



# FCC PART 15C TEST REPORT FOR CERTIFICATION On Behalf of

CE LINK LIMITED

QI2 Wireless Charger

Model Number: MPP15-1TCNB-J

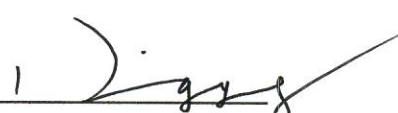
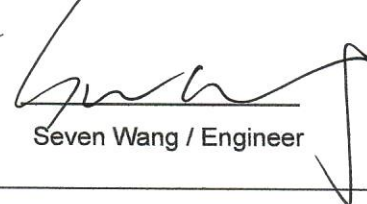

FCC ID: A4X-MPP15-1TCNB-J

Applicant:	CE LINK LIMITED
Address:	22 Dongkang Road, Dalingshan Town, Dongguan City, Guangdong China.
Prepared By:	EST Technology Co., Ltd.
	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China
Tel: 86-769-83081888-808	

Report Number:	ESTE-R2407038
Date of Test:	Jun. 12, 2024~ Jul. 04, 2024
Date of Report:	Jul. 05, 2024

## TABLE OF CONTENTS

Description	Page
TEST REPORT VERIFICATION.....	3
1. GENERAL INFORMATION .....	4
1.1. Description of Device (EUT).....	4
2. SUMMARY OF TEST .....	5
2.1. Summary of test result .....	5
2.2. Test Facilities.....	6
2.3. Measurement uncertainty .....	7
2.4. Assistant equipment used for test .....	7
2.5. Block Diagram .....	7
2.6. Test Mode .....	8
2.7. Test Equipment List.....	9
3. RADIATED EMISSION .....	10
3.1. Limit.....	10
3.2. Test Setup.....	11
3.3. Spectrum Analyzer Setting.....	12
3.4. Test Procedure.....	12
3.5. Test Result.....	14
4. ANTENNA REQUIREMENTS .....	26
4.1. Limit.....	26
4.2. Test Result.....	26
5. TEST SETUP PHOTO.....	27
6. EUT PHOTO .....	28

<b>Applicant:</b>	CE LINK LIMITED		
<b>Address:</b>	22 Dongkang Road, Dalingshan Town, Dongguan City, Guangdong China.		
<b>Manufacturer:</b>	CE LINK LIMITED		
<b>Address:</b>	22 Dongkang Road, Dalingshan Town, Dongguan City, Guangdong China.		
<b>Factory 1:</b>	SuiChuan CE LINK LIMITED		
<b>Address:</b>	SuiChuan county industrial park east zone, Ji'an city, Jiangxi province, China.		
<b>Factory 2:</b>	CE LINK VIET NAM COMPANY LIMITED.		
<b>Address:</b>	Lot CNSG04&CNSG06 Van Trung Industrial Zone, Viet Yen district, Bac Giang Province, Vietnam		
<b>E.U.T:</b>	Q12 Wireless Charger		
<b>Model Number:</b>	MPP15-1TCNB-J		
<b>Power Supply:</b>	Input: 5V===3A, 9V===2.22A Output: 5W/7.5W/15W		
<b>Trade Name:</b>	CE-LINK	<b>Serial No.:</b>	-----
<b>Date of Receipt:</b>	Jun. 12, 2024	<b>Date of Test:</b>	Jun. 12, 2024~ Jul. 04, 2024
<b>Test Specification:</b>	FCC Part 15 Subpart C ANSI C63.10:2013		
<b>Test Result:</b>	<p>The device described above is tested by EST Technology Co., Ltd. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart C requirements.</p> <p>This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd.</p>		
<b>Prepared by:</b>	 Ring Yang / Assistant	<b>Reviewed by:</b>	 Seven Wang / Engineer
		<b>Date:</b>	Jul. 05, 2024
		<b>Approved by:</b>	 Iceman Hu / Manager
<b>Other Aspects:</b>	None.		
Abbreviations: OK/P=passed    fail/F=failed    n.a/N=not applicable    E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products ,It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.			

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

Product Name	:	QI2 Wireless Charger
Model Number	:	MPP15-1TCNB-J
Operation Frequency	:	110.5KHz-205KHz; 384KHz
Max Wireless Charge Power	:	15W
Max Field Strength of Fundamental	:	76.52dB $\mu$ V/m
Modulation Type	:	FSK
Antenna Type	:	Induction coil
Sample Type	:	Prototype production

Note: For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.



## 2. SUMMARY OF TEST

### 2.1. Summary of test result

No.	Description of Test Item	FCC Standard Section	Results
1	Radiated Emission	15.205 15.209	PASS
2	AC Power Line Conducted Emissions	15.207	N/A
3	Antenna Requirement	15.203	PASS

Note: "N/A" denotes test is not applicable in this test report.  
Products are intended for use in vehicle environments only.

## 2.2. Test Facilities

EMC Lab : Accredited by CNAS, CHINA  
Registration No.: L5288  
This Accreditation is valid until: November 12, 2029

Recognized by FCC, USA  
Designation Number: CN1215  
This Recognition is valid until: January 31, 2026

Accredited by A2LA, USA  
Registration No.: 4366.01  
This Accreditation is valid until: January 31, 2026

Recognized by Industry Canada  
CAB identifier No.: CN0035  
This Recognition is valid until: January 31, 2026

Recognized by VCCI, Japan  
Registration No.: C-14103; T-20073; R-13663;  
R-20103; G-20097  
Date of registration: Apr. 20, 2020  
This Recognition is valid until: Apr. 19, 2026

Recognized by TUV Rheinland, Germany  
Registration No.: UA 50413872 0001  
Date of registration: July 31, 2018

Recognized by Intertek  
Registration No.: 2011-RTL-L2-64  
Date of registration: November 08, 2018

Name of Firm : EST Technology Co., Ltd.

Site Location : Chilingxiang, Qishantou, Santun, Houjie, Dongguan,  
Guangdong, China

### 2.3. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Conduction emission test	±3.48dB
Uncertainty for spurious emissions test (30MHz-1GHz)	±4.60 dB(Polarize: H)
	±4.68 dB(Polarize: V)
Uncertainty for spurious emissions test (1GHz to 18GHz)	±4.96dB
Uncertainty for radio frequency	7×10 <sup>-8</sup>
Uncertainty for conducted RF Power	1.08dB
Uncertainty for Power density test	0.26dB

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

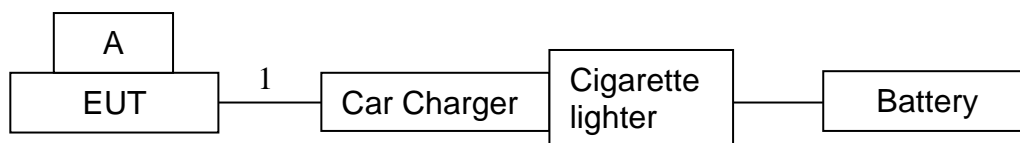
### 2.4. Assistant equipment used for test

Item	Equipment	Brand	Model Name/Type No.	FCC ID	Series No.
A	Load	N/A	N/A	N/A	N/A

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.0m	Type-C Line

### 2.5. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 meter high above ground.



(EUT: QI2 Wireless Charger)

## 2.6. Test Mode

The test mode was selected for the final test as listed below.

Test Item	Test Mode
Radiated Emission	Wireless Charging with Empty Load
	Wireless Charging with Half Load
	Wireless Charging with Full Load

Note: The Full Load is worst case, will be recorded in the report.



## 2.7. Test Equipment List

For Radiated Emission Test(9kHz-30MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 11,24	June 10,25
Active Loop Antenna	SCHWAREBECK	FMZB 1519B	EST-E054	LISAI	June 11,24	June 10,25
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
9kHz-30MHz Cable	N/A	EST-001	N/A	N/A	N/A	N/A

For Radiated Emission Test (30MHz-1000MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 11,24	June 10,25
Bilog Antenna	Teseq	CBL 6111D	EST-E034	LISAI	June 11,24	June 10,25
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
30-1000MHz Cable	N/A	EST-002	N/A	N/A	N/A	N/A

### 3. RADIATED EMISSION

#### 3.1. Limit

##### 15.209 Radiated emission limits

Frequency (MHz)	Field Strength( $\mu\text{V/m}$ )	Distance(m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Note:

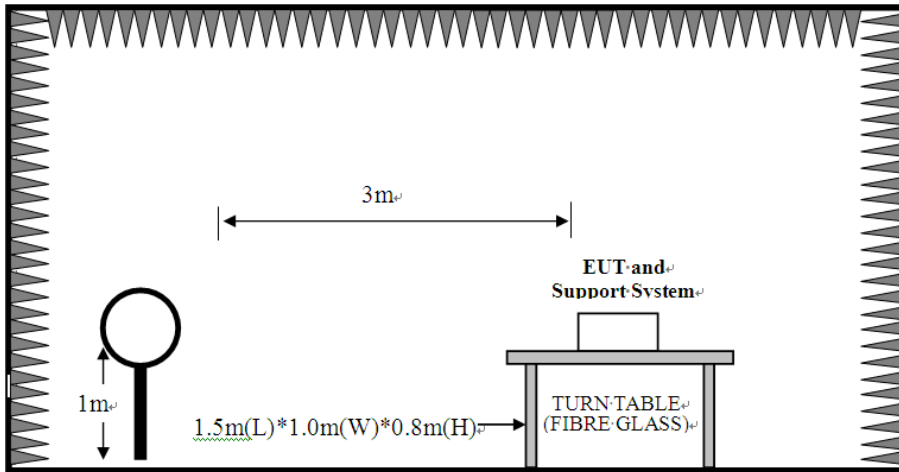
1. Emission level  $\text{dB}\mu\text{V} = 20 \log$  Emission level  $\mu\text{V/m}$ .
2. The smaller limit shall apply at the cross point between two frequency bands.
3. Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system

