Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	RAXWN8711
Equipment	:	Wireless LAN Network Module
Brand Name	:	Arcadyan
Model Name	:	WN8711BTAAC-YA
Applicant	:	Arcadyan Technology Corporation No.8, Sec.2, Guangfu Rd.,Hsinchu, 30071 Taiwan
Manufacturer (1)	:	Arcadyan Technology Corporation No.8, Sec.2, Guangfu Rd.,Hsinchu, 30071 Taiwan
Manufacturer (2)	:	ARCADYAN TECHNOLOGY (VIETNAM) CO.,LTD Land Plot No. D4-5-6, Thang Long Vinh Phuc Industrial Park, Thien Ke Commune, Binh Xuyen District, Vinh Phuc Province Vietnam
Standard	:	47 CFR FCC Part 15.247

The product was received on Jul. 13, 2023, and testing was started from Jul. 15, 2023 and completed on Jul. 05, 2024. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR770523-23AC	01	Initial issue of report	Aug. 26, 2024

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	15.247(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: Muse Chan

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Version	Ch. Frequency (MHz)	Channel Number
2400-2483.5	BR / EDR	2402-2480	0-78 [79]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-BR	1	1
2.4-2.4835GHz	BT-EDR	1	1

Note:
- Bluetooth BR uses a GFSK (1Mbps).
- Bluetooth EDR uses a combination of π/4-DQPSK (2Mbps) and 8DPSK (3Mbps).
- Bluetooth BR/EDR uses as a system using FHSS modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Type	Connector	Gain (dBi)		Cable Length (mm)
					2.4GHz	5GHz	
1	ACON	AEMEE-10000	Dipole	Reversed-SMA	3.24	4.54	Note 1
2	WNC	YSB2022	PIFA	I-PEX	3.1	4.4	-

Note 1:

Dipole Cable	Brand	Model Name	Cable Length (mm)	Cable Loss (dB)		True Gain (dBi)	
				2.4GHz / BT	5GHz	2.4GHz / BT	5GHz
1	ACON	AEC8P-1000001 (Black)	30	0.08	0.12	3.16	4.42
2	ACON	AEC8P-1000003 (Black)	50	0.13	0.19	3.11	4.35
3	ACON	AEC8P-1000005 (Black)	70	0.19	0.27	3.05	4.27
4	ACON	AEC8P-1000007 (Black)	90	0.24	0.35	3.00	4.19
5	ACON	AEC8P-1000009 (Black)	120	0.32	0.46	2.92	4.08
6	ACON	AEC8P-1000011 (Black)	160	0.43	0.62	2.81	3.92
7	ACON	AEC8P-1000013 (Black)	200	0.54	0.77	2.70	3.77
8	ACON	AEC8P-1000015 (Black)	240	0.64	0.93	2.60	3.61
9	ACON	AEC8P-1000017 (Black)	280	0.75	1.08	2.49	3.46
10	ACON	AEC8P-1000019 (Black)	320	0.86	1.24	2.38	3.30
11	ACON	AEC8P-1000021 (Black)	360	0.96	1.39	2.28	3.15
12	ACON	AEC8P-1000023 (Black)	400	1.07	1.54	2.17	3.00
13	ACON	AEC8P-1000025 (Black)	450	1.21	1.74	2.03	2.80
14	ACON	AEC8P-1000027 (Black)	500	1.34	1.93	1.90	2.61

Note 2: Dipole Antenna collocate with 14 set cables selling, only the highest gain antenna “cable 1” was tested and recorded in the report.

Note 3: PIFA Antenna is only for EUT 2 use.

Note 4: The above information was declared by manufacturer.

Note 5: The EUT has one antenna.

For WLAN 2.4GHz Function

IEEE 802.11b/g/n (1TX/1RX):

Port 1 can be used as transmitting/receiving antenna.

Port 1 could transmit/receive simultaneously.

For WLAN 5GHz Function

IEEE 802.11a/n/ac (1TX/1RX):

Port 1 can be used as transmitting/receiving antenna.

Port 1 could transmit/receive simultaneously.

For Bluetooth function (1TX/1RX):

Port 1 can be used as transmitting/receiving antenna.

Port 1 could transmit/receive simultaneously.

1.1.3 EUT Operational Condition

EUT Power Type	From host system
Test Software Version	DOS [ver 6.1.7601]
Operating frequency of CPU	1GHz
Rating	3.7V, 4.21W

1.1.4 Table for EUT Supports Function

Function	Supports type
AP	Master
Slave	Slave without radar detection

Note 1: AP Mode and Slave Mode were tested and their data were recorded in this report.
Note 2: The above information was declared by manufacturer.

1.1.5 Table for DDR Detail Information

Items / Source		DDR
Main	Brand	SAMSUNG
	Model	K4B2G1646F-BYMA
	Capacity	256MB
Second	Brand	WINBOND
	Model	W632GU6NB-11
	Capacity	256MB

Note: The above information was declared by manufacturer.

1.1.6 Table for EUT Information

EUT	DDR	Equipped Antenna
1	Main	Dipole
2	Second	Dipole, PIFA

1.1.7 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR770523-13AC

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

Modifications	Performance Checking
1. Adding second source DDR (Brand name: WINBOND / Model name: W632GU6NB-11).	Emissions in Restricted Frequency Bands
2. Add a new type PIFA antenna for EUT 2.	Emissions in Restricted Frequency Bands
3. Adding Manufacturer (Company name: ARCADYAN TECHNOLOGY (VIETNAM) CO.,LTD / Company address: Land Plot No. D4-5-6, Thang Long Vinh Phuc Industrial Park, Thien Ke Commune, Binh Xuyen District, Vinh Phuc Province Vietnam).	After evaluating, it does not affect the test.

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

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
Radiated Below 1GHz	03CH05-CB	Stim Sung	24.5~25.6 / 56~59	Jul. 15, 2023
	03CH04-CB	Gordon Hung	21.9~22.4 / 55~58	Jun. 20, 2024
Radiated above 1GHz	03CH01-CB	Paul Hu	22~23 / 55~58	Jun. 19, 2024~ Jul. 05, 2024

Note: The tested sample of PIFA Antenna was received on Jun. 13, 2024.

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 Date: Date Before May 28, 2024

Test Items	Uncertainty	Remark
Radiated Emission (9kHz ~ 30MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.1 dB	Confidence levels of 95%

Test Date: Date After May 27, 2024

Test Items	Uncertainty	Remark
Radiated Emission (9kHz ~ 30MHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.0 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 The Worst Case Measurement Configuration

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. The EUT was performed at X axis, Y axis and Z axis position for Emissions in Restricted Frequency Bands above 1GHz, and the worst case was found at X axis. So the measurement will follow this same test configuration. 2. The EUT performed the test at (2.4GHz+Bluetooth) mode and (5GHz+Bluetooth) mode; the worst case was found at (5GHz+Bluetooth) mode. Thus, the measurement will follow this same test configuration. 3. The EUT performed the test at Master mode and Slave mode; the worst case was found at Master mode. Thus, the measurement will follow this same test configuration.
1	AP Mode_EUT 2 in X axis (5GHz+Bluetooth Master) with Dipole antenna + cable 1
2	AP Mode_EUT 2 in X axis (5GHz+Bluetooth Master) with PIFA antenna
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 2 in Y axis with PIFA antenna

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + Bluetooth with Dipole antenna
2	WLAN 5GHz + Bluetooth with Dipole antenna
Refer to Sporton Test Report No.: FA770523-23 for Co-location RF Exposure Evaluation.	

2.2 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.

2.3 Accessories

N/A

2.4 Support Equipment

For Radiated (below 1GHz):

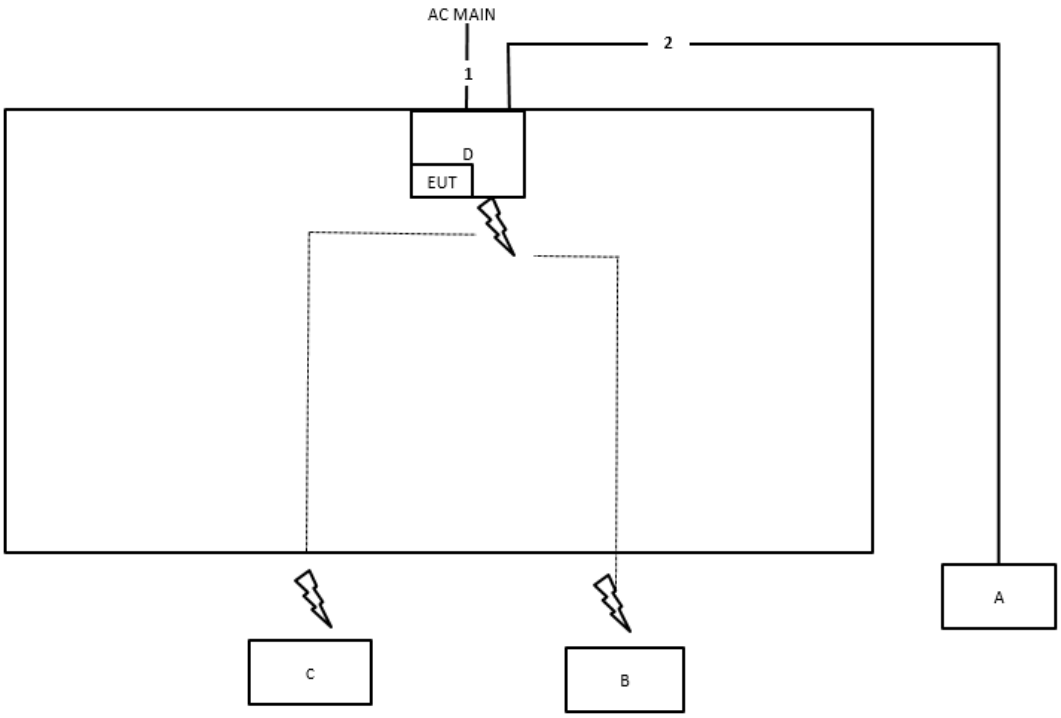
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN NB	DELL	E4300	N/A
B	5G NB	DELL	E4300	N/A
C	BT Speaker	MARUS	MSK06C-RD	N/A
D	Fixture 1	Arcadyan	WN9711BTAAC-YA Test Jig	N/A

