RADIO TEST REPORT

FCC ID	:	UDX-600104010
Equipment	:	Wi-Fi 6E Access Point
Brand Name	:	Cisco
Model Name	:	MR57-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 Oct. 06, 2021, and testing was started from Oct. 16, 2021 and completed on Dec. 23, 2021. 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: Cliff Chang

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
FR181947-01AD	01	Initial issue of report	Feb. 07, 2022

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:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. 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: Jessie Wei

1 General Description

1.1 Information

1.1.1 RF General Information

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

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

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

1.1.2 Antenna Information

Ant.	Port					Brand	P/N	Ant. Type	Connector	Gain (dBi)
	WLAN 2.4GHz	WLAN 5GHz UNII 1~3	WLAN 5GHz UNII 2C~4	WLAN 6GHz UNII 5~8	Bluetooth					
1	4	4	-	-	-	CISCO	95XKAN15.G42	PIFA	I-PEX	Note1
2	3	3	-	-	-	CISCO	95XKAN15.G43	PIFA	I-PEX	
3	2	2	-	-	-	CISCO	95XKAN15.G44	PIFA	I-PEX	
4	1	1	-	-	-	CISCO	95XKAN15.G45	PIFA	I-PEX	
5	-	-	2	2	-	CISCO	95XKAN15.G46	Dipole	I-PEX	
6	-	-	1	1	-	CISCO	95XKAN15.G47	Dipole	I-PEX	
7	-	-	4	4	-	CISCO	95XKAN15.G48	Dipole	I-PEX	
8	-	-	3	3	-	CISCO	95XKAN15.G49	Dipole	I-PEX	
9	1	1	-	-	-	CISCO	95XKAN15.G51	PIFA	I-PEX	
10	-	-	-	-	1	CISCO	95XKAN15.G50	PIFA	I-PEX	

Note1:

Ant.	Antenna Gain (dBi)											
	WLAN 2.4GHz	WLAN 5GHz UNII 1	WLAN 5GHz UNII 2A	WLAN 5GHz UNII 2C	WLAN 5GHz UNII 3	WLAN 5GHz UNII 4	WLAN 6GHz UNII 5	WLAN 6GHz UNII 6	WLAN 6GHz UNII 7	WLAN 6GHz UNII 8	Blue tooth	Remark
1	1.87	4.07	4.09	2.45	1.97	-	-	-	-	-	-	Radio 1
2	2.68	3.7	4.21	3	3.84	-	-	-	-	-	-	Radio 1
3	2.7	3.29	3.51	2.33	3.03	-	-	-	-	-	-	Radio 1
4	1.52	1.8	1.7	1.44	1.61	-	-	-	-	-	-	Radio 1
5	-	-	-	3.52	3.3	4.84	5.05	4.08	4.27	3.47	-	Radio 2
6	-	-	-	3.54	4.33	4.28	4.71	3.72	3.49	4.02	-	Radio 2
7	-	-	-	4.28	4.45	4.6	4.64	4.40	4.31	3.39	-	Radio 2
8	-	-	-	4.13	4.39	4.75	4.76	3.51	4.21	4.03	-	Radio 2
9	3.80	6.29	6.29	6.29	6.29	-	-	-	-	-	-	Radio 3
10	-	-	-	-	-	-	-	-	-	-	3.65	Radio 4

Note2:

Item	Directional Gain (dBi)						Remark
	WLAN 2.4GHz	WLAN 5GHz UNII 1	WLAN 5GHz UNII 2A	WLAN 5GHz UNII 2C	WLAN 5GHz UNII 3	WLAN 5GHz UNII 4	
2T1S	3.93	4.36	4.68	3.36	3.75	-	Radio 1
4T1S	5.7	6.45	6.36	5.06	5.18	-	
2T1S	-	-	-	5.32	6.01	5.57	Radio 2
4T1S	-	-	-	5.65	6.75	6.43	

Note3: Radio 1 (WLAN 2.4/5GHz UNII 1~3), Radio 2 (5GHz UNII 2C, 3, 4): The directional gain is measured which follows the procedure of KDB 662911 D03. The antenna report is provided in the operational description for this application.
This EUT doesn't enable UNII 2A, 2C.

Note4: The above information was declared by manufacturer.
The EUT has ten antennas.
For WLAN 2.4GHz function (Radio 1):
For IEEE 802.11b/g/n/VHT/ax mode (1TX, 2TX, 4TX/4RX):
For 1TX
Only Port 1 can be use as transmitting antenna.
For 2TX
Only Port 1 and Port 2 can be use as transmitting antenna.
Port 1 and Port 2 could transmit simultaneously.
For 4TX
Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.
For 4RX
Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.
For WLAN 5GHz function (Radio 1 and Radio 2):
For IEEE 802.11a/n/ac/ax mode (1TX, 2TX, 4TX/4RX):
For 1TX
Only Port 1 can be use as transmitting antenna.
For 2TX
Only Port 1 and Port 2 can be use as transmitting antenna.
Port 1 and Port 2 could transmit simultaneously.
For 4TX
Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.
For 4RX
Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.
For 6GHz function (Radio 2):
For IEEE 802.11ax mode (1TX, 2TX, 4TX/4RX):
For 1TX
Only Port 1 can be use as transmitting antenna.
For 2TX
Only Port 1 and Port 2 can be use as transmitting antenna.
Port 1 and Port 2 could transmit simultaneously.
For 4TX
Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.
For 4RX
Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.
For Scanning Radio 3:
For WLAN 2.4GHz function
For 802.11b/g/n/VHT/ax mode (1RX):
Only Port 1 can be used as receiving functions.
For WLAN 5GHz function
For IEEE 802.11a/n/ac/ax mode (1RX):
Only Port 1 can be used as receiving functions.
For Bluetooth function (Radio 4):
For Bluetooth mode (1TX/1RX):
Only Port 1 can be used as transmitting/receiving antenna.

1.1.3 Table for Radio function

Function / Radio	WLAN 2.4GHz	WLAN 5GHz UNII 1, 3	WLAN 5GHz UNII 3~4	WLAN 6GHz UNII 5~8	Bluetooth
1 (Iron Radio)	V	V	-	-	-
2 (Pine Radio)	-	-	V	V	-
3 (Scanning Radio)	V	V	-	-	-
4	-	-	-	-	V

Note: The above information was declared by manufacturer.

1.1.4 Table for EUT Operation Function

Mode	Operation Function
1	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+R4: Bluetooth
2	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 5GHz+R4: Bluetooth
3	R1: 2.4GHz/5GHz Full Band+R2: 6E+R3: 2.4GHz+R4: Bluetooth
4	R1: 2.4GHz/5GHz Full Band+R2: 6E+R3: 5GHz+R4: Bluetooth

Note: The above information was declared by manufacturer.

1.1.5 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
BT-LE(1Mbps)	0.664	1.78	415u	3k
BT-LE(2Mbps)	0.401	3.97	250.625u	10k

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

1.1.6 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QSRP(Version 5.0-00199)、DOS [ver 6.1.7601]			
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.

1.2 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	TH03-CB	Owen Hsu	24.8~26.2 / 63~67	Oct. 21, 2021~ Dec. 23, 2021
Radiated below 1GHz	03CH05-CB	Kevin Huang	24.4~25.5 / 55~58	Nov. 11, 2021~ Nov. 12, 2021
Radiated above 1GHz	03CH03-CB	Paul Chen	22.5~23.6 / 56~59	Oct. 16, 2021~ Dec. 13, 2021
AC Conduction	CO01-CB	Peter Wu	22~23 / 59~60	Nov. 17, 2021

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)	2.0 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	200
2440MHz	200
2478MHz	178
2480MHz	70
BT-LE(2Mbps)	-
2402MHz	200
2440MHz	200
2478MHz	200
2480MHz	25

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	R1:2.4GHz/5GHz Low Band+R2:5GHz High band+R3:2.4GHz+R4:Bluetooth+Adapter
2	R1:2.4GHz/5GHz Low Band+R2:5GHz High band+R3:5GHz+R4:Bluetooth+Adapter
3	R1:2.4GHz/5GHz Full Band+R2:6E+R3:2.4GHz+R4:Bluetooth+Adapter
4	R1:2.4GHz/5GHz Full Band+R2:6E+R3:5GHz+R4:Bluetooth+Adapter
Mode 1 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~6 will follow this same test mode.	
5	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+R4: Bluetooth+PoE 1
6	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+R4: Bluetooth+PoE 2
For operating mode 5 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT in Z axis-R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+ R4: Bluetooth+Adapter
2	EUT in Y axis-R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+ R4: Bluetooth+Adapter
3	EUT in X axis-R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+ R4: Bluetooth+Adapter
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~6 will follow this same test mode.	
4	EUT in X axis-R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 5GHz+ R4: Bluetooth+Adapter
5	EUT in X axis-R1: 2.4GHz/5GHz Full Band+R2: 6E+R3: 2.4GHz+ R4: Bluetooth+Adapter
6	EUT in X axis-R1: 2.4GHz/5GHz Full Band+R2: 6E+R3: 5GHz+ R4: Bluetooth+Adapter
Mode 3 has been evaluated to be the worst case among Mode 1~6, thus measurement for Mode 7~8 will follow this same test mode.	
7	EUT in X axis-R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+ R4: Bluetooth+PoE 1
8	EUT in X axis-R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+ R4: Bluetooth+PoE 2
For operating mode 7 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	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R4: Bluetooth
2	R1: 2.4GHz/5GHz Full Band+R2: 6E+R4: Bluetooth
Refer to Sporton Test Report No.: FA181947-01 for Co-location RF Exposure Evaluation.	

Note: The Adapter and PoEs are for measurement only, would not be marketed.

Adapter and PoEs information as below:

Power	Brand	Model
Adapter	Cisco	MA-PWR-50WAC
PoE 1	Cisco	MA-INJ-4
PoE 2	PHIHONG	POE60U-1BT-X

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

Wall-mounted rack*1

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE 1	Cisco	MA-INJ-4	N/A
B	PoE PC	DELL	T3400	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G-L NB	DELL	E6430	N/A
E	LAN PC	DELL	T3400	N/A
F	Flash disk3.0	Transcend	JetFlash-700	N/A
G	5G-H NB	DELL	E6430	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	2.4G NB	DELL	E4300	N/A
B	5G-L NB	Apple	Mac Book	N/A
C	5G-H NB	Apple	Mac Book	N/A
D	NB	Apple	Mac Book	N/A
E	Flash disk3.0	Silicon Power	B06	N/A
F	PC	HP	SGH8190LP1	N/A
G	PoE 1	Cisco	MA-INJ-4	N/A

For Radiated (above 1GHz):

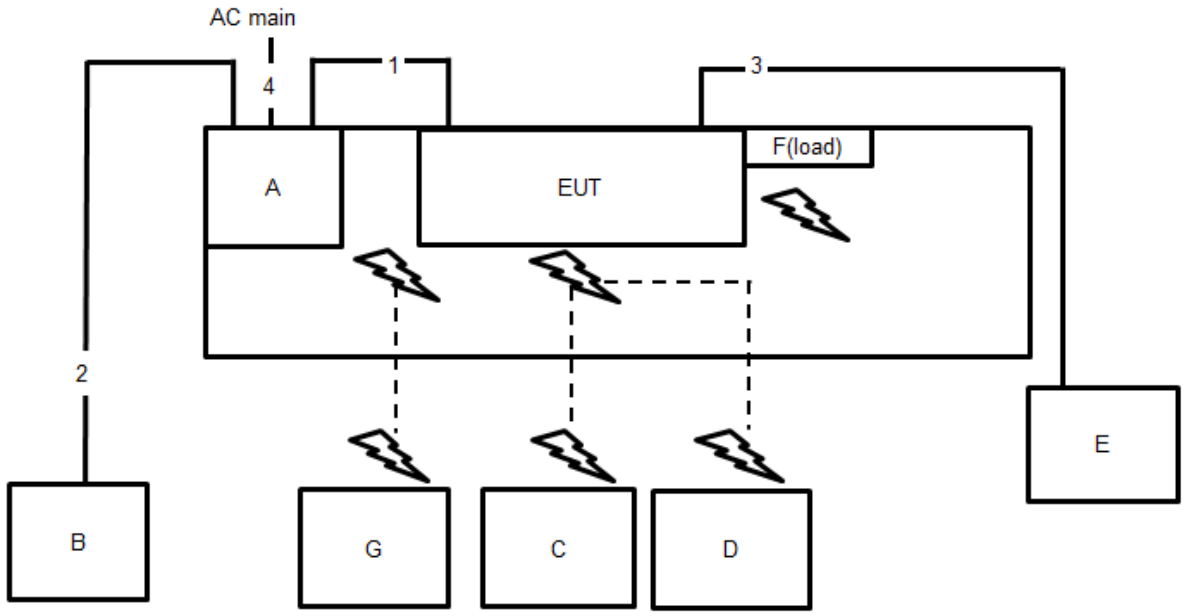
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Adapter	Cisco	MA-PWR-50WAC	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Adapter	Cisco	MA-PWR-50WAC	N/A

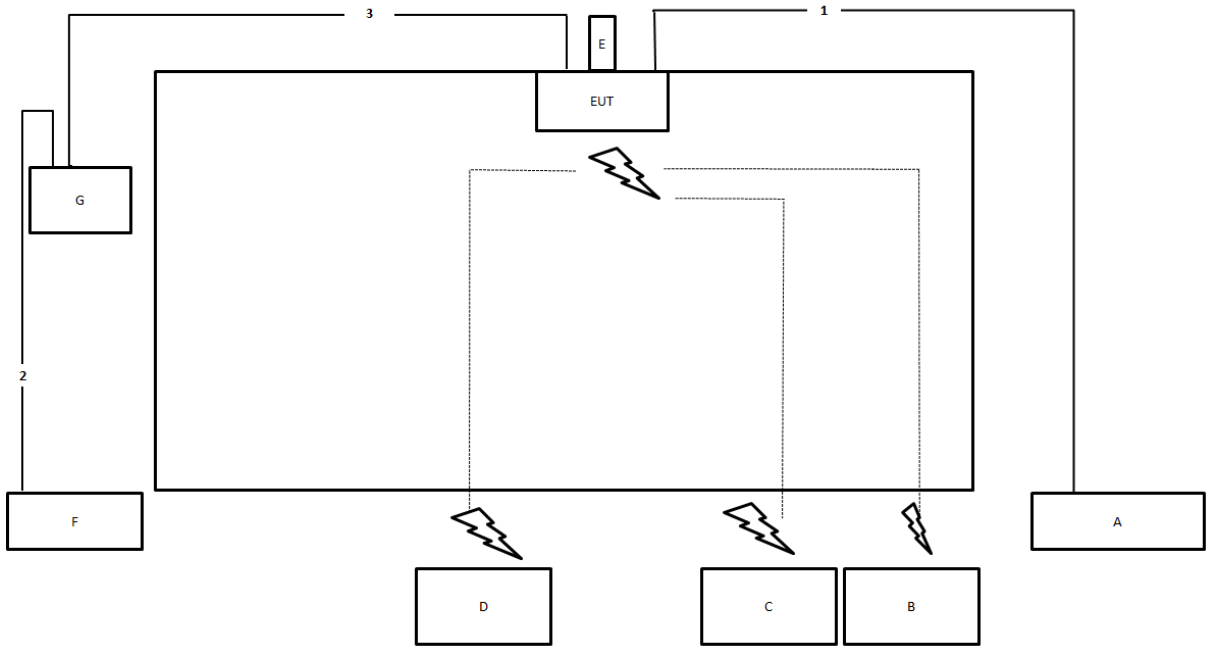
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



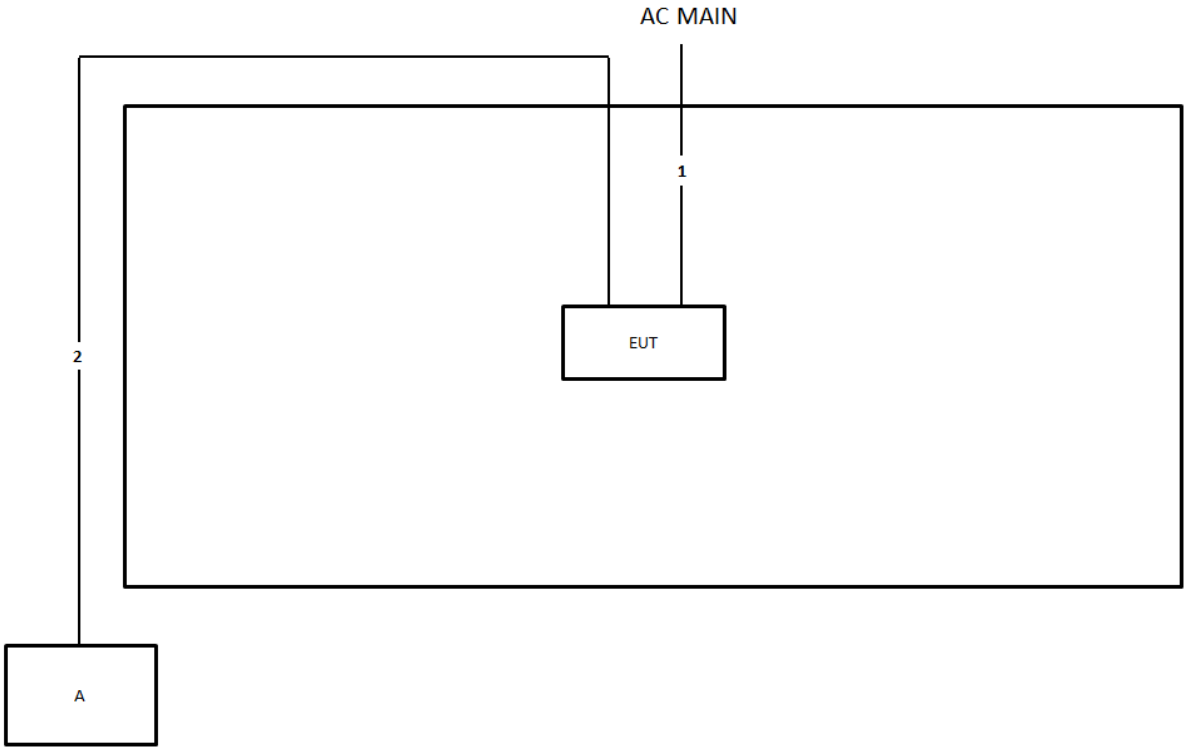
Item	Connection	Shielded	Length
1	RJ-45 cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	Power cable	No	1.8m

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	3.4m
2	RJ-45 cable	No	10m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

