



Compliance Certification Services (Kunshan) Inc.

Report No.: KSEM221100229401

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TEST REPORT

Application No.: KSEM2211002294AT
Applicant: ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Applicant: No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Manufacturer: ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.
Address of Manufacturer: No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China
Equipment Under Test (EUT):
EUT Name: IP CAMERA
Model No.: Refer to page 2 & 3
✦ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Standard(s) : EN 55032: 2015+A11:2020+A1:2020
EN 61000-3-3: 2013+ A1:2019+A2:2021
EN IEC 61000-3-2: 2019+A1:2021
EN 50130-4: 2011 +A1:2014
EN 55035: 2017+A11:2020
Date of Receipt: 2022-11-29
Date of Test: 2022-12-02 to 2022-12-12
Date of Issue: 2022-12-17

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Eric Lin
Laboratory Manager



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Model No.:

DH-IPC-HFW2541TP-ZS-27135-QH;DH-IPC-HFW2541T-ZS;DH-IPC-HFW2841TP-ZS-27135;DH-IPC-HFW2841T-ZS;DH-IPC-HFW2541TP-ZAS-27135-QH;DH-IPC-HFW2541T-ZAS;DH-IPC-HFW2841TP-ZAS-27135;DH-IPC-HFW2841T-ZAS;IPC-HFW2541TP-ZS-27135-QH;IPC-HFW2541T-ZS;IPC-HFW2841TP-ZS-27135;IPC-HFW2841T-ZS;IPC-HFW2541TP-ZAS-27135-QH;IPC-HFW2541T-ZAS;IPC-HFW2841TP-ZAS-27135;IPC-HFW2841T-ZAS;DH-IPC-HFW2241TP-ZS-27135-USA;DH-IPC-HFW2441TP-ZS-27135-USA;DH-IPC-HFW2541TP-ZS-27135-USA-QH;DH-IPC-HFW2841TP-ZS-27135-USA;DH-IPC-HFW2241TP-ZAS-27135-USA;DH-IPC-HFW2441TP-ZAS-27135-USA;DH-IPC-HFW2541TP-ZAS-27135-USA-QH;DH-IPC-HFW2841TP-ZAS-27135-USA;Na2CFbcd(a=1~9; b=A~Z or 1~9; c=A~Z or 1~9; d=-B or blank);

DH-IPC-HFW2241T-ZS-27135;IPC-HFW2241T-ZS-27135;DH-IPC-HFW2441T-ZS-27135;IPC-HFW2441T-ZS-27135;DH-IPC-HFW2541T-ZS-27135;IPC-HFW2541T-ZS-27135;DH-IPC-HFW2841T-ZS-27135;IPC-HFW2841T-ZS-27135;DH-IPC-HFW2241T-ZAS-27135;IPC-HFW2241T-ZAS-27135;DH-IPC-HFW2441T-ZAS-27135;IPC-HFW2441T-ZAS-27135;DH-IPC-HFW2541T-ZAS-27135;IPC-HFW2541T-ZAS-27135;DH-IPC-HFW2841T-ZAS-27135;IPC-HFW2841T-ZAS-27135;DH-IPC-HFW2241TP-AS-0360B DH-IPC-HFW2241T-AS;DH-IPC-HFW2241TP-AS-0600B; DH-IPC-HFW2241T-AS;DH-IPC-HFW2241TP-AS-0800B;DH-IPC-HFW2241T-AS;DH-IPC-HFW2441TP-AS-0360B;DH-IPC-HFW2441T-AS;DH-IPC-HFW2441TP-AS-0600B;DH-IPC-HFW2441T-AS;DH-IPC-HFW2441TP-AS-0800B;DH-IPC-HFW2441T-AS;DH-IPC-HFW2541TP-AS-0360B-QH;DH-IPC-HFW2541T-AS;DH-IPC-HFW2541TP-AS-0600B-QH;DH-IPC-HFW2541T-AS;DH-IPC-HFW2541TP-AS-0800B-QH;DH-IPC-HFW2541T-AS;DH-IPC-HFW2841TP-AS-0360B;DH-IPC-HFW2841T-AS;DH-IPC-HFW2841TP-AS-0600B;DH-IPC-HFW2841T-AS;IPC-HFW2241TP-AS-0360B;IPC-HFW2241T-AS;IPC-HFW2241TP-AS-0600B;IPC-HFW2241T-AS;IPC-HFW2241TP-AS-0800B;IPC-HFW2241T-AS;IPC-HFW2441TP-AS-0360B;IPC-HFW2441T-AS;IPC-HFW2441TP-AS-0600B;IPC-HFW2441T-AS;IPC-HFW2441TP-AS-0800B;IPC-HFW2441T-AS;IPC-HFW2541TP-AS-0360B-QH;IPC-HFW2541T-AS;IPC-HFW2541TP-AS-0600B-QH;IPC-HFW2541T-AS;IPC-HFW2541TP-AS-0800B-QH;IPC-HFW2541T-AS;IPC-HFW2841TP-AS-0360B;IPC-HFW2841T-AS;IPC-HFW2841TP-AS-0600B;IPC-HFW2841T-AS;DH-IPC-HFW2241TP-AS-0360B-USA;Na2CFbcd(a=1~9; b=A~Z or 1~9; c=A~Z or 1~9; d=-B or blank)

DH-IPC-HFW2241T-AS-0360B;IPC-HFW2241T-AS-0360B;DH-IPC-HFW2241TP-AS-0600B-USA;DH-IPC-HFW2241T-AS-0600B;IPC-HFW2241T-AS-0600B;DH-IPC-HFW2241TP-AS-0800B-USA;DH-IPC-HFW2241T-AS-0800B;IPC-HFW2241T-AS-0800B;DH-IPC-HFW2441TP-AS-0360B-USA;DH-IPC-HFW2441T-AS-0360B;IPC-HFW2441T-AS-0360B;DH-IPC-HFW2441TP-AS-0600B-USA;DH-IPC-HFW2441T-AS-0600B;IPC-HFW2441T-AS-0600B;DH-IPC-HFW2441TP-AS-0800B-USA;DH-IPC-HFW2441T-AS-0800B;IPC-HFW2441T-AS-0800B;DH-IPC-HFW2541TP-AS-0360B-USA-QH;DH-IPC-HFW2541T-AS-0360B;IPC-HFW2541T-AS-0360B;DH-IPC-HFW2541TP-AS-0600B-USA-QH;DH-IPC-HFW2541T-AS-0600B;IPC-HFW2541T-AS-0600B;DH-IPC-HFW2541TP-AS-0800B-USA-QH;DH-IPC-HFW2541T-AS-0800B;IPC-HFW2541T-AS-0800B;DH-IPC-HFW2841TP-AS-0360B-USA;DH-IPC-HFW2841T-AS-0360B;IPC-HFW2841T-AS-0360B;DH-IPC-HFW2841TP-AS-0600B-USA;DH-IPC-HFW2841T-AS-0600B;IPC-HFW2841T-AS-0600B;DH-IPC-HFW2541TP-ZS-27135-QH; DH-IPC-HFW2541T-ZS; DH-IPC-HFW2541TP-ZS-27135-USA-QH; DH-IPC-HFW2541TP-ZAS-27135-QH; DH-IPC-HFW2541T-ZAS; DH-IPC-HFW2541TP-ZAS-27135-USA-QH; IPC-HFW2541TP-ZS-27135-QH; IPC-HFW2541T-ZSIPC-HFW2541TP-ZAS-27135-QH; IPC-HFW2541T-ZAS; DH-IPC-HFW2541T-ZS-27135; IPC-HFW2541T-ZS-27135; DH-IPC-HFW2541T-ZAS-27135; IPC-HFW2541T-ZAS-27135; DH-IPC-HFW2541TP-AS-0360B-QH; DH-IPC-HFW2541TP-AS-0600B-QH; DH-IPC-HFW2541TP-AS-0800B-QH; DH-IPC-HFW2541T-AS; DH-IPC-HFW2541TP-AS-0360B-USA-QH; DH-IPC-HFW2541TP-AS-0600B-USA-QH; DH-IPC-HFW2541TP-AS-0800B-USA-QH; IPC-HFW2541TP-AS-0360B-QH; IPC-HFW2541TP-AS-0600B-QH; IPC-HFW2541TP-AS-0800B-QH; IPC-HFW2541T-AS; DH-IPC-HFW2541T-AS-0360B; IPC-HFW2541T-AS-



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Report No.: KSEM221100229401

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0360B; DH-IPC-HFW2541T-AS-0600B; IPC-HFW2541T-AS-0600B; DH-IPC-HFW2541T-AS-0800B; IPC-HFW2541T-AS-0800B; DH-IPC-HFW2841TP-ZS-27135; DH-IPC-HFW2841T-ZS; DH-IPC-HFW2841TP-ZS-27135-USA; DH-IPC-HFW2841TP-ZAS-27135; DH-IPC-HFW2841T-ZAS; DH-IPC-HFW2841TP-ZAS-27135-USA; IPC-HFW2841TP-ZS-27135; IPC-HFW2841T-ZS; IPC-HFW2841TP-ZAS-27135; IPC-HFW2841T-ZAS; DH-IPC-HFW2841T-ZS-27135; IPC-HFW2841T-ZS-27135; DH-IPC-HFW2841T-ZAS-27135; IPC-HFW2841T-ZAS-27135; DH-IPC-HFW2841TP-AS-0360B DH-IPC-HFW2841T-AS; DH-IPC-HFW2841TP-AS-0360B-USA; DH-IPC-HFW2841TP-AS-0600B DH-IPC-HFW2841T-AS; DH-IPC-HFW2841TP-AS-0600B-USA; IPC-HFW2841TP-AS-0360B; IPC-HFW2841TP-AS-0600B; IPC-HFW2841T-AS; DH-IPC-HFW2841T-AS-0360B; IPC-HFW2841T-AS-0360B; DH-IPC-HFW2841T-AS-0600B; IPC-HFW2841T-AS-0600B; Na2CFbcd(a=1~9; b=A~Z or 1~9; c=A~Z or 1~9; d=-B or blank);

DH-IPC-HFW2249TP-AS-IL-0360B; DH-IPC-HFW2249TP-AS-IL-0600B; DH-IPC-HFW2249TP-AS-IL-0800B; DH-IPC-HFW2449TP-AS-IL-0360B; DH-IPC-HFW2449TP-AS-IL-0600B; DH-IPC-HFW2449TP-AS-IL-0800B; IPC-HFW2249TP-AS-IL-0360B; IPC-HFW2249TP-AS-IL-0600B; IPC-HFW2249TP-AS-IL-0800B; IPC-HFW2449TP-AS-IL-0360B; IPC-HFW2449TP-AS-IL-0600B; IPC-HFW2449TP-AS-IL-0800B; DH-IPC-HFW2249T-AS-IL; DH-IPC-HFW2449T-AS-IL; IPC-HFW2249T-AS-IL; IPC-HFW2449T-AS-IL; DH-IPC-HFW2249T-AS-IL-0360B; DH-IPC-HFW2249T-AS-IL-0600B; DH-IPC-HFW2249T-AS-IL-0800B; DH-IPC-HFW2449T-AS-IL-0360B; DH-IPC-HFW2449T-AS-IL-0600B; DH-IPC-HFW2449T-AS-IL-0800B; IPC-HFW2249T-AS-IL-0360B; IPC-HFW2249T-AS-IL-0600B; IPC-HFW2249T-AS-IL-0800B; IPC-HFW2449T-AS-IL-0360B; IPC-HFW2449T-AS-IL-0600B; IPC-HFW2449T-AS-IL-0800B; DH-IPC-HFW2549T-AS-IL-0360B; DH-IPC-HFW2549T-AS-IL-0600B; DH-IPC-HFW2549T-AS-IL-0800B; DH-IPC-HFW2849T-AS-IL-0360B; DH-IPC-HFW2849T-AS-IL-0600B; DH-IPC-HFW2849T-AS-IL-0800B; IPC-HFW2549T-AS-IL-0360B; IPC-HFW2849T-AS-IL-0360B; IPC-HFW2849T-AS-IL-0600B; IPC-HFW2849T-AS-IL-0800B; DH-IPC-HFW2549TP-AS-IL-0360B; DH-IPC-HFW2549TP-AS-IL-0600B; DH-IPC-HFW2549TP-AS-IL-0800B; DH-IPC-HFW2849TP-AS-IL-0360B; DH-IPC-HFW2849TP-AS-IL-0600B; DH-IPC-HFW2849TP-AS-IL-0800B; IPC-HFW2549TP-AS-IL-0360B; IPC-HFW2549TP-AS-IL-0600B; IPC-HFW2549TP-AS-IL-0800B; IPC-HFW2849TP-AS-IL-0360B; IPC-HFW2849TP-AS-IL-0600B; IPC-HFW2849TP-AS-IL-0800B; DH-IPC-HFW2549T-AS-IL; DH-IPC-HFW2849T-AS-IL; IPC-HFW2549T-AS-IL; IPC-HFW2849T-AS-IL



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Revision Record			
Version	Description	Date	Remark
00	Update Mainboard	2022-12-17	Based on KSEM220800128101 (Original Report No.: KSEM220600083001)

Authorized for issue by:			
	Kun Gu /Project Engineer		
	Eric Lin /Reviewer		



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2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Power Port (150kHz-30MHz)	EN 55032: 2015+A11:2020+A1:2020	EN 55032: 2015+A11:2020+A1:2020	Class B	Pass
Asymmetric Mode Conducted Emissions(150kHz-30MHz)		EN 55032: 2015+A11:2020+A1:2020	Class B	Pass
Radiated Emissions (30MHz-1GHz)		EN 55032: 2015+A11:2020+A1:2020	Class B	Pass
Radiated Emissions (Above 1GHz)		EN 55032: 2015+A11:2020+A1:2020	Class B	Pass
Voltage Fluctuations and Flicker	EN 61000-3-3: 2013+ A1:2019+A2:2021	EN 61000-3-3: 2013+ A1:2019+A2:2021	Clause 5	Pass
Harmonic Current Emission	EN IEC 61000-3-2: 2019+A1:2021	EN IEC 61000-3-2: 2019+A1:2021	Class A	Pass

Immunity Part				
Item	Standard	Method	Requirement	Result
Electrostatic Discharge	EN 50130-4: 2011 +A1:2014	EN 61000-4-2:2009	6kV Contact Discharge, 2,4,8kV Air Discharge	Pass
Radiated Immunity(80MHz-2.7GHz)		EN IEC 61000-4-3: 2020	10V/m, 80%, 1kHz sinusoidal Amp. Mod.	Pass
Electrical Fast Transients & Burst at AC Power Port		EN 61000-4-4:2012	2kV, 5/50ns Tr/Td, 100kHz Repetition Frequency	Pass
Surge at AC Power Port		EN 61000-4-5:2014 +A1:2017	1.2/50µs Tr/Td, 0.5,1kV Line to Line, 0.5,1,2kV Line to Ground	Pass
Conducted Immunity at Power Port (150kHz-100MHz)		EN 61000-4-6:2014	10Vrms (emf),80%,1kHz sinusoidal Amp. Mod.	Pass
Voltage Dips and Interruptions		EN IEC 61000-4-11:2020	80 % UT for 250per, 70 % UT for 25per, 40 % UT for 10per, 0 % UT for 250per	Pass
Mains Supply Voltage Variations		EN 50130-4:2011+A1:2014	Unom+10%, Unom-15%	Pass



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Immunity Part				
Item	Standard	Method	Requirement	Result
Electrical Fast Transients & Burst at Signal Port	EN 55035: 2017+A11:2020	EN 61000-4-4:2012	1kV, 5/50ns Tr/Td, 100kHz Repetition Frequency	Pass
Surge at Signal Port		EN 61000-4-5:2014 +A1:2017	1.2/50µs Tr/Td, 0.5, 1kV line-to-ground	Pass
Conducted Immunity at Signal Port (150kHz-100MHz)		EN 61000-4-6:2014	10Vrms (emf), 80%, 1kHz sinusoidal Amp. Mod	Pass
Electrostatic Discharge		EN 61000-4-2: 2009	±4kV Contact Discharge; ±2kV, ±4kV, ±8kV Air Discharge	Pass
Radiated Immunity (80MHz-1GHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz)		EN IEC 61000-4-3: 2020	3V/m, 80%, 1kHz Amp. Mod.	Pass
Electrical Fast Transients & Burst at AC Power Port		EN 61000-4-4: 2012	1kV; 5/50ns Tr/Td; 5kHz Repetition Frequency	Pass
Electrical Fast Transients & Burst at Signal Port		EN 61000-4-4: 2012	0,5kV; 5/50ns Tr/Td; 5kHz Repetition Frequency	Pass
Surge at AC Power Port		EN 61000-4-5: 2014 +A1: 2017	1,2/50µs Tr/Td; 1KV Line to Line; 2V Line to Ground	Pass
Surge at Signal Port		EN 61000-4-5: 2014 +A1: 2017	1,2/50µs Tr/Td; 1 kV Lines to Ground, 1,2/50µs Tr/Td; 0,5 kV Shield to Ground	Pass
Conducted Immunity at AC Power Port (150kHz-80MHz)		EN 61000-4-6: 2014	0,15 to 10MHz 3Vrms (emf), 10 to 30MHz 3V to 1Vrms(emf), 30 to 80MHz 1Vrms(emf), 80%, 1kHz Amp. Mod.	Pass
Conducted Immunity at Signal Port (150kHz-80MHz)	EN 61000-4-6: 2014	0,15 to 10MHz 3Vrms (emf), 10 to 30MHz 3V to 1Vrms(emf), 30 to 80MHz 1Vrms(emf), 80%, 1kHz Amp. Mod.	Pass	
Power Frequency Magnetic Field	EN 61000-4-8: 2010	50 or 60Hz, 1 A/m	Pass	



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Immunity Part				
Item	Standard	Method	Requirement	Result
Voltage Dips and Interruptions		EN IEC 61000-4-11:2020	<5% residual voltage for 0,5cycle, 70% residual voltage for 25cycles, <5% residual voltage for 250cycles	Pass

Note: There are series models mentioned in this report, and they are the similar in electrical and electronic characters. Only the model DH-IPC-HFW2449T-AS-IL, DH-IPC-HFW2849T-AS-IL were tested since their differences are the model number and motherboard. The difference between DH-IPC-HFW2449T-AS-IL and DH-IPC-HFW2849T-AS-IL is motherboard.



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4 General Information

4.1 Details of E.U.T.

Power supply:	DC12V, 1A; POE (802.3af) EUT1: DH-IPC-HFW2449T-AS-IL EUT2: DH-IPC-HFW2849T-AS-IL Pre-test Voltage: AC 230V/50Hz&110V/60Hz Final-test Voltage: AC 230V/50Hz
---------------	--

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
AC Adapter	DVE	DSA-12G-12FEU	/
Notebook	LENOVO	K27	EB24537645
Notebook	APPLE	Macbook 13Pro	/
Notebook	XIAOMI	Pro15	00342-35744-35614- AAOEM
PoE Adapter	SUPLET	LAS60-57CN-RJ45	/
PoE Adapter	PowerDsine	PD-9001GR/AC	/



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EMC Laboratory

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4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty (U_{LAB}) *	U_{CISPR}
1	Conducted Emission at mains port using AMN	2.4dB (9kHz to 150kHz)	3.8dB (9kHz to 150kHz)
		2.2dB (150kHz to 30MHz)	3.4dB (150kHz to 30MHz)
2	Conducted Emission at telecommunication port using AAN	4.0 dB (150kHz to 30MHz)	5.0dB (150kHz to 30MHz)
3	Radiated Power	3.2dB	4.5dB (30MHz to 300MHz)
4	Radiated Emission (10m)	4.1 dB	6.3dB (30MHz-1GHz)
5	Radiated Emission (3m)	4.6 dB (30MHz-1GHz)	6.3dB (30MHz-1GHz)
		5.0dB (1GHz-6GHz)	5.2dB (1GHz-6GHz)
		5.2dB (6GHz-18GHz)	5.5dB (6GHz-18GHz)
		5.3dB (18GHz-40GHz)	N/A

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Decision Rule:

- CISPR 16-4-2 for emission measurements is as below described.
Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.
- U_{LAB} less than U_{CISPR} , therefore:
 - compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit.
 - non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.
- For immunity testing no decision rule is applicable.



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4.4 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1.SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

Conducted Emissions at Mains Power Port (150kHz-30MHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMI TEST RECEIVER	R&S	ESCI	KS301101	01/22/2022	01/21/2023
TWO-LINE V-NETWORK	R&S	ENV216	KS301197	01/22/2022	01/21/2023
V (V-LISN)	SCHWARZBECK	NNLK 8129	KS301091	01/22/2022	01/21/2023
Pulse LIMITER	R&S	ESH3-Z2	KUS1902E001	01/22/2022	01/21/2023
Software	Faratronic	EZ_EMV-3A1	N/A	N/A	N/A

Asymmetric Mode Conducted Emissions(150kHz-30MHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMI TEST RECEIVER	R&S	ESCI	KS301101	01/22/2022	01/21/2023
TWO-LINE V-NETWORK	R&S	ENV216	KS301197	01/22/2022	01/21/2023
V (V-LISN)	SCHWARZBECK	NNLK 8129	KS301091	01/22/2022	01/21/2023
Pulse LIMITER	R&S	ESH3-Z2	KUS1902E001	01/22/2022	01/21/2023
CISPR22 FOUR BALANCED TELECOM PARIS ISN	FCC	FCC-TLISN-T2-02	KS301144	01/22/2022	01/21/2023
COUPLING AND DECOUPLING NETWORK	TESEQ	ISN ST08	KS301171	01/22/2022	01/21/2023
IMPEDANCE STABILIZATION NETWORK	TESEQ	ISN T800	KS301185	01/22/2022	01/21/2023
IMPEDANCE STABILIZATION NETWORK	TESEQ	ISN T8-CAT6	KS301285	01/22/2022	01/21/2023
RF CURRENT PROBE	FCC	F-65A	CZ301012	01/22/2022	01/21/2023
Software	Faratronic	EZ_EMV-3A1	N/A	N/A	N/A

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMI Test Receiver	R&S	ESCI	KS301196	08/22/2022	08/21/2023
Antenna	TESEQ	CBL 6112D	KUS1806E006	03/05/2022	03/04/2024
Software	Faratronic	EZ_EMV 3A1	N/A	N/A	N/A



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Radiated Emissions (Above 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Spectrum Analyzer	R&S	FSU26	KS301206	04/01/2022	03/31/2023
Preamplifier	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-2	01/22/2022	01/21/2023
Horn-antenna	SCHWARZBECK	BBHA9120D	KS301079	04/02/2022	04/01/2024
Software	Faratronic	EZ_EMV-3A1	N/A	N/A	N/A

Voltage Fluctuations and Flicker					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Harmonic & Flicker Tester	SCHAFFNER	CCN 1000-1	KS301033	08/22/2022	08/21/2023
AC Power Source	SCHAFFNER	NSG 1007	KS301087	08/22/2022	08/21/2023
Software	TESEQ	CTS4-v 4.24.0	N/A	N/A	N/A
Harmonic/Flicker Analyzer	KIKUSUI	KHA3000	KUS2009M002-1	04/01/2022	03/31/2023
Line Impedance Network	KIKUSUI	SPEC71116	KUS2009M002-1	04/01/2022	03/31/2023
Switcher	KIKUSUI	SPEC71092	KUS2009M002-2	04/01/2022	03/31/2023
AC Power Supply(Master)	KIKUSUI	PCR24000WE 2	KUS2009M002-3	04/01/2022	03/31/2023
AC Power Supply(Slave)	KIKUSUI	PCR24000WE 2	KUS2009M002-4	04/01/2022	03/31/2023
Software	KIKUSUI	HarmoCapture 3-vv 2.5.2.00	N/A	N/A	N/A

Harmonic Current Emission					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Harmonic & Flicker Tester	SCHAFFNER	CCN 1000-1	KS301033	08/22/2022	08/21/2023
AC Power Source	SCHAFFNER	NSG 1007	KS301087	08/22/2022	08/21/2023
Software	TESEQ	CTS4-v 4.24.0	N/A	N/A	N/A
Harmonic/Flicker Analyzer	KIKUSUI	KHA3000	KUS2009M002-1	04/01/2022	03/31/2023
Line Impedance Network	KIKUSUI	SPEC71116	KUS2009M002-1	04/01/2022	03/31/2023
Switcher	KIKUSUI	SPEC71092	KUS2009M002-2	04/01/2022	03/31/2023
AC Power	KIKUSUI	PCR24000WE	KUS2009M002	04/01/2022	03/31/2023



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Supply(Master)		2	-3		
AC Power Supply(Slave)	KIKUSUI	PCR24000WE 2	KUS2009M002 -4	04/01/2022	03/31/2023
Software	KIKUSUI	HarmoCapture 3-vv 2.5.2.00	N/A	N/A	N/A

Electrostatic Discharge

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
ESD Simulator	EM TEST	DITO 509030	KS301147	01/26/2022	01/25/2023

Radiated Immunity

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Synthesized Signal Generator	AGILENT	83732B	KS301183	01/22/2022	01/21/2023
Laser probe interface	AR Worldwide	FI7000	KS301193-2	04/01/2022	03/31/2023
E-Field Sensor	AR Worldwide	FL7006 100K- 6G	KS301193-1	04/01/2022	03/31/2023
Amplifier Research (80~1000MHz 150w)	AR Worldwide	150W1000M1	KS301139	08/22/2022	08/21/2023
Amplifier Research (1~6GHz 50w)	AR Worldwide	50S1G6M1	KS301231	08/22/2022	08/21/2023
Dual Directional Coupler (1-11G)	AR Worldwide	C1-A47NFNF 35dB	KS301193-5	N.C.R	N.C.R
Dual Directional Coupler (80~1000MHz 400w)	AR Worldwide	DC6180	KS301193-6	N.C.R	N.C.R
RF POWER METER	BOONTON	4232A-01	KS301022	01/22/2022	01/21/2023
POWER SENSOR	BOONTON	51085	H3010235-1	01/22/2022	01/21/2023
POWER SENSOR	BOONTON	51085	H3010235-2	01/22/2022	01/21/2023
Antenna	AR Worldwide	TP1000A	CZ301029	N.C.R	N.C.R
Software	AR	emc ware-v 3.2.0.4	N/A	N/A	N/A

Electrical Fast Transients & Burst at AC Power Port

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	Transient2000	KS301188-1	08/22/2022	08/21/2023
Burst Generator	SANKI	EFT-0404S	KUS2009M002 -7	04/01/2022	03/31/2023
Coupling and Decoupling Network	SANKI	CDN-4350	KUS2009M002 -8	04/01/2022	03/31/2023



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Electrical Fast Transients & Burst at Signal Port					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	Transient2000	KS301188-1	08/22/2022	08/21/2023
Coupling Network	EMC PARTNER	CN-EFT1000	KS301188-3	08/22/2022	08/21/2023
Burst Generator	SANKI	EFT-0404S	KUS2009M002-7	04/01/2022	03/31/2023
Coupling and Decoupling Network	SANKI	CDN-4350	KUS2009M002-8	04/01/2022	03/31/2023

Surge at AC Power Port					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/22/2022	08/21/2023
Surge Generator	SANKI	LSG-0506S	KUS2009M002-5	04/01/2022	03/31/2023
Coupling and Decoupling Network	SANKI	CDN-5350	KUS2009M002-6	04/01/2022	03/31/2023

Surge at Signal Port					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/22/2022	08/21/2023
Coupling and Decoupling Network	EMC PARTNER	CDN-UTP8	KS301188-2	08/22/2022	08/21/2023
Surge Generator	SANKI	LSG-0506S	KUS2009M002-5	04/01/2022	03/31/2023
Coupling and Decoupling Network	SANKI	CDN-5350	KUS2009M002-6	04/01/2022	03/31/2023

Conducted Immunity at AC Power Port (150kHz-80MHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Test System for Conducted and Radiated Immunity	TESEQ	NSG 4070B	KSZ201705E003	01/22/2022	01/21/2023
Amplifier	TESEQ	SCCXE75	KSZ201705E004	01/22/2022	01/21/2023
EM-Koppelzange	SCHAFFNER	KEMZ 801	CZ301002	01/22/2022	01/21/2023
Attenuator	EURO MC	7860 ORGEVAL	CZ301084	04/01/2022	03/31/2023



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Directional Coupler	HIGH POWER	C21A8	CZ750021	09/06/2022	09/05/2023
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M216	CZ301085	04/01/2022	03/31/2023
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M316	CZ301025	04/01/2022	03/31/2023
CDN (Coupling and Decoupling Network)	TESEQ	CDN M116	KS301184-1	04/01/2022	03/31/2023
CDN	TESEQ	CDN M432	KUS2003M001-1	01/22/2022	01/21/2023
CDN	TESEQ	CDN M432-3LN	KUS2003M001-2	01/22/2022	01/21/2023
CDN	TESEQ	CDN M532	KUS2003M001-3	01/26/2022	01/25/2023
CDN	TESEQ	CDN M232	KSZ201706E001	04/01/2022	03/31/2023
CDN	TESEQ	CDN M332	KSZ201706E002	04/01/2022	03/31/2023
Software	TESEQ	NSG 4070-v 1.3.0.1	N/A	N/A	N/A

Conducted Immunity at Signal Port (150kHz-80MHz)

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Test System for Conducted and Radiated Immunity	TESEQ	NSG 4070B	KSZ201705E003	01/22/2022	01/21/2023
Amplifier	TESEQ	SCCXE75	KSZ201705E004	01/22/2022	01/21/2023
EM-Koppelzange	SCHAFFNER	KEMZ 801	CZ301002	01/22/2022	01/21/2023
Attenuator	EURO MC	7860 ORGEVAL	CZ301084	04/01/2022	03/31/2023
Directional Coupler	HIGH POWER	C21A8	CZ750021	09/06/2022	09/05/2023
CDN	TESEQ	CDN T2-10S	KS301286	04/01/2022	03/31/2023
CDN	TESEQ	CDN T4-10S	KS301287	04/01/2022	03/31/2023
CDN	TESEQ	CDN T8-10S	KS301288	04/01/2022	03/31/2023
Current Clamp	TESEQ	IP-DR250	KS201703E001	04/01/2022	03/31/2023
Software	TESEQ	NSG 4070-v 1.3.0.1	N/A	N/A	N/A

Power Frequency Magnetic Field

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/22/2022	08/21/2023



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Inductive Standard Coil	EMC PARTNER	MF1000-1	KS301188-4	08/22/2022	08/21/2023
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Voltage Dips and Interruptions

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/22/2022	08/21/2023
Switcher	KIKUSUI	SPEC71092	KUS2009M002-2	04/01/2022	03/31/2023
AC Power Supply(Master)	KIKUSUI	PCR24000WE2	KUS2009M002-3	04/01/2022	03/31/2023
AC Power Supply(Slave)	KIKUSUI	PCR24000WE2	KUS2009M002-4	04/01/2022	03/31/2023
Software	KIKUSUI	Quick Immunity Sequencer 2-v 4.0.3.02	N/A	N/A	N/A

Mains Supply Voltage Variations

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/22/2022	08/21/2023
Switcher	KIKUSUI	SPEC71092	KUS2009M002-2	04/01/2022	03/31/2023
AC Power Supply(Master)	KIKUSUI	PCR24000WE2	KUS2009M002-3	04/01/2022	03/31/2023
AC Power Supply(Slave)	KIKUSUI	PCR24000WE2	KUS2009M002-4	04/01/2022	03/31/2023
Software	KIKUSUI	Quick Immunity Sequencer 2-v 4.0.3.02	N/A	N/A	N/A

General used equipment

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Digital Pressure Meter	Mengde	DYM3	CZ750023	02/01/2022	01/31/2023
Temperature & Humidity Recorder	Anymetre	TH603	CZ720001-1 CZ720001-2 CZ720001-3 CZ720001-4 CZ720001-5 CZ720001-6 CZ720001-7	10/13/2022	10/12/2023



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6 Emission Test Results

6.1 Conducted Emissions at Mains Power Port (150kHz-30MHz)

Test Requirement: EN 55032: 2015+A11:2020+A1:2020

Test Method: EN 55032: 2015+A11:2020+A1:2020

Limit:

0.15MHz-0.5MHz 66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average

0.5MHz-5MHz 56dB(μV) quasi-peak, 46dB(μV) average

5MHz-30MHz 60dB(μV) quasi-peak, 50dB(μV) average

Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 20.6 °C

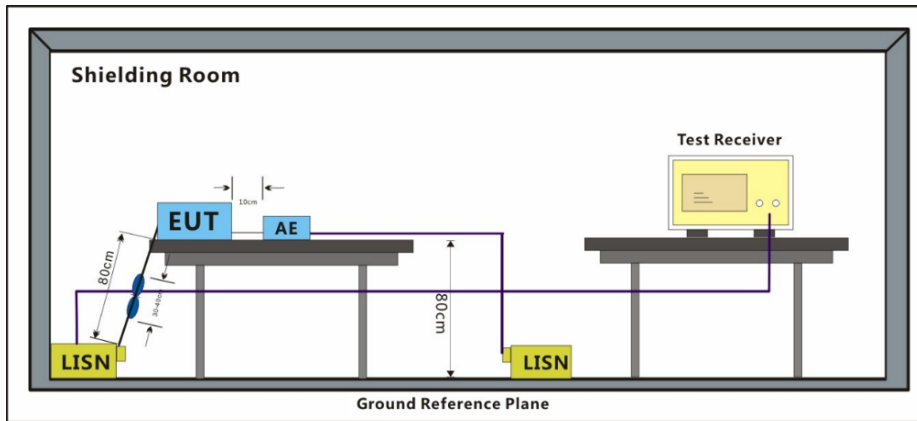
Humidity: 35.1 % RH

Atmospheric Pressure: 1010 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

6.1.3 Test Setup Diagram



6.1.4 Measurement Procedure and Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

Remark: Level= Read Level+ Cable Loss+ LISN Factor

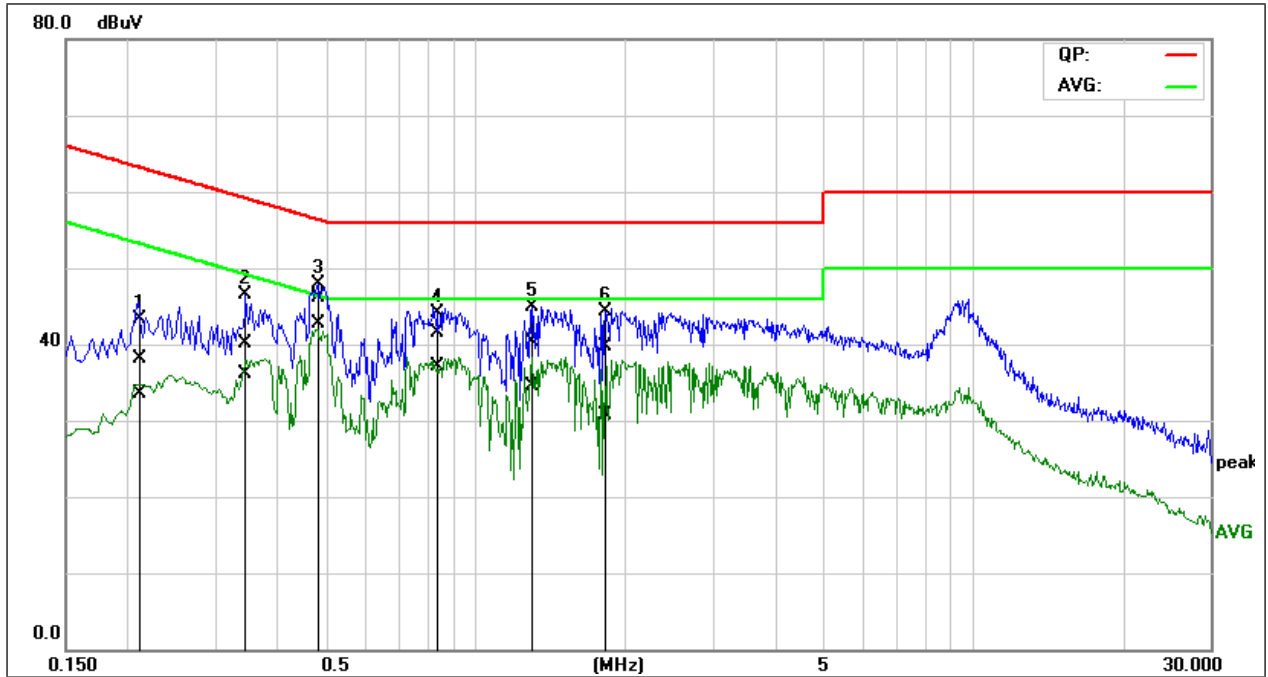


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Test Mode: 00; Line: Live line



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.2136	18.61	14.03	19.50	38.11	33.53	63.06	53.06	-24.95	-19.53	Pass
2	0.3440	20.59	16.54	19.52	40.11	36.06	59.11	49.11	-19.00	-13.05	Pass
3*	0.4848	26.60	23.11	19.56	46.16	42.67	56.26	46.26	-10.10	-3.59	Pass
4	0.8384	21.83	17.48	19.58	41.41	37.06	56.00	46.00	-14.59	-8.94	Pass
5	1.2929	20.60	14.88	19.61	40.21	34.49	56.00	46.00	-15.79	-11.51	Pass
6	1.8171	20.11	11.09	19.64	39.75	30.73	56.00	46.00	-16.25	-15.27	Pass

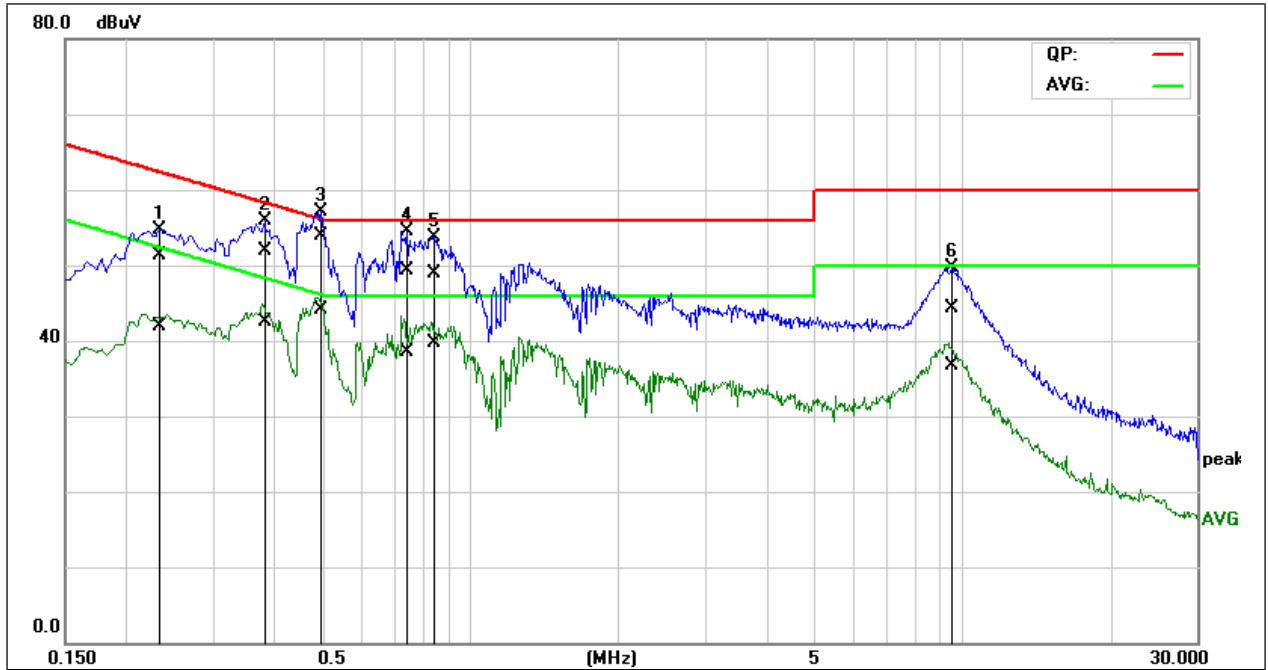


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Test Mode: 00; Line: Neutral Line



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2334	31.82	22.43	19.49	51.31	41.92	62.33	52.33	-11.02	-10.41	Pass
2	0.3813	32.31	22.96	19.52	51.83	42.48	58.25	48.25	-6.42	-5.77	Pass
3*	0.4968	34.31	24.45	19.56	53.87	44.01	56.05	46.05	-2.18	-2.04	Pass
4	0.7379	29.81	18.99	19.56	49.37	38.55	56.00	46.00	-6.63	-7.45	Pass
5	0.8481	29.43	20.21	19.57	49.00	39.78	56.00	46.00	-7.00	-6.22	Pass
6	9.4786	24.20	16.62	20.02	44.22	36.64	60.00	50.00	-15.78	-13.36	Pass



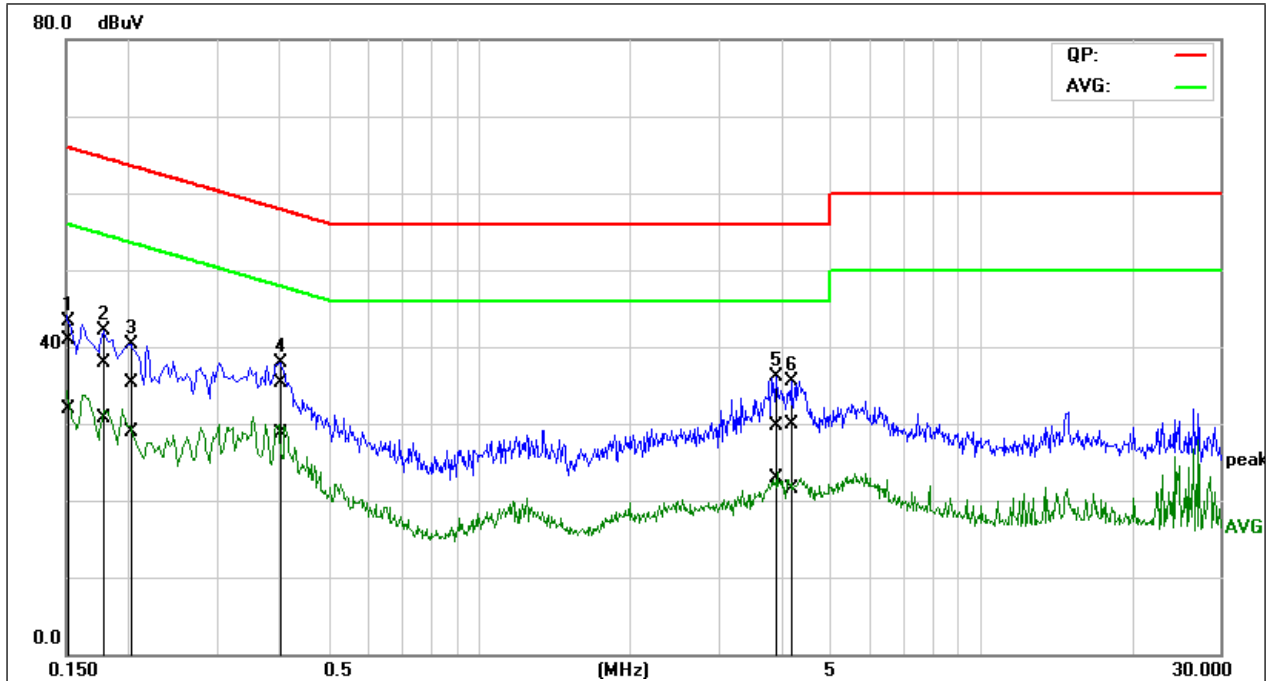
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Test Mode: 01; Line: Live line



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.1525	21.43	12.43	19.50	40.93	31.93	65.86	55.86	-24.93	-23.93	Pass
2	0.1794	18.50	11.28	19.50	38.00	30.78	64.51	54.51	-26.51	-23.73	Pass
3	0.2017	15.88	9.42	19.50	35.38	28.92	63.54	53.54	-28.16	-24.62	Pass
4*	0.4010	15.83	9.18	19.54	35.37	28.72	57.83	47.83	-22.46	-19.11	Pass
5	3.9292	10.04	3.15	19.76	29.80	22.91	56.00	46.00	-26.20	-23.09	Pass
6	4.1405	10.05	1.64	19.77	29.82	21.41	56.00	46.00	-26.18	-24.59	Pass

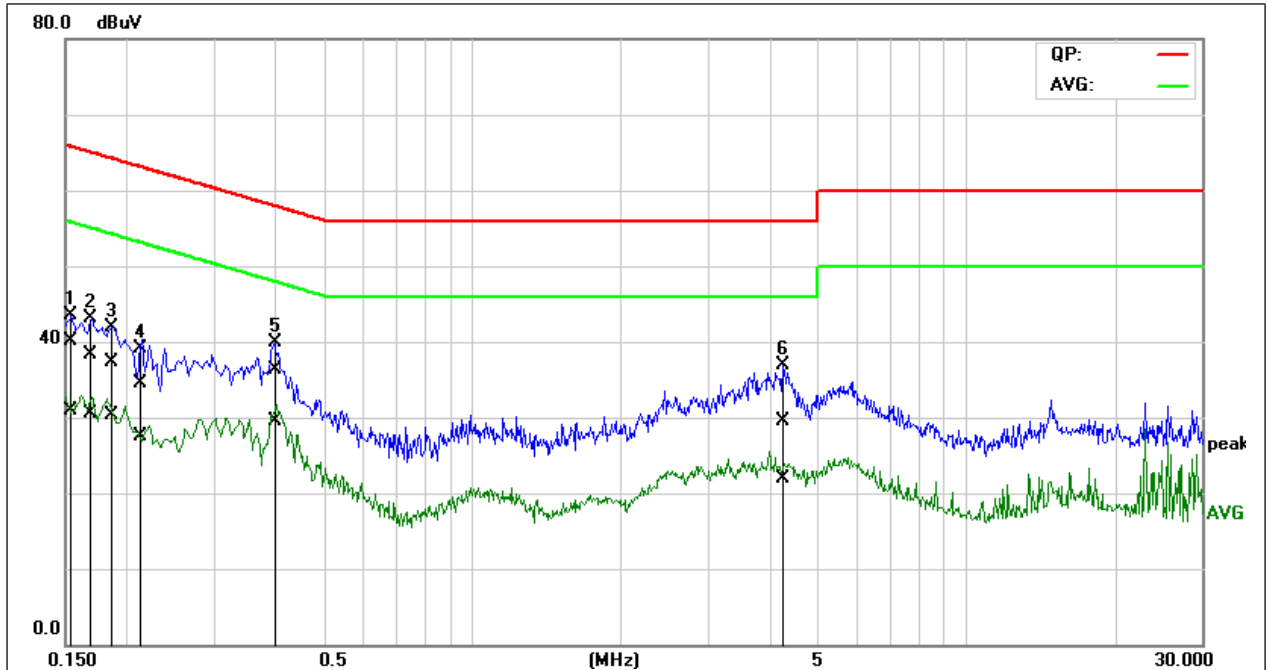


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Test Mode: 01; Line: Neutral Line



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1545	20.69	11.42	19.48	40.17	30.90	65.75	55.75	-25.58	-24.85	Pass
2	0.1710	18.89	10.99	19.48	38.37	30.47	64.91	54.91	-26.54	-24.44	Pass
3	0.1862	17.88	10.75	19.49	37.37	30.24	64.20	54.20	-26.83	-23.96	Pass
4	0.2110	15.04	7.96	19.49	34.53	27.45	63.17	53.17	-28.64	-25.72	Pass
5*	0.3954	16.72	9.93	19.52	36.24	29.45	57.95	47.95	-21.71	-18.50	Pass
6	4.2620	9.73	2.11	19.77	29.50	21.88	56.00	46.00	-26.50	-24.12	Pass

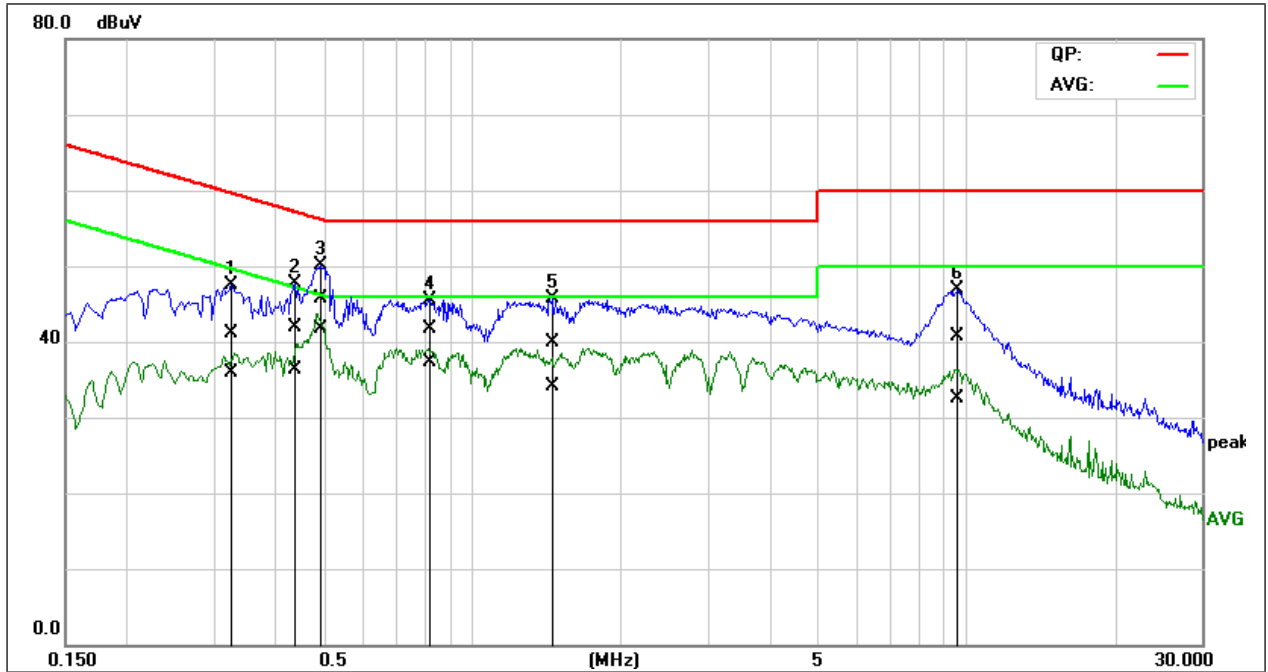


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Test Mode: 02; Line: Live line



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.3272	21.50	16.29	19.52	41.02	35.81	59.52	49.52	-18.50	-13.71	Pass
2	0.4391	22.39	16.68	19.54	41.93	36.22	57.08	47.08	-15.15	-10.86	Pass
3*	0.4940	26.09	22.11	19.56	45.65	41.67	56.10	46.10	-10.45	-4.43	Pass
4	0.8273	22.19	17.82	19.58	41.77	37.40	56.00	46.00	-14.23	-8.60	Pass
5	1.4548	20.35	14.46	19.62	39.97	34.08	56.00	46.00	-16.03	-11.92	Pass
6	9.6010	20.63	12.40	20.03	40.66	32.43	60.00	50.00	-19.34	-17.57	Pass

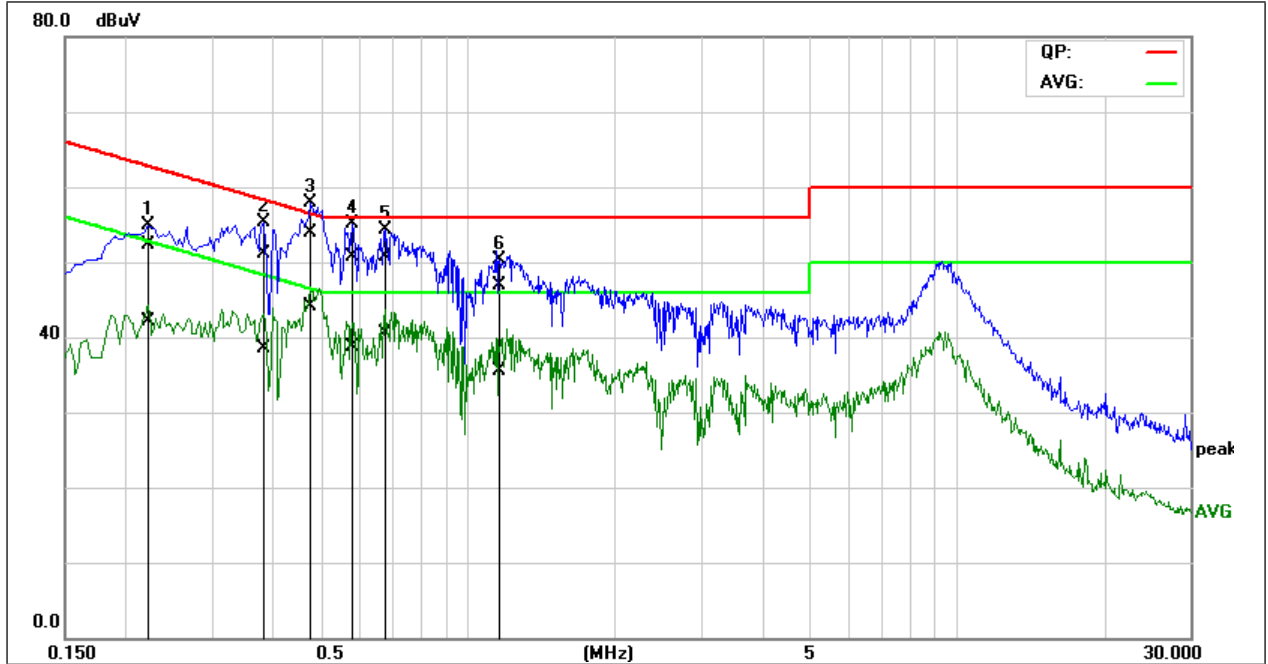


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Test Mode: 02; Line: Neutral Line



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2197	32.91	22.71	19.49	52.40	42.20	62.83	52.83	-10.43	-10.63	Pass
2	0.3824	31.58	19.02	19.52	51.10	38.54	58.23	48.23	-7.13	-9.69	Pass
3*	0.4755	34.42	24.58	19.55	53.97	44.13	56.42	46.42	-2.45	-2.29	Pass
4	0.5726	31.17	19.17	19.56	50.73	38.73	56.00	46.00	-5.27	-7.27	Pass
5	0.6830	31.13	20.94	19.56	50.69	40.50	56.00	46.00	-5.31	-5.50	Pass
6	1.1624	27.27	15.82	19.61	46.88	35.43	56.00	46.00	-9.12	-10.57	Pass

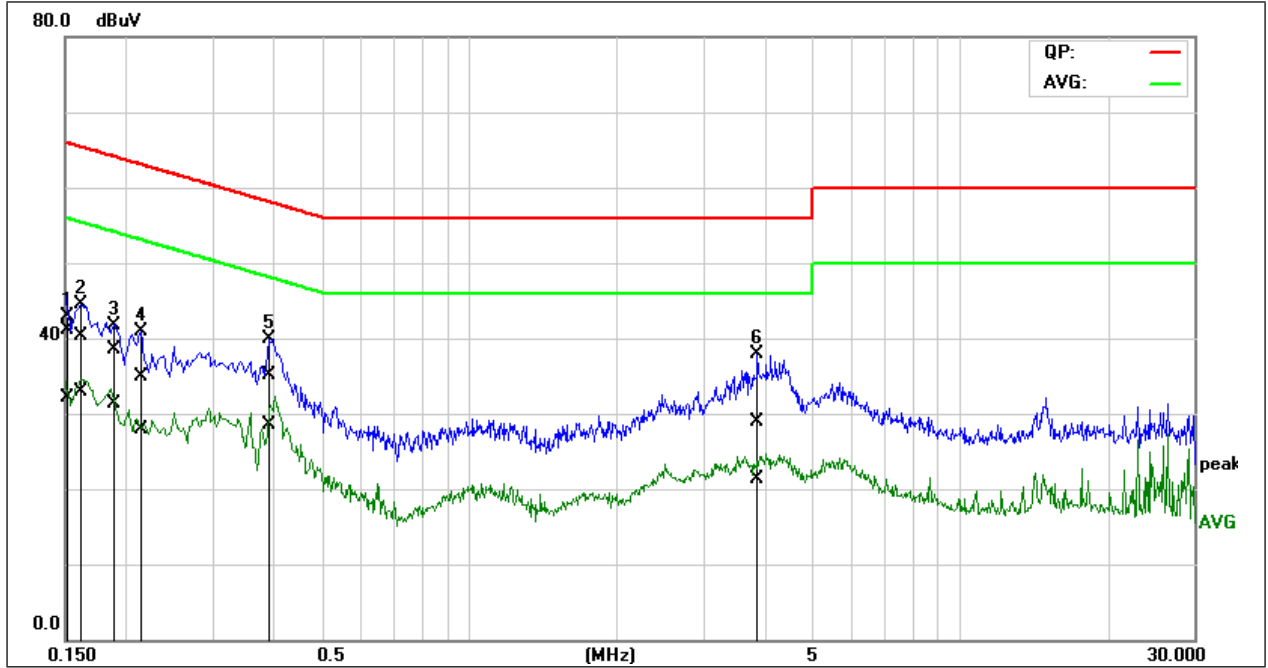


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Test Mode: 03; Line: Live line



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1531	21.65	12.60	19.50	41.15	32.10	65.83	55.83	-24.68	-23.73	Pass
2	0.1607	20.88	13.32	19.50	40.38	32.82	65.43	55.43	-25.05	-22.61	Pass
3	0.1851	18.91	11.88	19.50	38.41	31.38	64.25	54.25	-25.84	-22.87	Pass
4	0.2145	15.48	8.46	19.50	34.98	27.96	63.03	53.03	-28.05	-25.07	Pass
5*	0.3911	15.64	8.88	19.53	35.17	28.41	58.04	48.04	-22.87	-19.63	Pass
6	3.8735	9.19	1.50	19.76	28.95	21.26	56.00	46.00	-27.05	-24.74	Pass

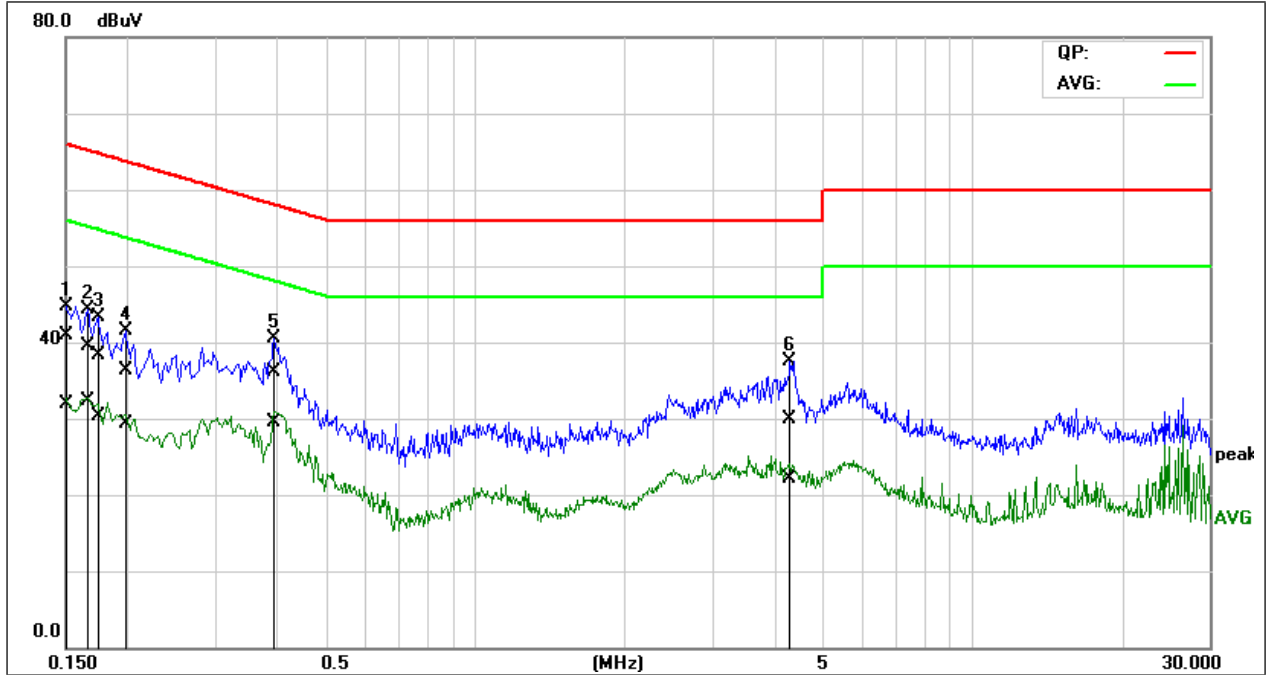


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Test Mode: 03; Line: Neutral Line



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1520	21.37	12.38	19.48	40.85	31.86	65.89	55.89	-25.04	-24.03	Pass
2	0.1668	19.98	12.77	19.48	39.46	32.25	65.12	55.12	-25.66	-22.87	Pass
3	0.1725	18.77	10.74	19.48	38.25	30.22	64.84	54.84	-26.59	-24.62	Pass
4	0.1996	16.89	9.82	19.49	36.38	29.31	63.63	53.63	-27.25	-24.32	Pass
5*	0.3934	16.56	9.90	19.52	36.08	29.42	57.99	47.99	-21.91	-18.57	Pass
6	4.3166	10.14	2.40	19.77	29.91	22.17	56.00	46.00	-26.09	-23.83	Pass



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6.2 Asymmetric Mode Conducted Emissions(150kHz-30MHz)

Test Requirement: EN 55032: 2015+A11:2020+A1:2020
 Test Method: EN 55032: 2015+A11:2020+A1:2020
 Limit:
 0.15 MHz -0.5MHz 84dB(μV)-74dB(μV) quasi-peak, 74dB(μV)-64dB(μV) average
 0.5 MHz -30MHz 74dB(μV) quasi-peak, 64dB(μV) average
 Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

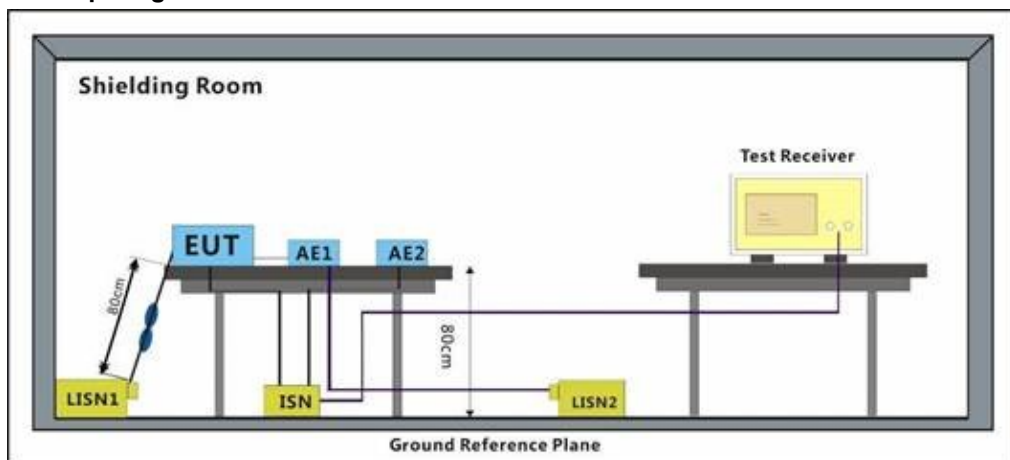
6.2.1 E.U.T. Operation

Operating Environment:
 Temperature: 20.5 °C Humidity: 35.1 % RH Atmospheric Pressure: 1010 mbar

