



FCC CERTIFICATION TEST REPORT

Applicant	:	Scosche Industries Inc.
Address of Applicant	:	1550 Pacific Ave, Oxnard, CA 93033
Manufacturer	:	Scosche Industries Inc.
Address of Manufacturer	:	1550 Pacific Ave, Oxnard, CA 93033
Equipment under Test	:	Wireless Charging Pad
Model No.	:	MSQP
FCC ID	:	IKQMSQP-1
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart C, ANSI C63.10:2013
Report No.	:	DDT-RE24041909-2E03
Issue Date	:	2024/07/23
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

Table of Contents

1.	Summary of Test Results	5
2.	General Test Information	6
2.1.	Description of EUT	6
2.2.	Accessories of EUT	6
2.3.	Block diagram of EUT configuration for test.....	6
2.4.	Decision of final test mode	6
2.5.	Deviations of test standard	6
2.6.	Test environment conditions.....	7
2.7.	Test laboratory	7
2.8.	Measurement uncertainty	8
3.	Radiated Emission.....	11
3.1.	Test equipment	11
3.2.	Block diagram of test setup	12
3.3.	Limits.....	12
3.4.	Assistant equipment used for test	13
3.5.	Test procedure	13
3.6.	Test result	14
3.7.	Test data	15
4.	Power Line Conducted Emissions.....	23
4.1.	Test equipment	23
4.2.	Block diagram of test setup	23
4.3.	Limits.....	23
4.4.	Assistant equipment used for test	23
4.5.	Test procedure	24
4.6.	Test result	24
4.7.	Test data	25
5.	Test Setup Photograph.....	27
6.	Photos of the EUT	29

Test Report Declare

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Equipment under Test	:	Wireless Charging Pad
Model No.	:	MSQP
Manufacturer	:	Scosche Industries Inc.
Address of Manufacturer	:	1550 Pacific Ave, Oxnard, CA 93033

Test Standard Used:
FCC Rules and Regulations Part 15 Subpart C,
ANSI C63.10:2013

We Declare:
The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE24041909-2E03		
Date of Receipt:	2024/05/14	Date of Test:	2024/05/14~2024/07/23

Prepared By:

Tiger Mo

Tiger Mo/Engineer

Approved By:

Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2024/07/23	

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	20 dB Bandwidth	FCC Part 15: 15.215	/	Pass
2	Radiated Emission	FCC Part 15: 15.205, FCC Part 15: 15.209	/	Pass
3	Antenna Requirement	FCC Part 15: 15.203	/	Pass
4	Power Line Conducted Emissions	FCC Part 15: 15.207(a)	/	Pass
Note: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.				

2. General Test Information

2.1. Description of EUT

EUT Name	: Wireless Charging Pad
Model Number	: MSQP
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC powered by an external adapter
Wireless charging Operation frequency	: 110.5 kHz - 205 kHz
Antenna Type	: Inductive loop coil antenna

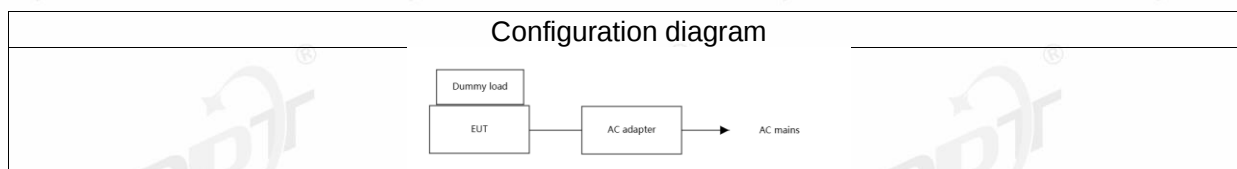
Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

“☒” means to be chosen or applicable; “☐” means don't to be chosen or not applicable; This note applies to entire report.

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

2.3. Block diagram of EUT configuration for test



2.4. Decision of final test mode

According pre-test, the worst test modes were reported as below:

According pre-test, the worst test modes were reported as below:

For mode 1: Tx mode (5W load, 7.5W load, 10W load, 15W load)

For mode 2: Standby mode

Note: Scan with mode 1 and mode 2, the worst case is mode 1 Tx mode (15W load) and recorded in this report

2.5. Deviations of test standard

No deviation.

2.6. Test environment conditions

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

Temperature range:	+15°C to +35 °C
Humidity range:	20% to 75%
Pressure range:	86 kPa to 106 kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.7. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$);
	1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$);
	1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$);
	1.40 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
	1.66 dB ($8 \text{ GHz} \leq f < 26.5 \text{ GHz}$)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 °C
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz)
	4.40 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.34dB (150KHz-30MHz)
	3.72dB (9KHz-150KHz)

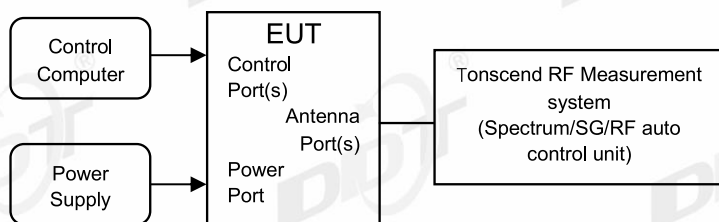
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. 20 dB Bandwidth

3.1. Test equipment

☑RF Connected Test (RF Measurement System 4#)				
Signal &Spectrum Analyzer	R&S	FSV3044	101173	2025/03/31
Wideband Radio Communication Tester	R&S	CMW500	168801	2025/03/31
MXG Vector Signal Generator	Agilent	N5182A	MY48180737	2025/03/31
PSG Vector Signal Generator	Agilent	E8267D	US49060192	2024/09/05
RF Control Unit	Tonsend	JS0806-2	21I8060485	2025/03/31
TEMP&HUMI Programmable Chamber	ZHIXIANG	ZXGDJS-150L	ZX170110-A	2025/04/22
Test Software	Tonscend	JS1120-3	Ver.3.2.22	N/A

3.2. Block diagram of test setup



3.3. Limits

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

3.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
AC Adapter	HUAWEI	HW-100400U01	Input: 100-240V~ 50/60Hz, Output: 5V/2A or 9V/2A or 10V/4A	N/A
Dummy load	N/A	N/A	N/A	N/A

3.5. Test procedure

(1) Connect EUT to spectrum analyzer and use the following settings:

Centre Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	1% to 5% of the occupied bandwidth
VBW	Approximately 3xRBW
Trace	Max hold

Sweep	Auto
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(2) The 20 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20 dB.

