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TEST REPORT

Product Name : Energy Storage System

Model Number : NURA-6.5KW

Prepared for : Crown Micro FZCO
Address : Plot No. S60806, Jafza South, Jebel Ali Free Zone, Dubai,
United Arab Emirates

Prepared by : EMTEK (SHENZHEN) CO., LTD.
Address : Building 69, Majialong Industry Zone, Nanshan District,
Shenzhen, Guangdong, China

Tel: (0755) 26954280
Fax: (0755) 26954282

Report Number : ENS2503130245E00101R
Date(s) of Tests : March 26, 2025 to April 22, 2025
Date of issue : April 22, 2025



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APPENDIX (Photos of EUT) (3 Pages)



TEST REPORT DESCRIPTION

Applicant : Crown Micro FZCO
Manufacturer : Crown Micro FZCO
Trade Mark : N/A
EUT : Energy Storage System
Model No. : NURA-6.5KW
Rating : AC 230V, 50/60Hz
PV: DC 120-500V
Battery: DC 40-60V

Measurement Procedure Used:

EN IEC 61000-6-3:2021
EN 61000-3-12:2011
EN IEC 61000-3-11:2019
EN IEC 61000-6-1:2019
(IEC 61000-4-2:2008, IEC 61000-4-3:2006+A1:2007+A2:2010, IEC61000-4-4:2012,
IEC 61000-4-5:2014, IEC 61000-4-6:2013, IEC 61000-4-8:2009, IEC 61000-4-34:2005+A1:2009)

The device described above is tested by EMTEK (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and EMTEK (SHENZHEN) CO., LTD. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the EN IEC 61000-6-3 and EN IEC 61000-6-1 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of EMTEK (SHENZHEN) CO., LTD.

Date of Test : March 26, 2025 to April 22, 2025

Prepared by : Kangtao Zhang
Kangtao Zhang/Editor

Reviewer : Kaimin Guo
Kaimin Guo/Supervisor

Approved & Authorized Signer : Lisa Wang
Lisa Wang/Manager

Modified Information

Version	Report No.	Revision Date	Summary
Ver.1.0	ENS2503130245E00101R	/	Original Report



1. SUMMARY OF TEST RESULTS

EMISSION				
Description of Test Item		Standard	Limits	Results
Conducted Emissions at Mains Terminals	AC Mains port	EN IEC 61000-6-3:2021	Table 4	Pass
	DC Power port ☐ V-AN ☒ Δ -AN		Table 5	Pass
Discontinuous disturbance at mains terminals		Cited from CISPR 14-1	CISPR 14-1	N/A
Conducted Emissions at wired network ports		Cited from CISPR 32	Table 6	N/A
Radiated emissions at frequencies up to 1 GHz		EN IEC 61000-6-3:2021	Table 3	Pass
Radiated emissions at frequencies above 1 GHz		EN IEC 61000-6-3:2021	Table 3	N/A
Harmonic Current Emissions		EN 61000-3-12:2011	Table 2	Pass
Voltage Fluctuation and Flicker		EN IEC 61000-3-11:2019	--	Pass
DC power port terminal disturbance for class b GCPC-Proportion relation approach		Cited from CISPR 11	Table C.1	N/A
DC power port terminal disturbance for class b GCPC-Current-to-voltage Conversion approach		Cited from CISPR 32	Table C.2	N/A

IMMUNITY (EN IEC 61000-6-1:2019)				
Description of Test Item		Basic Standard	Performance Criteria	Results
Electrostatic Discharge (ESD)		IEC 61000-4-2:2008	B	Pass
Radio-Frequency, Continuous Radiated Disturbance		IEC 61000-4-3:2006+A1:2007+A2:2010	A	Pass
EFT/B Immunity	Signal/control ports	IEC 61000-4-4:2012	B	N/A
	DC power ports			Pass
	AC power ports			Pass
Surge Immunity	Signal/control ports	IEC 61000-4-5:2014	B	N/A
	DC power ports			Pass
	AC power ports			Pass
Conducted RF Immunity	Signal/control ports	IEC 61000-4-6:2013	A	N/A
	DC power ports			Pass
	AC power ports			Pass
Power Frequency Magnetic Field		IEC 61000-4-8:2009	A	Pass
Voltage dips and interruptions		IEC 61000-4-34:2005+A1:2009	B,C	Pass
Note: N/A means not applicable.				

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : Energy Storage System

Model Number : NURA-6.5KW

Sample ID : ENS2503130245E001/1-1

Applicant : Crown Micro FZCO

Address : Plot No. S60806, Jafza South, Jebel Ali Free Zone, Dubai, United Arab Emirates

Manufacturer : Crown Micro FZCO

Address : Plot No. S60806, Jafza South, Jebel Ali Free Zone, Dubai, United Arab Emirates

Factory : ShenZhen Lux Power technology Co., LTD

Address : C501, Building A, Donghua Industrial Park, 5003 Bao'an Avenue, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, 518126, China.

Date of Received : March 26, 2025

Date of Test : March 26, 2025 to April 22, 2025

2.2. Independent Operation Modes

- A. On
1. PV Charging
 2. AC Charging
 3. Discharging & AC Back UP

2.3. Test Manner

Test Items	Test Voltage	Operation Modes	Worst case
Conducted Emissions at Mains Terminals	AC 230V/50Hz DC 360V	Mode A.2 Mode A.1	Mode A.2 (AC 230V/50Hz) Mode A.1 (DC 360V)
Radiated emissions at frequencies up to 1 GHz	DC 360V AC 230V/50Hz DC 51.2V	Mode A	Mode A.2 (AC 230V/50Hz)
Harmonic Current Emissions	AC 230V/50Hz	Mode A.2	\
Voltage Fluctuation and Flicker	AC 230V/50Hz	Mode A.2	\
Electrostatic Discharge	DC 360V	Mode A	\
Continuous RF electromagnetic field disturbances	AC 230V/50Hz DC 51.2V	Mode A	\
Electrical fast transients/burst	DC 360V AC 230V/50Hz	Mode A.1 Mode A.2	\
Surges		Mode A.1 Mode A.2	\
Continuous induced RF disturbances		Mode A.1 Mode A.2	\
Power frequency magnetic field		Mode A	\
Voltage dips and interruptions	AC 230V/50Hz	Mode A.2	\

2.4. Description of Test Facility

Site Description
EMC Lab.

: **Accredited by CNAS**

The Certificate Registration Number is L2291.

The Laboratory has been assessed and proved to be in compliance with CNAS-CL01 (identical to ISO/IEC 17025:2017)

Accredited by FCC

Designation Number: CN1204

Test Firm Registration Number: 882943

Accredited by A2LA

The Certificate Number is 4321.01.

Accredited by Industry Canada

The Conformity Assessment Body Identifier is CN0008

Name of Firm

: EMTEK (SHENZHEN) CO., LTD.

Site Location

: Building 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China

2.5. Description of Support Device

N/A

2.6. Measurement Uncertainty

Test Item	Uncertainty
Conducted Emission Uncertainty (Conduction 2#)	: 3.16dB (9k~150kHz Conduction) 2.90dB (150k~30MHz Conduction)
Radiated Emission Uncertainty (3m 3# Chamber)	: 4.28dB (30M~1GHz Polarize: H) 4.86dB (30M~1GHz Polarize: V)
Uncertainty for Flicker test	: 0.514%
Uncertainty for Harmonic test	: 4.04%
Uncertainty for C/S Test	: 0.94dB(Using CDN Test) 2.37dB(Using EM Clamp Test)
Uncertainty for R/S Test	: 1.53dB(80MHz-3000MHz)
Uncertainty for test site temperature and humidity	: 0.6℃ 4%

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1. For Power Line Conducted Emission Measurement

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	EMI Test Receiver	Rohde & Schwarz	ESCI	101045	May 10, 2024	1 Year
☒	PULSE LIMITER	Rohde & Schwarz	ESH3-Z2	100107	May 10, 2024	1 Year
☒	AMN	Schwarzbeck	NNLK 8129	8129203	May 11, 2024	1 Year
☒	DC LISN	Schwarzbeck	PVDC 8301	00075	May 10, 2024	1 Year

3.2. For Radiated Emission Measurement

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	EMI Test Receiver	Rohde & Schwarz	ESU 26	100154	May 10, 2024	1 Year
☒	Pre-Amplifier	Lunar EM	LNA30M3G-25	J10100000070	May 10, 2024	1 Year
☒	Bilog Antenna	Schwarzbeck	VULB9163	661	June 02, 2023	2 Year

3.3. For Harmonic Current / Flicker Measurement

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	45KVA AC Power source	Teseq	NSG 1007-45/45KVA	1305A02873	May 11, 2024	1 Year
☒	Signal conditioning Unit	Teseq	CCN 1000-3	1305A02873	May 11, 2024	1 Year
☒	Impedance network	Teseq	INA2197/37A	1305A02873	May 11, 2024	1 Year
☒	Impedance network	Teseq	INA 2196/75A	1305A02874	May 11, 2024	1 Year
☐	Proflin 2100 AC Switching Unit	Teseq	NSG 2200-3	A22714	May 11, 2024	1 Year

3.4. For Electrostatic Discharge Immunity Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	ESD Tester	EMTEST	Dito	P2220263883	Oct. 21, 2024	1 Year

3.5. For RF Strength Susceptibility Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	Power Amplifier	MILMEGA	AS0102-55	1018770	May 11, 2024	1 Year
☒	RF Power Meter. Dual Channel	BOONTON	4232A	10539	May 11, 2024	1 Year
☒	Log.-Per. Antenna	SCHWARZBECK	STLP 9129-7/16	3050	N/A	N/A
☒	Signal Generator	Agilent	N5181A	MY501451 87	May 11, 2024	1 Year
☒	50ohm Diode Power Sensor	BOONTON	51011EMC	36164	May 11, 2024	1 Year
☒	Field Strength Meter	DARE	RSS1006A	10I00037S NO22	May 20, 2024	1 Year
☒	Multi-function interface system	DARE	CTR1009B	12I00250S NO72	N/A	N/A
☒	Automatic switch group	DARE	RSW1004A	N/A	N/A	N/A
☒	Power Amplifier	MILMEGA	AS1860-50	1059346	May 11, 2024	1 Year
☒	Power Amplifier	Vectawave	VBA 1000-600C	133627	Oct. 18, 2024	1 Year
☒	Directional Coupler	BONN	BDC 0810-50/1500	2229689	Oct. 18, 2024	1 Year

3.6. For Electrical Fast Transient / Burst Immunity Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	Burst Tester	Partner	IMU-MGS	109938-1635	Oct. 18, 2024	1 Year
☒	Three phase CDN	Teseq	CDN 163	202	May 12, 2024	1 Year

3.7. For Surge Immunity Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	Controller	HAEFELY	Psurge 8000	174031	May 11, 2024	1 Year
☒	Impulse Module	HAEFELY	PIM 100	174124	May 11, 2024	1 Year
☒	Coupling Decoupling	HAEFELY	PCD 130	172181	May 11, 2024	1 Year
☒	Coupling Module	HAEFELY	PCD122	174354	May 11, 2024	1 Year
☒	Impulse Module	HAEFELY	PIM 120	174435	May 11, 2024	1 Year
☒	Coupling Module	HAEFELY	PCD 126A	174387	May 11, 2024	1 Year
☒	Impulse Module	HAEFELY	PIM 110	174391	May 11, 2024	1 Year
☒	Impulse Module	HAEFELY	PIM 150	178707	May 12, 2024	1 Year
☒	Impulse Module	PMI	PCDN8	190422	May 12, 2024	1 Year

3.8. For Injected Current Susceptibility Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	Continuous Wave Simulator	EMTEST	CWS500C	0900-12	May 10, 2024	1 Year
☒	Attenuator	EMTEST	100W 6dB DC-3G	/	May 10, 2024	1 Year
☒	Signal Generator	R&S	SMB100A	103041	May 10, 2024	1 Year
☒	Three phase CDN	TESEQ	CDN M532S	33799	May 11, 2024	1 Year
☒	Power meter	AGILENT	E4418B	MY45102886	May 10, 2024	1 Year
☒	Directional coupler	SKET	DC_0110000M-100W	SK2018080301	May 10, 2024	1 Year

