

EMC Technical Construction File

Report No:CEEASY260614E

Date:1/4/2026

Applicant	Jinan HX Precision Machinery CO.,LTD
Address	F30, 20th Floor, Block A, Jinyu Vanke Center, No. 975 Caoshanling South Road, Shunhua Road Subdistrict, Jinan Area, China (Shandong) Pilot Free Trade Zone
Manufacturer	Jinan HX Precision Machinery CO.,LTD
Address	F30, 20th Floor, Block A, Jinyu Vanke Center, No. 975 Caoshanling South Road, Shunhua Road Subdistrict, Jinan Area, China (Shandong) Pilot Free Trade Zone

Equipment Under Test (EUT):

Sample Name	Intelligent construction robot
Model No.	HX33-W
Trademark	
Additional model	HX45-W, HX60-W, HX-P, HX-P2, HX-G, HX-G2, HX-W, HX-W2, HX-A, HX-A2,HX-S, HX-S2, HX-T, HX-T2, HX-T3, HX-C, HX-C2, HXG-1, HXG-2, HXL-100, HXL-200, HXL-300, HXL-500
Date of Receipt	1/4/2026
Date of Test	1/4/2026
Standard(s) :	EN IEC 61000-3-2:2019+A1:2021 EN 61000-3-3:2013+A1:2019+A2:2021
Test Result	PASS
Date of Issue	1/4/2026

Approved by:

Reviewed by:

Tested by:

EMC Technical Construction File

chments (including a total number of pages in each attachment): --	
Summary of testing:	
Tests performed (name of test and test clause): The submitted samples were tested and found to comply with the requirements of: European group difference and national differences	
Summary of compliance with National Differences: ☒ The product fulfils the requirements of EN IEC 55014-1:2021 EN IEC 61000-3-2:2019+A1:2021 EN 61000-3-3:2013+A1:2019+A2:2021 EN IEC 55014-2:2021	
Copy of marking plate Intelligent construction robot Model: HX33-W 220-240V, 193W    Jinan HX Precision Machinery CO.,LTD Note: <i>As declared by the applicant the authorized EEA representative or importer was not decided at the time of application, but will be marked on the products before placing them on the market.</i> <i>Note: According to when placing the products on the market the authorized representative / importer within the European Economic Area (EEA) must be marked on the product if the manufacturer is not located within the EEA. Marking on the packaging is only acceptable if it is not possible to place such markings on the product.</i>	

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1 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Mains Power Port (150kHz-30MHz)	EN IEC 55014-1:2021	EN IEC 55014-1:2021	--	Pass
Radiated Emissions	EN IEC 55014-1:2021	EN IEC 55014-1:2021	Class B	Pass
Discontinuous Interference	EN IEC 55014-1:2021	EN IEC 55014-1:2021	CISPR 15-1	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 of EN 61000-3-3	Pass

Immunity Part				
Item	Standard	Method	Requirement	Result
Electrostatic Discharge	EN IEC 55014-2:2021	EN 61000-4-2:2009	2,4kV Contact Discharge, 2,4,8kV Air Discharge	Pass
Continuos RF Eletromagnetic field Disturbance	EN IEC 55014-2:2021	EN 61000-4-3:2006 +A1:2007+A2:2010	80%, 1kHz, AM Mod 3V/m,0.08~ 1GHz 3V/m,1.4~2.0GHz 1V/m,2.0~2.7GHz	Pass
Electrical Fast Transients Burst at AC Mains Power Port	EN IEC 55014-2:2021	EN 61000-4-4:2012	1kV, 5/50ns Tr/Td, 5kHz Repetition Frequency	Pass
Surge at AC Mains Power Port	EN IEC 55014-2:2021	EN 61000-4-5:2014 +A1:2017	1.2/50µs Tr/Td, 1kV Line to Line, 2kV Line to Ground	Pass
Conducted Immunity at AC Mains Power Port (150kHz-80MHz)	EN IEC 55014-2:2021	EN 61000-4-6:2014	3Vrms (emf),80%, 1kHz Amp. Mod.	Pass
Voltage Dips and Interruptions	EN IEC 55014-2:2021	EN 61000-4-11:2004 +A1:2017	For 50Hz: 0 % UT for 0.5cycle, 0 % UT for 1.0cycles, 70 % UT for 25cycles 0 % UT for 250cycles,	Pass

Note: (1)= Continuous working product. (2)=Refer to section 5.4.

EMC Technical Construction File

2 Contents

	Page
1 Cover Page.....	1
1 Test Summary	3
2 Contents	4
3 General Information	6
3.1 Details of E.U.T	6
3.2 Description of Support Units	6
3.3 Measurement Uncertainty	6
3.4 Test Location	6
3.5 Test Facility	6
3.6 Deviation from Standards	6
3.7 Abnormalities from Standard Conditions	6
3.8 EMS Monitor	6
4 Equipment List	7
5 Emission Test Results	8
5.1 Conducted Emissions at AC Mains Power Port (150kHz-30MHz)	8
5.1.1 E.U.T. Operation	8
5.1.2 Test Mode Description	8
5.1.3 Test Setup Diagram	8
5.1.4 Measurement Procedure and Data	8
5.2 Disturbance POWER test	11
5.2.1 E.U.T. Operation	11
5.2.2 Test Mode Description	11
5.2.3 Test Setup Diagram	11
5.2.4 Measurement Procedure and Data	11
5.3 Radiated Emissions	14
5.3.1 E.U.T. Operation	14
5.3.2 Test Mode Description	14
5.3.3 Test Setup Diagram	14
5.3.4 Measurement Procedure and Data	14
5.4 Voltage Fluctuations and Flicker	15
5.4.1 E.U.T. Operation	15
5.4.2 Test Mode Description	15
5.4.3 Test Setup Diagram	15
5.4.4 Measurement Procedure and Data	16
5.5 Harmonic Current Emission	17
5.5.1 E.U.T. Operation	17
5.5.2 Test Setup Diagram	17
5.5.3 Measurement Data	18
6 Immunity Test Results	19
6.1 Electrostatic Discharge	20
6.1.1 Test Setup Diagram	20
6.1.2 E.U.T. Operation	20
6.1.3 Test Mode Description	20

EMC Technical Construction File

6.1.4 Test Condition and Results:	20
6.2 Continuous RF Electromagnetic field Disturbance	22
2.1.1 Test Setup Diagram	22
6.2.1 E.U.T. Operation	22
6.2.2 Test Mode Description	22
6.2.3 Test Condition and Results:	22
6.3 Electrical Fast Transients Burst at AC Mains Power Port	23
6.3.1 Test Setup Diagram	23
6.3.2 E.U.T. Operation	23
6.3.3 Test Mode Description	23
6.3.4 Test Condition and Results:	23
6.4 Surge at AC Mains Power Port	24
6.4.1 Test Setup Diagram	24
6.4.2 E.U.T. Operation	24
6.4.3 Test Mode Description	24
6.4.4 Test Condition and Results:	24
6.5 Conducted Immunity at AC Mains Power Port (150kHz-80MHz)	25
2.1.2 Test Setup Diagram	25
6.5.1 E.U.T. Operation	25
6.5.2 Test Mode Description	25
6.5.3 Test Condition and Results:	25
6.6 Voltage Dips and Interruptions	26
6.6.1 Test Setup Diagram	26
6.6.2 E.U.T. Operation	26
6.6.3 Test Mode Description	26
6.6.4 Test Condition and Results:	26
7 EUT Constructional Details (EUTPhotos)	27

EMC Technical Construction File

3 General Information

3.1 Details of E.U.T.

Power supply:	220-240V
Test Voltage:	240V
Cable(s):	

3.2 Description of Support Units

3.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Mains Power Port (150kHz-30MHz)	3.12dB
Radiated Emissions(30MHz-1000MHz)	3.66dB
Remark: The U_{lab} (lab Uncertainty) is less than U_{cisp} (CISPR Uncertainty), so the test results – 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.	