##### 15.205 Restricted frequency band

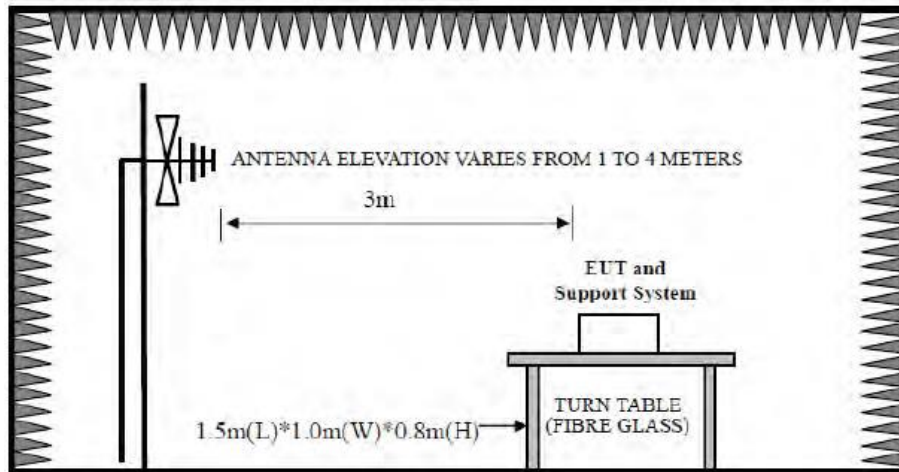
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )

### 3.2. Test Setup

9kHz~30MHz



30~1000MHz



### 3.3. Spectrum Analyzer Setting

#### For 9KHz-150KHz

Spectrum Parameters	Setting
RBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
VBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
Start frequency	9KHz
Stop frequency	150KHz
Sweep Time	Auto
Detector	PEAK/QP/AVG
Trace Mode	Max Hold

#### For 150KHz-30MHz

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

#### For 30MHz-1000MHz

Spectrum Parameters	Setting
RBW	120KHz
VBW	300KHz
Start frequency	30MHz
Stop frequency	1000MHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

### 3.4. Test Procedure

- a. EUT was placed on a turn table, which is 0.8 meter high above ground.
- b. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower.
- c. Set the EUT transmit continuously with maximum output power.
- d. Spectrum analyzer setting parameters in accordance with section 3.3.
- e. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
- f. For below 30MHz test, the center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates both coaxial and coplanar polarization to find out the maximum emission level.
- g. For above 30MHz test, the antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both coaxial and coplanar polarization of the antenna are set on test.
- h. Record the results in the test report.

Note:

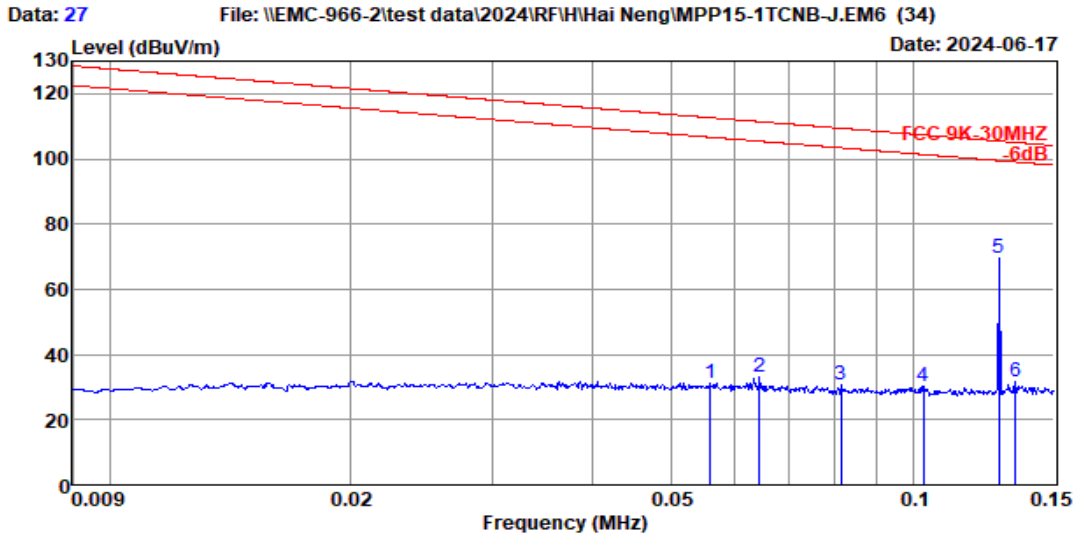
1. For emissions below 30MHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.
2. For emissions below 30MHz, if peak level comply with QP limit, then the QP level is deemed to comply with QP limit.
3. The frequency 128kHz are fundamental frequency For 15W.

### 3.5. Test Result

#### Radiated Emission Below 30MHz

EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878



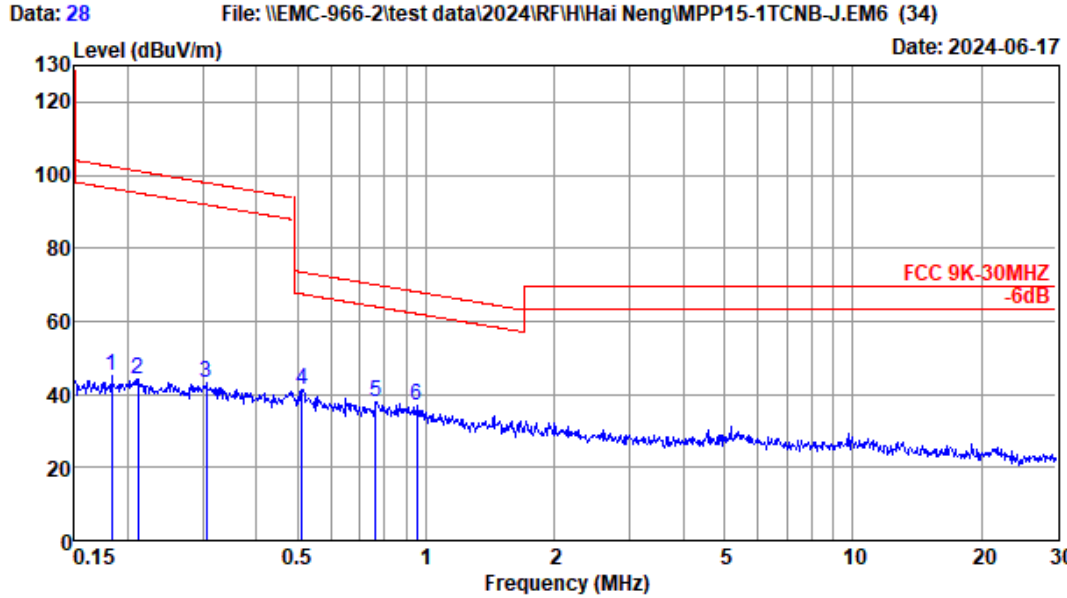
Site no. : 2# 966 chamber Data no. : 27  
 Dis. / Ant. : 3m FMZB 1519B Ant. pol. : COAXIAL  
 Limit : FCC 9K-30MHZ  
 Env. / Ins. : Temp:22.4°C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 7.5W

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.05603	20.90	0.10	10.18	31.18	112.64	81.46	Peak
2	0.06450	20.90	0.10	12.14	33.14	111.41	78.27	Peak
3	0.08146	20.90	0.10	9.94	30.94	109.39	78.45	Peak
4	0.10318	20.10	0.10	9.94	30.14	107.33	77.19	Peak
5	0.12783	19.80	0.10	49.55	69.45	105.47	36.02	Peak
6	0.13403	19.80	0.10	11.56	31.46	105.06	73.60	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878



Site no. : 2# 966 chamber Data no. : 28  
 Dis. / Ant. : 3m FMZB 1519B Ant. pol. : COAXIAL  
 Limit : FCC 9K-30MHz  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 7.5W

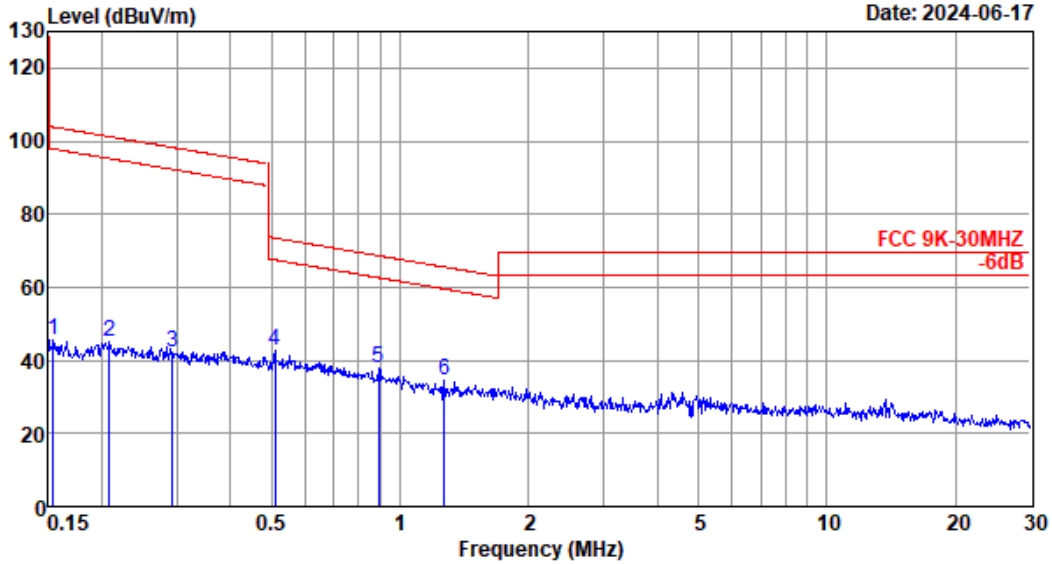
	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.18346	19.99	0.10	24.93	45.02	102.33	57.31	Peak
2	0.21167	20.08	0.10	24.10	44.28	101.09	56.81	Peak
3	0.30509	20.35	0.10	22.75	43.20	97.92	54.72	Peak
4	0.51278	20.88	0.10	20.46	41.44	73.41	31.97	Peak
5	0.76297	20.74	0.10	17.04	37.88	69.95	32.07	Peak
6	0.95313	20.64	0.10	16.04	36.78	68.02	31.24	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878

