Applicant:	ZHEJIANG IWALK TECHNOLOGY CO., LTD. NO. 59-1 JUXING TECHNOLOGY PARK, JIAOJIANG DISTRICT, TAIZHOU CITY, ZHEJIANG, PROVINCE
Manufacturer:	Teleshop Limited NO. 59-1 JUXING TECHNOLOGY PARK, JIAOJIANG DISTRICT, TAIZHOU CITY, ZHEJIANG, PROVINCE
Product Name:	Electrical Bike
Brand Name:	/
Model Name:	RS1
Ratings:	36V 10400mAh/374.4Wh ,IP54
EUT Voltage:	36V
Date of Receipt:	September 03, 2021
Date of Review:	September 03, 2021 to September 12, 2021
Review Standard:	EN 55014-1:2017+A11:2020+A11:2020, EN 55014-2:2015, EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019
Review Result:	PASS

Prepared by :

Approved by :

GLOBAL TESTING SERVICES CO., LTD. CERTIFICATION

Table Of Contents

1. General Information

1.1 Description of EUT

Product Name:	Electrical Bike
Model Name:	RS1
Serial Number:	N/A
Power Supply:	36V
Applicant:	Teleshop Limited NO. 59-1 JUXING TECHNOLOGY PARK, JIAOJIANG DISTRICT, TAIZHOU CITY, ZHEJIANG, PROVINCE
Manufacturer:	ZHEJIANG IWALK TECHNOLOGY CO., LTD. NO. 59-1 JUXING TECHNOLOGY PARK, JIAOJIANG DISTRICT, TAIZHOU CITY, ZHEJIANG, PROVINCE

1.2 Description of Review Facility

Site Description	:	Shanghai Global Testing Services Co., Ltd.
Name of Firm	:	Shanghai Global Testing Services Co., Ltd.
Site Location	:	Floor 2nd, Building D-1, No. 128, Shenfu Road, Minhang District, Shanghai, China.

The site and apparatus are constructed in conformance with the requirements of ANSI C63.4, CISPR 16-1-1 and other equivalent standards.

1.3 Measurement Uncertainty

Conducted Emission Expanded Uncertainty	:	U = 2.50 dB
Radiated Emission Expanded Uncertainty	:	U = 4.08 dB

2. Techniacl Summary

2.1 Summary Of Standards And Test Results

The EUT have been tested according to the applicable standards as referenced below:

Emission (EN 55014-1:2017+A11:2020)		
Test Item	**Test Standard**	**Results**
Mains Terminal Continuous Disturbance Voltage	EN 55014-1	P
Mains Terminal Discontinuous Disturbance Voltage	EN 55014-1	N/A
Disturbance Power	EN 55014-1	N/A
Radiated Emission	EN 55014-1	P

Immunity (EN 55014-2:2015)		
Test Item	**Basic Standard**	**Results**
Electrostatic discharge Immunity	IEC 61000-4-2:2008	P
RF Electromagnetic Field Immunity	IEC 61000-4-3:2006+A1:2007 +A2:2010	P
Electrical Fast Transient/Burst Immunity	IEC 61000-4-4:2012	P
Surge Immunity	IEC 61000-4-5:2014	P
Injected Current	IEC 61000-4-6:2013+Cor 1:2015	P
Voltage Dips	IEC 61000-4-11:2004	P

Note: P means pass, F means failure, N/A means not applicable

2.2 Description of Performance Criteria

The variety and the diversity of the apparatus within the scope of this standard make it difficult to define precise criteria for the evaluation of the immunity test results.
If, as result of the application of the tests defined in this standard, the apparatus becomes dangerous or unsafe, the apparatus shall be deemed to have failed the test.
A functional description and a definition of performance criteria, during or as a consequence of the EMC testing, shall be provided by the manufacturer and noted in the test report, based on the following criteria:

2.2.1 Performance criterion A

The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

2.2.2 Performance 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 allowed however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

2.2.3 Performance criterion C

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

3. Test Equipment List

Mains Terminal Continuous Disturbance Voltage				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
Shielding Room	CHENGYU	5m×4m×3m	CR	Dec 24, 2021
EMI Test Receiver	R&S	ESCI7	100787	Dec 24, 2021
Artificial Mains Network	TESEQ	NNB 51	33285	Dec 24, 2021

Radiated Disturbance Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
3m Semi-anechoic Chamber	CHENGYU	9.2×6.25×6.15m	SAR	Dec 24, 2021
EMI Test Receiver	R&S	ESCI7	100787	Dec 24, 2021
EMC Shielding room	Changzhou FeiTe	8 x 5 x 3 mm	Nil	Dec 24, 2021
Broadband Log Antenna	Schwarzbeck	VULB 9163	9163-561	Dec 24, 2021

Harmonic Current Emissions				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
Harmonic Currents and Flick Tester	APS	ECTS-3120T	550029	Nov 18, 2021

Voltage Fluctuations and Flicker Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
Harmonic Currents and Flick Tester	APS	ECTS-3120T	550029	Nov 18, 2021

Electrostatic Discharge Immunity Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
ESD Generator	SCHAFFNER	NSG 438	849	Dec 24,2021

RF Electromagnetic Field Immunity				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
Radiated Immunity Test System	TESEQ	ITS 6006	37546	Dec 24, 2021
Power Meter	TESEQ	PMR 6006	73819	Dec 24, 2021
Power Amplifier	MILMEGA	AS1860-50	1066592	Dec 24, 2021
Log Periodic Antenna	Schwarzbeck	STLP 9128 D	9128 D 048	Dec 24, 2021
Field Probe	ETS-Lindgren	HI-6105	00161798	Dec 24, 2021

Electrical Fast Transient/Burst Immunity Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
EFT/SURGE Generator	TESEQ	NSG 3060	1468	Dec 24, 2021
Single Phase Coupling/decoupling Network	TESEQ	CDN 3061	1404	Dec 24, 2021

Surge Immunity Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
EFT/SURGE Generator	TESEQ	NSG 3060	1468	Dec 24, 2021
Single Phase Coupling/decoupling Network	TESEQ	CDN 3061	1404	Dec 24, 2021

Injected Current Immunity Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
Conducted Immunity Test System	TESEQ	NSG 4070	25795	Dec 24, 2021
Coupling/Decoupling Network	TESEQ	CDN M116S	35371	Dec 24, 2021

Voltage Dips Immunity Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Next Cal.**
EFT/SURGE Generator	TESEQ	NSG 3060	1468	Dec 24, 2021
Single Phase Coupling/decoupling Network	TESEQ	CDN 3061	1404	Dec 24, 2021

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and has been calibrated by accredited calibration laboratories.

