



TEST REPORT

Application No.: SHEM2003001531CR
FCC ID: 2ATA8-MWCC-01A
Applicant: Ningbo Medkinetic Medical Device Co.,Ltd.
Address of Applicant: Lushan West Road 167-8,Ningbo Free Trade Zone(South),315806 Ningbo
Manufacturer: Ningbo Medkinetic Medical Device Co.,Ltd.
Address of Manufacturer: Lushan West Road 167-8,Ningbo Free Trade Zone(South),315806 Ningbo
Factory: Ningbo Medkinetic Medical Device Co.,Ltd.
Address of Factory: Lushan West Road 167-8,Ningbo Free Trade Zone(South),315806 Ningbo
Equipment Under Test (EUT):
EUT Name: Wireless Charging Cradle
Model No.: MWCC-01A
Standard(s) : 47 CFR Part 18
Date of Receipt: 2020-03-10
Date of Test: 2020-04-18 to 2020-04-23
Date of Issue: 2020-04-26

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Parlam Zhan

Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.



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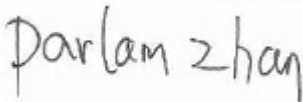
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Testing Center EMC Lab (201612)

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Revision Record			
Version	Description	Date	Remark
00	Original	2020-04-26	/

Authorized for issue by:			
			
		Micheal Niu / Project Engineer	
			
		Parlam Zhan / Reviewer	



2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 18	FCC OST/MP-5:1986	Class B	Pass
Radiated Emissions (Magnetic field Strength) (9kHz- 30MHz)	47 CFR Part 18	FCC OST/MP-5:1986	Class B	Pass
Radiated Emissions (30MHz-1GHz)	47 CFR Part 18	FCC OST/MP-5:1986	Class B	Pass



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4 General Information

4.1 Details of E.U.T.

Power supply: DC 5V/500mA by adapter
Test voltage: AC 120V/60Hz
Output power: DC 5V/200mA
Operation frequency: 170 kHz
Antenna type: Inductive Loop Coil Antenna
Modulation type: Load modulation
Cable: USB Cable 50cm

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
AC Adapter	Apple	A1402	/

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conducted Emission at mains port using AMN	±2.6dB (9kHz to 150kHz)
		±2.3dB (150kHz to 30MHz)
2	Conducted Emission at mains port using VP	±1.9 dB (9kHz to 30MHz)
3	Conducted Emission at telecommunication port using AAN	±4.1 dB (150kHz to 30MHz)
4	Radiated Power	±3.0dB
5	Radiated emission	±4.4dB (30MHz-1GHz)
		±4.8dB (1GHz-6GHz)
		±5.2dB (6GHz-18GHz)

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **NVLAP (LAB CODE: 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

- **FCC (Designation Number: CN5033)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

- **ISED (CAB Identifier: CN0020)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



5 Equipment List

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESR7	SHEM162-1	2019-12-20	2020-12-19
Line impedance stabilization network	SCHWARZBECK	NSLK8127	SHEM061-1	2019-12-20	2020-12-19
Line impedance stabilization network	EMCO	3816/2	SHEM019-1	2019-12-20	2020-12-19
Pulse limiter	Rohde & Schwarz	ESH3-Z2	SHEM029-1	2019-12-20	2020-12-19
Shielding Room	ZHONGYU	8*4*3M	SHEM079-2	2017-12-20	2020-12-19
CE test Cable	/	/	CE01	2019-12-26	2020-12-25

Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESU40	SHEM051-1	2019-12-20	2020-12-19
CONTROLLER	INNCO	CO200	SHEM047-1	N/A	N/A
ANTENNA MAST	INNCO	MA400-EP	SHEM047-2	N/A	N/A
TURN DEVICE	INNCO	DE 3600-RH	SHEM047-3	N/A	N/A
Loop antenna	Schwarzbeck - Mess-Elektronik	FMZB1519	SHEM135-1	2019-12-20	2020-12-19
Low Amplifier	CLAVIIO	BDLNA-0001-412010	SHEM164-1	2019-08-13	2020-08-12

