

RF PERFORMANCE TEST REPORT

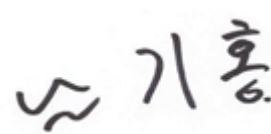
Test Report No. : OT-207-RWD-006
AGR No : A19DA-098
Applicant : IoTEC Co., Ltd.
Address : 802, MARIO tower 28, Digital-ro 30-gil, Guro-gu. Seouk Korea
Manufacturer : IoTEC Co., Ltd.
Address : 802, MARIO tower 28, Digital-ro 30-gil, Guro-gu. Seouk Korea
Type of Equipment : Petmom water
FCC ID. : 2AWWO-PWF-500
Model Name : PWF-500
Multiple Model Name : N/A
Serial number : N/A
Total page of Report : 23 pages (including this page)
Date of Incoming : December 11, 2019
Date of issue : July 09, 2020

SUMMARY

The equipment complies with the regulation; **FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209**
 This test report only contains the result of a single test of the sample supplied for the examination.
 It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by: 

 Ha-Ram Lee / Manager
 ONETECH Corp.

Approved by: 

 Ki-Hong, Nam / General Manager
 ONETECH Corp.

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Revision History

Issue Report No.	Issued Date	Revisions	Effect Section
OT-207-RWD-006	July 09, 2020	Initial Release	All

1. VERIFICATION OF COMPLIANCE

APPLICANT : IoTEC Co., Ltd.
 ADDRESS : 802, MARIO tower 28, Digital-ro 30-gil, Guro-gu. Seouk Korea
 CONTACT PERSON : GO JAE SOO / CEO
 TELEPHONE NO : +82-2-6672-0400
 FCC ID : 2AWWO-PWF-500
 MODEL NAME : PWF-500
 BRAND NAME : N/A
 SERIAL NUMBER : N/A
 DATE : July 09, 2020

EQUIPMENT CLASS	DCD – Part 15 Low Power Transmitter Below 1 705 kHz
KIND OF EQUIPMENT	Petmom water
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC&IC RULES PART(S)	FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	No
FINAL TEST WAS CONDUCTED ON	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. The equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.209, 15.209(a)	Radiated emission, Spurious Emission and Field Strength of Fundamental	Met the Limit / PASS
2.1049	20 dB Bandwidth	Met the Limit / PASS
15.207	Transmitter AC Power Line Conducted Emission	Met the Limit / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209, 2.1049.

2.5 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.10: 2013 at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The ONETECH Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 301-14, Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do, 464-862 Korea.

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-4112/ C-4617/ G-666/ T-1842

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

-. Site Accreditation:

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

3. GENERAL INFORMATION

3.1 Product Description

The IoTEC Co., Ltd., Model: PWF-500 (referred to as the EUT in this report) is a Petmom water. Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Wireless Charger
OPERATING FREQUENCY	111 kHz ~ 205 kHz
RATED RF OUTPUT POWER	80.4 dB μ V/m
ANTENNA TYPE	Coil Antenna
MODULATION	ASK
RATED SUPPLY VOLTAGE	DC 5.0 V

3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

4. EUT MODIFICATIONS

-. None

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	N/A	N/A	N/A
LED Board	N/A	N/A	N/A

5.2 Peripheral equipment

Model	Manufacturer	Description	Connected to
N/A	N/A	DUMMY load	N/A

5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting is programmed.

For final testing, the EUT was set at Max. load (119 kHz), Mid. load (135 kHz), and Min. load (148 kHz) for 5V.

To get a maximum emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis.

Mode	Charging current	Description
Charging Mode With load	1 000 mA	Using Max. load
	500 mA	Using Mid. load
	100 mA	Using Min. load

5.4 Configuration of Test System

Line Conducted Test : The EUT was tested in a charging mode. The EUT was connected to USB and the power of USB was connected to Adapter. All supporting equipment were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4: 2009 7.3.3 to determine the worse operating conditions.