For Radiated (above 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	Fixture	Arcadyan	WN9711BTAAC-YA Test Jig	N/A

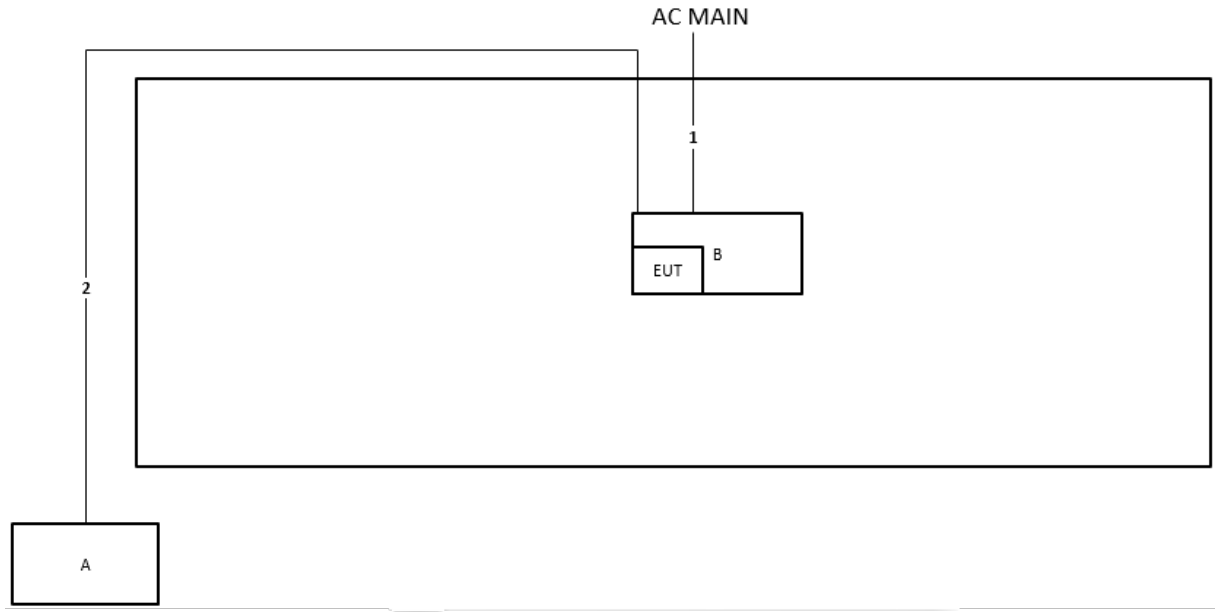
2.5 Test Setup Diagram

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



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

3 Transmitter Test Result

3.1 Emissions in Restricted Frequency Bands

3.1.1 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.

3.1.2 Measuring Instruments

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

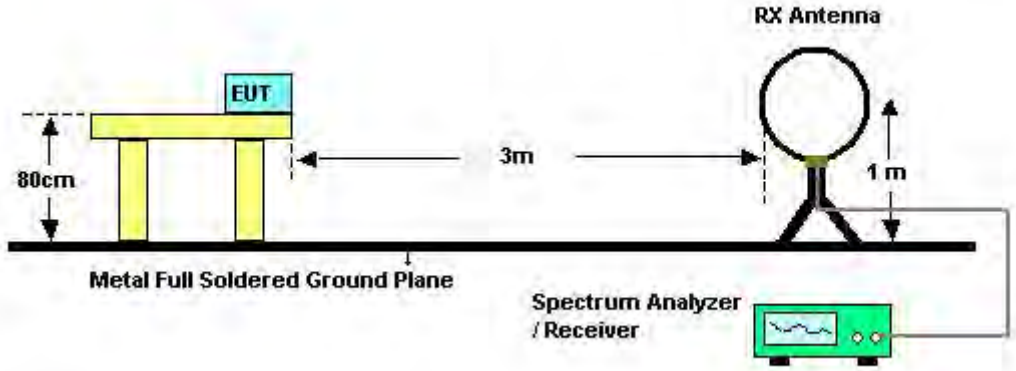
3.1.3 Test Procedures

Test Method	
▪ The average emission levels shall be measured in [hopping 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 ANSI C63.10, clause 4.1.4.2.1 QP value.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
	▪ Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.

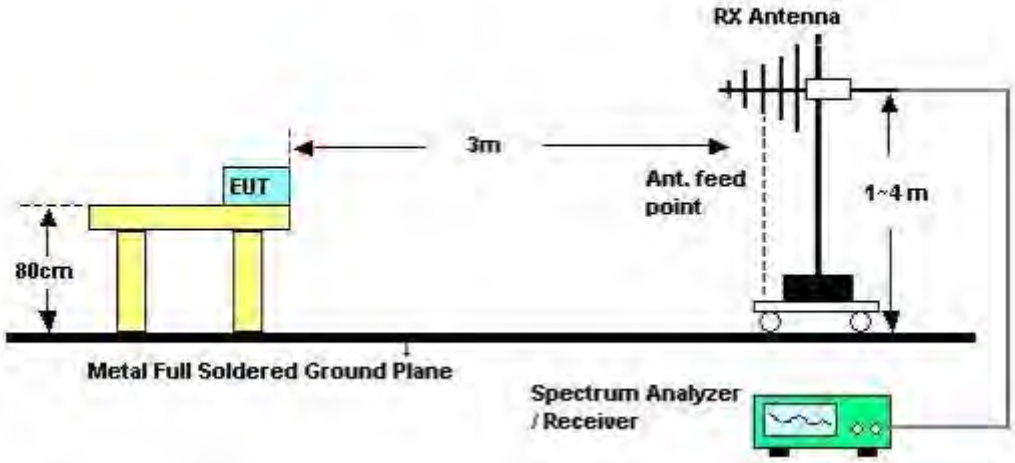
3.1.4 Test Setup

Emissions in Restricted Frequency Bands

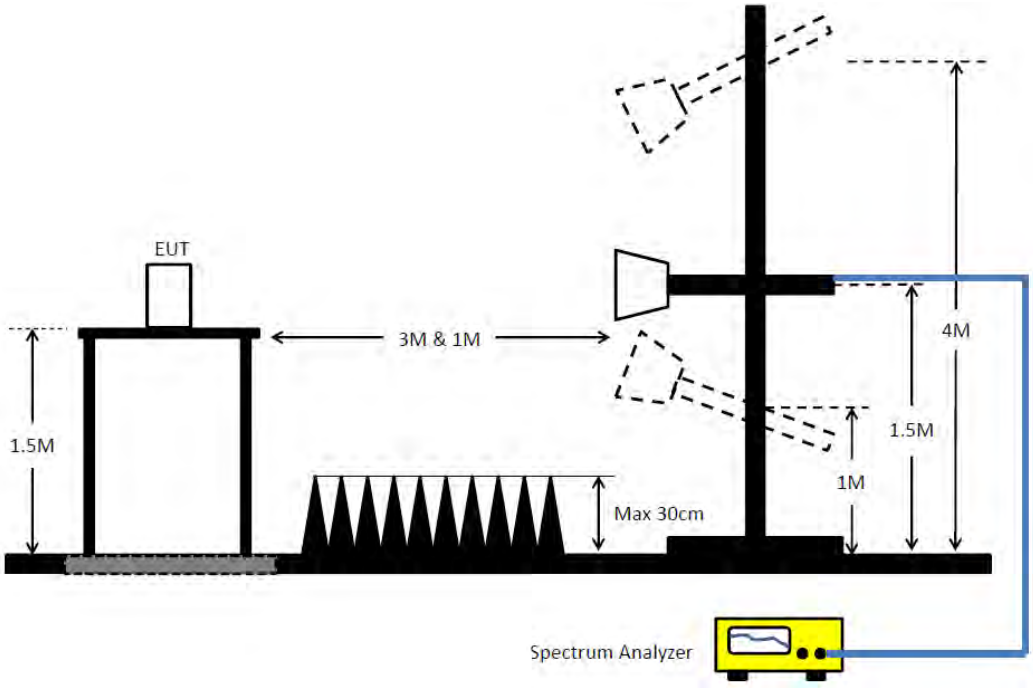
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.1.5 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.

3.1.6 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.

3.1.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix A

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Apr. 18, 2023	Apr. 17, 2024	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 13, 2023	Jun. 12, 2024	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30 MHz	Oct. 13, 2023	Oct. 12, 2024	Radiation (03CH04-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH04-CB	30 MHz ~ 1 GHz	Aug. 01, 2023	Jul. 31, 2024	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	22021&AT-N0607	30MHz ~ 1GHz	Oct. 07, 2023	Oct. 06, 2024	Radiation (03CH04-CB)
Pre-Amplifier	EMCI	EMC330N	980391	20MHz ~ 3GHz	May 22, 2024	May 21, 2025	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 19, 2024	Mar. 18, 2025	Radiation (03CH04-CB
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 20, 2023	Oct. 19, 2024	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+67	30MHz – 1GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 04, 2024	May 03, 2025	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120D-01816	1GHz~18GHz	Dec. 20, 2023	Dec. 19, 2024	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 17, 2024	May 16, 2025	Radiation (03CH01-CB)

