

TCB

**GRANT OF EQUIPMENT
AUTHORIZATION**

TCB

**Certification
Issued Under the Authority of the
Federal Communications Commission**

By:

**MiCOM Labs
575 Boulder Court
Pleasanton, CA 94566**

Date of Grant: 03/14/2022

Application Dated: 03/14/2022

**Guangdong Welland Technology Co., Ltd.
No.85 MinKe East Road, MinYing Science
and Technology Park, ShiQi District,
Zhongshan, 528400
China**

Attention: Hillary Chan , Sales Manager

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: 2AP3Q-FI2019LB-B
Name of Grantee: Guangdong Welland Technology Co., Ltd.

Equipment Class: Digital Transmission System
Notes: Smart Body Fat Scale

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
	15C	2402.0 - 2480.0	0.0007		

Power listed is the maximum conducted output power.



MSDS Report

Prepared For :	SHENZHEN HOPEPOWER TECHNOLOGY CO., LTD. NO.145, THE SECOND INDUSTRIAL AVENUE, TANGXIAYONG, SONGGANG TOWN, BAO'ANDIST, SHENZHEN
Product Name:	Lithium-ion polymer battery
Model :	HKT 402030
Nominal Voltage:	3.7V
Typical Capacity:	200mAh,0.74Wh
Weight:	4.4g
Dimension :	32.0mm×19.2mm×4.0mm (L×W×T)
Prepared By :	Shenzhen TCT Testing Technology Co., Ltd. 1F, No.1 Building, No.1 Chongqing Road, Yibaolai Industrial Park,Qiaotou Village, Fuyong Town, Baoan District, Shenzhen
Report No.:	TCT150906M006

Written by: Cecily Xiong

Approved by: _____

Inspected by: Carol Xiong

Date: 2025-09-25



Material Safety Data Sheet

Section 1- Chemical Product & Company Identification

Product Name: Lithium-ion polymer battery

Manufacture: SHENZHEN HOPEPOWER TECHNOLOGY CO., LTD.

Address: NO.145, THE SECOND INDUSTRIAL AVENUE, TANGXIAYONG,
SONGGANG TOWN, BAO'ANDIST, SHENZHEN

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E-mail: 2659236424@qq.com

Item Code: TCT150906M006

Section 2- Hazards Identification

Preparation hazards and classification	Not dangerous with normal use. Do not dismantle, open or shred Lithium-ion polymer battery the ingredients contained within or their ingredients products could be harmful.
Appearance, Color, Odor	Solid object with no odor, no color.
Primary Route(s) of Exposure	These chemicals are contained in a sealed stainless steel enclosure. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by Inhalation, Ingestion, Eye contact and Skin contact
Potential Health Effects:	<p>ACUTE (short term): see Section 8 for exposure controls In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns.</p> <p>Inhalation: Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.</p> <p>Ingestion: Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.</p>

	<p>Skin: Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin.</p> <p>Eye: Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye.</p> <p>CHRONIC (long term): see Section 11 for additional toxicological data</p>
Medical Conditions Aggravated by Exposure	Not applicable
Reported as carcinogen	Not applicable

Section 3- Composition/Information on Ingredients

Lithium-ion polymer battery is a mixture

Hazardous Ingredients (Chemical Name)	Concentration or concentration ranges (%)	CAS Number
Lithium Cobalt Oxide (CoLiO ₂)	15-40	12190-79-3
Graphite	10-30	1307-96-6
Phosphate(1-), hexafluoro-, lithium	10-30	21324-40-3
Copper	7-13	7440-50-8
Aluminum foil	5-10	7429-90-5
Nickel	1-5	7440-02-0

Labeling according to EC directives.

No symbol and risk phrase are required.

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

Section 4- First Aid Measures

Inhalation	If contents of an opened battery are inhaled, remove source of contamination or move victim to fresh air. Obtain medical advice.
Skin contact	If skin contact with contents of an open battery occurs, as quickly as possible remove contaminated clothing, shoes and leather goods. Immediately flush with lukewarm, gently flowing water for at least 30 minutes. If irritation or pain persists, seek medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
Eye contact	If eye contact with contents of an open battery occurs, immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes while holding the eyelids open. Neutral saline solution may be used as soon as it is available. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto face. Quickly transport victim to an emergency care facility.
Ingestion	If ingestion of contents of an open battery occurs, never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 60 to 240 mL (2-8 oz.) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.

Section 5- Fire Fighting Measures

Flammable Properties	In the event that this battery has been ruptured, the electrolyte solution contain within the battery would be flammable. Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.
Suitable extinguishing Media	Use extinguishing media suitable for the materials that are burning.
Unsuitable extinguishing Media	Not available
Explosion Data	Sensitivity to Mechanical Impact: This may result in rupture in extreme cases Sensitivity to Static Discharge: Not Applicable
Specific Hazards arising from the chemical	Fires involving Lithium-ion polymer battery can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended to extinguish the fire
Protective Equipment and precautions for firefighters	As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.
NFPA	Health: 0 Flammability: 0 Instability: 0

Section 6- Accidental Release Measures

Personal Precautions, protective equipment, and emergency procedures	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8.
Environmental Precautions	Prevent material from contaminating soil and from entering sewers or waterways.
Methods and materials for Containment	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.
Methods and materials for cleaning up	Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.

Section 7- Handling and Storage

Handling	<p>Don't handling Lithium-ion polymer battery with metalwork. Do not open, disassemble, crush or burn battery. Ensure good ventilation/ exhaust at the workplace.</p> <p>Prevent formation of dust.</p> <p>Information about protection against explosions and fires: Keep ignition sources away- Do not smoke.</p>
Storage	<p>If the Lithium-ion polymer battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Lithium-ion polymer battery periodically.</p> <p>3 months: -10°C~+40°C, 45 to 85%RH</p> <p>And recommended at 0°C~+35°C for long period storage.</p> <p>The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more.</p> <p>The voltage for a long time storage shall be 3.7V~4.2V range.</p> <p>Do not storage Lithium-ion polymer battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.</p> <p>Keep out of reach of children.</p> <p>Do not expose Lithium-ion polymer battery to</p>

	heat or fire. Avoid storage in direct sunlight. Do not store together with oxidizing and acidic materials.
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Section 8 - Exposure Controls/Personal Protection

Engineering Controls	Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keep away from heat and open flame. Store in a cool, dry place.
Personal Protective Equipment	Respiratory Protection: Not necessary under normal conditions. Skin and body Protection: Not necessary under normal conditions, Wear neoprene or nitrile rubber gloves if handling an open or leaking battery. Hand protection: Wear neoprene or natural rubber material gloves if handling an open or leaking battery. Eye Protection: Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.
Other Protective Equipment	Have a safety shower and eye wash fountain readily available in the immediate work area.
Hygiene Measures	Do not eat, drink, or smoke in work area. Maintain good housekeeping.

Section 9- Physical and Chemical Properties

Physical State	Form: Solid
	Color: Silvery
	Odour: Monotony
Change in condition:	
pH, with indication of the concentration	Not applicable
Melting point/freezing point	Not available.
Boiling Point, initial boiling point and Boiling range:	Not available.
Flash Point	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapor Pressure:	Not applicable

Vapor Density: (Air = 1)	Not applicable
Density/relative density	Not available.
Solubility in Water:	Insoluble
n-octanol/water partition coefficient	Not available.
Auto-ignition temperature	130°C
Decomposition temperature	Not available.
Odour threshold	Not available.
Evaporation rate	Not available.
Flammability (soil, gas)	Not available.
Viscosity	Not applicable

Section 10 – Stability and Reactivity

Stability	The product is stable under normal conditions.
Conditions to Avoid (e.g. static discharge, shock or vibration)	Do not subject Lithium-ion polymer battery to mechanical shock. Vibration encountered during transportation does not cause leakage, fire or explosion. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.
Incompatible Materials	Not Available
Hazardous Decomposition Products	This material may release toxic fumes if burned or exposed to fire
Possibility of Hazardous Reaction	Not Available

Section 11 – Toxicological Information

Irritation	Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.
Sensitization	Not Available
Neurological Effects	Not Available
Teratogenicity	Not Available
Reproductive Toxicity	Not Available
Mutagenicity (Genetic Effects)	Not Available

Toxicologically Synergistic Materials	Not Available
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Section 12-Ecological Information

General note:	Water hazard class 1(Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Anticipated behavior of a chemical product in environment/possible environmental impact/ecotoxicity	Not Available
Mobility in soil	Not Available
Persistence and Degradability	Not Available
Bioaccumulation potential	Not Available
Other Adverse Effects	Not Available

Section 13 – Disposal Considerations

Product disposal recommendation: Observe local, state and federal laws and regulations.

Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassembly the battery. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local, state and federal laws and regulations.

The potential effects on the environment and human health of the substances used in batteries and accumulators; the desirability of not disposing of waste batteries and accumulators as unsorted municipal waste and of participating in their separate collection so as to facilitate treatment and recycling;

Section 14 – Transport Information

This report applies to by sea, by air and by land;

The Lithium-ion polymer battery (model: HKT 402030) tested according to the requirements of the UN manual of tests and Criteria, Part III, subsection 38.3;

The Lithium-ion polymer battery was protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to short circuit;

The Lithium-ion polymer battery according to Section II/Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966~967 of the 2015 IATA Dangerous Goods regulations 56th Edition may be transported. and applicable U.S. DOT regulations for the safe transport of Lithium battery.

More information concerning shipping, testing, marking and packaging can be obtained from label master at <http://www.labelmaster.com/>.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

*******End of report*******

Report No.: TCT150906M006

Shenzhen TCT Testing Technology Co., Ltd.
1F, Building 1, Yibaolai Industrial Park, Qiaotou Village, Fuyong Town, Baoan District, Shenzhen,
Guangdong, P.R.C (518101)
Search Number: TCT150906M006C
Search System: <http://www.tct-lab.com/cn/search.asp>



WEI JIAN TESTING

According to EMC Directive 2014/30/EU
Ref. No.: SZWJ2022060701Z

The test sample of product has been passed, the test according to requirements of the following standards:

Product: HQ-185 massage device
Trade mark: N/A
Applicant: Shenzhen Huiyibo Electronics Co., LTD
Address: 156 Yanluo Road, Songgang, Yanchuan, Baoan District, Shenzhen, Guangdong, China
Manufacturer: Shenzhen Huiyibo Electronics Co., LTD
Address: 156 Yanluo Road, Songgang, Yanchuan, Baoan District, Shenzhen, Guangdong, China
Model: HQ-185/HQ
Rating: DC 5V by Adapter AC 100-240V/50-60Hz
Test Standards EN 55014-1-2017AMD.11:2020
EN 55014-2: 2015
EN IEC 61000-3-2: 2019
EN 61000-3-3-2013AMD.1:2019
Test report No SZWJ2022060701EMC

Based on the voluntary assessment of the product sample and technical file, we confirm that the above-mentioned product meets the requirements of the EU directive. The CE mark as show below can be used, under the responsibility of the manufacturer or the importer, after completion of an EU declaration of conformity and compliance with all relevant EU directives.

CE

Approved by:

Date :



The results in this report are applicable only to the equipment tested. This report shall not be re-produced except in full without the written approval of WEI JIAN (Shenzhen) testing Services Co., Ltd.

WEI JIAN (Shenzhen) Testing Services Co., Ltd

No.4, Xintian Avenue, Xintian Community, Fuhai Street, Baoan District, Shenzhen, Guangdong, China



EMC Test Report

Equipment under Test : HQ-185 massage device
Model /Type : HQ-185
Listed Models : HQ

Applicant : Shenzhen Huiyibo Electronics Co., LTD
Address : 156 Yanluo Road, Songgang, Yanchuan, Baoan District, Shenzhen,Guangdong,China
Manufacturer : Shenzhen Huiyibo Electronics Co., LTD
Address : 156 Yanluo Road, Songgang, Yanchuan, Baoan District, Shenzhen,Guangdong,China

Laboratory : WEI JIAN (Shenzhen) Testing Service Co., Ltd
Address : No.4, Xintian Avenue, Xintian Community, Fuhai Street, Baoan District, Shenzhen,Guangdong,China
Tel : +86)-0755-33694011
Fax : +(86)-0755-33694011
Website : Http: www.wjjc-lab.com

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Test Result:	PASS
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TEST RESULT CERTIFICATION

Applicant's name.....: Shenzhen Huiyibo Electronics Co., LTD
Address.....: 156 Yanluo Road, Songgang, Yanchuan, Baoan District,
 Shenzhen,Guangdong,China
Manufacturer's Name.....: Shenzhen Huiyibo Electronics Co., LTD
Address.....: 156 Yanluo Road, Songgang, Yanchuan, Baoan District,
 Shenzhen,Guangdong,China

Product description

Product name.....: HQ-185 massage device
Test Model: HQ-185

Standards.....:
 EN 55014-1-2017AMD.11:2020
 EN 55014-2: 2015
 EN IEC 61000-3-2: 2019
 EN 61000-3-3-2013AMD.1:2019

This device described above has been tested by WEI JIAN (Shenzhen) Testing Service Co.,Ltd, and the test results show that the equipment under test (EUT) is in compliance with the 2014/30/EU requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of WEI JIAN (Shenzhen) Testing Service Co.,Ltd, this document may be altered or revised by WEI JIAN (Shenzhen) Testing Service Co.,Ltd, personal only, and shall be noted in the revision of the document.

Date (s) of performance of tests.....: May.31, 2022~Jun .06, 2022
Date of Issue.....: Jun .07, 2022
Test Result.....: **Pass**

Testing Engineer : _____

Technical Manager : _____

Authorized Signatory : _____

 (Anna Yao)





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TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
EN 55014-1: 2017AMD.11:2020	Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	
EN61000-3-2: 2014	Harmonic Current Emission	Class A or D NOTE (2)	PASS	
EN 61000-3-3-2013AMD.1:2019	Voltage Fluctuations & Flicker	-----	PASS	
EMC Immunity				
Section EN 55014-2: 2015	Test Item	Performance Criteria	Judgment	Remark
EN 61000-4-2: 2009	Electrostatic Discharge	B	PASS	
EN 61000-4-3:2006+A1:2008+A2: 2010	RF electromagnetic field	A	PASS	
EN 61000-4-4: 2012	Fast transients	B	PASS	
EN 61000-4-5: 2006	Surges	B	PASS	
EN 61000-4-6: 2012	Injected Current	A	PASS	
EN 61000-4-11: 2004	Volt. Interruptions Volt. Dips	C / C / C NOTE (3)	PASS	

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report
 - (2) No limits apply for equipment with an active input power up to and including 75W.
 - (3) Voltage dip: 0% reduction – Performance Criteria **C**
Voltage dip: 30% reduction – Performance Criteria **C**
Voltage dip: 60% reduction – Performance Criteria **C**
- For client's request and manual description, the test will not be executed.



TEST FACILITY

WEI JIAN (Shenzhen) Testing Service Co., Ltd
No.4,Xintian Avenue, Xintian Community, Fuhai Street, Baoan District,
Shenzhen,Guangdong,China

MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$ · where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2** · providing a level of confidence of approximately **95 %**.

Test Item	Uncertainty
Conducted Emission	2.6dB
Radiated Emission(Below 1G)	4.56dB(distance:3m; Polarize:V)
	4.42dB(distance:3m; Polarize:H)
Radiated Emission(1GHz-18GHz)	3.78dB(distance:3m; Polarize:V)
	3.69dB(distance:3m; Polarize:H)
Flicker test	1.7%
Harmonic test	1.88dB
R/S Test	0.92dB
C/S Test	0.68 dB
Test Site Temperature And Humidity	0.6°C
	3%



GENERAL INFORMATION

GENERAL DESCRIPTION OF EUT

Equipment	HQ-185 massage device				
Brand	N/A				
Model Name	HQ-185				
Additional Model Number(s)	HQ				
Model Difference	The model names are different, and everything else is the same				
Product Description	<table border="1"><tr><td>Operating frequency:</td><td>N/A</td></tr><tr><td>Connecting I/O port:</td><td>N/A</td></tr></table> <p>Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an Household Device. More details of EUT technical specification, please refer to the User's Manual.</p>	Operating frequency:	N/A	Connecting I/O port:	N/A
Operating frequency:	N/A				
Connecting I/O port:	N/A				
Power Source	DC Voltage				
Power Rating	DC 5V by Adapter AC 230V/50Hz				



DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Running

For Conducted Test	
Final Test Mode	Description
Mode 1	Running

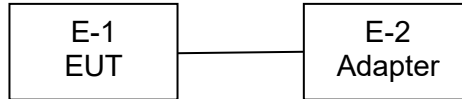
For Radiated Test	
Final Test Mode	Description
Mode 1	Running

For EMS Test	
Final Test Mode	Description
Mode 1	Running



DESCRIPTION OF TEST SETUP

Mode 1:



DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	EUT	N/A	HQ-185	N/A	EUT
E-2	Adapter	N/A	Laboratory provided	N/A	

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) 'YES' means 'shielded' 'with core'; 'NO' means 'unshielded' 'without core'.



