

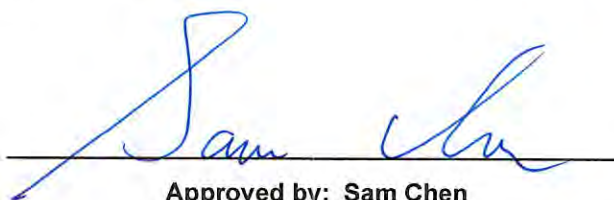


RADIO TEST REPORT

FCC ID : TLZ-XM9098
Equipment : IEEE 802.112X2 WiFi 6 SU and MU-MIMO DBC
Wireless LAN + Bluetooth 5.1 Combo Module
Brand Name : AzureWave
Model Name : AW-XM458, AW-XM369, AW-XM458MA-XXX,
AW-XM369MA-XXX
Applicant : AzureWave Technologies, Inc.
8F., No.94, Baozhong Rd. , Xindian Dist., New
Taipei City , Taiwan 231
Manufacturer : AzureWave Technologies (Shanghai) Inc.
No. 1355, Jiaxin Road, Malu Twon, Jiading District
Shanghai, P.R. China
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 21, 2024, and testing was started from Jul. 11, 2024 and completed on Jul. 31, 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.)



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Report No. : FR132339-09AC

History of this test report

[illegible]



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(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/manufacture 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: Vicky Huang



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
2400-2483.5	BT-BR	1	1
2400-2483.5	BT-EDR	1	1

Note:

- ♦ Bluetooth BR uses a GFSK (1Mbps).
- ♦ Bluetooth EDR uses a combination of $\pi/4$ -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**

Set	Ant.	Port			Brand	Model Name	Antenna Type	Connector	Gain (dBi)
		WLAN 2.4GHz	WLAN 5GHz	Bluetooth					
1	1	1	1	-	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA	I-PEX	Note 1
	2	2	2	-	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA	I-PEX	
	3	-	-	1	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA	I-PEX	
2	4	1/2	1/2	1	Inpaq	WA-P-LB-02-587	PCB	I-PEX	
3	5	1/2	1/2	1	Inpaq	WA-P-LB-03-129	PCB	I-PEX	
4	6	-	-	-	Inpaq	WA-P-LB-03-130	PCB	I-PEX	
5	7	-	-	-	Inpaq	WA-F-LB-03-110	PCB	I-PEX	
6	8	-	-	-	Inpaq	WA-F-LB-02-187	PCB	I-PEX	
7	9	-	-	-	Inpaq	WA-F-LA-01-015	PCB	I-PEX	
8	10	-	-	-	TE Connectivity	2195501-2	PCB	I-PEX	Note 2
9	11	-	-	-	TE Connectivity	2195505-2	PCB	I-PEX	
10	12	-	-	-	LUXSHARE-ICT	SA37A47021	Dipole	I-PEX	Note 1
	13	-	-	-	LUXSHARE-ICT	SA37A47021	Dipole	I-PEX	
11	14	-	-	-	LUXSHARE-ICT	SA37A47025	PIFA	I-PEX	Note 1
12	15	1/2	1/2	1	TAOGLAS	WLA.10	Chip	N/A	Note 1

Note1:

Set	Ant.	Port			Antenna Gain (dBi)		
		WLAN 2.4GHz	WLAN 5GHz	Bluetooth	WLAN 2.4GHz	WLAN 5GHz	Bluetooth
1	1	1	1	-	2.98	5.16	-
	2	2	2	-	2.98	5.16	-
	3	-	-	1	-	-	2.98
2	4	1/2	1/2	1	4.43	7.52	4.43
3	5	1/2	1/2	1	6.51	3.2	6.51
4	6	-	-	-	4.91	5.84	4.91
5	7	-	-	-	-0.27	2.74	-0.27
6	8	-	-	-	0.07	2.39	0.07
7	9	-	-	-	5.66	-	5.66
8	10	-	-	-	0.47	1.88	0.47
9	11	-	-	-	0.77	0.96	0.77
11	14	-	-	-	-	-	-1.1
12	15	1/2	1/2	1	1.25	2.17	1.25

Note2:

Set	Ant.	Port		Cable Length	Antenna Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
		WLAN 2.4GHz	WLAN 5GHz		WLAN 2.4GHz	WLAN 5GHz	WLAN 2.4GHz	WLAN 5GHz	WLAN 2.4GHz	WLAN 5GHz
10	12	-	-	450mm	2.8	2.6	1.1	1.9	1.7	0.7
	13	-	-	470mm	2.8	2.6	1.2	2	1.6	0.6

Note3: The above information was declared by manufacturer.

Note4: There are 15 antenna sets listed on the antenna table. The antenna sets 1~9 and 12 have three antennas for each set. The antenna set 10 has two antennas. The antenna set 11 has one antenna. The EUT has four types of antenna.

Note5: Directional gain information.

For ant. 1~ant. 2

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

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} S_{j,k} \right)^2}{N_{ANT}} \right]$$

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

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2))^2 / N_{ANT}] \Rightarrow 10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$$

Where ;

$$2.4G \ G1 = 2.98 ; G2 = 2.98 ; DG=5.99$$

$$5G \ G1 = 5.16 ; G2 = 5.16 ; DG=8.17$$

For ant. 4~ant. 5

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

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} S_{j,k} \right)^2}{N_{ANT}} \right]$$

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

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2))^2 / N_{ANT}] \Rightarrow 10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$$

Where ;

For ant. 5

$$2.4G \ G1 = 6.51 ; G2 = 6.51 ; DG=9.52$$

For ant. 4

$$5G \ G1 = 7.52 ; G2 = 7.52 ; DG=10.53$$

For ant. 15

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

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ant}} \left(\sum_{k=1}^{N_{ant}} g_{j,k} \right)^2}{N_{ant}} \right]$$

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

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2))^2 / N_{ANT}] \Rightarrow 10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$$

Where ;

$$2.4G \ G1 = 1.25 \text{ dBi} ; G2 = 1.25 \text{ dBi} ; DG = 4.26 \text{ dBi}$$

$$5G \ G1 = 2.17 \text{ dBi} ; G2 = 2.17 \text{ dBi} ; DG = 5.18 \text{ dBi}$$

<WLAN 2.4GHz Function>

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

<WLAN 5GHz Function>

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

<Bluetooth Function> (1TX/1RX)

Only Port 1 can be used as transmitting/receiving.

1.1.3 EUT Operational Condition

EUT Power Type	From host system
Test Software Version	DutApiMimoApApp (Version : 2.0.0.80)

1.1.4 Table for Multiple Listing

EUT	Model No.	GPIO	Antenna	RF Connector Trace and Type	Description
1	AW-XM458, AW-XM369	Without GPIO	PIFA, PCB, Dipole	-	All the model names are identical, the difference model names served as marketing strategy.
2	AW-XM458MA-XXX, AW-XM369MA-XXX	With GPIO		Type 1	All the model names are identical, the difference model names served as marketing strategy.
3				Type 2	
4			Chip	Type 3	

Note 1: From the above models, model: AW-XM458MA-XXX (EUT 4) was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR132339-07AC.

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

Modifications	Performance Checking
Add EUT 4 with a new antenna type (chip antenna Set 12)	1. AC Power-line Conducted Emissions 2. Emissions in Restricted Frequency Bands below 1GHz. 3. Emissions in Restricted Frequency Bands above 1GHz.(Based on original output power to 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	03CH01-CB	Chris Li	21.9-22.4 / 55-58	Jul. 11, 2024~ Jul. 24, 2024
Radiated above 1GHz	03CH02-CB	Chris Li	21.8-22.9 / 55-58	Jul. 11, 2024~ Jul. 24, 2024
AC Conduction	CO01-CB	Ryan Huang	22~23 / 51~53	Jul. 31, 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 Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
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	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	EUT 4 + WLAN 2.4GHz (Ant. Set 12)
2	EUT 4 + WLAN 5GHz (Ant. Set 12)
3	EUT 4 + Bluetooth (Ant. Set 12)
For operating mode 3 is the worst case and it was record in this test report.	

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
	After evaluating, and the worst case was found at X axis, so it was selected to perform test and its test result was written in the report.
1	EUT 4 in X axis + WLAN 2.4GHz (Ant. Set 12) + WLAN 5GHz (Ant. Set 12) + Bluetooth (Ant. Set 12)
Operating Mode > 1GHz	CTX
	After evaluating, and the worst case was found as below. So the measurement will follow this same test configuration.
1	EUT 4 in Z axis + Ant. Set 12

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth
Refer to Sporton Test Report No.: FA132339-09 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 AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB2	DELL	E6430	N/A
B	Fixture	Azurewave	2304NF-i1	N/A
C	NB1	DELL	E6430	N/A
D	Earphone	SHYARO CHI	MIC-04	N/A
E	Mouse	HP	FM100	N/A
F	Fixture	Azurewave	2458-i6	N/A

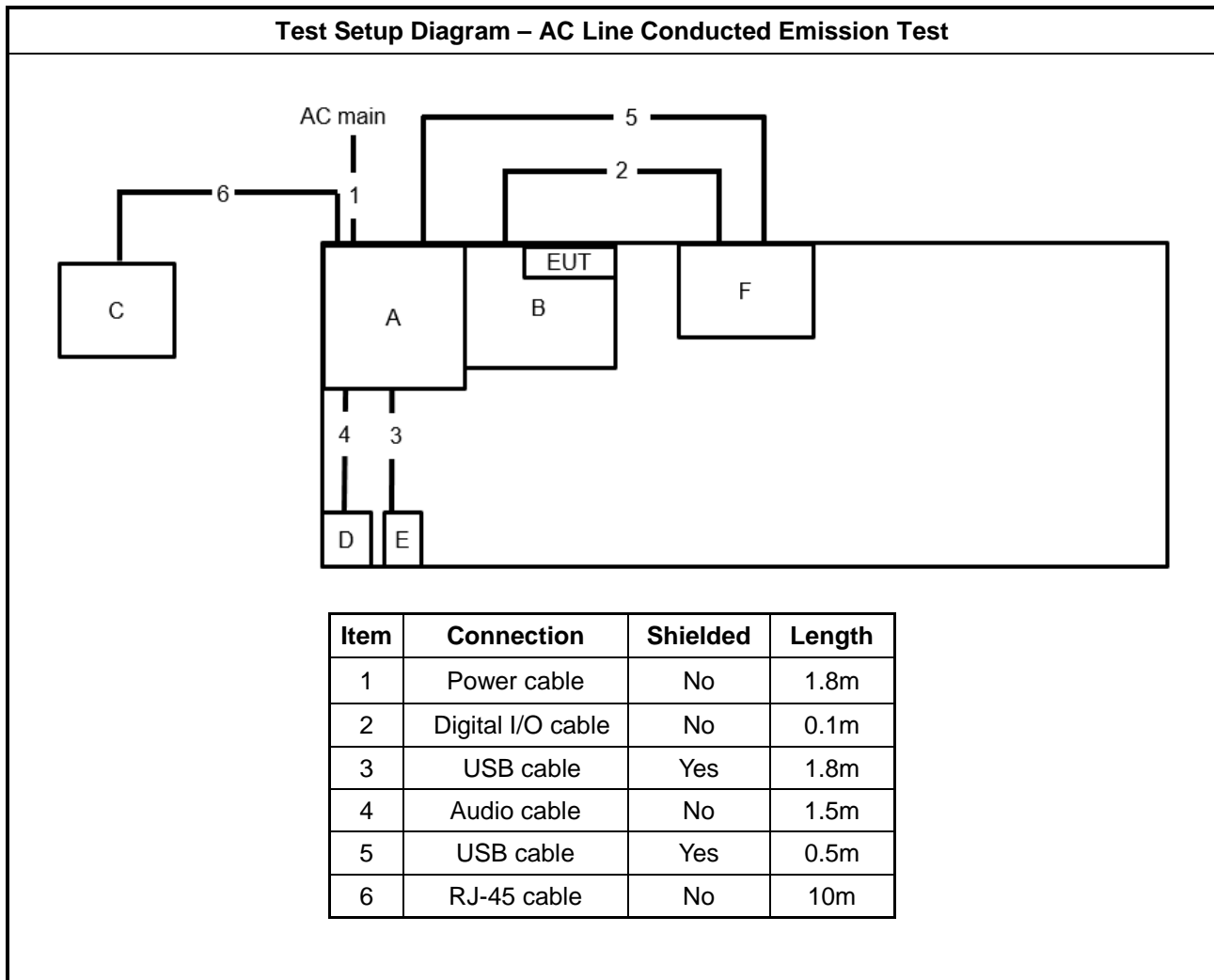
For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Test Fixture	Azurewave	2304NF-i1	N/A
C	Test Fixture	Azurewave	2458-i6	N/A
D	AP Router(2.4G)	ASUS	AX88U	N/A
E	AP Router(5G)	ASUS	AX88U	N/A
F	Phone(BT)	PHILIPS	M20	N/A

