

EMC TEST REPORT

For

Shanghai Rhimo Power Technology Co., Ltd

Product Name: Uninterruptible Power systems(UPS)

Test Model(s): RM31-20K-H

Report Reference No. : DACE250515030RL001

Applicant's Name : Shanghai Rhimo Power Technology Co., Ltd

Address : Room 8008, Building 5, No. 741 Yaozhou Road, Xincun Township,
Chongming District, Shanghai (Shanghai Xincun Economic Community)

Testing Laboratory : Shenzhen DACE Testing Technology Co., Ltd.

Address : 102, Building H1, & 1/F., Building H, Hongfa Science & Technology Park,
Tangtou Community, Shiyan Subdistrict, Bao'an District, Shenzhen,
Guangdong, China

Test Specification Standard : EN IEC 62040-2:2018

Date of Receipt : May 14, 2025

Date of Test : May 14, 2025 to May 19, 2025

Data of Issue : May 19, 2025

Result : PASS

Note: This report shall not be reproduced except in full, without the written approval of Shenzhen DACE Testing Technology Co., Ltd. This document may be altered or revised by Shenzhen DACE Testing Technology Co., Ltd. personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample



000005177

Apply for company information

Applicant's Name	:	Shanghai Rhimo Power Technology Co., Ltd
Address	:	Room 8008, Building 5, No. 741 Yaozhou Road, Xincun Township, Chongming District, Shanghai (Shanghai Xincun Economic Community)
Product Name	:	Uninterruptible Power systems(UPS)
Test Model(s)	:	RM31-20K-H
Series Model(s)	:	RM31-10K-H, RM31-15K-H
Test Specification Standard(s)	:	EN IEC 62040-2:2018

NOTE1:

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EU Directives.



NOTE2:

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

Compiled by:

Amy Zhu / Test Engineer

May 19, 2025

Supervised by:

Stone Yin / Project Engineer

May 19, 2025

Approved by:

Tom Chen / Manager

May 19, 2025



Revision History Of Report

Version	Description	REPORT No.	Issue Date
V1.0	Original	DACE250515030RL001	May 19, 2025

CONTENTS

1 TEST SUMMARY	5
1.1 TEST STANDARDS	5
1.2 SUMMARY OF TEST RESULT	5
2 GENERAL INFORMATION	6
2.1 CLIENT INFORMATION	6
2.2 DESCRIPTION OF DEVICE (EUT)	6
2.3 DESCRIPTION OF TEST MODES	6
2.4 DESCRIPTION OF SUPPORT UNITS	6
2.5 EQUIPMENTS USED DURING THE TEST	7
2.6 STATEMENT OF THE MEASUREMENT UNCERTAINTY	10
3 EMISSION TEST RESULTS (EMI)	11
3.1 CONDUCTED EMISSIONS FROM AC INPUT POWER PORT	11
3.1.1 E.U.T. Operation:	11
3.1.2 Test Setup Diagram:	11
3.1.3 Test Data:	12
3.2 RADIATED EMISSIONS	16
3.2.1 E.U.T. Operation:	16
3.2.2 Test Setup Diagram:	16
3.2.3 Test Data:	17
3.3 LOW-FREQUENCY EMISSION - INPUT CURRENT HARMONICS	19
3.3.1 E.U.T. Operation:	19
3.3.2 Test Setup Diagram:	19
3.3.3 Test Data:	19
4 IMMUNITY TEST RESULTS (EMS)	20
4.1 ELECTROSTATIC DISCHARGE	21
4.1.1 E.U.T. Operation:	21
4.1.2 Test Setup Diagram:	21
4.1.3 Test Data:	22
4.2 RADIO-FREQUENCY ELECTROMAGNETIC FIELD	23
4.2.1 E.U.T. Operation:	23
4.2.2 Test Setup Diagram:	23
4.2.3 Test Data:	23
4.3 FAST TRANSIENT-BURST (AC INPUT POWER PORT)	24
4.3.1 E.U.T. Operation:	24
4.3.2 Test Setup Diagram:	24
4.3.3 Test Data:	24
4.4 FAST TRANSIENT-BURST (AC OUTPUT POWER PORT)	25
4.4.1 E.U.T. Operation:	25
4.4.2 Test Setup Diagram:	25
4.4.3 Test Data:	25
4.5 SURGE (AC INPUT POWER PORT)	26
4.5.1 E.U.T. Operation:	26
4.5.2 Test Setup Diagram:	26
4.5.3 Test Data:	26
5 PHOTOS OF THE EUT	27

1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

EN IEC 62040-2:2018: Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements

1.2 Summary of Test Result

Item	Standard	Method	Requirement	Result
Conducted emissions from AC input power port	EN IEC 62040-2:2018	EN IEC 62040-2 Annex A.6	EN IEC 62040-2 Clause 5.3.2	Pass
Radiated emissions	EN IEC 62040-2:2018	EN IEC 62040-2 Annex A.8	EN IEC 62040-2 Clause 5.3.3	Pass
Low-frequency emission - Input current harmonics	EN IEC 62040-2:2018	EN 61000-3-12, clause 7	EN IEC 62040-2 Clause 5.3.2.6	N/A
Electrostatic discharge	EN IEC 62040-2:2018	EN IEC 62040-2 Annex D.2; EN 61000-4-2, clauses 6, 7 and 8	EN IEC 62040-2 Clause 6.3.3	Pass
Radio-frequency electromagnetic field	EN IEC 62040-2:2018	EN IEC 62040-2 Annex D.3; EN 61000-4-3, clauses 6, 7 and 8	EN IEC 62040-2 Clause 6.3.3	Pass
Fast transient-burst (AC input power port)	EN IEC 62040-2:2018	EN IEC 62040-2 Annex D.4; EN 61000-4-4, clauses 5	EN IEC 62040-2 Clause 6.3.3	Pass
Fast transient-burst (AC output power port)	EN IEC 62040-2:2018	EN IEC 62040-2 Annex D.4; EN 61000-4-4, clauses 5	EN IEC 62040-2 Clause 6.3.3	Pass
Immunity to low-frequency signals (AC input power port)	EN IEC 62040-2:2018	EN IEC 62040-2 Annex D.6; EN 61000-2-2	EN IEC 62040-2 Clause 6.3.3	N/A
Surge (AC input power port)	EN IEC 62040-2:2018	EN IEC 62040-2 Annex D.5; EN 61000-4-5, clauses 7 and 8	EN IEC 62040-2 Clause 6.3.3	Pass