Radiated Emission Test : Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 m Semi Anechoic Chamber.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

According to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Construction:

The antenna of the EUT is a Coil Antenna on the main board in the EUT, so no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Tests, the following operating modes were investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

6.2 General Radiated Emissions Tests

During Preliminary Tests, the following operating modes were investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

7. 20 dB BANDWIDTH

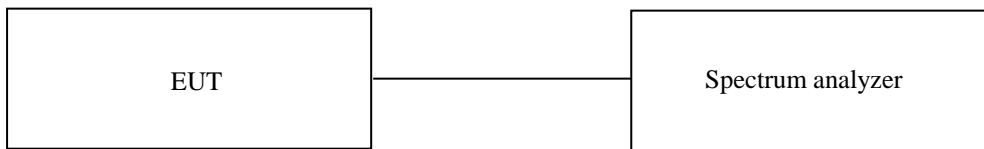
7.1 Operating environment

Temperature : 22 °C
 Relative humidity : 51 % R.H.

7.2 Test set-up

- a. Span = approximately 2 to 3 times the 20 dB bandwidth, RBW = greater than 1 % of the 20 dB bandwidth, VBW = RBW, Sweep = auto, Detector = peak, Trace = max hold.
- b. The marker-to-peak function to set the mark to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level.

The marker-delta reading at this point is 20 dB bandwidth of the emission.