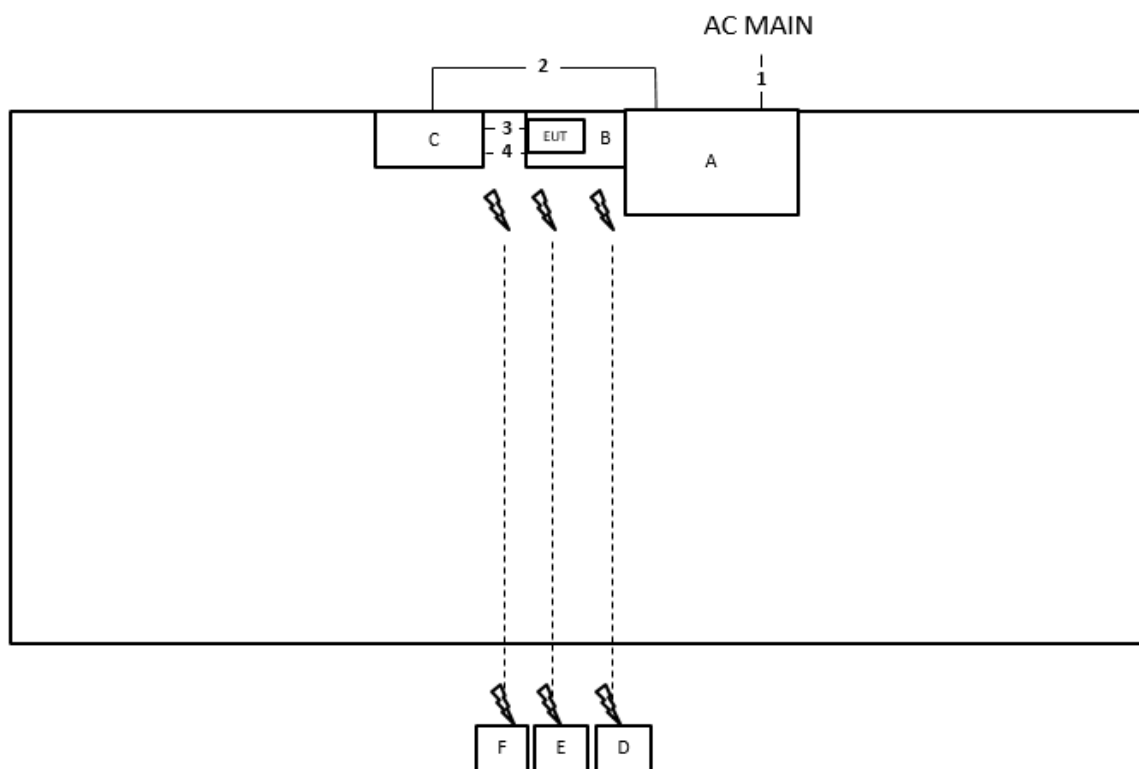
For Radiated (above 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Test Fixture	Azurewave	2304NF-i1	N/A
C	Test Fixture	Azurewave	2458-i6	N/A

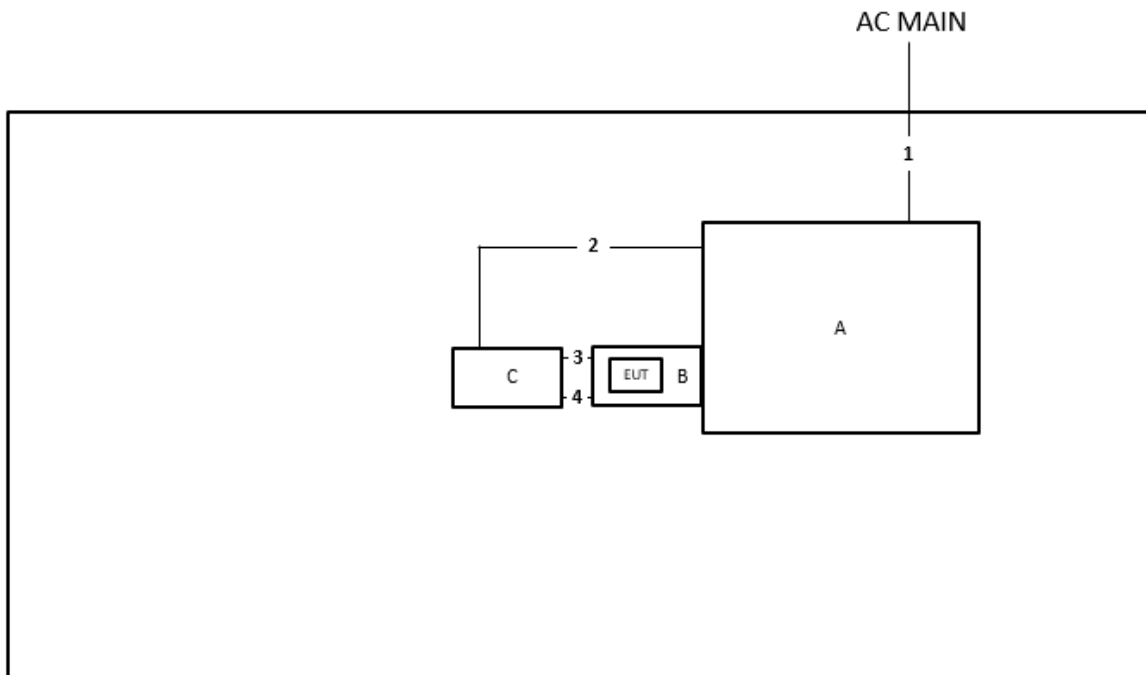
2.5 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	USB cable	Yes	1m
3	Console cable	No	0.15m
4	Console cable	No	0.15m

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	USB cable	Yes	1.5m
3	Console cable	No	0.15m
4	Console cable	No	0.15m



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.

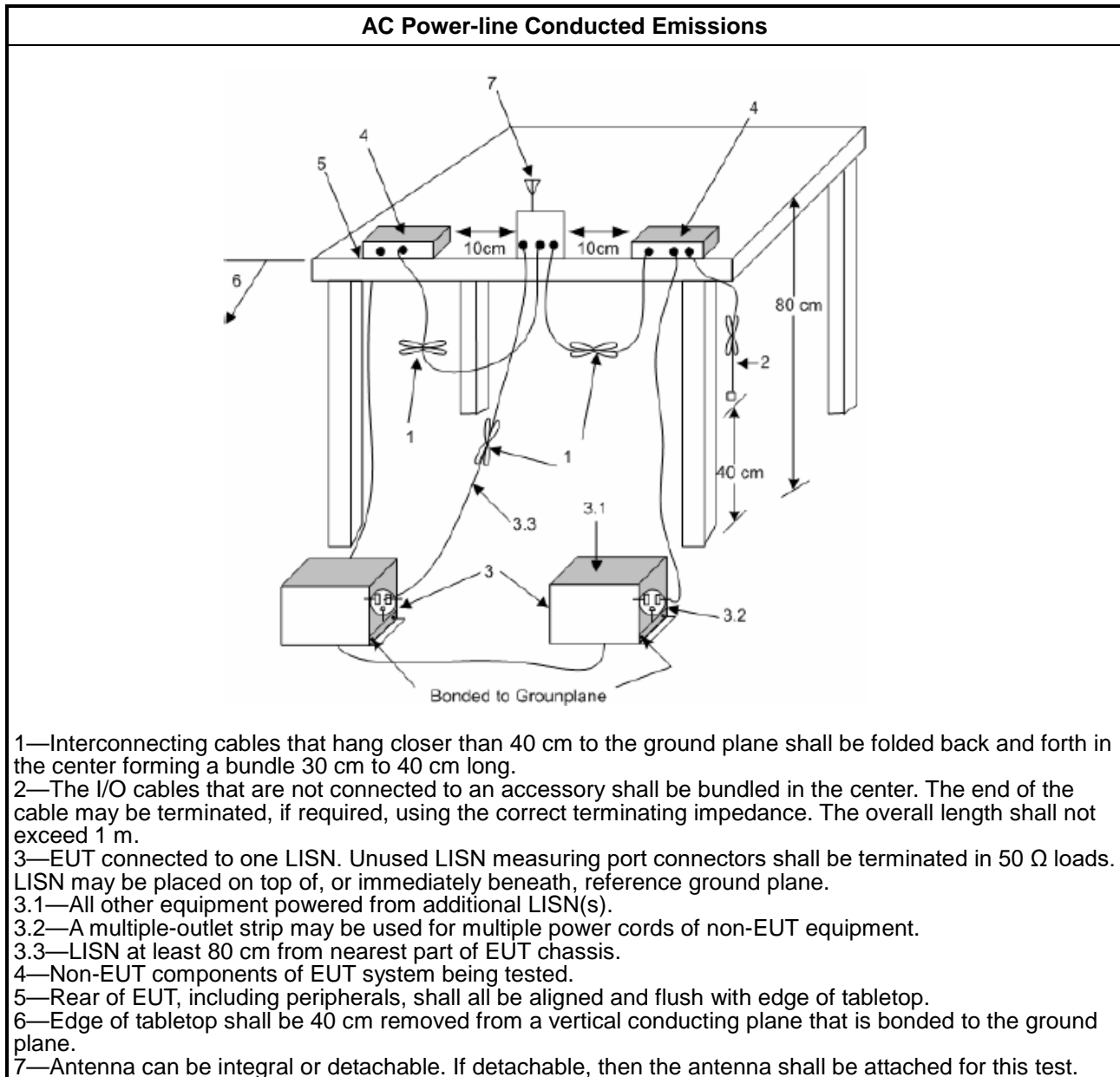
3.1.2 Measuring Instruments

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



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 Emissions in Restricted Frequency Bands

3.2.1 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 below 30 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.

