TEST REPORT

Reference No.	:	WTD23D11233950W
FCC ID.....	:	2BB75I-MG001
Applicant	:	Shenzhen Sungpo Hi-Tech Electronic Co.,Ltd
Address	:	Room 318, Chuangke Building, 72-6 Huanguan South Road, Xintian Community, Guanhu Street, Longhua District, Shenzhen City, Guangdong Province, China
Manufacturer.....	:	Dongguan SUNGPO Industry Co.,Ltd
Address	:	Room 502, Building 2, No. 9, Yuhu Road, Fenggang Town, Dongguan City, Guangdong Province, China
Product.....	:	MASSAGER
Model(s).....	:	I-MG001
Standards.....	:	47 CFR Part 15, Subpart B
Date of Receipt sample...	:	2023-11-01
Date of Test	:	2023-11-01 to 2023-11-08
Date of Issue	:	2023-11-08
Test Result	:	Pass

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Compiled by: Approved by:

Will Tan / Project Engineer

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3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD23D11233950W	2023-11-01	2023-11-01 to 2023-11-08	2023-11-08	Original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product: MASSAGER

Model(s): I-MG001

4.2 Details of E.U.T.

Power Supply: Input: 24V⎓0.8A, 43.2W

Adapter: Model: MX20W-2400800U
Input: 100-240V~, 50/60Hz, 0.5A
Output: 24.0V⎓0.8A
Manufacturer: Shenzhen Mingxin Power Technologies Co.,Ltd.

Battery: DC 21.6V, 2000mAh

Highest Internal Frequency: 1.705-108MHz

Classification of Equipment: Class B

4.3 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4 Abnormalities from Standard Conditions

None

4.5 EUT Setup and Operation Mode

No	Title	Description
TM1	charging mode	AC120V/60Hz
TM2	Maximum vibration mode	Built-in battery
Pre-test in voltage input range & all operation modes, and find out the worst case for compliance test. And record it in the report.		

5 Summary of Test Results

Item	Standard	Method	Requirement	Result
Conducted emissions on AC mains	47 CFR Part 15, Subpart B	ANSI C63.4-2014	15.107, Class B	Pass
Radiated emissions (Below 1GHz)	47 CFR Part 15, Subpart B	ANSI C63.4-2014	15.109, Class B	Pass

6 Equipment Used during Test

6.1 Equipment List

Conducted emissions on AC mains					
Description	**Manufacturer**	**Model**	**Serial No.**	**Cal. Date**	**Due. Date**
Cable	Top	TYPE16(3.5M)	/	2023-07-27	2024-07-26
LISN	R&S	ENV216	100115	2023-07-27	2024-07-26
EMI Test Receiver	R&S	ESCI	100947	2023-07-27	2024-07-26
Test Software	Frad Technology	EZ-EMC(RA-03A1-1)	/	/	/

Radiated emissions (Below 1GHz)					
Description	**Manufacturer**	**Model**	**Serial No.**	**Cal. Date**	**Due. Date**
Cable	HUBER+SUHNER	CBL2	525178	2023-04-24	2024-04-23
Amplifier	ANRITSU	MH648A	M43381	2023-04-24	2024-04-23
Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2023-11-01	2024-10-31
Test Receiver	R&S	ESCI	101296	2023-04-24	2024-04-23
Test Software	Frad Technology	EZ-EMC(RA-03A1-1)	/	/	/

6.2 Description of Support Units

Equipment	Manufacturer	Model No.	Serial No.
/	/	/	/

6.3 Measurement Uncertainty

Parameter	Measurement Uncertainty
Conducted Emissions (AC Mains 150k - 30MHz)	±3.64dB
Radiated Emissions (30M - 1000MHz)	±4.53dB
Confidence interval: 95%. Confidence factor: k=2	

7 Emission Test Results (EMI)

7.1 Conducted emissions on AC mains

Test Requirement:	15.107, Class B
Test Limit:	

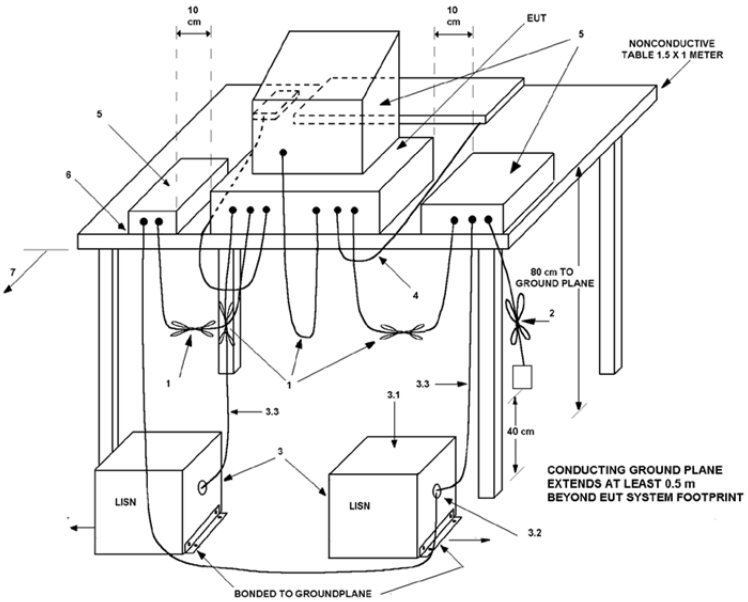
Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency.		

