TEST REPORT

Eurofins KCTL Co.,Ltd. 28, Mosan-gil, Jeongnam-myeon, Hwasung-si, Gyeonggi-do, 18516, Korea TEL: 82 31 286 5881 FAX: 82 31 8059 1154 www.kctl.co.kr	Report No.: KR25-HEF0007 Page (1) of (27)	eurofins | KCTL

1. Client

- Name : Iritech, Inc.
- Address : Suite 801, Tower A, Daesung D-Polis Bldg, 606, Seobusaet-gil, Geumcheon-gu, Seoul 08504, Republic of Korea
- Date of Receipt : 2025-03-10

2. Use of Report : -

3. Name of Product / Model : Iris Scanner / IriAegis-BK

4. Manufacturer / Country of Origin : Iritech, Inc. / Vietnam, China

5. Date of Test : 2025-03-12 to 2025-03-13

6. Location of Test : ■ Permanent Testing Lab □ On Site Testing
(Address: 28 Mosan-gil, Jeongnam-myeon, Hwaseong-si, Gyeonggi-do, Korea)

7. Test method used : FCC Part 15 Subpart B, Class A
ANSI C63.4-2017

8. Test Result : Refer to the test result in the test report

Affirmation	Tested by Name : Joochan Park (Signature)	Technical Manager Name : Byungyeon Kim (Signature)

2025-03-17

Eurofins KCTL Co.,Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2025-03-17	Originally issued	-

General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ **Statement not required by the standard or client used for type testing**

Contents

1. Applicant information

Applicant:	Iritech, Inc.
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Contact name:	Yongchul Youn
Manufacturer:	Iritech, Inc.
Address:	Suite 801, Tower A, Daesung D-Polis Bldg, 606, Seobusaet-gil, Geumcheon-gu, Seoul 08504, Republic of Korea
Telephone:	+82-2-872-3812
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E-mail:	ycyoun@iritech.com
Contact name:	Yongchul Youn

2. Laboratory information

Address

Eurofins KCTL Co.,Ltd. (Hwaseong Lab.)

28, Mosan-gil, Jeongnam-myeon, Hwasung-si, Gyeonggi-do, 18516, Korea

Telephone Number: 82 31 286 5881

Facsimile Number: 82 31 8059 1154

FCC Site Designation No: KR0040

KOLAS NO.: KT231

VCCI NO.: 1980

SITE MAP

3. Test system configuration

3.1 Operation environment

	Temperature	Humidity	Pressure
Shielded Room (CE)	22.1 °C	38.9 % R.H.	-
Chamber 10 m (RE)	21.7 °C	40.0 % R.H.	-
Chamber 3 m (RE)	21.4 °C	39.6 % R.H.	-

Test site

These testing items were performed following locations;

Test item	Test site
Conducted Emission	Shielded Room
Radiated Emission (Below 1 GHz)	10 m Chamber
Radiated Emission (Above 1 GHz)	3 m Chamber

3.2 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC.
The factors contributing to uncertainties are test receiver, cable loss, antenna factor calibration, Antenna directivity, antenna factor variation with height, antenna phase center variation, antenna frequency interpolation, measurement distance variation, site imperfection, mismatch, and system repeatability. Based on CISPR 16-4-2, the measurement uncertainty level with a 95 % confidence level was applied.

Conducted Emission measurement_AMN (Confidence level about 95 %, k = 2)		
Shielded Room	150 kHz ~ 30 MHz : 2.9 dB	
Radiated Emission measurement (Confidence level about 95 %, k = 2)		
10 m Chamber	30 MHz ~ 1 GHz	3 m : 5.0 dB
		10 m : 5.0 dB
3 m Chamber	1 GHz ~ 2 GHz	4.5 dB

3.3 Measurement Program

These test items were performed by software programs;

Test item	Measurement Program	Used
Conducted Emission	TEPTO-DV/AM V 4.1.0083 (tsj corporation)	☒
Radiated Emission(Below 1 GHz)	TEPTO-DV/RE V 3.1. 0047 (tsj corporation)	☒
Radiated Emission(Above 1 GHz)	TEPTO-DV/RE V 3.1. 0048 (tsj corporation)	☒