2 GENERAL INFORMATION

2.1 Client Information

Applicant's Name : Shanghai Rhimo Power Technology Co., Ltd
Address : Room 8008, Building 5, No. 741 Yaozhou Road, Xincun Township, Chongming District, Shanghai (Shanghai Xincun Economic Community)
Manufacturer : Shanghai Rhimo Power Technology Co., Ltd
Address : Room 8008, Building 5, No. 741 Yaozhou Road, Xincun Township, Chongming District, Shanghai (Shanghai Xincun Economic Community)

2.2 Description of Device (EUT)

Product Name:	Uninterruptible Power systems(UPS)
Model/Type reference:	RM31-20K-H
Series Model:	RM31-10K-H, RM31-15K-H
Model Difference:	The names are different, the power is different, and the appearance dimensions are different, the circuit principle is the same, and all the tests are based on the model RM31-20K-H
Trade Mark:	RhimoPower
Power Supply:	Input: 190-520V~;44~56Hz Output: 220V~;50Hz

2.3 Description of Test Modes

No	Title	Description
TM1	Charging+Discharging	AC 380V/50Hz
TM2	Charging	Pre-scan
TM3	Discharging	Pre-scan
***Note: All test modes weretested, but we only recorded the worst case inthis report.		

2.4 Description of Support Units

The EUT was tested as an independent device.

2.5 Equipments Used During The Test

Conducted emissions from AC input power port

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
loop antenna	EVERFINE	LLA-2	80900L-C	2024-12-19	2025-12-18
Power absorbing clamp	SCHWARZ BECK	MESS-ELEKTRONIK	/	2025-04-23	2026-04-22
Electric Network	SCHWARZ BECK	CAT5 8158	CAT5 8158#207	2025-04-18	2026-04-17
Cable	SCHWARZ BECK	/	/	2025-04-18	2026-04-17
Pulse Limiter	SCHWARZ BECK	VTSD 9561-F Pulse limiter 10dB Attenuation	561-G071	2024-12-06	2025-12-05
50ΩCoaxial Switch	Anritsu	MP59B	M20531	/	/
Test Receiver	Rohde & Schwarz	ESPI TEST RECEIVER	ID:1164.6607K 03-102109-MH	2025-04-25	2026-04-24
L.I.S.N	R&S	ESH3-Z5	831.5518.52	2025-04-18	2026-04-17
L.I.S.N	SCHWARZ BECK	NSLK 8126	05055	2025-04-18	2026-04-17
Pulse Limiter	CYBERTEK	EM5010A	/	2024-09-27	2025-09-26
EMI test software	EZ -EMC	EZ	V1.1.42	/	/

Radiated emissions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Cable(HF)2	SCHWARZ BECK	50Ω	/	2025-04-18	2026-04-17
Cable(HF)1	SCHWARZ BECK	50Ω	/	2025-04-18	2026-04-17
Cable(LF)2	SCHWARZ BECK	50Ω	/	2025-04-18	2026-04-17
Cable(LF)1	SCHWARZ BECK	50Ω	/	2025-04-18	2026-04-17
control	MF	MF-7802	MF780208362	2024-12-09	2025-12-08
Test Receiver	Rohde & Schwarz	ESPI TEST RECEIVER	ID:1164.6607K 03-102109-MH	2025-04-25	2026-04-24
EMI Test software	Farad	EZ -EMC	V1.1.42	/	/
Positioning Controller	MF	MF-7802	/	/	/
Amplifier(18-40G)	COM-POWER	AH-1840	10100008-1	2024-04-26	2027-04-25
Horn antenna	COM-POWER	AH-1840 (18-40G)	10100008	2024-04-26	2027-04-25
Loop antenna	ZHINAN	ZN30900C	ZN30900C	2025-04-28	2026-04-27
Power amplifier(LF)	Schwarzbeck	BBV9743	9743-151	2025-04-29	2026-04-28
Power amplifier(HF)	Schwarzbeck	BBV9718	9718-282	2025-04-29	2026-04-28
Test Receiver	R&S	ESCI 3	1166.5950K03 -101431-Jq	2025-04-18	2026-04-17
Horn Antenna	Sunol Sciences	DRH-118	A091114	2025-04-21	2026-04-20
Broadband Antenna	Sunol Sciences	JB6 Antenna	A090414	2024-09-28	2026-09-27

Low-frequency emission - Input current harmonics					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Harmonic current/scintillation analyzer	TTI	AC 2000A	72314	2024-12-06	2025-12-05
PC	/	P2L97	N/A	/	/

Electrostatic discharge					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
ESD Tester	Prima	ESD61002A	144305	2024-12-06	2025-12-05

Radio-frequency electromagnetic field

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
PC	/	486DX2	/	/	/
Log-periodic Antenna	AR	AT1080	16812	/	/
Biconic Antenna	EMCO	3108	9507-2534	/	/
Isotropic Field Probe	AR	FP2000	16755	2024-11-27	2025-11-26
Isotropic Field Monitor	AR	FM2000	16829	/	/
Amplifier	AR	100W/1000M1	17028	/	/
Amplifier	AR	500A100	17034	/	/
Signal Generator	HP	8648A	3625U00573	2023-12-12	2025-12-11

Fast transient-burst (AC output power port)
Fast transient-burst (AC input power port)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coupling Clamp	HTEC	H3C	147147	2024-12-06	2025-12-05
Burst Tester	HTEC	HEFT 51	144303	2024-12-24	2025-12-23

Immunity to low-frequency signals (AC input power port)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
-----------	--------------	----------	--------------	----------	--------------

Surge (AC input power port)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Surge Tester	Prima	SUG61005TB	PR160351170	2024-12-06	2025-12-05
CDN coupling/decoupling network	Prima	DATA-CDN-8B	PR201254826	/	/

2.6 Statement Of The Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Disturbance (0.15~30MHz)	$\pm 3.41\text{dB}$
Radiated Emission (Below 1GHz)	$\pm 5.79\text{dB}$
Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.	