Data: 29 File: \\EMC-966-2\test data\2024\RF\H\Hai Neng\MPP15-1TCNB-J.EM6 (34) Date: 2024-06-17



Site no. : 2# 966 chamber Data no. : 29  
 Dis. / Ant. : 3m FMZB 1519B Ant. pol. : COPLANAR  
 Limit : FCC 9K-30MHZ  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 7.5W

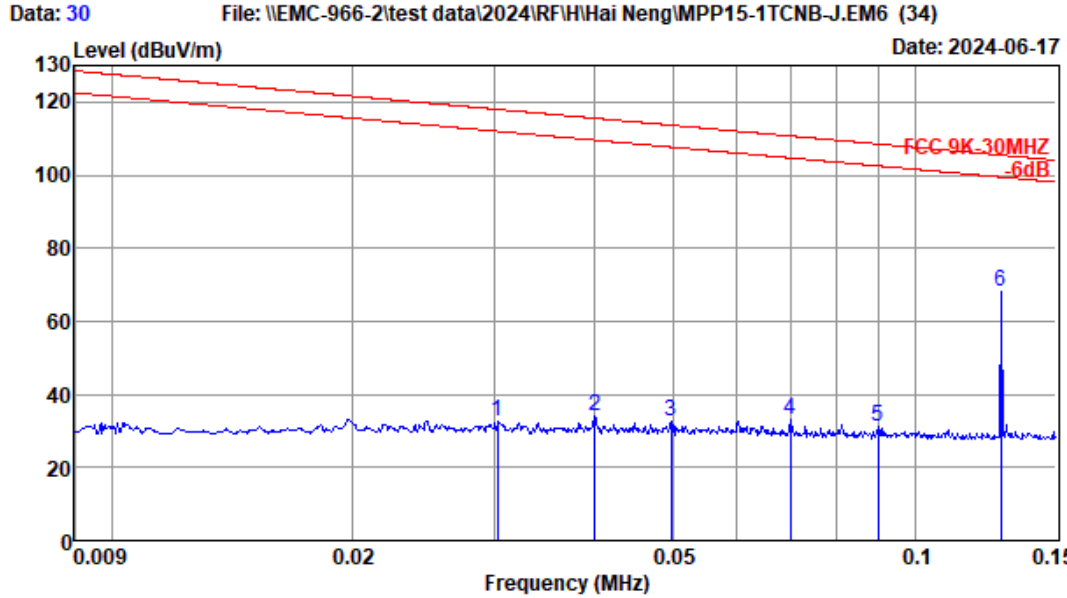
	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.15403	19.90	0.10	25.72	45.72	103.85	58.13	Peak
2	0.20833	20.08	0.10	25.12	45.30	101.23	55.93	Peak
3	0.29243	20.26	0.10	21.87	42.23	98.28	56.05	Peak
4	0.51007	20.88	0.10	21.68	42.66	73.45	30.79	Peak
5	0.88969	20.67	0.10	17.27	38.04	68.62	30.58	Peak
6	1.26884	20.60	0.10	13.84	34.54	65.54	31.00	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.



# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878



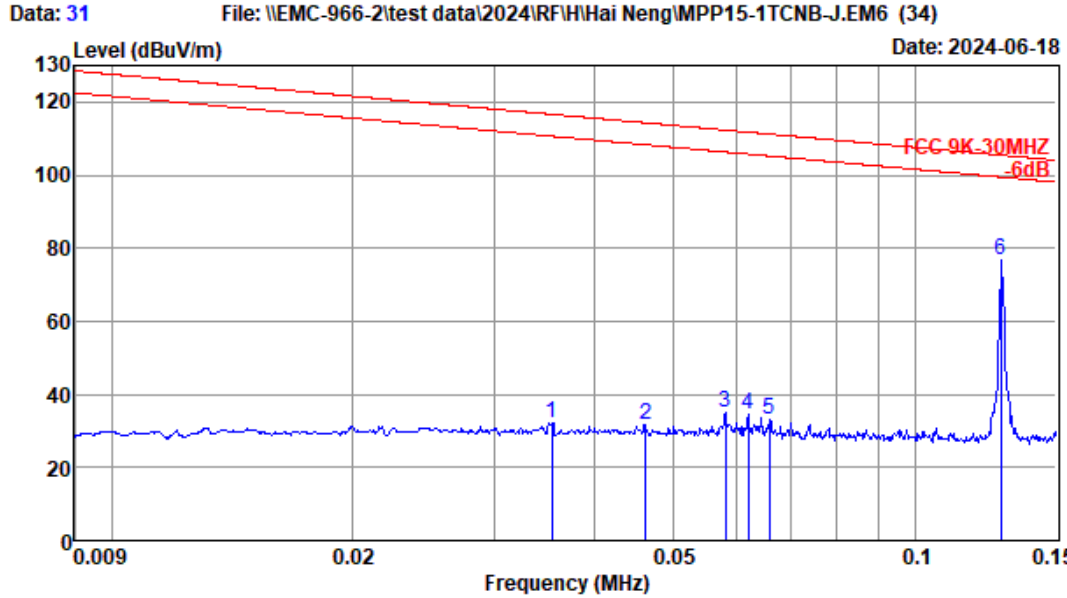
Site no. : 2# 966 chamber Data no. : 30  
 Dis. / Ant. : 3m FMZB 1519B Ant. pol. : COPLANAR  
 Limit : FCC 9K-30MHZ  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 7.5W

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.03026	20.60	0.10	12.14	32.84	117.99	85.15	Peak
2	0.03998	20.60	0.10	13.41	34.11	115.57	81.46	Peak
3	0.04979	20.60	0.10	11.82	32.52	113.66	81.14	Peak
4	0.06998	20.90	0.10	12.26	33.26	110.70	77.44	Peak
5	0.08989	20.10	0.10	11.08	31.28	108.53	77.25	Peak
6	0.12783	19.80	0.10	48.07	67.97	105.47	37.50	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878



Site no. : 2# 966 chamber Data no. : 31  
 Dis. / Ant. : 3m FMZB 1519B Ant. pol. : COAXIAL  
 Limit : FCC 9K-30MHZ  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 15W

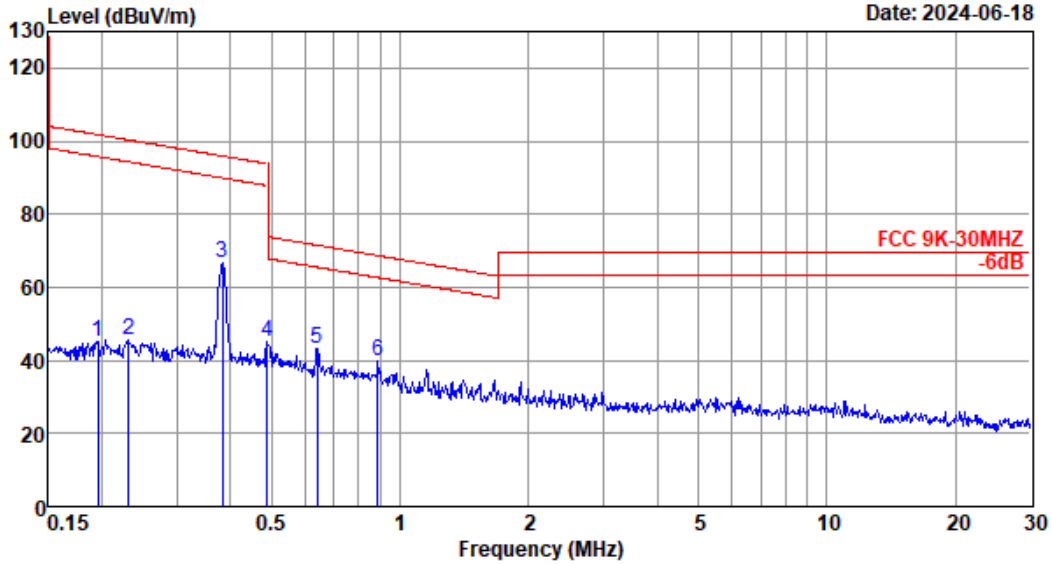
	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.03532	20.60	0.10	11.54	32.24	116.64	84.40	Peak
2	0.04628	20.60	0.10	11.12	31.82	114.30	82.48	Peak
3	0.05812	20.90	0.10	13.90	34.90	112.32	77.42	Peak
4	0.06201	20.90	0.10	13.68	34.68	111.76	77.08	Peak
5	0.06596	20.90	0.10	12.15	33.15	111.22	78.07	Peak
6	0.12783	19.80	0.10	56.62	76.52	105.47	28.95	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878

Data: 32      File: \\EMC-966-2\test data\2024\RF\H\Hai Neng\MPP15-1TCNB-J.EM6 (34)      Date: 2024-06-18



Site no. : 2# 966 chamber      Data no. : 32  
 Dis. / Ant. : 3m FMZB 1519B      Ant. pol. : COAXIAL  
 Limit : FCC 9K-30MHZ  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 15W