4. Description of EUT

4.1 General information

Capture Mode	Auto capture (Both Iris Capture Simultaneously)
Image Format	ISO Standard 19794-6 (2005 & 2011), (640 x 480 Pixels, 8bit Grayscale)
Capture Time	<3 seconds
Iris Image Resolution	VGA (640 x 480)
Dimensions	190 x 162 x 70 mm (7.48 x 6.38 x 2.76 in)
Power	Single USB Bus Powered (DC +5V±5%) (Power Consumption: <2.5W)
Environmental	-10 °C to + 55 °C (Operating); 0% to 93% RH
Illumination	Infrared LED (2 x 810nm LED)
Certificates (TBD)	Eye safety standard Exempt Group per IEC 62471:2006-07, RoHS FCC part15B/IEC:CISPR 22 Class A , IP65, IEC/EN 61000-4 3:2006 A2:2010
Compliance	UIDAI, MOSIP
Connectivity	USB 2.0
Host OS	Windows, , Linux, Android (※ Please specify before ordering)

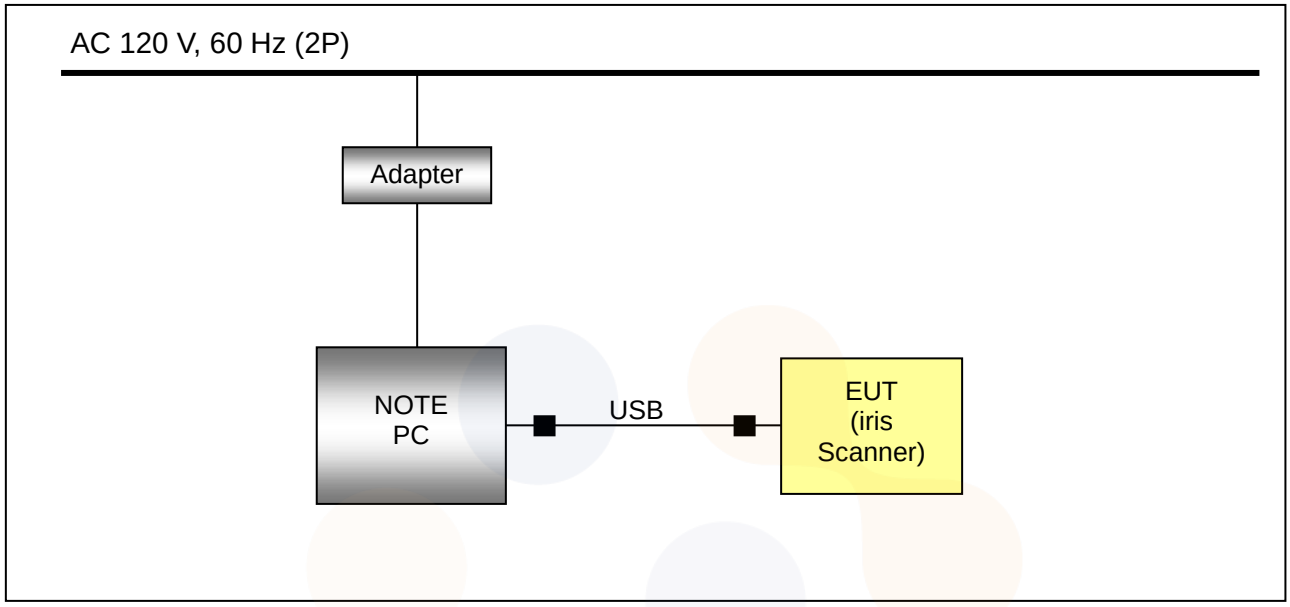
4.2 Product description

Type of product	Iris Scanner
Model name (Basic)	IriAegis-BK
Model name (Variant)	-
Difference	-
Testing voltage	AC 120 V, 60 Hz
Input rating	DC 5 V (USB)
Internal clock frequency	480 MHz

4.3 Auxiliary equipments

Type	Model / Part #	S/N	Manufacturer
NOTE PC	NT551XED	-	SAMSUNG
Adapter	EP-TA845 001	-	SAMSUNG

4.4 Test configuration



	Start		End		Cable	
	Name	I/O port	Name	I/O port	Length (m)	Spec.
1	**Iris Scanner (EUT)**	USB	NOTE PC	USB	1.6	Shield (Core)
2	**NOTE PC**	Power	Adapter	-	1.0	Shield

4.5 Operating conditions

The EUT was configured as normal intended use.

Test mode	Normal operating
1	After powering on the EUT, it was tested while monitoring the normal operation status of the EUT using priviate program(IriTech Iris CaptureUL) on NOTE PC.