3 Emission Test Results (EMI)

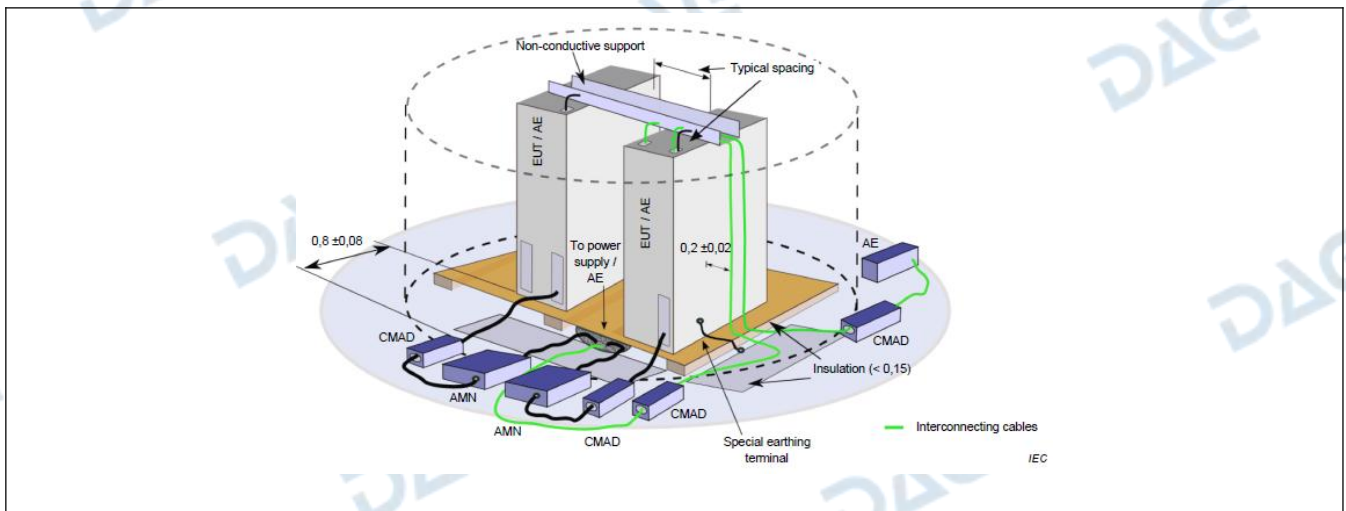
3.1 Conducted emissions from AC input power port

Test Requirement:	EN IEC 62040-2 Clause 5.3.2																																																											
Test Limit:	<table><tr><th rowspan="3">UPS rated output current A</th><th rowspan="3">Frequency range MHz</th><th colspan="4">Limits dB (μV)</th></tr><tr><th colspan="2">Mains terminal</th><th colspan="2">Network port</th></tr><tr><th>Quasi-peak</th><th>Average</th><th>Quasi-peak</th><th>Average</th></tr><tr><td rowspan="3">> 16 to 100</td><td>0,15 to 0,50^b</td><td>100</td><td>90</td><td>110 to 100^a</td><td>94 to 84^a</td></tr><tr><td>0,50 to 5,0^b</td><td>86</td><td>76</td><td rowspan="2">100</td><td rowspan="2">84</td></tr><tr><td>5,0 to 30,0</td><td>90 to 73^a</td><td>80 to 60^a</td></tr><tr><td rowspan="3">> 100</td><td>0,15 to 0,50^b</td><td>130</td><td>120</td><td>110 to 100^a</td><td>94 to 84^a</td></tr><tr><td>0,50 to 5,0^b</td><td>125</td><td>115</td><td rowspan="2">100</td><td rowspan="2">84</td></tr><tr><td>5,0 to 30,0</td><td>115</td><td>105</td></tr><tr><td colspan="6">^a The limits decrease linearly with the logarithm of the frequency.</td></tr><tr><td colspan="6">^b The lower limit shall apply at the transition frequency.</td></tr></table>						UPS rated output current A	Frequency range MHz	Limits dB (μV)				Mains terminal		Network port		Quasi-peak	Average	Quasi-peak	Average	> 16 to 100	0,15 to 0,50 ^b	100	90	110 to 100 ^a	94 to 84 ^a	0,50 to 5,0 ^b	86	76	100	84	5,0 to 30,0	90 to 73 ^a	80 to 60 ^a	> 100	0,15 to 0,50 ^b	130	120	110 to 100 ^a	94 to 84 ^a	0,50 to 5,0 ^b	125	115	100	84	5,0 to 30,0	115	105	^a The limits decrease linearly with the logarithm of the frequency.						^b The lower limit shall apply at the transition frequency.					
UPS rated output current A	Frequency range MHz	Limits dB (μV)																																																										
		Mains terminal		Network port																																																								
		Quasi-peak	Average	Quasi-peak	Average																																																							
> 16 to 100	0,15 to 0,50 ^b	100	90	110 to 100 ^a	94 to 84 ^a																																																							
	0,50 to 5,0 ^b	86	76	100	84																																																							
	5,0 to 30,0	90 to 73 ^a	80 to 60 ^a																																																									
> 100	0,15 to 0,50 ^b	130	120	110 to 100 ^a	94 to 84 ^a																																																							
	0,50 to 5,0 ^b	125	115	100	84																																																							
	5,0 to 30,0	115	105																																																									
^a The limits decrease linearly with the logarithm of the frequency.																																																												
^b The lower limit shall apply at the transition frequency.																																																												
Test Method:	EN IEC 62040-2 Annex A.6																																																											
Procedure:	An PASSial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.																																																											

3.1.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

3.1.2 Test Setup Diagram:



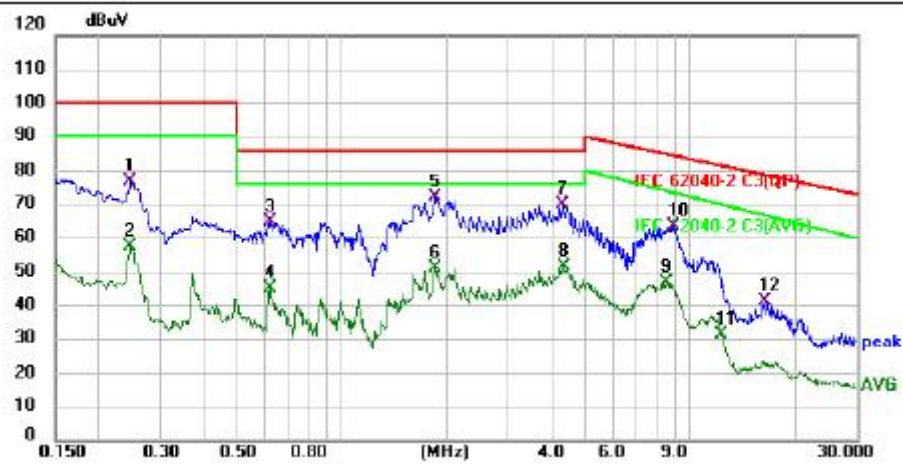
3.1.3 Test Data:

TM1 / Line: L1



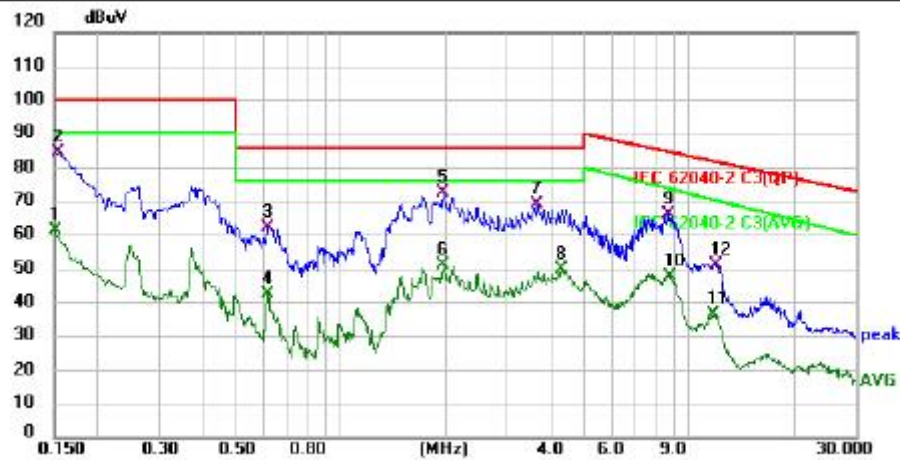
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1539	59.52	10.10	69.62	100.0	-30.38	QP	
2		0.1660	36.87	10.10	46.97	90.00	-43.03	AVG	
3		0.3288	35.19	10.09	45.28	90.00	-44.72	AVG	
4		0.3412	53.78	10.09	63.87	100.0	-36.13	QP	
5		1.8140	47.74	10.01	57.75	76.00	-18.25	AVG	
6	*	2.0493	67.58	10.00	77.58	86.00	-8.42	QP	
7		3.4483	40.14	10.12	50.26	76.00	-25.74	AVG	
8		3.4646	60.76	10.12	70.88	86.00	-15.12	QP	
9		9.4905	45.55	10.32	55.87	83.92	-28.05	QP	
10		11.6715	22.59	10.37	32.96	70.54	-37.58	AVG	
11		26.9807	32.40	10.94	43.34	74.01	-30.67	QP	
12		26.9807	10.90	10.94	21.84	61.18	-39.34	AVG	

TM1 / Line: L2



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
		MHz	dBuV	Factor	ment	dBuV	dB		
1		0.2456	66.89	10.09	76.98	100.0	-23.02	QP	
2		0.2456	47.55	10.09	57.64	90.00	-32.36	AVG	
3		0.6181	55.01	10.07	65.08	86.00	-20.92	QP	
4		0.6181	35.06	10.07	45.13	76.00	-30.87	AVG	
5	*	1.8431	62.15	10.01	72.16	86.00	-13.84	QP	
6		1.8530	41.04	10.01	51.05	76.00	-24.95	AVG	
7		4.2834	60.09	10.18	70.27	86.00	-15.73	QP	
8		4.3062	41.28	10.18	51.46	76.00	-24.54	AVG	
9		8.5355	36.75	10.29	47.04	74.03	-26.99	AVG	
10		8.9528	53.48	10.30	63.78	84.47	-20.69	QP	
11		12.3072	21.14	10.39	31.53	69.95	-38.42	AVG	
12		16.3018	30.74	10.49	41.23	78.79	-37.56	QP	

TM1 / Line: L3



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
		MHz	Level	Factor	ment				
1		0.1500	51.48	10.10	61.58	90.00	-28.42	AVG	
2		0.1532	74.69	10.10	84.79	100.0	-15.21	QP	
3		0.6148	52.48	10.07	62.55	86.00	-23.45	QP	
4		0.6148	32.60	10.07	42.67	76.00	-33.33	AVG	
5	*	1.9540	62.55	10.00	72.55	86.00	-13.45	QP	
6		1.9643	41.32	9.99	51.31	76.00	-24.69	AVG	
7		3.6534	58.93	10.13	69.06	86.00	-16.94	QP	
8		4.2834	39.70	10.18	49.88	76.00	-26.12	AVG	
9		8.7185	56.02	10.29	66.31	84.72	-18.41	QP	
10		8.8115	37.57	10.29	47.86	73.68	-25.82	AVG	
11		11.6715	26.13	10.37	36.50	70.54	-34.04	AVG	
12		11.9217	41.01	10.38	51.39	81.76	-30.37	QP	

TM1 / Line: N



No. Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
	MHz	dBuV	Factor	ment	dBuV	dB	Detector	Comment
1	0.1500	58.79	10.10	68.89	100.0	-31.11	QP	
2	0.1693	38.65	10.10	48.75	90.00	-41.25	AVG	
3	0.3341	53.06	10.09	63.15	100.0	-36.85	QP	
4	0.3341	33.43	10.09	43.52	90.00	-46.48	AVG	
5	0.9910	45.73	10.08	55.81	76.00	-20.19	AVG	
6	1.0070	63.36	10.08	73.44	86.00	-12.56	QP	
7 *	2.0493	69.73	10.00	79.73	86.00	-6.27	QP	
8	2.1381	46.22	10.01	56.23	76.00	-19.77	AVG	
9	3.4830	39.29	10.12	49.41	76.00	-26.59	AVG	
10	3.6340	61.67	10.13	71.80	86.00	-14.20	QP	
11	9.4905	46.65	10.32	56.97	83.92	-26.95	QP	
12	12.5710	23.95	10.40	34.35	69.71	-35.36	AVG	