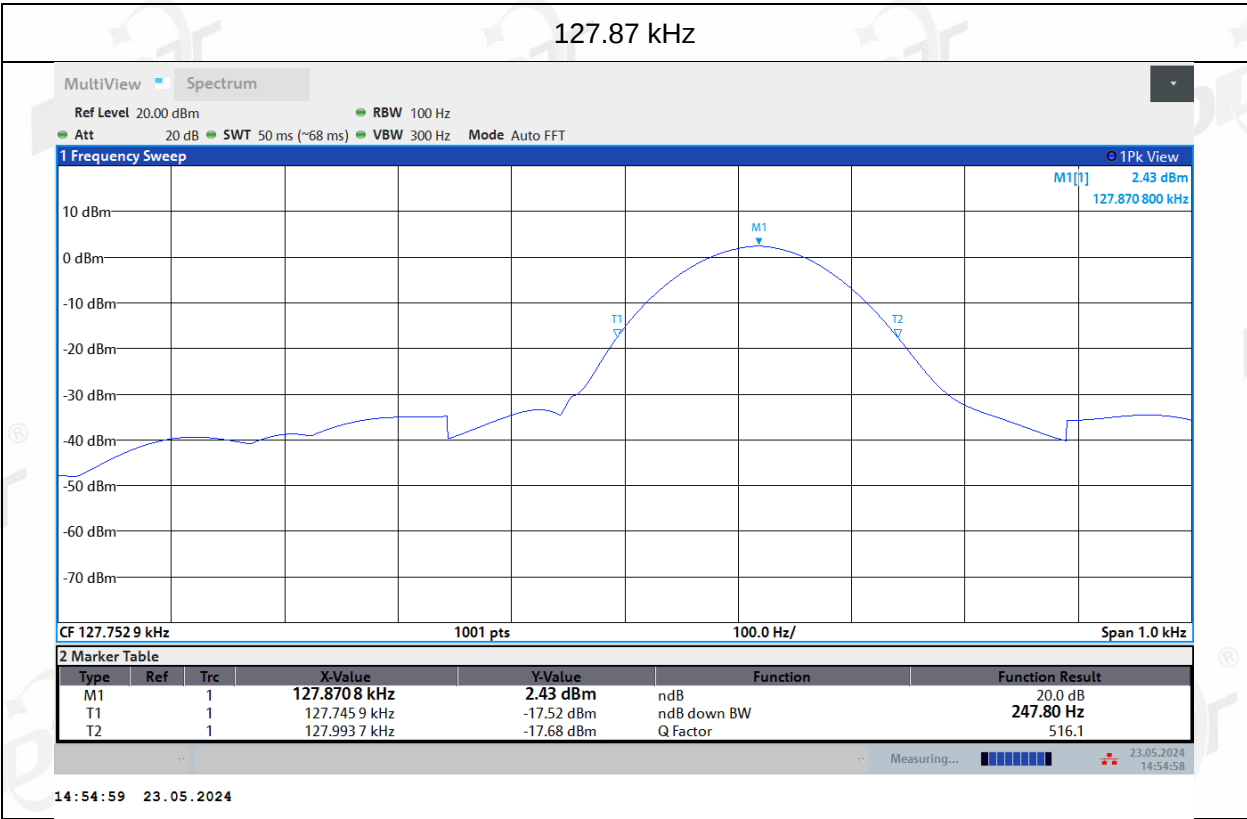
3.6. Test result

Test Site: RF Measurement System 4#	Test Date: 2024/05/23
Condition: 23.4°C,53.0%	Test Engineer: haofeng chen
Memo: /	

EUT Name: Wireless Charging Pad	EUT Model: MSQP
Sample No.: S24041909-009	Test Mode: Charging
Power supply: DC powered by an external adapter	Memo:/ /