5. Summary of test results

In the above configuration tested, The EUT complied with the requirement of the specification

5.1 Summary of EMI emission test results

FCC Part 15 Subpart B (Class A)

ANSI C63.4 – 2017

Applied	Test items	Test method	Result
☒	Conducted Emission	ANSI C63.4 – 2017	Pass
☒	Radiated Emission	ANSI C63.4 – 2017	Pass

6. Test results

6.1 Conducted Emissions

Testing voltage	AC 120 V, 60 Hz		
Test facility	Shielded Room		
Date	2025-03-13		
Temperature (°C)	22.1 °C	Humidity (% R.H.)	38.9 % R.H.
Remarks	Pass		

6.1.1 Limits of conducted emissions measurement

☒ AC main

Frequency [MHz]	Class A (dB(μV))		Class B (dB(μV))	
	Quasi-peak	Average	Quasi-peak	Average
0.15 ~ 0.5	79	66	66 ~ 56[1)]	56 ~ 46[1)]
0.5 ~ 5	73	60	56	46
5 ~ 30	73	60	60	50

[1)] The limit decreases linearly with the logarithm of frequency

6.1.2 Measurement procedure

The measurements were performed in a shielded room. EUT was setup as shown in photograph and placed on a non-metallic table height of 0.8 m above the reference ground plane. The rear of table was located 0.4 m to the vertical conducted plane. EUT was power through the LISN, which was bonded to the ground plane. The LISN power was filtered. Each EUT power lead, except ground (safety) lead was individually connected through a LISN to input power source. EUT signal cables that hung closer than 0.4 m to the Horizontal metal ground 0.3 m ~ 0.4 m long. The power cord was bundles in the center. All peripheral equipment was powered from a sub LISN. The LISN and ISN were positioned 0.8 m from the EUT. Peak and Average detection were used in preliminary testing and Quasi-peak and Average detections were used at final measurement.

6.1.3 Used equipments

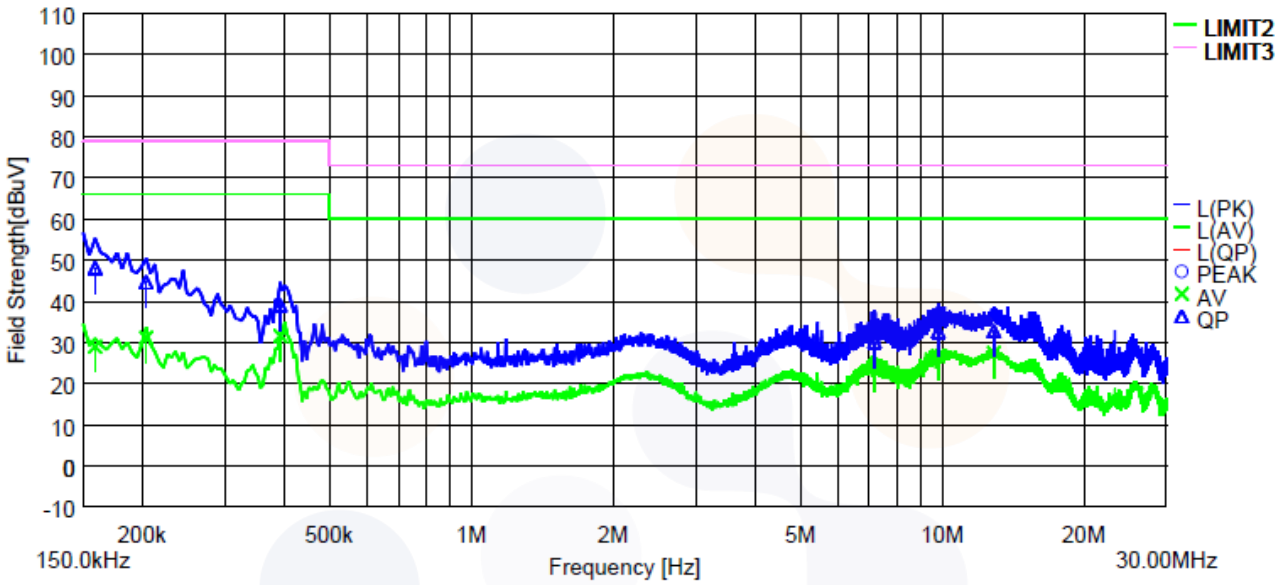
Equipment	Model	Makers	Serial No.	Next Cal. Date	Used
Two Line V-Network	ENV216	Rohde & Schwarz	101371	2025-12-23	☒
EMI TEST RECEIVER	ESCI 3	Rohde & Schwarz	100710	2025-08-25	☒

