




TEST REPORT

Report No. : **CHEW21020067** Report verification: 

Project No..... : **SHT2101054701EW**

FCC ID..... : **2AN5D-WP01**

Applicant's name : **Shenzhen Yunding Information Technology Co., Ltd.**

Address..... : 32G, Tower 3, Dachong Business Building (The Third Phase),
Shennan Avenue North, Tong Gu Road West, Yuehai Street
Communities, Nanshan District, Shenzhen, Guangdong, China

Test item description : **Wireless Charger**

Trade Mark : Oclean

Model/Type reference..... : WP01

Listed Model(s) : -

Standard : **47 CFR FCC Part 18**

Date of receipt of test sample..... : Jan. 18, 2021

Date of testing..... : Jan. 19, 2021- Feb. 22, 2021

Date of issue..... : Feb. 23, 2021

Result..... : **Pass**

Compiled by
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Testing Laboratory Name : **Shenzhen Huatongwei International Inspection Co., Ltd.**

Address..... : 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao,
Gongming, Shenzhen, China

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The test report merely corresponds to the test sample.

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1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

[47 CFR FCC Part 18](#) - Industrial, Scientific, and medical medical equipment.

[FCC/OST MP-5](#) -Methods of Measurements of Radio Noise Emissions from Industrial, Scientific and Medical equipment (February 1986)

1.2. Report version information

Revision No.	Date of issue	Description
N/A	2021-02-23	Original

2. TEST DESCRIPTION

Test Item	Section in CFR 47	Result	Test Engineer
Conducted Emissions	PART 18.307(b)	Pass	Jiongsheng Feng
Radiated Emissions	PART 18.305(b)	Pass	Pan Xie

Note: The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Client Information

Applicant:	Shenzhen Yunding Information Technology Co., Ltd.
Address:	32G, Tower 3, Dachong Business Building (The Third Phase), Shennan Avenue North, Tong Gu Road West, Yuehai Street Communities, Nanshan District, Shenzhen, Guangdong, China
Manufacturer:	Shenzhen Yunding Information Technology Co., Ltd.
Address:	32G, Tower 3, Dachong Business Building (The Third Phase), Shennan Avenue North, Tong Gu Road West, Yuehai Street Communities, Nanshan District, Shenzhen, Guangdong, China

3.2. Product Description

Name of EUT:	Wireless Charger
Trade Mark:	Oclean
Model No.:	WP01
Listed Model(s)	-
Power supply:	5V
Adapter information:	-
Category:	Consumer device
Wireless Charger	
Operation Frequency:	110kHz~205kHz
Rating output:	1.5W

3.3. Operation state

Keep the EUT in wireless communication mode.

3.4. EUT configuration

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?					
✓					
Item	Equipement	Trade Name	Model No.	FCC ID	Power cord
1	Adapter	Apple	A1443	-	-
2	Oclean Smart Sonic Electric Toothbrush	Oclean	Y2087	-	-

3.5. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China	
Connect information:	Tel: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn	
Qualifications	Type	Accreditation Number
	FCC	762235

4.2. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

4.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emissions	30~1000MHz	4.28 dB	(1)
Radiated Emissions	1~18GHz	5.16 dB	(1)
Conducted Disturbance	0.15~30MHz	3.35 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.4. Equipments Used during the Test

● Conducted Emission							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Shielded Room	Albatross projects	HTWE0114	N/A	N/A	2018/09/28	2023/09/27
●	EMI Test Receiver	R&S	HTWE0111	ESCI	101247	2020/10/19	2021/10/18
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2020/10/15	2021/10/14
●	Pulse Limiter	R&S	HTWE0033	ESH3-Z2	100499	2020/10/15	2021/10/14
●	RF Connection Cable	HUBER+SUHNER	HTWE0113-02	ENVIROFLE X_142	EF-NM-BNCM-2M	2020/10/15	2021/10/14
●	Test Software	R&S	N/A	ES-K1	N/A	N/A	N/A