4. Emission Test

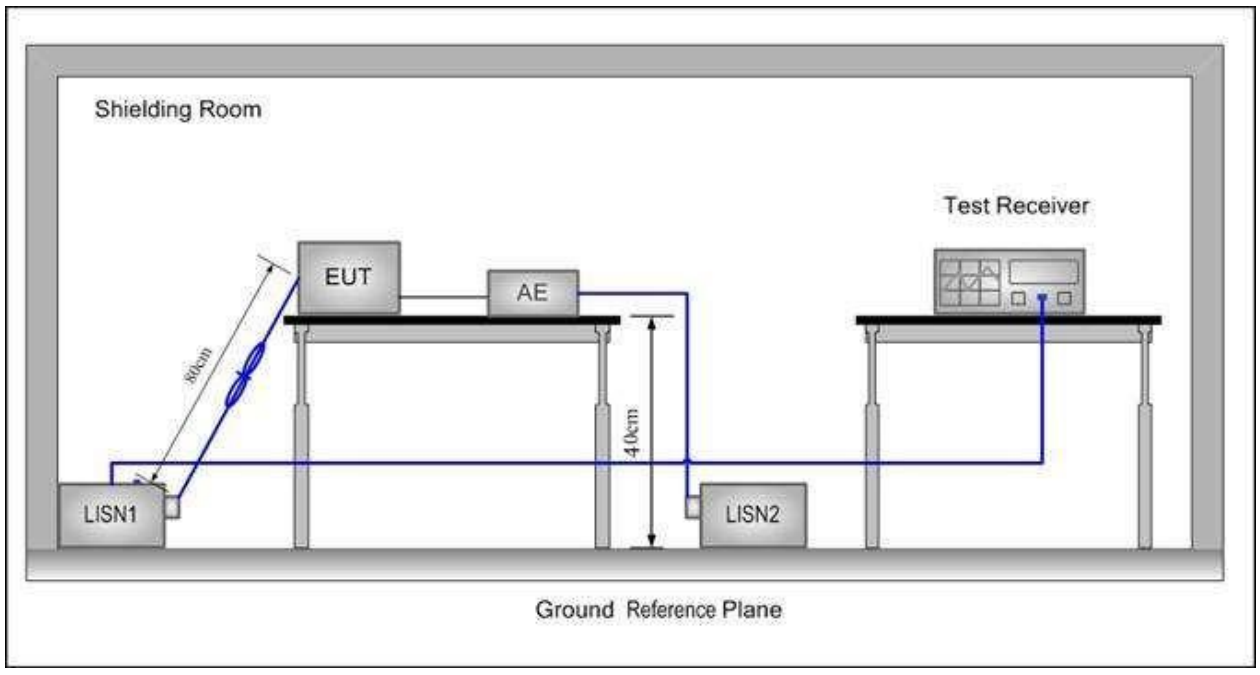
4.1 Conducted Emission

This clause lays down the general requirements for the measurement of disturbance voltage produced at the terminals of apparatus

4.1.1 Limits

Frequency range MHz	At mains terminals dB (μV)	
	Quasi-peak Limit	Average Limit
0.15 to 0.50	66 to 56	59 to 46
0.50 to 5	56	46
5 to 30	60	50
Note1: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 30 MHz. Note2: The lower limit is applicable at the transition frequency.		

4.1.2 Measurement procedure



1. The mains terminal disturbance voltage was measured with the EUT in a shielded room.

2. The EUT was connected to AC power source through a LISN (Line Impedance Stabilization Network) which provides a (50 μH + 5 Ω) || 50 Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN, which was bonded to the ground reference plane in the same way as the LISN for the unit being measured

3. The tabletop EUT was placed upon a non-metallic table 0.4m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation

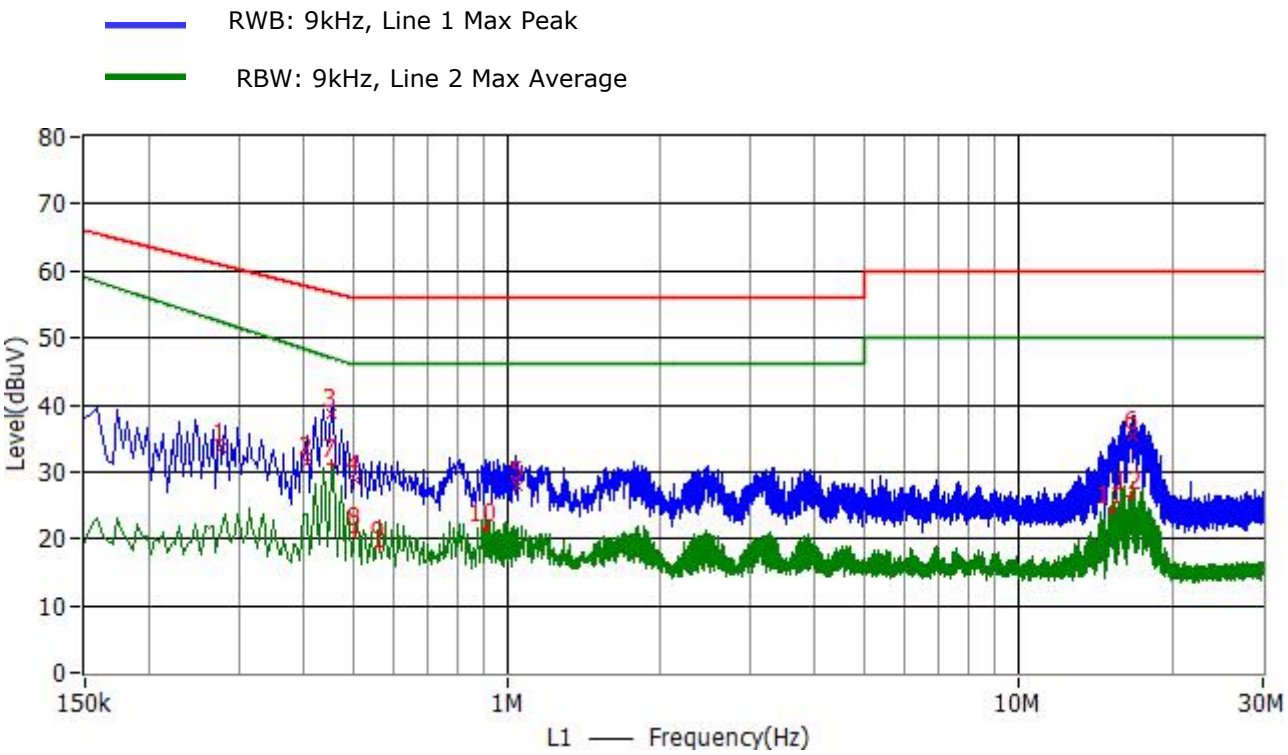
4. According to a pre-test at 160kHz, the worst voltage was selected for final test. Before get the final emission results with quasi-peak(QP) detector and average(AVG) detector, a pre-scan was performed with the peak(PK) and average(AVG) detector to find out the maximum emission data plots of the EUT.