Frequency (kHz)	20 dB Bandwidth Result (Hz)
127.87	247.8

3.7. Test data

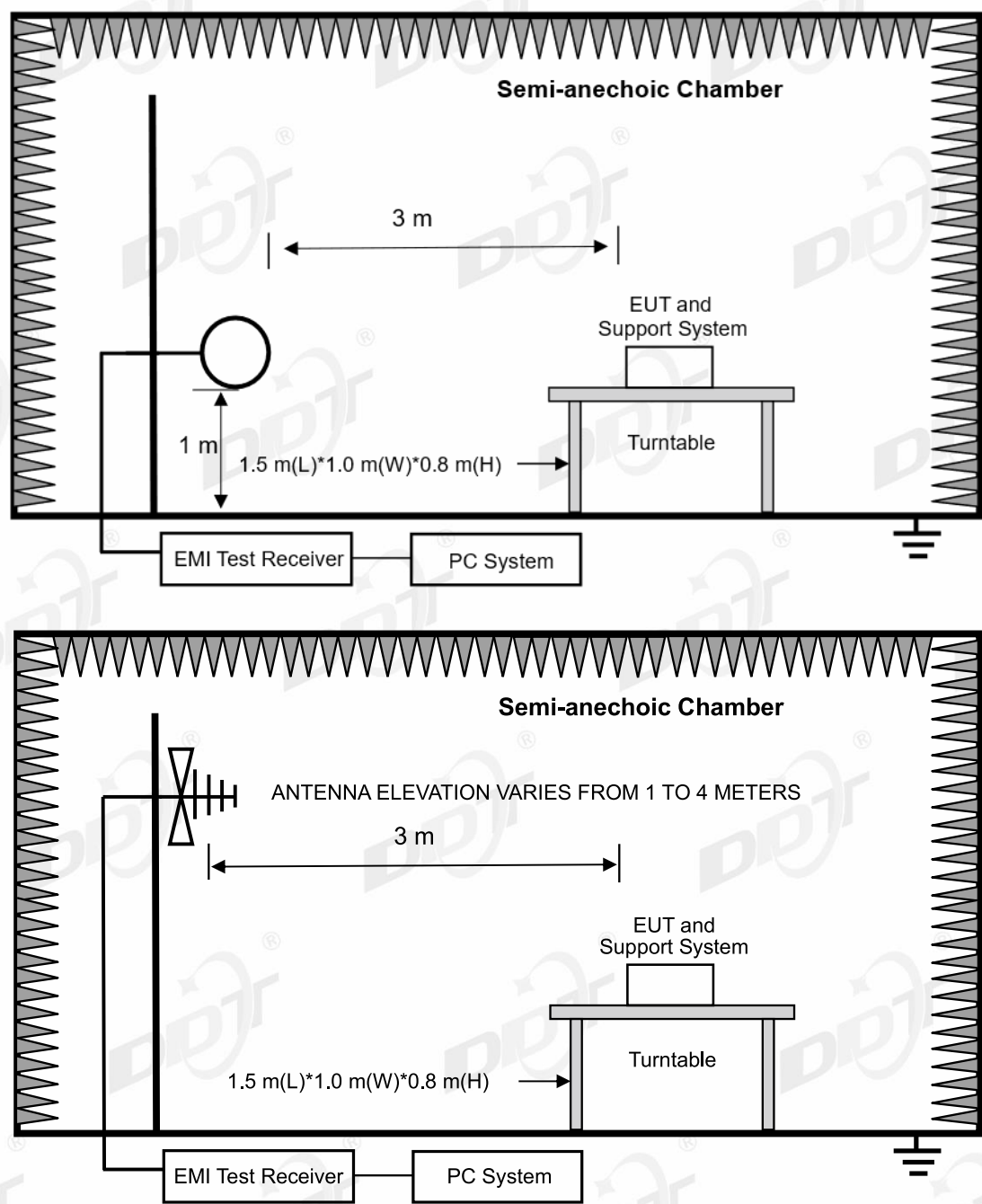


4. Radiated Emission

4.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/07/08
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26
Hochgewinn-Hornantenne	SCHWARZBEC K	BBHA 9120 D	DDT-ZC02129	2025/09/18
RF cable	Yuhu Technology	ZT26S-SMAJ- SMAJ-1M	DDT-ZC02037	2025/03/31
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ- 1.5M	DDT-ZC02762	2025/03/31
ELECTRIC AND MAGNETIC FIELD ANALYZER	Narda	EHP-200A	DDT-ZC01401	2024/09/20
RF cable	Yuhu Technology	JCTB810-NJ-NJ- 9M	DDT-ZC02538	2025/03/31
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11

4.2. Block diagram of test setup



4.3. Limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		mV/m	dB(mV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30~ 88	3	100	40.0
88~ 216	3	150	43.5
216~ 960	3	200	46.0
960~ 1000	3	500	54.0

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dBuV/m}) = \text{Limit}_{300\text{m}}(\text{dBuV/m}) + 40\log(300\text{m}/3\text{m}) = \text{Limit}_{300\text{m}}(\text{dBuV/m}) + 80$$

$$\text{Limit}_{3\text{m}}(\text{dBuV/m}) = \text{Limit}_{30\text{m}}(\text{dBuV/m}) + 40\log(30\text{m}/3\text{m}) = \text{Limit}_{30\text{m}}(\text{dBuV/m}) + 40$$

4.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
AC Adapter	HUAWEI	HW-100400U01	Input: 100-240V~ 50/60Hz, Output: 5V/2A or 9V/2A or 10V/4A	N/A
Dummy load	N/A	N/A	N/A	N/A

4.5. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1G and 150 cm above the ground plane inside a fully-anechoic chamber for above 1G.

(2) Test antenna was located 3 m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m

According ANSI C63.10:2013 clause 6.4.6 and 6.5.3, for measurements below 30 MHz, Antenna was located 3 m from EUT, the loop antenna was positioned in three antenna orientations (parallel, perpendicular, and round-parallel), for each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable, and the lowest height of the magnetic antenna shall be 1 m above the ground. For measurement above 30MHz, the trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT through three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18 GHz to 25 GHz, so below final test was performed with frequency range from 9 kHz to 18 GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2013 clause 4.1.4.2.2 procedure for average measure.

(8) For portable device, X axis, Y axis, Z axis are tested, and worse setup is reported.

4.6. Test result

PASS. (See below detailed test result)

4.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-22

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPERATE Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

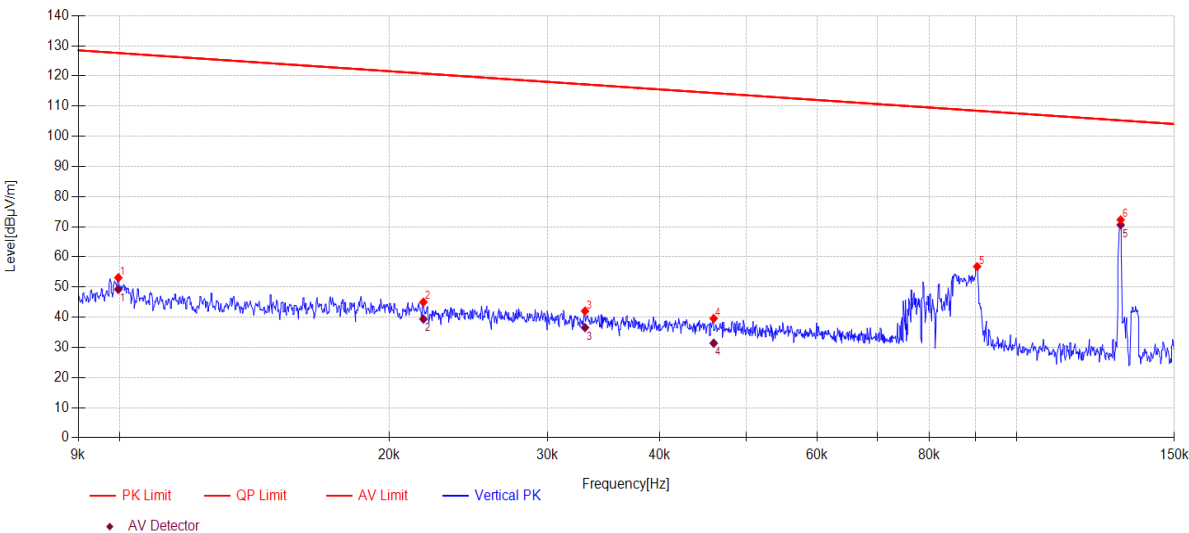
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Memo:

X Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.010	62.03	20.30	0.07	-29.30	53.10	127.62	74.52	PK	Vertical
2	0.022	53.88	20.36	0.07	-29.32	44.99	120.82	75.83	PK	Vertical
3	0.033	50.93	20.37	0.07	-29.34	42.03	117.22	75.19	PK	Vertical
4	0.046	48.62	20.24	0.07	-29.36	39.57	114.35	74.78	PK	Vertical
5	0.090	66.07	20.10	0.07	-29.44	56.80	108.47	51.67	PK	Vertical
6	0.131	81.53	20.20	0.07	-29.51	72.29	105.28	32.99	PK	Vertical

Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.010	58.15	20.30	0.07	-29.30	49.22	127.60	78.38	AV	Vertical
2	0.022	48.26	20.36	0.07	-29.32	39.37	120.83	81.46	AV	Vertical
3	0.033	45.44	20.37	0.07	-29.34	36.54	117.23	80.69	AV	Vertical
4	0.046	40.42	20.24	0.07	-29.36	31.37	114.34	82.97	AV	Vertical
5	0.131	79.84	20.20	0.07	-29.51	70.60	105.28	34.68	AV	Vertical

Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-22

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPERATE Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