Test Method:	ANSI C63.4-2014
Procedure:	An initial pre-scan was performed with peak detector.Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected. Remark: Level= Read Level+ Cable Loss+ LISN Factor

7.1.1 E.U.T. Operation

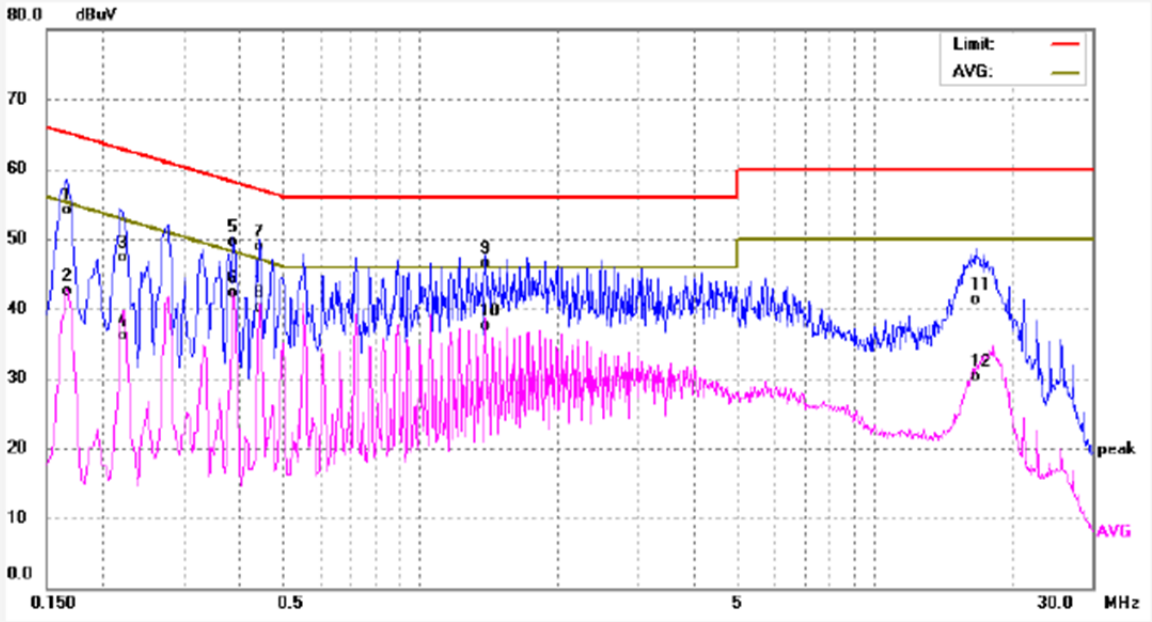
Environmental Conditions					
Temperature:	25.6 °C	Humidity:	50.2 %	Atmospheric Pressure:	101.3 kPa
Test mode:	TM1				