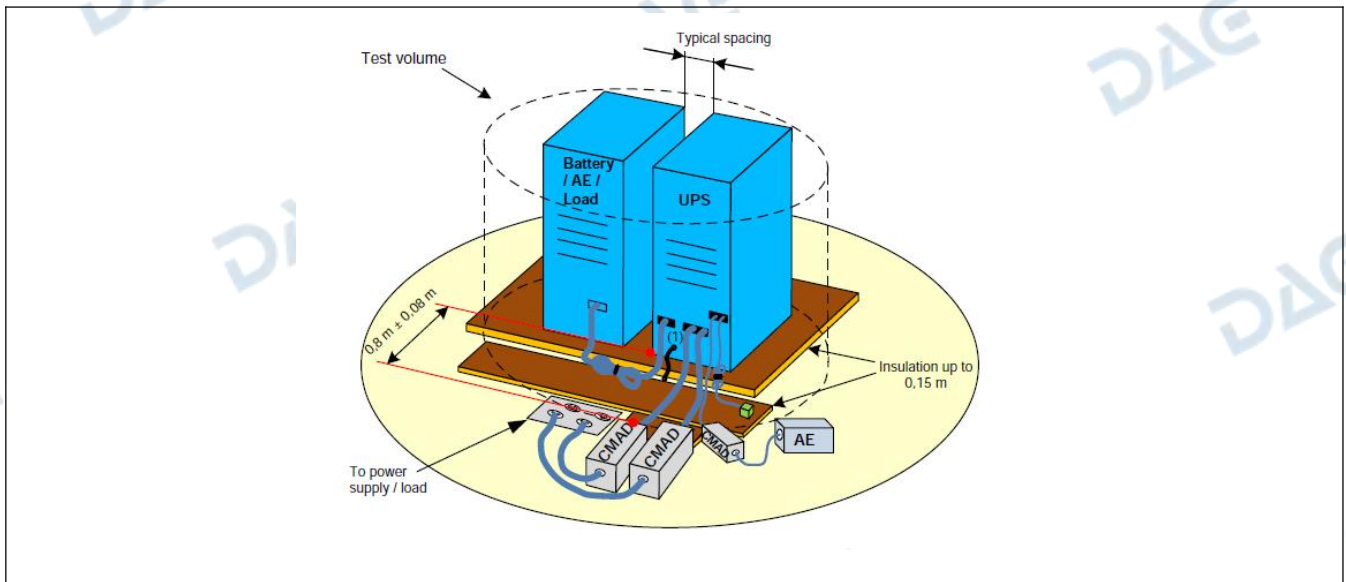
3.2 Radiated emissions

Test Requirement:	EN IEC 62040-2 Clause 5.3.3																
Test Limit:	<table><tr><th>Frequency range</th><th colspan="3">Quasi-peak limits dB (μV/m)</th></tr><tr><th>MHz</th><th>Category C1 UPS</th><th>Category C2 UPS</th><th>Category C3 UPS</th></tr><tr><td>30 to 230^a</td><td>30</td><td>40</td><td>50</td></tr><tr><td>230 to 1 000</td><td>37</td><td>47</td><td>60</td></tr></table> ^a The lower limit shall apply at the transition frequency. Note: The test distance is 10 m. If the emission measurement at 10 m cannot be made because of high ambient noise levels or for other reasons, measurements are made at a closer distance, for example 3 m. An inverse proportionality factor of 20 dB per decade is used to normalize the measured data to the specified distance for determining compliance.	Frequency range	Quasi-peak limits dB (μV/m)			MHz	Category C1 UPS	Category C2 UPS	Category C3 UPS	30 to 230 ^a	30	40	50	230 to 1 000	37	47	60
Frequency range	Quasi-peak limits dB (μV/m)																
MHz	Category C1 UPS	Category C2 UPS	Category C3 UPS														
30 to 230 ^a	30	40	50														
230 to 1 000	37	47	60														
Test Method:	EN IEC 62040-2 Annex A.8																
Procedure:	An PASSial 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.																