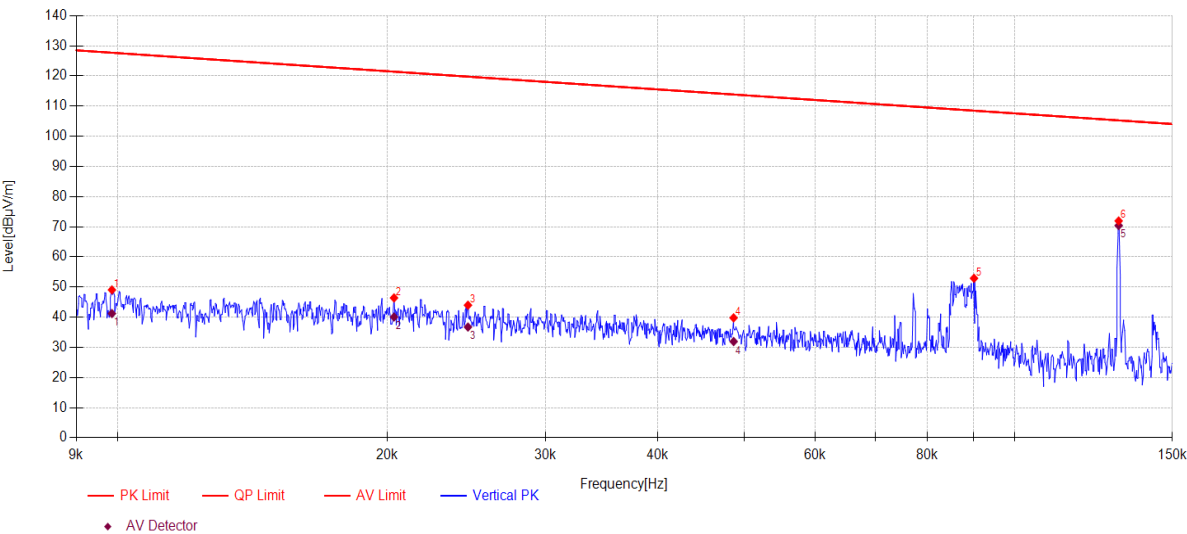
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Memo:

Y Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.010	57.98	20.30	0.07	-29.30	49.05	127.72	78.67	PK	Vertical
2	0.020	55.30	20.35	0.07	-29.32	46.40	121.43	75.03	PK	Vertical
3	0.025	52.86	20.37	0.07	-29.33	43.97	119.78	75.81	PK	Vertical
4	0.049	48.87	20.21	0.07	-29.37	39.78	113.86	74.08	PK	Vertical
5	0.090	62.17	20.10	0.07	-29.44	52.90	108.50	55.60	PK	Vertical
6	0.131	81.16	20.20	0.07	-29.51	71.92	105.28	33.36	PK	Vertical

Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.010	50.14	20.30	0.07	-29.30	41.21	127.68	86.47	AV	Vertical
2	0.020	48.95	20.35	0.07	-29.32	40.05	121.45	81.40	AV	Vertical
3	0.025	45.63	20.37	0.07	-29.33	36.74	119.78	83.04	AV	Vertical
4	0.049	41.02	20.21	0.07	-29.37	31.93	113.87	81.94	AV	Vertical
5	0.131	79.63	20.20	0.07	-29.51	70.39	105.28	34.89	AV	Vertical

Note:

1. Level = Reading + Cable Loss + Antenna Factor + AMP

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-22

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPERATE Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

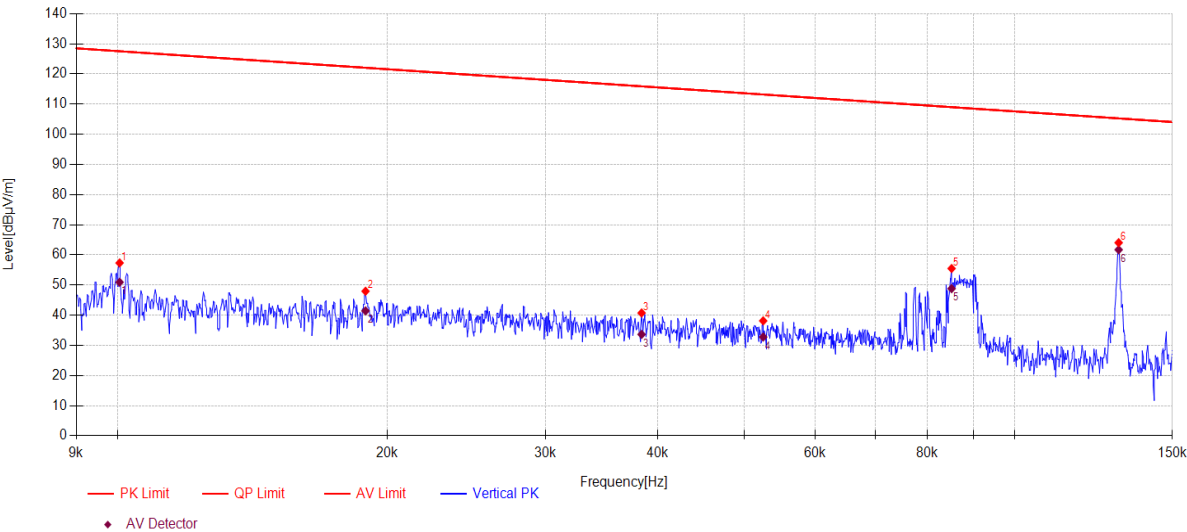
DDT 3# Chamber

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Memo:

Z Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.010	66.25	20.31	0.07	-29.30	57.33	127.55	70.22	PK	Vertical
2	0.019	56.85	20.35	0.07	-29.32	47.95	122.06	74.11	PK	Vertical
3	0.038	49.69	20.32	0.07	-29.35	40.73	115.91	75.18	PK	Vertical
4	0.052	47.22	20.21	0.07	-29.37	38.13	113.20	75.07	PK	Vertical
5	0.085	64.70	20.15	0.07	-29.43	55.49	109.00	53.51	PK	Vertical
6	0.131	73.28	20.20	0.07	-29.51	64.04	105.28	41.24	PK	Vertical

Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.010	59.85	20.31	0.07	-29.30	50.93	127.51	76.58	AV	Vertical
2	0.019	50.32	20.35	0.07	-29.32	41.42	122.07	80.65	AV	Vertical
3	0.038	42.59	20.32	0.07	-29.35	33.63	115.91	82.28	AV	Vertical
4	0.052	41.85	20.21	0.07	-29.37	32.76	113.20	80.44	AV	Vertical
5	0.085	58.03	20.15	0.07	-29.43	48.82	109.00	60.18	AV	Vertical
6	0.131	70.96	20.20	0.07	-29.51	61.72	105.28	43.56	AV	Vertical

- Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-22

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPERATE Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