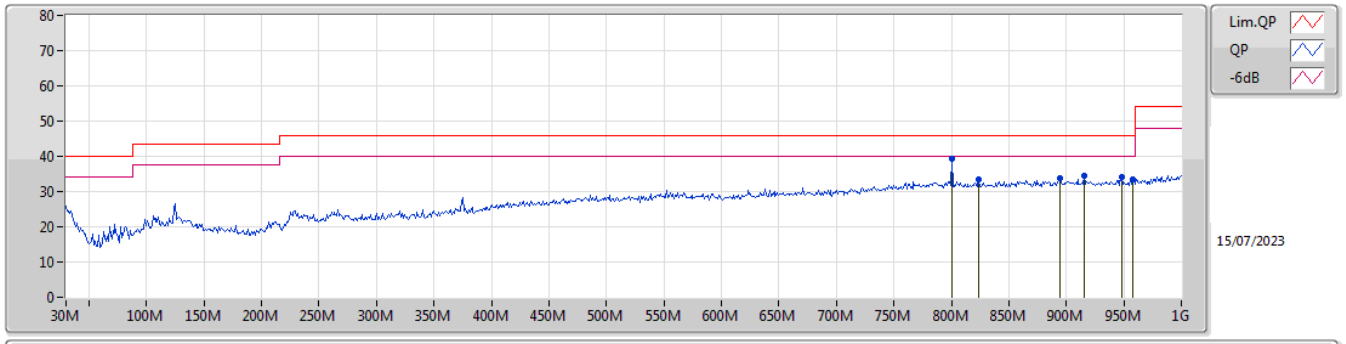
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV3044	101437	10kHz ~ 44GHz	Nov. 28, 2023	Nov. 27, 2024	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Nov. 06, 2023	Nov. 05, 2024	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Nov. 06, 2023	Nov. 05, 2024	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)

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

Summary

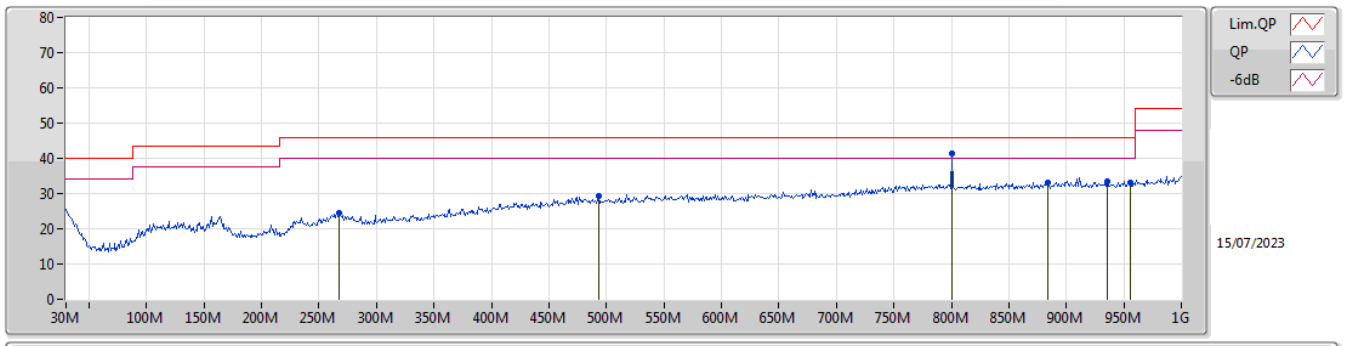
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	800.18M	41.36	46.00	-4.64	Horizontal

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	800.18M	39.42	46.00	-6.58	-1.67	3	Vertical	310	1.00	"Worst"	41.09	25.76	5.20	32.63
PK	823.46M	33.39	46.00	-12.61	-1.71	3	Vertical	29	1.25	-	35.10	25.63	5.29	32.63
PK	894.27M	33.86	46.00	-12.14	-0.46	3	Vertical	120	2.00	-	34.32	26.37	5.64	32.47
PK	915.61M	34.60	46.00	-11.40	-0.43	3	Vertical	80	2.00	-	35.03	26.37	5.68	32.48
PK	948.59M	34.13	46.00	-11.87	-0.16	3	Vertical	24	1.50	-	34.29	26.70	5.69	32.55
PK	957.32M	33.43	46.00	-12.57	0.03	3	Vertical	0	1.00	-	33.40	26.82	5.72	32.51

Mode 1

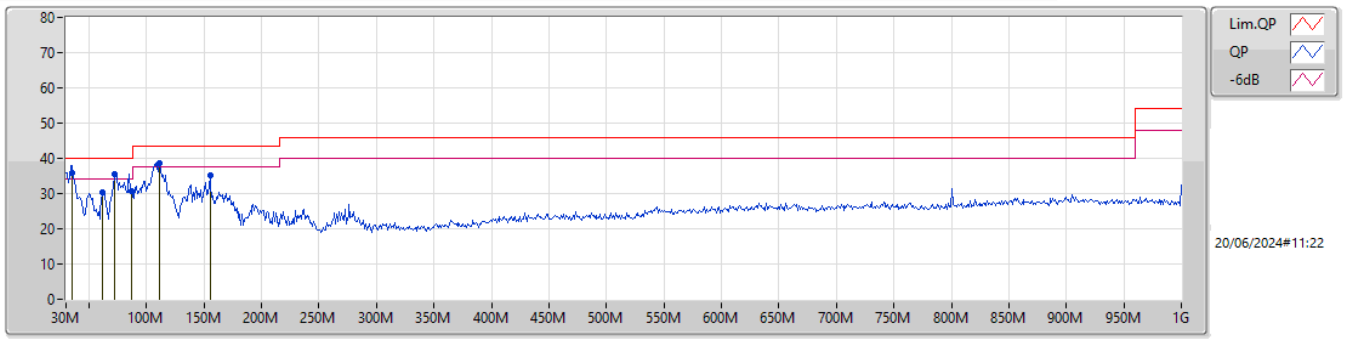


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	267.65M	24.50	46.00	-21.50	-10.38	3	Horizontal	340	2.00	-	34.88	18.86	2.83	32.07
PK	493.66M	29.29	46.00	-16.71	-5.10	3	Horizontal	211	2.00	-	34.39	23.22	3.96	32.28
PK	800.18M	41.36	46.00	-4.64	-1.67	3	Horizontal	284	1.25	"Worst"	43.03	25.76	5.20	32.63
PK	883.6M	33.23	46.00	-12.77	-0.69	3	Horizontal	36	2.00	-	33.92	26.24	5.58	32.51
PK	935.98M	33.41	46.00	-12.59	-0.22	3	Horizontal	277	1.50	-	33.63	26.62	5.68	32.52
PK	955.38M	33.24	46.00	-12.76	-0.01	3	Horizontal	207	2.00	-	33.25	26.80	5.71	32.52

Summary

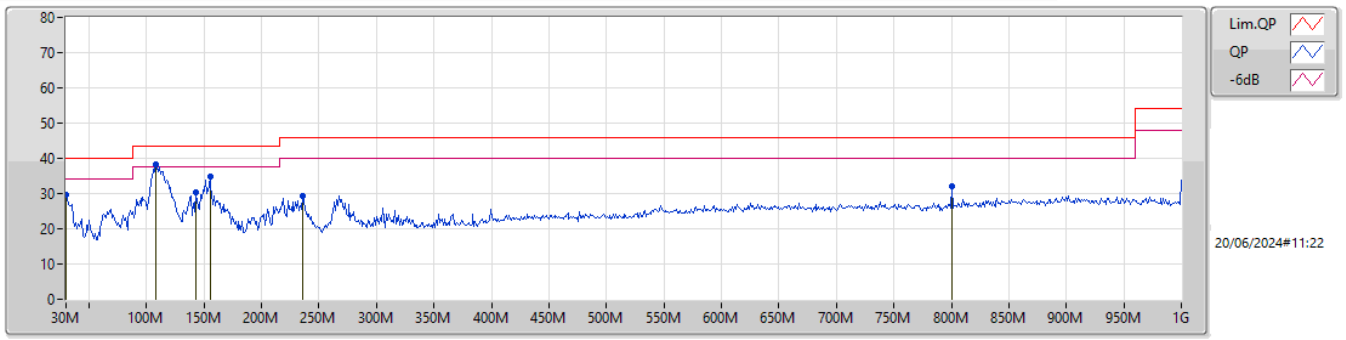
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	QP	34.85M	35.70	40.00	-4.30	Vertical

Mode 2



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
QP	34.85M	35.70	40.00	-4.30	-9.00	3	Vertical	86	1.50	"Worst"	44.70	21.32	0.37	30.69
PK	62.01M	30.46	40.00	-9.54	-18.01	3	Vertical	70	1.00	-	48.47	12.53	0.60	31.14
PK	72.68M	35.66	40.00	-4.34	-17.64	3	Vertical	29	2.00	-	53.30	12.43	0.67	30.74
PK	87.23M	30.62	40.00	-9.38	-15.43	3	Vertical	160	1.25	-	46.05	14.62	0.78	30.83
PK	111.48M	38.79	43.50	-4.71	-11.84	3	Vertical	226	1.00	-	50.63	18.16	0.89	30.89
PK	155.13M	35.19	43.50	-8.31	-13.82	3	Vertical	178	1.25	-	49.01	16.37	1.11	31.30

Mode 2



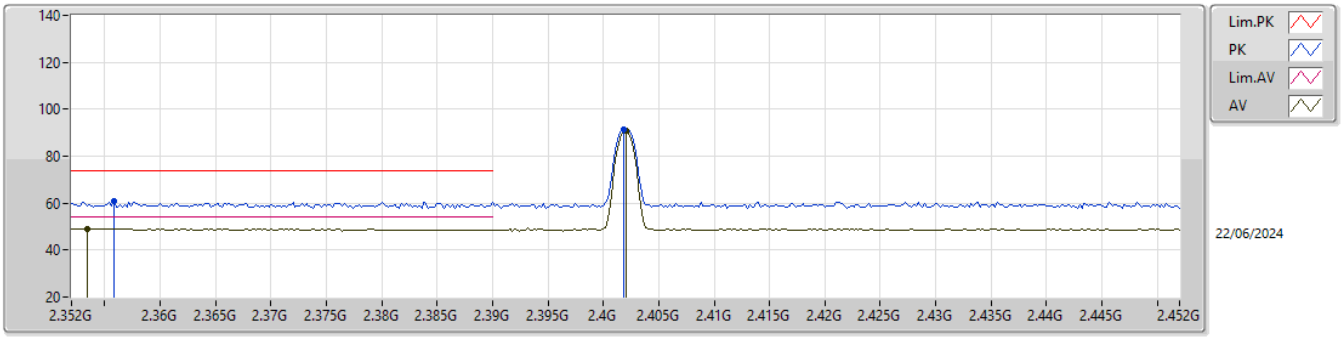
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	30M	29.51	40.00	-10.49	-7.16	3	Horizontal	3	1.25	-	36.67	23.56	0.33	31.05
PK	107.6M	38.32	43.50	-5.18	-12.11	3	Horizontal	143	3.00	"Worst"	50.43	17.84	0.87	30.82
PK	142.52M	30.46	43.50	-13.04	-12.99	3	Horizontal	240	1.50	-	43.45	17.28	1.09	31.36
PK	155.13M	34.68	43.50	-8.82	-13.82	3	Horizontal	260	2.00	-	48.50	16.37	1.11	31.30
PK	235.64M	29.36	46.00	-16.64	-12.79	3	Horizontal	258	1.50	-	42.15	16.72	1.40	30.91
PK	800.18M	32.22	46.00	-13.78	-3.19	3	Horizontal	184	1.00	-	35.41	25.86	2.92	31.97

