

# TEST REPORT

**Application No.:** KSEM2404001054AT

**Applicant:** ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

**Address of Applicant:** No.1399, Binxing Road, Binjiang District, Hangzhou, P.R.China

**Manufacturer:** ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

**Address of Manufacturer:** No.1399, Binxing Road, Binjiang District, Hangzhou, P.R.China

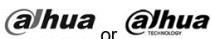

**Equipment Under Test (EUT):**

**EUT Name:** NETWORK VIDEO RECORDER

**Model No.:** DHI-NVR2108-8P-4KS3;DHI-NVR2116-8P-4KS3;NVR2108-8P-4KS3;NVR2116-8P-4KS3;DHI-NVR2108HS-8P-4KS3;DHI-NVR2116HS-8P-4KS3;NVR2108HS-8P-4KS3;NVR2116HS-8P-4KS3;DHI-NVR21xx-8P-4KS3;NVR21xx-8P-4KS3;DHI-NVR21xxHS-8P-4KS3;NVR21xxHS-8P-4KS3(The "xx" can be 04,08,16 and 32 denote different software configuration) ♣

**Add Model No.:** DHI-N220108HS-8P-4KS4; N220108HS-8P-4KS4

♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

**Trade Mark:**  or 

**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:** 2023-09-19

**Date of Test:** 2023-10-02 to 2023-10-13

**Date of Issue:** 2024-05-06

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

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<i>Revision Record</i>			
<i>Version</i>	<i>Description</i>	<i>Date</i>	<i>Remark</i>
00	Add models	2024-05-06	Based on KSEM230900222201

<b>Authorized for issue by:</b>				
<b>Tested By</b>				
		Kun_gu/Project Engineer		
<b>Approved By</b>				
		Terry Hou /Reviewer		

## 2 Test Summary

<b>Emission Part</b>				
<b>Item</b>	<b>Standard</b>	<b>Method</b>	<b>Requirement</b>	<b>Result</b>
Conducted Emissions at Mains Power Port (150kHz-30MHz)	EN 55032: 2015+A11:2020+A1:2020	EN 55032: 2015+A11:2020+A1:2020	Class A	Pass
Harmonic Current Emission	EN IEC 61000-3-2: 2019+A1:2021	EN IEC 61000-3-2: 2019+A1:2021	Class A	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
Asymmetric Mode Conducted Emissions(150kHz-30MHz)	EN 55032: 2015+A11:2020+A1:2020	EN 55032: 2015+A11:2020+A1:2020	Class A	Pass
Radiated Emissions (30MHz-1GHz)		EN 55032: 2015+A11:2020+A1:2020	Class A	Pass
Radiated Emissions (Above 1GHz)		EN 55032: 2015+A11:2020+A1:2020	Class A	Pass

<b>Immunity Part</b>				
<b>Item</b>	<b>Standard</b>	<b>Method</b>	<b>Requirement</b>	<b>Result</b>
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
Electrical Fast Transients & Burst at Signal Port		EN 61000-4-4:2012	1kV, 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
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 Power Port (150kHz-100MHz)		EN 61000-4-6:2014	10Vrms (emf),80%,1kHz sinusoidal Amp. Mod.	Pass
Conducted Immunity at Signal Port (150kHz-100MHz)		EN 61000-4-6:2014	10Vrms (emf),80%,1kHz sinusoidal Amp. Mod	Pass
Mains Supply Voltage Variations		EN 50130-4:2011+A1:2014	Unom+10%, Unom-15%	Pass

Immunity Part				
Item	Standard	Method	Requirement	Result
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
Electrostatic Discharge	EN 55035: 2017+A11:2020	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; 2kV 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	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
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

Model No.: DHI-NVR2108-8P-4KS3;DHI-NVR2116-8P-4KS3;NVR2108-8P-4KS3;NVR2116-8P-4KS3;DHI-NVR2108HS-8P-4KS3;DHI-NVR2116HS-8P-4KS3;NVR2108HS-8P-4KS3;NVR2116HS-8P-4KS3;DHI-NVR21xx-8P-4KS3;NVR21xx-8P-4KS3;DHI-NVR21xxHS-8P-4KS3;NVR21xxHS-8P-4KS3(The "xx" can be 04,08,16 and 32 denote different software configuration)

Only the model DHI-NVR2108HS-8P-4KS3 · DHI-NVR2108-8P-4KS3 was tested.

There are series models mentioned in this report, and they are the similar in electrical and electronic characters. Only the model DHI-NVR2108HS-8P-4KS3 · DHI-NVR2108-8P-4KS3 were tested since their differences are the model number and appearance.The difference between DHI-NVR2108HS-8P-4KS3 and DHI-NVR2108-8P-4KS3 is chassis.



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Note: We add models DHI-N220108HS-8P-4KS4; N220108HS-8P-4KS4 in this report. The new models mentioned in this report are the same as the original models, in Electronic or Electrical characters. Which were already EMC tested in the report KSEM230900222201. So the new models in this report are deemed to fulfil the EMC requirements without testing.

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## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	<p>For Adapter1:E096-1A530181B3 Input:AC100-240V,50/60Hz,1.5A Output:DC53V,1.81A</p> <p>For Adapter2:ADS-110DL-48N-1 530096E Input:AC100-240V,50/60Hz,1.5A Output:DC53V,1.812A</p> <p>EUT1:DHI-NVR2108HS-8P-4KS3 EUT2:DHI-NVR2108-8P-4KS3</p> <p>Pre-test Voltage:AC 230V/50Hz&amp;110V/60Hz Final-test Voltage:AC 230V/50Hz</p>
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### 4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Displayer	LENOVO	T2054pC	/
Displayer	ViewSonic	VS16006	/
Earphone	EDIFIER	K800	/
Earphone	SENIC	ST-908	/
HDD	SAMSUNG	MU-PA500B	/
HDD	SEAGATE	SRD0VN1	/
Network Camera	/	/	/
Notebook	APPLE	Macbook 13Pro	/
Notebook	LENOVO	K27	/
Notebook	LENOVO	80H1	/

**4.3 Measurement Uncertainty & Decision Rule**

**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.

#### **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).
3. Sample source: sent by customer.

#### **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	02/03/2023	02/02/2024
TWO-LINE V-NETWORK	R&S	ENV216	KS301197	01/17/2023	01/16/2024
V (V-LISN)	SCHWARZBECK	NNLK 8129	KS301091	01/17/2023	01/16/2024
Pulse LIMITER	R&S	ESH3-Z2	KUS1902E001	01/17/2023	01/16/2024
Software	Faratronic	EZ_EMV-3A1	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	08/24/2023	08/23/2024
AC Power Source	SCHAFFNER	NSG 1007	KS301087	08/24/2023	08/23/2024
Software	TESEQ	CTS4-v 4.24.0	N/A	N/A	N/A
Harmonic/Flicker Analyzer	KIKUSUI	KHA3000	KUS2009M002-1	03/31/2023	03/30/2024
Line Impedance Network	KIKUSUI	SPEC71116	KUS2009M002-1	03/31/2023	03/30/2024
Switcher	KIKUSUI	SPEC71092	KUS2009M002-2	03/31/2023	03/30/2024
AC Power Supply(Master)	KIKUSUI	PCR24000WE 2	KUS2009M002-3	03/16/2023	03/15/2024
AC Power Supply(Slave)	KIKUSUI	PCR24000WE 2	KUS2009M002-4	03/16/2023	03/15/2024
Software	KIKUSUI	HarmoCapture 3-vv 2.5.2.00	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	08/24/2023	08/23/2024
AC Power Source	SCHAFFNER	NSG 1007	KS301087	08/24/2023	08/23/2024
Software	TESEQ	CTS4-v 4.24.0	N/A	N/A	N/A
Harmonic/Flicker Analyzer	KIKUSUI	KHA3000	KUS2009M002-1	03/31/2023	03/30/2024
Line Impedance Network	KIKUSUI	SPEC71116	KUS2009M002-1	03/31/2023	03/30/2024
Switcher	KIKUSUI	SPEC71092	KUS2009M002-2	03/31/2023	03/30/2024
AC Power Supply(Master)	KIKUSUI	PCR24000WE 2	KUS2009M002-3	03/16/2023	03/15/2024
AC Power Supply(Slave)	KIKUSUI	PCR24000WE 2	KUS2009M002-4	03/16/2023	03/15/2024

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Software	KIKUSUI	HarmoCapture 3-vv 2.5.2.00	N/A	N/A	N/A
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### Asymmetric Mode Conducted Emissions(150kHz-30MHz)

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMI TEST RECEIVER	R&S	ESCI	KS301101	02/03/2023	02/02/2024
TWO-LINE V-NETWORK	R&S	ENV216	KS301197	01/17/2023	01/16/2024
V (V-LISN)	SCHWARZBECK	NNLK 8129	KS301091	01/17/2023	01/16/2024
Pulse LIMITER	R&S	ESH3-Z2	KUS1902E001	01/17/2023	01/16/2024
CISPR22 FOUR BALANCED TELECOM PARIS ISN	FCC	FCC-TLISN-T2-02	KS301144	01/17/2023	01/16/2024
COUPLING AND DECOUPLING NETWORK	TESEQ	ISN ST08	KS301171	01/17/2023	01/16/2024
IMPEDANCE STABILIZATION NETWORK	TESEQ	ISN T800	KS301185	01/17/2023	01/16/2024
IMPEDANCE STABILIZATION NETWORK	TESEQ	ISN T8-CAT6	KS301285	01/17/2023	01/16/2024
RF CURRENT PROBE	FCC	F-65A	CZ301012	01/17/2023	01/16/2024
Software	Faratronic	EZ_EMCC-v 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	08/24/2023	08/23/2024
Antenna	TESEQ	CBL 6112D	KUS1806E006	08/24/2023	03/04/2024
Software	Faratronic	EZ_EMCC v 3A1	N/A	N/A	N/A

### Radiated Emissions (Above 1GHz)

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Spectrum Analyzer	R&S	FSU26	KS301206	03/16/2023	03/15/2024
Preamplifier	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-2	01/17/2023	01/16/2024
Horn-antenna	SCHWARZBECK	BBHA9120D	KS301079	04/02/2022	04/01/2024
Software	Faratronic	EZ_EMCC-v 3A1	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	02/06/2023	02/05/2024



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<b>Radiated Immunity(80MHz-2.7GHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Synthesized Signal Generator	AGILENT	83732B	KS301183	02/03/2023	02/02/2024
Laser probe interface	AR Worldwide	FI7000	KS301193-2	03/21/2023	03/20/2024
E-Field Sensor	AR Worldwide	FL7006 100K-6G	KS301193-1	03/21/2023	03/20/2024
Amplifier Research (80~1000MHz 150w)	AR Worldwide	150W1000M1	KS301139	08/24/2023	08/23/2024
Amplifier Research (1~6GHz 50w)	AR Worldwide	50S1G6M1	KS301231	08/24/2023	08/23/2024
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	02/03/2023	02/02/2024
POWER SENSOR	BOONTON	51085	H3010235-1	02/03/2023	02/02/2024
POWER SENSOR	BOONTON	51085	H3010235-2	02/03/2023	02/02/2024
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

<b>Electrical Fast Transients &amp; Burst at AC Power Port</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMC Immunity Tester	EMC PARTNER	Transient2000	KS301188-1	08/24/2023	08/23/2024
Coupling Network	EMC PARTNER	CN-EFT1000	KS301188-3	08/24/2023	08/23/2024
Burst Generator	SANKI	EFT-0404S	KUS2009M002-7	03/31/2023	03/30/2024
Coupling and Decoupling Network	SANKI	CDN-4350	KUS2009M002-8	08/11/2023	08/10/2024

<b>Electrical Fast Transients &amp; Burst at Signal Port</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMC Immunity Tester	EMC PARTNER	Transient2000	KS301188-1	08/24/2023	08/23/2024
Coupling Network	EMC PARTNER	CN-EFT1000	KS301188-3	08/24/2023	08/23/2024
Burst Generator	SANKI	EFT-0404S	KUS2009M002-7	03/31/2023	03/30/2024
Coupling and Decoupling Network	SANKI	CDN-4350	KUS2009M002-8	08/11/2023	08/10/2024

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<b>Surge at AC Power Port</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Coupling and Decoupling Network	EMC PARTNER	CDN-UTP8	KS301188-2	08/24/2023	08/23/2024
Surge Generator	SANKI	LSG-0506S	KUS2009M002-5	08/11/2023	08/10/2024
Coupling and Decoupling Network	SANKI	CDN-5350	KUS2009M002-6	08/11/2023	08/10/2024

<b>Surge at Signal Port</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Coupling and Decoupling Network	EMC PARTNER	CDN-UTP8	KS301188-2	08/24/2023	08/23/2024
Surge Generator	SANKI	LSG-0506S	KUS2009M002-5	08/11/2023	08/10/2024
Coupling and Decoupling Network	SANKI	CDN-5350	KUS2009M002-6	08/11/2023	08/10/2024

<b>Conducted Immunity at Power Port (150kHz-100MHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Test System for Conducted and Radiated Immunity	TESEQ	NSG 4070B	KSZ201705E003	02/03/2023	02/02/2024
Amplifier	TESEQ	SCCXE75	KSZ201705E004	02/03/2023	02/02/2024
EM-Koppelzange	SCHAFFNER	KEMZ 801	CZ301002	02/03/2023	02/02/2024
Attenuator	EURO MC	7860 ORGEVAL	CZ301084	03/16/2023	03/15/2024
Directional Coupler	HIGH POWER	C21A8	CZ750021	08/24/2023	08/23/2024
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M216	CZ301085	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M316	CZ301025	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	TESEQ	CDN S751	KS301184-2	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	TESEQ	CDN M116	KS301184-1	03/16/2023	03/15/2024
CDN	TESEQ	CDN T2-10S	KS301286	03/16/2023	03/15/2024
CDN	TESEQ	CDN T4-10S	KS301287	03/16/2023	03/15/2024
CDN	3Ctest	CDNRJ45	KS301288	08/11/2023	08/10/2024



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Current Clamp	TESEQ	IP-DR250	KS201703E00 1	02/03/2023	02/02/2024
CDN	TESEQ	CDN M432	KUS2003M001 -1	02/03/2023	02/02/2024
CDN	TESEQ	CDN M432- 3LN	KUS2003M001 -2	02/03/2023	02/02/2024
CDN	TESEQ	CDN M532	KUS2003M001 -3	02/03/2023	02/02/2024
CDN	TESEQ	CDN M232	KSZ201706E0 01	03/16/2023	03/15/2024
CDN	TESEQ	CDN M332	KSZ201706E0 02	03/16/2023	03/15/2024
Software	TESEQ	NSG 4070-v 1.3.0.1	N/A	N/A	N/A

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

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Test System for Conducted and Radiated Immunity	TESEQ	NSG 4070B	KSZ201705E0 03	02/03/2023	02/02/2024
Amplifier	TESEQ	SCCXE75	KSZ201705E0 04	02/03/2023	02/02/2024
EM-Koppelzange	SCHAFFNER	KEMZ 801	CZ301002	02/03/2023	02/02/2024
Attenuator	EURO MC	7860 ORGEVAL	CZ301084	03/16/2023	03/15/2024
Directional Coupler	HIGH POWER	C21A8	CZ750021	08/24/2023	08/23/2024
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M216	CZ301085	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M316	CZ301025	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	TESEQ	CDN S751	KS301184-2	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	TESEQ	CDN M116	KS301184-1	03/16/2023	03/15/2024
CDN	TESEQ	CDN T2-10S	KS301286	03/16/2023	03/15/2024
CDN	TESEQ	CDN T4-10S	KS301287	03/16/2023	03/15/2024
CDN	3Ctest	CDNRJ45	KS301288	08/11/2023	08/10/2024
Current Clamp	TESEQ	IP-DR250	KS201703E00 1	02/03/2023	02/02/2024
CDN	TESEQ	CDN M432	KUS2003M001 -1	02/03/2023	02/02/2024
CDN	TESEQ	CDN M432- 3LN	KUS2003M001 -2	02/03/2023	02/02/2024
CDN	TESEQ	CDN M532	KUS2003M001 -3	02/03/2023	02/02/2024
CDN	TESEQ	CDN M232	KSZ201706E0 01	03/16/2023	03/15/2024
CDN	TESEQ	CDN M332	KSZ201706E0 02	03/16/2023	03/15/2024

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Software	TESEQ	NSG 4070-v 1.3.0.1	N/A	N/A	N/A
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### Mains Supply Voltage Variations

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Switcher	KIKUSUI	SPEC71092	KUS2009M002 -2	03/31/2023	03/30/2024
AC Power Supply(Master)	KIKUSUI	PCR24000WE 2	KUS2009M002 -3	03/16/2023	03/15/2024
AC Power Supply(Slave)	KIKUSUI	PCR24000WE 2	KUS2009M002 -4	03/16/2023	03/15/2024
Software	KIKUSUI	Quick Immunity Sequencer 2-v 4.0.3.02	N/A	N/A	N/A

### Voltage Dips and Interruptions

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Switcher	KIKUSUI	SPEC71092	KUS2009M002 -2	03/31/2023	03/30/2024
AC Power Supply(Master)	KIKUSUI	PCR24000WE 2	KUS2009M002 -3	03/16/2023	03/15/2024
AC Power Supply(Slave)	KIKUSUI	PCR24000WE 2	KUS2009M002 -4	03/16/2023	03/15/2024
Software	KIKUSUI	Quick Immunity Sequencer 2-v 4.0.3.02	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	02/06/2023	02/05/2024

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

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Synthesized Signal Generator	AGILENT	83732B	KS301183	02/03/2023	02/02/2024
Laser probe interface	AR Worldwide	FI7000	KS301193-2	03/21/2023	03/20/2024
E-Field Sensor	AR Worldwide	FL7006 100K-6G	KS301193-1	03/21/2023	03/20/2024
Amplifier Research (80~1000MHz 150w)	AR Worldwide	150W1000M1	KS301139	08/24/2023	08/23/2024
Amplifier Research (1~6GHz 50w)	AR Worldwide	50S1G6M1	KS301231	08/24/2023	08/23/2024
Dual Directional Coupler (1-11G)	AR Worldwide	C1-A47NFNF 35dB	KS301193-5	N.C.R	N.C.R
Dual Directional Coupler	AR Worldwide	DC6180	KS301193-6	N.C.R	N.C.R



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(80~1000MHz 400w)					
RF POWER METER	BOONTON	4232A-01	KS301022	02/03/2023	02/02/2024
POWER SENSOR	BOONTON	51085	H3010235-1	02/03/2023	02/02/2024
POWER SENSOR	BOONTON	51085	H3010235-2	02/03/2023	02/02/2024
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	08/24/2023	08/23/2024
Burst Generator	SANKI	EFT-0404S	KUS2009M002 -7	03/31/2023	03/30/2024
Coupling and Decoupling Network	SANKI	CDN-4350	KUS2009M002 -8	08/11/2023	08/10/2024

### 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	08/24/2023	08/23/2024
Coupling Network	EMC PARTNER	CN-EFT1000	KS301188-3	08/24/2023	08/23/2024
Burst Generator	SANKI	EFT-0404S	KUS2009M002 -7	03/31/2023	03/30/2024
Coupling and Decoupling Network	SANKI	CDN-4350	KUS2009M002 -8	08/11/2023	08/10/2024

### Surge at AC Power Port

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Surge Generator	SANKI	LSG-0506S	KUS2009M002 -5	08/11/2023	08/10/2024
Coupling and Decoupling Network	SANKI	CDN-5350	KUS2009M002 -6	08/11/2023	08/10/2024

### Surge at Signal Port

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Coupling and Decoupling Network	EMC PARTNER	CDN-UTP8	KS301188-2	08/24/2023	08/23/2024
Surge Generator	SANKI	LSG-0506S	KUS2009M002 -5	08/11/2023	08/10/2024
Coupling and Decoupling Network	SANKI	CDN-5350	KUS2009M002 -6	08/11/2023	08/10/2024

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<b>Conducted Immunity at AC Power Port (150kHz-80MHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Test System for Conducted and Radiated Immunity	TESEQ	NSG 4070B	KSZ201705E003	02/03/2023	02/02/2024
Amplifier	TESEQ	SCCXE75	KSZ201705E004	02/03/2023	02/02/2024
EM-Koppelzange	SCHAFFNER	KEMZ 801	CZ301002	02/03/2023	02/02/2024
Attenuator	EURO MC	7860 ORGEVAL	CZ301084	03/16/2023	03/15/2024
Directional Coupler	HIGH POWER	C21A8	CZ750021	08/24/2023	08/23/2024
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M216	CZ301085	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	SCHAFFNER	CDN M316	CZ301025	03/16/2023	03/15/2024
CDN (Coupling and Decoupling Network)	TESEQ	CDN M116	KS301184-1	03/16/2023	03/15/2024
CDN	TESEQ	CDN M432	KUS2003M001-1	02/03/2023	02/02/2024
CDN	TESEQ	CDN M432-3LN	KUS2003M001-2	02/03/2023	02/02/2024
CDN	TESEQ	CDN M532	KUS2003M001-3	02/03/2023	02/02/2024
CDN	TESEQ	CDN M232	KSZ201706E001	03/16/2023	03/15/2024
CDN	TESEQ	CDN M332	KSZ201706E002	03/16/2023	03/15/2024
Software	TESEQ	NSG 4070-v 1.3.0.1	N/A	N/A	N/A

<b>Conducted Immunity at Signal Port (150kHz-80MHz)</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal Date</b>	<b>Cal Due Date</b>
Test System for Conducted and Radiated Immunity	TESEQ	NSG 4070B	KSZ201705E003	02/03/2023	02/02/2024
Amplifier	TESEQ	SCCXE75	KSZ201705E004	02/03/2023	02/02/2024
EM-Koppelzange	SCHAFFNER	KEMZ 801	CZ301002	02/03/2023	02/02/2024
Attenuator	EURO MC	7860 ORGEVAL	CZ301084	03/16/2023	03/15/2024
Directional Coupler	HIGH POWER	C21A8	CZ750021	08/24/2023	08/23/2024
CDN	TESEQ	CDN T2-10S	KS301286	03/16/2023	03/15/2024
CDN	TESEQ	CDN T4-10S	KS301287	03/16/2023	03/15/2024
CDN	3Ctest	CDNRJ45	KS301288	08/11/2023	08/10/2024
Current Clamp	TESEQ	IP-DR250	KS201703E001	02/03/2023	02/02/2024
Software	TESEQ	NSG 4070-v 1.3.0.1	N/A	N/A	N/A

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Power Frequency Magnetic Field					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Inductive Standard Coil	EMC PARTNER	MF1000-1	KS301188-4	08/24/2023	08/23/2024

Voltage Dips and Interruptions					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMC Immunity Tester	EMC PARTNER	TRA2006	KS301188-1	08/24/2023	08/23/2024
Switcher	KIKUSUI	SPEC71092	KUS2009M002-2	03/31/2023	03/30/2024
AC Power Supply(Master)	KIKUSUI	PCR24000WE 2	KUS2009M002-3	03/16/2023	03/15/2024
AC Power Supply(Slave)	KIKUSUI	PCR24000WE 2	KUS2009M002-4	03/16/2023	03/15/2024
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	01/31/2023	01/30/2024
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

## 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 79dB(μV) quasi-peak, 66dB(μV) average

0.5MHz-30MHz 73dB(μV) quasi-peak, 60dB(μV) average

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

#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 24 °C

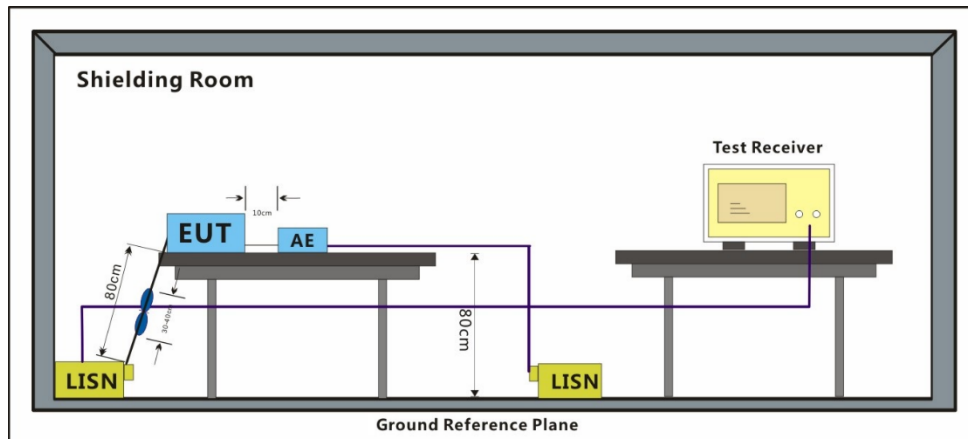
Humidity: 48 % RH

Atmospheric Pressure: 1010 mbar

#### 6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 6.1.3 Test Setup Diagram





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### **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

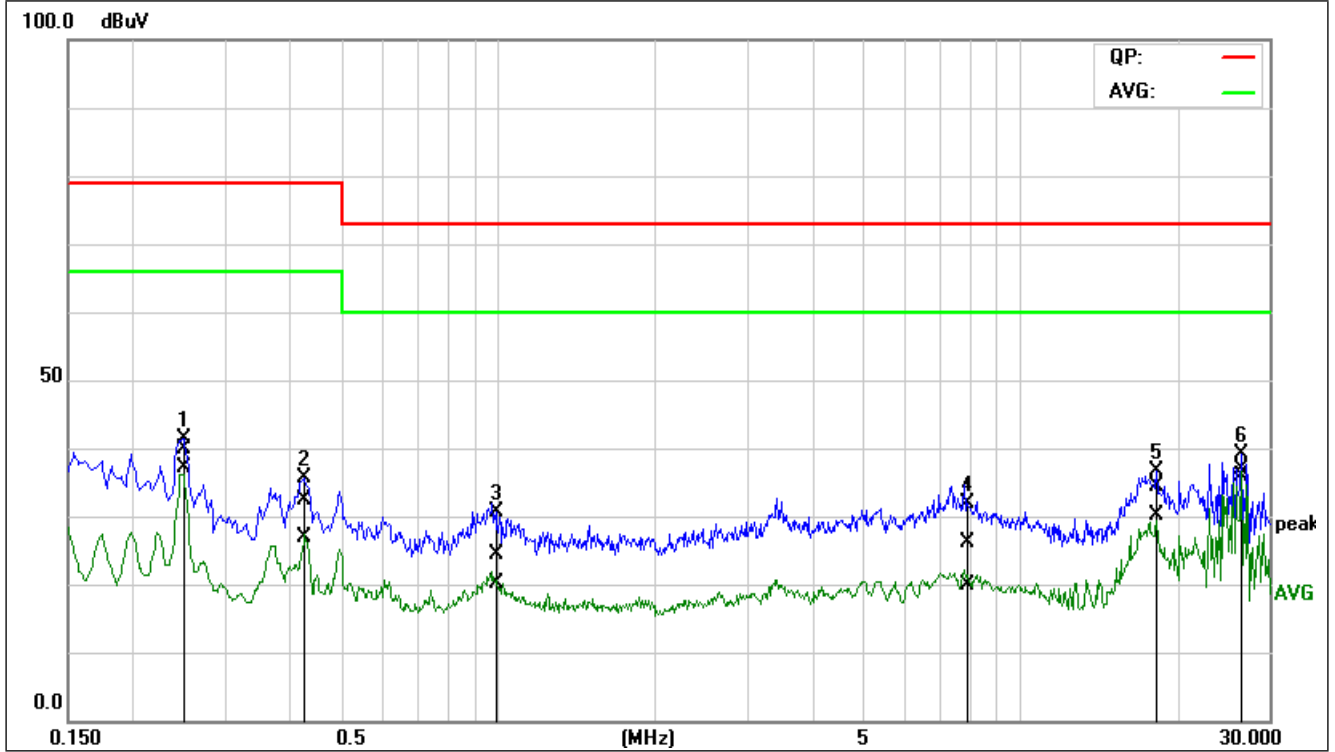
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Test Mode: 00; Line: Live line



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	0.2485	19.79	17.16	20.03	39.82	37.19	79.00	66.00	-39.18	-28.81	Pass
2	0.4254	12.29	6.94	20.04	32.33	26.98	79.00	66.00	-46.67	-39.02	Pass
3	0.9843	4.50	0.28	19.91	24.41	20.19	73.00	60.00	-48.59	-39.81	Pass
4	7.9192	6.02	-0.07	20.07	26.09	20.00	73.00	60.00	-46.91	-40.00	Pass
5	18.2435	14.51	10.11	19.98	34.49	30.09	73.00	60.00	-38.51	-29.91	Pass
6*	26.6069	16.72	15.74	20.08	36.80	35.82	73.00	60.00	-36.20	-24.18	Pass

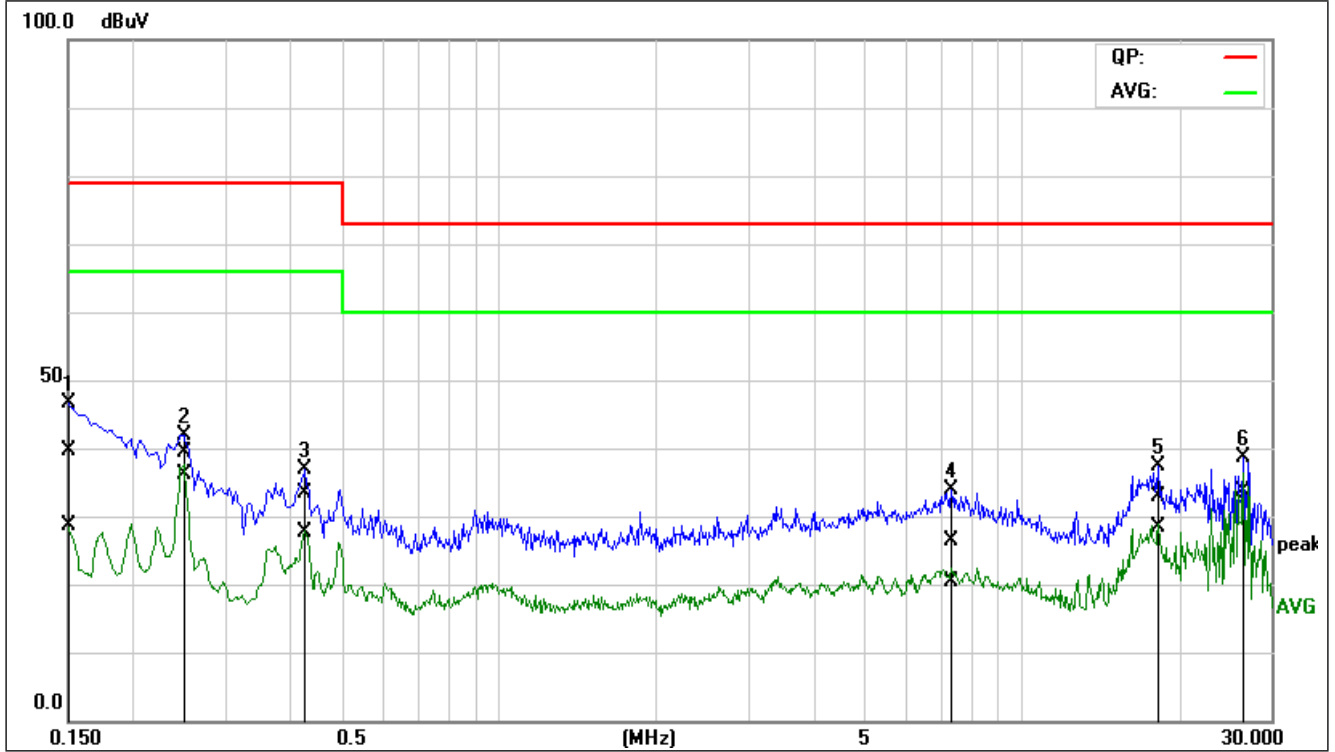
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Test Mode: 00; Line: Neutral Line



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	0.1500	19.33	8.48	20.25	39.58	28.73	79.00	66.00	-39.42	-37.27	Pass
2	0.2505	19.30	16.08	20.15	39.45	36.23	79.00	66.00	-39.55	-29.77	Pass
3	0.4246	13.34	7.58	20.09	33.43	27.67	79.00	66.00	-45.57	-38.33	Pass
4	7.3720	6.36	0.50	20.00	26.36	20.50	73.00	60.00	-46.64	-39.50	Pass
5	18.2413	12.81	8.31	19.96	32.77	28.27	73.00	60.00	-40.23	-31.73	Pass
6*	26.6124	13.43	12.03	20.09	33.52	32.12	73.00	60.00	-39.48	-27.88	Pass