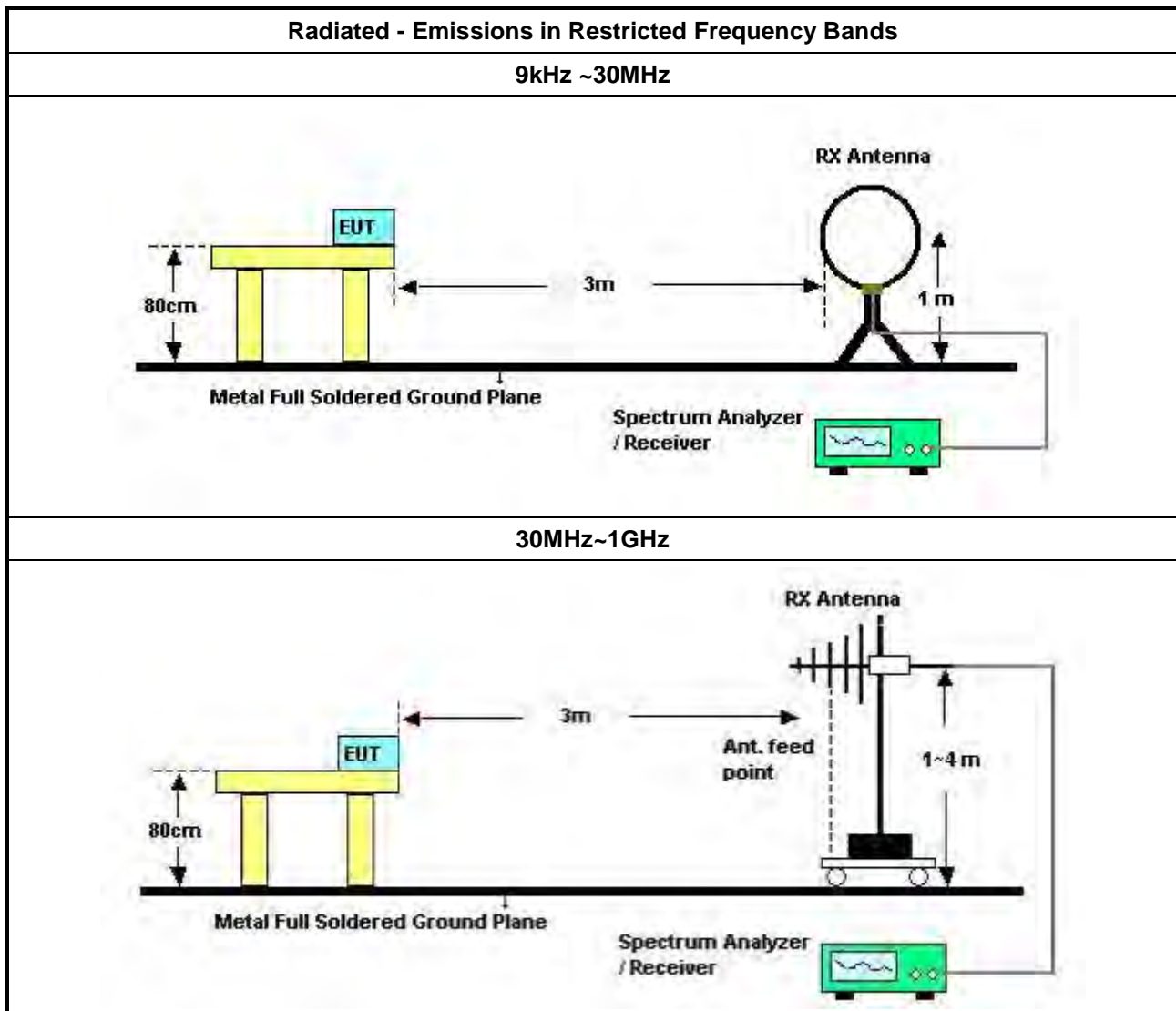
3.2.2 Measuring Instruments

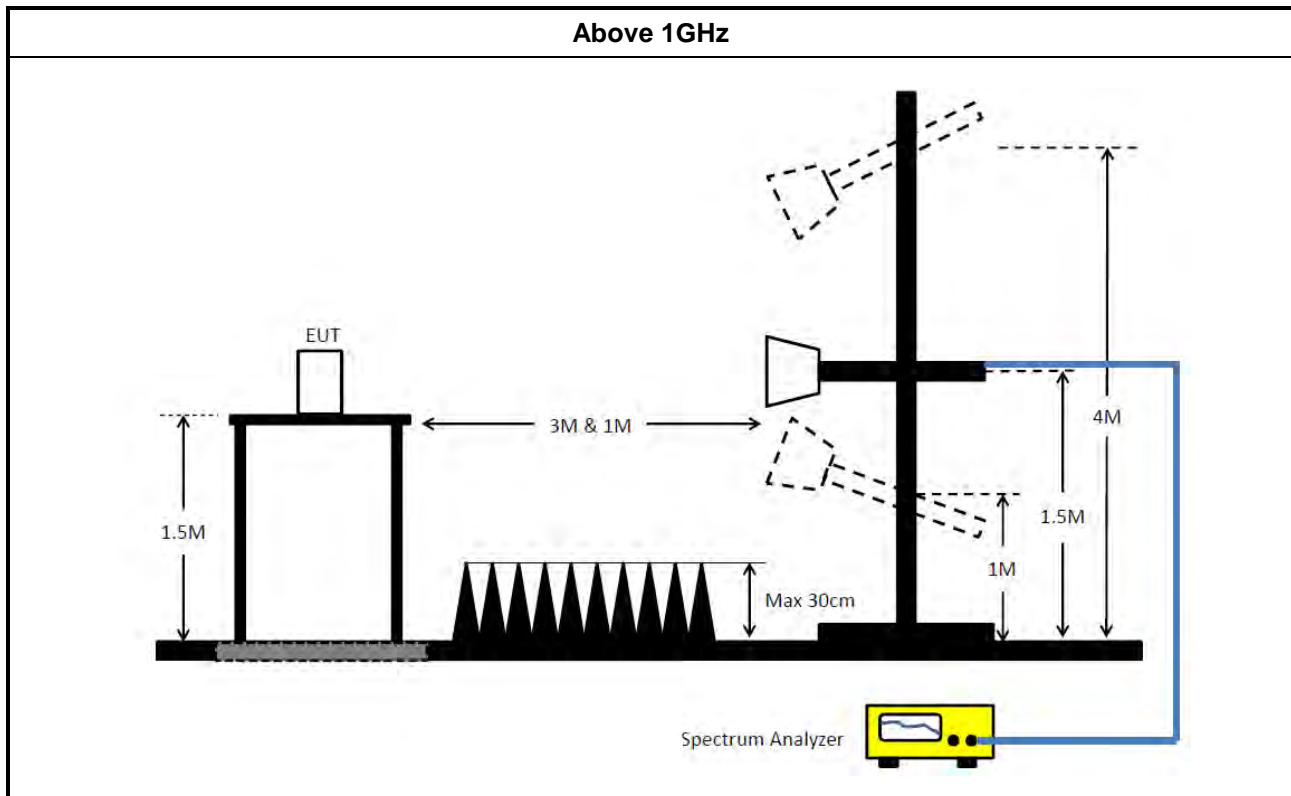
Refer a test equipment and calibration data table in this test report.

3.2.3 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.

3.2.4 Test Setup





3.2.5 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.

3.2.6 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.

3.2.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix B



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. 01, 2024	Feb. 28, 2025	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 19, 2024	Feb. 18, 2025	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 24, 2024	Apr. 23, 2025	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 08, 2024	Feb. 07, 2025	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 17, 2023	Oct. 16, 2024	Conduction (CO01-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO01-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH01-CB	30 MHz ~ 1 GHz	Jan. 18, 2024	Jan. 17, 2025	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Feb. 18, 2024	Feb. 17, 2025	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30 MHz	Oct. 13, 2023	Oct. 12, 2024	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH0301	20230109-2	10M-1GHz	Jun. 22, 2024	Jun. 21, 2025	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV3044	101437	10kHz ~ 44GHz	Nov. 28, 2023	Nov. 27, 2024	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 20, 2023	Oct. 19, 2024	Radiation (03CH01-CB)
RF Cable-low	Woken	RG402	Low Cable-31+32	30 MHz ~ 1 GHz	Nov. 06, 2023	Nov. 05, 2024	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 24, 2024	Mar. 23, 2025	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 12, 2024	Apr. 11, 2025	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jun. 29, 2024	Jun. 28, 2025	Radiation (03CH02-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 24, 2023	Nov. 23, 2024	Radiation (03CH02-CB)
Signal Analyzer	R&S	FSV3044	101536	10kHz ~ 44GHz	Jul. 24, 2023	Jul. 23, 2024	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Jun. 20, 2024	Jun. 19, 2025	Radiation (03CH02-CB)



RADIO TEST REPORT

Report No. : FR132339-09AC

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Jun. 20, 2024	Jun. 19, 2025	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Jan. 11, 2024	Jan. 10, 2025	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)

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

N.C.R. means Non-Calibration required.



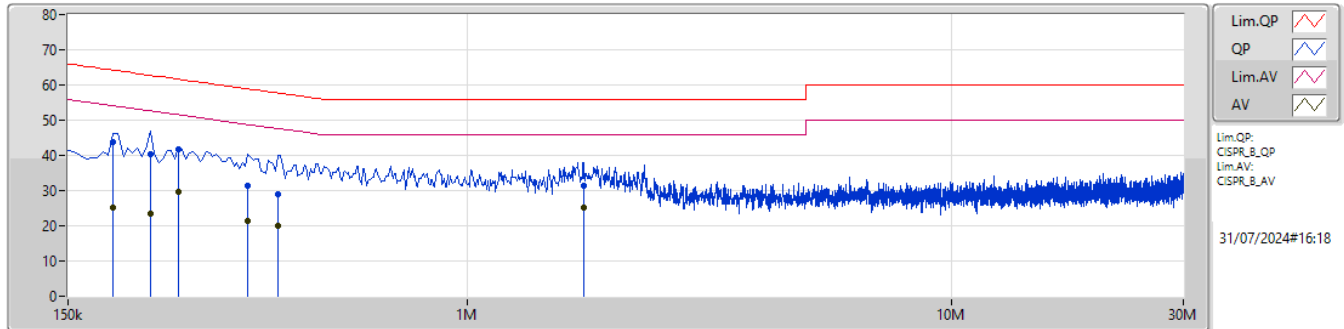
Conducted Emissions at Powerline

Appendix A

Summary

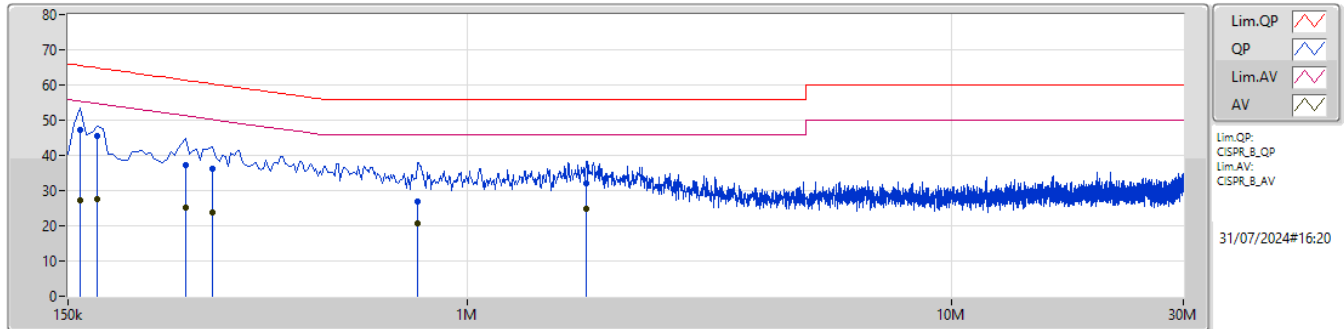
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 3	Pass	QP	159k	47.31	65.52	-18.21	Neutral

