

PF Concept International Coöperatief U.A.

CE TEST REPORT

SCOPE OF WORK:
EMC report

Model:
12447190

REPORT NUMBER
2504B1963SHA-001

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Report no. 2504B1963SHA-001

Applicant : **PF Concept International Coöperatief U.A.**
Kabelweg 1, 2371 DX Roelofarendsveen, The Netherlands

Manufacturing site : **#11490 / #12727**

Summary

The equipment complies with the requirements according to the following standard(s) or Specification:

EN IEC 61000-6-1:2019: Electromagnetic compatibility (EMC) - General standards – Immunity for residential, commercial and light-industrial environment

EN IEC 61000-6-3:2021: General standards –Emission standard for equipment in residential environments

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Reviewer

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Total Quality. Assured.

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Revision History

Report No.	Version	Description	Issued Date
2504B1963SHA-001	Rev. 01	Initial issue of report	2025-06-12

Measurement result summary

TEST ITEM	TEST RESULT	NOTE
Conducted disturbance voltage at mains terminals	NA	
Electromagnetic radiation disturbance	Pass	
Harmonic current	NA	
Voltage fluctuations and flicker	NA	
Electrostatic discharge	Pass	
Radio frequency electromagnetic field	Pass	
Fast transients	NA	
Surges	NA	
Radio frequency, common mode	NA	
Voltage dips	NA	
Power frequency magnetic field	NA	

Notes: 1: NA =Not Applicable

2: Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

3: Additions, Deviations and Exclusions from Standards: None.

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name : 5000mAh Rugged Solar Powerbank
Type/Model : 12447190
PO no : 669138
Description of EUT : The product is a Powerbank.
Rating : 5000mAh, 3.6Vdc
Type-C Input/ Output: 5Vdc,2A
USB-A Output: 5Vdc,2A
Brand name : --
EUT type : ☒ Table-top
☐ Floor standing
Sample received date : 2025-04-22
Sample Identification : -
No.
Date of test : 2025-04-22 to 2025-06-10

1.2 Description of Test Facility

Name : Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address : Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R.
China
Telephone : 86 21 61278200
Telefax : 86 21 54262353

The test facility is : CNAS Accreditation Lab
recognized, certified, Registration No. CNAS L21189
or accredited by these FCC Accredited Lab
organizations Designation Number: CN0175
IC Registration Lab
CAB identifier.: CN0051
VCCI Registration Lab
Registration No.: R-14243, G-10845, C-14723, T-12252
A2LA Accreditation Lab
Certificate Number: 3309.02

2 TEST SPECIFICATIONS

2.1 Normative references

IEC 61000-6-1:2016, EN IEC 61000-6-1:2019, BS EN IEC 61000-6-1:2019: Electromagnetic compatibility (EMC) - General standards – Immunity for residential, commercial and light-industrial environment

IEC 61000-6-3:2020, EN IEC 61000-6-3:2021, BS EN IEC 61000-6-3:2021: General standards –Emission standard for equipment in residential environments

2.2 Mode of operation during the test

Within this test report, EUT was tested under all available operation modes and tested under its rating voltage and frequency. Other voltage and frequency is specified if used.

2.3 Test peripherals used

Item No	Description	Band and Model	S/No
1	AC/DC Adaptor	LSU02	Input: 100-240V~, 50/60Hz, 0.3A Max. Output: 5.0VDC, 1.0A, 5.0W
2	phone	-	-

2.4 Record of climatic conditions

Test Item	Temperature (°C)	Relative Humidity (%)	Pressure (Kpa)
Electromagnetic radiation disturbance	25	46	NA
Electrostatic discharge	26	44	102
Radio frequency electromagnetic field	25	46	NA
Fast transients	NA	NA	NA
Surges	NA	NA	NA
Radio frequency, common mode	NA	NA	NA
Voltage dips	NA	NA	NA
Power frequency magnetic field	NA	NA	NA

Notes: NA =Not Applicable

2.5 Instrument list

Conducted Emission/Disturbance Power/Tri-loop Test/CDN method					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☐	Test Receiver	R&S	ESR7	EC 6194	2024-12-09
☐	Attenuator	Hua Xiang	Ts5-10db-6g	EC 6194-1	2024-12-09
Radiated Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Test Receiver	R&S	ESIB 26	EC 3045	2025-10-19
☒	Bilog Antenna	TESEQ	CBL 6112B	EC 6411	2025-08-08
ESD					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	ESD generator	EM TEST	ditto	EC 2956	2025-07-17
EFT/Surge/Voltage Dips					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☐	Conduct immunity system	EM TEST	UCS 500M6B	EC 2958	2025-03-21
☐	Automatic transformer	EM TEST	MV2616	EC 2957	2025-03-21
Conducted Immunity					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☐	Signal generator	R&S	SML 01	EC 2338	2024-12-09
☐	Power amplifier	AR	75A250	EC 3043-1	2025-07-17
☐	Attenuator	EM TEST	ATT6/75	EC 3043-3	2025-02-08
☐	CDN	Frankonia	CDN M2M316	EC 5969	2025-02-10
Radiated Immunity					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Signal generator	R&S	SMR 20	EC 3044-1	2026-01-11
☒	Power amplifier	AR	250W1000B	EC 5818-2	2026-03-20
☒	Power amplifier	BONN	BLMA1060-100	EC 5818-4	2026-03-20
☒	Log-period antenna	AR	AT 1080	EC 3044-7	2025-08-27
☒	Horn antenna	Schwarzbeck	STLP 9149	EC 5881	2025-11-08
☒	Field meter	AR	FL17000	EC 5818-1	2025-09-14
☒	Power sensor	Keysight	N1914A	EC 5818-3	2026-03-20
☒	Signal generator	Agilent	N5181A	EC 6171	2025-08-19
Tet Site					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Shielded room	Zhongyu	-	EC 2838	2026-01-11

☒	Shielded room	Zhongyu	-	EC 2839	2026-01-11
☒	Semi-anechoic chamber	Albatross project	-	EC 3048	2025-08-22
☒	Fully-anechoic chamber	Albatross project	-	EC 3047	2025-08-22
Additional instrument					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Thermo-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3783	2026-03-24
☒	Thermo-Hygrograph	ZJ1-2A	S.M.I.F.	EC 5198	2026-03-08
☒	Thermo-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3442	2026-01-03
☒	Thermo-Hygrograph	ZJ1-2A	S.M.I.F.	EC 5844	2026-03-08
☒	Pressure meter	YM3	Shanghai Mengde	EC 4620	2025-09-14

2.6 Measurement Uncertainty

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Conducted emission at mains ports	9kHz ~ 150kHz	3.52 dB
	150kHz ~ 30MHz	3.19 dB
Continuous disturbance voltage at telecom ports	150kHz ~ 30MHz	3.64 dB
Continuous disturbance current at telecom ports	150kHz ~ 30MHz	2.62 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	4.90 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.02 dB
	6GHz ~ 18GHz	5.28 dB
Harmonic current emission	-	3.90%
Voltage fluctuations and flicker	-	10.34%