3.4 Test Location

Hangzhou Simon Purification Technology Co., Ltd.
Room 715, 7th Floor, No. 1, Yinhu Innovation Center, No. 9 Fuxian Road, Yinhu Street, Fuyang District, Hangzhou City, Zhejiang Province

3.5 Test Facility

The test facility is recognized, certified, or accredited.

3.6 Deviation from Standards

This report is based on the requirements of customers to carry the equipment in the manufacturer for on-site testing.

3.7 Abnormalities from Standard Conditions

The test equipment in the calibration period, but the test site has not been calibrated.

3.8 EMS Monitor

Visual: LCD Display
Audio: Buzzing
Other: N/A

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4 Equipment List

Test Equipment	Model	Manufacturer	Serial No.	Cal Date
EMC Laboratory				
Conduction& Radiated Test equipment				
EMI Test Receiver	ESPI	R&S	102086	2025.10.14
LISN	ENV216	R&S	101242	2025.10.14
LISN	3810/2NM	EMCO	000-23625	2025.10.14
Bi-log Antenna	CBL6111D	TESEQ	34678	2025.10.11
Pre-Amplifier (0. 1M-3GHz)	EM330	EM	060665	2025.10.11
RE Cable (9K-1G)	N/A	R01	N/A	2025.10.11
EMS Test equipment				
ESD				
ESD TEST GENERATOR	KES4021	KZKUSUI	LB003568	2026.06.27
EFT				
EFT/B Generator	HEFT 51	HTEC	143801	2025.10.14
Surge				
Surge Generator	HCWG71	HTEC	143804	2025.10.11
Conducted RF immunity				
CS	CDG-6000-25	SCHLODER	126A1280/2014	2025.10.14
Attenuator	ATT-6DB-100	Nemtest	A100W224	2025.10.11
CDN	CDN-M2+3	Frankonia	A2210275/2014	2025.10.14
Coupling clamp	----	KEMZ801	-----	2025.10.14
Voltage dips, short interruptions and voltage variations immunity				
VOLTAGE DIPS & INTERRUPTIONS Generator	HPFS 161P	HTEC	143803	2025.10.11
Harmonics & Flicker				
Harmonic Voltage & Flicker	PACS-1	California Instruments	72812	2025.10.14
AC Power Source	5000ix	California Instruments	59862	2025.10.11

Radiated Immunity				
No.	Test Item	Equipment	Model No.	Cal due date
1	Power Meter	Agilent	E4419B	2025.10.11
2	Power Sensor	Hp	E9300A	2025.10.11
3	Power Sensor	Hp	E9300A	2025.10.11
4	Signal Generator	Agilent	N5181A	2025.10.11
5	Power Amplifier	MICOTOP	MPA-80-1000-250	2025.10.11
6	Power Amplifier	MICOTOP	MPA-1000-6000-100	2025.10.11
7	RS Test Antenna (0.08-1GHz)	SCHWARZBECK	VULP 9118E	N/A
8	RS Test Antenna (1-10GHz)	SCHWARZBECK	STLP 9149	N/A
9	Temperature & Humidity	Mieo	HH660	2025.10.11

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5 Emission Test Results

5.1 Conducted Emissions at AC Mains Power Port (150kHz-30MHz)	
Test Requirement:	EN 61000-3-3:2013
Test Method:	EN IEC 55014-1:2021

Limit:
0.15 M-0.5 MHz 66dB(μV)-56dB(μV) quasi-peak, 59dB(μV)-46dB(μV) average
0.5M-5MHz 56dB(μV) quasi-peak, 46dB(μV) average
5M-30MHz 60dB(μV) quasi-peak, 50dB(μV) average
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15 M to 30MHz

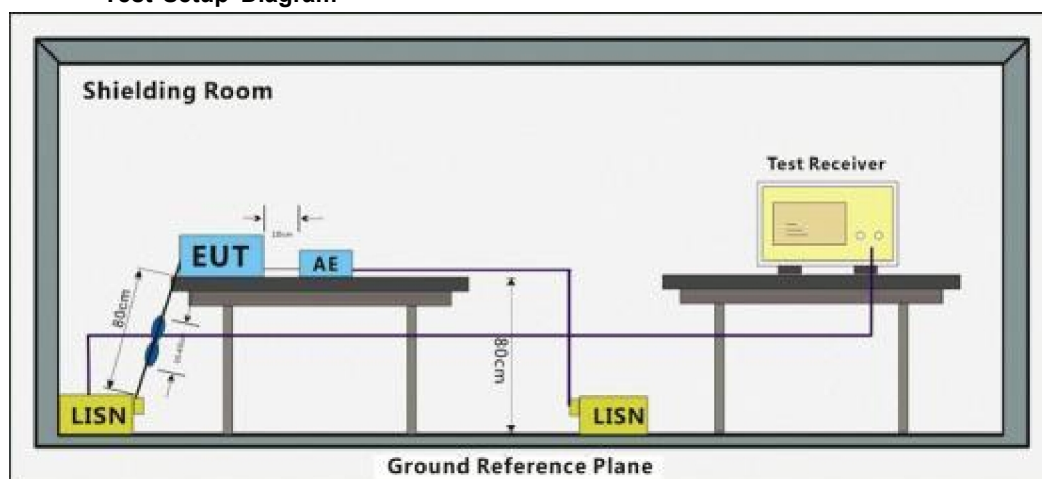
5.1.1 E.U.T. Operation

Operating Environment:
Temperature: 22.1 °C Humidity: 52 % RH Atmospheric Pressure: 1010 mbar

5.1.2 Test Mode Description

Test Mode:

5.1.3 Test Setup Diagram



5.1.4 Measurement Procedure and Data

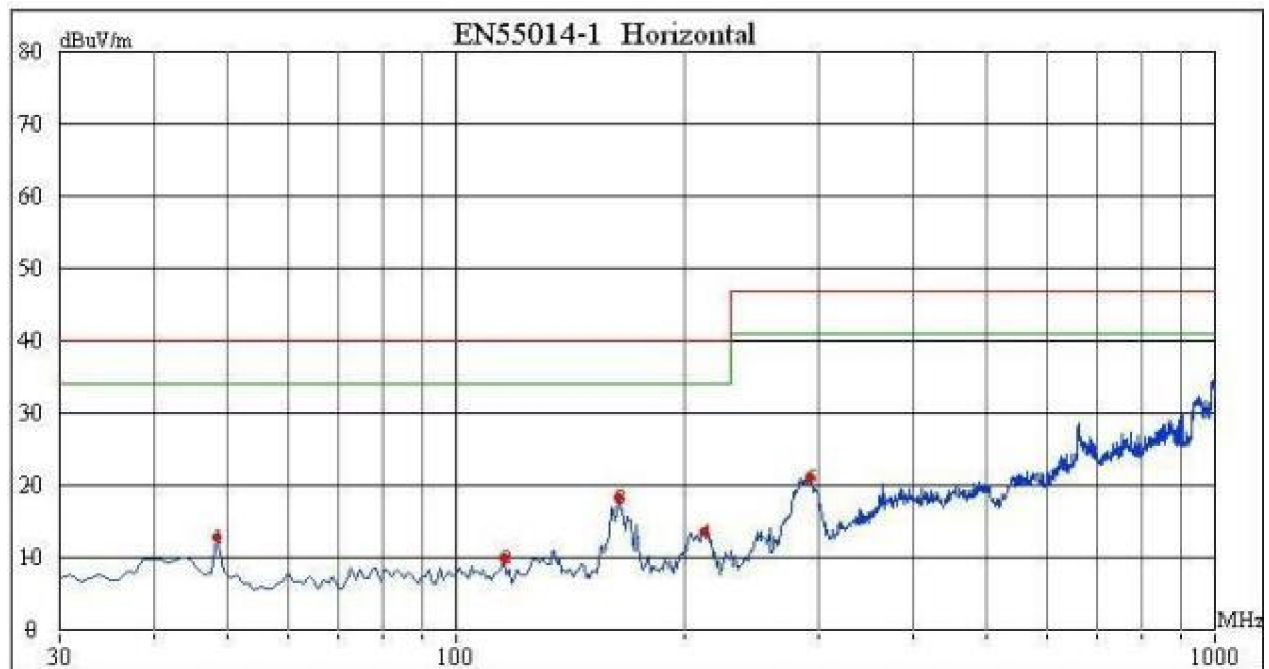
Frequency Range: 150 kHz to 30 MHz

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.

Measured Level = Read level + Cable Loss + LISN Factor

EMC Technical Construction File

EUT:	fresh air system	Model No.:	K400CZ1
Temperature:	24.2 °C	Relative Humidity:	55%
Test Power:	240V	Test Result:	Pass
Test Mode:	ON		



	Freq	Level	Margin	Limit	Reading	Correct	Remark
	MHz	dBu/m	dB	(dBuA/m)	(dBuA/m)	Factor(dB)	
1	48.4300	12.92	-27.03	40.00	2.30	10.60	
2	115.3600	10.07	-29.93	40.00	-2.50	12.58	
3	163.8600	18.32	-21.69	40.00	4.76	13.50	
4	212.3600	13.53	-26.47	40.00	0.35	13.18	
5	291.9000	21.12	-25.81	47.00	1.62	19.50	

Note: Measurement Level = Reading Level + Correct Factor

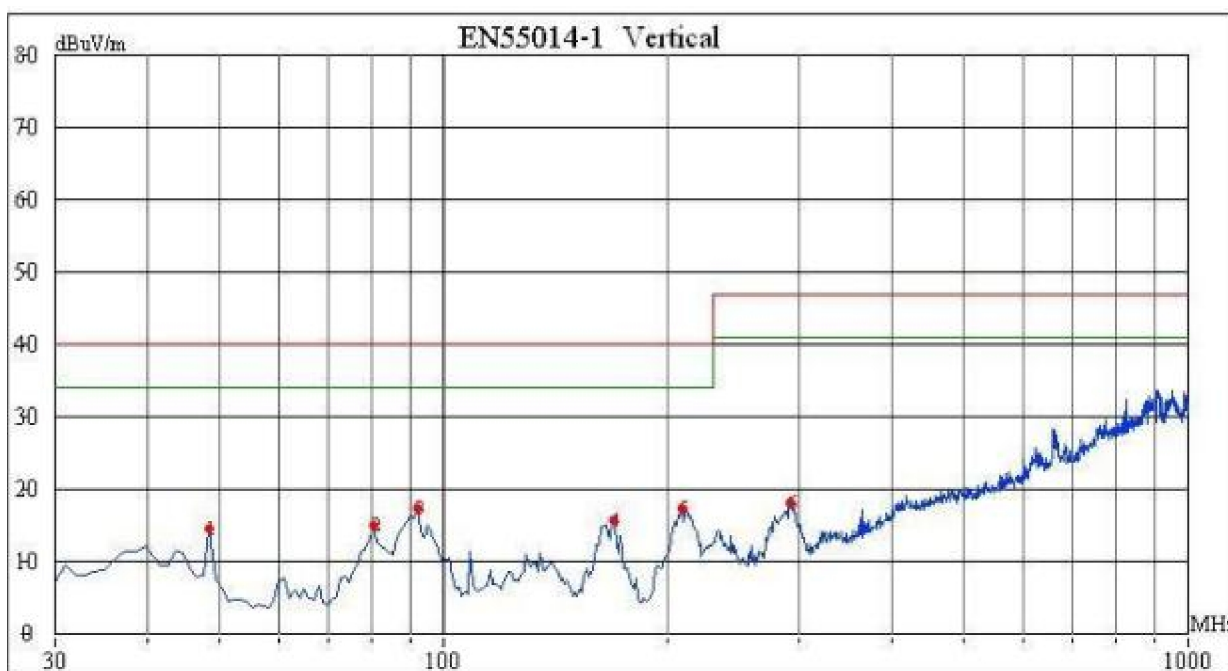
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Neutral Line



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EUT:	Intelligent construction robot	Model No.:	COS-100
Temperature:	24.2 °C	Relative Humidity:	55%
Test Power:	240V	Test Result:	Pass
Test Mode:	ON		



	Freq	Level	Margin	Limit	Reading	Correct	Remark
	MHz	dBu/m	dB	(dBuA/m)	(dBuA/m)	Factor(dB)	
1	48.4300	14.62	-25.37	40.00	4.94	9.69	
2	80.4400	14.94	-25.01	40.00	-0.98	15.95	
3	92.0800	17.42	-22.55	40.00	-0.87	18.32	
4	168.7100	15.72	-24.28	40.00	3.16	12.56	
5	208.4800	17.30	-22.71	40.00	0.97	16.35	
6	292.8700	18.10	-28.84	47.00	3.12	14.92	

Note: Measurement Level = Reading Level + Correct Factor

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5.2 Disturbance POWER test

Test Requirement: EN 61000-3-3:2013

Test Method: EN 61000-3-3:2013

Limit:

30 ~ 300 45 Increasing Linearly with Frequency to 55 (Q.P.)