3.2.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

3.2.2 Test Setup Diagram:

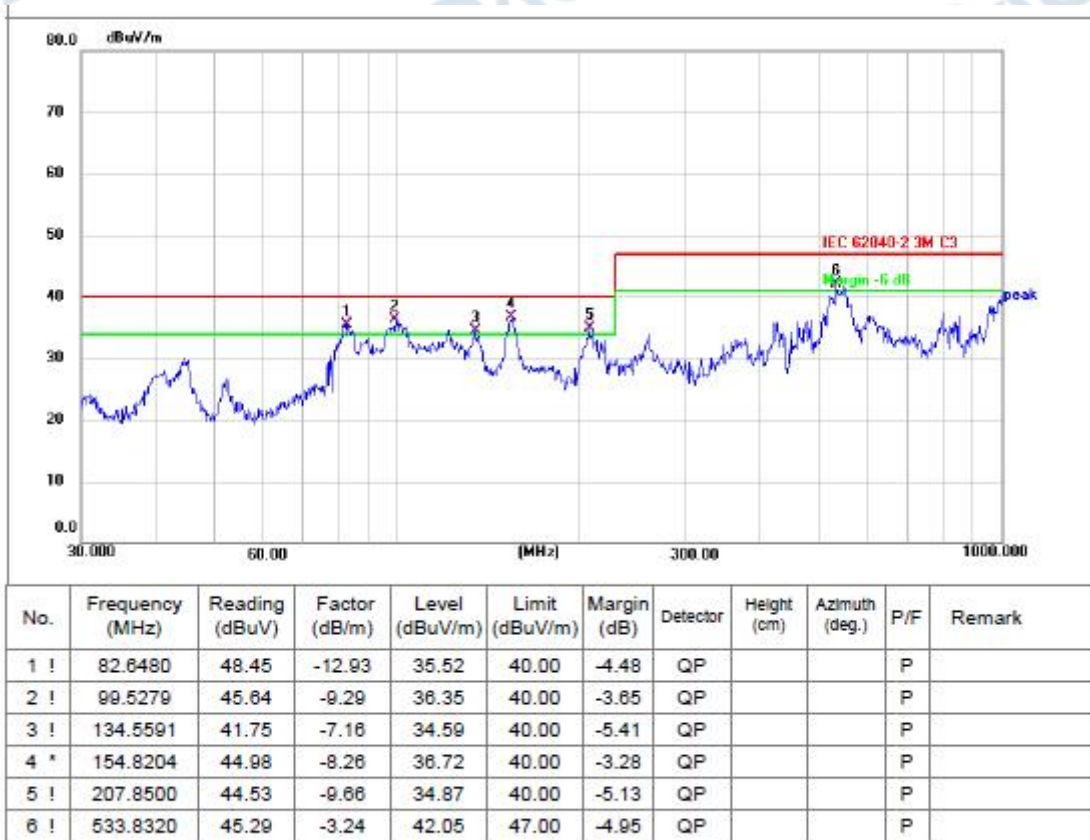


3.2.3 Test Data:

TM1 / Polarization: Horizontal



TM1 / Polarization: Vertical



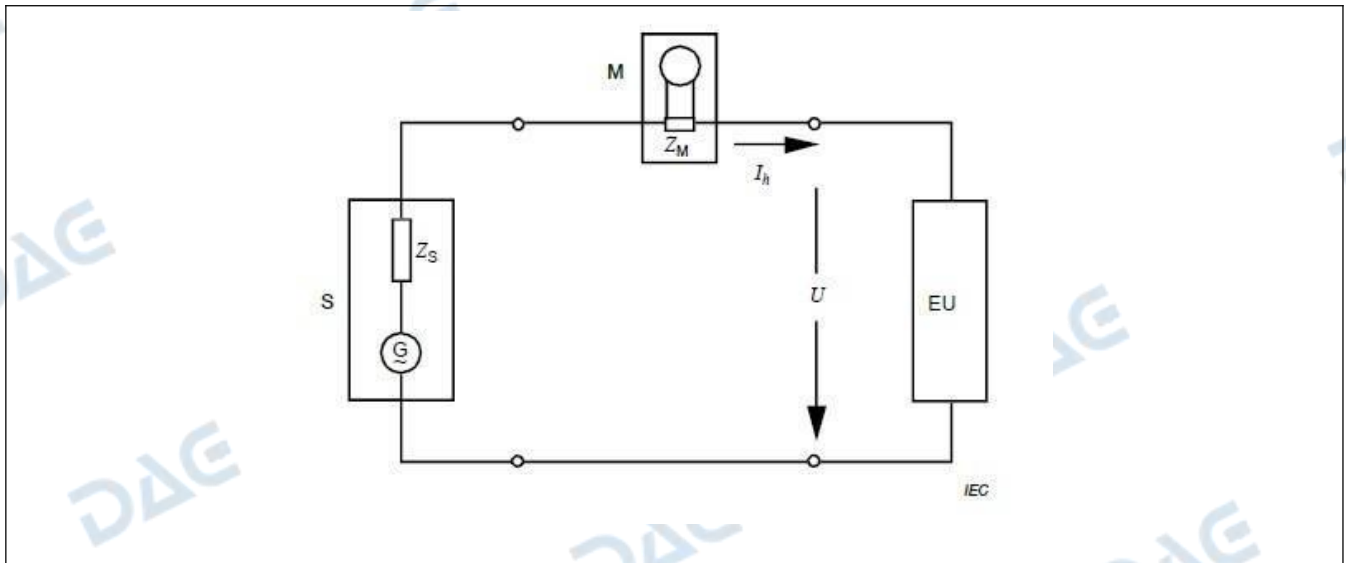
3.3 Low-frequency emission - Input current harmonics

Test Requirement:	EN IEC 62040-2 Clause 5.3.2.6
Test Limit:	EN 61000-3-12, clause 5
Test Method:	EN 61000-3-12, clause 7

3.3.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

3.3.2 Test Setup Diagram:



3.3.3 Test Data:

Please Refer to Appendix for Details.

4 Immunity Test Results (EMS)

Performance Criteria Description in EN IEC 62040-2 Performance criteria

	Criterion A	Criterion B
External and internal indications and metering	Change only during test	Change only during test
Control signals to external devices	No change	Change only temporarily in consistency with the actual UPS mode of operation
Mode of operation ^a	No change	Change only temporarily
^a At all times, the UPS shall remain within the performance classification as declared by the UPS manufacturer (see IEC 62040-3:2011).		

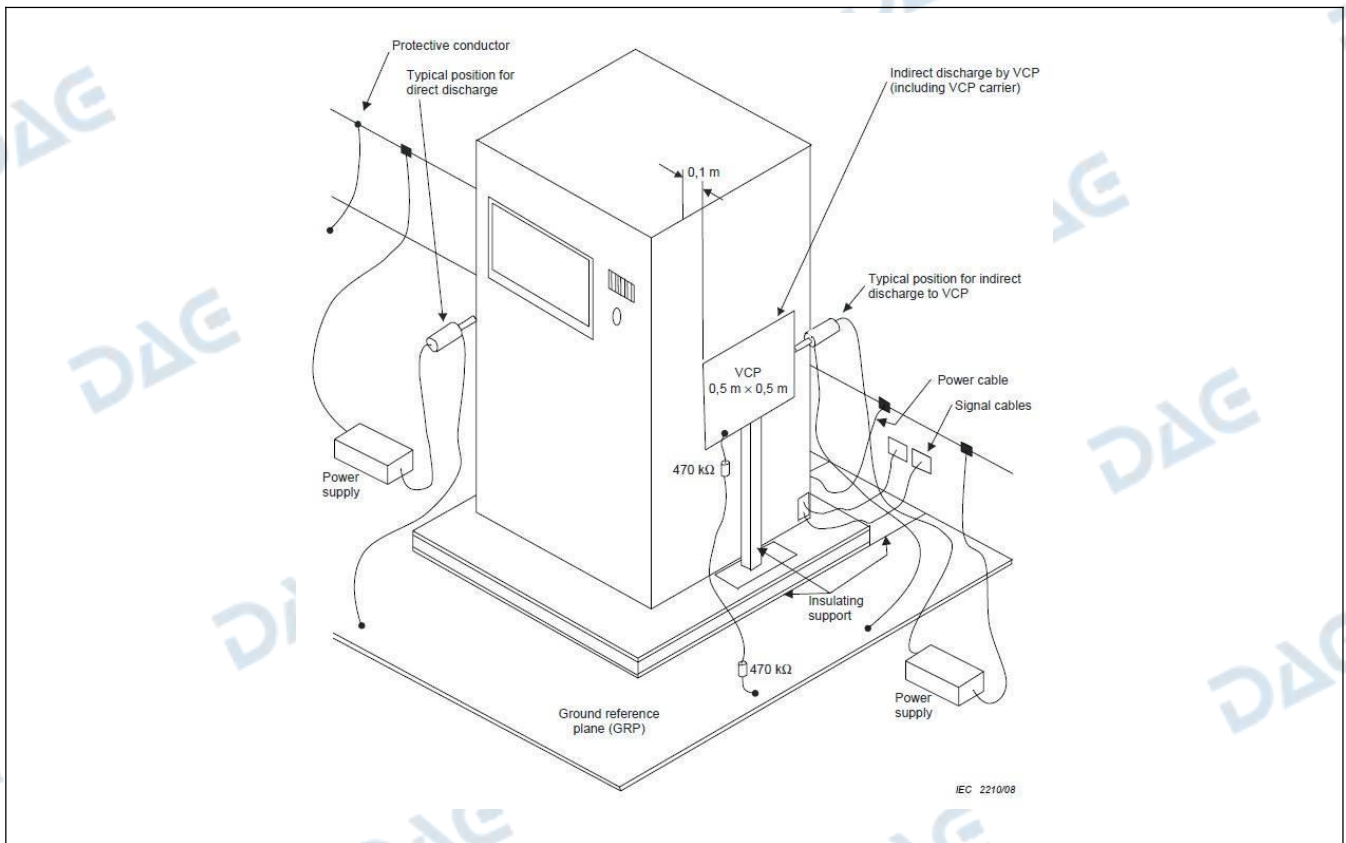
4.1 Electrostatic discharge

Test Requirement:	EN IEC 62040-2 Clause 6.3.3
Test Method:	EN IEC 62040-2 Annex D.2; EN 61000-4-2, clauses 6, 7 and 8
Procedure:	Discharge Impedance: 330Ω/150pF Number of Discharge: Minimum 10 times at each test point Discharge Mode: Single Discharge Discharge Period: 1 second minimum
Performance Criteria:	B

4.1.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:	TM1				
Final test mode:	TM1				