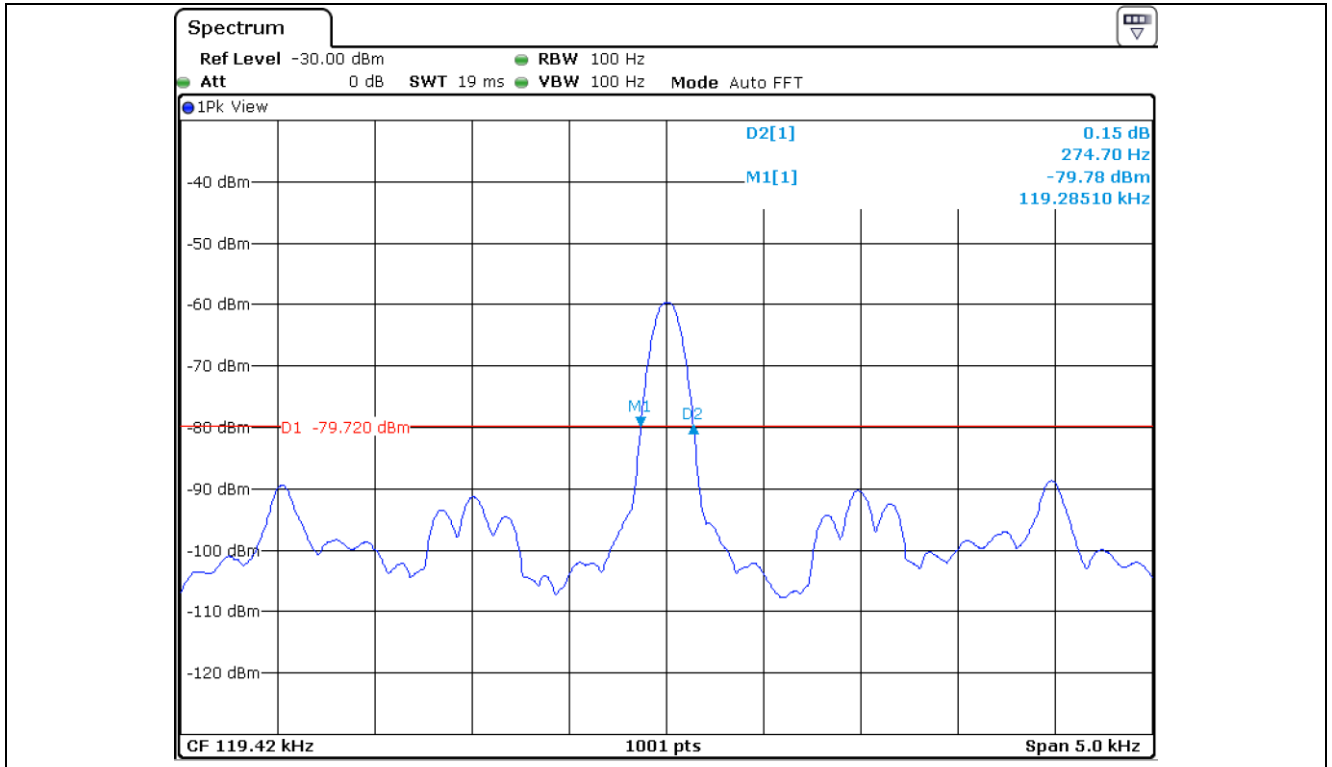


7.3 Test data

Test Date : December 24, 2019

Frequency : 119.42 KHz

20 dB Bandwidth : 274.70 Hz



Tested by: Siwon Lee / Assistant Manager

8. Spurious Emission Test

8.1 Regulation

According to §15.209(a), for an intentional device, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency [MHz]	Field strength [μ V/m]	Field strength [dB μ V/m]	Measurement distance [m]
0.009 ~ 0.490	2 400 / F (kHz)	48.52 ~ 13.80	300
0.490 ~ 1.705	24 000 / F (kHz)	33.8 ~ 22.97	30
1.705 ~ 30	30	29.50	30
30 ~ 88	*100	40.00	3
88 ~ 216	*150	43.52	3
216 ~ 960	*200	46.02	3
Above 960	500	53.98	3

*Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 ~ 72 MHz, 76 ~ 88 MHz, 174 ~ 216 MHz or 470 ~ 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

8.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 kHz to 1 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 ms in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

8.3 Test data for Using Max load (1 000 mA)

8.3.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 51 % R.H.

Temperature: 22 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : Petmom water

Date: December 24, 2019

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.038	AV	H	25.1	19.4	0.0	44.5	-35.5	36.0	71.5
*0.119	AV	H	60.9	19.4	0.1	80.4	0.4	26.1	25.7
0.210	AV	H	29.6	19.4	0.1	49.1	-30.9	21.2	52.1
0.329	AV	H	33.6	19.4	0.1	53.1	-26.9	17.3	44.2

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.568	QP	H	29.6	19.3	0.1	49.0	9.0	32.5	23.5
0.807	QP	H	18.0	19.3	0.1	37.4	-2.6	29.5	32.1

-. Remark: "H" Horizontal, "V" Vertical

-. "*" Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz



Tested by: Seion Lee / Assistant Manager

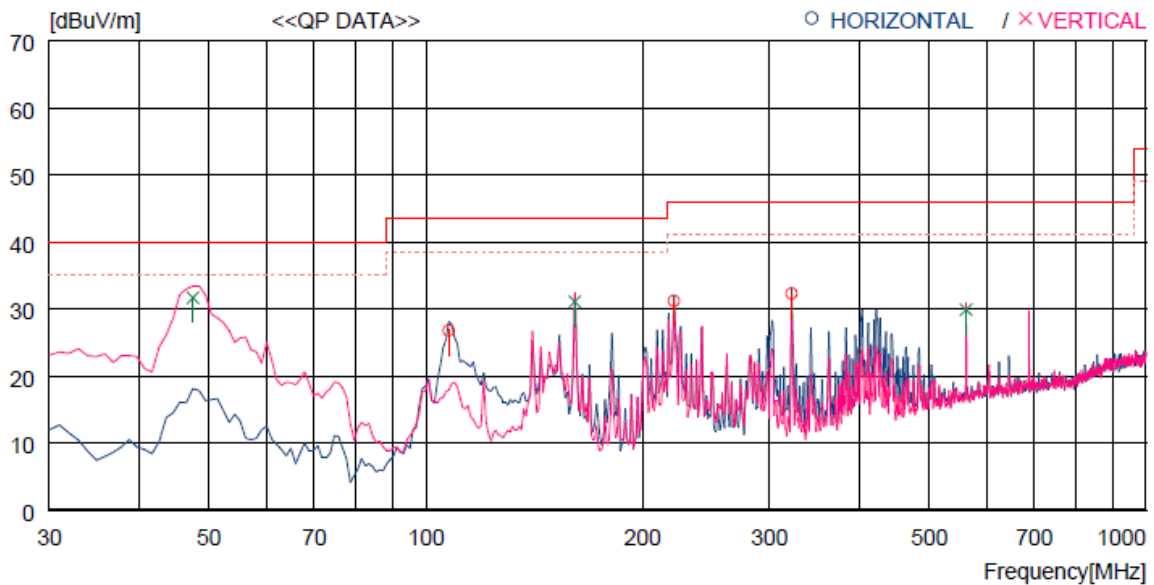
8.3.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 51 % R.H. Temperature: 22 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209
 Frequency range : 30 MHz ~ 1 000 MHz
 Result : PASSED