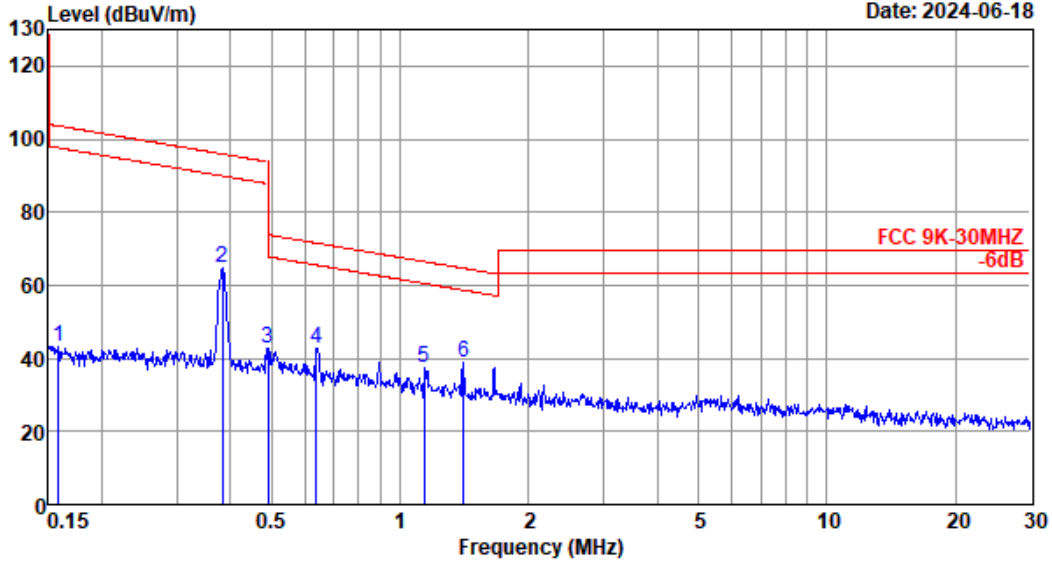
	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.19550	19.99	0.10	25.23	45.32	101.78	56.46	Peak
2	0.23162	20.08	0.10	25.41	45.59	100.31	54.72	Peak
3	0.38343	20.54	0.10	45.88	66.52	95.93	29.41	Peak
4	0.48890	20.90	0.10	24.02	45.02	93.82	48.80	Peak
5	0.64058	20.81	0.10	22.06	42.97	71.47	28.50	Peak
6	0.88499	20.67	0.10	19.28	40.05	68.67	28.62	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878

Data: 33 File: \\EMC-966-2\test data\2024\RF\H\Hai Neng\MPP15-1TCNB-J.EM6 (34) Date: 2024-06-18



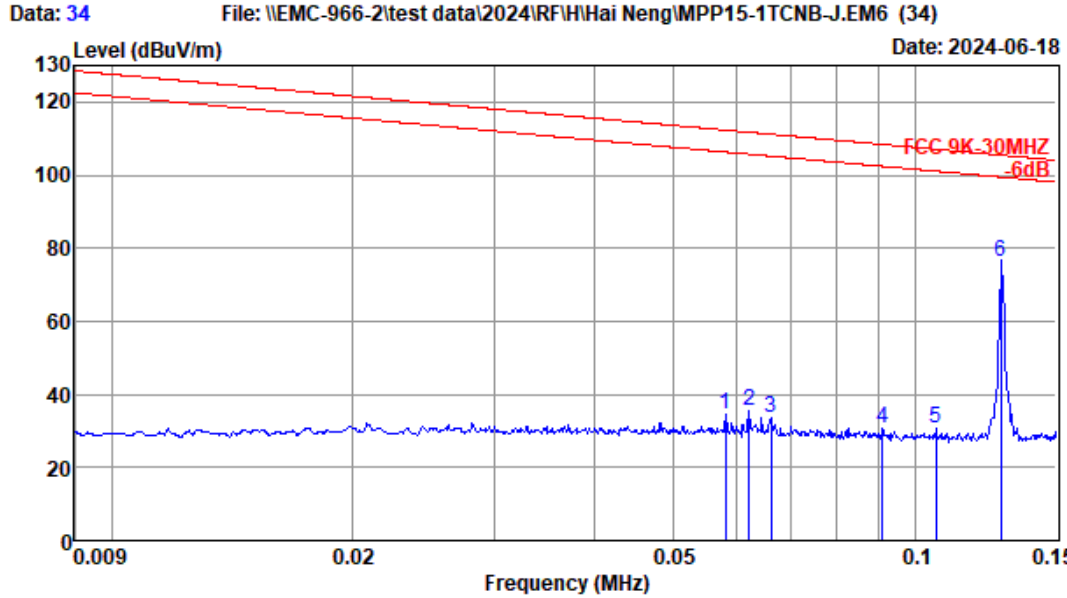
Site no. : 2# 966 chamber Data no. : 33  
 Dis. / Ant. : 3m FMZB 1519B Ant. pol. : COPLANAR  
 Limit : FCC 9K-30MHZ  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 15W

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.15816	19.90	0.10	23.41	43.41	103.62	60.21	Peak
2	0.38343	20.54	0.10	43.97	64.61	95.93	31.32	Peak
3	0.49150	20.90	0.10	21.92	42.92	73.77	30.85	Peak
4	0.63720	20.81	0.10	21.72	42.63	71.52	28.89	Peak
5	1.14126	20.60	0.10	16.70	37.40	66.46	29.06	Peak
6	1.41068	20.60	0.10	18.25	38.95	64.62	25.67	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878



Site no. : 2# 966 chamber Data no. : 34  
 Dis. / Ant. : 3m FMZB 1519B Ant. pol. : COPLANAR  
 Limit : FCC 9K-30MHZ  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 15W

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.05812	20.90	0.10	13.40	34.40	112.32	77.92	Peak
2	0.06218	20.90	0.10	14.38	35.38	111.73	76.35	Peak
3	0.06615	20.90	0.10	12.81	33.81	111.19	77.38	Peak
4	0.09116	20.10	0.10	10.69	30.89	108.41	77.52	Peak
5	0.10612	20.10	0.10	10.54	30.74	107.09	76.35	Peak
6	0.12783	19.80	0.10	56.60	76.50	105.47	28.97	Peak

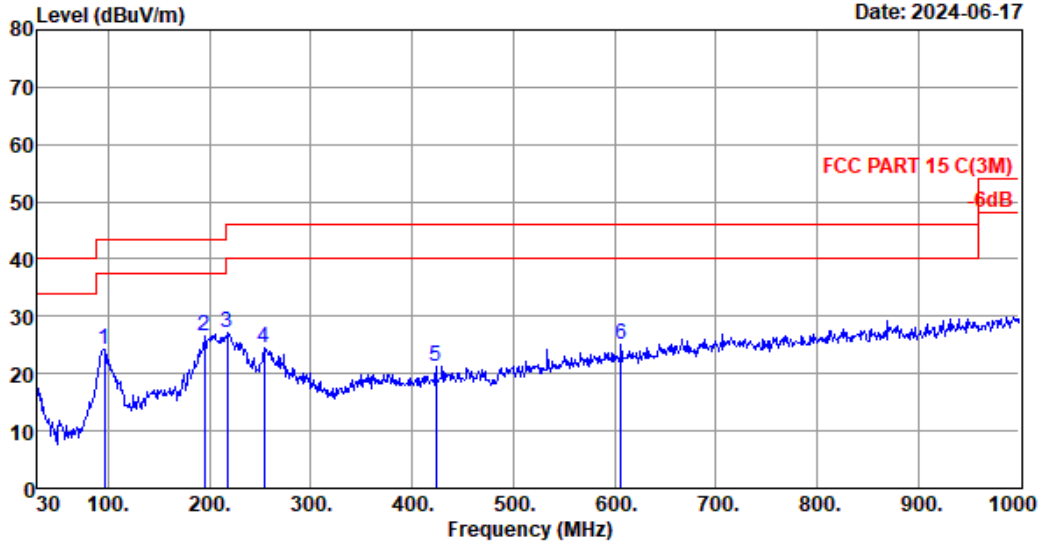
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

### Radiated Emission Above 30MHz

EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878

Data: 23 File: \\EMC-966-2\test data\2024\RF\H\Hai Neng\MPP15-1TCNB-J.EM6 (34) Date: 2024-06-17



Site no. : 2# 966 chamber Data no. : 23  
 Dis. / Ant. : 3m 47018 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 C(3M)  
 Env. / Ins. : Temp:22.4°C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 15W

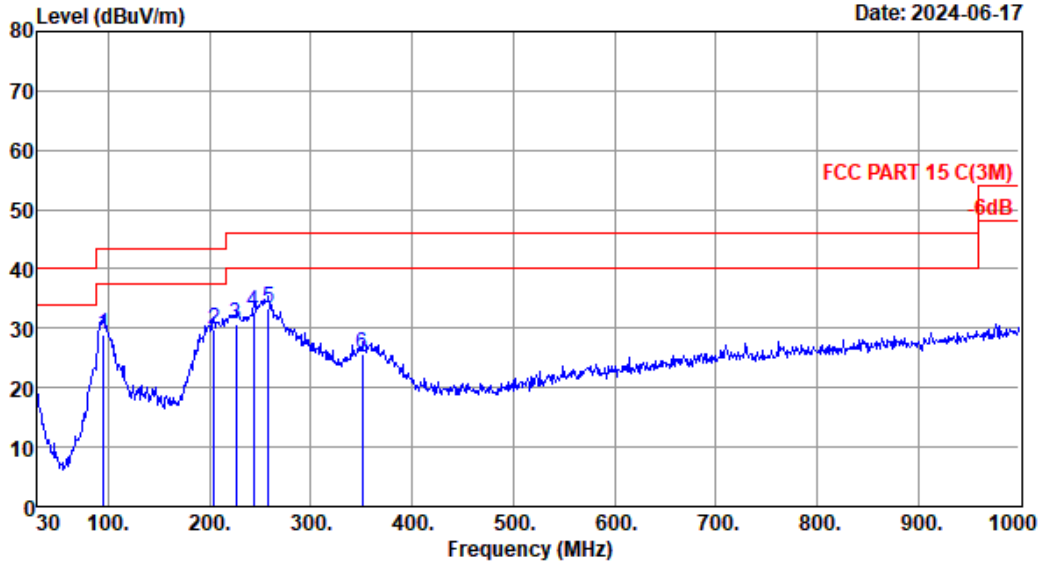
	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	95.96	10.02	1.52	12.80	24.34	43.50	19.16	QP
2	194.90	9.10	1.71	15.69	26.50	43.50	17.00	QP
3	217.21	9.78	1.81	15.54	27.13	46.00	18.87	QP
4	254.07	13.68	1.97	8.74	24.39	46.00	21.61	QP
5	423.82	17.04	2.66	1.47	21.17	46.00	24.83	QP
6	606.18	20.52	3.32	1.25	25.09	46.00	20.91	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878