4.1.2 Test Setup Diagram:



4.1.3 Test Data:

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

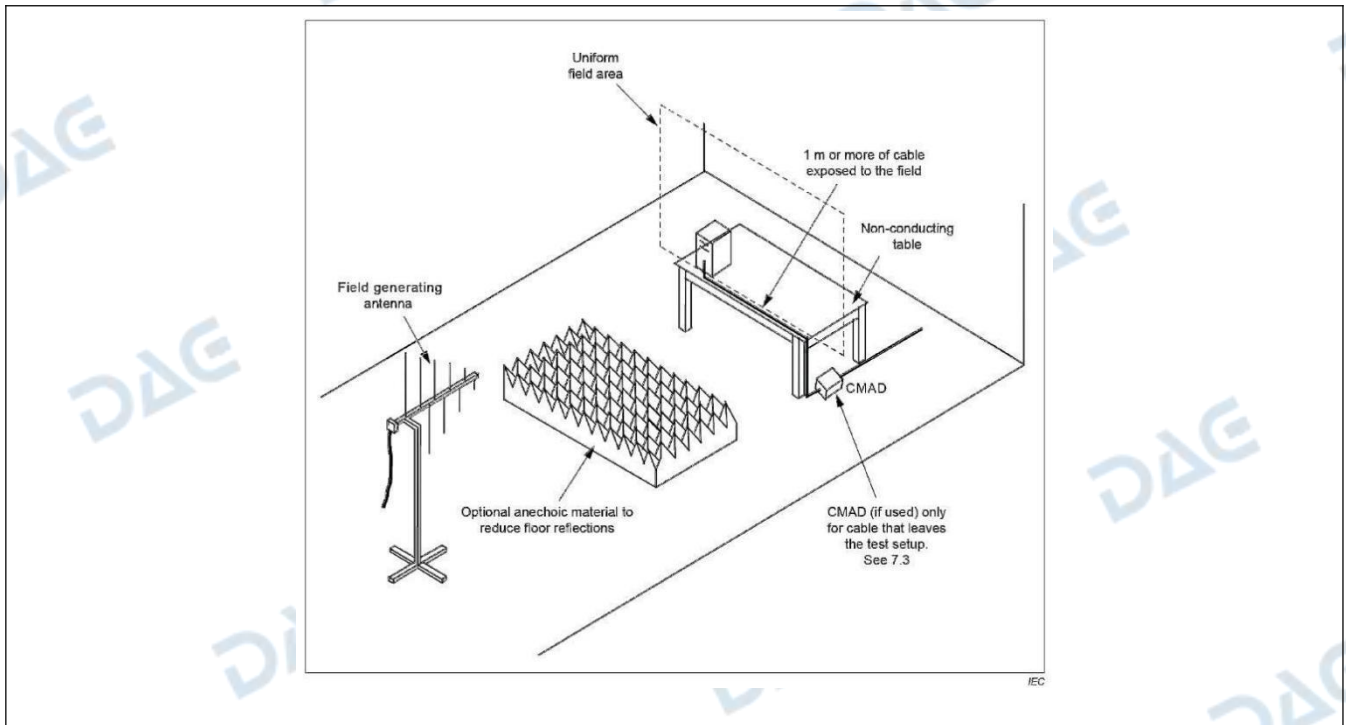
4.2 Radio-frequency electromagnetic field

Test Requirement:	EN IEC 62040-2 Clause 6.3.3
Test Method:	EN IEC 62040-2 Annex D.3; EN 61000-4-3, clauses 6, 7 and 8
Procedure:	Frequency Range: 80MHz to 1GHz Antenna Polarisation: Vertical and Horizontal Modulation: 1kHz,80% Amp. Mod,1% increment
Performance Criteria:	A

4.2.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1			
Final test mode:		TM1			

4.2.2 Test Setup Diagram:



4.2.3 Test Data:

Frequency	Field Strength (V/m)	EUT face	Dwell time	Result/ Observations
80MHz-1GHz	10	Front	3s	A
80MHz-1GHz	10	Back	3s	A
80MHz-1GHz	10	Left	3s	A
80MHz-1GHz	10	Right	3s	A
80MHz-1GHz	10	Top	3s	A
80MHz-1GHz	10	Bottom	3s	A

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

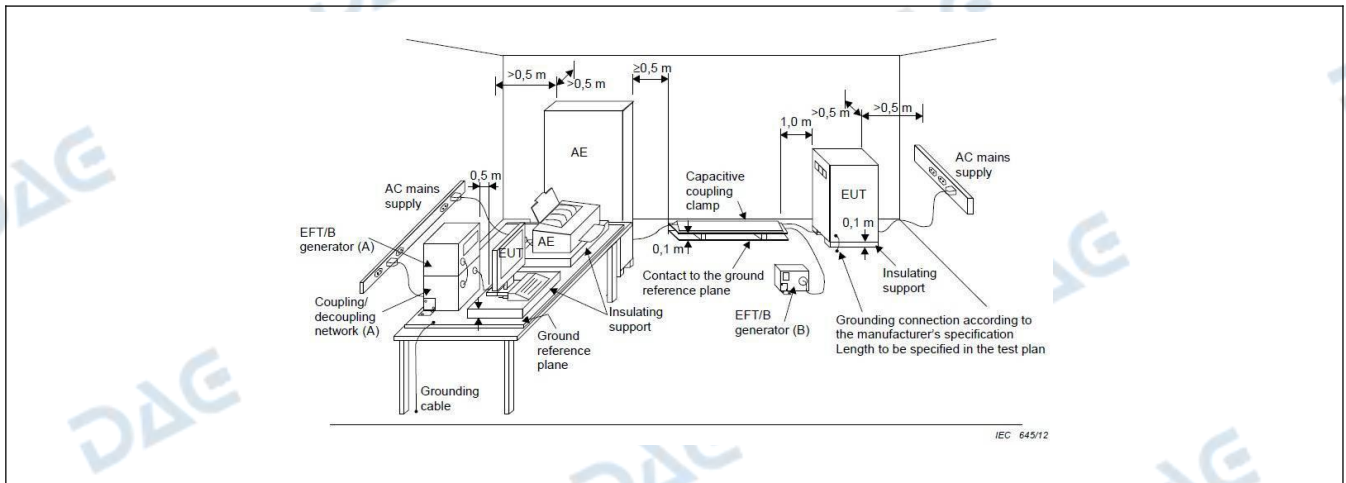
4.3 Fast transient-burst (AC input power port)

Test Requirement:	EN IEC 62040-2 Clause 6.3.3
Test Method:	EN IEC 62040-2 Annex D.4; EN 61000-4-4, clauses 5
Procedure:	Repetition Frequency: 5kHz Burst Period: 300ms
Performance Criteria:	B

4.3.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1			
Final test mode:		TM1			