EUT : Petmom water Date: December 24, 2019

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
---- Horizontal ----										
1	107.600	46.5	12.0	1.0	32.7	26.8	43.5	16.7	300	266
2	221.090	50.8	11.6	1.4	32.6	31.2	46.0	14.8	200	0
3	321.970	49.3	14.0	1.7	32.7	32.3	46.0	13.7	100	127
---- Vertical ----										
4	47.460	49.2	14.6	0.6	32.7	31.7	40.0	8.3	100	0
5	160.950	53.6	8.9	1.2	32.6	31.1	43.5	12.4	100	0
6	562.529	41.0	19.6	2.3	33.0	29.9	46.0	16.1	100	301

Tested by: Sieon Lee / Assistant Manager

8.4 Test data for Using Mid. load (500 mA)

8.4.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 51 % R.H.

Temperature: 22 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : Petmom water

Date: December 24, 2019

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.038	AV	H	26.0	19.4	0.0	45.4	-34.6	36.0	70.6
0.115	AV	H	22.6	19.4	0.1	42.1	-37.9	26.4	64.3
*0.135	AV	H	57.4	19.4	0.1	76.9	-3.1	25.0	28.1
0.389	AV	H	34.7	19.4	0.1	54.2	-25.8	15.8	41.6

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.657	QP	H	29.2	19.3	0.1	48.6	8.6	31.3	22.7
0.926	QP	H	20.5	19.3	0.1	39.9	-0.1	28.3	28.4

