中认信通
CHINA CERTIFICATION ICT CO.,LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

TEST REPORT

Applicant: **INFINIX MOBILITY LIMITED**

Address: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTR E 19-25 SHAN MEI STREET FOTAN NT HONGKONG

FCC ID: **2AIZN-X6858**

Product Name: **Mobile Phone**

Standard(s): **47 CFR Part 15, Subpart C**
ANSI C63.10-2013

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: **2403Y36748E-RF-00I**

Date Of Issue: **2024/12/19**

Reviewed By: **Calvin Chen**

Title: RF Engineer

Approved By: **Sun Zhong**

Title: Manager

Test Laboratory: **China Certification ICT Co., Ltd (Dongguan)**
No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China

Tel: +86-769-83085888
www.ccttt.com.cn

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, 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. : 442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk "★".

Each test item follows the test standard(s) without deviation.

CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2403Y36748E-RF-00I	Original Report	2024/12/19

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Mobile Phone
EUT Model:	X6858
Operation Frequency:	112 kHz
Rated Input Voltage:	DC 3.91V from battery or DC 5V/5-10V/11V charging from adapter
Wireless Output:	4 Watts
Sample Number:	2TEK-1(Type 1), 2TEK-3(Type 2)
EUT Received Date:	2024/10/23
EUT Received Status:	Good
Note: The EUT has two configurations that Type 1 and Type 2 are electrically identical. Please refer to the declaration letter for more detail, which was provided by manufacturer. All test item performs on two configurations.	

Antenna Information Detail▲:

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Coil	Unknown	Unknown	Unknown

The Method of §15.203 Compliance:

☒Antenna was permanently attached to the unit.

☐Antenna use a unique type of connector to attach to the EUT.

☐Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Accessory Information:

Accessory Description	Manufacturer	Model
Adapter	Infinix	U450XSB

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in normal use Mode, which was provided by the manufacturer.
Equipment Modifications:	No
EUT Exercise Software:	No

1.2.2 Support Equipment List and Details

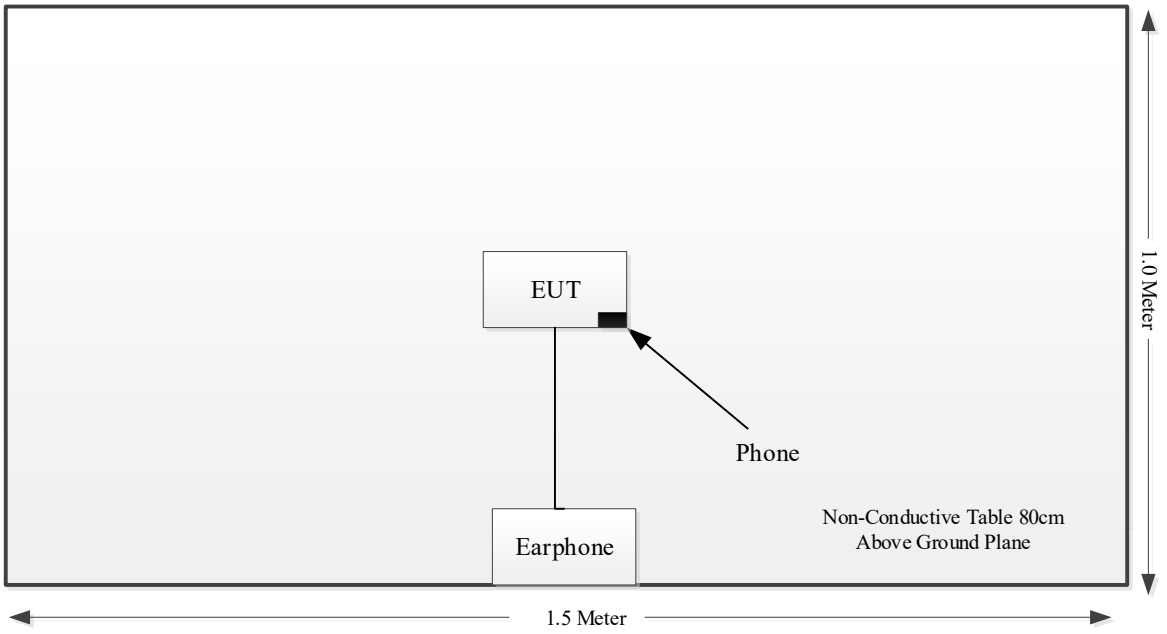
Manufacturer	Description	Model	Serial Number
Infinix	Phone	X6855	Unknown
Unknown	Earphone	Unknown	Unknown