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Digital pressure meter	YONGZHI	DYM3-01	SHEM082-1	2018-01-25	2021-01-24
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-1~6	2019-09-16	2020-09-15
Digital Multimeter	FLUKE	17B	SHEM043-3	2019-09-02	2020-09-01
Autoformer regulator	Guangzhou bao de	TDGC2-5KVA	SHEM150-1	N/A	N/A
Multi-purpose tong tester	FLUKE	316	SHEM001-1	2019-12-20	2020-12-19

6 Emission Test Results

6.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

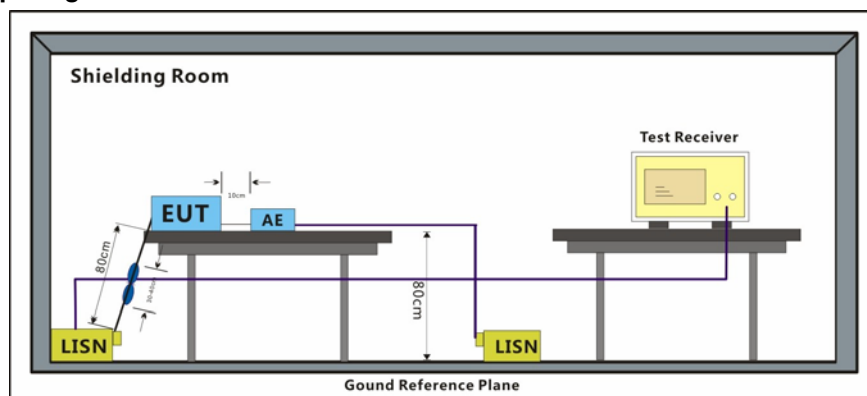
Test Requirement:	47 CFR Part 18
Test Method:	FCC OST/MP-5:1986
Frequency Range:	150kHz to 30MHz
Limit:	
0.15M-0.5MHz	66dB(μ V)-56dB(μ V) quasi-peak, 56dB(μ V)-46dB(μ V) average
0.5M-5MHz	56dB(μ V) quasi-peak, 46dB(μ V) average
5M-30MHz	60dB(μ V) quasi-peak, 50dB(μ V) average
Detector:	Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
Test mode a:Wireless Charging:Keep Device continuous charging

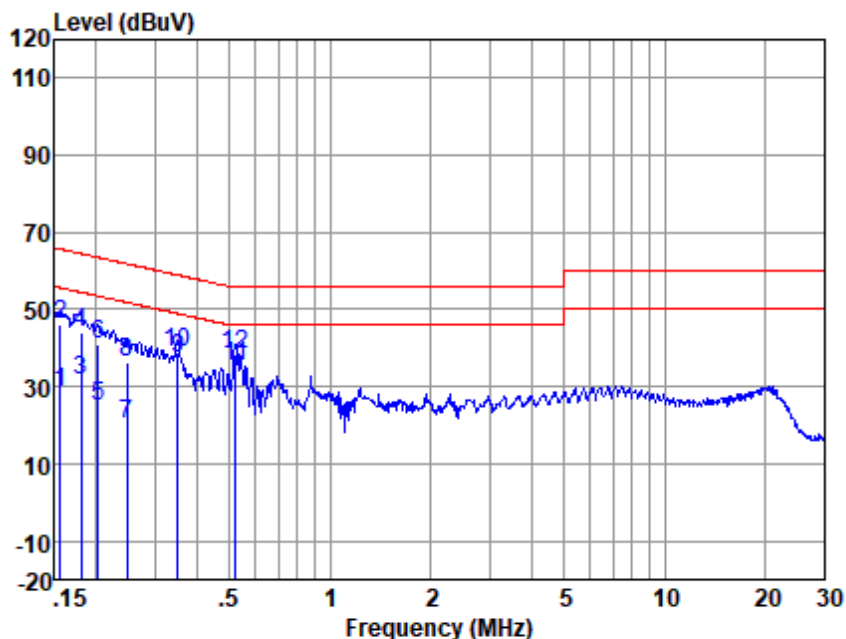
6.1.2 Test Setup Diagram



6.1.3 Measurement Data

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.