6.1.4 Photographs of test setup

AC Main

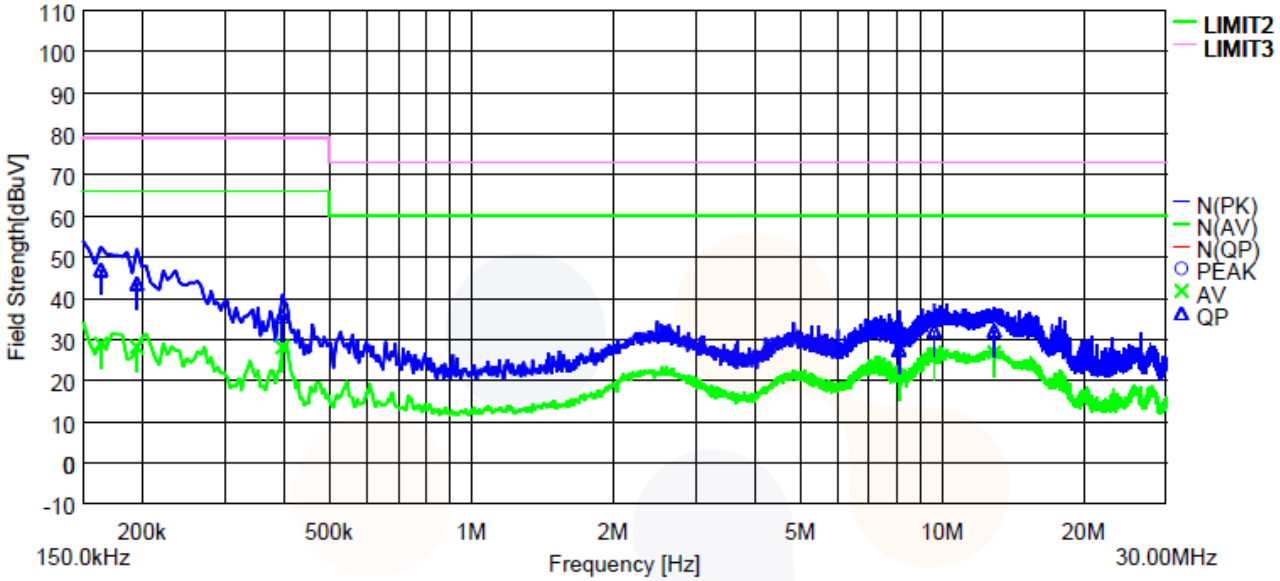
6.1.5 Conducted emissions measurement result

AC Main



Freq.	Mode	Level			Factor			PEAK	CAV	QP	Limit			Margin		
		PEAK	CAV	QP	LISN	Loss	Gain				PEAK	CAV	QP	PEAK	CAV	QP
[MHz]		[dBuV]			[dB]			[dBuV]			[dBuV]			[dB]		
0.15900	L	---	18.95	38.02	10.01	0.02	0.00	---	28.98	48.05	---	66.00	79.00	---	37.02	30.95
0.20400	L	---	21.06	34.57	10.03	0.02	0.00	---	31.11	44.62	---	66.00	79.00	---	34.89	34.38
0.39300	L	---	21.73	29.06	9.85	0.03	0.00	---	31.62	38.94	---	66.00	79.00	---	34.38	40.06
7.18350	L	---	13.90	19.88	10.00	0.18	0.00	---	24.09	30.06	---	60.00	73.00	---	35.91	42.94
9.81600	L	---	16.40	22.20	10.12	0.24	0.00	---	26.76	32.56	---	60.00	73.00	---	33.24	40.44
12.88050	L	---	16.88	22.18	10.29	0.29	0.00	---	27.46	32.75	---	60.00	73.00	---	32.54	40.25

[L]



Freq.	Mode	Level			Factor			PEAK	CAV	QP	Limit			Margin		
		PEAK	CAV	QP	LISN	Loss	Gain				PEAK	CAV	QP	PEAK	CAV	QP
[MHz]		[dBuV]			[dB]			[dBuV]			[dBuV]			[dB]		
0.16350	N	---	18.77	36.83	10.14	0.02	0.00	---	28.94	47.00	---	66.00	79.00	---	37.06	32.00
0.19500	N	---	18.02	33.40	10.12	0.02	0.00	---	28.16	43.55	---	66.00	79.00	---	37.84	35.45
0.39750	N	---	18.16	25.70	9.89	0.03	0.00	---	28.08	35.62	---	66.00	79.00	---	37.92	43.38
8.11050	N	---	10.85	17.43	10.08	0.20	0.00	---	21.13	27.71	---	60.00	73.00	---	38.87	45.29
9.63150	N	---	15.87	21.70	10.15	0.23	0.00	---	26.25	32.07	---	60.00	73.00	---	33.75	40.93
12.91650	N	---	16.27	21.51	10.32	0.29	0.00	---	26.89	32.13	---	60.00	73.00	---	33.11	40.87

