

TEST REPORT

Applicant Name: Bytech NY Inc.
Address: 2585 West 13th Street, Brooklyn NY 11223, New York, United States
Report Number: 2501R48041E-RF-00
FCC ID: 2AHN6-OPCP522

Test Standard (s)

FCC PART 18

Sample Description

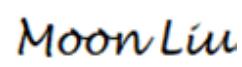
Product Type: 10W Mag Wireless Charger Light
Model No.: BY-OP-CP-522-AC
Multiple Model(s) No.: N/A
Trade Mark: N/A
Date Received: 2025/03/18
Issue Date: 2025/04/09

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

Prepared and Checked By:

Ethan Bu
EMC Engineer

Approved By:

Moon Liu
EMC Supervisor

Note: The information marked[#] is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

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TABLE OF CONTENTS

DOCUMENT REVISION HISTORY	3
GENERAL INFORMATION.....	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
OBJECTIVE	4
MEASUREMENT UNCERTAINTY	4
TEST FACILITY	5
OPERATING CONDITION/TEST CONFIGURATION.....	6
DESCRIPTION OF TEST CONFIGURATION	6
EUT EXERCISE SOFTWARE	6
SPECIAL ACCESSORIES.....	6
EQUIPMENT MODIFICATIONS	6
SUPPORT EQUIPMENT LIST AND DETAILS	6
EXTERNAL CABLE LIST AND DETAILS	6
BLOCK DIAGRAM OF TEST SETUP	7
SUMMARY OF TEST RESULTS	8
TEST EQUIPMENT LIST	9
FCC §18.307 CONDUCTED EMISSIONS	10
APPLICABLE STANDARD	10
EUT SETUP	10
EMI TEST RECEIVER SETUP.....	10
TEST PROCEDURE	11
TEST DATA	11
FCC §18.305 - FIELD STRENGTH TEST	14
APPLICABLE STANDARD	14
EUT SETUP	15
EMI TEST RECEIVER SETUP.....	16
LEVEL & OVER LIMIT CALCULATION	16
TEST DATA	16
EUT PHOTOGRAPHS.....	19
TEST SETUP PHOTOGRAPHS	20

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2501R48041E-RF-00	Original Report	2025/04/09

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	10W Mag Wireless Charger Light
Tested Model	BY-OP-CP-522-AC
Multiple Model(s)	N/A
UPC Number	805112135639, 805112135646
SKU Number	9188989
LOT Number	BY032025
Voltage Range	DC 9V from adapter
Highest operating frequency [#]	110-205kHz
Wireless Output Power	10Watts
Sample number	2ZTX-1 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A

Objective

This report is in accordance with Part 2-Subpart J, and Part 18-Subparts A, B and C of the Federal Communication Commissions rules and regulations and FCC OST MP-5(1986) FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical Equipment.

The objective of the manufacturer is to determine compliance with FCC Part 18 limits.

Measurement Uncertainty

Item	Frequency Range		Expanded Measurement uncertainty
Conducted Emissions	AC Mains	150kHz ~30MHz	3.66dB(k=2, 95% level of confidence)
Radiated Emissions	0.009MHz~30MHz	/	3.60dB(k=2, 95% level of confidence)
	30MHz~200MHz	Horizontal	5.32dB(k=2, 95% level of confidence)
	30MHz~200MHz	Vertical	5.43dB(k=2, 95% level of confidence)
	200MHz~1000MHz	Horizontal	5.77dB(k=2, 95% level of confidence)
	200MHz~1000MHz	Vertical	5.73dB(k=2, 95% level of confidence)
Nerve Simulation	H-Field		0.74dB(k=2, 95% level of confidence)
	E-Field		1.14dB(k=2, 95% level of confidence)

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West), 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

Each test item follows test standards and with no deviation.

OPERATING CONDITION/TEST CONFIGURATION

Description of Test Configuration

The EUT was operated at maximum (continuous) RF output power.

Test Mode: Wireless charging

EUT Exercise Software

No exercise software was used.

Special Accessories

No special accessory was used.

Equipment Modifications

No modifications were made to the EUT tested.