● Radiated emission-6th test site							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0127	SAC-3m-02	C11121	2018/09/30	2021/09/29
●	EMI Test Receiver	R&S	HTWE0099	ESCI	100900	2020/10/19	2021/10/18
●	Loop Antenna	R&S	HTWE0170	HFH2-Z2	100020	2018/04/02	2021/04/01
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0123	VULB9163	538	2018/04/04	2021/04/03
●	Pre-Amplifier	SCHWARZBECK	HTWE0295	BBV 9742	N/A	2020/11/13	2021/11/12
●	RF Connection Cable	HUBER+SUHNER	HTWE0062-01	N/A	N/A	2020/05/27	2021/05/26
●	RF Connection Cable	HUBER+SUHNER	HTWE0062-02	SUCOFLEX104	501184/4	2020/05/27	2021/05/26
●	Test Software	R&S	N/A	ES-K1	N/A	N/A	N/A

5. TEST CONDITIONS AND RESULTS

5.1. Conducted Emissions Test

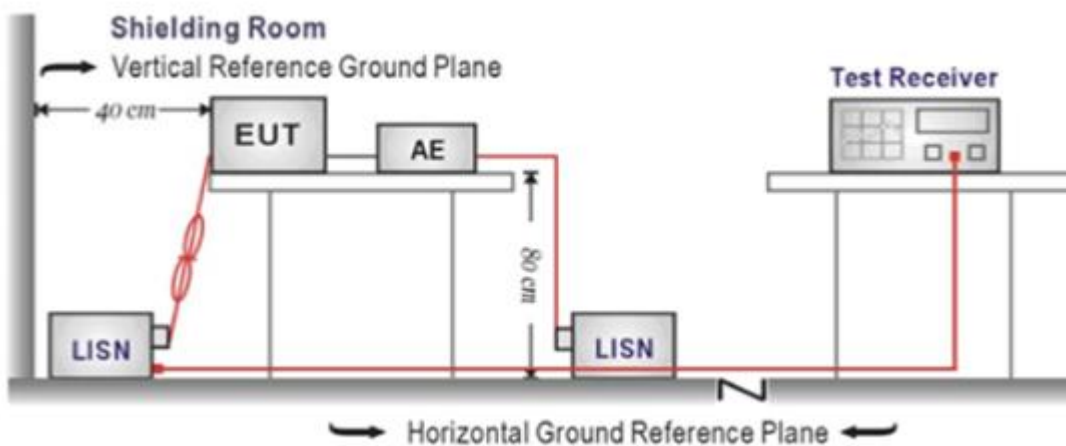
LIMIT

According to §18.307 (b):

Frequency range (MHz)	Limit (dBuV)	
	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 CONFIGURATION



TEST PROCEDURE

1. The EUT was setup according to test configuration
2. The EUT was placed on a plat form of nominal size, 1 m by 1.5 m, raised 10 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 10 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50ohm / 50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST MODE:

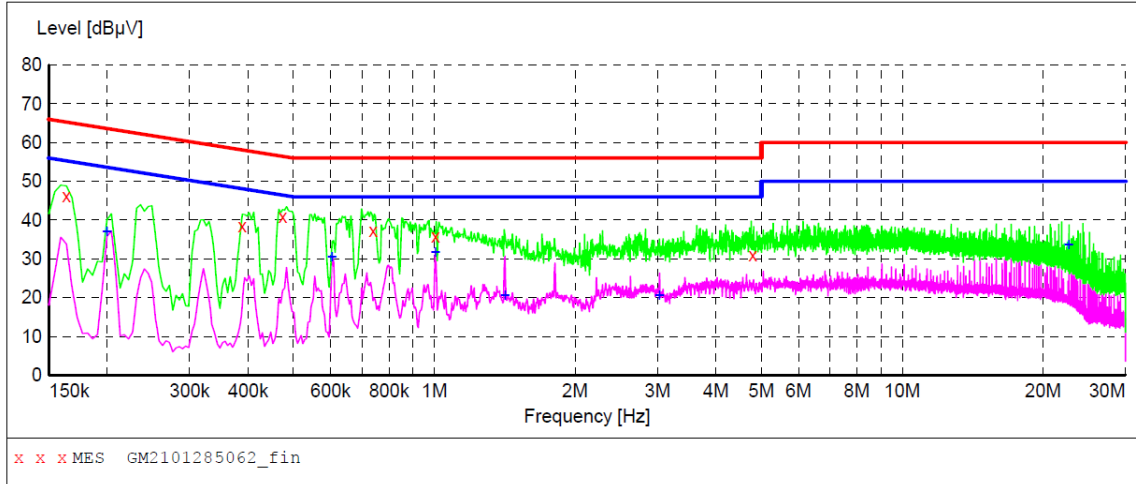
Please refer to the clause 3.3

TEST RESULTS

Passed Not Applicable

Test Line:

L



MEASUREMENT RESULT: "GM2101285062_fin"

1/28/2021 7:02PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.163500	46.10	10.2	65	19.2	QP	L1	GND
0.388500	38.40	10.2	58	19.7	QP	L1	GND
0.474000	40.90	10.2	56	15.5	QP	L1	GND
0.739500	37.30	10.2	56	18.7	QP	L1	GND
1.005000	35.90	10.2	56	20.1	QP	L1	GND
4.794000	31.00	10.2	56	25.0	QP	L1	GND

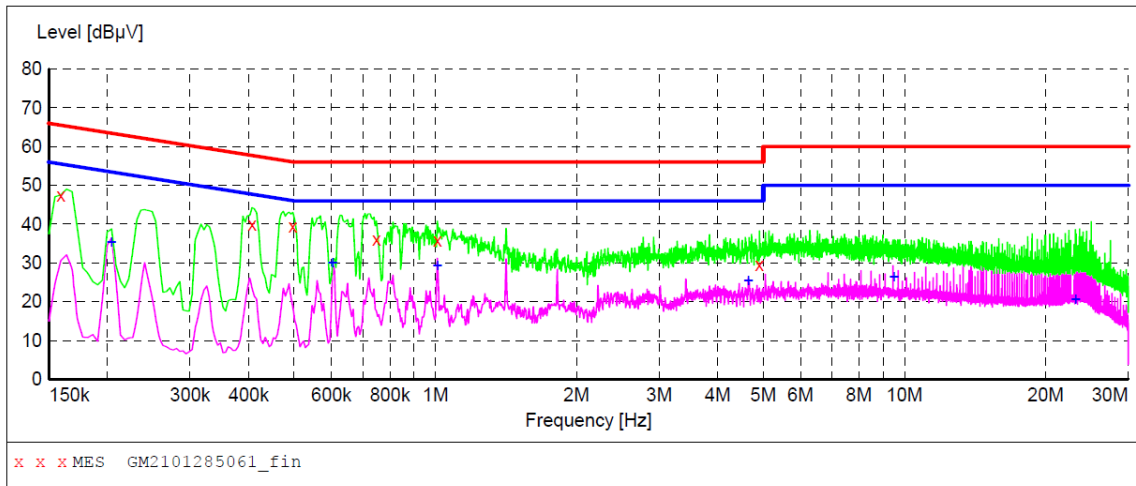
MEASUREMENT RESULT: "GM2101285062_fin2"

1/28/2021 7:02PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.199500	36.90	10.2	54	16.7	AV	L1	GND
0.604500	30.40	10.2	46	15.6	AV	L1	GND
1.005000	31.60	10.2	46	14.4	AV	L1	GND
1.414500	20.50	10.2	46	25.5	AV	L1	GND
3.025500	20.60	10.2	46	25.4	AV	L1	GND
22.708500	33.60	10.5	50	16.4	AV	L1	GND

Test Line:

N



MEASUREMENT RESULT: "GM2101285061_fin"

1/28/2021 6:55PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.159000	47.30	10.2	66	18.2	QP	N	GND
0.406500	40.00	10.2	58	17.7	QP	N	GND
0.496500	39.40	10.2	56	16.7	QP	N	GND
0.748500	36.00	10.2	56	20.0	QP	N	GND
1.009500	35.80	10.2	56	20.2	QP	N	GND
4.902000	29.60	10.2	56	26.4	QP	N	GND

MEASUREMENT RESULT: "GM2101285061_fin2"