Data: 24 File: \\EMC-966-2\test data\2024\RF\H\Hai Neng\MPP15-1TCNB-J.EM6 (34) Date: 2024-06-17



Site no. : 2# 966 chamber Data no. : 24  
 Dis. / Ant. : 3m 47018 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 C(3M)  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 15W

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	94.99	10.00	1.45	17.46	28.91	43.50	14.59	QP
2	204.60	9.00	1.75	19.06	29.81	43.50	13.69	QP
3	225.94	10.84	1.84	17.99	30.67	46.00	15.33	QP
4	243.40	11.90	1.92	18.83	32.65	46.00	13.35	QP
5	257.95	14.02	1.99	17.29	33.30	46.00	12.70	QP
6	351.07	15.62	2.47	7.72	25.81	46.00	20.19	QP

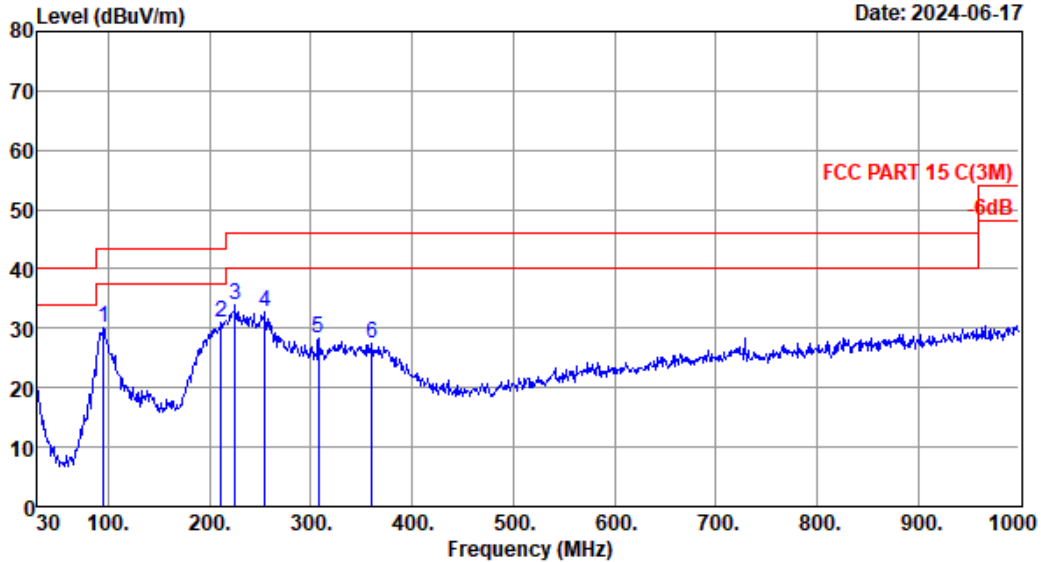
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878

Data: 25 File: \\EMC-966-2\test data\2024\RF\H\Hai Neng\MPP15-1TCNB-J.EM6 (34)

Date: 2024-06-17



Site no. : 2# 966 chamber Data no. : 25  
 Dis. / Ant. : 3m 47018 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 C(3M)  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
 7.5W

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	94.99	10.00	1.45	18.77	30.22	43.50	13.28	QP
2	211.39	9.22	1.78	19.90	30.90	43.50	12.60	QP
3	224.97	10.80	1.84	21.39	34.03	46.00	11.97	QP
4	255.04	13.90	1.98	17.02	32.90	46.00	13.10	QP
5	307.42	14.10	2.25	11.87	28.22	46.00	17.78	QP
6	360.77	15.82	2.49	9.04	27.35	46.00	18.65	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.



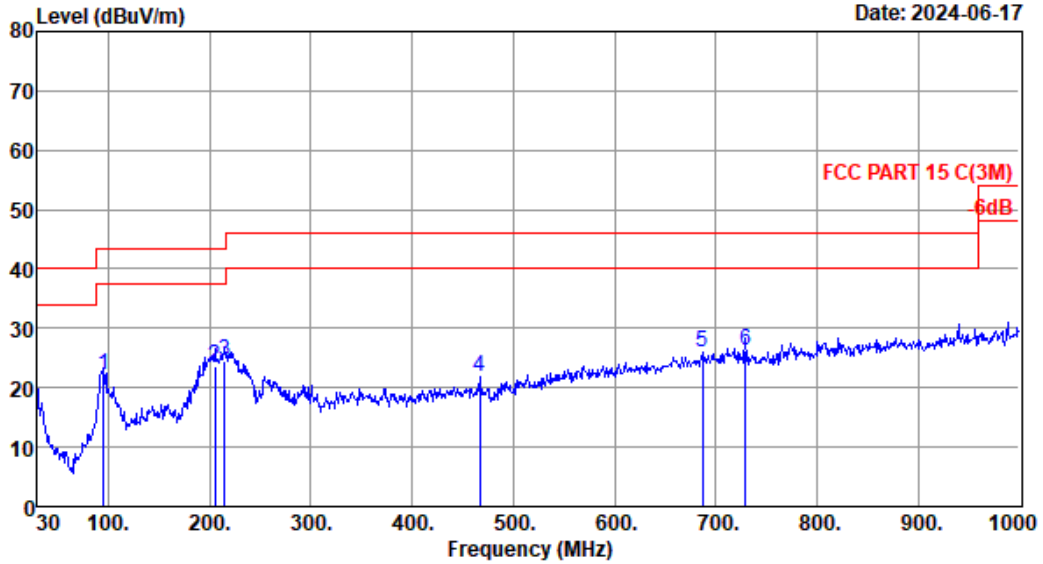
# EST Technology

Chilingxiang, Qishantou, Santun,  
Houjie, Dongguan, Guangdong, China  
Tel: +86-769-83081888  
Fax: +86-769-83081878

Data: 26

File: \\EMC-966-2\test data\2024\RF\H\Hai Neng\MPP15-1TCNB-J.EM6 (34)

Date: 2024-06-17



Site no. : 2# 966 chamber                      Data no. : 26  
 Dis. / Ant. : 3m 47018                      Ant. pol. : VERTICAL  
 Limit : FCC PART 15 C(3M)  
 Env. / Ins. : Temp:22.4'C;Humi:61.5%;Press:101.33kPa  
 Engineer : Eric  
 EUT : QI2 Wireless Charger  
 Power : DC 9V  
 M/N : MPP15-1TCNB-J  
 Test Mode : TX Mode  
               7.5W

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	94.99	10.00	1.45	10.81	22.26	43.50	21.24	QP
2	205.57	9.02	1.76	12.74	23.52	43.50	19.98	QP
3	215.27	9.70	1.80	13.00	24.50	43.50	19.00	QP
4	466.50	17.66	2.81	1.46	21.93	46.00	24.07	QP
5	686.69	21.84	3.57	0.62	26.03	46.00	19.97	QP
6	729.37	22.00	3.69	0.54	26.23	46.00	19.77	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. Margin= Limit - Emission Level.  
 3. The emission levels that are 20dB below the official limit are not reported.

## 4. ANTENNA REQUIREMENTS

### 4.1. Limit

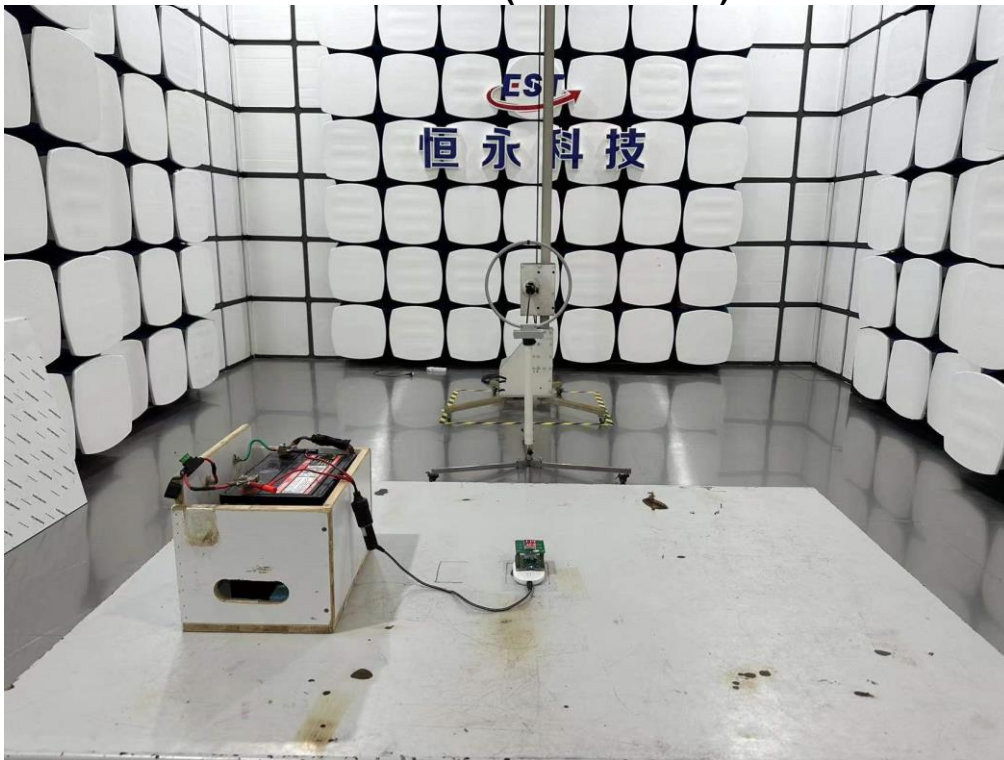
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