35 Increasing Linearly with Frequency to 45 (A.V.)

5.2.1 E.U.T. Operation

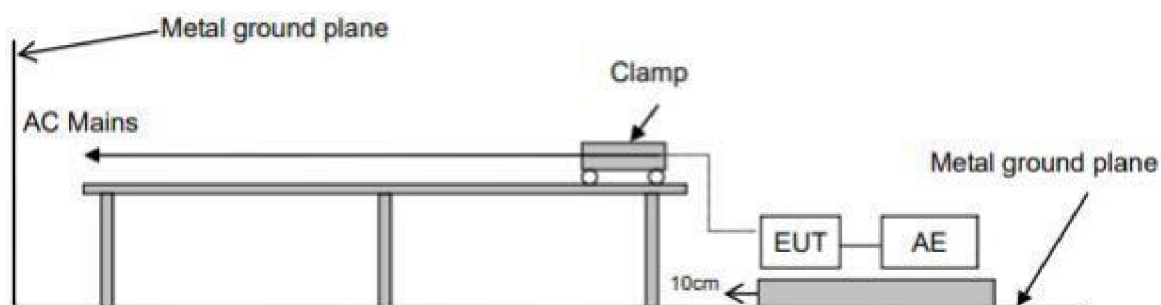
Operating Environment:

Temperature: 24 °C Humidity: 54 % RH Atmospheric Pressure: 1010 mbar

5.2.2 Test Mode Description

Test Mode:

5.2.3 Test Setup Diagram



5.2.4 Measurement Procedure and Data

The EUT is placed on the ground and away from other metallic surface at least 0.4 m . It is connected to the power mains through an extension cord of 6m min . The absorber clamp clamps the cord and moves from the far end to the EUT to measure the disturbing energy emitted from the cord.

The bandwidth of the test receiver is set at 120 kHz.

All the test results are listed in Section 6.6 .

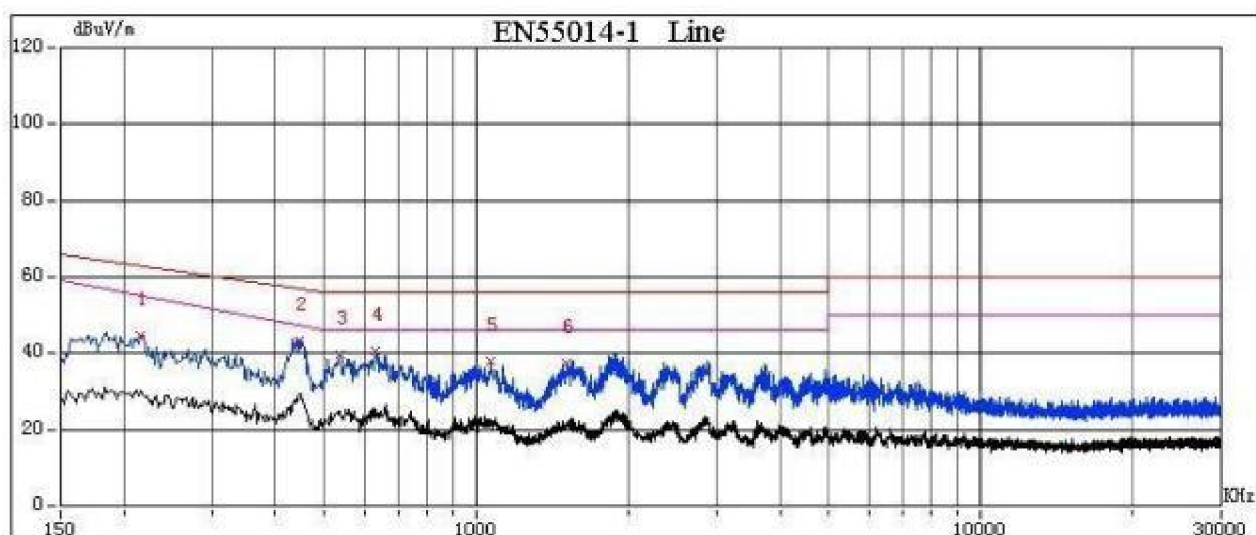
The frequency spectrum from 30 MHz to 300 MHz is investigated.

As the peak value is too low against the limit, so the quasi-peak value and average value have omitted. All the scanning waveforms are attached in **Appendix II**

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Polarization: Horizontal

EUT:	Intelligent construction robot	Model No.:	K400CZ1
Temperature:	24.2 °C	Relative Humidity:	55%
Test Power:	240V	Test Result:	Pass
Test Mode:	ON		



No.	Freq (KHz)	Peak Amptd (dBuV)	QP Amptd (dBuV)	Avg Amptd (dBuV)	QP Limit (dBuV)	Avg Limit (dBuV)	QP Mrgi (dB)	Avg Margin (dB)	Futon (dB)
1	216.600	44.62	---	---	64.10	56.53	-19.44	-11.87	11.57
2	447.850	43.33	---	---	57.49	47.91	-14.16	-4.68	11.38
3	538.500	39.59	---	---	56.00	46.00	-16.41	-6.41	11.89
4	631.000	40.61	---	---	56.00	46.00	-15.40	-5.40	12.33
5	1065.750	37.83	---	---	56.00	46.00	-18.17	-8.17	12.18
6	1507.900	37.61	---	---	56.00	46.00	-18.40	-8.40	12.40

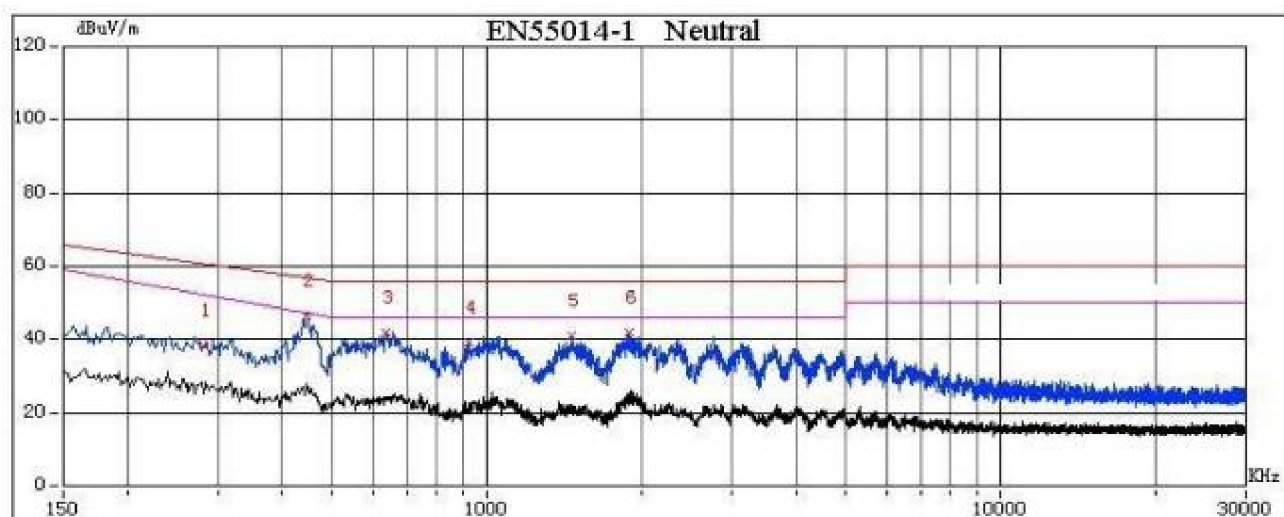
Note: '*' means the disturbance power level 20 dB lower than the relevant limit.