MEASUREMENT INSTRUMENTS LIST

CONDUCTED EMISSION

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	LISN	R&S	ENV216	101334	Apr. 10,22	Apr. 9,23	1 year
2	LISN	SCHWARZBECK	NNLK 8129	8129267	Apr. 10,22	Apr. 9,23	1 year
3	Pulse Limiter	SCHWARZBECK	VTSD 9561F	9716	Apr. 10,22	Apr. 9,23	1 year
4	50Ω Switch	ANRITSU CORP	MP59B	6200983704	Apr. 10,22	Apr. 9,23	1 year
5	Test Cable	N/A	C01	N/A	Apr. 10,22	Apr. 9,23	1 year
6	Test Cable	N/A	C02	N/A	Apr. 10,22	Apr. 9,23	1 year
7	Test Cable	N/A	C03	N/A	Apr. 10,22	Apr. 9,23	1 year
8	EMI Test Receiver	R&S	ESCI	101318	Apr. 10,22	Apr. 9,23	1 year
9	Passive Voltage Probe	ESH2-Z3	R&S	100173	Apr. 10,22	Apr. 9,23	1 year
10	Triple-Loop Antenna	EVERFINE	LIA-2	11020016	Apr. 10,22	Apr. 9,23	1 year
11	Absorbing Clamp	R&S	MDS-21	100423	Apr. 10,22	Apr. 9,23	1 year

RADIATED TEST SITE

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Bilog Antenna	TESEQ	CBL6111D	31437	Apr. 10,22	Apr. 9,23	1 year
2	Test Cable	N/A	R-01	N/A	Apr. 10,22	Apr. 9,23	1 year
3	Test Cable	N/A	R-02	N/A	Apr. 10,22	Apr. 9,23	1 year
4	EMI Test Receiver	Rohde&Schwarz	ESVD	847312/008	Apr. 10,22	Apr. 9,23	1 year
5	Antenna Mast	EM	SC100_1	N/A	N/A	N/A	N/A
6	Turn Table	EM	SC100	060533	N/A	N/A	N/A
7	50Ω Switch	Anritsu Corp	MP59B	6200983705	Apr. 10,22	Apr. 9,23	1 year
8	Spectrum Analyzer	Aglient	E4407B	160400005	Apr. 10,22	Apr. 9,23	1 year
9	Horn Antenna	EM	EM-AH-10180	2011071402	Apr. 10,22	Apr. 9,23	1 year
10	Amplifier	EM	EM-30180	060536	Apr. 10,22	Apr. 9,23	1 year



HARMONICS AND FILCK

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Harmonic & Flicker	EM TEST	DPA500	0303-08	Apr. 10,22	Apr. 9,23	1 year
2	AC Power Source	EM TEST	ACS500	0203-06	Apr. 10,22	Apr. 9,23	1 year

ESD

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	ESD TEST GENERATOR	SCHAFFNER	NSG438	858	Apr. 10,22	Apr. 9,23	1 year

RS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Signal Generator	R&S	SMT 06	832080/007	Apr. 10,22	Apr. 9,23	1 year
2	Log-Bicon Antenna	Schwarzbeck	VULB9161	4022	Apr. 10,22	Apr. 9,23	1 year
3	Power Amplifier	AR	150W1000M1	320946	Apr. 10,22	Apr. 9,23	1 year
4	Microwave Horn Antenna	AR	AT4002A	321467	Apr. 10,22	Apr. 9,23	1 year
5	Power Amplifier	AR	25S1G4A	308598	Apr. 10,22	Apr. 9,23	1 year

SURGE, EFT/BURST, VOLTAGE INTERRUPTION/DIPS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Surge Generator	EVERFINE	EMS61000-5A	1101002	Apr. 10,22	Apr. 9,23	1 year
2	DIPS Generator	EVERFINE	EMS61000-11 K	1011002	Apr. 10,22	Apr. 9,23	1 year
3	EFT/B Generator	EVERFINE	EMS61000-4A-V2	1012005	Apr. 10,22	Apr. 9,23	1 year

INJECTION CURRENT

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Signal Generator	IFR	2023A	202301/368	Apr. 10,22	Apr. 9,23	1 year
2	Power Amplifier	AR	75A250AM1	0320709	Apr. 10,22	Apr. 9,23	1 year
3	CDN	FCC	FCC-801-M2	06043	Apr. 10,22	Apr. 9,23	1 year



4	EM Clamp	FCC	F-203I-23MM	504	Apr. 10,22	Apr. 9,23	1 year
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2.4.8 MF

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Generator	EVERFINE	EMS61000-8K	1007001	Apr. 10,22	Apr. 9,23	1 year



EMC EMISSION TEST

CONDUCTED EMISSION MEASUREMENT

POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

Frequency Range (MHz)	At mains terminals		At load terminals and additional terminals	
	Quasi-peak (dBuV)	Average (dBuV)	Quasi-peak (dBuV)	Average (dBuV)
0.15 -0.5	66 - 56 *	56 - 46 *	80.00	70.00
0.50 -5.0	56.00	46.00	74.00	64.00
5.0 -30.0	60.00	50.00	74.00	64.00

MAINS TERMINALS OF TOOLS

Frequency Range (MHz)	Rated motor power not exceeding 700W		Rated motor power above 700W and not exceeding 1 000 W		Rated motor power above 1 000 W	
	dB (uV) Quasi-peak	dB (uV) Average**	dB (uV) Quasi-peak	dB (uV) Average**	dB (uV) Quasi-peak	dB (uV) Average**
0.15 -0.5	66.0 to 59.0*	59.0 to 49.0*	70.0 to 63.0*	63.0 to 53.0*	76.0 to 69.0*	69.0 to 59.0*
0.50 -5.0	59.0	49.0	63.0	53.0	69.0	59.0
5.0 -30.0	64.0	54.0	68.0	58.0	74.0	64.0

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of ' * ' marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) '**' 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.

The following table is the setting of the receiver

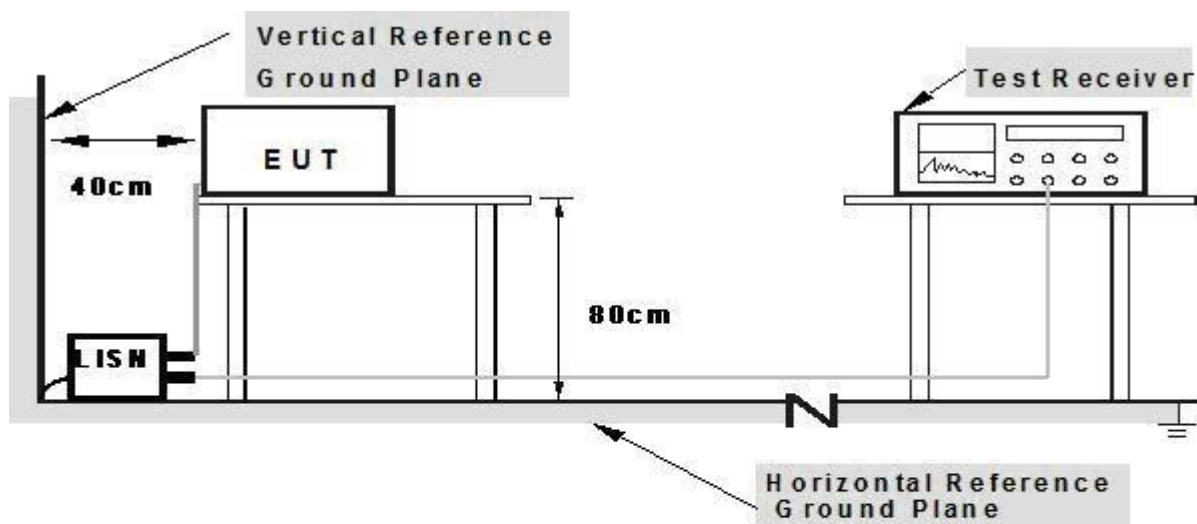
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP



- Note: 1. Support units were connected to second LISN.**
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

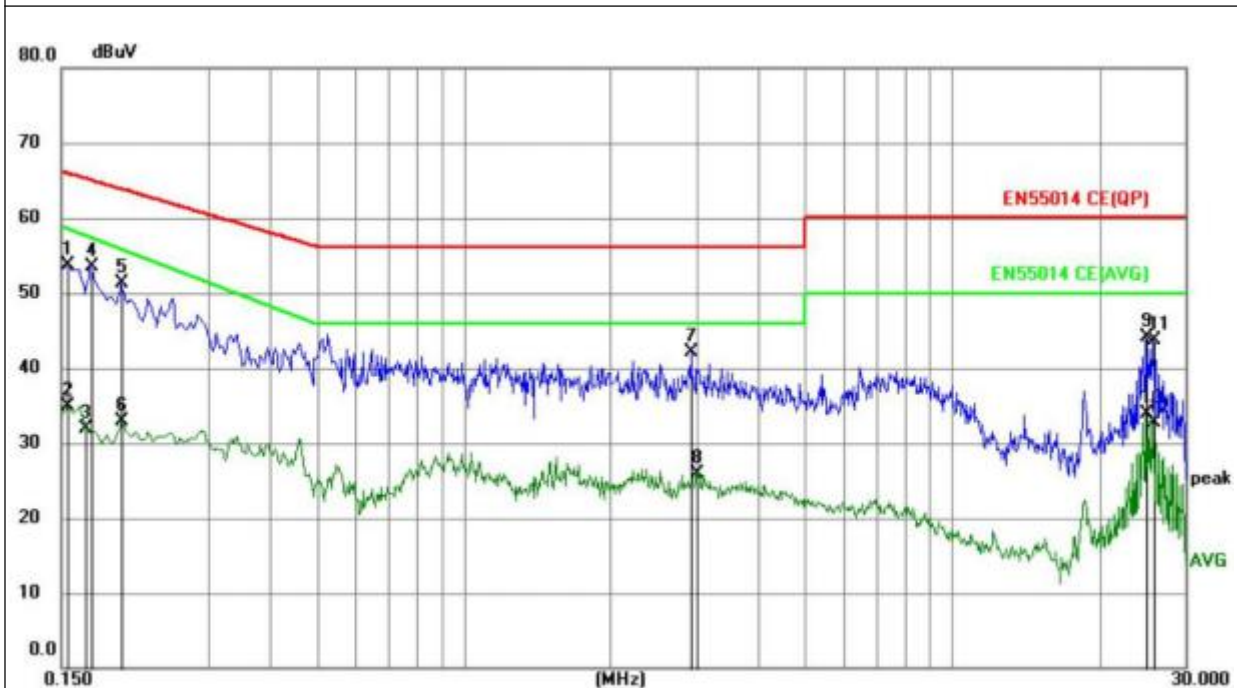


TEST RESULTS

EUT :	HQ-185 massage device	Model Name. :	HQ-185
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2022-06-06
Test Mode :	Running	Phase :	L1
Test Voltage :	DC 5V by Adapter AC 230V/50Hz		

Remark:

Factor = Insertion Loss + Cable Loss.



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1545	40.81	12.91	53.72	65.75	-12.03	QP	P	
2	0.1548	21.96	12.90	34.86	58.66	-23.80	AVG	P	
3	0.1680	19.20	12.61	31.81	57.78	-25.97	AVG	P	
4	0.1725	41.09	12.51	53.60	64.84	-11.24	QP	P	
5	0.1995	39.36	11.93	51.29	63.63	-12.34	QP	P	
6	0.1995	20.98	11.93	32.91	55.92	-23.01	AVG	P	
7	2.9265	32.07	9.96	42.03	56.00	-13.97	QP	P	
8	2.9940	16.06	9.94	26.00	46.00	-20.00	AVG	P	
9	25.0395	34.21	9.91	44.12	60.00	-15.88	QP	P	
10	25.0395	23.99	9.91	33.90	50.00	-16.10	AVG	P	
11	25.8134	33.78	9.92	43.70	60.00	-16.30	QP	P	
12	25.8134	22.69	9.92	32.61	50.00	-17.39	AVG	P	

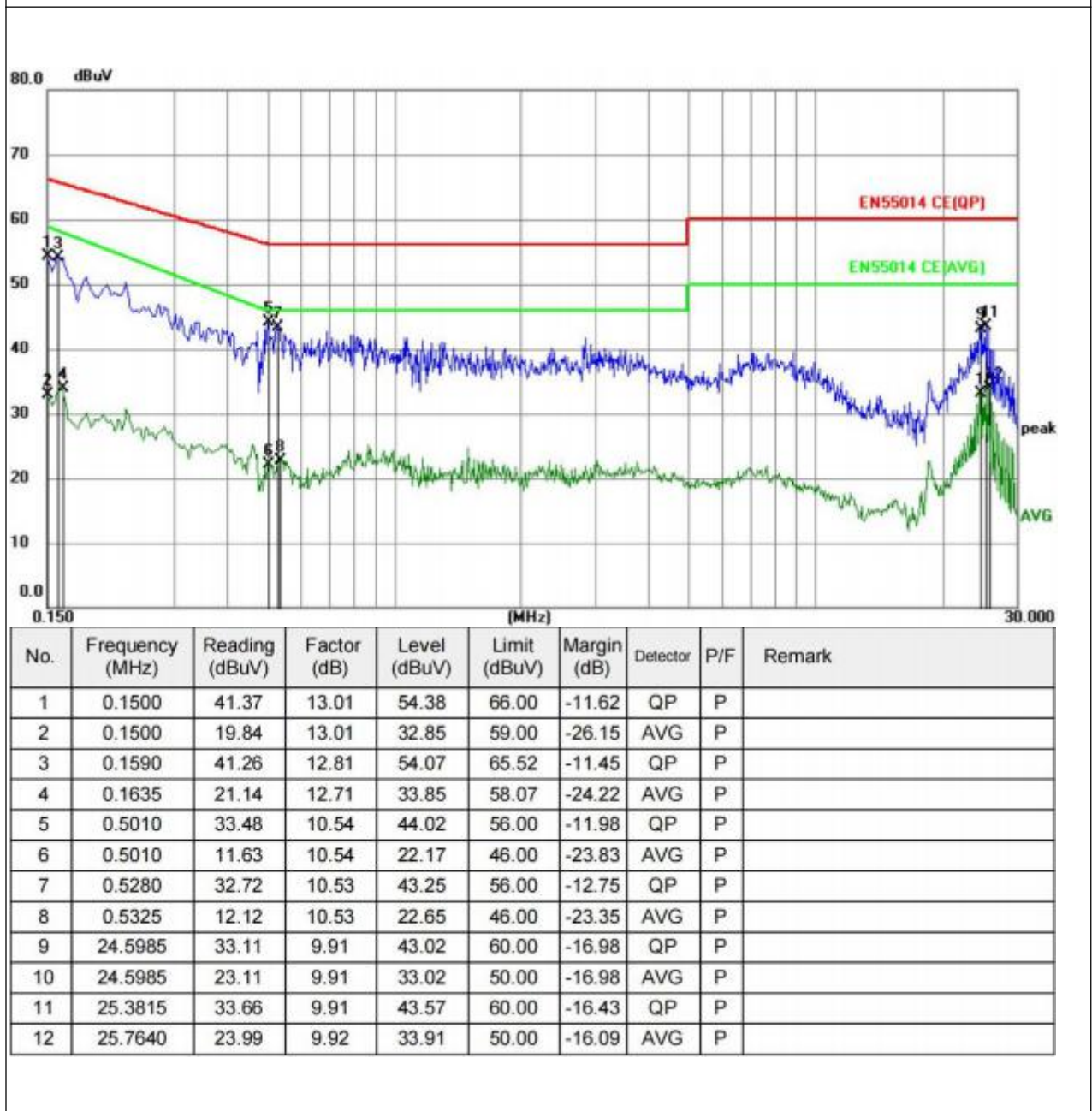


WEI JIAN TESTING

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EUT :	HQ-185 massage device	Model Name. :	HQ-185
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2022-06-06
Test Mode :	Running	Phase :	N
Test Voltage :	DC 5V by Adapter AC 230V/50Hz		

Remark:
Factor = Insertion Loss + Cable Loss.