### 4.2. Test Result

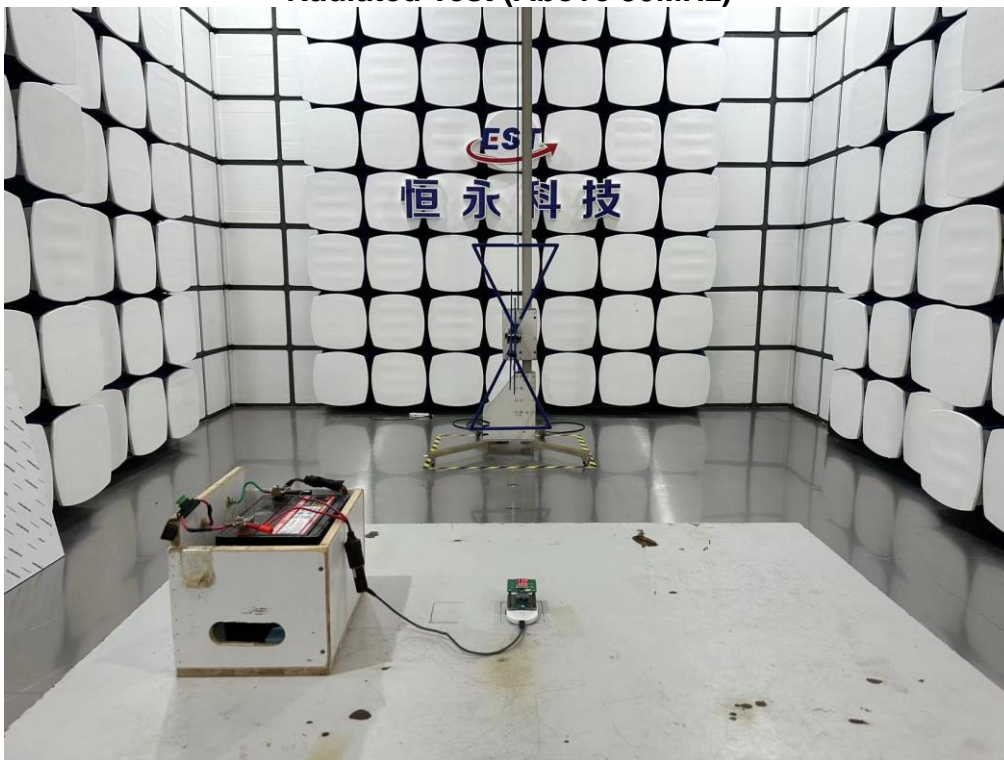
The antennas used for this product is Coil antenna ,so compliance with antenna requirements. ( Please refer to the EUT photo for details)

## 5. TEST SETUP PHOTO

Radiated Test (Below 30MHz)

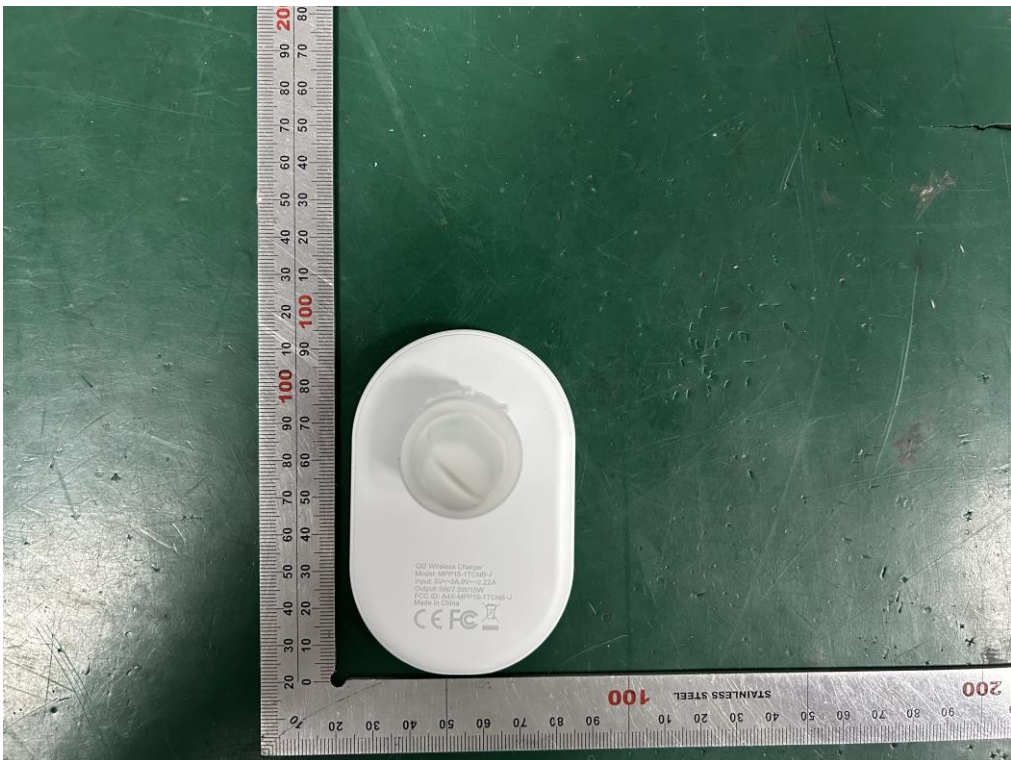


Radiated Test (Above 30MHz)



## 6. EUT PHOTO

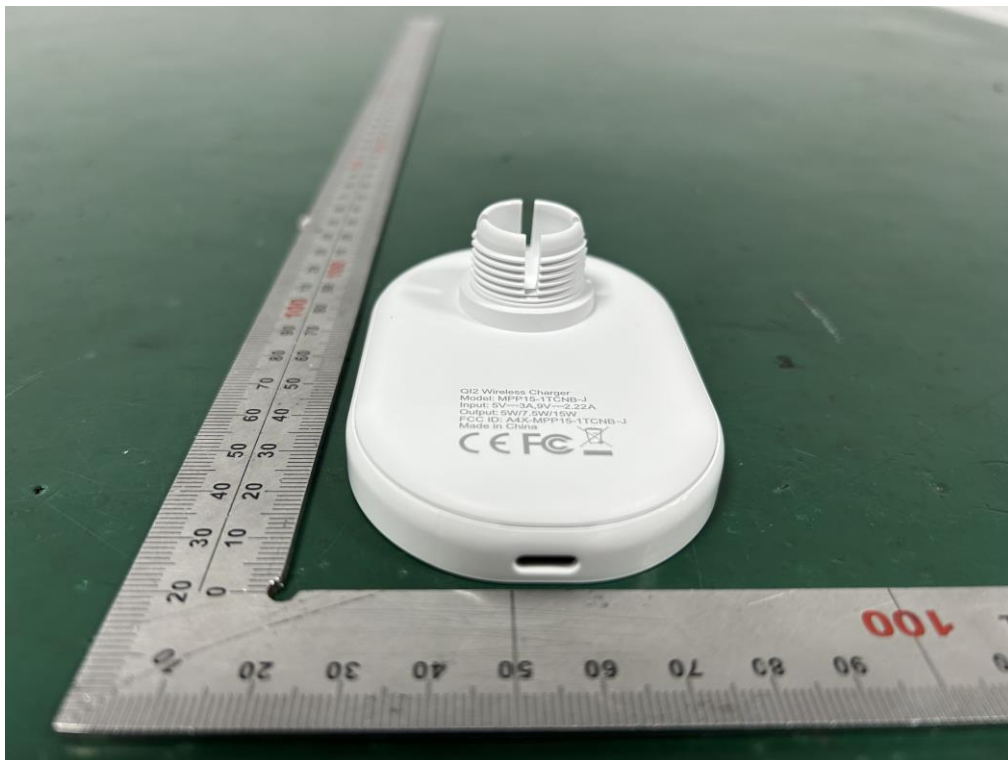
**External Photos**  
M/N: MPP15-1TCNB-J