3.9. For Magnetic Field Immunity Test

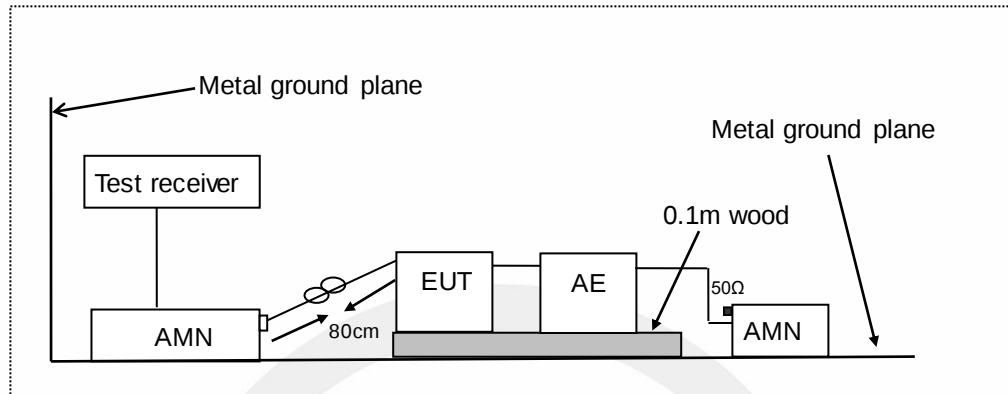
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	Magnetic Field Tester	HAEFELY	MAG100	250040.1	May 10, 2024	1 Year

3.10. For Voltage Dips and Interruptions Test

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒	45KVA AC Power source	Teseq	NSG 1007-45/45KVA	1305A02873	May 11, 2024	1 Year
☐	Signal conditioning Unit	Teseq	CCN 1000-3	1305A02873	May 11, 2024	1 Year
☐	Impedance network	Teseq	INA2197/37A	1305A02873	May 11, 2024	1 Year
☐	Impedance network	Teseq	INA 2196/75A	1305A02874	May 11, 2024	1 Year
☒	Proffline 2100 AC Switching Unit	Teseq	NSG 2200-3	A22714	May 11, 2024	1 Year

4. POWER LINE CONDUCTED EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



LISN: Artificial Mains Network
AE: Associated equipment
EUT: Equipment under test

4.2. Measuring Standard

EN IEC 61000-6-3:2021

4.3. Power Line Conducted Emission Limits

☒ AC Mains port:

Frequency (MHz)	Limit (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0

NOTE1-The lower limit shall apply at the transition frequencies.

NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

☒ DC Power port (Δ -AN):

Frequency (MHz)	Limit (dB μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	84.0 ~ 74.0 *	74.0 ~ 64.0 *
0.50 ~ 30.00	74.0	64.0

NOTE1-The lower limit shall apply at the transition frequencies.

NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

4.4. EUT Configuration of Measurement

The following equipments are installed on Conducted Emission Measurement to meet EN IEC 61000-6-3 requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Energy Storage System
Model Number : NURA-6.5KW

4.5. Test Procedure

The EUT is put on the plane 0.1 m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the EN IEC 61000-6-3 regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver) is set at 9kHz in 150kHz~30MHz and 200Hz in 9kHz~150kHz.

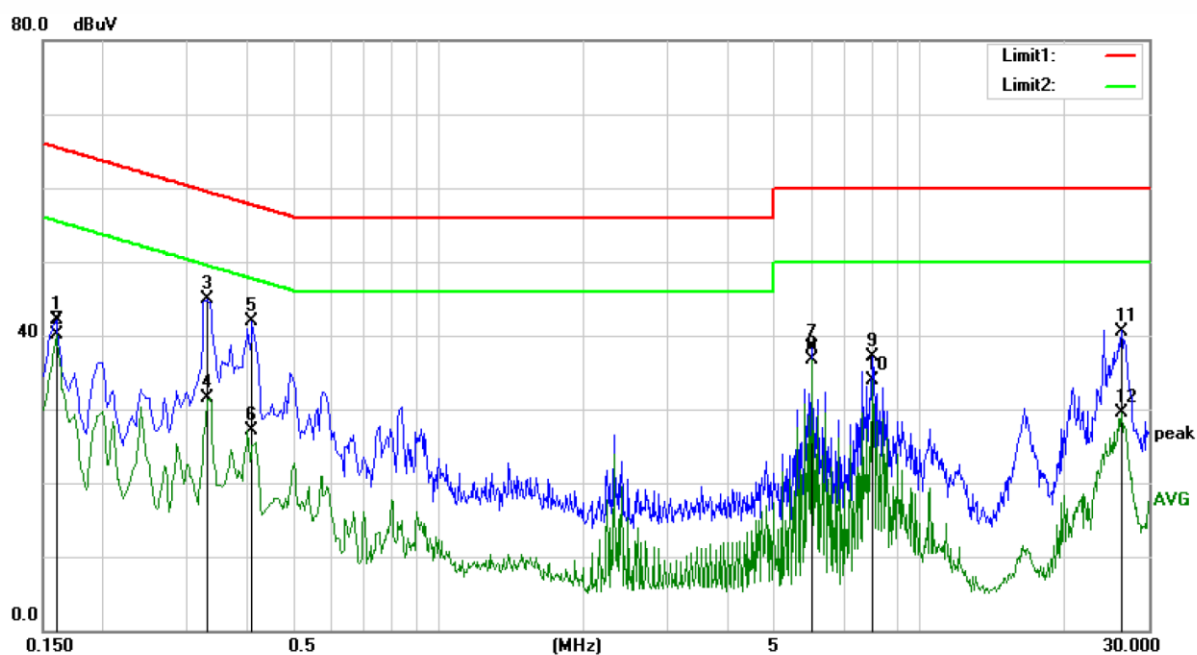
The frequency range from 150kHz to 30MHz is investigated.

4.6. Measuring Results

PASS.

All the modes were tested and the data of the worst modes are attached the following pages.

Temperature : 25.1°C
Humidity : 51%
Atmospheric Pressure : 101kpa
Test Engineer : Jinren Tan
Test Date : 2025-03-28



Site Conduction 2#

Phase: L1

Temperature: 25.1

Limit: (CE)EN61000-6-3_QP

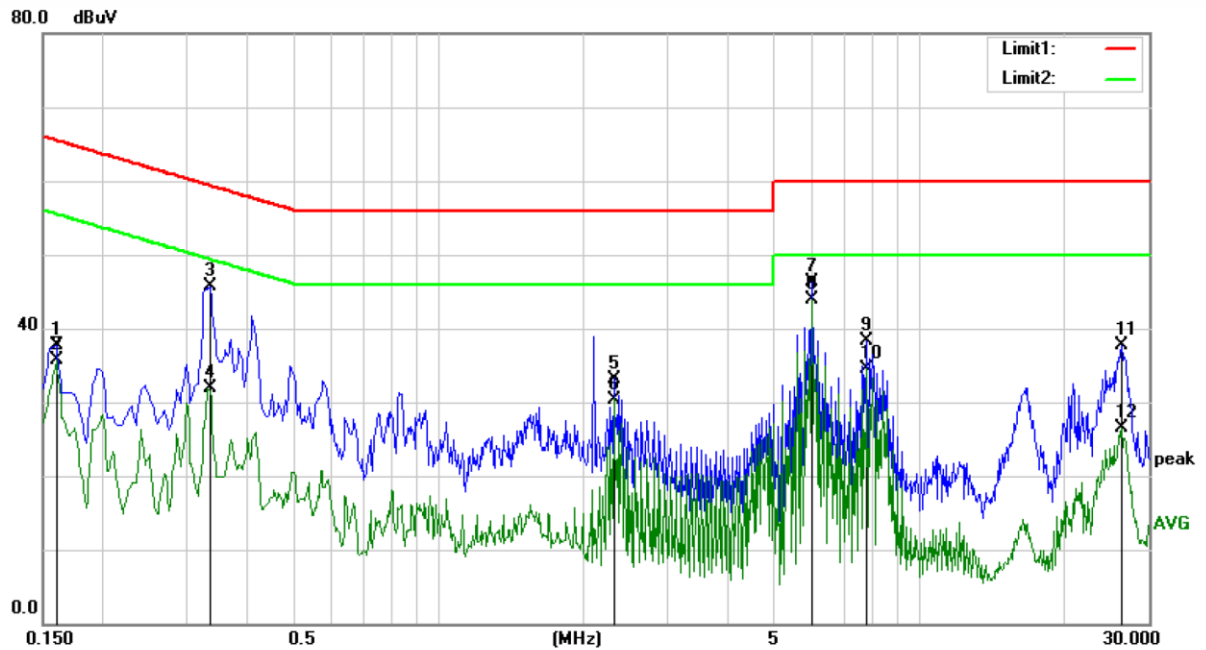
Power: AC 230V/50Hz

Humidity: 51 %

Mode: AC Charging

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	dBuV	Factor	ment	dBuV	dB	Detector	Comment
1		0.1600	31.56	10.58	42.14	65.46	-23.32	QP	
2		0.1600	29.50	10.58	40.08	55.46	-15.38	AVG	
3		0.3300	34.29	10.59	44.88	59.45	-14.57	QP	
4		0.3300	20.93	10.59	31.52	49.45	-17.93	AVG	
5		0.4100	31.14	10.68	41.82	57.65	-15.83	QP	
6		0.4100	16.44	10.68	27.12	47.65	-20.53	AVG	
7		5.9800	27.72	10.57	38.29	60.00	-21.71	QP	
8	*	5.9800	26.16	10.57	36.73	50.00	-13.27	AVG	
9		7.9800	26.53	10.65	37.18	60.00	-22.82	QP	
10		7.9800	23.29	10.65	33.94	50.00	-16.06	AVG	
11		26.4050	29.50	11.10	40.60	60.00	-19.40	QP	
12		26.4050	18.31	11.10	29.41	50.00	-20.59	AVG	



Site Conduction 2#

Phase: N

Temperature: 25.1

Limit: (CE)EN61000-6-3_QP

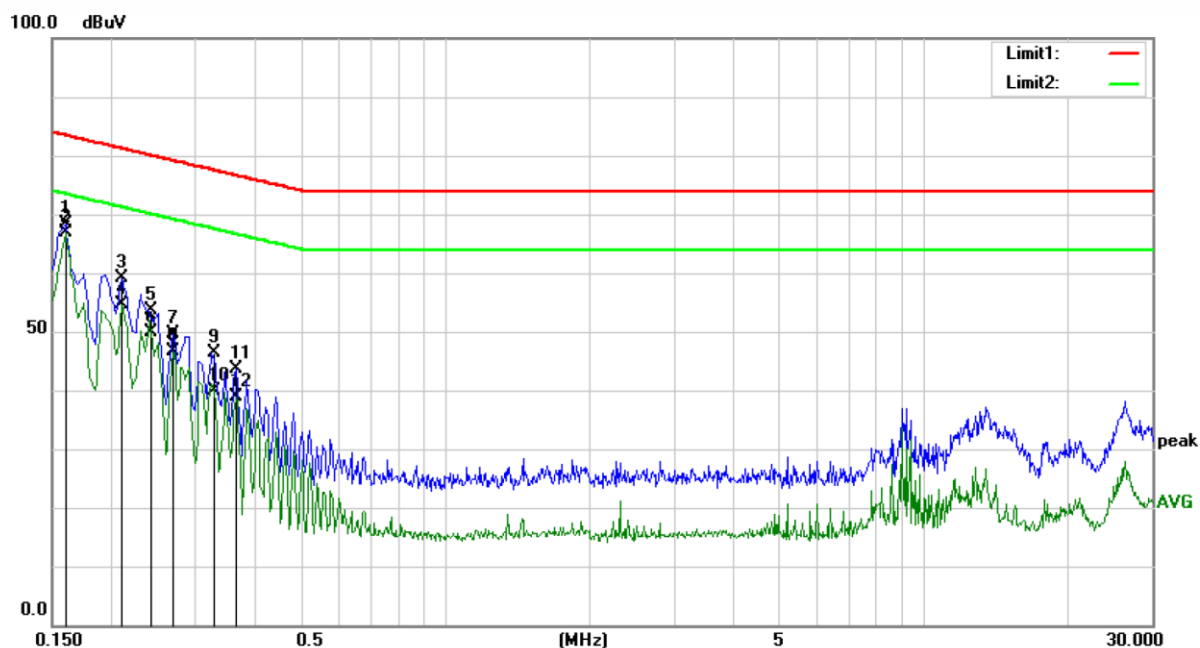
Power: AC 230V/50Hz

Humidity: 51 %

Mode: AC Charging

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1600	27.10	10.58	37.68	65.46	-27.78	QP	
2		0.1600	25.05	10.58	35.63	55.46	-19.83	AVG	
3		0.3350	35.11	10.59	45.70	59.33	-13.63	QP	
4		0.3350	21.33	10.59	31.92	49.33	-17.41	AVG	
5		2.3200	22.69	10.51	33.20	56.00	-22.80	QP	
6		2.3200	19.89	10.51	30.40	46.00	-15.60	AVG	
7		5.9800	35.70	10.57	46.27	60.00	-13.73	QP	
8	*	5.9800	33.36	10.57	43.93	50.00	-6.07	AVG	
9		7.7800	27.65	10.67	38.32	60.00	-21.68	QP	
10		7.7800	23.82	10.67	34.49	50.00	-15.51	AVG	
11		26.4050	26.59	11.10	37.69	60.00	-22.31	QP	
12		26.4050	15.31	11.10	26.41	50.00	-23.59	AVG	