-. Remark: "H" Horizontal, "V" Vertical

-. "*" Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz



Tested by: Sieon Lee / Assistant Manager

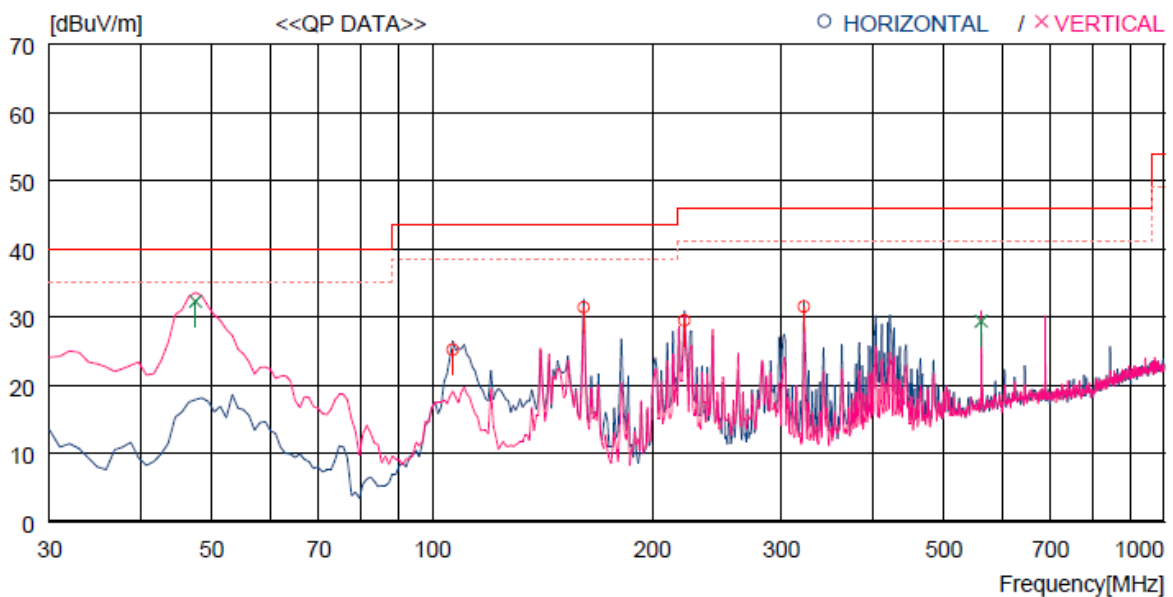
8.4.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 51 % R.H. Temperature: 22 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209
 Frequency range : 30 MHz ~ 1 000 MHz
 Result : PASSED

EUT : Petmom water Date: December 24, 2019

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	106.630	44.8	12.1	1.0	32.7	25.2	43.5	18.3	300	282
2	160.950	53.9	8.9	1.2	32.6	31.4	43.5	12.1	300	101
3	221.090	49.1	11.6	1.4	32.6	29.5	46.0	16.5	200	278
4	321.970	48.5	14.0	1.7	32.7	31.5	46.0	14.5	100	129
----- Vertical -----										
5	47.460	49.8	14.6	0.6	32.7	32.3	40.0	7.7	100	0
6	562.529	40.5	19.6	2.3	33.0	29.4	46.0	16.6	100	62

Tested by: Sieon Lee / Assistant Manager

8.5 Test data for Using Min. load (100 mA)

8.5.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 51 % R.H. Temperature: 22 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : Petmom water

Date: December 24, 2019

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBµV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBµV/m)	Emission Level at 300m (dBµV/m)	Limit at 300m (dBµV/m)	Margin (dB)
0.038	AV	H	26.0	19.4	0.0	45.4	-34.6	36.0	70.6
0.115	AV	H	23.0	19.4	0.1	42.5	-37.5	26.4	63.9
*0.148	AV	H	56.3	19.4	0.1	75.8	-4.2	24.2	28.4
0.419	AV	H	34.2	19.4	0.1	53.7	-26.3	15.2	41.5

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBµV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBµV/m)	Emission Level at 30m (dBµV/m)	Limit at 30m (dBµV/m)	Margin (dB)
0.717	QP	H	27.1	19.3	0.1	46.5	6.5	30.5	24.0
1.016	QP	H	19.3	19.3	0.1	38.7	-1.3	27.5	28.8

-. Remark: "H" Horizontal, "V" Vertical

-. "*" Means Fundamental frequency

-. Emission Level at 3m [dB µ V/m] = Reading [dBµV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBµV/m] – Limit at 300m [dBµV/m]

= Emission Level at 300m [dBµV/m] – Limit at 30m [dBµV/m]

-. Emission Level at 300m [dBµV/m] = Emission Level at 3m [dBµV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBµV/m] = Emission Level at 3m [dBµV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz



Tested by: Sieon Lee / Assistant Manager

8.5.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 51 % R.H. Temperature: 22 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