3 Mains terminal disturbance voltage

Test result: NA

3.1 Limits

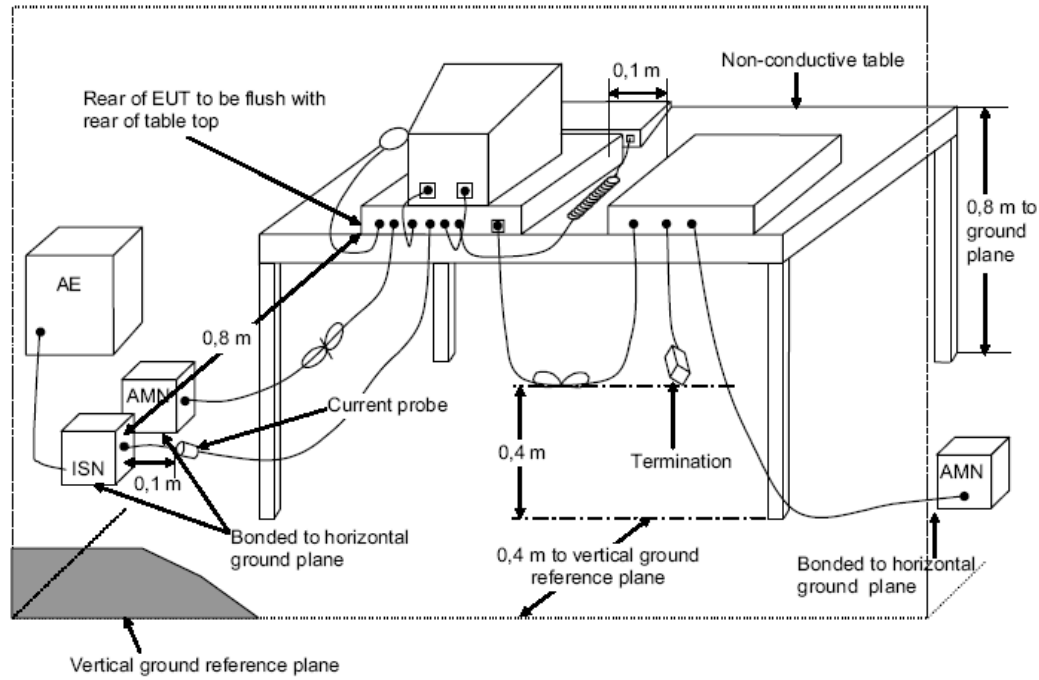
3.1.1 Limits at the AC mains ports

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.5	66-56*	56-46*
0.5 ~ 5	56	46
5 ~ 30	60	50
Note: 1. * means the limit decreasing linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz 2. If the limit for the measurement with the average detector is met when using a receiver with a quasi-peak detector, the equipment under test shall be deemed to meet both limits and the measurement using the receiver with an average detector need not be carried out.		

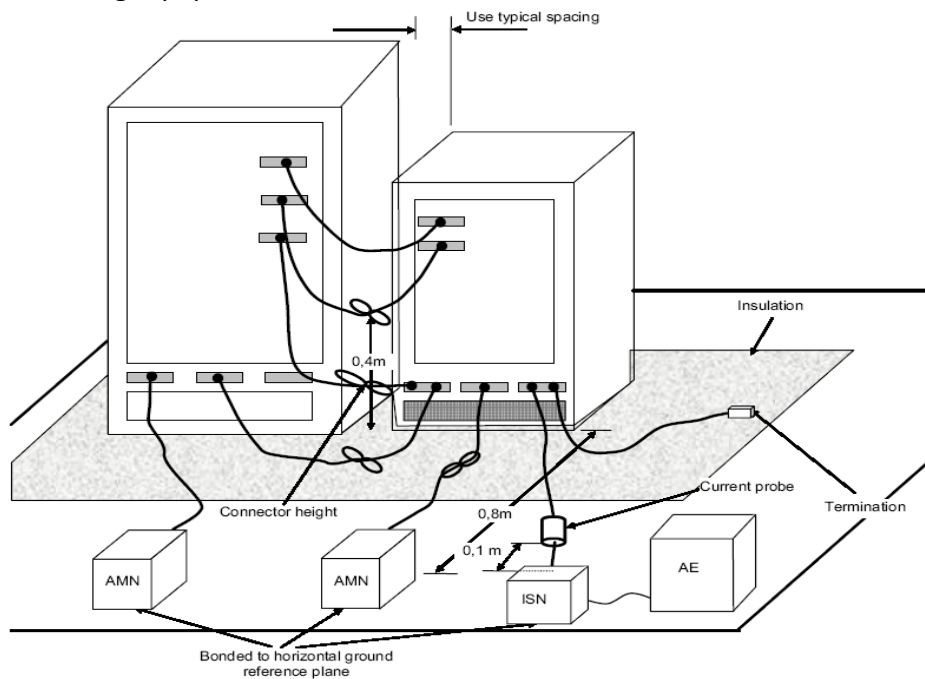
3.1.2 Limits at the DC mains ports

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.5	79	66
0.5 ~ 30	73	60
Note: 1. If the limit for the measurement with the average detector is met when using a receiver with a quasi-peak detector, the equipment under test shall be deemed to meet both limits and the measurement using the receiver with an average detector need not be carried out.		

3.2 Test setup

☐ For table top equipment

☐ For floor standing equipment



3.3 Test Procedure

Measurement was performed in shielded room, and instruments used were following CISPR 16-1-2 clause 4.3.

Detailed test procedure was following CISPR 16-2-1 clause 7.4

EUT arrangement and operation conditions were according to CISPR 16-2-1 clause 7.4.

Frequency range 150kHz – 30MHz was checked and EMI receiver measurement bandwidth was set to 9 kHz.

3.4 Test Result

Test Curve: NA

L line

N line

4 Radiated emission

Test result: Pass

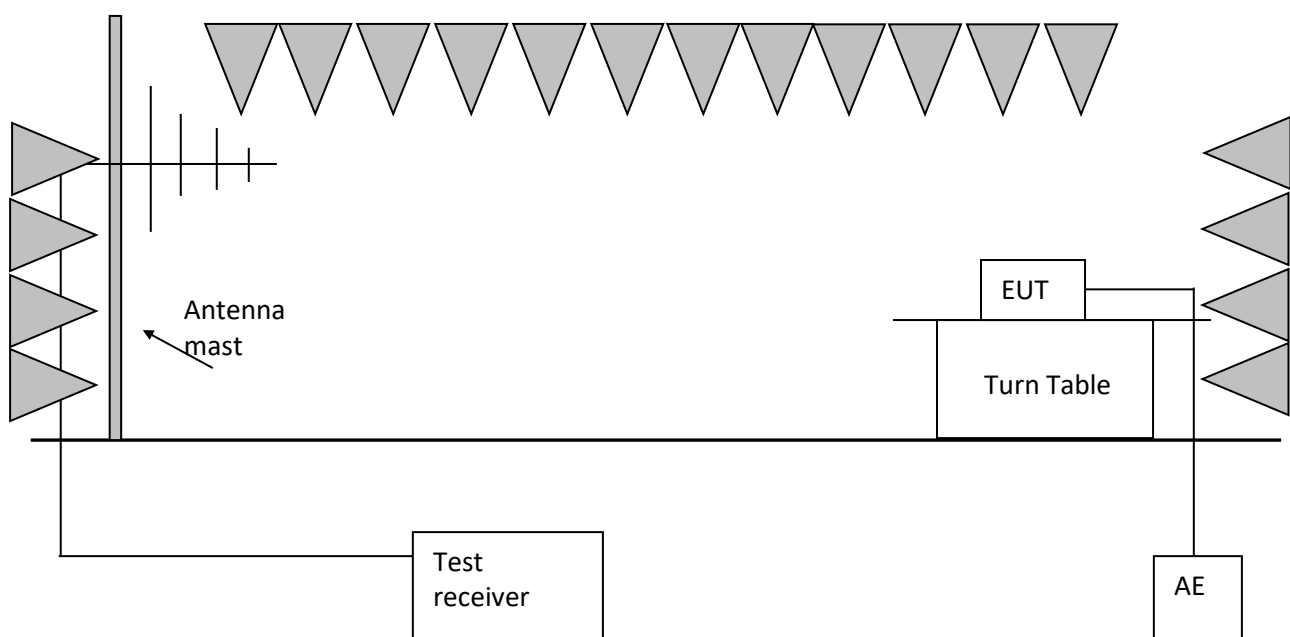
4.1 Limits

Frequency range (MHz)	Limit in dBuV/m (Quasi-peak) Of measurement distance 3m	Limit in dBuV/m (Quasi-peak) Of measurement distance 10m
30-230	40	30
230-1000	47	37
Note: 1. for the measurement distance other than 3m and 10m, the limit is varied according to 20dB/10 decades. 2. The gray rows are selected items. 3. If the internal emission source is operating at a frequency below 9kHz then measurements need only to be performed up to 230MHz.		

1-6GHz:

Frequency range (GHz)	Average limit in dBuV/m Of measurement distance 3m	Peak limit in dBuV/m Of measurement distance 3m
1-3	50	70
3-6	54	74
Note: 1. for the measurement distance other than 3m and 10m, the limit is varied according to 20dB/10 decades.		