Mode 3



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	186k	43.95	64.20	-20.25	9.92	Line	-	34.03	0.05	0.02	9.85						
AV	186k	25.23	54.20	-28.97	9.92	Line	-	15.31	0.05	0.02	9.85						
QP	222k	40.26	62.75	-22.49	9.93	Line	-	30.33	0.05	0.02	9.86						
AV	222k	23.36	52.75	-29.39	9.93	Line	-	13.43	0.05	0.02	9.86						
QP	253.5k	41.82	61.64	-19.82	9.93	Line	"Worst"	31.89	0.05	0.02	9.86						
AV	253.5k	29.55	51.64	-22.09	9.93	Line	-	19.62	0.05	0.02	9.86						
QP	352.5k	31.38	58.91	-27.53	9.95	Line	-	21.43	0.05	0.02	9.88						
AV	352.5k	21.28	48.91	-27.63	9.95	Line	-	11.33	0.05	0.02	9.88						
QP	406.5k	29.06	57.72	-28.66	9.96	Line	-	19.10	0.05	0.02	9.89						
AV	406.5k	20.02	47.72	-27.70	9.96	Line	-	10.06	0.05	0.02	9.89						
QP	1.734M	31.26	56.00	-24.74	10.04	Line	-	21.22	0.09	0.06	9.89						
AV	1.734M	25.09	46.00	-20.91	10.04	Line	-	15.05	0.09	0.06	9.89						

Mode 3



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	159k	47.31	65.52	-18.21	9.93	Neutral	"Worst"	37.38	0.05	0.02	9.86						
AV	159k	27.11	55.52	-28.41	9.93	Neutral	-	17.18	0.05	0.02	9.86						
QP	172.5k	45.56	64.83	-19.27	9.93	Neutral	-	35.63	0.05	0.02	9.86						
AV	172.5k	27.67	54.83	-27.16	9.93	Neutral	-	17.74	0.05	0.02	9.86						
QP	262.5k	37.26	61.35	-24.09	9.94	Neutral	-	27.32	0.05	0.02	9.87						
AV	262.5k	25.11	51.35	-26.24	9.94	Neutral	-	15.17	0.05	0.02	9.87						
QP	298.5k	36.10	60.28	-24.18	9.94	Neutral	-	26.16	0.05	0.02	9.87						
AV	298.5k	23.73	50.28	-26.55	9.94	Neutral	-	13.79	0.05	0.02	9.87						
QP	789k	26.95	56.00	-29.05	9.97	Neutral	-	16.98	0.06	0.01	9.90						
AV	789k	20.77	46.00	-25.23	9.97	Neutral	-	10.80	0.06	0.01	9.90						
QP	1.761M	32.20	56.00	-23.80	10.03	Neutral	-	22.17	0.08	0.06	9.89						
AV	1.761M	24.94	46.00	-21.06	10.03	Neutral	-	14.91	0.08	0.06	9.89						



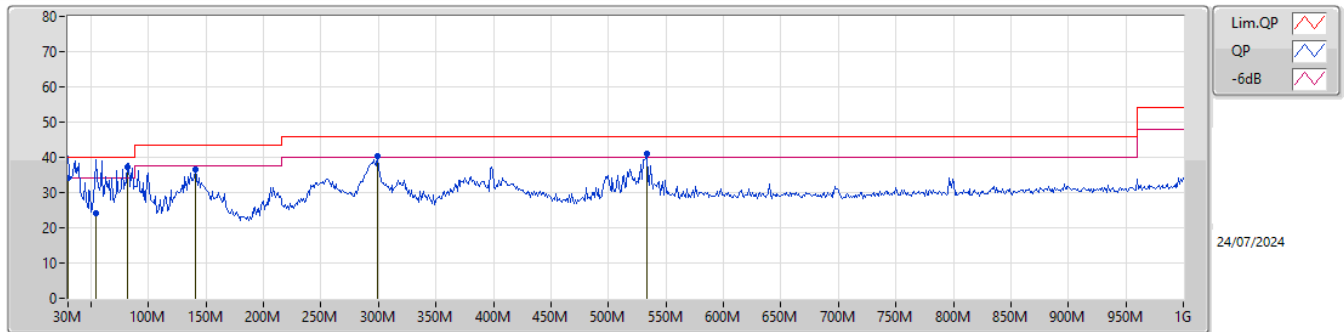
Radiated Emissions below 1GHz

Appendix B.1

Summary

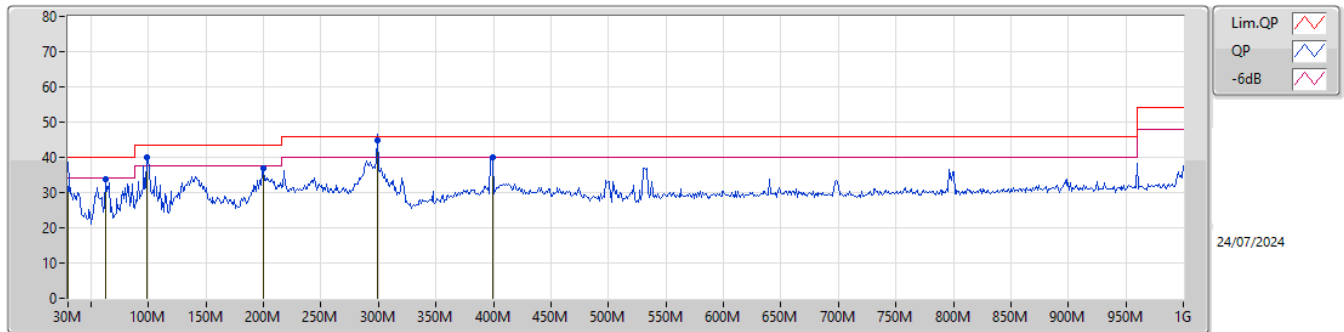
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	299.66M	44.99	46.00	-1.01	Horizontal

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
QP	30M	34.24	40.00	-5.76	-19.71	3	Vertical	360	1.00	-	53.95	24.06	0.68	44.45		
QP	54.25M	24.18	40.00	-15.82	-31.23	3	Vertical	242	3.00	-	55.41	12.80	0.86	44.89		
QP	81.41M	37.28	40.00	-2.72	-30.86	3	Vertical	324	1.00	"Worst"	68.14	12.56	1.01	44.43		
PK	140.58M	36.38	43.50	-7.12	-27.01	3	Vertical	189	1.00	-	63.39	16.39	1.32	44.72		
PK	298.69M	40.37	46.00	-5.63	-24.33	3	Vertical	298	2.00	-	64.70	18.19	1.98	44.50		
PK	533.43M	41.12	46.00	-4.88	-18.58	3	Vertical	2	1.25	-	59.70	22.98	2.50	44.06		

Mode 1



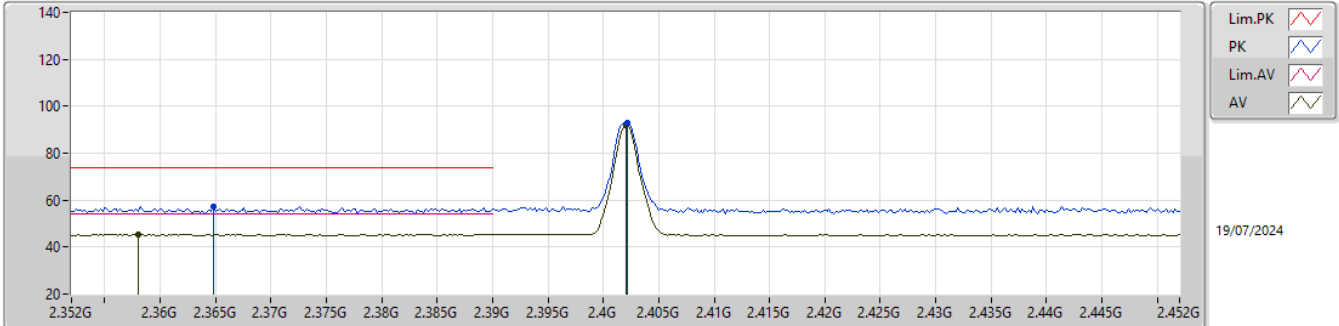
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB/m)	CL (dB)	PA (dB)		
QP	30M	30.92	40.00	-9.08	-19.71	3	Horizontal	95	1.00	-	50.63	24.06	0.68	44.45		
PK	62.98M	33.83	40.00	-6.17	-31.80	3	Horizontal	189	1.00	-	65.63	12.05	0.93	44.78		
QP	98.87M	39.96	43.50	-3.54	-27.69	3	Horizontal	189	2.00	-	67.65	15.82	1.13	44.64		
PK	199.75M	36.79	43.50	-6.71	-28.77	3	Horizontal	182	1.25	-	65.56	14.34	1.58	44.69		
QP	299.66M	44.99	46.00	-1.01	-24.32	3	Horizontal	163	1.00	"Worst"	69.31	18.20	1.99	44.51		
PK	399.57M	39.83	46.00	-6.17	-21.10	3	Horizontal	298	1.00	-	60.93	20.74	2.22	44.06		

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-BR(1Mbps)	Pass	AV	4.804G	48.32	54.00	-5.68	3	Horizontal	136	1.03	-

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

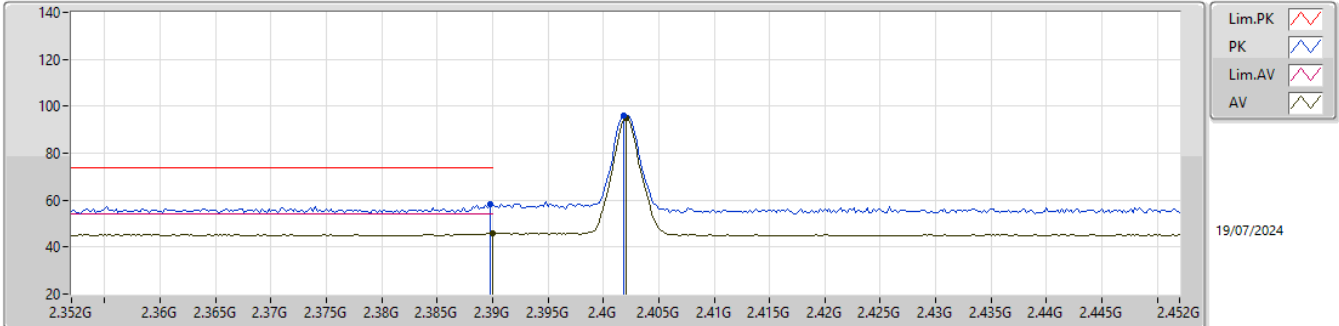


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.3648G	57.18	74.00	-16.82	24.73	3	Vertical	164	2.75	-	28.40	4.05	-			
AV	2.358G	45.40	54.00	-8.60	12.98	3	Vertical	164	2.75	-	28.38	4.04	-			
PK	2.4022G	93.01	Inf	-Inf	60.46	3	Vertical	164	2.75	-	28.48	4.07	-			
AV	2.402G	92.12	Inf	-Inf	59.57	3	Vertical	164	2.75	-	28.48	4.07	-			