7.1.2 Basic Test Setup Block Diagram



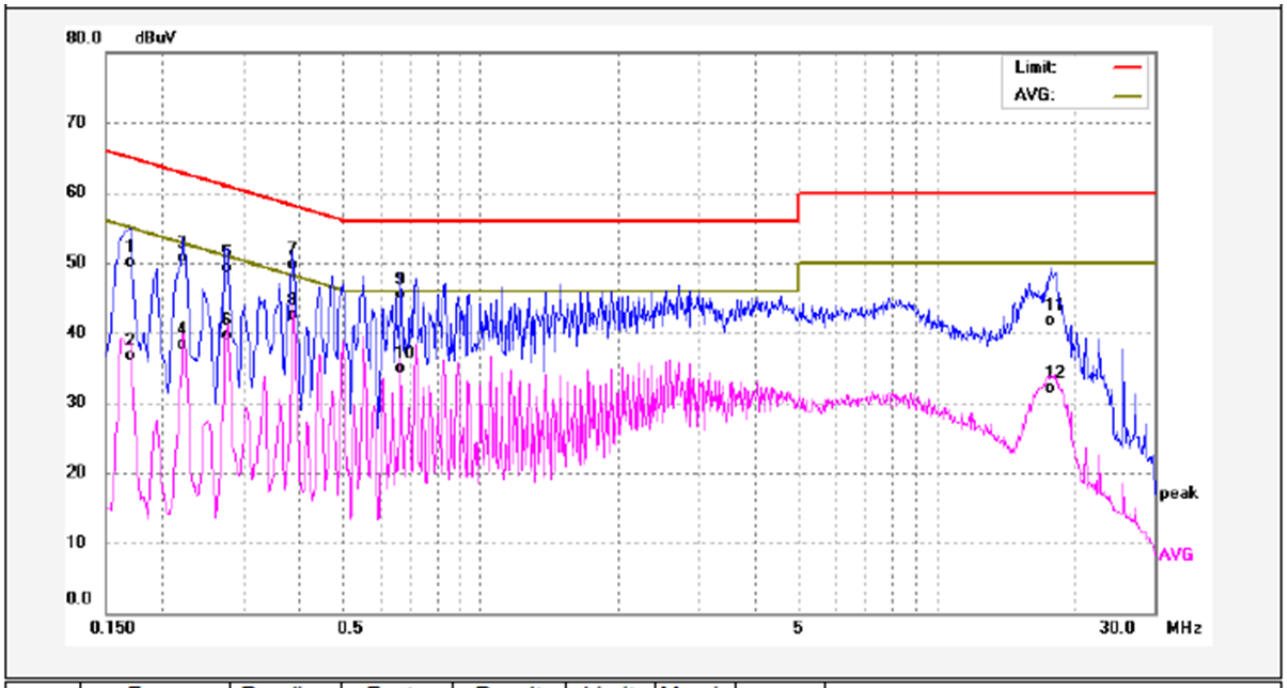
7.1.3 Summary of Test Results

TM1 / Line: Line



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1660	43.14	10.95	54.09	65.15	-11.06	QP	
2	0.1660	31.48	10.95	42.43	55.15	-12.72	AVG	
3	0.2180	36.38	10.96	47.34	62.89	-15.55	QP	
4	0.2180	25.13	10.96	36.09	52.89	-16.80	AVG	
5	0.3860	38.56	10.99	49.55	58.15	-8.60	QP	
6	0.3860	31.33	10.99	42.32	48.15	-5.83	AVG	
7	0.4420	37.85	10.99	48.84	57.02	-8.18	QP	
8	0.4420	29.14	10.99	40.13	47.02	-6.89	AVG	
9	1.3820	35.46	11.05	46.51	56.00	-9.49	QP	
10	1.3820	26.52	11.05	37.57	46.00	-8.43	AVG	
11	16.6539	29.61	11.63	41.24	60.00	-18.76	QP	
12	16.6539	18.72	11.63	30.35	50.00	-19.65	AVG	

TM1 / Line: Neutral



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1700	39.13	10.95	50.08	64.96	-14.88	QP	
2	0.1700	25.73	10.95	36.68	54.96	-18.28	AVG	
3	0.2220	39.67	10.96	50.63	62.74	-12.11	QP	
4	0.2220	27.26	10.96	38.22	52.74	-14.52	AVG	
5	0.2740	38.29	10.98	49.27	60.99	-11.72	QP	
6	0.2740	28.64	10.98	39.62	50.99	-11.37	AVG	
7	0.3860	38.81	10.99	49.80	58.15	-8.35	QP	
8	0.3860	31.52	10.99	42.51	48.15	-5.64	AVG	
9	0.6660	34.49	11.01	45.50	56.00	-10.50	QP	
10	0.6660	23.83	11.01	34.84	46.00	-11.16	AVG	
11	17.8260	30.05	11.64	41.69	60.00	-18.31	QP	
12	17.8260	20.38	11.64	32.02	50.00	-17.98	AVG	

7.2 Radiated emissions (Below 1GHz)

Test Requirement:	15.109, Class B
Test Limit:	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

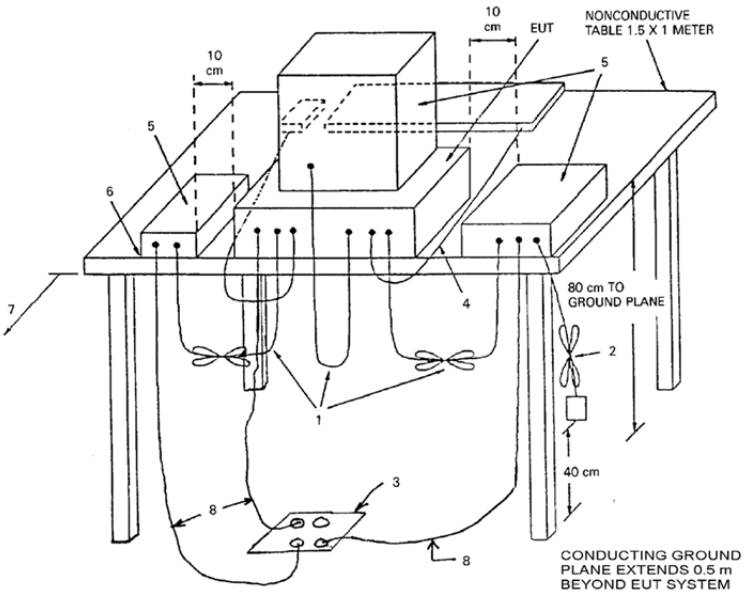
Frequency of emission (MHz)	**Field strength @3m**		**Field strength @10m**	
	(uV/m)	**(dBuV/m)**	**(uV/m)**	**(dBuV/m)**
30 – 88	100	40	30	29.5
88 – 216	150	43.5	45	33.1
216 – 960	200	46	60	35.6
Above 960	500	54	150	43.5

Test Method:	ANSI C63.4-2014
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

7.2.1 E.U.T. Operation

Environmental Conditions					
Temperature:	26.2 °C	Humidity:	54.5 %	Atmospheric Pressure:	101.2 kPa
Test mode:	TM1, TM2				

