FCC Test Report

Equipment under Test	:	oral irrigator
Trade Name	:	N/A
Model /Type	:	M01
Listed Models	:	M02,NW01,NW02

Applicant	:	Hunan Bodeyi Medical Instrument Technology Co., Ltd
Address	:	Room 201,Building A27,Jinyu Industrial Center,Maqiaohe Road,Wangcheng Economic and Technological Zone,Changsha City
Manufacturer	:	Hunan Bodeyi Medical Instrument Technology Co., Ltd
Address	:	Room 201,Building A27,Jinyu Industrial Center,Maqiaohe Road,Wangcheng Economic and Technological Zone,Changsha City

Laboratory	:	Shenzhen Yacetong Testing Technology Services Co., Ltd.
Address	:	Room 310, No.12, Tongfu Industrial Zone, Xinhe Community, Fuhai Street, Bao 'an District, Shenzhen, Guangdong, China
Tel	:	+(86)-0755-23728760
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Website	:	http://www.yctlab.com

TEST RESULT CERTIFICATION

Applicant's name	Hunan Bodeyi Medical Instrument Technology Co., Ltd
Address	Room 201,Building A27,Jinyu Industrial Center,Maqiaohe Road,Wangcheng Economic and Technological Zone,Changsha City
Manufacturer's Name	Hunan Bodeyi Medical Instrument Technology Co., Ltd
Address	Room 201,Building A27,Jinyu Industrial Center,Maqiaohe Road,Wangcheng Economic and Technological Zone,Changsha City

Product description

Product name	oral irrigator
Test model:	M01
Standards	FCC Part15B: November 12, 2020 ANSI C63.4:2010

This device described above has been tested by YCT, and the test results show that the equipment under test (EUT) is in compliance with Part 15 of FCC Rules. And it is applicable only to the tested sample identified in the report.

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Date of Test	
Date (s) of performance of tests	Feb.17, 2023~Feb.24, 2023
Date of Issue	Feb.24, 2023
Test Result	**Pass**

Testing Engineer : (Jack Yu)

Technical Manager : (Peter peng)

Authorized Signatory : (Jim he)

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1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
FCC Part15B: November 12, 2020 ANSI C63.4:2010	Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report

(2) For client's request and manual description, the test will not be executed.

1.1 TEST FACILITY

Shenzhen Yacetong Testing Technology Services Co., Ltd.
Room 310, No.12, Tongfu Industrial Zone, Xinhe Community, Fuhai Street,
Bao 'an District, Shenzhen, Guangdong, China

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± 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)

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	oral irrigator
Brand	N/A
Model Name	M01
Additional Model Number(s)	M02,NW01,NW02
Model Difference	The model name is different and everything else is the same
Product Description	The EUT is a oral irrigator oscillator frequency: N/A Connecting I/O port: N/A Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
Power Rating	AC 120V/60Hz

2.2 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

2.3 DESCRIPTION OF TEST SETUP

Mode 1:

E-1
EUT

2.4 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	Brand	Model/Type No.	Series No.	Note
E-1	oral irrigator	N/A	M01	N/A	EUT

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”.

2.5 MEASUREMENT INSTRUMENTS LIST

2.6 CONDUCTED TEST SITE

Radiation Test equipment

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	ESM01-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

Conduction Test equipment

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

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

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.

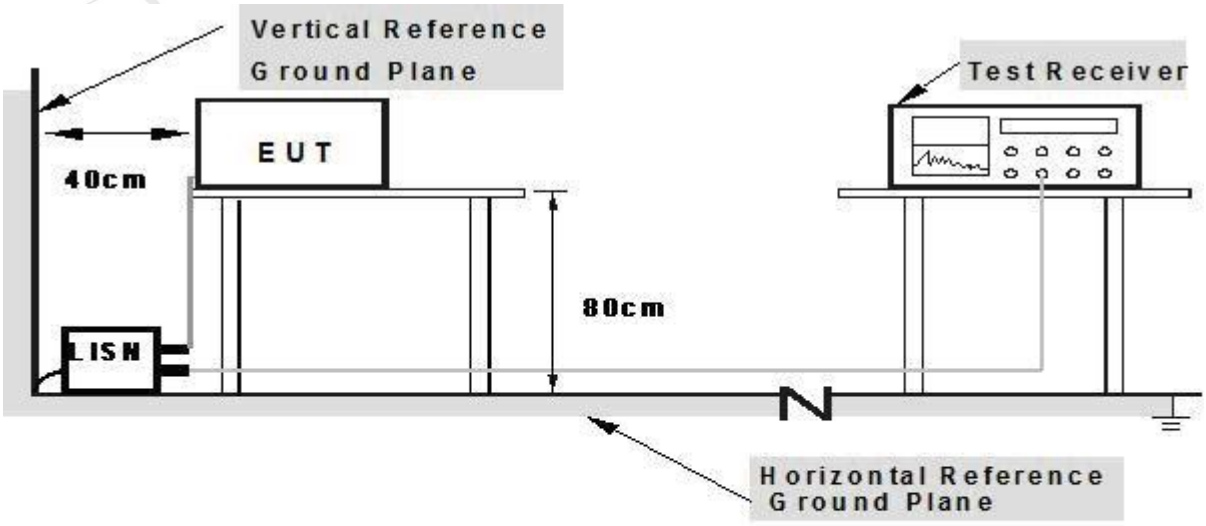
The following table is the setting of the receiver