Site Conduction 2#

Phase: +

Temperature: 25.1

Limit: (CE)EN61000-6-3_DC PORT_QP

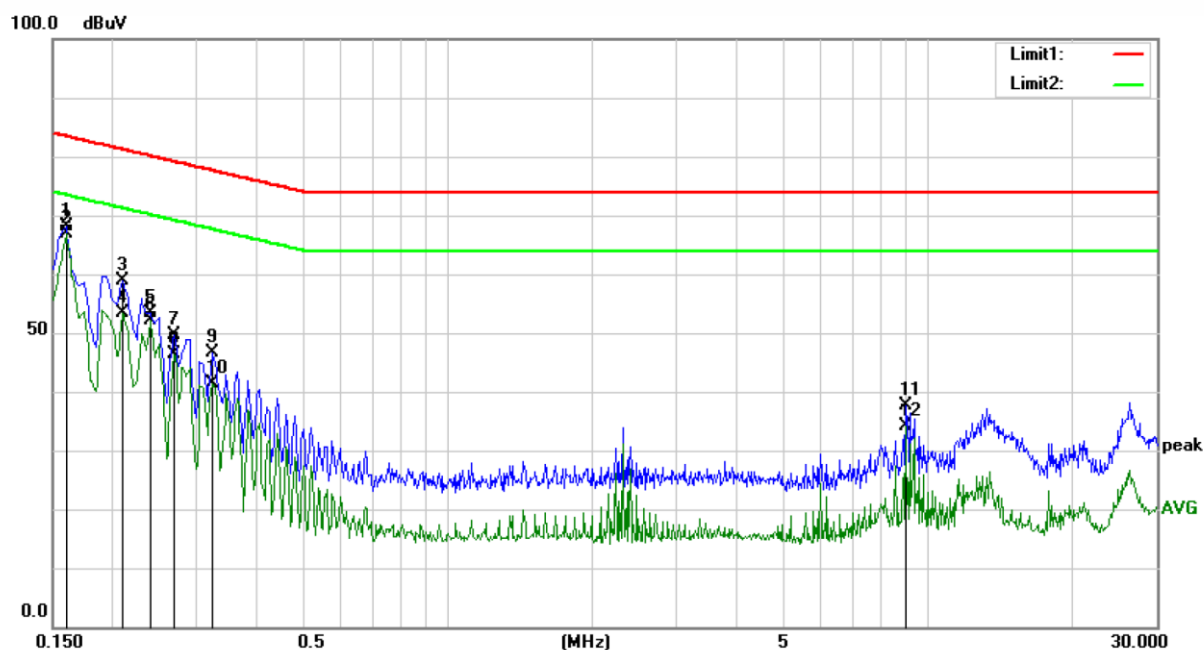
Power: DC 360V

Humidity: 51 %

Mode: PV Charging

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1600	48.57	19.82	68.39	83.46	-15.07	QP	
2	*	0.1600	47.06	19.82	66.88	73.46	-6.58	AVG	
3		0.2100	39.45	19.73	59.18	81.21	-22.03	QP	
4		0.2100	34.83	19.73	54.56	71.21	-16.65	AVG	
5		0.2416	33.79	19.73	53.52	80.04	-26.52	QP	
6		0.2416	30.22	19.73	49.95	70.04	-20.09	AVG	
7		0.2700	30.05	19.67	49.72	79.12	-29.40	QP	
8		0.2700	26.85	19.67	46.52	69.12	-22.60	AVG	
9		0.3268	26.88	19.58	46.46	77.53	-31.07	QP	
10		0.3268	20.31	19.58	39.89	67.53	-27.64	AVG	
11		0.3650	24.15	19.56	43.71	76.61	-32.90	QP	
12		0.3650	19.29	19.56	38.85	66.61	-27.76	AVG	



Site Conduction 2#

Phase: -

Temperature: 25.1

Limit: (CE)EN61000-6-3_DC PORT_QP

Power: DC 360V

Humidity: 51 %

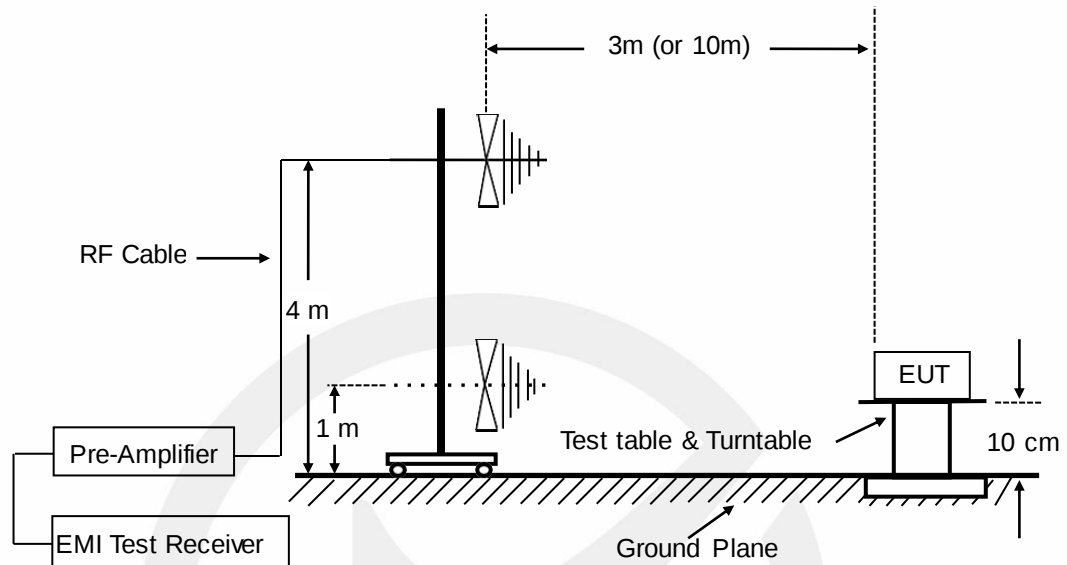
Mode: PV Charging

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
		MHz	Level	Factor	ment			Detector	Comment
			dBuV	dB	dBuV	dBuV	dB		
1		0.1600	48.43	19.82	68.25	83.46	-15.21	QP	
2	*	0.1600	47.08	19.82	66.90	73.46	-6.56	AVG	
3		0.2100	39.17	19.73	58.90	81.21	-22.31	QP	
4		0.2100	33.60	19.73	53.33	71.21	-17.88	AVG	
5		0.2400	33.76	19.73	53.49	80.10	-26.61	QP	
6		0.2400	32.32	19.73	52.05	70.10	-18.05	AVG	
7		0.2700	30.05	19.67	49.72	79.12	-29.40	QP	
8		0.2700	26.71	19.67	46.38	69.12	-22.74	AVG	
9		0.3250	26.93	19.58	46.51	77.58	-31.07	QP	
10		0.3250	21.70	19.58	41.28	67.58	-26.30	AVG	
11		8.9800	17.54	20.05	37.59	74.00	-36.41	QP	
12		8.9800	14.17	20.05	34.22	64.00	-29.78	AVG	

5. RADIATED EMISSION MEASUREMENT

5.1. Block Diagram of Test Setup



5.2. Measuring Standard

EN IEC 61000-6-3:2021

5.3. Radiated Emission Limits

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dB μ V/m)
30 ~ 230	3	40
230 ~ 1000	3	47

Note: (1) The smaller limit shall apply at the combination point between two frequency bands.
(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

5.4. EUT Configuration of Measurement

The EN IEC 61000-6-3 regulations test method must be used to find the maximum emission during radiated emission measurement.

EUT : Energy Storage System
Model Number : NURA-6.5KW

5.5. Test Procedure

The EUT is placed on a turntable which is 0.1 meter high above the ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the Receiver (ESCI) is set at 120kHz.

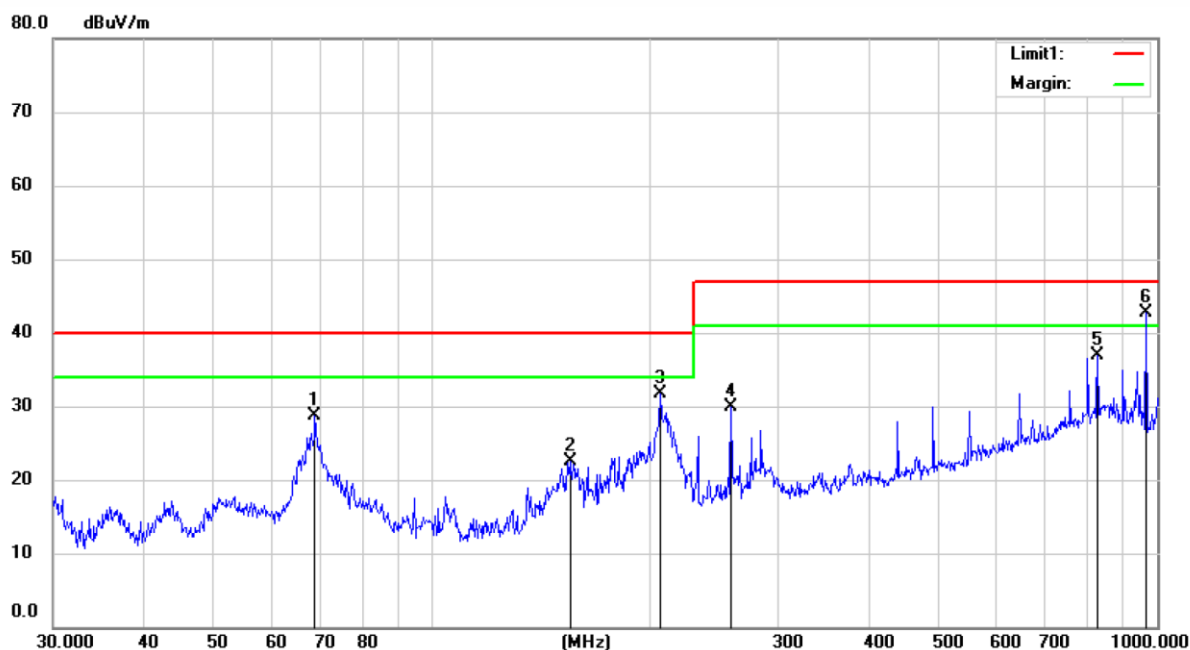
5.6. Measuring Results

PASS.