QP Level = QP Reading + Cable Loss

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Polarization: Vertical

EUT:	Intelligent construction robot	Model No.:	COS-100
Temperature:	24.2 °C	Relative Humidity:	55%
Test Power:	240V	Test Result:	Pass
Test Mode:	ON		



No	Freq(KHz)	Peak Amptd(dE uV)	QP Amptd(dEu V)	vg Amptd(dEu V)	QP Limt(dEu V)	Avg Lim+(dBu V)	QP Margin(d B)	Avg rzh(dE)	Fastan(dE)
1	281.350	38.28	---	---	62.25	54.15	-23.96	-15.83	12.20
2	446.000	46.68	---	---	57.54	48.01	-10.86	-1.35	11.54
3	634.700	42.04	---	---	56.00	46.00	-13.96	-3.96	12.33
4	919.600	39.48	---	---	56.00	46.0	-16.60	-6.60	12.22
5	1461.650	41.02	---	---	56.00	46.0	-14.98	-4.98	12.34

Note: Measurement Level = Reading Level + Correct Factor

EMC Technical Construction File

5.3 Radiated Emissions

Test Requirement: EN IEC 55014-1:2021

Test Method: EN IEC 55014-1:2021

Limit:

30MHz- 230MHz: 40dBuV/m quasi-peak

230MHz- 1000MHz: 47dBuV/m quasi-peak

Detector: Peak for pre-scan (120 kHz resolution bandwidth) 30MHz to 1000MHz

5.3.1 E.U.T. Operation

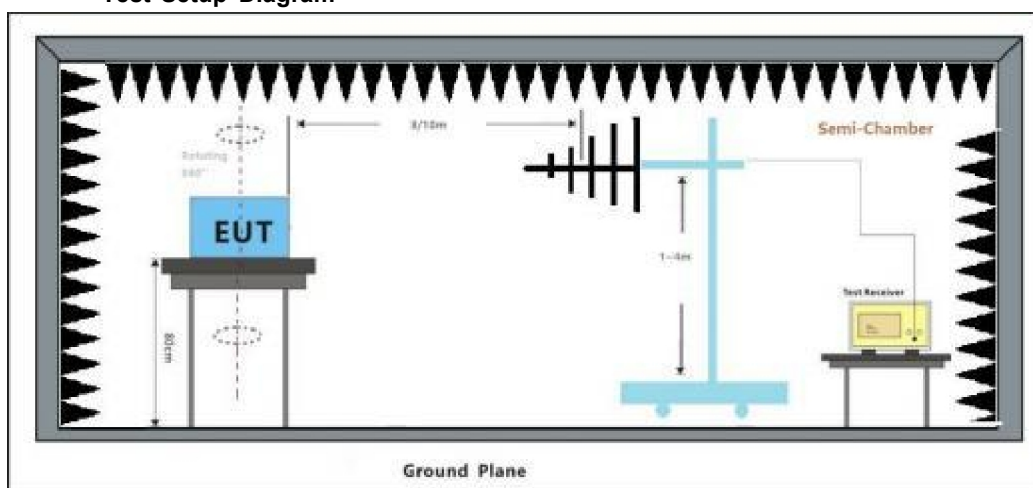
Operating Environment:

Temperature: 22.0 °C Humidity: 52 % RH Atmospheric Pressure: 1010 mbar

5.3.2 Test Mode Description

Test Mode:

5.3.3 Test Setup Diagram



5.3.4 Measurement Procedure and Data

Frequency Range: 30MHz to 1000MHz

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

Measured Level = Read level + Cable Loss + Ant Factor- Pre-amp

EMC Technical Construction File

Note: Measurement Level = Reading Level + Correct Factor

5.4 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

5.4.1 E.U.T. Operation

Operating Environment:

Temperature: 25.6 °C

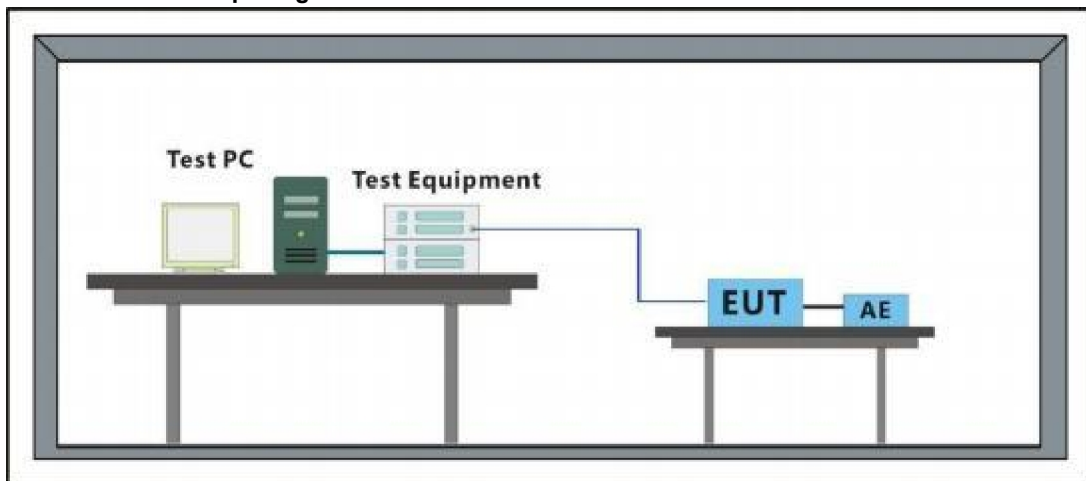
Humidity: 65.6 % RH

Atmospheric Pressure: 1010 mbar

5.4.2 Test Mode Description

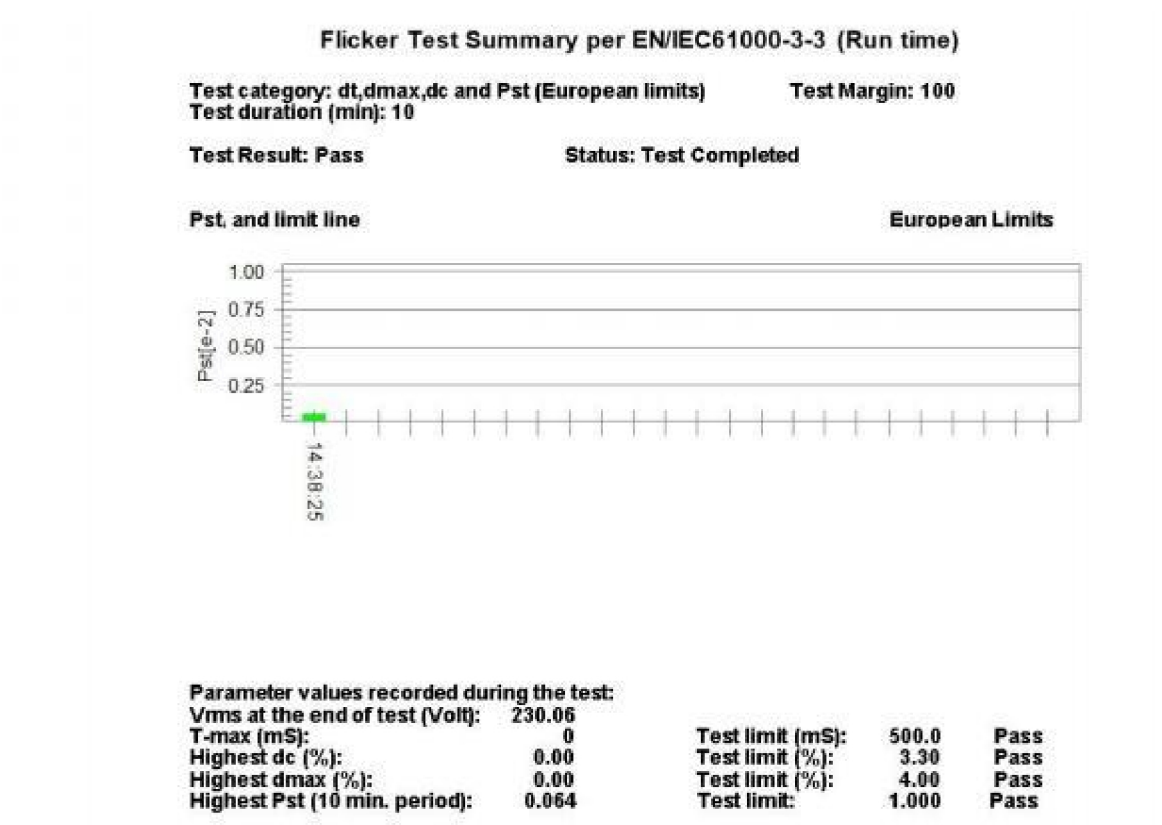
Test Mode: Normal working mode(Max Loading).