Support Equipment List and Details

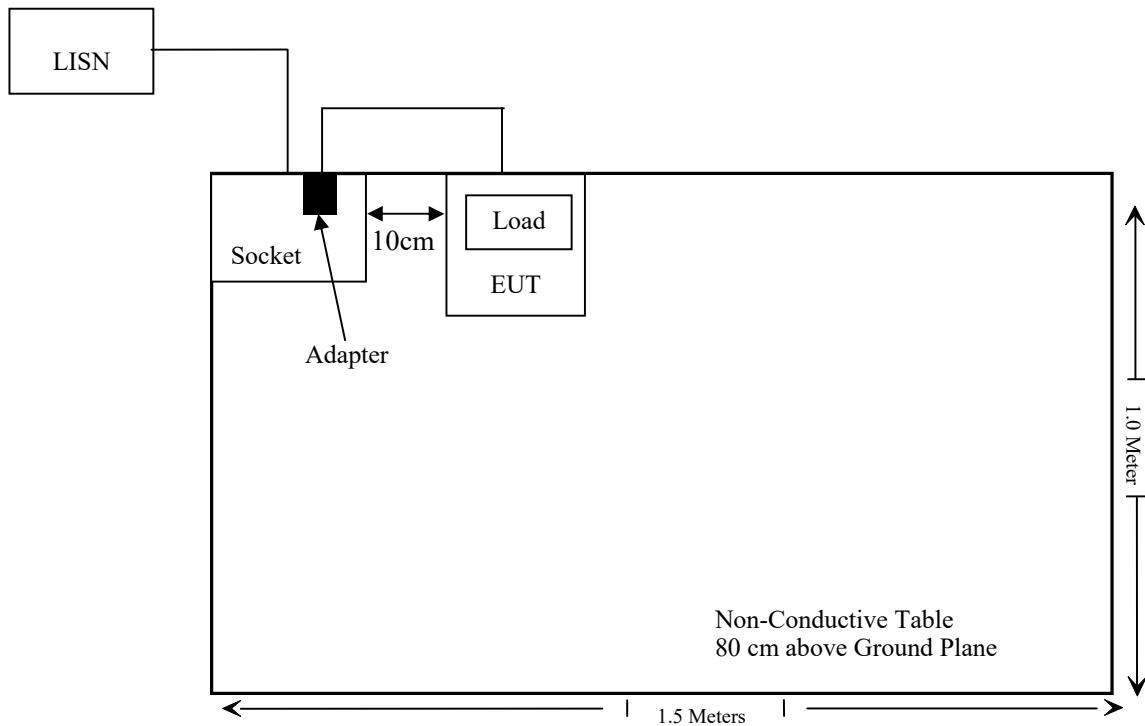
Manufacturer	Description	Model	Serial Number
N/A	Load	N/A	N/A
iHome	Adapter	GJ02CH-020P01U	/

External Cable List and Details

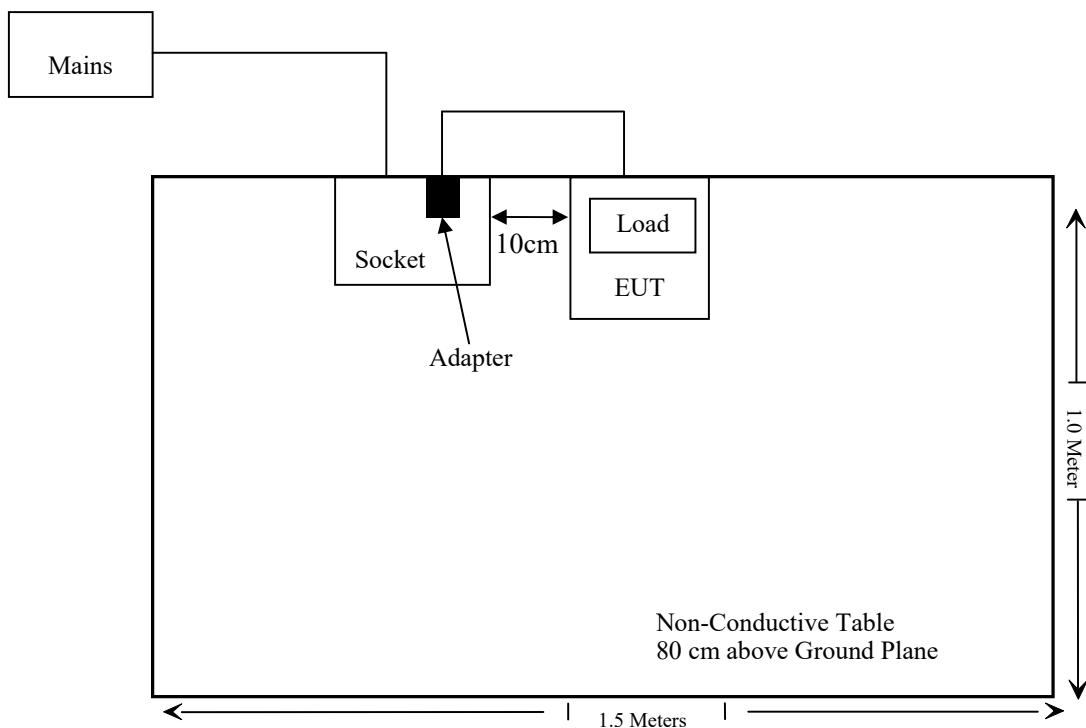
Cable Description	Length (m)	From/Port	To
Unshielded Un-detachable AC cable	1.0	Socket	Mains
Unshielded detachable Type C cable	1.0	EUT	Adapter