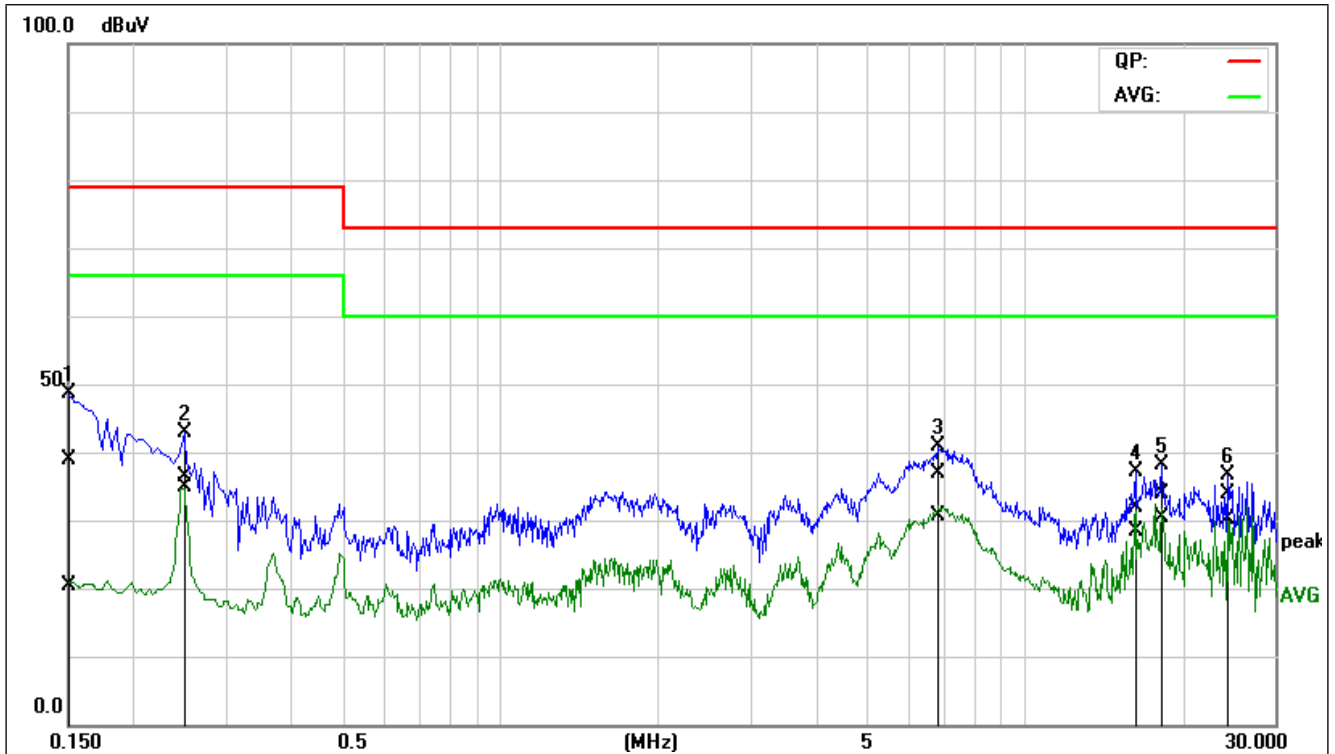
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Test Mode: 01; Line: Live line



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	0.1500	18.76	0.26	20.19	38.95	20.45	79.00	66.00	-40.05	-45.55	Pass
2	0.2490	16.26	14.74	20.03	36.29	34.77	79.00	66.00	-42.71	-31.23	Pass
3*	6.8332	16.86	10.54	20.08	36.94	30.62	73.00	60.00	-36.06	-29.38	Pass
4	16.2241	11.82	8.50	19.95	31.77	28.45	73.00	60.00	-41.23	-31.55	Pass
5	18.2405	13.90	10.52	19.98	33.88	30.50	73.00	60.00	-39.12	-29.50	Pass
6	24.3493	13.98	10.23	19.99	33.97	30.22	73.00	60.00	-39.03	-29.78	Pass

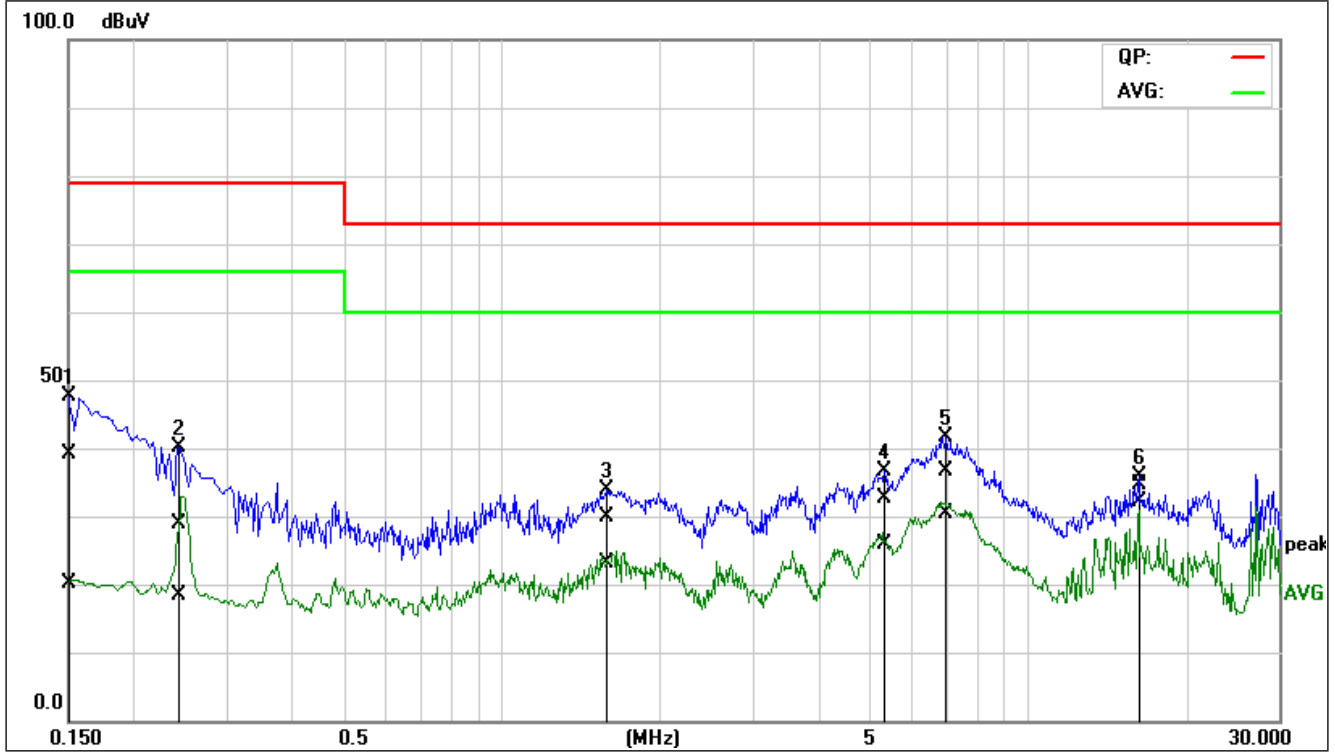
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Test Mode: 01; Line: Neutral Line



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	0.1507	18.84	-0.08	20.26	39.10	20.18	79.00	66.00	-39.90	-45.82	Pass
2	0.2449	8.83	-1.67	20.15	28.98	18.48	79.00	66.00	-50.02	-47.52	Pass
3	1.5908	9.83	3.10	20.00	29.83	23.10	73.00	60.00	-43.17	-36.90	Pass
4	5.3431	12.62	5.95	19.90	32.52	25.85	73.00	60.00	-40.48	-34.15	Pass
5	7.0173	16.62	10.49	20.00	36.62	30.49	73.00	60.00	-36.38	-29.51	Pass
6*	16.2286	14.70	12.15	19.99	34.69	32.14	73.00	60.00	-38.31	-27.86	Pass

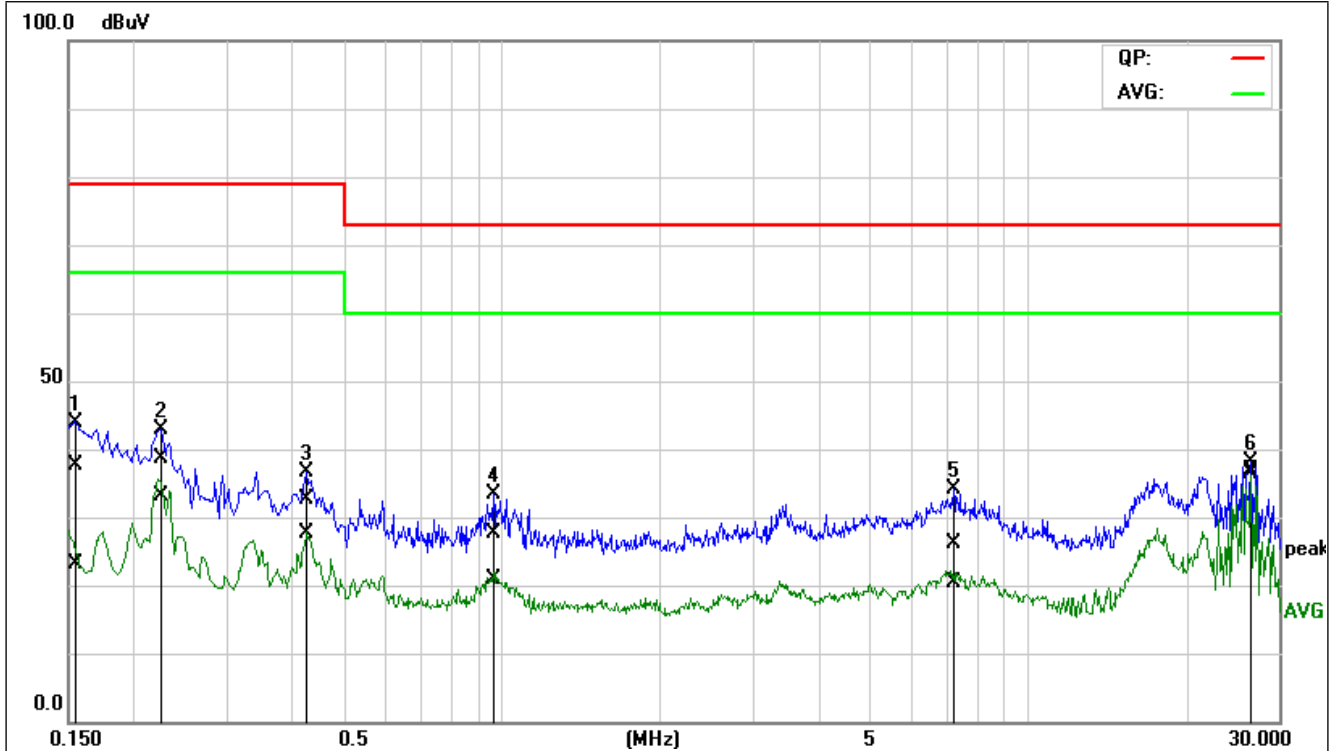
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Test Mode: 02; Line: Live line



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	0.1568	17.52	2.83	20.18	37.70	23.01	79.00	66.00	-41.30	-42.99	Pass
2	0.2267	18.49	13.19	20.03	38.52	33.22	79.00	66.00	-40.48	-32.78	Pass
3	0.4281	12.60	7.55	20.04	32.64	27.59	79.00	66.00	-46.36	-38.41	Pass
4	0.9638	7.69	0.97	19.91	27.60	20.88	73.00	60.00	-45.40	-39.12	Pass
5	7.2159	5.98	0.18	20.09	26.07	20.27	73.00	60.00	-46.93	-39.73	Pass
6*	26.4864	16.87	16.30	20.08	36.95	36.38	73.00	60.00	-36.05	-23.62	Pass

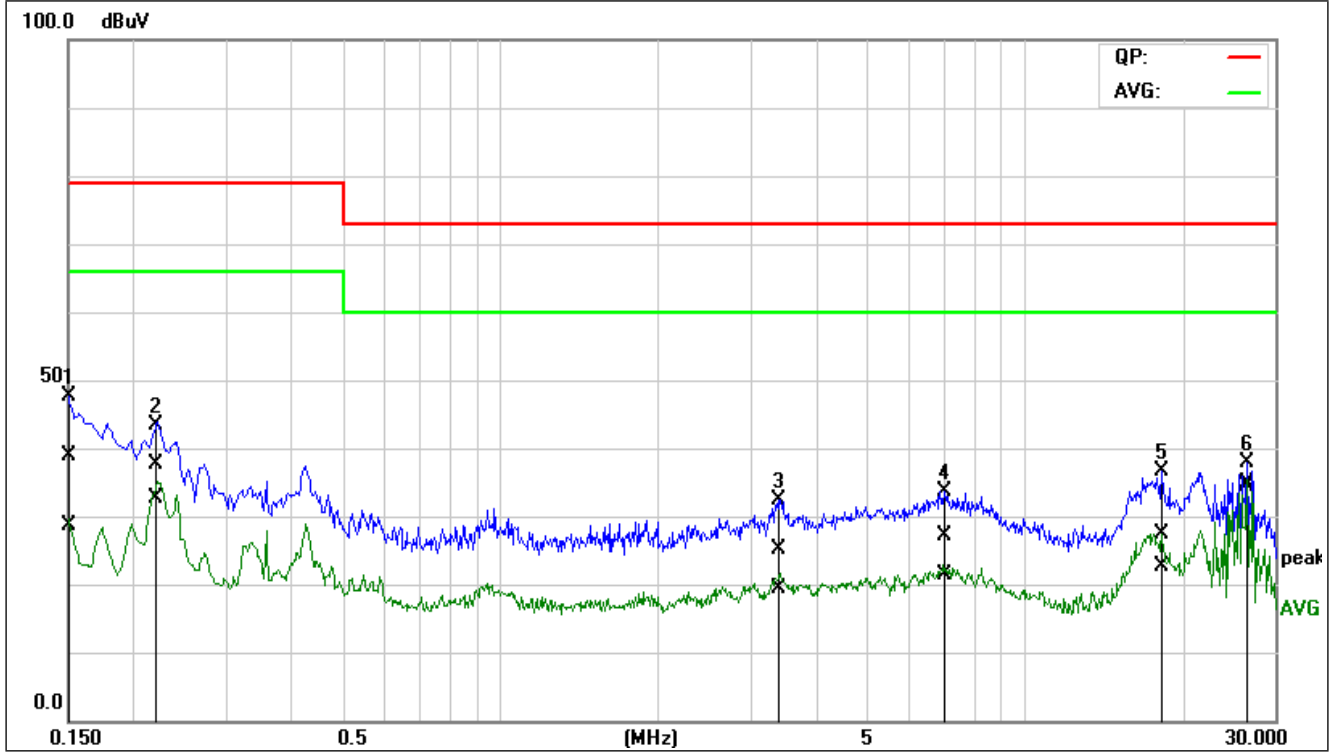
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Test Mode: 02; Line: Neutral Line



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	0.1500	18.71	8.37	20.25	38.96	28.62	79.00	66.00	-40.04	-37.38	Pass
2	0.2181	17.60	12.49	20.14	37.74	32.63	79.00	66.00	-41.26	-33.37	Pass
3	3.3491	5.10	-0.69	19.98	25.08	19.29	73.00	60.00	-47.92	-40.71	Pass
4	7.0883	7.19	1.41	20.00	27.19	21.41	73.00	60.00	-45.81	-38.59	Pass
5	18.2799	7.39	2.79	19.96	27.35	22.75	73.00	60.00	-45.65	-37.25	Pass
6*	26.4847	14.79	14.17	20.09	34.88	34.26	73.00	60.00	-38.12	-25.74	Pass

### 6.2 Harmonic Current Emission

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

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

#### 6.2.1 E.U.T. Operation

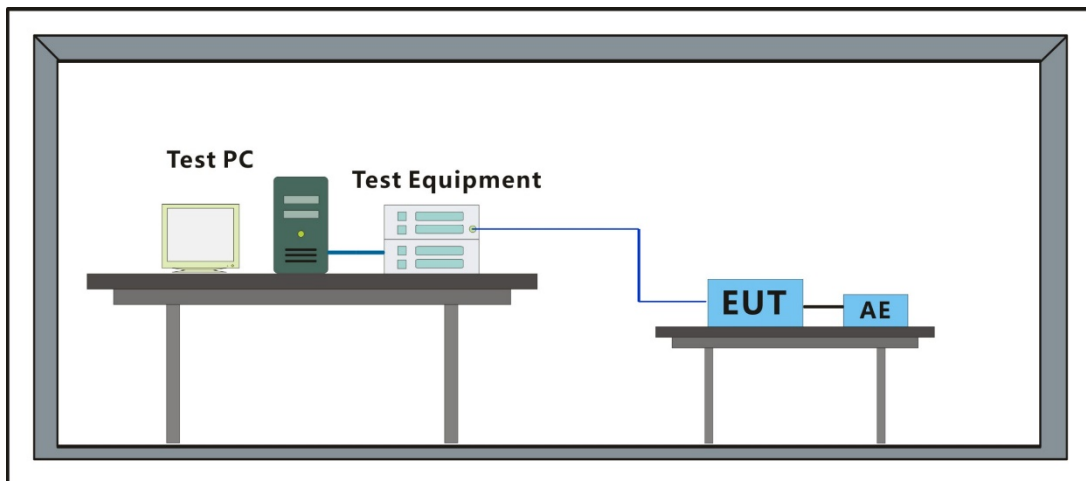
Operating Environment:

Temperature: 24 °C Humidity: 48 % RH Atmospheric Pressure: 1010 mbar

#### 6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 6.2.3 Test Setup Diagram



#### 6.2.4 Measurement Procedure and Data

Frequency Range: 100Hz to 2kHz



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Test Mode: 00

**Highest parameter values during test:**

V <sub>RMS</sub> (Volts):	230.23	Frequency(Hz):	50.00
I <sub>Peak</sub> (Amps):	0.610	I <sub>RMS</sub> (Amps):	0.121
I <sub>Fund</sub> (Amps):	0.052	Crest Factor:	5.155
Power (Watts):	10.6	Power Factor:	0.388

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	N/A	0.004	1.620	N/A	Pass
3	0.044	2.300	1.9	0.045	3.450	1.3	Pass
4	0.002	0.430	N/A	0.004	0.645	N/A	Pass
5	0.042	1.140	3.7	0.043	1.710	2.5	Pass
6	0.002	0.300	N/A	0.003	0.450	N/A	Pass
7	0.040	0.770	5.2	0.041	1.155	3.5	Pass
8	0.002	0.230	N/A	0.003	0.345	N/A	Pass
9	0.037	0.400	9.3	0.038	0.600	6.3	Pass
10	0.002	0.184	N/A	0.003	0.276	N/A	Pass
11	0.034	0.330	10.3	0.034	0.495	7.0	Pass
12	0.001	0.153	N/A	0.003	0.230	N/A	Pass
13	0.030	0.210	14.5	0.031	0.315	9.8	Pass
14	0.001	0.131	N/A	0.002	0.197	N/A	Pass
15	0.027	0.150	17.7	0.027	0.225	12.0	Pass
16	0.001	0.115	N/A	0.002	0.173	N/A	Pass
17	0.023	0.132	17.2	0.023	0.198	11.6	Pass
18	0.001	0.102	N/A	0.002	0.153	N/A	Pass
19	0.019	0.118	15.9	0.019	0.178	10.7	Pass
20	0.001	0.092	N/A	0.001	0.138	N/A	Pass
21	0.015	0.107	14.1	0.015	0.161	9.5	Pass
22	0.001	0.084	N/A	0.001	0.125	N/A	Pass
23	0.012	0.098	11.9	0.012	0.147	8.0	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.008	0.090	9.4	0.009	0.135	6.4	Pass
26	0.001	0.071	N/A	0.001	0.107	N/A	Pass
27	0.006	0.083	6.9	0.006	0.125	4.7	Pass
28	0.001	0.066	N/A	0.001	0.099	N/A	Pass
29	0.003	0.078	N/A	0.004	0.116	N/A	Pass
30	0.000	0.061	N/A	0.001	0.092	N/A	Pass
31	0.002	0.073	N/A	0.002	0.109	N/A	Pass
32	0.001	0.058	N/A	0.001	0.086	N/A	Pass
33	0.001	0.068	N/A	0.001	0.102	N/A	Pass
34	0.000	0.054	N/A	0.001	0.081	N/A	Pass
35	0.001	0.064	N/A	0.001	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	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	0.000	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	0.000	0.069	N/A	Pass



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Test Mode: 00

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.168	0.460	36.55	OK
3	0.453	2.072	21.87	OK
4	0.039	0.460	8.45	OK
5	0.038	0.921	4.15	OK
6	0.079	0.460	17.17	OK
7	0.057	0.691	8.32	OK
8	0.043	0.460	9.43	OK
9	0.014	0.460	3.03	OK
10	0.025	0.460	5.36	OK
11	0.025	0.230	11.01	OK
12	0.020	0.230	8.74	OK
13	0.027	0.230	11.71	OK
14	0.015	0.230	6.45	OK
15	0.023	0.230	9.94	OK
16	0.014	0.230	5.94	OK
17	0.023	0.230	9.80	OK
18	0.017	0.230	7.40	OK
19	0.020	0.230	8.74	OK
20	0.009	0.230	3.95	OK
21	0.017	0.230	7.43	OK
22	0.008	0.230	3.58	OK
23	0.017	0.230	7.48	OK
24	0.006	0.230	2.40	OK
25	0.013	0.230	5.52	OK
26	0.010	0.230	4.27	OK
27	0.010	0.230	4.41	OK
28	0.008	0.230	3.28	OK
29	0.006	0.230	2.40	OK
30	0.007	0.230	2.88	OK
31	0.006	0.230	2.62	OK
32	0.005	0.230	2.22	OK
33	0.004	0.230	1.79	OK
34	0.003	0.230	1.34	OK
35	0.004	0.230	1.79	OK
36	0.003	0.230	1.40	OK
37	0.006	0.230	2.80	OK
38	0.003	0.230	1.36	OK
39	0.005	0.230	2.35	OK
40	0.005	0.230	1.99	OK



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Test Mode: 01

### Highest parameter values during test:

V <sub>RMS</sub> (Volts):	230.23	Frequency(Hz):	50.00
I <sub>Peak</sub> (Amps):	0.533	I <sub>RMS</sub> (Amps):	0.102
I <sub>Fund</sub> (Amps):	0.045	Crest Factor:	5.218
Power (Watts):	8.8	Power Factor:	0.376

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	N/A	0.004	1.620	N/A	Pass
3	0.036	2.300	1.6	0.037	3.450	1.1	Pass
4	0.002	0.430	N/A	0.003	0.645	N/A	Pass
5	0.035	1.140	3.1	0.036	1.710	2.1	Pass
6	0.002	0.300	N/A	0.003	0.450	N/A	Pass
7	0.033	0.770	4.3	0.034	1.155	2.9	Pass
8	0.002	0.230	N/A	0.003	0.345	N/A	Pass
9	0.031	0.400	7.8	0.031	0.600	5.2	Pass
10	0.002	0.184	N/A	0.003	0.276	N/A	Pass
11	0.029	0.330	8.7	0.029	0.495	5.8	Pass
12	0.002	0.153	N/A	0.002	0.230	N/A	Pass
13	0.026	0.210	12.3	0.026	0.315	8.3	Pass
14	0.001	0.131	N/A	0.002	0.197	N/A	Pass
15	0.023	0.150	15.3	0.023	0.225	10.2	Pass
16	0.001	0.115	N/A	0.002	0.173	N/A	Pass
17	0.020	0.132	15.0	0.020	0.198	10.1	Pass
18	0.001	0.102	N/A	0.002	0.153	N/A	Pass
19	0.017	0.118	14.1	0.017	0.178	9.4	Pass
20	0.001	0.092	N/A	0.001	0.138	N/A	Pass
21	0.014	0.107	12.7	0.014	0.161	8.5	Pass
22	0.001	0.084	N/A	0.001	0.125	N/A	Pass
23	0.011	0.098	11.0	0.011	0.147	7.4	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.008	0.090	9.1	0.008	0.135	6.1	Pass
26	0.001	0.071	N/A	0.001	0.107	N/A	Pass
27	0.006	0.083	7.0	0.006	0.125	4.8	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	0.000	0.061	N/A	0.001	0.092	N/A	Pass
31	0.002	0.073	N/A	0.002	0.109	N/A	Pass
32	0.001	0.058	N/A	0.001	0.086	N/A	Pass
33	0.001	0.068	N/A	0.001	0.102	N/A	Pass
34	0.000	0.054	N/A	0.001	0.081	N/A	Pass
35	0.001	0.064	N/A	0.001	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	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	0.000	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	0.000	0.069	N/A	Pass



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Test Mode: 01

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.167	0.460	36.33	OK
3	0.447	2.072	21.59	OK
4	0.033	0.460	7.22	OK
5	0.035	0.921	3.78	OK
6	0.080	0.460	17.45	OK
7	0.057	0.691	8.22	OK
8	0.043	0.460	9.29	OK
9	0.015	0.460	3.35	OK
10	0.026	0.460	5.61	OK
11	0.023	0.230	10.18	OK
12	0.017	0.230	7.43	OK
13	0.023	0.230	10.04	OK
14	0.014	0.230	6.24	OK
15	0.020	0.230	8.61	OK
16	0.014	0.230	6.20	OK
17	0.021	0.230	9.01	OK
18	0.016	0.230	6.77	OK
19	0.018	0.230	7.67	OK
20	0.009	0.230	3.80	OK
21	0.017	0.230	7.33	OK
22	0.008	0.230	3.33	OK
23	0.015	0.230	6.44	OK
24	0.006	0.230	2.71	OK
25	0.013	0.230	5.77	OK
26	0.010	0.230	4.33	OK
27	0.010	0.230	4.29	OK
28	0.008	0.230	3.40	OK
29	0.006	0.230	2.77	OK
30	0.007	0.230	3.09	OK
31	0.007	0.230	2.92	OK
32	0.005	0.230	2.22	OK
33	0.005	0.230	2.20	OK
34	0.003	0.230	1.39	OK
35	0.004	0.230	1.71	OK
36	0.003	0.230	1.44	OK
37	0.005	0.230	2.21	OK
38	0.003	0.230	1.41	OK
39	0.005	0.230	2.00	OK
40	0.004	0.230	1.89	OK



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Test Mode: 02

### Highest parameter values during test:

V <sub>RMS</sub> (Volts):	230.24	Frequency(Hz):	50.00
I <sub>Peak</sub> (Amps):	0.650	I <sub>RMS</sub> (Amps):	0.134
I <sub>Fund</sub> (Amps):	0.056	Crest Factor:	5.353
Power (Watts):	9.8	Power Factor:	0.365

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	N/A	0.006	1.620	N/A	Pass
3	0.040	2.300	1.7	0.042	3.450	1.2	Pass
4	0.002	0.430	N/A	0.005	0.645	N/A	Pass
5	0.038	1.140	3.4	0.040	1.710	2.3	Pass
6	0.002	0.300	N/A	0.005	0.450	N/A	Pass
7	0.037	0.770	4.7	0.038	1.155	3.3	Pass
8	0.002	0.230	N/A	0.005	0.345	N/A	Pass
9	0.034	0.400	8.6	0.036	0.600	6.0	Pass
10	0.002	0.184	N/A	0.004	0.276	N/A	Pass
11	0.032	0.330	9.6	0.033	0.495	6.7	Pass
12	0.002	0.153	N/A	0.004	0.230	N/A	Pass
13	0.029	0.210	13.7	0.030	0.315	9.5	Pass
14	0.002	0.131	N/A	0.003	0.197	N/A	Pass
15	0.026	0.150	17.2	0.027	0.225	11.8	Pass
16	0.001	0.115	N/A	0.003	0.173	N/A	Pass
17	0.023	0.132	17.1	0.023	0.198	11.7	Pass
18	0.001	0.102	N/A	0.002	0.153	N/A	Pass
19	0.019	0.118	16.3	0.020	0.178	11.1	Pass
20	0.001	0.092	N/A	0.002	0.138	N/A	Pass
21	0.016	0.107	15.0	0.016	0.161	10.2	Pass
22	0.001	0.084	N/A	0.002	0.125	N/A	Pass
23	0.013	0.098	13.3	0.013	0.147	9.0	Pass
24	0.001	0.077	N/A	0.001	0.115	N/A	Pass
25	0.010	0.090	11.3	0.010	0.135	7.7	Pass
26	0.000	0.071	N/A	0.001	0.107	N/A	Pass
27	0.008	0.083	9.1	0.008	0.125	6.3	Pass
28	0.000	0.066	N/A	0.001	0.099	N/A	Pass
29	0.005	0.078	6.9	0.006	0.116	4.8	Pass
30	0.000	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	0.000	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	0.000	0.081	N/A	Pass
35	0.001	0.064	N/A	0.002	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	0.077	N/A	Pass
37	0.001	0.061	N/A	0.002	0.091	N/A	Pass
38	0.000	0.048	N/A	0.000	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	0.000	0.069	N/A	Pass



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Test Mode: 02

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.157	0.460	34.16	OK
3	0.455	2.072	21.96	OK
4	0.030	0.460	6.59	OK
5	0.035	0.921	3.84	OK
6	0.082	0.460	17.88	OK
7	0.058	0.691	8.34	OK
8	0.046	0.460	10.09	OK
9	0.018	0.460	3.86	OK
10	0.025	0.460	5.45	OK
11	0.022	0.230	9.58	OK
12	0.015	0.230	6.41	OK
13	0.028	0.230	12.27	OK
14	0.015	0.230	6.64	OK
15	0.020	0.230	8.64	OK
16	0.014	0.230	6.06	OK
17	0.025	0.230	10.90	OK
18	0.014	0.230	6.19	OK
19	0.017	0.230	7.46	OK
20	0.010	0.230	4.17	OK
21	0.022	0.230	9.45	OK
22	0.007	0.230	2.92	OK
23	0.015	0.230	6.50	OK
24	0.006	0.230	2.67	OK
25	0.017	0.230	7.41	OK
26	0.010	0.230	4.29	OK
27	0.009	0.230	3.77	OK
28	0.008	0.230	3.63	OK
29	0.011	0.230	4.72	OK
30	0.006	0.230	2.76	OK
31	0.006	0.230	2.52	OK
32	0.005	0.230	2.33	OK
33	0.010	0.230	4.13	OK
34	0.003	0.230	1.30	OK
35	0.003	0.230	1.09	OK
36	0.003	0.230	1.39	OK
37	0.006	0.230	2.78	OK
38	0.003	0.230	1.30	OK
39	0.005	0.230	2.07	OK
40	0.004	0.230	1.92	OK

### 6.3 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

#### 6.3.1 E.U.T. Operation

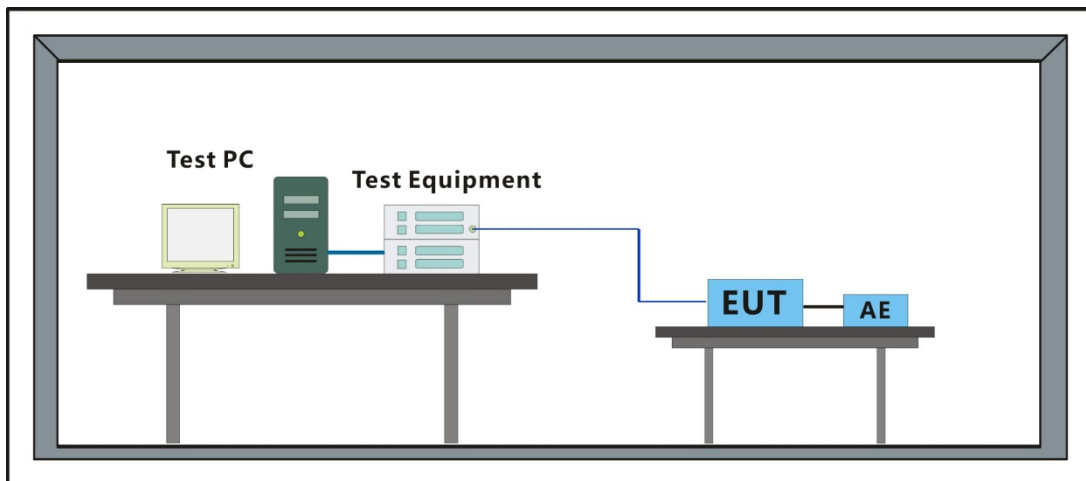
Operating Environment:

Temperature: 24 °C Humidity: 48 % RH Atmospheric Pressure: 1010 mbar

#### 6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 6.3.3 Test Setup Diagram



#### 6.3.4 Measurement Procedure and Data



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### Test Mode:00

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.15		
Highest dt (%):		Test limit (%):	
T-max (mS):	0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.261	Test limit:	1.000 Pass
Highest Plt (2 hr. period):	0.114	Test limit:	0.650 Pass

### Test Mode:01

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.15		
Highest dt (%):		Test limit (%):	
T-max (mS):	0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.261	Test limit:	1.000 Pass
Highest Plt (2 hr. period):	0.114	Test limit:	0.650 Pass

### Test Mode:02

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.20		
Highest dt (%):		Test limit (%):	
T-max (mS):	0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.273	Test limit:	1.000 Pass
Highest Plt (2 hr. period):	0.119	Test limit:	0.650 Pass