4.2 Block diagram of test set up



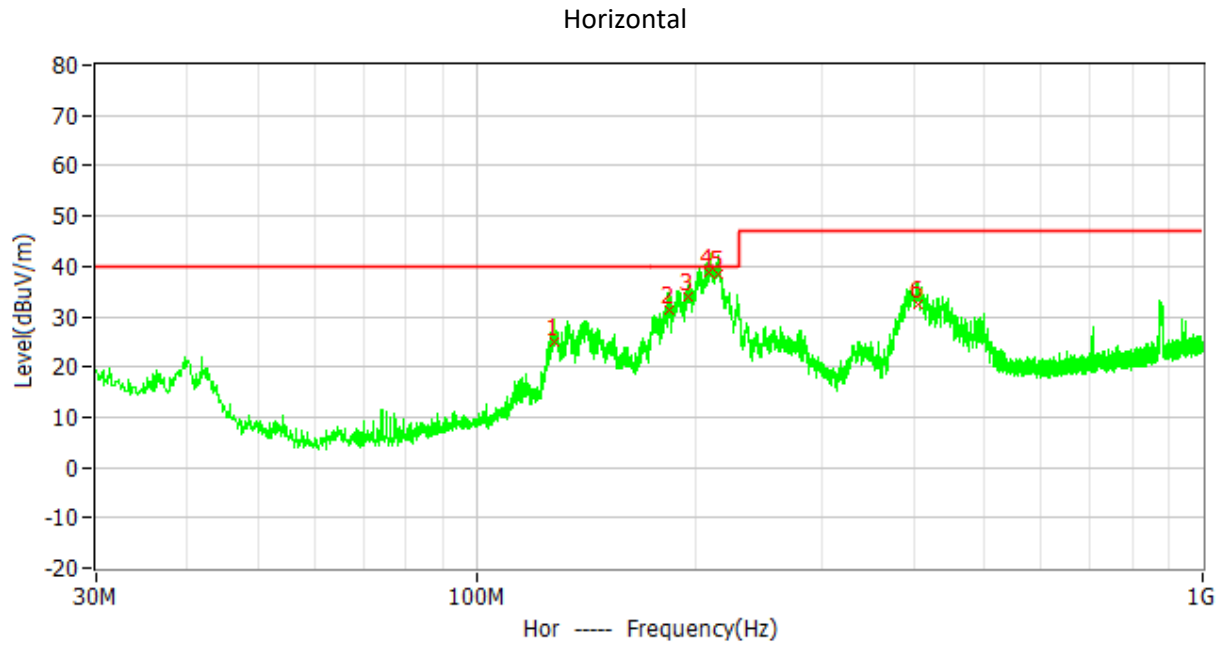
4.3 Test Procedure

The measurement was applied in a semi-anechoic chamber.
Measurement was performed according to CISPR 16-2-3.
Setting of EUT is according to CISPR 16-2-3.
The bandwidth setting on R&S Test Receiver ESI26 was 120 kHz.
The frequency range from 30MHz to 1000MHz was checked.
The bandwidth setting on R&S Test Receiver ESI26 was 1MHz.
The frequency range from 1000MHz to 6000MHz was checked.

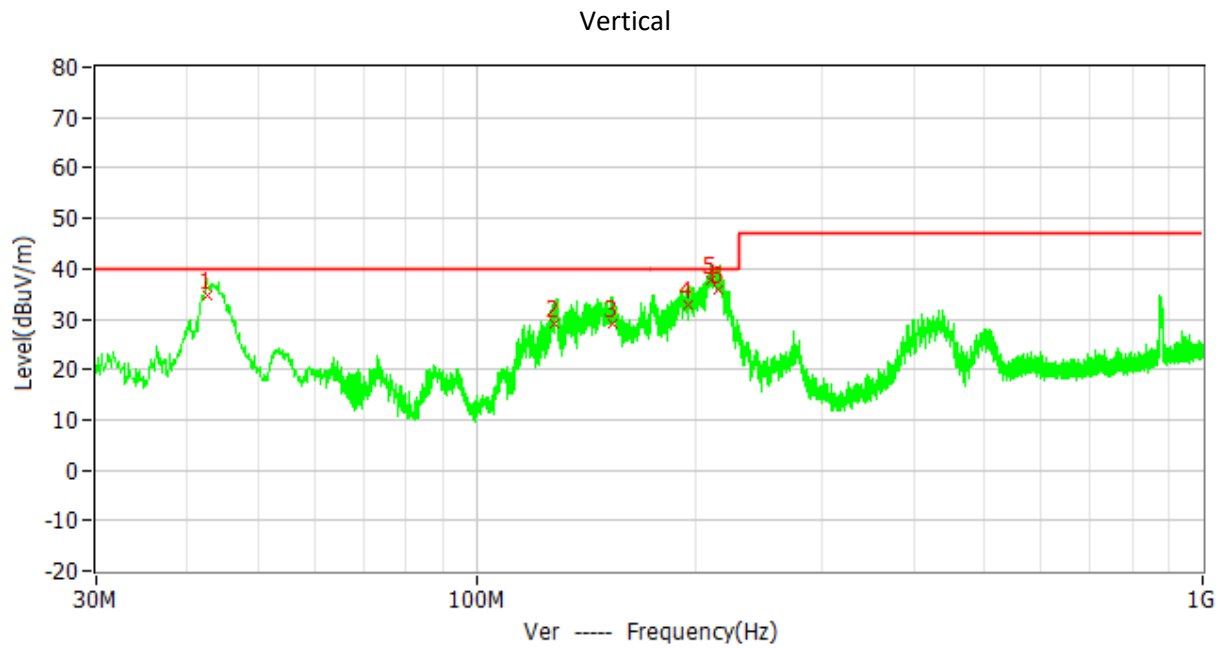
4.4 Test Result

Charging mode

Test Curve:



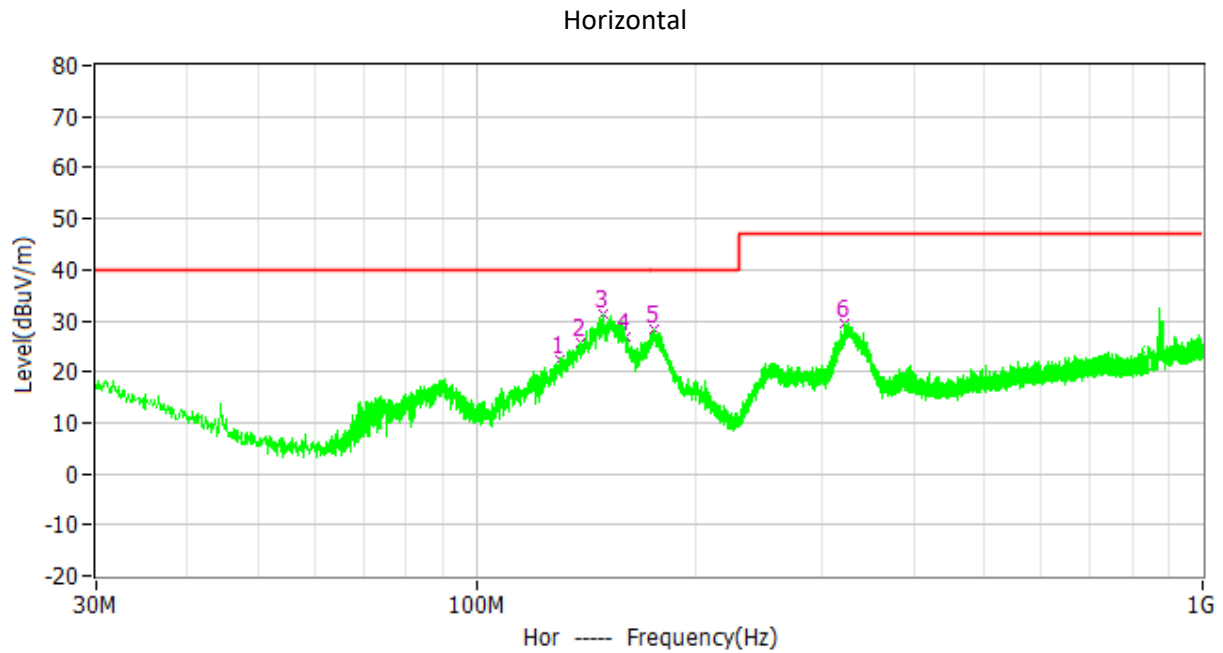
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1	127.831MHz	40.0	24.9	-15.1	11.8	13.1	QP	Hor
2	184.790MHz	40.0	31.4	-8.6	20.6	10.8	QP	Hor
3	195.477MHz	40.0	34.1	-5.9	23.3	10.8	QP	Hor
4	208.905MHz	40.0	38.8	-1.2	27.9	10.9	QP	Hor
5	215.804MHz	40.0	38.6	-1.4	27.7	10.9	QP	Hor
6	405.135MHz	47.0	32.6	-14.4	14.4	18.2	QP	Hor