1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Eraphone	No	No	1.2	EUT	Earphone

1.2.4 Block Diagram of Test Setup

Spurious emissions:



1.3 Measurement Uncertainty

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

Parameter	Measurement Uncertainty
radiated Emissions	9kHz~30MHz: 4.12dB 30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Description of Test	Result
FCC§15.207	AC Line Conducted Emission	Not Applicable
FCC§15.209 §15.205	Radiated Emission Test	Compliant
FCC§15.215	20 dB Emission Bandwidth	Compliant
FCC§15.203	Antenna Requirement	Compliant
FCC§1.1310 §2.1093	Maximum Permissible Exposure (MPE)	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

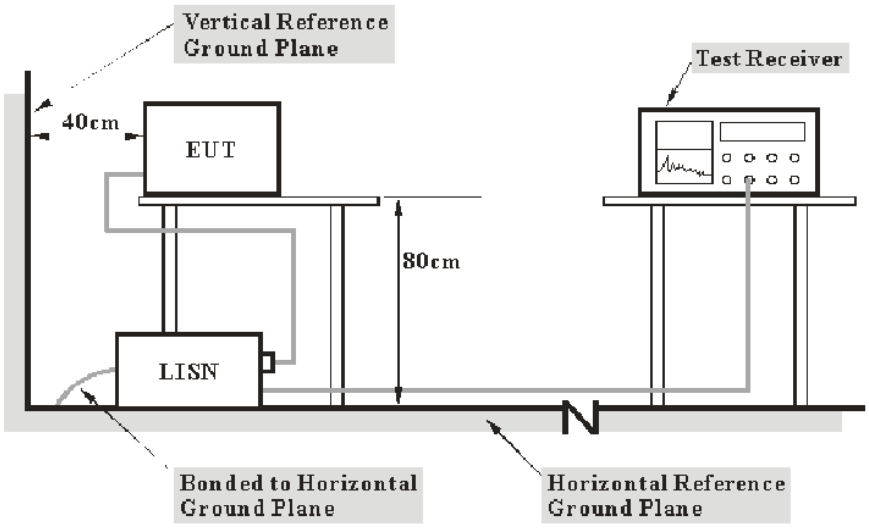
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.1.2 EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 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 per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

3.1.3 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

3.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

3.2 Radiated Emissions

3.2.1 Applicable Standard

FCC §15.209

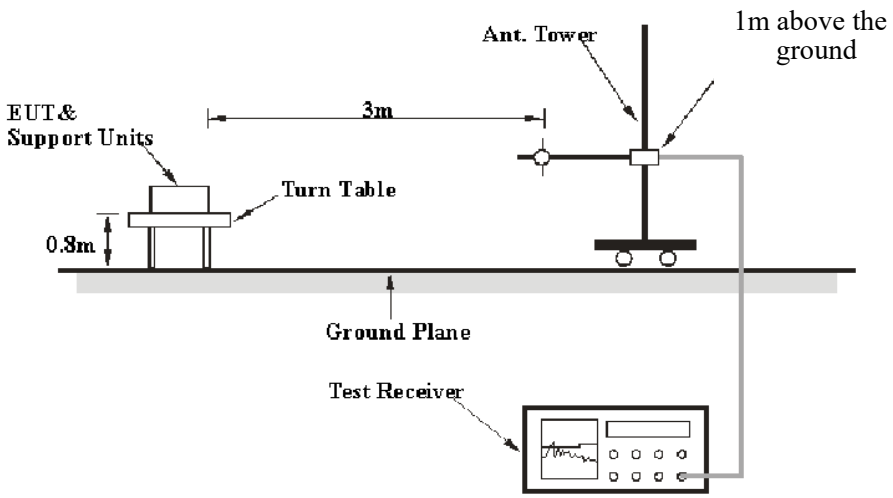
(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