### 6.4 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:

0.15MHz – 0.5MHz 97dB(μV)-87dB(μV) quasi-peak, 84(μV)-74dB(μV) average

0.5MHz – 30MHz 87dB(μV) quasi-peak, 74dB(μV) average

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

#### 6.4.1 E.U.T. Operation

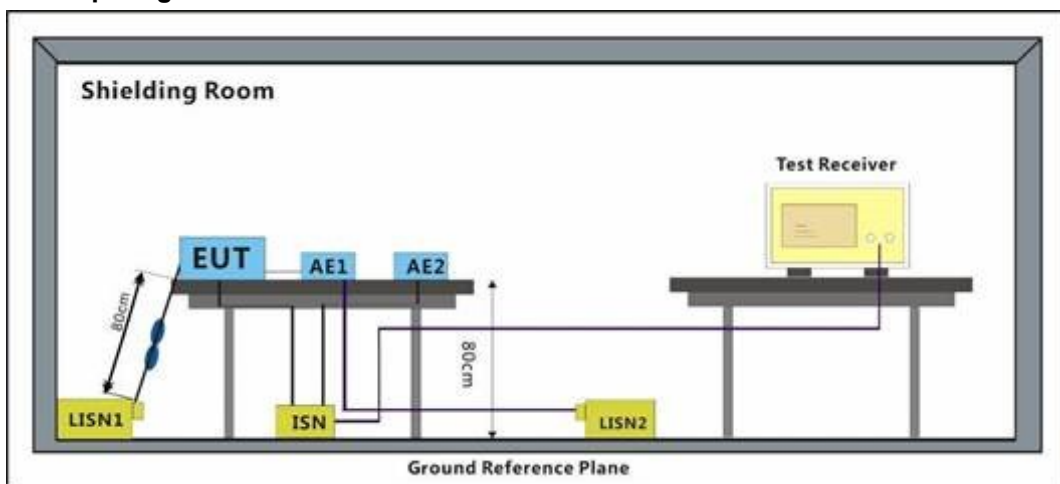
Operating Environment:

Temperature: 24 °C Humidity: 48 % RH Atmospheric Pressure: 1010 mbar

#### 6.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 6.4.3 Test Setup Diagram



#### 6.4.4 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

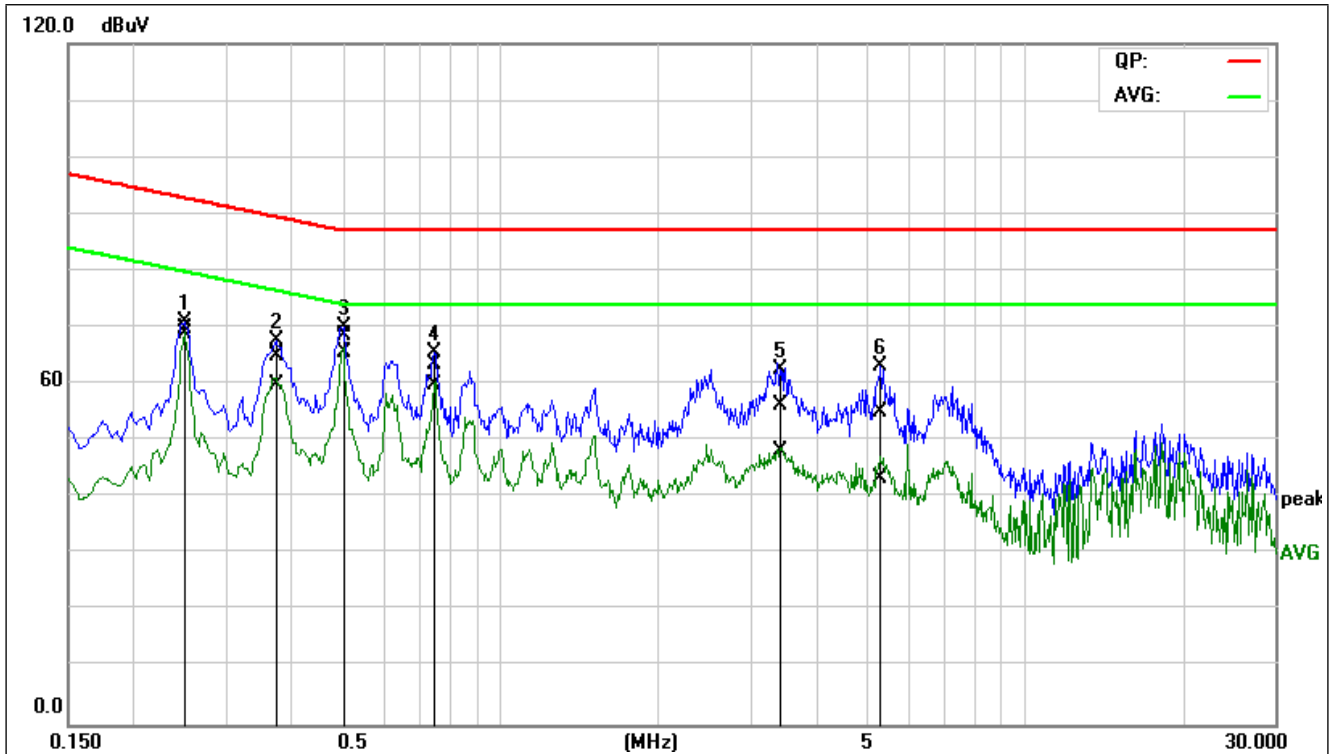
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Test Mode: 00; LAN Port



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	0.2495	49.84	48.95	19.98	69.82	68.93	92.77	79.77	-22.95	-10.84	Pass
2	0.3739	44.90	40.03	19.95	64.85	59.98	89.41	76.41	-24.56	-16.43	Pass
3*	0.4978	48.54	45.73	19.94	68.48	65.67	87.04	74.04	-18.56	-8.37	Pass
4	0.7525	43.36	39.79	20.03	63.39	59.82	87.00	74.00	-23.61	-14.18	Pass
5	3.4226	36.15	28.02	20.11	56.26	48.13	87.00	74.00	-30.74	-25.87	Pass
6	5.2959	35.03	23.13	20.11	55.14	43.24	87.00	74.00	-31.86	-30.76	Pass

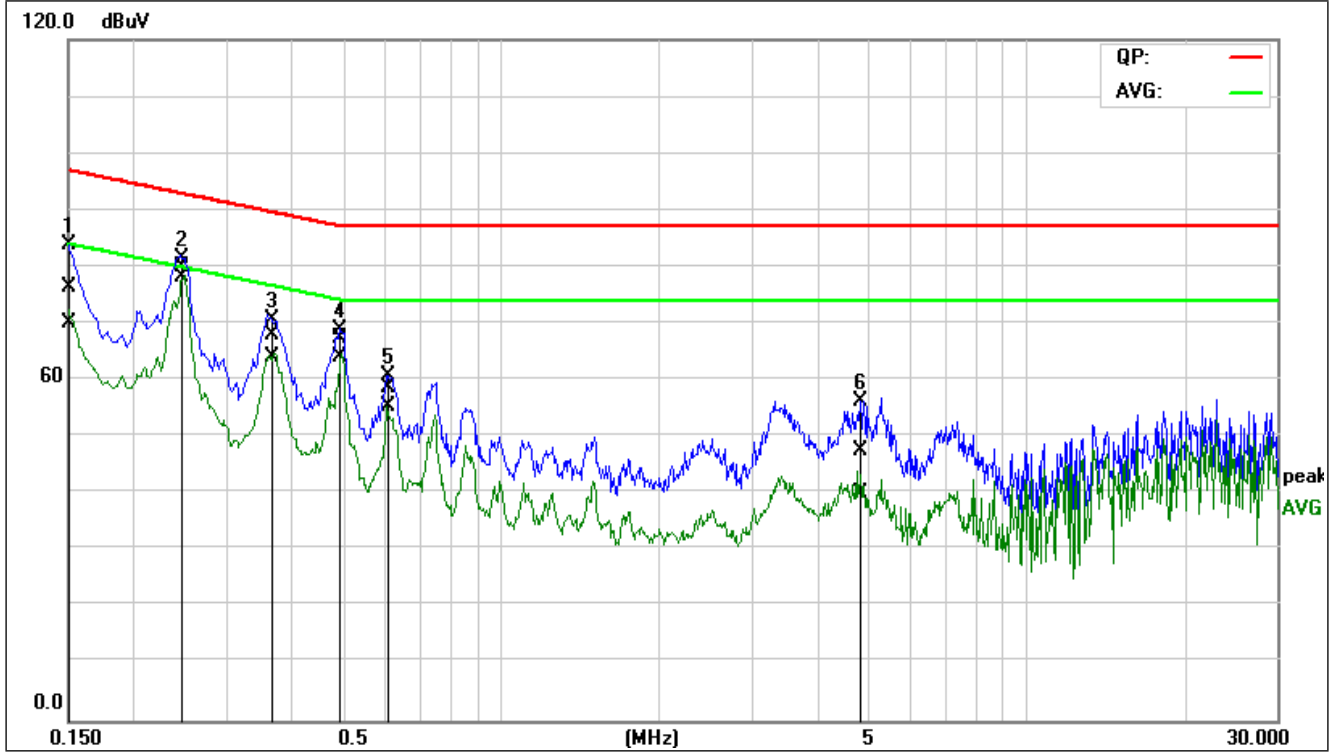
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Test Mode: 00;POE Port



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	0.1500	56.46	50.16	20.01	76.47	70.17	96.99	84.00	-20.52	-13.83	Pass
2*	0.2500	59.95	58.20	19.97	79.92	78.17	92.75	79.76	-12.83	-1.59	Pass
3	0.3678	48.08	44.14	19.95	68.03	64.09	89.55	76.55	-21.52	-12.46	Pass
4	0.4990	47.26	44.08	19.94	67.20	64.02	87.02	74.02	-19.82	-10.00	Pass
5	0.6072	38.72	35.29	19.99	58.71	55.28	87.00	74.00	-28.29	-18.72	Pass
6	4.7633	27.49	19.88	20.09	47.58	39.97	87.00	74.00	-39.42	-34.03	Pass

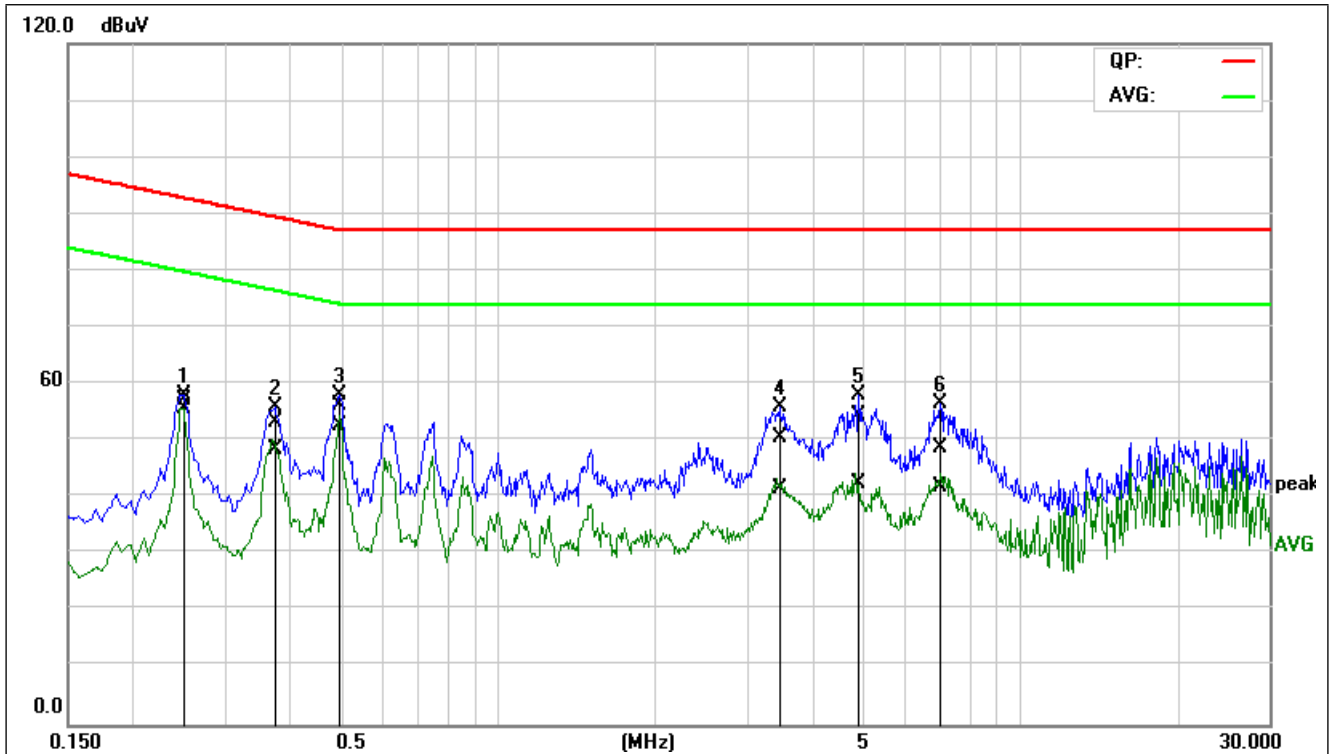
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Test Mode: 01; LAN Port



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	0.2488	37.03	35.72	19.98	57.01	55.70	92.80	79.80	-35.79	-24.10	Pass
2	0.3728	33.26	28.40	19.95	53.21	48.35	89.44	76.44	-36.23	-28.09	Pass
3*	0.4994	36.29	32.84	19.94	56.23	52.78	87.01	74.01	-30.78	-21.23	Pass
4	3.4901	30.58	21.54	20.11	50.69	41.65	87.00	74.00	-36.31	-32.35	Pass
5	4.9189	34.40	22.46	20.09	54.49	42.55	87.00	74.00	-32.51	-31.45	Pass
6	7.0097	28.61	21.66	20.22	48.83	41.88	87.00	74.00	-38.17	-32.12	Pass

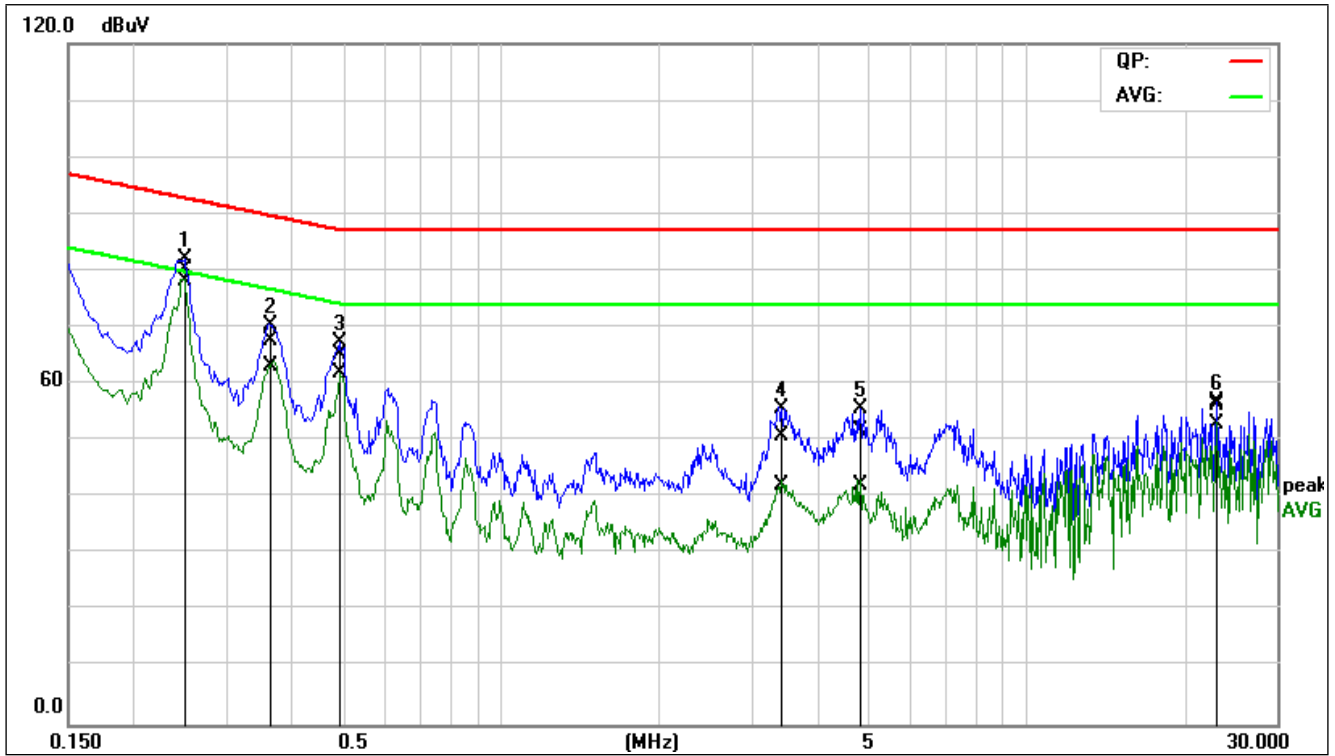
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Test Mode: 01; POE Port



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*	0.2500	60.16	58.22	19.97	80.13	78.19	92.75	79.76	-12.62	-1.57	Pass
2	0.3656	47.64	43.32	19.95	67.59	63.27	89.60	76.60	-22.01	-13.33	Pass
3	0.4954	45.38	42.12	19.94	65.32	62.06	87.08	74.08	-21.76	-12.02	Pass
4	3.4274	30.85	21.99	20.11	50.96	42.10	87.00	74.00	-36.04	-31.90	Pass
5	4.8389	31.55	22.19	20.09	51.64	42.28	87.00	74.00	-35.36	-31.72	Pass
6	23.1295	35.88	32.61	20.29	56.17	52.90	87.00	74.00	-30.83	-21.10	Pass

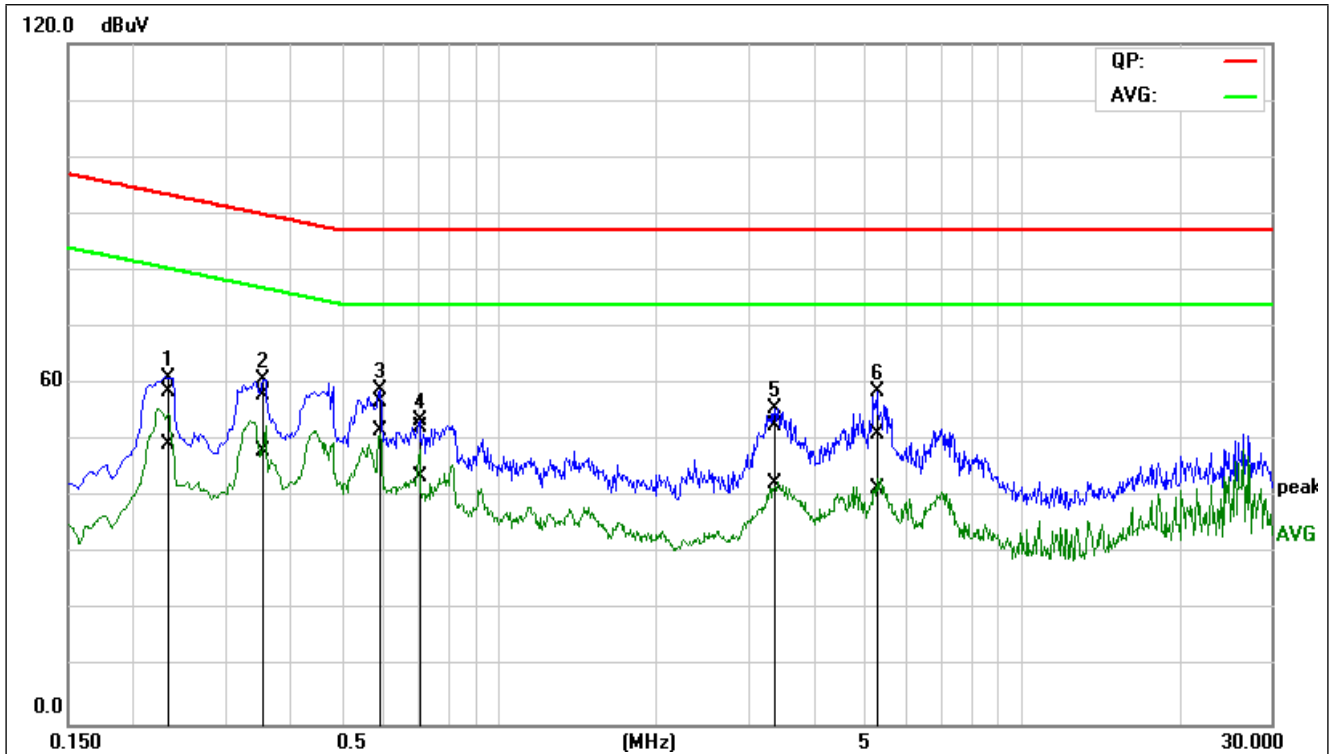
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Test Mode: 02; LAN Port



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	0.2343	38.64	29.48	19.98	58.62	49.46	93.30	80.30	-34.68	-30.84	Pass
2	0.3531	38.06	28.12	19.94	58.00	48.06	89.89	76.89	-31.89	-28.83	Pass
3*	0.5924	36.91	31.70	19.98	56.89	51.68	87.00	74.00	-30.11	-22.32	Pass
4	0.7108	32.27	23.70	20.03	52.30	43.73	87.00	74.00	-34.70	-30.27	Pass
5	3.3704	32.52	22.21	20.10	52.62	42.31	87.00	74.00	-34.38	-31.69	Pass
6	5.3035	31.11	21.48	20.11	51.22	41.59	87.00	74.00	-35.78	-32.41	Pass

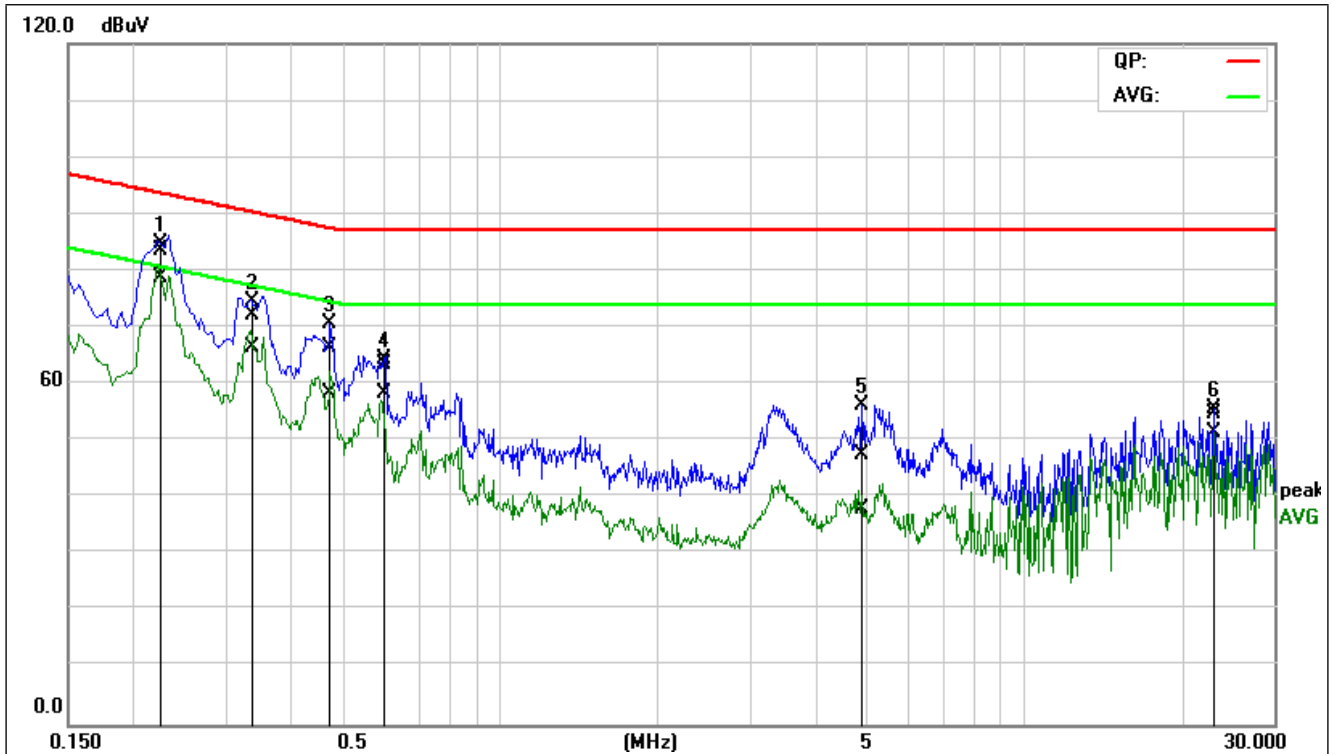
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Test Mode: 02; POE Port



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*	0.2263	63.44	58.63	19.98	83.42	78.61	93.58	80.58	-10.16	-1.97	Pass
2	0.3381	52.17	46.56	19.96	72.13	66.52	90.25	77.25	-18.12	-10.73	Pass
3	0.4761	46.66	38.27	19.94	66.60	58.21	87.41	74.41	-20.81	-16.20	Pass
4	0.5927	43.62	38.24	19.98	63.60	58.22	87.00	74.00	-23.40	-15.78	Pass
5	4.9224	27.58	17.73	20.09	47.67	37.82	87.00	74.00	-39.33	-36.18	Pass
6	23.1298	34.56	31.27	20.29	54.85	51.56	87.00	74.00	-32.15	-22.44	Pass

**6.5 Radiated Emissions (30MHz-1GHz)**

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

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

Limit:

Test Distance: 3m  
 30MHz-230MHz: 50 dB(μV/m) quasi-peak  
 230MHz-1GHz: 57 dB(μV/m) quasi-peak  
 Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

Test Distance: 10m  
 30MHz-230MHz: 40 dB(μV/m) quasi-peak  
 230MHz-1GHz: 47 dB(μV/m) quasi-peak  
 Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz  
 Highest internal frequency (Fx): Fx ≤ 108MHz  
 Highest measured frequency: 1GHz

**6.5.1 E.U.T. Operation**

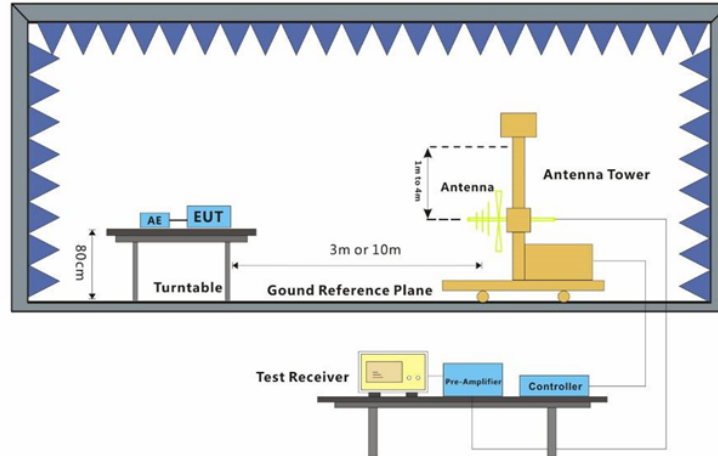
Operating Environment:

Temperature: 24.5 °C      Humidity: 51.2 % RH      Atmospheric Pressure: 1010 mbar

**6.5.2 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

### 6.5.3 Test Setup Diagram



### 6.5.4 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

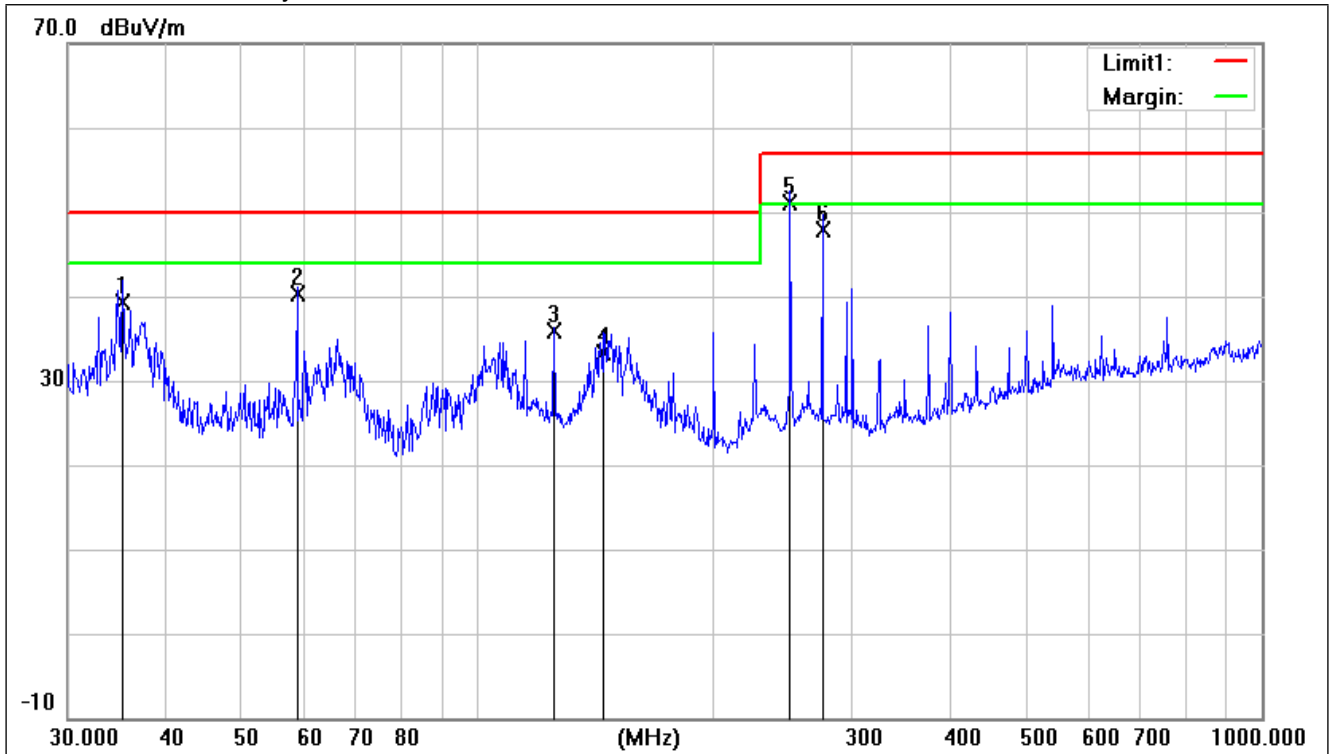
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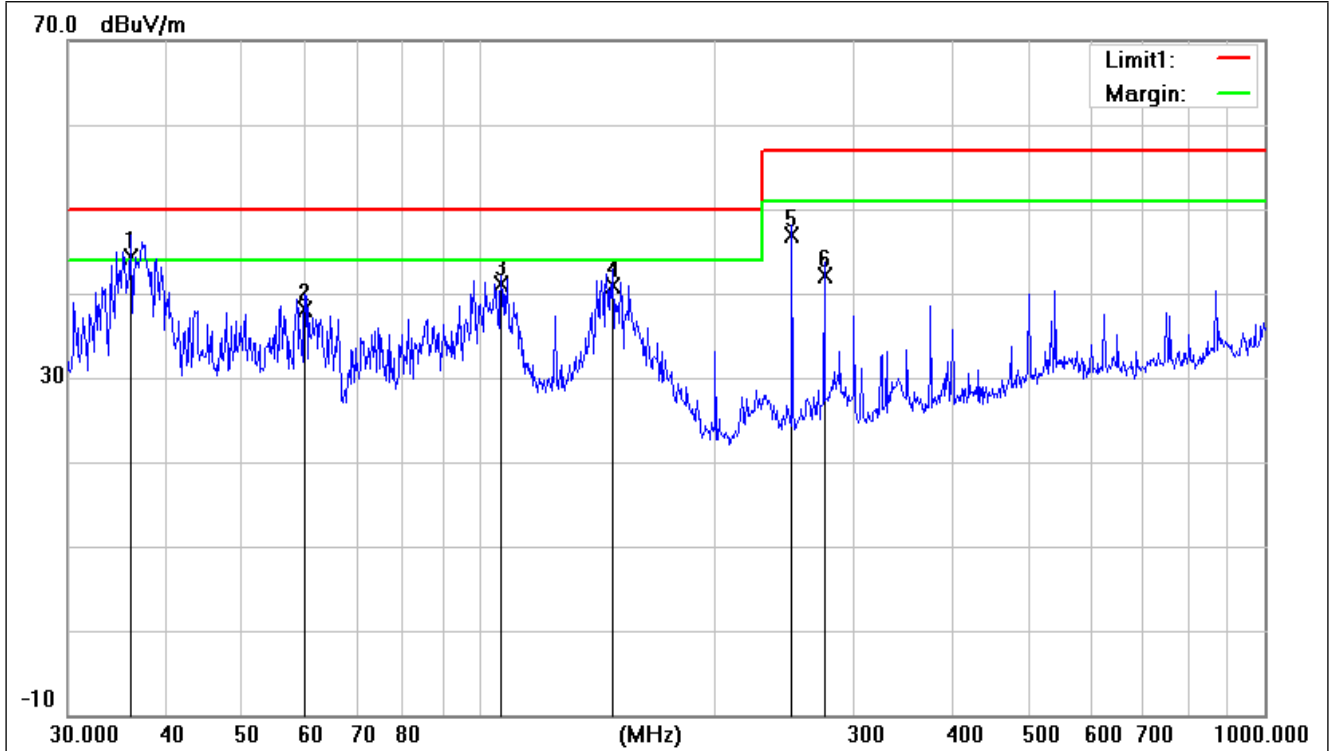
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Test Mode: 00; Polarity: Horizontal