RADIATED EMISSION MEASUREMENT

LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

FREQUENCY (MHz)	At 10m	At 3m
	dBuV/m	dBuV/m
30 – 230	30	40
230 – 1000	37	47

LIMITS OF DISTURBANCE POWER MEASUREMENT (Below 1000MHz)

Frequency Range	Household and similar appliances		Tools					
			Rated motor power not exceeding 700 W		Rated motor power above 700 W and not exceeding 1 000 W		Rated motor power above 1 000 W	
(MHz)	dB (pW) Quasi-peak	dB (pW) Averag*	dB (pW) Quasi-peak	dB (pW) Averag*	dB (pW) Quasi-peak	dB (pW) Averag*	dB (pW) Quasi-peak	dB (pW) Average*
30-300	44-55	35-45	44-55	35-45	49-59	39-49	55-65	45-55

* 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.

Notes:

- (1) The limit for radiated test was performed according to as following: CISPR 14.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

TEST PROCEDURE

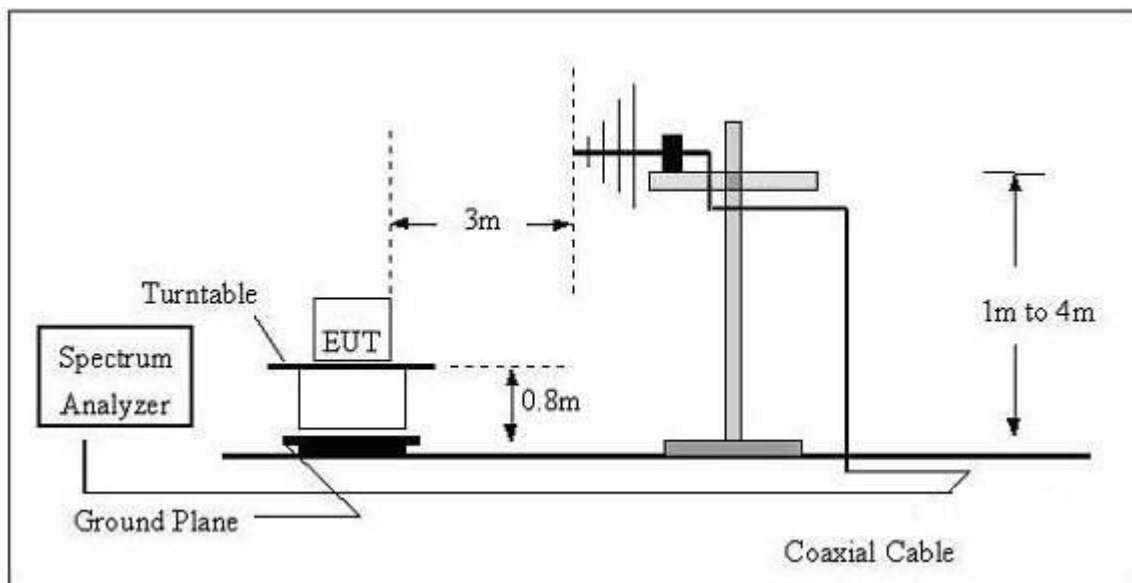
- a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.



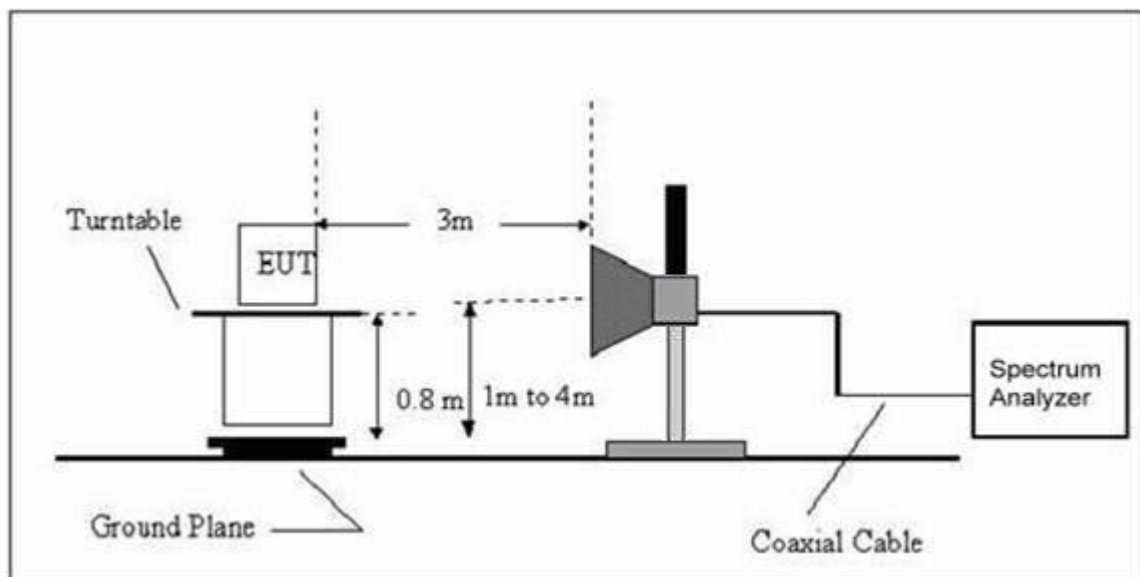
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz.



(B) Disturbance Power Test Set-UP Frequency Below 1GHz





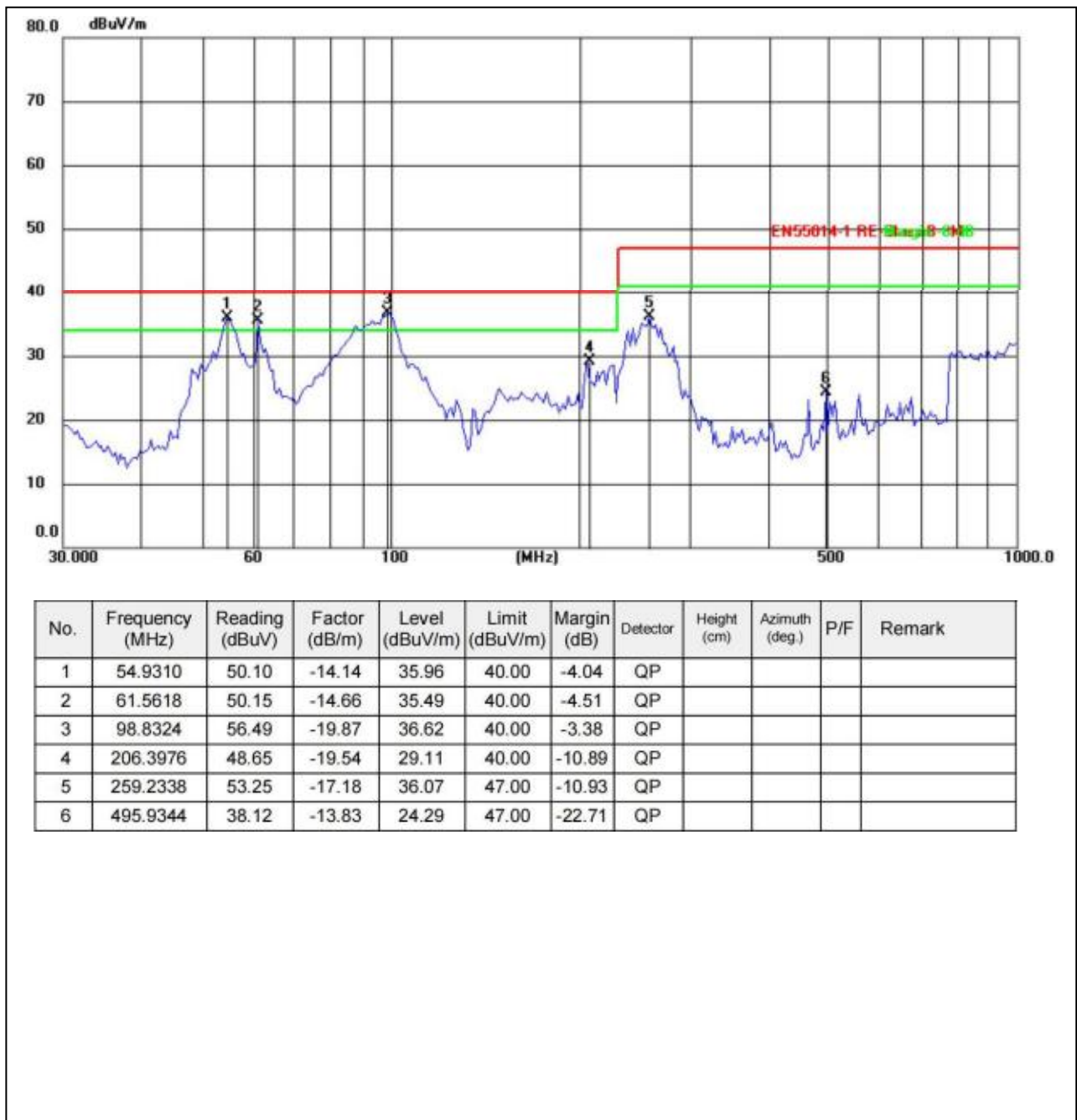
EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



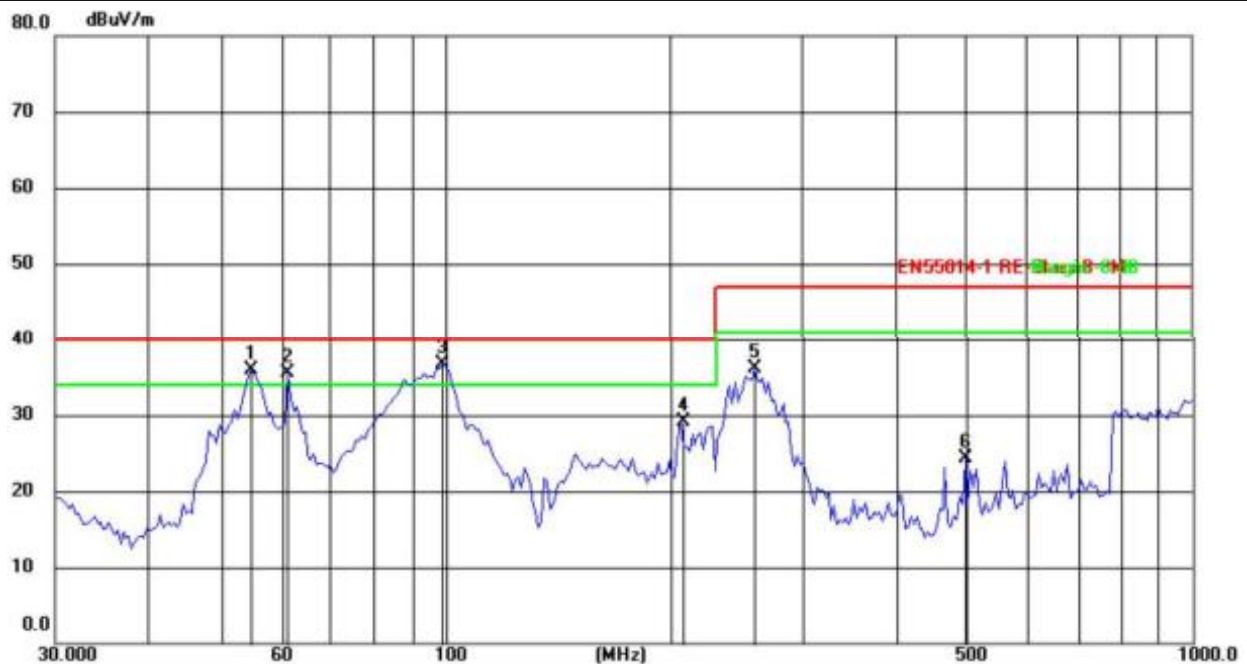
TEST RESULTS(30MHz-1000MHz)

EUT :	HQ-185 massage device	Model Name. :	HQ-185
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2022-06-06
Test Mode :	Running	Phase :	Horizontal
Test Voltage :	DC 5V by Adapter AC 230V/50Hz		





EUT :	HQ-185 massage device	Model Name. :	HQ-185
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2022-06-06
Test Mode :	Running	Phase :	Horizontal
Test Voltage :	DC 5V by Adapter AC 230V/50Hz		

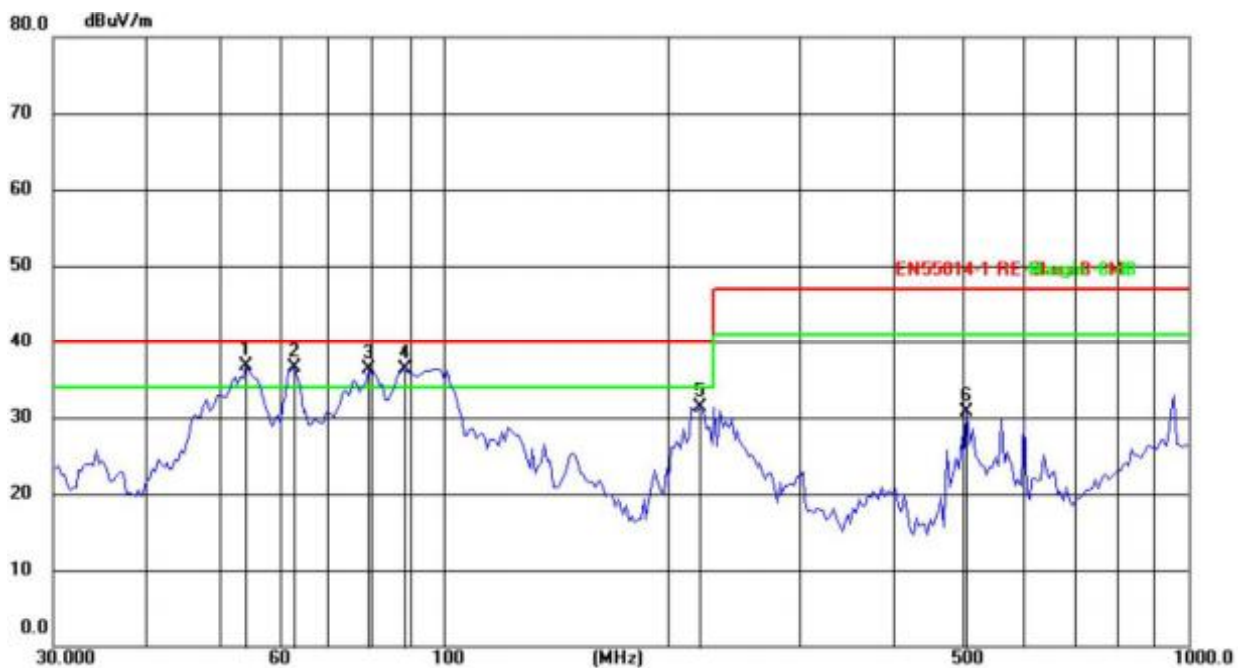


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	54.9310	50.10	-14.14	35.96	40.00	-4.04	QP				
2	61.5618	50.15	-14.66	35.49	40.00	-4.51	QP				
3	98.8324	56.49	-19.87	36.62	40.00	-3.38	QP				
4	206.3976	48.65	-19.54	29.11	40.00	-10.89	QP				
5	259.2338	53.25	-17.18	36.07	47.00	-10.93	QP				
6	495.9344	38.12	-13.83	24.29	47.00	-22.71	QP				



TEST RESULTS(30MHz ~300MHz)

EUT :	HQ-185 massage device	Model Name. :	HQ-185
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2022-06-06
Test Mode :	Running	Phase :	DC
Test Voltage :	DC 5V by Adapter AC 230V/50Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	54.4515	54.41	-17.75	36.66	40.00	-3.34	QP				
2	63.2023	55.05	-18.64	36.41	40.00	-3.59	QP				
3	79.3816	58.00	-21.72	36.28	40.00	-3.72	QP				
4	88.9637	57.94	-21.54	36.40	40.00	-3.60	QP				
5	221.3921	52.94	-21.59	31.35	40.00	-8.65	QP				
6	504.7062	44.17	-13.40	30.77	47.00	-16.23	QP				



HARMONICS CURRENT

LIMITS OF HARMONICS CURRENT

IEC 555-2					
Table - I			Table - II		
Equipment Category	Harmonic Order n	Max. Permissible Harmonic Current (in Amperes)	Equipment Category	Harmonic Order n	Max. Permissible Harmonic Current (in Amperes)
Non Portable Tools or TV Receivers	Odd Harmonics		TV Receivers	Odd Harmonics	
	3	2.30		3	0.80
	5	1.14		5	0.60
	7	0.77		7	0.45
	9	0.40		9	0.30
	11	0.33		11	0.17
	13	0.21		13	0.12
	$15 \leq n \leq 39$	$0.15 \cdot 15/n$		$15 \leq n \leq 39$	$0.10 \cdot 15/n$
	Even Harmonics			Even Harmonics	
	2	1.08		2	0.30
4	0.43	4	0.15		
8	0.30				
$8 \leq n \leq 40$	$0.23 \cdot 8/n$	DC	0.05		

EN 61000-3-2/IEC 61000-3-2					
Equipment Category	Max. Permissible Harmonic Current (in Amperes)	Equipment Category	Harmonic Order n	Max. Permissible Harmonic Current (in A)	Max. Permissible Harmonic Current (mA/w)
Class A	Same as Limits Specified in 4-2.1, Table - I, but only odd harmonics required	Class D	3	2.30	3.4
			5	1.14	1.9
			7	0.77	1.0
			9	0.40	0.5
			11	0.33	0.35
			$13 \leq n \leq 39$	see Table I	3.85/n
only odd harmonics required					



TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions.

b. The classification of EUT is according to section 5 of EN 61000-3-2. The EUT is classified as follows:

Class A: Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.