4.1.3 Measurement uncertainty

Ulab(cond) = 2.5dB at 95% level of confidence, k=2

4.1.4 Results -Measurement Data

Neutral Line: Level

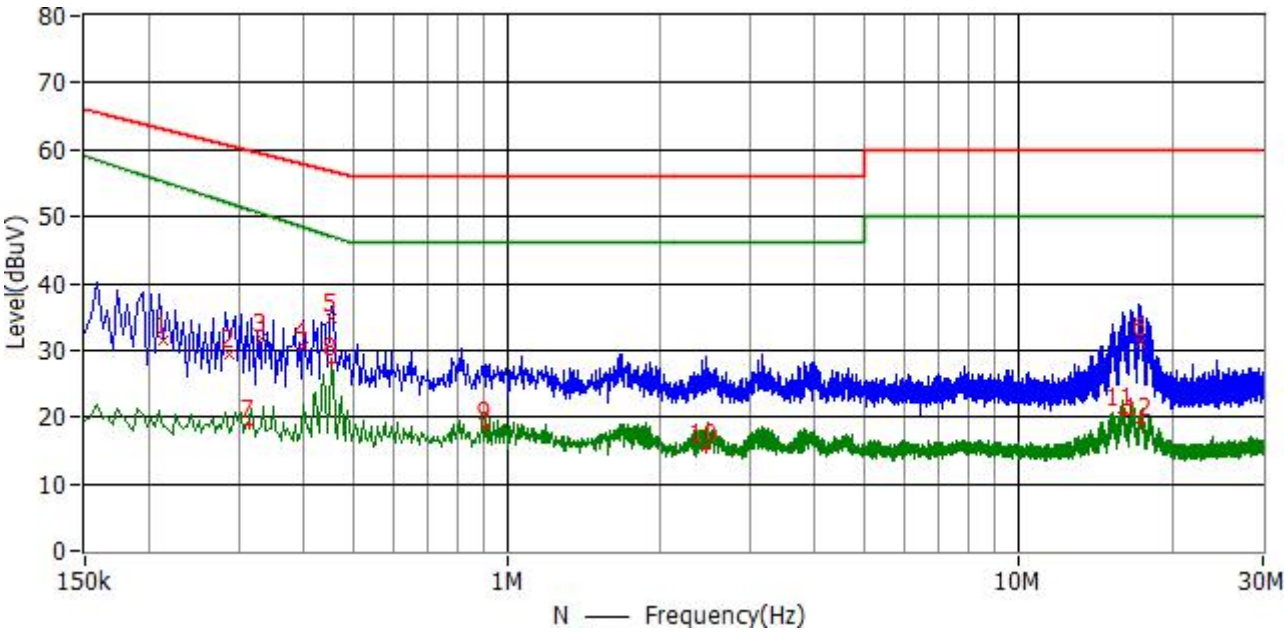


No.	Frequency	Limit dBuV	Level dBuV	Delta Limit dB	Factor dB	Detector	Phase
1	278.000 kHz	60.8	33.4	-27.1	10.4	QP	L1
2	406.000 kHz	56.8	31.2	-26.2	10.4	QP	L1
3	454.000 kHz	56.4	38.4	-18.5	10.4	QP	L1
4	506.000 kHz	56.0	28.5	-27.4	10.5	QP	L1
5	1.050 MHz	56.0	28.0	-28.0	10.5	QP	L1
6	16.666 MHz	60.0	35.5	-24.5	10.7	QP	L1
7	454.000 kHz	47.0	31.2	-15.3	10.4	CAV	L1
8	506.000 kHz	46.0	21.1	-24.4	10.5	CAV	L1
9	562.000 kHz	46.0	19.0	-27.0	10.5	CAV	L1
10	910.000 kHz	46.0	21.7	-24.5	10.4	CAV	L1
11	15.282 MHz	50.0	24.2	-25.7	10.7	CAV	L1
12	16.618 MHz	50.0	26.5	-23.5	10.7	CAV	L1

Neutral Line: Level

RWB: 9kHz, Line 1 Max Peak

RBW: 9kHz, Line 2 Max Average



No.	Frequency	Limit dBuV	Level dBuV	Delta Limit dB	Factor dB	Detector	Phase
1	214.000 kHz	63.0	31.4	-31.4	10.3	QP	N
2	286.000 kHz	60.4	29.1	-31.5	10.3	QP	N
3	330.000 kHz	59.2	31.7	-27.6	10.3	QP	N
4	402.000 kHz	57.6	30.5	-27.3	10.4	QP	N
5	454.000 kHz	56.2	34.7	-21.7	10.4	QP	N
6	17.246 MHz	60.0	31.0	-28.5	10.6	QP	N
7	314.000 kHz	51.0	19.0	-32.0	10.3	CAV	N
8	454.000 kHz	47.0	28.1	-18.8	10.4	CAV	N
9	910.000 kHz	46.0	18.7	-27.1	10.4	CAV	N
10	2.446 MHz	46.0	15.3	-30.6	10.4	CAV	N
11	15.954 MHz	50.0	20.8	-29.2	10.6	CAV	N
12	17.334 MHz	50.0	19.3	-30.7	10.6	CAV	N

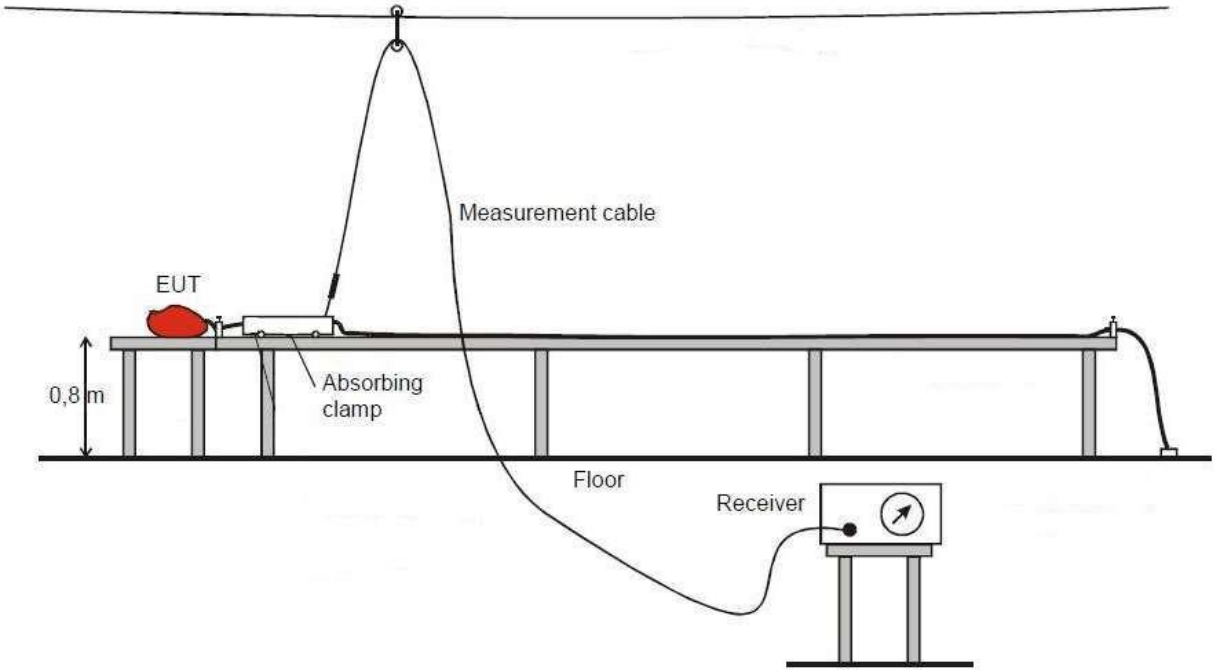
4.2 Disturbance power

This clause lays down the general requirements for the measurement of disturbance power produced at the terminals of apparatus

4.2.1 Limits

Frequency range MHz	Limit dB (pW)	
	Quasi-peak	Average
30 to 300	45 to 55	35 to 45
Note1: Increasing linearly with the frequency from.		