Mode:a; Line:Live Line

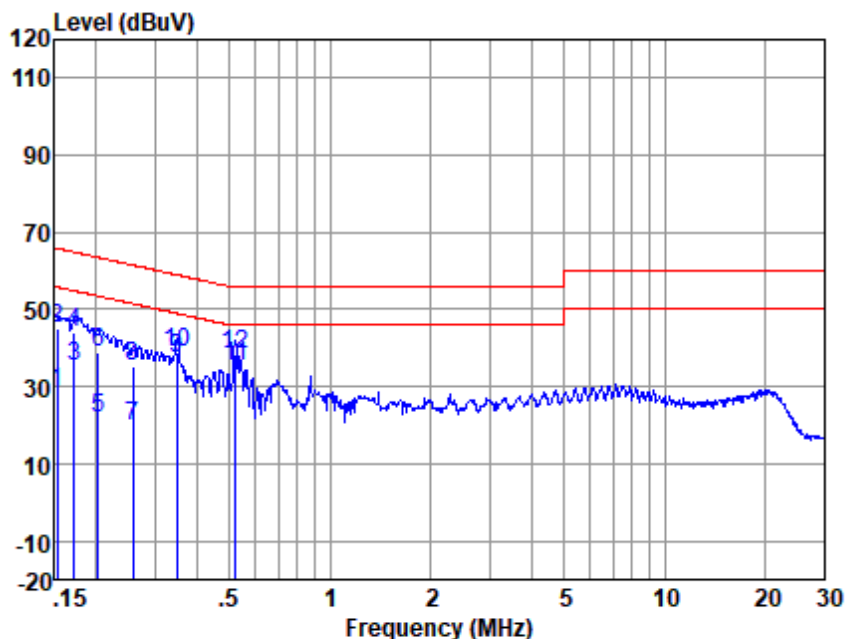


LISN : LINE
EUT/Project No : 1531CR
Test Mode : a

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.16	18.44	0.08	9.97	28.49	55.65	-27.16	Average
2	0.16	35.91	0.08	9.97	45.96	65.65	-19.69	QP
3	0.18	21.44	0.08	9.99	31.51	54.50	-22.99	Average
4	0.18	33.74	0.08	9.99	43.81	64.50	-20.69	QP
5	0.20	14.70	0.07	10.00	24.77	53.54	-28.77	Average
6	0.20	31.02	0.07	10.00	41.09	63.54	-22.45	QP
7	0.25	9.99	0.07	10.01	20.07	51.86	-31.79	Average
8	0.25	26.44	0.07	10.01	36.52	61.86	-25.34	QP
9	0.35	26.99	0.08	10.03	37.10	48.96	-11.86	Average
10	0.35	28.74	0.08	10.03	38.85	58.96	-20.11	QP
11	0.52	25.31	0.08	10.05	35.44	46.00	-10.56	Average
12	0.52	28.22	0.08	10.05	38.35	56.00	-17.65	QP

Notes: Emission Level = Read Level + LISN Factor + Cable loss

Mode:a; Line:Neutral Line



LISN : NEUTRAL
EUT/Project No : 1531CR
Test Mode : a

	Freq (MHz)	Read level (dBuV)	LISN Factor (dB)	Cable Loss (dB)	Emission Level (dBuV)	Limit (dBuV)	Over Limit (dB)	Remark
1	0.15	18.30	0.07	9.97	28.34	55.87	-27.53	Average
2	0.15	34.81	0.07	9.97	44.85	65.87	-21.02	QP
3	0.17	25.11	0.07	9.98	35.16	54.86	-19.70	Average
4	0.17	34.03	0.07	9.98	44.08	64.86	-20.78	QP
5	0.20	12.00	0.06	10.00	22.06	53.49	-31.43	Average
6	0.20	29.07	0.06	10.00	39.13	63.49	-24.36	QP
7	0.26	9.62	0.06	10.01	19.69	51.51	-31.82	Average
8	0.26	25.40	0.06	10.01	35.47	61.51	-26.04	QP
9	0.35	27.08	0.06	10.03	37.17	49.00	-11.83	Average
10	0.35	28.82	0.06	10.03	38.91	59.00	-20.09	QP
11	0.52	25.02	0.06	10.05	35.13	46.00	-10.87	Average
12	0.52	28.47	0.06	10.05	38.58	56.00	-17.42	QP