Block Diagram of Test Setup

Conduction emission:



Radio emission:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC§1.1310 & §2.1091	Maximum Permissible Exposure(MPE)	Compliant*
FCC §18.307	AC Line Conducted Emission	Compliant
FCC §18.305	Field strength	Compliant

Compliant*: Test data please refer to report 2503R48042E-00.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
AC Line Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2024/12/04	2025/12/03
Rohde & Schwarz	LISN	ENV216	101613	2024/12/04	2025/12/03
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2024/05/21	2025/05/20
Unknown	CE Cable	Unknown	UF A210B-1-0720-504504	2024/05/21	2025/05/20
Audix	EMI Test software	E3	191218(V9)	NCR	NCR
Radiated Emission/Disturbances Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2024/12/04	2025/12/03
Sonoma instrument	Pre-amplifier	310 N	186238	2024/05/21	2025/05/20
BACL	Active Loop Antenna	1313-1A	4031911	2024/05/14	2027/05/13
Unknown	Cable	2Y194	0735	2024/12/04	2025/12/03
Unknown	Cable	PNG214	1354	2024/12/04	2025/12/03
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR

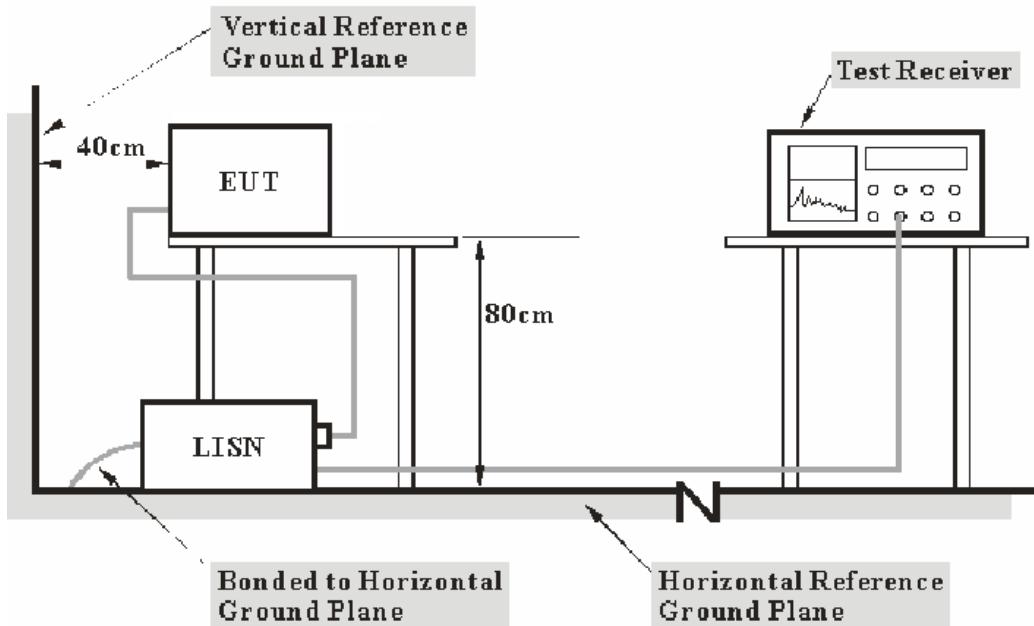
*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §18.307 CONDUCTED EMISSIONS

Applicable Standard

FCC §18.307

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMIN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5: 1986 measurement procedure. Specification used was with the FCC Part 18.