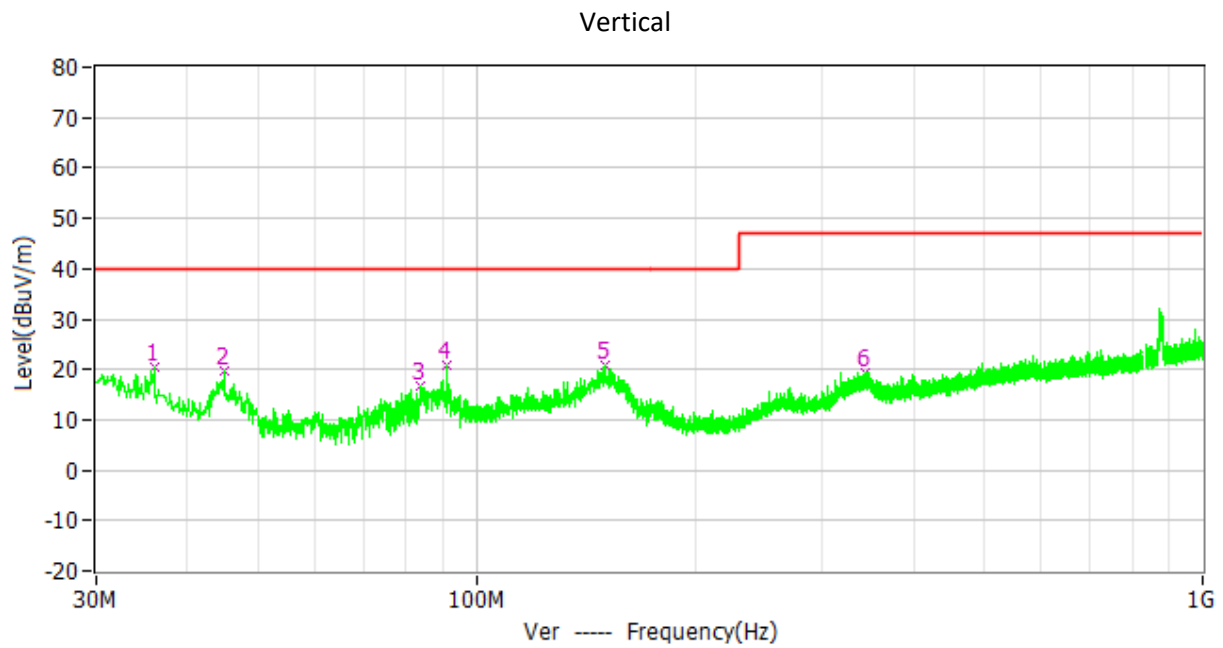
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1	42.667MHz	40.0	34.7	-5.3	21.7	13.0	QP	Ver
2	127.907MHz	40.0	28.9	-11.1	15.8	13.1	QP	Ver
3	154.235MHz	40.0	28.9	-11.1	17.2	11.7	QP	Ver
4	195.421MHz	40.0	32.9	-7.1	22.1	10.8	QP	Ver
5	210.940MHz	40.0	37.5	-2.5	26.6	10.9	QP	Ver
6	215.034MHz	40.0	35.7	-4.3	24.8	10.9	QP	Ver

Discharging mode

Test Curve:



No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1	130.395MHz	40.0	22.5	-17.5	9.5	13.0	QP	Hor
2	139.319MHz	40.0	25.8	-14.2	13.3	12.5	QP	Hor
3	149.310MHz	40.0	31.2	-8.8	19.2	12.0	QP	Hor
4	160.950MHz	40.0	26.7	-13.3	15.3	11.4	QP	Hor
5	175.403MHz	40.0	28.5	-11.5	17.6	10.9	QP	Hor
6	321.873MHz	47.0	29.5	-17.5	13.7	15.8	QP	Hor

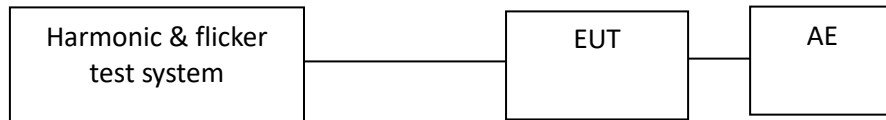


No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1	36.014MHz	40.0	20.5	-19.5	4.0	16.5	QP	Ver
2	45.035MHz	40.0	19.6	-20.4	7.8	11.8	QP	Ver
3	83.932MHz	40.0	16.7	-23.3	7.7	9.0	QP	Ver
4	91.304MHz	40.0	20.9	-19.1	10.5	10.4	QP	Ver
5	150.765MHz	40.0	20.9	-19.1	9.0	11.9	QP	Ver
6	342.922MHz	47.0	19.4	-27.6	3.0	16.4	QP	Ver

5 Harmonic current emission

Test result: NA

5.1 Test Setup



5.2 Test Procedure

Harmonics of the fundamental current were measured up to 40 order harmonics using a digital power meter with an analogue output and frequency analyzer which was integrated in the harmonic & flicker test system. The measurements were carried out under steady conditions.

- ☐ Measuring instrumentation according to IEC 61000-4-7:2002+A1:2008
- ☐ This product is not defined as lighting equipment, and has rated power less than 75W, therefore, no limit applies according to EN 61000-3-2
- ☐ The EUT is kitchen machines as listed in the scope of IEC 60335-2-14, therefore, is deemed to conform to the harmonic current limits of this standard without further testing.
- ☐ The appliance has rated input power less than 75W, and is not luminary device. According to the standards, no limit applies.

5.3 Test limit

5.3.1 Limits for equipment with input current $\leq 16A$ per phase

Harmonic order n	Maximum permissible harmonic current A
Odd harmonics	
3	2,30
5	1,14
7	0,77
9	0,40
11	0,33
13	0,21
$15 \leq n \leq 39$	$0,15 \frac{15}{n}$
Even harmonics	
2	1,08
4	0,43
6	0,30
$8 \leq n \leq 40$	$0,23 \frac{8}{n}$

5.3.2 Limits for equipment with input current $> 16A$ and $\leq 75A$ per phase

☐ Current emission limits for professional equipment with $I_{1max} \leq 75 A$ other than balanced three-phase equipment

Minimal R_{sce}	Admissible individual harmonic current I_n/I_1^a %						Admissible harmonic current distortion factors %	
	I_3	I_5	I_7	I_9	I_{11}	I_{13}	THD	$PWHD$
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
NOTE 1 The relative values of even harmonics up to order 12 must not exceed $16/n$ %. Even harmonics above order 12 are taken into account in THD and $PWHD$ in the same way as odd order harmonics.								
NOTE 2 Linear interpolation between successive R_{sce} values are permitted.								
^a I_1 = reference fundamental current; I_n = harmonic current component.								

☐ Current emission limits for professional balanced three-phase equipment

with $I_{1\max} \leq 75 \text{ A}$

Minimal R_{scs}	Admissible individual harmonic current I_n/I_1^a				Admissible harmonic current distortion factors	
	%				%	
	I_5	I_7	I_{11}	I_{13}	THD	$PWHD$
33	10,7	7,2	3,1	2	13	22
66	14	9	5	3	16	25
120	19	12	7	4	22	28
250	31	20	12	7	37	38
≥ 350	40	25	15	10	48	46
NOTE 1 The relative values of even harmonics up to order 12 must not exceed $16/n$ %. Even harmonics above order 12 are taken into account in THD and $PWHD$ in the same way as odd order harmonics.						
NOTE 2 Linear interpolation between successive R_{scs} values are permitted.						
^a I_1 = reference fundamental current; I_n = harmonic current component.						

☐ Current emission limits for professional balanced three-phase equipment
with $I_{1\max} \leq 75 \text{ A}$ under specified conditions

Minimal R_{scs}	Admissible individual harmonic current I_n/I_1^a				Admissible harmonic current distortion factors	
	%				%	
	I_5	I_7	I_{11}	I_{13}	THD	$PWHD$
33	10,7	7,2	3,1	2	13	22
≥ 120	40	25	15	10	48	46
NOTE 1 The relative values of even harmonics up to order 12 must not exceed $16/n$ %. Even harmonics above order 12 are taken into account in THD and $PWHD$ in the same way as odd order harmonics.						
NOTE 2 Linear interpolation between successive R_{scs} values are permitted.						
^a I_1 = reference fundamental current; I_n = harmonic current component.						