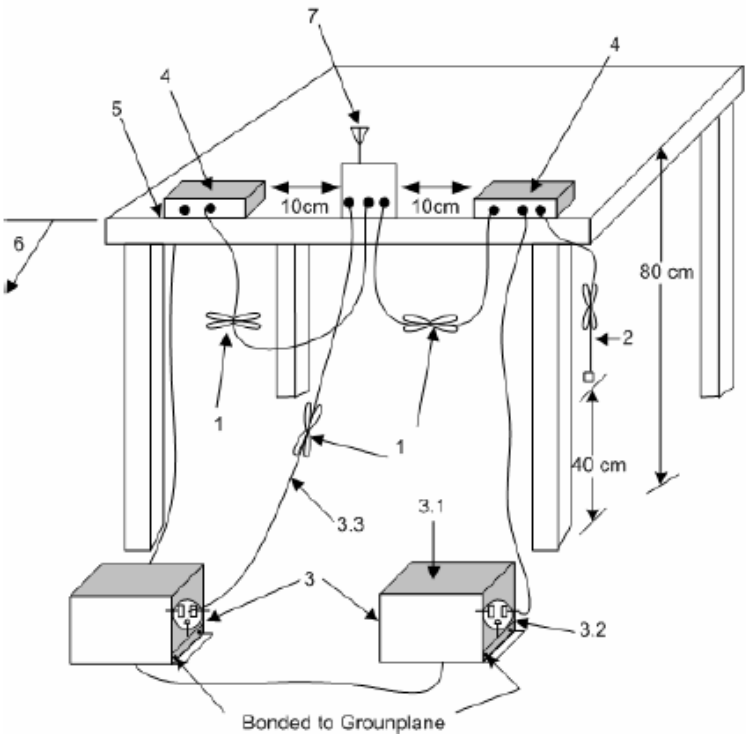
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



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

1.1.1. Measurement Results Calculation

The measured Level is calculated using:

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

b. Margin = -Limit + Level

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

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

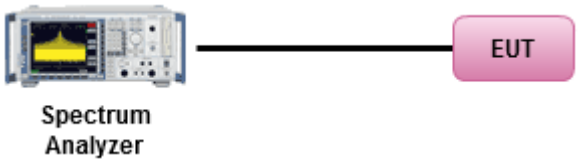
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

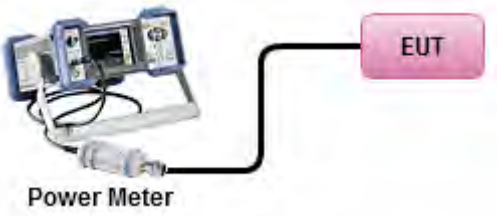
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

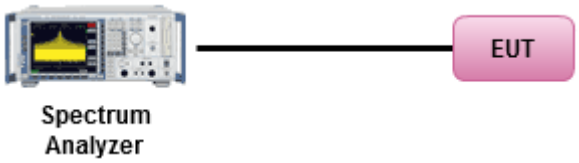
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.	
	[duty cycle ≥ 98% or external video / power trigger]	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		☐ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

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

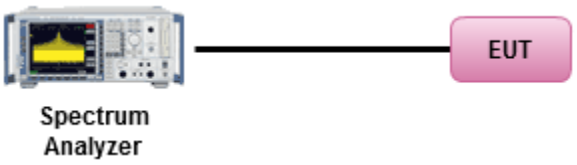
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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

3.6.2 Measuring Instruments

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

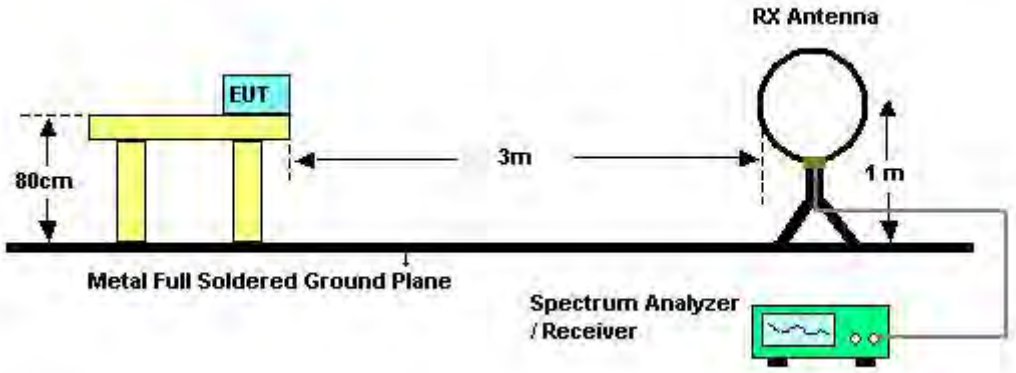
3.6.3 Test Procedures

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

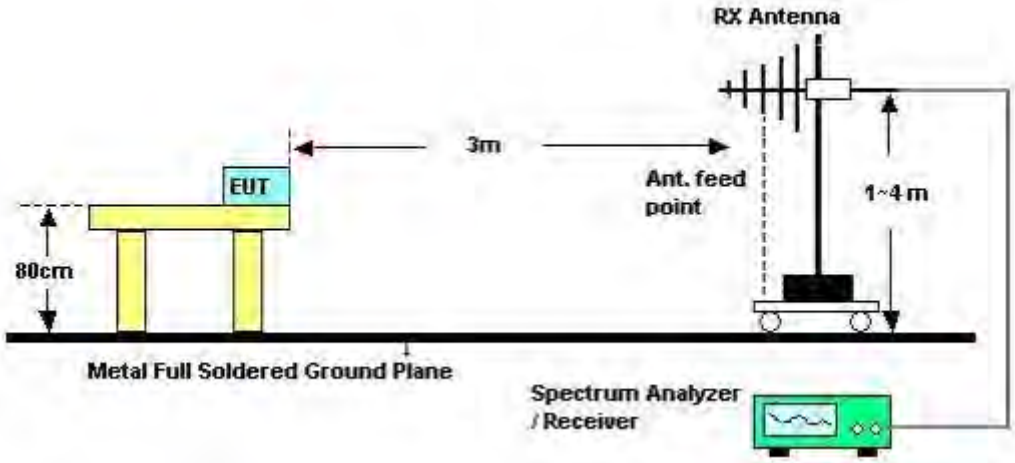
3.6.4 Test Setup

Emissions in Restricted Frequency Bands

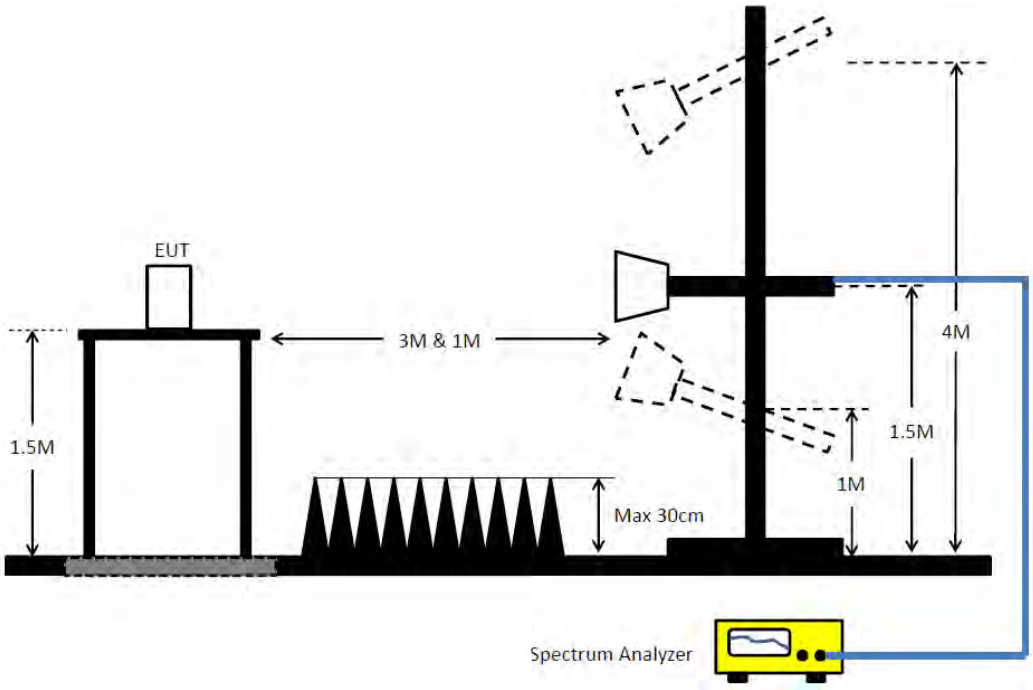
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Measurement Results Calculation

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

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 03, 2021	Mar. 02, 2022	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Jan. 06, 2021	Jan. 05, 2022	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Mar. 07, 2021	Mar. 06, 2022	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 30, 2021	Jan. 29, 2022	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 19, 2021	May 18, 2022	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 09, 2021	Aug. 08, 2022	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 04, 2021	Oct. 03, 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	03CH03-CB	1GHz ~18GHz 3m	May 06, 2021	May 05, 2022	Radiation (03CH03-CB)
Horn Antenna	ETS・Lindgren	3115	6821	750MHz~18GHz	Jan. 26, 2021	Jan. 25, 2022	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 04, 2021	Jun. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 31, 2020	Dec. 30, 2021	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

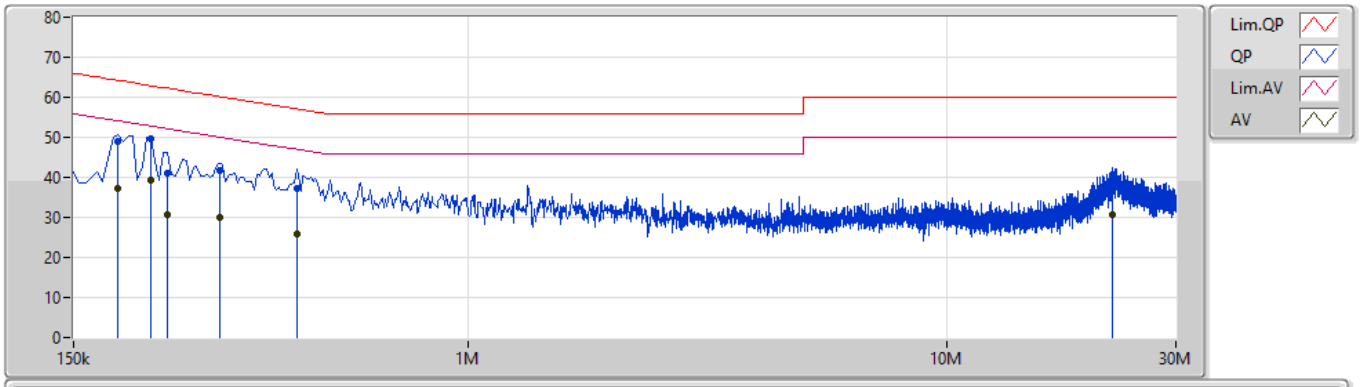
Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 5	Pass	QP	217.5k	52.77	62.92	-10.15	Neutral

Mode 5

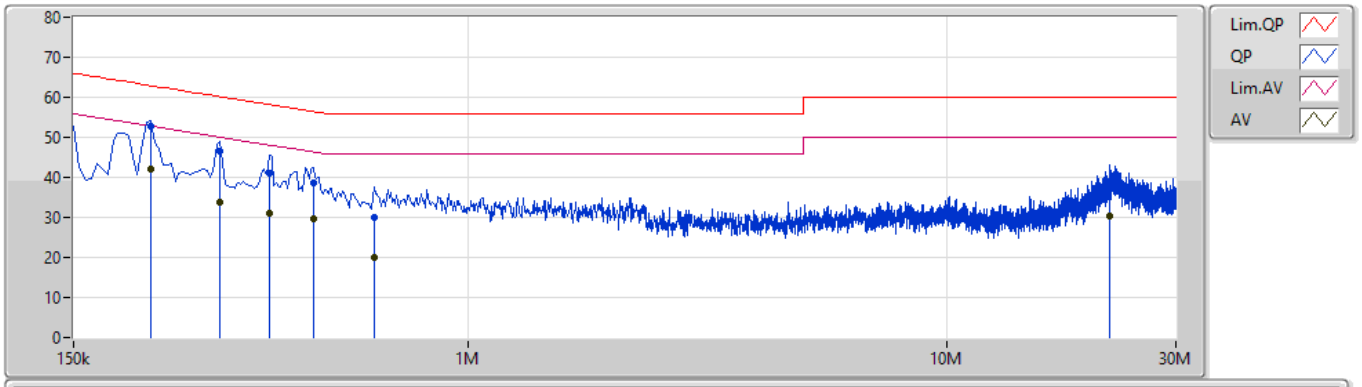
17/11/2021



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	186k	48.91	64.20	-15.29	9.89	Line	-	39.02	0.04	0.04	9.81
AV	186k	37.25	54.20	-16.95	9.89	Line	-	27.36	0.04	0.04	9.81
QP	217.5k	49.69	62.92	-13.23	9.89	Line	"Worst"	39.80	0.04	0.04	9.81
AV	217.5k	39.26	52.92	-13.66	9.89	Line	-	29.37	0.04	0.04	9.81
QP	235.5k	41.17	62.25	-21.08	9.89	Line	-	31.28	0.04	0.04	9.81
AV	235.5k	30.67	52.25	-21.58	9.89	Line	-	20.78	0.04	0.04	9.81
QP	303k	41.70	60.17	-18.47	9.90	Line	-	31.80	0.04	0.04	9.82
AV	303k	30.00	50.17	-20.17	9.90	Line	-	20.10	0.04	0.04	9.82
QP	438k	37.30	57.11	-19.81	9.90	Line	-	27.40	0.04	0.04	9.82
AV	438k	25.89	47.11	-21.22	9.90	Line	-	15.99	0.04	0.04	9.82
QP	22.137M	37.90	60.00	-22.10	10.58	Line	-	27.32	0.33	0.25	10.00
AV	22.137M	30.75	50.00	-19.25	10.58	Line	-	20.17	0.33	0.25	10.00

Mode 5

17/11/2021



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	217.5k	52.77	62.92	-10.15	9.88	Neutral	"Worst"	42.89	0.03	0.04	9.81
AV	217.5k	42.14	52.92	-10.78	9.88	Neutral	-	32.26	0.03	0.04	9.81
QP	303k	46.44	60.17	-13.73	9.89	Neutral	-	36.55	0.03	0.04	9.82
AV	303k	33.88	50.17	-16.29	9.89	Neutral	-	23.99	0.03	0.04	9.82
QP	384k	41.02	58.20	-17.18	9.89	Neutral	-	31.13	0.03	0.04	9.82
AV	384k	31.12	48.20	-17.08	9.89	Neutral	-	21.23	0.03	0.04	9.82
QP	474k	38.58	56.44	-17.86	9.89	Neutral	-	28.69	0.03	0.04	9.82
AV	474k	29.57	46.44	-16.87	9.89	Neutral	-	19.68	0.03	0.04	9.82
QP	636k	29.94	56.00	-26.06	9.91	Neutral	-	20.03	0.04	0.04	9.83
AV	636k	20.11	46.00	-25.89	9.91	Neutral	-	10.20	0.04	0.04	9.83
QP	21.881M	37.32	60.00	-22.68	10.56	Neutral	-	26.76	0.32	0.24	10.00
AV	21.881M	30.21	50.00	-19.79	10.56	Neutral	-	19.65	0.32	0.24	10.00

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)	637.5k	1.027M	1M03F1D	630k	1.021M
BT-LE(2Mbps)	1.09M	2.069M	2M07F1D	1.083M	2.044M

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

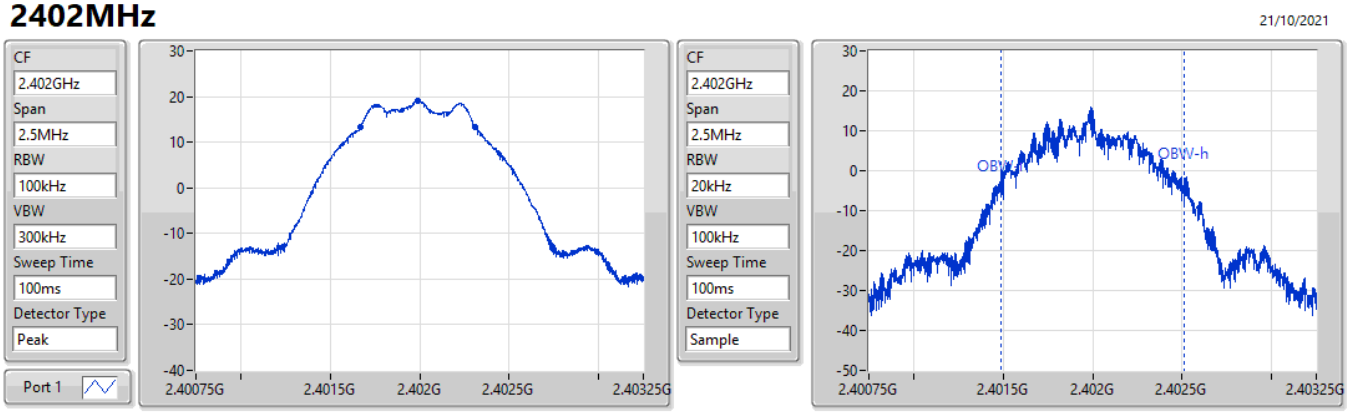
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	637.5k	1.027M
2440MHz	Pass	500k	636.25k	1.021M
2480MHz	Pass	500k	630k	1.022M
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	500k	1.09M	2.044M
2440MHz	Pass	500k	1.088M	2.054M
2480MHz	Pass	500k	1.083M	2.069M