Class B: Portable tools. Portable tools.; Arc welding equipment which is not professional equipment.

Class C: Lighting equipment.

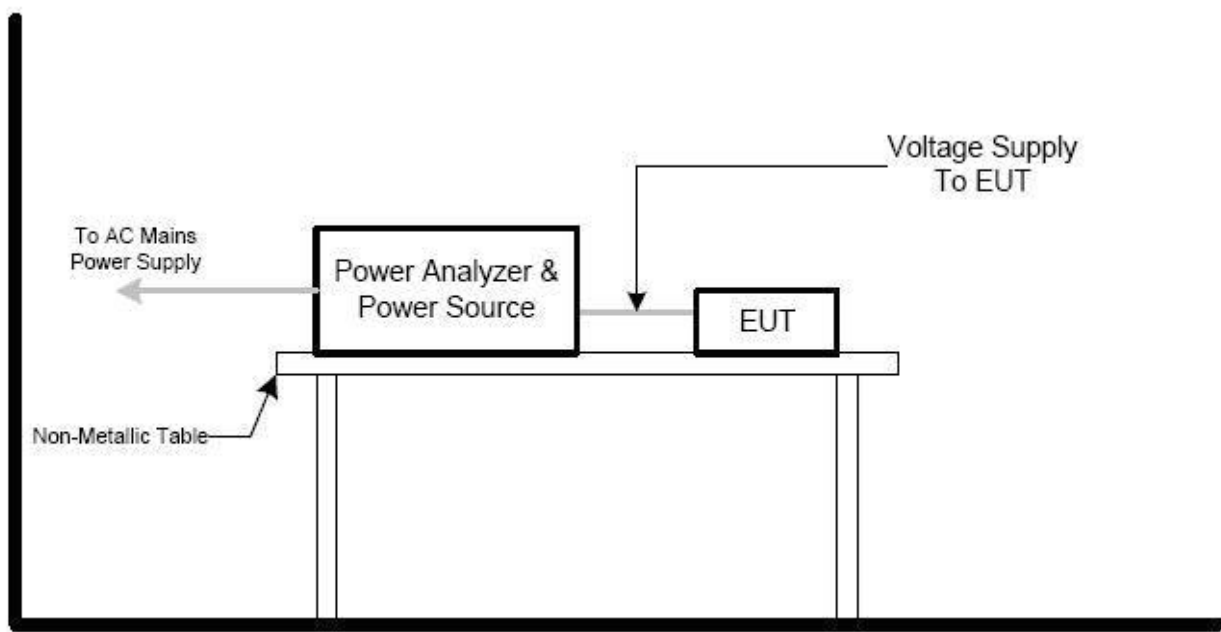
Class D: Equipment having a specified power less than or equal to 600W of the following types: Personal computers and personal computer monitors and television receivers.

c. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

TEST SETUP





TEST RESULTS

EUT :	HQ-185 massage device	Model Name. :	HQ-185
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Voltage :	DC 5V by Adapter AC 230V/50Hz		

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [A]	Result
1	54.280E-3	100.000		
2	879.136E-6	1.620	972.00E-3	PASS
3	53.207E-3	98.023	2.07	PASS
4	4.171E-3	7.684	387.00E-3	PASS
5	50.334E-3	92.729	1.03	PASS
6	873.771E-6	1.610	270.00E-3	PASS
7	46.261E-3	85.226	693.00E-3	PASS
8	1.540E-3	2.838	207.00E-3	PASS
9	41.384E-3	76.241	360.00E-3	PASS
10	1.479E-3	2.725	165.60E-3	PASS
11	35.950E-3	66.230	297.00E-3	PASS
12	813.505E-6	1.499	138.00E-3	PASS
13	30.390E-3	55.986	189.00E-3	PASS
14	820.178E-6	1.511	118.29E-3	PASS
15	25.051E-3	46.151	135.00E-3	PASS
16	763.358E-6	1.406	103.50E-3	PASS
17	20.403E-3	37.589	119.11E-3	PASS
18	1.256E-3	2.313	92.00E-3	PASS
19	16.785E-3	30.922	106.58E-3	PASS
20	754.383E-6	1.390	82.80E-3	PASS
21	14.348E-3	26.434	96.43E-3	PASS
22	1.302E-3	2.399	75.28E-3	PASS
23	12.971E-3	23.896	88.05E-3	PASS
24	749.844E-6	1.381	68.99E-3	PASS
25	12.243E-3	22.556	81.00E-3	PASS
26	1.268E-3	2.335	63.69E-3	PASS
27	11.711E-3	21.576	75.00E-3	PASS
28	729.747E-6	1.344	59.14E-3	PASS
29	11.032E-3	20.324	69.83E-3	PASS
30	749.859E-6	1.381	55.20E-3	PASS
31	10.193E-3	18.779	65.32E-3	PASS
32	748.461E-6	1.379	51.75E-3	PASS
33	8.993E-3	16.568	61.36E-3	PASS
34	714.008E-6	1.315	48.71E-3	PASS
35	7.758E-3	14.293	57.86E-3	PASS
36	729.180E-6	1.343	46.00E-3	PASS
37	6.346E-3	11.690	54.73E-3	PASS
38	713.340E-6	1.314	43.58E-3	PASS
39	5.144E-3	9.476	51.92E-3	PASS
40	937.976E-6	1.728	41.40E-3	PASS



Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	231.39	100.603		
2	40.35E-3	0.018	0.2	PASS
3	134.24E-3	0.058	0.9	PASS
4	16.76E-3	0.007	0.2	PASS
5	38.12E-3	0.017	0.4	PASS
6	11.34E-3	0.005	0.2	PASS
7	59.91E-3	0.026	0.3	PASS
8	15.26E-3	0.007	0.2	PASS
9	59.27E-3	0.026	0.2	PASS
10	10.64E-3	0.005	0.2	PASS
11	67.55E-3	0.029	0.1	PASS
12	14.73E-3	0.006	0.1	PASS
13	21.94E-3	0.010	0.1	PASS
14	13.07E-3	0.006	0.1	PASS
15	60.44E-3	0.026	0.1	PASS
16	11.14E-3	0.005	0.1	PASS
17	35.56E-3	0.015	0.1	PASS
18	10.68E-3	0.005	0.1	PASS
19	43.95E-3	0.019	0.1	PASS
20	14.74E-3	0.006	0.1	PASS
21	31.15E-3	0.014	0.1	PASS
22	10.23E-3	0.004	0.1	PASS
23	49.33E-3	0.021	0.1	PASS
24	11.49E-3	0.005	0.1	PASS
25	14.75E-3	0.006	0.1	PASS
26	14.06E-3	0.006	0.1	PASS
27	31.58E-3	0.014	0.1	PASS
28	13.46E-3	0.006	0.1	PASS
29	36.79E-3	0.016	0.1	PASS
30	11.34E-3	0.005	0.1	PASS
31	40.32E-3	0.018	0.1	PASS
32	10.32E-3	0.004	0.1	PASS
33	15.37E-3	0.007	0.1	PASS
34	11.82E-3	0.005	0.1	PASS
35	15.72E-3	0.007	0.1	PASS
36	10.97E-3	0.005	0.1	PASS
37	33.11E-3	0.014	0.1	PASS
38	10.30E-3	0.004	0.1	PASS
39	31.07E-3	0.014	0.1	PASS
40	13.55E-3	0.006	0.1	PASS



VOLTAGE FLUCTUATION AND FLICKERS

LIMITS OF VOLTAGE FLUCTUATION AND FLICKERS

Tests	Limits		Descriptions
	IEC555-3	IEC/EN 61000-3-3	
Pst	≤ 1.0 , Tp= 10 min.	≤ 1.0 , Tp= 10 min.	Short Term Flicker Indicator
Plt	N/A	≤ 0.65 , Tp=2 hr.	Long Term Flicker Indicator
dc	$\leq 3\%$	$\leq 3.3\%$	Relative Steady-State V-Chang
dmax	$\leq 4\%$	$\leq 4\%$	Maximum Relative V-change
d (t)	N/A	$\leq 3.3\%$ for > 500 ms	Relative V-change characteristic

TEST PROCEDURE

a. Harmonic Current Test:

Test was performed according to the procedures specified in Clause 5.0 of IEC555-2 and/or Sub-clause 6.2 of IEC/EN 61000-3-2 depend on which standard adopted for compliance measurement.

b. Fluctuation and Flickers Test:

Tests was performed according to the Test Conditions/Assessment of Voltage Fluctuations specified in Clause 5.0/6.0 of IEC555-3 and/or Clause 6.0/4.0 of IEC/EN 61000-3-3 depend on which standard adopted for compliance measurement.

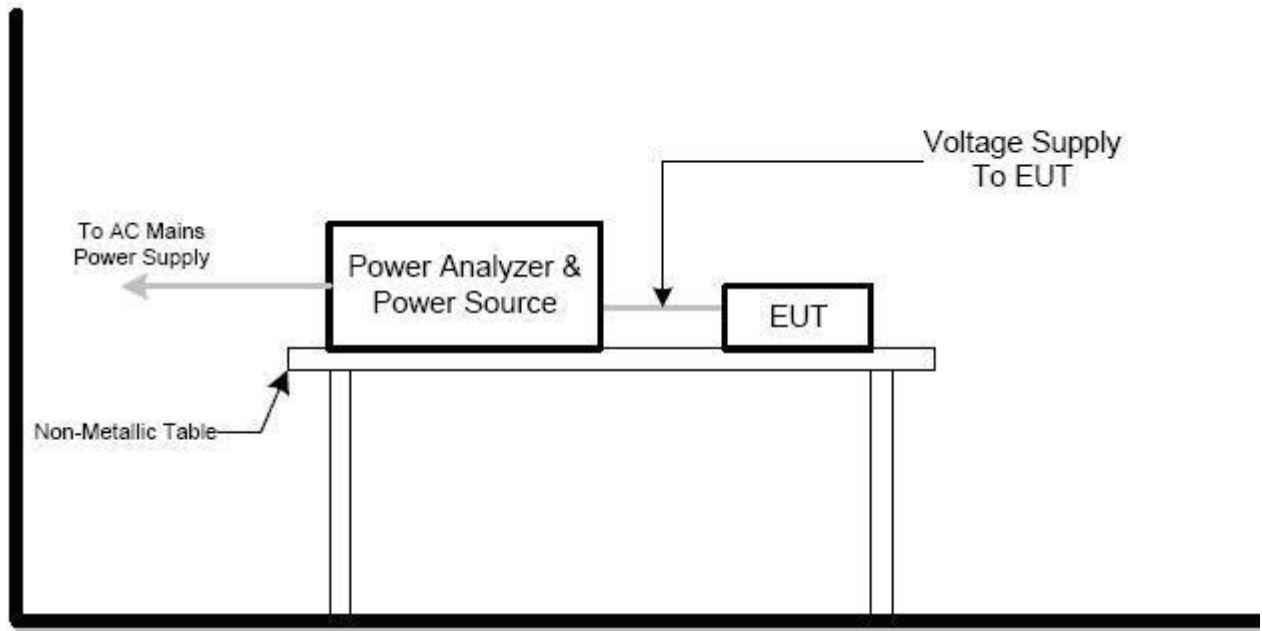
c. All types of harmonic current and/or voltage fluctuation in this report are assessed by direct measurement using flicker-meter.

EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



TEST SETUP



TEST RESULTS

EUT :	HQ-185 massage device	Model Name :	HQ-185
Temperature :	25 °C	Relative Humidity :	45%
Pressure :	1010 hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Power :	DC 5V by Adapter AC 230V/50Hz		

Test Parameter	Measurement Value	Limit	Remarks
P_{st}	0.023	1.0	Pass
P_{it}	0.005	0.65	Pass
$T_{dt(s)}$	0.003	0.2	Pass
$d_{max}(\%)$	0.00%	4%	Pass
$d_c(\%)$	0.00%	3%	Pass



EMC IMMUNITY TEST

STANDARD COMPLIANCE/ SERVIRITY LEVEL/ CRITERIA

Tests Standard No.	TEST SPECIFICATION	Test Mode Test Ports	Perform. Criteria
1. ESD IEC/EN 61000-4-2	8KV air discharge 4KV contact discharge	Direct Mode	B
	4KV HCP discharge 4KV VCP discharge	Indirect Mode	B
2. RS IEC/EN 61000-4-3	80 MHz to 1000 MHz, 1000Hz, 80%, AM modulated	Enclosure	A
3. EFT/Burst IEC/EN 61000-4-4	5/50ns Tr/Th 5KHz Repetition Freq.	Power Supply Port	B
	5/50ns Tr/Th 5KHz Repetition Freq.	CTL/Signal Data Line Port	B
4. Surges IEC/EN 61000-4-5	1.2/50(8/20) Tr/Th us	L-N	B
	1.2/50(8/20) Tr/Th us	L-PE N-PE	B
5 Injected Current IEC/EN 61000-4-6	0.15 MHz to 80 MHz, 1000Hz 80 % , AM Modulated 150Ω source impedance	CTL/Signal Port	A
	0.15 MHz to 80 MHz, 1000Hz 80 % , AM Modulated 150Ω source impedance	AC Power Port	A
	0.15 MHz to 80 MHz, 1000Hz 80 % , AM Modulated 150Ω source impedance	DC Power Port	A
6. Power Frequency Magnetic Field IEC/EN 61000-4-8	50 Hz,	Enclosure	A
7. Volt. Interruptions Volt. Dips IEC/EN 61000-4-11	Voltage dip 0%	AC Power Port	C
	Voltage dip 30%		C
	Voltage dip 60%		C



GENERAL PERFORMANCE CRITERIA

According to **EN 55014-2** standard, the general performance criteria as following:

Criterion A	<p>The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended.</p> <p>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, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.</p>
Criterion B	<p>After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.</p> <p>The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.</p>
Criterion C	<p>Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions.</p> <p>Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.</p>

GENERAL PERFORMANCE CRITERIA TEST SETUP

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



ESD TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Required Performance	B
Discharge Voltage:	Air Discharge : 2kV/4kV/8kV (Direct) Contact Discharge : 2kV/4kV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 20 at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

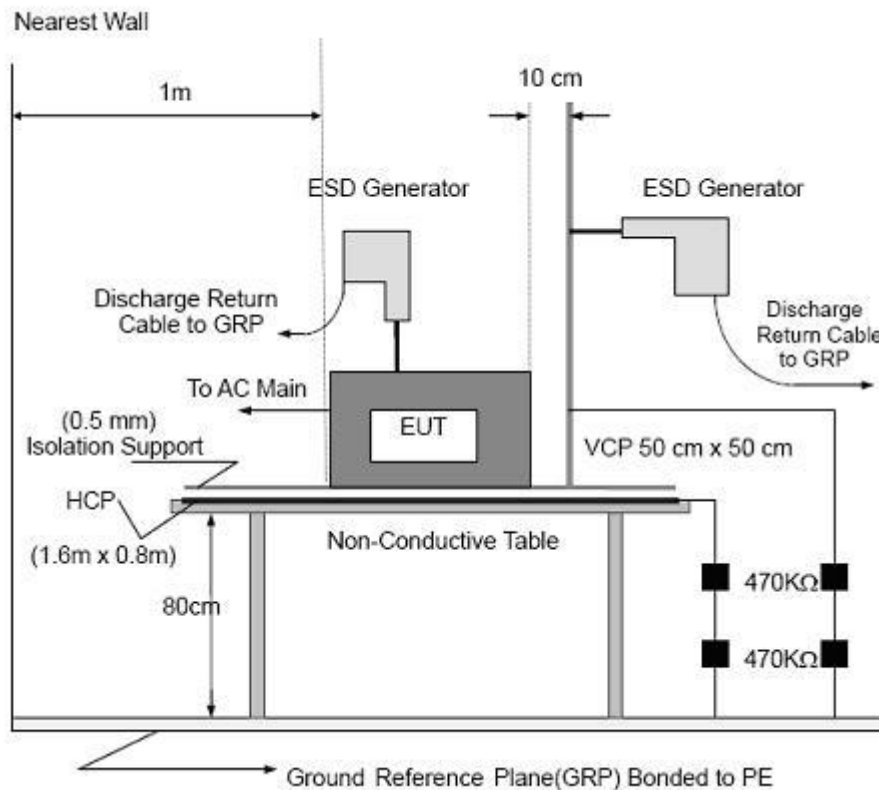
TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

- a. Contact discharge was applied to conductive surfaces and coupling planes of the EUT.
During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second. The EUT shall be exposed to at least 200 discharges, 100 each at negative and positive polarity, at a minimum of four test points. One of the test points shall be subjected to at least 50 indirect discharges to the center of the front edge of the horizontal coupling plane. The remaining three test points shall each receive at least 50 direct contact discharges.
If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode. Test shall be performed at a maximum repetition rate of one discharge per second.
Vertical Coupling Plane (VCP):
The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
Horizontal Coupling Plane (HCP):
The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
- b. Air discharges at insulation surfaces of the EUT.
It was at least ten single discharges with positive and negative at the same selected point.



TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940k total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of 1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.



TEST RESULTS

EUT :	HQ-185 massage device	Model Name :	HQ-185
Temperature :	25 °C	Relative Humidity :	45%
Pressure :	1010 hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Power :	DC 5V by Adapter AC 230V/50Hz		

Mode	Air Discharge								Contact Discharge								Criterion	Result
	2		4		8		15		2		4		6		8			
Test level (kV)																		
Test Location	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
HCP									A	A	A	A					B	PASS
VCP									A	A	A	A						PASS
shell	A	A	A	A	A	A												PASS
key	A	A	A	A	A	A												PASS

Note:

- 1) +/- denotes the Positive/Negative polarity of the output voltage.
- 2) Test condition:
Direct / Indirect (HCP/VCP) discharges: Minimum 50 times (Positive/Negative) at each point. Air discharges: Minimum 10 times (Positive/Negative) at each point.
- 3) Test location(s) in which discharge (Air and contact discharge) to be applied illustrated by photos shown in next page(s)
- 4) The Indirect (HCP/VCP) discharges description of test point as following:
1. left side 2.right side 3.front side 4.rear side.
- 5) N/A - denotes test is not applicable in this test report.



RS TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance	A
Frequency Range:	80 MHz - 1000 MHz
Field Strength:	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3 m
Antenna Height:	1.5 m
Dwell Time:	at least 3 seconds

TEST PROCEDURE

The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber.

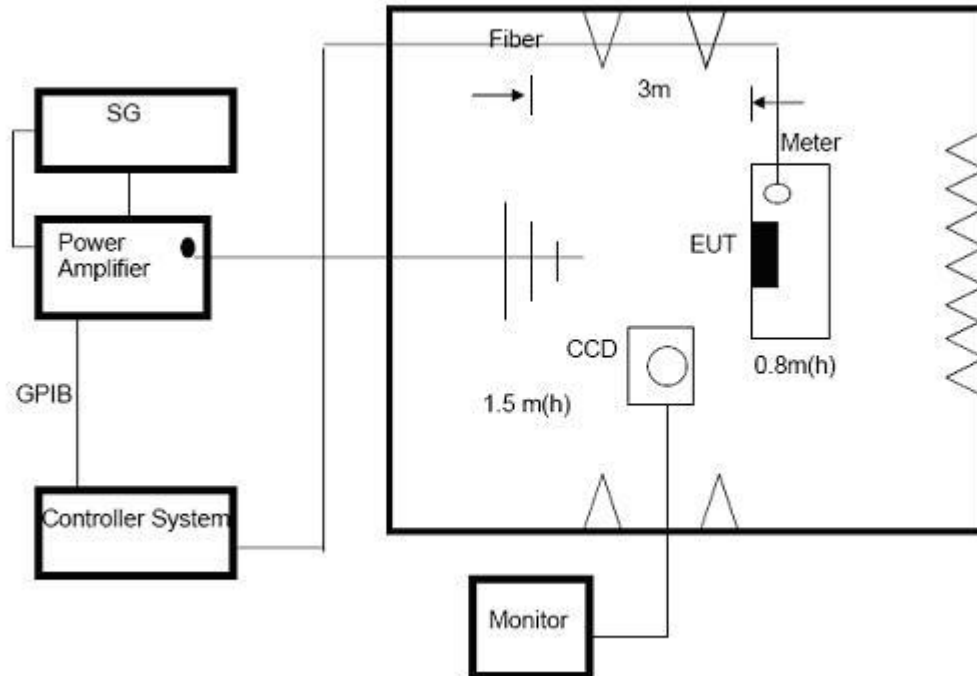
The testing distance from antenna to the EUT was 3 meters.

The other condition as following manner:

- a. The frequency range is swept from 80 MHz to 1000 MHz, & 1400MHz - 2700MHz with the signal 80%amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- b. Sweep Frequency 900 MHz, with the Duty Cycle: 1/8 and Modulation: Pulse 217 Hz(if applicable)
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- d. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.



TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.



TEST RESULTS

EUT :	HQ-185 massage device	Model Name :	HQ-185
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Power :	DC 5V by Adapter AC 230V/50Hz		

Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Perform. Criteria	Results	Judgment
80MHz - 1000MHz	H / V	3 V/m (rms) AM Modulated 1000Hz, 80%	Front	A	A	PASS
			Rear			
			Left			
			Right			

Note:

- 1) N/A - denotes test is not applicable in this test report.
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 4) Criteria C: The system shut down during the test.



EFT/BURST TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-4
Required Performance	B
Test Voltage:	Power Line : 1 kV Signal/Control Line : 0.5 KV
Polarity:	Positive & Negative
Impulse Frequency:	5 kHz
Impulse Wave shape :	5/50 ns
Burst Duration:	15 ms
Burst Period:	300 ms
Test Duration:	Not less than 1 min.

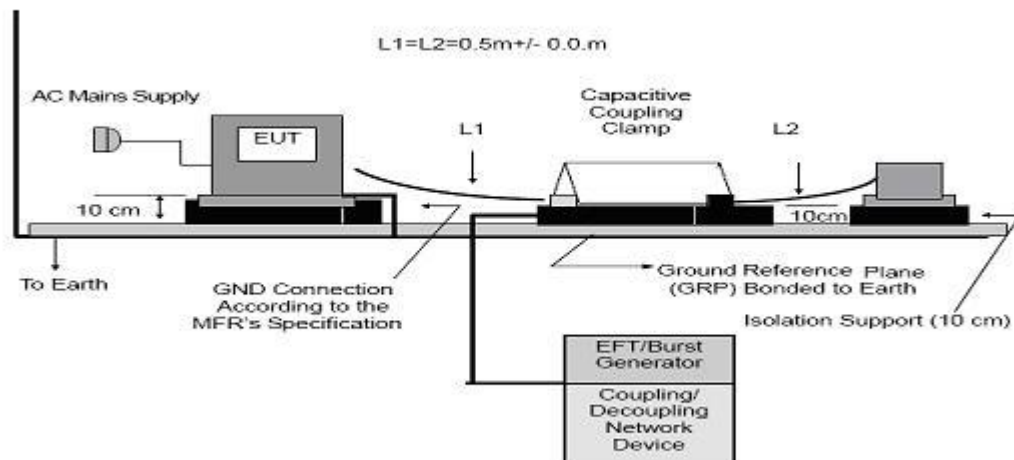
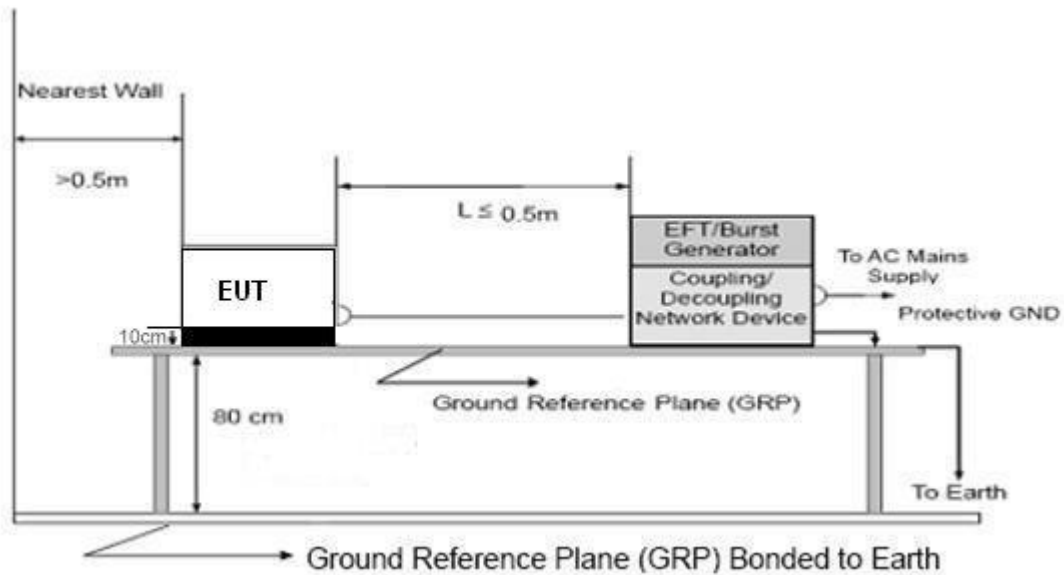
TEST PROCEDURE

The EUT and its simulators were placed on a ground reference plane and were insulated from it by a wood support 0.1m + 0.01m thick. The ground reference plane was 1m*1m metallic sheet with 0.65mm minimum thickness. The other condition as following manner:

- a. The length of power cord between the coupling device and the EUT should not exceed 1 meter.
- b. Both positive and negative polarity discharges were applied.
- c. The duration time of each test sequential was 1 minute.



TEST SETUP



Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table (0.8m high) standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system. A minimum distance of 0.5m was provided between the EUT and the walls of the laboratory or any other metallic structure.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-4 and its cables, were isolated from the Ground Reference Plane by an insulating support that is 0.1-meter thick. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system.



TEST RESULTS

EUT :	HQ-185 massage device	Model Name :	HQ-185
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Power :	DC 5V by Adapter AC 230V/50Hz		

Coupling Line		Test level (kV)								Criterion	Result	
		0.5		1		2		4				
		+	-	+	-	+	-	+	-			
AC line	L	A	A	A	A					B	PASS	
	N	A	A	A	A						B	PASS
	PE											
	L+N	A	A	A	A						B	PASS
	L+PE											
	N+PE											
	L+N+PE											
DC Line												
Signal Line												

Note:

- 1) +/- denotes the Positive/Negative polarity of the output voltage.
- 2) N/A - denotes test is not applicable in this test report.
- 3) Criteria A: There was no change operated with initial operating during the test.
- 4) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 5) Criteria C: The system shut down during the test.



SURGE TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-5
Required Performance	B
Wave-Shape:	Combination Wave 1.2/50 us Open Circuit Voltage 8 /20 us Short Circuit Current
Test Voltage:	Power Line : 0.5 kV, 1 kV, 2 kV
Surge Input/Output:	L-N, L-PE, N-PE
Generator Source:	2 ohm between networks
Impedance:	12 ohm between network and ground
Polarity:	Positive/Negative
Phase Angle:	0 /90/180/270°
Pulse Repetition Rate:	1 time / min. (maximum)
Number of Tests:	5 positive and 5 negative at selected points

TEST PROCEDURE

a. For EUT power supply:

The surge is to be applied to the EUT power supply terminals via the capacitive coupling network. Decoupling networks are 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. The power cord between the EUT and the coupling/decoupling networks shall be 2meters in length (or shorter).

b. For test applied to unshielded unsymmetrically operated interconnection lines of EUT:

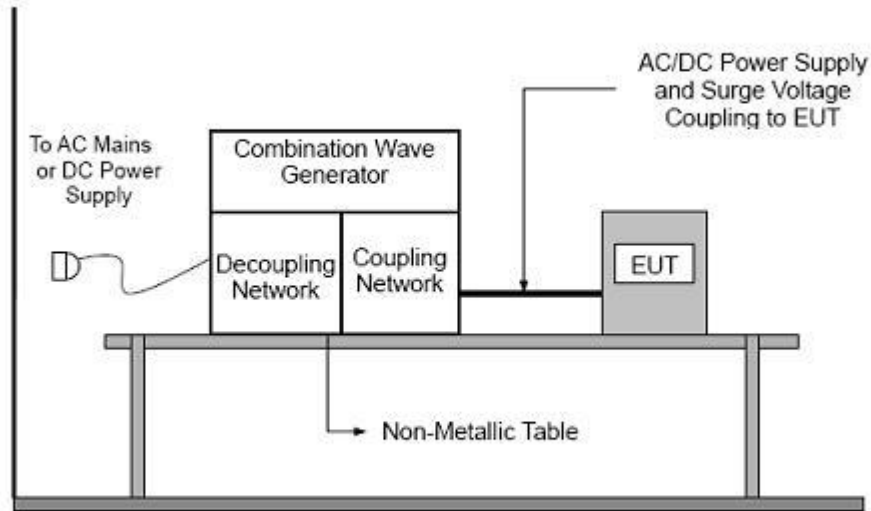
The surge is applied to the lines via the capacitive coupling. The coupling /decoupling networks shall not influence the specified functional conditions of the EUT. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).

c. For test applied to unshielded symmetrically operated interconnection /telecommunication lines of EUT:

d. The surge is applied to the lines via gas arrestors coupling. Test levels below the ignition point of the coupling arrester cannot be specified. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).



TEST SETUP





TEST RESULTS

EUT :	HQ-185 massage device	Model Name :	HQ-185
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Power :	DC 5V by Adapter AC 230V/50Hz		

Coupling Line			Test level								Criterion	Result
			0.5 kV		1 kV		2 kV		4 kV			
			+	-	+	-	+	-	+	-		
AC line	L-N	0°	A	A	A	A					B B B B	PASS
		90°	A	A	A	A						
		180°	A	A	A	A						
		270°	A	A	A	A						
	L-PE	0°										
		90°										
		180°										
		270°										
	N-PE	0°										
		90°										
		180°										
		270°										
DC Line												
Signal Line												

Note:

- 1) Polarity and Numbers of Impulses : 5 Pst / Ngst at each tested mode.
- 2) N/A - denotes test is not applicable in this Test Report.
- 3) Criteria A: There was no change operated with initial operating during the test.
- 4) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 5) Criteria C: The system shut down during the test.



INJECTION CURRENT TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-6
Required Performance	A
Frequency Range:	0.15 MHz - 80 MHz
Field Strength:	3 Vr.m.s.
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Dwell Time:	at least 3 seconds

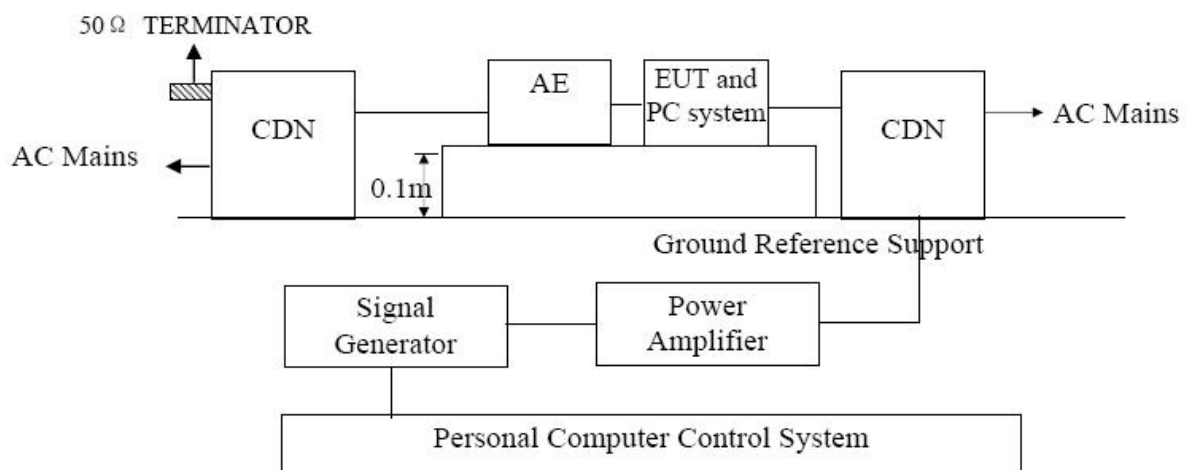
TEST PROCEDURE

The EUT are placed on an insulating support 0.1m 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 50mm (where possible). The disturbance signal described below is injected to EUT through CDN.