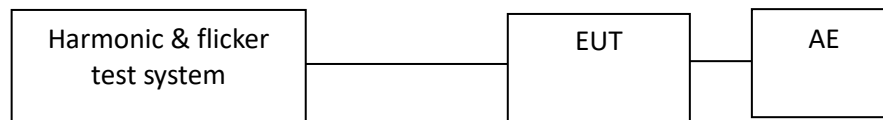
5.4 Test Result

none

6 Voltage fluctuations and flicker

Test result: Pass

6.1 Test Setup



6.2 Test Procedure

6.2.1 Definition

- Flicker: impression of unsteadiness of visual sensation induced by a lighting stimulus whose luminance or spectral distribution fluctuates with time.
- Pst: Short-term flicker indicator the flicker severity evaluated over a short period (in minutes); Pst=1 is the conventional threshold of irritability
- Plt: long-term flicker indicator; the flicker severity evaluated over a long period (a few hours) using successive Pst values.
- dc: the relative steady-state voltage change
- dmax: the maximum relative voltage change
- d(t): the value during a voltage change

6.2.2 Test condition

According to EN61000-3-3, Tests need not be made on equipment which is unlikely to produce significant voltage fluctuations or flicker..

6.2.3 Test protocol

The tested object operated under the operating condition specified in IEC 61000-3-3: 1994+A1:2001

The following limits apply

- "Plt" shall not exceed 0.65.
- "Pst" shall not exceed 1.0.
- "dc" shall not exceed 3.3%.
- "dmax" shall not exceed 4/6/7%*
- d(t) shall not exceed 3.3% for more than 500ms.

Notes:

- * means for 4% limit, without additional conditions
- 6% limit, switched manually or automatically more than twice per day
- 7% limit, switched automatically for no more than twice per day or attended while in use.

6.3 Test Result

none

Immunity Test

Performance criteria

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 reasonable 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.

7 Electrostatic Discharge (ESD)

Test result **Pass**

7.1 Severity Level and Performance Criterion

7.1.1 Test level

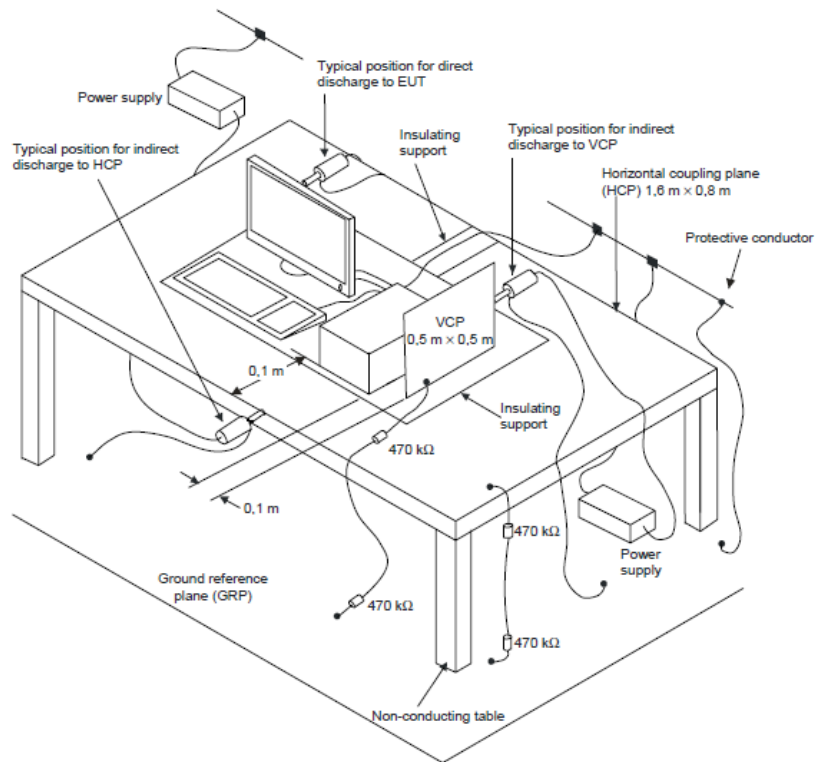
Contact discharge		Air discharge	
Level	Test voltage (kV)	Level	Test voltage (Kv)
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15
X	Special	X	Special
Notes: 1. "X" is an open level. The level has to be specified in the dedicated equipment specification. If higher voltages than those shown are specified, special test equipment may be needed. 2. The gray rows were the selected test level.			

7.1.2 Performance Criterion

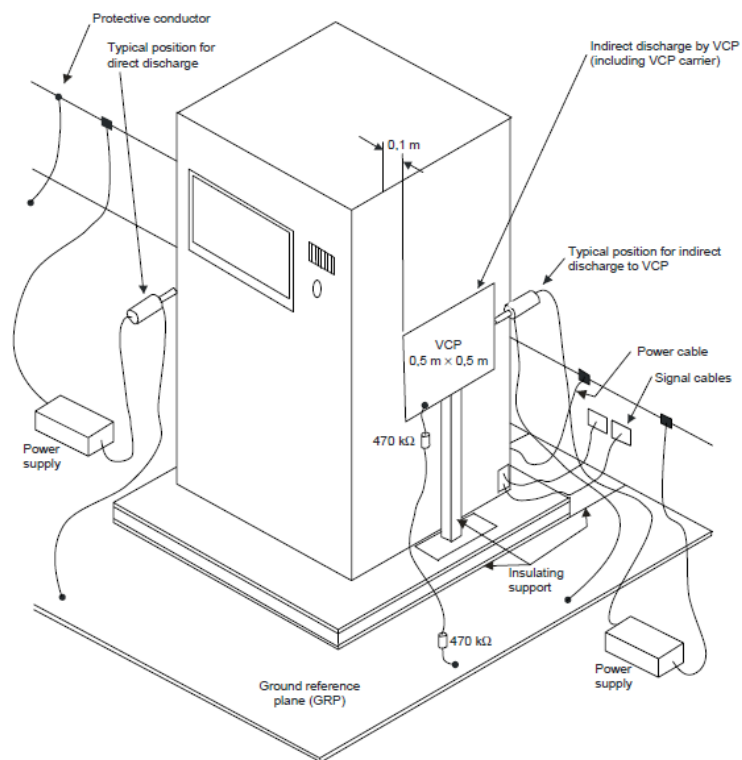
Criterion B

7.2 Test Setup

☒ For table-top equipment



☐ For floor standing equipment



7.3 Test Procedure

Measurement was performed in shielded room.

Measurement procedure was applied according to EN 61000-4-2 clause 8.

The test method and equipment was specified by EN 61000-4-2.

7.4 Test Result

Direct discharges were applied at the following selected points:

Test level [kV]	Air/Contact	Polarity (+/-)	Pass/Fail/NA	Comment
2/4	Contact	+/-	Pass	Accessible metal parts of the EUT
2/4	Contact	+/-	Pass	All touchable screws of enclosure
2/4/8	Air	+/-	Pass	Air gap of the switch, button
2/4/8	Air	+/-	Pass	Slots around the EUT

Indirect contact discharges were applied to the VCP and the HCP at the following selected points:

For table-top equipment

Position	Description	Point	Pass/Fail/NA
HCP front	0,1m from the front of the EUT	Edge of centre on HCP	Pass
HCP back	0,1m from the back of the EUT	Edge of centre on HCP	Pass
HCP right	0,1m from the right side of the EUT	Edge of centre on HCP	Pass
HCP left	0,1m from the left side of the EUT	Edge of centre on HCP	Pass
VCP front	0,1m from the front of the EUT	Edge of centre on VCP	Pass
VCP back	0,1m from the back of the EUT	Edge of centre on VCP	Pass
VCP right	0,1m from the right of the EUT	Edge of centre on VCP	Pass
VCP left	0,1m from the left of the EUT	Edge of centre on VCP	Pass

For floor standing equipment

Position	Description	Point	Pass/Fail/NA
CP front	0,1m from the front of the EUT	Edge of centre on VCP	NA
CP back	0,1m from the back of the EUT	Edge of centre on VCP	NA
CP right	0,1m from the right of the EUT	Edge of centre on VCP	NA
CP left	0,1m from the left of the EUT	Edge of centre on VCP	NA

Observation: All the functions were operated as normal after the test.