The socket was connected to a 120 V_{AC}/ 60Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

Test Data

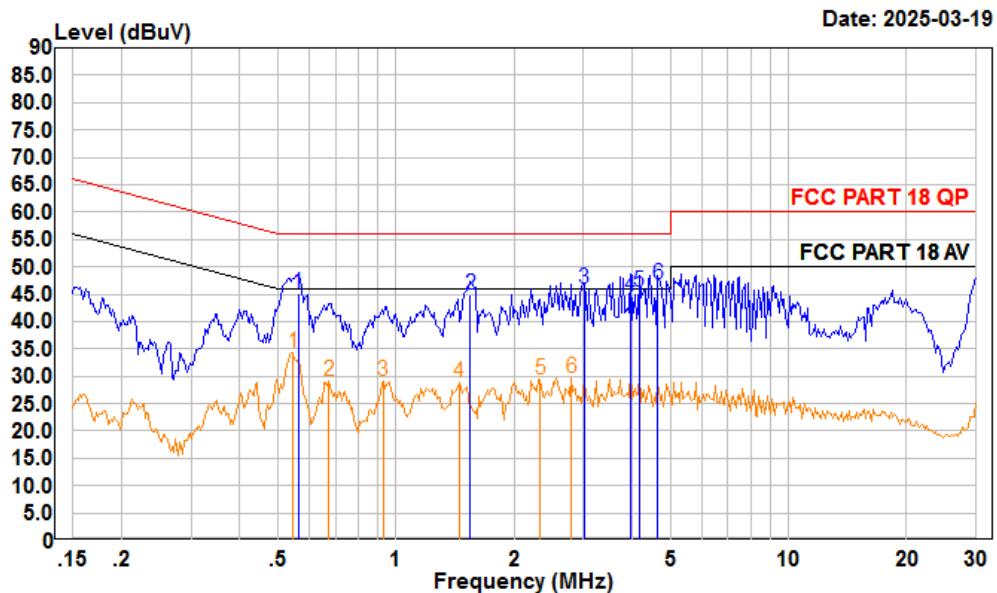
Environmental Conditions

Temperature:	24.4 °C
Relative Humidity:	32 %
ATM Pressure:	101.9 kPa

The testing was performed by Macy Shi on 2025-03-19.