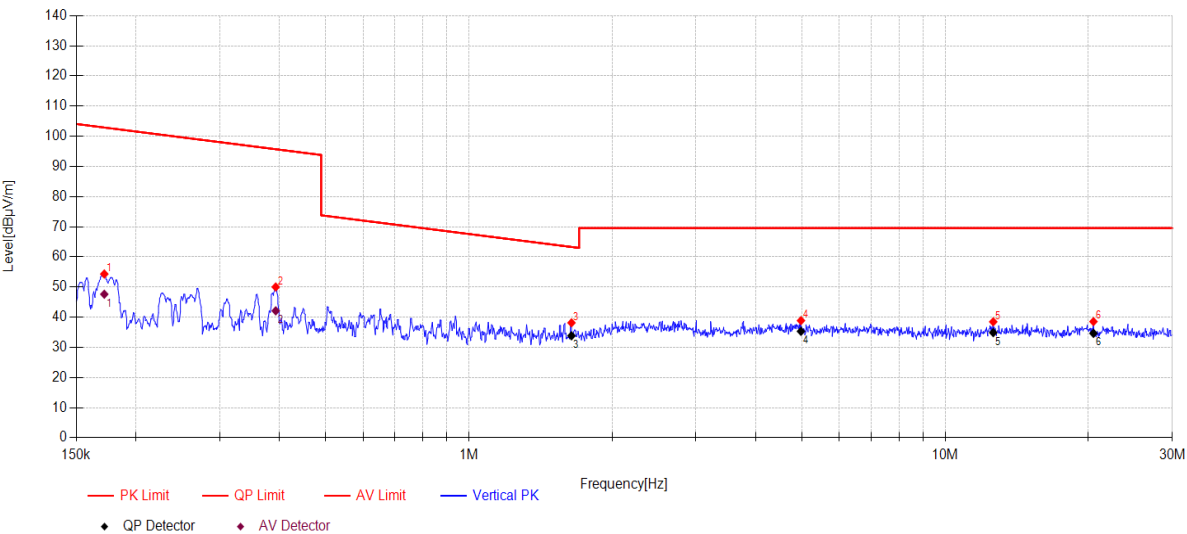
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24041909-2E\FCC BELOW 1G 9K-30M\20240522-224316_V

Memo:

Z Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.172	63.64	20.20	0.07	-29.58	54.33	102.91	48.58	PK	Vertical
2	0.393	59.76	20.20	0.08	-30.03	50.01	95.71	45.70	PK	Vertical
3	1.643	49.32	20.17	0.13	-31.49	38.13	63.29	25.16	PK	Vertical
4	4.983	50.02	20.10	0.16	-31.41	38.87	69.54	30.67	PK	Vertical
5	12.621	49.09	20.38	0.25	-31.26	38.46	69.54	31.08	PK	Vertical
6	20.489	48.98	20.30	0.41	-31.14	38.55	69.54	30.99	PK	Vertical

Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.172	56.92	20.20	0.07	-29.58	47.61	102.91	55.30	AV	Vertical
2	0.393	51.85	20.20	0.08	-30.03	42.10	95.71	53.61	AV	Vertical
3	1.643	45.03	20.17	0.13	-31.49	33.84	63.29	29.45	QP	Vertical
4	4.983	46.45	20.10	0.16	-31.41	35.30	69.54	34.24	QP	Vertical
5	12.621	45.52	20.38	0.25	-31.26	34.89	69.54	34.65	QP	Vertical
6	20.489	45.08	20.30	0.41	-31.14	34.65	69.54	34.89	QP	Vertical

Note:

1. Level = Reading + Cable Loss + Antenna Factor + AMP

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-22

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPERATE Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

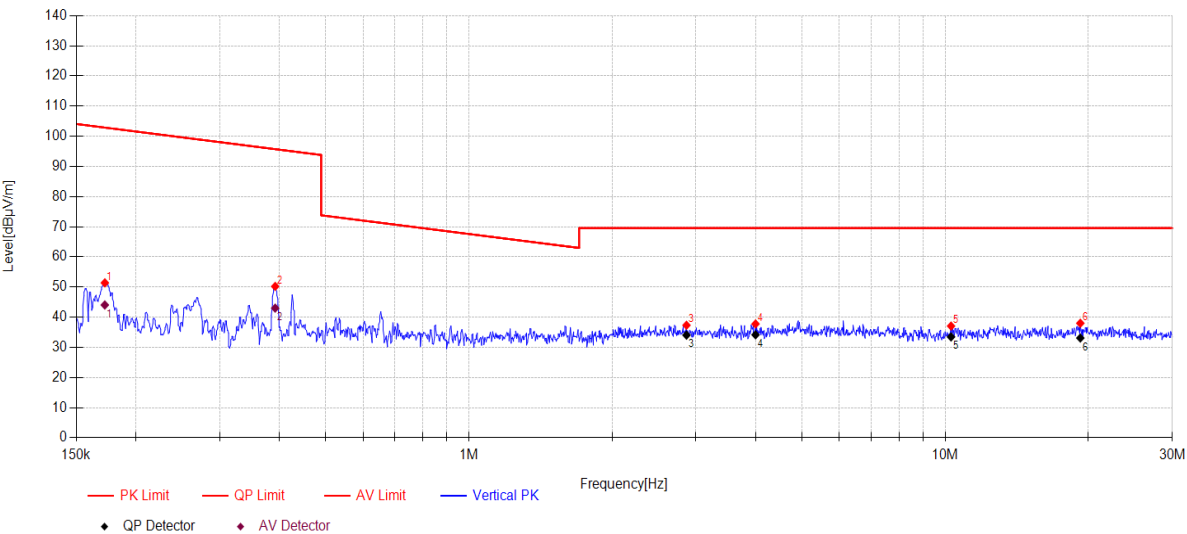
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24041909-2E\FCC BELOW 1G 9K-30M\20240522-224400_V

Memo:

Y Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.172	60.70	20.20	0.07	-29.58	51.39	102.88	51.49	PK	Vertical
2	0.392	59.95	20.20	0.08	-30.02	50.21	95.73	45.52	PK	Vertical
3	2.865	48.53	20.11	0.14	-31.46	37.32	69.54	32.22	PK	Vertical
4	4.000	48.94	20.10	0.15	-31.43	37.76	69.54	31.78	PK	Vertical
5	10.293	47.85	20.30	0.21	-31.30	37.06	69.54	32.48	PK	Vertical
6	19.228	48.46	20.30	0.38	-31.16	37.98	69.54	31.56	PK	Vertical

Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.172	53.36	20.20	0.07	-29.58	44.05	102.89	58.84	AV	Vertical
2	0.392	52.74	20.20	0.08	-30.02	43.00	95.73	52.73	AV	Vertical
3	2.865	45.26	20.11	0.14	-31.46	34.05	69.54	35.49	QP	Vertical
4	4.000	45.34	20.10	0.15	-31.43	34.16	69.54	35.38	QP	Vertical
5	10.293	44.25	20.30	0.21	-31.30	33.46	69.54	36.08	QP	Vertical
6	19.228	43.58	20.30	0.38	-31.16	33.10	69.54	36.44	QP	Vertical

Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-22

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPERATE Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

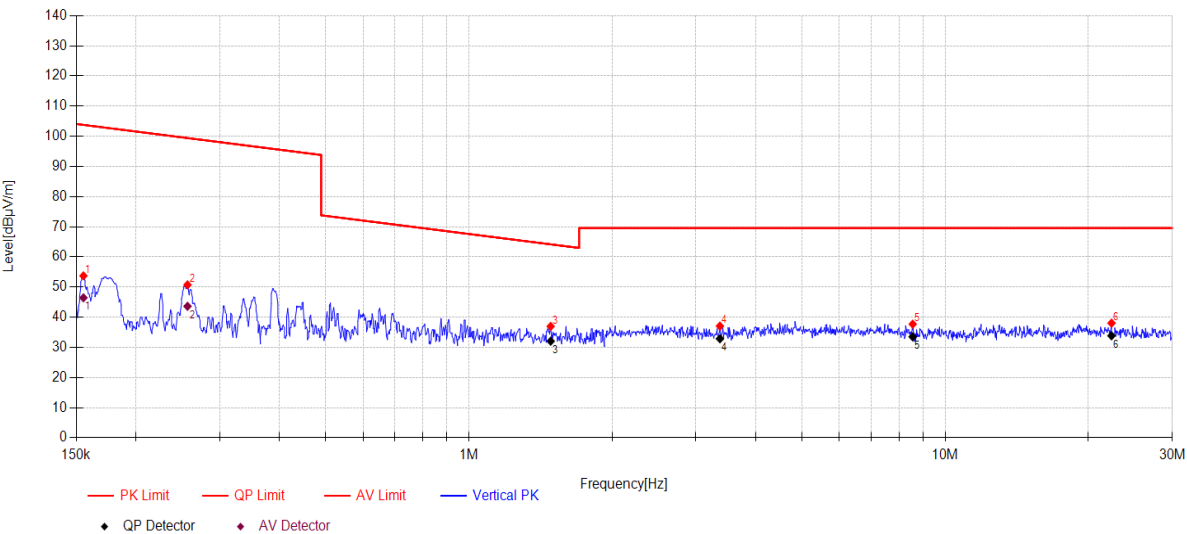
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24041909-2E\FCC BELOW 1G 9K-30M\20240522-224429_V

Memo:

X Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.155	62.99	20.20	0.07	-29.55	53.71	103.78	50.07	PK	Vertical
2	0.257	60.17	20.20	0.08	-29.73	50.72	99.41	48.69	PK	Vertical
3	1.486	48.15	20.18	0.12	-31.49	36.96	64.17	27.21	PK	Vertical
4	3.367	48.26	20.10	0.14	-31.45	37.05	69.54	32.49	PK	Vertical
5	8.552	48.58	20.26	0.19	-31.33	37.70	69.54	31.84	PK	Vertical
6	22.360	48.30	20.37	0.47	-31.11	38.03	69.54	31.51	PK	Vertical

Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.155	55.72	20.20	0.07	-29.55	46.44	103.78	57.34	AV	Vertical
2	0.257	53.07	20.20	0.08	-29.73	43.62	99.41	55.79	AV	Vertical
3	1.486	43.23	20.18	0.12	-31.49	32.04	64.17	32.13	QP	Vertical
4	3.367	44.06	20.10	0.14	-31.45	32.85	69.54	36.69	QP	Vertical
5	8.552	44.38	20.26	0.19	-31.33	33.50	69.54	36.04	QP	Vertical
6	22.360	44.1	20.37	0.47	-31.11	33.83	69.54	35.71	QP	Vertical

- Note:
- Level = Reading + Cable Loss + Antenna Factor + AMP
 - If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
 - Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-21

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPENING Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

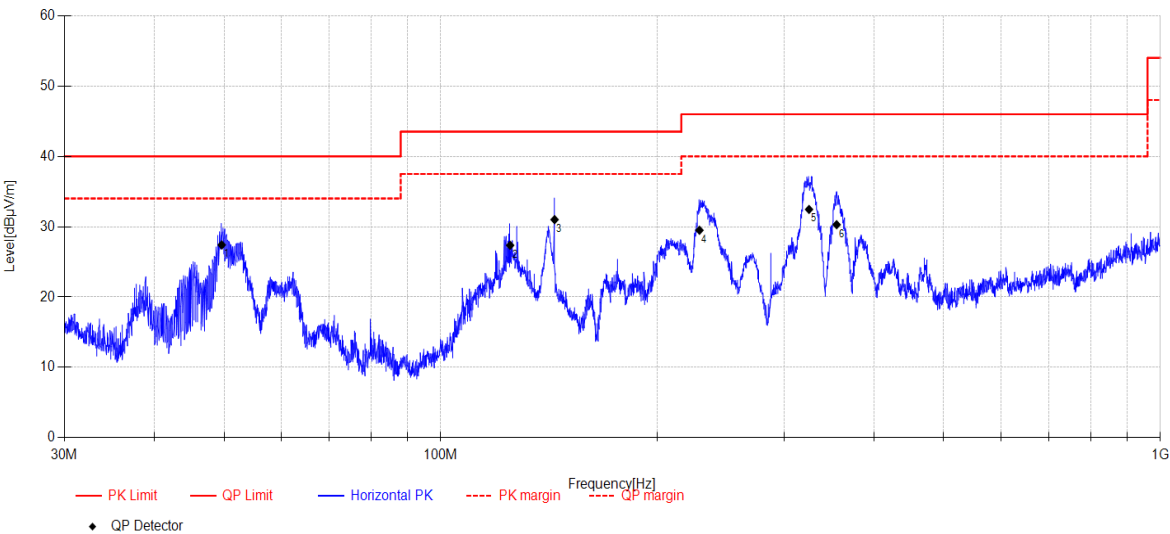
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24041909-2E\FCC BELOW 1G\20240521-234702_H

Memo:

Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	49.632	41.35	12.89	3.88	-30.71	27.41	40.00	12.59	QP	Horizontal
2	124.883	44.92	8.92	4.35	-30.83	27.36	43.50	16.14	QP	Horizontal
3	143.986	48.02	9.30	4.46	-30.77	31.01	43.50	12.49	QP	Horizontal
4	228.879	43.43	11.69	4.89	-30.51	29.50	46.00	16.50	QP	Horizontal
5	324.985	43.89	13.50	5.32	-30.25	32.46	46.00	13.54	QP	Horizontal
6	355.003	39.54	15.50	5.44	-30.19	30.29	46.00	15.71	QP	Horizontal