4.2.2 Measurement procedure



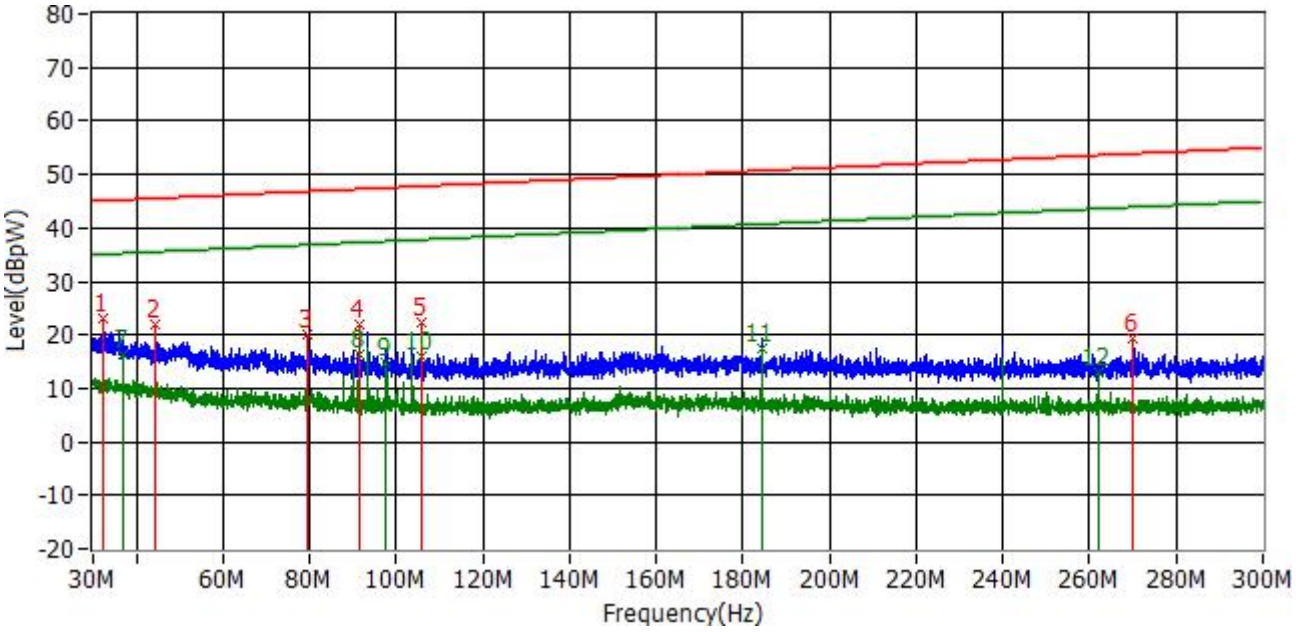
The test configuration corresponds to the standard EN 55014-1. The equipment under test is placed on a non metallic table with 0,8 m high. The lead to be measured is stretched horizontally in a straight line, to permit variation in position of the absorbing clamp along the lead to find the maximum indication. The lead shall be at least length of 6 meter. According to a pre-test at 50MHz, the worst voltage was selected for final test. Before get the final emission results with quasi-peak(QP) detector and average(AVG) detector, a pre-scan was performed with the peak(PK) detector to find out the maximum emission data plots of the EUT. The absorbing clamp is placed around the lead.

4.2.3 Measurement uncertainty

Ulab(cond) = 4.08 dB at confidence of 95%,k=2

4.2.4 Results

DC Level



No.	Frequency	Limit dBpW	Level dBpW	Delta Limit dB	Factor dB	Detector
1	32.520 MHz	45.2	22.4	-22.2	9.1	QP
2	44.340 MHz	45.6	21.7	-23.7	8.0	QP
3	79.560 MHz	46.4	19.5	-27.0	6.3	QP
4	91.440 MHz	47.1	22.6	-25.2	5.8	QP
5	105.720 MHz	47.5	22.2	-25.5	5.7	QP
6	270.060 MHz	53.7	19.7	-34.6	5.6	QP
7	36.840 MHz	35.2	16.1	-19.1	8.8	CAV
8	91.440 MHz	37.1	16.5	-20.8	5.8	CAV
9	97.680 MHz	37.6	14.2	-22.8	5.7	CAV
10	105.720 MHz	37.	15.4	-21.9	5.7	CAV
11	184.260 MHz	40.3	17.2	-23.3	5.5	CAV
12	262.140 MHz	43.4	12.4	-30.8	5.5	CAV

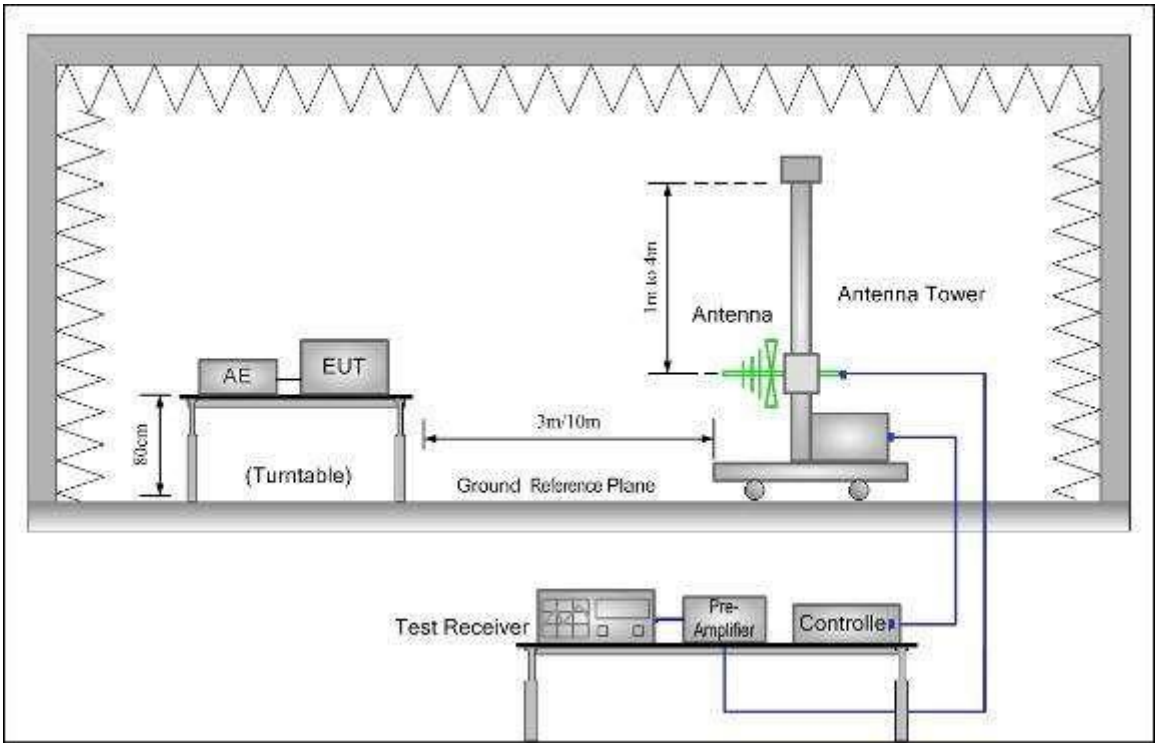
4.3 RADIATED DISTURBANCE

This clause lays down the general requirements for the measurement of Radiated disturbance produced at the space of apparatus

4.3.1 Limits

Frequency range	Quasi-peak limits at 3m
MHz	dB (μV/m)
30 to 230	40
230 to 1000	47

4.3.2 Measurement procedure



1. The radiated emissions test was conducted in a semi-anechoic chamber. The EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation

2. Before get the final emission results with quasi-peak(QP) detector, a pre-scan was performed with the peak(PK) detector to find out the maximum emission data plots of the EUT.