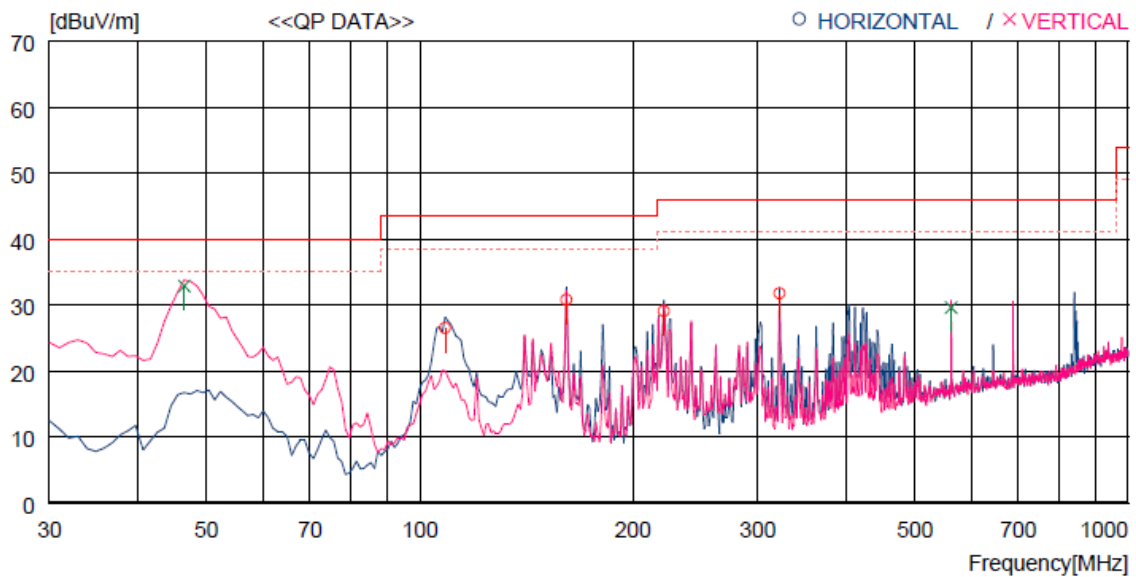
Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : Petmom water

Date: December 24, 2019

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	108.570	46.2	12.0	1.0	32.7	26.5	43.5	17.0	300	81
2	160.950	53.3	8.9	1.2	32.6	30.8	43.5	12.7	200	111
3	221.090	48.7	11.6	1.4	32.6	29.1	46.0	16.9	200	291
4	321.970	48.8	14.0	1.7	32.7	31.8	46.0	14.2	100	129
----- Vertical -----										
5	46.490	50.3	14.7	0.6	32.7	32.9	40.0	7.1	100	71
6	562.529	40.7	19.6	2.3	33.0	29.6	46.0	16.4	100	20