6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

6.2.3 Test Setup Diagram



6.2.4 Measurement Procedure and Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

Remark: Level= Read Level+ Cable Loss+ LISN Factor



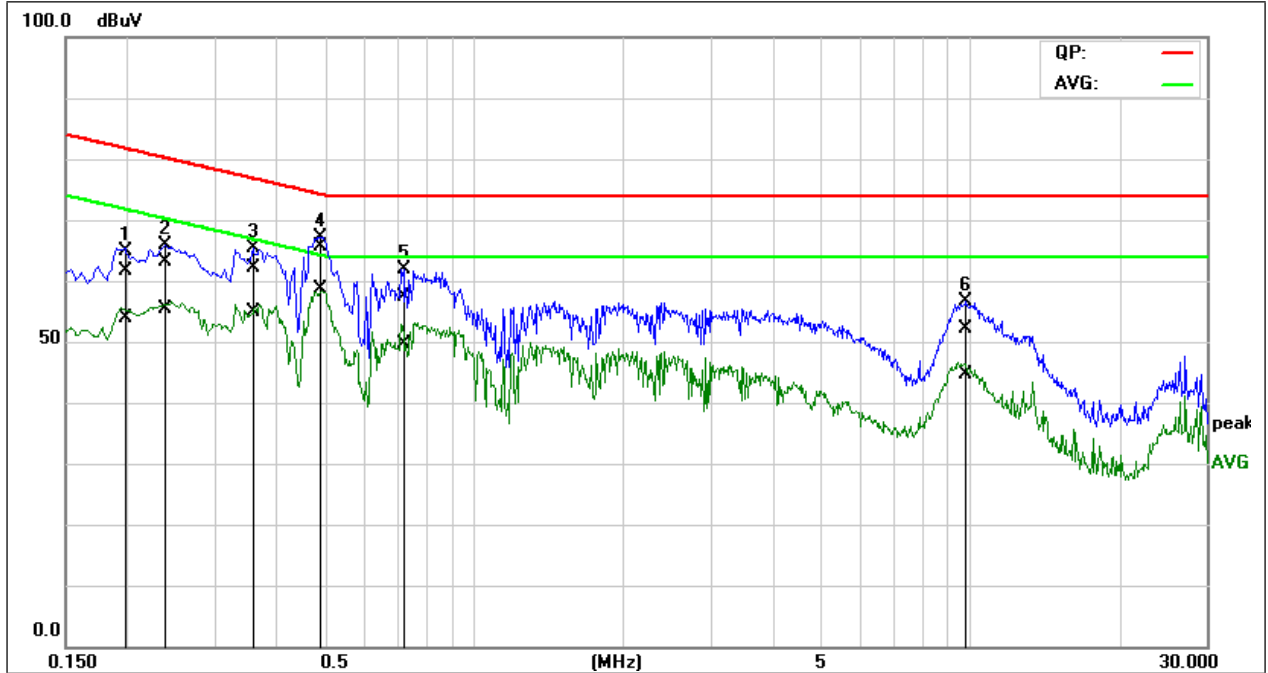
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Test Mode: 00



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2005	41.76	33.98	19.78	61.54	53.76	81.59	71.59	-20.05	-17.83	Pass
2	0.2369	43.45	35.69	19.71	63.16	55.40	80.20	70.20	-17.04	-14.80	Pass
3	0.3561	42.66	35.26	19.58	62.24	54.84	76.82	66.82	-14.58	-11.98	Pass
4*	0.4921	45.95	38.95	19.56	65.51	58.51	74.13	64.13	-8.62	-5.62	Pass
5	0.7252	37.85	30.23	19.51	57.36	49.74	74.00	64.00	-16.64	-14.26	Pass
6	9.8574	32.42	24.80	19.78	52.20	44.58	74.00	64.00	-21.80	-19.42	Pass

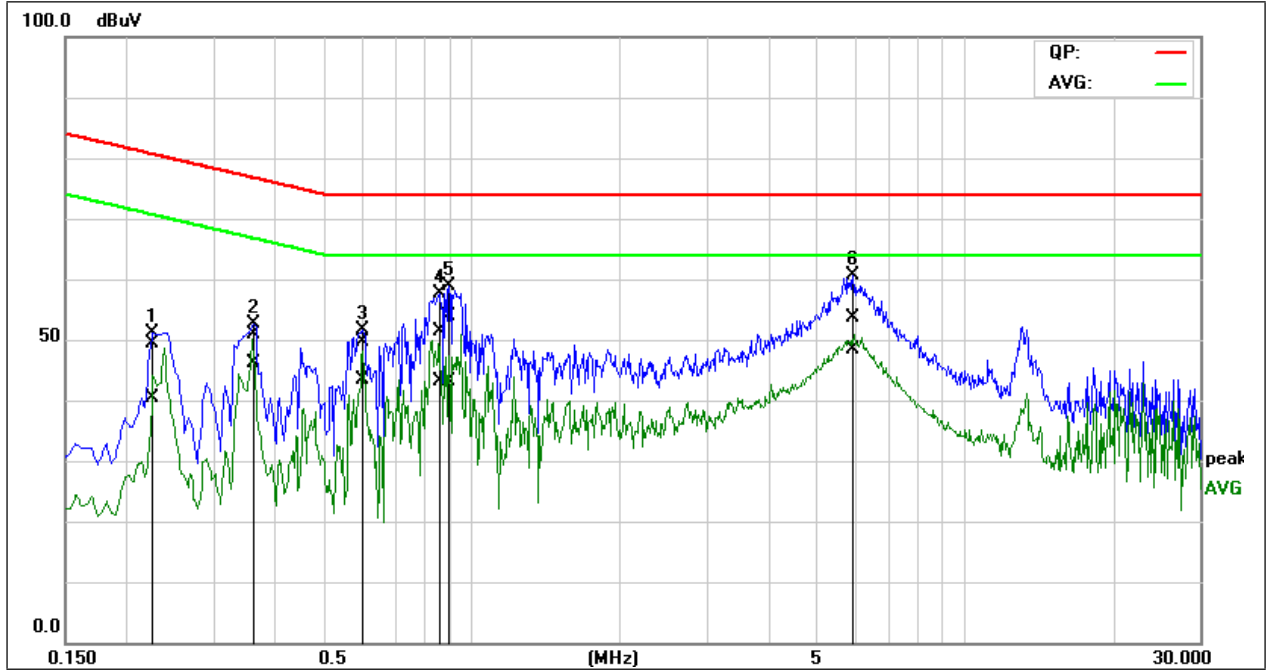


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Test Mode: 01



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2248	29.61	20.66	19.74	49.35	40.40	80.64	70.64	-31.29	-30.24	Pass
2	0.3594	31.39	26.45	19.58	50.97	46.03	76.74	66.74	-25.77	-20.71	Pass
3	0.5960	30.21	23.80	19.54	49.75	43.34	74.00	64.00	-24.25	-20.66	Pass
4	0.8688	31.92	23.57	19.51	51.43	43.08	74.00	64.00	-22.57	-20.92	Pass
5	0.8992	34.37	23.51	19.50	53.87	43.01	74.00	64.00	-20.13	-20.99	Pass
6*	5.9099	33.94	28.77	19.64	53.58	48.41	74.00	64.00	-20.42	-15.59	Pass

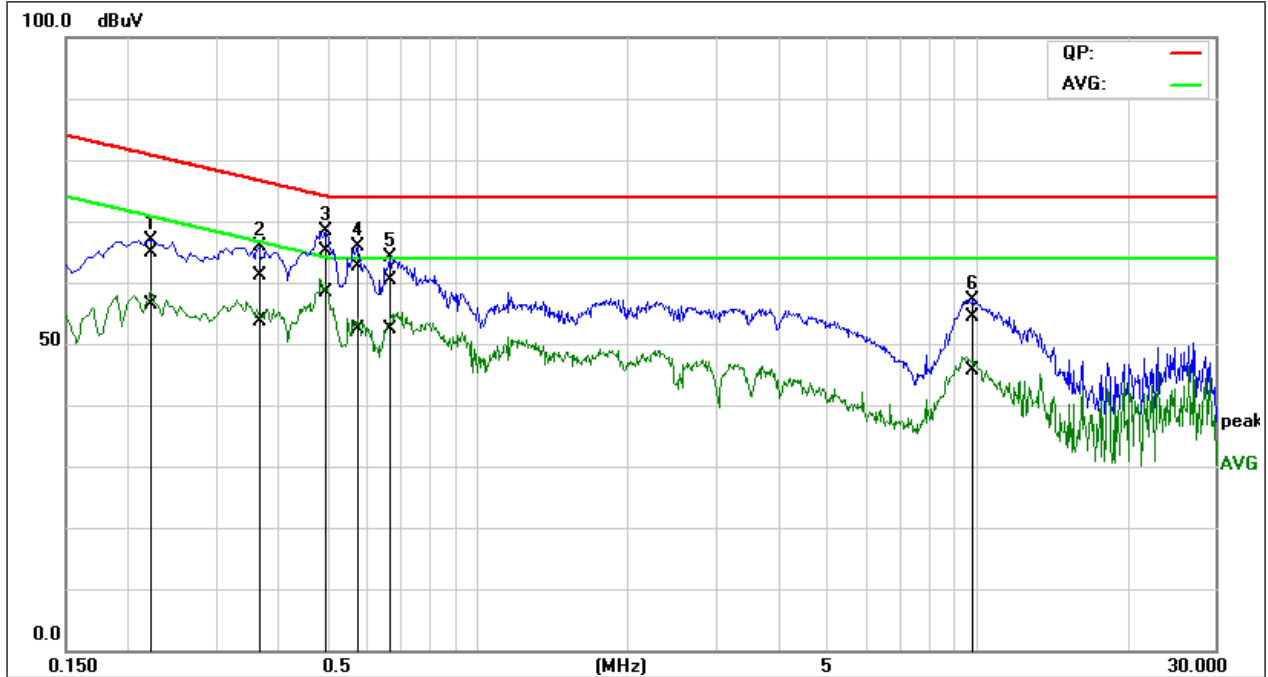


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Test Mode: 02



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2226	45.10	36.61	19.74	64.84	56.35	80.72	70.72	-15.88	-14.37	Pass
2	0.3621	41.63	34.01	19.59	61.22	53.60	76.68	66.68	-15.46	-13.08	Pass
3*	0.4891	45.64	38.79	19.56	65.20	58.35	74.18	64.18	-8.98	-5.83	Pass
4	0.5719	42.97	32.94	19.55	62.52	52.49	74.00	64.00	-11.48	-11.51	Pass
5	0.6716	40.92	32.95	19.53	60.45	52.48	74.00	64.00	-13.55	-11.52	Pass
6	9.8129	34.48	25.90	19.78	54.26	45.68	74.00	64.00	-19.74	-18.32	Pass

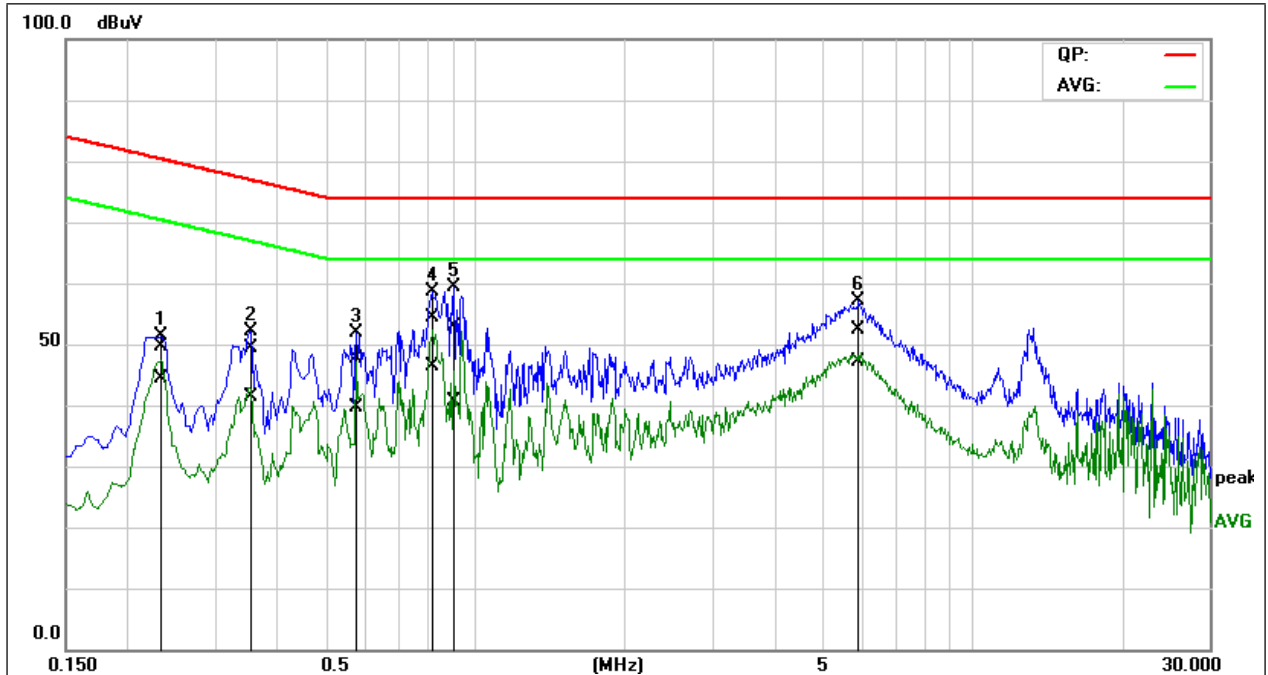


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Test Mode: 03



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.2339	29.96	24.60	19.72	49.68	44.32	80.31	70.31	-30.63	-25.99	Pass
2	0.3521	29.85	21.78	19.59	49.44	41.37	76.91	66.91	-27.47	-25.54	Pass
3	0.5808	28.06	20.07	19.54	47.60	39.61	74.00	64.00	-26.40	-24.39	Pass
4	0.8143	34.86	26.93	19.51	54.37	46.44	74.00	64.00	-19.63	-17.56	Pass
5	0.9136	33.46	21.17	19.50	52.96	40.67	74.00	64.00	-21.04	-23.33	Pass
6*	5.8443	32.84	27.54	19.64	52.48	47.18	74.00	64.00	-21.52	-16.82	Pass



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6.3 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN 55032: 2015+A11:2020+A1:2020
 Test Method: EN 55032: 2015+A11:2020+A1:2020
 Limit:
 30MHz-230MHz: 40 dB(μV/m) quasi-peak
 230MHz-1GHz: 47 dB(μV/m) quasi-peak
 Detector: Peak for pre-scan (120kHz resolution bandwidth) 30MHz to 1000MHz

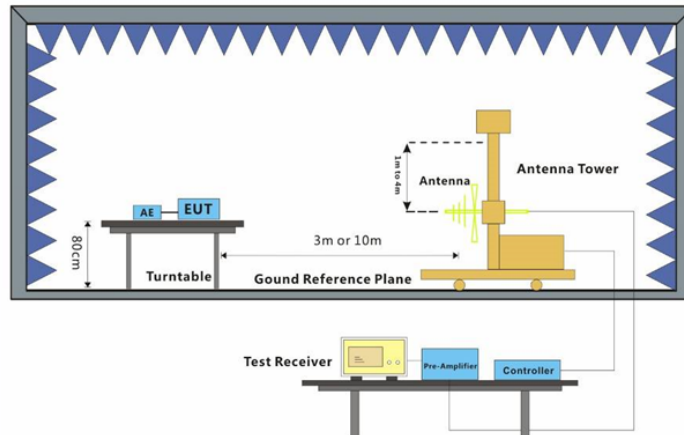
6.3.1 E.U.T. Operation

Operating Environment:
 Temperature: 19.7 °C Humidity: 35.3 % RH Atmospheric Pressure: 1010 mbar

6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

6.3.3 Test Setup Diagram



6.3.4 Measurement Procedure and Data

Frequency range: 30MHz-1GHz

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

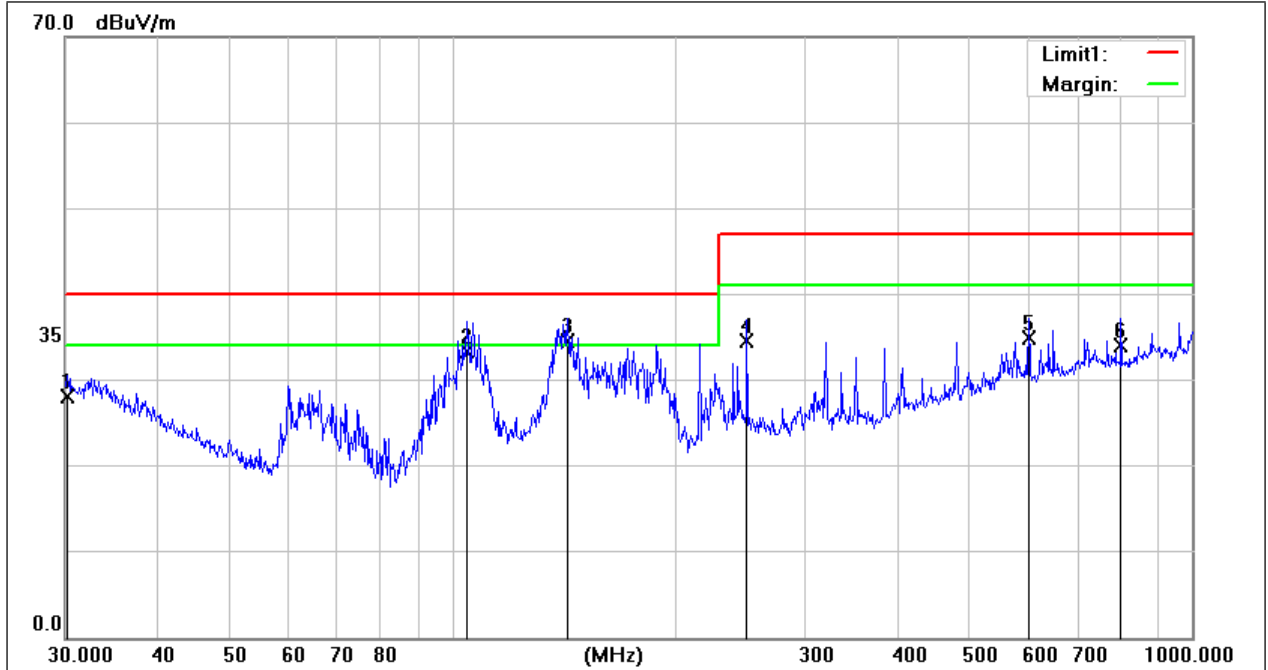


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Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	30.2111	2.84	25.22	28.06	40.00	-11.94	200	147	QP
2	104.9033	15.54	17.82	33.36	40.00	-6.64	200	223	QP
3	143.3261	16.38	18.20	34.58	40.00	-5.42	200	321	QP
4	250.3012	14.79	19.79	34.58	47.00	-12.42	100	0	QP
5	601.4265	7.77	27.09	34.86	47.00	-12.14	300	124	QP
6	801.7863	5.80	28.32	34.12	47.00	-12.88	100	309	QP



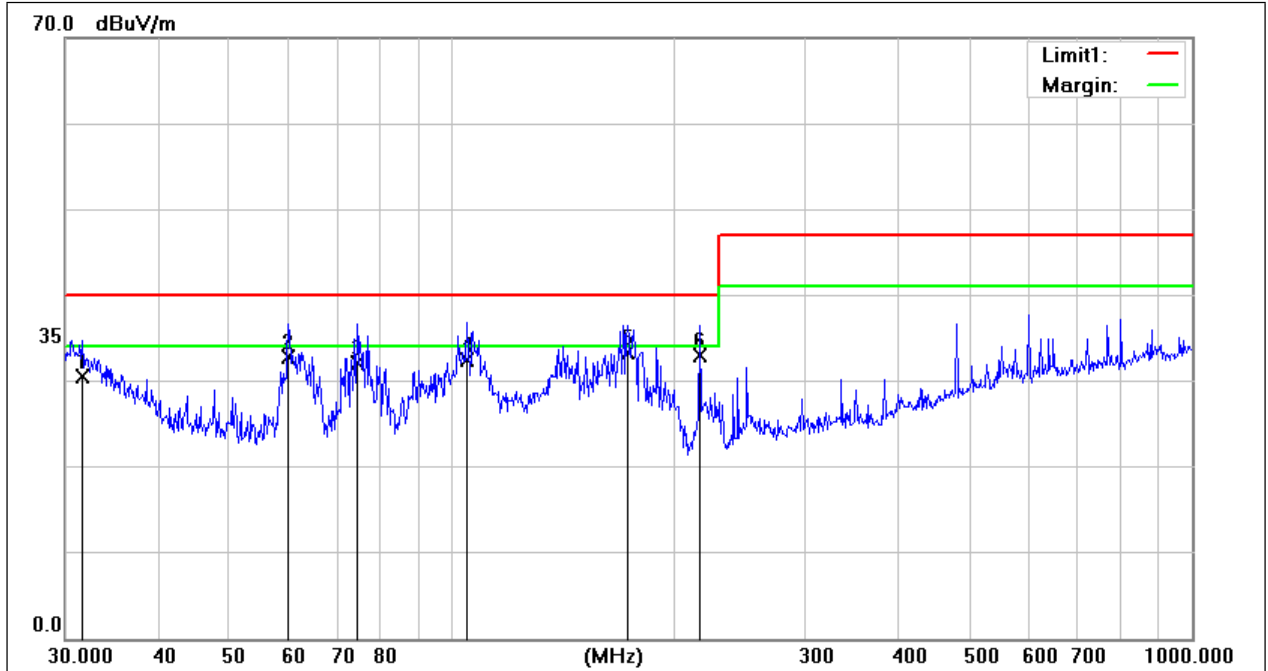
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Test Mode: 00; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	31.6202	5.42	25.14	30.56	40.00	-9.44	200	0	QP
2	60.0691	17.93	14.92	32.85	40.00	-7.15	100	229	QP
3	74.3955	16.88	15.18	32.06	40.00	-7.94	100	295	QP
4	104.5361	14.71	17.77	32.48	40.00	-7.52	400	305	QP
5	172.5988	16.40	16.86	33.26	40.00	-6.74	200	346	QP
6	216.0240	16.46	16.59	33.05	40.00	-6.95	100	328	QP

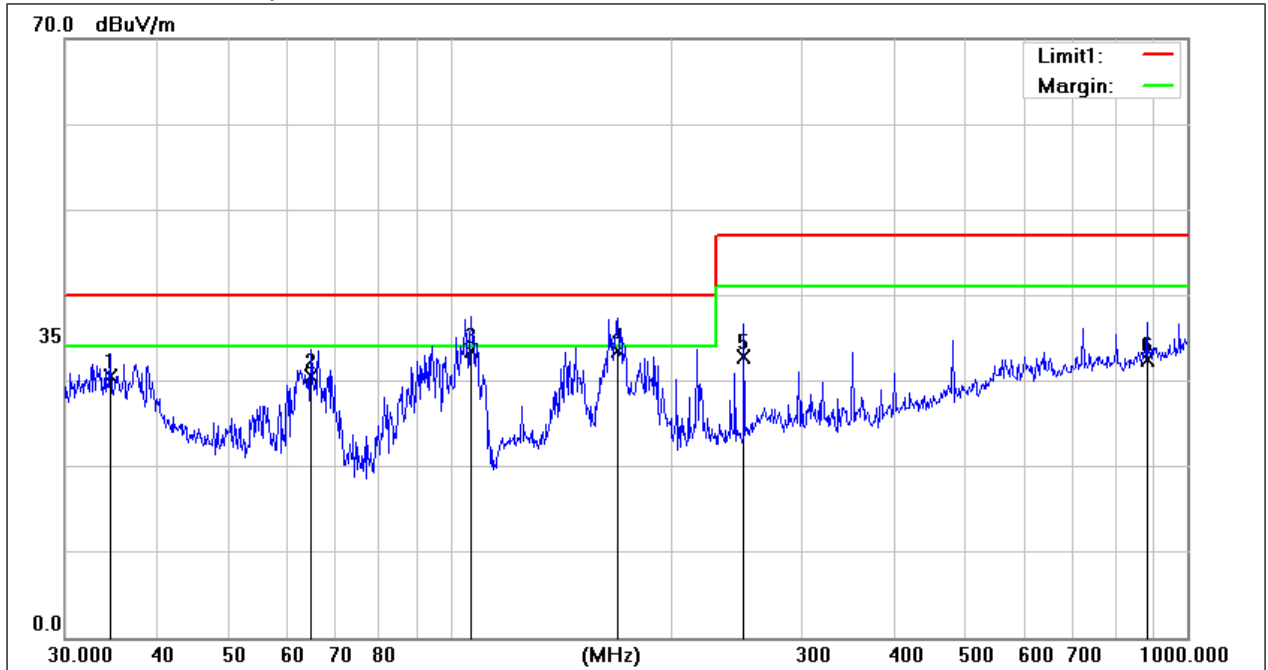


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Test Mode: 01; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	34.5173	5.72	24.77	30.49	40.00	-9.51	200	270	QP
2	64.6594	15.68	14.88	30.56	40.00	-9.44	200	280	QP
3	106.7587	15.43	18.06	33.49	40.00	-6.51	300	236	QP
4	169.0054	16.53	17.03	33.56	40.00	-6.44	200	63	QP
5	250.3012	13.07	19.79	32.86	47.00	-14.14	400	0	QP
6	881.4067	3.07	29.39	32.46	47.00	-14.54	100	203	QP



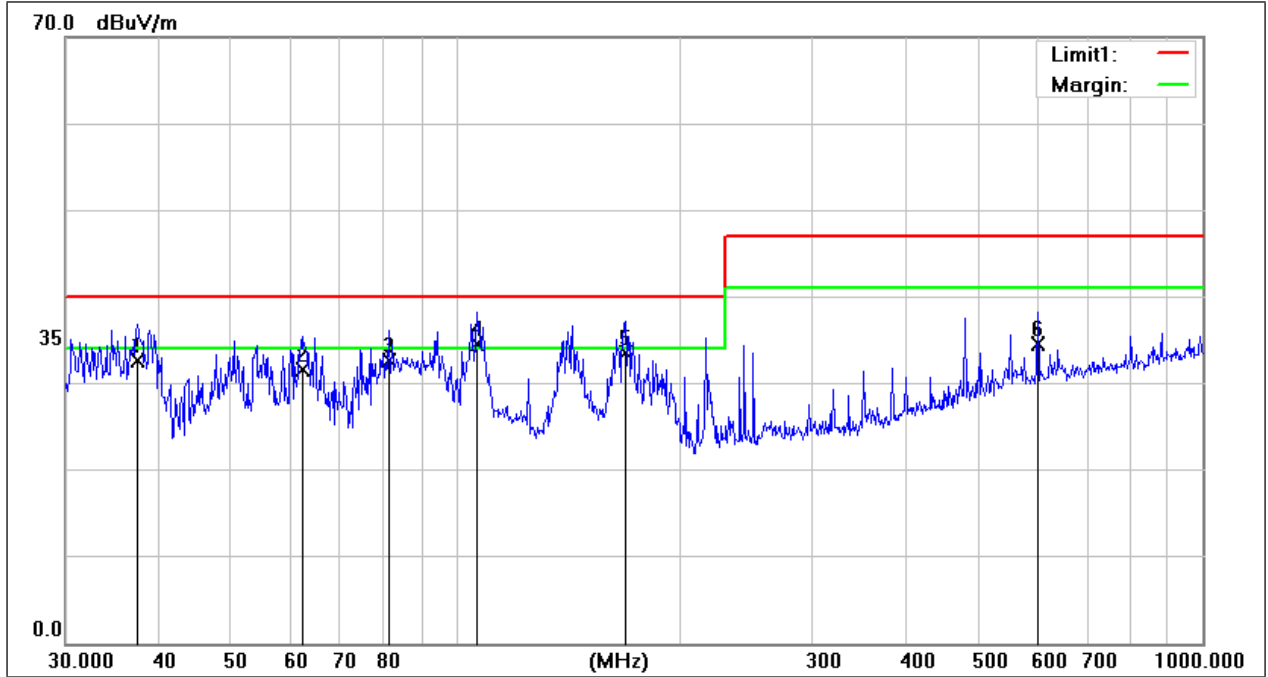
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Test Mode: 01; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	37.4165	9.17	23.39	32.56	40.00	-7.44	100	276	QP
2	62.2128	16.97	14.68	31.65	40.00	-8.35	200	0	QP
3	81.2117	18.56	14.07	32.63	40.00	-7.37	100	360	QP
4	106.7587	16.50	18.06	34.56	40.00	-5.44	400	0	QP
5	169.0054	16.42	17.03	33.45	40.00	-6.55	100	301	QP
6	601.4265	7.47	27.09	34.56	47.00	-12.44	100	8	QP



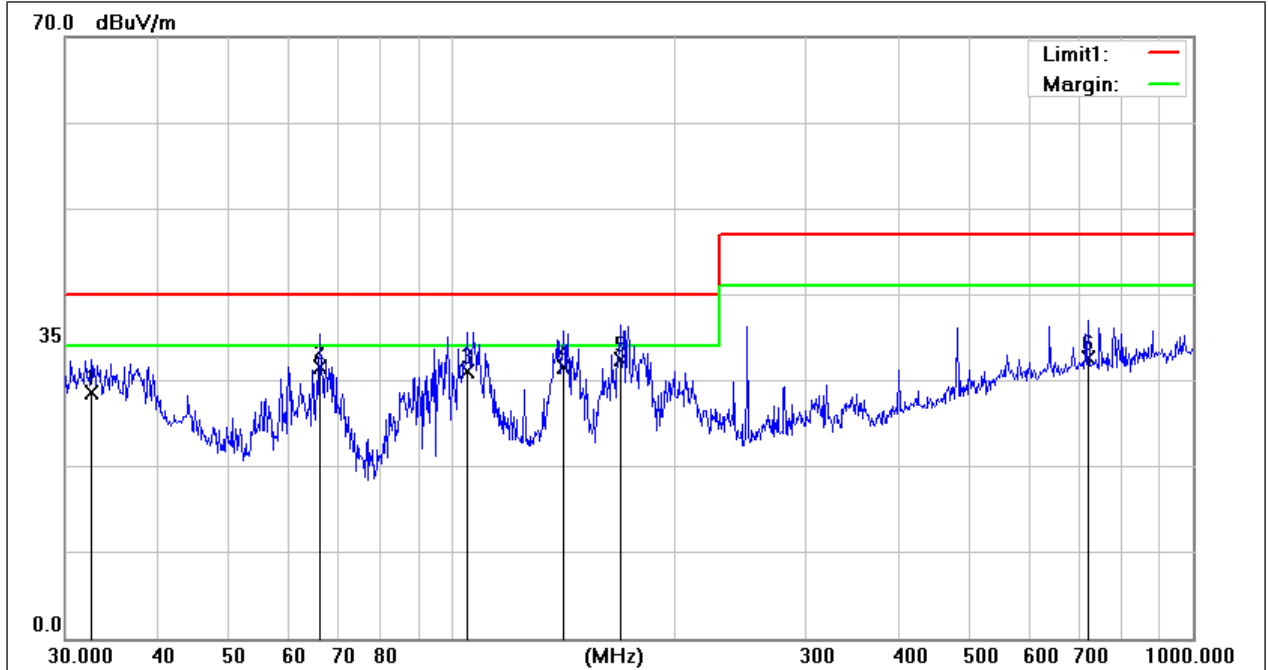
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Test Mode: 02; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	32.5198	3.54	25.09	28.63	40.00	-11.37	200	56	QP
2	66.2662	16.46	15.19	31.65	40.00	-8.35	400	360	QP
3	104.5361	13.25	17.77	31.02	40.00	-8.98	200	240	QP
4	141.3298	13.21	18.41	31.62	40.00	-8.38	200	240	QP
5	169.0054	15.45	17.03	32.48	40.00	-7.52	200	46	QP
6	721.7259	4.59	27.97	32.56	47.00	-14.44	100	347	QP