The other condition as following manner:

- The frequency range is swept from 150 KHz to 80 MHz, with the signal 80%amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed 1.5×10^{-3} decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.

TEST SETUP



NOTE:

FLOOR-STANDING EQUIPMENT

The equipment to be tested is placed on an insulating support of 0.1 meters height above a ground reference plane. All relevant cables shall be provided with the appropriate coupling and decoupling devices at a distance between 0.1 meters and 0.3 meters from the projected geometry of the EUT on the ground reference plane.



TEST RESULTS

EUT :	HQ-185 massage device	Model Name :	HQ-185
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Power :	DC 5V by Adapter AC 230V/50Hz		

Test Ports (Mode)	Freq. Range (MHz)	Field Strength	Perform. Criteria	Results	Judgment
Input/ Output AC. Power Port	0.15 ---80	3V(rms) AM Modulated 1000Hz, 80%	A	A	PASS
Input/ Output DC. Power Port	0.15 --- 80		A	N/A	N/A
Signal Line	0.15 --- 80		A	N/A	N/A

Note:

- 1) N/A - denotes test is not applicable in this Test Report.
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 4) Criteria C: The system shut down during the test.



VOLTAGE INTERRUPTION/DIPS TESTING

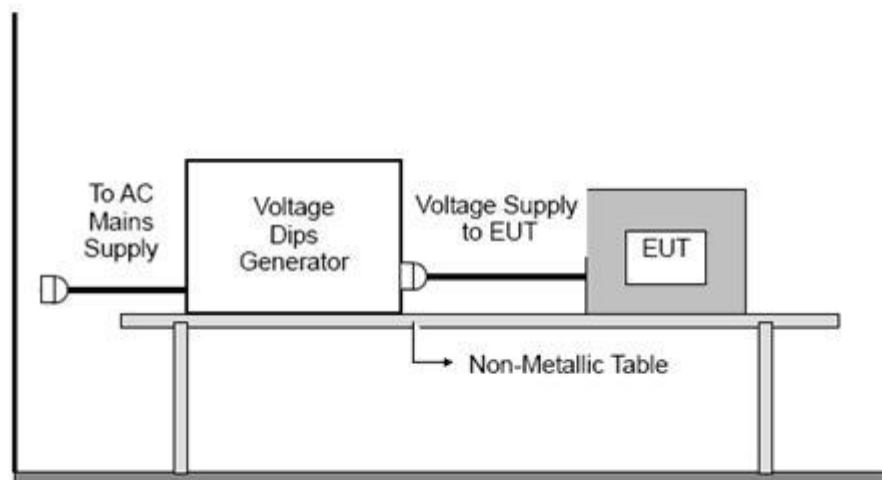
TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-11
Required Performance:	C (For 0% Voltage Dips) C (For 30% Voltage Dips) C (For 60% Voltage Dips)
Test Duration Time:	Minimum three test events in sequence
Interval between Event:	Minimum ten seconds
Phase Angle:	0°/45°/90°/135°/180°/225°/270°/315°/360°
Test Cycle:	3 times

TEST PROCEDURE

The EUT shall be tested for each selected combination of test levels and duration with a sequence of three dips/interruptions with intervals of 10 s minimum (between each test event). Each representative mode of operation shall be tested. Abrupt changes in supply voltage shall occur at zero crossings of the voltage waveform.

TEST SETUP





TEST RESULTS

EUT :	HQ-185 massage device	Model Name :	HQ-185
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2022-06-06
Test Mode :	Running		
Test Power :	DC 5V by Adapter AC 230V/50Hz		

Interruption & Dips	Duration (T)	Perform Criteria	Results	Judgment
Voltage dip 0%	0.5	C	B	PASS
Voltage dip 60%	10	C	B	PASS
Voltage dip 30%	50	C	B	PASS

Note:

- 1). N/A - denotes test is not applicable in this test report.
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 4) Criteria C: The system shut down during the test.



RE

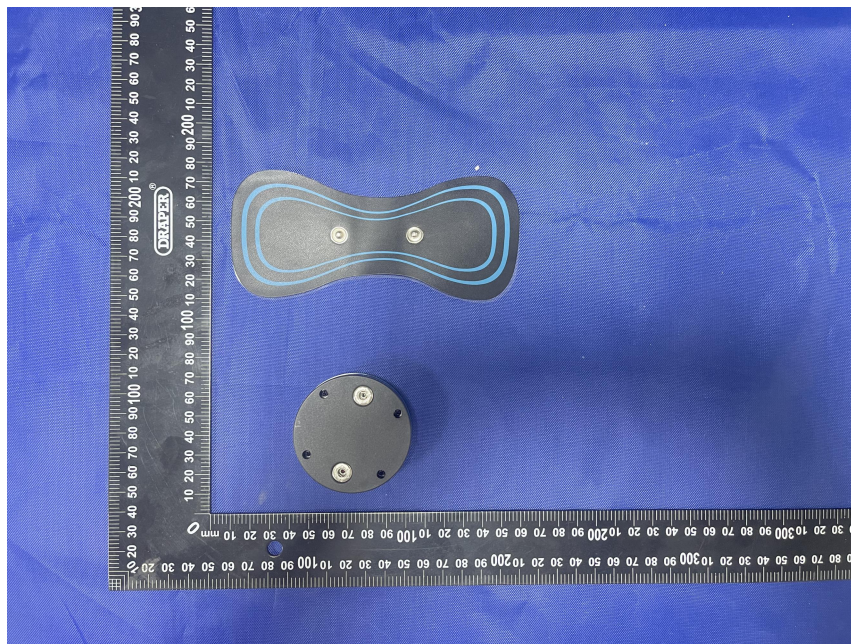


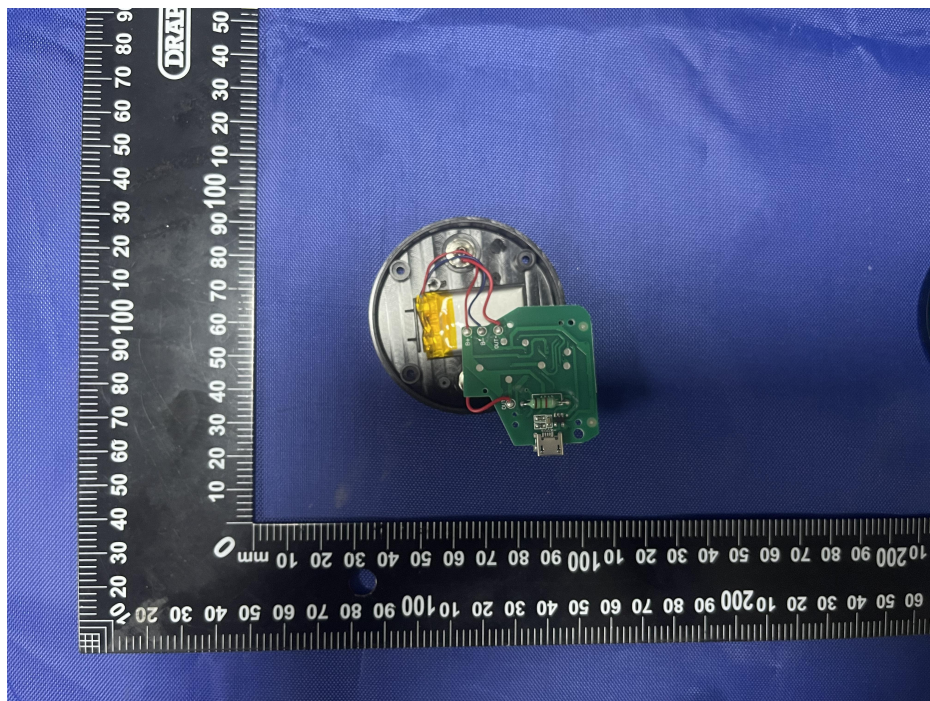
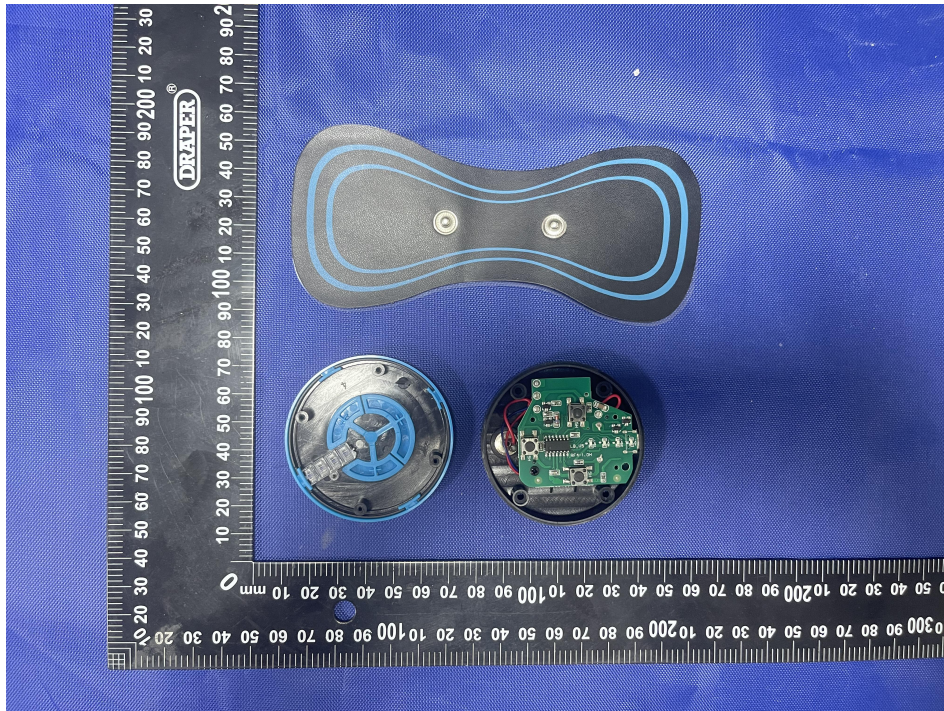
CE





EUT







※※※※※END OF REPORT※※※※※



WEI JIAN TESTING

CERTIFICATE OF ROHS CONFORMITY

Certificate No. : SZWJ2022060703
Applicant : Shenzhen Huiyibo Electronics Co., LTD
Address : 156 Yanluo Road, Songgang, Yanchuan, Baoan District,
Shenzhen,Guangdong,China
Manufacturer : Shenzhen Huiyibo Electronics Co., LTD
Address : 156 Yanluo Road, Songgang, Yanchuan, Baoan District,
Shenzhen,Guangdong,China
Product : HQ-185 massage device
Trade Name : N/A
Model : HQ-185/HQ
Test Standards : IEC62321-3-1:2013
IEC62321-5:2013/ICP-OES
IEC62321-4:2013+A1:2017/ICP-OES
IEC62321-7-1:2017/UV-VIS and
IEC62321-7-2:2017/UV-VIS
IEC62321-6:2015 /GC-MS
IEC 62321-8:2017 / GC-MS
Test report No : SZWJ2022060703ROHS

The Certificate of Compliance is based on a test procedure or an evaluation of the above-mentioned product. This is to certify that the above-mentioned product is in compliance with the RoHS 2.0 Directive -2011/65/EU Annex II (EU) 2015/863 as last amended by Directive(EU) 2017/2102.

RoHS

Approved by:

[Signature]
Department Manager

Date :

Jun. 07, 2022



The results in this report are applicable only to the equipment tested. This report shall not be re-produced except in full without the written approval of WEI JIAN (Shenzhen) testing Services Co., Ltd.

WEI JIAN (Shenzhen) Testing Services Co., Ltd
No.4, Xintian Avenue, Xintian Community, Fuhai Street, Baoan District,
Shenzhen,Guangdong,China



Test Report

Applicant : Shenzhen Huiyibo Electronics Co., LTD
Address : 156 Yanluo Road, Songgang, Yanchuan, Baoan District,
Shenzhen,Guangdong,China

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Name : HQ-185 massage device
Sample Model : HQ-185/HQ
Sample brand : N/A
Sample Received Date : May. 31. 2022
Test Completed Date : May. 31. 2022~Jun. 06, 2022
Date of Issue : Jun. 07, 2022
Test Method : 1, Screening test method: IEC62321-3-1:2013/XRF
2, Wet chemical test method:
Lead(Pb): IEC62321-5:2013/ICP-OES
Cadmium(Cd): IEC62321-5:2013/ICP-OES
Mercury(Hg): IEC62321-4:2013+A1:2017/ICP-OES
Hexavalent Chromium(CrVI):IEC62321-7-1:2017/UV-VIS and
IEC62321-7-2:2017/UV-VIS
Polybrominated Biphenyls (PBBs): IEC62321-6:2015 /GC-MS
Polybrominated Biphenyl Ethers(PBDEs): IEC62321-6:2015 /GC-MS
3, Phthalates test method: IEC 62321-8:2017 / GC-MS

Test Results : Refer to the next page(s).

Test Requested	Conclusion
RoHS Directive (EU)2015/863 amending Annex II to Directive 2011/65/EU– Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(CrVI), Polybrominated Biphenyls (PBBs), Polybrominated Biphenyl Ethers(PBDEs), Dibutyl phthalate (DBP), Butyl benzyl phthalate(BBP), Bis-(2-ethylhexyl)phthalate(DEHP), Di-iso-butyl ortho-phthalate(DIBP)	PASS

Reviewed by:

Lab Senior Engineer

Authorized Signature:





Test Results:

Part No.	Results	Cd	Pb	Hg	Cr ⁶⁺	PBBs	PBDEs	Conclusion on RoHS
1	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
2	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
3	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
4	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
5	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
6	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
7	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
8	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
9	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
10	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
11	EDXRF	BL	BL	BL	BL	--	--	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
12	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
13	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply
14	EDXRF	BL	BL	BL	BL	BL	BL	--
	Wet Chemical Testing	--	--	--	--	--	--	Comply



Test Item	Result(%)								
	1	2	5	7	8	10	12	13	14
89butyl phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis-(2-ethylhexyl)phthalate (DEHP)	0.05	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Di-iso-butyl ortho-phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.



Note:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) N.D. = Not Detected (less than MDL)
- (3) MDL = Method Detection Limit

Remark:

- (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr⁶⁺.
- (b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb,Hg), UV-VIS (for CrVI) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1: 2013 (Unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	Not applicable	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

(c) BL = Below Limit, OL = Over Limit, IN = Inconclusive, LOD = Limit of Detection

(d) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition

(e) mg/kg = ppm = 0.0001%, N.D. = not detected (<MDL), --- = not conducted

(f) Unit and Method Detection Limit (MDL) in wet chemical test:

Test Items	Pb	Cd	Hg
Units	mg/kg	mg/kg	mg/kg
MDL	2	2	2

The MDL for single compound of PBBs & PBDEs is 5 mg/kg and MDL of Cr⁶⁺ for polymer & composite sample is 2 mg/kg.