1/28/2021 6:55PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.204000	35.40	10.2	53	18.0	AV	N	GND
0.604500	30.00	10.2	46	16.0	AV	N	GND
1.009500	29.30	10.2	46	16.7	AV	N	GND
4.645500	25.50	10.2	46	20.5	AV	N	GND
9.492000	26.40	10.4	50	23.6	AV	N	GND
23.149500	20.70	10.5	50	29.3	AV	N	GND

5.2. Radiated Emissions Test

LIMIT

According to §18.307 (b):

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500	25	300
		500 or more	$25 \times \text{SQRT}(\text{power}/500)$	¹ 300
	Any non-ISM frequency	Below 500	15	300
		500 or more	$15 \times \text{SQRT}(\text{power}/500)$	¹ 300
Industrial heaters and RF stabilized arc welders	On or below 5,725 MHz Above 5,725 MHz	Any Any	10 (²)	1,600 (²)
Medical diathermy	Any ISM frequency Any non-ISM frequency	Any Any	25	300
			15	300
Ultrasonic	Below 490 kHz	Below 500	$2,400/F(\text{kHz})$	300
		500 or more	$2,400/F(\text{kHz}) \times \text{SQRT}(\text{power}/500)$	³ 300
	490 to 1,600 kHz Above 1,600 kHz	Any Any	$24,000/F(\text{kHz})$	30
			15	30
Induction cooking ranges	Below 90 kHz On or above 90 kHz	Any	1,500	⁴ 30
		Any	300	⁴ 30

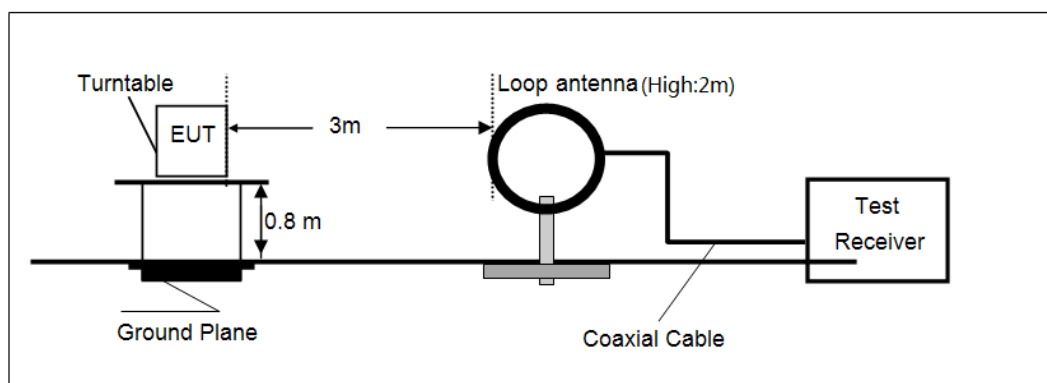
¹Field strength may not exceed 10 $\mu\text{V}/\text{m}$ at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

²Reduced to the greatest extent possible.

³Field strength may not exceed 10 $\mu\text{V}/\text{m}$ at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.

⁴Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT is placed on a turn table which is 0.8 meter above ground.
2. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 2m.
5. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 30MHz
RBW=9kHz, VBW=30kHz Sweep=auto, Detector function=peak, Trace=max hold;

TEST MODE:

Please refer to the clause 3.3

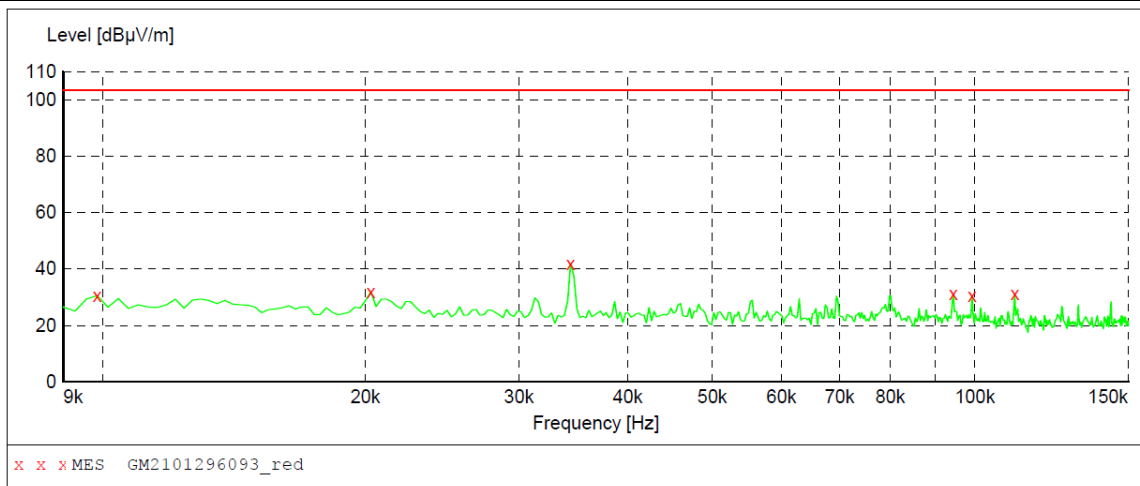
TEST RESULTS

Passed **Not Applicable**

Note:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. This product belong to any non-ISM frequency equipment, the field strength limit is 15uV/m at 300 meter
3. Emission level dBµV/m for 0.009~30MHz = 20log (15) + 40log (300/3) dBµV/m;

9K-150K

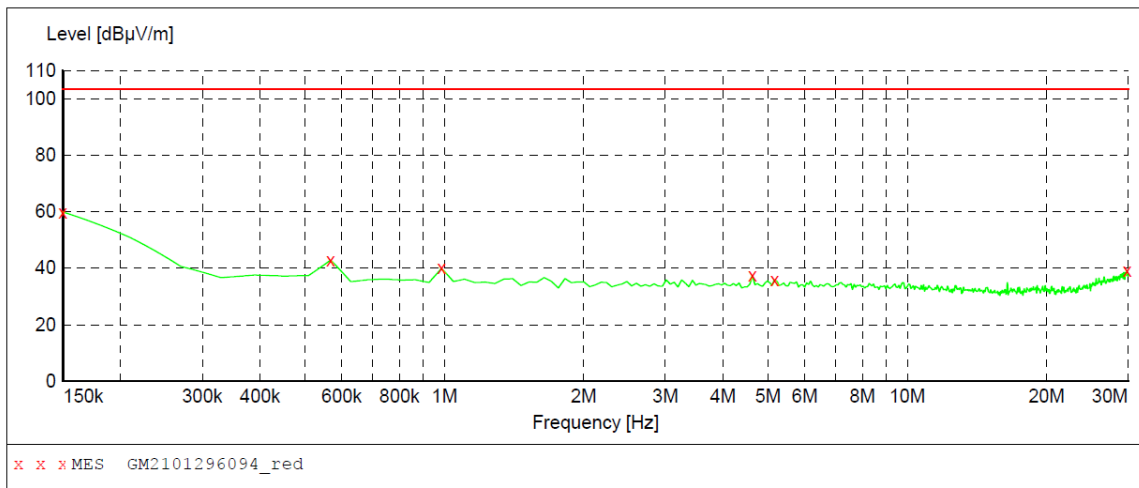


MEASUREMENT RESULT: "GM2101296093_red"

1/29/2021 4:33PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
0.009846	30.60	24.4	103.5	72.9	Peak	0.0	360.00	HORIZONTAL
0.020280	32.00	24.5	103.5	71.5	Peak	0.0	360.00	HORIZONTAL
0.034380	42.00	24.3	103.5	61.5	Peak	0.0	360.00	HORIZONTAL
0.094446	31.10	24.0	103.5	72.4	Peak	0.0	360.00	HORIZONTAL
0.099240	30.60	24.0	103.5	72.9	Peak	0.0	360.00	HORIZONTAL
0.111084	31.10	24.0	103.5	72.4	Peak	0.0	360.00	HORIZONTAL

0.15M-30M



MEASUREMENT RESULT: "GM2101296094_red"

1/29/2021 4:35PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
0.150000	59.90	23.8	103.5	43.6	Peak	0.0	360.00	HORIZONTAL
0.567900	42.90	23.5	103.5	60.6	Peak	0.0	360.00	HORIZONTAL
0.985800	40.00	23.3	103.5	63.5	Peak	0.0	360.00	HORIZONTAL
4.627500	37.40	23.0	103.5	66.1	Peak	0.0	360.00	HORIZONTAL
5.164800	36.00	22.9	103.5	67.5	Peak	0.0	360.00	HORIZONTAL
29.820900	39.10	27.3	103.5	64.4	Peak	0.0	360.00	HORIZONTAL

