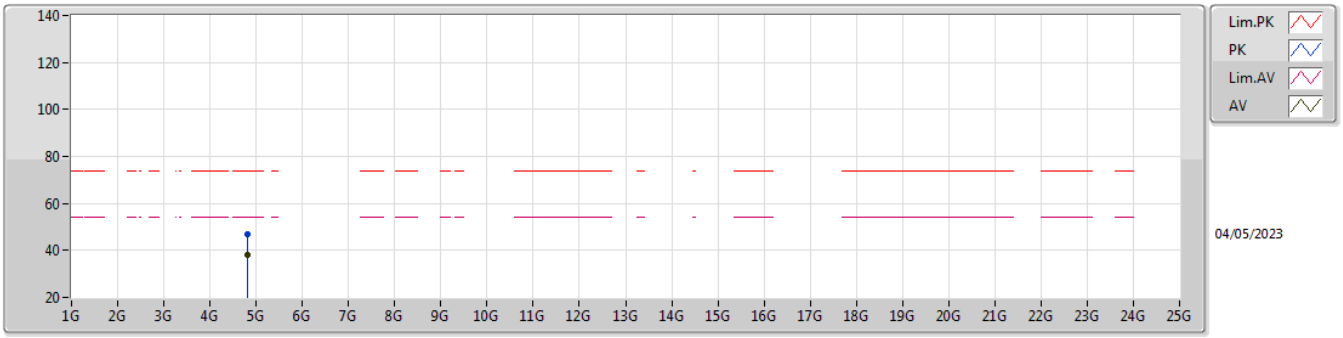


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80303G	49.38	74.00	-24.62	43.85	3	Vertical	279	2.55	-	31.31	6.75	32.53
AV	4.803G	40.83	54.00	-13.17	35.30	3	Vertical	279	2.55	-	31.31	6.75	32.53

2.4-2.4835GHz_BT-LE(2Mbps)

2402MHz_TX

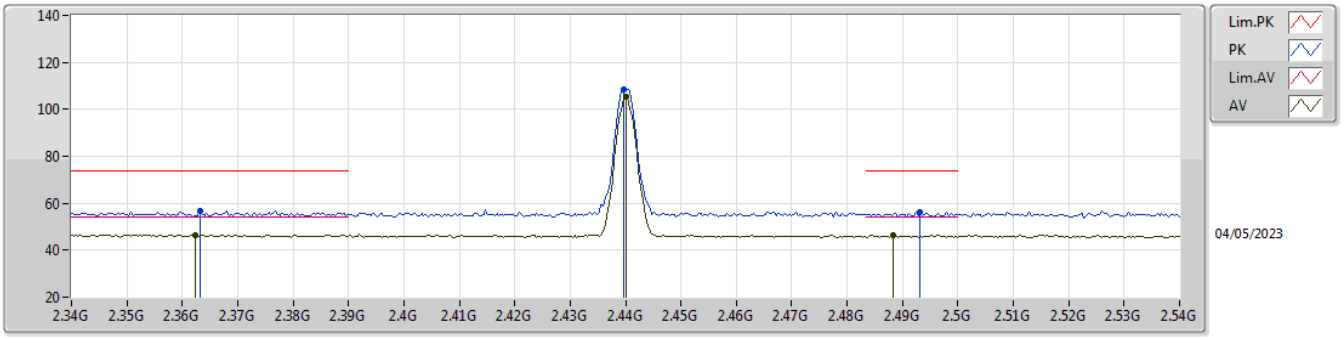


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80286G	47.06	74.00	-26.94	41.53	3	Horizontal	97	2.57	-	31.31	6.75	32.53
AV	4.80387G	38.07	54.00	-15.93	32.54	3	Horizontal	97	2.57	-	31.31	6.75	32.53