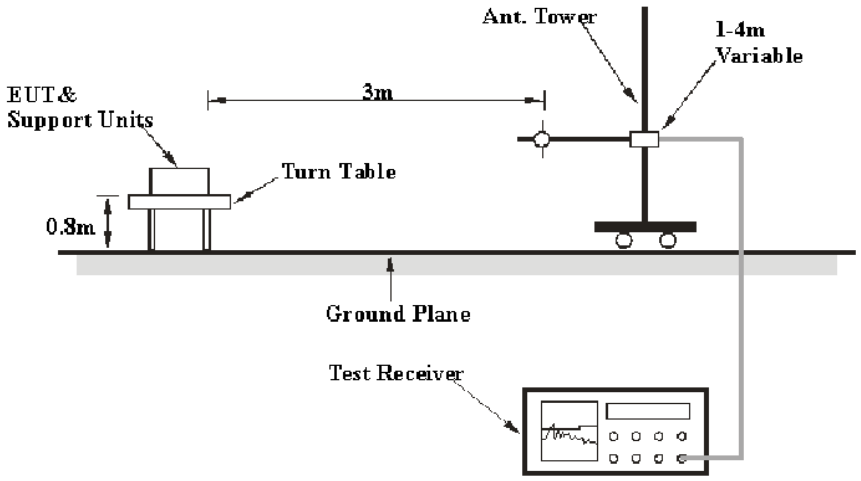
**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permItted under other sections of this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

3.2.2 EUT Setup

9kHz-30MHz:



30MHz-1GHz:



The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 limits.

The spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 1 GHz.

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

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	300 Hz	1 kHz	/	PK
	/	/	200 Hz	QP/AV
150 kHz – 30 MHz	10 kHz	30 kHz	/	PK
	/	/	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	/	PK
			120 kHz	QP

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz, employing an average detector.

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

3.2.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:
Result = Reading + Factor
Factor = Antenna Factor + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:
Margin = Limit – Result

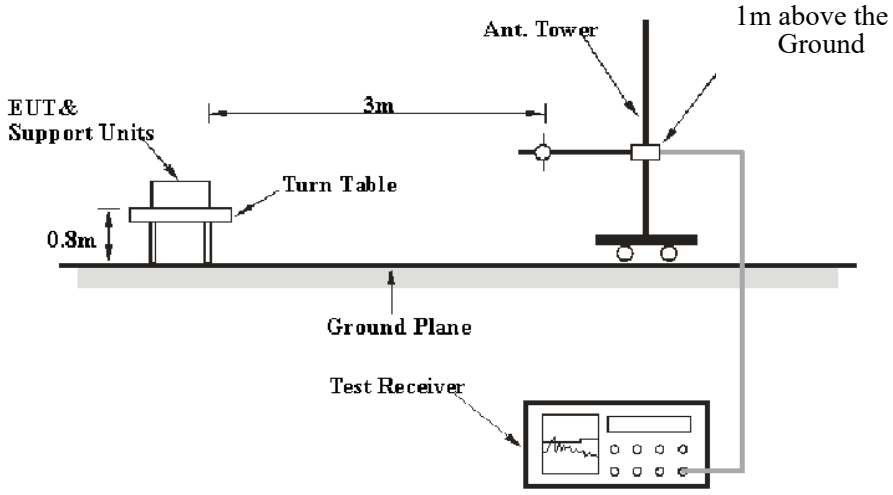
3.3 20 dB Emission Bandwidth:

3.3.1 Applicable Standard

FCC §15.215

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. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of band operation.

3.3.2 EUT Setup



3.3.3 Test Procedure

1. Position the EUT on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
2. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
3. Measure the 99% Occupied bandwidth use the 99% Occupied bandwidth function of the test equipment.

3.4 Antenna Requirement

3.4.1 Applicable Standard

FCC §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. 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.

3.4.2 Judgment

Compliant. Please refer to the Antenna Information detail in Section 1.

4. Test DATA AND RESULTS

4.1 AC Line Conducted Emissions

Not Applicable, the device was powered by battery when operating.