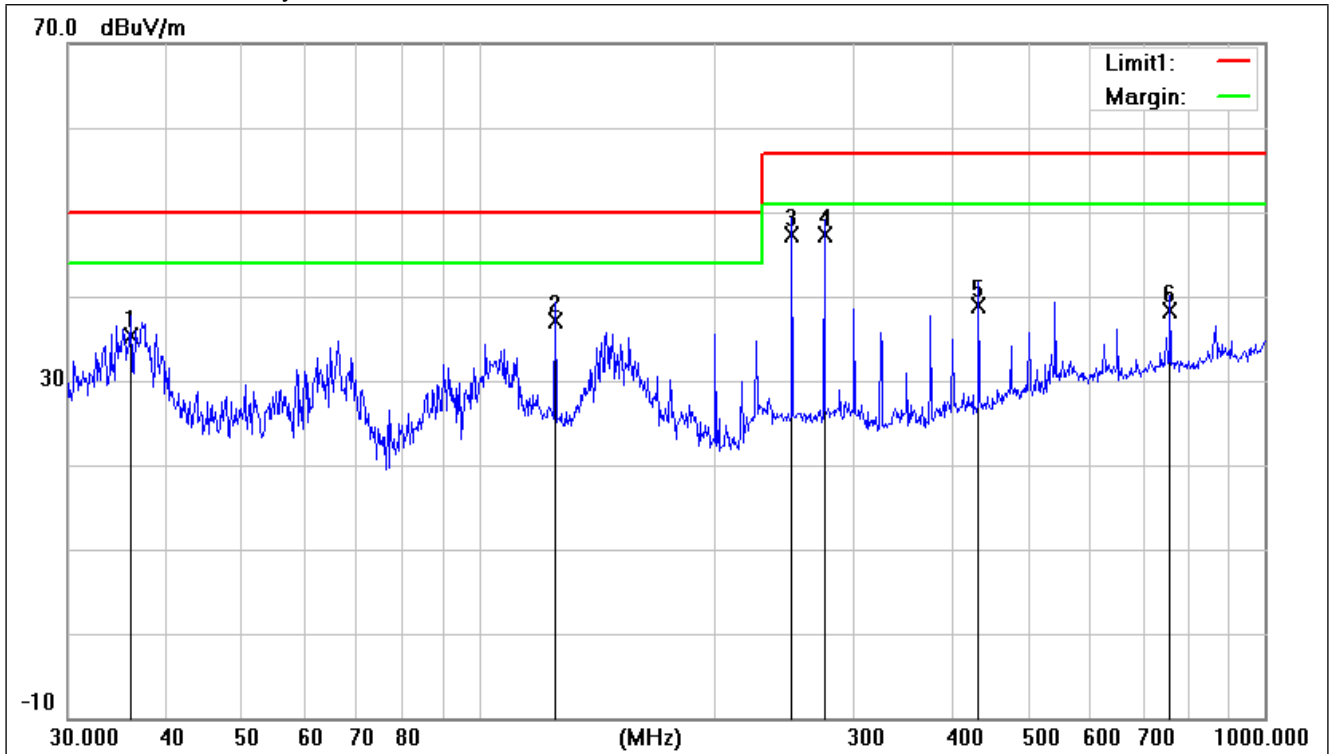
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	35.2512	14.73	24.53	39.26	50.00	-10.74	200	286	QP
2	58.8185	25.17	15.16	40.33	50.00	-9.67	200	282	QP
3	125.0066	16.49	19.50	35.99	50.00	-14.01	200	111	QP
4	144.8418	15.14	18.11	33.25	50.00	-16.75	200	205	QP
5	250.3012	31.30	19.76	51.06	57.00	-5.94	200	41	QP
6	275.1570	27.64	20.21	47.85	57.00	-9.15	200	37	QP

Test Mode: 00; Polarity: Vertical



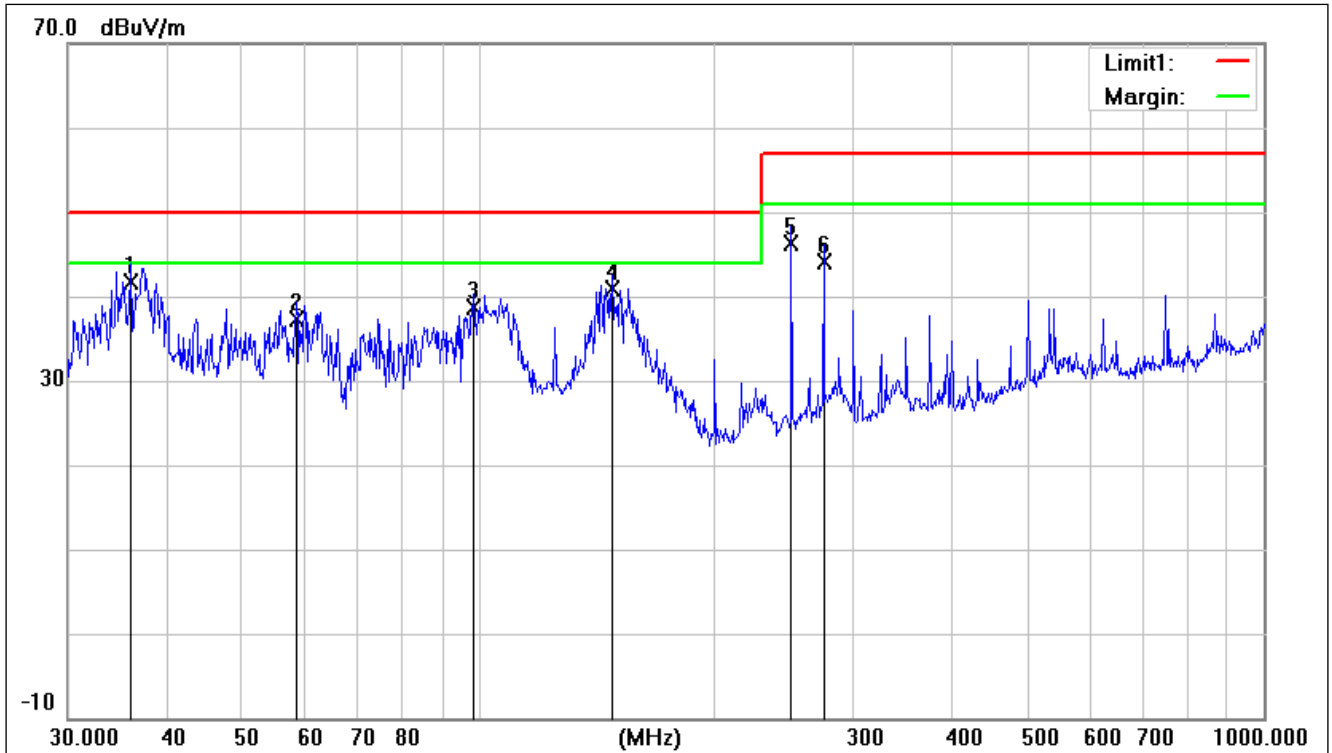
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	36.1272	20.31	24.05	44.36	50.00	-5.64	100	255	QP
2	60.0691	23.05	14.98	38.03	50.00	-11.97	100	43	QP
3	106.7587	22.95	18.10	41.05	50.00	-8.95	100	37	QP
4	147.9214	22.91	17.93	40.84	50.00	-9.16	100	4	QP
5	250.3012	27.11	19.76	46.87	57.00	-10.13	100	310	QP
6	275.1570	21.82	20.21	42.03	57.00	-14.97	100	249	QP

Test Mode: 01; Polarity: Horizontal



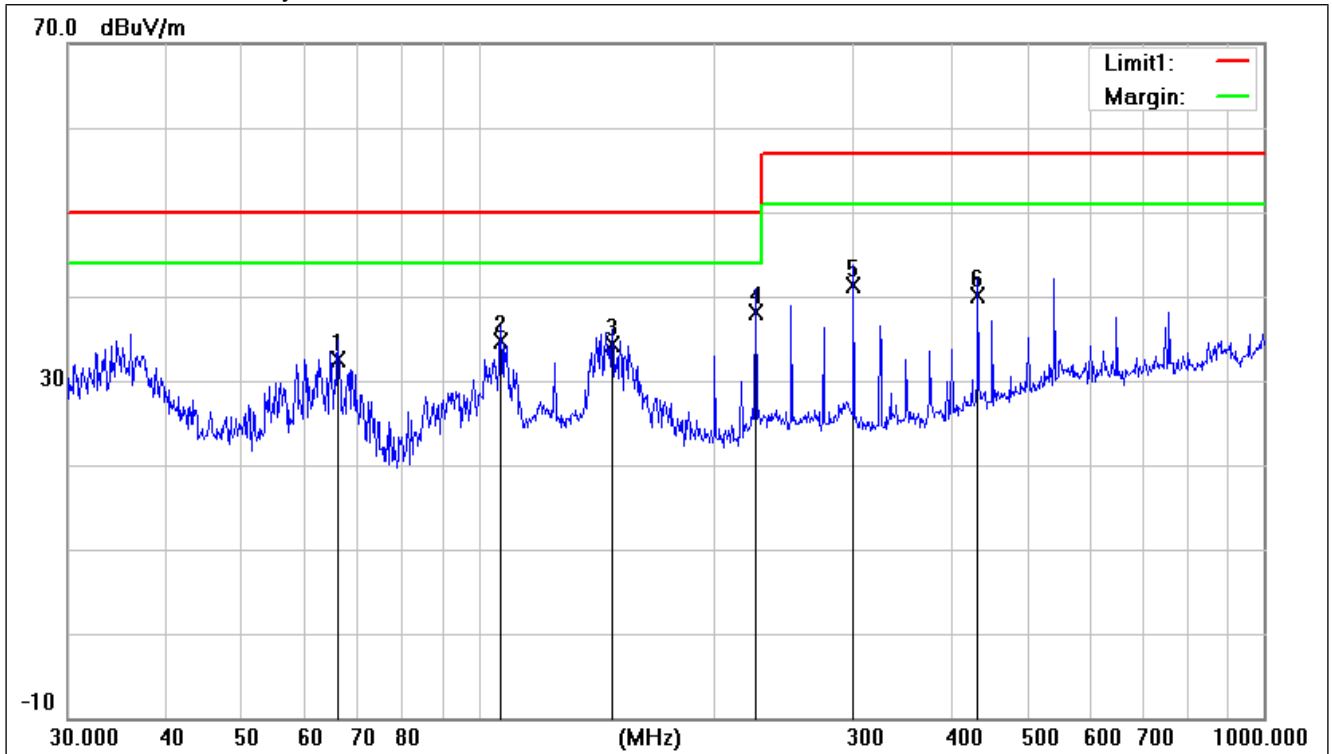
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	36.1272	11.21	24.05	35.26	50.00	-14.74	200	229	QP
2	125.0066	17.51	19.50	37.01	50.00	-12.99	200	244	QP
3	250.3012	27.49	19.76	47.25	57.00	-9.75	200	34	QP
4	275.1570	27.12	20.21	47.33	57.00	-9.67	200	56	QP
5	432.5457	15.02	23.97	38.99	57.00	-18.01	200	32	QP
6	758.0408	10.02	28.24	38.26	57.00	-18.74	200	133	QP

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	36.1272	17.60	24.05	41.65	50.00	-8.35	100	276	QP
2	58.6126	22.05	15.20	37.25	50.00	-12.75	100	186	QP
3	98.4866	21.81	16.83	38.64	50.00	-11.36	100	15	QP
4	147.9214	22.91	17.93	40.84	50.00	-9.16	110	360	QP
5	250.3012	26.46	19.76	46.22	57.00	-10.78	100	308	QP
6	275.1570	23.82	20.21	44.03	57.00	-12.97	145	360	QP

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	66.2662	17.36	15.23	32.59	50.00	-17.41	200	268	QP
2	106.7587	16.56	18.10	34.66	50.00	-15.34	200	298	QP
3	147.9214	16.28	17.93	34.21	50.00	-15.79	200	201	QP
4	225.3080	21.13	17.07	38.20	50.00	-11.80	200	18	QP
5	300.3673	20.63	20.70	41.33	57.00	-15.67	200	155	QP
6	432.5457	16.16	23.97	40.13	57.00	-16.87	200	18	QP

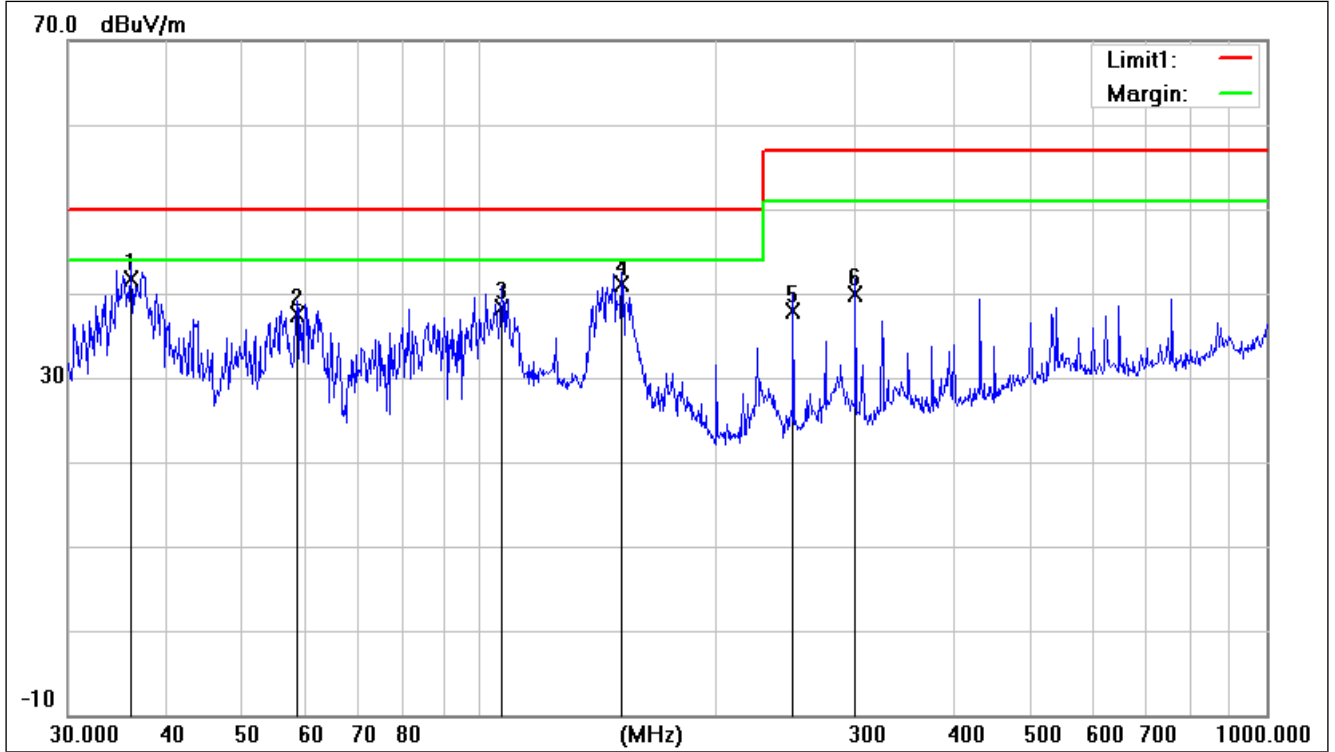
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Test Mode: 02; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	36.1272	17.60	24.05	41.65	50.00	-8.35	100	234	QP
2	58.6126	22.32	15.20	37.52	50.00	-12.48	100	173	QP
3	106.7587	20.16	18.10	38.26	50.00	-11.74	100	314	QP
4	151.5972	23.21	17.82	41.03	50.00	-8.97	100	3	QP
5	250.3012	18.24	19.76	38.00	57.00	-19.00	100	16	QP
6	300.3673	19.19	20.70	39.89	57.00	-17.11	100	358	QP

### 6.6 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: 80 dB(μV/m) peak; 60 dB(μV/m) average

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

Highest internal frequency (Fx):

Highest measured frequency:

Fx ≤ 108MHz 1GHz

108MHz < Fx ≤ 500MHz 2GHz

500MHz < Fx ≤ 1GHz 5GHz

Fx > 1GHz 5 × Fx up to a maximum of 6GHz

#### 6.6.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C

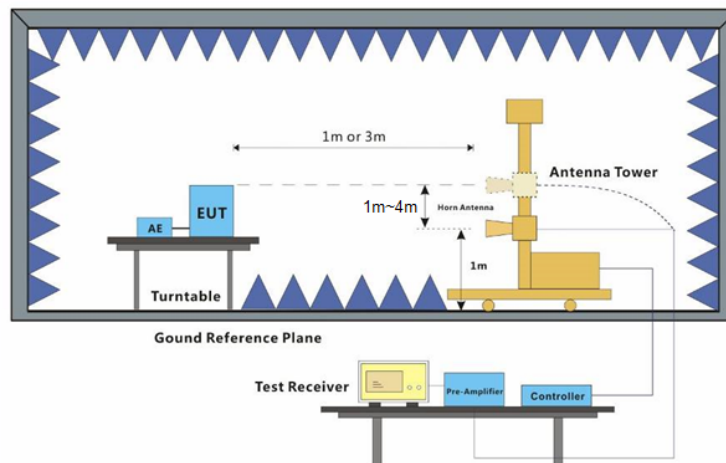
Humidity: 49 % RH

Atmospheric Pressure: 1010 mbar

#### 6.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 6.6.3 Test Setup Diagram



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### 6.6.4 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

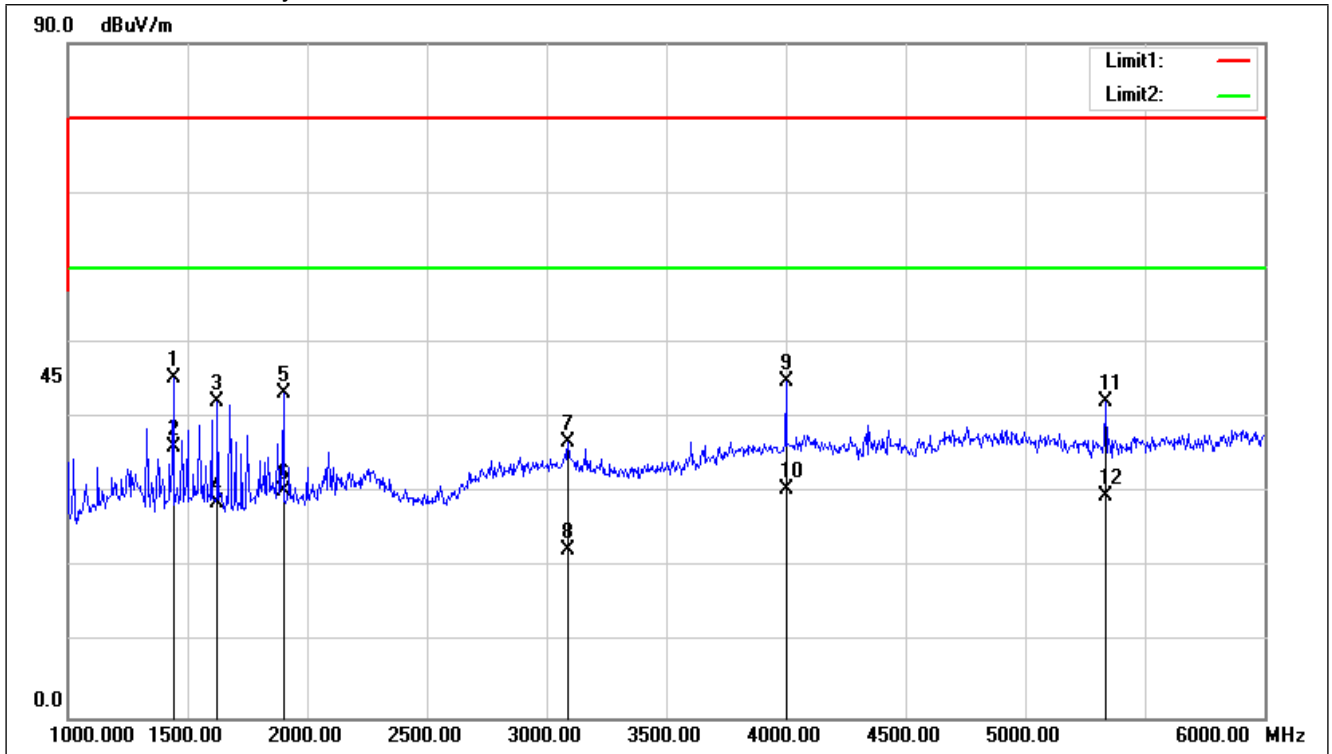
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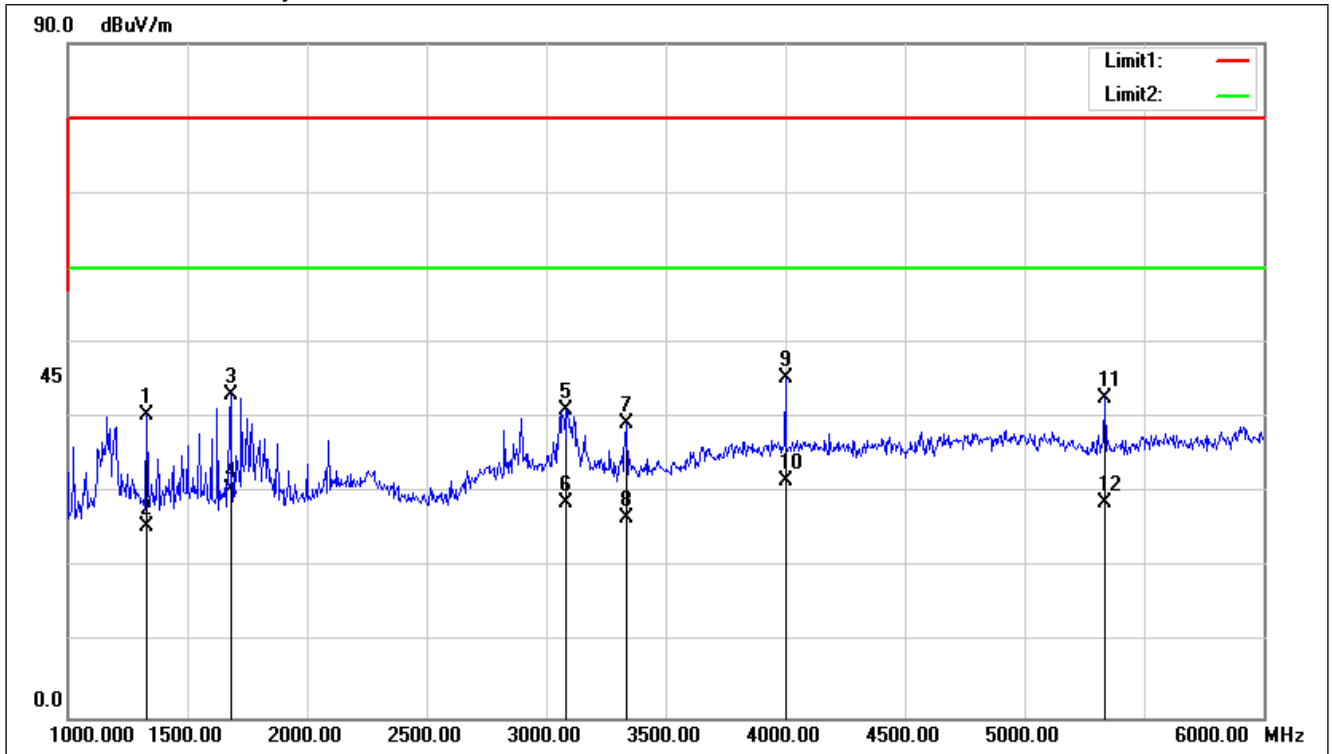
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Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1440.000	67.23	-21.85	45.38	80.00	-34.62	100	194	peak
2	1440.000	58.07	-21.85	36.22	60.00	-23.78	100	194	AVG
3	1625.000	64.50	-22.21	42.29	80.00	-37.71	100	48	peak
4	1625.000	50.84	-22.21	28.63	60.00	-31.37	100	48	AVG
5	1900.000	64.78	-21.47	43.31	80.00	-36.69	100	356	peak
6	1900.000	51.74	-21.47	30.27	60.00	-29.73	100	356	AVG
7	3090.000	53.80	-17.09	36.71	80.00	-43.29	200	19	peak
8	3090.000	39.50	-17.09	22.41	60.00	-37.59	200	19	AVG
9	4000.000	59.45	-14.55	44.90	80.00	-35.10	100	86	peak
10	4000.000	44.97	-14.55	30.42	60.00	-29.58	100	86	AVG
11	5335.000	55.85	-13.76	42.09	80.00	-37.91	100	125	peak
12	5335.000	43.28	-13.76	29.52	60.00	-30.48	100	125	AVG

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	1330.000	61.99	-21.51	40.48	80.00	-39.52	200	227	peak
2	1330.000	47.15	-21.51	25.64	60.00	-34.36	200	227	AVG
3	1680.000	65.18	-22.18	43.00	80.00	-37.00	100	102	peak
4	1680.000	52.63	-22.18	30.45	60.00	-29.55	100	102	AVG
5	3085.000	58.18	-17.10	41.08	80.00	-38.92	100	192	peak
6	3085.000	45.76	-17.10	28.66	60.00	-31.34	100	192	AVG
7	3335.000	56.73	-17.54	39.19	80.00	-40.81	100	173	peak
8	3335.000	44.09	-17.54	26.55	60.00	-33.45	100	173	AVG
9	4000.000	59.81	-14.55	45.26	80.00	-34.74	100	214	peak
10	4000.000	46.07	-14.55	31.52	60.00	-28.48	100	214	AVG
11	5335.000	56.42	-13.76	42.66	80.00	-37.34	100	328	peak
12	5335.000	42.40	-13.76	28.64	60.00	-31.36	100	328	AVG

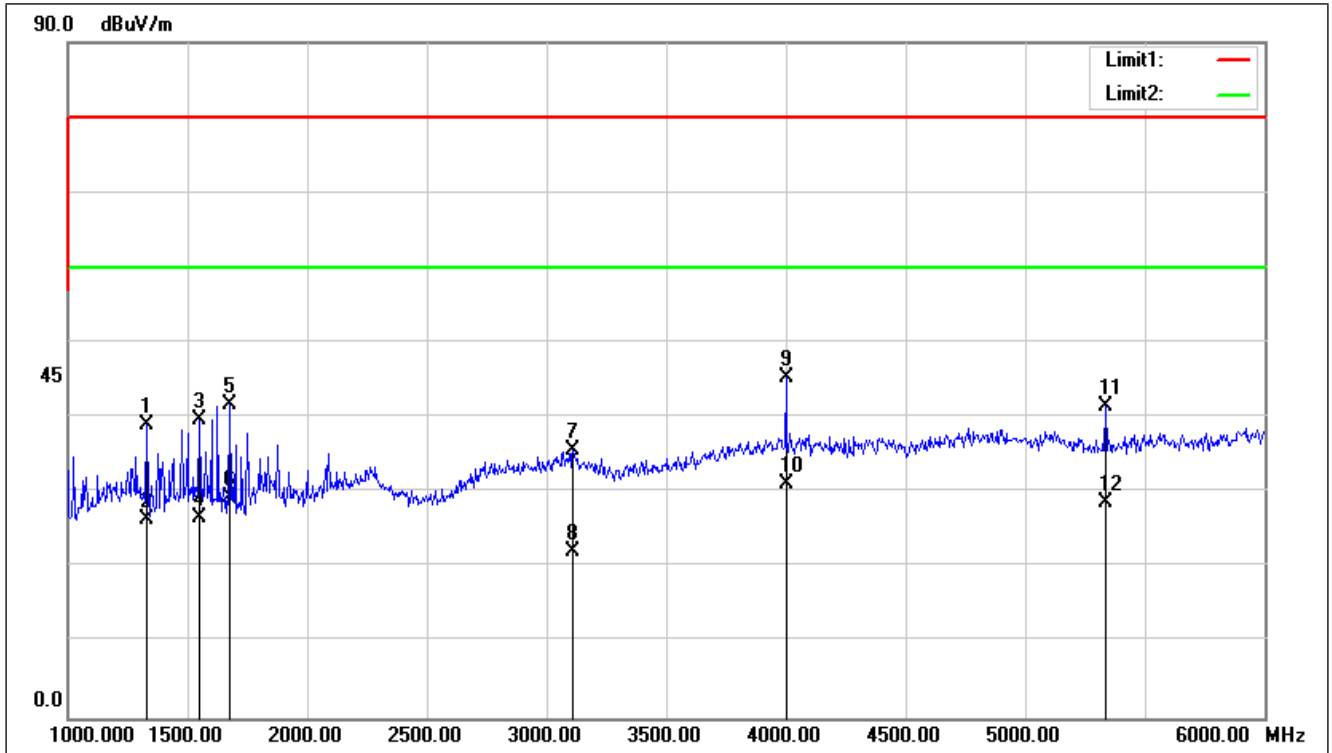
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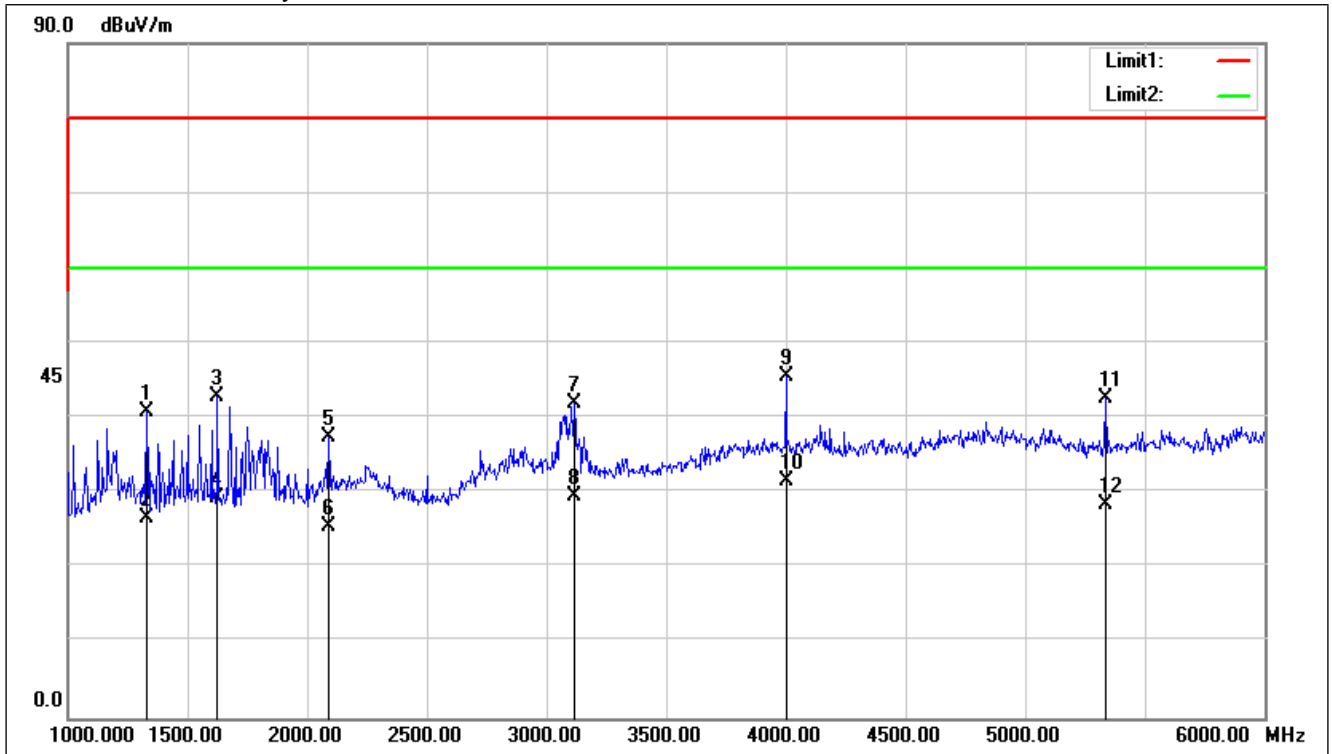
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Test Mode: 01; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	1330.000	60.56	-21.51	39.05	80.00	-40.95	100	282	peak
2	1330.000	48.05	-21.51	26.54	60.00	-33.46	100	282	AVG
3	1550.000	61.75	-22.08	39.67	80.00	-40.33	100	336	peak
4	1550.000	48.63	-22.08	26.55	60.00	-33.45	100	336	AVG
5	1675.000	64.00	-22.19	41.81	80.00	-38.19	100	47	peak
6	1675.000	51.61	-22.19	29.42	60.00	-30.58	100	47	AVG
7	3110.000	52.58	-17.02	35.56	80.00	-44.44	200	36	peak
8	3110.000	39.07	-17.02	22.05	60.00	-37.95	200	36	AVG
9	4000.000	59.81	-14.55	45.26	80.00	-34.74	100	101	peak
10	4000.000	45.80	-14.55	31.25	60.00	-28.75	100	101	AVG
11	5335.000	55.29	-13.76	41.53	80.00	-38.47	100	123	peak
12	5335.000	42.39	-13.76	28.63	60.00	-31.37	100	123	AVG

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	1330.000	62.39	-21.51	40.88	80.00	-39.12	200	213	peak
2	1330.000	48.06	-21.51	26.55	60.00	-33.45	200	213	AVG
3	1625.000	65.18	-22.21	42.97	80.00	-37.03	100	359	peak
4	1625.000	51.63	-22.21	29.42	60.00	-30.58	100	359	AVG
5	2090.000	57.85	-20.44	37.41	80.00	-42.59	100	274	peak
6	2090.000	46.08	-20.44	25.64	60.00	-34.36	100	274	AVG
7	3115.000	59.08	-17.01	42.07	80.00	-37.93	100	173	peak
8	3115.000	46.64	-17.01	29.63	60.00	-30.37	100	173	AVG
9	4000.000	60.06	-14.55	45.51	80.00	-34.49	100	213	peak
10	4000.000	46.07	-14.55	31.52	60.00	-28.48	100	213	AVG
11	5335.000	56.34	-13.76	42.58	80.00	-37.42	100	159	peak
12	5335.000	42.31	-13.76	28.55	60.00	-31.45	100	159	AVG

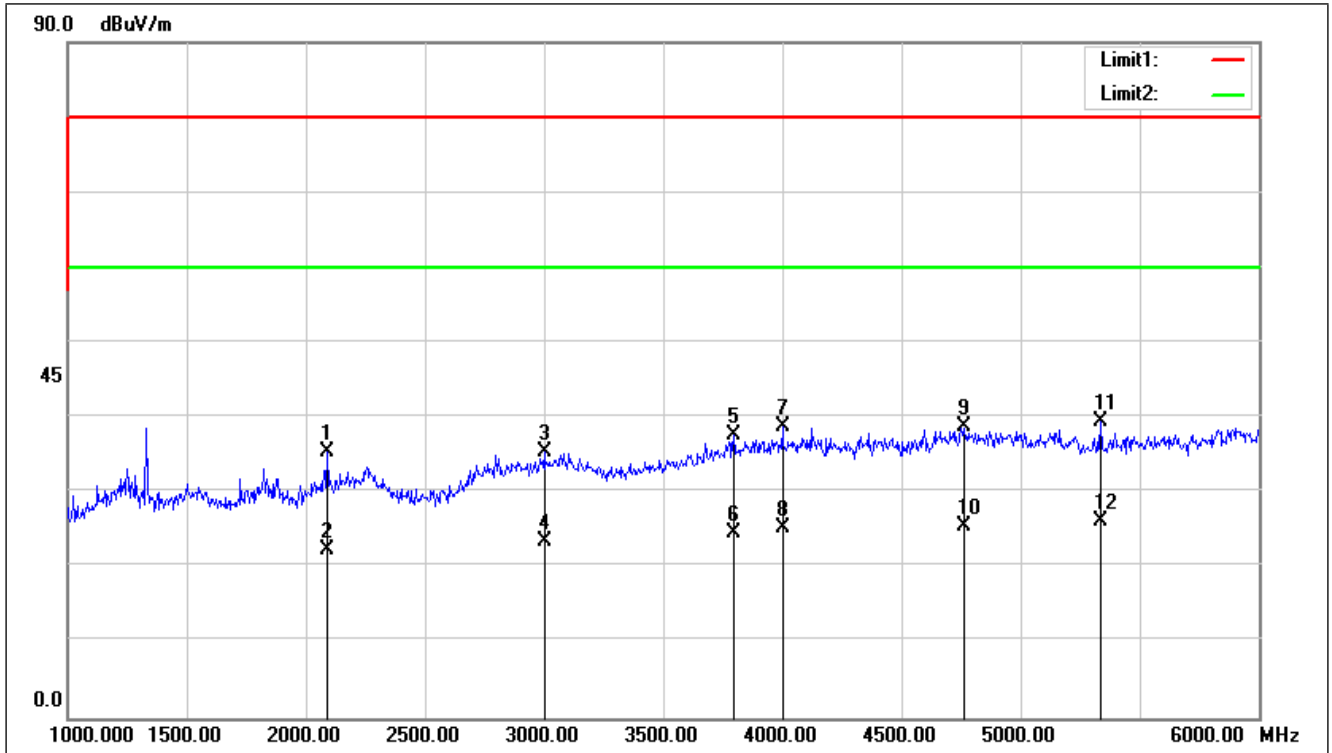
## Compliance Certification Services (Kunshan) Inc.