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

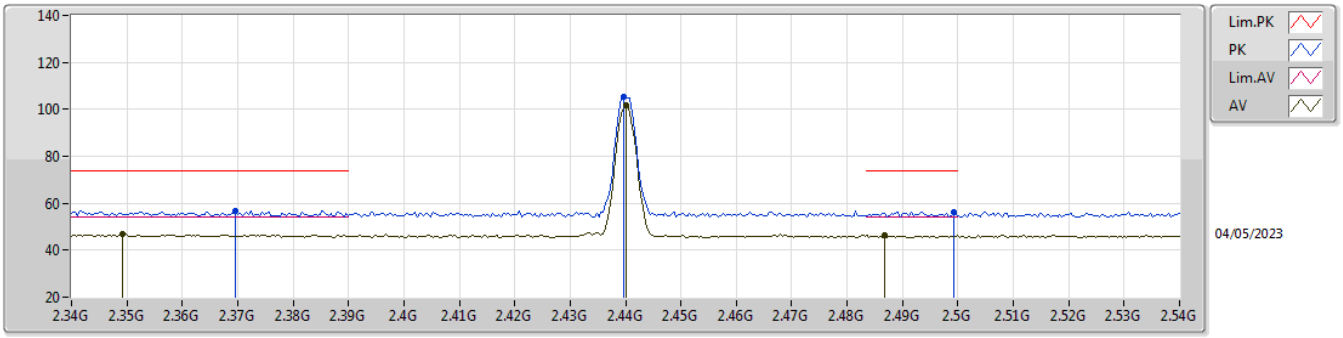


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3632G	56.93	74.00	-17.07	24.15	3	Vertical	250	1.76	-	27.75	5.03	-
AV	2.3624G	46.62	54.00	-7.38	13.84	3	Vertical	250	1.76	-	27.75	5.03	-
PK	2.4396G	108.39	Inf	-Inf	75.68	3	Vertical	250	1.76	-	27.60	5.11	-
AV	2.44G	105.37	Inf	-Inf	72.66	3	Vertical	250	1.76	-	27.60	5.11	-
PK	2.4932G	56.45	74.00	-17.55	23.74	3	Vertical	250	1.76	-	27.60	5.11	-
AV	2.4884G	46.40	54.00	-7.60	13.69	3	Vertical	250	1.76	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

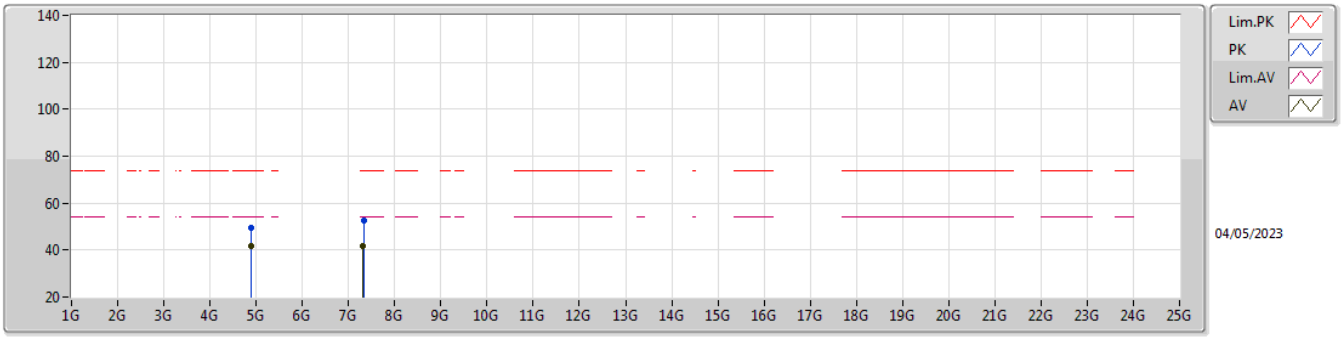


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3696G	56.76	74.00	-17.24	24.00	3	Horizontal	274	2.14	-	27.72	5.04	-
AV	2.3492G	46.96	54.00	-7.04	14.16	3	Horizontal	274	2.14	-	27.80	5.00	-
PK	2.4396G	105.21	Inf	-Inf	72.50	3	Horizontal	274	2.14	-	27.60	5.11	-
AV	2.44G	101.95	Inf	-Inf	69.24	3	Horizontal	274	2.14	-	27.60	5.11	-
PK	2.4992G	56.37	74.00	-17.63	23.66	3	Horizontal	274	2.14	-	27.60	5.11	-
AV	2.4868G	46.32	54.00	-7.68	13.61	3	Horizontal	274	2.14	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