Test Mode: Wireless charging

AC 120V/60 Hz, Line



Condition: Line

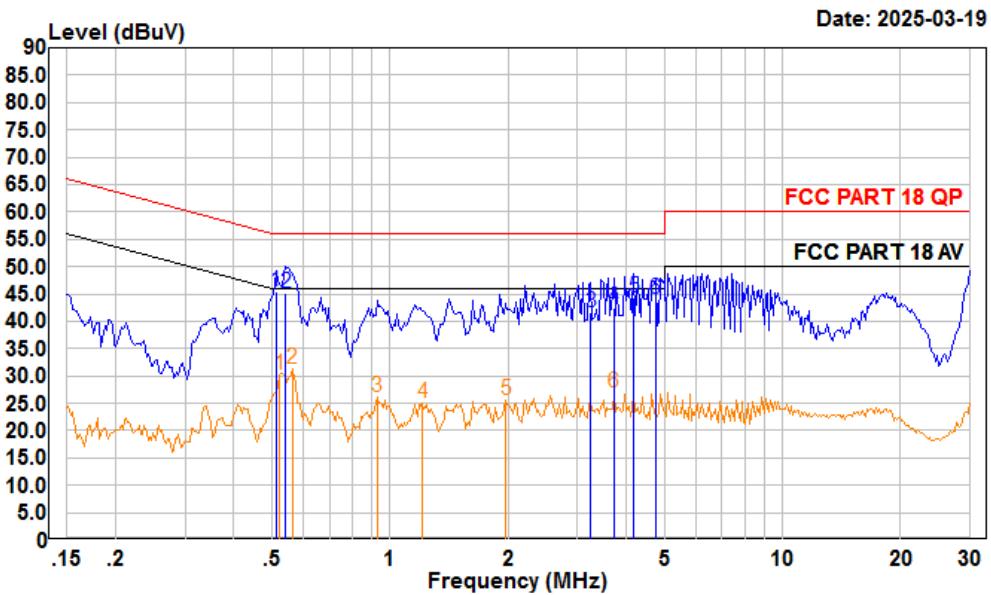
Project : 2501R48041E-RF

test Mode: Wireless charging tester:Macy.shi

Setting : RBW:9kHz VBW:30KHz Detector Peak/av

Freq	Read	LISN	Cable	Limit	Over	Remark
	Freq	Level	Level	Factor	Line	Limit
MHz						
1	0.564	24.40	45.17	10.64	10.13	56.00 -10.83 QP
2	1.544	23.81	44.88	10.91	10.16	56.00 -11.12 QP
3	3.018	24.90	46.06	10.98	10.18	56.00 -9.94 QP
4	3.947	23.50	44.61	10.90	10.21	56.00 -11.39 QP
5	4.163	24.39	45.48	10.88	10.21	56.00 -10.52 QP
6	4.647	25.70	46.71	10.82	10.19	56.00 -9.29 QP
Read						
Freq	Level	LISN	Cable	Limit	Over	Remark
MHz						
1	0.546	13.63	34.37	10.61	10.13	46.00 -11.63 Average
2	0.675	8.11	29.11	10.86	10.14	46.00 -16.89 Average
3	0.928	8.43	29.19	10.66	10.10	46.00 -16.81 Average
4	1.449	7.86	28.89	10.87	10.16	46.00 -17.11 Average
5	2.334	8.13	29.37	11.06	10.18	46.00 -16.63 Average
6	2.794	8.58	29.76	11.00	10.18	46.00 -16.24 Average

AC 120V/60 Hz, Neutral



Freq	Read		LISN	Cable	Limit	Over	Remark
	MHz	dBuV					
1	0.513	24.79	45.44	10.51	10.14	56.00	-10.56 QP
2	0.541	24.51	45.16	10.52	10.13	56.00	-10.84 QP
3	3.241	20.50	41.60	10.91	10.19	56.00	-14.40 QP
4	3.720	21.20	42.37	10.97	10.20	56.00	-13.63 QP
5	4.180	23.20	44.37	10.97	10.20	56.00	-11.63 QP
6	4.746	23.10	44.17	10.88	10.19	56.00	-11.83 QP

Freq	Read		LISN	Cable	Limit	Over	Remark
	MHz	dBuV					
1	0.524	9.51	30.16	10.51	10.14	46.00	-15.84 Average
2	0.564	10.52	31.19	10.54	10.13	46.00	-14.81 Average
3	0.928	5.22	26.08	10.76	10.10	46.00	-19.92 Average
4	1.210	4.09	25.00	10.77	10.14	46.00	-21.00 Average
5	1.970	4.76	25.65	10.70	10.19	46.00	-20.35 Average
6	3.720	5.73	26.90	10.97	10.20	46.00	-19.10 Average

FCC §18.305 - FIELD STRENGTH TEST

Applicable Standard

As per FCC Part 18.305

(a) ISM equipment operating on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (μ V/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 25 × SQRT(power/500)	300 1300
	Any non-ISM frequency	Below 500 500 or more	15 15 × SQRT(power/500)	300 1300
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 15	300 300
Ultrasonic	Below 490 kHz	Below 500 500 or more	2,400/F(kHz) 2,400/F(kHz) × SQRT(power/500)	300 3300
	490 to 1,600 kHz Above 1,600 kHz	Any Any	24,000/F(kHz) 15	30 30
Induction cooking ranges	Below 90 kHz On or above 90 kHz	Any Any	1,500 300	430 430

¹Field strength may not exceed 10 μ V/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.