7.2.2 Basic Test Setup Block Diagram



7.2.3 Summary of Test Results

TM1 / Polarization: Horizontal

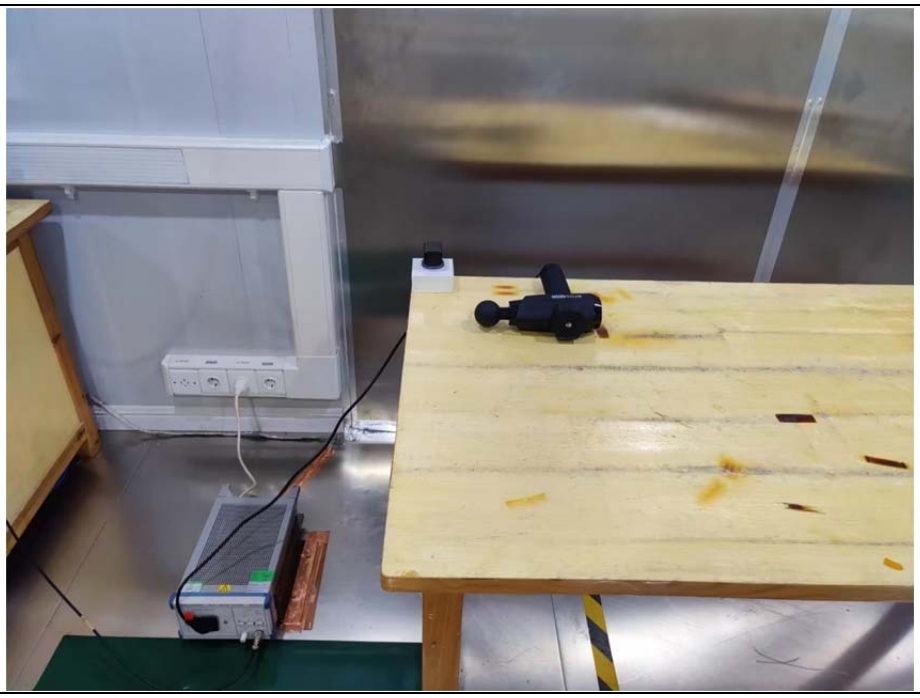
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	48.6719	38.01	-14.68	23.33	40.00	-16.67	QP	
2	61.9951	41.40	-15.36	26.04	40.00	-13.96	QP	
3	124.1330	48.21	-17.00	31.21	43.50	-12.29	QP	
4	253.8367	46.86	-8.50	38.36	46.00	-7.64	QP	
5	346.9362	54.58	-12.15	42.43	46.00	-3.57	QP	
6	480.5276	51.35	-9.14	42.21	46.00	-3.79	QP	

TM1 / Polarization: Vertical

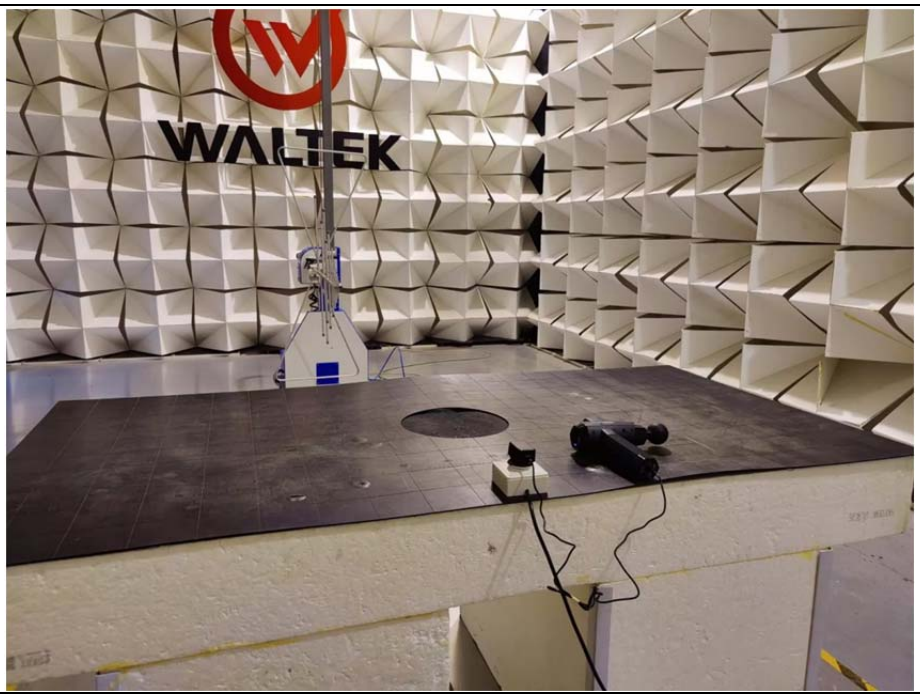
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	39.1616	49.79	-15.80	33.99	40.00	-6.01	QP	
2	150.0108	49.58	-15.53	34.05	43.50	-9.45	QP	
3	254.7284	46.38	-8.53	37.85	46.00	-8.15	QP	
4	268.4853	48.68	-10.04	38.64	46.00	-7.36	QP	
5	349.2500	51.09	-12.14	38.95	46.00	-7.05	QP	
6	490.7447	48.30	-9.02	39.28	46.00	-6.72	QP	