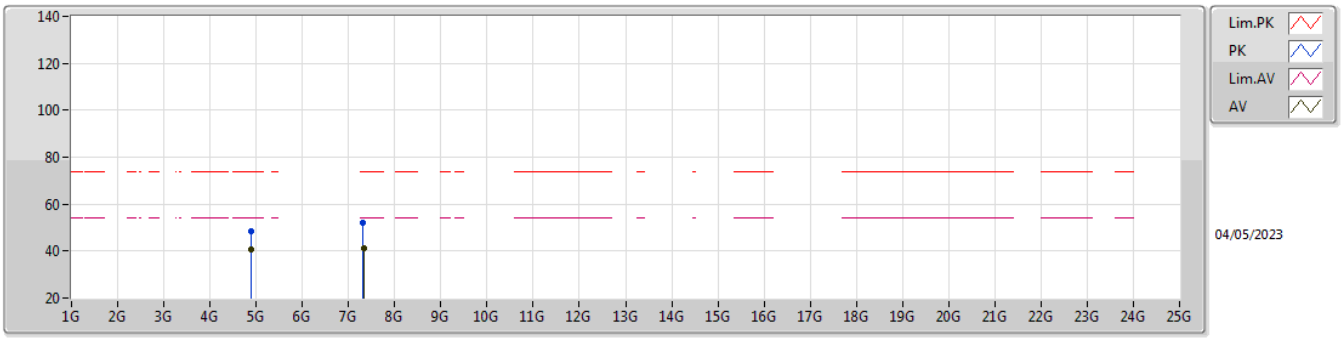


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.87999G	49.28	74.00	-24.72	43.60	3	Vertical	276	2.48	-	31.40	6.78	32.50
AV	4.87909G	41.50	54.00	-12.50	35.82	3	Vertical	276	2.48	-	31.40	6.78	32.50
PK	7.32239G	52.43	74.00	-21.57	41.11	3	Vertical	239	2.97	-	36.70	8.07	33.45
AV	7.31974G	41.68	54.00	-12.32	30.36	3	Vertical	239	2.97	-	36.70	8.07	33.45

2.4-2.4835GHz_BT-LE(2Mbps)