Note:

- Result Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-05-21

Tested By:

Junchang Du

EUT:

Wireless Charging Pad

Model Number:

MSQP

Test Mode:

OPENING Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.2°C;Humi:64.6%

Test Site:

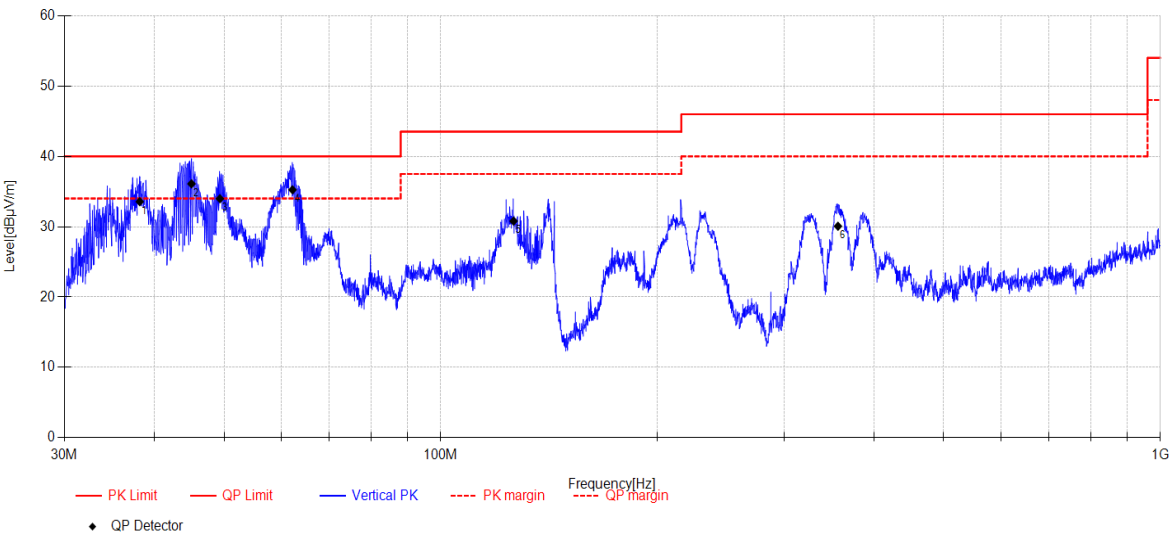
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24041909-2E\FCC BELOW 1G\20240521-234744_V

Memo:

Sample Number:S24041909-009 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	38.183	49.21	11.42	3.81	-30.88	33.56	40.00	6.44	QP	Vertical
2	45.055	49.87	13.15	3.85	-30.77	36.10	40.00	3.90	QP	Vertical
3	49.355	48	12.81	3.88	-30.71	33.98	40.00	6.02	QP	Vertical
4	62.247	49.2	12.70	3.97	-30.62	35.25	40.00	4.75	QP	Vertical
5	126.292	48.13	9.13	4.36	-30.82	30.80	43.50	12.70	QP	Vertical
6	356.499	39.49	15.32	5.45	-30.19	30.07	46.00	15.93	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

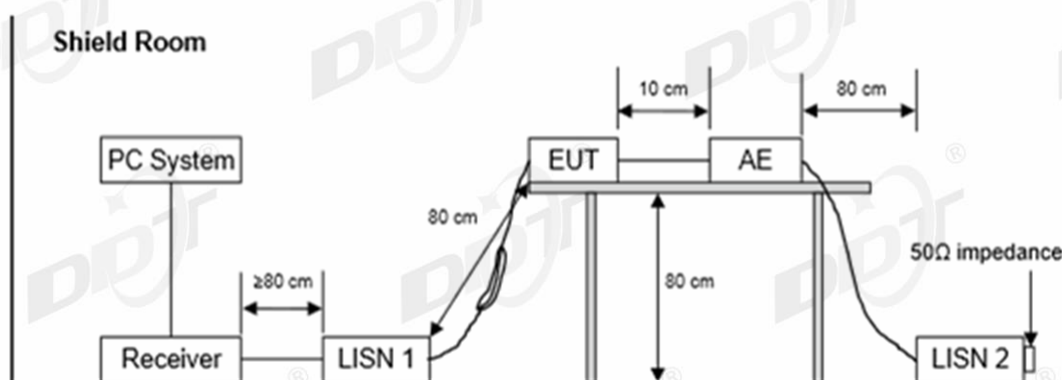
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

5. Power Line Conducted Emissions

5.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Two Line V-Network	R&S	ENV216	DDT-ZC02059	2025/07/08
Three-phase artificial power network	SCHWARZBEC K	NSLK 8163	DDT-ZC01572	2025/07/08
Conducted Radiated Software	Audix	E3	DDT-ZC00562	/
RF Cable	Yuhu Technology	Z806-NJ-NJ-6M	DDT-ZC02004	2025/07/08
Pulse Limiter	SCHWARZBEC K	VTSD 9561	DDT-ZC02128	2025/07/08
EMI Test Receiver	R&S	ESCI/E3	DDT-ZC01297	2025/07/08
Δ -shaped artificial power network	SCHWARZBEC K	PVDC 8301	DDT-ZC03939	2025/03/31
Two Line V-Network	R&S	ENV216	DDT-ZC02056	2025/07/08

5.2. Block diagram of test setup



5.3. Limits

Frequency	Quasi-Peak Level dB(mV)	Average Level dB(mV)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

5.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
AC Adapter	HUAWEI	HW-100400U01	Input: 100-240V~ 50/60Hz, Output: 5V/2A or 9V/2A or 10V/4A	N/A
Dummy load	N/A	N/A	N/A	N/A

5.5. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

5.6. Test result

PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Note2: “-----” means Peak detection; “-----” means Average detection.

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded the worst case.