8 Photographs – Test Setup Model I-MG001 FCC ID: 2BB75I-MG001

8.1 Conducted emissions on AC mains



8.2 Radiated emissions (Below 1GHz)



9 Photographs – Constructional Details

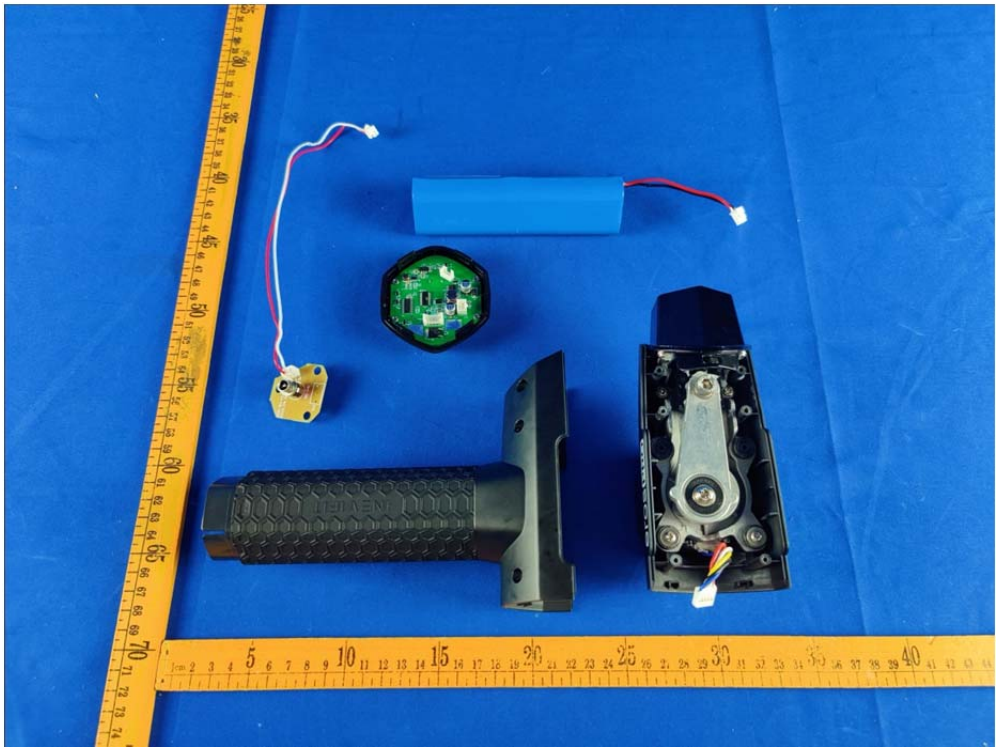
9.1 EUT – External View Model I-MG001 FCC ID: 2BB75I-MG001