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

3.1.2 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.

3.1.3 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 from other units and other metal planes

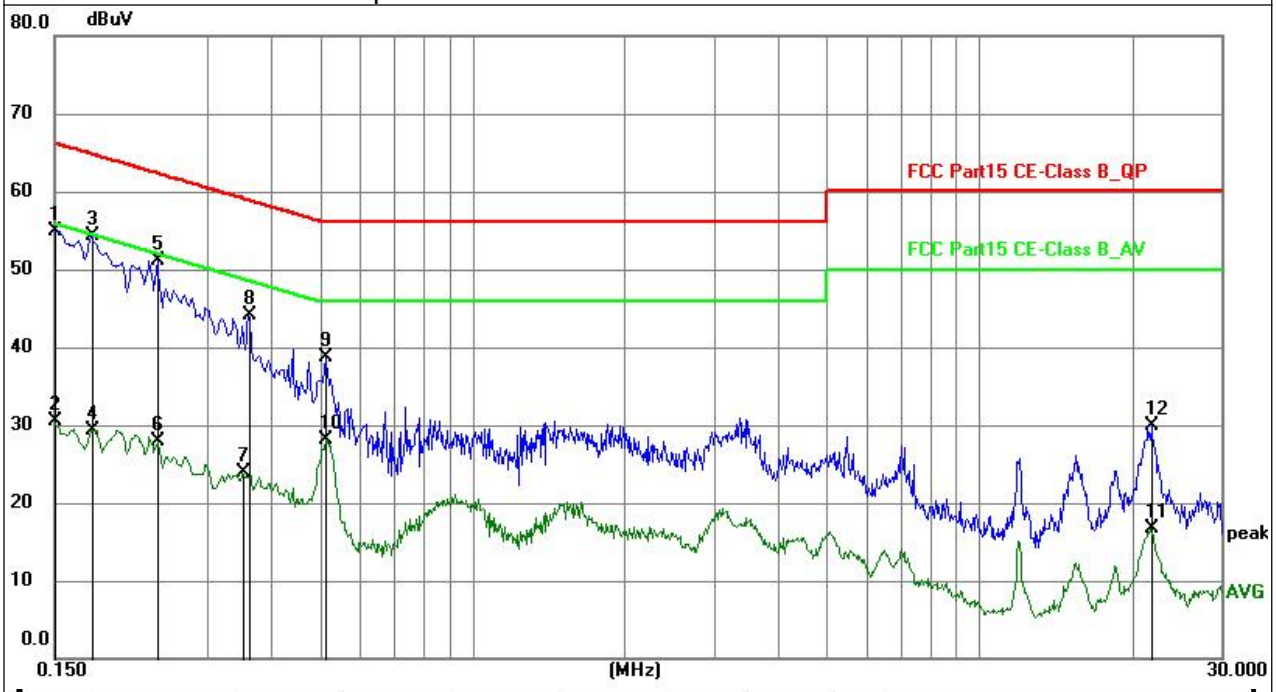
3.1.4 EUT OPERATING CONDITIONS

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.

3.1.5 TEST RESULTS

EUT :	oral irrigator	Model Name. :	M01
Temperature :	26 ℃	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2021-08-02
Test Mode :	Running	Phase :	L
Test Voltage :	AC 120V/60Hz		