5.4.3 Test Setup Diagram



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5.4.4 Measurement Procedure and Data



EMC Technical Construction File

5.5 Harmonic Current Emission

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

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

Frequency Range: 100Hz to 2kHz

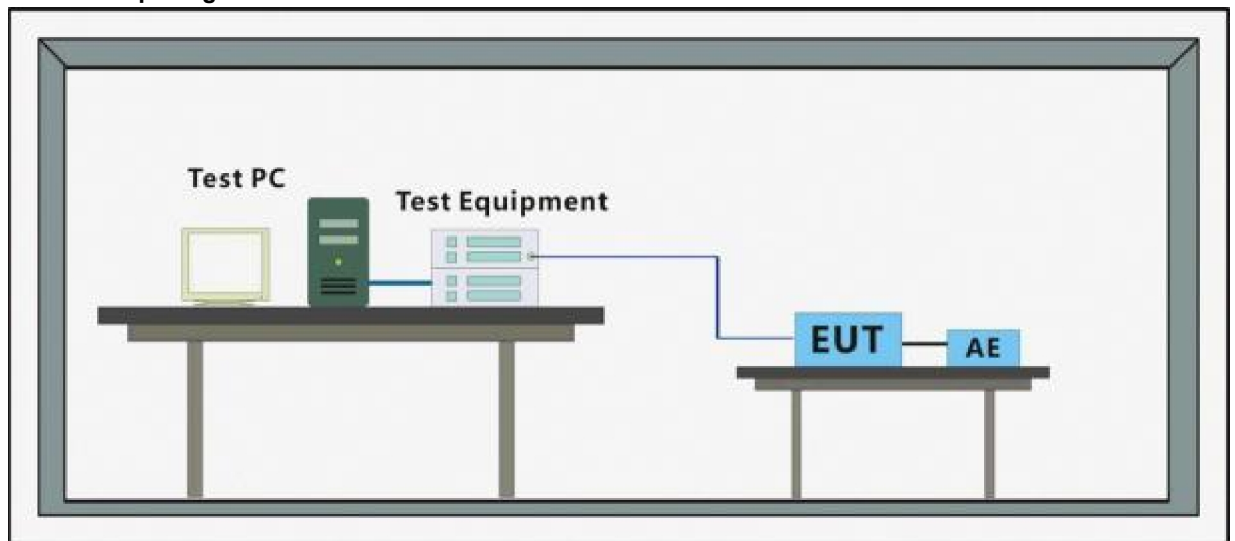
5.5.1 E.U.T. Operation

Operating Environment:

Temperature: / °C Humidity: / % RH Atmospheric Pressure: / mbar

Test Mode: Normal working mode(Max Loading).

5.5.2 Test Setup Diagram



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5.5.3 Measurement Data

Ha	Entire measurement (0.320 s = 1 time window(s))						Worst 2.5 min		Average		PASS	FAIL
	Maximum	Window	EN6 10 00-3-2 Class D 50W	Margin in Max Win	100 to 150 %	Ex-ceeded	100 to 150 %	Ex-ceeded	Value	Ex-ceeded		
DC	0.0012 A	1	--	--	0	0	n.e.	n.e.	-0.0012 A	0	X	
1	0.2989 A	1	--	--	0	0	n.e.	n.e.	0.2989 A	0	X	
2	0.0002 A	1	--	--	0	0	n.e.	n.e.	0.0002 A	0	X	
3	0.0418 A	1	0.2239 A	81.3 %	0	0	n.e.	n.e.	0.0418 A	0	X	
4	0.0001 A	1	--	--	0	0	n.e.	n.e.	0.0001 A	0	X	
5	0.0263 A	1	0.1251 A	78.9 %	0	0	n.e.	n.e.	0.0263 A	0	X	
6	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
7	0.0141 A	1	0.0658 A	78.6 %	0	0	n.e.	n.e.	0.0141 A	0	X	
8	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
9	0.0051 A	1	0.0329 A	84.4 %	0	0	n.e.	n.e.	0.0051 A	0	X	
10	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
11	0.0007 A	1	0.0230 A	97.1 %	0	0	n.e.	n.e.	0.0007 A	0	X	
12	0.0001 A	1	--	--	0	0	n.e.	n.e.	0.0001 A	0	X	
13	0.0029 A	1	0.0195 A	85.1 %	0	0	n.e.	n.e.	0.0029 A	0	X	
14	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
15	0.0033 A	1	0.0169 A	80.3 %	0	0	n.e.	n.e.	0.0033 A	0	X	
16	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
17	0.0039 A	1	0.0149 A	73.9 %	0	0	n.e.	n.e.	0.0039 A	0	X	
18	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
19	0.0018 A	1	0.0133 A	86.9 %	0	0	n.e.	n.e.	0.0018 A	0	X	
20	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
21	0.0016 A	1	0.0121 A	86.7 %	0	0	n.e.	n.e.	0.0016 A	0	X	
22	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
23	0.0015 A	1	0.0110 A	86.4 %	0	0	n.e.	n.e.	0.0015 A	0	X	
24	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
25	0.0023 A	1	0.0101 A	77.5 %	0	0	n.e.	n.e.	0.0023 A	0	X	
26	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
27	0.0019 A	1	0.0094 A	80.0 %	0	0	n.e.	n.e.	0.0019 A	0	X	
28	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
29	0.0017 A	1	0.0087 A	80.2 %	0	0	n.e.	n.e.	0.0017 A	0	X	
30	0.0001 A	1	--	--	0	0	n.e.	n.e.	0.0001 A	0	X	
31	0.0009 A	1	0.0082 A	88.5 %	0	0	n.e.	n.e.	0.0009 A	0	X	
32	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
33	0.0015 A	1	0.0077 A	80.3 %	0	0	n.e.	n.e.	0.0015 A	0	X	
34	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	
35	0.0014 A	1	0.0072 A	80.3 %	0	0	n.e.	n.e.	0.0014 A	0	X	
36	0.0001 A	1	--	--	0	0	n.e.	n.e.	0.0001 A	0	X	
37	0.0013 A	1	0.0069 A	80.6 %	0	0	n.e.	n.e.	0.0013 A	0	X	
38	0.0001 A	1	--	--	0	0	n.e.	n.e.	0.0001 A	0	X	
39	0.0010 A	1	0.0065 A	84.3 %	0	0	n.e.	n.e.	0.0010 A	0	X	
40	0.0000 A	1	--	--	0	0	n.e.	n.e.	0.0000 A	0	X	

Note: The actual power is less than 75W .