3. The frequencies of maximum emission were determined in the final radiated emissions measurement, the physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in

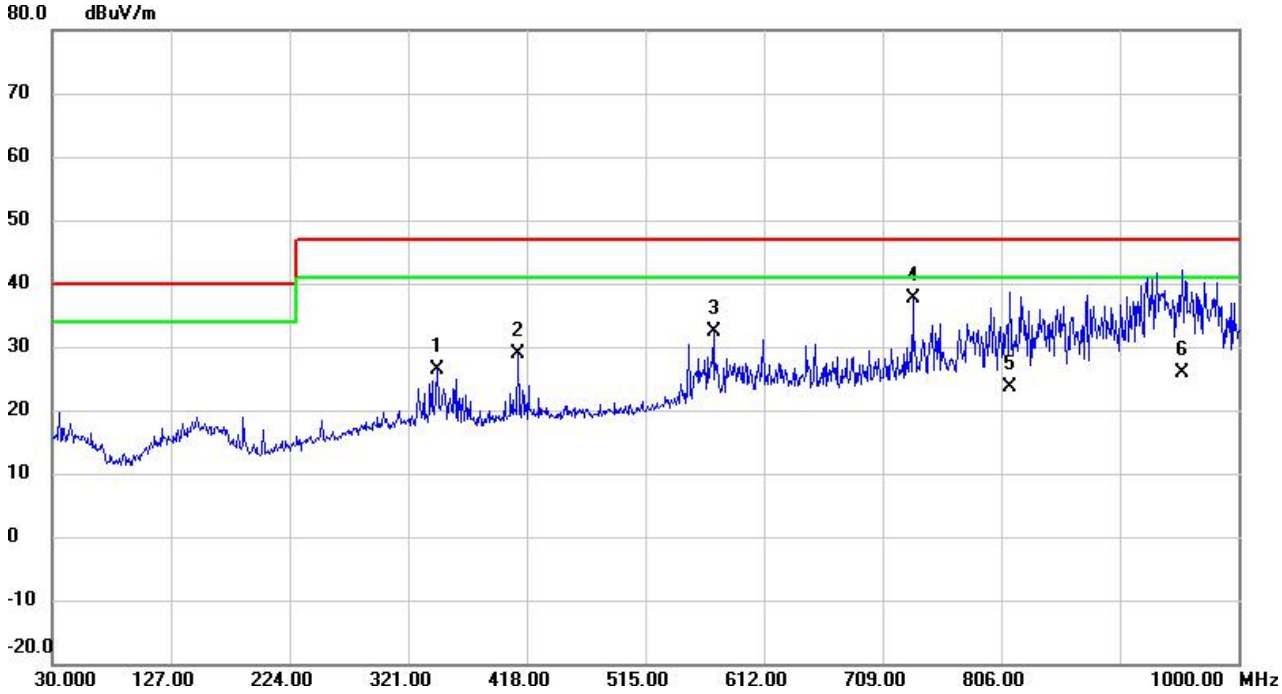
order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization. Test was performed on subcontractor.

4.3.3 Measurement uncertainty

The maximum measurement uncertainty is evaluated as:
Horizontal: 30MHz~200MHz: 3.20 dB, 200MHz~1GHz: 3.18 dB
Vertical: 30MHz~200MHz: 4.12 dB, 200MHz~1GHz: 3.12 dB

4.3.4 Results

Note: Standalone operating mode



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		344.2800	40.25	-13.75	26.50	47.00	-20.50	QP
2		411.2100	42.41	-13.41	29.00	47.00	-18.00	QP
3		570.7750	42.50	-10.16	32.34	47.00	-14.66	QP
4	*	733.7350	44.95	-7.29	37.66	47.00	-9.34	QP
5		813.2750	30.08	-6.34	23.74	47.00	-23.26	QP
6		954.4100	30.91	-5.12	25.79	47.00	-21.21	QP

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		356.8900	46.69	-13.68	33.01	47.00	-13.99	QP
2		564.4700	39.99	-10.50	29.49	47.00	-17.51	QP
3		781.7500	39.12	-6.54	32.58	47.00	-14.42	QP
4		844.3150	39.64	-6.09	33.55	47.00	-13.45	QP
5	*	926.7650	41.46	-5.27	36.19	47.00	-10.81	QP
6		953.9250	41.02	-5.13	35.89	47.00	-11.11	QP

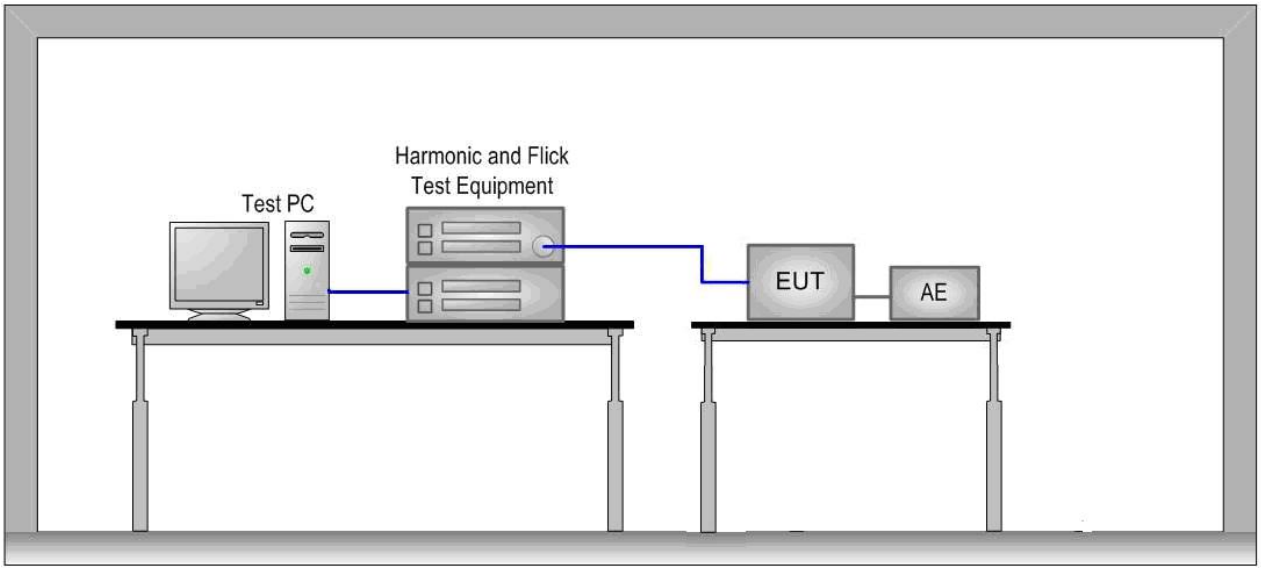
4.4 Voltage Changes, Voltage Fluctuations and Flicker

This part is concerned with the limitation of voltage fluctuations and flicker impressed on the public low- voltage system

4.4.1 Limits

Value	Limit
Pst	1,0
Plt	0,65
dt	3,3%
dc	3,3%
dmax	4,0%

4.4.2 Measurementest procedure



The equipment under test is placed on a wooden table with a height of 0,8 m in the EMC lab. The voltage fluctuations and flicker were measured at the supply terminals of the EUT.