6. TEST SETUP PHOTOS OF THE EUT

Conducted Emissions (AC Mains)

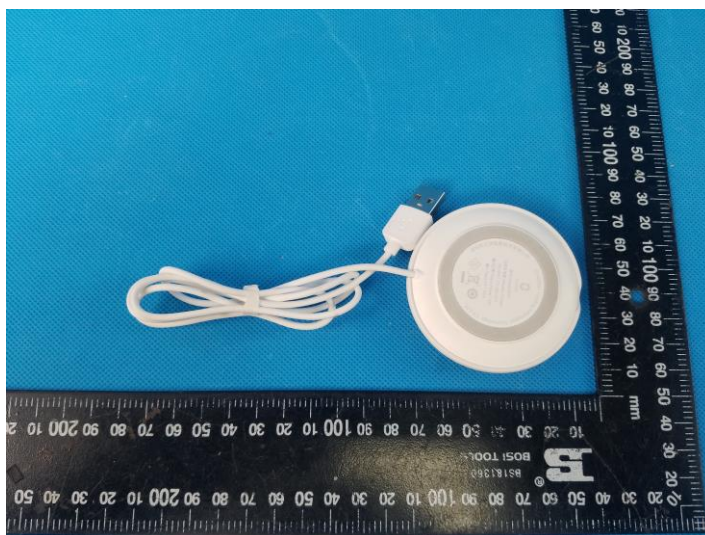


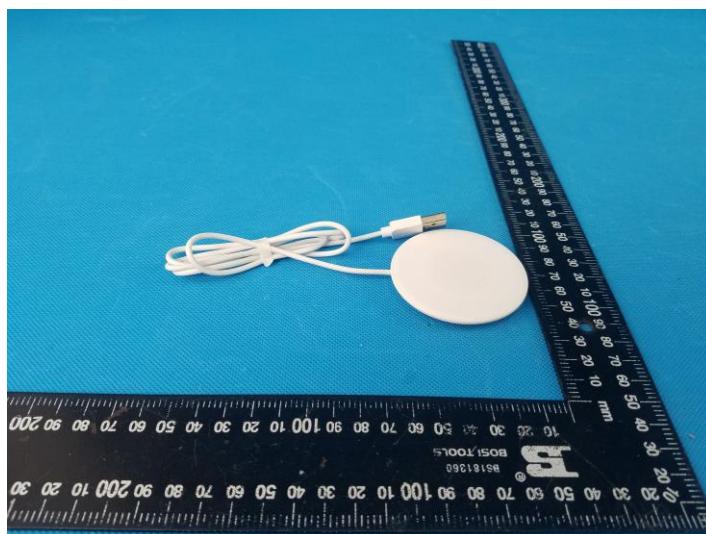
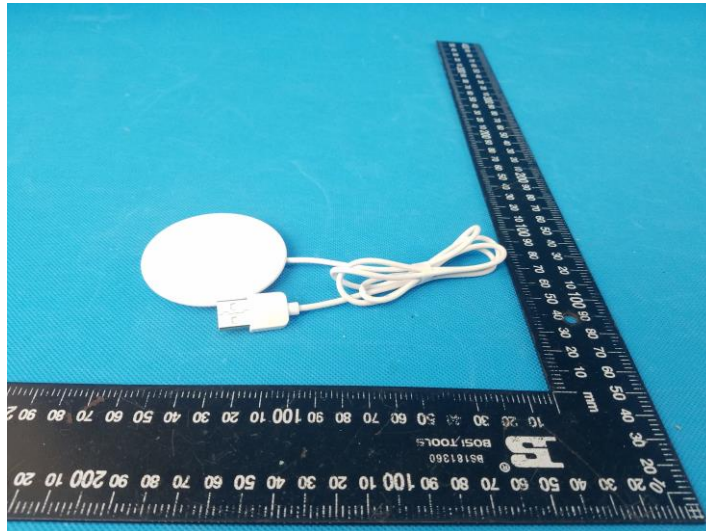
Radiated Emissions (Below 30MHz)