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

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

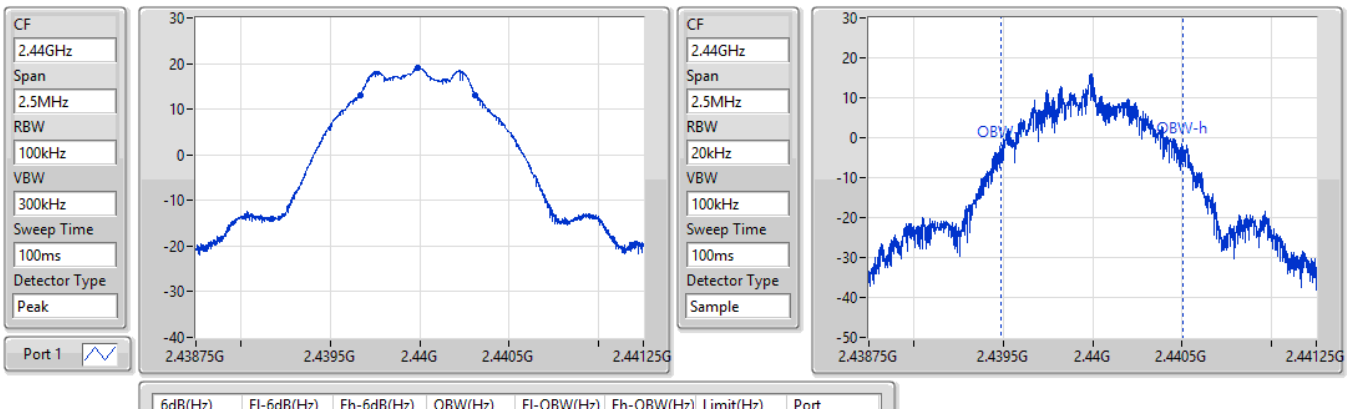
2402MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
637.5k	2.40167G	2.402308G	1.027M	2.401488G	2.402515G	500k	1

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

2440MHz

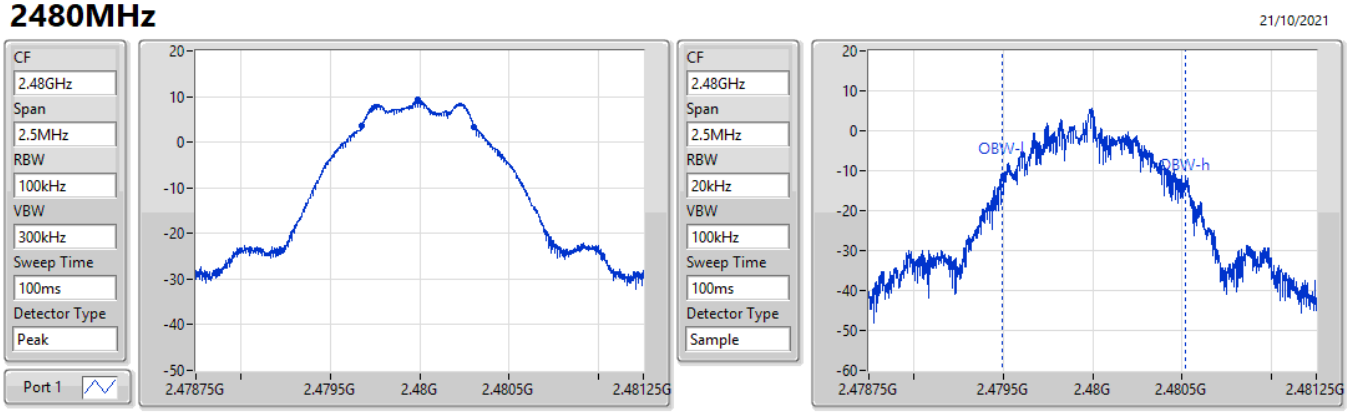


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
636.25k	2.439671G	2.440308G	1.021M	2.439487G	2.440507G	500k	1

BT-LE(1Mbps)

EBW-DTS

2480MHz

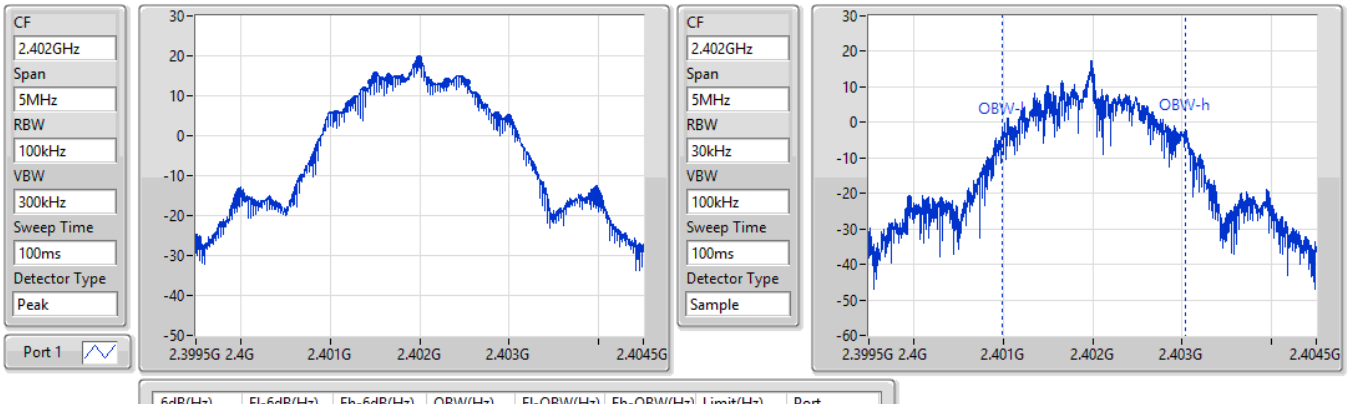


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
630k	2.479675G	2.480305G	1.022M	2.479494G	2.480516G	500k	1

BT-LE(2Mbps)

EBW-DTS

2402MHz

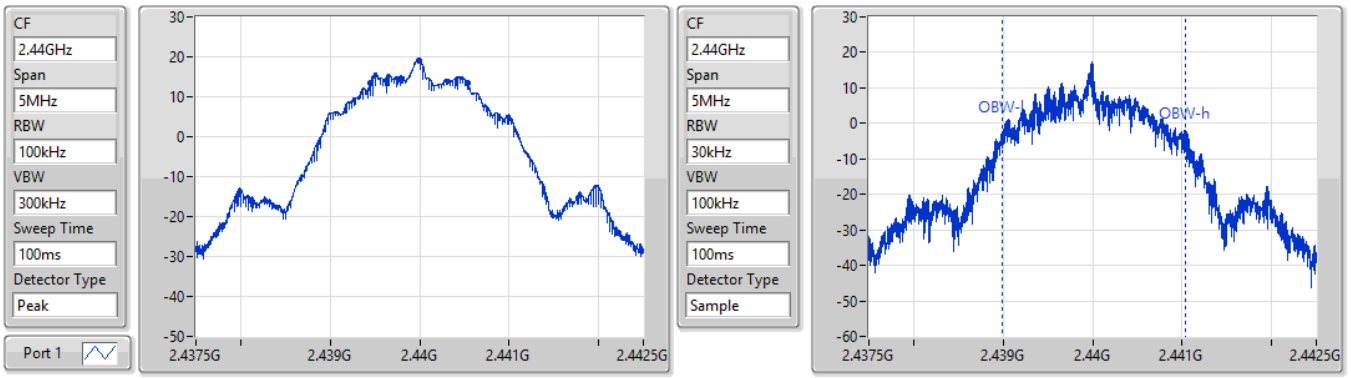


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.09M	2.401448G	2.402538G	2.044M	2.400988G	2.403032G	500k	1

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

2440MHz

21/10/2021

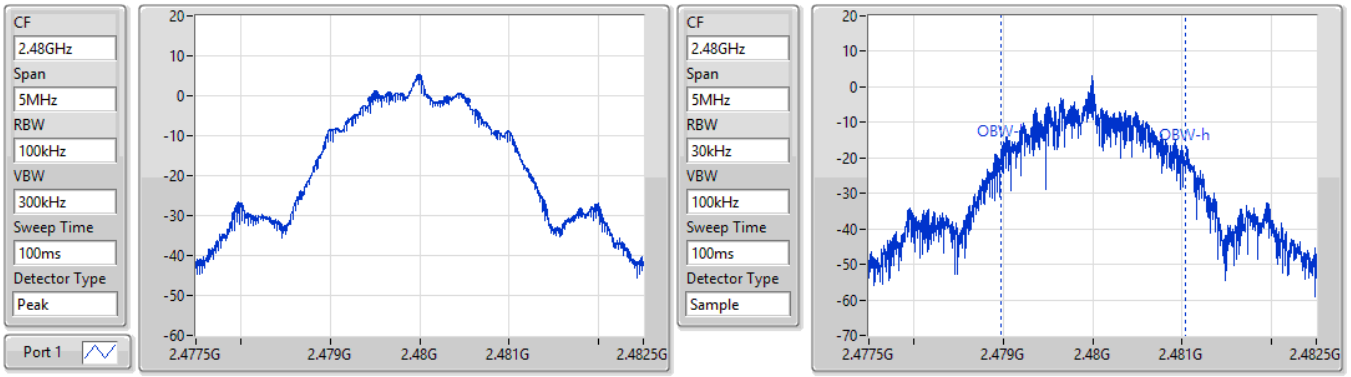


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.088M	2.439448G	2.440535G	2.054M	2.438986G	2.441039G	500k	1

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

2480MHz

21/10/2021



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.083M	2.479455G	2.480538G	2.069M	2.478976G	2.481044G	500k	1

Summary

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	19.00	0.07943
BT-LE(2Mbps)	18.91	0.07780

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.65	18.82	30.00
2440MHz	Pass	3.65	19.00	30.00
2478MHz	Pass	3.65	18.32	30.00
2480MHz	Pass	3.65	8.96	30.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	3.65	18.65	30.00
2440MHz	Pass	3.65	18.91	30.00
2478MHz	Pass	3.65	6.01	30.00
2480MHz	Pass	3.65	4.19	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
BT-LE(1Mbps)	3.92
BT-LE(2Mbps)	3.81

RBW = 3kHz;

Result

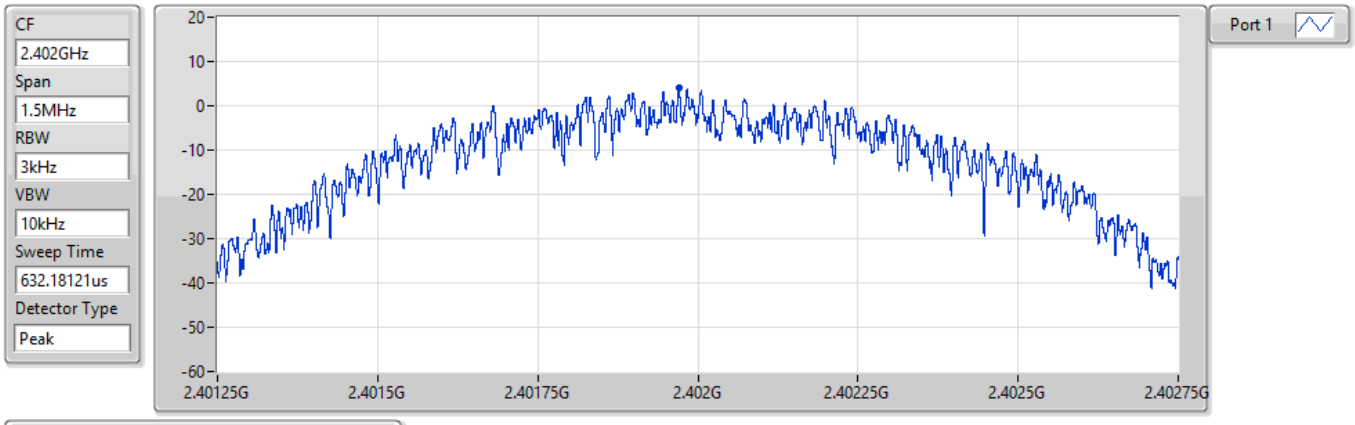
Mode	Result	Gain (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.65	3.92	8.00
2440MHz	Pass	3.65	3.73	8.00
2480MHz	Pass	3.65	-6.25	8.00
BT-LE(2Mbps)	-	-	-	-
2402MHz	Pass	3.65	3.81	8.00
2440MHz	Pass	3.65	3.69	8.00
2480MHz	Pass	3.65	-12.75	8.00

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

21/10/2021

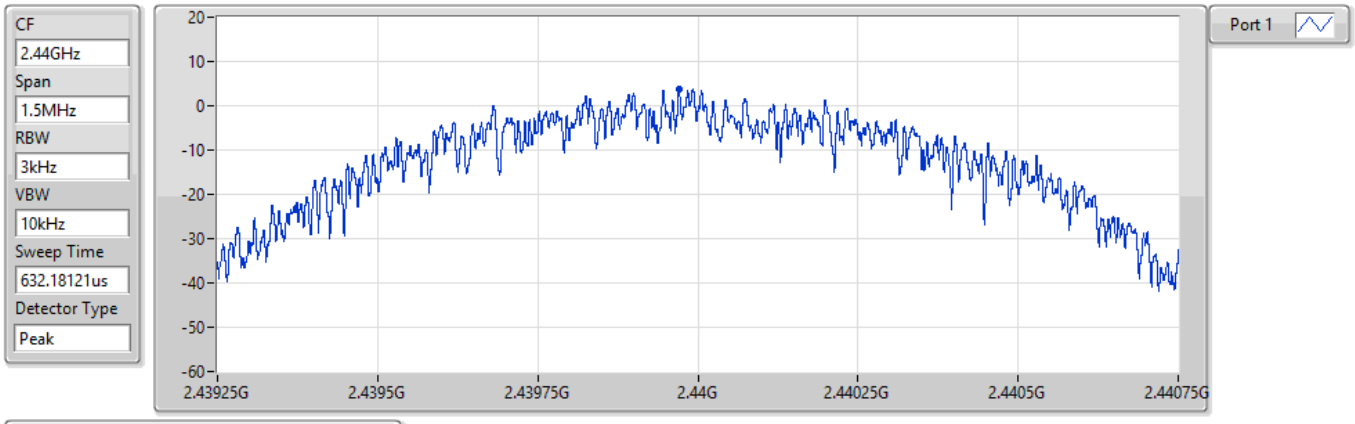


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.92	3.92	3.92

BT-LE(1Mbps) **PSD**

2440MHz

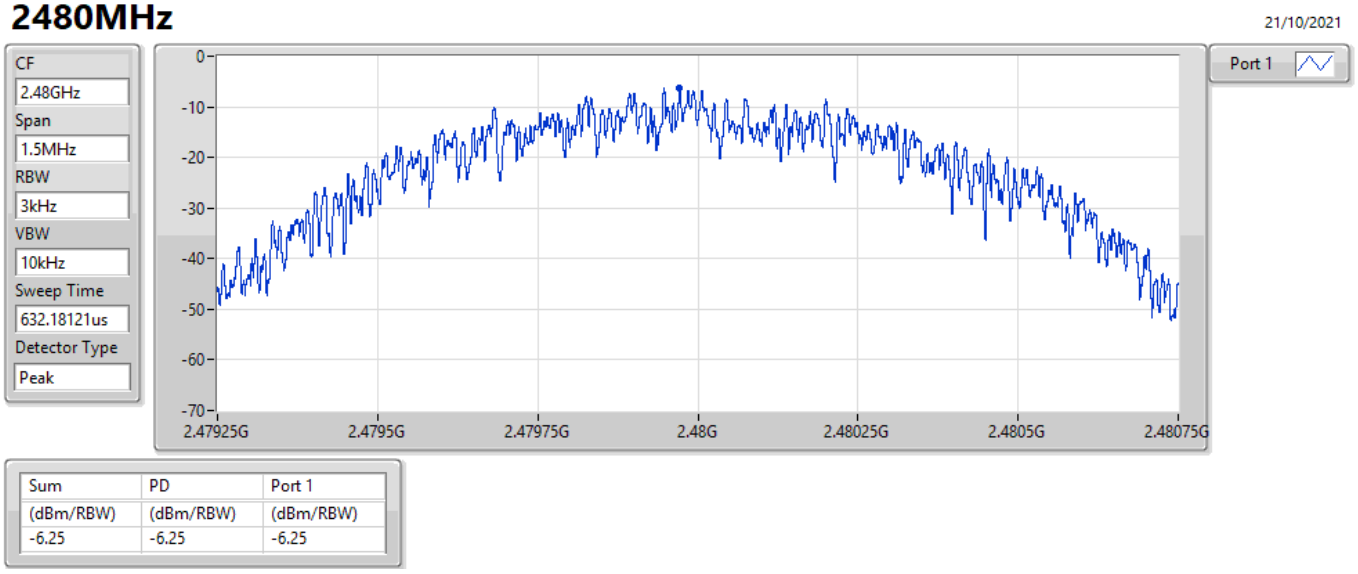
21/10/2021



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.73	3.73	3.73

BT-LE(1Mbps) PSD

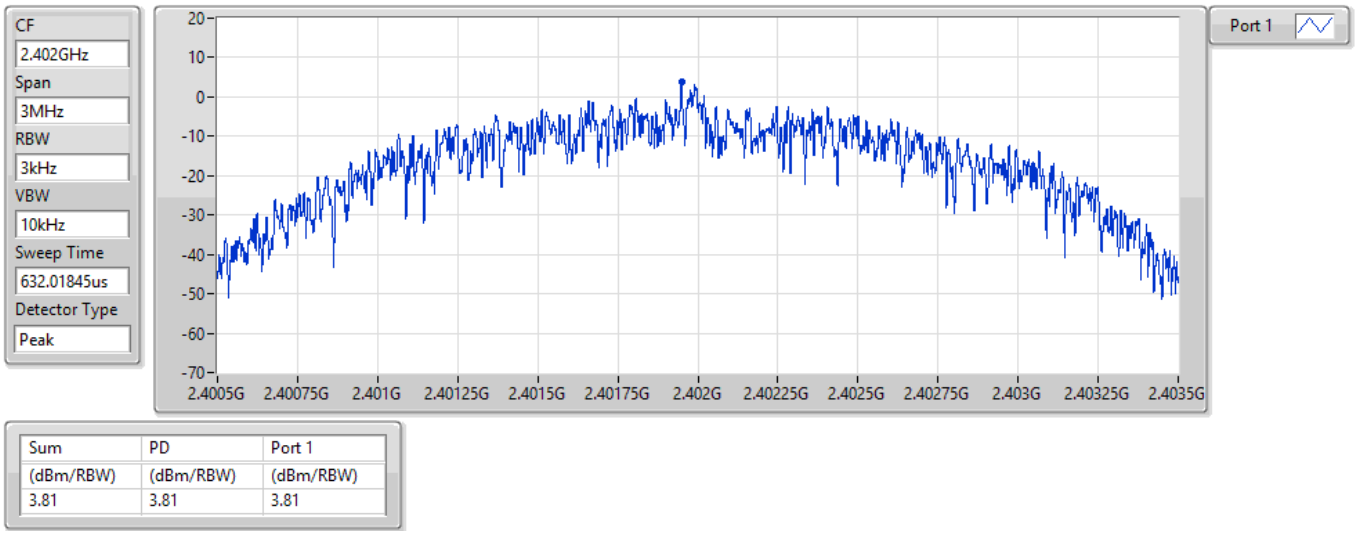
2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.25	-6.25	-6.25