Notes: Emission Level = Read Level + LISN Factor + Cable loss

6.2 Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)

Test Requirement: 47 CFR Part 18
Test Method: FCC OST/MP-5:1986
Frequency Range: 9kHz to 30MHz
Measurement Distance: 3m
Limit

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any non-ISM frequency	Below 500 500 or more	15 $15 \times \text{SQRT}(\text{power}/500)$	300 300

¹Field strength may not exceed 10 $\mu\text{V}/\text{m}$ at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

Frequency band in which device operates (MHz)	Range of frequency measurements	
	Lowest frequency	Highest frequency
Below 1.705	Lowest frequency generated in the device, but not lower than 9 kHz	30 MHz.
1.705 to 30	Lowest frequency generated in the device, but not lower than 9 kHz	400 MHz.
30 to 500	Lowest frequency generated in the device or 25 MHz, whichever is lower	Tenth harmonic or 1,000 MHz, whichever is higher.
500 to 1,000	Lowest frequency generated in the device or 100 MHz, whichever is lower	Tenth harmonic.

Remark:

- 1.The EUT belongs to non-ISM equipment, the field strength limit is 15 $\mu\text{V}/\text{m}$ at 300 meter distance
2. Limit: $20\log(15\mu\text{V}/\text{m})+20\log(300/3)=63.52\text{dBuV}/\text{m}$ at 3 meters distance