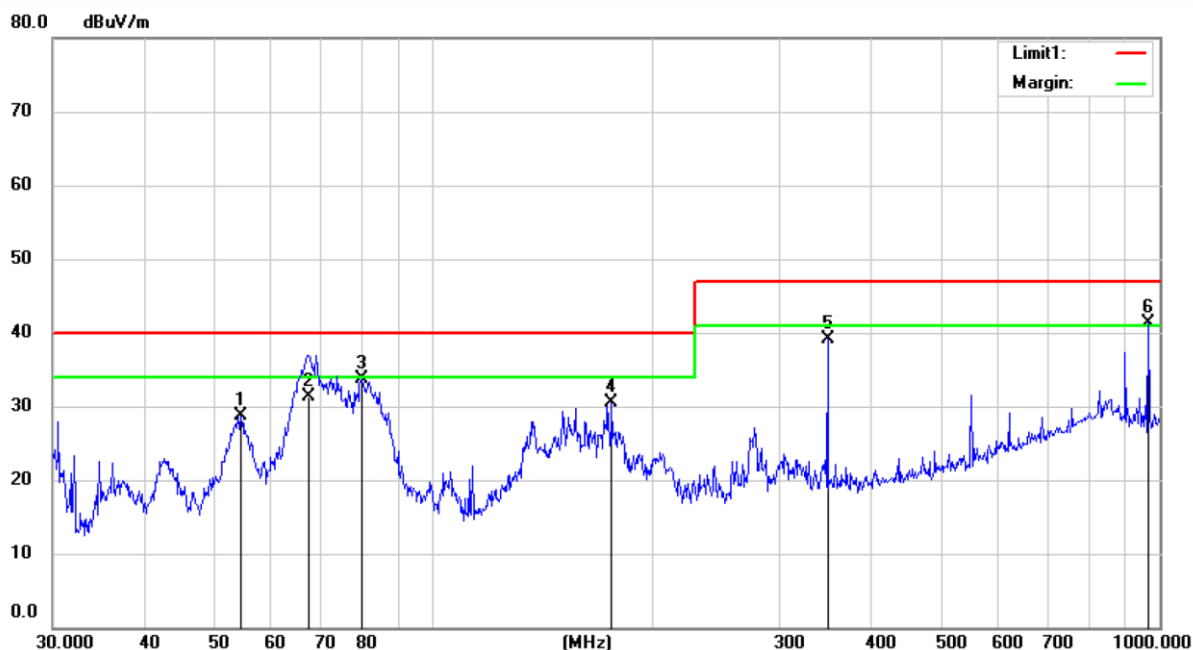
The frequency range from 30MHz to 1000MHz is investigated.

All the modes were tested and the data of the worst modes are attached the following pages.

Temperature : 25.2°C
Humidity : 47%
Atmospheric Pressure : 101kpa
Test Engineer : Sunyong Hu
Test Date : 2025-03-26



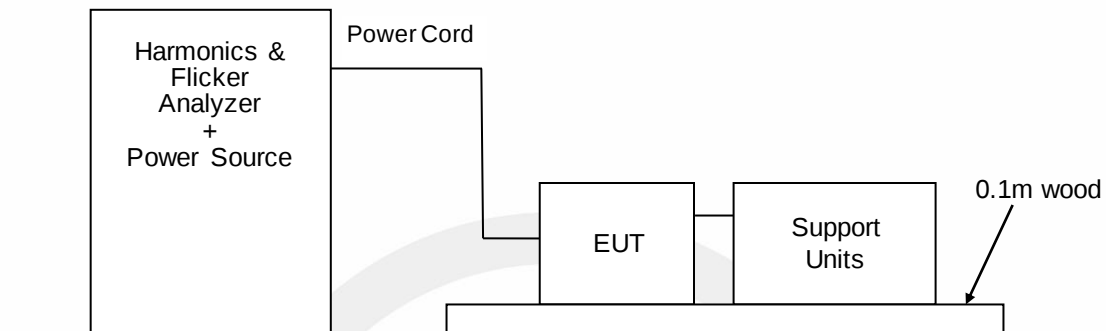
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		68.8721	44.32	-15.65	28.67	40.00	-11.33	QP		
2		154.8204	39.63	-17.12	22.51	40.00	-17.49	QP		
3		206.3976	47.42	-15.63	31.79	40.00	-8.21	QP		
4		258.3264	42.94	-13.11	29.83	47.00	-17.17	QP		
5		827.4934	35.67	1.19	36.86	47.00	-10.14	QP		
6	*	965.5421	44.20	-1.43	42.77	47.00	-4.23	QP		



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
										Comment
1		54.4516	42.71	-14.05	28.66	40.00	-11.34	QP		
2		67.4382	46.90	-15.60	31.30	40.00	-8.70	QP		
3		79.8003	51.44	-17.67	33.77	40.00	-6.23	QP		
4		176.2686	46.79	-16.38	30.41	40.00	-9.59	QP		
5		349.2500	49.23	-10.07	39.16	47.00	-7.84	QP		
6	*	965.5421	42.83	-1.43	41.40	47.00	-5.60	QP		

6. HARMONIC CURRENT EMISSION MEASUREMENT

6.1. Block Diagram of Test Setup



6.2. Standard Limits

EN 61000-3-12

Harmonic current emissions evaluate the potential for the EUT to cause distortion on the AC power lines. It is applicable to electrical and electronic equipment having an input current $>16\text{ A}$ and $\leq 75\text{ A}$ per phase, and intended to be connected to public low-voltage distribution systems

Table 2 – Current emission limits for equipment other than balanced three-phase equipment

Minimum R_{sce}	Admissible individual harmonic current I_h/I_{ref} ^a						Admissible harmonic parameters	
	I_3	I_5	I_7	I_9	I_{11}	I_{13}	THC/I_{ref}	$PWHC/I_{ref}$
33	21,6	10,7	7,2	3,8	3,1	2	23	23
66	24	13	8	5	4	3	26	26
120	27	15	10	6	5	4	30	30
250	35	20	13	9	8	6	40	40
≥ 350	41	24	15	12	10	8	47	47

The relative values of even harmonics up to order 12 shall not exceed $16/h\%$. Even harmonics above order 12 are taken into account in THC and $PWHC$ in the same way as odd order harmonics.

Linear interpolation between successive R_{sce} values is permitted.

^a I_{ref} = reference current; I_h = harmonic current component.

6.3. Measuring Results

PASS.

Please see the attached pages.

Harmonics – Per EN/IEC61000-3-12 (Run time)

EUT: Energy Storage System

Test category: Table:2, Rsce=33, Inter-Harm,

Test date: 2025/4/8

Start time: 15:23:07

Tested by: Yingchao Zhang

Test Margin: 100

End time: 15:25:50

Test duration (min): 2.5

Data file name: CTSMXH_H-000010.cts_data

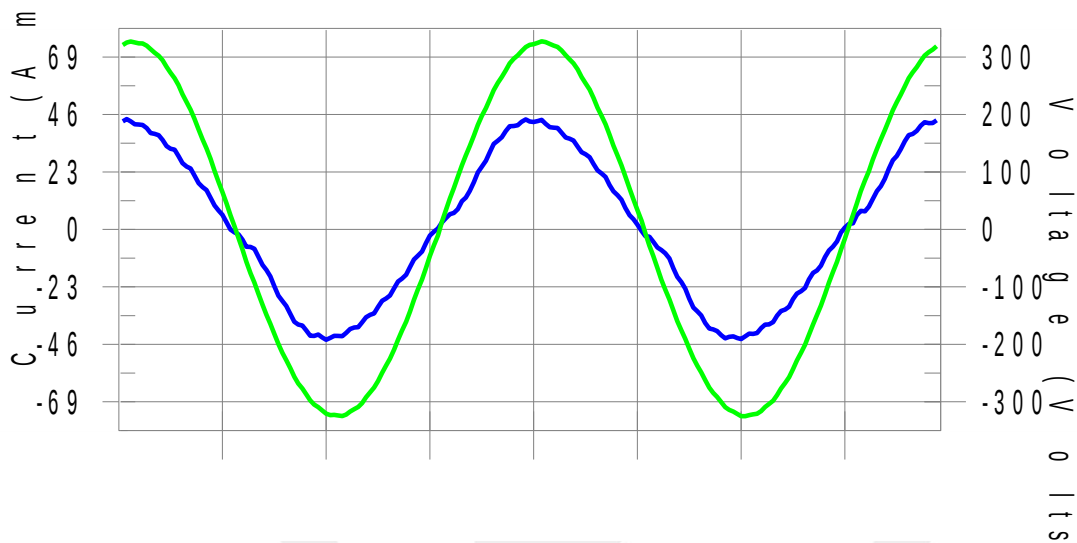
Comment: AC Charging

Customer: Crown Micro FZCO

Test Result: Pass

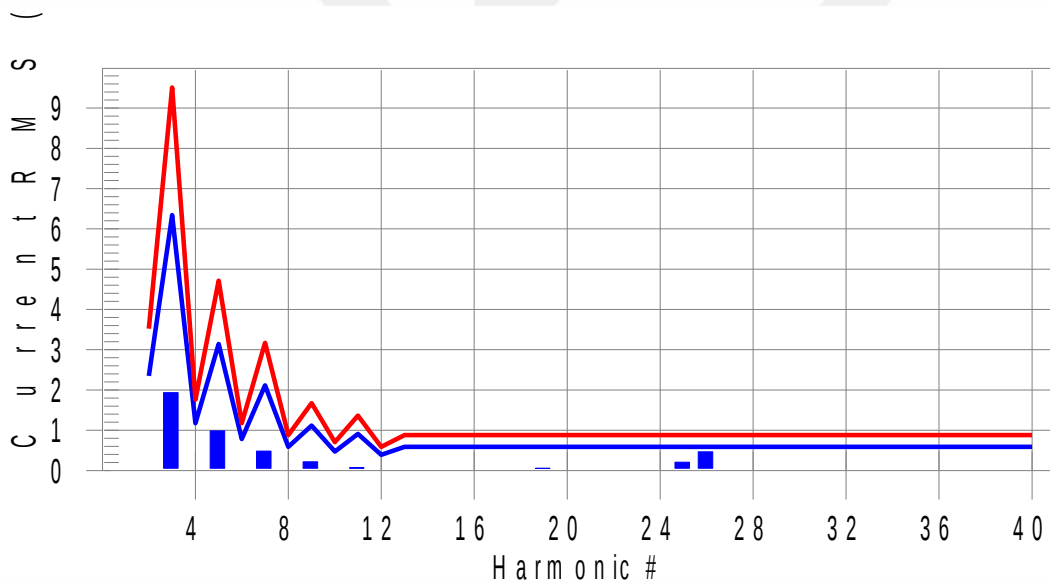
Source qualification: Normal

Current & voltage waveforms



Harmonics and Class 2 limit line

European Limits



Test result: Pass Worst harmonics H5-21.4% of 150% limit, H5-31.4% of 100% limit.