BT-LE(2Mbps) PSD

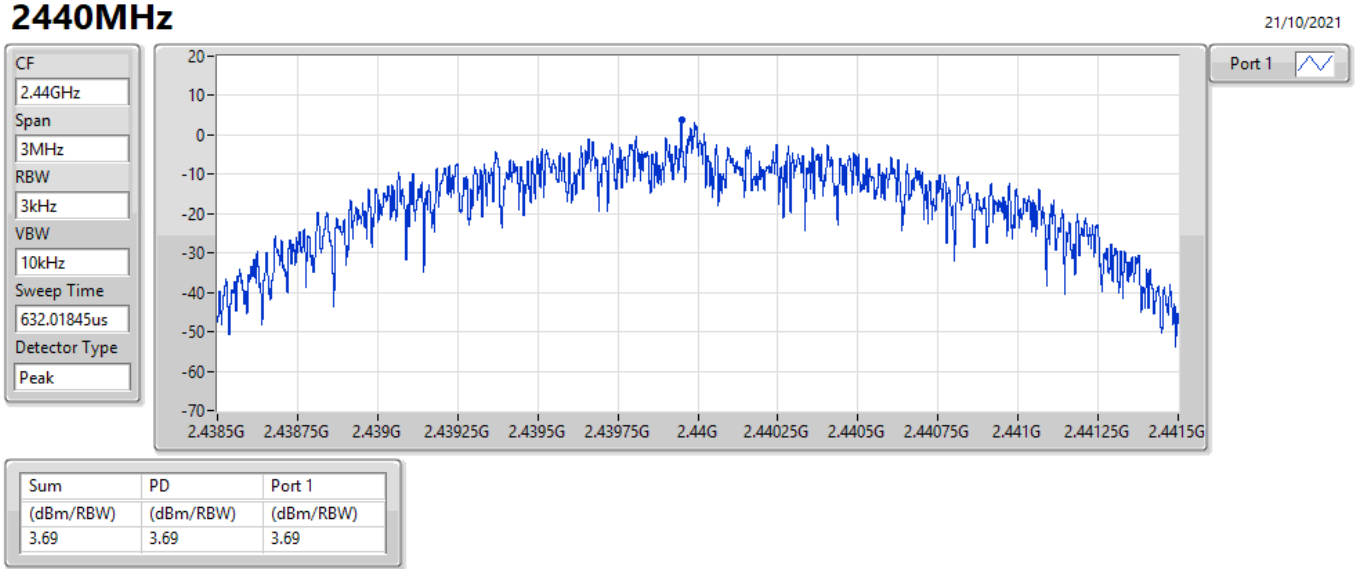
2402MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.81	3.81	3.81

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

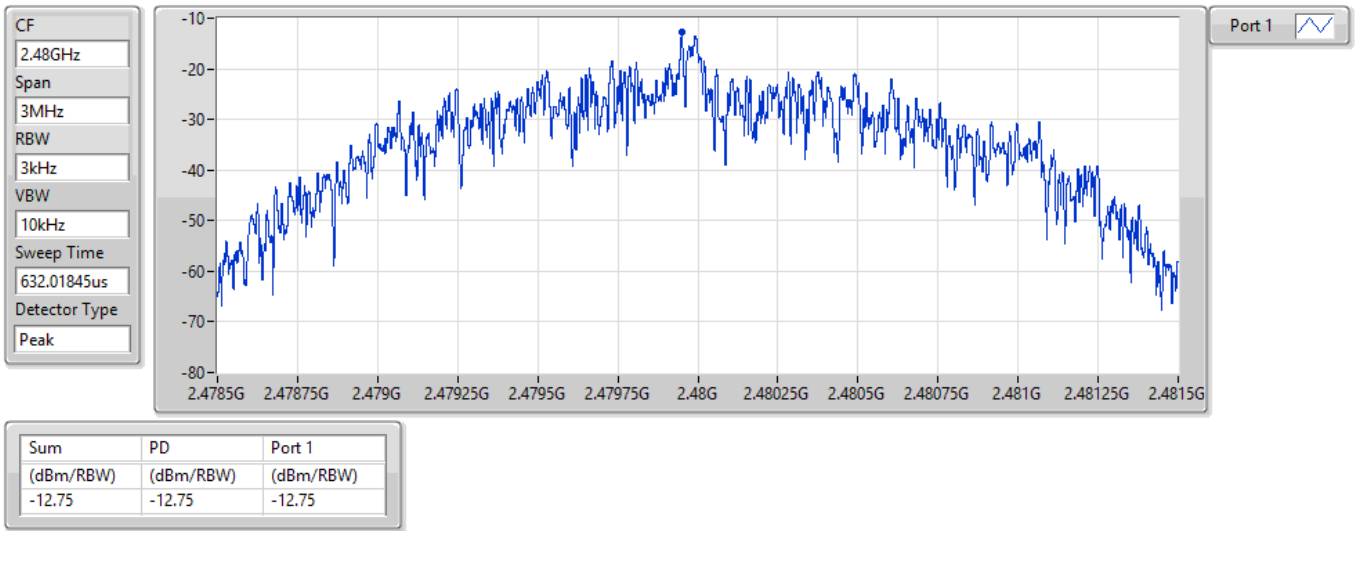
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.69	3.69	3.69

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

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.75	-12.75	-12.75

Summary

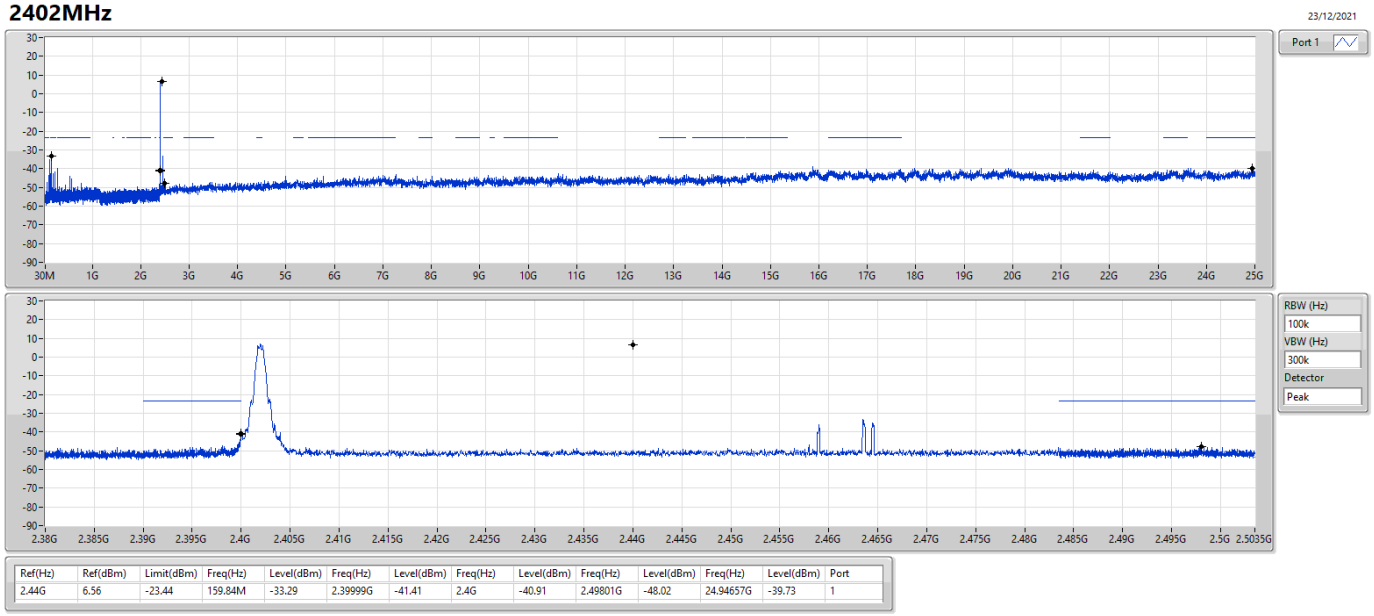
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.44G	6.56	-23.44	159.84M	-33.29	2.39999G	-41.41	2.4G	-40.91	2.49801G	-48.02	24.94657G	-39.73	1
BT-LE(2Mbps)	Pass	2.402G	19.05	-10.95	159.84M	-47.72	2.39998G	-13.16	2.4G	-13.47	2.49881G	-51.87	7.20527G	-36.33	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	2.44G	6.56	-23.44	159.84M	-33.29	2.39999G	-41.41	2.4G	-40.91	2.49801G	-48.02	24.94657G	-39.73	1
2440MHz	Pass	2.44G	6.56	-23.44	159.84M	-33.50	2.39415G	-48.64	2.4G	-50.58	2.48859G	-48.06	15.26745G	-39.02	1
2480MHz	Pass	2.44G	6.56	-23.44	159.84M	-33.93	2.39332G	-49.21	2.4835G	-49.76	2.4869G	-48.32	17.65489G	-39.51	1
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2402MHz	Pass	2.402G	19.05	-10.95	159.84M	-47.72	2.39998G	-13.16	2.4G	-13.47	2.49881G	-51.87	7.20527G	-36.33	1
2440MHz	Pass	2.40196G	19.16	-10.84	159.84M	-48.11	2.39968G	-52.20	2.4G	-52.36	2.50248G	-50.91	24.58663G	-43.12	1
2480MHz	Pass	2.402G	19.05	-10.95	159.84M	-48.20	2.39716G	-51.49	2.4835G	-50.40	2.484G	-49.37	16.59193G	-43.31	1

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

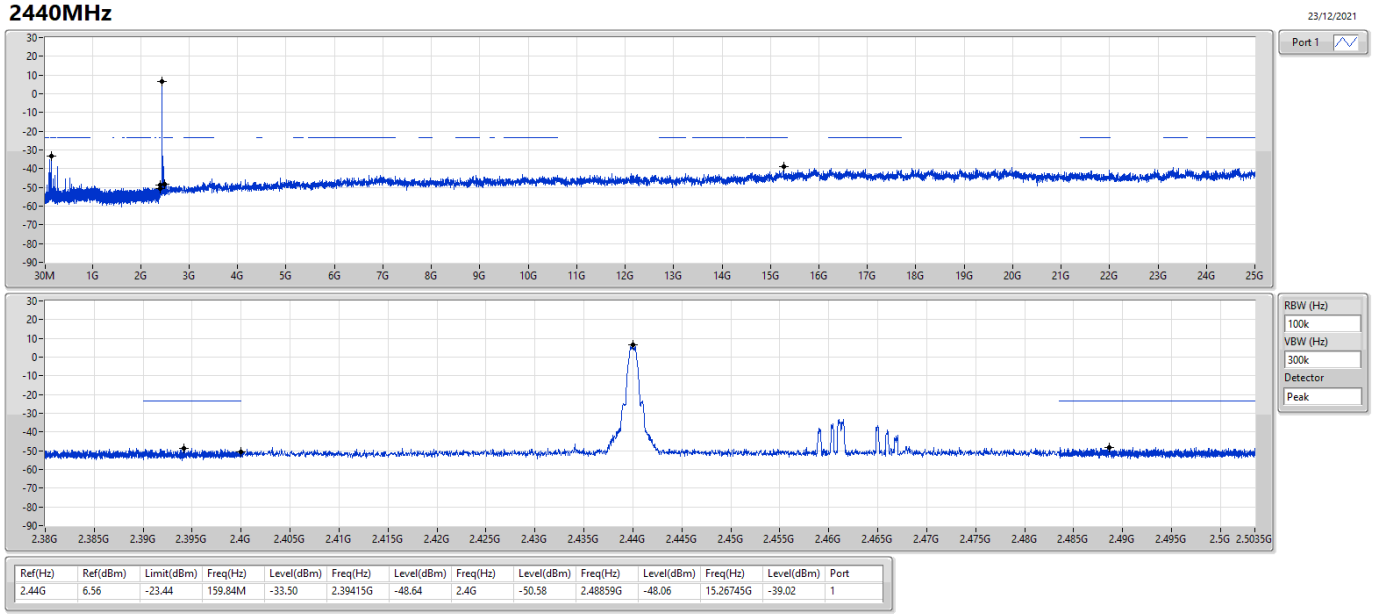
2402MHz



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
2.44G	6.56	-23.44	159.84M	-33.29	2.39999G	-41.41	2.4G	-40.91	2.49801G	-48.02	24.94657G	-39.73	1

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

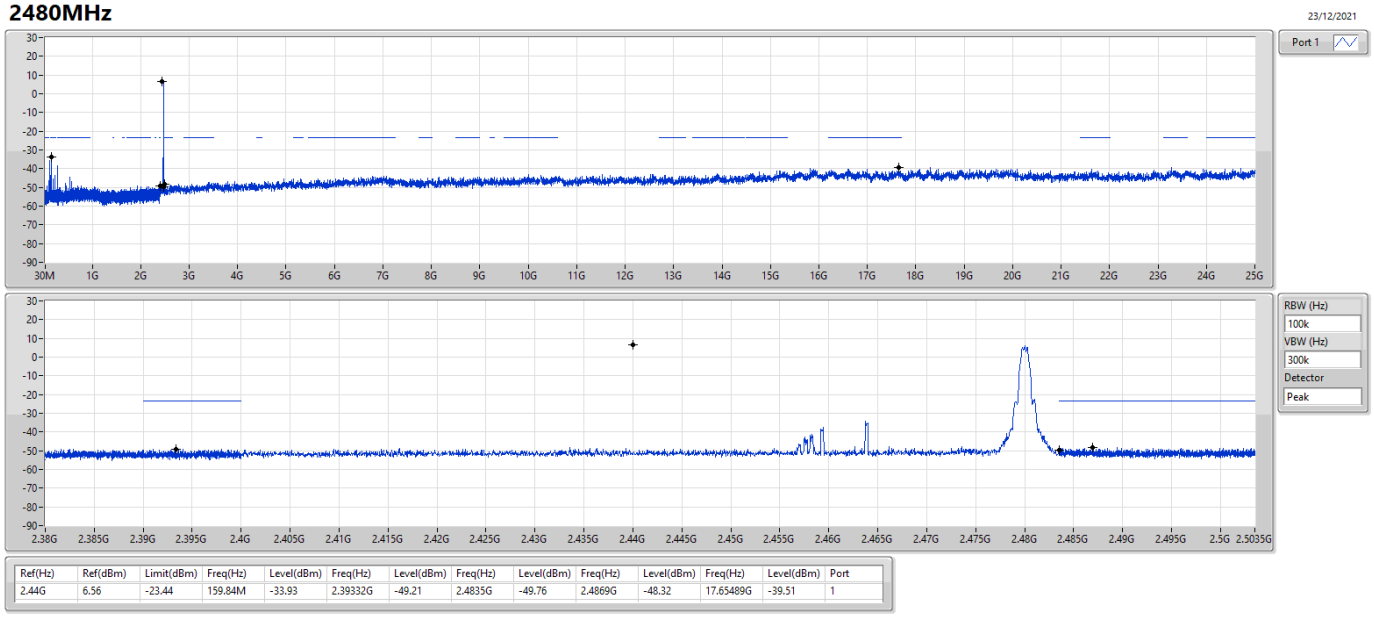
2440MHz



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
2.44G	6.56	-23.44	159.84M	-33.50	2.39415G	-48.64	2.4G	-50.58	2.48859G	-48.06	15.26745G	-39.02	1

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

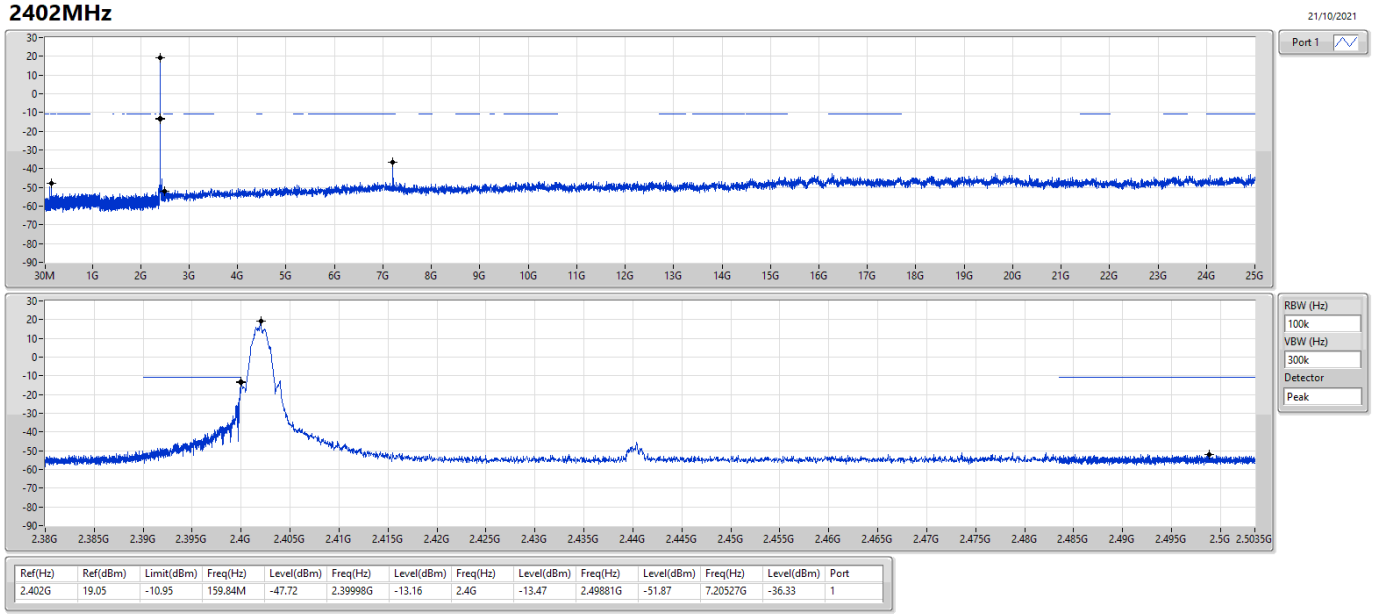
2480MHz



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
2.44G	6.56	-23.44	159.84M	-33.93	2.39332G	-49.21	2.4835G	-49.76	2.4869G	-48.32	17.65489G	-39.51	1