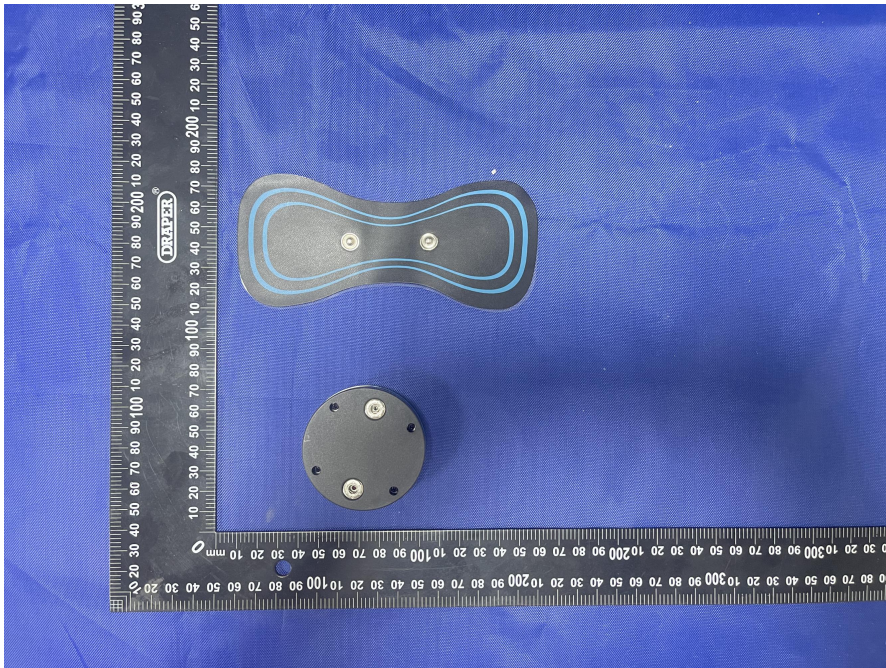
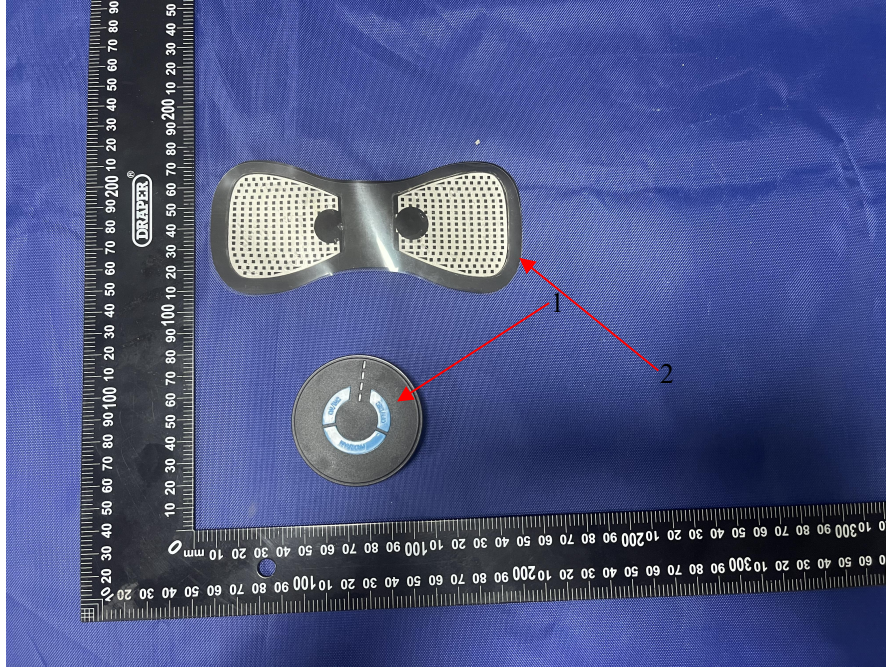
(g) According to IEC 62321:2008, result on Cr⁶⁺ for metal sample is shown as Positive/Negative.

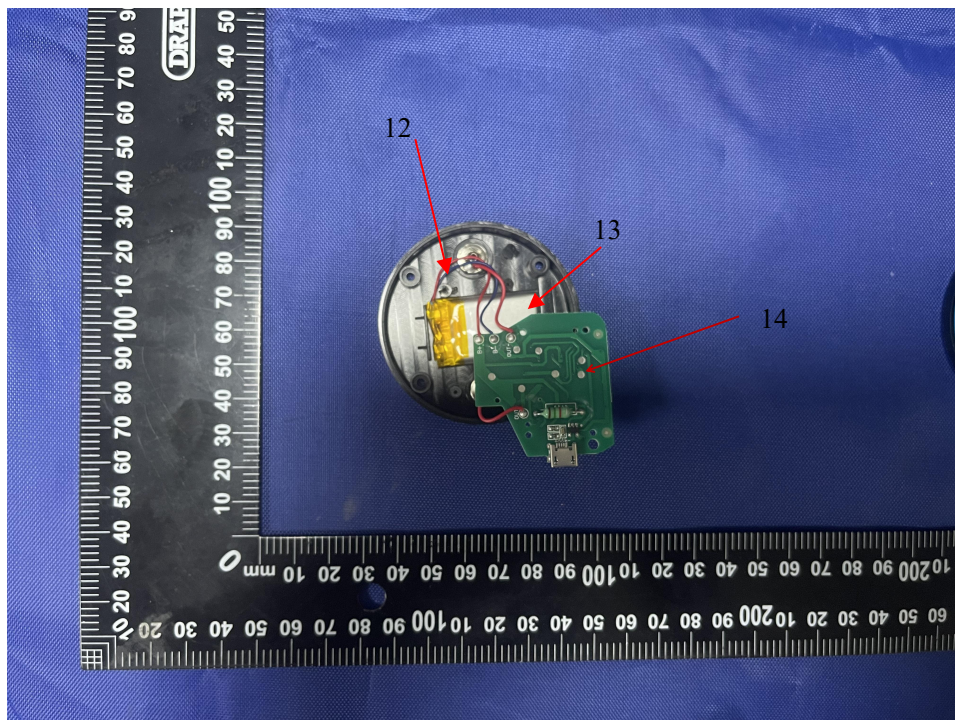
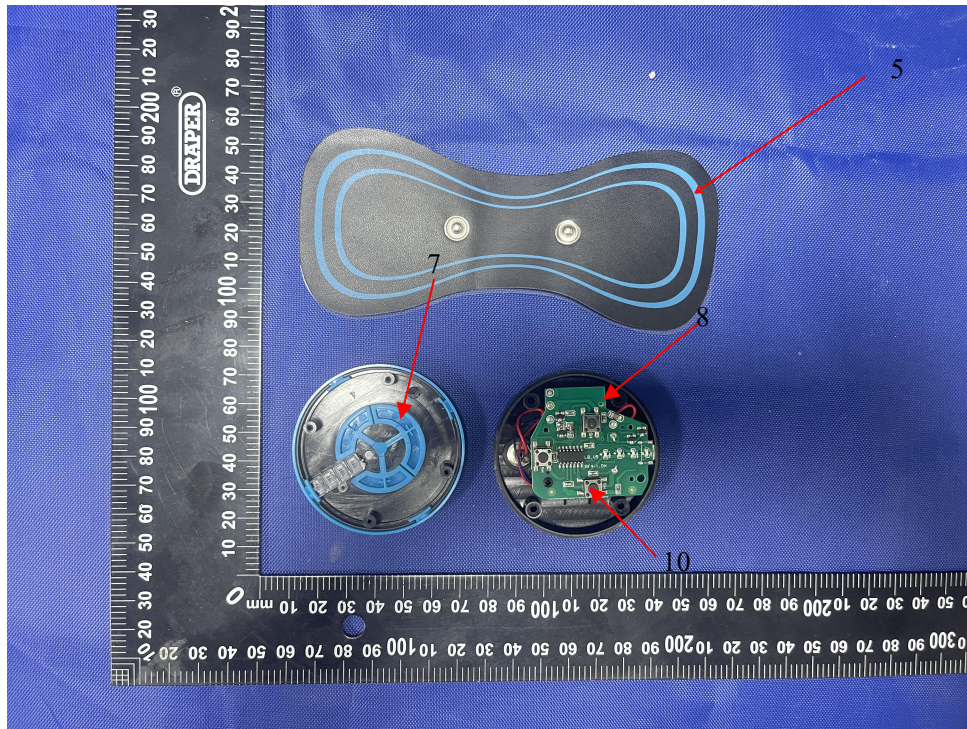
Positive = Presence of Cr⁶⁺ coating, Negative = Absence of Cr⁶⁺ coating.

(h) “*” (The result of No.183,166,269) the sample is made of copper alloy based on the client’s declaration. According to RoHS Directive 2011/65/EU exemption regulation, the result is exempted if the content of Pb in the copper alloy is less than 4%.



Sample photo





Note: The results shown in this report refer only to the sample(s) tested.

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

Shenzhen ZKT Technology Co., Ltd.

1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue,
Fuhai Street, Bao'an District, Shenzhen, China



SUPPLIER'S DECLARATION OF CONFORMITY

Certificate Number: ZKT-2306124337C

Certificate's Holder : Shenzhen Huiyibo Electronics Co., LTD
156 Yanluo Road, Songgang, Yanchuan, Baoan District,
Shenzhen, Guangdong, China

Manufacturer : Shenzhen Huiyibo Electronics Co., LTD
156 Yanluo Road, Songgang, Yanchuan, Baoan District,
Shenzhen, Guangdong, China

Trade Mark : N/A

Product : Cervical vertebra massager

Model(s) : HQ-185

Test Standard : FCC Part 15 B,
ANSI C63.4:2014

This Attestation of Compliance is issued on a voluntary basis for electrical equipment below the voltage limits of FCC standard. The essential requirements are fulfilled accordingly based on the technical specifications applicable at the time of issuance. See also notes overleaf. It is only valid in connection with the test report number: ZKT-2306124337E.



This Certificate of Conformity is based on single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole product and relevant Directives to be observed.



FCC TEST REPORT

Report Number..... : **ZKT-2306124337E**

Date of Test..... Jun. 12, 2023 to Jun. 19, 2023

Date of issue..... : Jun. 19, 2023

Total number of pages..... 13

Test Result : PASS

Testing Laboratory..... : **Shenzhen ZKT Technology Co., Ltd.**

Address : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name : **Shenzhen Huiyibo Electronics Co., LTD**

Address : 156 Yanluo Road, Songgang, Yanchuan, Baoan District, Shenzhen,Guangdong,China

Manufacturer's name : **Shenzhen Huiyibo Electronics Co., LTD**

Address : 156 Yanluo Road, Songgang, Yanchuan, Baoan District, Shenzhen,Guangdong,China

Test specification:

Standard..... : FCC Part 15 B
ANSI C63.4:2014

Test procedure..... : /

Non-standard test method : N/A

Test Report Form No..... : TRF-EL-117_V0

Test Report Form(s) Originator..... : ZKT Testing

Master TRF : Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of ZKT, this document may be altered or revised by ZKT, personal only, and shall be noted in the revision of the document.

Product name..... : **Cervical vertebra massager**

Trademark : N/A

Model/Type reference..... : HQ-185

Ratings..... : Input:DC 5V



Testing procedure and testing location:

Testing Laboratory.....: **Shenzhen ZKT Technology Co., Ltd.**
Address.....: 1/F, No. 101, Building B, No. 6, Tangwei Community
Industrial Avenue, Fuhai Street, Bao'an District,
Shenzhen, China

Tested by (name + signature).....: Jim Liu 

Reviewer (name + signature).....: Jackson Fang 

Approved (name + signature).....: Lake Xie 



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1.VERSION

Report No.	Version	Description	Approved
ZKT-2306124337E	Rev.01	Initial issue of report	Jun. 19, 2023



2.GENERAL INFORMATION

2.1 Description of Device (EUT)

EUT	Cervical vertebra massager
Trademark	N/A
Model Number	HQ-185
Model Difference	N/A
Power Supply	Input:DC 5V

2.2 Tested System Details

None.

2.3 Test Facility

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.4 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted Emission (150K-30MHZ)	3.20
Radiated disturbance30MHz-1000MHz	4.80



2.5 Test Instrument Used

Conducted emissions Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Oct. 21, 2022	Oct. 20, 2023
2	LISN	CYBERTEK	EM5040A	E185040014 9	N/A	Oct. 21, 2022	Oct. 20, 2023
3	Test Cable	N/A	C-01	N/A	N/A	Oct. 21, 2022	Oct. 20, 2023
4	Test Cable	N/A	C-02	N/A	N/A	Oct. 21, 2022	Oct. 20, 2023
5	Test Cable	N/A	C-03	N/A	N/A	Oct. 21, 2022	Oct. 20, 2023
6	EMI Test Receiver	R&S	ESC13	101393	4.42 SP3	Oct. 28, 2022	Oct. 27, 2023
7	Triple-Loop Antenna	N/A	RF300	N/A	N/A	Oct. 28, 2022	Oct. 27, 2023
8	Absorbing Clamp	DZ	ZN23201	15034	N/A	Oct. 31, 2022	Oct. 30, 2023
9	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	N/A	\	\

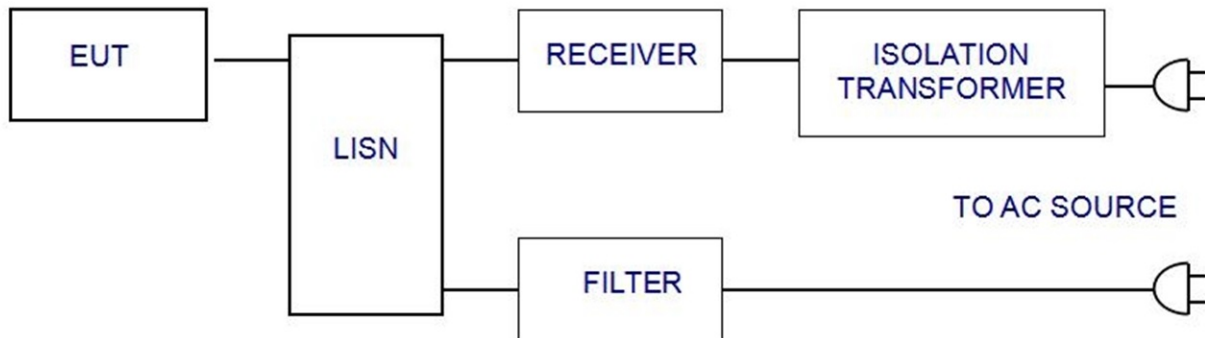
Radiation emissions& Radio Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY55370835	A.17.05	Oct. 28, 2022	Oct. 27, 2023
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Oct. 28, 2022	Oct. 27, 2023
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESC17	101169	4.32	Oct. 28, 2022	Oct. 27, 2023
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	N/A	N/A	Nov. 02, 2022	Nov. 01, 2023
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Nov. 01, 2022	Oct. 31, 2023
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Oct. 28, 2022	Oct. 27, 2023
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Nov. 01, 2022	Oct. 31, 2023
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	060747	N/A	Nov. 15, 2022	Nov. 14, 2023
9	Amplifier (1GHz-26.5GHz)	Agilent	8449B	3008A00315	N/A	Oct. 28, 2022	Oct. 27, 2023
10	Amplifier (500MHz-40GHz)	全聚达	DLE-161	097	N/A	Oct. 28, 2022	Oct. 27, 2023
11	Test Cable	N/A	R-01	N/A	N/A	Oct. 28, 2022	Oct. 27, 2023
12	Test Cable	N/A	R-02	N/A	N/A	Oct. 28, 2022	Oct. 27, 2023
13	Test Cable	N/A	R-03	N/A	N/A	Oct. 28, 2022	Oct. 27, 2023
14	Test Cable	N/A	RF-01	N/A	N/A	Oct. 28, 2022	Oct. 27, 2023
15	Test Cable	N/A	RF-02	N/A	N/A	Oct. 28, 2022	Oct. 27, 2023
16	Test Cable	N/A	RF-03	N/A	N/A	Oct. 28, 2022	Oct. 27, 2023
17	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
18	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	N/A	\	\
19	Turntable	MF	MF-7802BS	N/A	N/A	\	\
20	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\



3.CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

3.1 Block Diagram Of Test Setup



3.2 Test Standard

FCC PART 15 B

3.3 Power Line Conducted Emission Limit

Frequency MHz	Limits dB(μ V)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

- Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

3.4 EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5 Operating Condition of EUT

- 3.5.1 Setup the EUT and simulators as shown in Section 3.1.
- 3.5.2 Turn on the power of all equipments.
- 3.5.3 Let the EUT work in test modes and test it.