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-EDR(3Mbps)	Pass	AV	2.3566G	49.27	54.00	-4.73	3	Horizontal	130	2.95	-

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

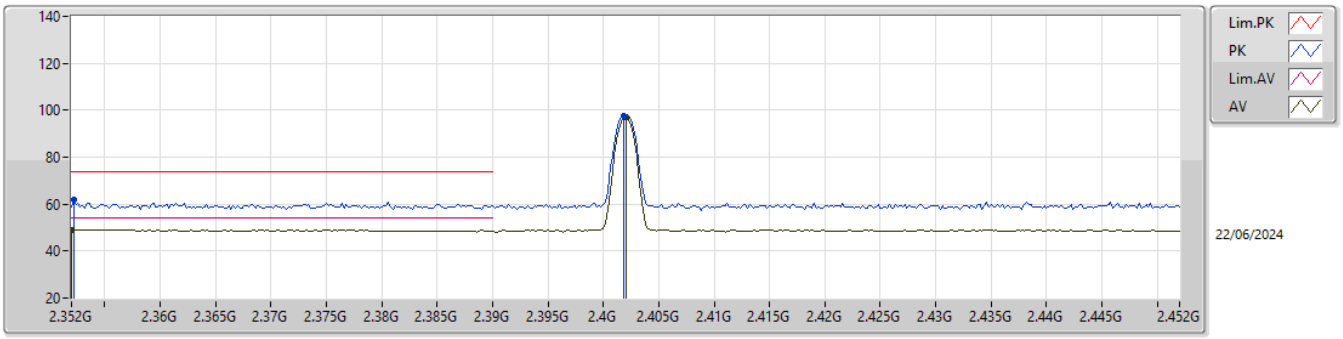


EUT Y_1TX
Setting 00
01-I-J-8

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	2.3558G	61.02	74.00	-12.98	28.47	3	Vertical	12	2.89	-	27.94	4.61	-
AV	2.3534G	49.05	54.00	-4.95	16.48	3	Vertical	12	2.89	-	27.97	4.60	-
PK	2.4018G	91.46	Inf	-Inf	59.11	3	Vertical	12	2.89	-	27.68	4.67	-
AV	2.402G	90.89	Inf	-Inf	58.54	3	Vertical	12	2.89	-	27.68	4.67	-

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

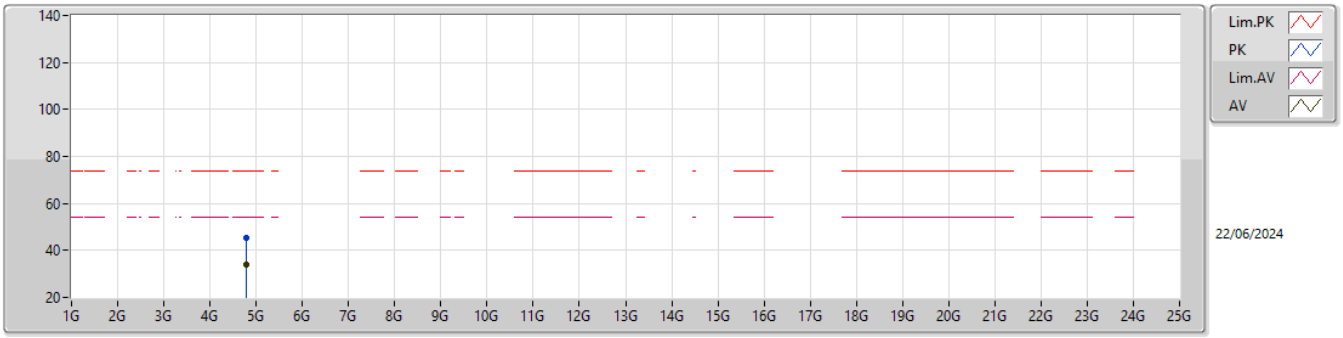


EUT Y_1TX
Setting 00
01-I-J-8

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	2.3522G	61.68	74.00	-12.32	29.10	3	Horizontal	130	2.96	-	27.98	4.60	-
AV	2.352G	49.06	54.00	-4.94	16.48	3	Horizontal	130	2.96	-	27.98	4.60	-
PK	2.4018G	97.52	Inf	-Inf	65.17	3	Horizontal	130	2.96	-	27.68	4.67	-
AV	2.402G	97.02	Inf	-Inf	64.67	3	Horizontal	130	2.96	-	27.68	4.67	-

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

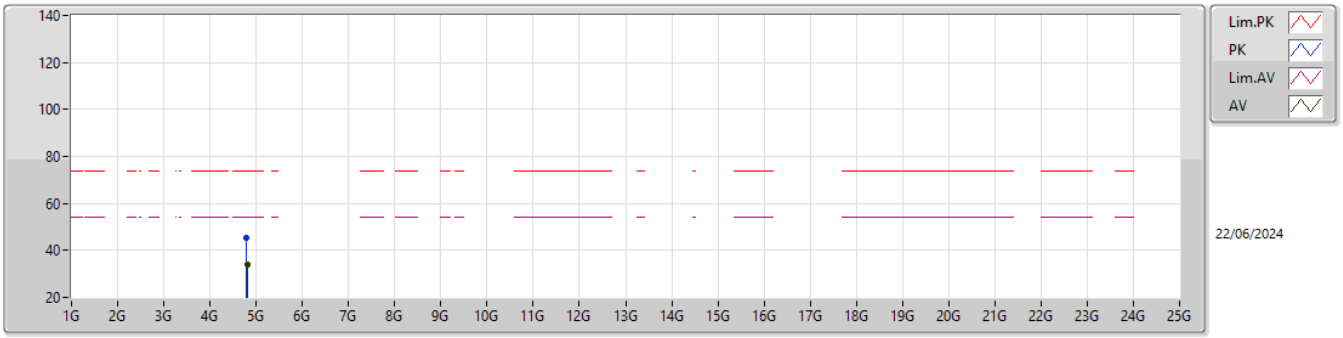


EUT Y_1TX
Setting 00
01-I-J-8

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	4.7881G	45.09	74.00	-28.91	39.48	3	Vertical	80	1.76	-	31.28	6.90	32.57
AV	4.7809G	33.72	54.00	-20.28	28.14	3	Vertical	80	1.76	-	31.26	6.89	32.57

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

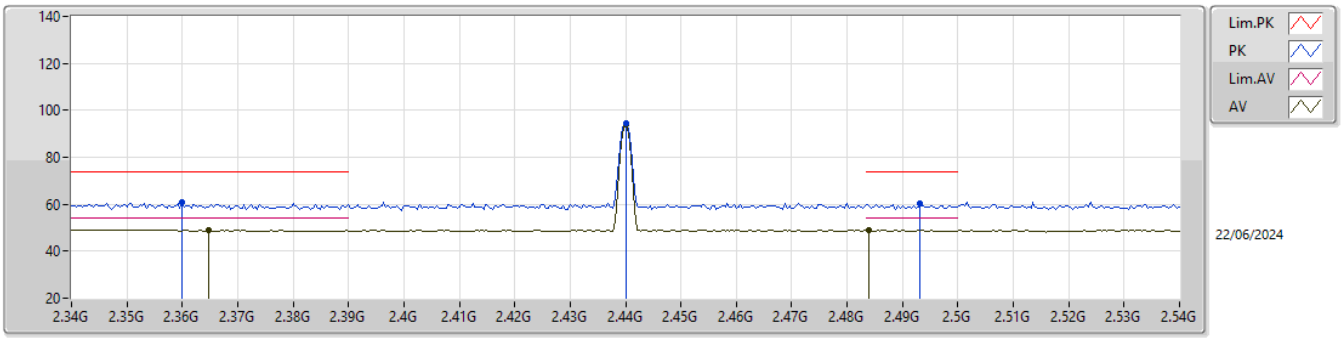


EUT Y_1TX
Setting 00
01-I-J-8

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	4.7983G	45.50	74.00	-28.50	39.86	3	Horizontal	328	1.03	-	31.30	6.91	32.57
AV	4.8136G	33.89	54.00	-20.11	28.24	3	Horizontal	328	1.03	-	31.30	6.92	32.57