Conclusion: The EUT can meet the requirement of Performance Criterion B.

8 Radio frequency electromagnetic field

Test result Pass

8.1 Severity Level and Performance Criterion

8.1.1 Test level

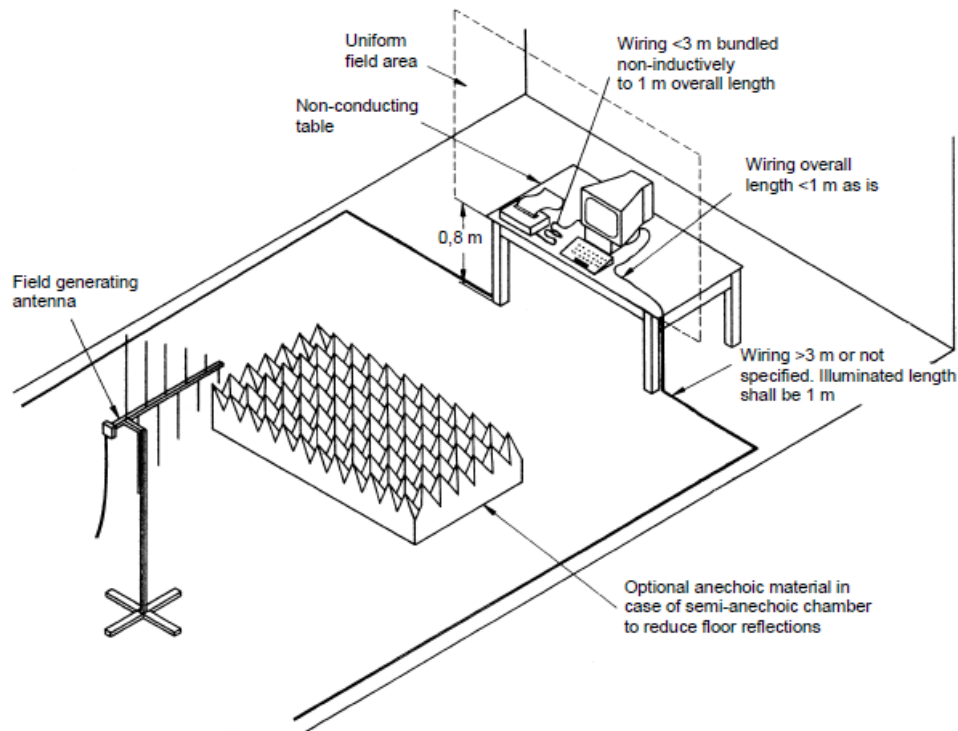
Level	Test field strength V/m
1	1
2	3
3	10
X	Special
Note: 1. X is an open test level. This level may be given in the product specification. 2. The gray row is the selected test level.	

8.1.2 Performance Criterion

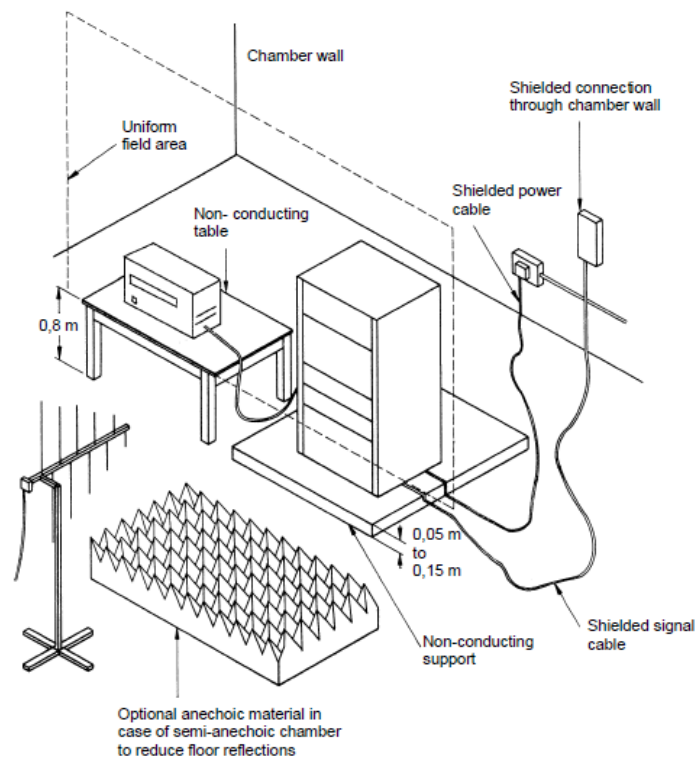
Criterion A

8.2 Test Setup

☒ For table-top equipment



☐ For floor standing equipment



8.3 Test Procedure

Measurement was performed in full-anechoic chamber.

Measurement procedure was applied according to EN 61000-4-3 clause 8.

The test method and equipment was specified by EN 61000-4-3.

8.4 Test Result

Test no.	Frequency (MHz)	Polarization	Test level (V/m)	Modulation	Exposed location	Pass/Fail/NA
1	80-1000	H & V	3	1 kHz, 80% AM 1 % increment	All sides	Pass
2	1400-6000	H & V	3	1 kHz, 80% AM 1 % increment	All sides	Pass

Observation: All the functions were operated as normal during and after test.

Conclusion: The EUT can meet the requirement of Performance Criterion A

9 Fast transients, common mode

Test result NA

9.1 Severity Level and Performance Criterion

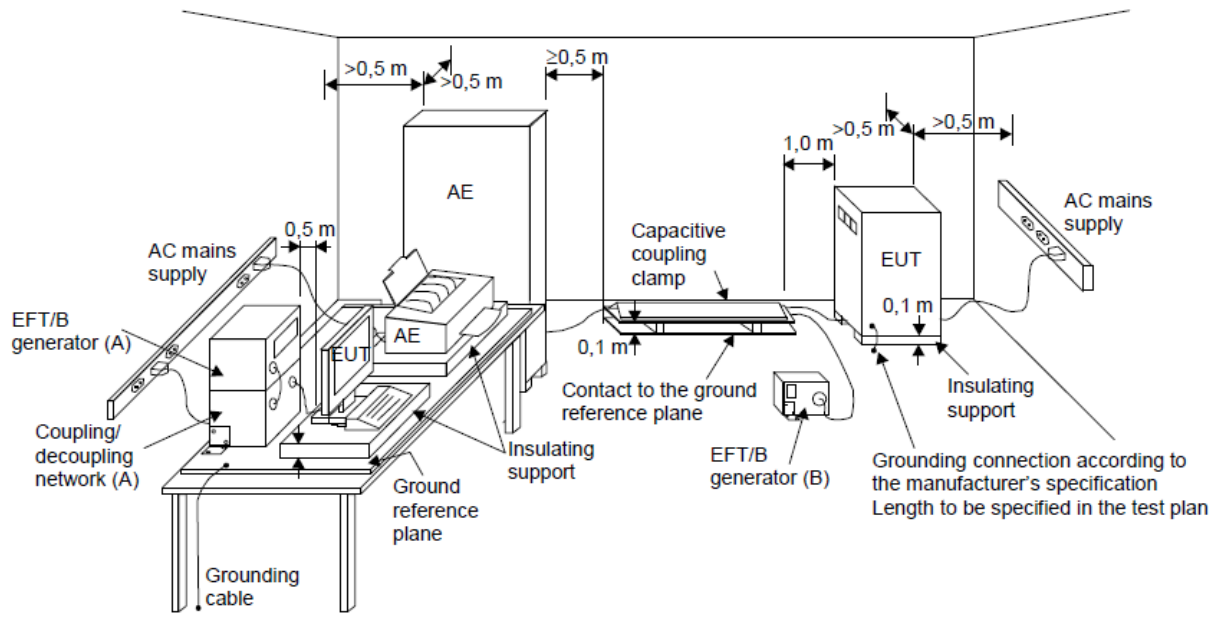
9.1.1 Test level

Open circuit output test voltage and repetition rate of the impulses				
Level	AC mains power input ports		Signal ports, DC power ports	
	Voltage peak (kV)	Repetition rate (kHz)	Voltage peak (kV)	Repetition rate (kHz)
1	0.5	5	0.25	5
2	1	5	0.5	5
3	2	5	1	5
4	4	2.5	2	5
X	Special	Special	Special	Special
Notes: 1. "X" is an open level. The level has to be specified in the dedicated equipment specification. 2. The gray rows were the selected test level.				