4.2 Radiated Emissions

Sample Number:	2TEK-1, 2TEK-3	Test Date:	2024/11/8~2024/12/16
Test Site:	966-2	Test Mode:	Wireless Charging
Tester:	Roinin Fu	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.2-25.9	Relative Humidity: (%)	56-57	ATM Pressure: (kPa)	100.3-101.7

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
BACL	Loop Antenna	1313-1A	3110611	2023/12/4	2026/12/3
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0300-01	2024/1/11	2025/1/10
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0500-01	2024/1/11	2025/1/10
Sunol Sciences	Antenna	JB6	A082520-5	2023/12/1	2026/11/30
R&S	EMI Test Receiver	ESR3	102724	2024/2/29	2025/2/28
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0100-03	2023/12/4	2024/12/3
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0370-01	2023/12/4	2024/12/3
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0100-03	2024/12/3	2025/12/2
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0370-01	2024/12/3	2025/12/2
XQY	Coaxial Cable	XQY-CMR400UF-NJ-NJ-7M	24056379	2024/6/11	2025/6/10
Sonoma	Amplifier	310N	186165	2023/12/4	2024/12/3
Sonoma	Amplifier	310N	186165	2024/12/3	2025/12/2
Audix	Test Software	E3	191218 (V9)	N/A	N/A

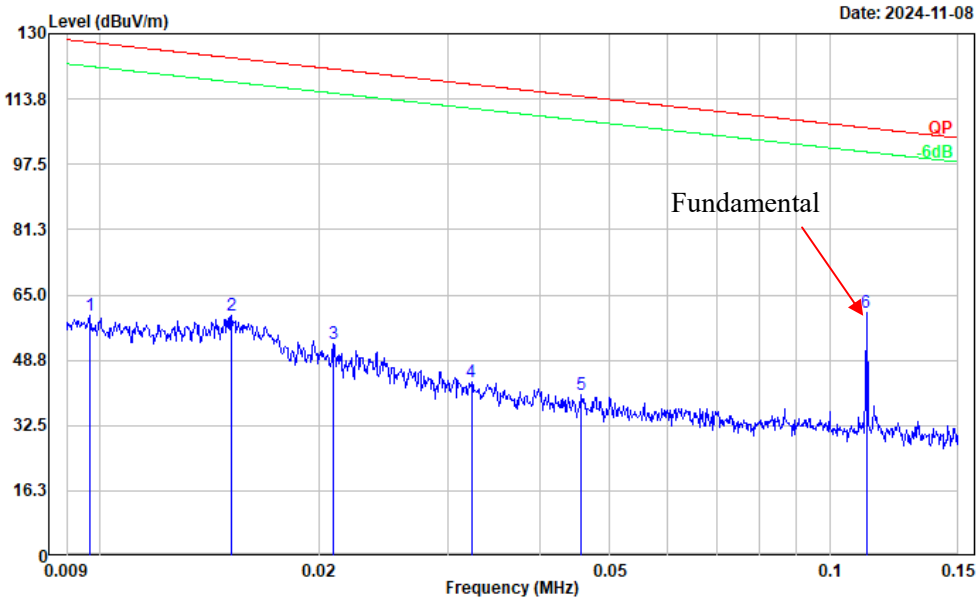
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

After pre-scan in the X, Y and Z axes of orientation, the worst case is refer to plots.