3.6 Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **FCC PART 15 B** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

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

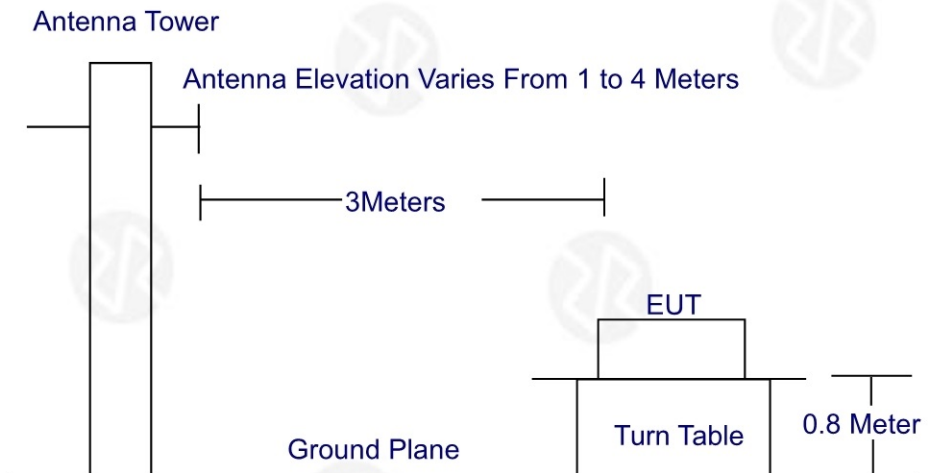
3.7 Test Result

The EUT is powered by DC only the test items is not applicable



4.RADIATION EMISSION TEST

4.1 Block Diagram of Test Setup



4.2 Test Standard

FCC PART 15 B

4.3 Radiation Limit

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

4.4 EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test. The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

4.5 Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

4.6 Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table 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 the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to FCC PART 15 B on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz. The frequency range from 30MHz to 1000MHz is checked. The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.

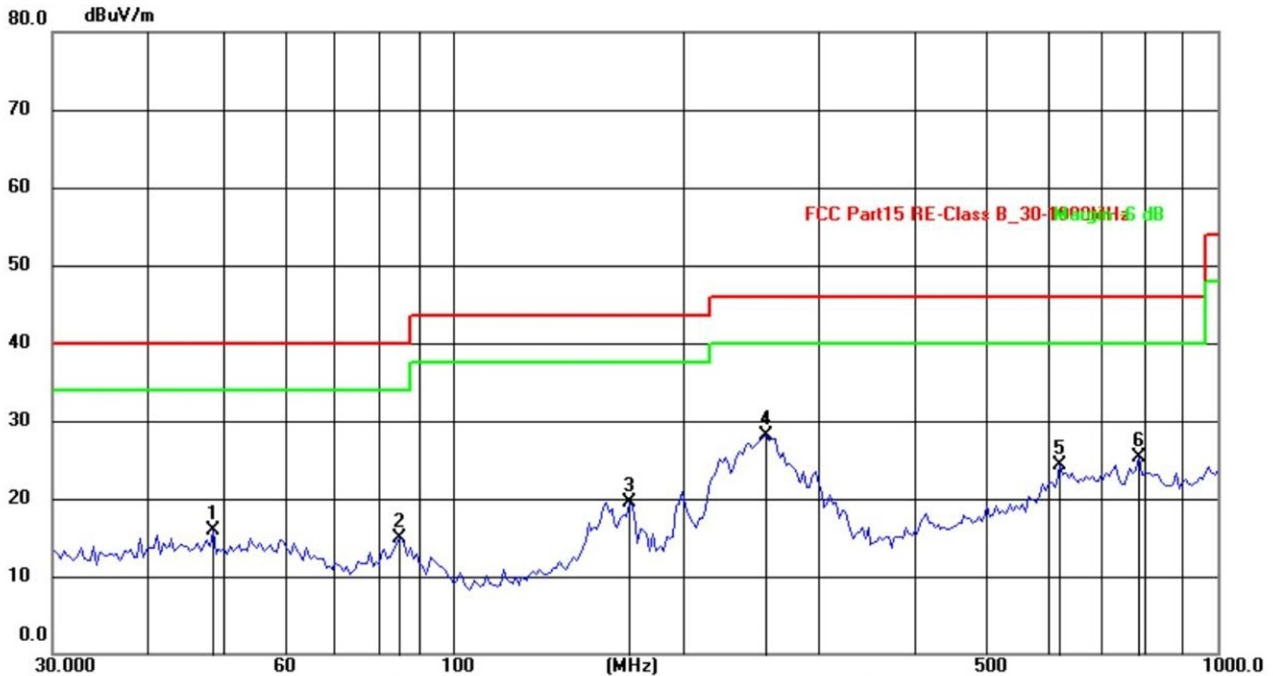
4.7 Test Result

PASS

Please refer to the following page.



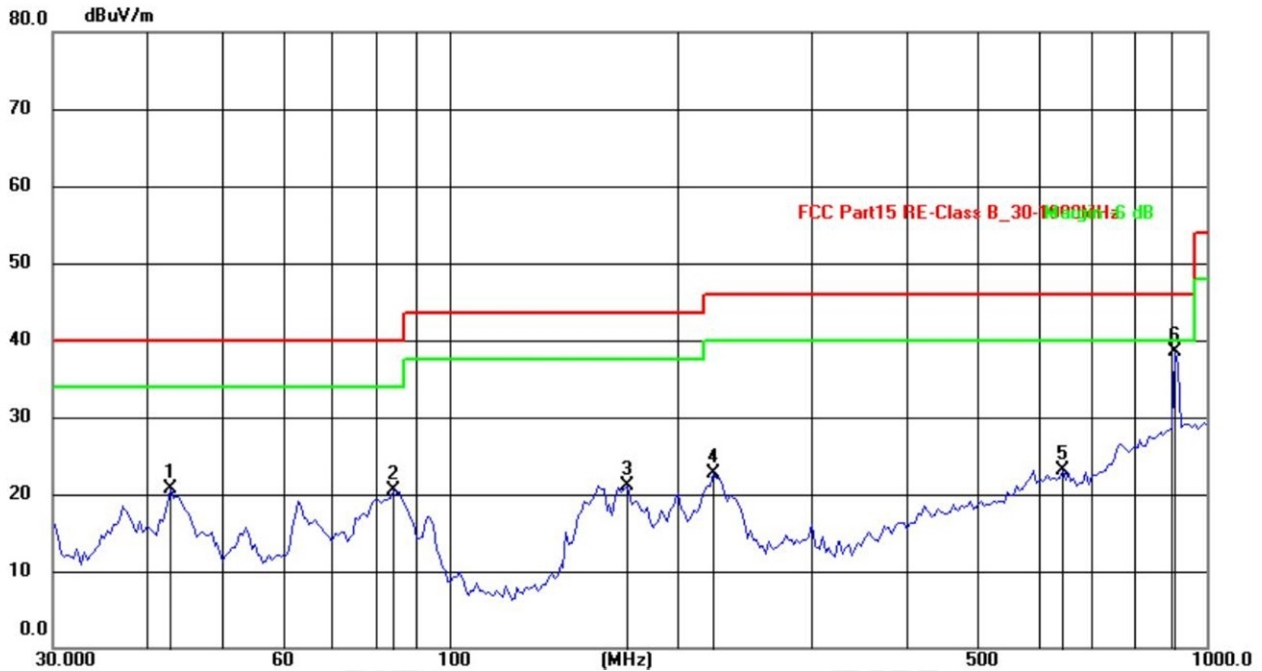
Radiation Emission Test Data			
Temperature:	26°C	Relative Humidity:	60%
Pressure:	1009hPa	Phase :	Horizontal
Test Voltage :	DC 5V	Test Mode:	Working



No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	48.5865	29.87	-14.05	15.82	40.00	-24.18	QP				
2	85.1486	34.80	-19.84	14.96	40.00	-25.04	QP				
3	170.1947	36.53	-17.04	19.49	43.50	-24.01	QP				
4	256.9712	43.71	-15.67	28.04	46.00	-17.96	QP				
5	622.8900	32.55	-8.34	24.21	46.00	-21.79	QP				
6	789.2337	32.20	-6.92	25.28	46.00	-20.72	QP				



Radiation Emission Test Data			
Temperature:	26°C	Relative Humidity:	60%
Pressure:	1009hPa	Phase :	Vertical
Test Voltage :	DC 5V	Test Mode:	Working



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	42.9750	37.78	-16.99	20.79	40.00	-19.21	QP				
2	84.4054	42.14	-21.71	20.43	40.00	-19.57	QP				
3	171.6932	41.07	-19.98	21.09	43.50	-22.41	QP				
4	223.3413	43.04	-20.37	22.67	46.00	-23.33	QP				
5	645.1194	30.79	-7.72	23.07	46.00	-22.93	QP				
6	908.0730	39.16	-0.70	38.46	46.00	-7.54	QP				

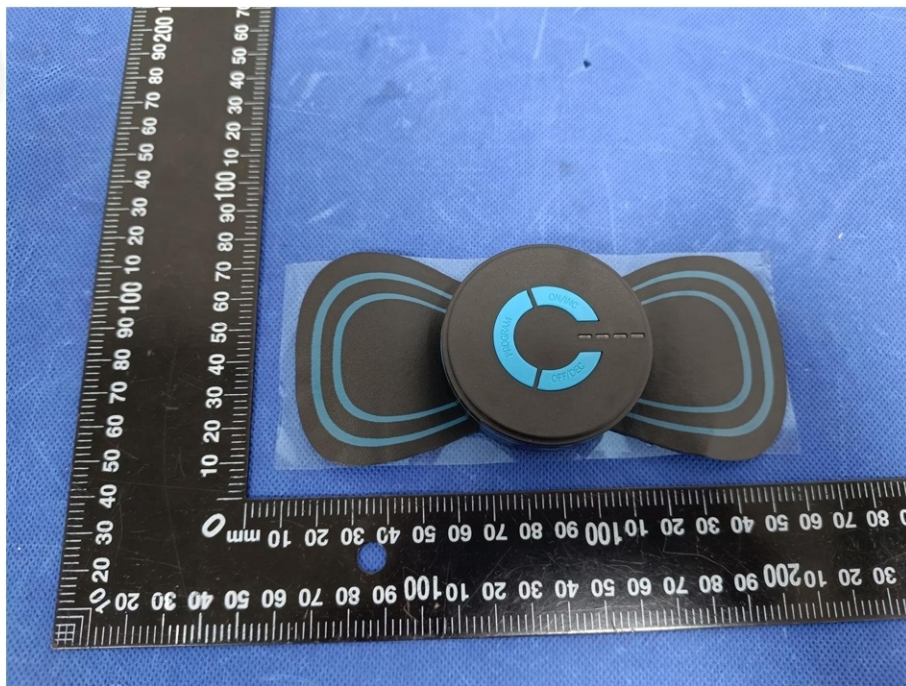


5.EUT PHOTOGRAPHS

EUT Photo 1

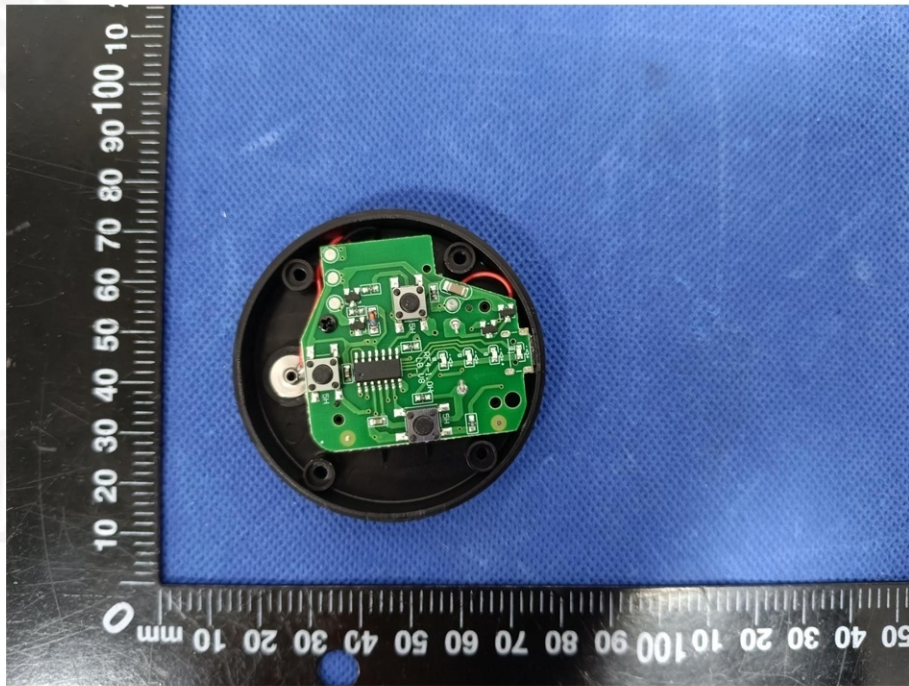


EUT Photo 2

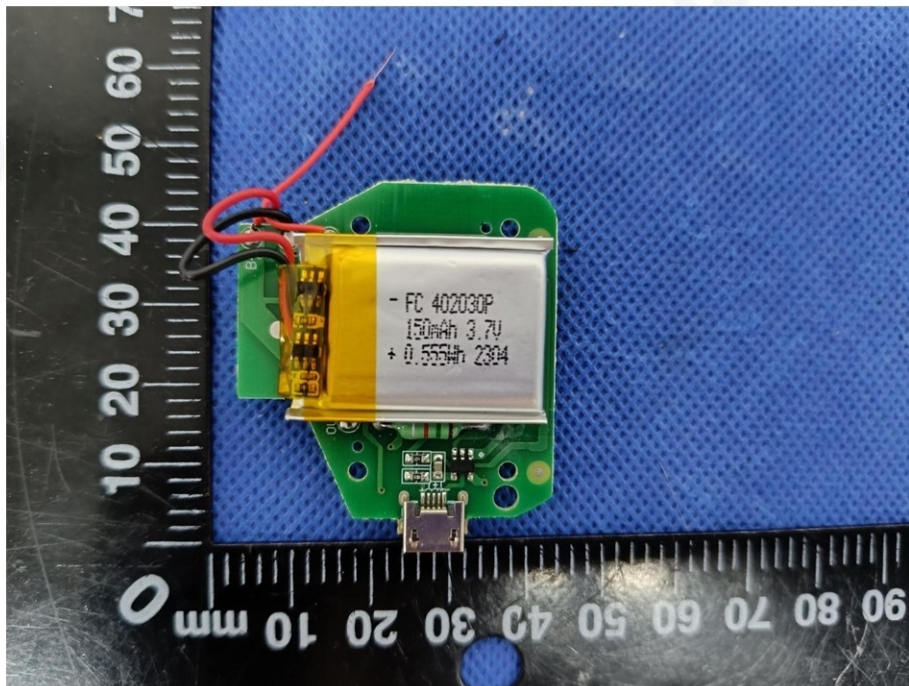




EUT Photo 3



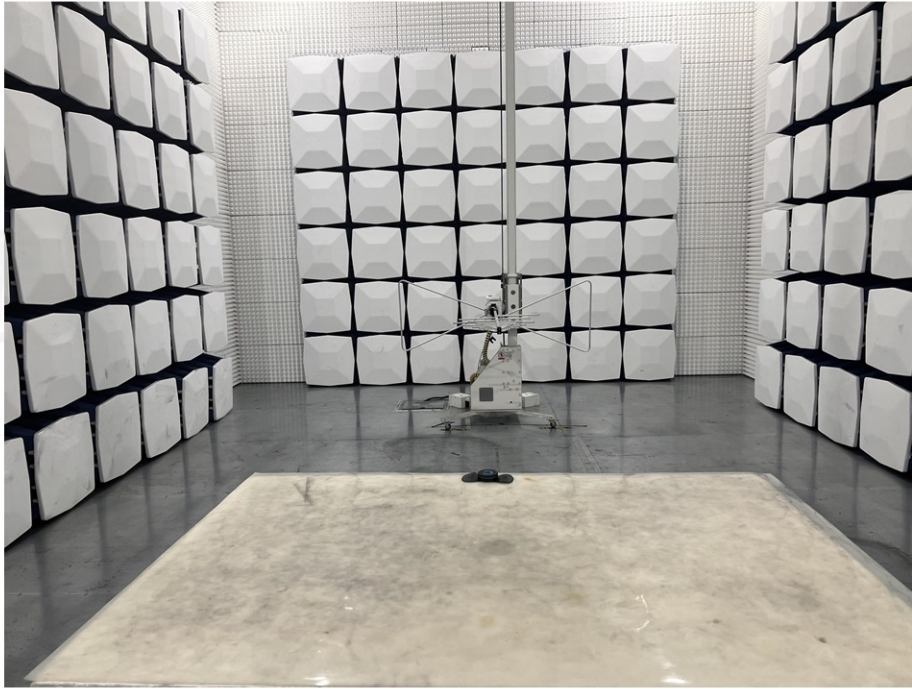
EUT Photo 4





6.EUT TEST PHOTOGRAPHS

RE



***** END OF REPORT *****