[N]

6.2 Radiated Emission

Testing voltage	AC 120 V, 60 Hz		
Test facility	10 m Chamber / 3 m Chamber		
Test distance	10 m / 3 m		
Date	2025-03-12		
Temperature (°C)	21.7 °C / 21.4 °C	Humidity (% R.H.)	40.0 % R.H. / 39.6 % R.H.
Remarks	Pass		

6.2.1 Limits of radiated emission measurement

☒ Limits below 1 ㎓

Frequency [㎒]	Class A (dB(㎶/m)) @ 10 m	Class B (dB(㎶/m)) @ 3 m
30-88	39	40
88-216	43.5	43.5
216-960	46.4	46
Above 960	49.5	54

☒ Limits above 1 ㎓

Frequency [㎓]	Class A @ 3 m		Class B @ 3 m	
	Average limit (dB(㎶/m))	Peak limit (dB(㎶/m))	Average limit (dB(㎶/m))	Peak limit (dB(㎶/m))
1 ~	60	80	54	74
Note - The lower limit applies at the transition frequency.				

6.2.2 Measurement procedure

The test was done at a 10 m Chamber with a quasi-peak detector.
EUT was placed on a non-metallic table height of 0.8 m above the reference ground plane.
Cables were folded back and forth forming a bundle 0.3 m to 0.4 m long and were hanged at a 0.4 m height to the ground plane. Cables connected to EUT were fixed to cause maximum emission.
Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.
The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

6.2.3 Used equipments

Equipment	Model no.	Makers	Serial no.	Next Cal. Date	Used
Test Receiver	ESCI	Rohde & Schwarz	100561	2025-09-11	☒
AMPLIFIER	310	SONAMA INSTRUMENT	185938	2025-12-24	☒
Bilog Antenna	CBL6112D	Teseq (SCHAFFNER)	55542	2026-12-30	☒
6 dB Fixed Attenuator	SA18N5W	Fairview Microwave	NONE	2026-12-30	☒
PREAMPLIFIER	87405C	KEYSIGHT	MY55380218	2025-06-13	☒
HORN ANTENNA	SAS-571	A.H. SYSTEMS	500	2025-09-20	☒
SIGNAL ANALYZER	FSV	Rohde & Schwarz	101244	2026-02-05	☒