2440MHz_TX

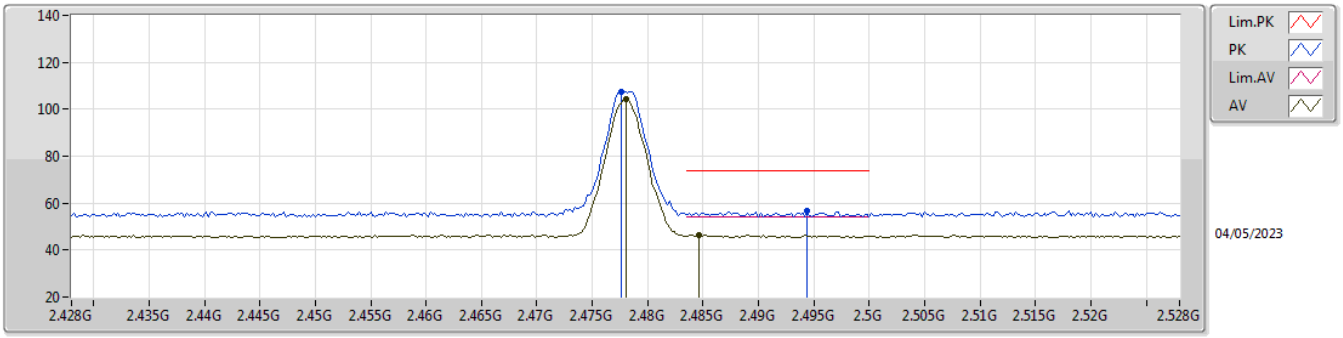


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.88092G	48.60	74.00	-25.40	42.91	3	Horizontal	239	3.00	-	31.40	6.78	32.49
AV	4.87901G	40.63	54.00	-13.37	34.95	3	Horizontal	239	3.00	-	31.40	6.78	32.50
PK	7.31775G	52.18	74.00	-21.82	40.86	3	Horizontal	40	1.06	-	36.70	8.07	33.45
AV	7.32222G	41.24	54.00	-12.76	29.92	3	Horizontal	40	1.06	-	36.70	8.07	33.45

2.4-2.4835GHz_BT-LE(2Mbps)

2478MHz_TX

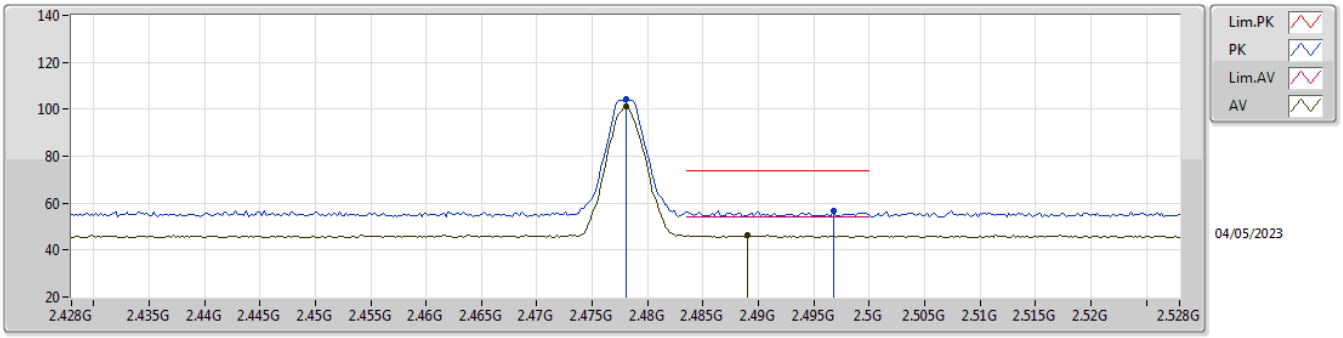


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.4776G	107.50	Inf	-Inf	74.79	3	Vertical	257	1.09	-	27.60	5.11	-
AV	2.478G	104.37	Inf	-Inf	71.66	3	Vertical	257	1.09	-	27.60	5.11	-
PK	2.4944G	56.61	74.00	-17.39	23.90	3	Vertical	257	1.09	-	27.60	5.11	-
AV	2.4846G	46.46	54.00	-7.54	13.75	3	Vertical	257	1.09	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2478MHz_TX