4.4.3 Results

Parameter values recorded during the test: Vrms at the end of test (Volt): 229.83

T-max (mS):	**0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.12**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**

5 Immunity Test

5.1 Performance Criteria Description in Clause 6 of EN 55014-2

Criterion A:	The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
Criterion B:	The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation and from what the user may reasonably expect from the apparatus if used as intended.
Criterion C:	Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

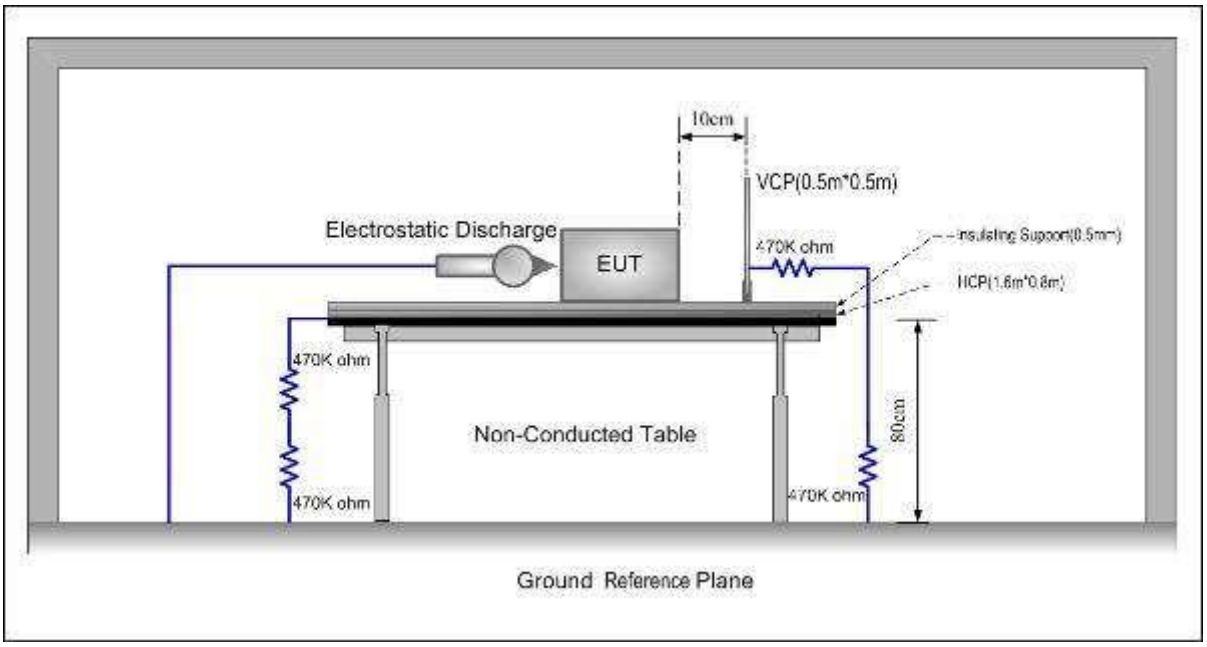
5.2 Classification of apparatus

Category I:	Apparatus containing no electronic control circuitry.
Category II:	Transformer toys, dual supply toys, mains powered motor operated appliances, tools, heating appliances and similar electric apparatus (for example . UV radiators, IR radiators and microwave ovens) containing electronic control circuitry with no internal clock frequency or oscillator frequency higher than 15 MHz.
Category III:	Equipment which in normal use, is not connected to a power network and has no cables attached. This category includes apparatus provided with rechargeable batteries, solar or other similar d.c. power sources which can be charged or operated by connecting the apparatus to the mains power. However, this apparatus shall also be tested as an apparatus in category II while it is connected to the mains network.
Category IV:	All other apparatus covered by the scope of this standard.

The EUT belongs to Category III+ Category II (while connected to AC mains)

5.3 ESD

5.3.1 Test Procedures



1. Contact discharge was applied only to conductive surfaces of the EUT. Air discharge was applied only to non-conducted surfaces of the EUT

2.The EUT was put on a 0.8m high wooden table for table-top equipment or 0.1m high for floor standing equipment standing on the ground reference plane (GRP)

3. A horizontal coupling plane(HCP) 1.6m by 0.8m in size was placed on the table, and the EUT with its cables were isolated from the HCP by an insulating support thick than 0.5mm. The VCP 0.5m by 0.5m in size while HCP were constructed from the same material type and thickness as that of the GRP, and connected to the GRP via a 470kΩ resistor at each end. The distance between EUT and any of the other metallic surfaces excepted the GRP, HCP and VCP was greater than 1m

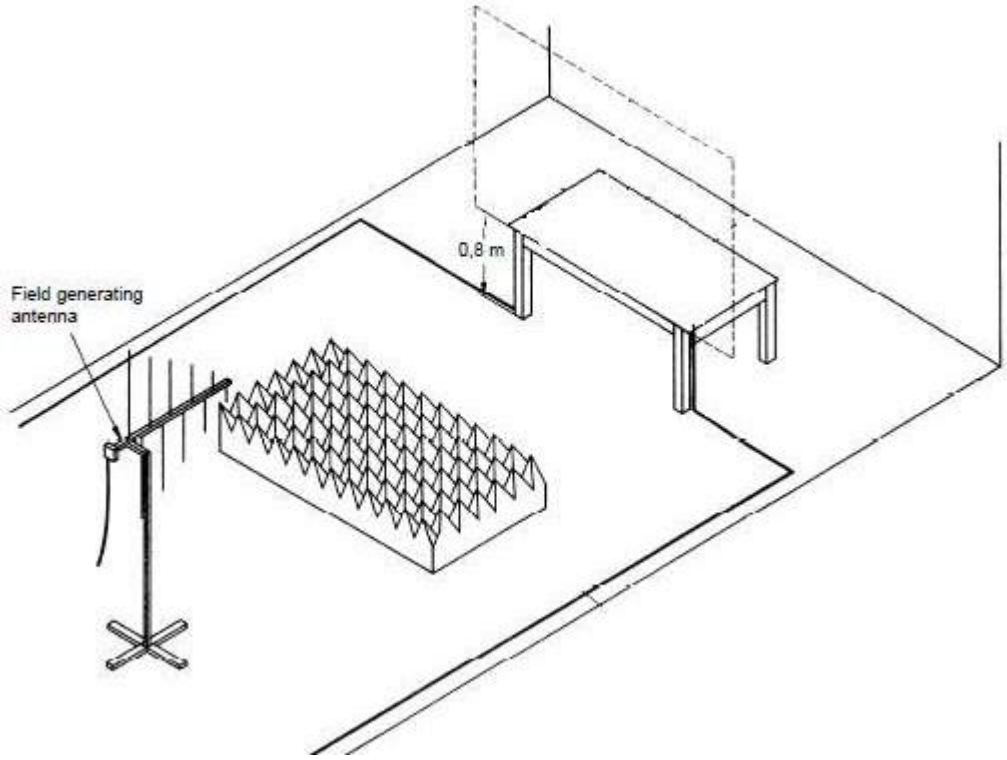
5.3.2 Results

Test point	Table (T) Floor (F)	Contact (C) Air (A)	Voltage (kV)	Number of discharge	Polarity (+ / -)	Opinion
Air discharge	T	A	8	20	+ / -	A
Contact discharge	T	C	4	20	+ / -	A
HCP	T	C	4	20	+ / -	A
VCP	T	C	4	20	+ / -	A

A: no loss of function.