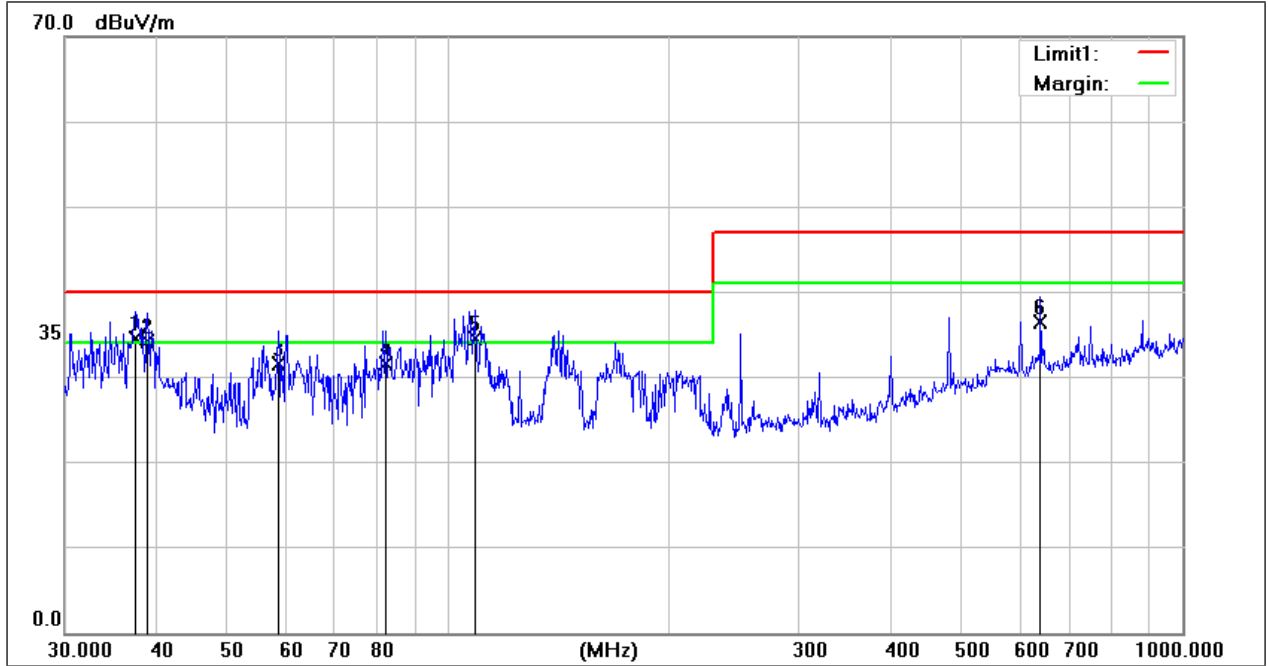
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Test Mode: 02; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	37.4165	11.19	23.39	34.58	40.00	-5.42	100	274	QP
2	38.8879	11.41	22.72	34.13	40.00	-5.87	100	322	QP
3	58.6126	16.40	15.16	31.56	40.00	-8.44	200	326	QP
4	82.0706	17.48	14.04	31.52	40.00	-8.48	100	336	QP
5	108.6470	16.27	18.29	34.56	40.00	-5.44	400	360	QP
6	640.6110	8.71	27.81	36.52	47.00	-10.48	200	6	QP

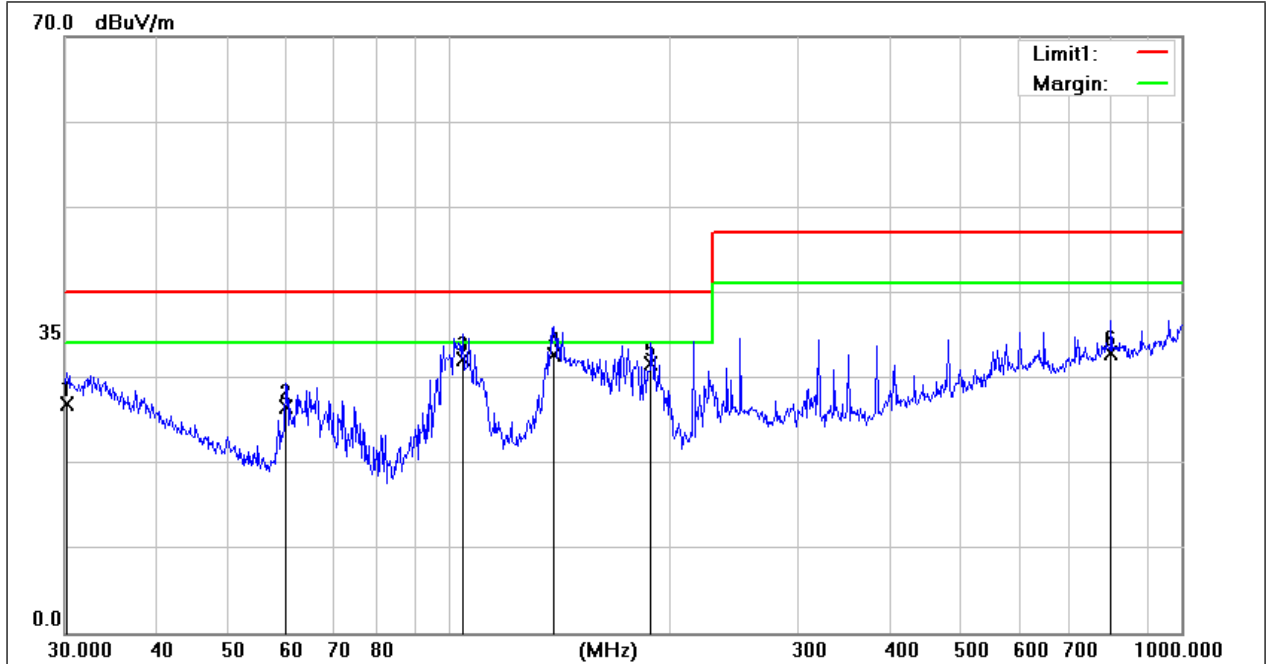


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Test Mode: 03; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	30.2110	1.73	25.22	26.95	40.00	-13.05	400	21	QP
2	60.0690	11.61	14.92	26.53	40.00	-13.47	300	356	QP
3	104.5361	14.38	17.77	32.15	40.00	-7.85	200	26	QP
4	139.3612	13.92	18.64	32.56	40.00	-7.44	100	253	QP
5	189.0742	15.16	16.36	31.52	40.00	-8.48	100	360	QP
6	801.7862	30.60	2.25	32.85	47.00	-14.15	200	0	QP



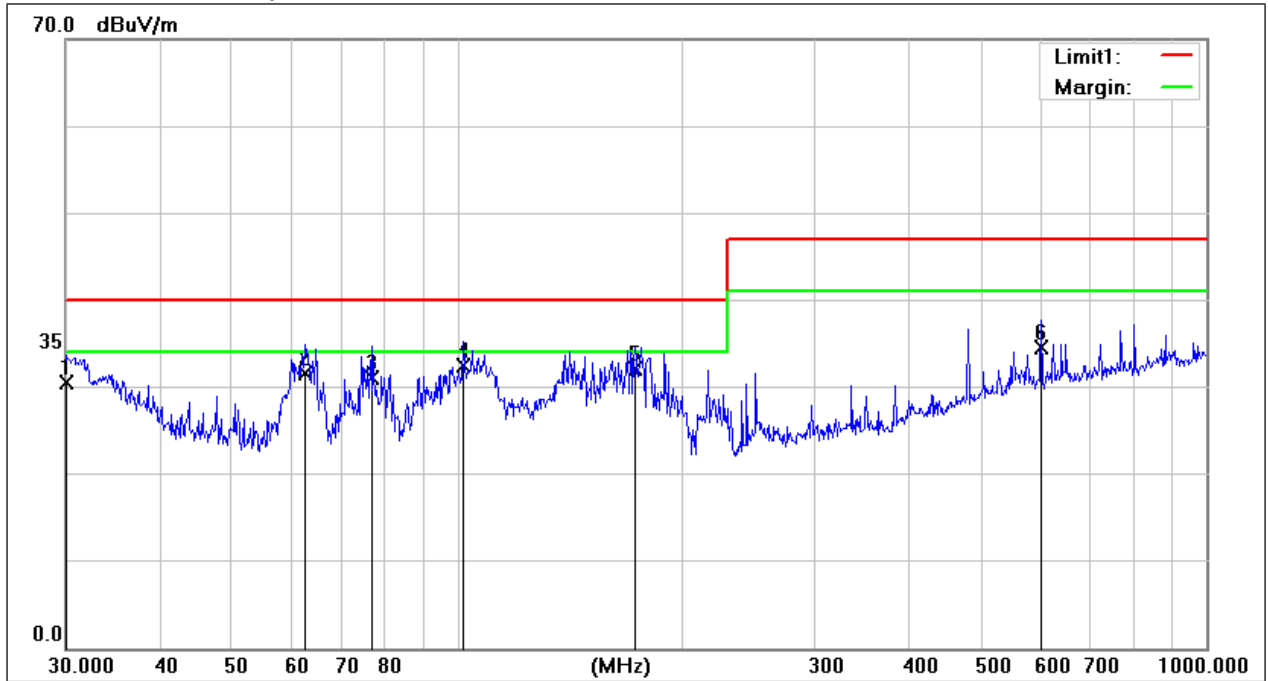
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 (86-512)57355888 (86-512)57370818 sgs.china@sgs.com

Test Mode: 03; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	30.0000	5.31	25.25	30.56	40.00	-9.44	200	360	QP
2	62.6507	16.94	14.69	31.63	40.00	-8.37	400	0	QP
3	77.0504	16.48	14.57	31.05	40.00	-8.95	200	20	QP
4	102.0014	15.07	17.39	32.46	40.00	-7.54	100	325	QP
5	172.5988	15.29	16.86	32.15	40.00	-7.85	100	256	QP
6	601.4265	7.49	27.09	34.58	47.00	-12.42	100	15	QP



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6.4 Radiated Emissions (Above 1GHz)

Test Requirement: EN 55032: 2015+A11:2020+A1:2020

Test Method: EN 55032: 2015+A11:2020+A1:2020

Limit:

1000MHz-6000MHz: 74 dB(μV/m) peak; 54 dB(μV/m) average

Detector: Peak for pre-scan (1000kHz resolution bandwidth) 1000MHz to 6000MHz

6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 20.7 °C

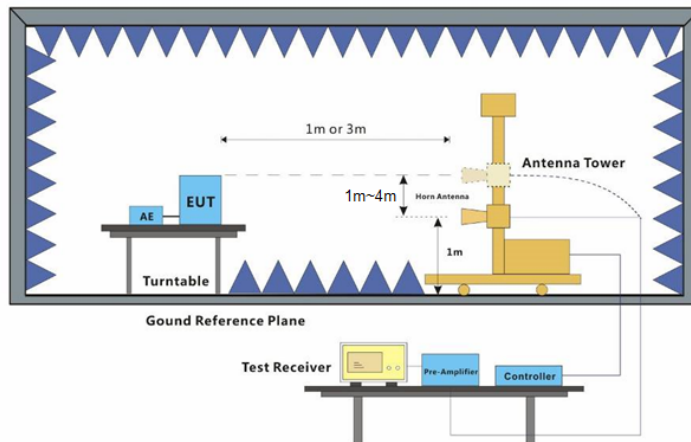
Humidity: 38.2 % RH

Atmospheric Pressure: 1010 mbar

6.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

6.4.3 Test Setup Diagram



6.4.4 Measurement Procedure and Data

Frequency range: Above 1GHz

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

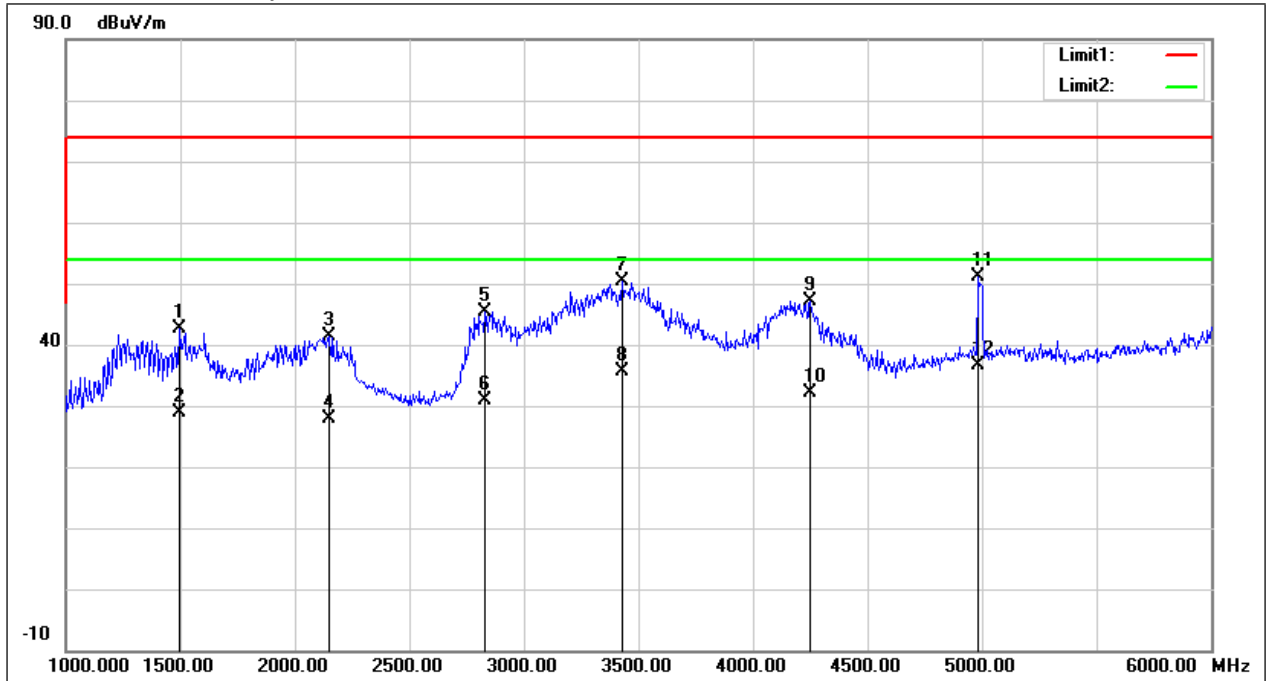


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Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1495.000	64.92	-22.24	42.68	74.00	-31.32	100	285	peak
2	1495.000	51.06	-22.24	28.82	54.00	-25.18	100	285	AVG
3	2150.000	61.78	-20.30	41.48	74.00	-32.52	200	197	peak
4	2150.000	48.08	-20.30	27.78	54.00	-26.22	200	197	AVG
5	2830.000	63.57	-18.22	45.35	74.00	-28.65	200	218	peak
6	2830.000	49.20	-18.22	30.98	54.00	-23.02	200	218	AVG
7	3430.000	67.96	-17.70	50.26	74.00	-23.74	100	194	peak
8	3430.000	53.34	-17.70	35.64	54.00	-18.36	100	194	AVG
9	4250.000	61.65	-14.43	47.22	74.00	-26.78	200	187	peak
10	4250.000	46.58	-14.43	32.15	54.00	-21.85	200	187	AVG
11	4985.000	64.48	-13.32	51.16	74.00	-22.84	100	190	peak
12	4985.000	50.01	-13.32	36.69	54.00	-17.31	100	190	AVG

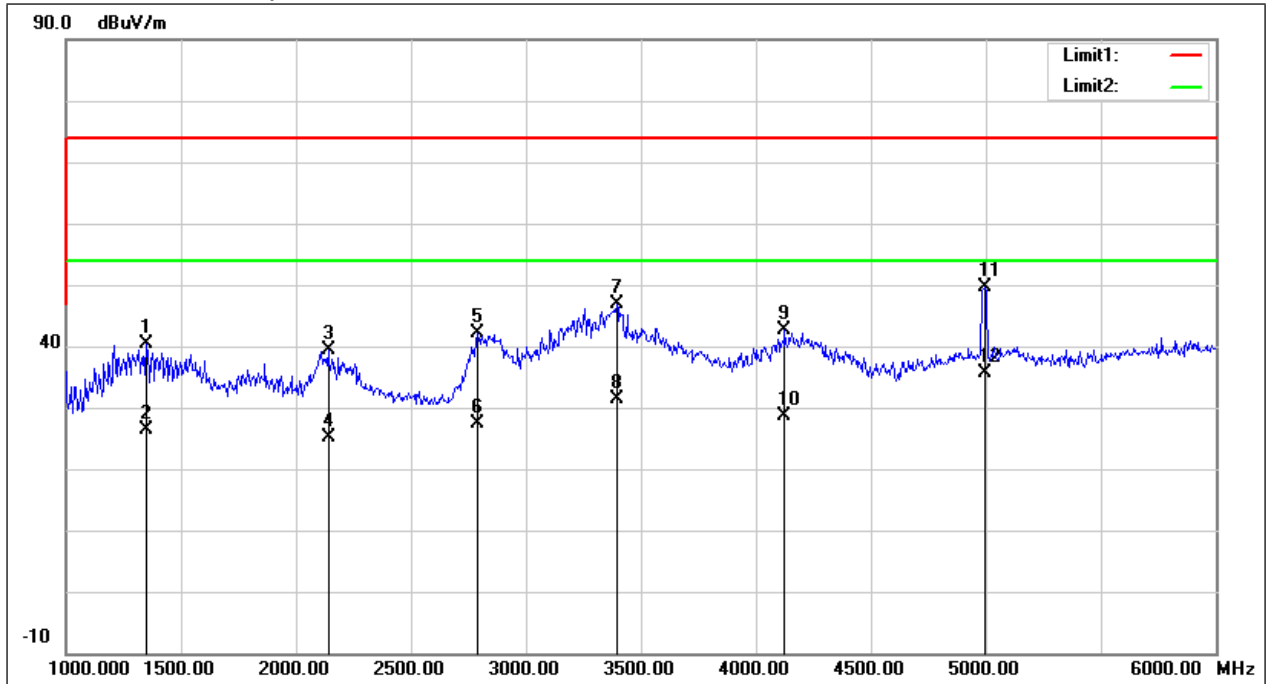


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Test Mode: 00; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1350.000	62.53	-22.14	40.39	74.00	-33.61	100	310	peak
2	1350.000	48.53	-22.14	26.39	54.00	-27.61	100	310	AVG
3	2140.000	59.71	-20.43	39.28	74.00	-34.72	200	306	peak
4	2140.000	45.53	-20.43	25.10	54.00	-28.90	200	306	AVG
5	2790.000	60.51	-18.27	42.24	74.00	-31.76	200	323	peak
6	2790.000	45.61	-18.27	27.34	54.00	-26.66	200	323	AVG
7	3395.000	64.72	-17.82	46.90	74.00	-27.10	100	116	peak
8	3395.000	49.08	-17.82	31.26	54.00	-22.74	100	116	AVG
9	4125.000	57.41	-14.71	42.70	74.00	-31.30	200	116	peak
10	4125.000	43.36	-14.71	28.65	54.00	-25.35	200	116	AVG
11	4995.000	63.01	-13.30	49.71	74.00	-24.29	100	105	peak
12	4995.000	48.92	-13.30	35.62	54.00	-18.38	100	105	AVG

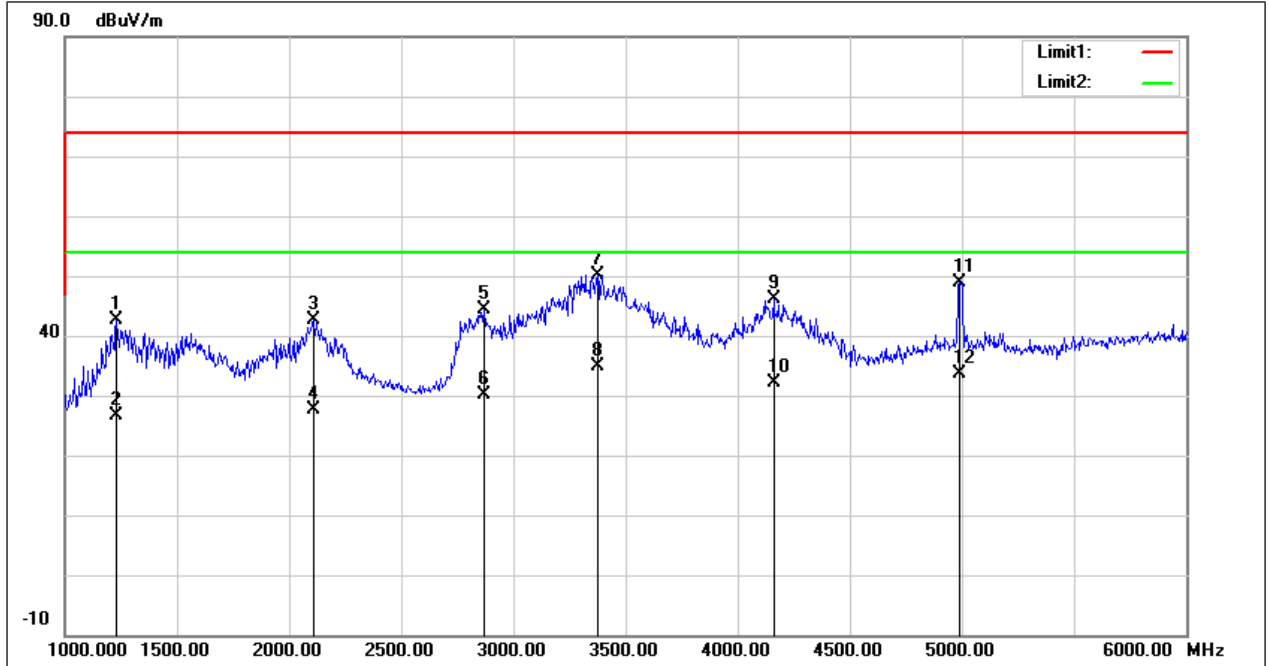


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Test Mode: 01; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1230.000	65.54	-22.95	42.59	74.00	-31.41	100	23	peak
2	1230.000	49.51	-22.95	26.56	54.00	-27.44	100	23	AVG
3	2110.000	63.46	-20.83	42.63	74.00	-31.37	100	193	peak
4	2110.000	48.52	-20.83	27.69	54.00	-26.31	100	193	AVG
5	2870.000	62.63	-18.14	44.49	74.00	-29.51	200	226	peak
6	2870.000	48.37	-18.14	30.23	54.00	-23.77	200	226	AVG
7	3375.000	67.98	-17.83	50.15	74.00	-23.85	200	187	peak
8	3375.000	52.72	-17.83	34.89	54.00	-19.11	200	187	AVG
9	4160.000	60.82	-14.67	46.15	74.00	-27.85	100	189	peak
10	4160.000	46.80	-14.67	32.13	54.00	-21.87	100	189	AVG
11	4990.000	62.29	-13.31	48.98	74.00	-25.02	200	189	peak
12	4990.000	46.96	-13.31	33.65	54.00	-20.35	200	189	AVG

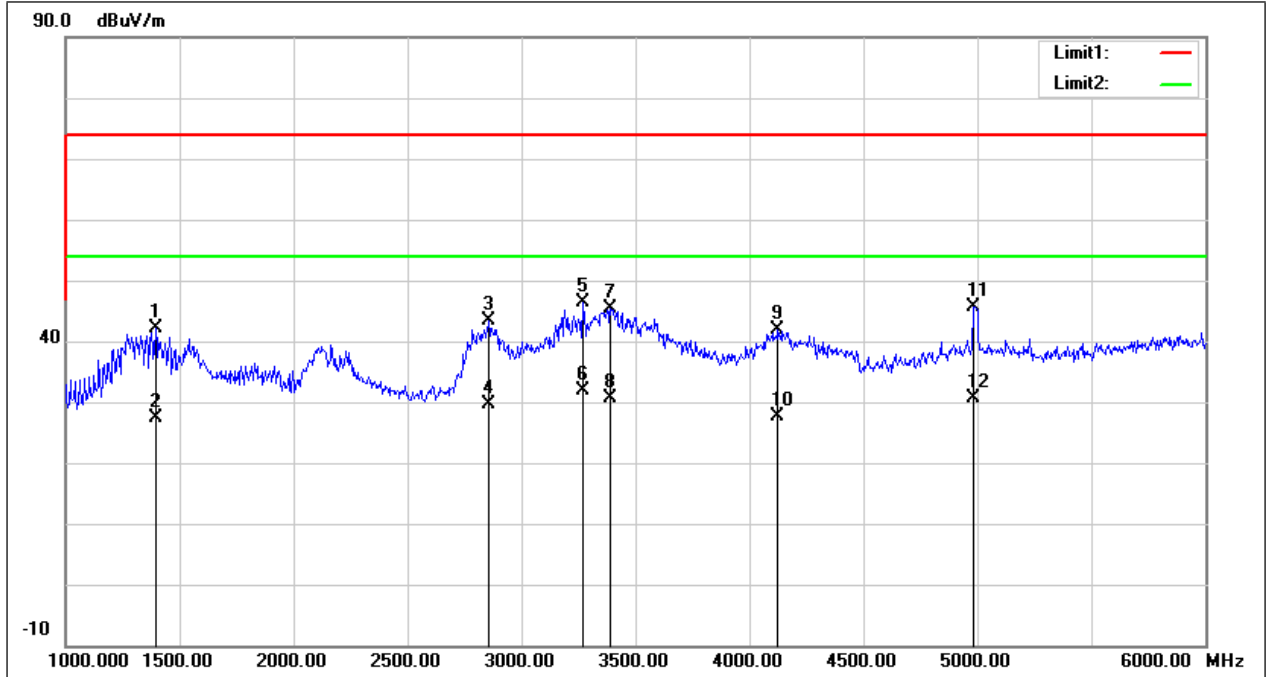


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Test Mode: 01; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1395.000	64.24	-22.08	42.16	74.00	-31.84	200	350	peak
2	1395.000	49.50	-22.08	27.42	54.00	-26.58	200	350	AVG
3	2855.000	61.59	-18.14	43.45	74.00	-30.55	100	122	peak
4	2855.000	47.75	-18.14	29.61	54.00	-24.39	100	122	AVG
5	3270.000	63.90	-17.62	46.28	74.00	-27.72	200	35	peak
6	3270.000	49.57	-17.62	31.95	54.00	-22.05	200	35	AVG
7	3390.000	63.23	-17.81	45.42	74.00	-28.58	100	295	peak
8	3390.000	48.47	-17.81	30.66	54.00	-23.34	100	295	AVG
9	4125.000	56.62	-14.71	41.91	74.00	-32.09	100	105	peak
10	4125.000	42.36	-14.71	27.65	54.00	-26.35	100	105	AVG
11	4980.000	58.99	-13.33	45.66	74.00	-28.34	100	115	peak
12	4980.000	44.02	-13.33	30.69	54.00	-23.31	100	115	AVG

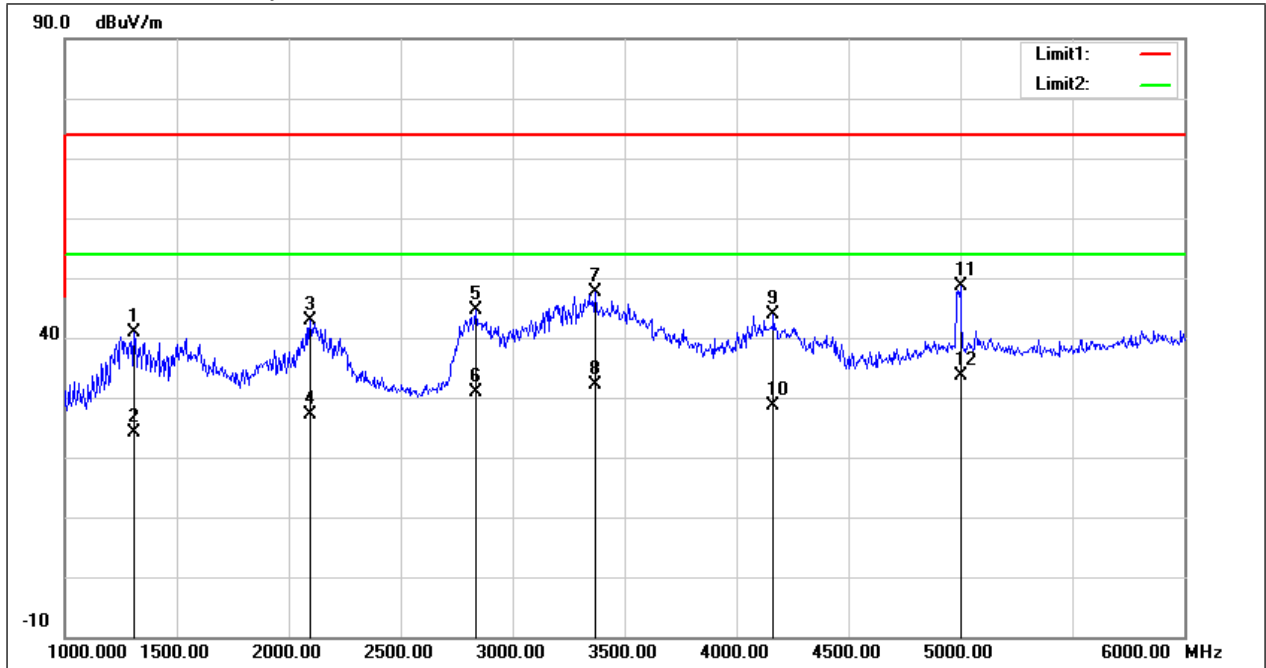


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Test Mode: 02; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1310.000	63.29	-22.37	40.92	74.00	-33.08	100	349	peak
2	1310.000	46.60	-22.37	24.23	54.00	-29.77	100	349	AVG
3	2095.000	63.98	-21.02	42.96	74.00	-31.04	100	190	peak
4	2095.000	48.04	-21.02	27.02	54.00	-26.98	100	190	AVG
5	2835.000	62.87	-18.20	44.67	74.00	-29.33	200	232	peak
6	2835.000	49.04	-18.20	30.84	54.00	-23.16	200	232	AVG
7	3370.000	65.44	-17.83	47.61	74.00	-26.39	100	333	peak
8	3370.000	49.95	-17.83	32.12	54.00	-21.88	100	333	AVG
9	4165.000	58.64	-14.66	43.98	74.00	-30.02	200	296	peak
10	4165.000	43.30	-14.66	28.64	54.00	-25.36	200	296	AVG
11	5000.000	61.86	-13.28	48.58	74.00	-25.42	200	323	peak
12	5000.000	46.93	-13.28	33.65	54.00	-20.35	200	323	AVG

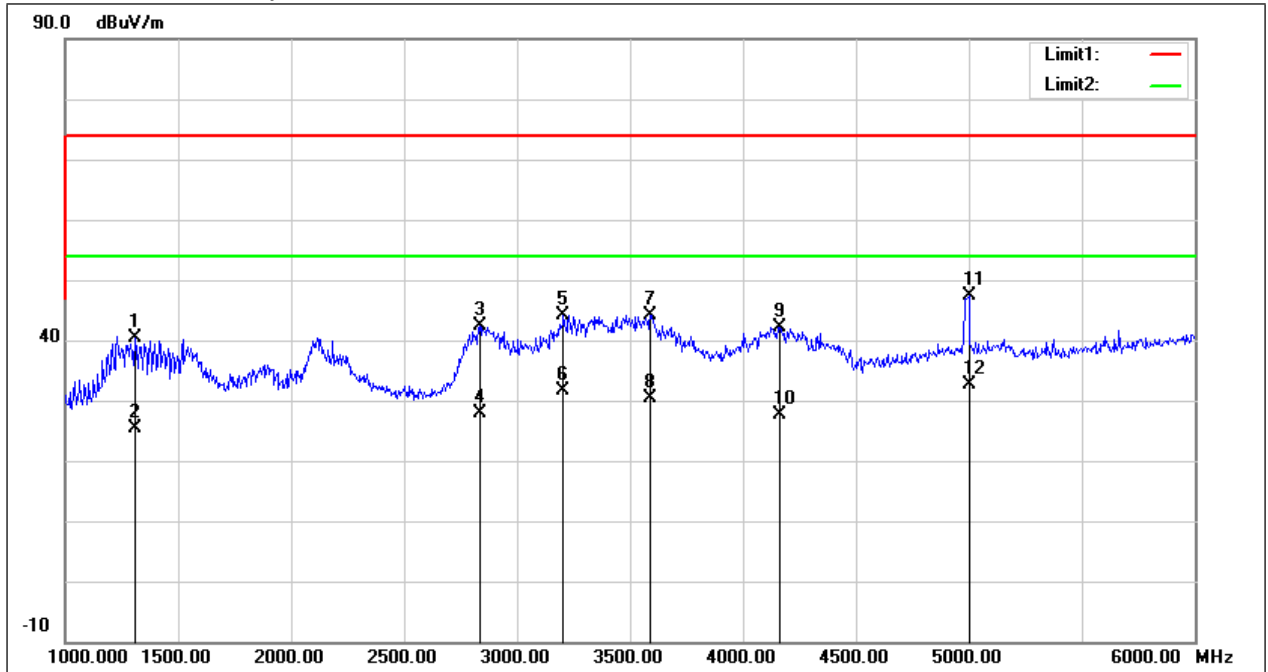


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Test Mode: 02; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1310.000	62.68	-22.37	40.31	74.00	-33.69	100	290	peak
2	1310.000	47.69	-22.37	25.32	54.00	-28.68	100	290	AVG
3	2835.000	60.53	-18.20	42.33	74.00	-31.67	200	317	peak
4	2835.000	46.05	-18.20	27.85	54.00	-26.15	200	317	AVG
5	3205.000	61.69	-17.48	44.21	74.00	-29.79	200	193	peak
6	3205.000	49.17	-17.48	31.69	54.00	-22.31	200	193	AVG
7	3590.000	60.80	-16.63	44.17	74.00	-29.83	100	193	peak
8	3590.000	46.95	-16.63	30.32	54.00	-23.68	100	193	AVG
9	4160.000	56.91	-14.67	42.24	74.00	-31.76	100	197	peak
10	4160.000	42.35	-14.67	27.68	54.00	-26.32	100	197	AVG
11	5000.000	60.67	-13.28	47.39	74.00	-26.61	200	191	peak
12	5000.000	45.96	-13.28	32.68	54.00	-21.32	200	191	AVG