**External Photos**  
M/N: MPP15-1TCNB-J



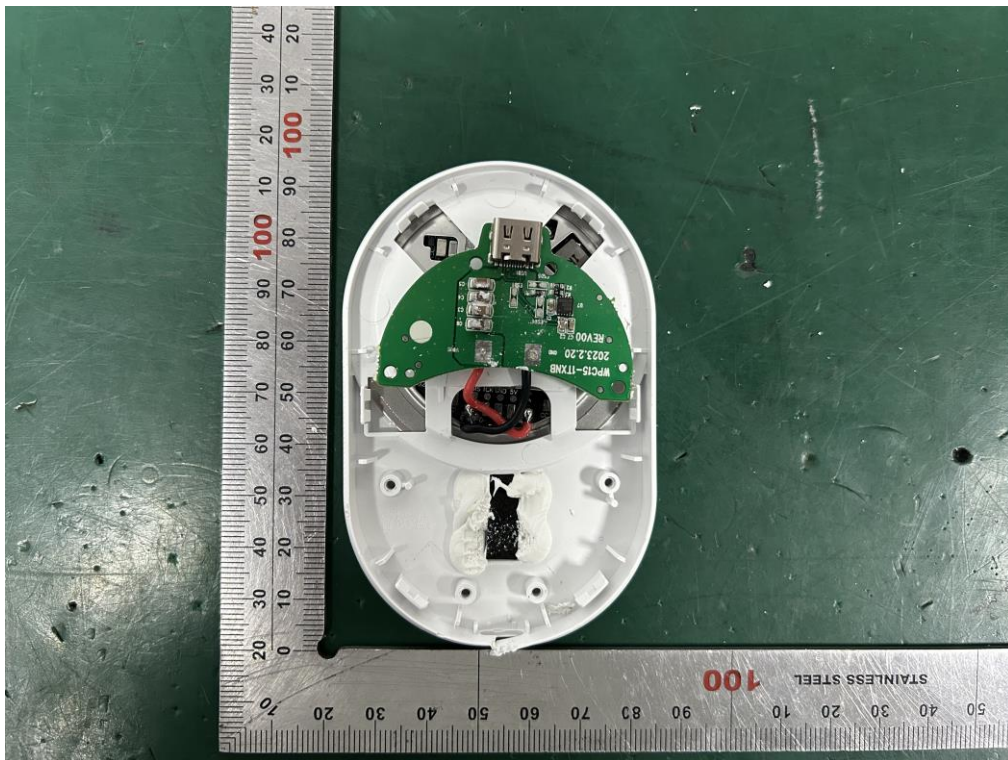
**External Photos**  
M/N: MPP15-1TCNB-J



**External Photos**  
M/N: MPP15-1TCNB-J

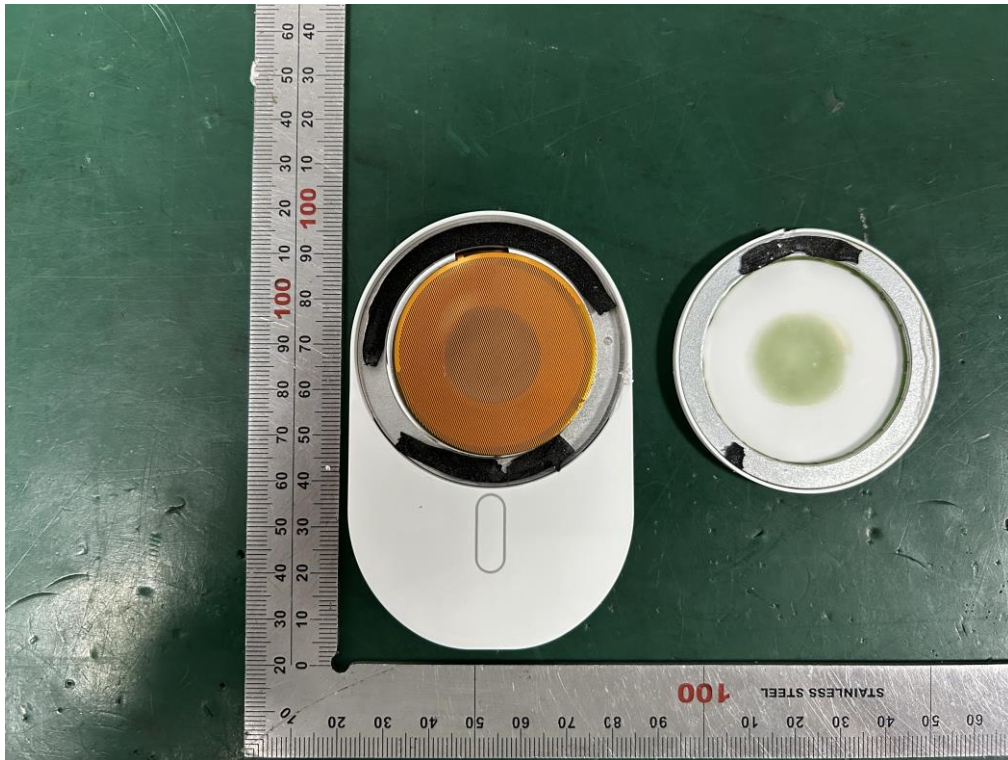


**Internal Photos**  
M/N: MPP15-1TCNB-J

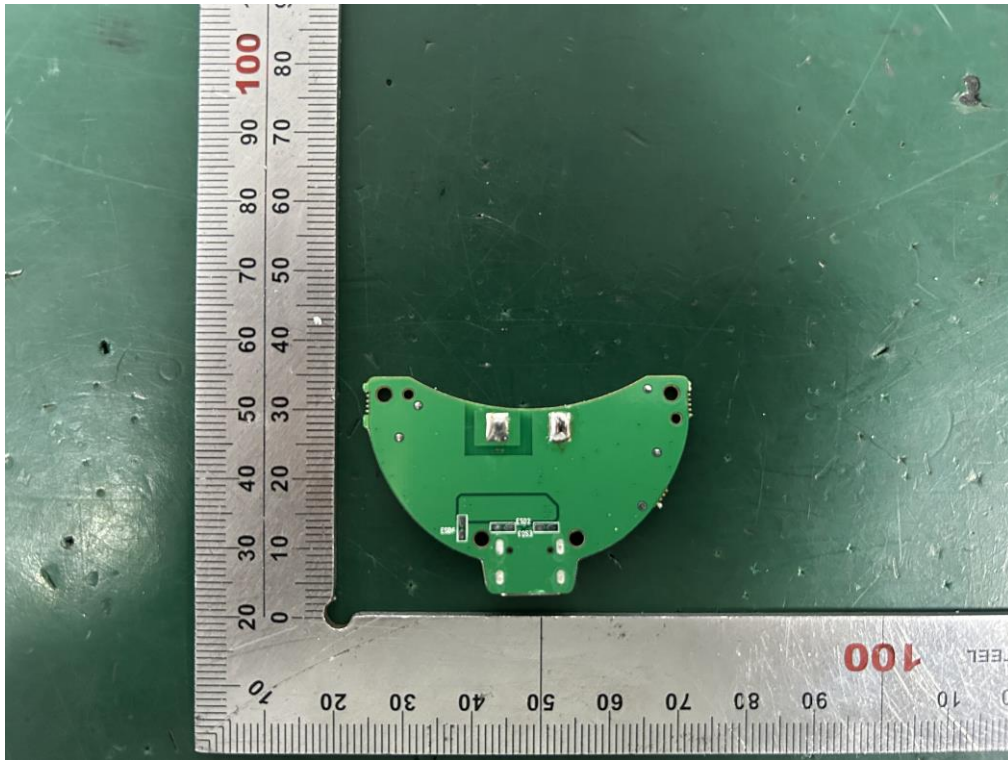
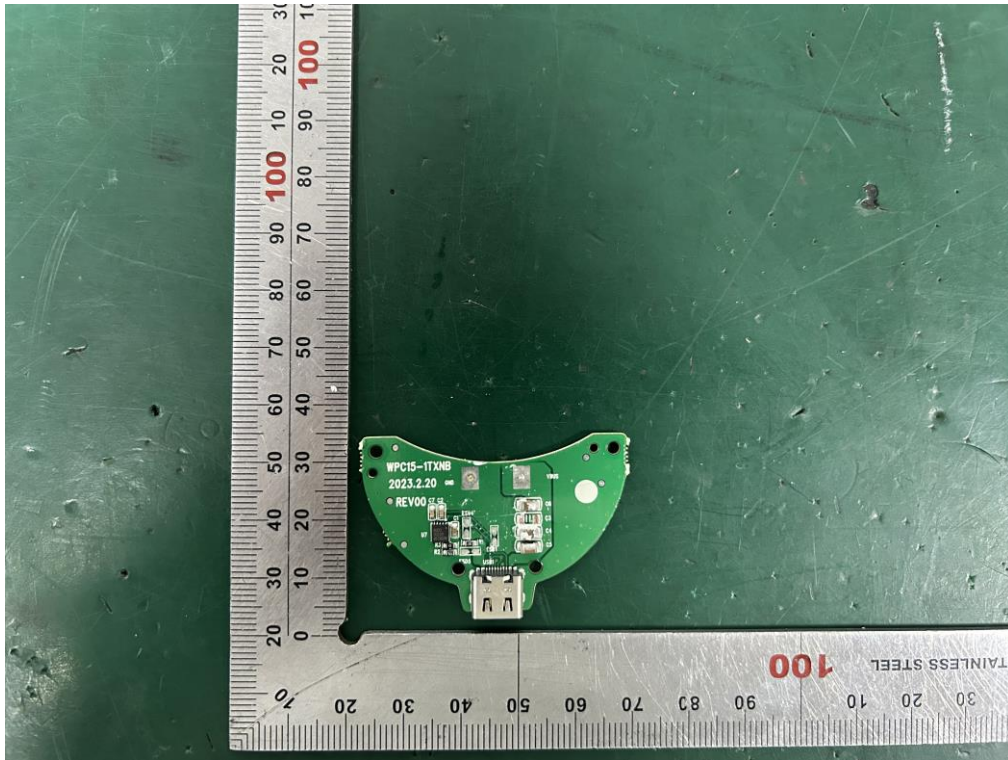