Tested by: Sieon Lee / Assistant Manager

9. CONDUCTED EMISSION TEST

9.1 Operating environment

Temperature : 22 °C
Relative humidity : 51 % R.H

9.2 Test set-up

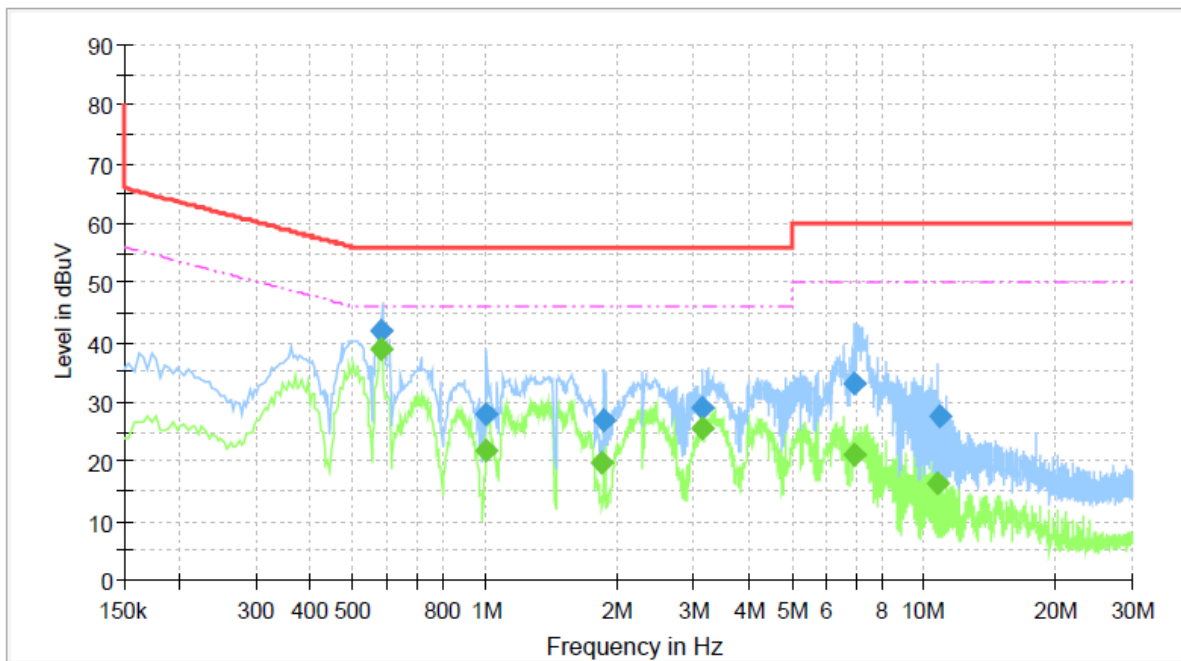
The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μ H + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

9.3 Test equipment used

All test equipment used is calibrated on a regular basis.

9.4 Test data

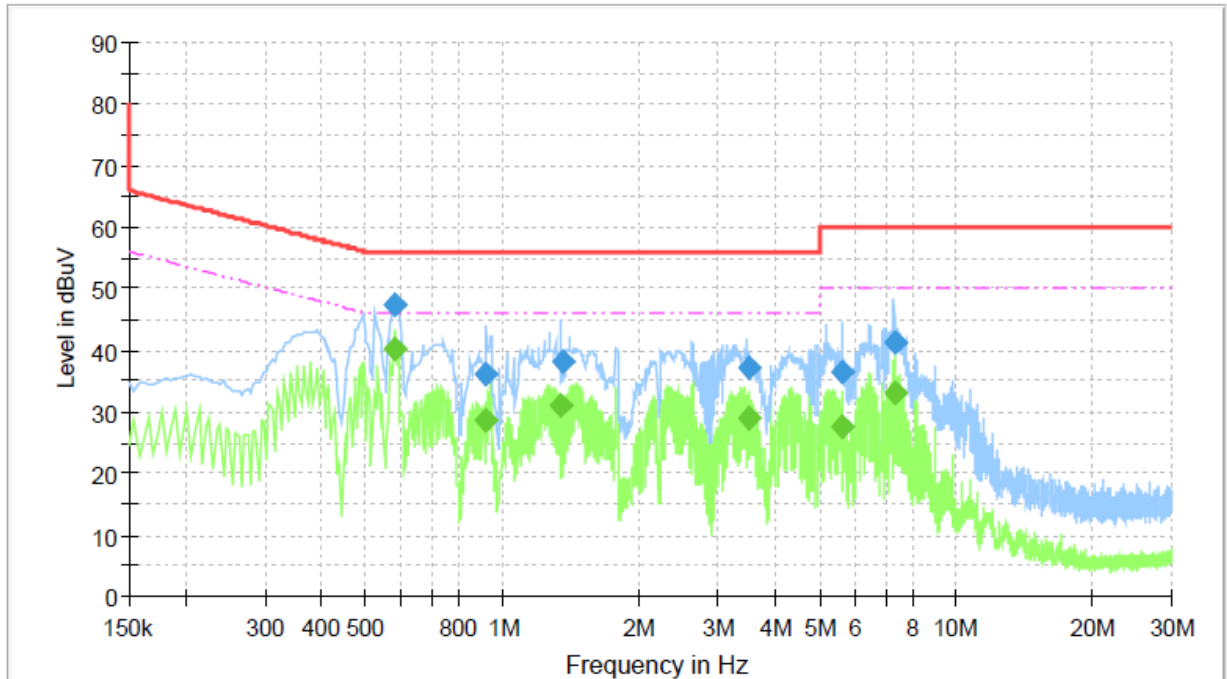
- Test Date : December 24, 2019
- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : HOT LINE