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

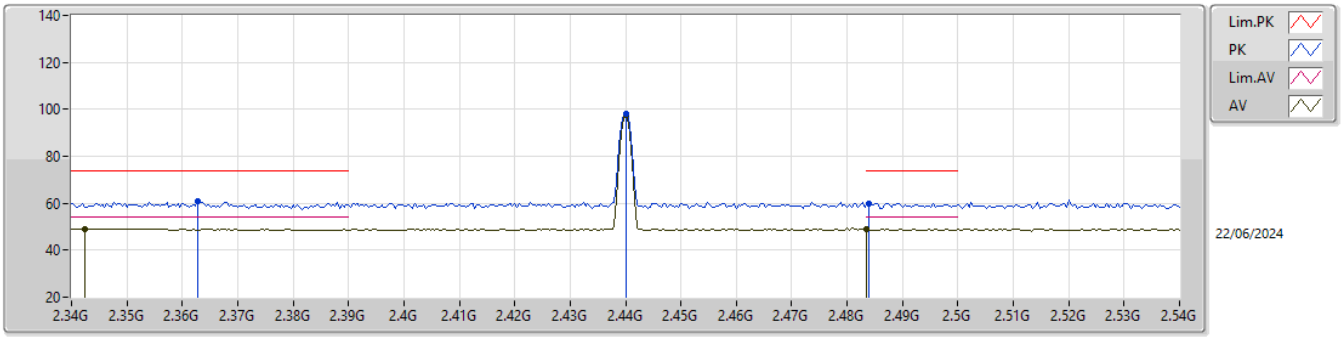


EUT Y_1TX
Setting 00
01-I-J-8

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	2.36G	60.67	74.00	-13.33	28.16	3	Vertical	55	3.00	-	27.90	4.61	-
AV	2.3648G	49.16	54.00	-4.84	16.69	3	Vertical	55	3.00	-	27.85	4.62	-
PK	2.44G	94.28	Inf	-Inf	62.14	3	Vertical	55	3.00	-	27.50	4.64	-
AV	2.44G	93.74	Inf	-Inf	61.60	3	Vertical	55	3.00	-	27.50	4.64	-
PK	2.4932G	60.18	74.00	-13.82	28.09	3	Vertical	55	3.00	-	27.50	4.59	-
AV	2.484G	48.96	54.00	-5.04	16.86	3	Vertical	55	3.00	-	27.50	4.60	-

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

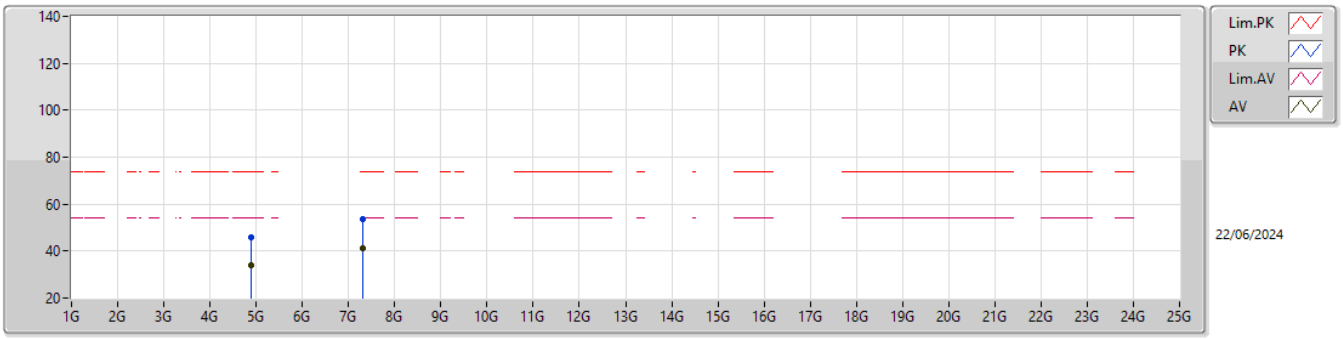


EUT Y_1TX
Setting 00
01-I-J-8

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	2.3628G	61.06	74.00	-12.94	28.57	3	Horizontal	134	2.86	-	27.87	4.62	-
AV	2.3424G	49.13	54.00	-4.87	16.54	3	Horizontal	134	2.86	-	28.00	4.59	-
PK	2.44G	98.05	Inf	-Inf	65.91	3	Horizontal	134	2.86	-	27.50	4.64	-
AV	2.44G	97.53	Inf	-Inf	65.39	3	Horizontal	134	2.86	-	27.50	4.64	-
PK	2.484G	59.84	74.00	-14.16	27.74	3	Horizontal	134	2.86	-	27.50	4.60	-
AV	2.4835G	48.96	54.00	-5.04	16.86	3	Horizontal	134	2.86	-	27.50	4.60	-

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

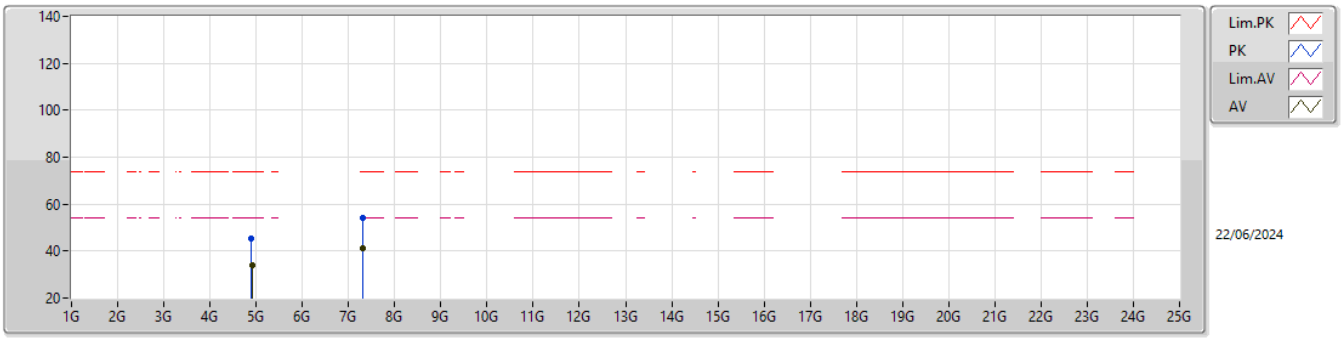


EUT Y_1TX
Setting 00
01-I-J-8

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	4.8991G	46.01	74.00	-27.99	40.28	3	Vertical	276	2.40	-	31.30	7.01	32.58
AV	4.8941G	34.02	54.00	-19.98	28.30	3	Vertical	276	2.40	-	31.30	7.00	32.58
PK	7.316G	53.61	74.00	-20.39	41.37	3	Vertical	311	2.59	-	36.24	8.63	32.63
AV	7.2984G	41.22	54.00	-12.78	28.95	3	Vertical	311	2.59	-	36.30	8.61	32.64

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

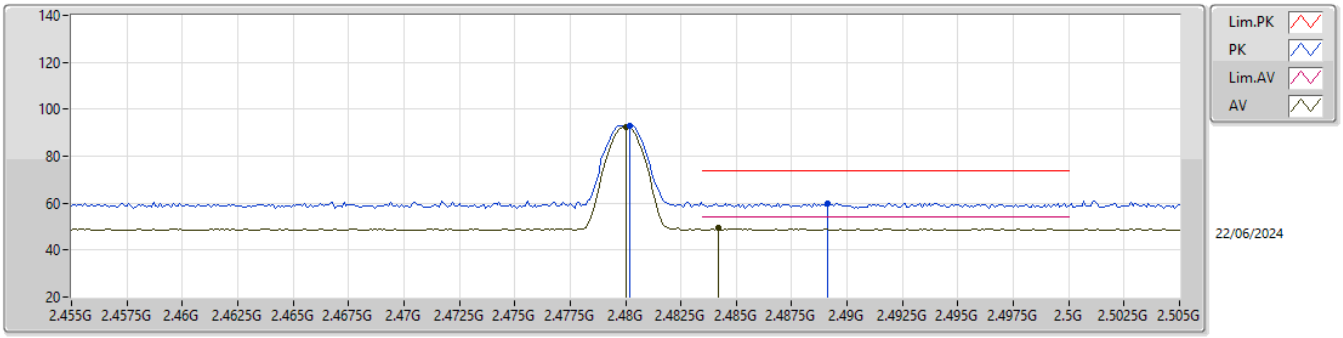


EUT Y_1TX
Setting 00
01-I-J-8

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	4.8885G	45.45	74.00	-28.55	39.73	3	Horizontal	208	1.73	-	31.30	7.00	32.58
AV	4.9043G	33.91	54.00	-20.09	28.16	3	Horizontal	208	1.73	-	31.32	7.01	32.58
PK	7.3049G	54.00	74.00	-20.00	41.73	3	Horizontal	246	2.17	-	36.28	8.62	32.63
AV	7.2984G	41.29	54.00	-12.71	29.02	3	Horizontal	246	2.17	-	36.30	8.61	32.64

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

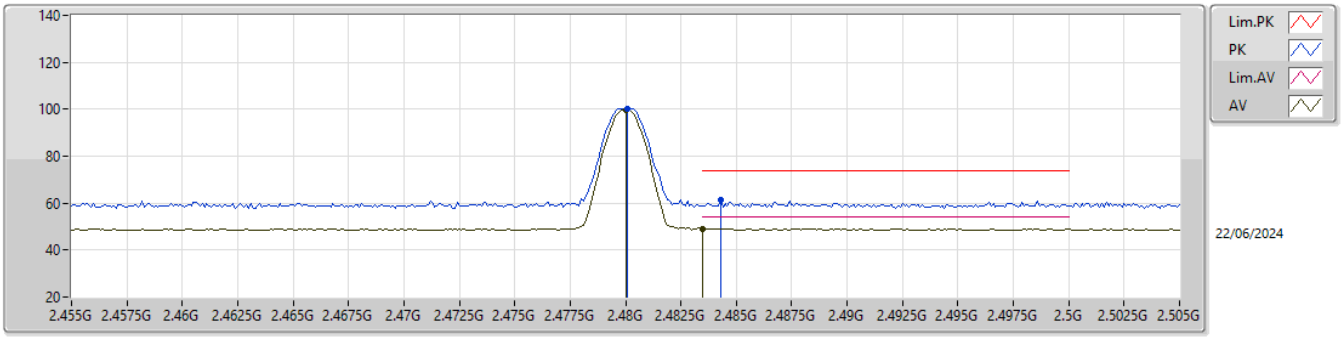


EUT Y_1TX
Setting 00
01-I-J-8

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	93.14	Inf	-Inf	61.04	3	Vertical	13	3.00	-	27.50	4.60	-
AV	2.48G	92.54	Inf	-Inf	60.44	3	Vertical	13	3.00	-	27.50	4.60	-
PK	2.4891G	60.05	74.00	-13.95	27.96	3	Vertical	13	3.00	-	27.50	4.59	-
AV	2.4842G	49.23	54.00	-4.77	17.13	3	Vertical	13	3.00	-	27.50	4.60	-