9.1.2 Performance Criterion

Criterion B

9.2 Test Setup



(A) location for supply line coupling

(B) location for signal lines coupling

9.3 Test Procedure

Measurement was performed in shielded room.

Measurement procedure was applied according to EN 61000-4-4 clause 8.

The test method and equipment was specified by EN 61000-4-4.

9.4 Test Result

Test No.	Level (kV)	Polarity (+/-)	Line for test	Pass/Fail/NA
1	1	+/-	AC power ports	NA
2	0.5	+/-	Signal ports	NA
3	0.5	+/-	CC power ports	NA

Observation:

Conclusion:

10 Surges

Test result NA

10.1 Severity Level and Performance Criterion

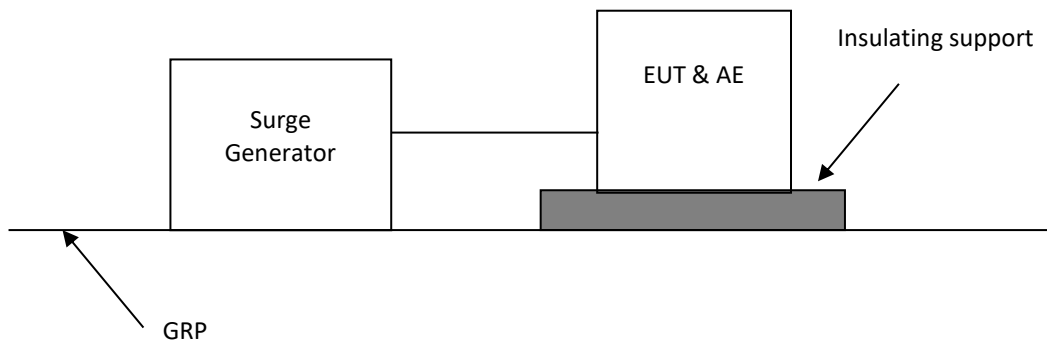
10.1.1 Test level

Level	Open-circuit test voltage (kV)
1	0.5
2	1.0
3	2.0
4	4.0
X*	Special
Notes: 1. "X" is an open class. This level can be specified in the product specification 2. The gray rows are the selected level.	

10.1.2 Performance Criterion

Criterion B

10.2 Test Setup



10.3 Test Procedure

Measurement was performed in shielded room.

Measurement procedure was applied according to EN 61000-4-5 clause 8.

The test method and equipment was specified by EN 61000-4-5.

10.4 Test Result

Test No.	Level [kV]	Polarity +/-	Line for test	Pass/Fail/NA
1	0.5/1	+/-	AC mains power input port (line to line)	NA
2	0.5/1/2	+/-	AC mains power input port (line to earth)	NA
3	0.5	+/-	DC power ports	NA

Observation: -

Conclusion: -

11 Radio frequency, common mode

Test result NA

11.1 Severity Level and Performance Criterion

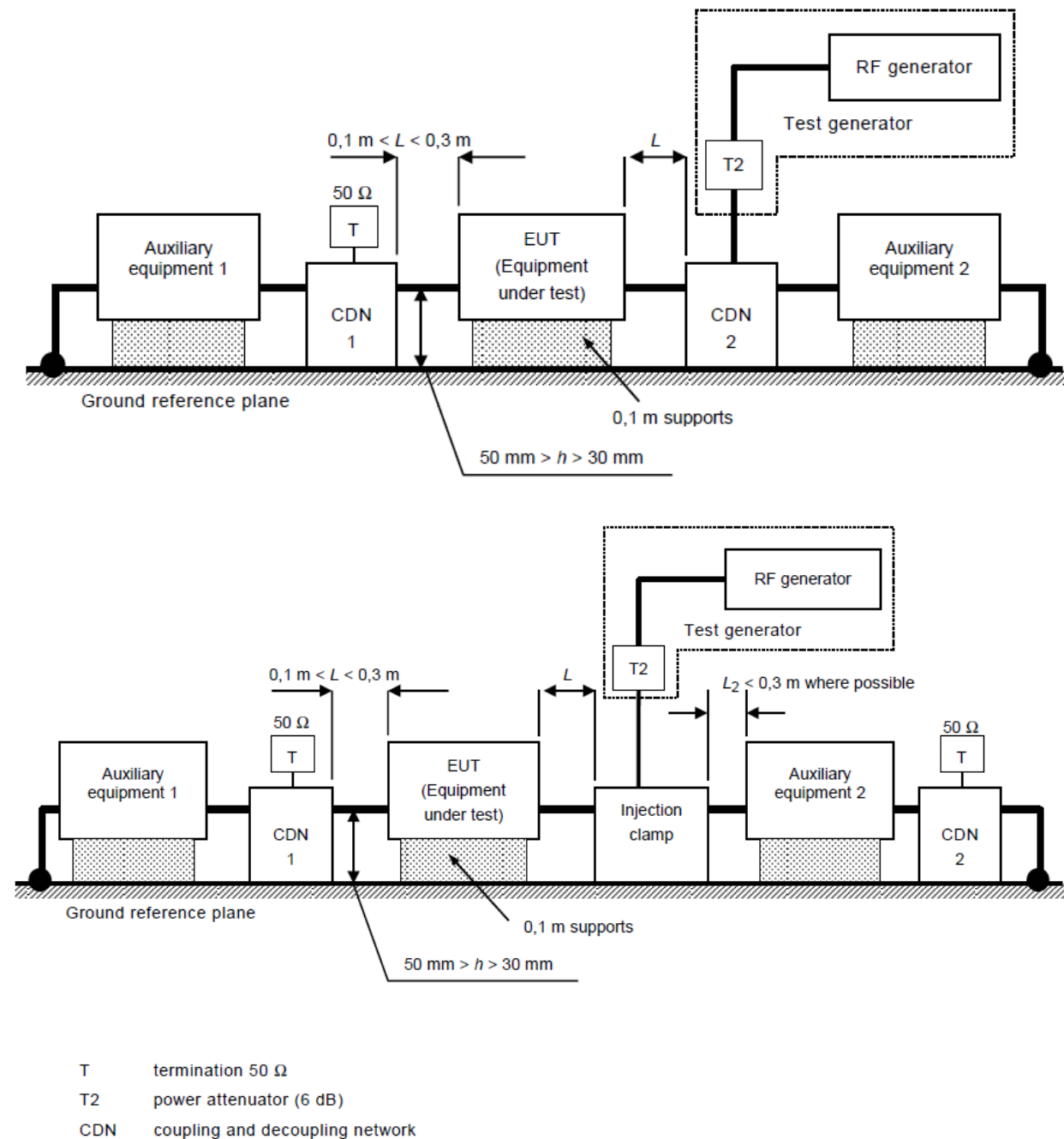
11.1.1 Test level

Frequency range 150kHz – 80MHz		
Level	Voltage level	
	U ₀ (dBuV)	U ₀ (V)
1	120	1
2	130	3
3	140	10
X	Special	Special
Notes: 1. "X" is an open level 2. The gray row is the selected test level.		

11.1.2 Performance Criterion

Criterion A

11.2 Block Diagram of Test Setup



11.3 Test Procedure

Measurement procedure was applied according to EN 61000-4-6 clause 8.
The test method and equipment was specified by EN 61000-4-6.