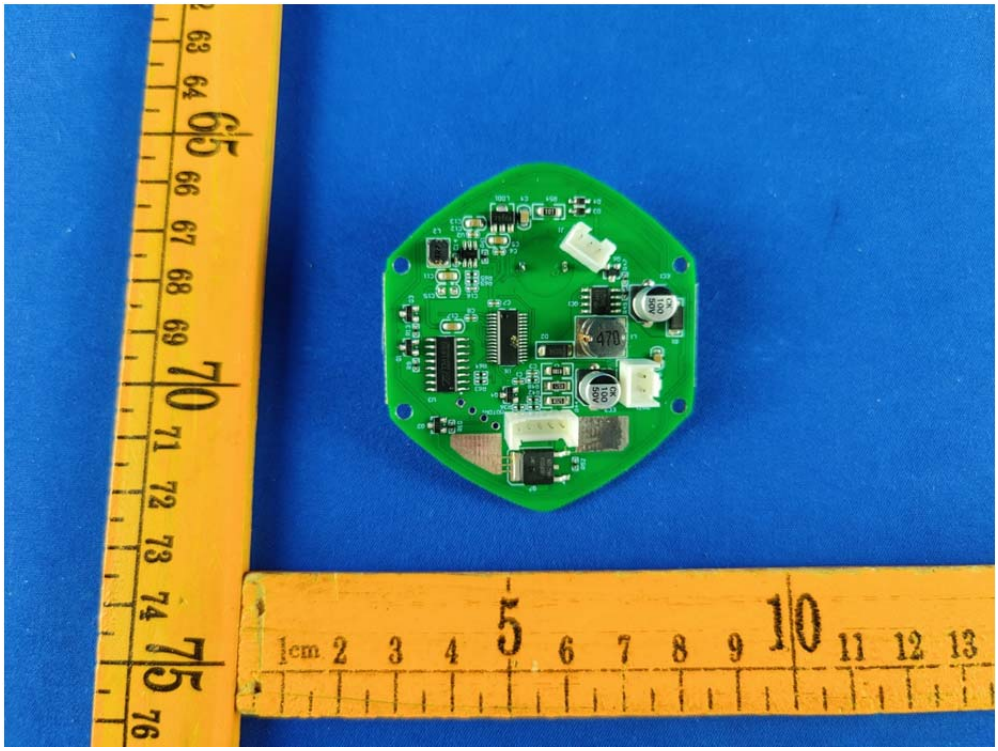
erosPRO

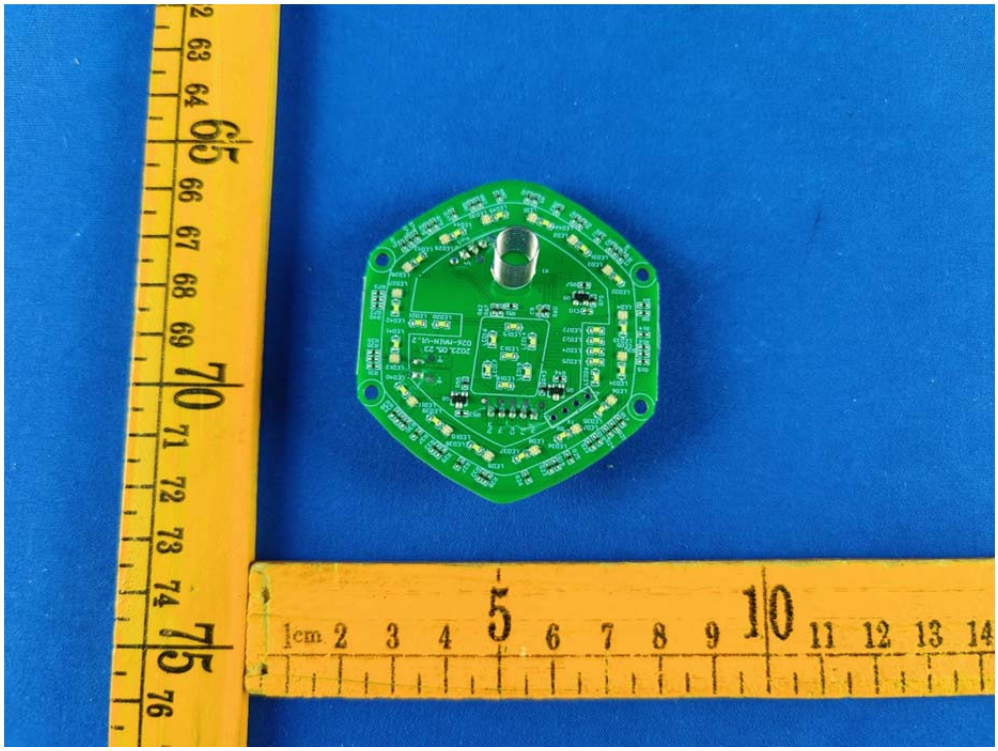
INEVIFIT
MASSAGER
eros PRO

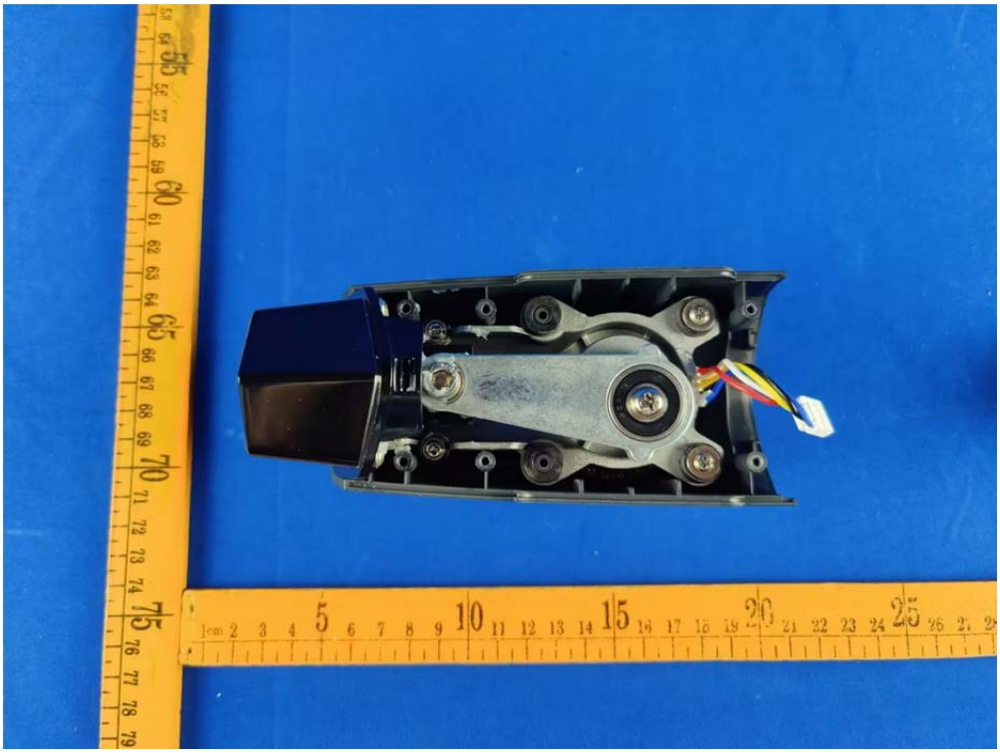
CLASS 2 POWER SUPPLY
MODEL:MX20W-2400800U
INPUT:100-240V~50/60Hz 0.5A
OUTPUT:24.0V ⎓ 0.8A
Shenzhen Mingwin Power Technologies Co.,Ltd.
MADE IN CHINA 2116