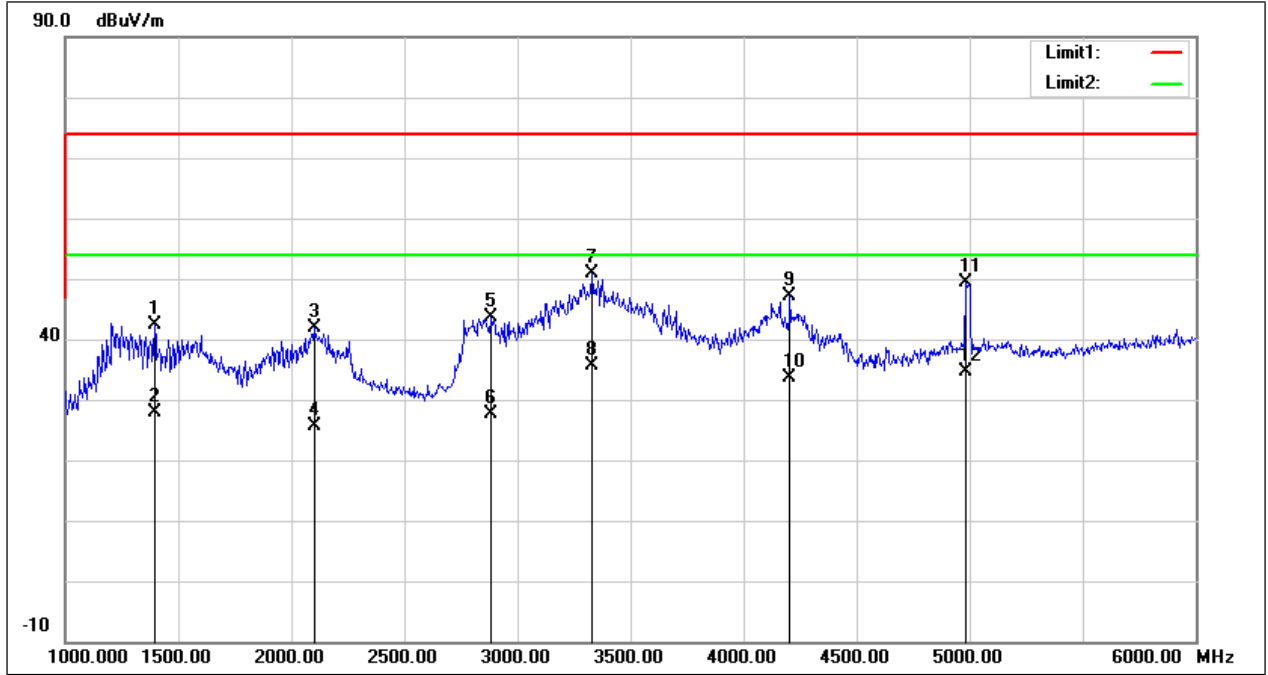


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Test Mode: 03; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1395.000	64.51	-22.08	42.43	74.00	-31.57	100	39	peak
2	1395.000	50.03	-22.08	27.95	54.00	-26.05	100	39	AVG
3	2100.000	62.87	-20.96	41.91	74.00	-32.09	200	200	peak
4	2100.000	46.59	-20.96	25.63	54.00	-28.37	200	200	AVG
5	2885.000	61.78	-18.15	43.63	74.00	-30.37	200	223	peak
6	2885.000	45.66	-18.15	27.51	54.00	-26.49	200	223	AVG
7	3330.000	68.65	-17.79	50.86	74.00	-23.14	100	190	peak
8	3330.000	53.43	-17.79	35.64	54.00	-18.36	100	190	AVG
9	4205.000	61.71	-14.58	47.13	74.00	-26.87	200	190	peak
10	4205.000	48.27	-14.58	33.69	54.00	-20.31	200	190	AVG
11	4980.000	62.68	-13.33	49.35	74.00	-24.65	100	190	peak
12	4980.000	47.98	-13.33	34.65	54.00	-19.35	100	190	AVG

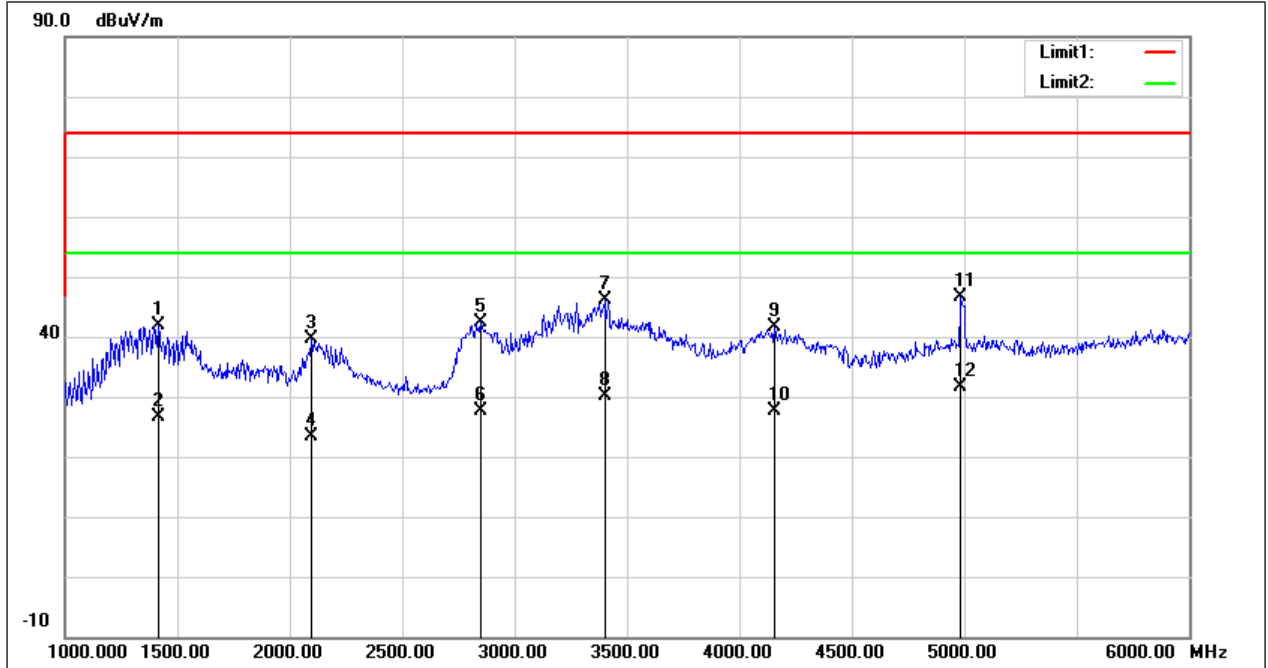


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Test Mode: 03; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1415.000	63.99	-22.04	41.95	74.00	-32.05	100	356	peak
2	1415.000	48.68	-22.04	26.64	54.00	-27.36	100	356	AVG
3	2095.000	60.67	-21.02	39.65	74.00	-34.35	200	229	peak
4	2095.000	44.33	-21.02	23.31	54.00	-30.69	200	229	AVG
5	2850.000	60.49	-18.15	42.34	74.00	-31.66	200	118	peak
6	2850.000	45.84	-18.15	27.69	54.00	-26.31	200	118	AVG
7	3400.000	63.95	-17.82	46.13	74.00	-27.87	100	120	peak
8	3400.000	48.04	-17.82	30.22	54.00	-23.78	100	120	AVG
9	4155.000	56.34	-14.68	41.66	74.00	-32.34	200	272	peak
10	4155.000	42.33	-14.68	27.65	54.00	-26.35	200	272	AVG
11	4985.000	59.89	-13.32	46.57	74.00	-27.43	100	253	peak
12	4985.000	44.97	-13.32	31.65	54.00	-22.35	100	253	AVG



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6.5 Voltage Fluctuations and Flicker

Test Requirement: EN 61000-3-3: 2013+ A1:2019+A2:2021

Test Method: EN 61000-3-3: 2013+ A1:2019+A2:2021

6.5.1 E.U.T. Operation

Operating Environment:

Temperature: 17.6 °C

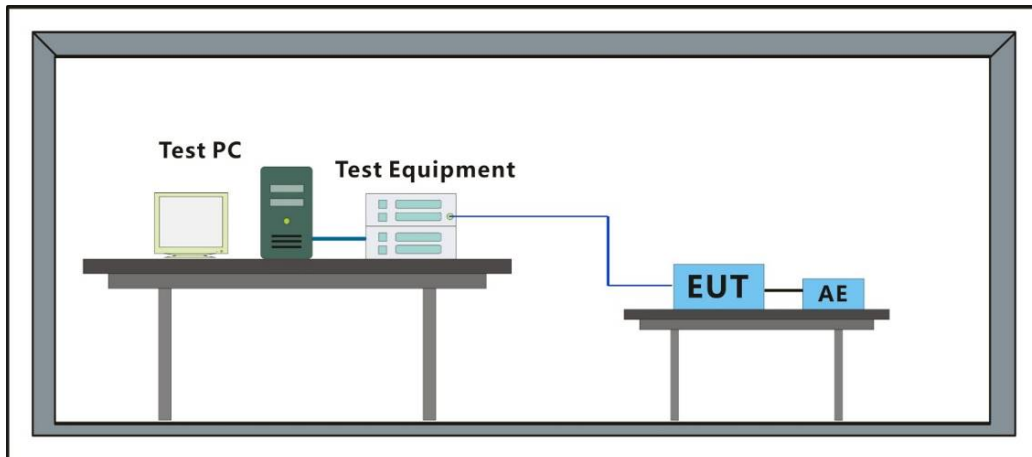
Humidity: 40.7 % RH

Atmospheric Pressure: 1010 mbar

6.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

6.5.3 Test Setup Diagram



6.5.4 Measurement Procedure and Data

Test Mode: 00

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.19		
Highest dt (%):	0.00	Test limit (%):	N/A
T-max (mS):	0	Test limit (mS):	500.0
Highest dc (%):	0.00	Test limit (%):	3.30
Highest dmax (%):	0.03	Test limit (%):	4.00
Highest Pst (10 min. period):	0.230	Test limit:	1.000
Highest Plt (2 hr. period):	0.101	Test limit:	0.650
			Pass
			Pass
			Pass
			Pass



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Test Mode: 01

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.14	Test limit (%):	N/A	N/A
Highest dt (%):	0.00	Test limit (mS):	500.0	Pass
T-max (mS):	0	Test limit (%):	3.30	Pass
Highest dc (%):	0.00	Test limit (%):	4.00	Pass
Highest dmax (%):	0.03	Test limit:	1.000	Pass
Highest Pst (10 min. period):	0.244	Test limit:	0.650	Pass
Highest Pit (2 hr. period):	0.107			

Test Mode: 02

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.19	Test limit (%):	N/A	N/A
Highest dt (%):	0.00	Test limit (mS):	500.0	Pass
T-max (mS):	0	Test limit (%):	3.30	Pass
Highest dc (%):	0.00	Test limit (%):	4.00	Pass
Highest dmax (%):	0.03	Test limit:	1.000	Pass
Highest Pst (10 min. period):	0.261	Test limit:	0.650	Pass
Highest Pit (2 hr. period):	0.114			

Test Mode: 03

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.16	Test limit (%):	N/A	N/A
Highest dt (%):	0.00	Test limit (mS):	500.0	Pass
T-max (mS):	0	Test limit (%):	3.30	Pass
Highest dc (%):	0.00	Test limit (%):	4.00	Pass
Highest dmax (%):	-0.03	Test limit:	1.000	Pass
Highest Pst (10 min. period):	0.261	Test limit:	0.650	Pass
Highest Pit (2 hr. period):	0.114			



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6.6 Harmonic Current Emission

Test Requirement: EN IEC 61000-3-2: 2019+A1:2021

Test Method: EN IEC 61000-3-2: 2019+A1:2021

6.6.1 E.U.T. Operation

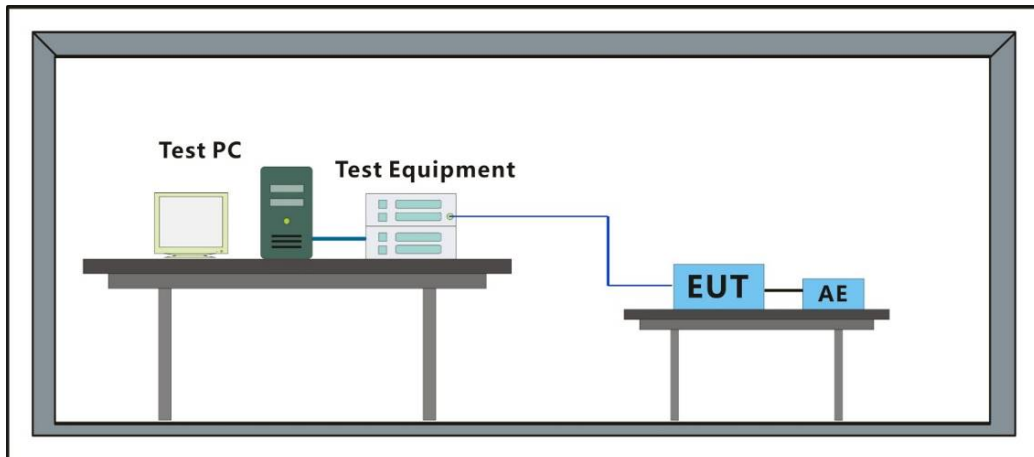
Operating Environment:

Temperature: 17.6 °C Humidity: 40.5 % RH Atmospheric Pressure: 1010 mbar

6.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

6.6.3 Test Setup Diagram



6.6.4 Measurement Procedure and Data

Frequency Range: 100Hz to 2kHz



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Test Mode: 00

Highest parameter values during test:

V_RMS (Volts):	230.22	Frequency(Hz):	50.00
I_Peak (Amps):	0.246	I_RMS (Amps):	0.031
I_Fund (Amps):	0.012	Crest Factor:	8.278
Power (Watts):	2.7	Power Factor:	0.397

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	N/A	0.002	1.620	N/A	Pass
3	0.010	2.300	0.4	0.011	3.450	0.3	Pass
4	0.002	0.430	N/A	0.002	0.645	N/A	Pass
5	0.010	1.140	0.8	0.010	1.710	0.6	Pass
6	0.001	0.300	N/A	0.002	0.450	N/A	Pass
7	0.009	0.770	1.2	0.010	1.155	0.8	Pass
8	0.001	0.230	N/A	0.002	0.345	N/A	Pass
9	0.009	0.400	2.2	0.009	0.600	1.5	Pass
10	0.001	0.184	N/A	0.002	0.276	N/A	Pass
11	0.008	0.330	2.6	0.009	0.495	1.7	Pass
12	0.001	0.153	N/A	0.002	0.230	N/A	Pass
13	0.008	0.210	3.8	0.008	0.315	2.6	Pass
14	0.001	0.131	N/A	0.002	0.197	N/A	Pass
15	0.007	0.150	4.9	0.007	0.225	3.3	Pass
16	0.001	0.115	N/A	0.001	0.173	N/A	Pass
17	0.007	0.132	5.1	0.007	0.198	3.5	Pass
18	0.001	0.102	N/A	0.001	0.153	N/A	Pass
19	0.006	0.118	5.2	0.006	0.178	3.5	Pass
20	0.001	0.092	N/A	0.001	0.138	N/A	Pass
21	0.006	0.107	5.2	0.006	0.161	3.5	Pass
22	0.001	0.084	N/A	0.001	0.125	N/A	Pass
23	0.005	0.098	N/A	0.005	0.147	N/A	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.004	0.090	N/A	0.004	0.135	N/A	Pass
26	0.001	0.071	N/A	0.001	0.107	N/A	Pass
27	0.004	0.083	N/A	0.004	0.125	N/A	Pass
28	0.001	0.066	N/A	0.001	0.099	N/A	Pass
29	0.003	0.078	N/A	0.003	0.116	N/A	Pass
30	0.001	0.061	N/A	0.001	0.092	N/A	Pass
31	0.003	0.073	N/A	0.003	0.109	N/A	Pass
32	0.001	0.058	N/A	0.001	0.086	N/A	Pass
33	0.002	0.068	N/A	0.002	0.102	N/A	Pass
34	0.001	0.054	N/A	0.001	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.001	0.051	N/A	0.001	0.077	N/A	Pass
37	0.002	0.061	N/A	0.002	0.091	N/A	Pass
38	0.001	0.048	N/A	0.001	0.073	N/A	Pass
39	0.001	0.058	N/A	0.001	0.087	N/A	Pass
40	0.000	0.046	N/A	0.001	0.069	N/A	Pass



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Compliance Certification Services (Kunshan) Inc.

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Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.149	0.460	32.27	OK
3	0.441	2.072	21.29	OK
4	0.095	0.460	20.74	OK
5	0.035	0.921	3.81	OK
6	0.063	0.460	13.74	OK
7	0.044	0.691	6.40	OK
8	0.035	0.460	7.61	OK
9	0.031	0.460	6.66	OK
10	0.024	0.460	5.13	OK
11	0.021	0.230	9.19	OK
12	0.019	0.230	8.22	OK
13	0.017	0.230	7.28	OK
14	0.011	0.230	4.68	OK
15	0.013	0.230	5.70	OK
16	0.016	0.230	6.94	OK
17	0.012	0.230	5.17	OK
18	0.016	0.230	6.88	OK
19	0.014	0.230	6.18	OK
20	0.010	0.230	4.17	OK
21	0.010	0.230	4.44	OK
22	0.008	0.230	3.47	OK
23	0.013	0.230	5.66	OK
24	0.007	0.230	2.91	OK
25	0.007	0.230	3.19	OK
26	0.013	0.230	5.79	OK
27	0.011	0.230	4.63	OK
28	0.008	0.230	3.59	OK
29	0.006	0.230	2.57	OK
30	0.008	0.230	3.40	OK
31	0.008	0.230	3.32	OK
32	0.006	0.230	2.73	OK
33	0.003	0.230	1.41	OK
34	0.005	0.230	2.21	OK
35	0.005	0.230	2.33	OK
36	0.004	0.230	1.57	OK
37	0.003	0.230	1.43	OK
38	0.003	0.230	1.41	OK
39	0.005	0.230	2.09	OK
40	0.004	0.230	1.94	OK



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Test Mode: 01

Highest parameter values during test:

V _{RMS} (Volts):	230.22	Frequency(Hz):	50.00
I _{Peak} (Amps):	0.395	I _{RMS} (Amps):	0.074
I _{Fund} (Amps):	0.040	Crest Factor:	5.395
Power (Watts):	5.3	Power Factor:	0.319

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	N/A	0.003	1.620	N/A	Pass
3	0.021	2.300	0.9	0.023	3.450	0.7	Pass
4	0.002	0.430	N/A	0.003	0.645	N/A	Pass
5	0.020	1.140	1.8	0.021	1.710	1.2	Pass
6	0.002	0.300	N/A	0.003	0.450	N/A	Pass
7	0.020	0.770	2.6	0.020	1.155	1.8	Pass
8	0.002	0.230	N/A	0.002	0.345	N/A	Pass
9	0.019	0.400	4.7	0.019	0.600	3.2	Pass
10	0.002	0.184	N/A	0.002	0.276	N/A	Pass
11	0.018	0.330	5.4	0.018	0.495	3.7	Pass
12	0.001	0.153	N/A	0.002	0.230	N/A	Pass
13	0.017	0.210	8.0	0.017	0.315	5.4	Pass
14	0.001	0.131	N/A	0.002	0.197	N/A	Pass
15	0.015	0.150	10.3	0.016	0.225	7.0	Pass
16	0.001	0.115	N/A	0.002	0.173	N/A	Pass
17	0.014	0.132	10.7	0.014	0.198	7.2	Pass
18	0.001	0.102	N/A	0.002	0.153	N/A	Pass
19	0.013	0.118	10.7	0.013	0.178	7.3	Pass
20	0.001	0.092	N/A	0.001	0.138	N/A	Pass
21	0.011	0.107	10.5	0.011	0.161	7.1	Pass
22	0.001	0.084	N/A	0.001	0.125	N/A	Pass
23	0.010	0.098	10.1	0.010	0.147	6.8	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.008	0.090	9.3	0.008	0.135	6.3	Pass
26	0.001	0.071	N/A	0.001	0.107	N/A	Pass
27	0.007	0.083	8.4	0.007	0.125	5.8	Pass
28	0.001	0.066	N/A	0.001	0.099	N/A	Pass
29	0.006	0.078	7.4	0.006	0.116	5.1	Pass
30	0.001	0.061	N/A	0.001	0.092	N/A	Pass
31	0.005	0.073	N/A	0.005	0.109	N/A	Pass
32	0.001	0.058	N/A	0.001	0.086	N/A	Pass
33	0.003	0.068	N/A	0.004	0.102	N/A	Pass
34	0.001	0.054	N/A	0.001	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.000	0.051	N/A	0.001	0.077	N/A	Pass
37	0.002	0.061	N/A	0.002	0.091	N/A	Pass
38	0.000	0.048	N/A	0.001	0.073	N/A	Pass
39	0.001	0.058	N/A	0.001	0.087	N/A	Pass
40	0.000	0.046	N/A	0.001	0.069	N/A	Pass



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Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.149	0.460	32.35	OK
3	0.446	2.072	21.54	OK
4	0.057	0.460	12.42	OK
5	0.034	0.921	3.71	OK
6	0.065	0.460	14.02	OK
7	0.046	0.691	6.69	OK
8	0.033	0.460	7.16	OK
9	0.026	0.460	5.59	OK
10	0.024	0.460	5.13	OK
11	0.023	0.230	10.09	OK
12	0.020	0.230	8.72	OK
13	0.022	0.230	9.55	OK
14	0.013	0.230	5.75	OK
15	0.017	0.230	7.24	OK
16	0.012	0.230	5.30	OK
17	0.018	0.230	8.01	OK
18	0.014	0.230	6.21	OK
19	0.017	0.230	7.30	OK
20	0.011	0.230	4.91	OK
21	0.019	0.230	8.21	OK
22	0.007	0.230	3.16	OK
23	0.016	0.230	7.09	OK
24	0.005	0.230	2.32	OK
25	0.015	0.230	6.31	OK
26	0.010	0.230	4.36	OK
27	0.013	0.230	5.74	OK
28	0.008	0.230	3.45	OK
29	0.009	0.230	3.97	OK
30	0.007	0.230	2.93	OK
31	0.009	0.230	3.74	OK
32	0.005	0.230	2.25	OK
33	0.008	0.230	3.69	OK
34	0.004	0.230	1.54	OK
35	0.006	0.230	2.73	OK
36	0.003	0.230	1.32	OK
37	0.005	0.230	2.06	OK
38	0.003	0.230	1.25	OK
39	0.004	0.230	1.85	OK
40	0.004	0.230	1.72	OK



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Test Mode: 02

Highest parameter values during test:

V_RMS (Volts):	230.22	Frequency(Hz):	50.00
I_Peak (Amps):	0.285	I_RMS (Amps):	0.038
I_Fund (Amps):	0.015	Crest Factor:	7.789
Power (Watts):	3.3	Power Factor:	0.393

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	N/A	0.002	1.620	N/A	Pass
3	0.012	2.300	0.5	0.014	3.450	0.4	Pass
4	0.002	0.430	N/A	0.002	0.645	N/A	Pass
5	0.012	1.140	1.0	0.012	1.710	0.7	Pass
6	0.001	0.300	N/A	0.002	0.450	N/A	Pass
7	0.011	0.770	1.5	0.012	1.155	1.0	Pass
8	0.001	0.230	N/A	0.002	0.345	N/A	Pass
9	0.011	0.400	2.7	0.011	0.600	1.9	Pass
10	0.001	0.184	N/A	0.002	0.276	N/A	Pass
11	0.010	0.330	3.1	0.011	0.495	2.2	Pass
12	0.001	0.153	N/A	0.002	0.230	N/A	Pass
13	0.010	0.210	4.6	0.010	0.315	3.2	Pass
14	0.001	0.131	N/A	0.002	0.197	N/A	Pass
15	0.009	0.150	6.0	0.009	0.225	4.1	Pass
16	0.001	0.115	N/A	0.002	0.173	N/A	Pass
17	0.008	0.132	6.2	0.008	0.198	4.2	Pass
18	0.001	0.102	N/A	0.002	0.153	N/A	Pass
19	0.007	0.118	6.2	0.007	0.178	4.2	Pass
20	0.001	0.092	N/A	0.001	0.138	N/A	Pass
21	0.007	0.107	6.1	0.007	0.161	4.1	Pass
22	0.001	0.084	N/A	0.001	0.125	N/A	Pass
23	0.006	0.098	5.8	0.006	0.147	4.0	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.005	0.090	N/A	0.005	0.135	N/A	Pass
26	0.001	0.071	N/A	0.001	0.107	N/A	Pass
27	0.004	0.083	N/A	0.004	0.125	N/A	Pass
28	0.001	0.066	N/A	0.001	0.099	N/A	Pass
29	0.004	0.078	N/A	0.004	0.116	N/A	Pass
30	0.001	0.061	N/A	0.001	0.092	N/A	Pass
31	0.003	0.073	N/A	0.003	0.109	N/A	Pass
32	0.001	0.058	N/A	0.001	0.086	N/A	Pass
33	0.003	0.068	N/A	0.003	0.102	N/A	Pass
34	0.001	0.054	N/A	0.001	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.001	0.051	N/A	0.001	0.077	N/A	Pass
37	0.002	0.061	N/A	0.002	0.091	N/A	Pass
38	0.001	0.048	N/A	0.001	0.073	N/A	Pass
39	0.002	0.058	N/A	0.002	0.087	N/A	Pass
40	0.000	0.046	N/A	0.001	0.069	N/A	Pass



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Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.147	0.460	32.01	OK
3	0.449	2.072	21.68	OK
4	0.070	0.460	15.31	OK
5	0.034	0.921	3.67	OK
6	0.097	0.460	21.16	OK
7	0.046	0.691	6.69	OK
8	0.048	0.460	10.49	OK
9	0.031	0.460	6.69	OK
10	0.029	0.460	6.23	OK
11	0.024	0.230	10.32	OK
12	0.014	0.230	6.15	OK
13	0.016	0.230	6.80	OK
14	0.012	0.230	5.17	OK
15	0.015	0.230	6.60	OK
16	0.013	0.230	5.76	OK
17	0.011	0.230	4.91	OK
18	0.014	0.230	6.23	OK
19	0.016	0.230	6.73	OK
20	0.009	0.230	3.93	OK
21	0.009	0.230	3.88	OK
22	0.008	0.230	3.31	OK
23	0.014	0.230	6.28	OK
24	0.005	0.230	2.38	OK
25	0.007	0.230	2.96	OK
26	0.010	0.230	4.44	OK
27	0.012	0.230	5.26	OK
28	0.008	0.230	3.48	OK
29	0.007	0.230	3.19	OK
30	0.007	0.230	3.16	OK
31	0.008	0.230	3.54	OK
32	0.006	0.230	2.51	OK
33	0.004	0.230	1.61	OK
34	0.004	0.230	1.55	OK
35	0.005	0.230	2.22	OK
36	0.003	0.230	1.38	OK
37	0.005	0.230	2.25	OK
38	0.003	0.230	1.23	OK
39	0.005	0.230	2.07	OK
40	0.005	0.230	2.00	OK



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Test Mode: 03

Highest parameter values during test:

V _{RMS} (Volts):	230.22	Frequency(Hz):	50.00
I _{Peak} (Amps):	0.415	I _{RMS} (Amps):	0.078
I _{Fund} (Amps):	0.041	Crest Factor:	5.362
Power (Watts):	5.9	Power Factor:	0.336

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	N/A	0.003	1.620	N/A	Pass
3	0.023	2.300	1.0	0.025	3.450	0.7	Pass
4	0.002	0.430	N/A	0.004	0.645	N/A	Pass
5	0.023	1.140	2.0	0.023	1.710	1.4	Pass
6	0.002	0.300	N/A	0.003	0.450	N/A	Pass
7	0.022	0.770	2.9	0.022	1.155	1.9	Pass
8	0.001	0.230	N/A	0.003	0.345	N/A	Pass
9	0.021	0.400	5.2	0.021	0.600	3.5	Pass
10	0.001	0.184	N/A	0.003	0.276	N/A	Pass
11	0.020	0.330	5.9	0.020	0.495	4.0	Pass
12	0.001	0.153	N/A	0.003	0.230	N/A	Pass
13	0.018	0.210	8.6	0.018	0.315	5.8	Pass
14	0.001	0.131	N/A	0.002	0.197	N/A	Pass
15	0.017	0.150	11.0	0.017	0.225	7.4	Pass
16	0.001	0.115	N/A	0.002	0.173	N/A	Pass
17	0.015	0.132	11.2	0.015	0.198	7.5	Pass
18	0.001	0.102	N/A	0.002	0.153	N/A	Pass
19	0.013	0.118	11.0	0.013	0.178	7.4	Pass
20	0.001	0.092	N/A	0.002	0.138	N/A	Pass
21	0.011	0.107	10.5	0.011	0.161	7.1	Pass
22	0.001	0.084	N/A	0.002	0.125	N/A	Pass
23	0.010	0.098	9.8	0.010	0.147	6.7	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.008	0.090	8.8	0.008	0.135	6.0	Pass
26	0.001	0.071	N/A	0.001	0.107	N/A	Pass
27	0.006	0.083	7.6	0.007	0.125	5.3	Pass
28	0.001	0.066	N/A	0.001	0.099	N/A	Pass
29	0.005	0.078	N/A	0.005	0.116	N/A	Pass
30	0.001	0.061	N/A	0.001	0.092	N/A	Pass
31	0.004	0.073	N/A	0.004	0.109	N/A	Pass
32	0.000	0.058	N/A	0.001	0.086	N/A	Pass
33	0.002	0.068	N/A	0.003	0.102	N/A	Pass
34	0.000	0.054	N/A	0.001	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.000	0.051	N/A	0.001	0.077	N/A	Pass
37	0.001	0.061	N/A	0.001	0.091	N/A	Pass
38	0.000	0.048	N/A	0.001	0.073	N/A	Pass
39	0.001	0.058	N/A	0.001	0.087	N/A	Pass
40	0.000	0.046	N/A	0.001	0.069	N/A	Pass



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Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.142	0.460	30.88	OK
3	0.454	2.071	21.91	OK
4	0.068	0.460	14.80	OK
5	0.033	0.921	3.58	OK
6	0.086	0.460	18.60	OK
7	0.052	0.691	7.57	OK
8	0.046	0.460	9.96	OK
9	0.026	0.460	5.74	OK
10	0.031	0.460	6.70	OK
11	0.024	0.230	10.43	OK
12	0.020	0.230	8.59	OK
13	0.023	0.230	9.96	OK
14	0.012	0.230	5.16	OK
15	0.018	0.230	7.98	OK
16	0.013	0.230	5.55	OK
17	0.019	0.230	8.06	OK
18	0.015	0.230	6.59	OK
19	0.016	0.230	7.15	OK
20	0.010	0.230	4.48	OK
21	0.017	0.230	7.57	OK
22	0.006	0.230	2.74	OK
23	0.016	0.230	7.04	OK
24	0.005	0.230	2.16	OK
25	0.014	0.230	6.28	OK
26	0.010	0.230	4.29	OK
27	0.012	0.230	5.27	OK
28	0.008	0.230	3.29	OK
29	0.008	0.230	3.45	OK
30	0.007	0.230	2.93	OK
31	0.008	0.230	3.51	OK
32	0.006	0.230	2.39	OK
33	0.007	0.230	3.26	OK
34	0.003	0.230	1.48	OK
35	0.005	0.230	2.26	OK
36	0.003	0.230	1.50	OK
37	0.004	0.230	1.77	OK
38	0.003	0.230	1.34	OK
39	0.005	0.230	2.08	OK
40	0.005	0.230	2.02	OK



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7 Immunity Test Results

Performance Criteria Description in EN 50130-4:2011 +A1:2014

There shall be no damage, malfunction or change of status due to the conditioning. Flickering of an indicator during the application of the discharges is permissible, providing that there is no residual change in the EUT or any change in outputs, which could be interpreted by associated equipment as a change.