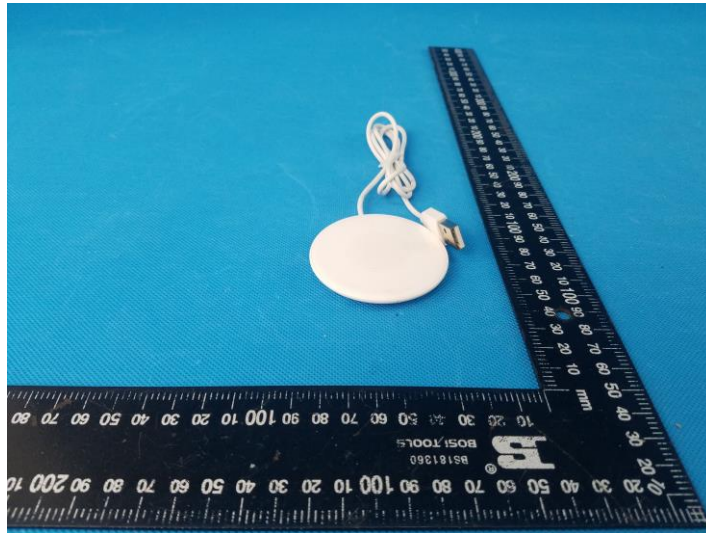


7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

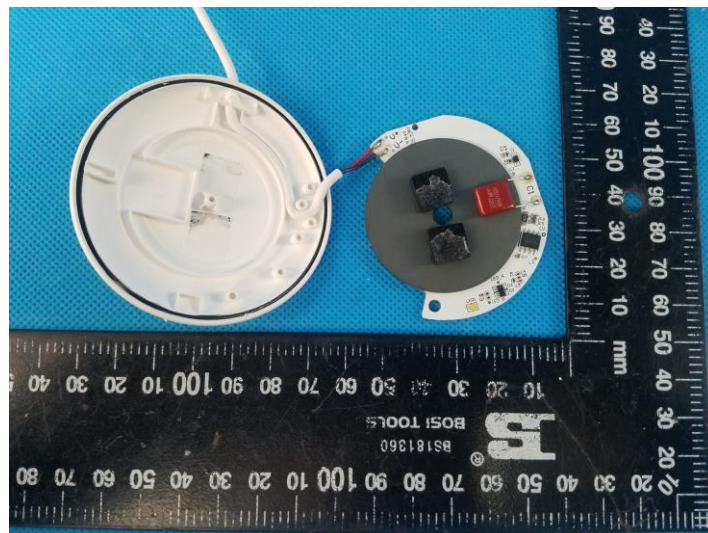
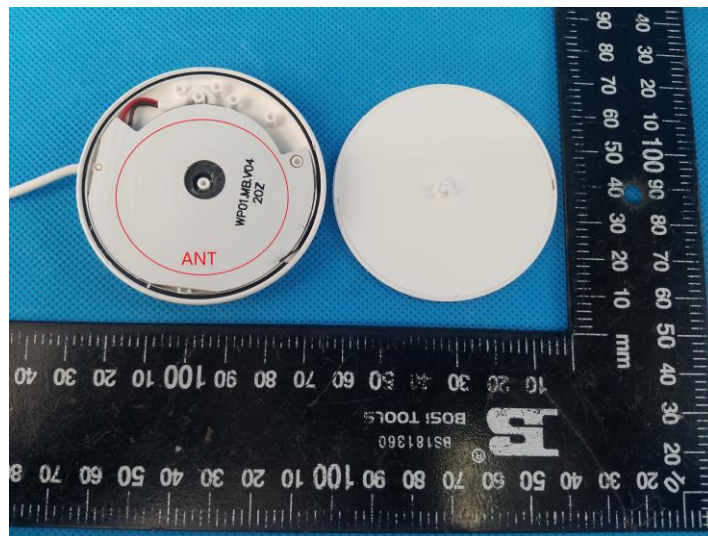
EXTERNAL PHOTO







INTERNAL PHOTO



-----End of Report-----