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

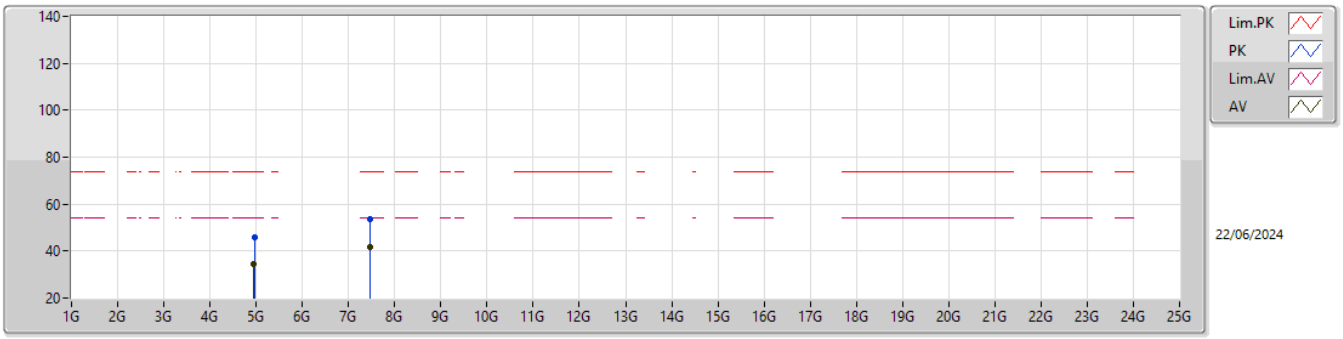


EUT Y_1TX
Setting 00
01-I-J-8

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	2.4801G	100.43	Inf	-Inf	68.33	3	Horizontal	131	3.00	-	27.50	4.60	-
AV	2.48G	99.91	Inf	-Inf	67.81	3	Horizontal	131	3.00	-	27.50	4.60	-
PK	2.4843G	61.31	74.00	-12.69	29.21	3	Horizontal	131	3.00	-	27.50	4.60	-
AV	2.4835G	48.96	54.00	-5.04	16.86	3	Horizontal	131	3.00	-	27.50	4.60	-

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

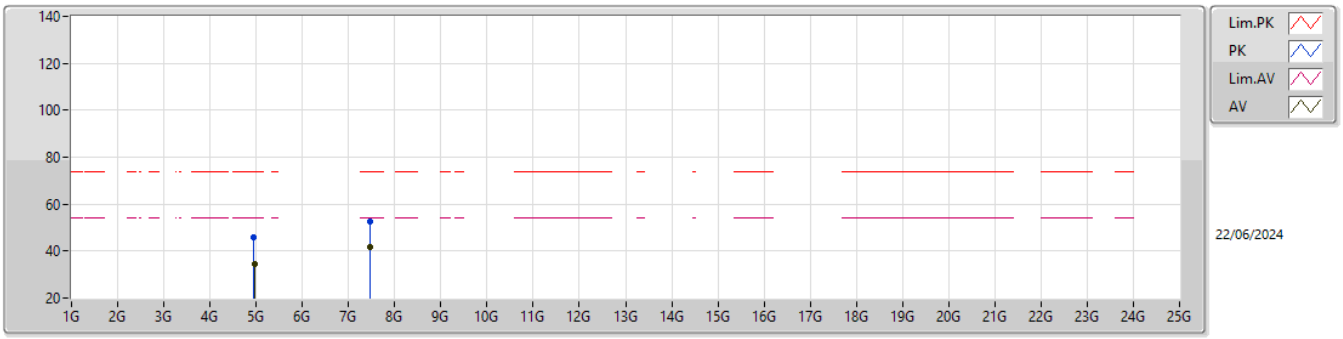


EUT Y_1TX
Setting 00
01-I-J-8

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	4.9574G	45.90	74.00	-28.10	39.88	3	Vertical	265	2.76	-	31.53	7.07	32.58
AV	4.956G	34.31	54.00	-19.69	28.30	3	Vertical	265	2.76	-	31.52	7.07	32.58
PK	7.4619G	53.55	74.00	-20.45	41.00	3	Vertical	230	1.79	-	36.38	8.74	32.57
AV	7.4543G	41.70	54.00	-12.30	29.15	3	Vertical	230	1.79	-	36.39	8.74	32.58

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

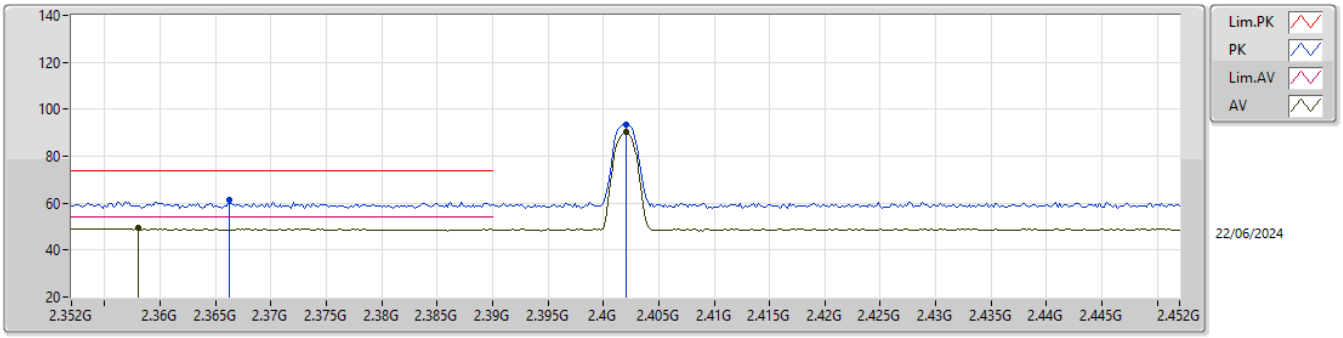


EUT Y_1TX
Setting 00
01-I-J-8

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	4.9354G	46.00	74.00	-28.00	40.09	3	Horizontal	119	1.83	-	31.44	7.05	32.58
AV	4.9598G	34.69	54.00	-19.31	28.66	3	Horizontal	119	1.83	-	31.54	7.07	32.58
PK	7.461G	52.70	74.00	-21.30	40.15	3	Horizontal	8	1.56	-	36.38	8.74	32.57
AV	7.4634G	41.65	54.00	-12.35	29.11	3	Horizontal	8	1.56	-	36.37	8.74	32.57

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

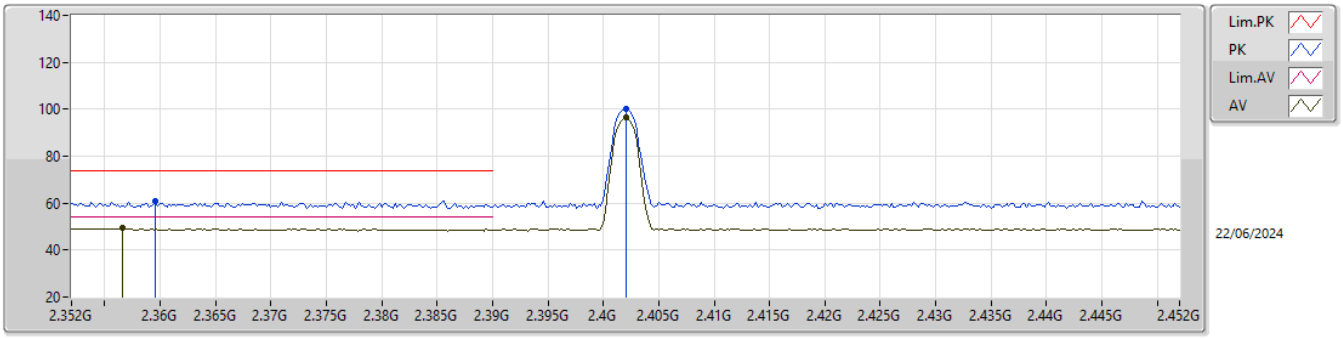


EUT Y_1TX
Setting 00
01-I-J-8

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	2.3662G	61.22	74.00	-12.78	28.76	3	Vertical	14	2.89	-	27.84	4.62	-
AV	2.358G	49.25	54.00	-4.75	16.72	3	Vertical	14	2.89	-	27.92	4.61	-
PK	2.402G	93.68	Inf	-Inf	61.33	3	Vertical	14	2.89	-	27.68	4.67	-
AV	2.402G	90.10	Inf	-Inf	57.75	3	Vertical	14	2.89	-	27.68	4.67	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

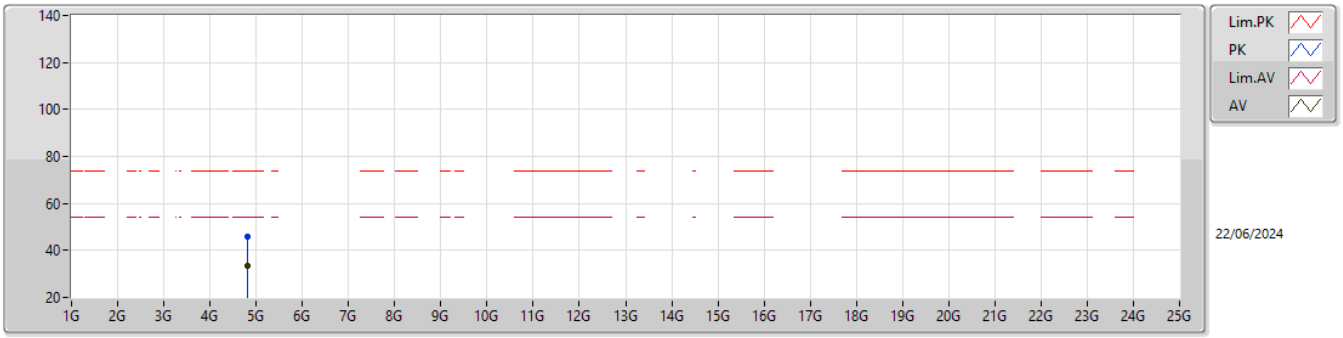


EUT Y_1TX
Setting 00
01-I-J-8

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	2.3596G	60.81	74.00	-13.19	28.30	3	Horizontal	130	2.95	-	27.90	4.61	-
AV	2.3566G	49.27	54.00	-4.73	16.73	3	Horizontal	130	2.95	-	27.93	4.61	-
PK	2.402G	100.04	Inf	-Inf	67.69	3	Horizontal	130	2.95	-	27.68	4.67	-
AV	2.402G	96.30	Inf	-Inf	63.95	3	Horizontal	130	2.95	-	27.68	4.67	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