Current Test Result Summary (Run time)

EUT: Energy Storage System

Tested by: Yingchao Zhang

Test category: Table:2, Rsce=33, Inter-Harm,

Test Margin: 100

Test date: 2025/4/8

Start time: 15:23:07

End time: 15:25:50

Test duration (min): 2.5

Data file name: CTSMXH_H-000010.cts_data

Comment: AC Charging

Customer: Crown Micro FZCO

Test Result: Pass

Measured Iref: 29.356(Amps)

Source: Normal

THC/Iref (%): 7.8

Limit (%): 23.0

PWHC/Iref (%): 8.1

PWHC Limit (%): 23.0

Highest parameter values during test:

V_RMS (Volts): 230.07

Frequency (Hz): 50.00

I_Peak (Amps): 44.659

I_RMS (Amps): 29.586

I_Fund (Amps): 29.265(avg)

Crest Factor: 1.543

Power (Watts): 6777

Power Factor: 0.996

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.020	2.348	0.9	0.069	3.523	1.9	Pass
3	1.933	6.341	30.5	1.956	9.511	20.6	Pass
4	0.014	1.174	1.2	0.026	1.761	1.5	Pass
5	0.986	3.141	31.4	1.008	4.712	21.4	Pass
6	0.010	0.783	1.3	0.017	1.174	1.4	Pass
7	0.483	2.114	22.8	0.489	3.170	15.4	Pass
8	0.008	0.587	1.4	0.021	0.881	2.4	Pass
9	0.218	1.116	19.5	0.224	1.673	13.4	Pass
10	0.008	0.470	1.6	0.017	0.705	2.5	Pass
11	0.077	0.910	8.4	0.080	1.365	5.8	Pass
12	0.012	0.391	3.1	0.015	0.587	2.5	Pass
13	0.037	0.587	6.3	0.065	0.881	7.4	Pass
14	0.008	N/A	N/A	0.012	N/A	N/A	N/A
15	0.019	N/A	N/A	0.071	N/A	N/A	N/A
16	0.008	N/A	N/A	0.011	N/A	N/A	N/A
17	0.037	N/A	N/A	0.091	N/A	N/A	N/A
18	0.009	N/A	N/A	0.012	N/A	N/A	N/A
19	0.055	N/A	N/A	0.075	N/A	N/A	N/A
20	0.013	N/A	N/A	0.016	N/A	N/A	N/A
21	0.042	N/A	N/A	0.060	N/A	N/A	N/A
22	0.028	N/A	N/A	0.032	N/A	N/A	N/A
23	0.050	N/A	N/A	0.060	N/A	N/A	N/A
24	0.032	N/A	N/A	0.045	N/A	N/A	N/A
25	0.206	N/A	N/A	0.313	N/A	N/A	N/A
26	0.464	N/A	N/A	0.501	N/A	N/A	N/A
27	0.051	N/A	N/A	0.056	N/A	N/A	N/A
28	0.033	N/A	N/A	0.037	N/A	N/A	N/A
29	0.037	N/A	N/A	0.040	N/A	N/A	N/A
30	0.026	N/A	N/A	0.029	N/A	N/A	N/A
31	0.033	N/A	N/A	0.052	N/A	N/A	N/A
32	0.033	N/A	N/A	0.035	N/A	N/A	N/A
33	0.031	N/A	N/A	0.051	N/A	N/A	N/A
34	0.013	N/A	N/A	0.015	N/A	N/A	N/A
35	0.029	N/A	N/A	0.030	N/A	N/A	N/A
36	0.009	N/A	N/A	0.010	N/A	N/A	N/A
37	0.026	N/A	N/A	0.028	N/A	N/A	N/A
38	0.008	N/A	N/A	0.010	N/A	N/A	N/A
39	0.022	N/A	N/A	0.023	N/A	N/A	N/A
40	0.008	N/A	N/A	0.009	N/A	N/A	N/A

Note: Measured I-ref was applied for this test.

Voltage Source Verification Data (Run time)

EUT: Energy Storage System

Tested by: Yingchao Zhang

Test category: Table:2, Rsce=33, Inter-Harm,

Test Margin: 100

Test date: 2025/4/8

Start time: 15:23:07

End time: 15:25:50

Test duration (min): 2.5

Data file name: CTSMXH_H-000010.cts_data

Comment: AC Charging

Customer: Crown Micro FZCO

Test Result: Pass

Source qualification: Normal

Measured source distortion is within the requirements of the standards

Measurements are compliant with IEC/EN61000-3-12 Ed. 2.0 & IEC/EN61000-4-7 Ed. 2.1

Highest parameter values during test:

Voltage (Vrms): 230.07

Frequency (Hz): 50.00

I_Peak (Amps): 44.659

I_RMS (Amps): 29.586

I_Fund (Amps): 29.265(avg)

Crest Factor: 1.543

Power (Watts): 6777

Power Factor: 0.996

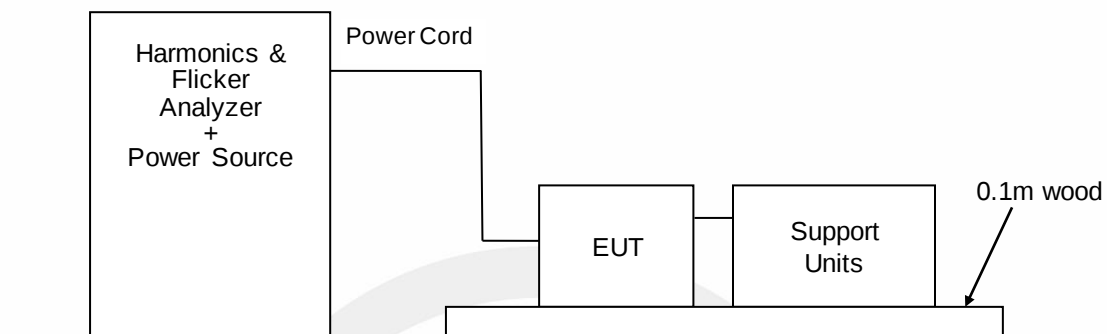
Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.100	0.920	10.90	OK
3	0.164	2.874	5.71	OK
4	0.051	0.920	5.59	OK
5	0.186	3.451	5.39	OK
6	0.026	0.920	2.88	OK
7	0.213	2.873	7.40	OK
8	0.036	0.920	3.88	OK
9	0.221	1.379	16.05	OK
10	0.037	0.919	4.07	OK
11	0.180	1.609	11.19	OK
12	0.024	0.690	3.51	OK
13	0.150	1.379	10.88	OK
14	0.023	0.690	3.29	OK
15	0.128	0.690	18.61	OK
16	0.021	0.690	3.06	OK
17	0.115	0.690	16.74	OK
18	0.021	0.690	3.09	OK
19	0.072	0.690	10.41	OK
20	0.030	0.690	4.41	OK
21	0.088	0.690	12.81	OK
22	0.027	0.690	3.97	OK
23	0.099	0.690	14.30	OK
24	0.078	0.690	11.30	OK
25	0.279	0.690	40.43	OK
26	0.331	0.690	48.04	OK
27	0.106	0.690	15.43	OK
28	0.033	0.690	4.84	OK
29	0.095	0.690	13.72	OK
30	0.026	0.690	3.83	OK
31	0.101	0.690	14.68	OK
32	0.048	0.690	6.91	OK
33	0.097	0.690	14.13	OK
34	0.026	0.690	3.84	OK
35	0.090	0.690	13.09	OK
36	0.023	0.690	3.36	OK
37	0.101	0.690	14.71	OK
38	0.023	0.690	3.38	OK
39	0.080	0.690	11.63	OK
40	0.034	0.690	4.99	OK

Minimum Rsce required: Rsce = 11.666

Phase A = 35.4% of tested Rsce = 33.000, Rsce = 11.666

7. VOLTAGE FLUCTUATION AND FLICKER MEASUREMENT

7.1. Block Diagram of Test Setup



7.2. Standard Limits

EN IEC 61000-3-11 Limits

The limits shall be applicable to voltage fluctuations and flicker at the supply terminals of the equipment under test, measured or calculated according to clause 4 under test conditions described in clause 6. Tests made to prove the compliance with the limits are considered to be type tests.

The following limits apply:

- the value of the short-term flicker indicator, P_{st} shall not be greater than 1,0;
- the value of the long-term flicker indicator, P_{lt} shall not be greater than 0,65;
- the value of $d(t)$ during a voltage change shall not exceed 3,3 % for more than 500 ms;
- the relative steady-state voltage change, dc , shall not exceed 3,3 %;
- the maximum relative voltage change d_{max} , shall not exceed:

7.3. Test Procedure

The total impedance of the test circuit, excluding the appliance under test, but including the internal impedance of the supply source, shall be equal to the reference impedance. The stability and tolerance of the reference impedance shall be adequate to ensure that the overall accuracy of 8% is achieved during the whole assessment procedure.

7.4. Test Results

PASS.

Please see the attached pages.

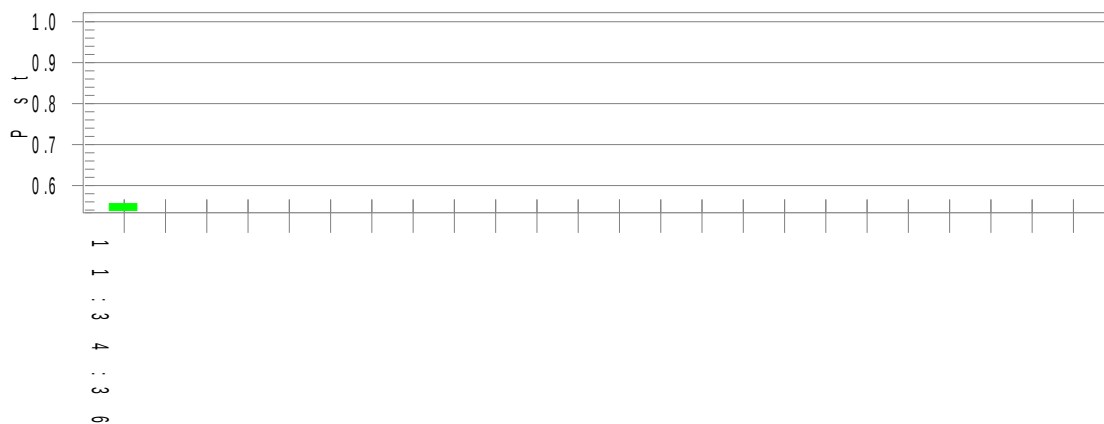
Flicker Test Summary Per EN/IEC61000-3-11 (Run time)

EUT: Energy Storage System
Test category: All parameters
Test date: 2025/4/21
Test duration (min): 10
Comment: AC Charging
Customer: Crown Micro FZCO
Z-test = (0.400 + j 0.250 Ohm)

Tested by: Yingchao Zhang
Test Margin: 100
Start time: 11:24:15
End time: 11:34:42
Data file name: CTSMXH_F-000030.cts_data

Test Result: Pass
Status: Test Completed

Pst_i and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt): 230.21

T-max (mS):	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.56	Test limit (%):	3.30	Pass
Highest dmax (%):	0.72	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.556	Test limit:	1.000	Pass

Calculated dmax(%): 0.722
Calculated dc(%): 0.557
Calculated Pst : 0.556
Calculated Plt : 0.243

The maximum permissible system impedance Z_{sys}:

Z = 0.965 Ohm + j 0.603 Ohm (0.965 Ohm + 1920 uH)

8. IMMUNITY PERFORMANCE CRITERIA DESCRIPTION

Performance Level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test, relative to a performance level by its manufacturer or the requestor of the test, or the agreed between the manufacturer and the purchaser of the product.

Definition related to the performance level:

1. Based on the used product standard
2. Based on the declaration of the manufacturer, requestor or purchaser

Criterion A:

The apparatus shall continue to operate as intended during and after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus 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, either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

Criterion B:

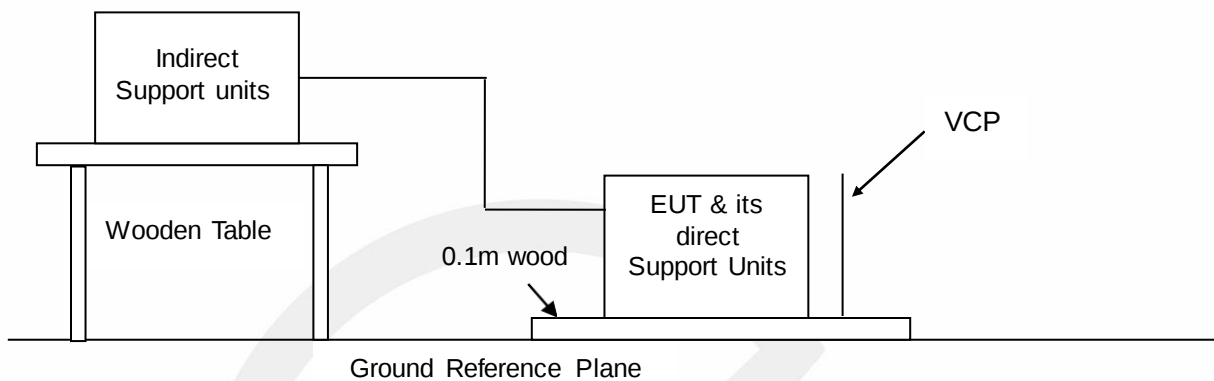
The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed. 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, either of these may be derived from the product description and documentation and 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.