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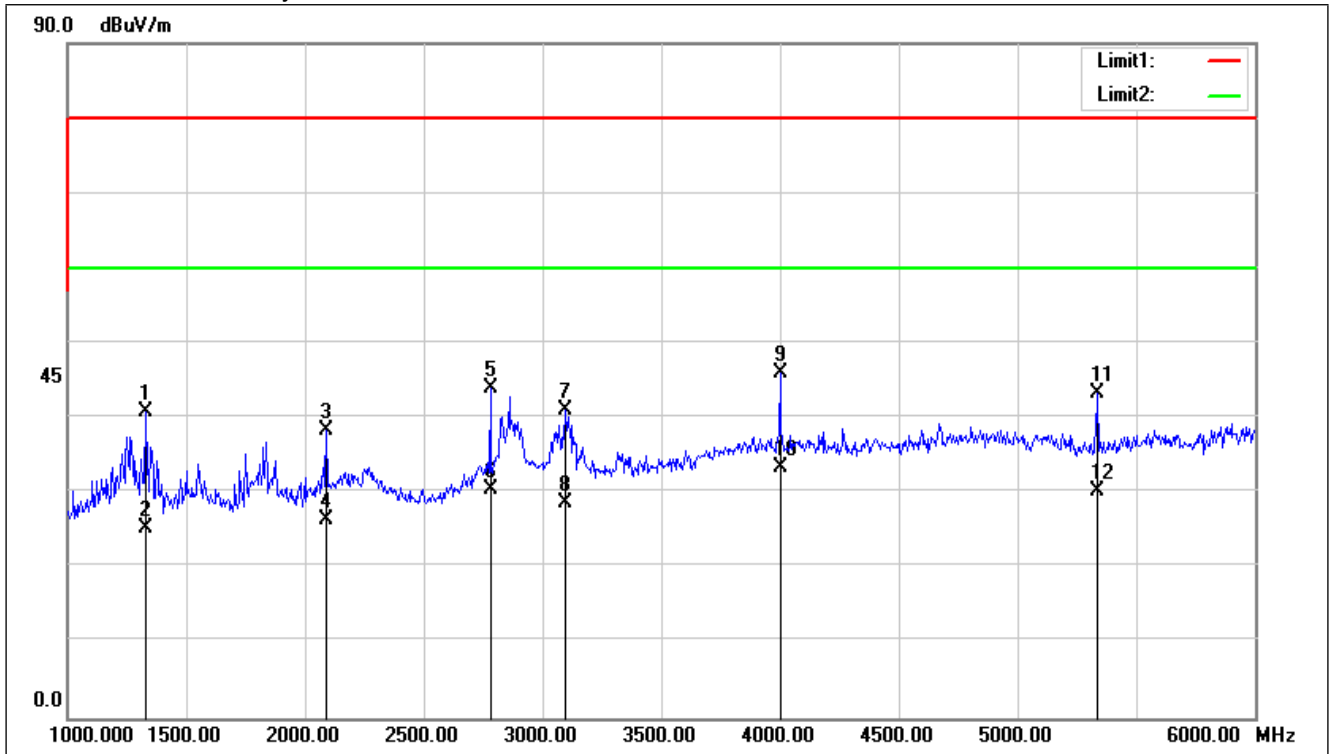
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Test Mode: 02; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	2090.000	55.82	-20.44	35.38	80.00	-44.62	100	24	peak
2	2090.000	42.86	-20.44	22.42	60.00	-37.58	100	24	AVG
3	3000.000	52.88	-17.40	35.48	80.00	-44.52	100	146	peak
4	3000.000	40.91	-17.40	23.51	60.00	-36.49	100	146	AVG
5	3795.000	53.05	-15.47	37.58	80.00	-42.42	200	195	peak
6	3795.000	40.06	-15.47	24.59	60.00	-35.41	200	195	AVG
7	4000.000	53.33	-14.55	38.78	80.00	-41.22	100	62	peak
8	4000.000	39.88	-14.55	25.33	60.00	-34.67	100	62	AVG
9	4760.000	51.85	-13.15	38.70	80.00	-41.30	100	2	peak
10	4760.000	38.77	-13.15	25.62	60.00	-34.38	100	2	AVG
11	5335.000	53.19	-13.76	39.43	80.00	-40.57	100	31	peak
12	5335.000	39.91	-13.76	26.15	60.00	-33.85	100	31	AVG

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	1330.000	62.35	-21.51	40.84	80.00	-39.16	100	359	peak
2	1330.000	46.84	-21.51	25.33	60.00	-34.67	100	359	AVG
3	2090.000	58.73	-20.44	38.29	80.00	-41.71	100	260	peak
4	2090.000	46.96	-20.44	26.52	60.00	-33.48	100	260	AVG
5	2780.000	61.81	-17.93	43.88	80.00	-36.12	200	3	peak
6	2780.000	48.35	-17.93	30.42	60.00	-29.58	200	3	AVG
7	3095.000	58.08	-17.06	41.02	80.00	-38.98	100	0	peak
8	3095.000	45.70	-17.06	28.64	60.00	-31.36	100	0	AVG
9	4000.000	60.63	-14.55	46.08	80.00	-33.92	100	354	peak
10	4000.000	48.07	-14.55	33.52	60.00	-26.48	100	354	AVG
11	5335.000	57.01	-13.76	43.25	80.00	-36.75	100	260	peak
12	5335.000	44.02	-13.76	30.26	60.00	-29.74	100	260	AVG

## 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

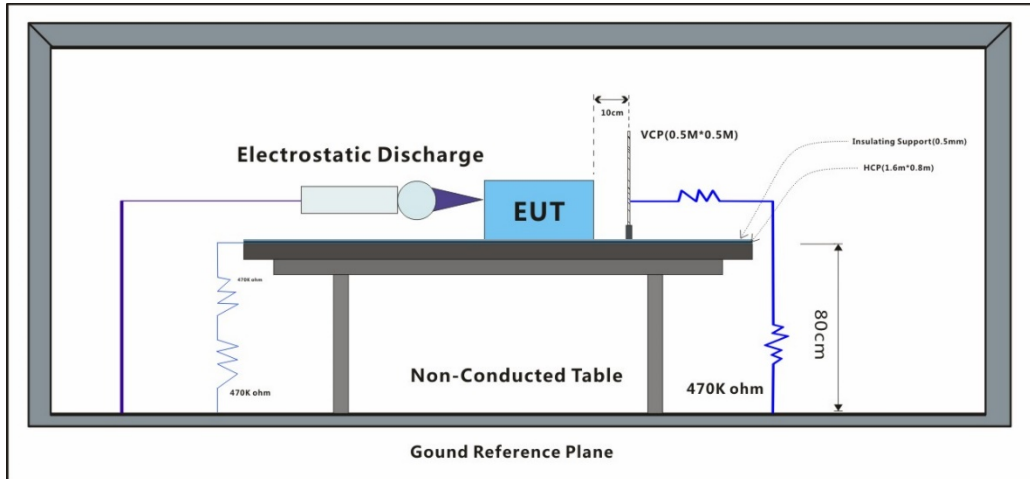
- Criterion A The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level 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.

### 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: 46 % RH

Atmospheric Pressure: 1010 mbar

#### 7.1.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

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### 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.

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

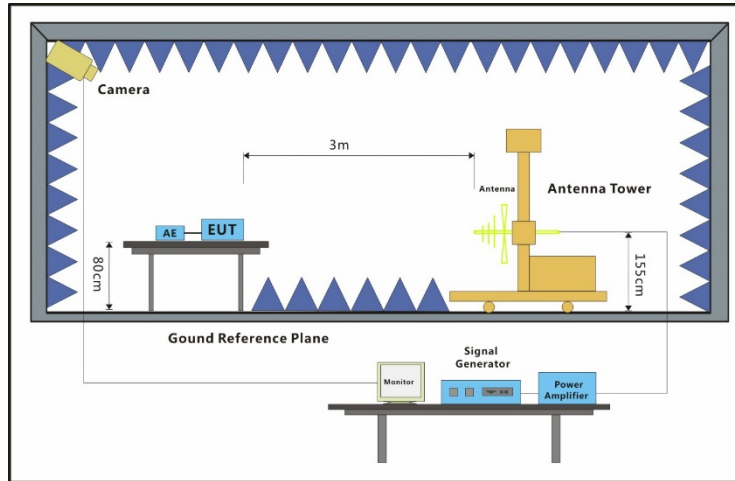
A: No degradation in the performance of the EUT was observed

**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: 25 °C      Humidity: 49 % RH      Atmospheric Pressure: 1010 mbar

**7.2.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

**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

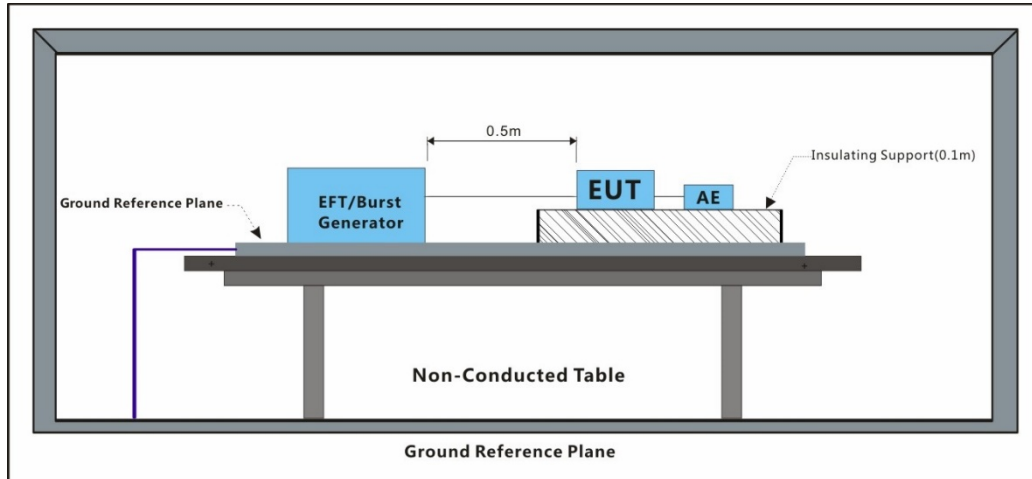
A: No degradation in the performance of the EUT was observed

### 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: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

#### 7.3.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 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

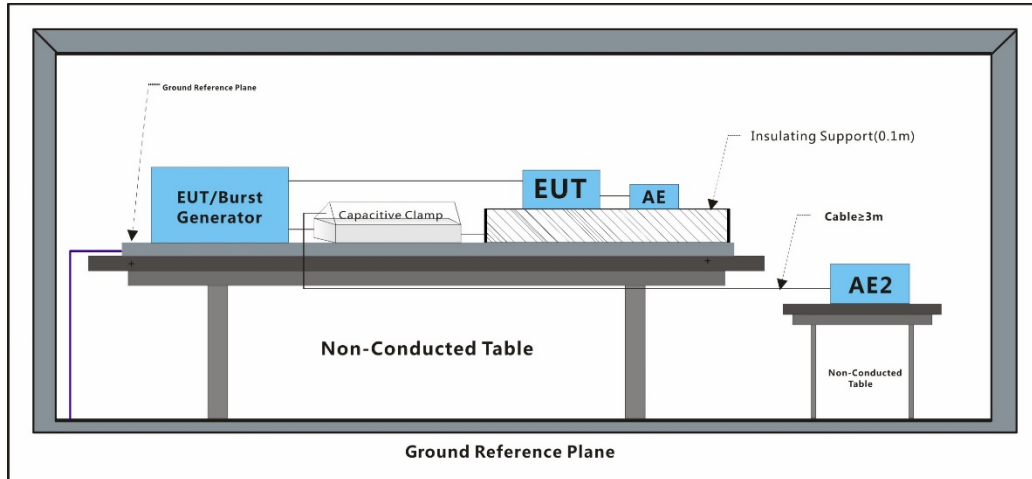
A: No degradation in the performance of the EUT was observed

### 7.4 Electrical Fast Transients & Burst at Signal Port

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

Test Method: EN 61000-4-4:2012

#### 7.4.1 Test Setup Diagram



#### 7.4.2 E.U.T. Operation

Operating Environment:

Temperature: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

#### 7.4.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 7.4.4 Test Condition and Results:

Repetition Frequency: 100kHz

Burst Period: 300ms

Test Duration: 1 minute per level & polarity

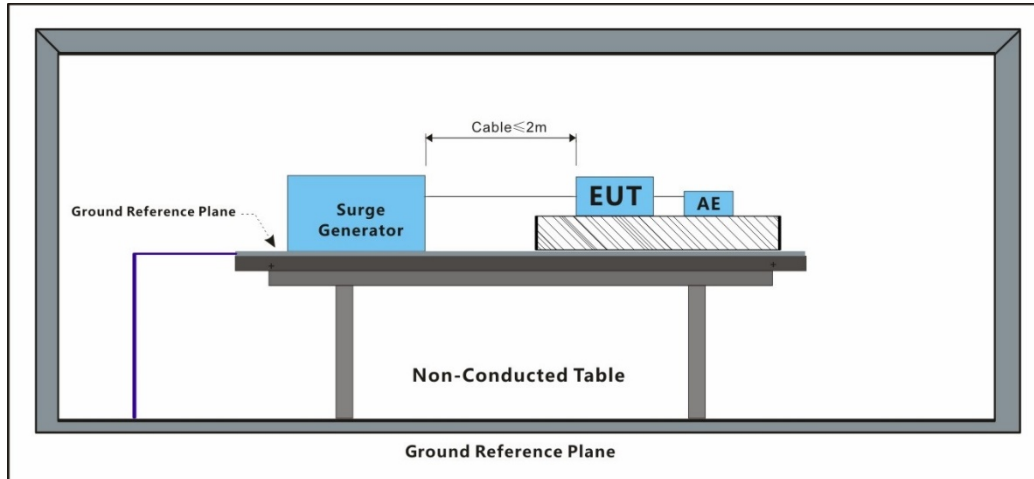
Test Line	Level (kV)	Polarity	CDN/Clamp	Result / Observations
Signal Port	1	+	Clamp	A
Signal Port	1	-	Clamp	A

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

**7.5 Surge at AC Power Port**

Test Requirement: EN 50130-4: 2011 +A1:2014  
 Test Method: EN 61000-4-5:2014 +A1:2017

**7.5.1 Test Setup Diagram**



**7.5.2 E.U.T. Operation**

Operating Environment:  
 Temperature: 22.3 °C      Humidity: 56.1 % RH      Atmospheric Pressure: 1010 mbar

**7.5.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

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### 7.5.4 Test Condition and Results:

Interval: 60s between each surge

No. of surges: 5 positive, 5 negative

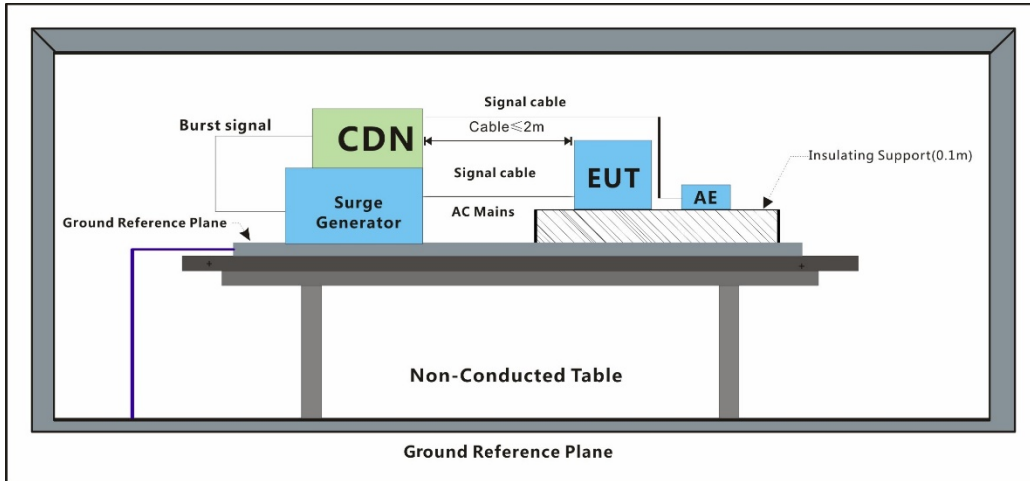
Test Line	Level (kV)	Polarity	Phase (deg)	Result / Observations
L-N	0.5,1	+	0°	A
L-N	0.5,1	-	0°	A
L-N	0.5,1	+	90°	A
L-N	0.5,1	-	90°	A
L-N	0.5,1	+	180°	A
L-N	0.5,1	-	180°	A
L-N	0.5,1	+	270°	A
L-N	0.5,1	-	270°	A
L-PE	0.5,1,2	+	0°	A
L-PE	0.5,1,2	-	0°	A
L-PE	0.5,1,2	+	90°	A
L-PE	0.5,1,2	-	90°	A
L-PE	0.5,1,2	+	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

**7.6 Surge at Signal Port**

Test Requirement: EN 50130-4: 2011 +A1:2014  
 Test Method: EN 61000-4-5:2014 +A1:2017

**7.6.1 Test Setup Diagram**



**7.6.2 E.U.T. Operation**

Operating Environment:  
 Temperature: 22.3 °C      Humidity: 56.1 % RH      Atmospheric Pressure: 1010 mbar

**7.6.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

**7.6.4 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
Signal port	Line-Ground	1	+	A
Signal port	Line-Ground	1	-	A

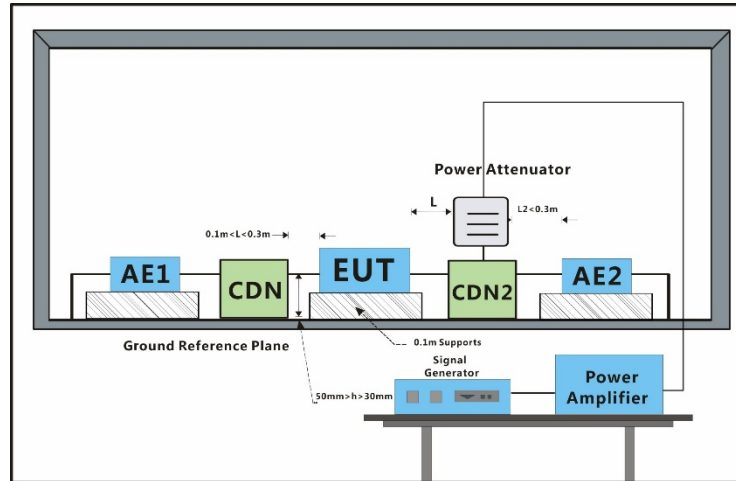
A: No degradation in the performance of the EUT was observed

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

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

Test Method: EN 61000-4-6:2014

#### 7.7.1 Test Setup Diagram



#### 7.7.2 E.U.T. Operation

Operating Environment:

Temperature: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

#### 7.7.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 7.7.4 Test Condition and Results:

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

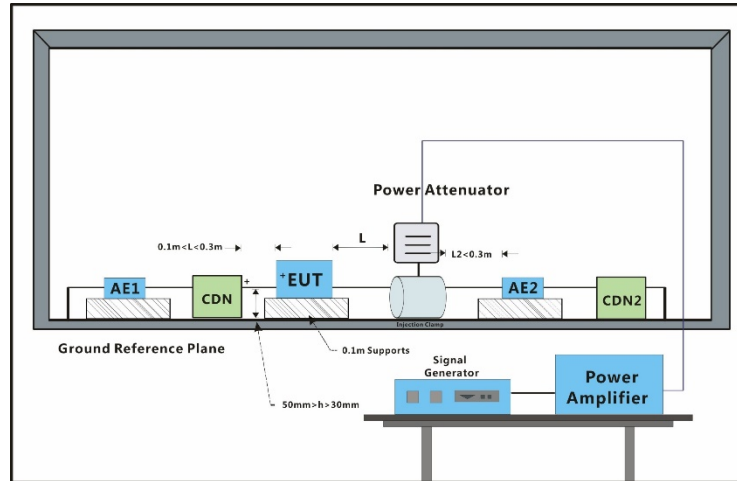
Cable port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
AC power port	10	CDN	3s	A
A: No degradation in the performance of the EUT was observed				

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

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

Test Method: EN 61000-4-6:2014

**7.8.1 Test Setup Diagram**



**7.8.2 E.U.T. Operation**

Operating Environment:

Temperature: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

**7.8.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

**7.8.4 Test Condition and Results:**

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

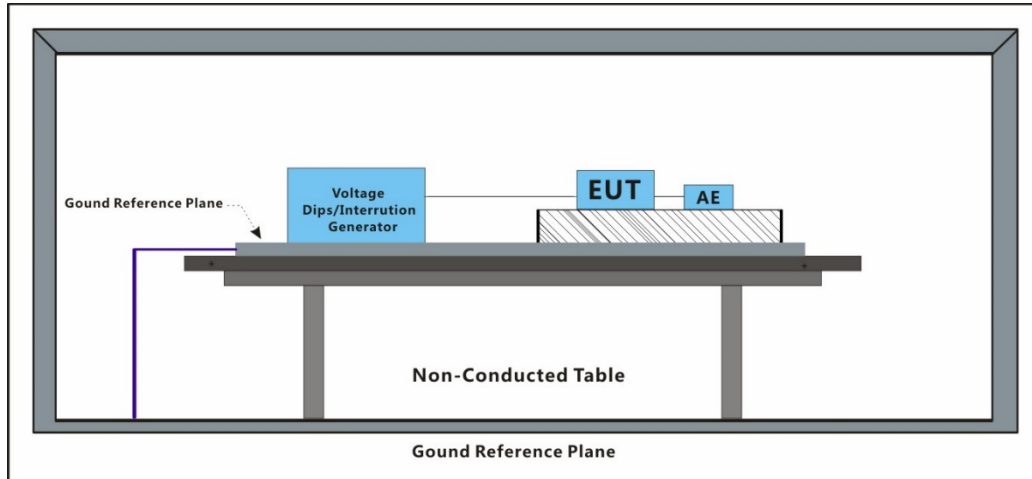
Cable port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
Signal or Control port	10	CDN	3s	A
A: No degradation in the performance of the EUT was observed				

### 7.9 Mains Supply Voltage Variations

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

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

#### 7.9.1 Test Setup Diagram



#### 7.9.2 E.U.T. Operation

Operating Environment:

Temperature: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

#### 7.9.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 7.9.4 Test Condition and Results:

Voltage max.: AC 264V (Umax: Unom + 10%)

Voltage min.: AC 85V (Umin: Unom - 15%)

Unom Voltage: AC 100-240V

Test phenomenon description for the EUT:

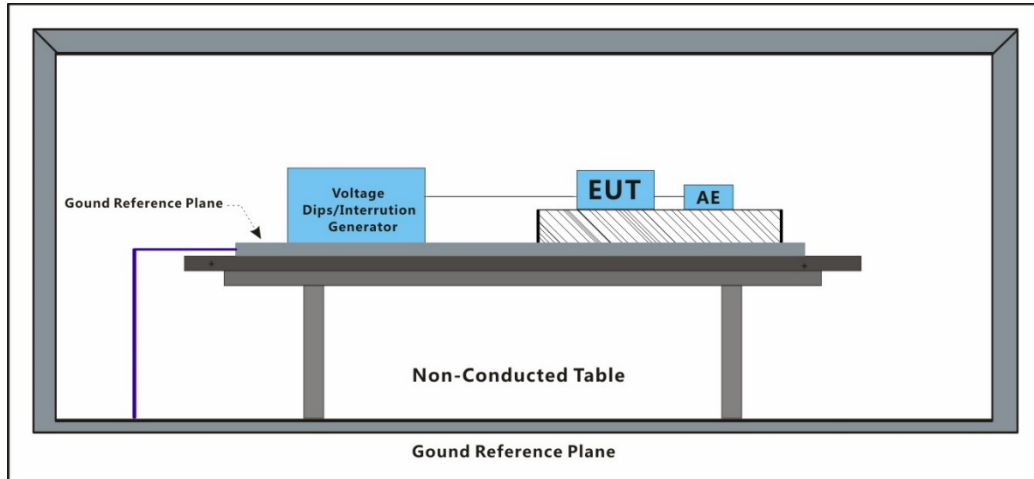
1. The EUT working normal, before the conditioning.
2. Monitor the EUT during the conditioning period and detected no any changes in states, during the conditioning.
3. No degradation in the performance of the EUT was observed, after the conditioning.

### 7.10 Voltage Dips and Interruptions

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

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

#### 7.10.1 Test Setup Diagram



#### 7.10.2 E.U.T. Operation

Operating Environment:

Temperature: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

#### 7.10.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

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### 7.10.4 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

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	C
0	180°	250 Cycles	3	C

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

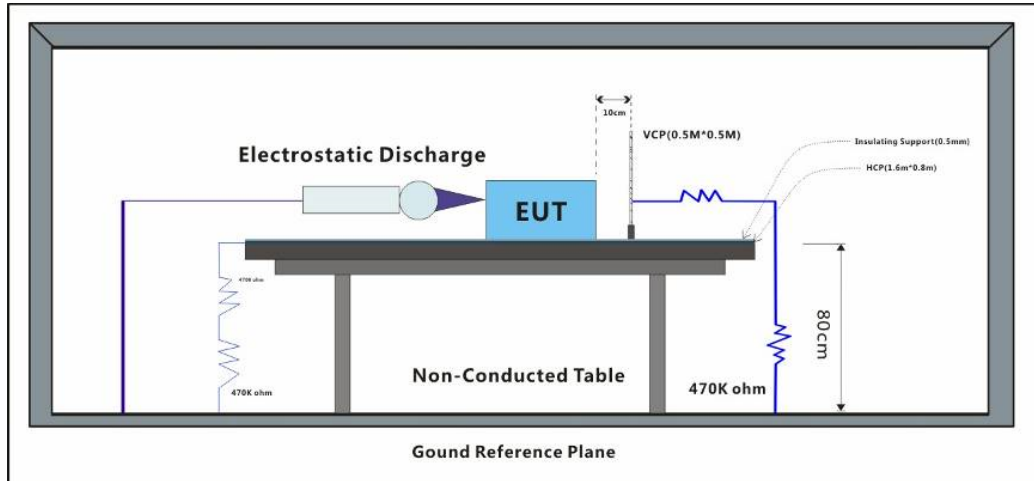
C: During the test EUT stop working when power supply drop,  
After the test by manual operation can work normally.

### 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: 46 % RH

Atmospheric Pressure: 1010 mbar

#### 7.11.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

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### 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.