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

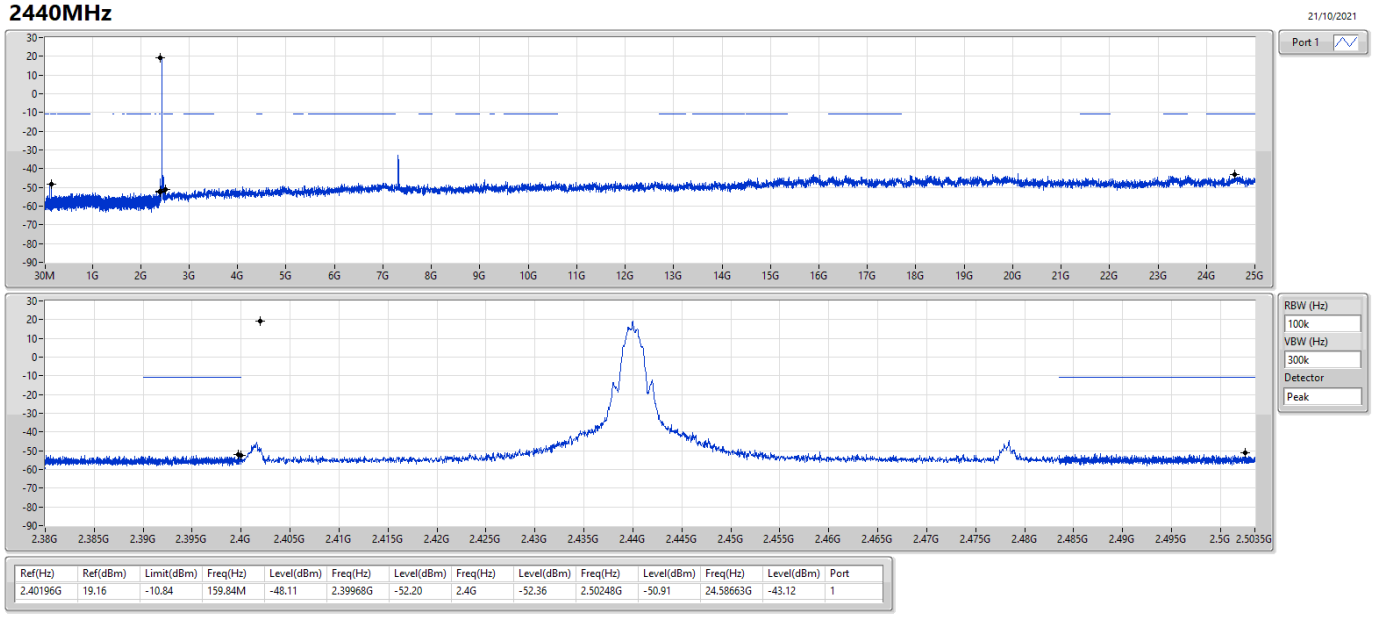
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	19.05	-10.95	159.84M	-47.72	2.39998G	-13.16	2.4G	-13.47	2.49881G	-51.87	7.20527G	-36.33	1

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

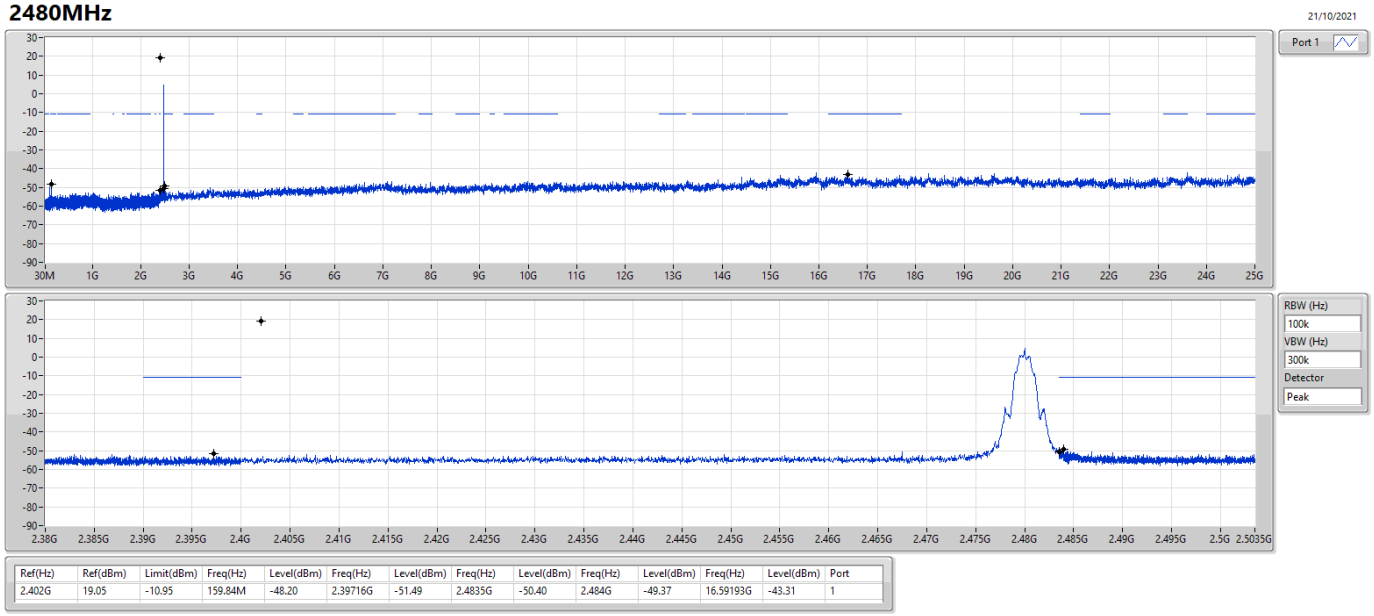
2440MHz



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
2.40196G	19.16	-10.84	159.84M	-48.11	2.39968G	-52.20	2.4G	-52.36	2.50248G	-50.91	24.58663G	-43.12	1

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

2480MHz

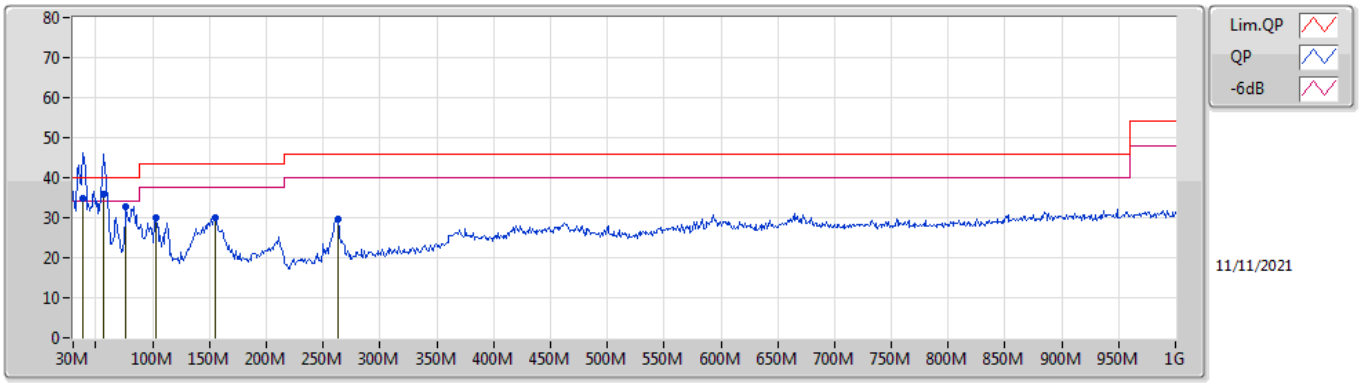


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.402G	19.05	-10.95	159.84M	-48.20	2.39716G	-51.49	2.4835G	-50.40	2.484G	-49.37	16.59193G	-43.31	1

Summary

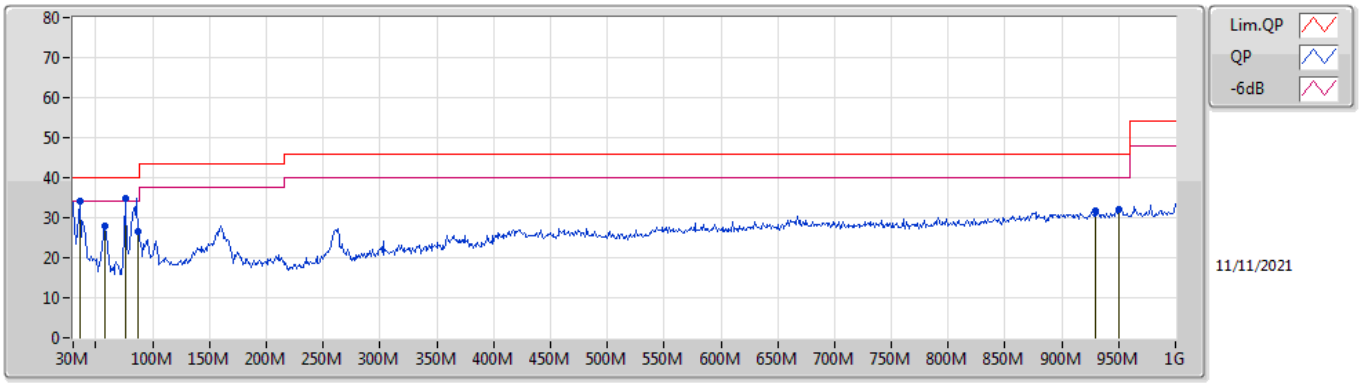
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 7	Pass	QP	56.19M	35.99	40.00	-4.01	Vertical

Mode 7



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	38.73M	34.86	40.00	-5.14	-11.36	3	Vertical	303	1.00	-	46.22	19.38	0.90	31.64
QP	56.19M	35.99	40.00	-4.01	-18.19	3	Vertical	303	1.00	"Worst"	54.18	12.51	1.12	31.82
QP	76.56M	32.86	40.00	-7.14	-18.20	3	Vertical	303	1.00	-	51.06	12.41	1.30	31.91
QP	102.75M	30.10	43.50	-13.40	-13.34	3	Vertical	360	1.00	-	43.44	17.03	1.51	31.88
QP	155.13M	29.89	43.50	-13.61	-14.14	3	Vertical	20	1.00	-	44.03	15.94	1.88	31.96
QP	262.8M	29.57	46.00	-16.43	-10.29	3	Vertical	186	1.00	-	39.86	19.26	2.48	32.03

Mode 7



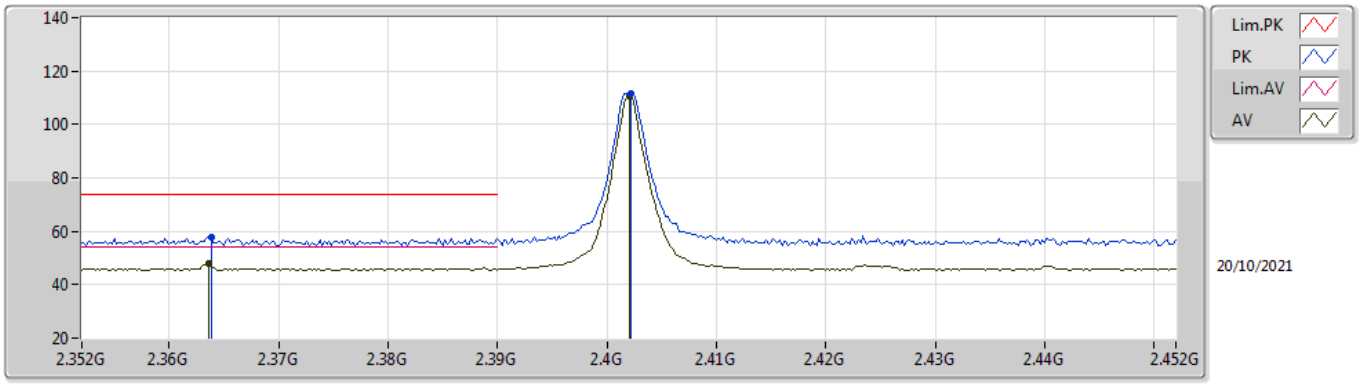
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
QP	35.82M	34.13	40.00	-5.87	-9.71	3	Horizontal	314	1.25	-	43.84	20.99	0.90	31.60
QP	58.13M	28.02	40.00	-11.98	-18.34	3	Horizontal	157	2.00	-	46.36	12.33	1.16	31.83
QP	75.59M	34.70	40.00	-5.30	-18.28	3	Horizontal	18	1.00	"Worst"	52.98	12.32	1.30	31.90
QP	87.23M	26.69	40.00	-13.31	-16.46	3	Horizontal	166	2.00	-	43.15	14.05	1.40	31.91
QP	929.19M	31.69	46.00	-14.31	-1.40	3	Horizontal	140	1.50	-	33.09	26.21	5.00	32.61
QP	950.53M	32.14	46.00	-13.86	-1.10	3	Horizontal	27	1.00	-	33.24	26.47	5.00	32.57

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	53.88	54.00	-0.12	3	Horizontal	52	2.86	-

BT-LE(1Mbps)

2402MHz_TX

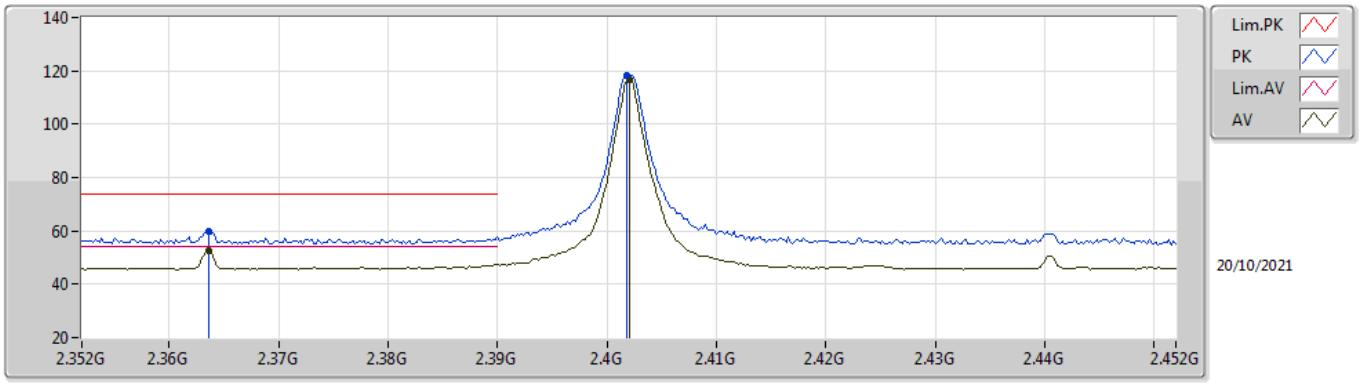


EUT Y_1TX
Setting 200
03-E-K-4

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	2.3638G	57.69	74.00	-16.31	24.96	3	Vertical	121	2.50	-	28.37	4.36	-
AV	2.3636G	47.69	54.00	-6.31	14.96	3	Vertical	121	2.50	-	28.37	4.36	-
PK	2.4022G	111.78	Inf	-Inf	79.08	3	Vertical	121	2.50	-	28.30	4.40	-
AV	2.402G	110.33	Inf	-Inf	77.63	3	Vertical	121	2.50	-	28.30	4.40	-

BT-LE(1Mbps)

2402MHz_TX

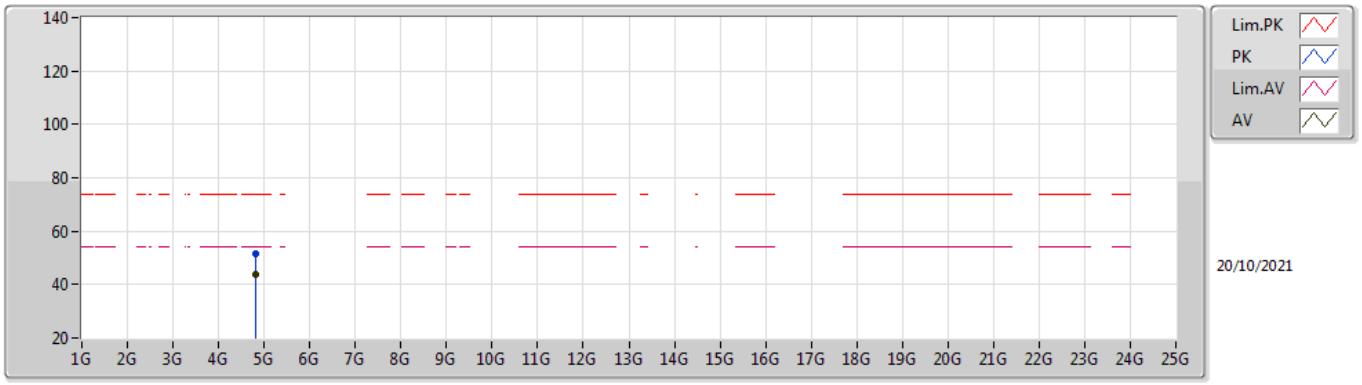


EUT Y_1TX
Setting 200
03-E-K-4

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	2.3636G	59.99	74.00	-14.01	27.26	3	Horizontal	55	1.80	-	28.37	4.36	-
AV	2.3636G	52.63	54.00	-1.37	19.90	3	Horizontal	55	1.80	-	28.37	4.36	-
PK	2.4018G	118.05	Inf	-Inf	85.35	3	Horizontal	55	1.80	-	28.30	4.40	-
AV	2.402G	116.71	Inf	-Inf	84.01	3	Horizontal	55	1.80	-	28.30	4.40	-

BT-LE(1Mbps)

2402MHz_TX

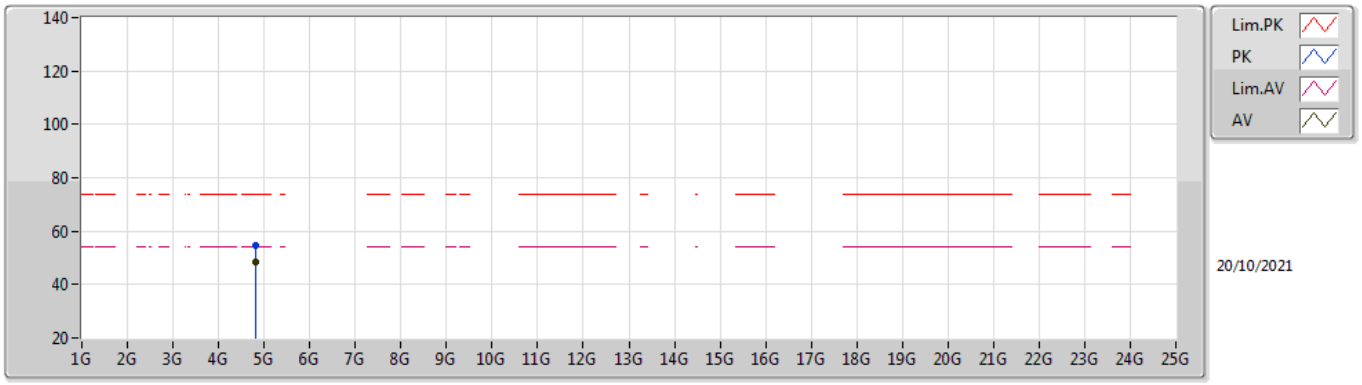


EUT Y_1TX
Setting 200
03-E-K-4

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	4.80451G	51.68	74.00	-22.32	46.61	3	Vertical	327	2.57	-	33.40	7.10	35.43
AV	4.80386G	43.87	54.00	-10.13	38.80	3	Vertical	327	2.57	-	33.40	7.10	35.43