4.3.2 Test Setup Diagram:



4.3.3 Test Data:

Port	Volt (kV)	Polarity	CDN/ Clamp	Result/ Observations
AC input power port	2	+	CDN	B
AC input power port	2	-	CDN	B

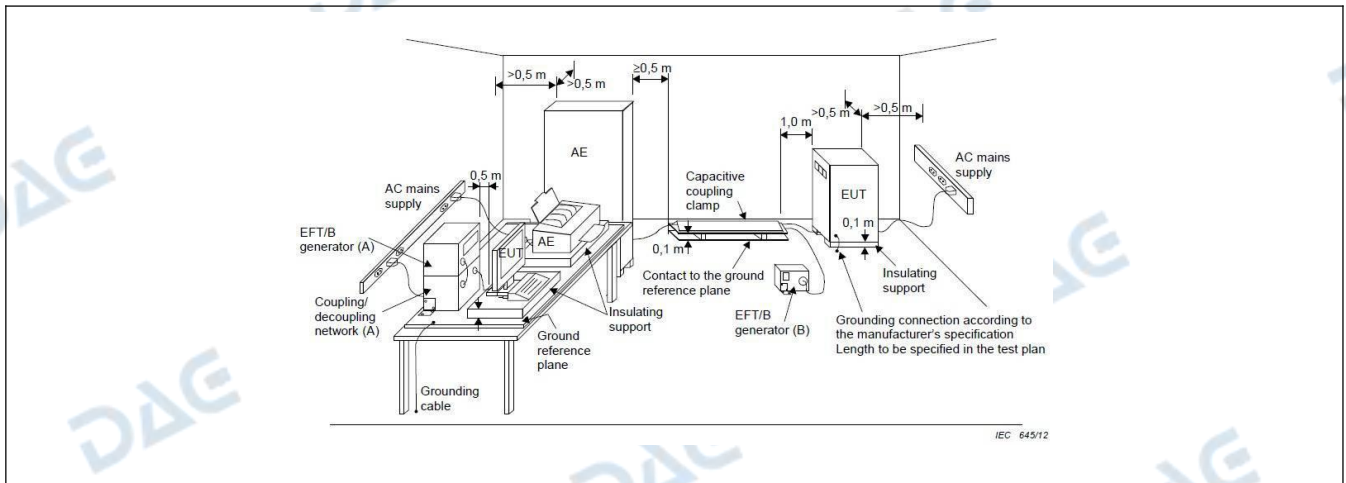
4.4 Fast transient-burst (AC output power port)

Test Requirement:	EN IEC 62040-2 Clause 6.3.3
Test Method:	EN IEC 62040-2 Annex D.4; EN 61000-4-4, clauses 5
Procedure:	Repetition Frequency: 5kHz Burst Period: 300ms
Performance Criteria:	B

4.4.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM3			
Final test mode:		TM3			

4.4.2 Test Setup Diagram:



4.4.3 Test Data:

Port	Volt (kV)	Polarity	CDN/ Clamp	Result/ Observations
AC output power port	2	+	CDN	B
AC output power port	2	-	CDN	B

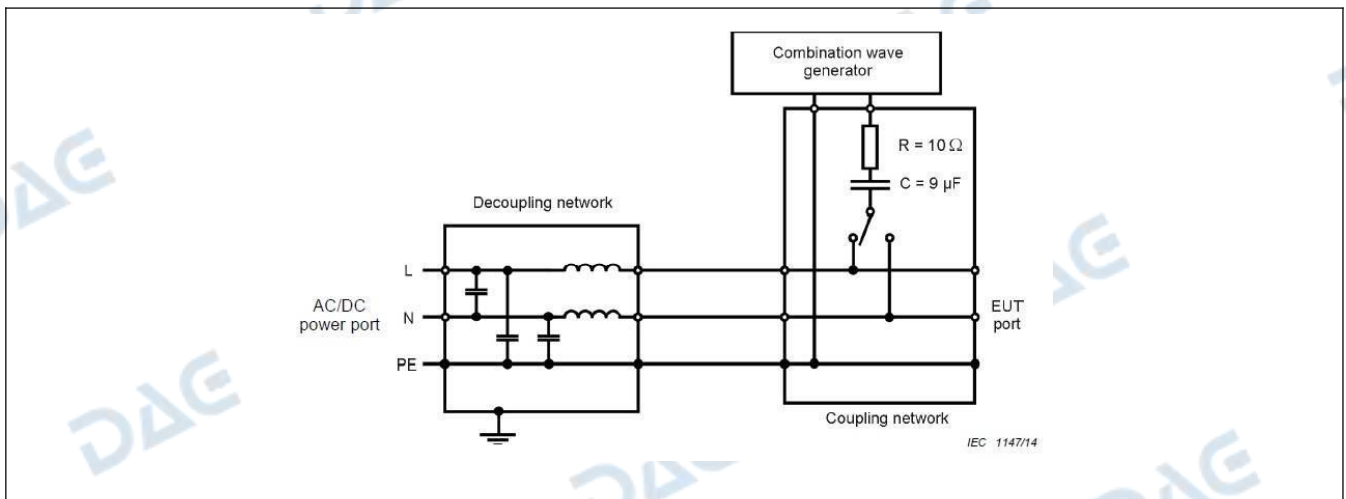
4.5 Surge (AC input power port)

Test Requirement:	EN IEC 62040-2 Clause 6.3.3
Test Method:	EN IEC 62040-2 Annex D.5; EN 61000-4-5, clauses 7 and 8
Procedure:	Interval: 60s between each surge No. of surges: 5 positive, 5 negative
Performance Criteria:	B

4.5.1 E.U.T. Operation:

Operating Environment:					
Temperature:	22 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa
Pretest mode:		TM1			
Final test mode:		TM1			

4.5.2 Test Setup Diagram:



4.5.3 Test Data:

Port	Volt (kV)	Polarity	Phase(degree)	Result/ Observations
L1-N	1	±	0°,90°,180°,270°	B
L2-N	1	±	0°,90°,180°,270°	B
L3-N	2	±	0°,90°,180°,270°	B
L1-PE	2	±	0°,90°,180°,270°	B
L2-PE	2	±	0°,90°,180°,270°	B
L3-PE	2	±	0°,90°,180°,270°	B
N-PE	2	±	0°,90°,180°,270°	B
L1-L3	1	±	0°,90°,180°,270°	B
L1-L2	1	±	0°,90°,180°,270°	B
L2-L3	1	±	0°,90°,180°,270°	B
L1-L2-L3	1	±	0°,90°,180°,270°	B
L1-L2-L3-N	1	±	0°,90°,180°,270°	B

5 PHOTOS OF THE EUT

External



***** End of Report *****