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.578	---	38.75	46.00	7.25	3000.0	9.0	L1	9.94
0.578	41.82	---	56.00	14.18	3000.0	9.0	L1	9.94
1.001	28.12	---	56.00	27.88	3000.0	9.0	L1	9.99
1.009	---	21.94	46.00	24.06	3000.0	9.0	L1	9.99
1.853	---	19.81	46.00	26.19	3000.0	9.0	L1	10.01
1.867	27.01	---	56.00	28.99	3000.0	9.0	L1	10.01
3.134	28.87	---	56.00	27.13	3000.0	9.0	L1	10.04
3.142	---	25.46	46.00	20.54	3000.0	9.0	L1	10.04
6.951	---	21.20	50.00	28.80	3000.0	9.0	L1	10.17
6.975	33.03	---	60.00	26.97	3000.0	9.0	L1	10.17
10.760	---	16.43	50.00	33.57	3000.0	9.0	L1	10.35
10.860	27.45	---	60.00	32.55	3000.0	9.0	L1	10.35

-. Tested Line : NEUTRAL LINE



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.578	47.28	---	56.00	8.72	3000.0	9.0	N	9.95
0.582	---	40.27	46.00	5.73	3000.0	9.0	N	9.95
0.921	---	28.60	46.00	17.40	3000.0	9.0	N	9.98
0.921	36.14	---	56.00	19.86	3000.0	9.0	N	9.98
1.343	---	30.86	46.00	15.14	3000.0	9.0	N	10.01
1.353	38.29	---	56.00	17.71	3000.0	9.0	N	10.01
3.481	37.05	---	56.00	18.95	3000.0	9.0	N	10.07
3.495	---	28.89	46.00	17.11	3000.0	9.0	N	10.07
5.614	---	27.47	50.00	22.53	3000.0	9.0	N	10.14
5.630	36.57	---	60.00	23.43	3000.0	9.0	N	10.14
7.345	41.26	---	60.00	18.74	3000.0	9.0	N	10.23
7.353	---	32.93	50.00	17.07	3000.0	9.0	N	10.23

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Sion Lee / Assistant Manager

10. LIST OF TEST EQUIPMENT

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1	Spectrum analyzer	R/S	FSV30	101199	Mar. 11, 2019	One Year	■
2	Test receiver	R/S	ESCI	101420	Mar. 28, 2019	One Year	■
3	Test receiver	R/S	ESR7	102190	Oct. 16, 2019	One Year	■
4	Amplifier	Sonoma Instrument	310N	392756	Oct. 16, 2019	One Year	■
5	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-225	Nov. 12, 2019	Two Year	■
6	Controller	Innco Systems GmbH	CO3000	1026/40960617/P	N/A	N/A	■
7	Turn Table	Innco Systems GmbH	DT2000-2t	930611	N/A	N/A	■
8	PULSE LIMITER	R/S	ESH3Z2	357.8810.52	Mar. 19, 2020	N/A	■
9	LISN	Schwarzbeck	NSLK8126	8126404	Mar. 19, 2020	One Year	■
10	Antenna Master	Innco Systems GmbH	MA-4640- XPET	MA4640/652/43100318/P	N/A	N/A	■
11	Loop Antenna	Schwarzbeck	FMZB 1513	1513-235	May. 13, 2018	Two Years	■
12	Environmental Test Chamber	ESPEC	PSL-2KP	14009407	Feb. 22, 2019	One Year	■
13	DC Power Supply	Protek	PWS-3003D	4020409	Jul. 24, 2019	One Year	■