BT-LE(1Mbps)

2402MHz_TX

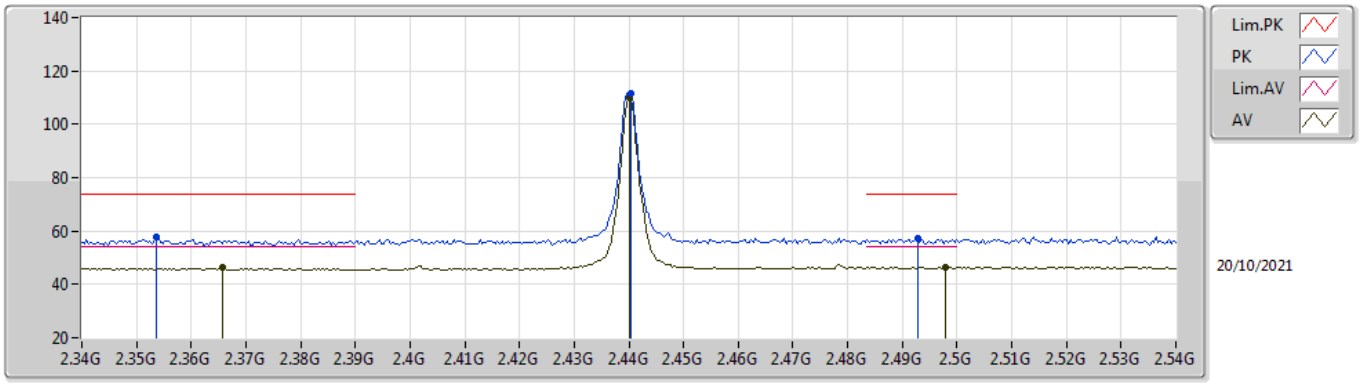


EUT Y_1TX
Setting 200
03-E-K-4

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	4.80446G	54.89	74.00	-19.11	49.82	3	Horizontal	5	1.55	-	33.40	7.10	35.43
AV	4.804G	48.38	54.00	-5.62	43.31	3	Horizontal	5	1.55	-	33.40	7.10	35.43

BT-LE(1Mbps)

2440MHz_TX

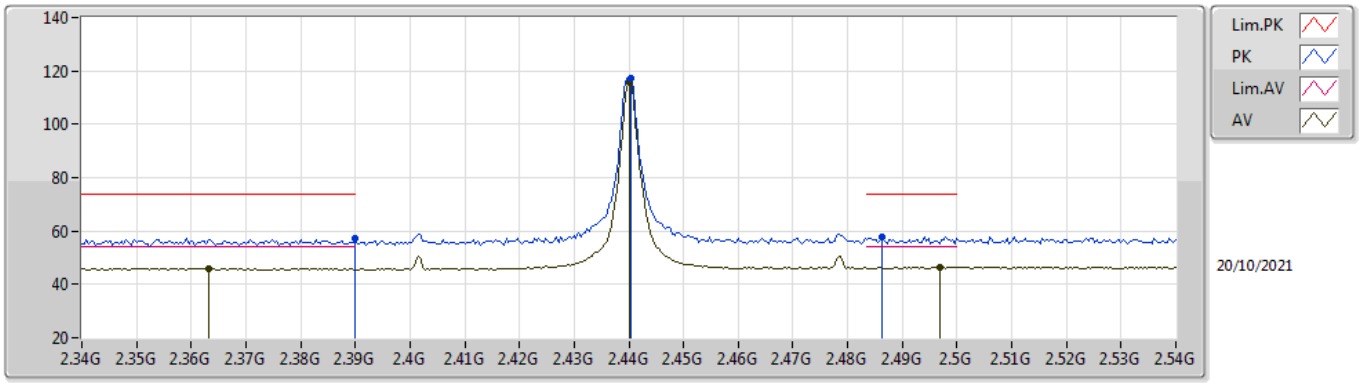


EUT Y_1TX
Setting 200
03-E-K-4

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3536G	57.64	74.00	-16.36	24.90	3	Vertical	123	2.36	-	28.39	4.35	-
AV	2.3656G	46.16	54.00	-7.84	13.42	3	Vertical	123	2.36	-	28.37	4.37	-
PK	2.4404G	111.33	Inf	-Inf	78.53	3	Vertical	123	2.36	-	28.38	4.42	-
AV	2.44G	110.05	Inf	-Inf	77.25	3	Vertical	123	2.36	-	28.38	4.42	-
PK	2.4928G	57.30	74.00	-16.70	24.19	3	Vertical	123	2.36	-	28.66	4.45	-
AV	2.498G	46.41	54.00	-7.59	13.27	3	Vertical	123	2.36	-	28.69	4.45	-

BT-LE(1Mbps)

2440MHz_TX

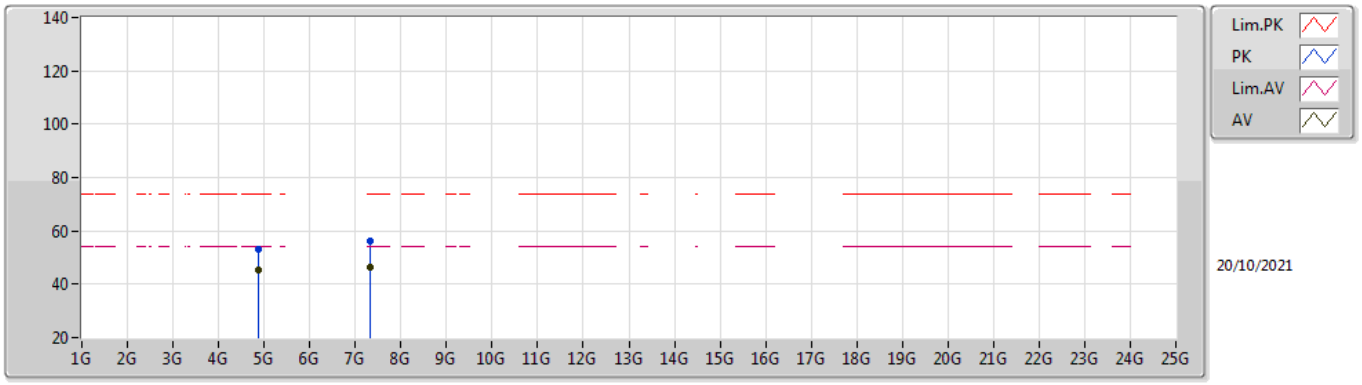


EUT Y_1TX
Setting 200
03-E-K-4

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	2.39G	57.39	74.00	-16.61	24.68	3	Horizontal	51	2.95	-	28.32	4.39	-	
AV	2.3632G	46.05	54.00	-7.95	13.32	3	Horizontal	51	2.95	-	28.37	4.36	-	
PK	2.4404G	117.47	Inf	-Inf	84.67	3	Horizontal	51	2.95	-	28.38	4.42	-	
AV	2.44G	115.91	Inf	-Inf	83.11	3	Horizontal	51	2.95	-	28.38	4.42	-	
PK	2.4864G	57.94	74.00	-16.06	24.88	3	Horizontal	51	2.95	-	28.62	4.44	-	
AV	2.4968G	46.35	54.00	-7.65	13.22	3	Horizontal	51	2.95	-	28.68	4.45	-	

BT-LE(1Mbps)

2440MHz_TX

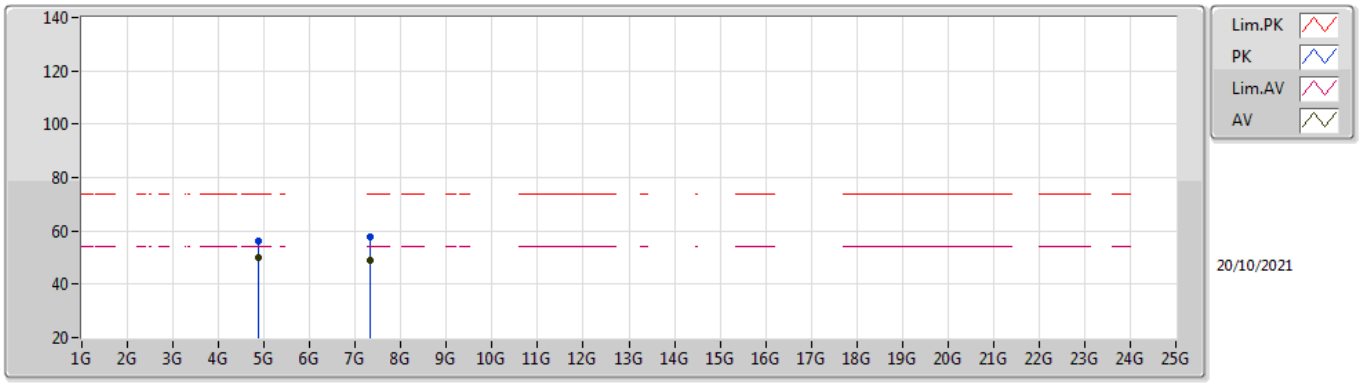


EUT Y_1TX
Setting 200
03-E-K-4

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	4.88035G	53.11	74.00	-20.89	47.92	3	Vertical	324	2.91	-	33.52	7.06	35.39
AV	4.87975G	45.22	54.00	-8.78	40.03	3	Vertical	324	2.91	-	33.52	7.06	35.39
PK	7.3192G	56.14	74.00	-17.86	46.15	3	Vertical	56	1.95	-	37.00	8.56	35.57
AV	7.31936G	46.26	54.00	-7.74	36.27	3	Vertical	56	1.95	-	37.00	8.56	35.57

BT-LE(1Mbps)

2440MHz_TX

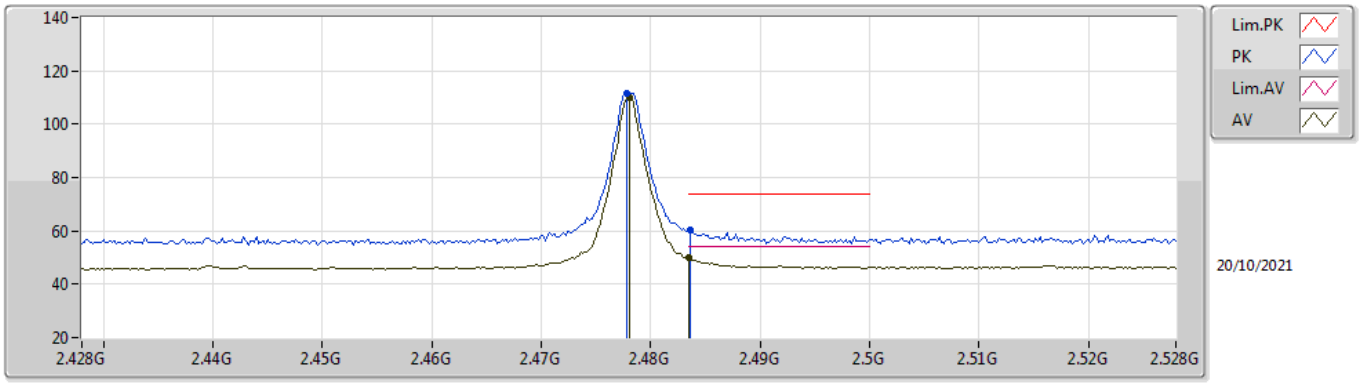


EUT Y_1TX
Setting 200
03-E-K-4

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	4.87953G	56.29	74.00	-17.71	51.10	3	Horizontal	-0	1.60	-	33.52	7.06	35.39
AV	4.87993G	50.15	54.00	-3.85	44.96	3	Horizontal	-0	1.60	-	33.52	7.06	35.39
PK	7.32054G	57.83	74.00	-16.17	47.84	3	Horizontal	292	2.93	-	37.00	8.56	35.57
AV	7.31939G	49.15	54.00	-4.85	39.16	3	Horizontal	292	2.93	-	37.00	8.56	35.57

BT-LE(1Mbps)

2478MHz_TX

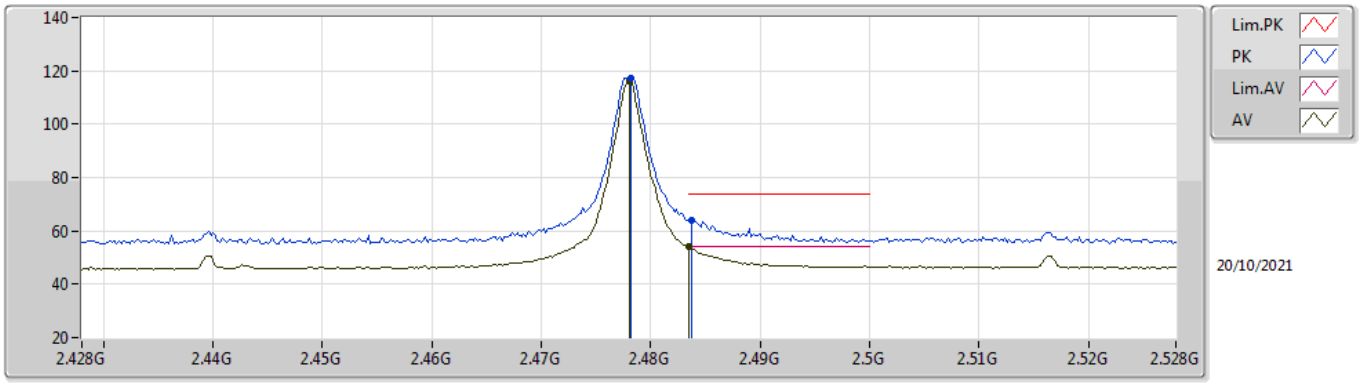


EUT Y_1TX
Setting 178
03-E-K-4

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	2.4778G	111.56	Inf	-Inf	78.55	3	Vertical	123	2.86	-	28.57	4.44	-
AV	2.478G	110.25	Inf	-Inf	77.24	3	Vertical	123	2.86	-	28.57	4.44	-
PK	2.4836G	60.10	74.00	-13.90	27.06	3	Vertical	123	2.86	-	28.60	4.44	-
AV	2.4835G	49.77	54.00	-4.23	16.73	3	Vertical	123	2.86	-	28.60	4.44	-

BT-LE(1Mbps)

2478MHz_TX

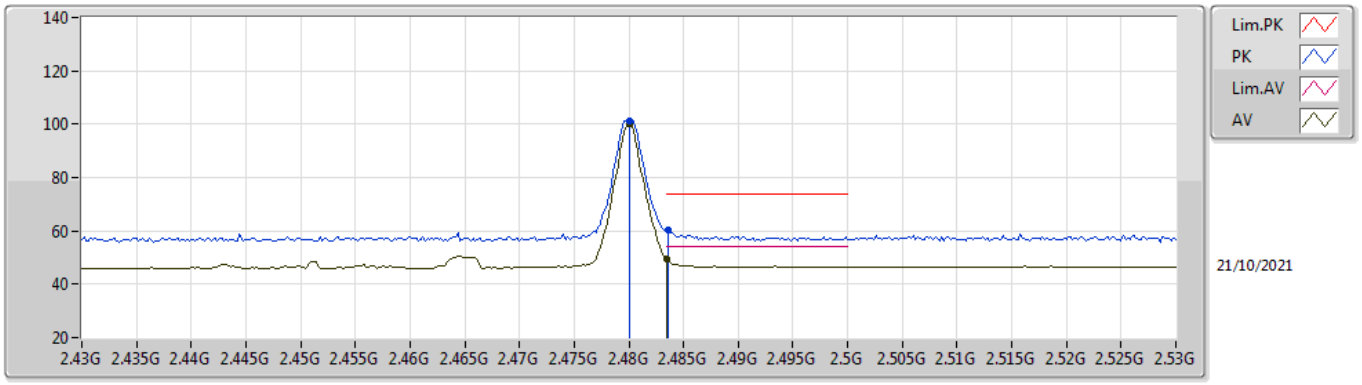


EUT Y_1TX
Setting 178
03-E-K-4

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	2.4782G	117.45	Inf	-Inf	84.44	3	Horizontal	52	2.86	-	28.57	4.44	-
AV	2.478G	116.13	Inf	-Inf	83.12	3	Horizontal	52	2.86	-	28.57	4.44	-
PK	2.4838G	64.03	74.00	-9.97	30.99	3	Horizontal	52	2.86	-	28.60	4.44	-
AV	2.4835G	53.88	54.00	-0.12	20.84	3	Horizontal	52	2.86	-	28.60	4.44	-

BT-LE(1Mbps)

2480MHz_TX

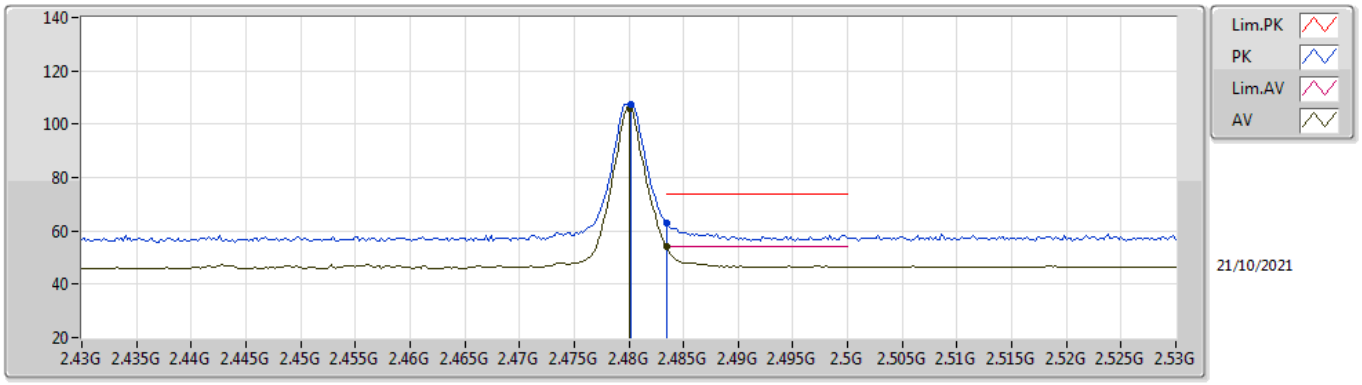


EUT Y_1TX
Setting 70
03-E-K-4

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	101.38	Inf	-Inf	68.36	3	Vertical	124	2.86	-	28.58	4.44	-
AV	2.48G	100.06	Inf	-Inf	67.04	3	Vertical	124	2.86	-	28.58	4.44	-
PK	2.4836G	60.48	74.00	-13.52	27.44	3	Vertical	124	2.86	-	28.60	4.44	-
AV	2.4835G	49.51	54.00	-4.49	16.47	3	Vertical	124	2.86	-	28.60	4.44	-