9. ELECTROSTATIC DISCHARGE IMMUNITY TEST

9.1. Block Diagram of Test Setup



9.2. Test Standard

EN IEC 61000-6-1:2019
(IEC 61000-4-2:2008 Severity Level: 3 / Air Discharge: $\pm 8\text{kV}$
Level: 2 / Contact Discharge: $\pm 4\text{kV}$)

9.3. Severity Levels and Performance Criterion

9.3.1. Severity level

Level	Test Voltage Contact Discharge (kV)	Test Voltage Air Discharge (kV)
1	± 2	± 2
2	± 4	± 4
3	± 6	± 8
4	± 8	± 15
X	Special	Special

9.3.2. Performance criterion: B

9.4. Operating Condition of EUT

- 9.4.1. Setup the EUT as shown on Section 9.1.
- 9.4.2. Turn on the power of all equipment.
- 9.4.3. Let the EUT work in test mode A and test it.

9.5. Test Procedure

9.5.1. Air Discharge:

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

9.5.2. Contact Discharge:

All procedure shall be the same as Section 9.5.1. except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

9.5.3. Indirect discharge for horizontal coupling plane

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the center point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

9.5.4. Indirect discharge for vertical coupling plane

At least 10 singles discharge (in the most sensitive polarity) shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m×0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

9.6. Test Results

PASS.

Please refer to the following page.

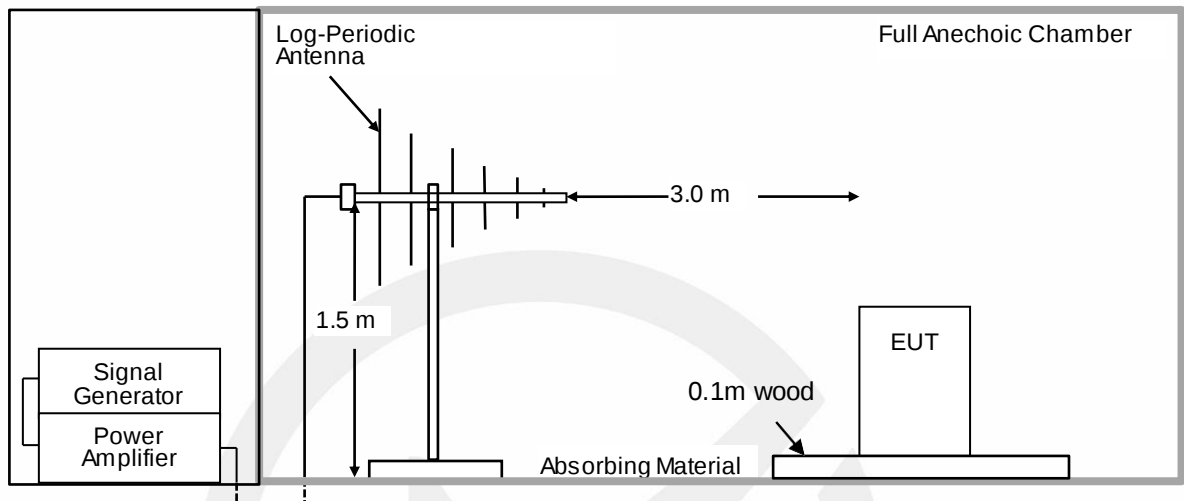
Electrostatic Discharge Test Result

EMTEK (SHENZHEN) CO., LTD.

Applicant : Crown Micro FZCO		
EUT : Energy Storage System		Test Date : 2025-04-09
M/N : NURA-6.5KW		Temperature : 24.8℃
Power Supply : DC 360V, AC 230V/50Hz, DC 51.2V		Humidity : 49%
Air discharge : ± 8.0kV		Atmospheric Pressure : 101kpa
Contact discharge : ± 4.0kV		Criterion : B
Test mode : Mode A		
Location	Kind A-Air Discharge C-Contact Discharge	Result
Metal/ Screw	C	A
Slot / Button/ LED	A	A
HCP	C	A
VCP of front	C	A
VCP of rear	C	A
VCP of left	C	A
VCP of right	C	A
Note:		

10. RF FIELD STRENGTH SUSCEPTIBILITY TEST

10.1. Block Diagram of Test Setup



10.2. Test Standard

EN IEC 61000-6-1:2019
(IEC 61000-4-3:2006+A1:2007+A2:2010, Severity Level 2: 3V/m)

10.3. Severity Levels and Performance Criterion

10.3.1. Severity Levels

Level	Field Strength V/m
1.	1
2.	3
3.	10
X	Special

10.3.2. Performance Criterion: A

10.4. Operating Condition of EUT

- 10.4.1. Setup the EUT as shown on Section 10.1.
- 10.4.2. Turn on the power of all equipment.
- 10.4.3. Let the EUT work in test mode A and test it.

10.5. Test Procedure

The EUT is placed on a table that is 0.1 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna that is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna is set on test. Each of the four sides of the EUT must be faced this transmitting antenna and measured individually.

In order to judge the EUT performance, a CCD camera is used to monitor it.

All the scanning conditions are as following:

Condition of Test	Remark
1. Fielded Strength	3V/m (Severity Level 2)
2. Radiated Signal	Modulated
3. Scanning Frequency	80-6000MHz
4. Sweep time of radiated	0.0015 Decade/s
5. Dwell Time	1 Sec.

10.6. Test Results

PASS.

Please refer to the following pages.

RF Field Strength Susceptibility Test Results

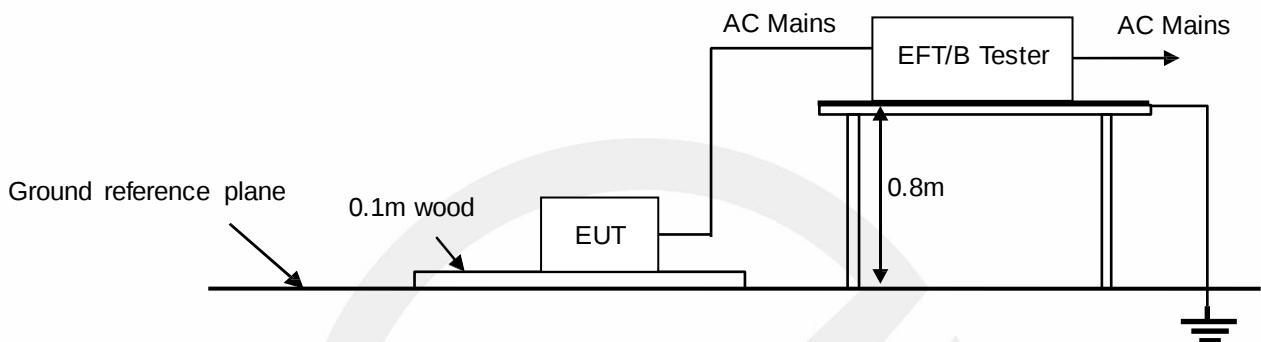
EMTEK (SHENZHEN) CO., LTD.

Applicant	: Crown Micro FZCO			
EUT	: Energy Storage System		Test Date	: 2025-04-09
M/N	: NURA-6.5KW		Temperature	: 24.7°C
Field Strength	: 3 V/m		Humidity	: 51%
Power Supply	: DC 360V, AC 230V/50Hz, DC 51.2V		Criterion	: A
Test Mode	: Mode A		Frequency Range	: 80 MHz to 1000 MHz 1400 MHz to 6000 MHz
Atmospheric Pressure : 101kpa				
Modulation:		☐ None	Pulse	☒ AM 1kHz 80%
		Frequency Rang 1: 80~ 1000MHz	Frequency Rang 2: 1400~ 6000 MHz	
Steps	1%			
	Horizontal	Vertical	Horizontal	Vertical
Front	A	A	A	A
Right	A	A	A	A
Rear	A	A	A	A
Left	A	A	A	A
Note:				

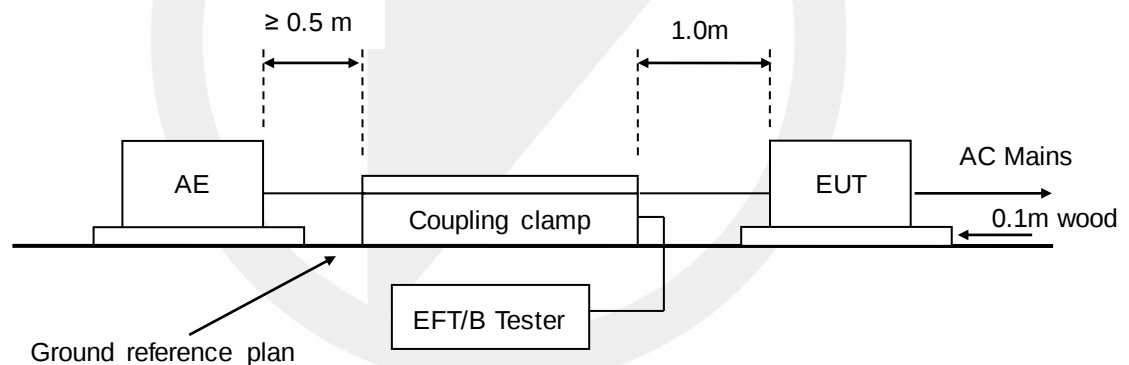
11. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

11.1. Block Diagram of Test Setup

AC Lines:



Signal lines:



11.2. Test Standard

EN IEC 61000-6-1:2019

(IEC61000-4-4:2012, Severity Level For AC Line: 1kV, DC Line/Signal/control ports 0.5kV)

11.3. Severity Levels and Performance Criterion

11.3.1. Severity level

Open Circuit Output Test Voltage $\pm 10\%$		
Level	On Power Supply Lines	On I/O (Input/Output) Signal data and control lines
1	0.5 kV	0.25 kV
2	1 kV	0.5 kV
3	2 kV	1 kV
4	4 kV	2 kV
X	Special	Special

11.3.2. Performance criterion: B

11.4. Operating Condition of EUT

11.4.1. Setup the EUT as shown on Section 11.1.

11.4.2. Turn on the power of all equipment.

11.4.3. Let the EUT work in test mode A.1, mode A.2 and test it.

11.5. Test Procedure

The EUT is put on the table that is 0.1 meter high above the ground. This reference ground plane shall project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5m.

11.5.1. For input and output AC power ports:

The EUT is connected to the power mains by using a coupling device that couples the EFT interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 2 mins.

11.5.2. For signal lines and control lines ports:

No I/O ports. It's unnecessary to test.

11.5.3. For DC output line ports:

It's unnecessary to test.

11.6. Test Results

PASS.

Please refer to the following page.

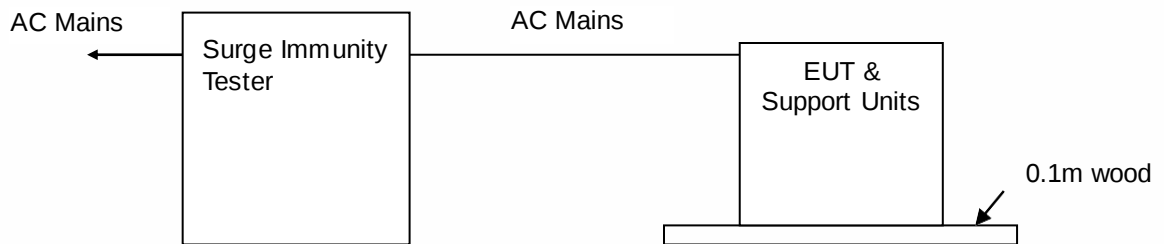
Electrical Fast Transient/Burst Test Results

EMTEK (SHENZHEN) CO., LTD.