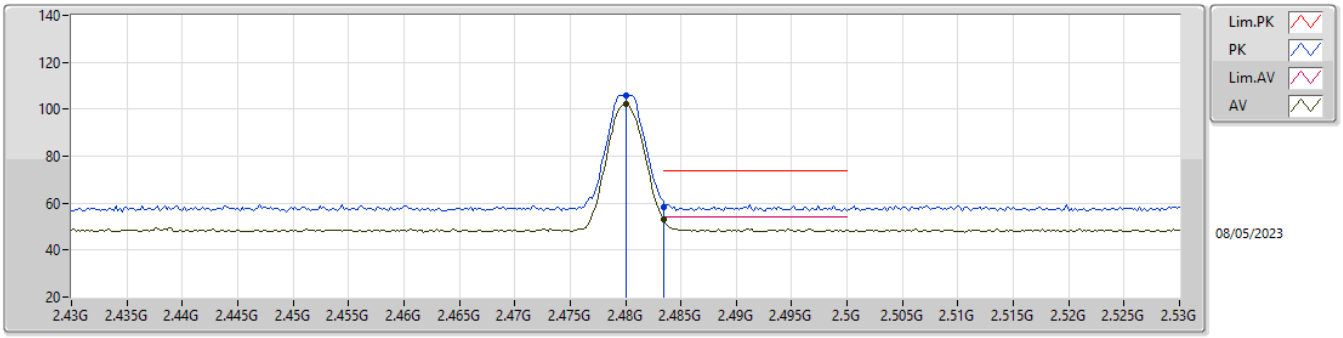


EUT Z_1TX
Setting Maximum
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.478G	104.08	Inf	-Inf	71.37	3	Horizontal	272	2.34	-	27.60	5.11	-
AV	2.478G	100.99	Inf	-Inf	68.28	3	Horizontal	272	2.34	-	27.60	5.11	-
PK	2.4968G	56.74	74.00	-17.26	24.03	3	Horizontal	272	2.34	-	27.60	5.11	-
AV	2.489G	46.26	54.00	-7.74	13.55	3	Horizontal	272	2.34	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

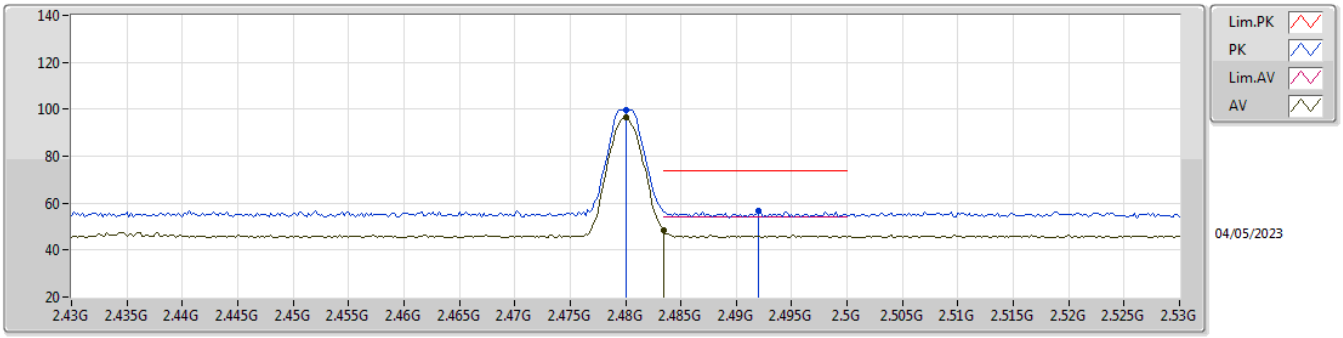


EUT Z_1TX
Setting Default
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.48G	105.84	Inf	-Inf	73.13	3	Vertical	258	1.80	-	27.60	5.11	-
AV	2.48G	102.40	Inf	-Inf	69.69	3	Vertical	258	1.80	-	27.60	5.11	-
PK	2.4835G	58.28	74.00	-15.72	25.57	3	Vertical	258	1.80	-	27.60	5.11	-
AV	2.4835G	52.90	54.00	-1.10	20.19	3	Vertical	258	1.80	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