5.7. Test data

TR-4-E-010 Conducted Emission Test Result

Test Site

: DDT 6# Shield Room

Test Date

: 2024-05-23

EUT

: Wireless Charging Pad

Power Supply

: AC 120V/60Hz

Condition

: Temp:21.5°C,Humi:51.8%

Tested By

: Genliu

Model Number

: MSQP

Test Mode

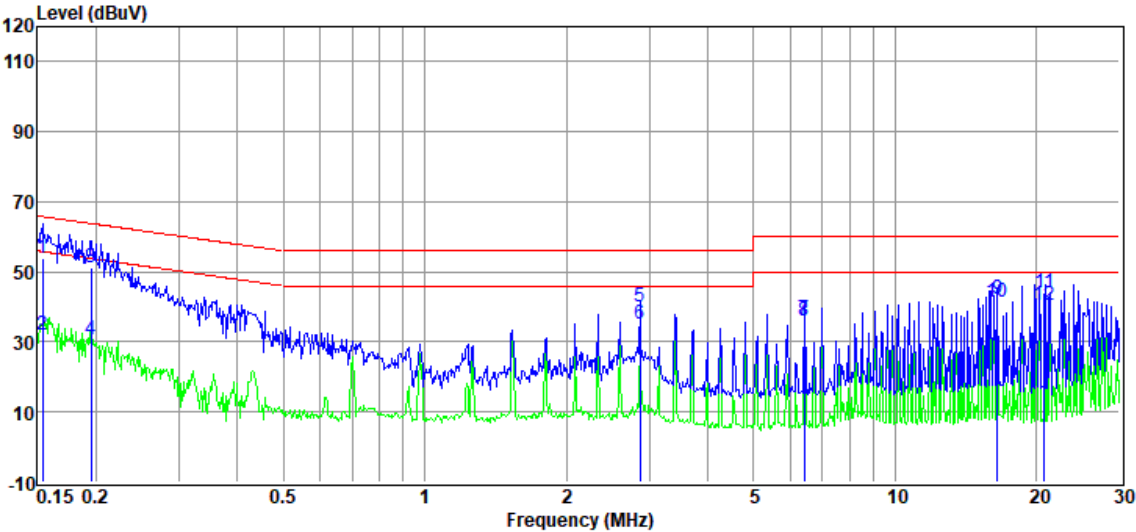
: Charging mode

LISN

: 2023 ENV 216 3#/LINE

Memo :

Data: 2



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	34.10	9.82	0.10	9.94	53.96	65.78	-11.82	QP	LINE
2	0.15	11.93	9.82	0.10	9.94	31.79	55.78	-23.99	Average	LINE
3	0.20	31.41	9.81	0.11	9.94	51.27	63.80	-12.53	QP	LINE
4	0.20	10.84	9.81	0.11	9.94	30.70	53.80	-23.10	Average	LINE
5	2.87	20.09	9.62	0.26	10.00	39.97	56.00	-16.03	QP	LINE
6	2.87	15.31	9.62	0.26	10.00	35.19	46.00	-10.81	Average	LINE
7	6.42	16.61	9.75	0.27	10.03	36.66	60.00	-23.34	QP	LINE
8	6.42	15.80	9.75	0.27	10.03	35.85	50.00	-14.15	Average	LINE
9	16.49	22.33	9.73	0.32	10.07	42.45	60.00	-17.55	QP	LINE
10	16.49	21.20	9.73	0.32	10.07	41.32	50.00	-8.68	Average	LINE
11	20.80	23.60	9.88	0.34	10.08	43.90	60.00	-16.10	QP	LINE
12	20.80	20.00	9.88	0.34	10.08	40.30	50.00	-9.70	Average	LINE

Note: 1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site

: DDT 6# Shield Room

Test Date

: 2024-05-23

EUT

: Wireless Charging Pad

Power Supply

: AC 120V/60Hz

Condition

: Temp:21.5°C,Humi:51.8%

Memo

:

D:\2024 Report Date\Q24041909-2E\CE-FCC.EM6

Tested By

: Genliu

Model Number

: MSQP

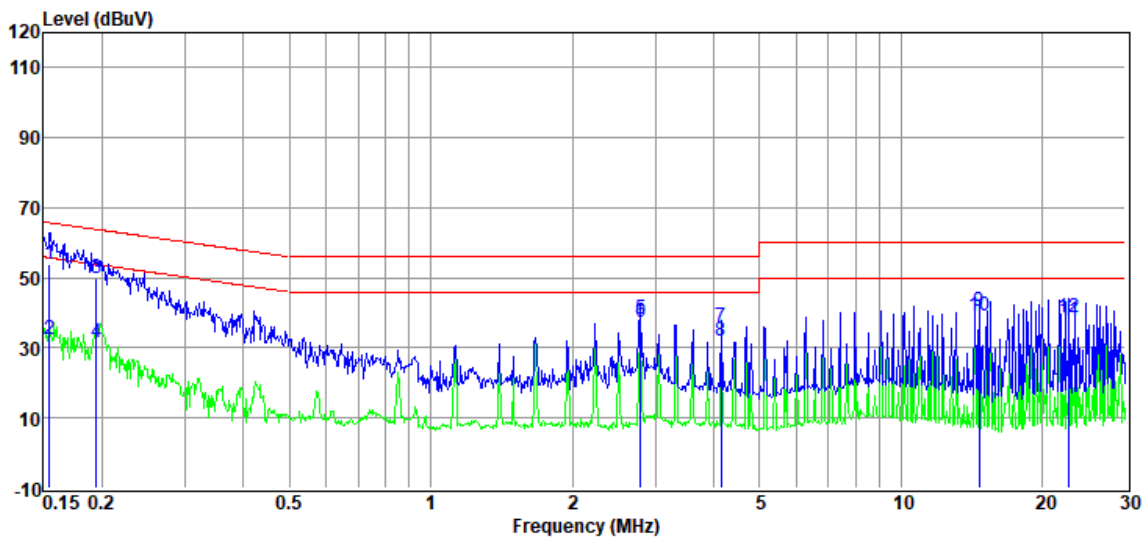
Test Mode

: Charging mode

LISN

: 2023 ENV 216 3#/NEUTRAL

Data: 4



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	34.12	9.80	0.10	9.94	53.96	65.74	-11.78	QP	NEUTRAL
2	0.15	12.62	9.80	0.10	9.94	32.46	55.74	-23.28	Average	NEUTRAL
3	0.19	29.94	9.93	0.11	9.94	49.92	63.84	-13.92	QP	NEUTRAL
4	0.19	11.74	9.93	0.11	9.94	31.72	53.84	-22.12	Average	NEUTRAL
5	2.79	18.50	9.65	0.26	10.00	38.41	56.00	-17.59	QP	NEUTRAL
6	2.79	17.40	9.65	0.26	10.00	37.31	46.00	-8.69	Average	NEUTRAL
7	4.14	15.97	9.56	0.27	10.01	35.81	56.00	-20.19	QP	NEUTRAL
8	4.14	12.12	9.56	0.27	10.01	31.96	46.00	-14.04	Average	NEUTRAL
9	14.67	20.33	9.94	0.31	10.06	40.64	60.00	-19.36	QP	NEUTRAL
10	14.67	18.68	9.94	0.31	10.06	38.99	50.00	-11.01	Average	NEUTRAL
11	22.78	17.50	9.92	0.35	10.09	37.86	60.00	-22.14	QP	NEUTRAL
12	22.78	18.25	9.92	0.35	10.09	38.61	50.00	-11.39	Average	NEUTRAL

Note: 1. Result Level = Read Level +LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

7. Photos of the EUT

Please refer to DDT-Q24041909-1E appendix I

-----End Report-----