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

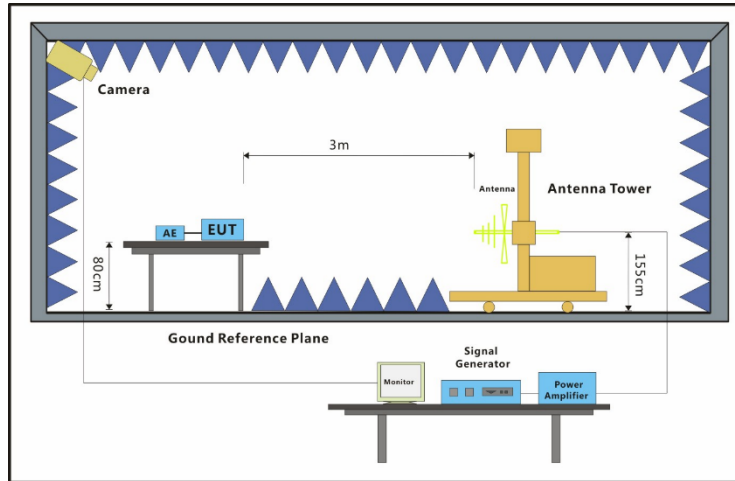
A: No degradation in the performance of the EUT was observed

**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: 25 °C

Humidity: 49 % RH

Atmospheric Pressure: 1010 mbar

**7.12.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

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### 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
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

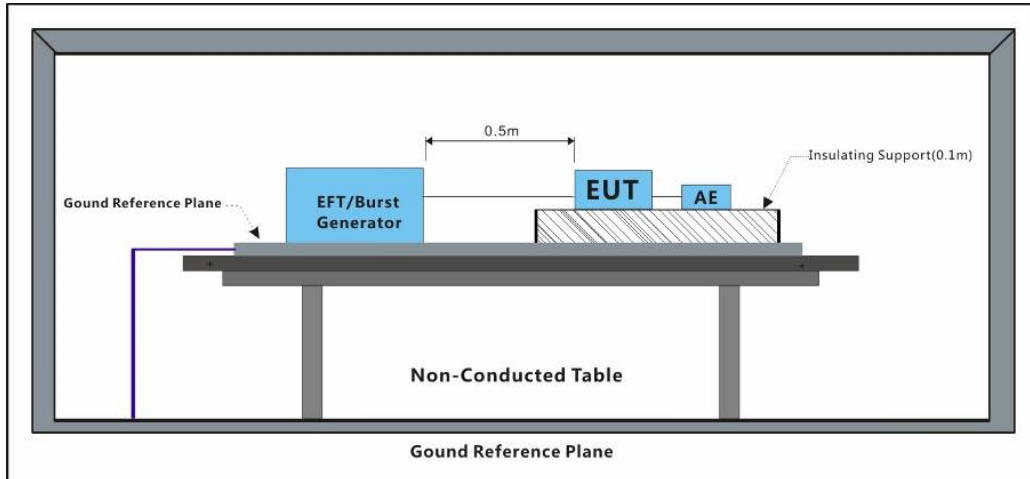
A: No degradation in the performance of the EUT was observed

**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: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

**7.13.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

**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

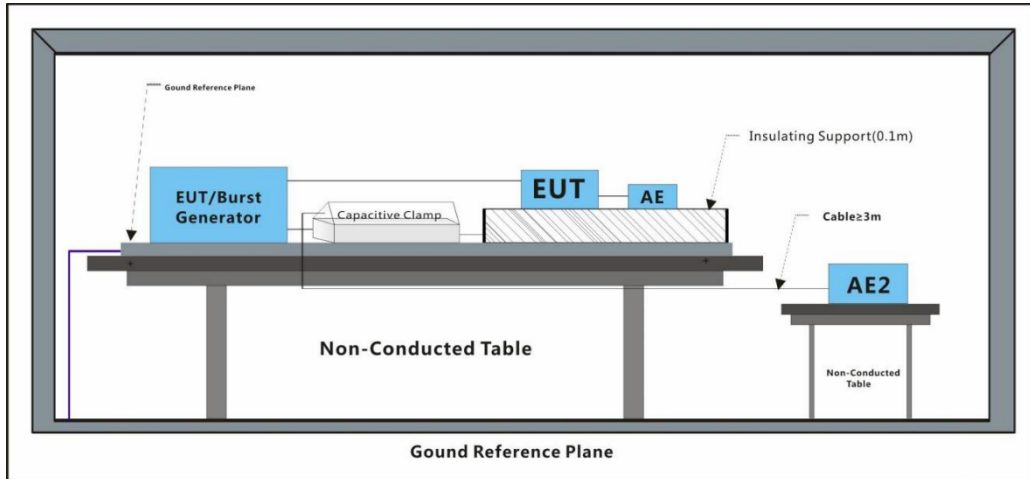
A: No degradation in the performance of the EUT was observed

### 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: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

#### 7.14.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 7.14.4 Test Condition and Results:

Performance Criterion: B

Repetition Frequency: 5kHz

Burst Period: 300ms

Test Duration: 2 minute per level & polarity

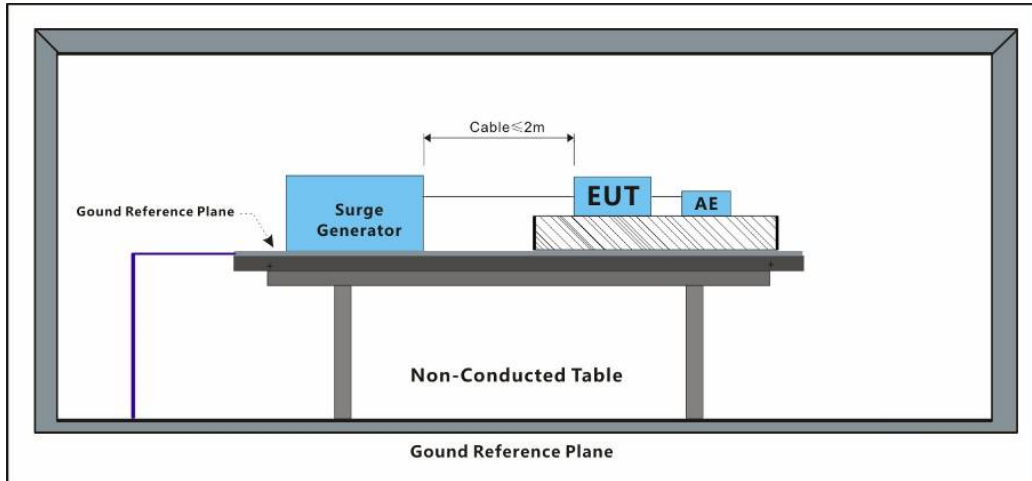
Port	Level (kV)	Polarity	CDN/Clamp	Result / Observations
Signal port	0.5	+	Clamp	A
Signal port	0.5	-	Clamp	A

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

**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: 22.3 °C      Humidity: 56.1 % RH      Atmospheric Pressure: 1010 mbar

**7.15.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

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**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

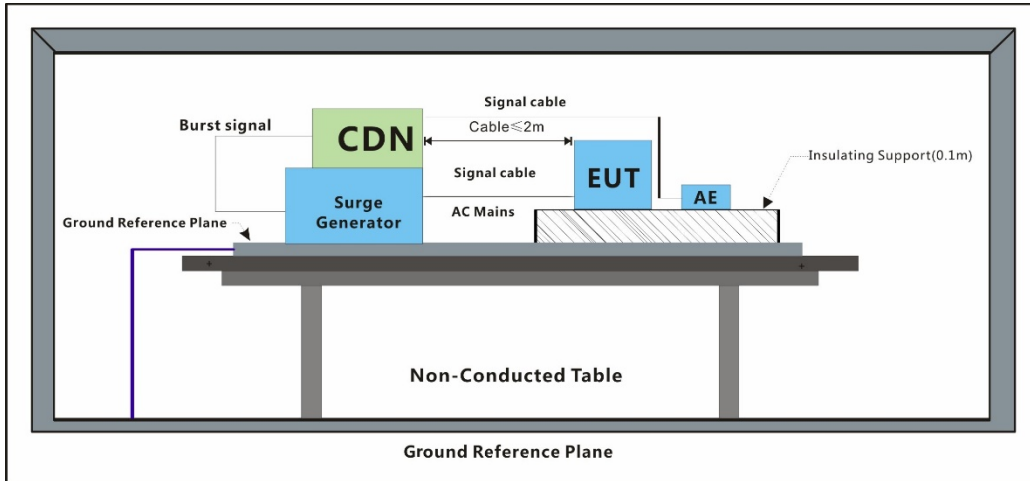
Test Line	Level (kV)	Polarity	Phase (deg)	Result / Observations
L-N	1	+	90°	A
L-N	1	-	270°	A
L-PE	2	+	90°	A
L-PE	2	-	270°	A
N-PE	2	-	90°	A
N-PE	2	+	270°	A

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

**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: 22.3 °C      Humidity: 56.1 % RH      Atmospheric Pressure: 1010 mbar

**7.16.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

**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

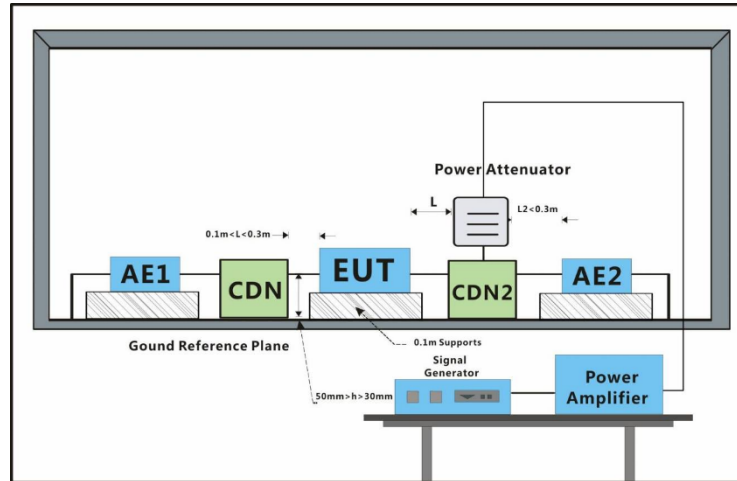
A: No degradation in the performance of the EUT was observed

### 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: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

#### 7.17.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

#### 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

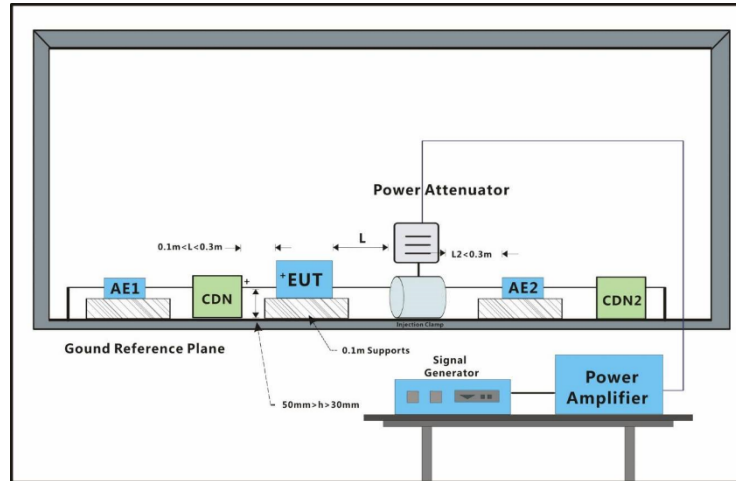
A: No degradation in the performance of the EUT was observed

**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: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

**7.18.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

**7.18.4 Test Condition and Results:**

Performance Criterion: A

Frequency Range: 0.15MHz to 80MHz

Modulation: 80%, 1kHz Amplitude Modulation

Step Size: 1%

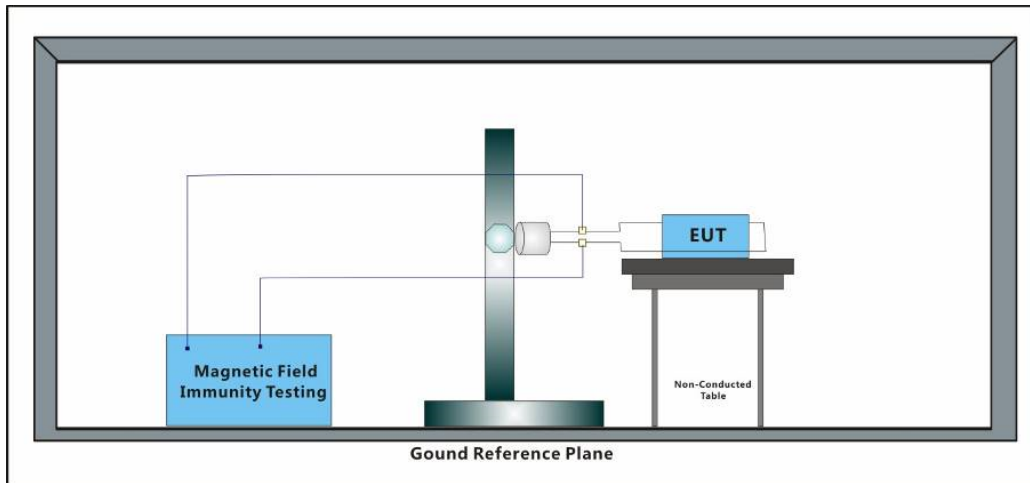
Port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
Signal port	3(0.15MHz-10MHz)	Clamp	3s	A
Signal port	3 to 1(10MHz-30MHz, Lines)	Clamp	3s	A
Signal port	1(30MHz-80MHz)	Clamp	3s	A

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

**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: 22.3 °C      Humidity: 56.1 % RH      Atmospheric Pressure: 1010 mbar

**7.19.3 Test Mode Description**

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

**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

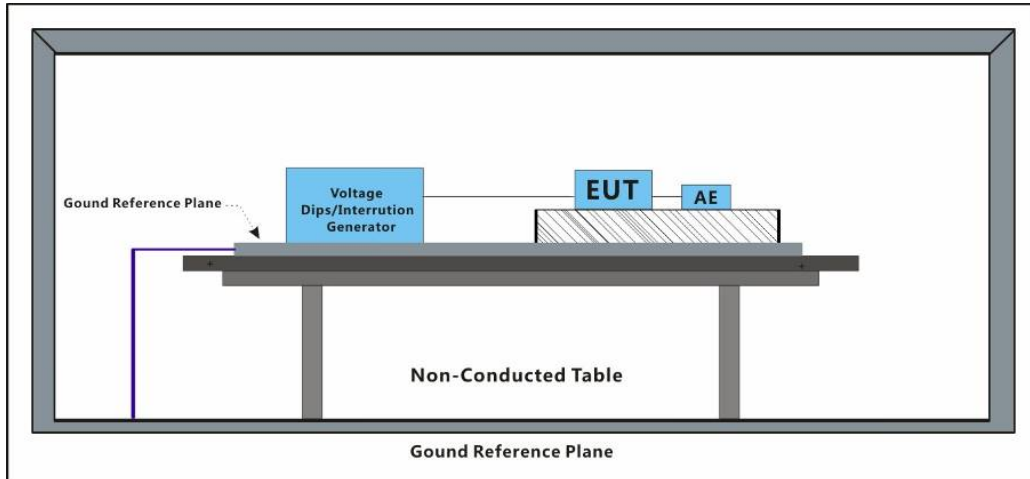
A: No degradation in the performance of the EUT was observed

## 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: 22.3 °C

Humidity: 56.1 % RH

Atmospheric Pressure: 1010 mbar

### 7.20.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)
Final test	01	Keep EUT1(DHI-NVR2108HS-8P-4KS3) working normally powered by Adapter2(ADS-110DL-48N-1 530096E)
Final test	02	Keep EUT2(DHI-NVR2108-8P-4KS3) working normally powered by Adapter1(E096-1A530181B3)

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### 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

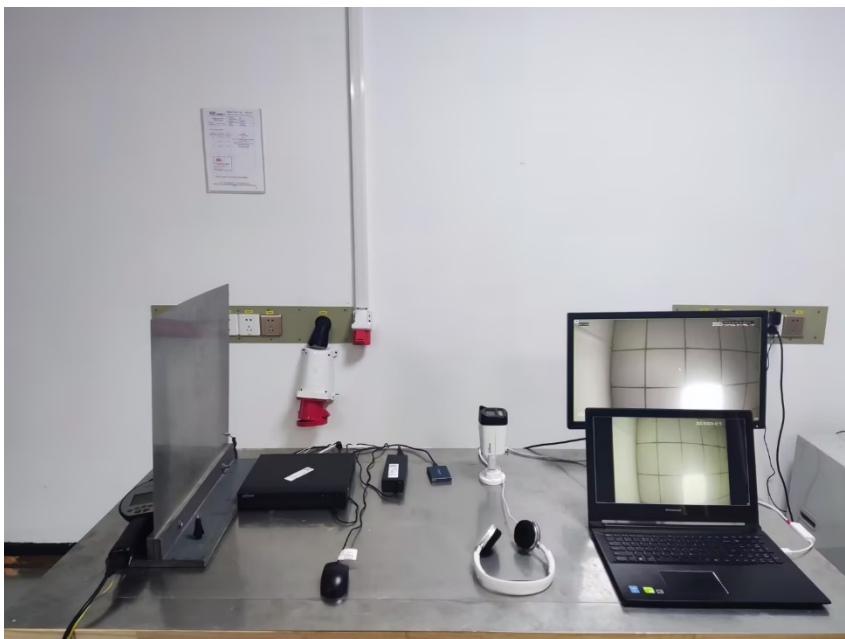
Level % UT	Phase (deg)	Duration	No. of Dips / Interruptions	Result / Observations
0	0°	0.5 Cycles	3	C
0	0°	250 Cycles	3	C
70	0°	25 Cycles	3	A

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

C: During the test EUT stop working when power supply drop,  
After the test by manual operation can work normally.

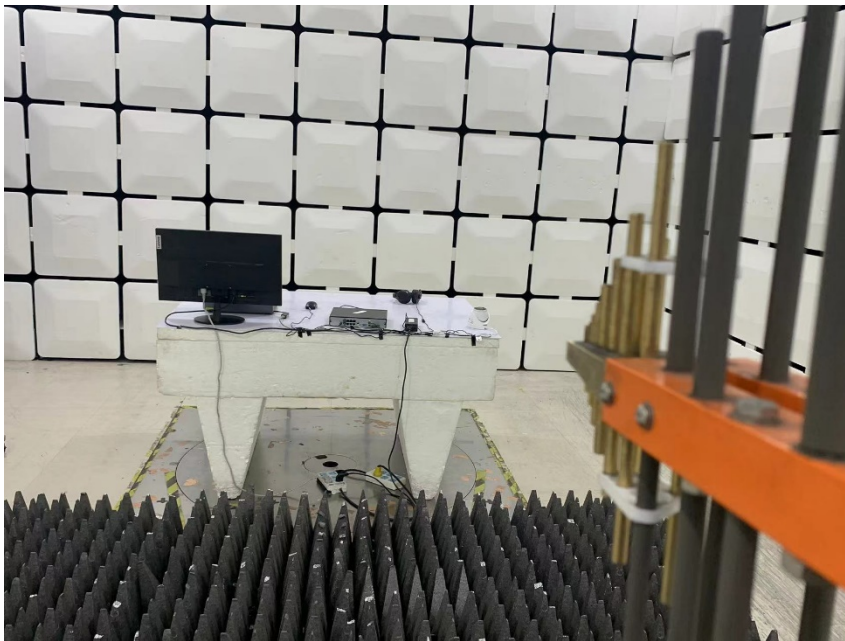
### 8 Test Setup Photo

#### Electrostatic Discharge





### Radiated Immunity(80MHz-2.7GHz)

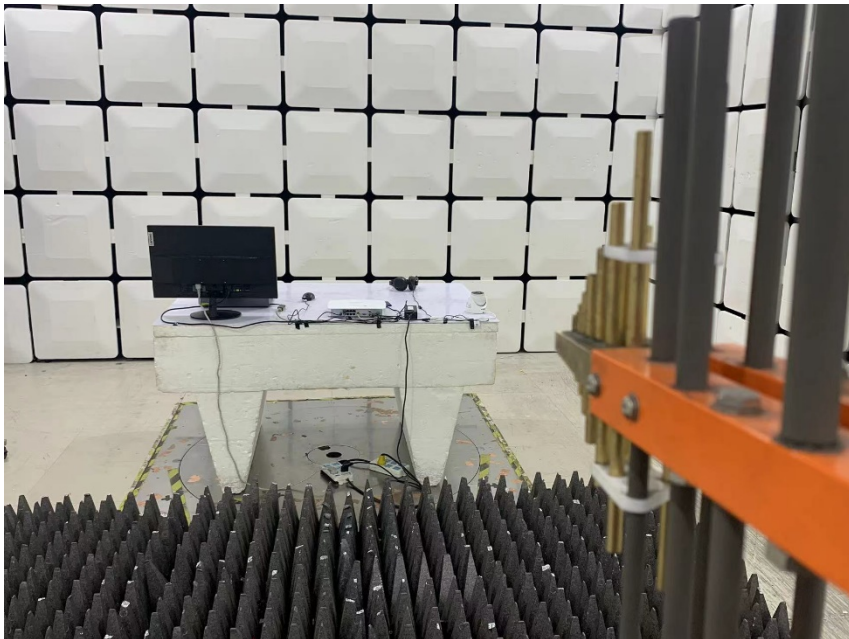
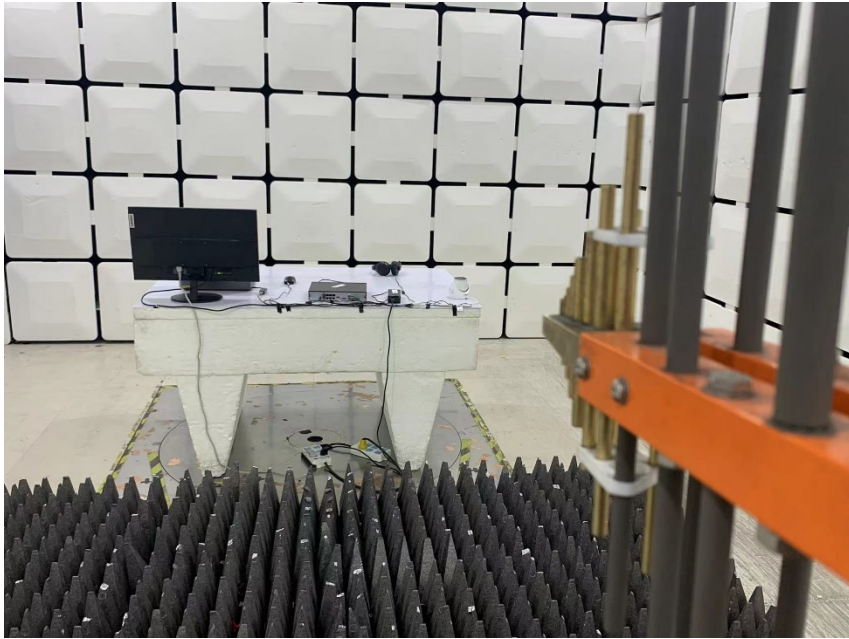


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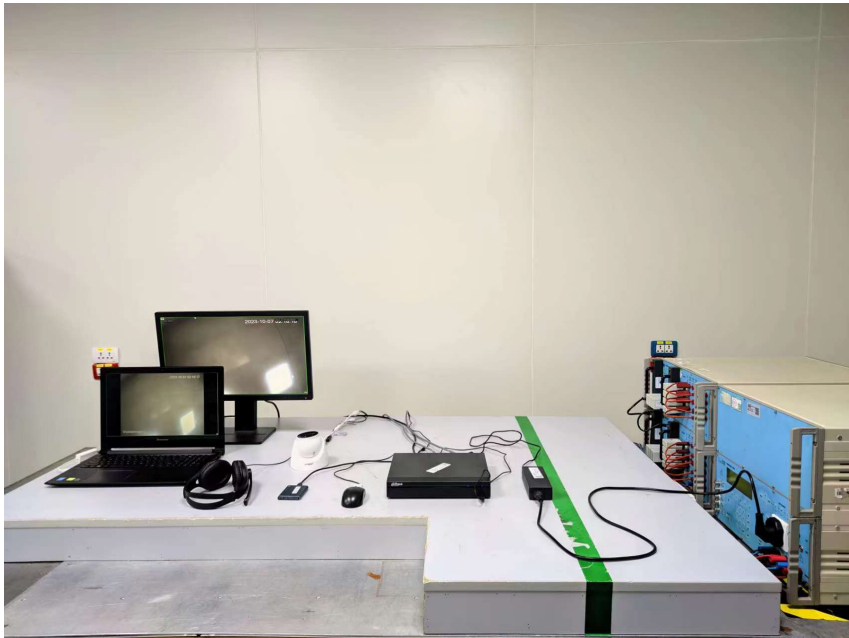
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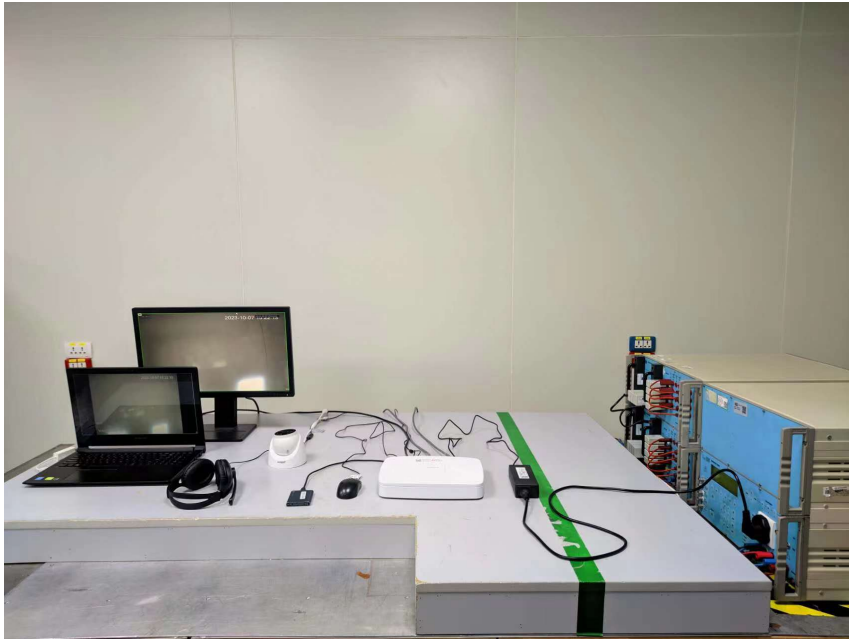
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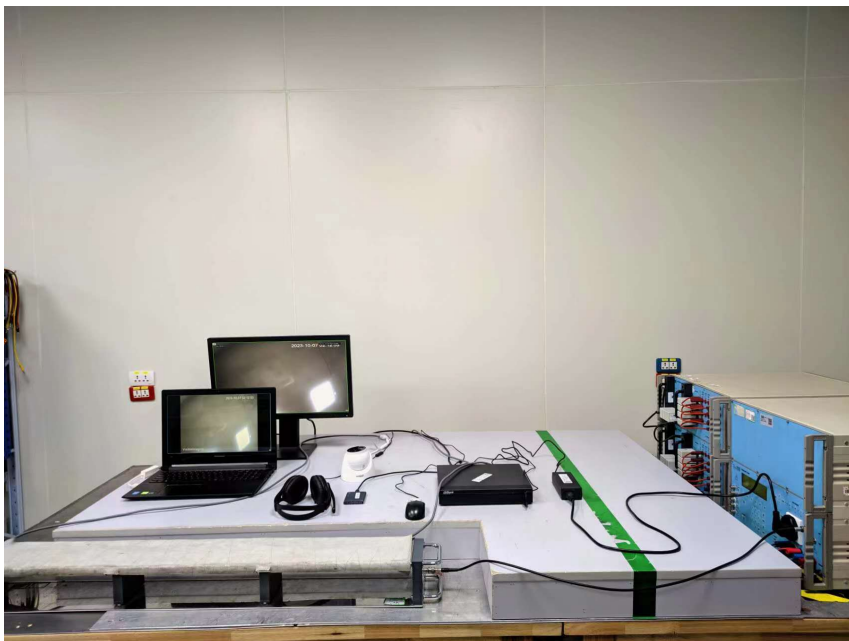


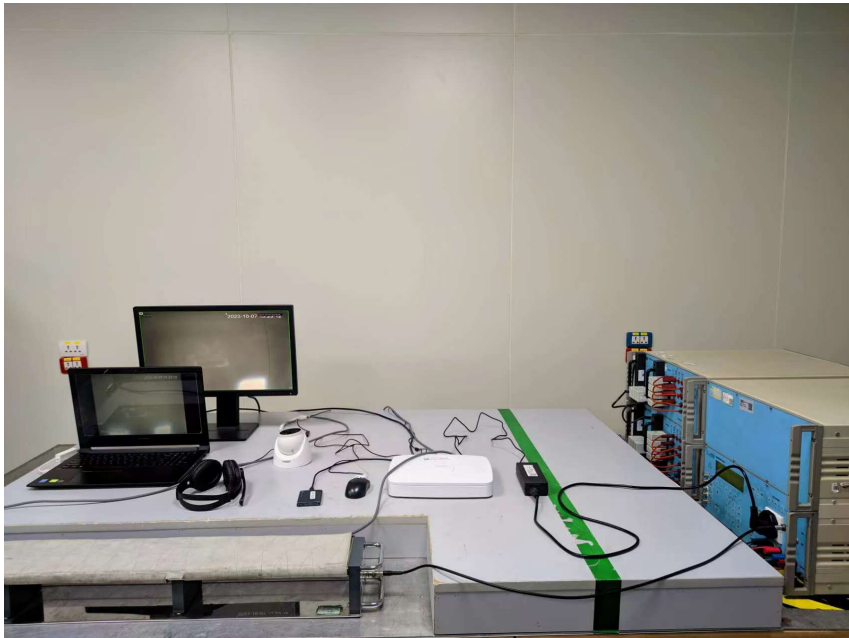
### Electrical Fast Transients & Burst at AC Power Port



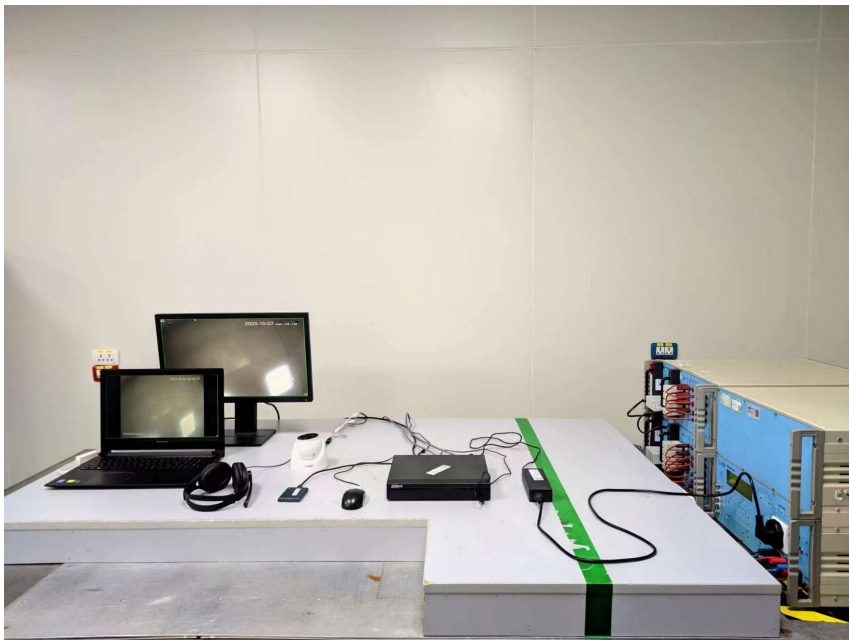


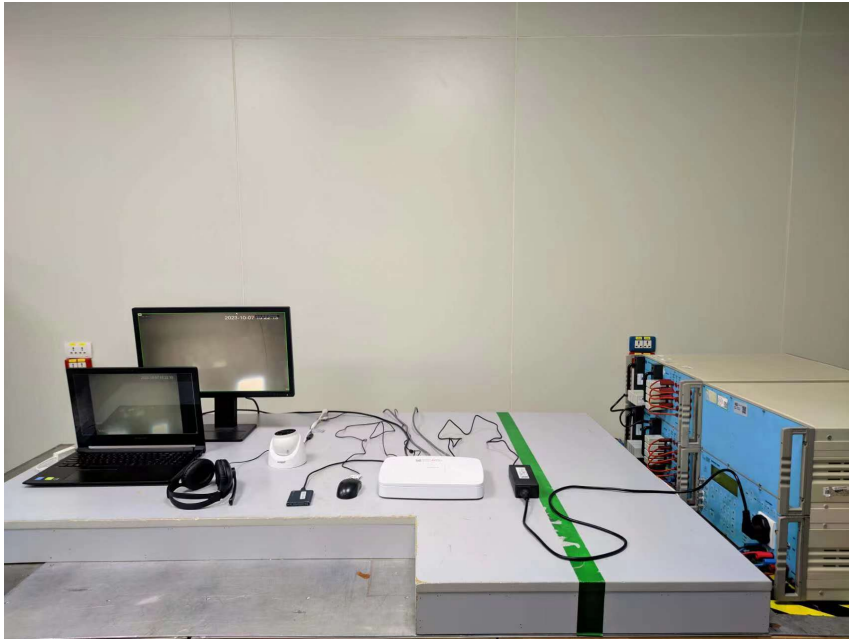
**Electrical Fast Transients & Burst at Signal Port**