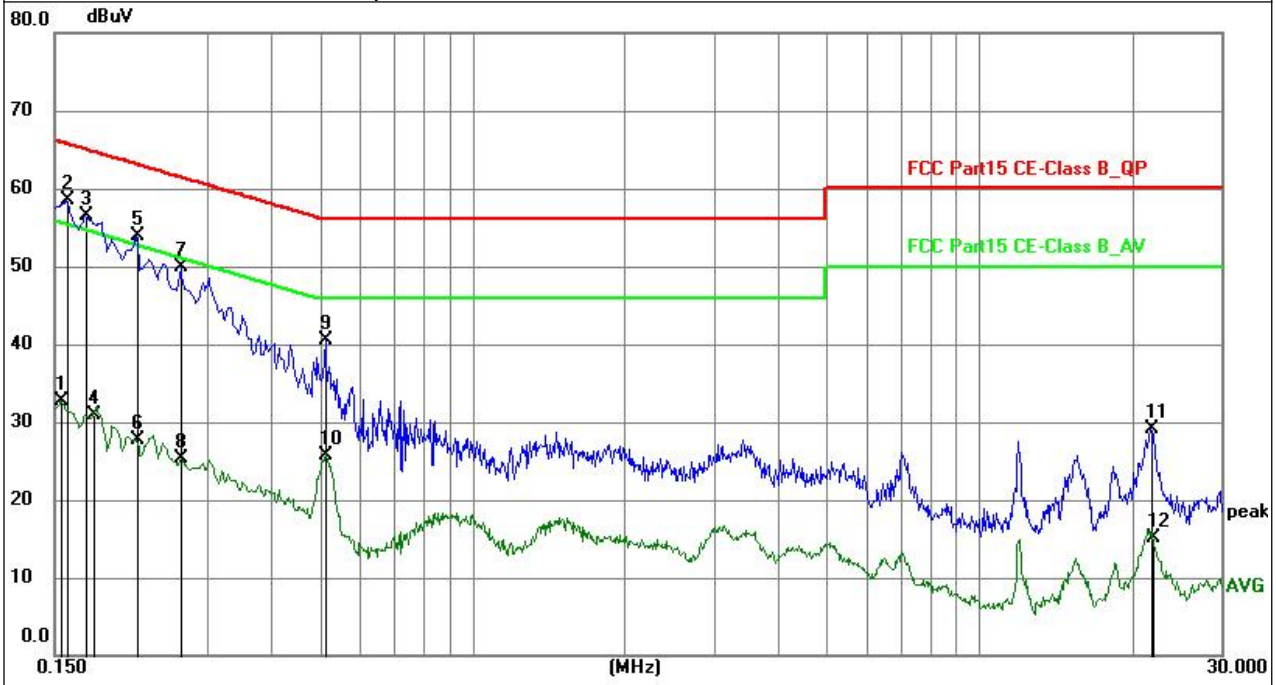
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. N/A means All Data have pass Limit



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1500	41.89	13.01	54.90	66.00	-11.10	QP	P	
2	0.1500	17.49	13.01	30.50	56.00	-25.50	AVG	P	
3	0.1770	41.81	12.42	54.23	64.63	-10.40	QP	P	
4	0.1777	16.80	12.41	29.21	54.59	-25.38	AVG	P	
5	0.2400	39.39	11.73	51.12	62.10	-10.98	QP	P	
6	0.2400	16.20	11.73	27.93	52.10	-24.17	AVG	P	
7	0.3525	12.77	11.22	23.99	48.90	-24.91	AVG	P	
8	0.3615	32.84	11.18	44.02	58.69	-14.67	QP	P	
9	0.5144	28.24	10.54	38.78	56.00	-17.22	QP	P	
10	0.5144	17.63	10.54	28.17	46.00	-17.83	AVG	P	
11	21.7770	6.75	9.88	16.63	50.00	-33.37	AVG	P	
12	21.8985	20.02	9.88	29.90	60.00	-30.10	QP	P	

EUT：	oral irrigator	Model Name. ：	M01
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Test Date：	2021-08-02
Test Mode：	Running	Phase：	N
Test Voltage ：	AC 120V/60Hz		

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. N/A means All Data have pass Limit



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1548	19.72	12.90	32.62	55.74	-23.12	AVG	P	
2	0.1590	45.65	12.81	58.46	65.52	-7.06	QP	P	
3	0.1725	44.01	12.51	56.52	64.84	-8.32	QP	P	
4	0.1787	18.56	12.39	30.95	54.55	-23.60	AVG	P	
5	0.2175	42.09	11.84	53.93	62.91	-8.98	QP	P	
6	0.2175	15.83	11.84	27.67	52.91	-25.24	AVG	P	
7	0.2670	38.27	11.61	49.88	61.21	-11.33	QP	P	
8	0.2670	13.76	11.61	25.37	51.21	-25.84	AVG	P	
9	0.5144	29.94	10.54	40.48	56.00	-15.52	QP	P	
10	0.5155	15.19	10.54	25.73	46.00	-20.27	AVG	P	
11	21.7545	19.24	9.88	29.12	60.00	-30.88	QP	P	
12	22.0020	5.14	9.88	15.02	50.00	-34.98	AVG	P	

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30 ~ 88	39.0	40.0
88 ~ 216	43.5	43.5
216 ~ 960	46.5	46.0
Above 960	49.5	54.0

Notes:

(1) The limit for radiated test was performed according to as following: FCC PART 15B /ICES-003.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.2 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.