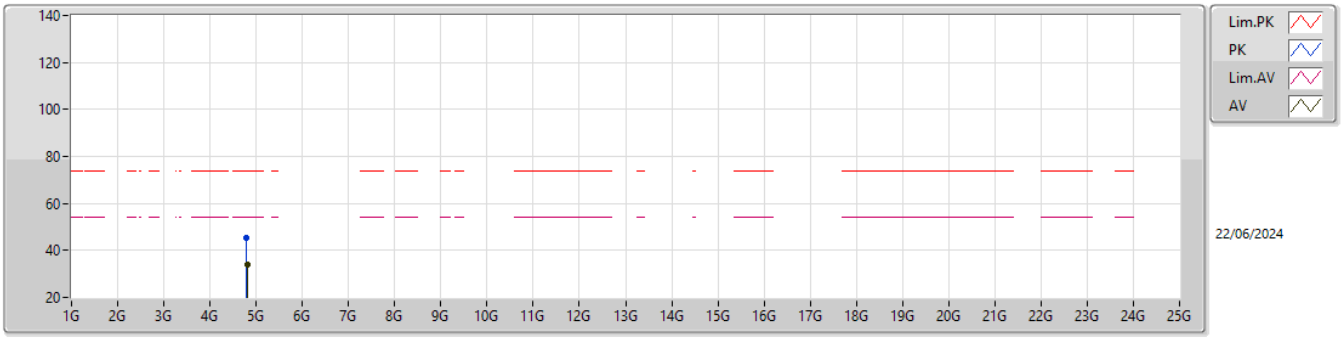


EUT Y_1TX
Setting 00
01-I-J-8

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	4.8208G	45.68	74.00	-28.32	40.02	3	Vertical	153	1.56	-	31.30	6.93	32.57
AV	4.8212G	33.68	54.00	-20.32	28.02	3	Vertical	153	1.56	-	31.30	6.93	32.57

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

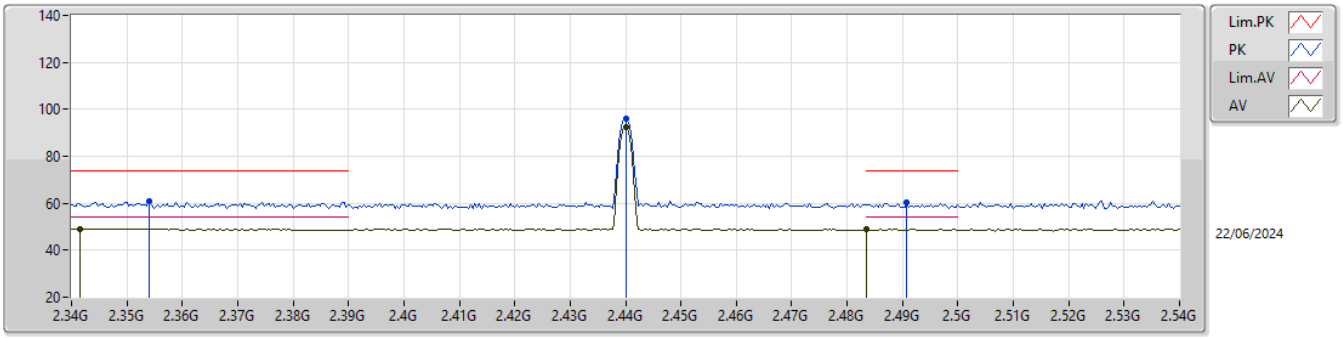


EUT Y_1TX
Setting 00
01-I-J-8

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	4.7856G	45.60	74.00	-28.40	40.00	3	Horizontal	106	1.33	-	31.27	6.90	32.57
AV	4.8124G	33.80	54.00	-20.20	28.15	3	Horizontal	106	1.33	-	31.30	6.92	32.57

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

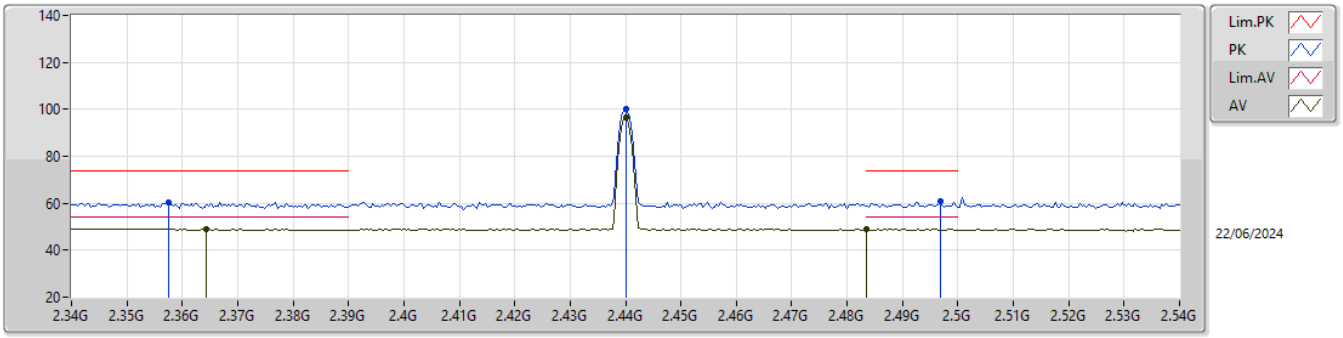


EUT Y_1TX
Setting 00
01-I-J-8

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.354G	60.82	74.00	-13.18	28.26	3	Vertical	56	3.00	-	27.96	4.60	-
AV	2.3416G	49.13	54.00	-4.87	16.54	3	Vertical	56	3.00	-	28.00	4.59	-
PK	2.44G	96.06	Inf	-Inf	63.92	3	Vertical	56	3.00	-	27.50	4.64	-
AV	2.44G	92.66	Inf	-Inf	60.52	3	Vertical	56	3.00	-	27.50	4.64	-
PK	2.4908G	60.49	74.00	-13.51	28.40	3	Vertical	56	3.00	-	27.50	4.59	-
AV	2.4835G	48.96	54.00	-5.04	16.86	3	Vertical	56	3.00	-	27.50	4.60	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

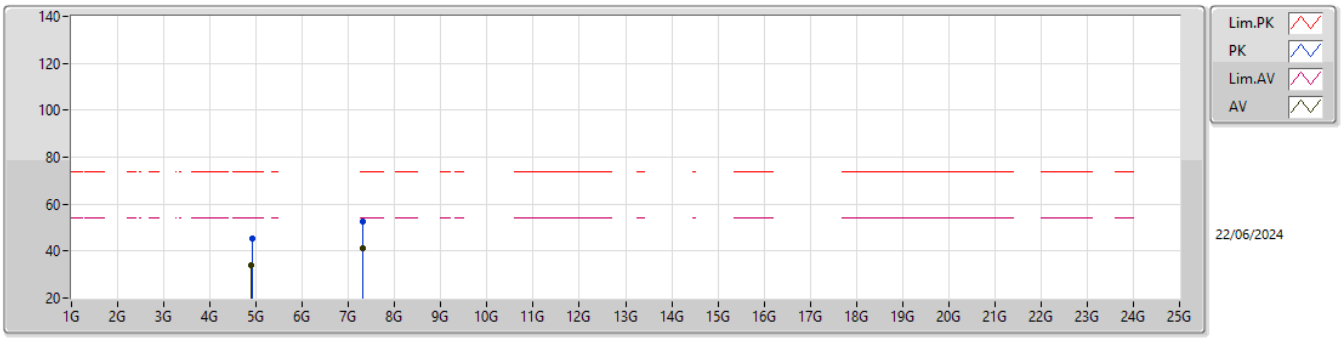


EUT Y_1TX
Setting 00
01-I-J-8

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	2.3576G	60.33	74.00	-13.67	27.80	3	Horizontal	132	2.86	-	27.92	4.61	-
AV	2.3644G	49.17	54.00	-4.83	16.69	3	Horizontal	132	2.86	-	27.86	4.62	-
PK	2.44G	100.06	Inf	-Inf	67.92	3	Horizontal	132	2.86	-	27.50	4.64	-
AV	2.44G	96.38	Inf	-Inf	64.24	3	Horizontal	132	2.86	-	27.50	4.64	-
PK	2.4968G	60.76	74.00	-13.24	28.67	3	Horizontal	132	2.86	-	27.50	4.59	-
AV	2.4835G	48.96	54.00	-5.04	16.86	3	Horizontal	132	2.86	-	27.50	4.60	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

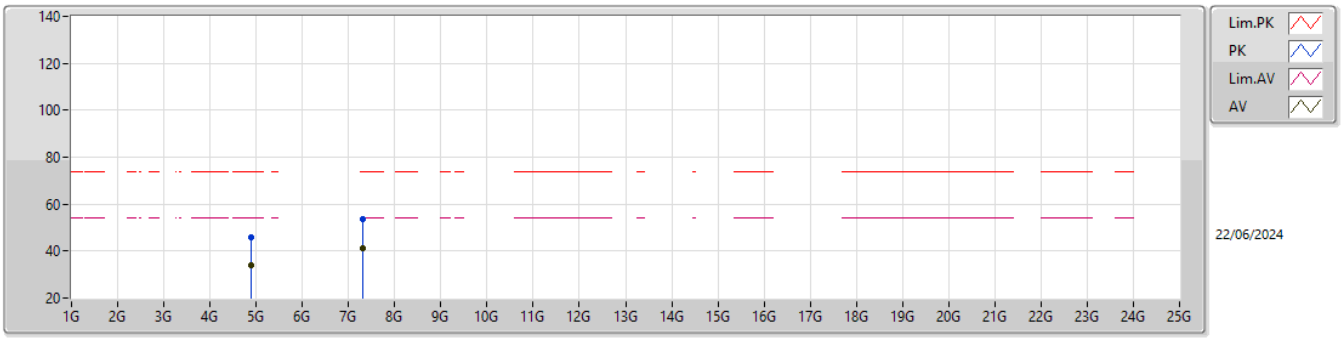


EUT Y_1TX
Setting 00
01-I-J-8

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	4.905G	45.11	74.00	-28.89	39.36	3	Vertical	148	1.36	-	31.32	7.01	32.58
AV	4.9035G	33.79	54.00	-20.21	28.05	3	Vertical	148	1.36	-	31.31	7.01	32.58
PK	7.3033G	52.71	74.00	-21.29	40.44	3	Vertical	227	1.59	-	36.29	8.61	32.63
AV	7.2968G	41.19	54.00	-12.81	28.93	3	Vertical	227	1.59	-	36.29	8.61	32.64