For further details, please refer to Clause 7.4, 8.4, 9.4, 10.4, 11.4, 12.4 and 13.4, of EN 50130-4.

General Performance Criteria Description in EN 55035: 2017+A11:2020

- Criterion A The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
- Criterion B During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test.
After the test, the equipment shall continue to operate as intended without operator intervention; no degradation of performance or loss of function is allowed, below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
- Criterion C Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. A reboot or re-start operation is allowed.
Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.



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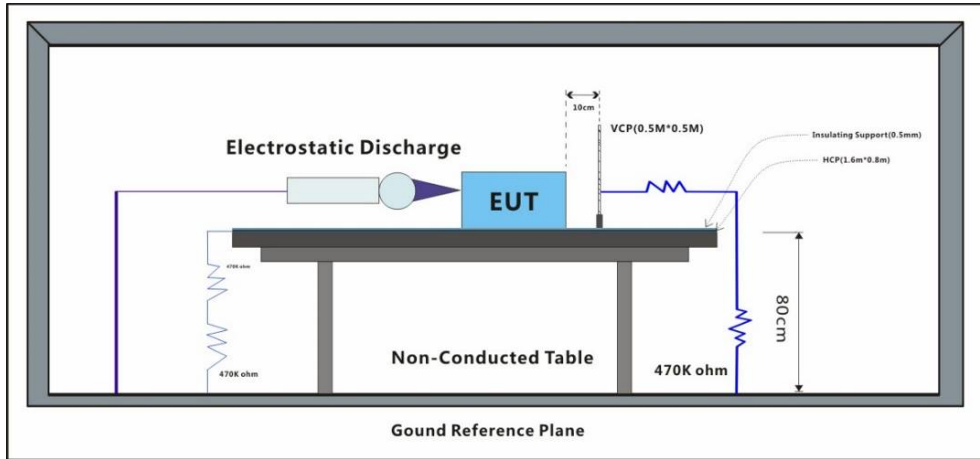
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7.1 Electrostatic Discharge

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 61000-4-2:2009

7.1.1 Test Setup Diagram



7.1.2 E.U.T. Operation

Operating Environment:

Temperature: 24 °C

Humidity: 48 % RH

Atmospheric Pressure: 1010 mbar

7.1.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.1.4 Test Condition and Results:

Number of Discharge: Minimum 10 times at each test point for Air Discharge; Minimum 50 times at each test point for Contact or VCP & HCP Discharge

Discharge Mode: Single Discharge

Discharge Period: 1 second minimum

Test Point 1: All insulated enclosure & seams.

Test Point 2: All accessible metal parts of the enclosure.

Test Point 3: All sides.



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Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	2,4,8	+	1	A
Air Discharge	2,4,8	-	1	A
Contact Discharge	6	+	2	A
Contact Discharge	6	-	2	A
Horizontal Coupling	6	+	3	A
Horizontal Coupling	6	-	3	A
Vertical Coupling	6	+	3	A
Vertical Coupling	6	-	3	A

A: No degradation in the performance of the EUT was observed



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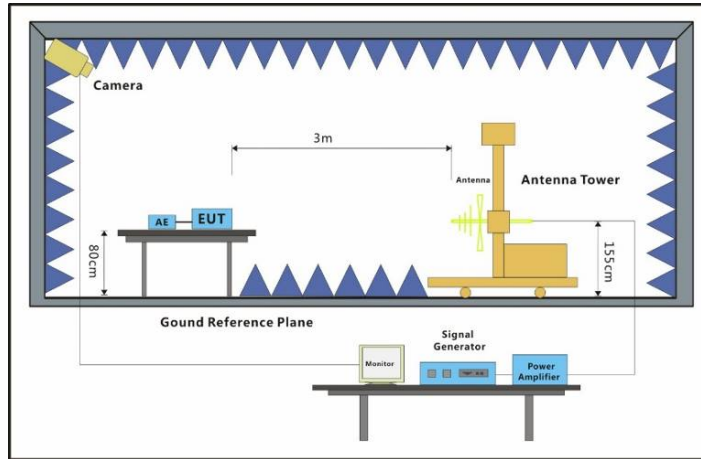
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7.2 Radiated Immunity(80MHz-2.7GHz)

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN IEC 61000-4-3: 2020

7.2.1 Test Setup Diagram



7.2.2 E.U.T. Operation

Operating Environment:

Temperature: 20.7 °C

Humidity: 38.2 % RH

Atmospheric Pressure: 1010 mbar

7.2.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.2.4 Test Condition and Results:

Modulation: 80%, 1 kHz Amplitude Modulation & 0.5s ON 0.5s OFF Pulse Modulation

Frequency	Level (V/m)	EUT Face	Dwell time	Result / Observations
80MHz-2.7GHz	10	Front	3s	A
80MHz-2.7GHz	10	Back	3s	A
80MHz-2.7GHz	10	Left	3s	A
80MHz-2.7GHz	10	Right	3s	A
80MHz-2.7GHz	10	Top	3s	A
80MHz-2.7GHz	10	Underside	3s	A

A: No degradation in the performance of the EUT was observed



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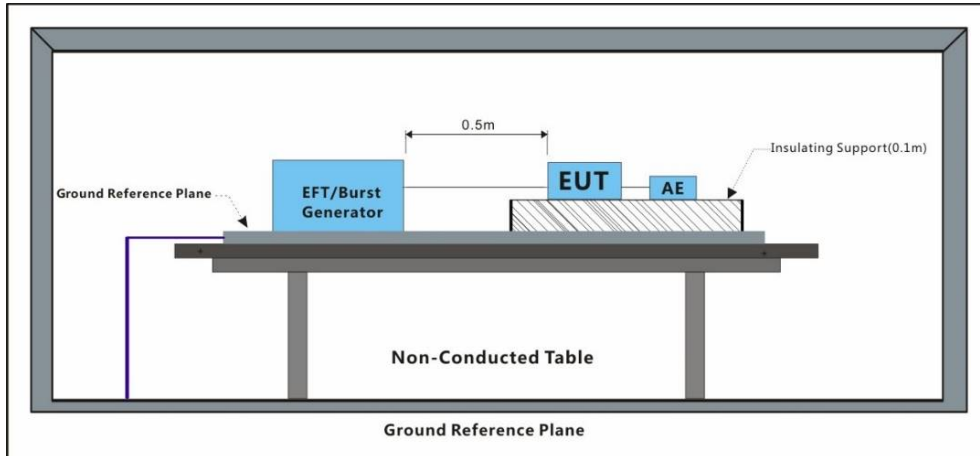
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7.3 Electrical Fast Transients & Burst at AC Power Port

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 61000-4-4:2012

7.3.1 Test Setup Diagram



7.3.2 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1010 mbar

7.3.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.3.4 Test Condition and Results:

Repetition Frequency: 100kHz

Burst Period: 300ms

Test Duration: 1 minute per level & polarity

Test Line	Level (kV)	Polarity	CDN/Clamp	Result / Observations
AC power port	2	+	CDN	A
AC power port	2	-	CDN	A

A: No degradation in the performance of the EUT was observed



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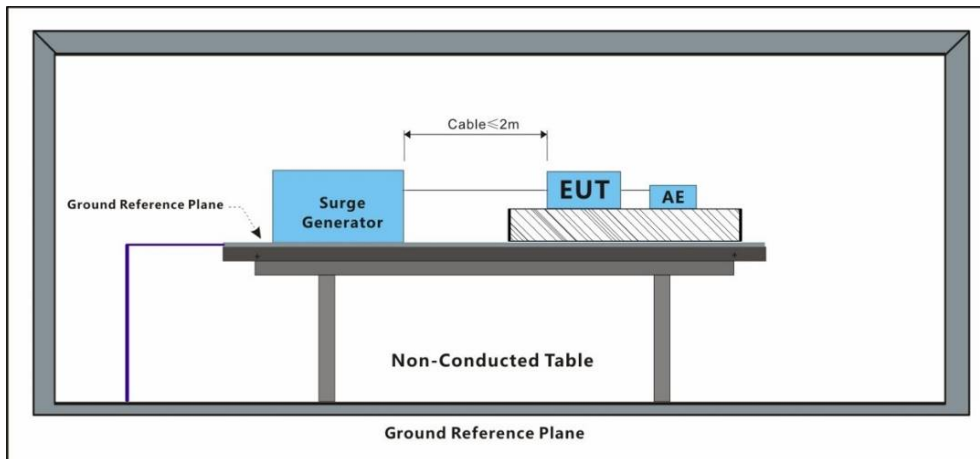
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7.4 Surge at AC Power Port

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 61000-4-5:2014 +A1:2017

7.4.1 Test Setup Diagram



7.4.2 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 46 % RH Atmospheric Pressure: 1010 mbar

7.4.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.4.4 Test Condition and Results:

Interval: 60s between each surge

No. of surges: 5 positive, 5 negative

Test Line	Level (kV)	Polarity	Phase (deg)	Result / Observations
L-N	0.5,1	+	0°	A
L-N	0.5,1	-	0°	A
L-N	0.5,1	+	90°	A
L-N	0.5,1	-	90°	A
L-N	0.5,1	+	180°	A
L-N	0.5,1	-	180°	A
L-N	0.5,1	+	270°	A
L-N	0.5,1	-	270°	A



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L-PE	0.5,1,2	+	0°	A
L-PE	0.5,1,2	-	0°	A
L-PE	0.5,1,2	+	90°	A
L-PE	0.5,1,2	-	90°	A
L-PE	0.5,1,2	+	180°	A
L-PE	0.5,1,2	-	180°	A
L-PE	0.5,1,2	+	270°	A
L-PE	0.5,1,2	-	270°	A
N-PE	0.5,1,2	+	0°	A
N-PE	0.5,1,2	-	0°	A
N-PE	0.5,1,2	+	90°	A
N-PE	0.5,1,2	-	90°	A
N-PE	0.5,1,2	+	180°	A
N-PE	0.5,1,2	-	180°	A
N-PE	0.5,1,2	+	270°	A
N-PE	0.5,1,2	-	270°	A

A: No degradation in the performance of the EUT was observed



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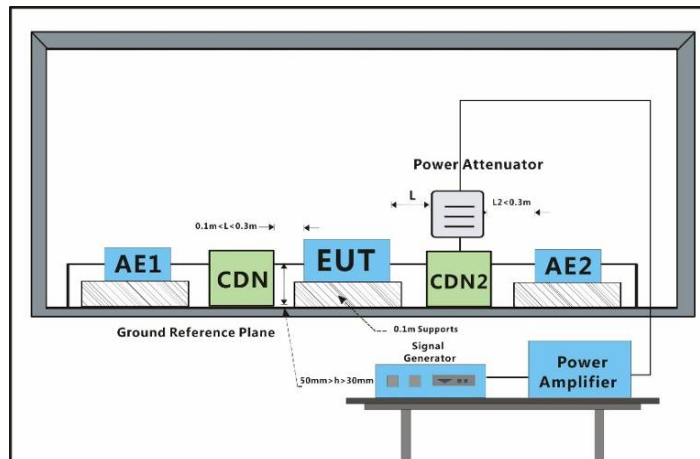
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7.5 Conducted Immunity at Power Port (150kHz-100MHz)

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 61000-4-6:2014

7.5.1 Test Setup Diagram



7.5.2 E.U.T. Operation

Operating Environment:

Temperature: 23 °C

Humidity: 48 % RH

Atmospheric Pressure: 1010 mbar

7.5.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.5.4 Test Condition and Results:

Modulation: 80%, 1 kHz Amplitude Modulation & 0.5s ON 0.5s OFF Pulse Modulation

Cable port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
AC power port	10	CDN	3s	A

A: No degradation in the performance of the EUT was observed



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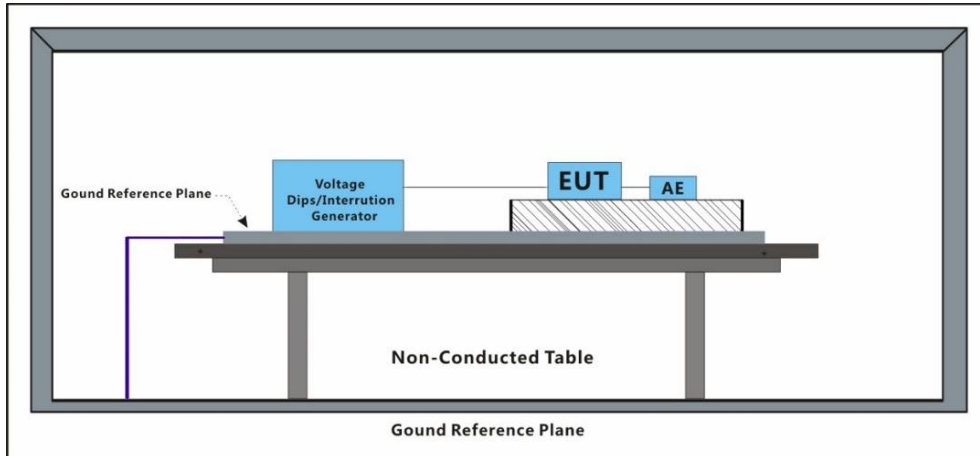
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7.6 Voltage Dips and Interruptions

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN IEC 61000-4-11:2020

7.6.1 Test Setup Diagram



7.6.2 E.U.T. Operation

Operating Environment:

Temperature: 24 °C

Humidity: 49 % RH

Atmospheric Pressure: 1010 mbar

7.6.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.6.4 Test Condition and Results:

Performance Criterion:

0% of UT (Supply Voltage) for 250 Periods;

40% of UT for 10 Periods;

70% of UT for 25 Periods; 80% of UT for 250 Periods;

No. of Dips / Interruptions: 3 per Level

Time between dropout 10s



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Level % UT	Phase (deg)	Duration	No. of Dips / Interruptions	Result / Observations
80	0°	250 Cycles	3	A
80	180°	250 Cycles	3	A
70	0°	25 Cycles	3	A
70	180°	25 Cycles	3	A
40	0°	10 Cycles	3	A
40	180°	10 Cycles	3	A
0	0°	250 Cycles	3	B
0	180°	250 Cycles	3	B

A: No degradation in the performance of the EUT was observed

B: During the test, the EUT working abnormally.

After the test, the EUT recovering working normally.



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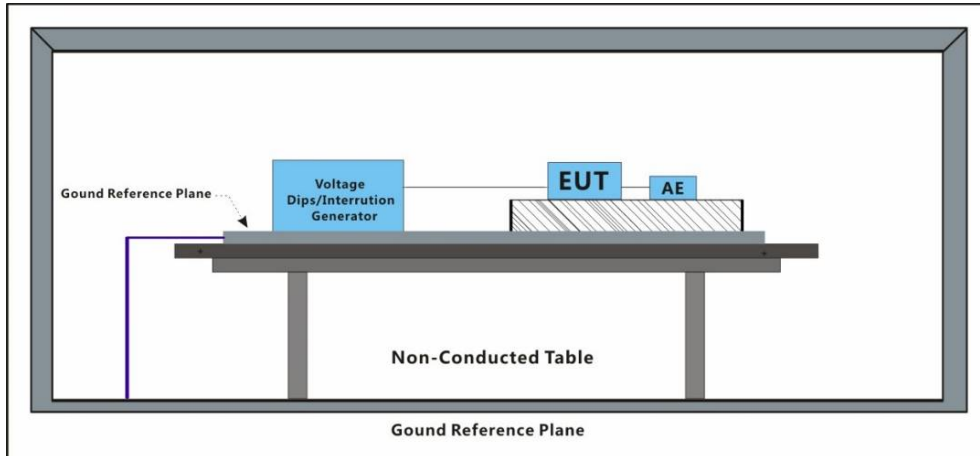
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7.7 Mains Supply Voltage Variations

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 50130-4:2011+A1:2014

7.7.1 Test Setup Diagram



7.7.2 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 48 % RH Atmospheric Pressure: 1010 mbar

7.7.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.7.4 Test Condition and Results:

Voltage max.: AC 264V (U_{max}: U_{nom} + 10%)

Voltage min.: AC 85V (U_{min}: U_{nom} - 15%)

U_{nom} Voltage: AC 100-240V

Test phenomenon description for the EUT:

1. The EUT working normal, before the conditioning.
2. Monitor the EUT during the conditioning period and detected no any changes in states, during the conditioning.
3. No degradation in the performance of the EUT was observed, after the conditioning.



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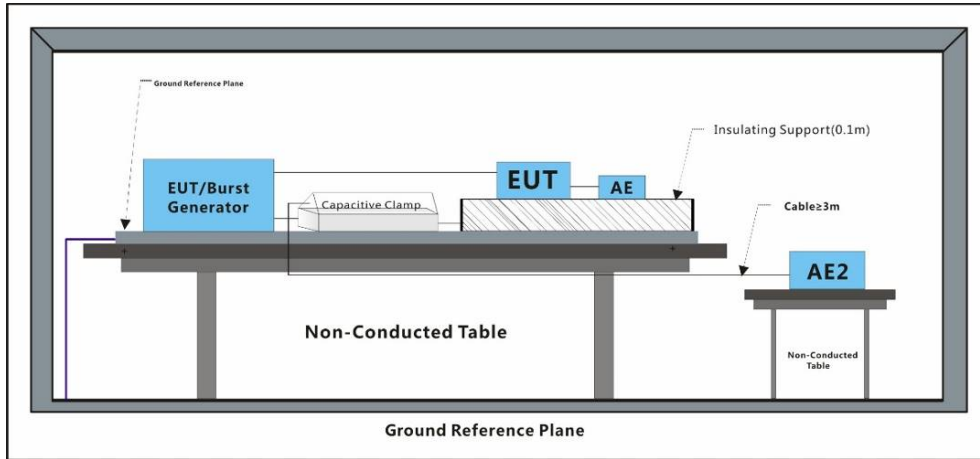
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7.8 Electrical Fast Transients & Burst at Signal Port

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 61000-4-4:2012

7.8.1 Test Setup Diagram



7.8.2 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 43 % RH Atmospheric Pressure: 1010 mbar

7.8.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.8.4 Test Condition and Results:

Repetition Frequency: 100kHz

Burst Period: 300ms

Test Duration: 1 minute per level & polarity

Test Line	Level (kV)	Polarity	CDN/Clamp	Result / Observations
Signal Port	1	+	Clamp	A
Signal Port	1	-	Clamp	A

A: No degradation in the performance of the EUT was observed



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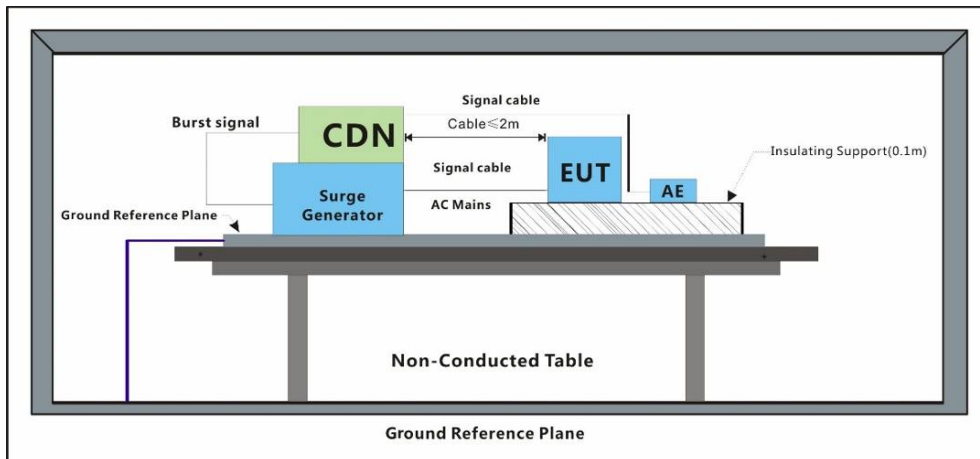
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7.9 Surge at Signal Port

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 61000-4-5:2014 +A1:2017

7.9.1 Test Setup Diagram



7.9.2 E.U.T. Operation

Operating Environment:

Temperature: 24 °C Humidity: 44 % RH Atmospheric Pressure: 1010 mbar

7.9.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.9.4 Test Condition and Results:

Interval: 60s between each surge

No. of surges: 5 positive, 5 negative.

Port	Line	Level (kV)	Polarity	Result / Observations
Signal port	Line-Ground	0.5	+	A
Signal port	Line-Ground	0.5	-	A

A: No degradation in the performance of the EUT was observed



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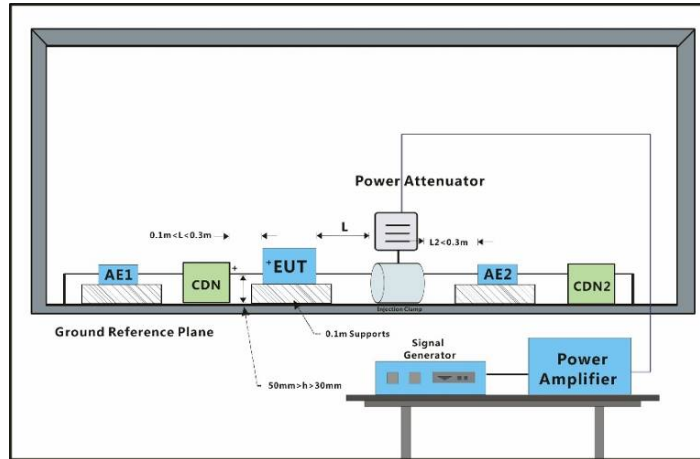
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7.10 Conducted Immunity at Signal Port (150kHz-100MHz)

Test Requirement: EN 50130-4: 2011 +A1:2014

Test Method: EN 61000-4-6:2014

7.10.1 Test Setup Diagram



7.10.2 E.U.T. Operation

Operating Environment:

Temperature: 21 °C

Humidity: 38 % RH

Atmospheric Pressure: 1010 mbar

7.10.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.10.4 Test Condition and Results:

Modulation: 80%, 1 kHz Amplitude Modulation & 0.5s ON 0.5s OFF Pulse Modulation

Cable port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
Signal or Control port	10	CDN	3s	A

A: No degradation in the performance of the EUT was observed



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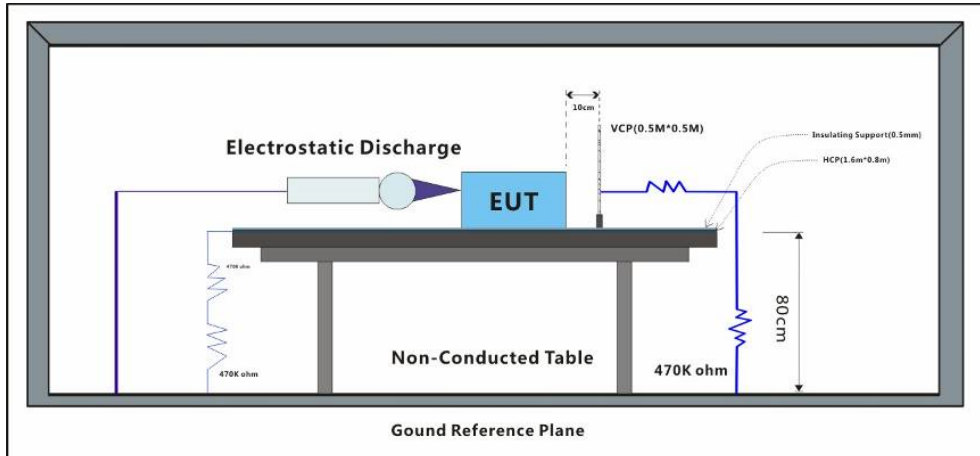
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7.11 Electrostatic Discharge

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-2: 2009

7.11.1 Test Setup Diagram



7.11.2 E.U.T. Operation

Operating Environment:

Temperature: 24 °C

Humidity: 48 % RH

Atmospheric Pressure: 1010 mbar

7.11.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.11.4 Test Condition and Results:

Performance Criterion: B

Discharge Impedance: 330Ω/150pF

Number of Discharge: Minimum 10 times at each test point

Discharge Mode: Single Discharge

Discharge Period: 1 second minimum

Test Point 1: All insulated enclosure & seams.

Test Point 2: All accessible metal parts of the enclosure.

Test Point 3: All sides.



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Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	2,4,8	+	1	A
Air Discharge	2,4,8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

A: No degradation in the performance of the EUT was observed



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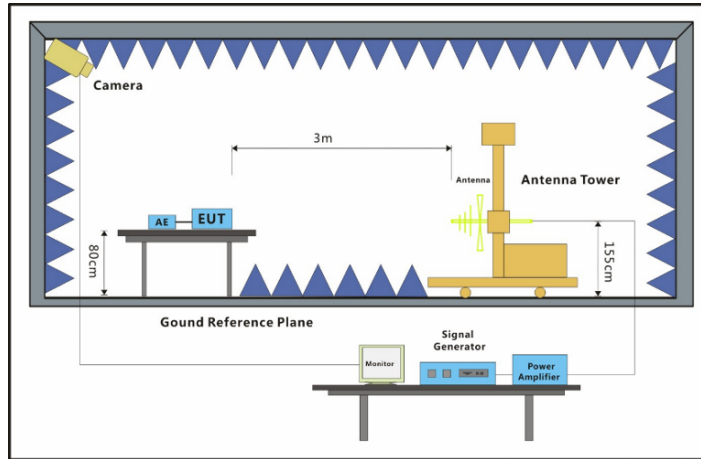
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7.12 Radiated Immunity (80MHz-1GHz,1800MHz,2600MHz,3500MHz,5000MHz)

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN IEC 61000-4-3: 2020

7.12.1 Test Setup Diagram



7.12.2 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

Humidity: 35.2 % RH

Atmospheric Pressure: 1010 mbar

7.12.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.12.4 Test Condition and Results:

Performance Criterion: A

Frequency Range: 80MHz to 1GHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz

Antenna Polarisation: Vertical and Horizontal

Modulation: 1kHz,80% Amp. Mod,1% increment

Test Distance:3m

Frequency	Level (V/m)	EUT Face	Dwell time	Result / Observations
80MHz-1GHz	3	Front	3s	A
80MHz-1GHz	3	Back	3s	A
80MHz-1GHz	3	Left	3s	A
80MHz-1GHz	3	Right	3s	A
80MHz-1GHz	3	Top	3s	A



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80MHz-1GHz	3	Underside	3s	A
1800MHz	3	Front	3s	A
1800MHz	3	Back	3s	A
1800MHz	3	Left	3s	A
1800MHz	3	Right	3s	A
1800MHz	3	Top	3s	A
1800MHz	3	Underside	3s	A
2600MHz	3	Front	3s	A
2600MHz	3	Back	3s	A
2600MHz	3	Left	3s	A
2600MHz	3	Right	3s	A
2600MHz	3	Top	3s	A
2600MHz	3	Underside	3s	A
3500MHz	3	Front	3s	A
3500MHz	3	Back	3s	A
3500MHz	3	Left	3s	A
3500MHz	3	Right	3s	A
3500MHz	3	Top	3s	A
3500MHz	3	Underside	3s	A
5000MHz	3	Front	3s	A
5000MHz	3	Back	3s	A
5000MHz	3	Left	3s	A
5000MHz	3	Right	3s	A
5000MHz	3	Top	3s	A
5000MHz	3	Underside	3s	A

A: No degradation in the performance of the EUT was observed



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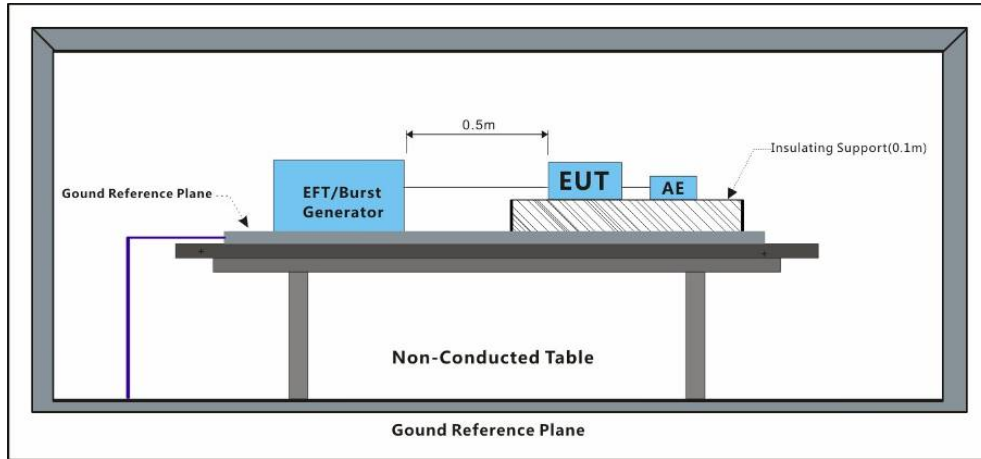
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7.13 Electrical Fast Transients & Burst at AC Power Port

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-4: 2012

7.13.1 Test Setup Diagram



7.13.2 E.U.T. Operation

Operating Environment:

Temperature: 22 °C

Humidity: 45 % RH

Atmospheric Pressure: 1010 mbar

7.13.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.13.4 Test Condition and Results:

Performance Criterion: B

Repetition Frequency: 5kHz

Burst Period: 300ms

Test Duration: 2 minute per level & polarity

Test Line	Level (kV)	Polarity	CDN/Clamp	Result / Observations
AC power port	1	+	CDN	A
AC power port	1	-	CDN	A

A: No degradation in the performance of the EUT was observed



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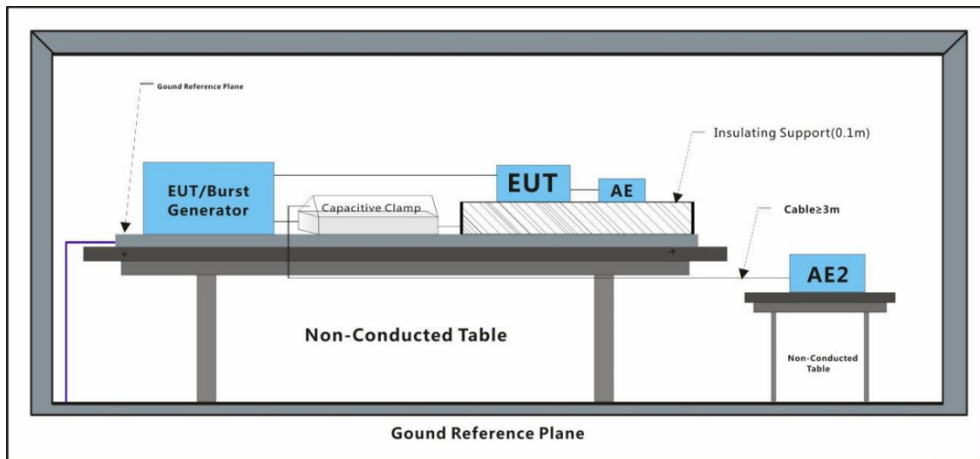
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7.14 Electrical Fast Transients & Burst at Signal Port