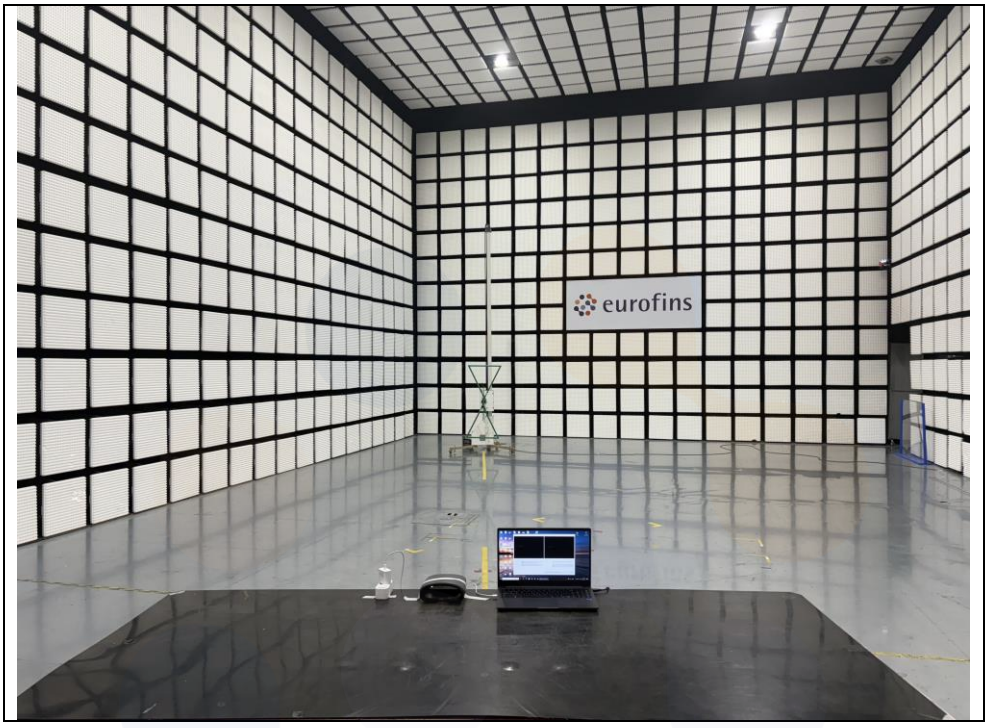
6.2.4 Sample calculation

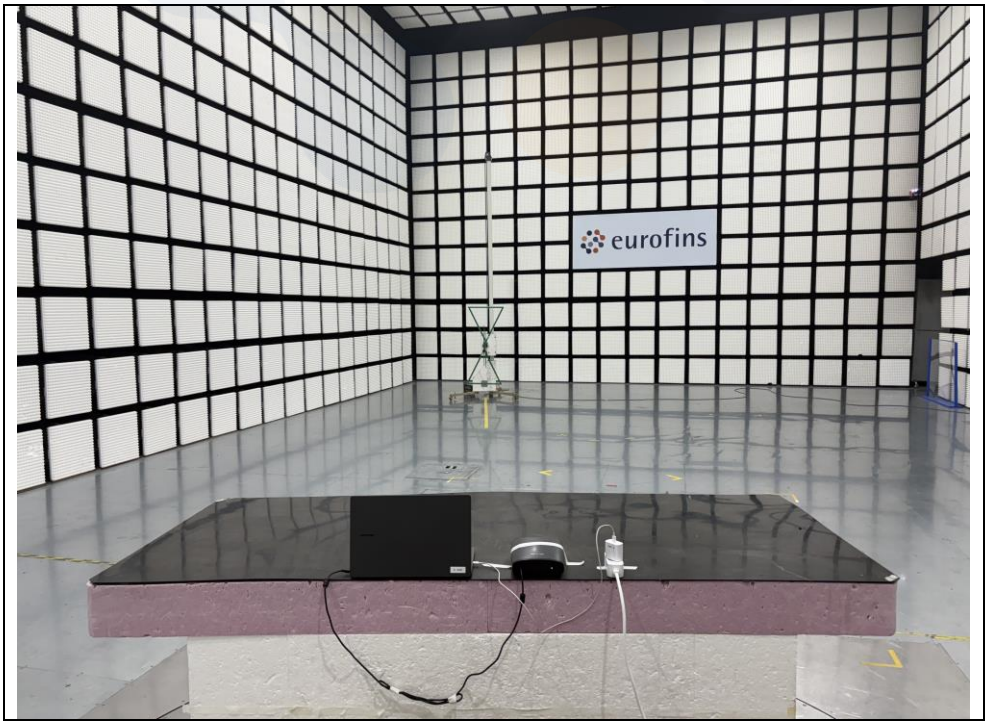
The field strength is calculated adding the antenna Factor, cable loss and, Antenna pad adding, subtracting the amplifier gain from the measured reading.
The sample calculation is as follow:

Result QP[dB(μV/m)] = Reading QP[dB(μV)] + C.Fac [dB/m]
Result QP : The final measure
Reading QP : Instrument readings
C.Fac : ANT FACTOR [dB/m] + LOSS [dB] - GAIN [dB]
ANT FACTOR: Antenna Factor
LOSS: Cable Loss
GAIN: Amplifier Gain