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

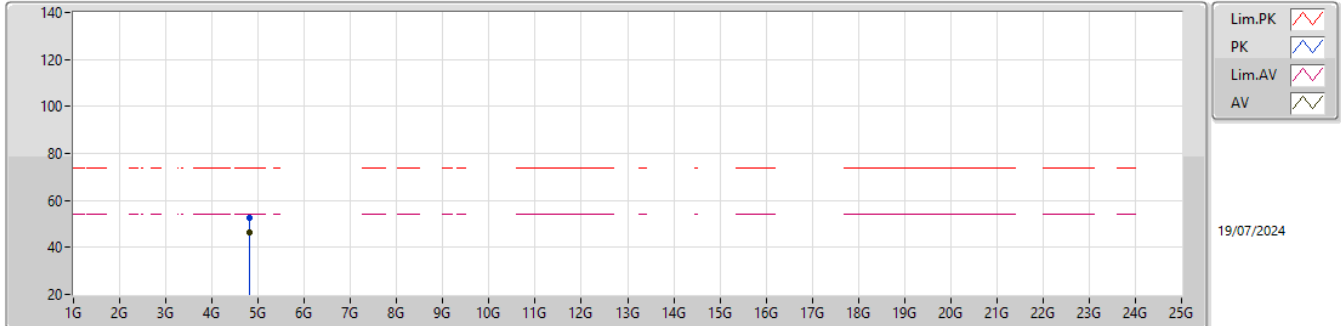


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.3898G	58.09	74.00	-15.91	25.53	3	Horizontal	139	2.78	-	28.50	4.06	-			
AV	2.39G	45.83	54.00	-8.17	13.27	3	Horizontal	139	2.78	-	28.50	4.06	-			
PK	2.4018G	96.07	Inf	-Inf	63.52	3	Horizontal	139	2.78	-	28.48	4.07	-			
AV	2.402G	95.17	Inf	-Inf	62.62	3	Horizontal	139	2.78	-	28.48	4.07	-			

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

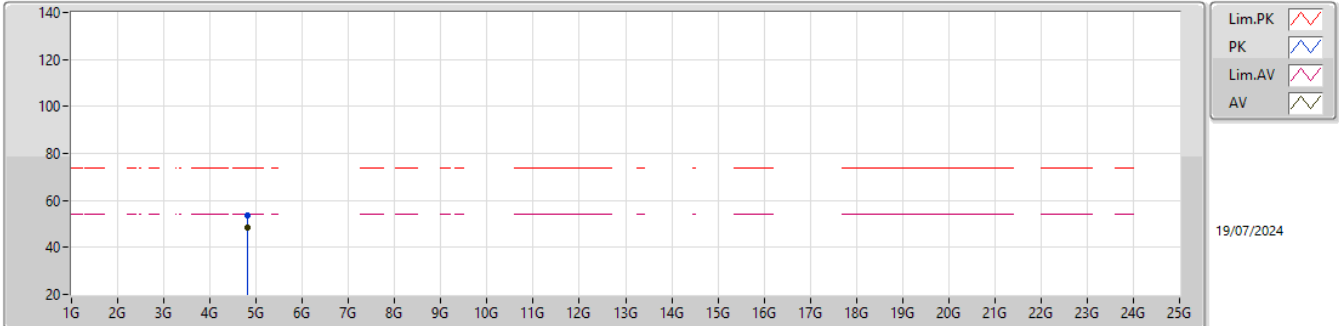


EUT_Z_1TX
Setting 4
02-D-J-8

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	4.80414G	52.77	74.00	-21.23	43.89	3	Vertical	197	3.00	-	33.11	6.77	31.00				
AV	4.80398G	46.61	54.00	-7.39	37.73	3	Vertical	197	3.00	-	33.11	6.77	31.00				

2.4-2.4835GHz_BT-BR(1Mbps)

2402MHz_TX

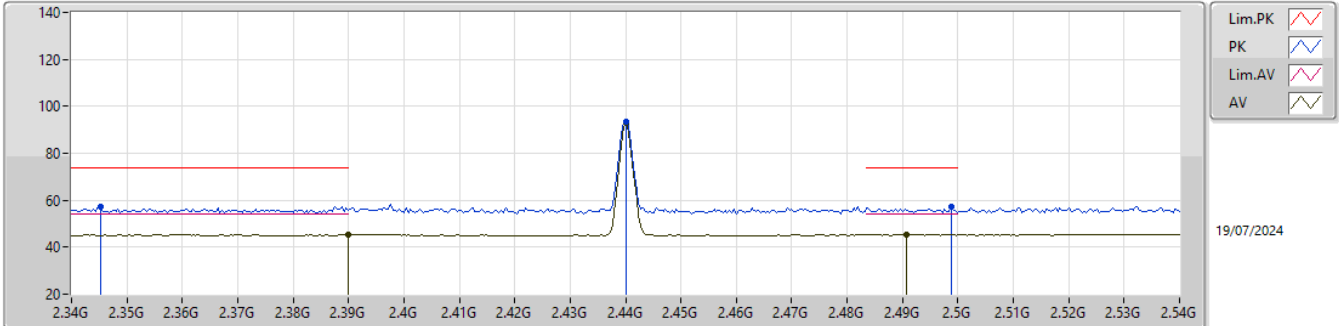


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.80424G	53.84	74.00	-20.16	44.96	3	Horizontal	136	1.03	-	33.11	6.77	31.00			
AV	4.804G	48.32	54.00	-5.68	39.44	3	Horizontal	136	1.03	-	33.11	6.77	31.00			

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

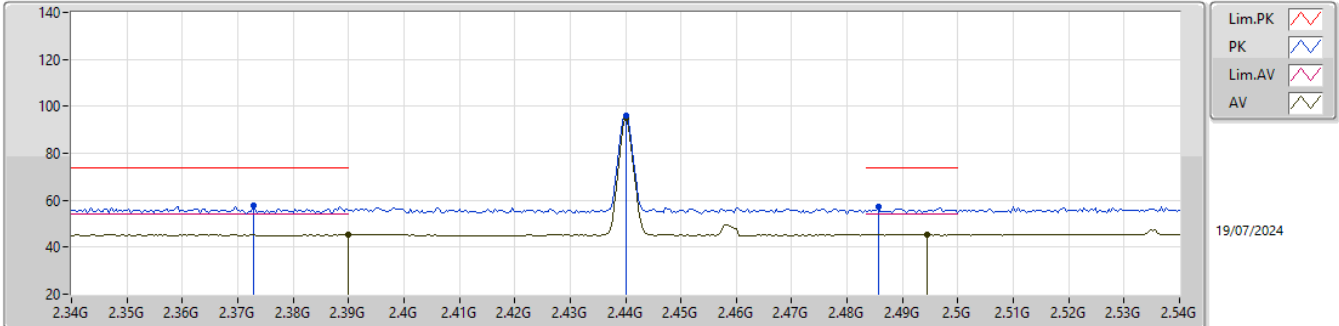


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.3452G	57.42	74.00	-16.58	25.09	3	Vertical	167	2.69	-	28.30	4.03	-			
AV	2.39G	45.39	54.00	-8.61	12.83	3	Vertical	167	2.69	-	28.50	4.06	-			
PK	2.44G	93.59	Inf	-Inf	60.99	3	Vertical	167	2.69	-	28.50	4.10	-			
AV	2.44G	92.71	Inf	-Inf	60.11	3	Vertical	167	2.69	-	28.50	4.10	-			
PK	2.4988G	57.22	74.00	-16.78	24.48	3	Vertical	167	2.69	-	28.60	4.14	-			
AV	2.4908G	45.47	54.00	-8.53	12.73	3	Vertical	167	2.69	-	28.60	4.14	-			

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

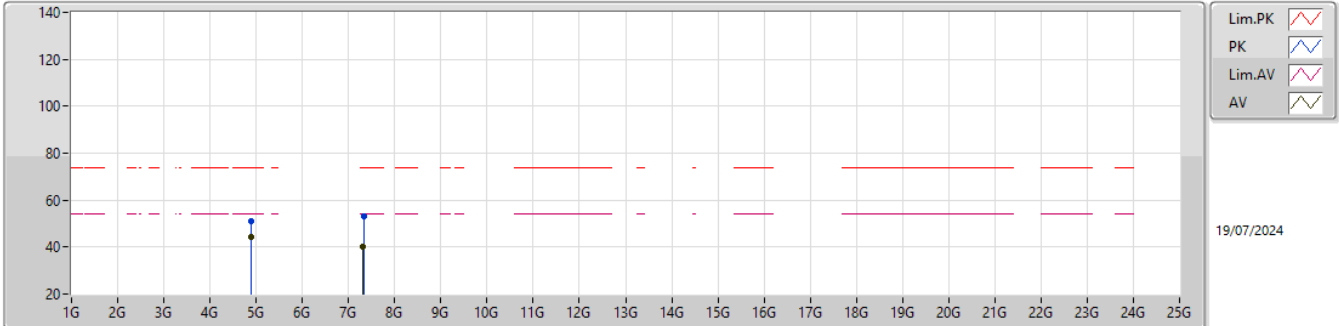


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.3728G	57.66	74.00	-16.34	25.21	3	Horizontal	88	1.18	-	28.40	4.05	-			
AV	2.39G	45.50	54.00	-8.50	12.94	3	Horizontal	88	1.18	-	28.50	4.06	-			
PK	2.44G	95.97	Inf	-Inf	63.37	3	Horizontal	88	1.18	-	28.50	4.10	-			
AV	2.44G	95.11	Inf	-Inf	62.51	3	Horizontal	88	1.18	-	28.50	4.10	-			
PK	2.4856G	57.11	74.00	-16.89	24.38	3	Horizontal	88	1.18	-	28.60	4.13	-			
AV	2.4944G	45.43	54.00	-8.57	12.69	3	Horizontal	88	1.18	-	28.60	4.14	-			