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-4: 2012

7.14.1 Test Setup Diagram



7.14.2 E.U.T. Operation

Operating Environment:

Temperature: 22 °C

Humidity: 46 % RH

Atmospheric Pressure: 1010 mbar

7.14.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.14.4 Test Condition and Results:

Performance Criterion: B

Repetition Frequency: 5kHz

Burst Period: 300ms

Test Duration: 2 minute per level & polarity

Port	Level (kV)	Polarity	CDN/Clamp	Result / Observations
Signal port	0.5	+	Clamp	A
Signal port	0.5	-	Clamp	A

A: No degradation in the performance of the EUT was observed



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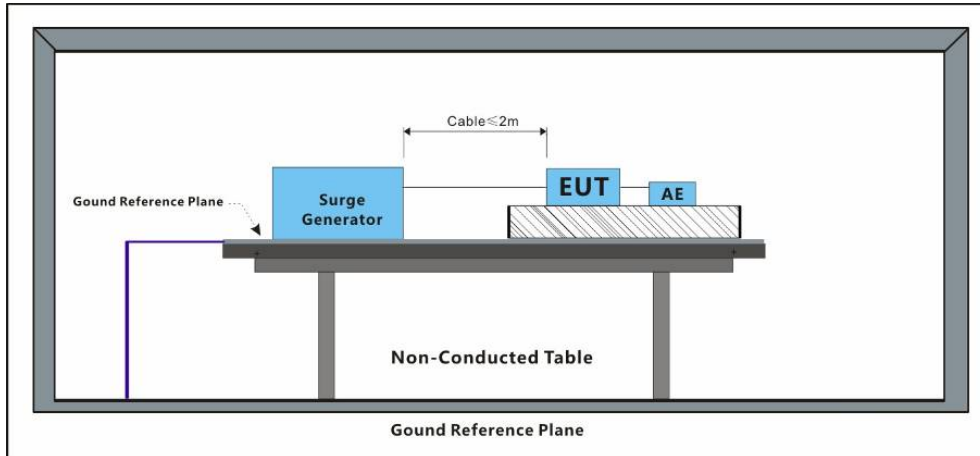
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7.15 Surge at AC Power Port

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-5: 2014 +A1: 2017

7.15.1 Test Setup Diagram



7.15.2 E.U.T. Operation

Operating Environment:

Temperature: 24 °C

Humidity: 48 % RH

Atmospheric Pressure: 1010 mbar

7.15.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.15.4 Test Condition and Results:

Performance Criterion: B

Interval: 60s between each surge

Generator source impedance: 2Ω

CDN coupling impedance(Line-to-ground):10Ω

No. of surges:

Five positive pulses line-to-neutral at 90° phase

Five negative pulses line-to-neutral at 270° phase

Five positive pulses line-to-earth at 90° phase

Five negative pulses line-to-earth at 270° phase

Five negative pulses neutral-to-earth at 90° phase

Five positive pulses neutral-to-earth at 270° phase



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Test Line	Level (kV)	Polarity	Phase (deg)	Result / Observations
L-N	1	+	90°	A
L-N	1	-	270°	A
L-PE	2	+	90°	A
L-PE	2	-	270°	A
N-PE	2	-	90°	A
N-PE	2	+	270°	A

A: No degradation in the performance of the EUT was observed



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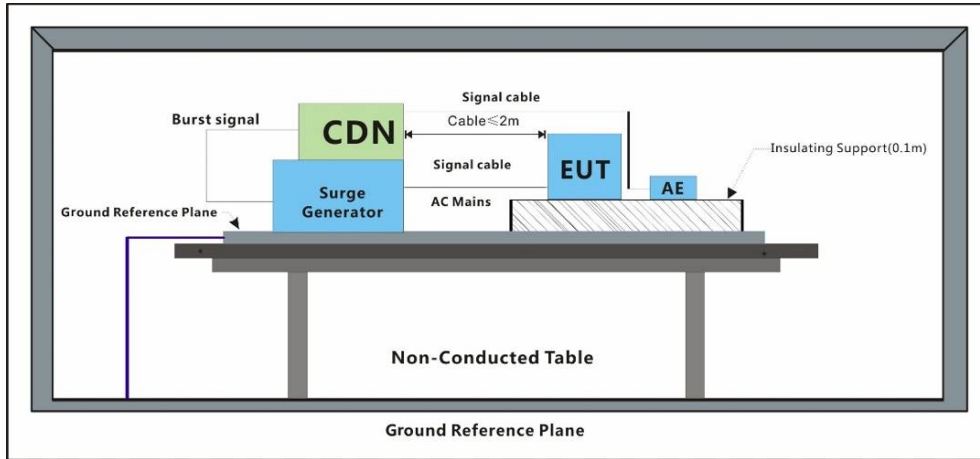
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7.16 Surge at Signal Port

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-5: 2014 +A1: 2017

7.16.1 Test Setup Diagram



7.16.2 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 43 % RH Atmospheric Pressure: 1010 mbar

7.16.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.16.4 Test Condition and Results:

Performance Criterion: B

Interval: 60s between each surge

Generator source impedance: 2Ω

Port	Line	Waveform(μs)	Level (kV)	Polarity	Result / Observations
Signal port	Line-Ground	1,2/50 (8/20)	0.5, 1	+	A
Signal port	Line-Ground	1,2/50 (8/20)	0.5, 1	-	A

A: No degradation in the performance of the EUT was observed



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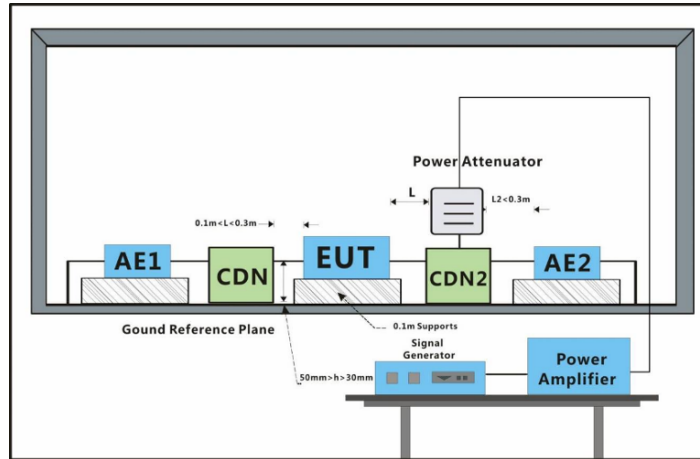
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7.17 Conducted Immunity at AC Power Port (150kHz-80MHz)

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-6: 2014

7.17.1 Test Setup Diagram



7.17.2 E.U.T. Operation

Operating Environment:

Temperature: 21 °C

Humidity: 43 % RH

Atmospheric Pressure: 1010 mbar

7.17.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.17.4 Test Condition and Results:

Performance Criterion: A

Frequency Range: 0.15MHz to 80MHz

Modulation: 80%, 1kHz Amplitude Modulation

Step Size: 1%

Cable port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
AC power port	3(0.15MHz-10MHz)	CDN	3s	A
AC power port	3 to 1(10MHz-30MHz, Lines)	CDN	3s	A
AC power port	1(30MHz-80MHz)	CDN	3s	A

A: No degradation in the performance of the EUT was observed



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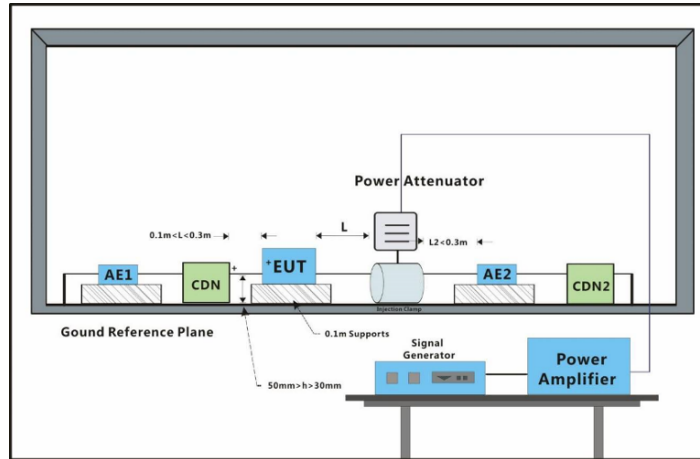
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7.18 Conducted Immunity at Signal Port (150kHz-80MHz)

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-6: 2014

7.18.1 Test Setup Diagram



7.18.2 E.U.T. Operation

Operating Environment:

Temperature: 23 °C

Humidity: 43 % RH

Atmospheric Pressure: 1010 mbar

7.18.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.18.4 Test Condition and Results:

Performance Criterion: A

Frequency Range: 0.15MHz to 80MHz

Modulation: 80%, 1kHz Amplitude Modulation

Step Size: 1%

Port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
Signal port	3(0.15MHz-10MHz)	Clamp	3s	A
Signal port	3 to 1(10MHz-30MHz, Lines)	Clamp	3s	A
Signal port	1(30MHz-80MHz)	Clamp	3s	A

A: No degradation in the performance of the EUT was observed



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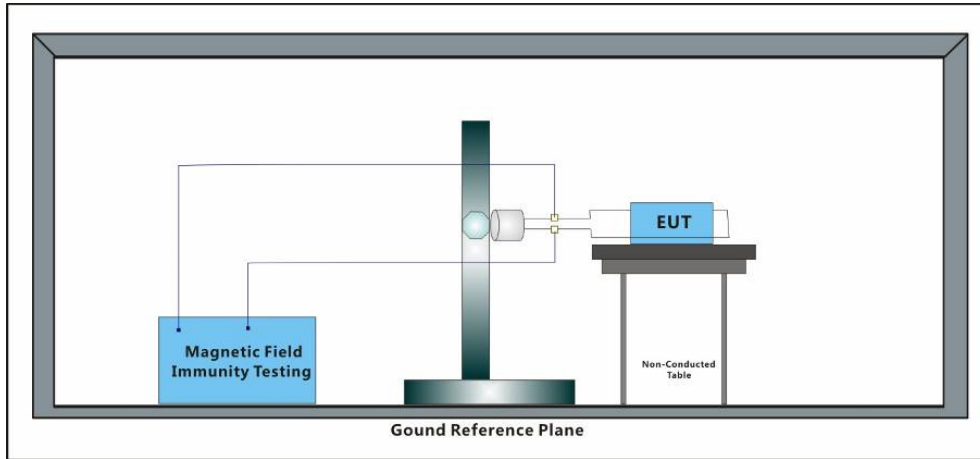
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7.19 Power Frequency Magnetic Field

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN 61000-4-8: 2010

7.19.1 Test Setup Diagram



7.19.2 E.U.T. Operation

Operating Environment:

Temperature: 24 °C

Humidity: 55 % RH

Atmospheric Pressure: 1010 mbar

7.19.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.19.4 Test Condition and Results:

Performance Criterion: A

Frequency	Level (A/m)	Axial	Magnetic Field Type	Result / Observations
50Hz	1	X	Continuous filed	A
50Hz	1	Y	Continuous filed	A
50Hz	1	Z	Continuous filed	A

A: No degradation in the performance of the EUT was observed



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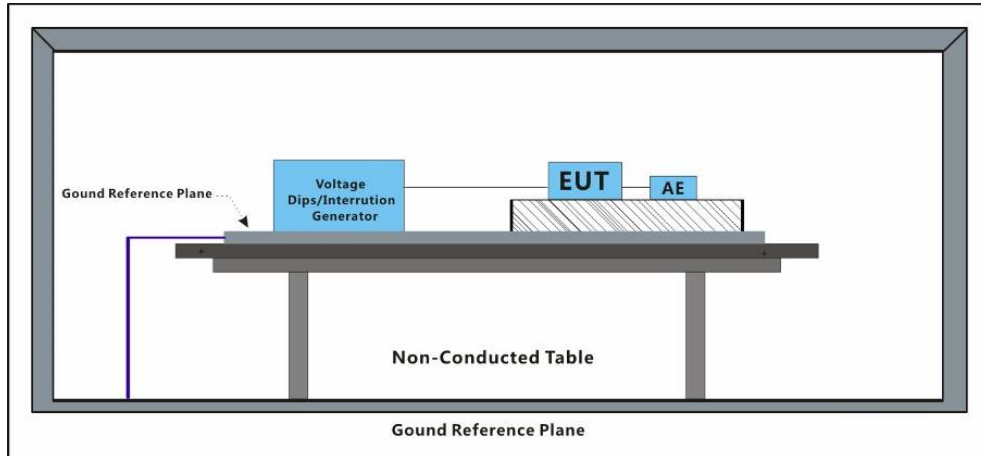
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7.20 Voltage Dips and Interruptions

Test Requirement: EN 55035: 2017+A11:2020

Test Method: EN IEC 61000-4-11:2020

7.20.1 Test Setup Diagram



7.20.2 E.U.T. Operation

Operating Environment:

Temperature: 24 °C

Humidity: 48 % RH

Atmospheric Pressure: 1010 mbar

7.20.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1 working normally with DC12V Adapter
Final test	01	Keep EUT1 working normally with POE Adapter
Final test	03	Keep EUT2 working normally with DC12V Adapter
Final test	02	Keep EUT2 working normally with POE Adapter

7.20.4 Test Condition and Results:

Performance Criterion:

<5% residual voltage for 0.5 Cycle: B

70% residual voltage for 25 Cycles: C

<5% residual voltage for 250 Cycles: C

No. of Dips / Interruptions: 3 per Level

Time between dropout: 10s



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Level % UT	Phase (deg)	Duration	No. of Dips / Interruptions	Result / Observations
0	0°	0.5 Cycles	3	A
0	0°	250 Cycles	3	B
70	0°	25 Cycles	3	A

A: No degradation in the performance of the EUT was observed

B: During the test,the EUT working abnormally.

After the test,the EUT recovering working normally.



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8 Test Setup Photo

Conducted Emissions at Mains Power Port (150kHz-30MHz)



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Asymmetric Mode Conducted Emissions(150kHz-30MHz)

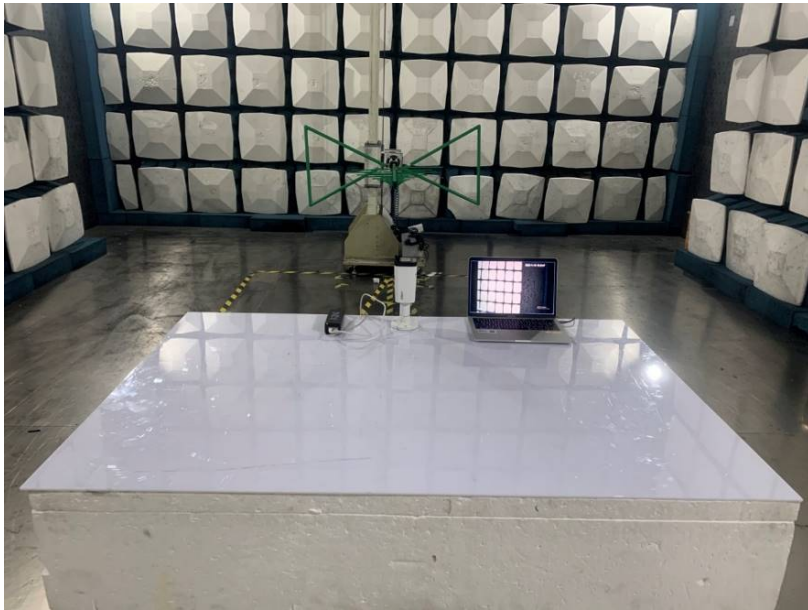
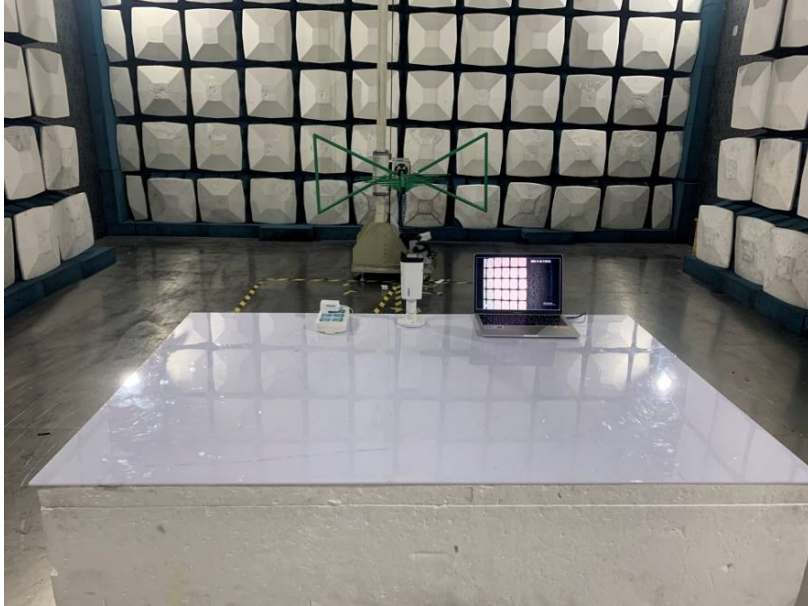


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Radiated Emissions (30MHz-1GHz)



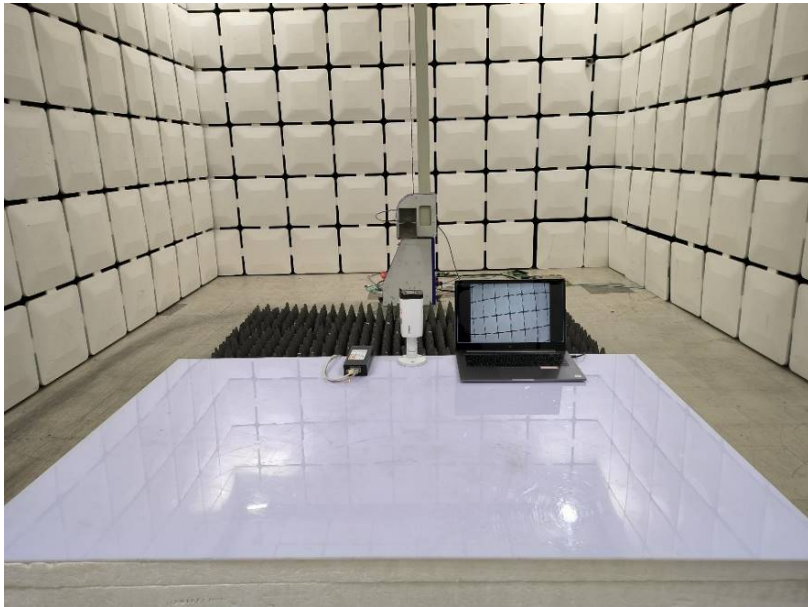
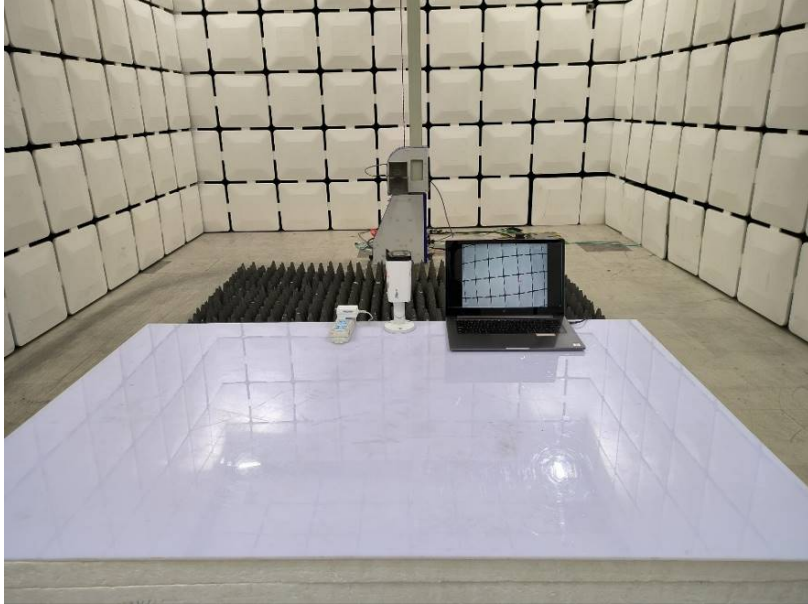
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Radiated Emissions (Above 1GHz)



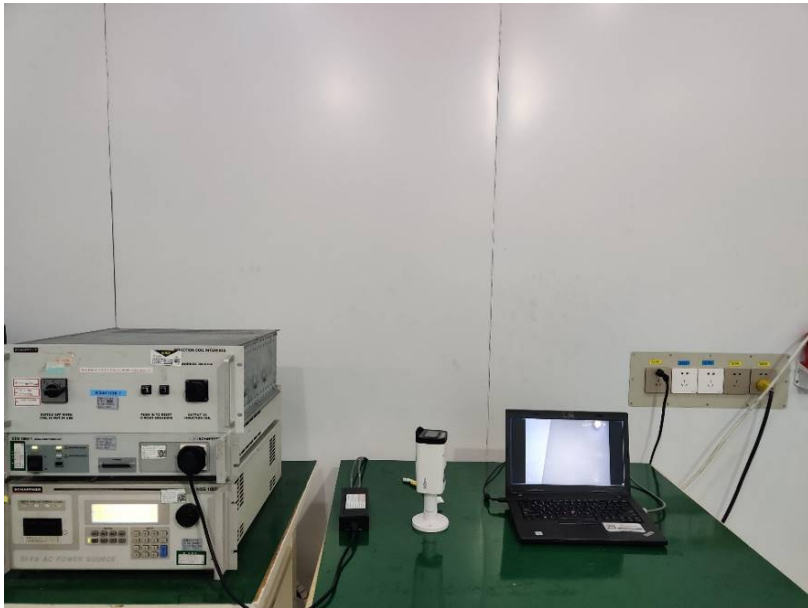
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Voltage Fluctuations and Flicker

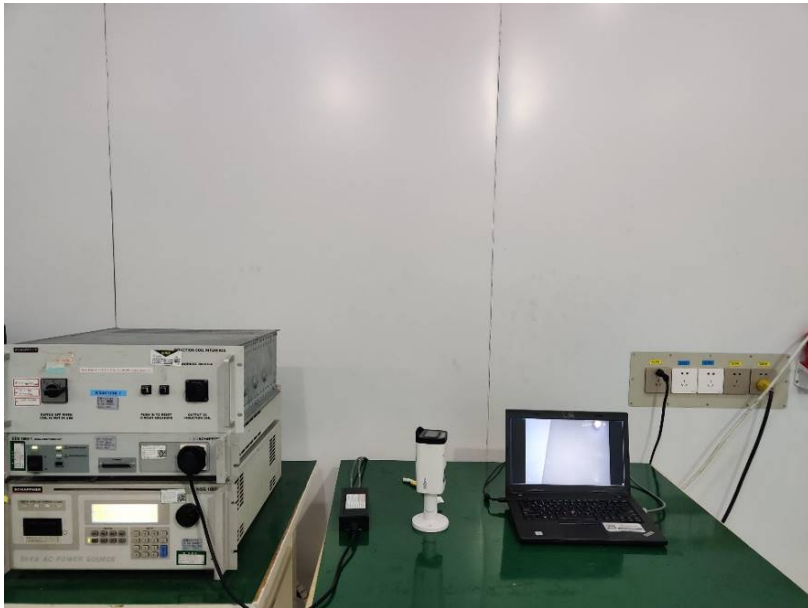
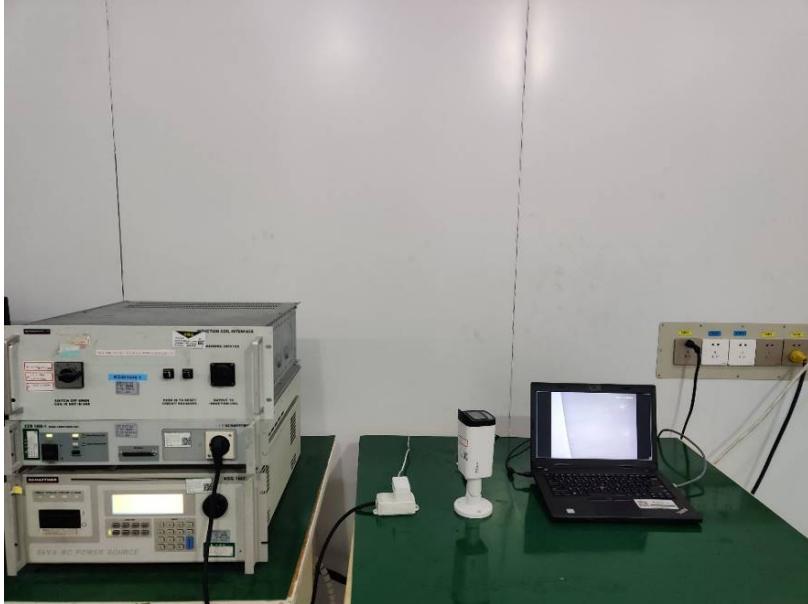


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Harmonic Current Emission



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Electrostatic Discharge



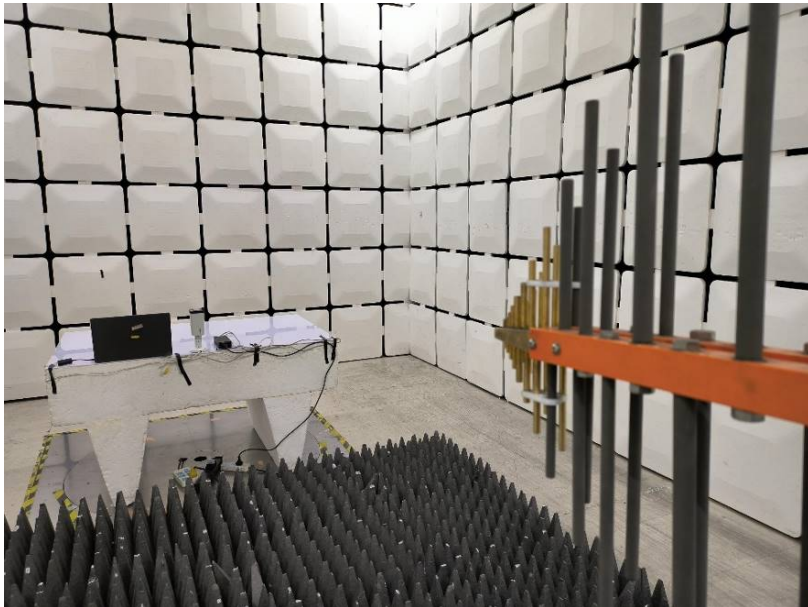
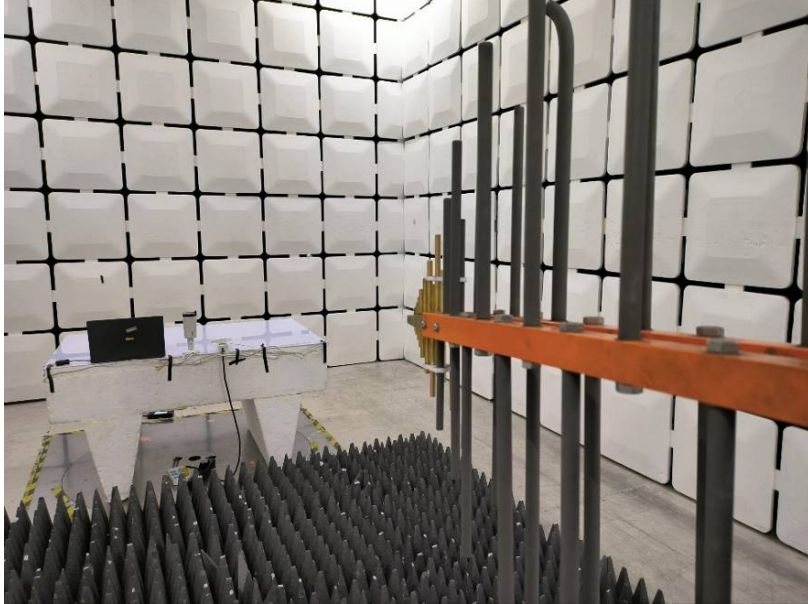
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Radiated Immunity



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Electrical Fast Transients & Burst at AC Power Port



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Electrical Fast Transients & Burst at Signal Port



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Surge at AC Power Port



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Surge at Signal Port



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Conducted Immunity at Signal Port



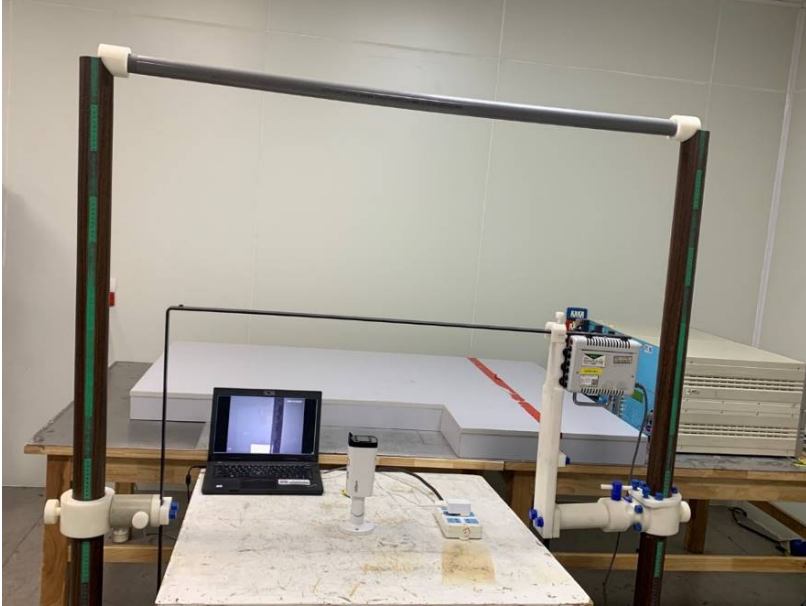
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Power Frequency Magnetic Field



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Voltage Dips and Interruptions



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Mains Supply Voltage Variations



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9 EUT Constructional Details (EUT Photos)