BT-LE(1Mbps)

2480MHz_TX

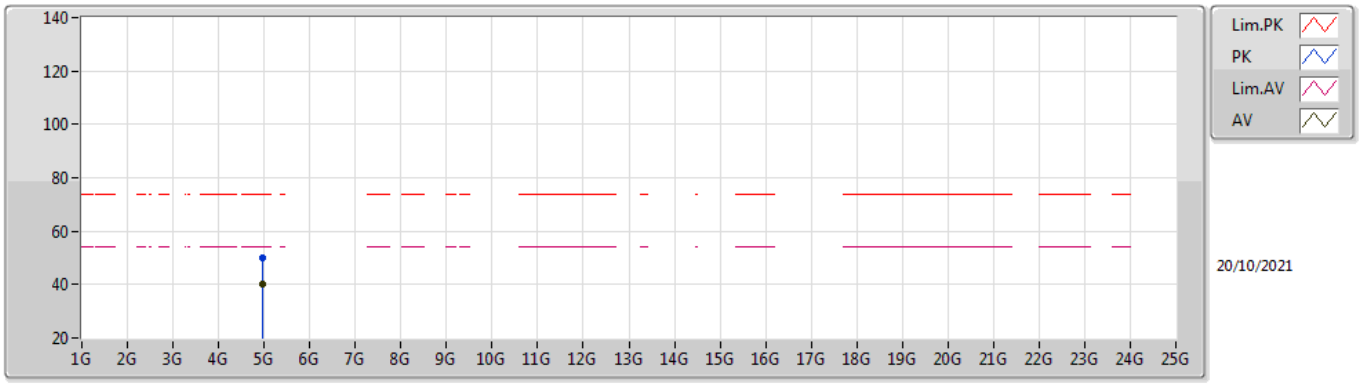


EUT Y_1TX
Setting 70
03-E-K-4

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	107.39	Inf	-Inf	74.37	3	Horizontal	52	2.86	-	28.58	4.44	-
AV	2.48G	106.10	Inf	-Inf	73.08	3	Horizontal	52	2.86	-	28.58	4.44	-
PK	2.4835G	63.05	74.00	-10.95	30.01	3	Horizontal	52	2.86	-	28.60	4.44	-
AV	2.4835G	53.88	54.00	-0.12	20.84	3	Horizontal	52	2.86	-	28.60	4.44	-

BT-LE(1Mbps)

2480MHz_TX

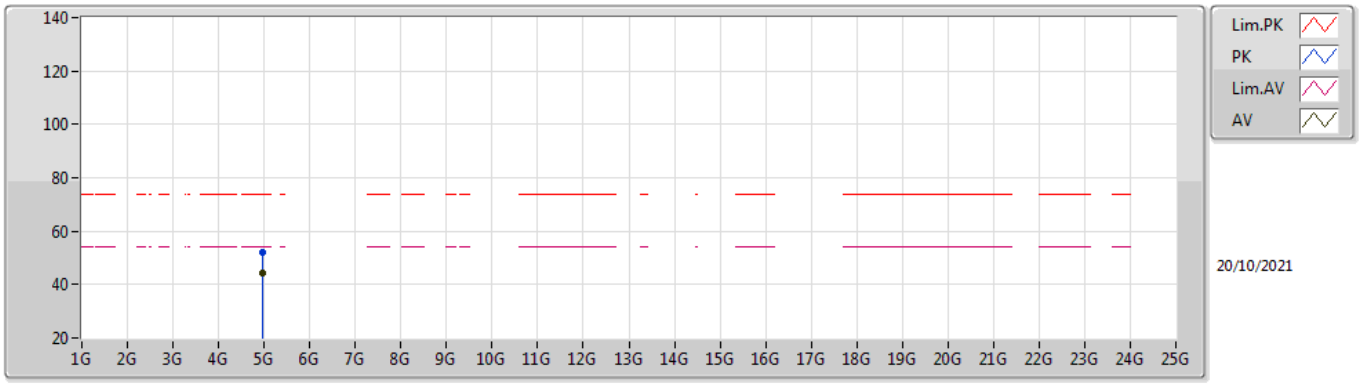


EUT Y_1TX
Setting 70
03-E-K-4

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	4.9594G	50.01	74.00	-23.99	44.62	3	Vertical	324	2.82	-	33.72	7.02	35.35
AV	4.95996G	40.35	54.00	-13.65	34.96	3	Vertical	324	2.82	-	33.72	7.02	35.35

BT-LE(1Mbps)

2480MHz_TX

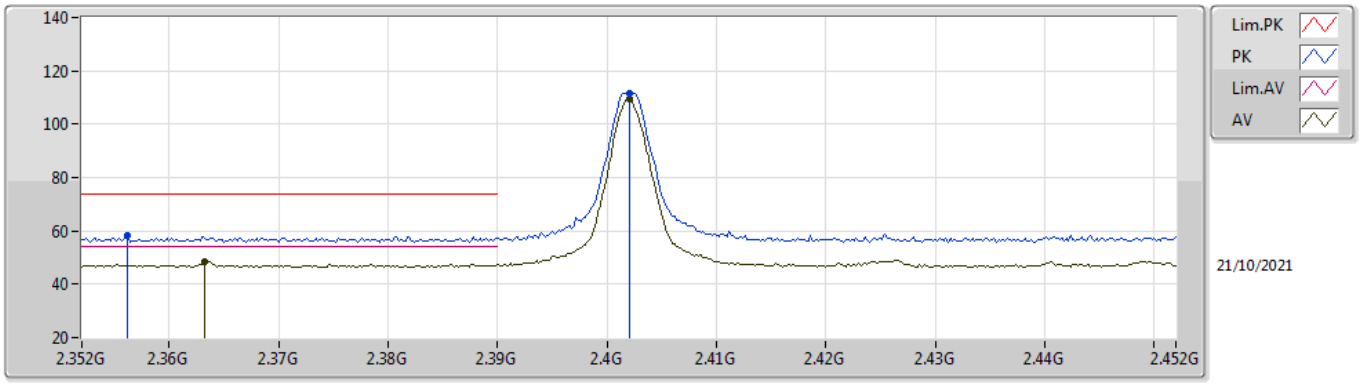


EUT Y_1TX
Setting 70
03-E-K-4

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	4.95956G	52.12	74.00	-21.88	46.73	3	Horizontal	360	1.36	-	33.72	7.02	35.35
AV	4.95978G	44.49	54.00	-9.51	39.10	3	Horizontal	360	1.36	-	33.72	7.02	35.35

BT-LE(2Mbps)

2402MHz_TX

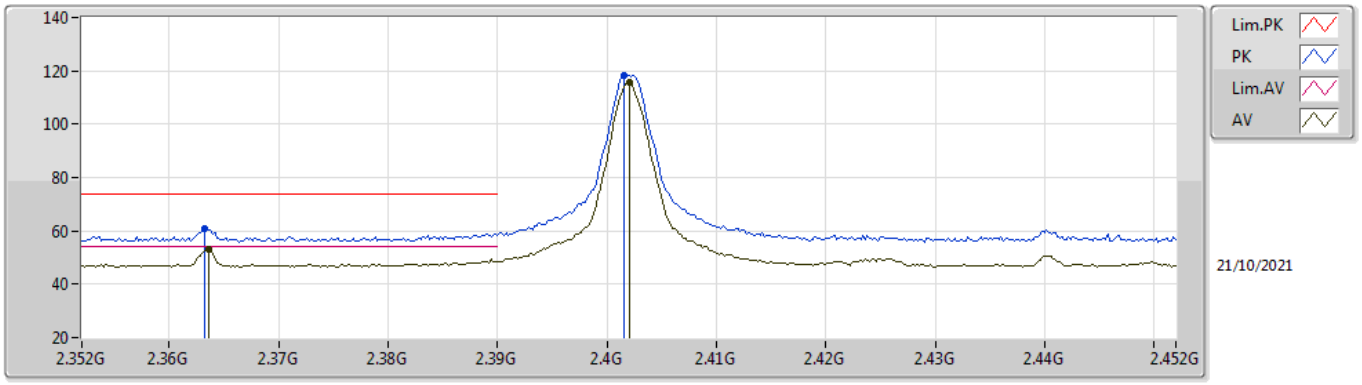


EUT Y_1TX
Setting 200
03-E-K-4

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	2.3562G	58.25	74.00	-15.75	25.50	3	Vertical	139	1.80	-	28.39	4.36	-
AV	2.3632G	48.42	54.00	-5.58	15.69	3	Vertical	139	1.80	-	28.37	4.36	-
PK	2.402G	111.76	Inf	-Inf	79.06	3	Vertical	139	1.80	-	28.30	4.40	-
AV	2.402G	109.59	Inf	-Inf	76.89	3	Vertical	139	1.80	-	28.30	4.40	-

BT-LE(2Mbps)

2402MHz_TX

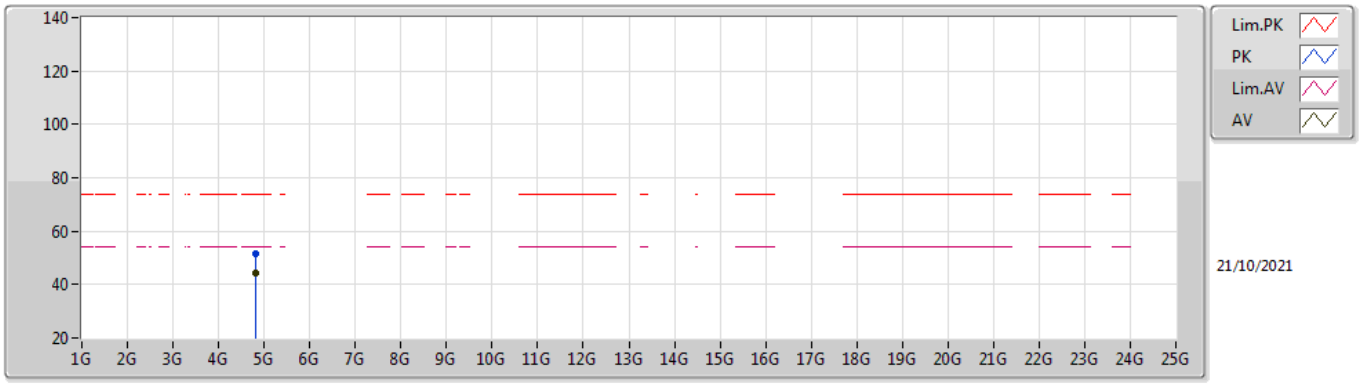


EUT Y_1TX
Setting 200
03-E-K-4

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	60.89	74.00	-13.11	28.16	3	Horizontal	54	1.80	-	28.37	4.36	-
AV	2.3636G	53.17	54.00	-0.83	20.44	3	Horizontal	54	1.80	-	28.37	4.36	-
PK	2.4016G	118.11	Inf	-Inf	85.41	3	Horizontal	54	1.80	-	28.30	4.40	-
AV	2.402G	115.89	Inf	-Inf	83.19	3	Horizontal	54	1.80	-	28.30	4.40	-

BT-LE(2Mbps)

2402MHz_TX

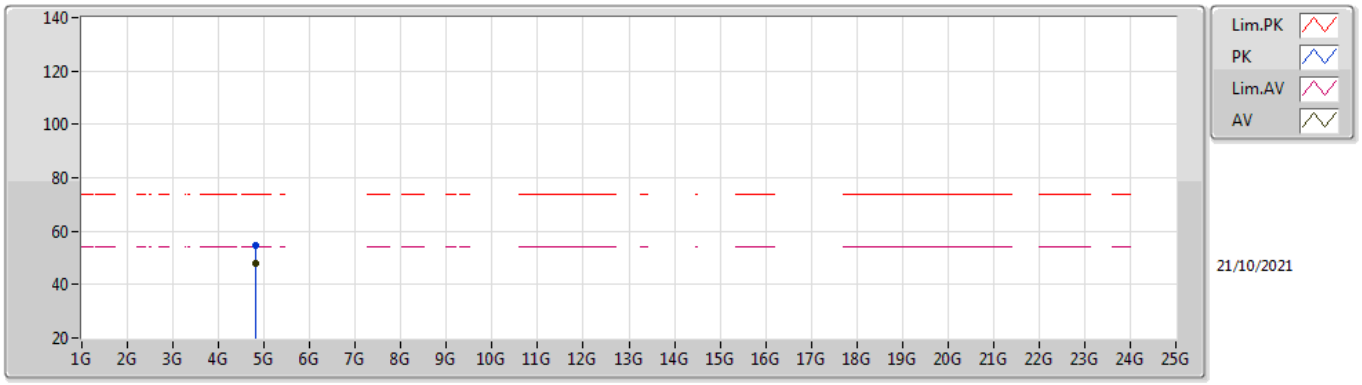


EUT Y_1TX
Setting 200
03-E-K-4

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	4.80399G	51.68	74.00	-22.32	46.61	3	Vertical	329	2.45	-	33.40	7.10	35.43
AV	4.80397G	44.55	54.00	-9.45	39.48	3	Vertical	329	2.45	-	33.40	7.10	35.43

BT-LE(2Mbps)

2402MHz_TX

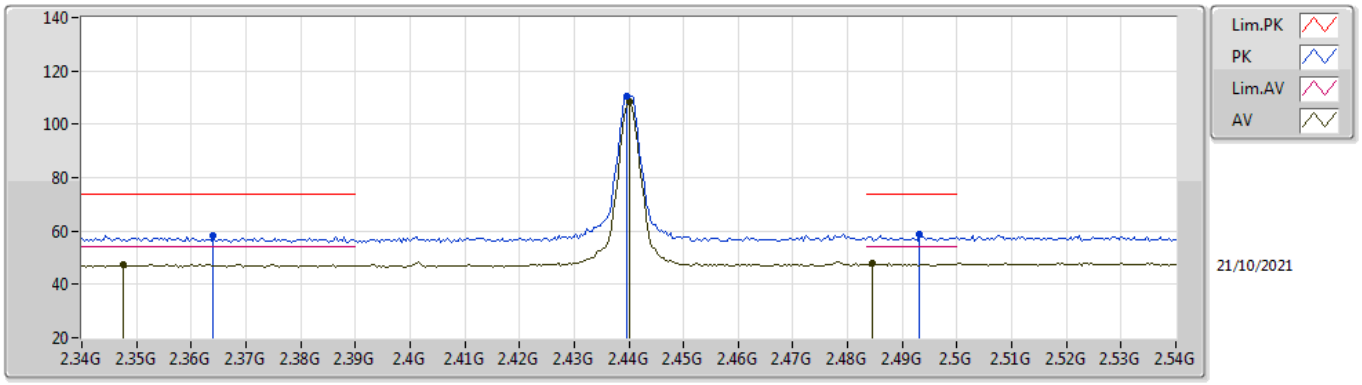


EUT Y_1TX
Setting 200
03-E-K-4

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	4.8049G	54.48	74.00	-19.52	49.41	3	Horizontal	6	1.38	-	33.40	7.10	35.43
AV	4.80403G	47.70	54.00	-6.30	42.63	3	Horizontal	6	1.38	-	33.40	7.10	35.43

BT-LE(2Mbps)

2440MHz_TX

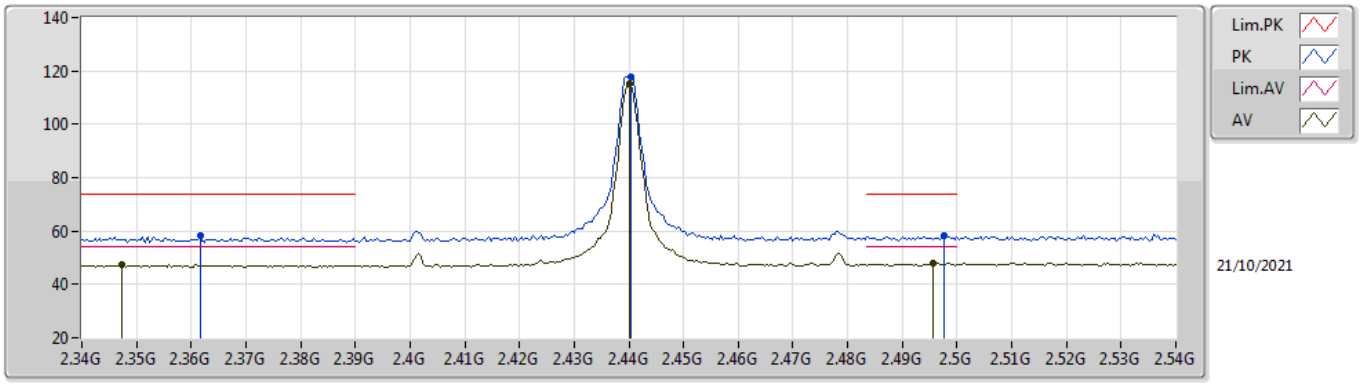


EUT Y_1TX
Setting 200
03-E-K-4

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	2.364G	58.34	74.00	-15.66	25.61	3	Vertical	128	2.94	-	28.37	4.36	-
AV	2.3476G	47.45	54.00	-6.55	14.71	3	Vertical	128	2.94	-	28.39	4.35	-
PK	2.4396G	110.50	Inf	-Inf	77.70	3	Vertical	128	2.94	-	28.38	4.42	-
AV	2.44G	108.25	Inf	-Inf	75.45	3	Vertical	128	2.94	-	28.38	4.42	-
PK	2.4932G	59.05	74.00	-14.95	25.94	3	Vertical	128	2.94	-	28.66	4.45	-
AV	2.4844G	47.81	54.00	-6.19	14.76	3	Vertical	128	2.94	-	28.61	4.44	-

BT-LE(2Mbps)