Applicant : <u>Crown Micro FZCO</u>			
EUT : <u>Energy Storage System</u>		Test Date : <u>2025-04-09</u>	
M/N : <u>NURA-6.5KW</u>		Temperature : <u>25.2℃</u>	
Power Supply : <u>DC 360V, AC 230V/50Hz</u>		Humidity : <u>48%</u>	
Test Mode : <u>Mode A.1, Mode A.2</u>			
Line : ☒ AC Mains ☒ DC Mains		Line : ☐ Signal ☐ I/O Cable	
Coupling : ☒ Direct		Coupling : ☐ Capacitive	
Test Time : 120s			
Line	Test Voltage	Result(+)	Result(-)
AC Mains	1kV	A	A
DC Line	0.5kV	A	A
Note:			

12. SURGE IMMUNITY TEST

12.1. Block Diagram of Test Setup



12.2. Test Standar

EN IEC 61000-6-1:2019
(IEC 61000-4-5:2014)

12.3. Severity Levels and Performance Criterion

12.3.1. Severity level

Severity Level	Open-Circuit Test Voltage kV
1	0.5
2	1.0
3	2.0
4	4.0
*	Special

12.3.2. Performance criterion: B

12.4. Operating Condition of EUT

12.4.1. Setup the EUT as shown on Section 12.1.

12.4.2. Turn on the power of all equipment.

12.4.3. Let the EUT work in test mode A.1, mode A.2 and test it.

12.5. Test Procedure

- 1) Set up the EUT and test generator as shown on Section 12.1.
- 2) For line to line coupling mode, provide a 1.0 kV 1.2/50us voltage surge (At open-circuit condition) and 8/20us current surge to EUT selected points.
- 3) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
- 4) Different phase angles are done individually.
- 5) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

12.6. Test Results

PASS.

Please refer to the following page.



Surge Immunity Test Result

EMTEK (SHENZHEN) CO., LTD.

Applicant : Crown Micro FZCO

EUT : Energy Storage System

M/N : NURA-6.5KW

Power Supply : DC 360V, AC 230V/50Hz

Test Mode : Mode A.1 Mode A.2

Test Date : 2025-04-09

Temperature : 25.2℃

Humidity : 48%

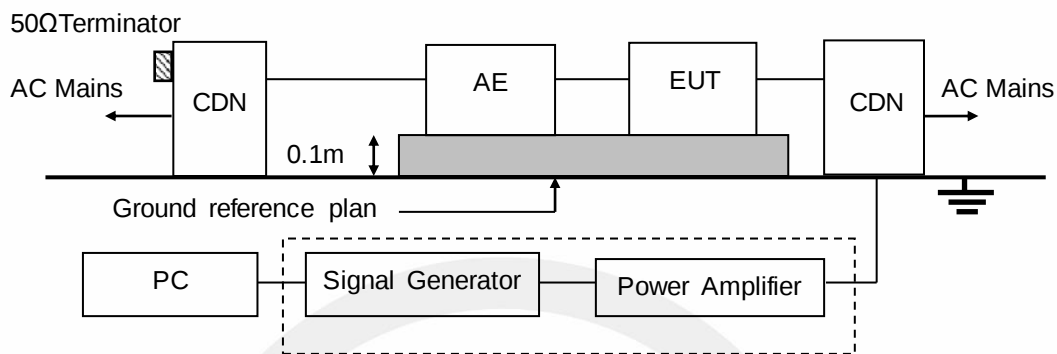
Criterion : B

Location	Polarity	Phase Angle	Number of Pulse	Pulse Voltage (kV)	Result
L-N	+	0°/90°/180°/270°	5	1.0	A
	-	0°/90°/180°/270°	5	1.0	A
L-PE	+	0°/90°/180°/270°	5	2.0	A
	-	0°/90°/180°/270°	5	2.0	A
N-PE	+	0°/90°/180°/270°	5	2.0	A
	-	0°/90°/180°/270°	5	2.0	A
P-N	+	/	5	0.5	A
	-	/	5	0.5	A
P-PE	+	/	5	1.0	A
	-	/	5	1.0	A
N-PE	+	/	5	1.0	A
	-	/	5	1.0	A

Remark:

13. INJECTED CURRENTS SUSCEPTIBILITY TEST

13.1. Block Diagram of Test Setup



13.2. Test Standard

EN IEC 61000-6-1:2019
(IEC 61000-4-6:2013, Severity Level: Level 2, 3V (r.m.s.), 0.15MHz ~ 80MHz)

13.3. Severity Levels and Performance Criterion

13.3.1. Severity level

Level	Field Strength V
1	1
2	3
3	10
X	Special

13.3.2. Performance criterion: A

13.4. Operating Condition of EUT

13.4.1. Setup the EUT as shown on Section 13.1.

13.4.2. Turn on the power of all equipment.

13.4.3. Let the EUT work in test mode A.1, mode A.2 and test it.

13.5. Test Procedure

- 1) Set up the EUT, CDN and test generators as shown on Section 13.1.
- 2) Let the EUT work in test mode and measure it.
- 3) The EUT are placed on an insulating support 0.1 m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).
- 4) The disturbance signal described below is injected to EUT through CDN.
- 5) The EUT operates within its operational mode(s) under intended climatic conditions after power on.
- 6) The frequency range is swept from 150kHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1kHz sine wave.
- 7) The rate of sweep shall not exceed 1.5×10^{-3} decades/s. where the frequency is swept incrementally; the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.
- 8) Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.

13.6. Test Results

PASS.

Please refer to the following page.

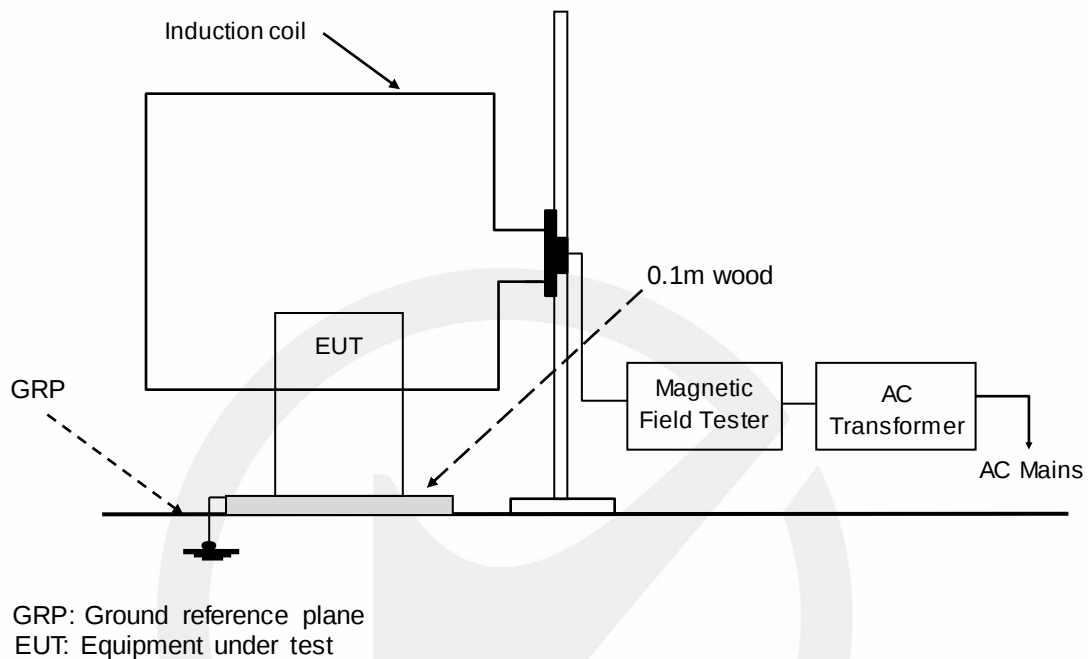
Injected Currents Susceptibility Test Results

EMTEK (SHENZHEN) CO., LTD.

Applicant : <u>Crown Micro FZCO</u>				
EUT : <u>Energy Storage System</u>			Test Date: <u>2025-04-09</u>	
M/N : <u>NURA-6.5KW</u>			Temperature : <u>25.2°C</u>	
Power Supply : <u>DC 360V, AC 230V/50Hz</u>			Humidity : <u>48%</u>	
Test Mode: <u>Mode A.1, Mode A.2</u>				
Frequency Range (MHz)	Injected Position	Strength (Unmodulated)	Criterion	Result
0.15 ~ 80	AC Mains	3V	A	A
0.15 ~ 80	DC Line	3V	A	A
Test Mode : <u>N/A</u>				
Frequency Range (MHz)	Injected Position	Strength (Unmodulated)	Criterion	Result
Remark : 1. Modulation Signal:1kHz 80% AM Measurement Equipment : Simulator: CWS 500C (SWITZERLAND EMTEST) CDN : ☐ CDN-M2 (SWITZERLAND EMTEST) ☐ CDN-M3 (SWITZERLAND EMTEST) ☒ CDN-M532 (TESEQ) ☐ Injection Clamp (EMTEST F-2031-23MM)		Note:		

14. MAGNETIC FIELD SUSCEPTIBILITY TEST

14.1. Block Diagram of Test Setup



14.2. Test Standard

EN IEC 61000-6-1:2019
(IEC 61000-4-8:2009, Severity Level: Level 2, 3A / m)

14.3. Severity Levels and Performance Criterion

14.3.1. Severity Levels

Level	Field Strength A/m
1	1
2	3
3	10
4	30
5	100
X	Special

14.3.2. Performance Criterion: A

14.4. Operating Condition of EUT

- 14.4.1. Setup the EUT as shown on Section 14.1.
- 14.4.2. Turn on the power of all equipment.
- 14.4.3. Let the EUT work in test mode A and test it.

14.5. Test Procedure

The EUT is placed in the middle of a induction coil (1*1m), under which is a 1*1*0.1m (high) table, this small table is also placed on a larger table, above the ground. Both horizontal and vertical polarization of the induction coil is set on test, so that each side of the EUT is affected by the magnetic field. Also can reach the same aim by change the position of the EUT.

14.6. Test Results

PASS.

Please refer to the following page.



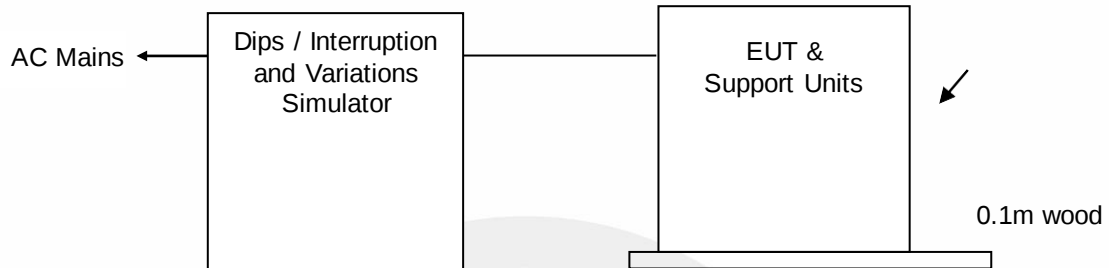
Magnetic Field Immunity Test Result

EMTEK (SHENZHEN) CO., LTD.

Standard: ☒ IEC 61000-4-8		Result: ☒ PASS / ☐ FAIL		
Applicant : <u>Crown Micro FZCO</u> EUT : <u>Energy Storage System</u> M/N : <u>NURA-6.5KW</u> Input Voltage : <u>DC 360V, AC 230V/50Hz, DC 51.2V</u> Date of Test : <u>2025-04-09</u> Ambient Condition : Temp : <u>25.2°C</u> Humid: <u>48%</u> Criterion: A				
Operation Mode: Mode A				
Test Level (A/m)	Testing Duration	Coil Orientation	Criterion	Result
3	5 mins	X	A	A
3	5 mins	Y	A	A
3	5 mins	Z	A	A
Operation Mode: N/A				
Test Level (A/m)	Testing Duration	Coil Orientation	Criterion	Result
Test Equipment	Magnetic Field Test: HEAFELY MAG 100.1			
Note:				

15. VOLTAGE DIPS AND INTERRUPTIONS TEST

15.1. Block Diagram of Test Setup



15.2. Test Standard

EN IEC 61000-6-1:2019 (IEC 61000-4-34:2005+A1:2009)

15.3. Severity Levels and Performance Criterion

15.3.1. Severity level

Test Level %UT	Voltage dip and short interruptions %UT	Duration (in period)
0	100	0.5
70	30	1
0	100	5
		10
		25
		50
		*

15.3.2. Performance criterion: B&C

15.4. Operating Condition of EUT

15.4.1. Setup the EUT as shown on Section 15.1.

15.4.2. Turn on the power of all equipment.

15.4.3. Let the EUT work in test mode (AC Charging) and test it.

15.5. Test Procedure

- 1) Set up the EUT and test generator as shown on Section 15.1.
- 2) The interruption is introduced at selected phase angles with specified duration.
- 3) Record any degradation of performance.