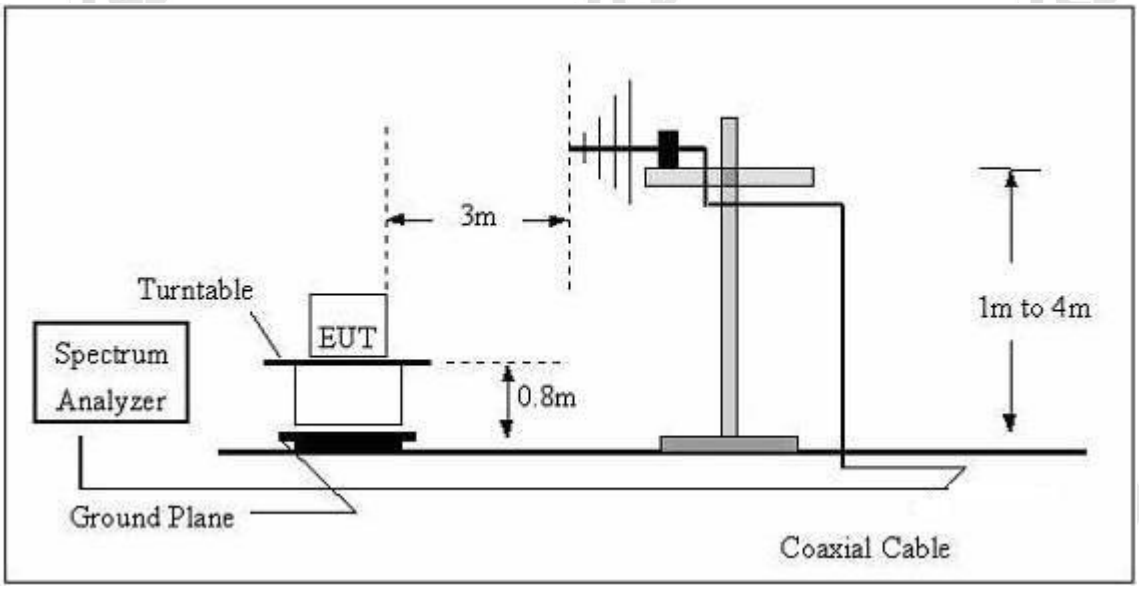
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.

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.

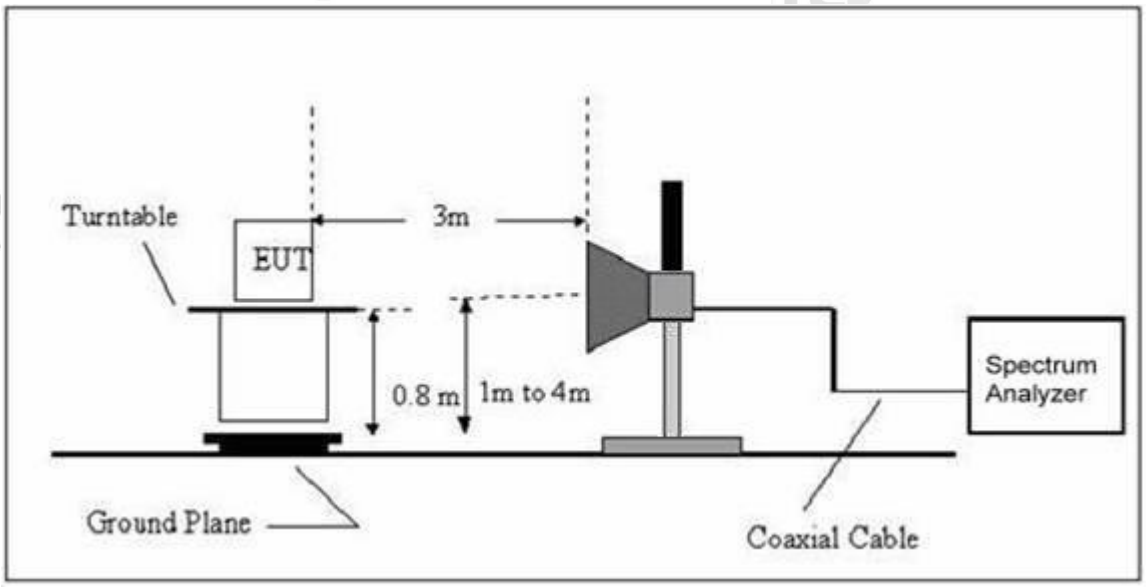
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.3 TEST SETUP