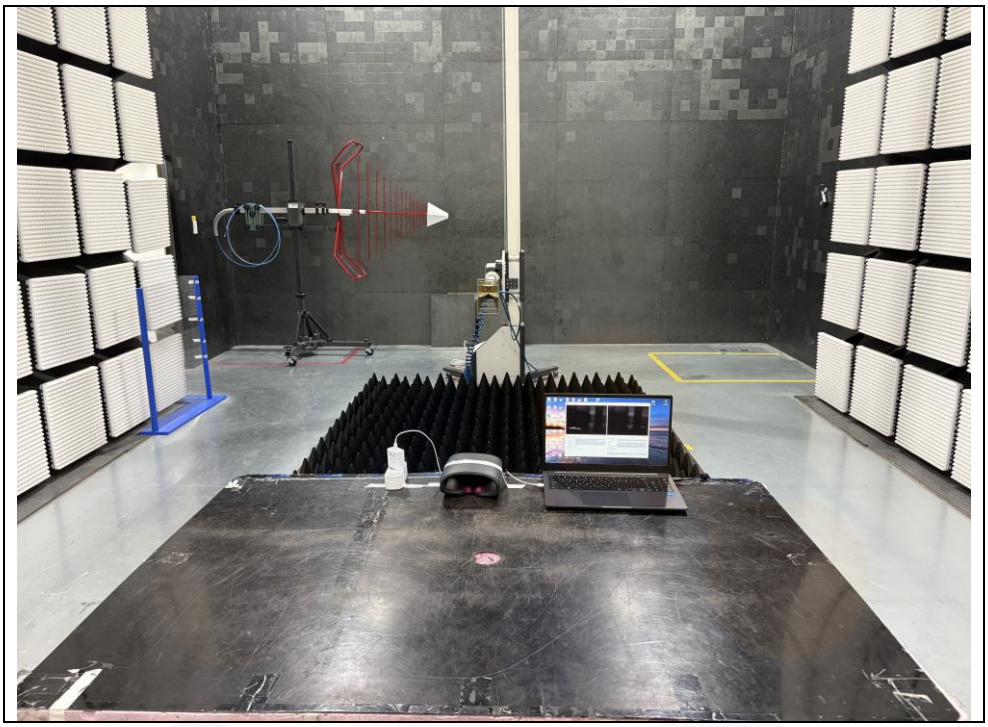
6.2.5 Photographs of test setup

30 ㎒ - 1 ㎓





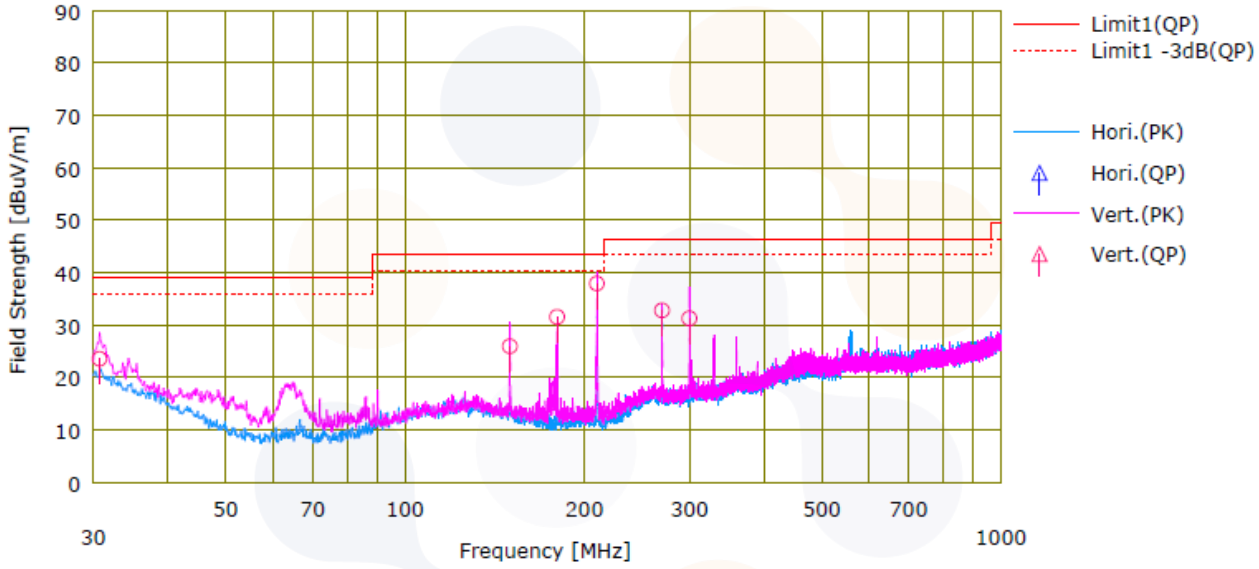
1 ㎓ - 2 ㎓



6.2.6 Radiated emission measurement result

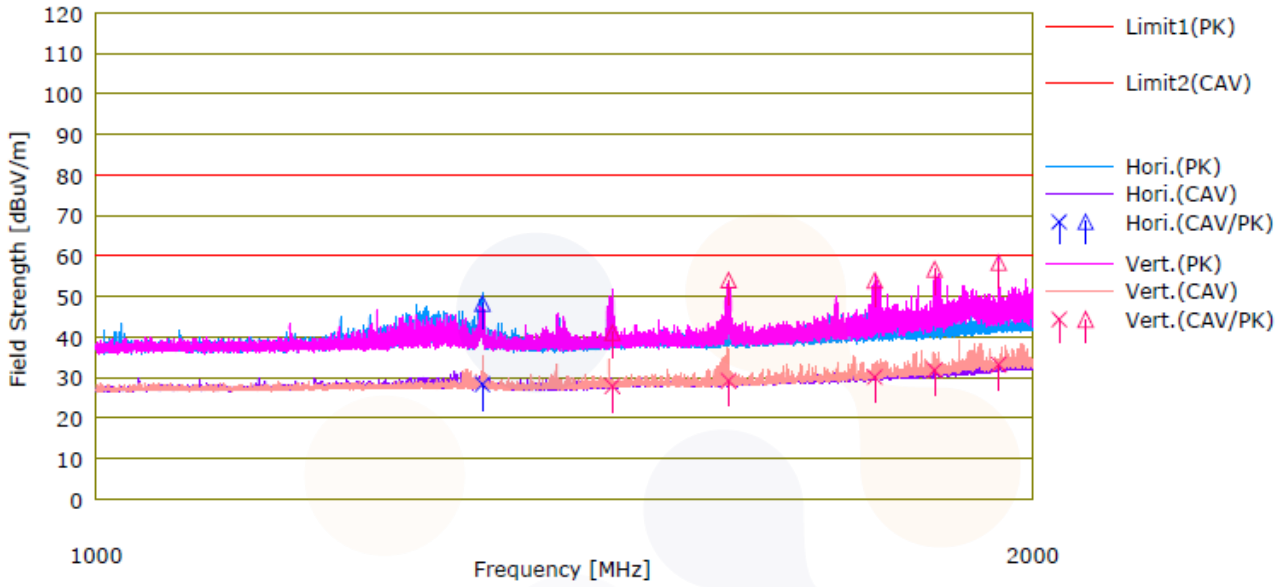
Graph and Data

30 ㎒ ~ 1 ㎓



No.	Freq. [MHz]	Readin <QP> [dBuV]	C.Fac [dB/m]	Result <QP> [dBuV/m]	Limit <QP> [dBuV/m]	Margin <QP> [dB]	Pola. [H/V]	Height [cm]	Angle [deg]	Ant. Type	Comment
1	30.727	29.89	-6.33	23.56	39.00	15.44	Vert.	292	37	BI-LO	
2	149.920	39.20	-13.28	25.92	43.50	17.58	Vert.	152	158	BI-LO	
3	179.986	46.22	-14.69	31.53	43.50	11.97	Vert.	123	3	BI-LO	
4	209.936	52.36	-14.47	37.89	43.50	5.61	Vert.	289	171	BI-LO	
5	269.954	43.11	-10.34	32.77	46.50	13.73	Vert.	177	168	BI-LO	
6	300.146	41.10	-9.85	31.25	46.50	15.25	Vert.	392	147	BI-LO	

1 ㎓ ~ 2 ㎓



No.	Freq.	Reading		C.Fac	Result		Limit		Margin		Pola.	Height	Angle	Ant. Type	Comment
		<CAV>	<PK>		<CAV>	<PK>	<PK>	<CAV>	<PK>	<CAV>					
	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[H/V]	[cm]	[deg]		
1	1331.000	29.15	49.06	-0.90	28.25	48.16	80.00	60.00	31.84	31.75	Hori.	135	284	SAS-5	
2	1465.250	28.44	41.61	-0.64	27.80	40.97	80.00	60.00	39.03	32.20	Vert.	206	358	SAS-5	
3	1596.950	29.52	54.34	-0.39	29.13	53.95	80.00	60.00	26.05	30.87	Vert.	189	224	SAS-5	
4	1779.450	29.23	53.06	0.84	30.07	53.90	80.00	60.00	26.10	29.93	Vert.	336	224	SAS-5	
5	1859.950	30.12	55.10	1.59	31.71	56.69	80.00	60.00	23.31	28.29	Vert.	282	182	SAS-5	
6	1950.099	30.37	55.54	2.74	33.11	58.28	80.00	60.00	21.72	26.89	Vert.	196	150	SAS-5	

7. EUT photographs

Front View

Rear View

Left View

Right View

Inside

- End -