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

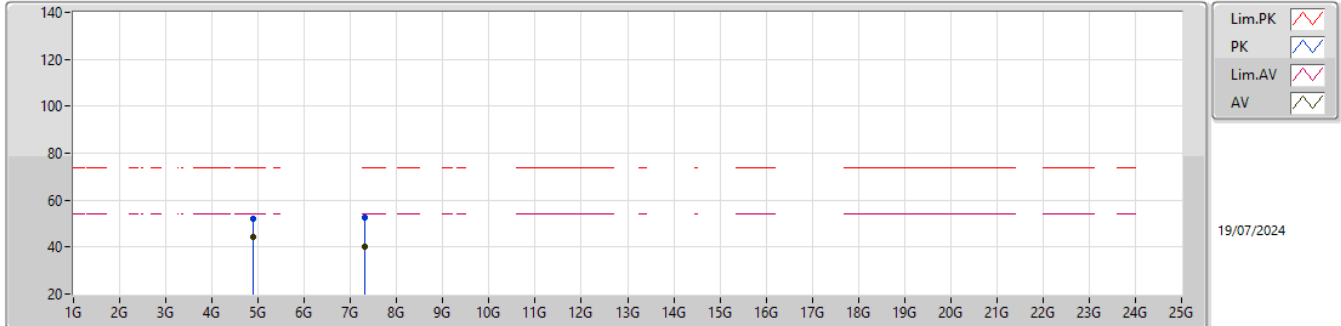


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.87978G	51.20	74.00	-22.80	42.13	3	Vertical	259	1.75	-	33.26	6.81	31.00			
AV	4.88002G	44.42	54.00	-9.58	35.35	3	Vertical	259	1.75	-	33.26	6.81	31.00			
PK	7.32326G	52.90	74.00	-21.10	38.47	3	Vertical	0	1.95	-	36.49	9.37	31.43			
AV	7.32118G	40.26	54.00	-13.74	25.84	3	Vertical	0	1.95	-	36.48	9.37	31.43			

2.4-2.4835GHz_BT-BR(1Mbps)

2440MHz_TX

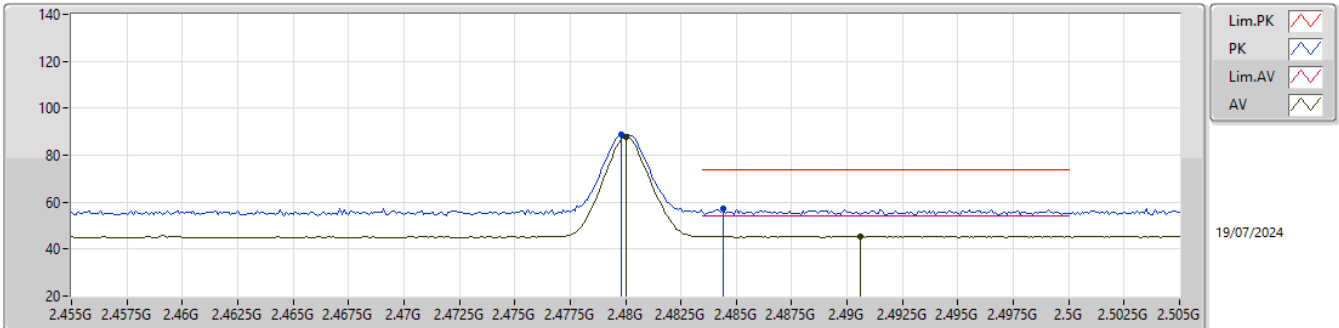


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.8796G	51.87	74.00	-22.13	42.80	3	Horizontal	137	3.00	-	33.26	6.81	31.00			
AV	4.87998G	44.34	54.00	-9.66	35.27	3	Horizontal	137	3.00	-	33.26	6.81	31.00			
PK	7.31528G	52.75	74.00	-21.25	38.35	3	Horizontal	290	1.14	-	36.46	9.37	31.43			
AV	7.3193G	40.09	54.00	-13.91	25.67	3	Horizontal	290	1.14	-	36.48	9.37	31.43			

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

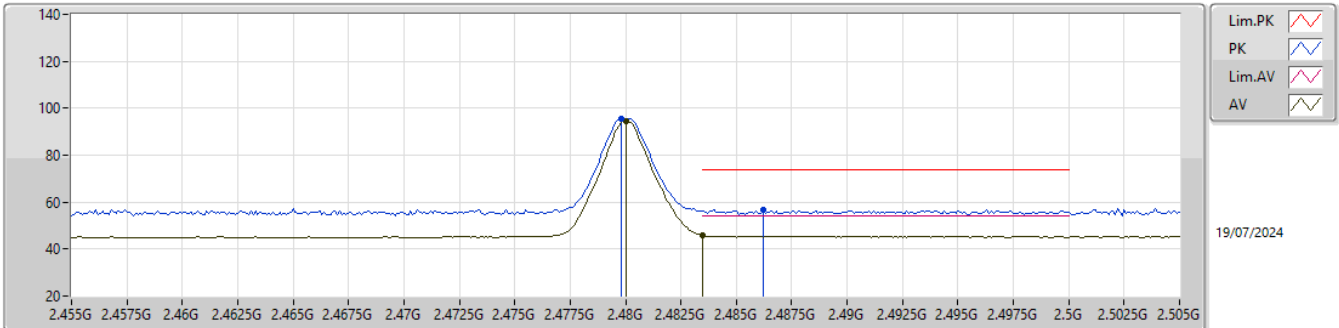


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.4798G	88.60	Inf	-Inf	55.87	3	Vertical	17	1.00	-	28.60	4.13	-			
AV	2.48G	87.59	Inf	-Inf	54.86	3	Vertical	17	1.00	-	28.60	4.13	-			
PK	2.4844G	57.27	74.00	-16.73	24.54	3	Vertical	17	1.00	-	28.60	4.13	-			
AV	2.4906G	45.46	54.00	-8.54	12.72	3	Vertical	17	1.00	-	28.60	4.14	-			

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

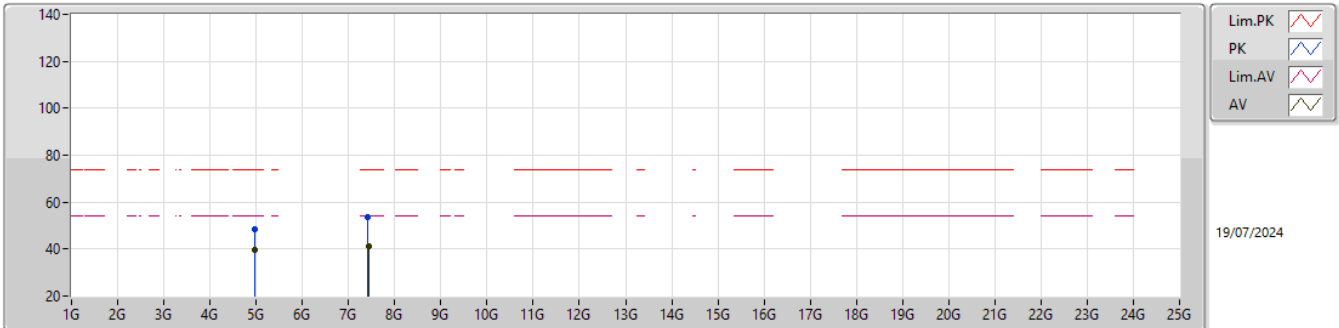


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.4798G	95.47	Inf	-Inf	62.74	3	Horizontal	135	2.92	-	28.60	4.13	-			
AV	2.48G	94.58	Inf	-Inf	61.85	3	Horizontal	135	2.92	-	28.60	4.13	-			
PK	2.4862G	56.74	74.00	-17.26	24.01	3	Horizontal	135	2.92	-	28.60	4.13	-			
AV	2.4835G	45.70	54.00	-8.30	12.97	3	Horizontal	135	2.92	-	28.60	4.13	-			

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

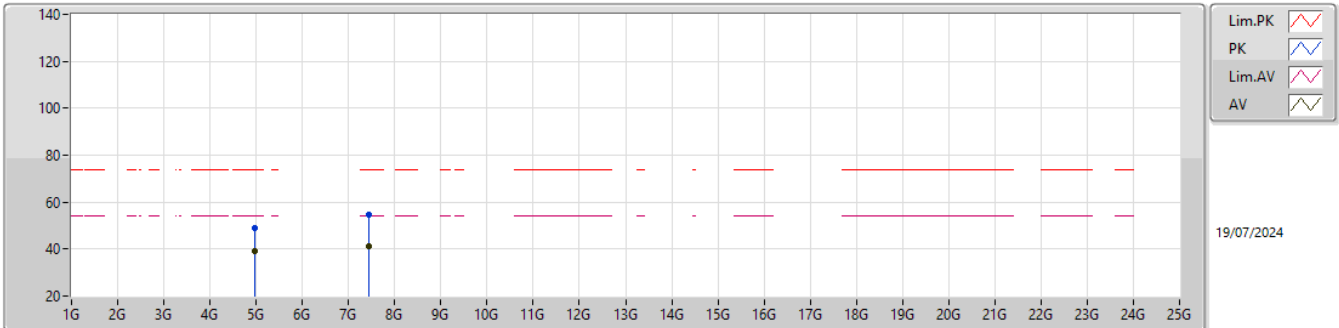


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.9602G	48.43	74.00	-25.57	39.18	3	Vertical	263	2.98	-	33.40	6.86	31.01			
AV	4.96G	39.51	54.00	-14.49	30.26	3	Vertical	263	2.98	-	33.40	6.86	31.01			
PK	7.4253G	53.81	74.00	-20.19	39.28	3	Vertical	139	1.44	-	36.60	9.36	31.43			
AV	7.4383G	40.96	54.00	-13.04	26.43	3	Vertical	139	1.44	-	36.60	9.36	31.43			

2.4-2.4835GHz_BT-BR(1Mbps)

2480MHz_TX

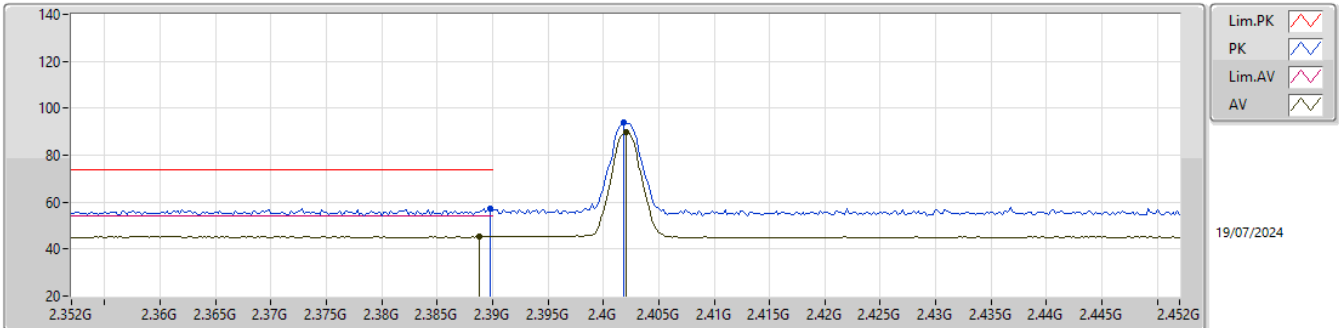


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.96G	49.14	74.00	-24.86	39.89	3	Horizontal	253	1.10	-	33.40	6.86	31.01			
AV	4.96G	39.38	54.00	-14.62	30.13	3	Horizontal	253	1.10	-	33.40	6.86	31.01			
PK	7.4351G	54.51	74.00	-19.49	39.98	3	Horizontal	277	1.70	-	36.60	9.36	31.43			
AV	7.4293G	41.19	54.00	-12.81	26.66	3	Horizontal	277	1.70	-	36.60	9.36	31.43			