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



(B) Radiated Emission Test Set-Up Frequency Above 1GHz



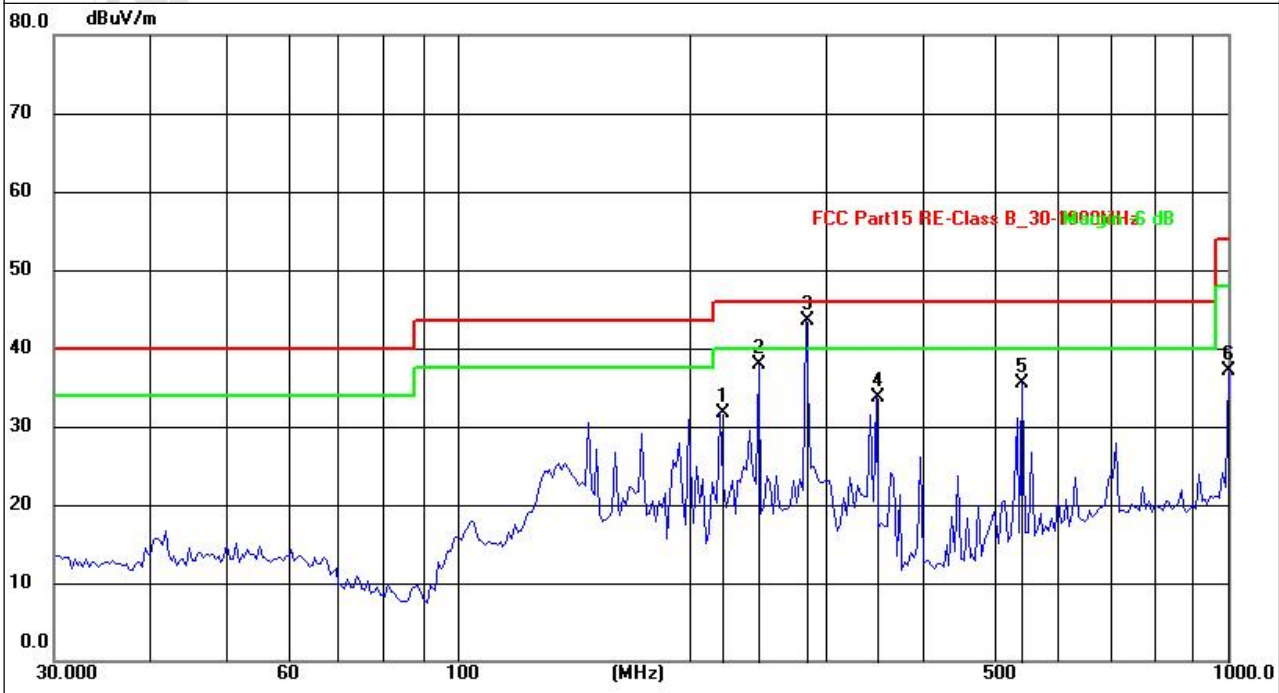
3.2.4 EUT OPERATING CONDITIONS

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.

3.2.5 TEST RESULTS

EUT :	oral irrigator	Model Name :	M01
Temperature :	24 ℃	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-08-02
Test Mode :	Running	Polarization :	Horizontal
Test Power :	AC 120V/60Hz		