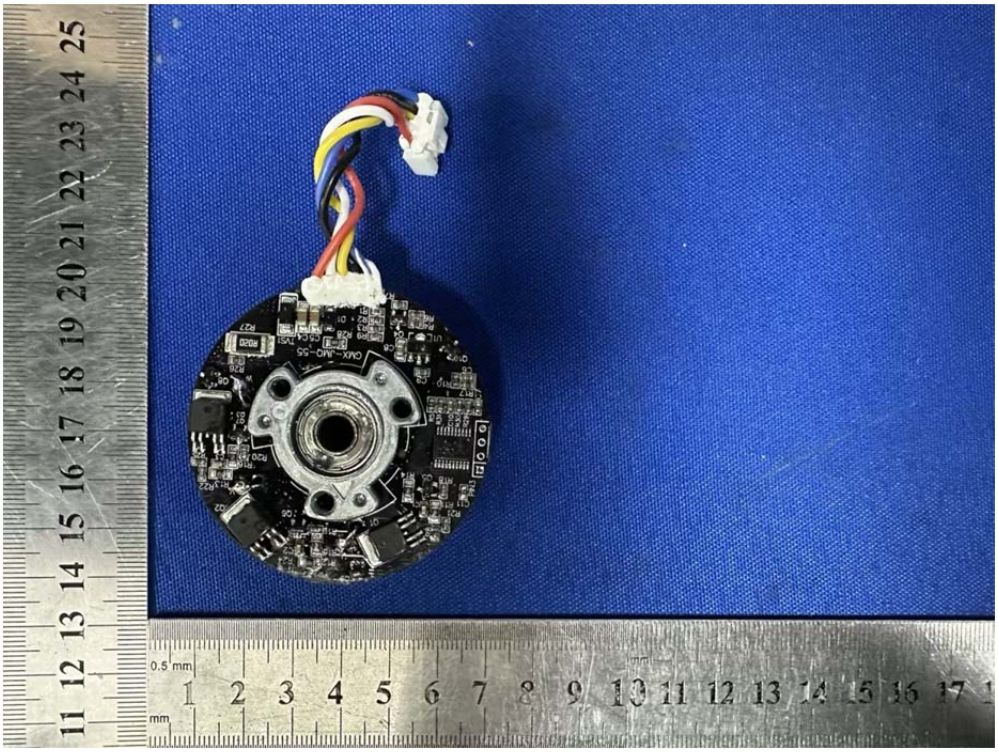
9.2 EUT – Internal View Model I-MG001 FCC ID: 2BB75I-MG001