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

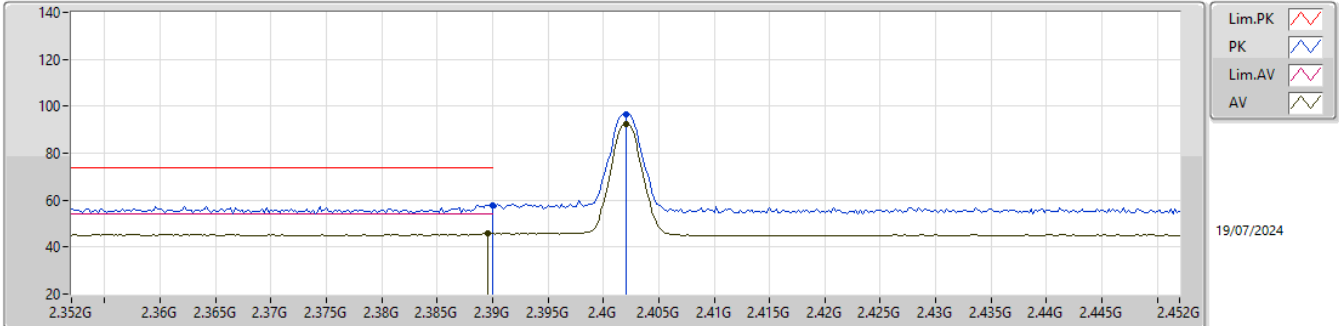


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.3898G	57.28	74.00	-16.72	24.72	3	Vertical	166	2.77	-	28.50	4.06	-				
AV	2.3888G	45.43	54.00	-8.57	12.88	3	Vertical	166	2.77	-	28.49	4.06	-				
PK	2.4018G	93.76	Inf	-Inf	61.21	3	Vertical	166	2.77	-	28.48	4.07	-				
AV	2.402G	89.70	Inf	-Inf	57.15	3	Vertical	166	2.77	-	28.48	4.07	-				

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

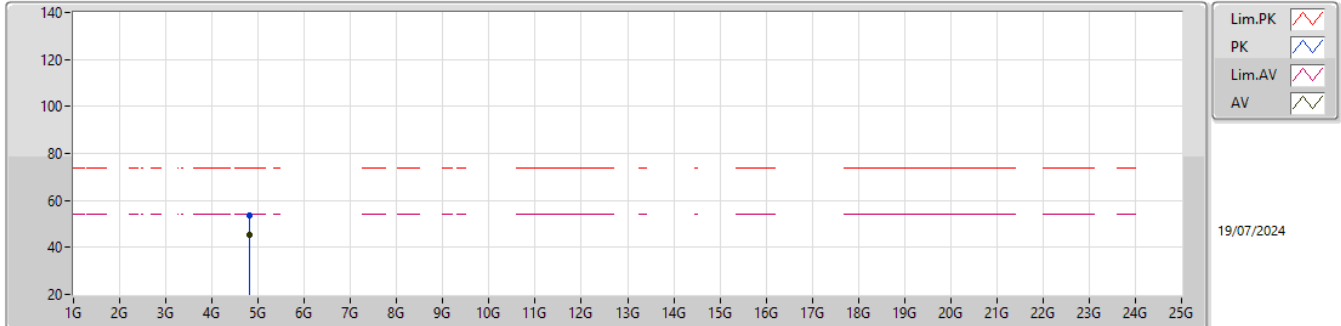


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.39G	57.88	74.00	-16.12	25.32	3	Horizontal	138	2.79	-	28.50	4.06	-				
AV	2.3896G	45.78	54.00	-8.22	13.22	3	Horizontal	138	2.79	-	28.50	4.06	-				
PK	2.402G	96.66	Inf	-Inf	64.11	3	Horizontal	138	2.79	-	28.48	4.07	-				
AV	2.402G	92.58	Inf	-Inf	60.03	3	Horizontal	138	2.79	-	28.48	4.07	-				

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

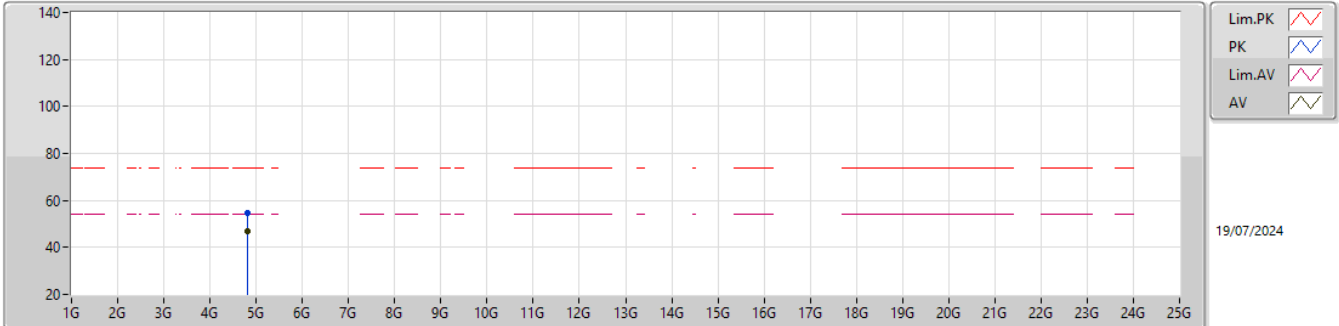


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.804G	53.85	74.00	-20.15	44.97	3	Vertical	197	3.00	-	33.11	6.77	31.00			
AV	4.80396G	45.37	54.00	-8.63	36.49	3	Vertical	197	3.00	-	33.11	6.77	31.00			

2.4-2.4835GHz_BT-EDR(3Mbps)

2402MHz_TX

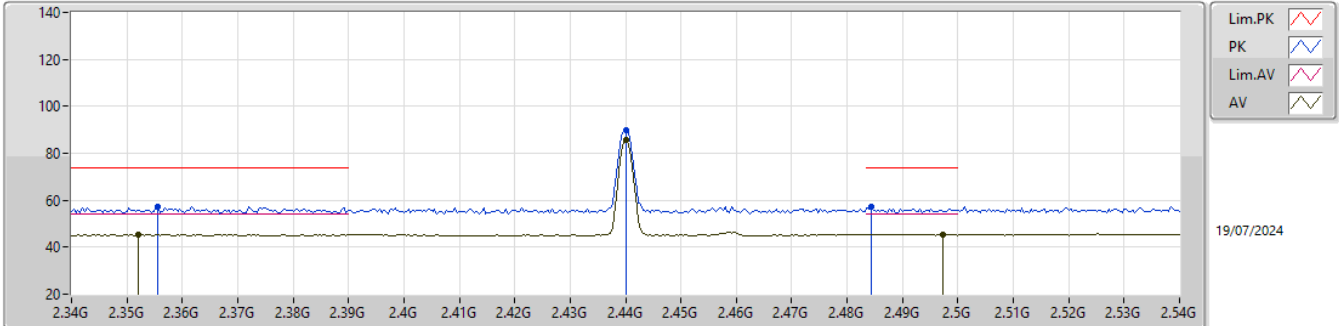


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.80414G	54.56	74.00	-19.44	45.68	3	Horizontal	138	1.05	-	33.11	6.77	31.00			
AV	4.80408G	47.15	54.00	-6.85	38.27	3	Horizontal	138	1.05	-	33.11	6.77	31.00			

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

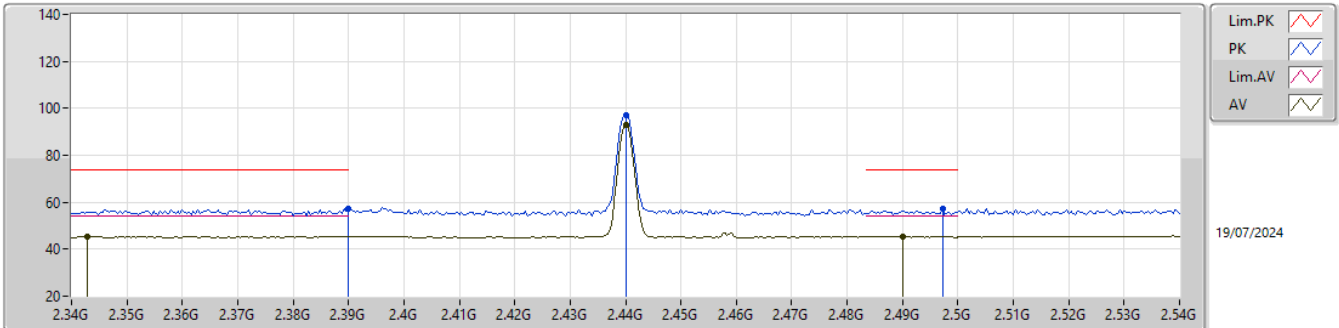


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.3556G	57.10	74.00	-16.90	24.70	3	Vertical	65	1.11	-	28.36	4.04	-			
AV	2.352G	45.33	54.00	-8.67	12.97	3	Vertical	65	1.11	-	28.32	4.04	-			
PK	2.44G	89.79	Inf	-Inf	57.19	3	Vertical	65	1.11	-	28.50	4.10	-			
AV	2.44G	85.60	Inf	-Inf	53.00	3	Vertical	65	1.11	-	28.50	4.10	-			
PK	2.4844G	57.03	74.00	-16.97	24.30	3	Vertical	65	1.11	-	28.60	4.13	-			
AV	2.4972G	45.53	54.00	-8.47	12.79	3	Vertical	65	1.11	-	28.60	4.14	-			

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

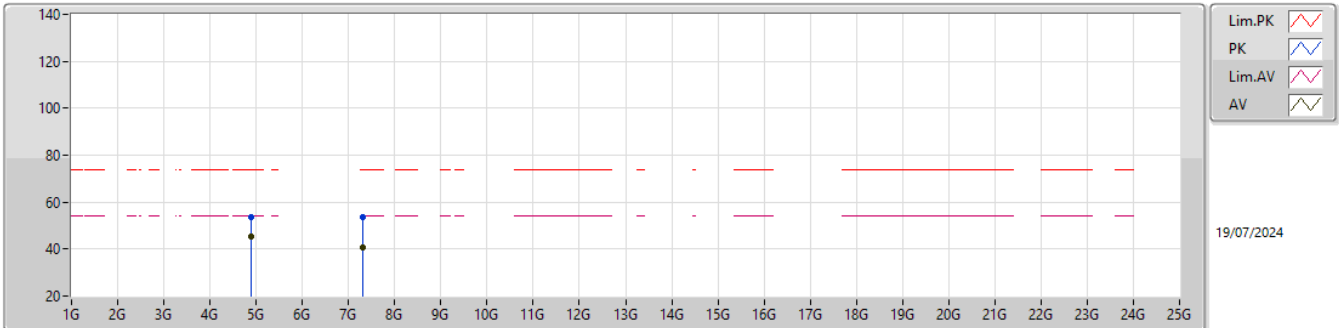


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	2.39G	57.09	74.00	-16.91	24.53	3	Horizontal	90	1.19	-	28.50	4.06	-			
AV	2.3428G	45.44	54.00	-8.56	13.11	3	Horizontal	90	1.19	-	28.30	4.03	-			
PK	2.44G	97.27	Inf	-Inf	64.67	3	Horizontal	90	1.19	-	28.50	4.10	-			
AV	2.44G	93.06	Inf	-Inf	60.46	3	Horizontal	90	1.19	-	28.50	4.10	-			
PK	2.4972G	57.39	74.00	-16.61	24.65	3	Horizontal	90	1.19	-	28.60	4.14	-			
AV	2.49G	45.31	54.00	-8.69	12.57	3	Horizontal	90	1.19	-	28.60	4.14	-			