11.4 Test Result

Test No.	Frequency (MHz)	Level (V)	Modulation	Injected point	Pass/Fail/NA
1	0.15~80	3	80%, 1 kHz, AM	AC power port	NA
2	0.15~80	3	80%, 1 kHz, AM	signal ports	NA
3	0.15~80	3	80%, 1 kHz, AM	DC power ports	NA

Observation: -

Conclusion: -

12 Voltage dips

Test result NA

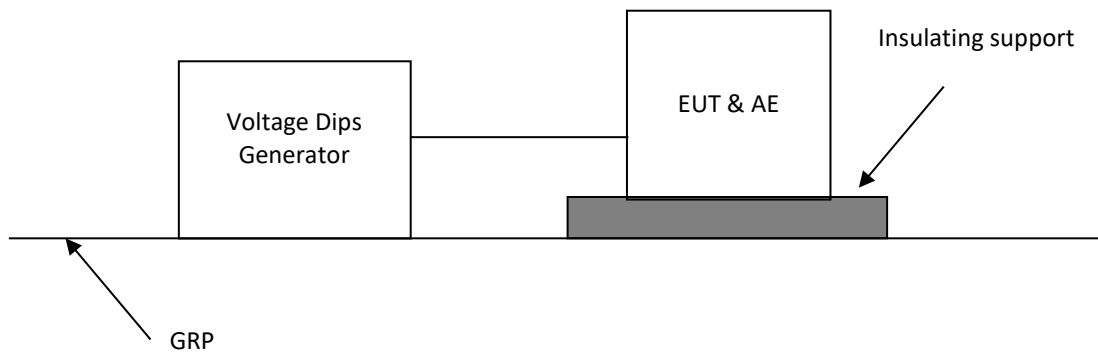
12.1 Severity Level and Performance Criterion

12.1.1 Test level

Test level Reduction (%)	Voltage level in % of rated Ut	Duration (cycles)	Performance criterion
100	0	0.5	B
		1	B
		250 (at 50Hz) 300 (at 60Hz)	C
30	70	25 (at 50Hz) 30 (at 60Hz)	C

Notes: The gray rows are selected test level.

12.2 Test Setup



12.3 Test Procedure

Measurement was performed in shielded room.

Measurement procedure was applied according to EN 61000-4-11 clause 8.

The test method and equipment was specified by EN 61000-4-11.

12.4 Test Result

Test no.	Test level % U _T	Voltage dip and short interruptions % U _T	Duration (in periods)	Pass/ Fail	Comment
1	70	30%	25 cycles at 50Hz	Pass	-
			30 cycles at 60Hz	Pass	
2	0	100%	0.5 cycle	Pass	-
3	0	100%	1 cycle	Pass	-
4	0	100%	250 cycles at 50Hz	Pass	-
			300 cycles at 60Hz	Pass	
Note: “NA” means not applicable.					

Observation:

Conclusion-

13 Power Frequency Magnetic field

Test result: NA

13.1 Severity Level and Performance Criterion

13.1.1 Test level

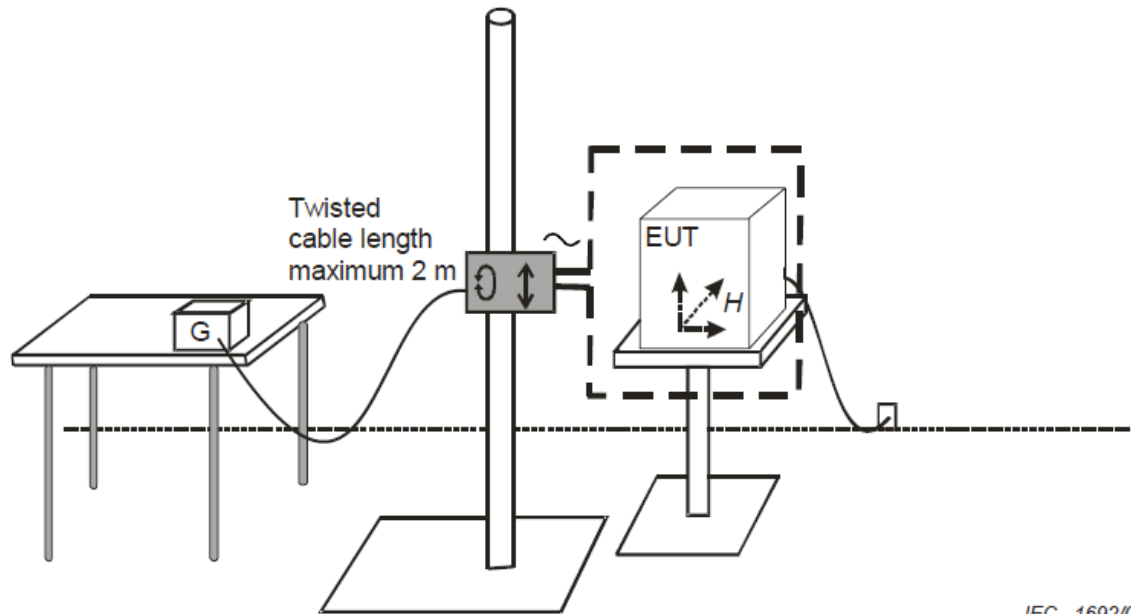
Level	Magnetic field strength A/m
1	1
2	3
3	10
4	30
5	100
X	Special
Note: 1. X is an open test level; this level may be given in the product specification. 2. The gray row is the selected test level.	

13.1.2 Performance Criterion

Performance criterion A

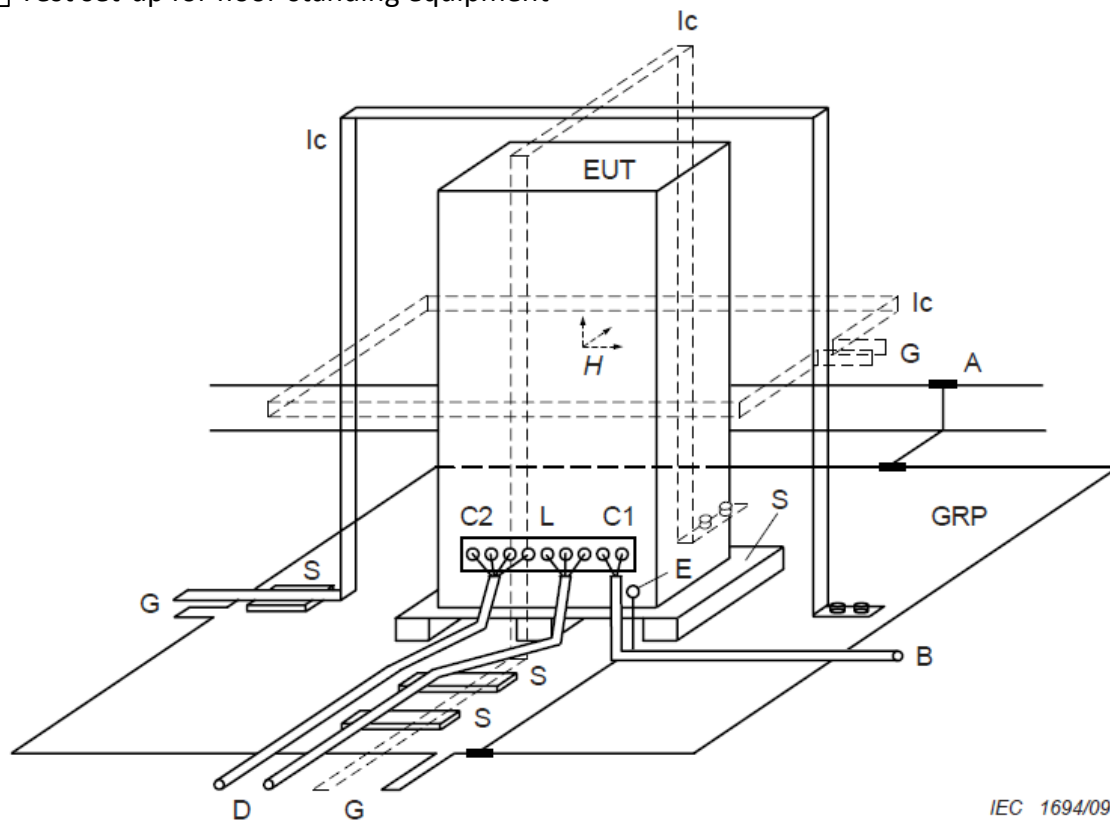
13.2 Diagram of Test Setup

☐ Test set-up for table-top equipment



IEC 1692/09

☐ Test set-up for floor-standing equipment



IEC 1694/09

13.3 Test Setup and Test Procedure

Measurement was performed in shielded room.

Measurement and setting of EUT was applied according to clause 7 of IEC 61000-4-8.

The test method and equipment was specified by IEC 61000-4-8 with the modifications by clause 8 of EN 61000-6-1.

13.4 Test Protocol

Test No.	Level A/m	Axis	Result	Comment
1	3	X		
2	3	Y		
3	3	Z		

Observation:

Conclusion:

Appendix I: Photograph of equipment under test





*****END of the report*****