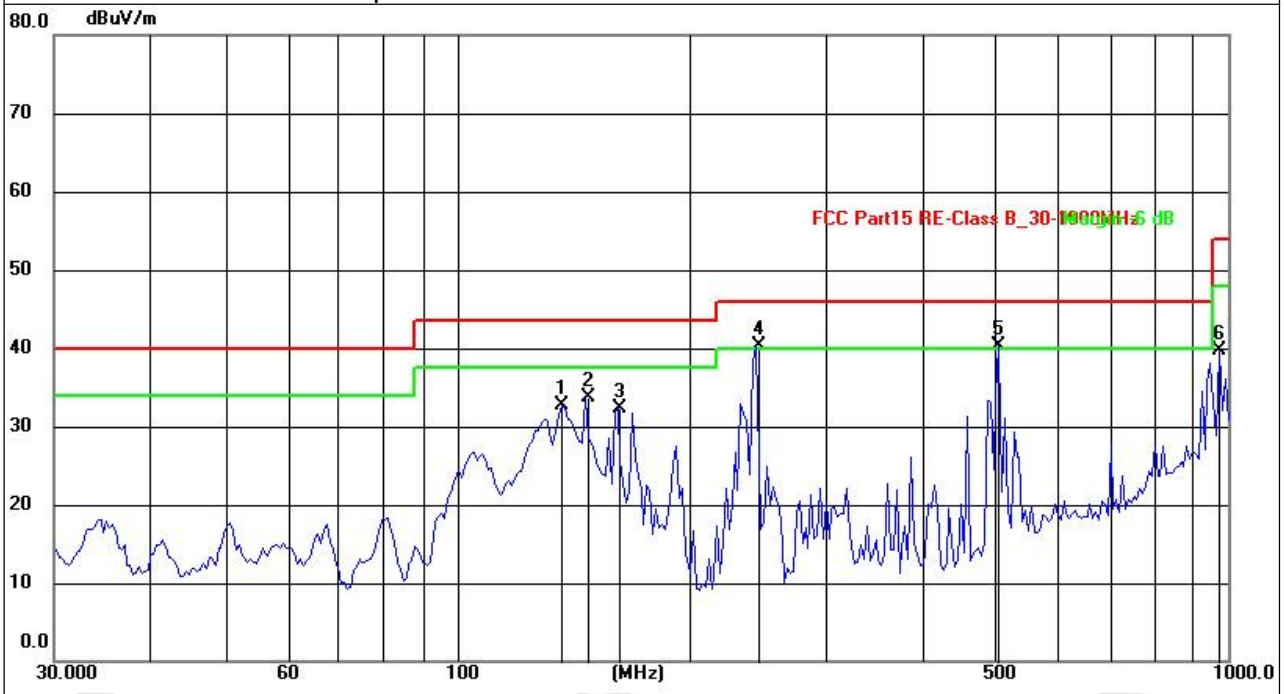
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Antenna Factor + Cable Loss.
3. N/A means All Data have pass Limit



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	219.4598	50.80	-19.01	31.79	46.00	-14.21	QP				
2	245.9509	55.48	-17.51	37.97	46.00	-8.03	QP				
3	282.9852	60.08	-16.56	43.52	46.00	-2.48	QP				
4	349.2500	52.59	-18.79	33.80	46.00	-12.20	QP				
5	541.3725	47.90	-12.46	35.44	46.00	-10.56	QP				
6	1000.0000	43.89	-6.87	37.02	54.00	-16.98	QP				

EUT :	oral irrigator	Model Name :	M01
Temperature :	24 ℃	Relative Humidity :	54%
Pressure :	1010 hPa	Test Date :	2021-08-02
Test Mode :	Running	Polarization :	Vertical
Test Power :	AC 120V/60Hz		

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Antenna Factor + Cable Loss.
3. N/A means All Data have pass Limit



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	136.6993	54.00	-21.38	32.62	43.50	-10.88	QP				
2	146.6304	54.81	-21.15	33.66	43.50	-9.84	QP				
3	161.4742	53.16	-20.78	32.38	43.50	-11.12	QP				
4	243.8043	61.90	-21.59	40.31	46.00	-5.69	QP				
5	504.7062	53.61	-13.40	40.21	46.00	-5.79	QP				
6	974.0436	42.09	-2.35	39.74	54.00	-14.26	QP				

3.2.6 TEST RESULTS(Above 1GHz)

EUT：	oral irrigator	Model Name ：	M01
Temperature：	24 ℃	Relative Humidity：	54%
Pressure：	N/A	Test Date：	N/A
Test Mode ：	N/A	Polarization：	N/A
Test Power ：	N/A		

3.2.7. LABELING REQUIREMENTS

(a) In addition to the requirements in part 2 of this chapter, a device subject to certification, or Supplier's Declaration of Conformity shall be labeled as follows:

(1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under part 73 of this chapter, land mobile operation under part 90 of this chapter, etc., shall bear the following statement in a conspicuous location on the device:
This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

(2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:
This device complies with part 15 of the FCC Rules for use with cable television service.

(3) All other devices shall bear the following statement in a conspicuous location on the device:
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

(5) When the device is so small or for such use that it is impracticable to label it with the statement specified under paragraph (a) of this section in a font that is four-point or larger, and the device does not have a display that can show electronic labeling, then the information required by this paragraph shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.