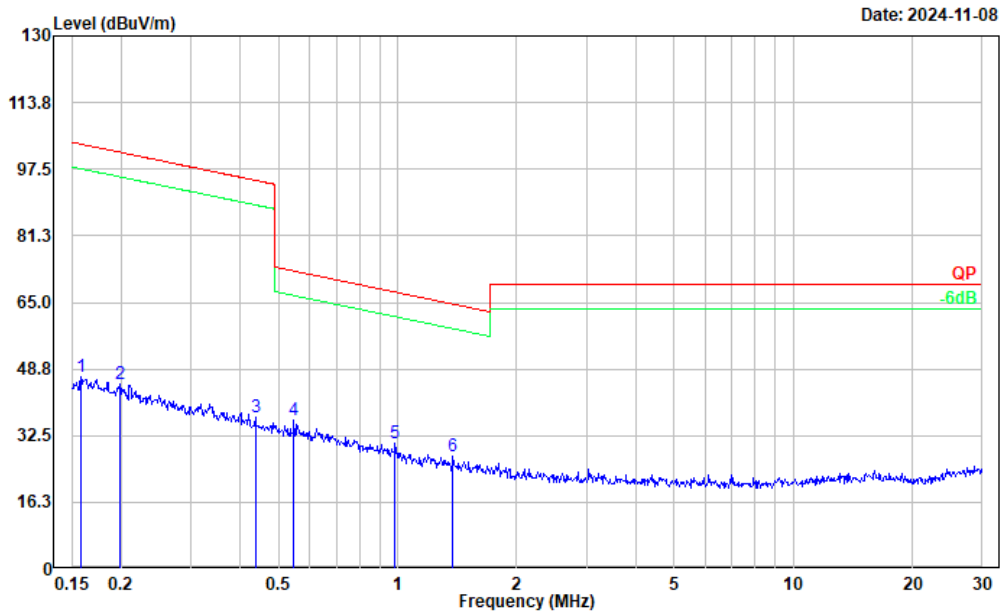
Type 1:
1)9k-30MHz
Parallel

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.010	24.91	34.84	59.75	127.88	68.13	Peak
2	0.015	27.83	31.91	59.74	124.00	64.26	Peak
3	0.021	23.62	29.10	52.72	121.21	68.49	Peak
4	0.032	19.11	24.15	43.26	117.43	74.17	Peak
5	0.046	18.94	21.35	40.29	114.42	74.13	Peak
6	0.112	46.42	14.07	60.49	106.60	46.11	Peak

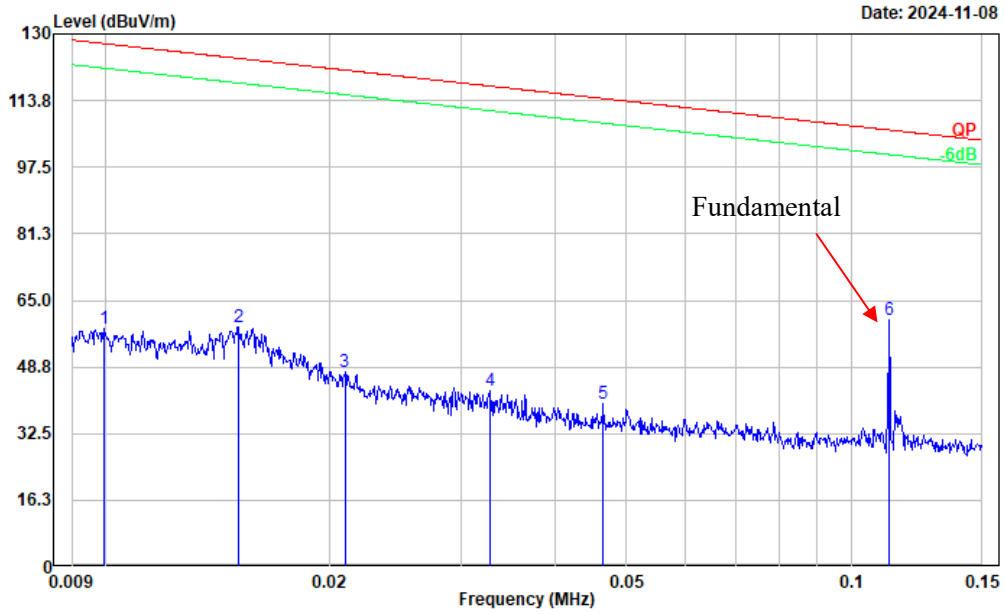
Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.158	34.91	11.94	46.85	103.62	56.77	Peak
2	0.199	34.99	10.05	45.04	101.64	56.60	Peak
3	0.437	34.56	2.33	36.89	94.79	57.90	Peak
4	0.546	35.78	0.42	36.20	72.83	36.63	Peak
5	0.984	34.76	-4.07	30.69	67.62	36.93	Peak
6	1.381	32.92	-5.56	27.36	64.61	37.25	Peak