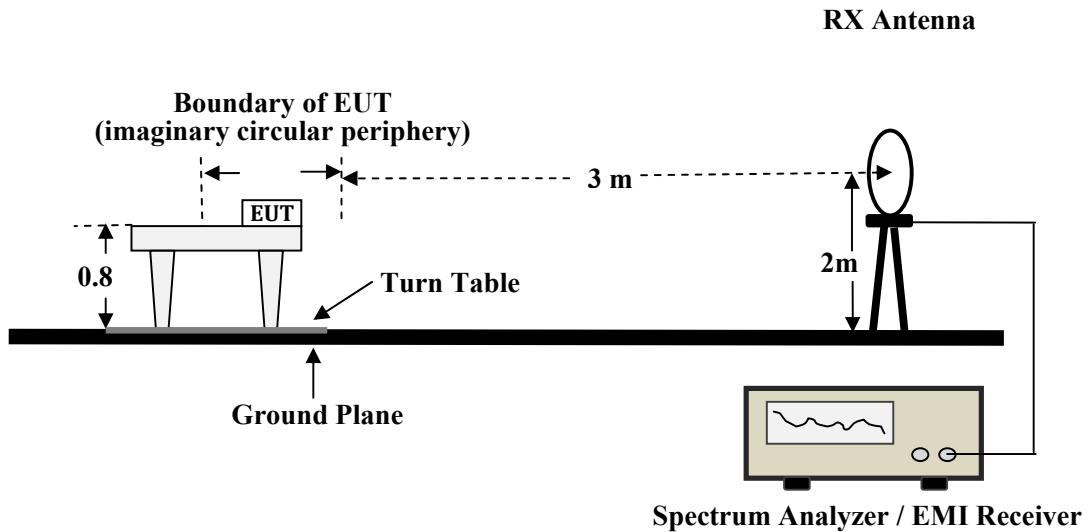
³Field strength may not exceed 10 μ V/m at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.

Emission level dB μ V /m for 0.009~30Mhz = 20log (15) + 40log (300/3) dB μ V /m

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

EUT Setup

Below 30MHz for Radiated Emissions



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the FCC OST MP-5(1986). The related limit was specified in Part 18.305.

The spacing between the peripherals was 10 cm.

The center of the loop shall be 2 m above the ground.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 30 MHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	Measurement
9 kHz – 150 kHz	200 Hz	1 kHz	QP/Average
150 kHz – 30 MHz	10 kHz	30 kHz	QP/Average

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector.

If the maximized peak measured value complies with the limit, then it is unnecessary to perform an QP/Average measurement

Level & Over Limit Calculation

The Level is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Read Level. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

$$\text{Level} = \text{Read Level} + \text{Factor}$$

The “**Over Limit**” Column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of -6 dB means the emission is 6 dB below the limit. The equation for margin calculation is as follows:

$$\text{Over limit} = \text{Level} - \text{Limit}$$

Test Data

Environmental Conditions

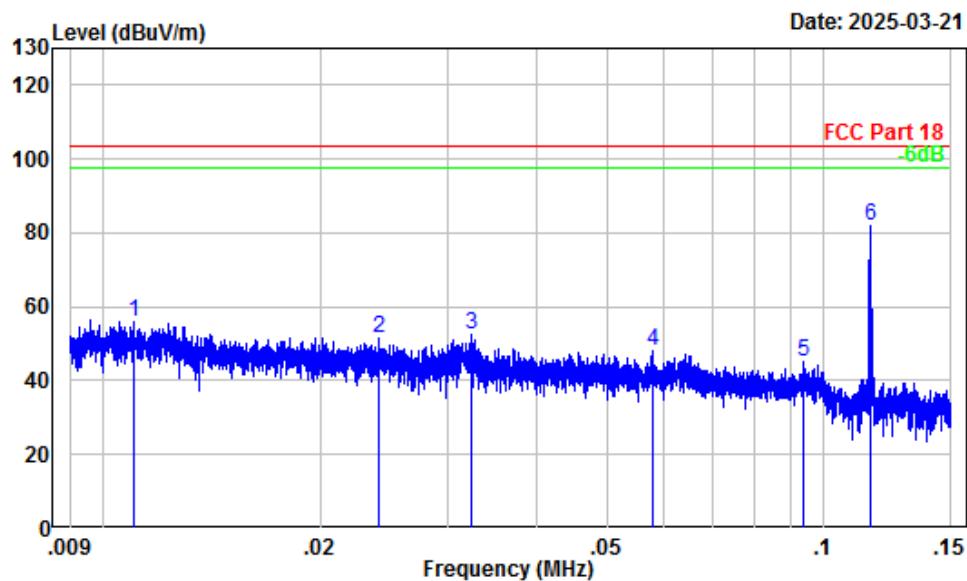
Temperature:	25.1 °C
Relative Humidity:	44 %
ATM Pressure:	101.3 kPa

The testing was performed by Anson Su on 2025-03-21.