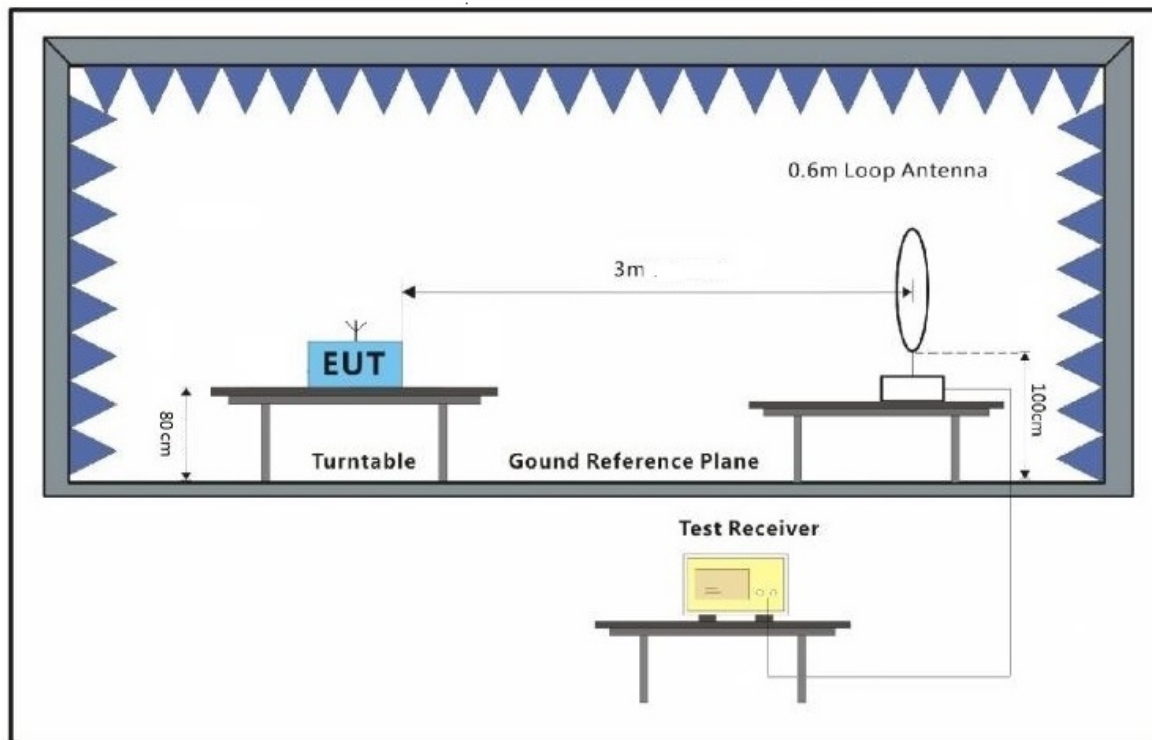
6.2.1 E.U.T. Operation

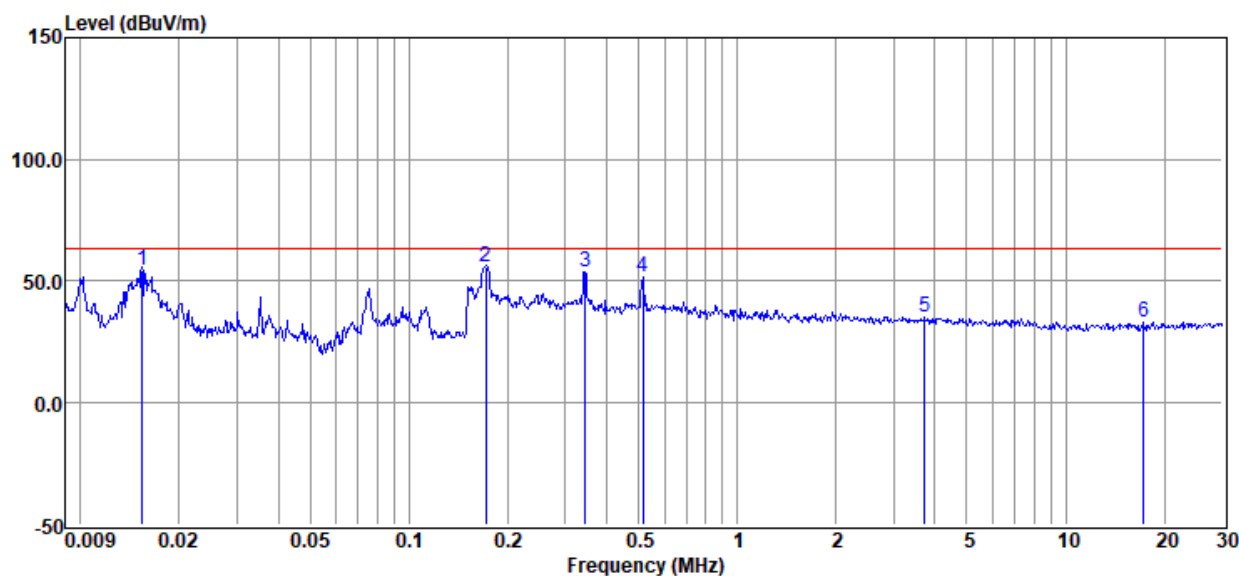
Operating Environment:
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
Test mode: a:Wireless Charging:Keep Device continuous charging

6.2.2 Measurement Data

For testing performed with the loop antenna, the center of the loop was positioned 0.8 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

6.2.3 Test Setup Diagram





Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dBμA/μVm)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector
1	0.015	35.05	19.64	0.03	54.72	63.50	-8.78	Average
2	0.171	35.99	19.82	0.05	55.86	63.50	-7.64	Average
3	0.344	33.78	19.88	0.08	53.74	63.50	-9.76	Average
4	0.515	31.28	20.02	0.09	51.39	63.50	-12.11	Average
5	3.730	15.02	20.18	0.29	35.49	63.50	-28.01	Average
6	17.281	12.41	20.10	0.63	33.14	63.50	-30.36	Average



7 Photographs

Refer to the < Photographs >

- End of the Report -