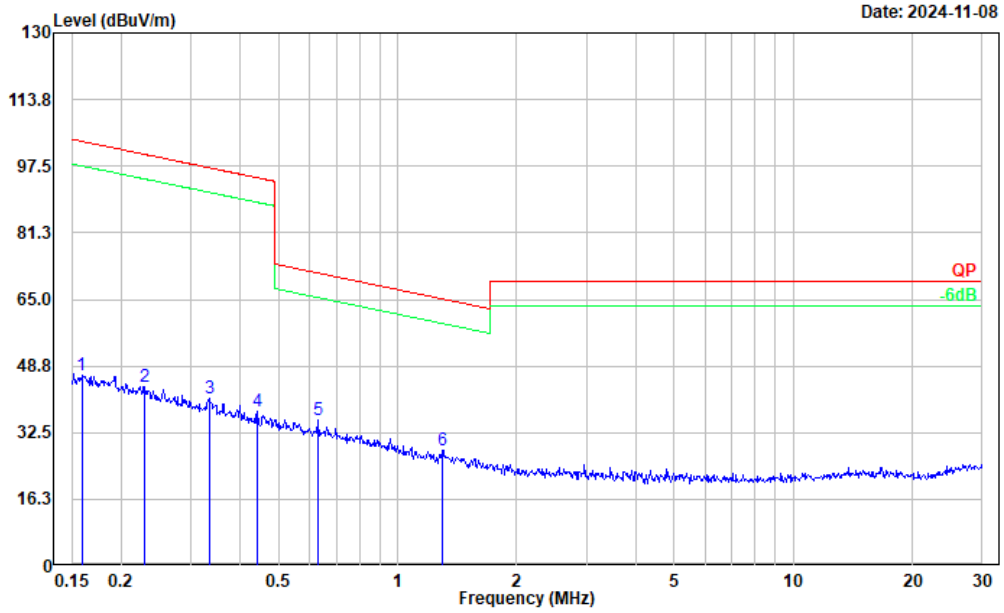
Perpendicular

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Perpendicular
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.010	23.55	34.52	58.07	127.66	69.59	Peak
2	0.015	26.39	31.95	58.34	124.05	65.71	Peak
3	0.021	18.33	29.07	47.40	121.19	73.79	Peak
4	0.033	18.99	24.05	43.04	117.30	74.26	Peak
5	0.047	18.77	21.16	39.93	114.25	74.32	Peak
6	0.113	46.05	14.06	60.11	106.58	46.47	Peak

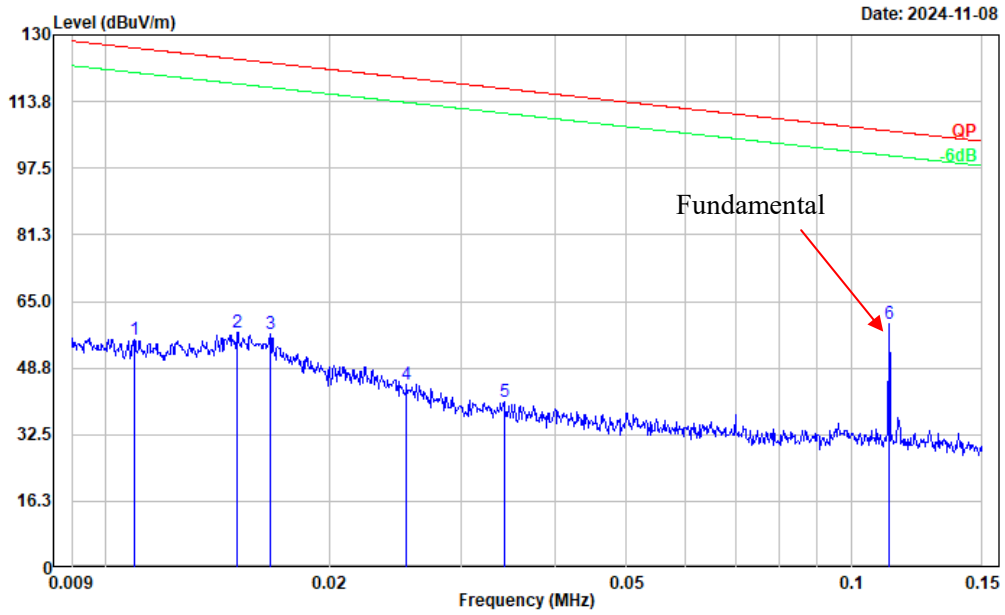
Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Perpendicular
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.159	34.56	11.90	46.46	103.58	57.12	Peak
2	0.229	35.20	8.63	43.83	100.40	56.57	Peak
3	0.334	36.25	4.61	40.86	97.13	56.27	Peak
4	0.442	35.30	2.22	37.52	94.69	57.17	Peak
5	0.627	35.99	-0.51	35.48	71.61	36.13	Peak
6	1.296	33.58	-5.27	28.31	65.17	36.86	Peak