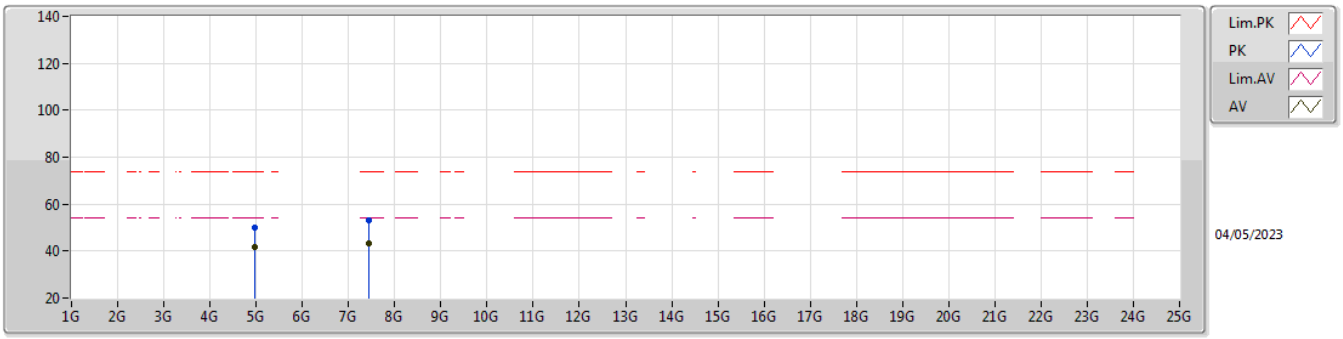


EUT Z_1TX
Setting Default
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.48G	99.79	Inf	-Inf	67.08	3	Horizontal	258	2.66	-	27.60	5.11	-
AV	2.48G	96.72	Inf	-Inf	64.01	3	Horizontal	258	2.66	-	27.60	5.11	-
PK	2.492G	56.72	74.00	-17.28	24.01	3	Horizontal	258	2.66	-	27.60	5.11	-
AV	2.4835G	48.35	54.00	-5.65	15.64	3	Horizontal	258	2.66	-	27.60	5.11	-

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX

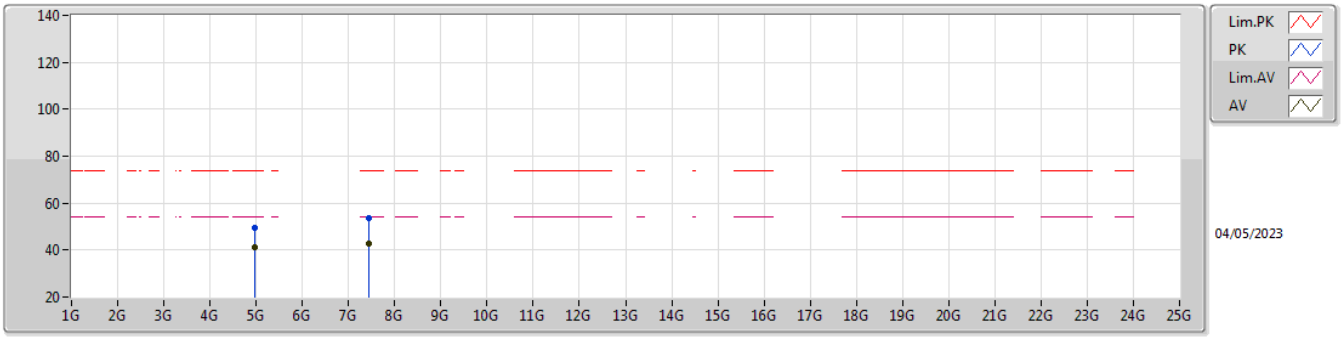


EUT Z_1TX
Setting Default
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.95994G	49.89	74.00	-24.11	43.98	3	Vertical	242	1.04	-	31.56	6.81	32.46
AV	4.95895G	41.83	54.00	-12.17	35.93	3	Vertical	242	1.04	-	31.55	6.81	32.46
PK	7.44125G	53.25	74.00	-20.75	42.06	3	Vertical	169	2.55	-	36.70	8.09	33.60
AV	7.43867G	43.07	54.00	-10.93	31.89	3	Vertical	169	2.55	-	36.70	8.08	33.60

2.4-2.4835GHz_BT-LE(2Mbps)