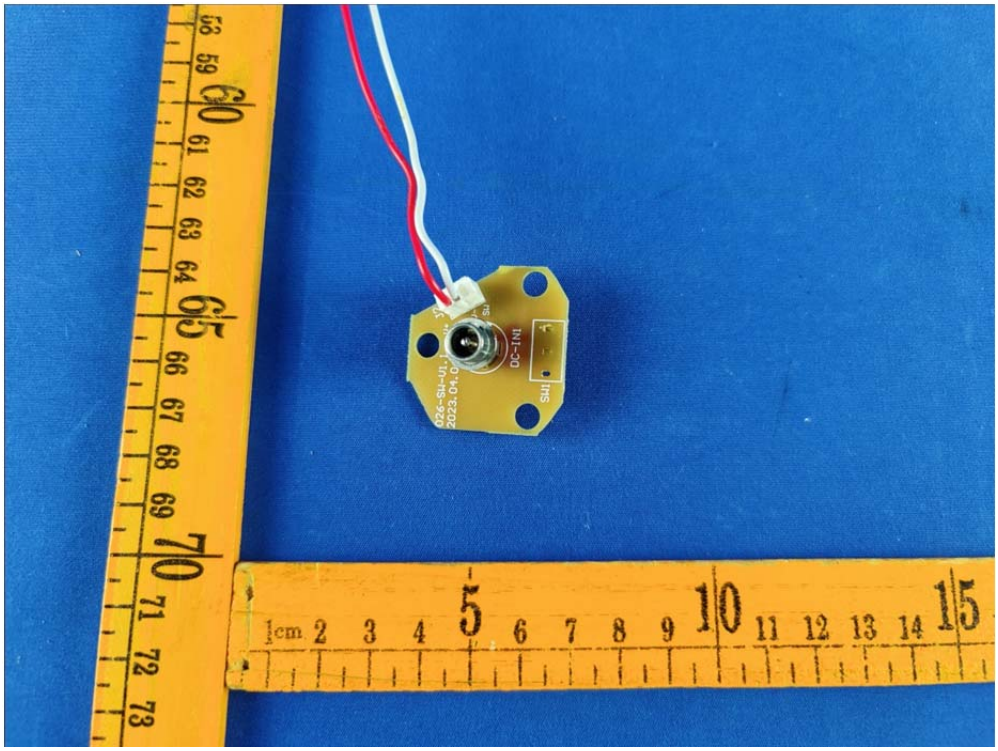


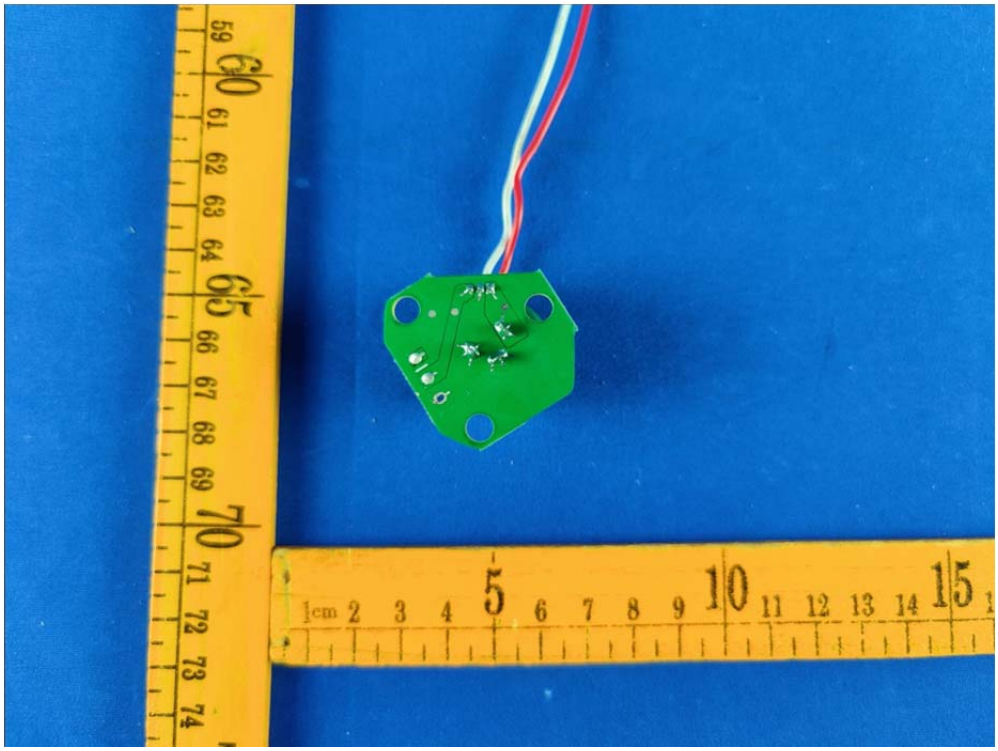


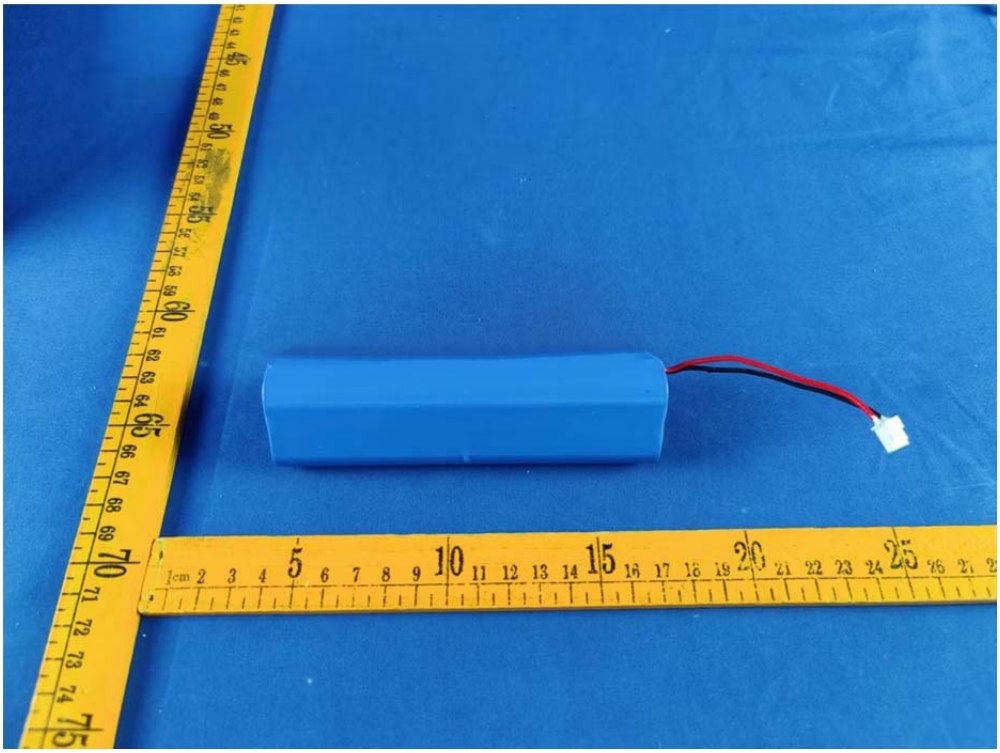












====== End of Report ======