EMC Technical Construction File

6 Immunity Test Results

Performance Criteria Description

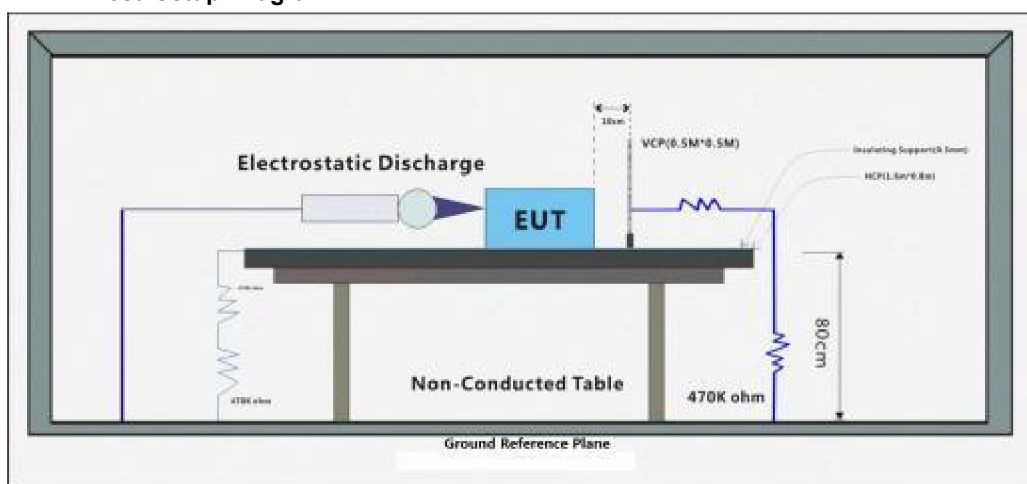
- Criterion A:** The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance 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 from what the user may reasonably expect from the apparatus if used as intended.
- Criterion B:** The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.
- Criterion C:** Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

EMC Technical Construction File

6.1 Electrostatic Discharge

Test Requirement:	EN IEC 55014-2:2021
Test Method:	EN 61000-4-2:2009

6.1.1 Test Setup Diagram



6.1.2 E.U.T. Operation

Operating Environment:

Temperature: 25.6 °C

Humidity: 55.9 % RH

Atmospheric Pressure: 1010 mbar

6.1.3 Test Mode Description

Test Mode: Normal working mode(Max Loading).

6.1.4 Test Condition and Results:

Performance Criterion: B

Discharge Impedance: 330 Ω / 150 pF

Discharge Voltage: Air Discharge: 8 kV; Contact Discharge: 4 kV; VCP/HCP: 4 kV.

Polarity: Positive & Negative

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.

EMC Technical Construction File

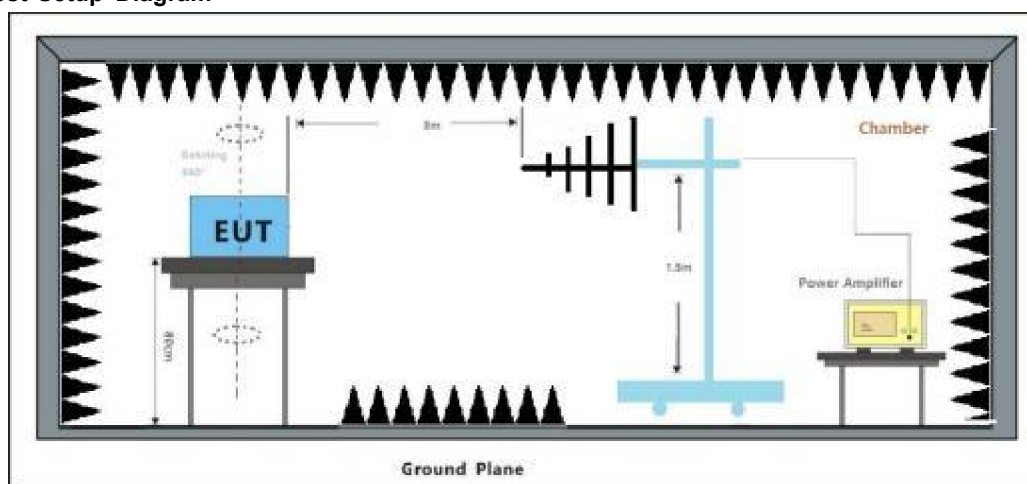
Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	8	+	1	A
Air Discharge	8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A
A: No degradation in the performance of the EUT was observed				
N/A: Not applicable				

EMC Technical Construction File

6.2 Continuos RF Eletromagnetic field Disturbance

Test Requirement:	EN IEC 55014-2:2021
Test Method:	EN IEC 61000-4-3:2020

2.1.1 Test Setup Diagram



6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23.7 oC

Humidity: 68.3 % RH

Atmospheric Pressure: 1010 mbar

6.2.2 Test Mode Description

Test Mode: Normal working mode(Max Loading).

6.2.3 Test Condition and Results:

Performance Criterion: A

Step Size: 1%

Frequency Range: 80 MHz to 2700MHz

Modulation: 80% , 1 kHz Amplitude Modulation

80~2000MHz

Surface	Level (V/m)	Polarization	Dwell time	Result / Observations
AC power port	3	H&V	1s	A
AC power port	3	H&V	1s	A
AC power port	3	H&V	1s	A
AC power port	3	H&V	1s	A

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

2.0~2.7GHz

Surface	Level (V/m)	Polarization	Dwell time	Result / Observations
AC power port	1	H&V	1s	A
AC power port	1	H&V	1s	A
AC power port	1	H&V	1s	A
AC power port	1	H&V	1s	A

EMC Technical Construction File

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

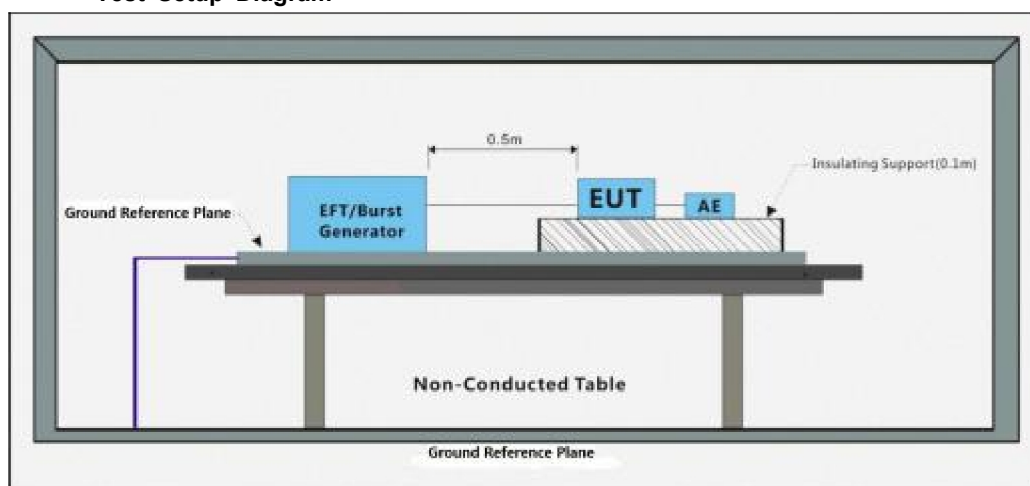


EMC Technical Construction File

6.3 Electrical Fast Transients Burst at AC Mains Power Port

Test Requirement:	EN IEC 55014-2:2021
Test Method:	EN 61000-4-4:2012

6.3.1 Test Setup Diagram



6.3.2 E.U.T. Operation

Operating Environment:

Temperature: 23.8 °C

Humidity: 67.5 % RH

Atmospheric Pressure: 1010 mbar

6.3.3 Test Mode Description

Test Mode: Normal working mode(Max Loading).

6.3.4 Test Condition and Results:

Performance Criterion: B

Repetition Frequency: 5kHz

Burst Period: 300ms

Test Duration: 2 minute per level & polarity

Test Level: 1.0 kV

Polarity: Positive & Negative

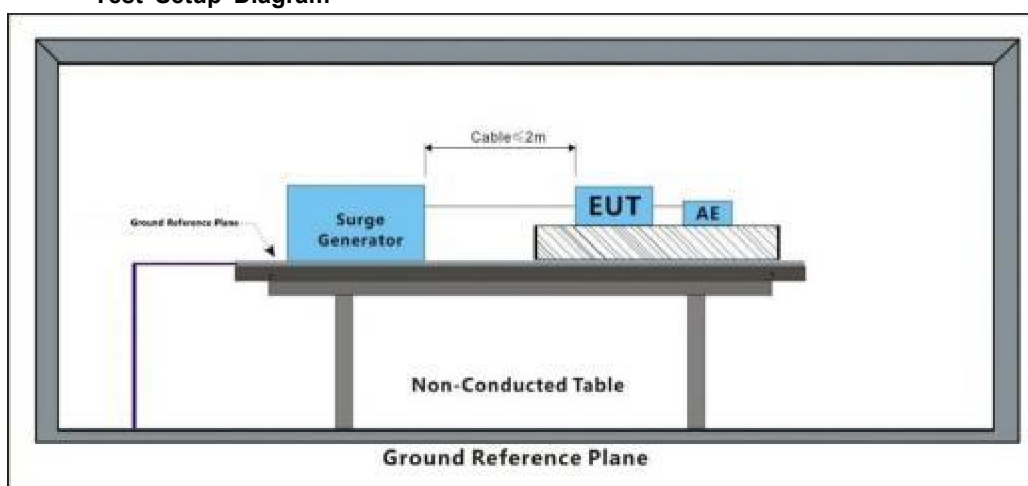
Test Line	Level (kV)	Polarity	CDN/Clamp	Result / Observations
AC power port	1	+	CDN	A
AC power port	1	-	CDN	A
A: No degradation in the performance of the EUT was observed				

EMC Technical Construction File

6.4 Surge at AC Mains Power Port

Test Requirement:	EN IEC 55014-2:2021
Test Method:	EN 61000-4-5:2014+A1:2017

6.4.1 Test Setup Diagram



6.4.2 E.U.T. Operation

Operating Environment:

Temperature: 23.7 °C

Humidity: 68.4 % RH

Atmospheric Pressure: 1010 mbar

6.4.3 Test Mode Description

Test Mode: Normal working mode(Max Loading).

6.4.4 Test Condition and Results:

Performance Criterion: B

Interval: 60s between each surge

Test Level: ±1kV Live to Neutral; ±2kV Live, Neutral to Earth

Polarity: Positive & Negative

Generator source impedance: 2Ω

Trigger Mode: Internal

No. of surges: 5 positive at 90°, 5 negative at 270°.

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

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

Cable Port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
AC power port	3	CDN	2s	A

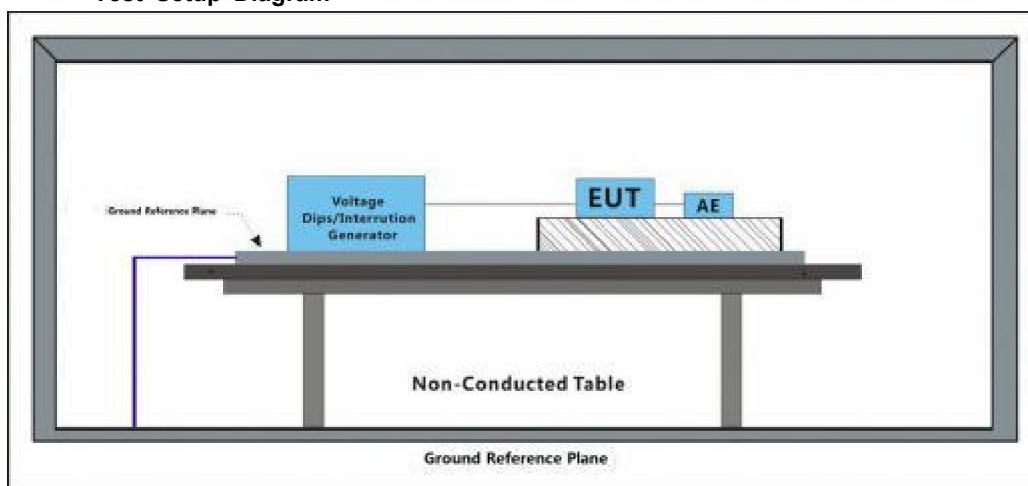
A: No degradation in the performance of the EUT was observed

EMC Technical Construction File

6.6 Voltage Dips and Interruptions

Test Requirement:	EN IEC 55014-2:2021
Test Method:	EN IEC 61000-4-11:2020

6.6.1 Test Setup Diagram



6.6.2 E.U.T. Operation

Operating Environment:

Temperature: 23.8 °C Humidity: 68.3 % RH Atmospheric Pressure: 1010 mbar

6.6.3 Test Mode Description

Test Mode: Normal working mode(Max Loading).

6.6.4 Test Condition and Results:

Performance Criterion:

For 50Hz: 0% of UT (Rated Voltage) for 0.5 Cycle: C; 40% of UT for 10 Cycles: C; 70% of UT for 25 Cycles: C.

No. of Dips / Interruptions: 3 per Level

Time between dropout: 10 s

Level % UT	Phase (deg)	Duration	No. of Dips / Interruptions	Result / Observations
0	0°	0.5 Cycle for 50Hz	3	A
0	180°	0.5 Cycle for 50Hz	3	A
40	0°	10 Cycles for 50Hz	3	A
40	180°	10 Cycles for 50Hz	3	A
70	0°	25 Cycles for 50Hz	3	A
70	180°	25 Cycles for 50Hz	3	A

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

EMC Technical Construction File

7 EUT Constructional Details (EUT Photos)



--End of the report--