2480MHz_TX



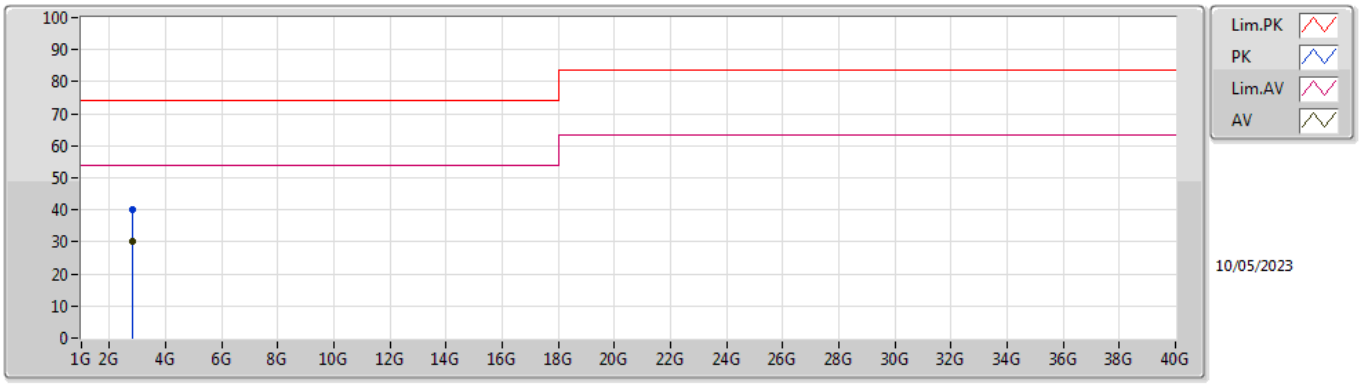
EUT Z_1TX
Setting Default
06-D-P-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.96096G	49.64	74.00	-24.36	43.72	3	Horizontal	251	2.92	-	31.57	6.81	32.46
AV	4.95906G	41.45	54.00	-12.55	35.55	3	Horizontal	251	2.92	-	31.55	6.81	32.46
PK	7.43781G	53.59	74.00	-20.41	42.41	3	Horizontal	194	1.19	-	36.70	8.08	33.60
AV	7.43885G	42.68	54.00	-11.32	31.50	3	Horizontal	194	1.19	-	36.70	8.08	33.60

Summary

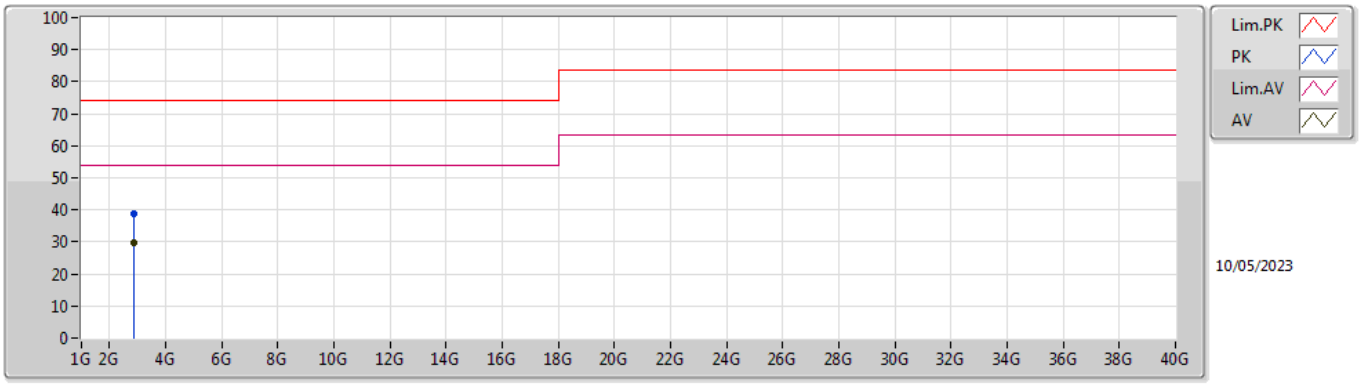
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	AV	2.821G	30.05	54.00	-23.95	Vertical

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	2.821G	40.05	74.00	-33.95	-3.01	3	Vertical	15	1.40	-	43.06	28.44	4.71	36.16
AV	2.821G	30.05	54.00	-23.95	-3.01	3	Vertical	15	1.40	"Worst"	33.06	28.44	4.71	36.16

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	2.872G	38.63	74.00	-35.37	-2.69	3	Horizontal	40	1.55	-	41.32	28.68	4.74	36.11
AV	2.872G	29.85	54.00	-24.15	-2.69	3	Horizontal	40	1.55	"Worst"	32.54	28.68	4.74	36.11