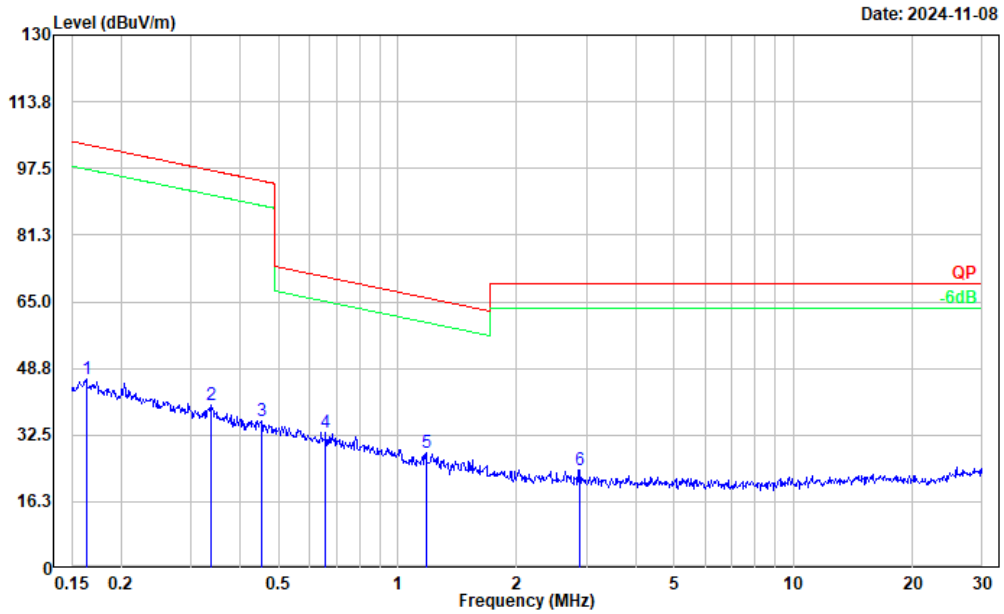
Ground-parallel

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Ground-parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.011	21.66	33.98	55.64	126.83	71.19	Peak
2	0.015	25.58	31.97	57.55	124.07	66.52	Peak
3	0.017	25.86	31.19	57.05	123.19	66.14	Peak
4	0.025	17.91	26.91	44.82	119.53	74.71	Peak
5	0.034	16.67	23.74	40.41	116.91	76.50	Peak
6	0.113	45.53	14.06	59.59	106.58	46.99	Peak