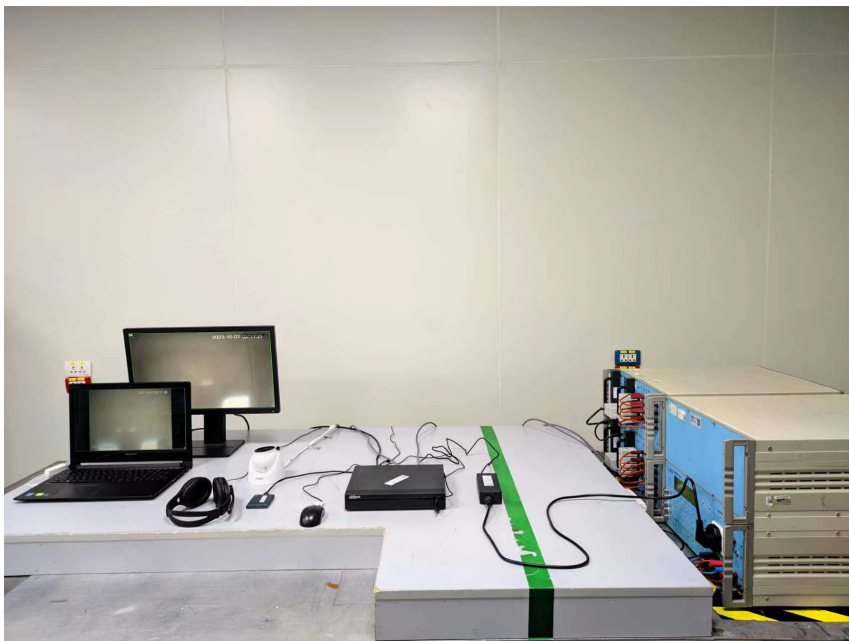


### Surge at AC Power Port





**Surge at Signal Port**





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





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

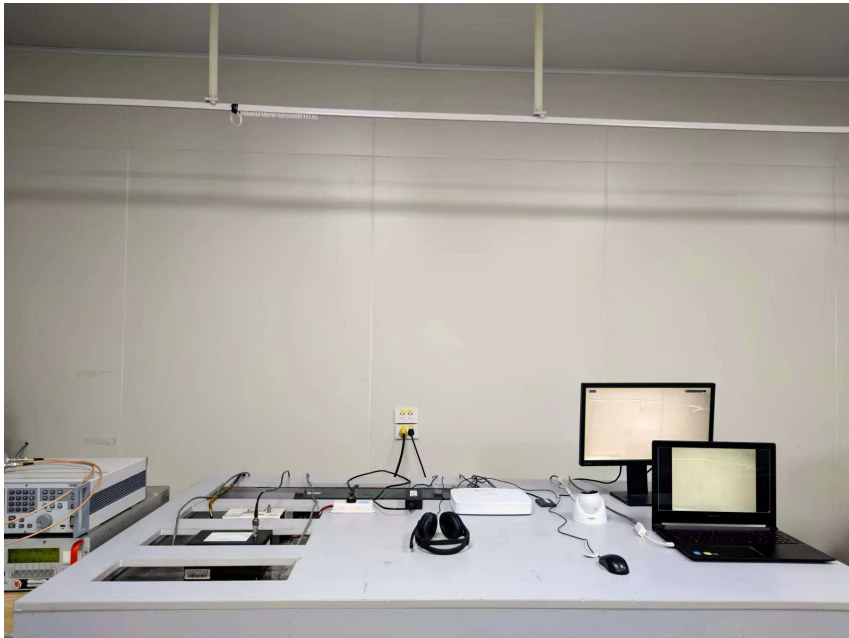


## Compliance Certification Services (Kunshan) Inc.

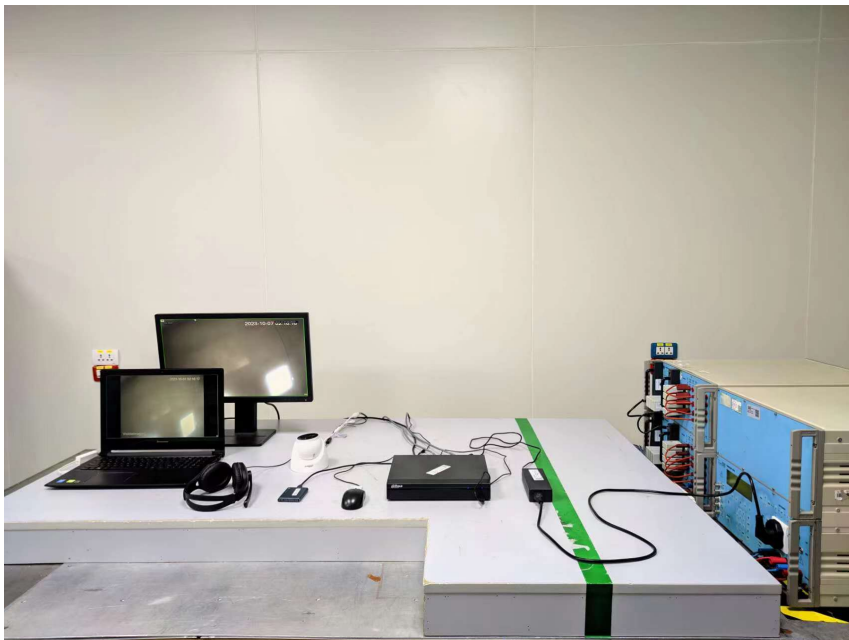
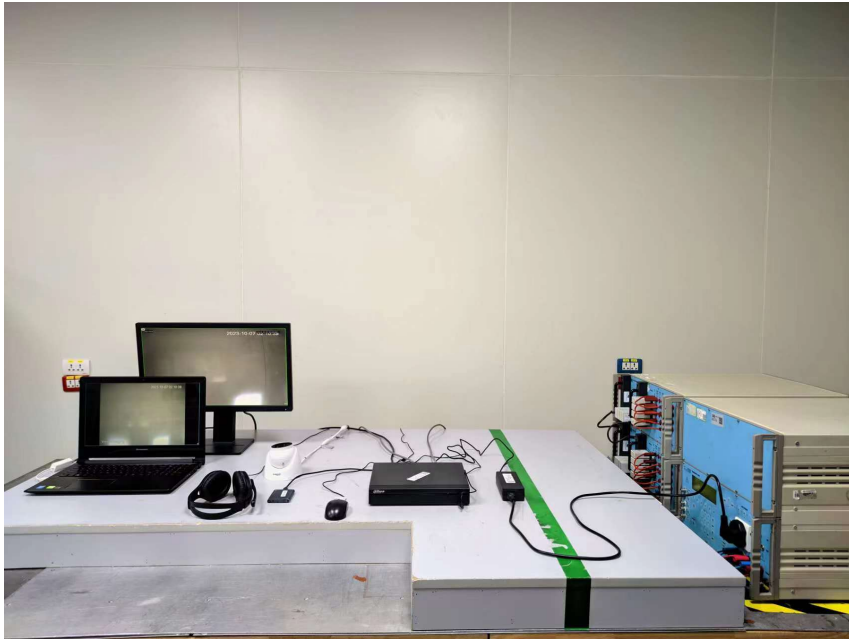
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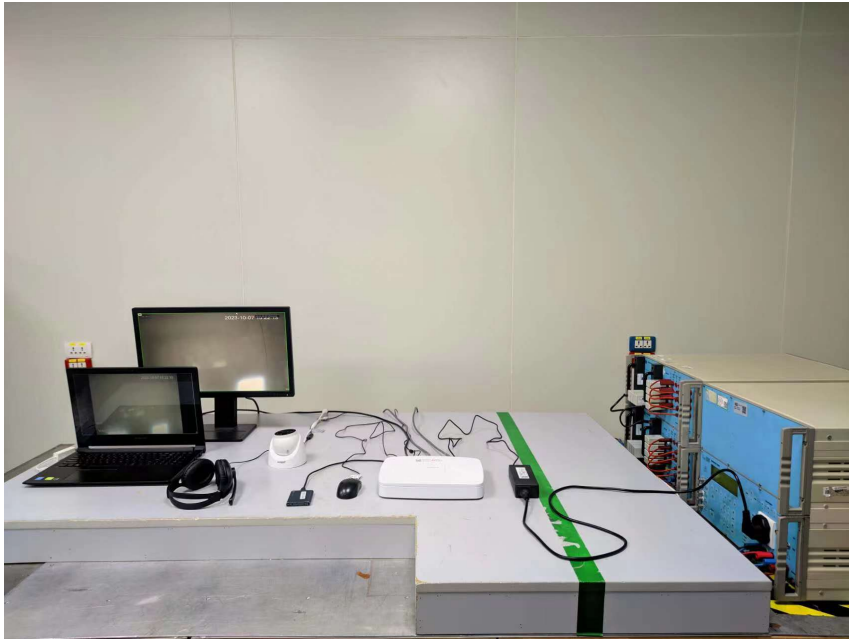
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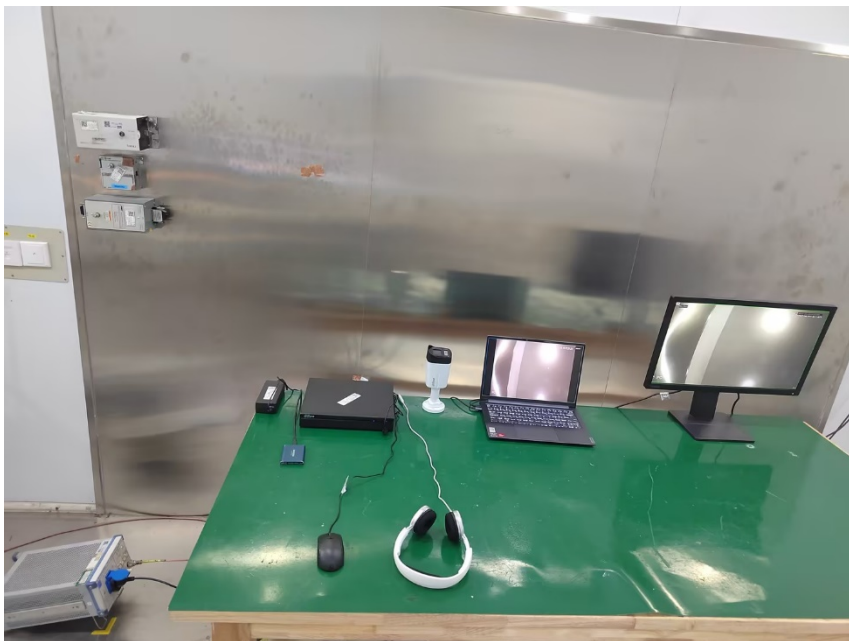


### Voltage Dips and Interruptions





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

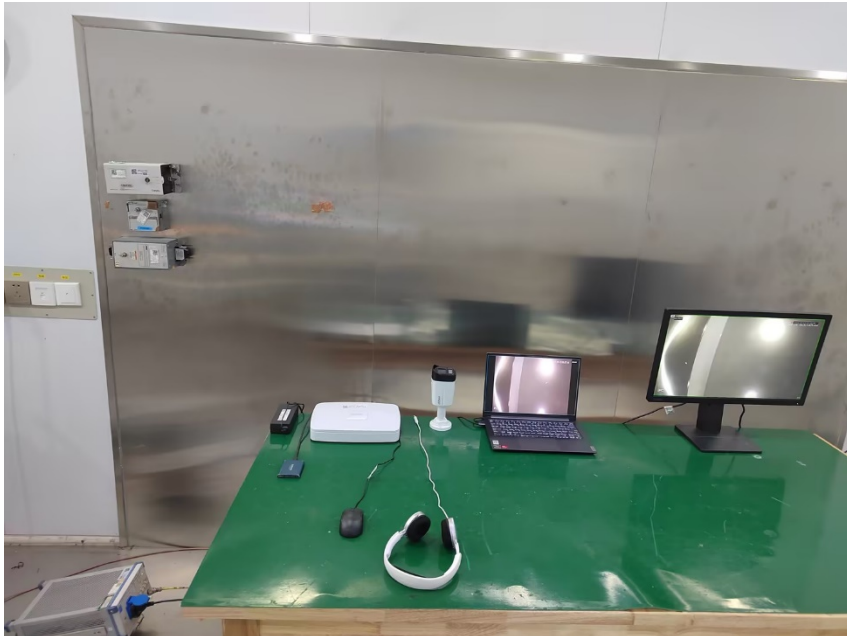


## Compliance Certification Services (Kunshan) Inc.

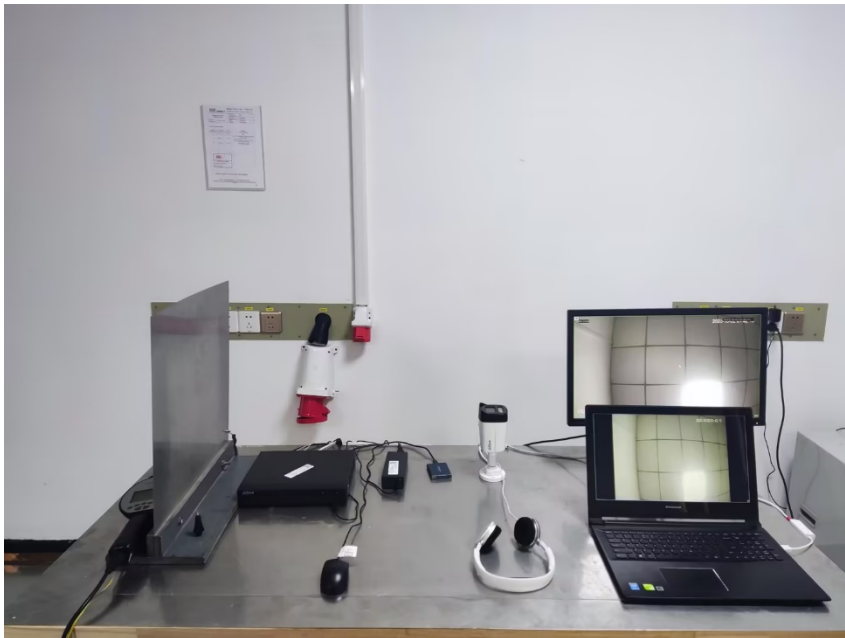
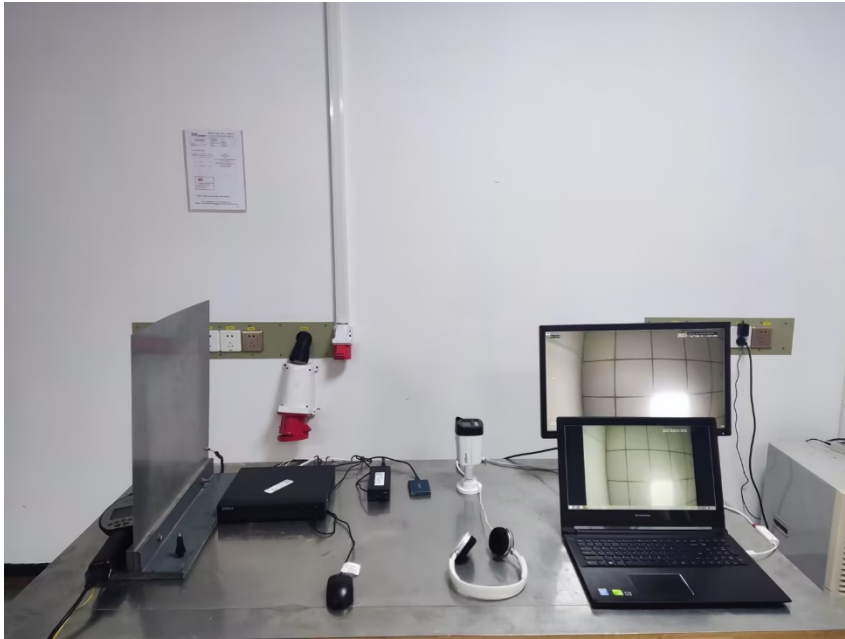
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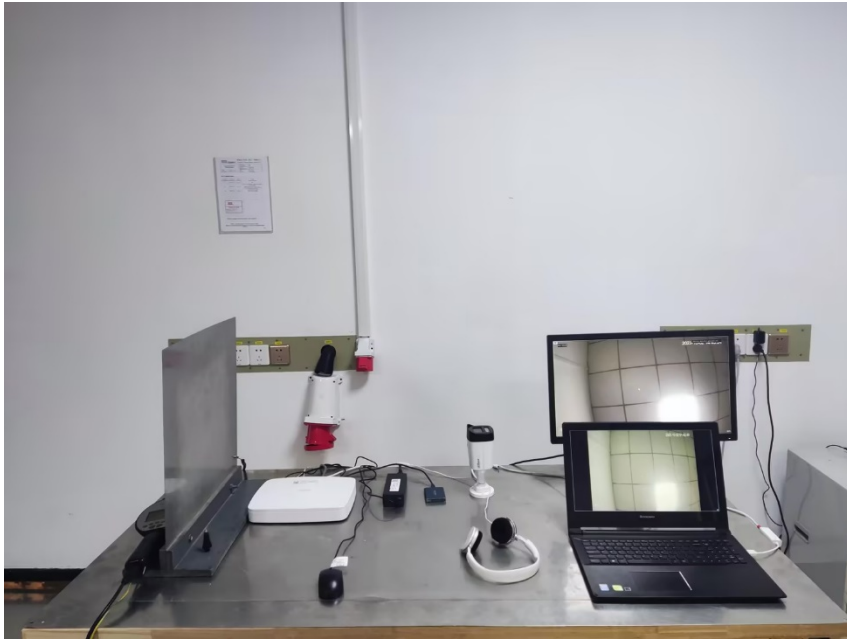
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### Electrostatic Discharge





### Harmonic Current Emission



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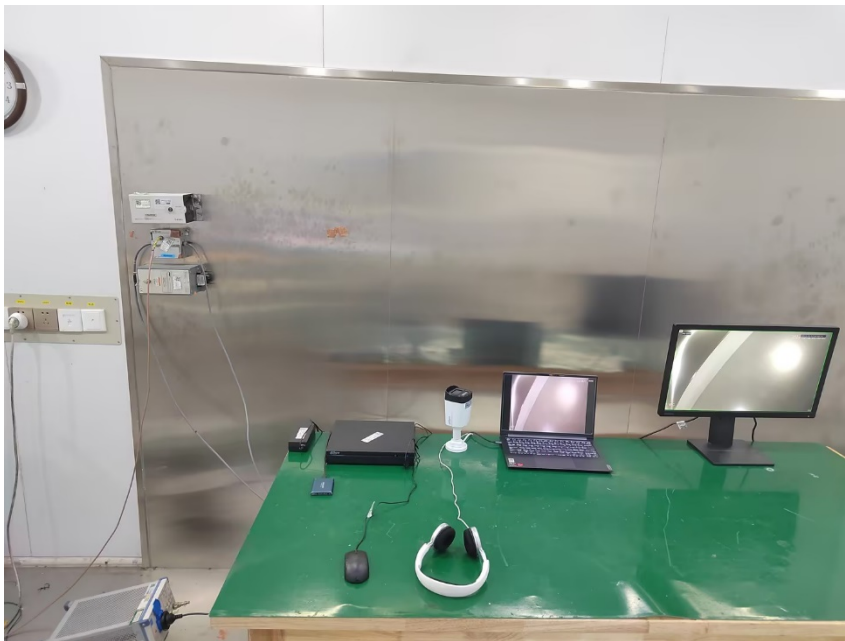


### Voltage Fluctuations and Flicker



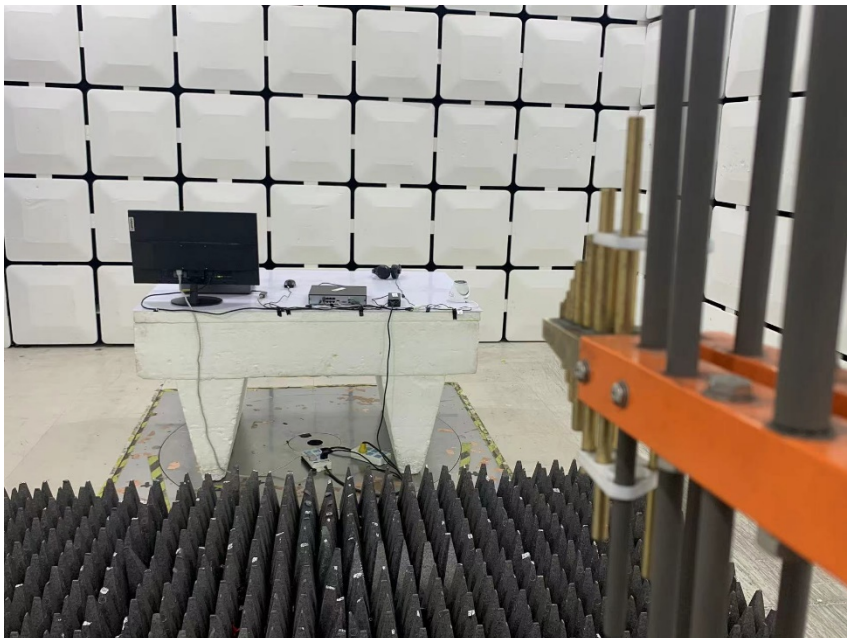
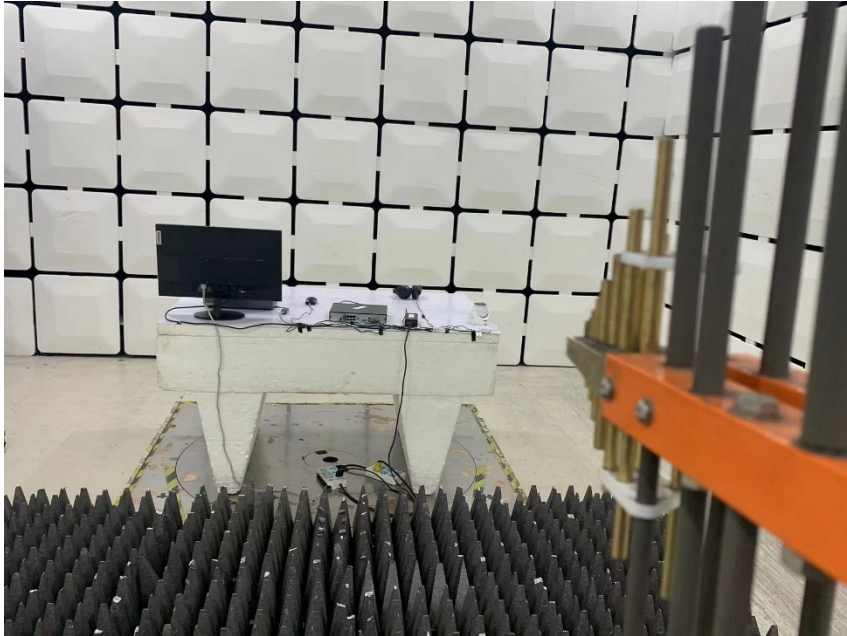


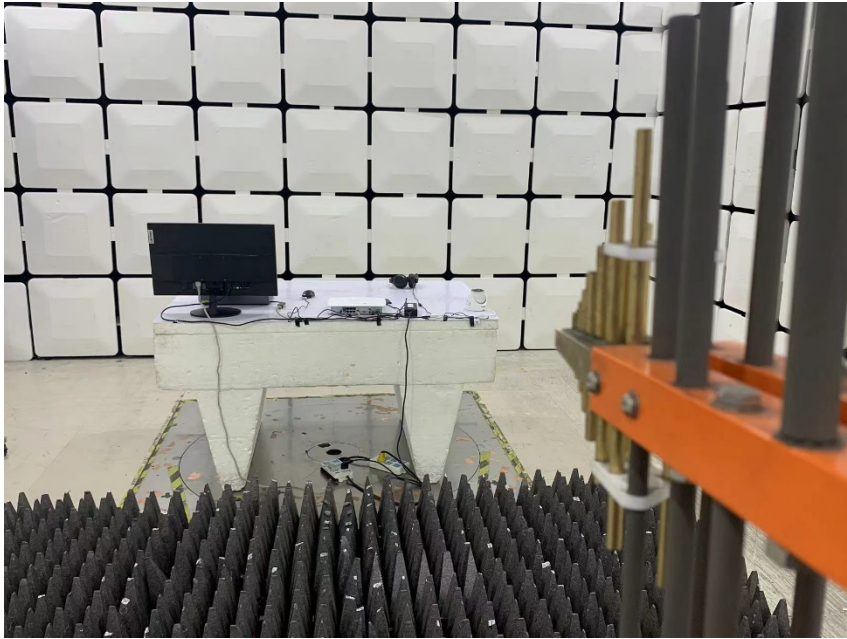
### Asymmetric Mode Conducted Emissions(150kHz-30MHz)





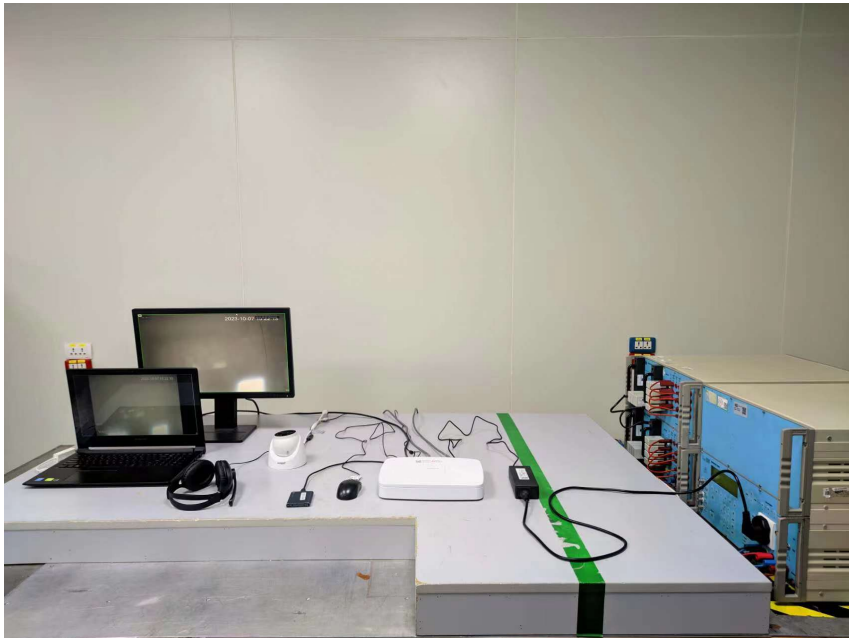
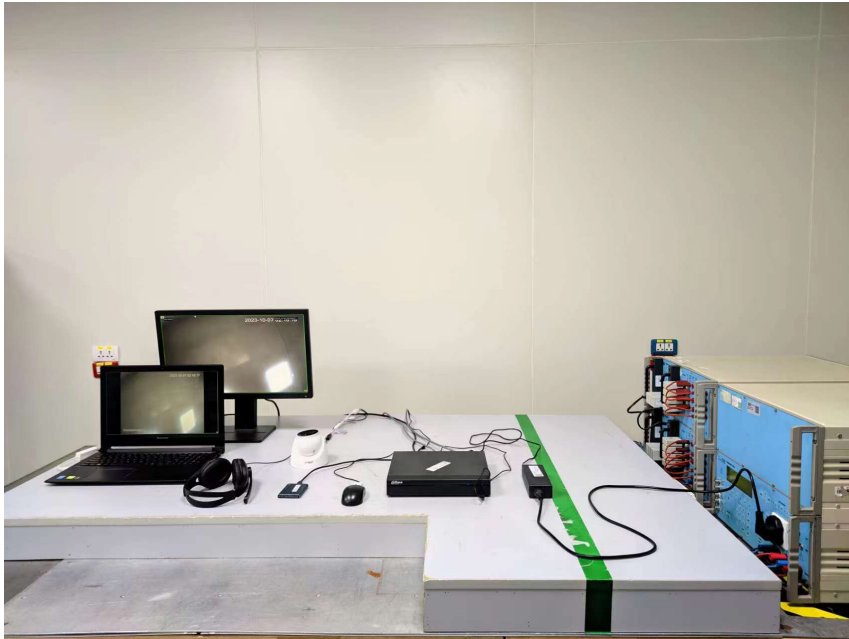
### Radiated Immunity (80MHz-1GHz,1800MHz,2600MHz,3500MHz,5000MHz)



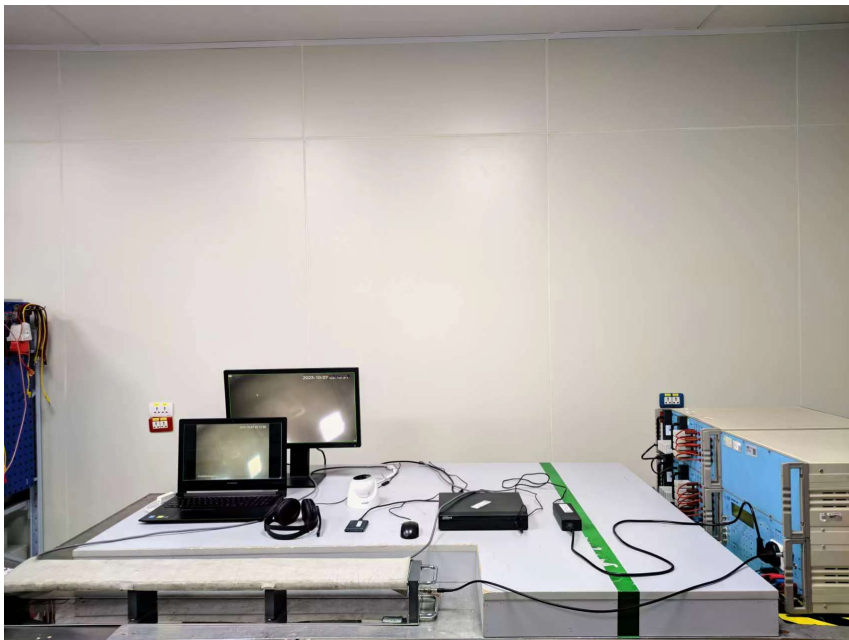


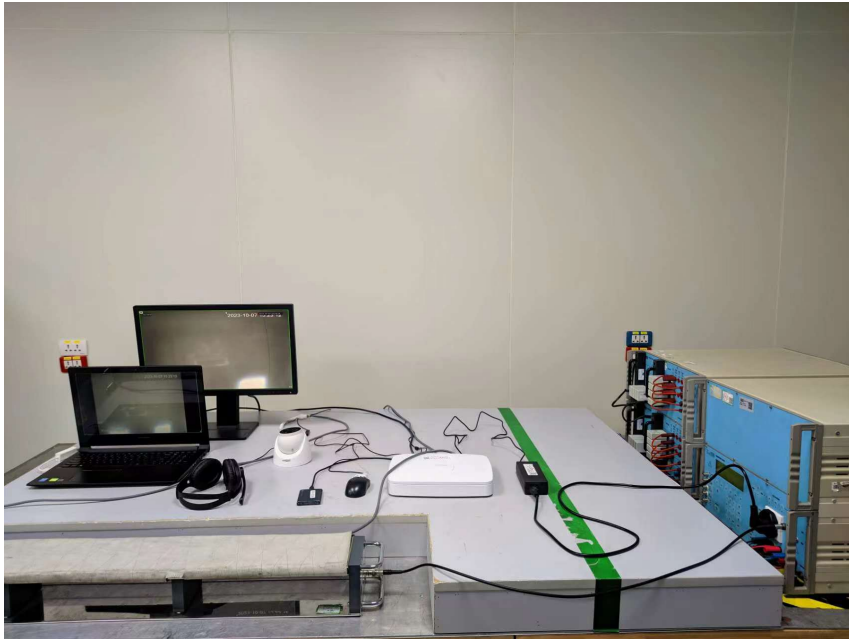
### Electrical Fast Transients & Burst at AC Power Port





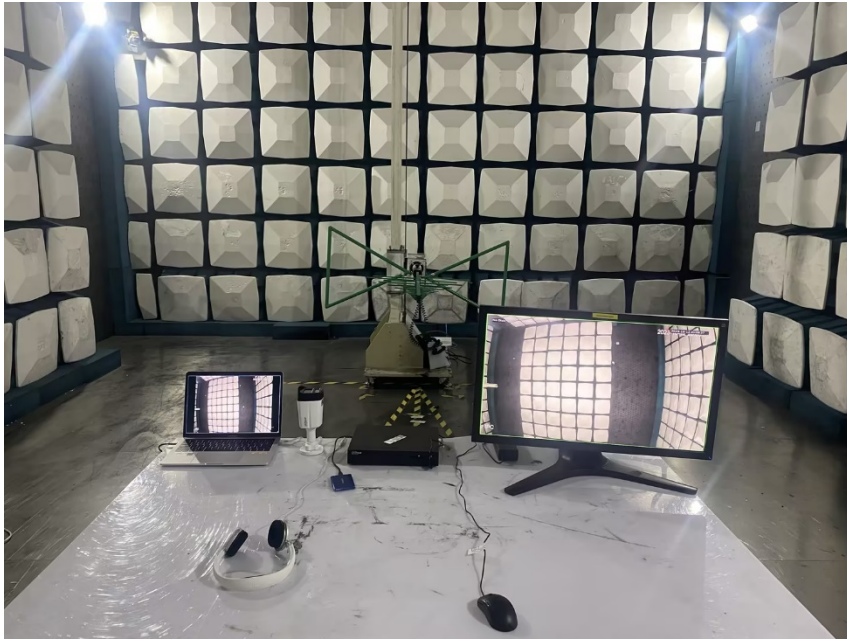
### Electrical Fast Transients & Burst at Signal Port



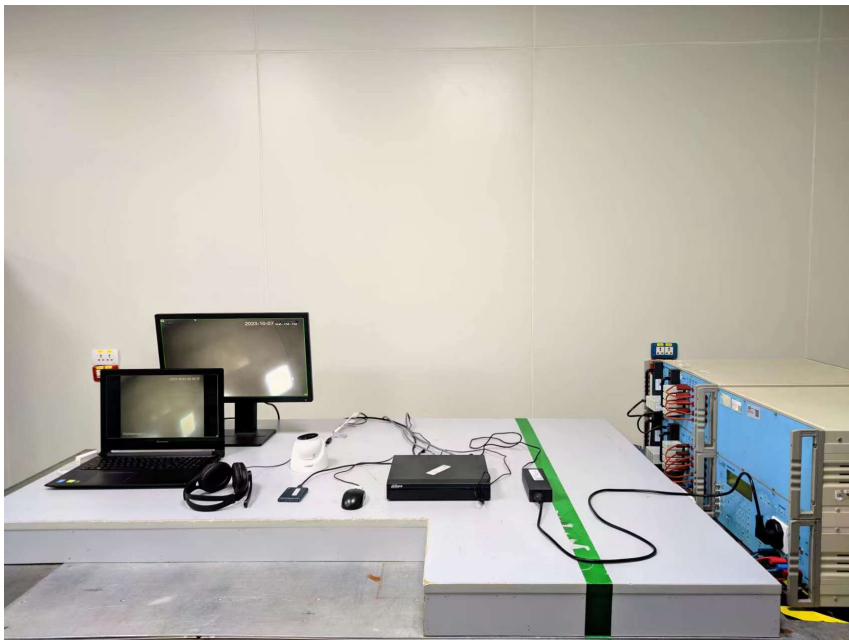
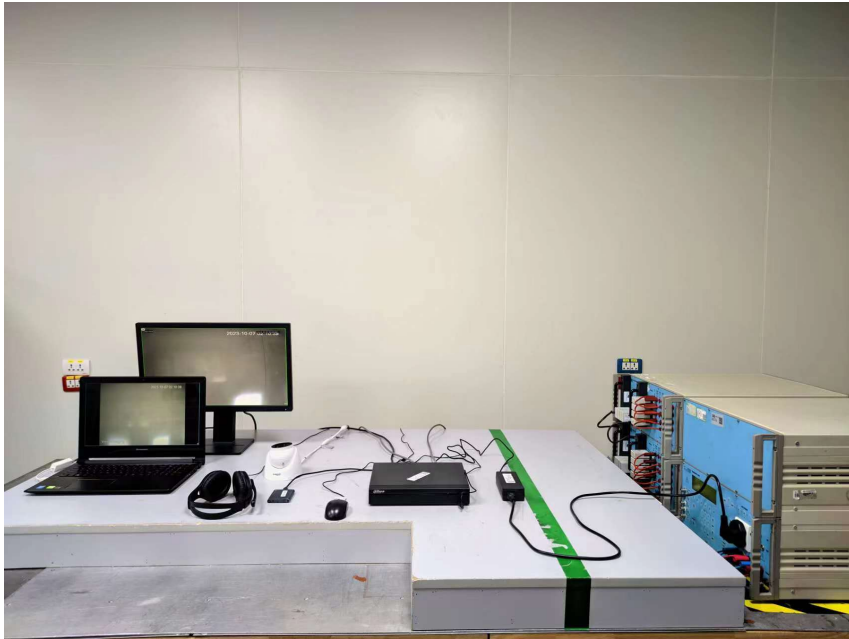