2440MHz_TX

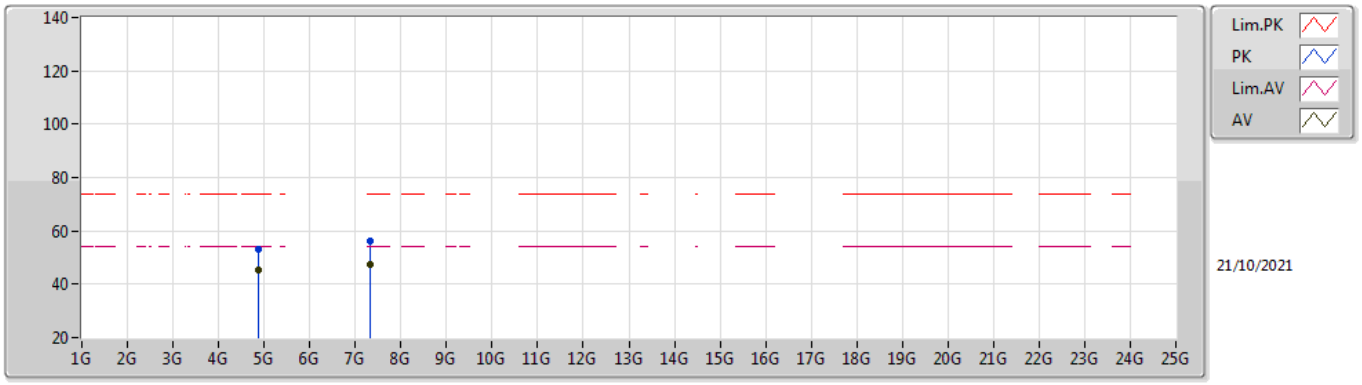


EUT Y_1TX
Setting 200
03-E-K-4

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	58.06	74.00	-15.94	25.32	3	Horizontal	51	2.95	-	28.38	4.36	-
AV	2.3472G	47.34	54.00	-6.66	14.61	3	Horizontal	51	2.95	-	28.38	4.35	-
PK	2.4404G	117.71	Inf	-Inf	84.91	3	Horizontal	51	2.95	-	28.38	4.42	-
AV	2.44G	115.39	Inf	-Inf	82.59	3	Horizontal	51	2.95	-	28.38	4.42	-
PK	2.4976G	58.31	74.00	-15.69	25.17	3	Horizontal	51	2.95	-	28.69	4.45	-
AV	2.4956G	47.84	54.00	-6.16	14.72	3	Horizontal	51	2.95	-	28.67	4.45	-

BT-LE(2Mbps)

2440MHz_TX

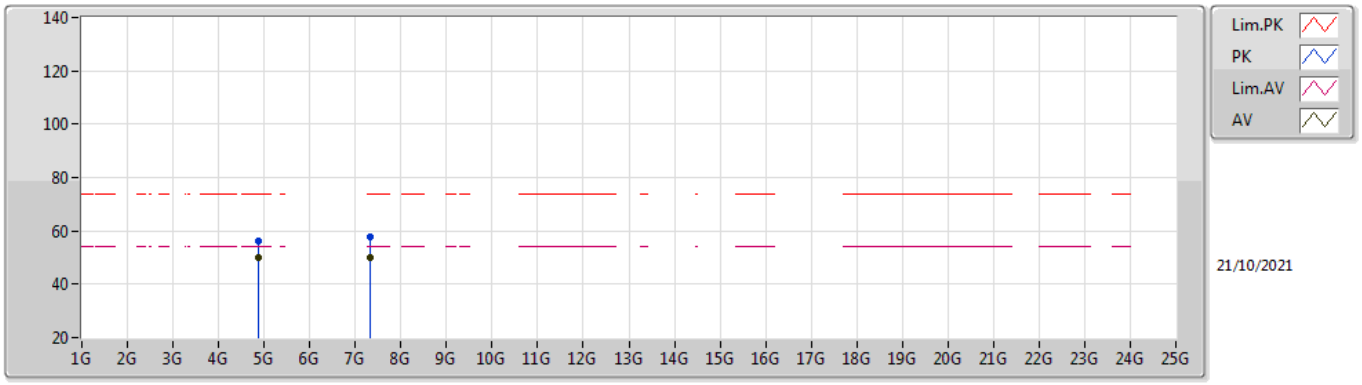


EUT Y_1TX
Setting 200
03-E-K-4

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	4.87988G	53.12	74.00	-20.88	47.93	3	Vertical	318	2.90	-	33.52	7.06	35.39
AV	4.87993G	45.48	54.00	-8.52	40.29	3	Vertical	318	2.90	-	33.52	7.06	35.39
PK	7.3199G	56.06	74.00	-17.94	46.07	3	Vertical	58	1.80	-	37.00	8.56	35.57
AV	7.32G	47.62	54.00	-6.38	37.63	3	Vertical	58	1.80	-	37.00	8.56	35.57

BT-LE(2Mbps)

2440MHz_TX

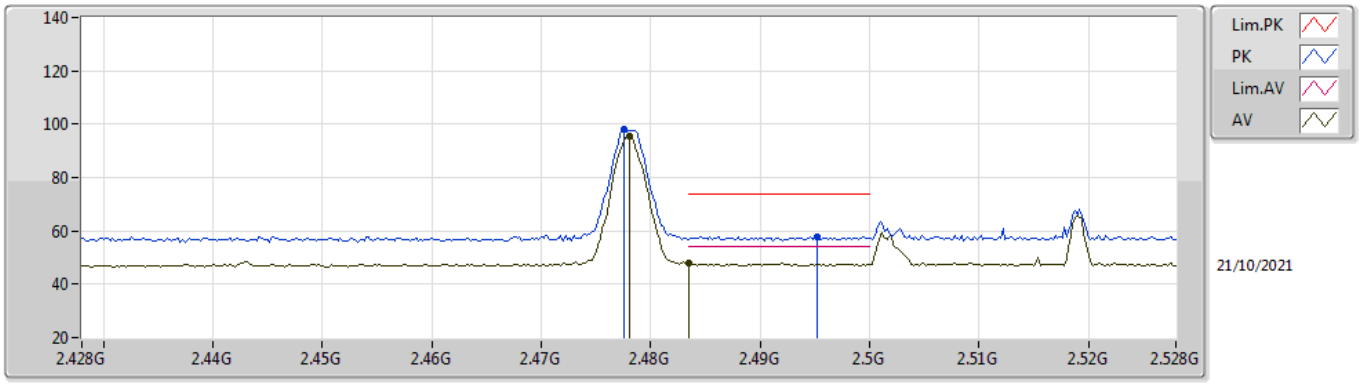


EUT Y_1TX
Setting 200
03-E-K-4

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	4.87896G	56.13	74.00	-17.87	50.94	3	Horizontal	-0	1.29	-	33.52	7.06	35.39
AV	4.87998G	49.85	54.00	-4.15	44.66	3	Horizontal	-0	1.29	-	33.52	7.06	35.39
PK	7.32149G	57.98	74.00	-16.02	47.99	3	Horizontal	290	2.94	-	37.00	8.56	35.57
AV	7.31996G	50.03	54.00	-3.97	40.04	3	Horizontal	290	2.94	-	37.00	8.56	35.57

BT-LE(2Mbps)

2478MHz_TX

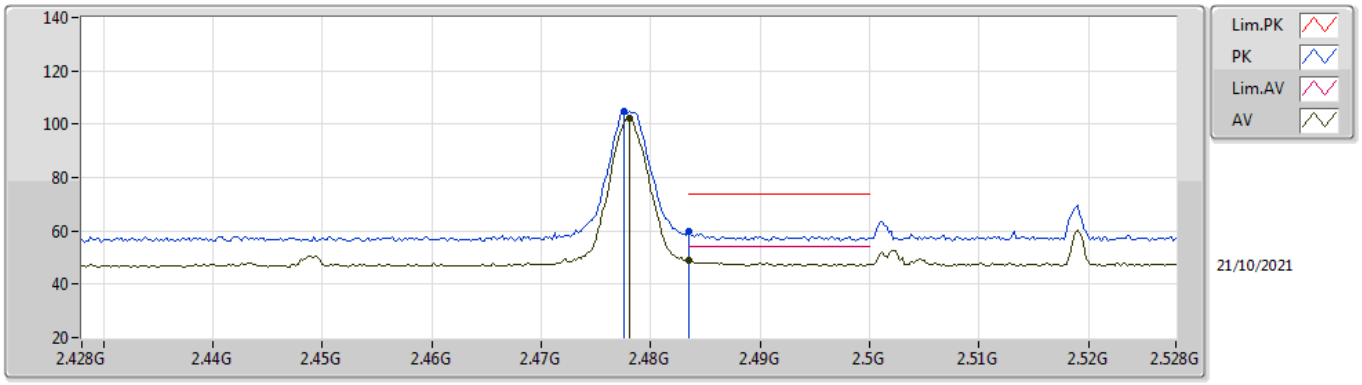


EUT Y_1TX
Setting 200
03-E-K-4

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	97.94	Inf	-Inf	64.93	3	Vertical	122	2.94	-	28.57	4.44	-
AV	2.478G	95.50	Inf	-Inf	62.49	3	Vertical	122	2.94	-	28.57	4.44	-
PK	2.4952G	57.93	74.00	-16.07	24.81	3	Vertical	122	2.94	-	28.67	4.45	-
AV	2.4835G	47.76	54.00	-6.24	14.72	3	Vertical	122	2.94	-	28.60	4.44	-

BT-LE(2Mbps)

2478MHz_TX

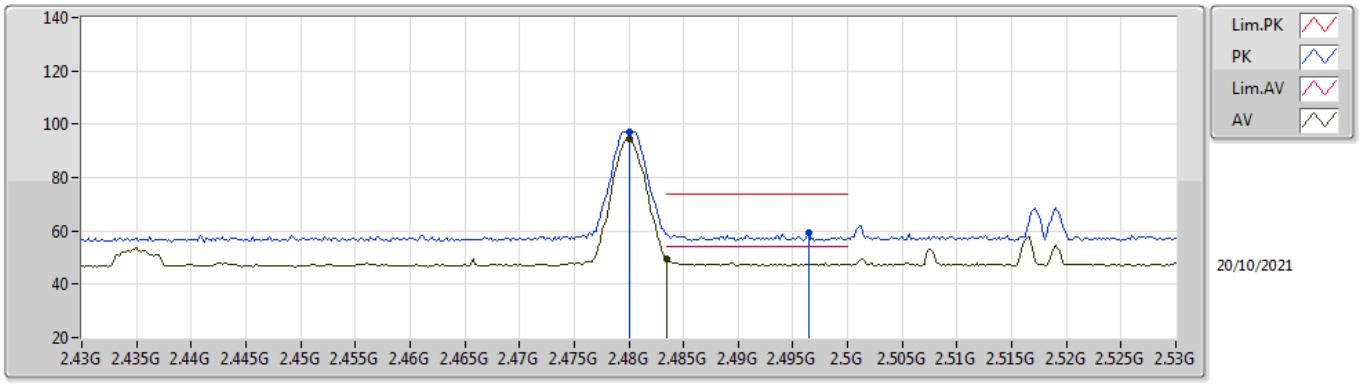


EUT Y_1TX
Setting 200
03-E-K-4

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	104.60	Inf	-Inf	71.59	3	Horizontal	51	2.84	-	28.57	4.44	-
AV	2.478G	102.16	Inf	-Inf	69.15	3	Horizontal	51	2.84	-	28.57	4.44	-
PK	2.4835G	59.96	74.00	-14.04	26.92	3	Horizontal	51	2.84	-	28.60	4.44	-
AV	2.4835G	48.95	54.00	-5.05	15.91	3	Horizontal	51	2.84	-	28.60	4.44	-

BT-LE(2Mbps)

2480MHz_TX

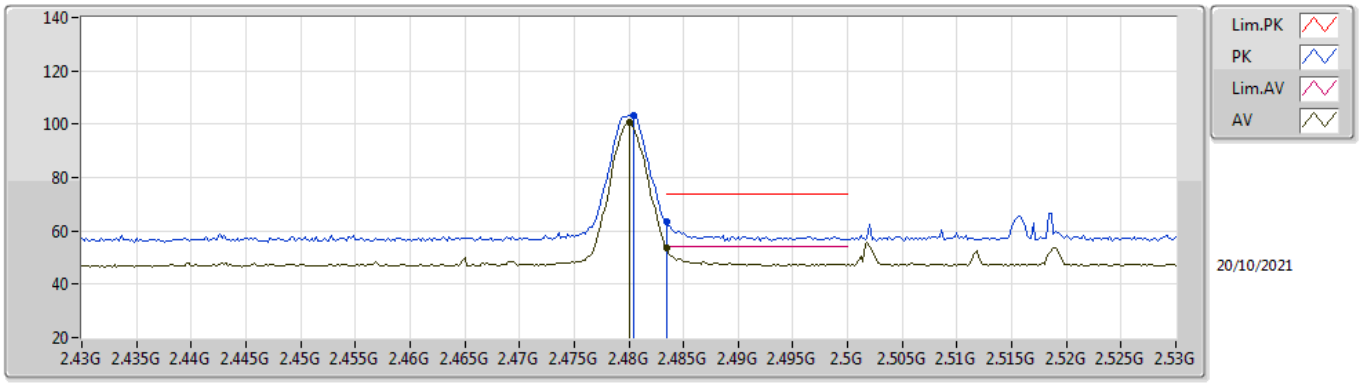


EUT Y_1TX
Setting 25
03-E-K-4

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	96.98	Inf	-Inf	63.96	3	Vertical	123	2.86	-	28.58	4.44	-
AV	2.48G	94.60	Inf	-Inf	61.58	3	Vertical	123	2.86	-	28.58	4.44	-
PK	2.4964G	59.15	74.00	-14.85	26.02	3	Vertical	123	2.86	-	28.68	4.45	-
AV	2.4835G	49.48	54.00	-4.52	16.44	3	Vertical	123	2.86	-	28.60	4.44	-

BT-LE(2Mbps)

2480MHz_TX

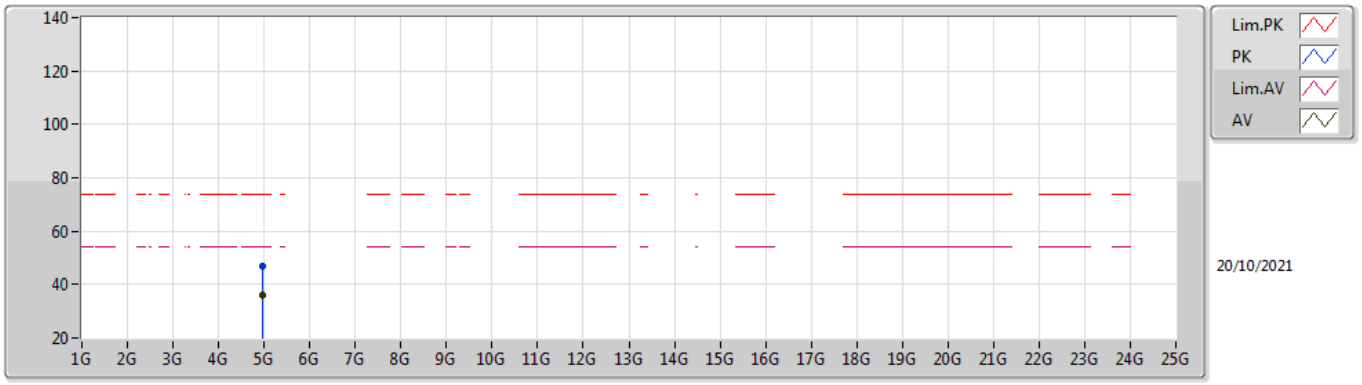


EUT Y_1TX
Setting 25
03-E-K-4

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	2.4804G	103.05	Inf	-Inf	70.03	3	Horizontal	49	2.86	-	28.58	4.44	-
AV	2.48G	100.62	Inf	-Inf	67.60	3	Horizontal	49	2.86	-	28.58	4.44	-
PK	2.4835G	63.36	74.00	-10.64	30.32	3	Horizontal	49	2.86	-	28.60	4.44	-
AV	2.4835G	53.82	54.00	-0.18	20.78	3	Horizontal	49	2.86	-	28.60	4.44	-

BT-LE(2Mbps)

2480MHz_TX

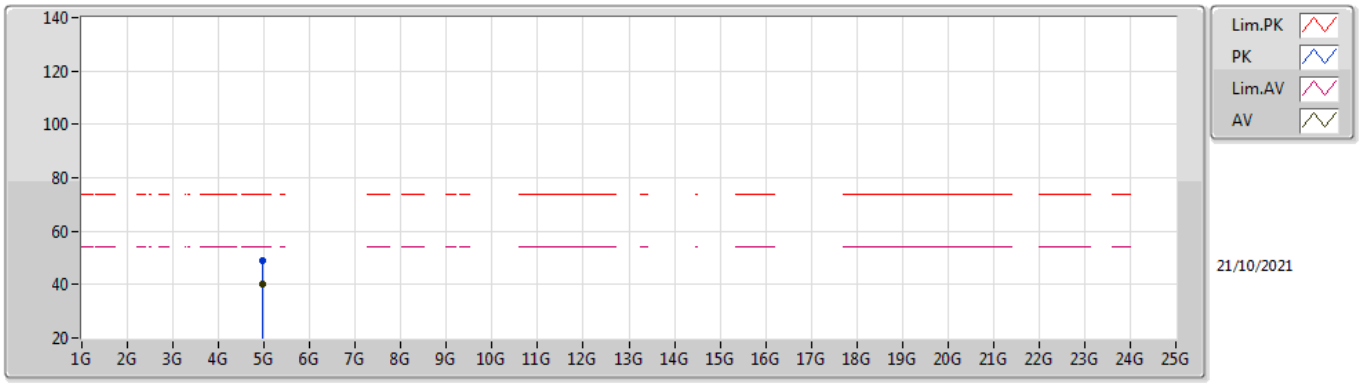


EUT Y_1TX
Setting 25
03-E-K-4

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	4.96108G	46.93	74.00	-27.07	41.54	3	Vertical	323	1.86	-	33.72	7.02	35.35
AV	4.96087G	36.29	54.00	-17.71	30.90	3	Vertical	323	1.86	-	33.72	7.02	35.35

BT-LE(2Mbps)

2480MHz_TX



EUT Y_1TX
Setting 25
03-E-K-4

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	4.96093G	48.97	74.00	-25.03	43.58	3	Horizontal	6	1.59	-	33.72	7.02	35.35
AV	4.96003G	40.03	54.00	-13.97	34.64	3	Horizontal	6	1.59	-	33.72	7.02	35.35