15.6. Test Results

PASS.

Please refer to the following page.



Voltage Dips and Interruptions Test Results

EMTEK (SHENZHEN) CO., LTD.

Applicant : Crown Micro FZCO

EUT : Energy Storage System

M/N : NURA-6.5KW

Power Supply : AC 230V/50Hz

Test Mode: AC Charging

Test Date : 2025-04-09

Temperature : 25.2°C

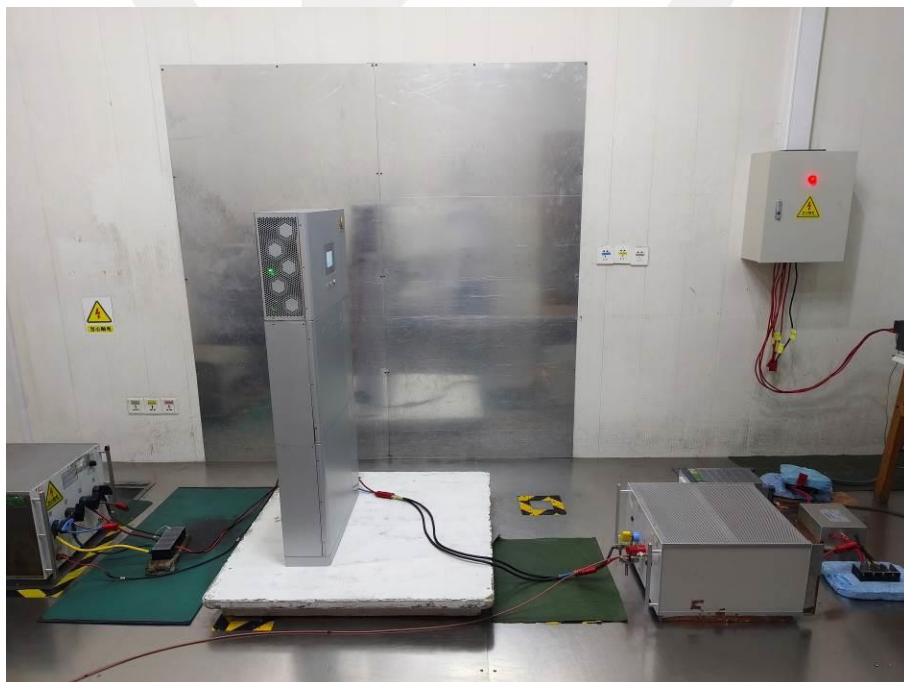
Humidity : 48%

Test Level % U _T	Voltage Dips & Short Interruptions % U _T	Duration (in periods)	Criterion ☐ A ☒ B ☒ C ☐ D	Result
0	100	0.5P	B	A
0	100	1P	B	A
70	30	25P	C	A
0	100	250P	C	B

Note: When it dropped to 0% and 250P, the prototype stopped charging and automatically returned to normal after the test was completed.

16. PHOTOGRAPHS

16.1. Photos of Conducted Emission Measurement



16.2. Photos of Radiation Emission Measurement



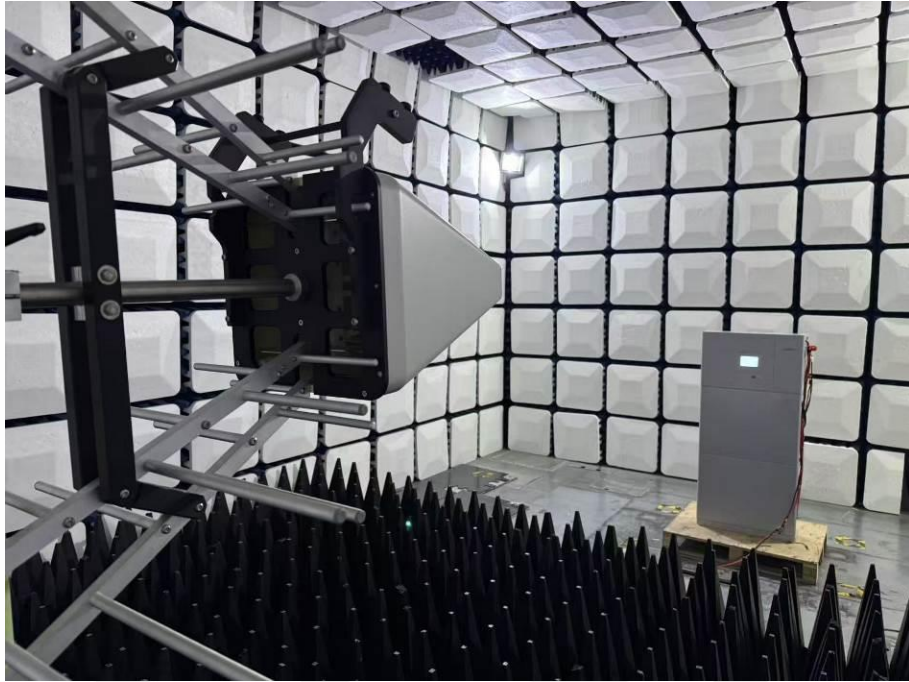
16.3.Photo of Harmonic / Flicker Measurement



16.4.Photo of Electrostatic Discharge Test



16.5.Photo of RF Field Strength Susceptibility Test



16.6.Photo of Electrical Fast Transient / Burst Test





16.7.Photo of Surge Test



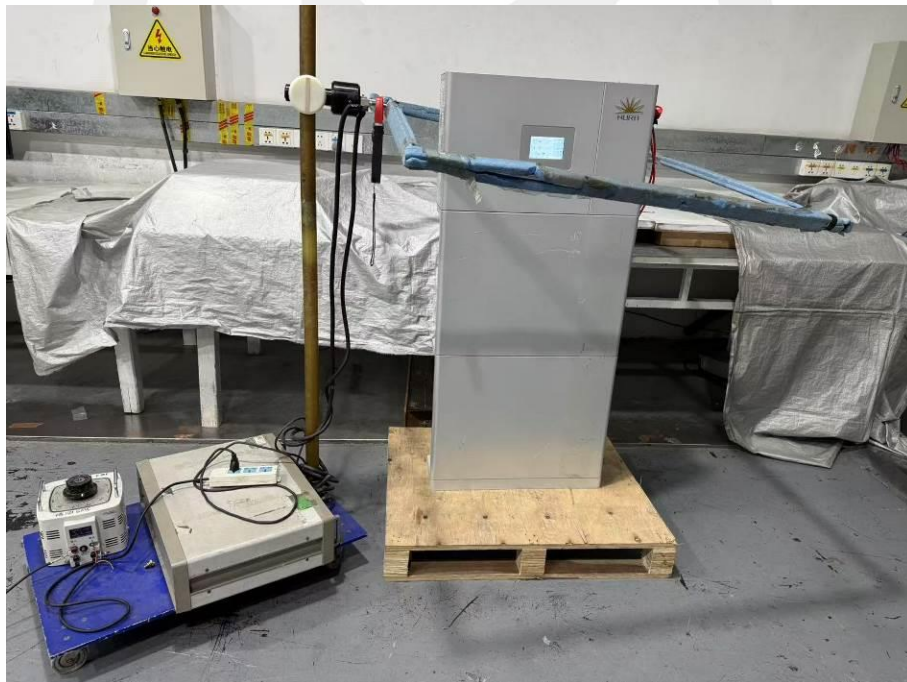


16.8.Photo of Injected Currents Susceptibility Test





16.9. Photo of Magnetic Field Immunity Test



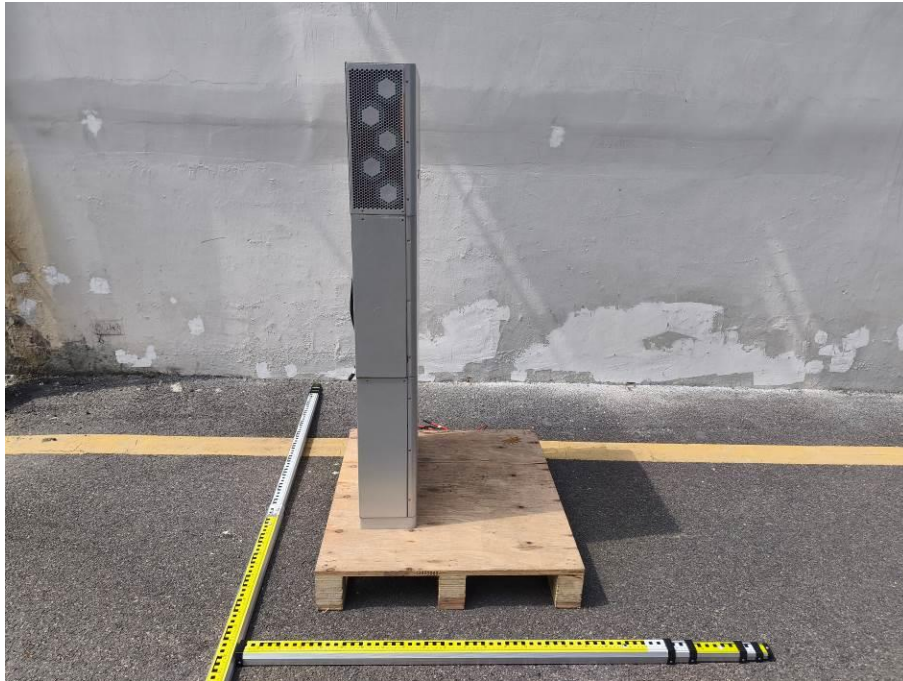
16.10.Photo of Voltage Dips and Interruption Immunity Test

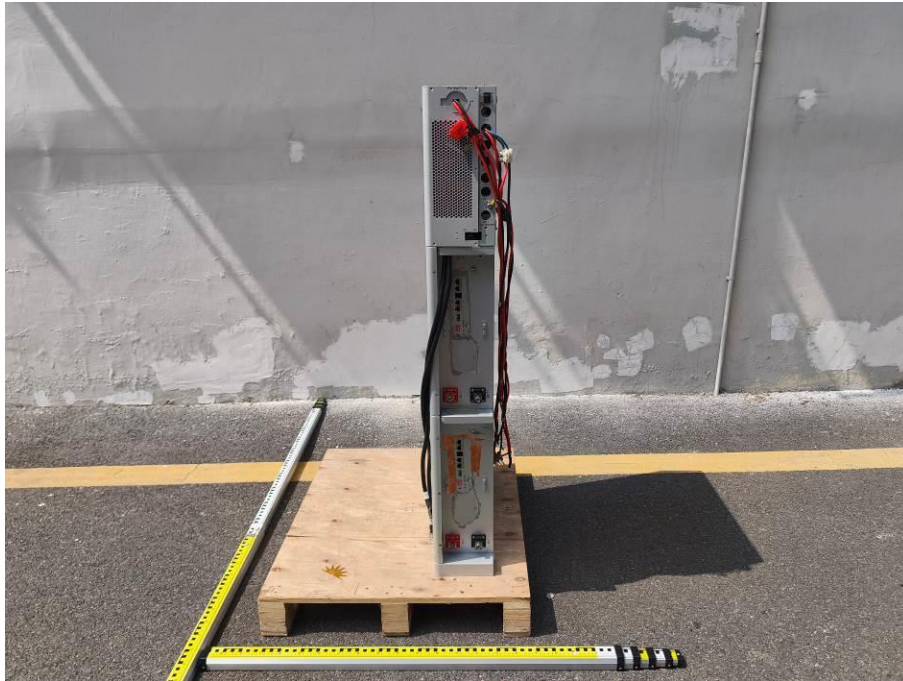




APPENDIX (Photos of EUT)







End of Report

Statement

- 1 . This report is invalid without the signature of the authorized approver and "special seal for testing".
- 2 . This report shall not be copied partly without authorization.
- 3 . The test results or observations are applicable only to tested sample. Client shall be responsible for representativeness of the sample and authenticity of the material.
- 4 . The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.
- 5 . The test results or observations are provided in accordance with measured value, without taking risks caused by uncertainty into account. Without explicit stipulation in special agreements, standards or regulations, EMTEK shall not assume any responsibility.
- 6 . Objections shall be raised within 20 days from the date receiving the report.