5.4 Radio frequency electromagnetic fields

5.4.1 Measurement procedure



1.The EUT was placed on 0.8m high wooden table for table-top equipment. For floor standing equipment, the EUT was placed on a 0.1m high wooden support above the GRP.The tests normally shall be performed with the generating antenna facing each of four sides of the EUT. When equipment can be used in different orientations (e.g. vertical or horizontal) the test shall be performed on all possible sides of the EUT.
2.The tests are carried out with a field strength by 1.5V/m (measured in the unmodulated field) with amplitude modulated signal by a depth of 80 % by a sinusoidal audio signal of 1 kHz. The logarithmic step was 1% and the dwell time was 3s dependent of the EUT cycle time
3.The EUT shall be positioned so that the four sides of the EUT shall be exposed to the electromagnetic field in sequence. In each position the performance of the EUT will be investigated. In the case where the most sensitive surface side of the EUT is known throughout the frequency range (for example, via preliminary tests), testing may be restricted to that surface side only. Test was performed on subcontractor.

5.4.2 Results

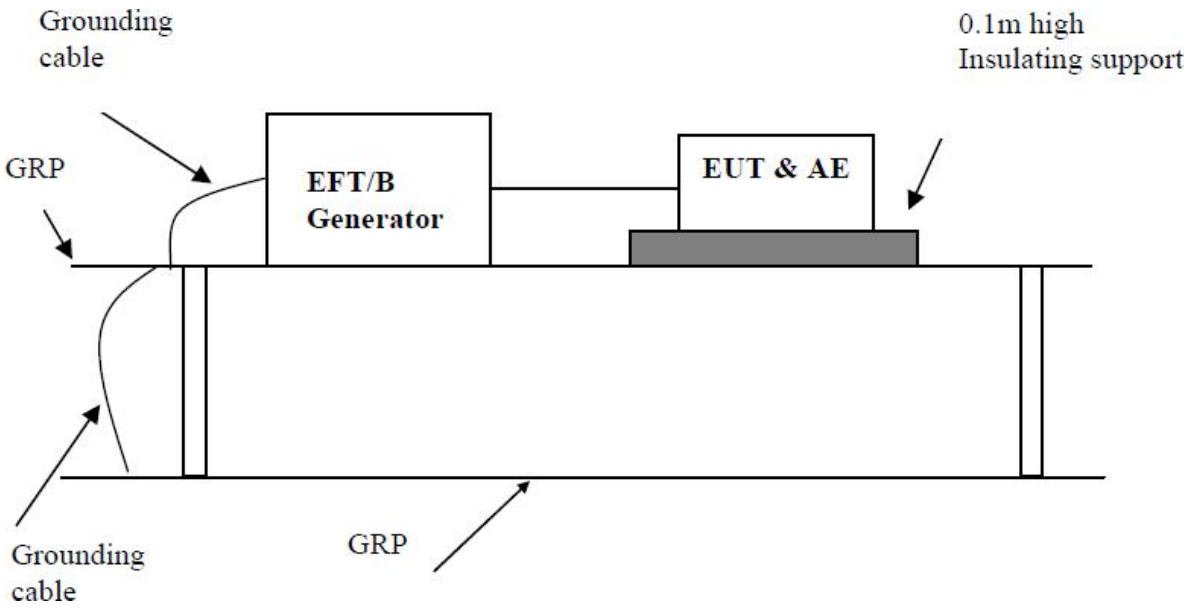
For standalone operating mode:

Frequency Range	Field Strength	Modulation	Opinion
80MHz to 1GHz	1.5V/m	80% AM 1kHz	A

A: no loss of function.

5.5 Electrical Fast Transients

5.5.1 Measurement procedure



1. The EUT was placed on a ground reference plane(GRP) insulated by an insulating support 0,1 m thick and the GRP was placed on a 0.8m high wooden table for table-top equipment. For floor standing equipment, the EUT was placed on a 0.1m high wooden support above the GRP.

2. The GRP shall project beyond the EUT and the clamp by at least 0.1m on all sides. The distance between the EUT and any other of the metallic surface except the GRP was greater than 0.5m. All cables to the EUT was placed on the insulation support 0.1m above GRP. Cables not subject to EFT was routed as far as possible from cable under test to minimize the coupling between the cables.

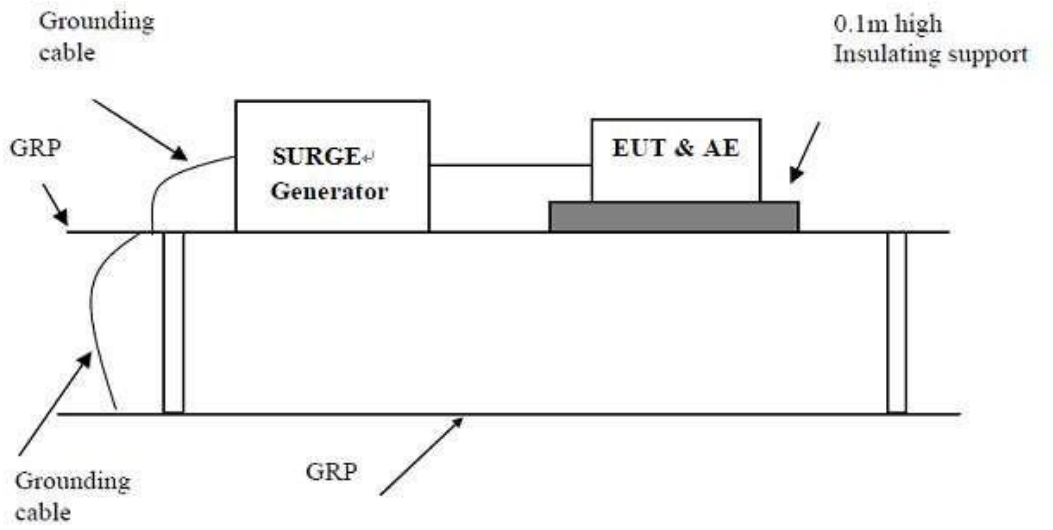
3. The length of signal and power cable between the EUT and EFT generator was 0.5m. If the cable is a non-detachable supply cable more than 0.5m, the excess length of this cable shall be folded to avoid a flat coil and situated at a distance of 0.1m above the GRP

5.5.2 Results

Test port	Voltage (kV)	Polarity (+ / -)	Duration (s or min)	Waveform Tr / Th	Repetition Frequenc y (kHz)	Opinion
DC power line	1	+	> 1 min	5/50 ns	5	A
DC power line	1	-	> 1 min	5/50 ns	5	A

5.6 Surge Immunity

5.6.1 Measurement procedure



1. The EUT was placed on a ground reference plane(GRP) insulated by an insulating support 0,1 m thick and the GRP was placed on a 0.8m high wooden table for table-top equipment. For floor standing equipment, the EUT was placed on a 0.1m high wooden support above the GRP.

2. The 1,2/50 μs surge was to be applied to the EUT power supply terminals via the capacitive coupling network .Decoupling networks were required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines and to provide sufficient decoupling impedance to the surge wave so that the specified wave may be applied on the lines under test.

3. The positive pulses are applied 90° relative to the phase angle of the a.c. line voltage to the equipment under test, and the negative pulses are applied 270° relative to the phase angle of the a.c. line voltage to the equipment under test.