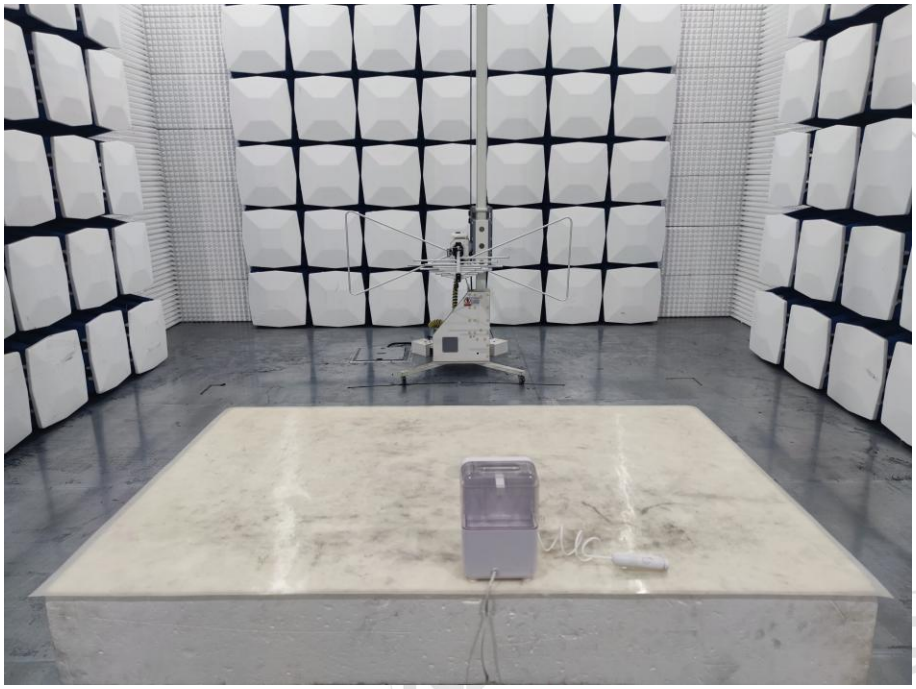
(b)-(c) [Reserved]
(d) Consumer electronics TV receiving devices, including TV receivers, videocassette recorders, and similar devices, that incorporate features intended to be used with cable television service, but do not fully comply with the technical standards for cable ready equipment set forth in §15.118, shall not be marketed with terminology that describes the device as “cable ready” or “cable compatible,” or that otherwise conveys the impression that the device is fully compatible with cable service. Factual statements about the various features of a device that are intended for use with cable service or the quality of such features are acceptable so long as such statements do not imply that the device is fully compatible with cable service. Statements relating to product features are generally acceptable where they are limited to one or more specific features of a device, rather than the device as a whole. This requirement applies to consumer TV receivers, videocassette recorders and similar devices manufactured or imported for sale in this country on or after October 31, 1994.

	**This device complies with part 15 of the FCC Rules for use with cable television service.** **This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.**