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

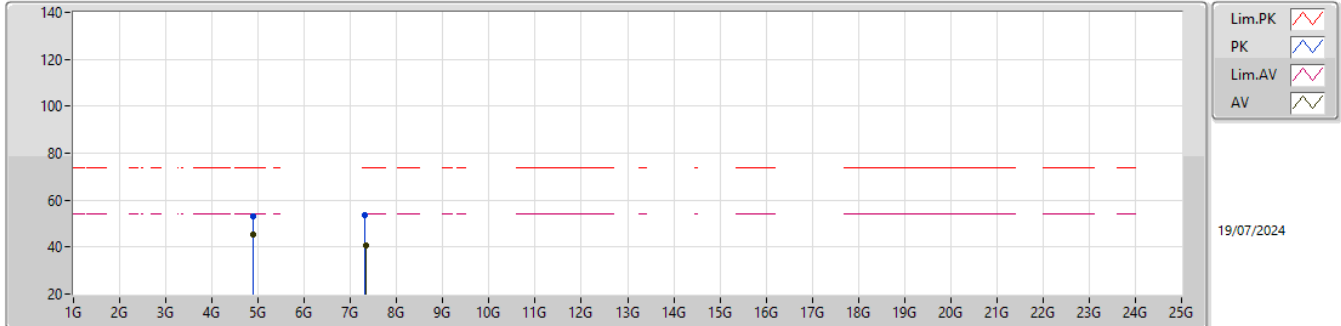


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.87984G	53.62	74.00	-20.38	44.55	3	Vertical	88	1.42	-	33.26	6.81	31.00			
AV	4.87996G	45.35	54.00	-8.65	36.28	3	Vertical	88	1.42	-	33.26	6.81	31.00			
PK	7.31848G	53.63	74.00	-20.37	39.22	3	Vertical	202	1.65	-	36.47	9.37	31.43			
AV	7.32172G	40.44	54.00	-13.56	26.01	3	Vertical	202	1.65	-	36.49	9.37	31.43			

2.4-2.4835GHz_BT-EDR(3Mbps)

2440MHz_TX

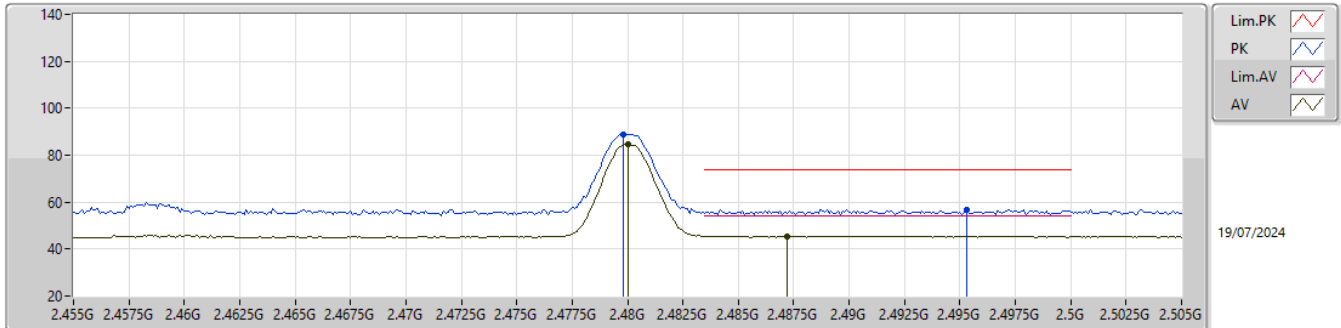


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.88016G	53.36	74.00	-20.64	44.29	3	Horizontal	329	3.00	-	33.26	6.81	31.00				
AV	4.88004G	45.42	54.00	-8.58	36.35	3	Horizontal	329	3.00	-	33.26	6.81	31.00				
PK	7.31728G	53.44	74.00	-20.56	39.03	3	Horizontal	122	1.90	-	36.47	9.37	31.43				
AV	7.32836G	40.56	54.00	-13.44	26.11	3	Horizontal	122	1.90	-	36.51	9.37	31.43				

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

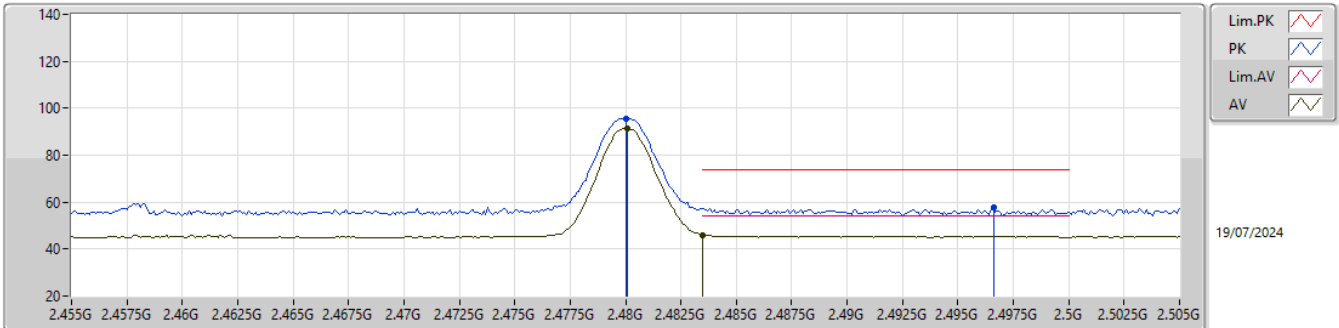


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.4798G	88.81	Inf	-Inf	56.08	3	Vertical	66	1.26	-	28.60	4.13	-				
AV	2.48G	84.54	Inf	-Inf	51.81	3	Vertical	66	1.26	-	28.60	4.13	-				
PK	2.4953G	56.97	74.00	-17.03	24.23	3	Vertical	66	1.26	-	28.60	4.14	-				
AV	2.4872G	45.40	54.00	-8.60	12.66	3	Vertical	66	1.26	-	28.60	4.14	-				

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

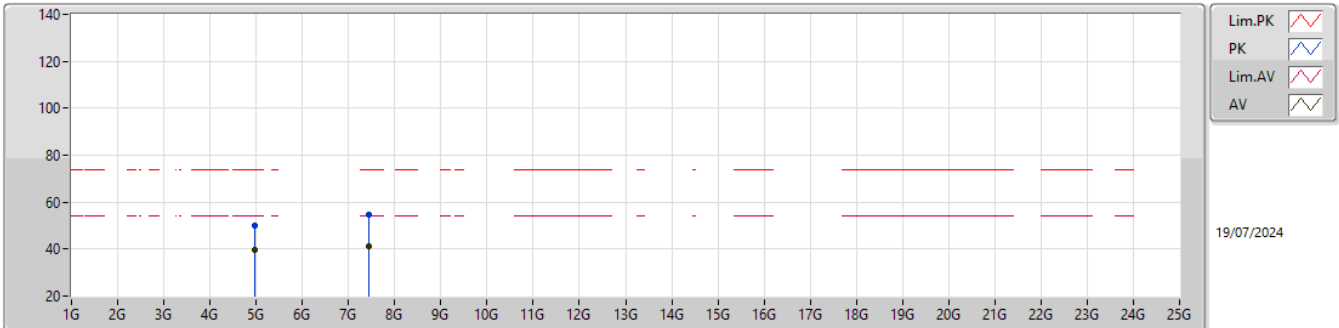


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	2.48G	95.48	Inf	-Inf	62.75	3	Horizontal	91	1.14	-	28.60	4.13	-				
AV	2.4801G	91.26	Inf	-Inf	58.53	3	Horizontal	91	1.14	-	28.60	4.13	-				
PK	2.4966G	57.57	74.00	-16.43	24.83	3	Horizontal	91	1.14	-	28.60	4.14	-				
AV	2.4835G	45.82	54.00	-8.18	13.09	3	Horizontal	91	1.14	-	28.60	4.13	-				

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX

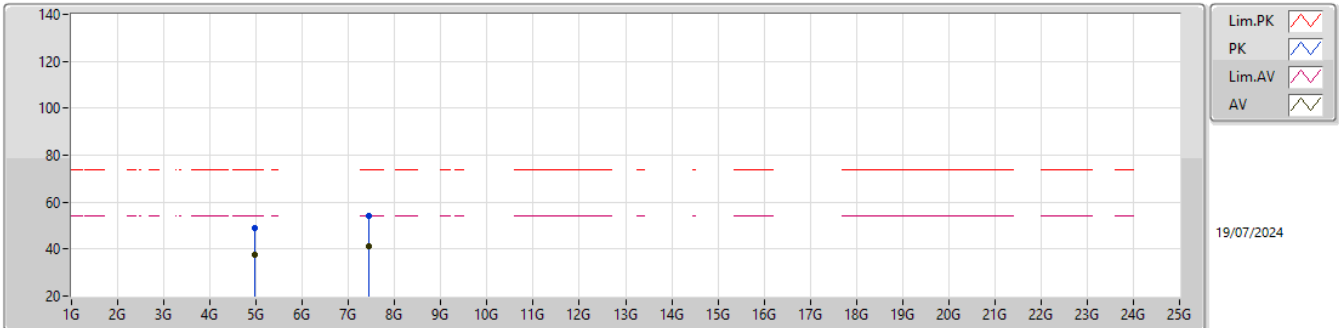


EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	4.9602G	49.91	74.00	-24.09	40.66	3	Vertical	256	1.68	-	33.40	6.86	31.01				
AV	4.96012G	39.45	54.00	-14.55	30.20	3	Vertical	256	1.68	-	33.40	6.86	31.01				
PK	7.43452G	54.54	74.00	-19.46	40.01	3	Vertical	74	2.93	-	36.60	9.36	31.43				
AV	7.44036G	41.25	54.00	-12.75	26.72	3	Vertical	74	2.93	-	36.60	9.36	31.43				

2.4-2.4835GHz_BT-EDR(3Mbps)

2480MHz_TX



EUT_Z_1TX
Setting 4
02-D-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	4.96044G	49.16	74.00	-24.84	39.91	3	Horizontal	315	2.38	-	33.40	6.86	31.01			
AV	4.96024G	37.50	54.00	-16.50	28.25	3	Horizontal	315	2.38	-	33.40	6.86	31.01			
PK	7.4326G	54.38	74.00	-19.62	39.85	3	Horizontal	70	2.01	-	36.60	9.36	31.43			
AV	7.43184G	41.37	54.00	-12.63	26.84	3	Horizontal	70	2.01	-	36.60	9.36	31.43			