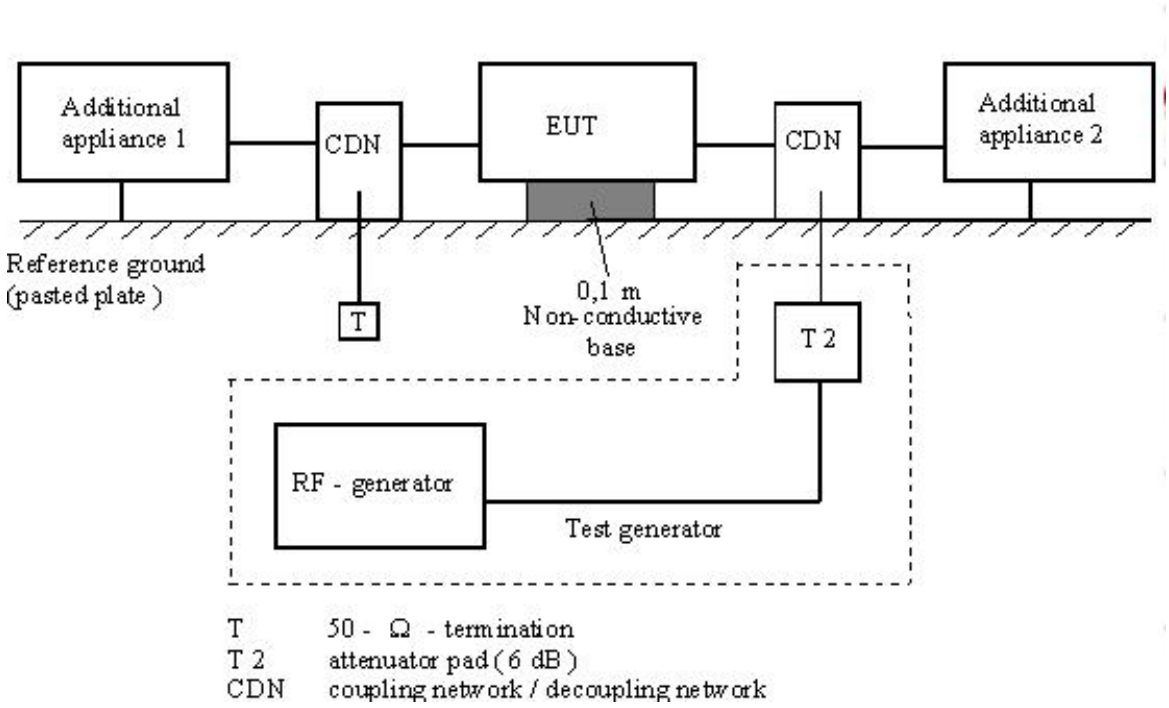
5.6.2 Results

Test mode	Polarity (+ / -)	Voltage (kV)	Waveform Tr / Th	Number of pulses	Opinion
Live-Neutral	+	1	1.2/50 μs	5	A
Live-Neutral	-	1	1.2/50 μs	5	A

A: no loss of function.

5.7 Injected currents(RF continues conducted)

5.7.1 Measurement procedure



1. The EUT was placed on an insulating support of 0.1m height above a ground reference Plane, arranged and connected to satisfy its functional requirement. All cables exiting the EUT was supported at a height of at least 30 mm above the ground reference plane.

2. The coupling and decoupling devices were required, they were located between 0,1 m and 0,3 m from the EUT. This distance was to be measured horizontally from the projection of the EUT on to the ground reference plane to the coupling and decoupling device.

3. The frequency range was swept from 150 kHz to 230 MHz, using the signal levels established during the setting process, and with the disturbance signal 80 % amplitude modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or to change coupling devices as necessary. Where the frequency was swept incrementally, the step size do not exceed 1 % of the preceding frequency

value. The dwell time of the amplitude modulated carrier at each frequency was not less than the time necessary for the EUT to be exercised and to respond, and was not less than 3s.

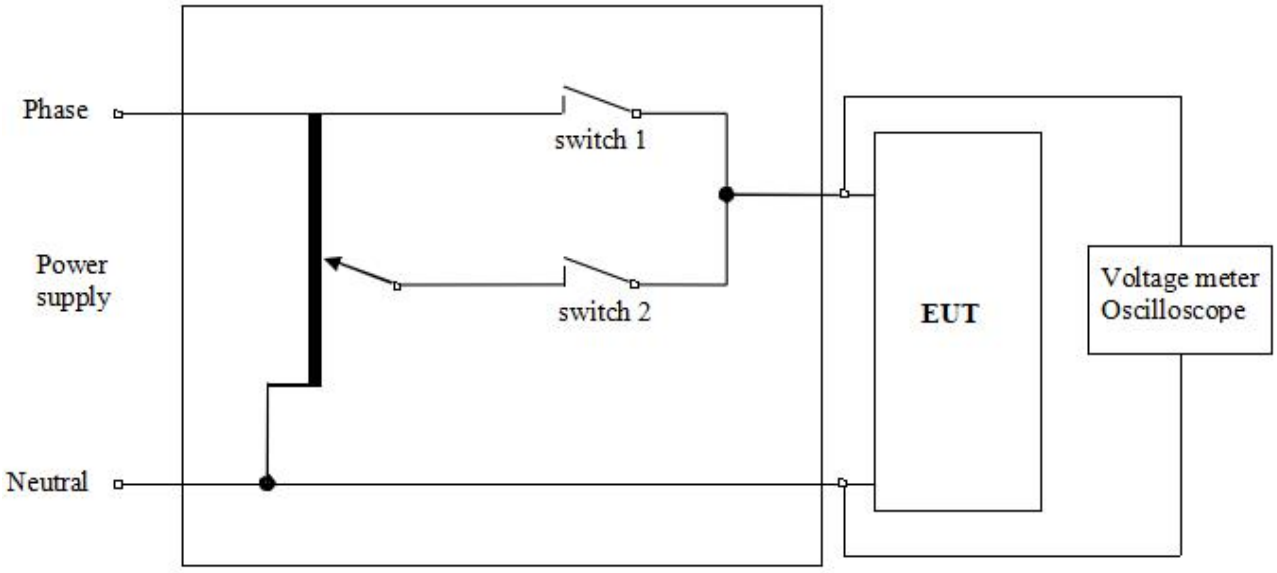
5.7.2 Results

Test port	Voltage (e.m.f.)	Modulation	Frequency Range	Opinion
DC power line	1.5V	80% AM 1 kHz	150 kHz - 230MHz	A

A: no loss of function.

5.8 Voltage dips and Interruption

5.8.1 Measurement procedure



1. The EUT was placed on a ground reference plane(GRP) insulated by an insulating support 0,1 m thick and the GRP was placed on a 0.8m high wooden table for table-top equipment. For floor standing equipment, the EUT was placed on a 0.1m high wooden support above the GRP.

2. The test was performed with the EUT connected to the test generator with the shortest power supply cable as specified by the EUT manufacturer. Voltage change shall occur at zero crossing.

3. The EUT was tested for each selected combination of test level and duration with a sequence of three dips /interruptions with intervals of 10 s minimum. Each representative mode of operation was tested.

5.8.2 Results

Reduction of supply voltage of	Voltage in % (in V)	Duration in parts of period (in ms)	Opinion
interruption	0% (0V)	0,5 (10ms)	A
60%	40% (92 V)	10 (200ms)	B
30%	70% (161 V)	25 (500ms)	B

A: no loss of function.

B: the appliance could not charge normally during the test, but it would recover after test.

----End of the report----

Type of equipment, model: Electrical Bike ,
RS1

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- End of Annex I -