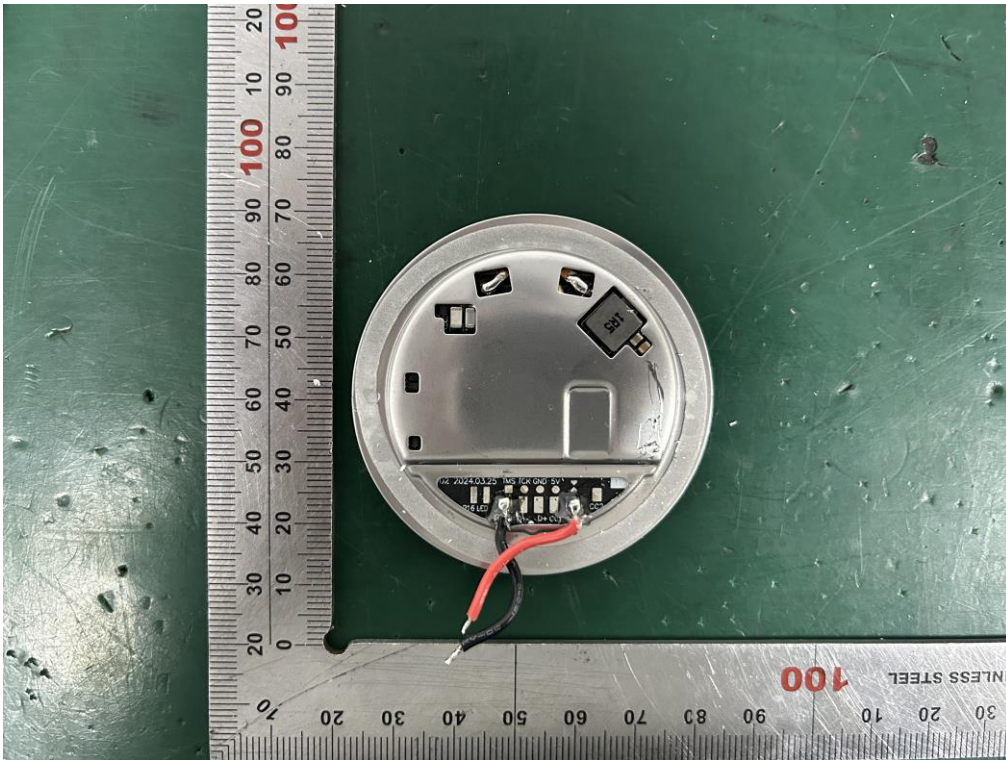
**Internal Photos**  
M/N: MPP15-1TCNB-J



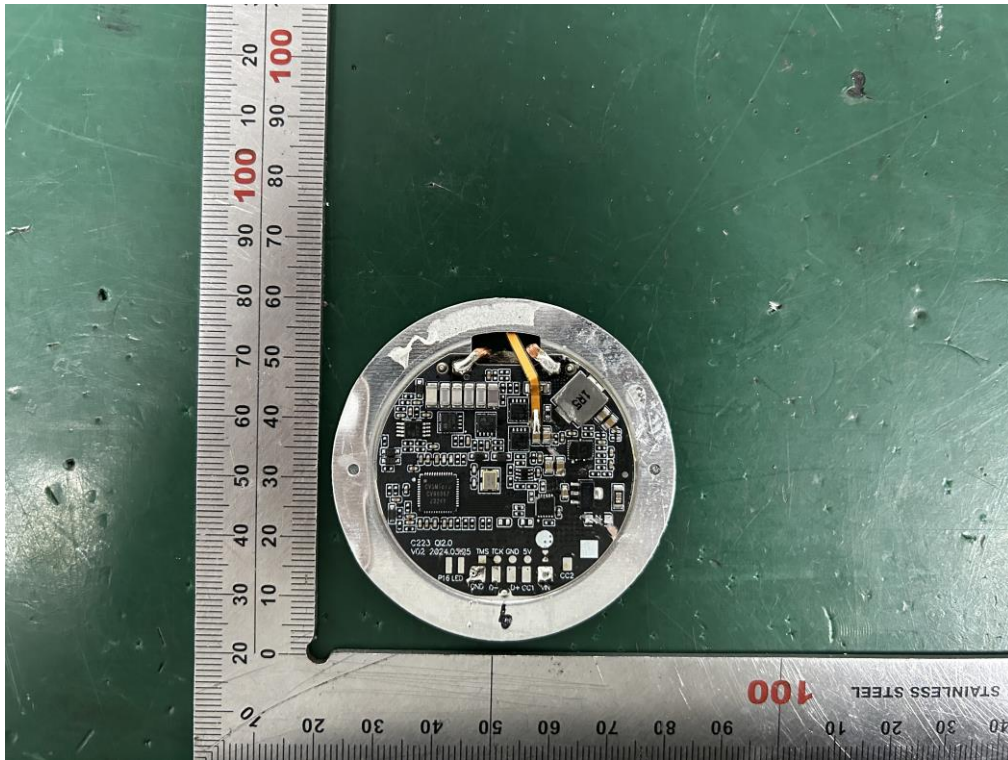
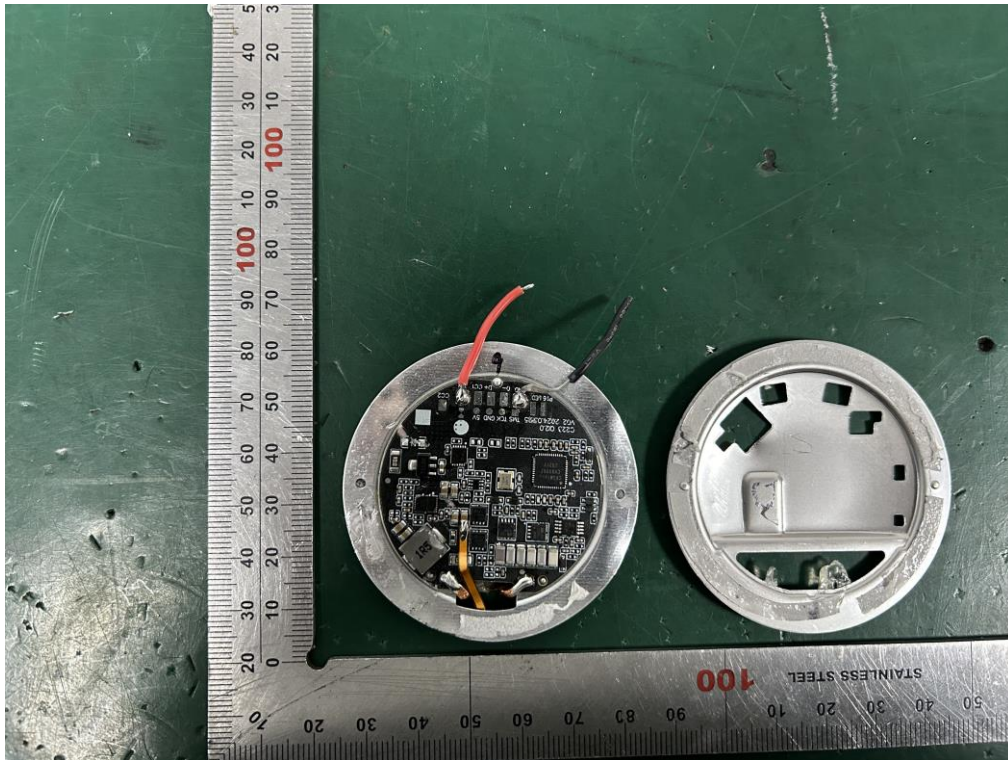
**Internal Photos**  
M/N: MPP15-1TCNB-J



**Internal Photos**  
M/N: MPP15-1TCNB-J

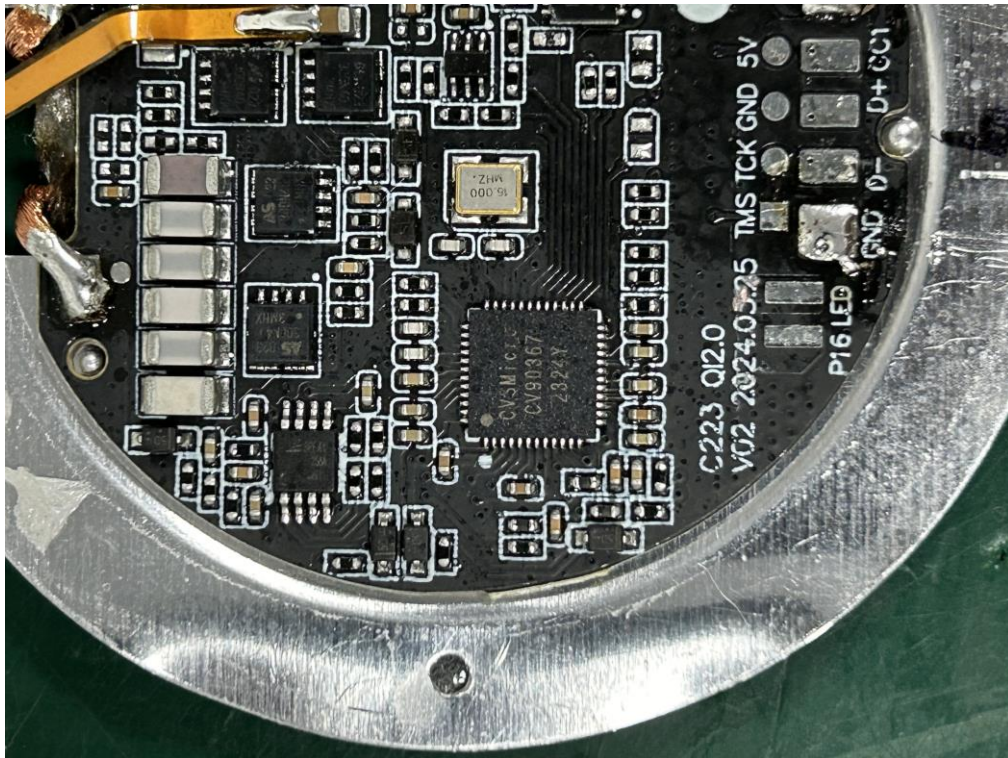


**Internal Photos**  
M/N: MPP15-1TCNB-J



**Internal Photos**  
M/N: MPP15-1TCNB-J

Coil  
Antenna



**End of Test Report**