Test Mode: Wireless charging.

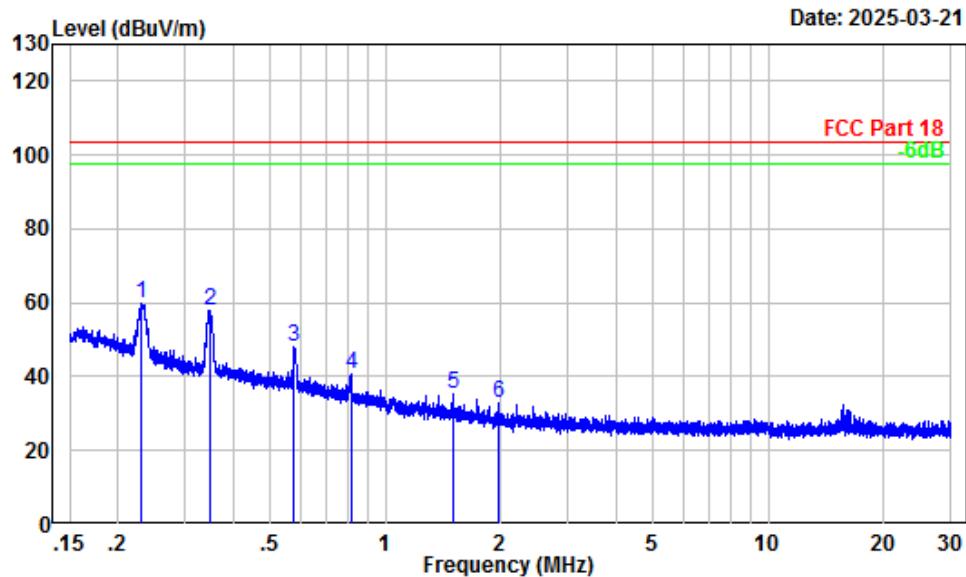
For 9 kHz~30 MHz test, Pre-scan in the parallel, perpendicular and ground parallel, just the worst case parallel was recorded in the report.

9 kHz – 150 KHz



Site : Chamber A
Condition : 3m
Project Number : 2501R48041E-RF
Test Mode : Wireless charging
Detector: Peak RBW/VBW: 0.3/1kHz
Tester : Anson Su

	Freq	Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB/m	dB _{uV}	dB _{uV/m}	dB _{uV/m}	dB	
1	0.01	32.11	23.79	55.90	103.52	-47.62	Peak
2	0.02	29.62	22.01	51.63	103.52	-51.89	Peak
3	0.03	28.24	24.47	52.71	103.52	-50.81	Peak
4	0.06	25.61	22.39	48.00	103.52	-55.52	Peak
5	0.09	22.46	22.92	45.38	103.52	-58.14	Peak
6	0.12	21.06	60.97	82.03	103.52	-21.49	Peak

150 kHz – 30 MHz:

Site : Chamber A
Condition : 3m
Project Number : 2501R48041E-RF
Test Mode : Wireless charging
Detector: Peak RBW/VBW: 10/30kHz
Tester : Anson Su

Freq	Factor	Read	Limit	Over	Remark	
		Level	Level	Line		
1	0.23	14.28	45.52	59.80	103.52	-43.72 Peak
2	0.35	9.30	48.75	58.05	103.52	-45.47 Peak
3	0.58	5.45	42.44	47.89	103.52	-55.63 Peak
4	0.81	2.61	37.96	40.57	103.52	-62.95 Peak
5	1.51	-0.22	35.49	35.27	103.52	-68.25 Peak
6	1.97	-1.52	34.54	33.02	103.52	-70.50 Peak

EUT PHOTOGRAPHS

Please refer to the attachment 2501R48041E-RF External photo and 2501R48041E-RF Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2501R48041E-RF Test Setup photo.

******* END OF REPORT *******