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

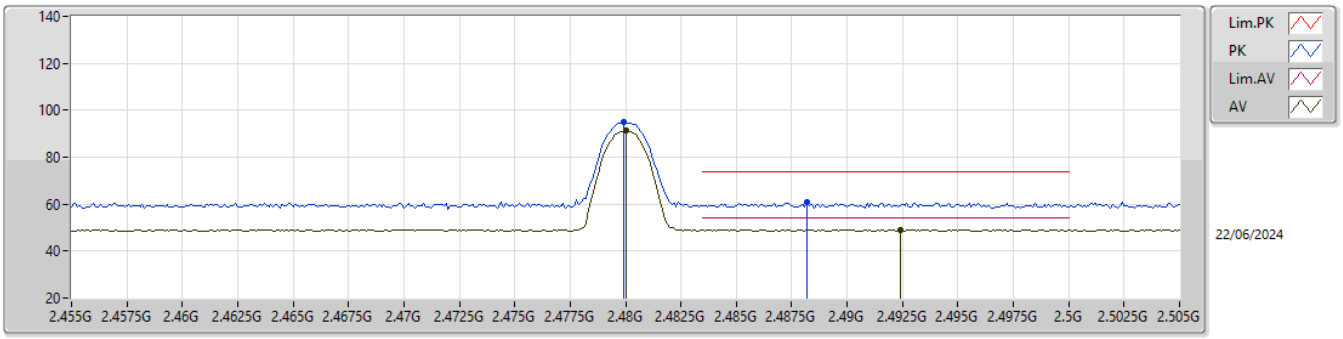


EUT Y_1TX
Setting 00
01-I-J-8

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	4.8956G	46.01	74.00	-27.99	40.28	3	Horizontal	20	1.37	-	31.30	7.01	32.58
AV	4.9011G	33.96	54.00	-20.04	28.23	3	Horizontal	20	1.37	-	31.30	7.01	32.58
PK	7.3102G	53.71	74.00	-20.29	41.46	3	Horizontal	124	1.11	-	36.26	8.62	32.63
AV	7.2961G	41.30	54.00	-12.70	29.04	3	Horizontal	124	1.11	-	36.29	8.61	32.64

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

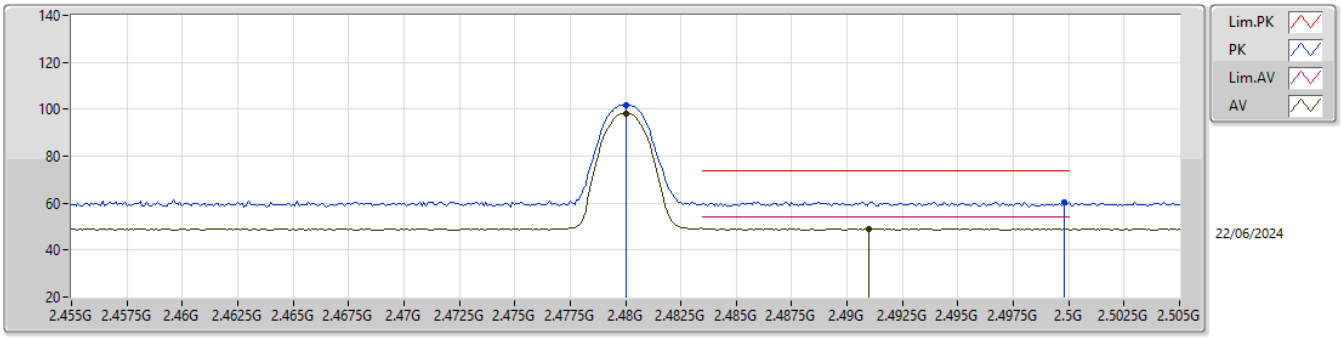


EUT Y_1TX
Setting 00
01-I-J-8

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	2.4799G	94.77	Inf	-Inf	62.67	3	Vertical	15	3.00	-	27.50	4.60	-
AV	2.48G	91.13	Inf	-Inf	59.03	3	Vertical	15	3.00	-	27.50	4.60	-
PK	2.4882G	60.66	74.00	-13.34	28.56	3	Vertical	15	3.00	-	27.50	4.60	-
AV	2.4924G	49.19	54.00	-4.81	17.10	3	Vertical	15	3.00	-	27.50	4.59	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

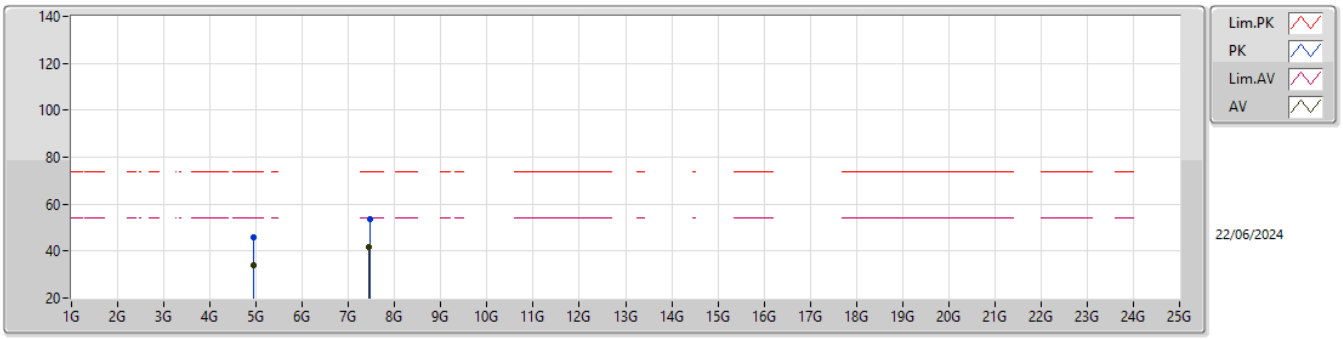


EUT Y_1TX
Setting 00
01-I-J-8

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	101.93	Inf	-Inf	69.83	3	Horizontal	131	3.00	-	27.50	4.60	-
AV	2.48G	98.26	Inf	-Inf	66.16	3	Horizontal	131	3.00	-	27.50	4.60	-
PK	2.4998G	60.60	74.00	-13.40	28.51	3	Horizontal	131	3.00	-	27.50	4.59	-
AV	2.491G	49.20	54.00	-4.80	17.11	3	Horizontal	131	3.00	-	27.50	4.59	-

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

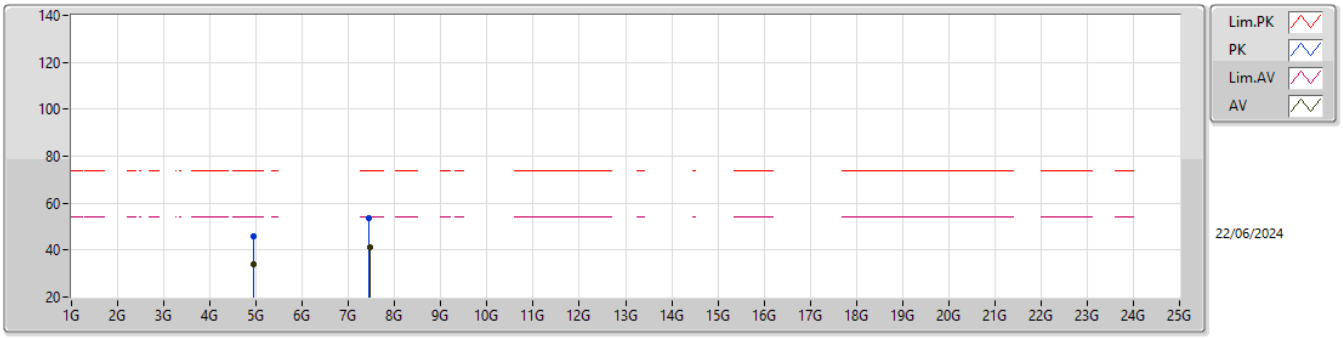


EUT Y_1TX
Setting 00
01-I-J-8

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	4.9515G	45.69	74.00	-28.31	39.70	3	Vertical	201	1.22	-	31.51	7.06	32.58
AV	4.9542G	34.17	54.00	-19.83	28.17	3	Vertical	201	1.22	-	31.52	7.06	32.58
PK	7.4549G	53.45	74.00	-20.55	40.90	3	Vertical	169	2.86	-	36.39	8.74	32.58
AV	7.4516G	41.57	54.00	-12.43	29.01	3	Vertical	169	2.86	-	36.40	8.74	32.58

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX



EUT Y_1TX
Setting 00
01-I-J-8

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	4.9428G	45.68	74.00	-28.32	39.74	3	Horizontal	354	1.47	-	31.47	7.05	32.58
AV	4.9417G	34.10	54.00	-19.90	28.16	3	Horizontal	354	1.47	-	31.47	7.05	32.58
PK	7.4424G	53.57	74.00	-20.43	41.07	3	Horizontal	233	1.30	-	36.35	8.73	32.58
AV	7.4647G	41.46	54.00	-12.54	28.92	3	Horizontal	233	1.30	-	36.37	8.74	32.57