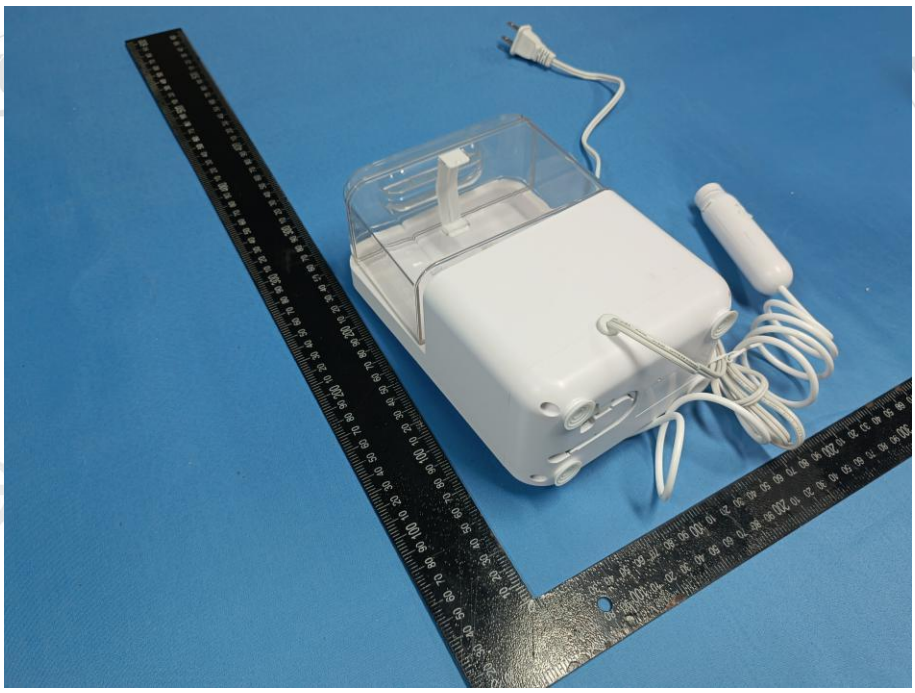
4. EUT TEST PHOTO

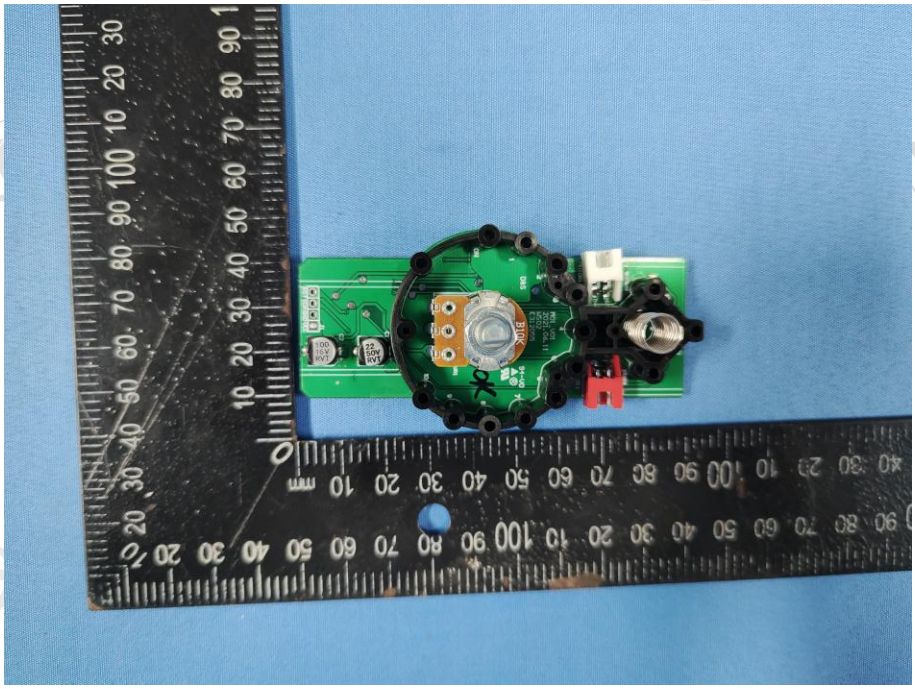
CE TEST SETUP PHOTO

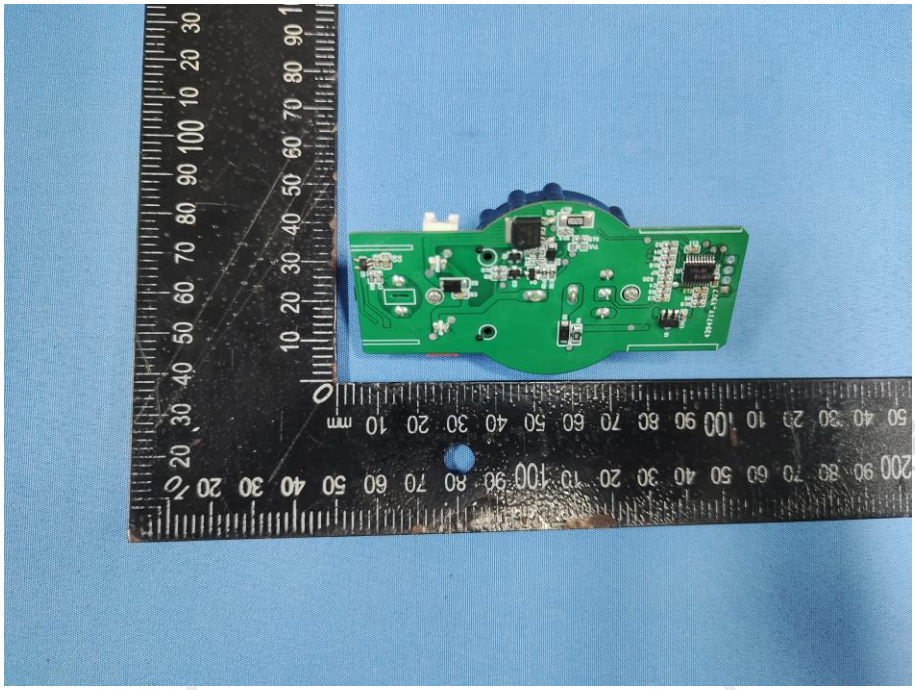
RE TEST SETUP PHOTO



ATTACHMENT PHOTOGRAPHS OF EUT







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