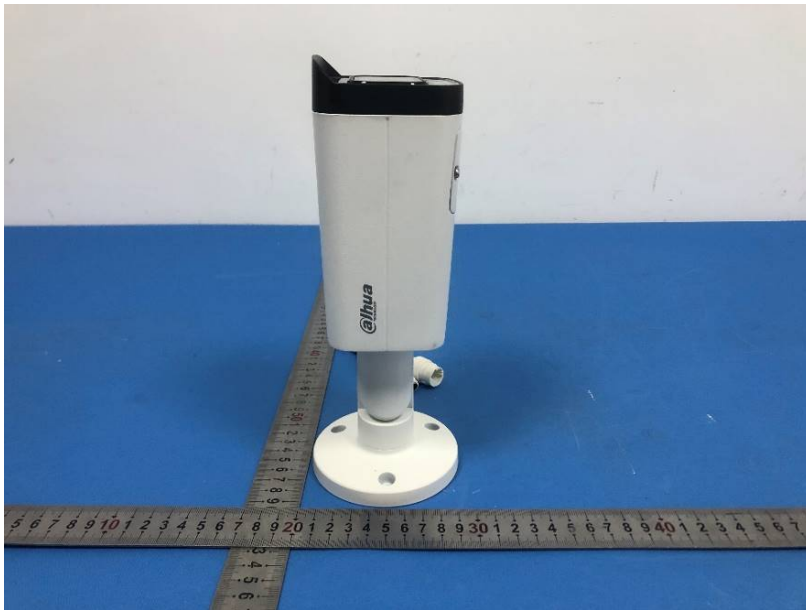


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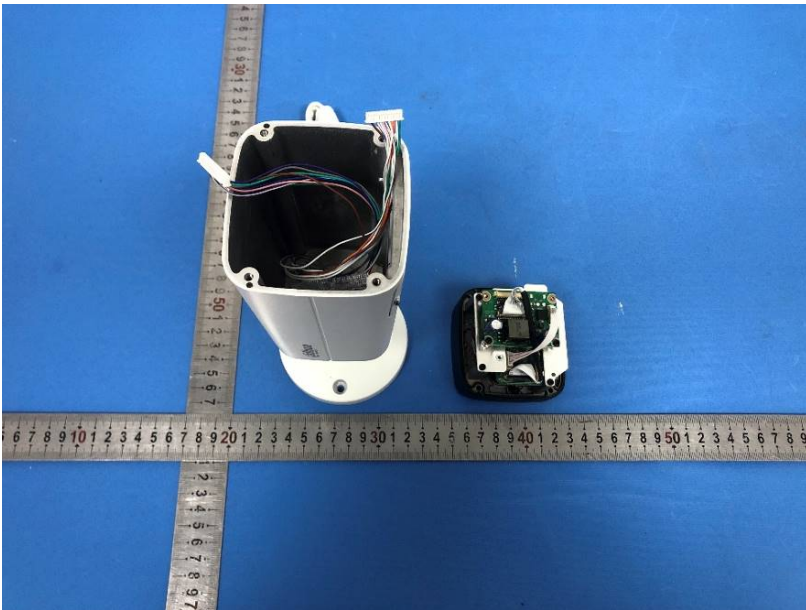
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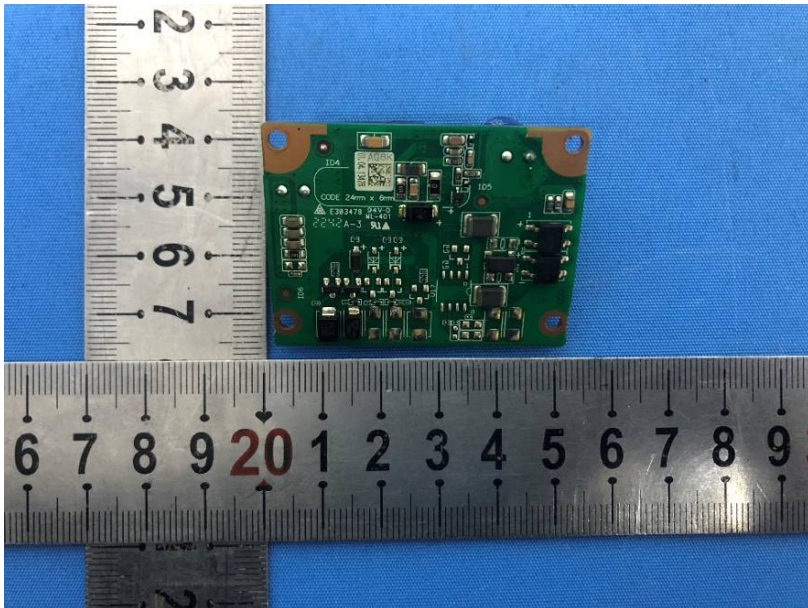
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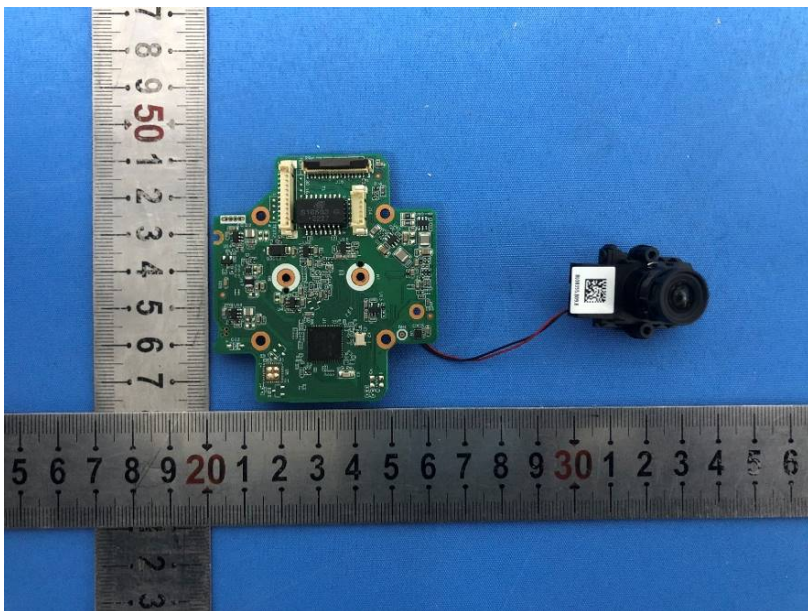
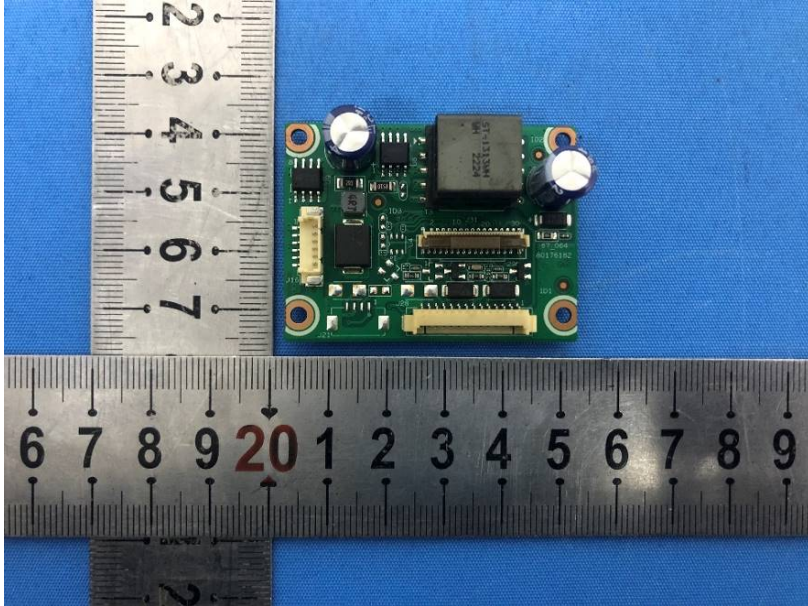
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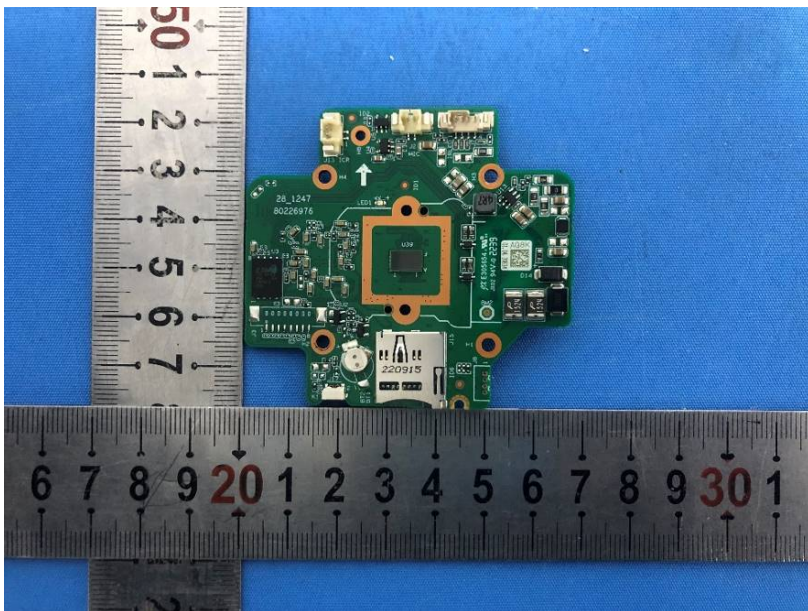
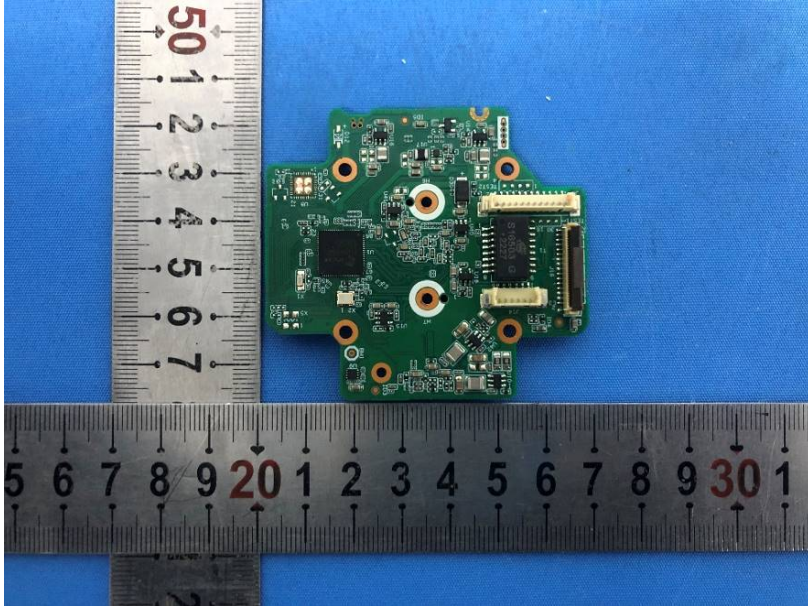
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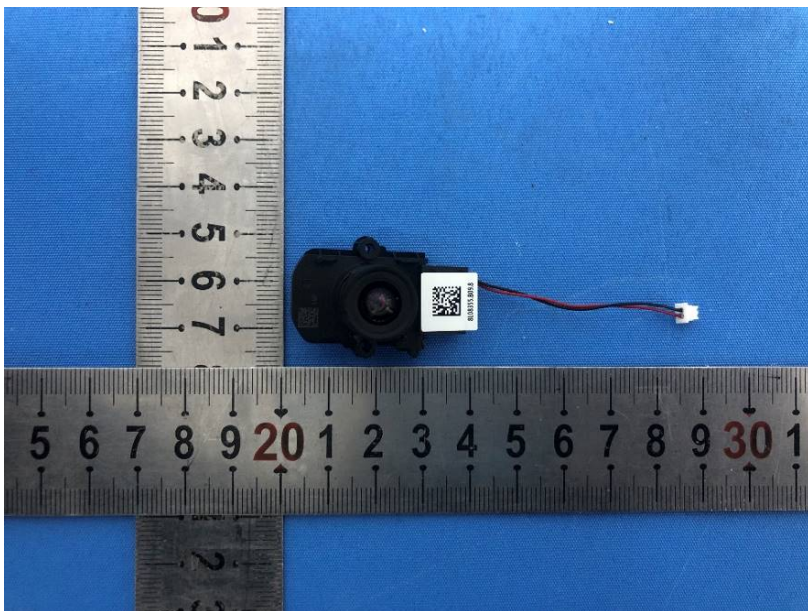
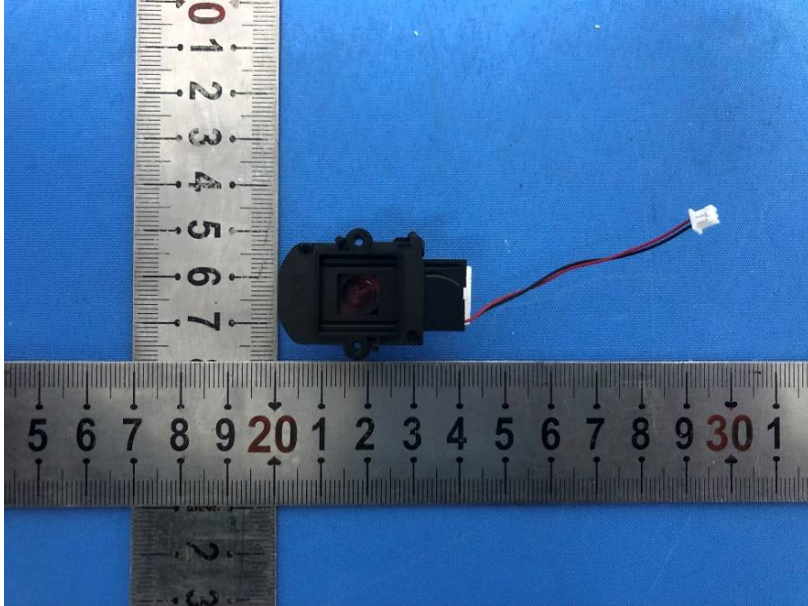
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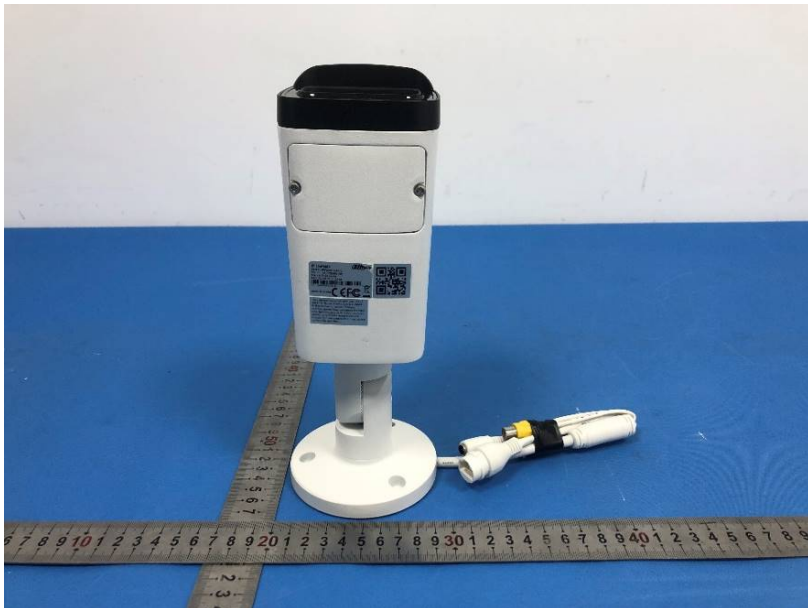
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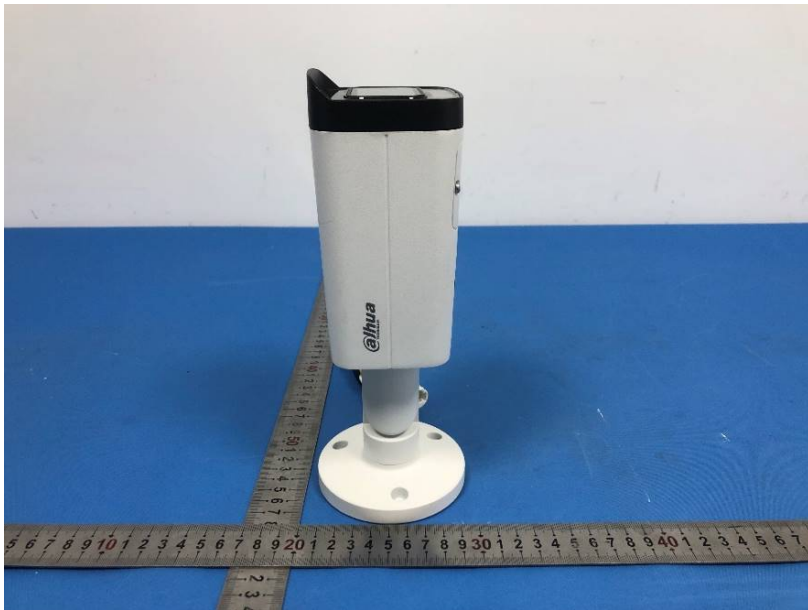
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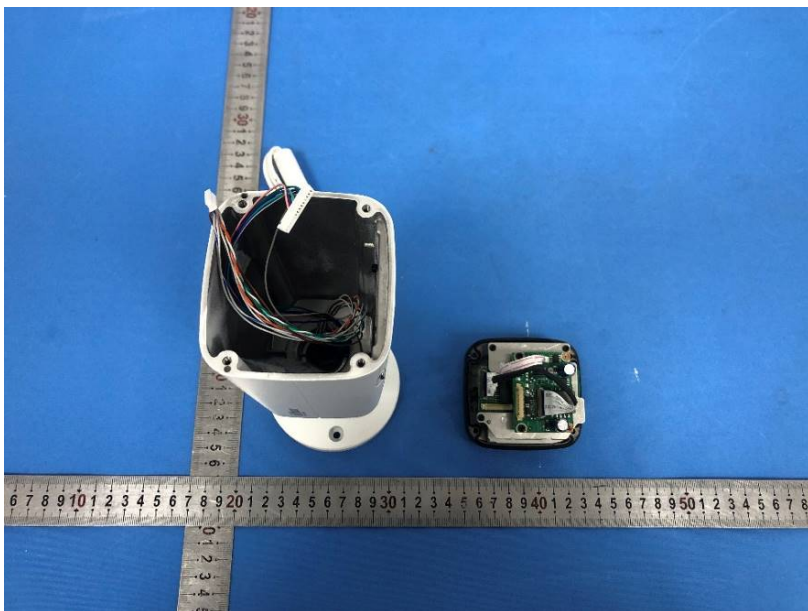


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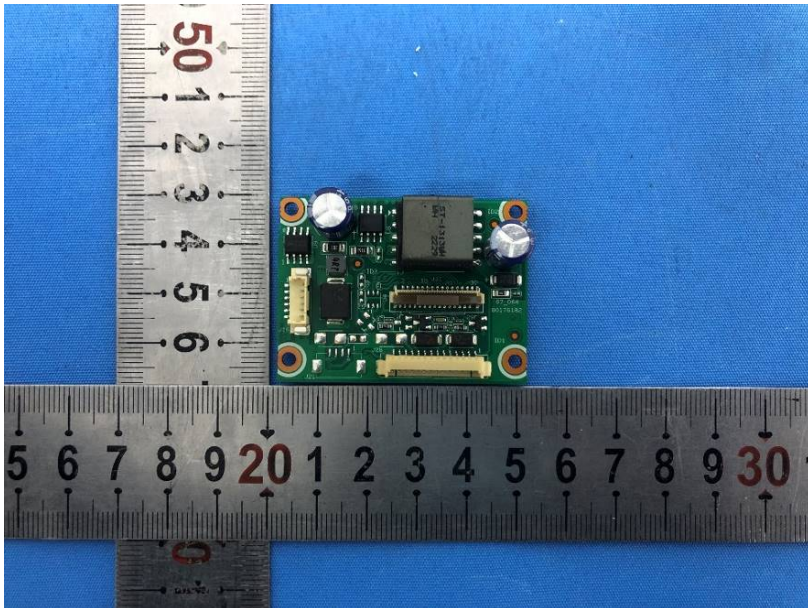
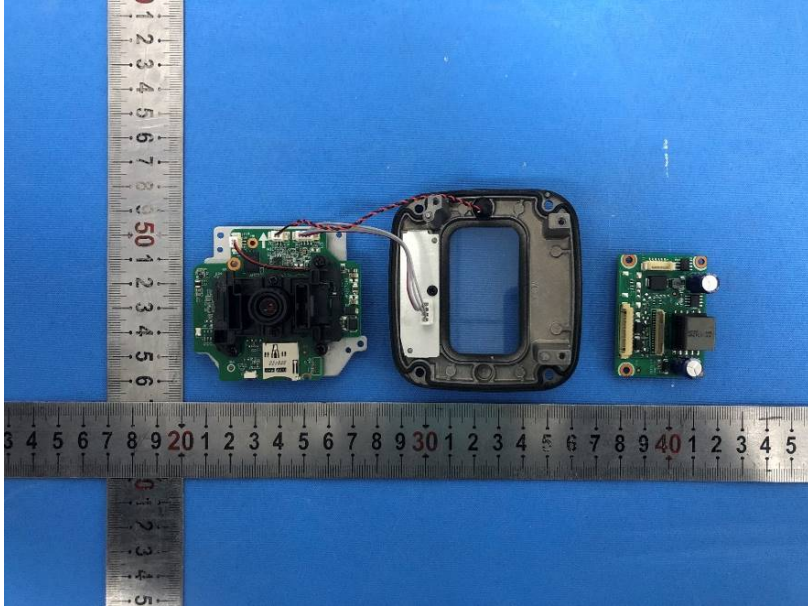
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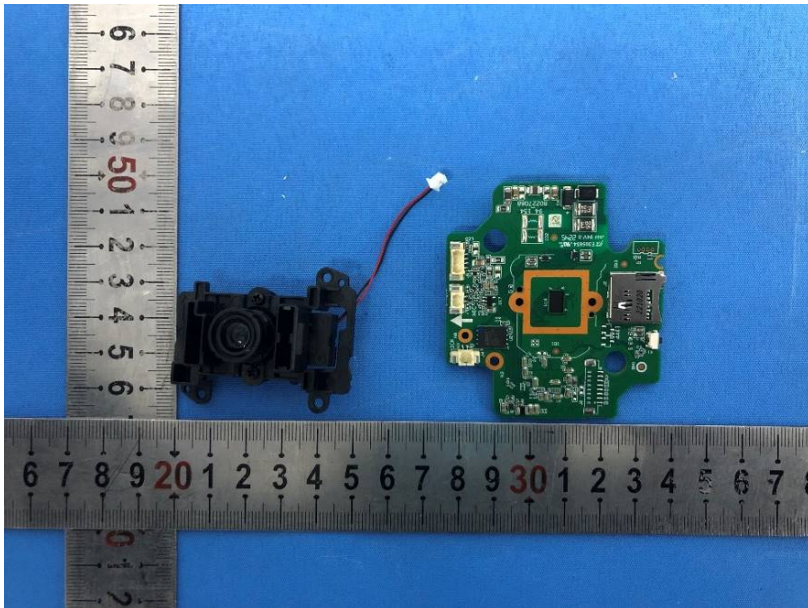
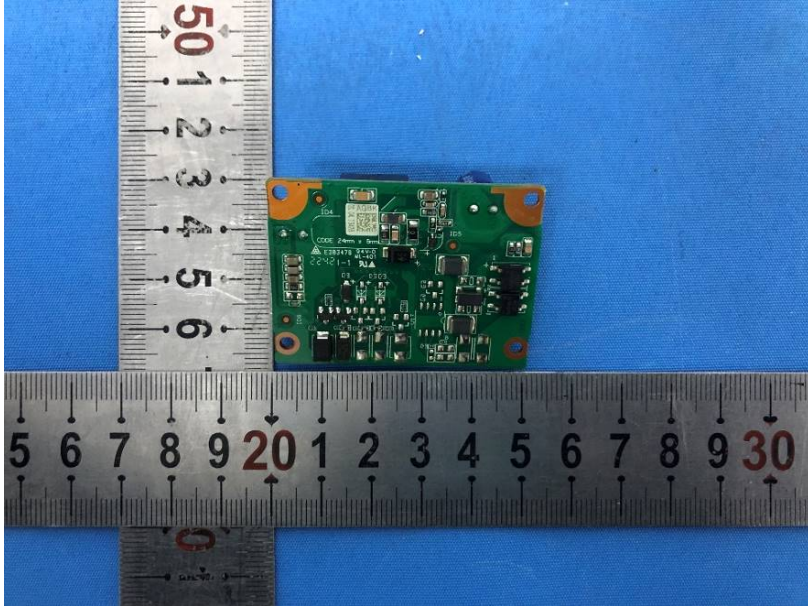
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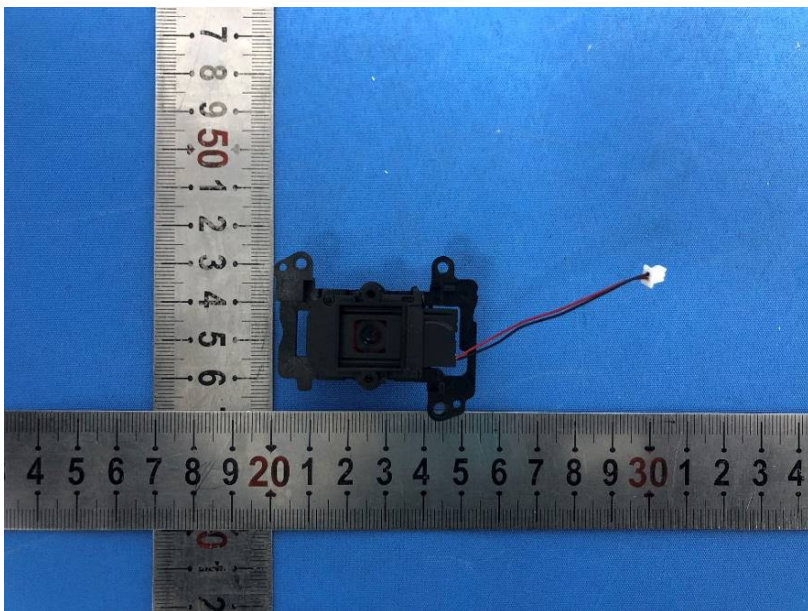
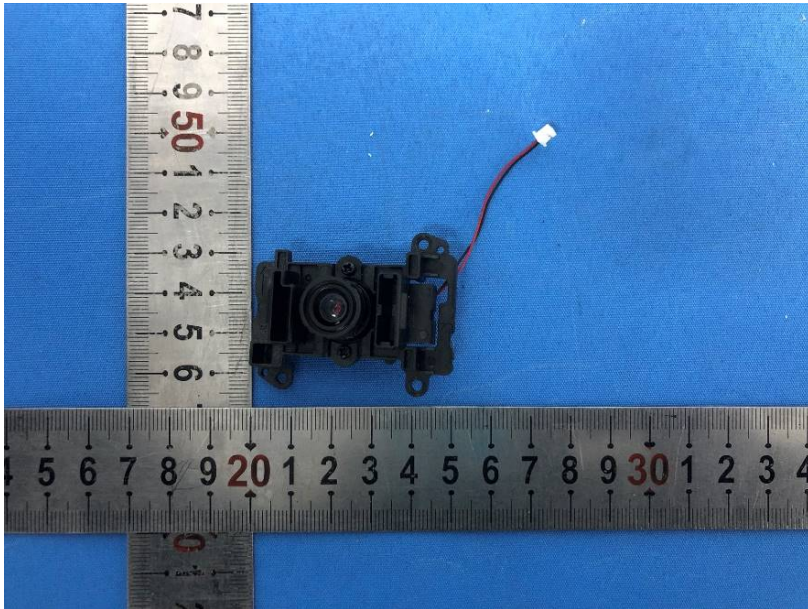


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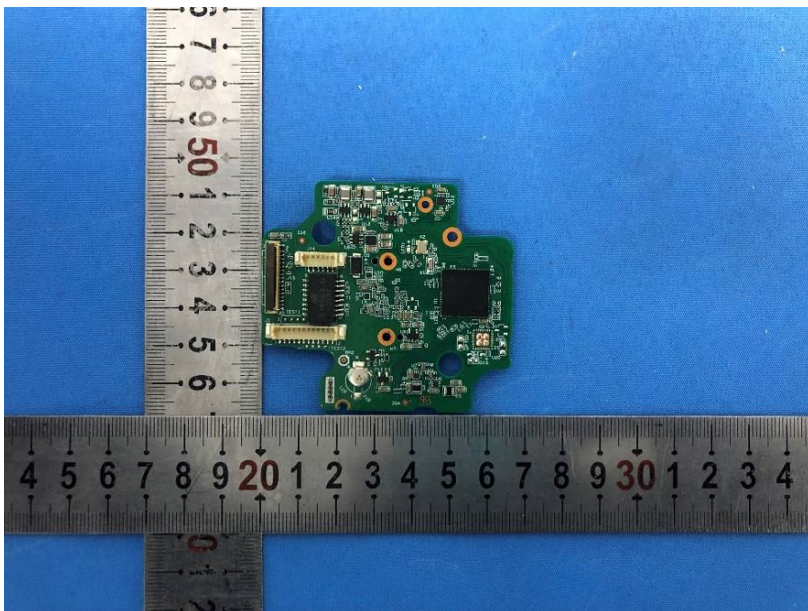
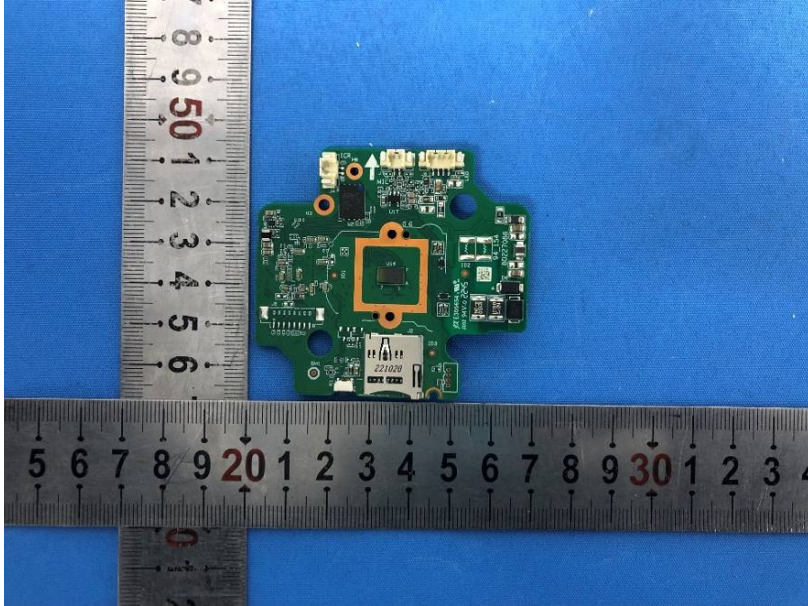
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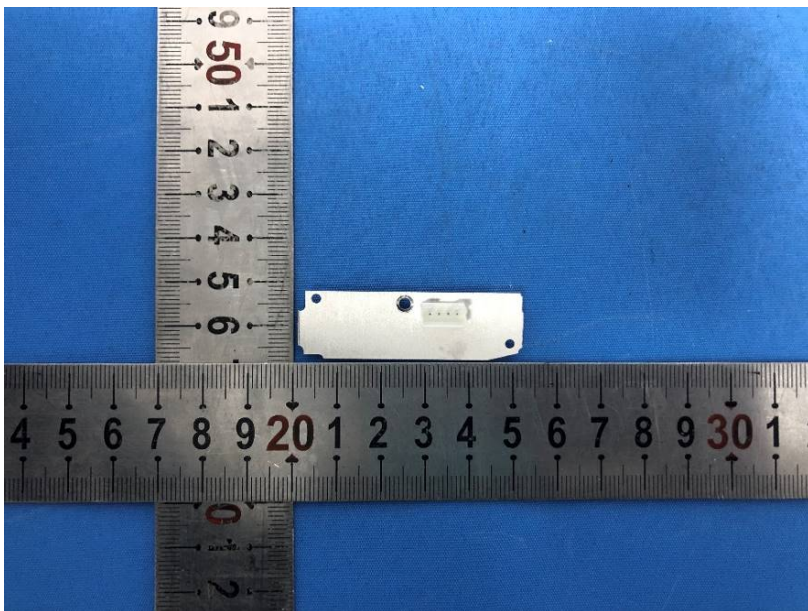
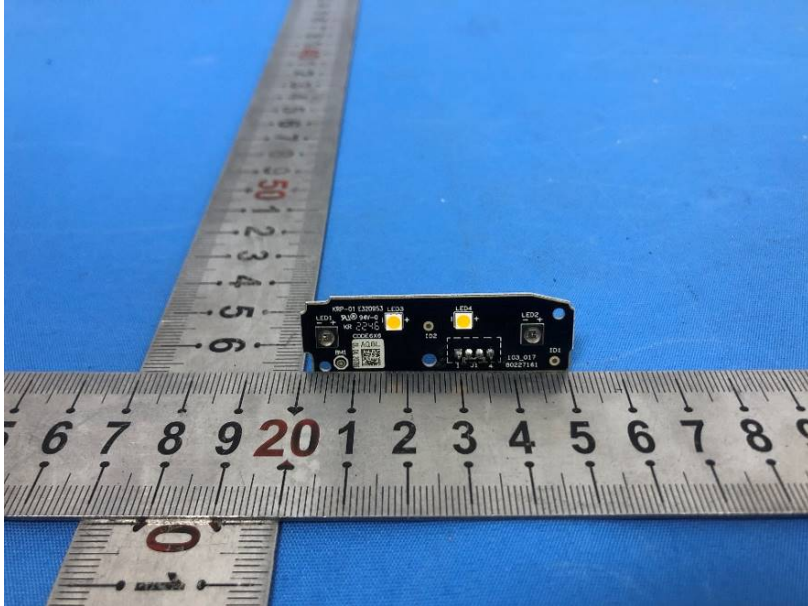
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