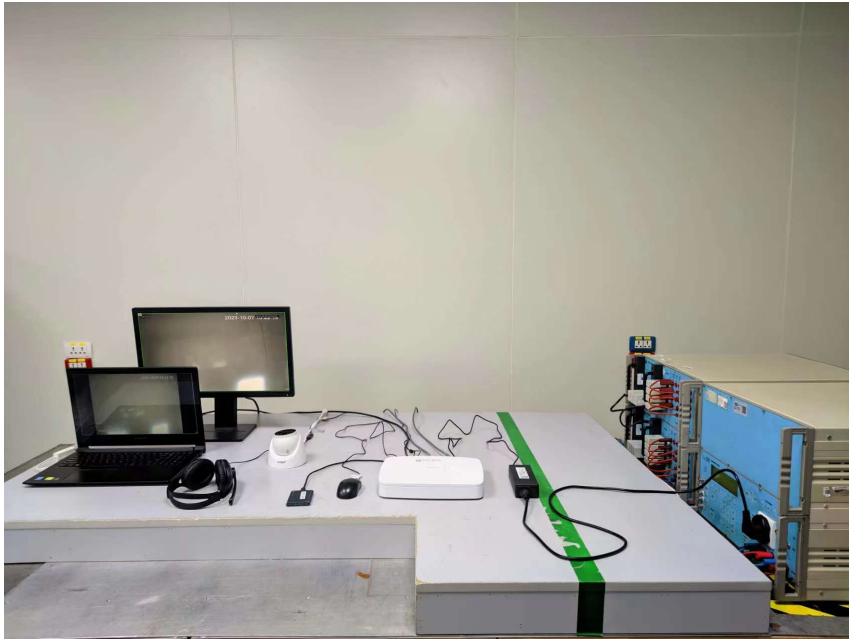
### Radiated Emissions (30MHz-1GHz)



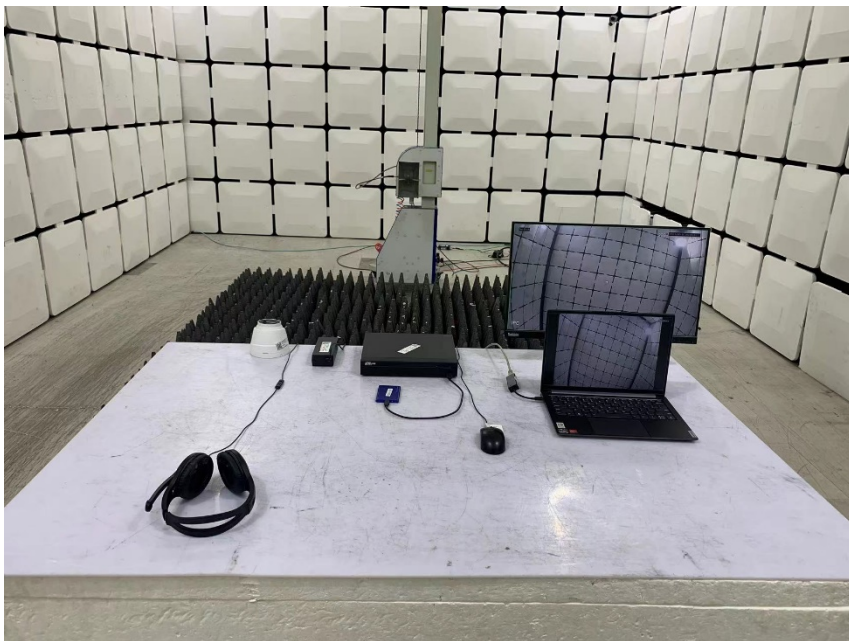


### Surge at AC Power Port





### Radiated Emissions (Above 1GHz)

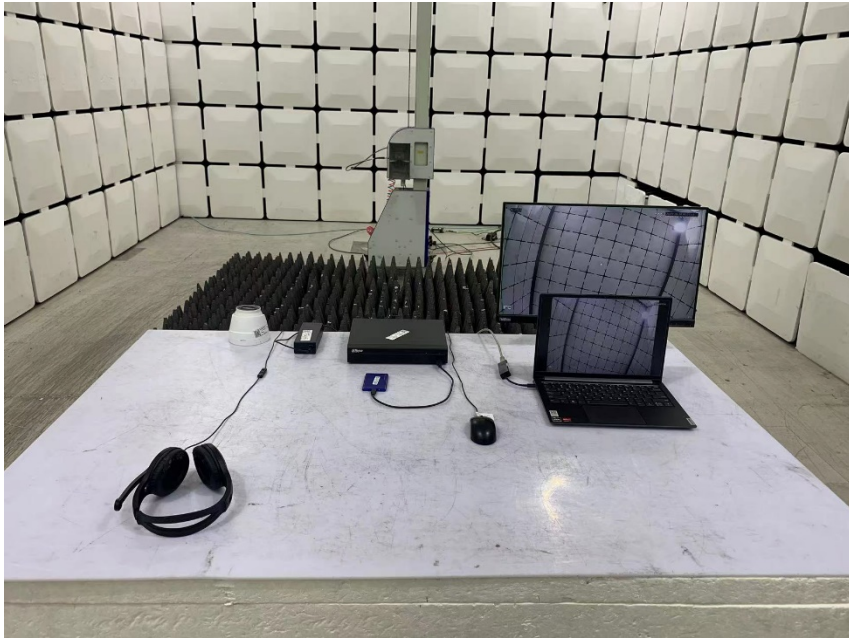


## Compliance Certification Services (Kunshan) Inc.

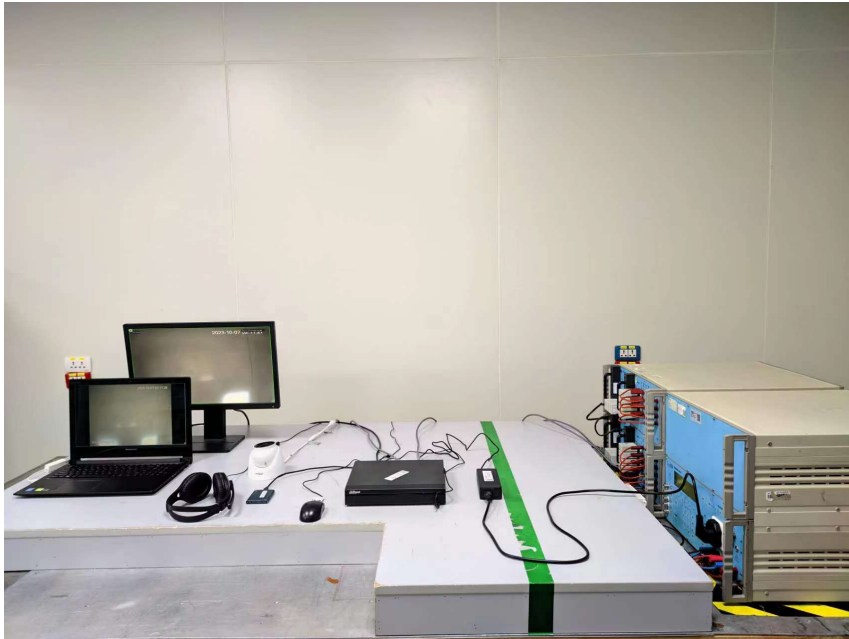
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### Surge at Signal Port





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



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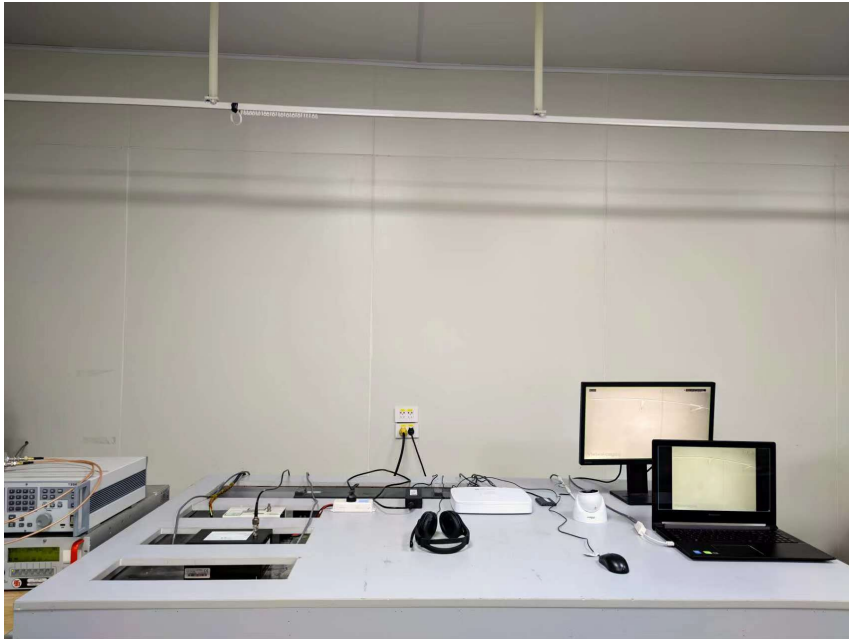
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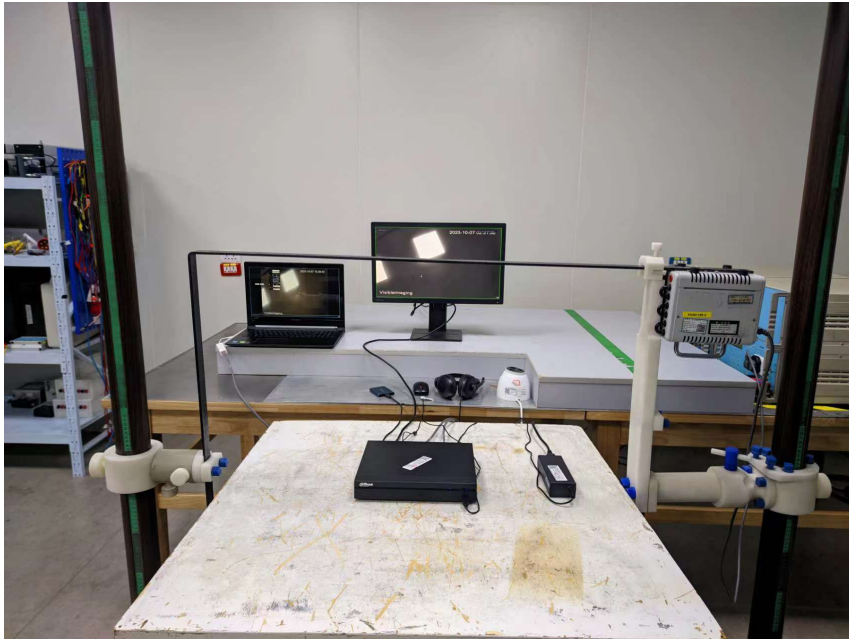
### Conducted Immunity at Signal Port (150kHz-80MHz)



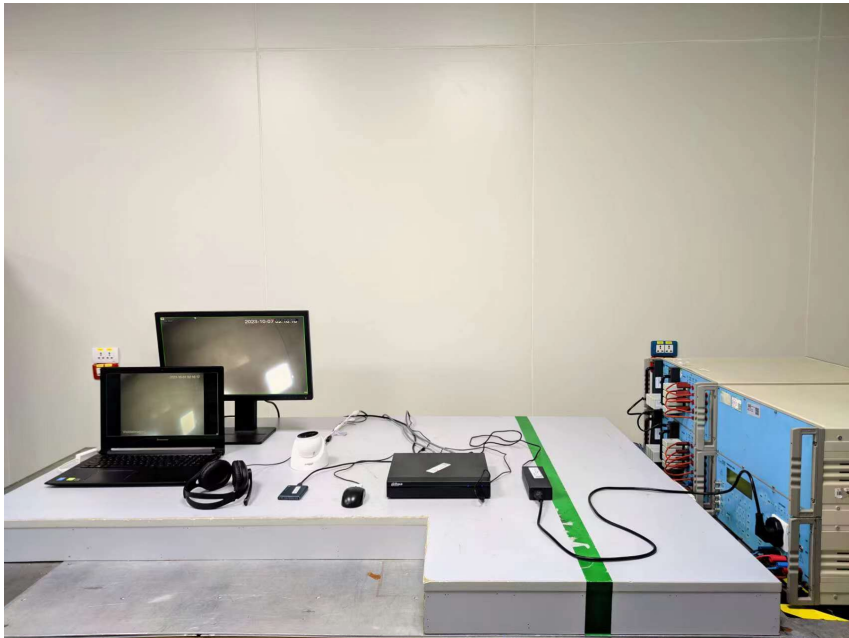


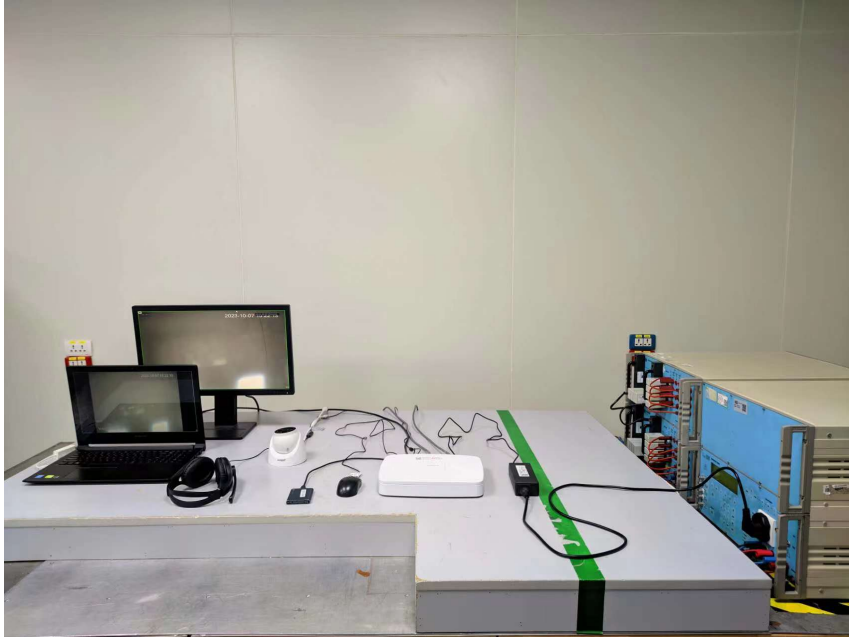
### Power Frequency Magnetic Field





### Voltage Dips and Interruptions





### 9 EUT Constructional Details (EUT Photos)



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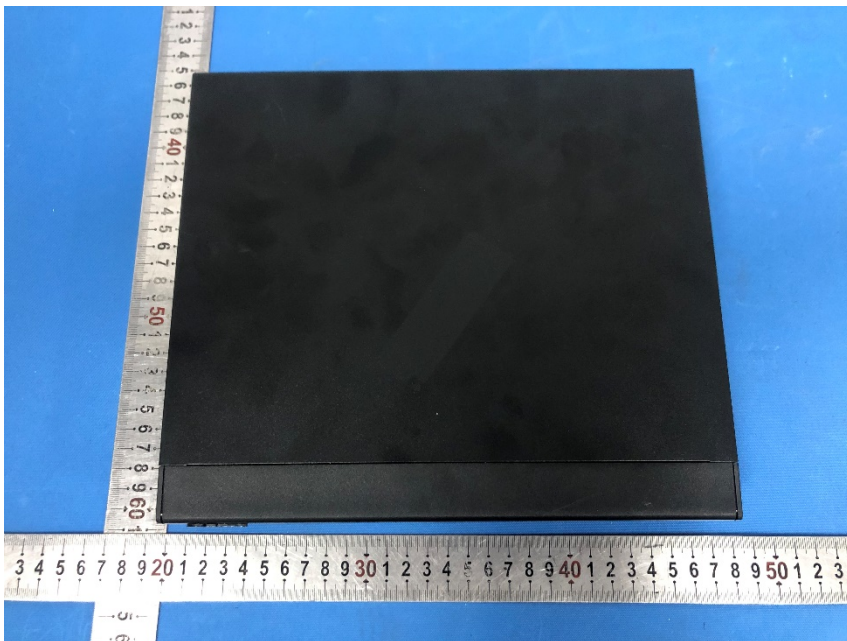
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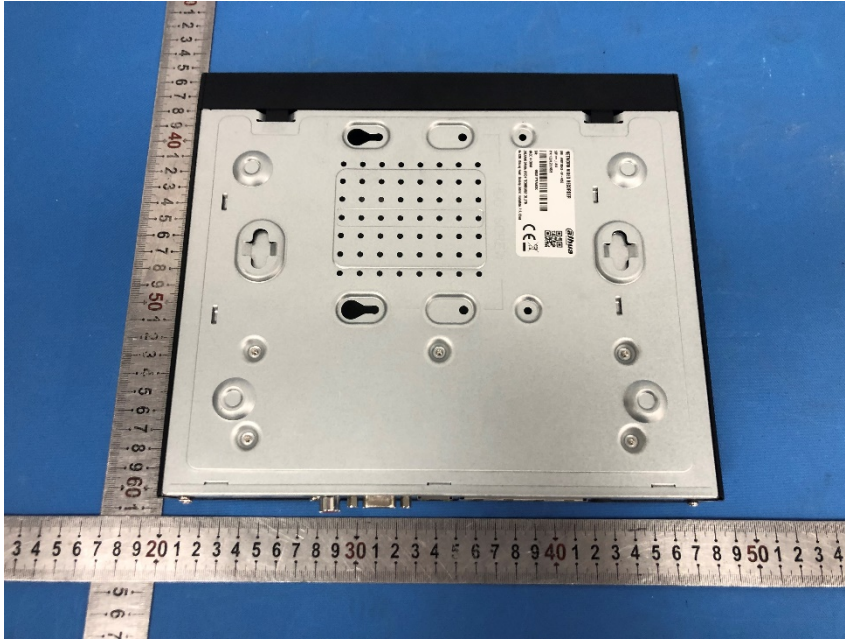


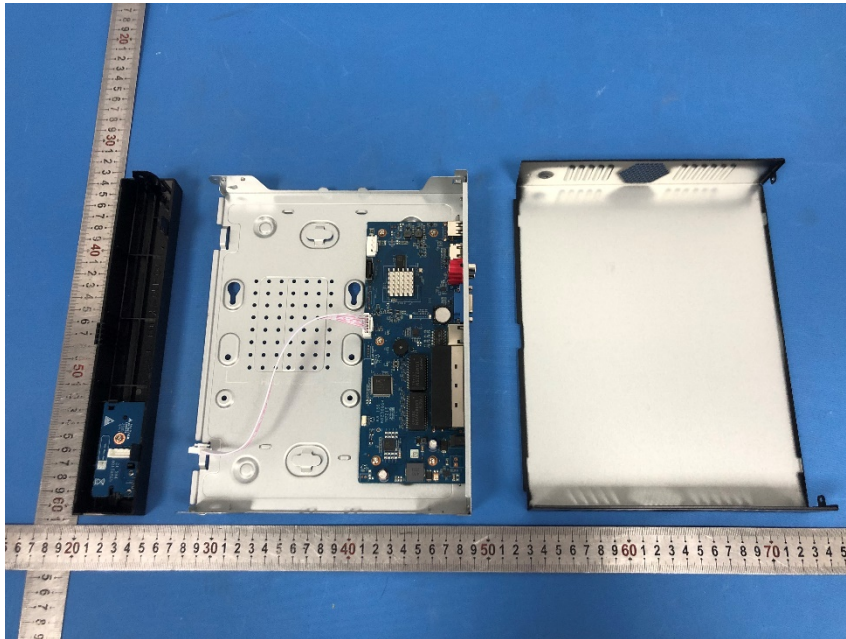
## Compliance Certification Services (Kunshan) Inc.

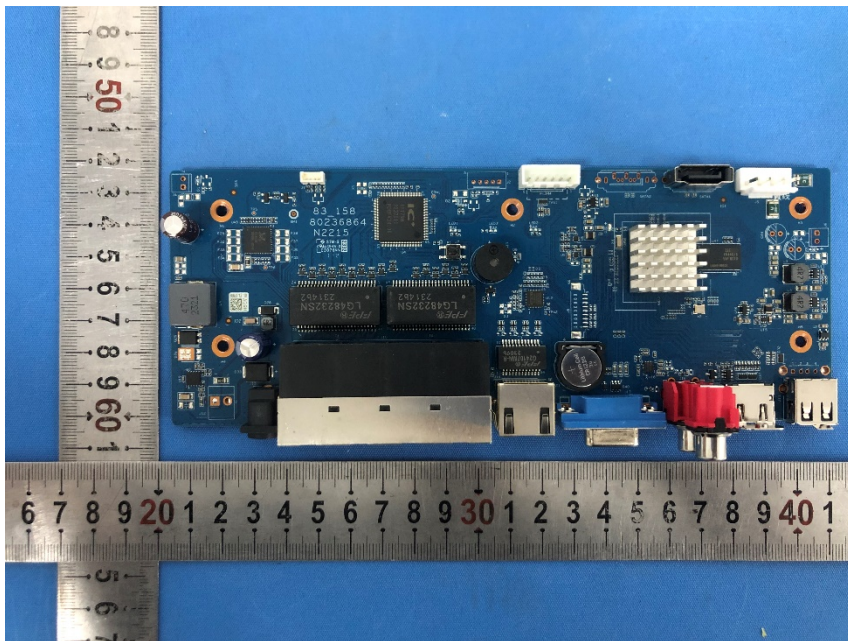
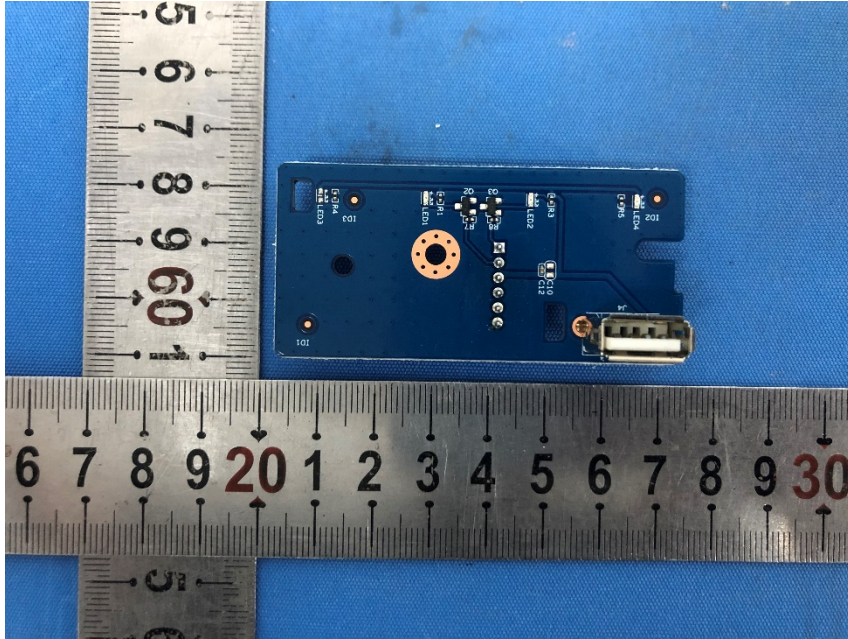
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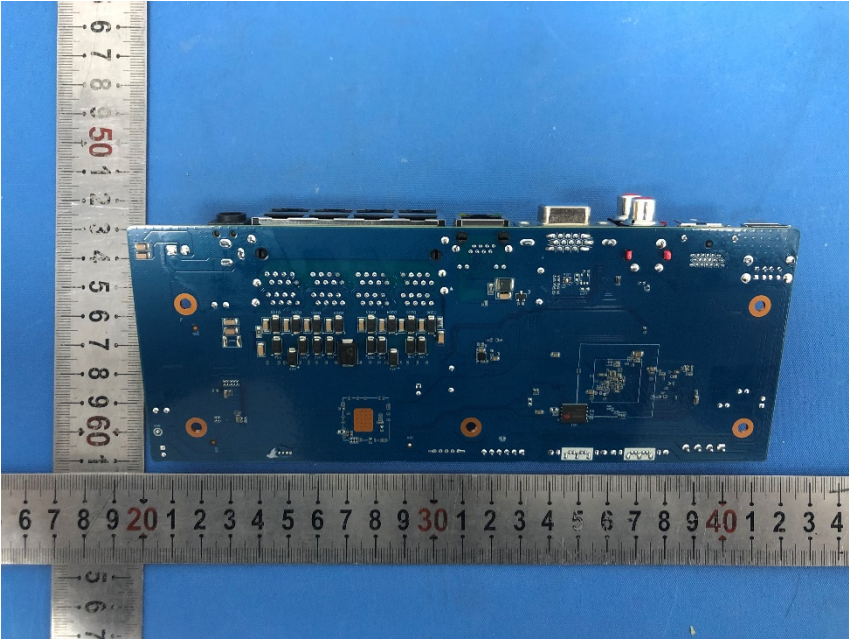


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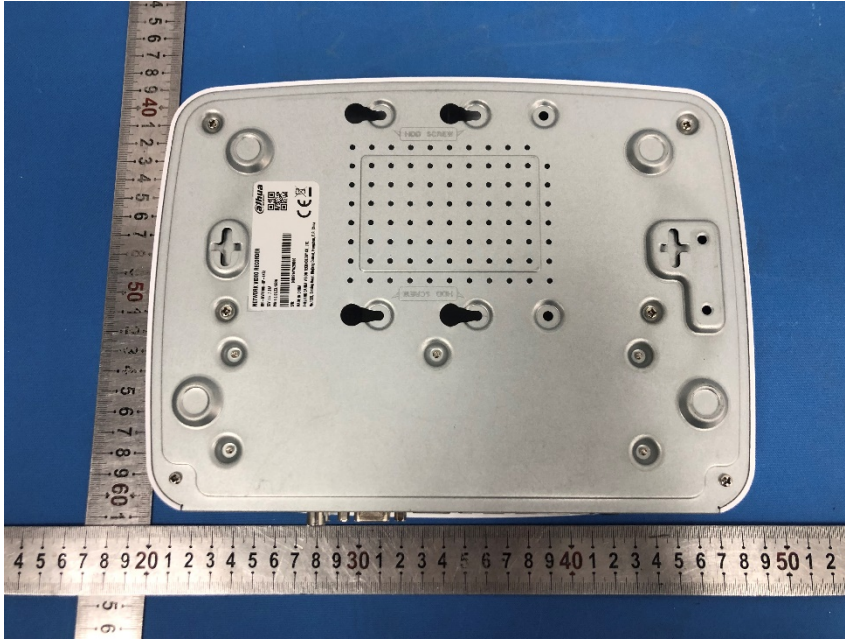


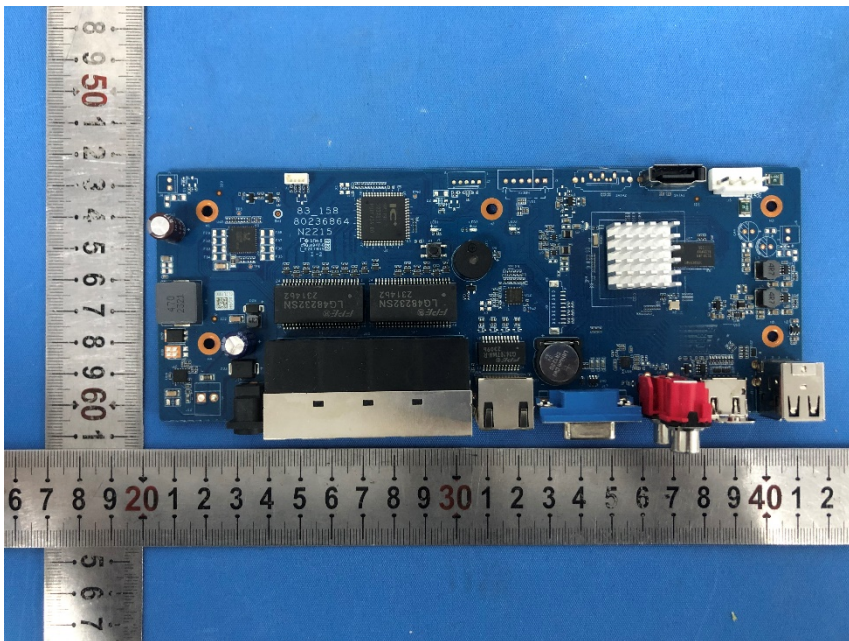
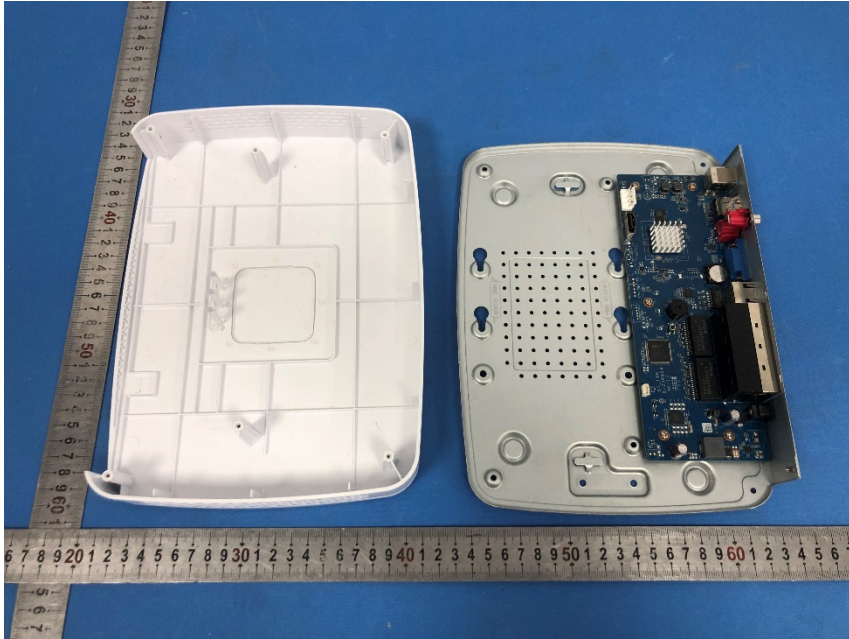
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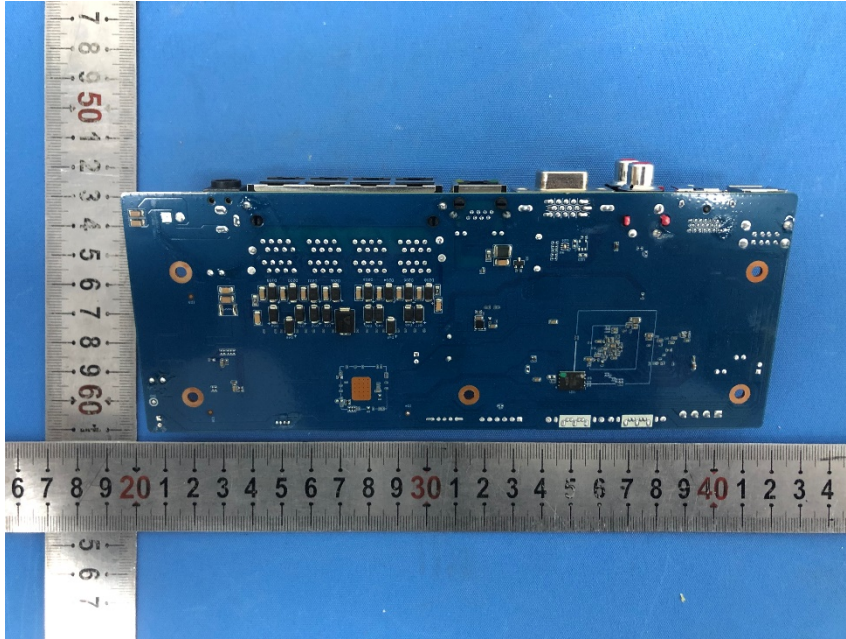
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- End of the Report -