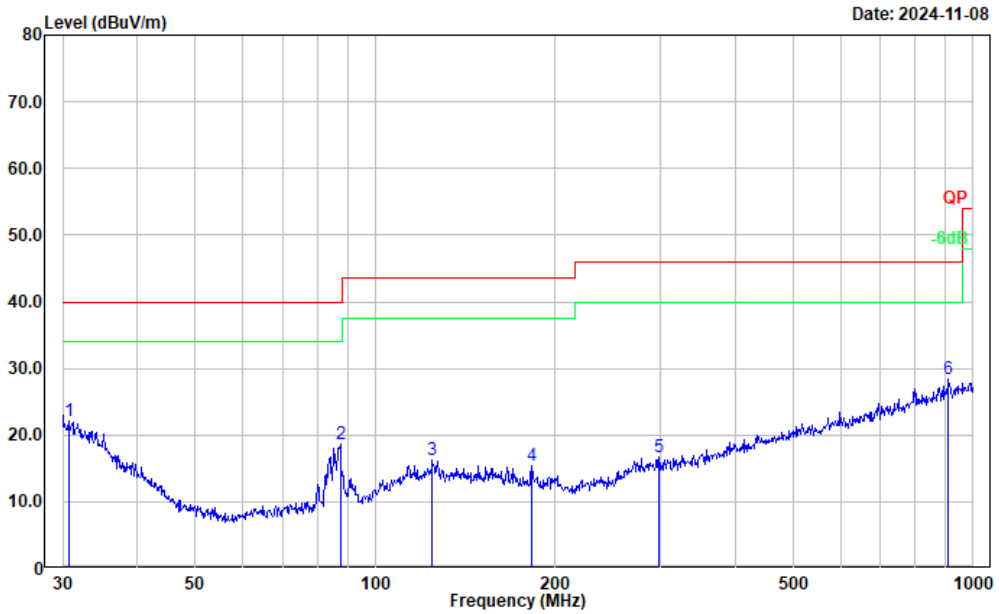
Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Ground-parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.163	34.52	11.70	46.22	103.35	57.13	Peak
2	0.337	35.29	4.53	39.82	97.04	57.22	Peak
3	0.452	33.94	2.03	35.97	94.51	58.54	Peak
4	0.658	34.03	-0.87	33.16	71.19	38.03	Peak
5	1.178	32.92	-4.84	28.08	66.02	37.94	Peak
6	2.884	32.13	-8.25	23.88	69.54	45.66	Peak

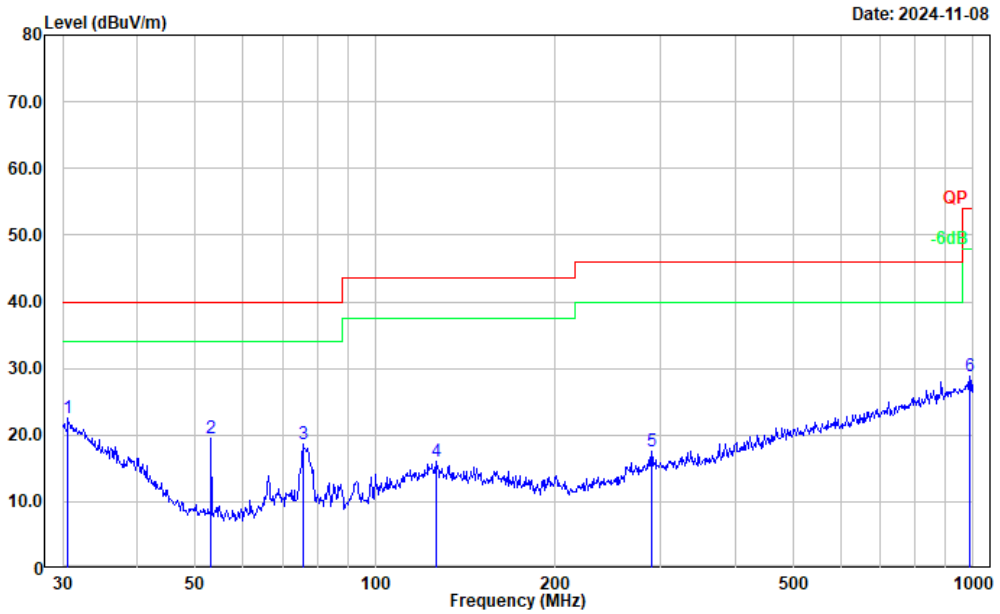
2)30MHz- 1GHz

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: horizontal
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.745	26.32	-4.25	22.07	40.00	17.93	Peak
2	87.418	35.80	-17.18	18.62	40.00	21.38	Peak
3	124.569	27.26	-10.95	16.31	43.50	27.19	Peak
4	182.559	29.04	-13.60	15.44	43.50	28.06	Peak
5	298.268	27.15	-10.43	16.72	46.00	29.28	Peak
6	909.667	27.98	0.36	28.34	46.00	17.66	Peak

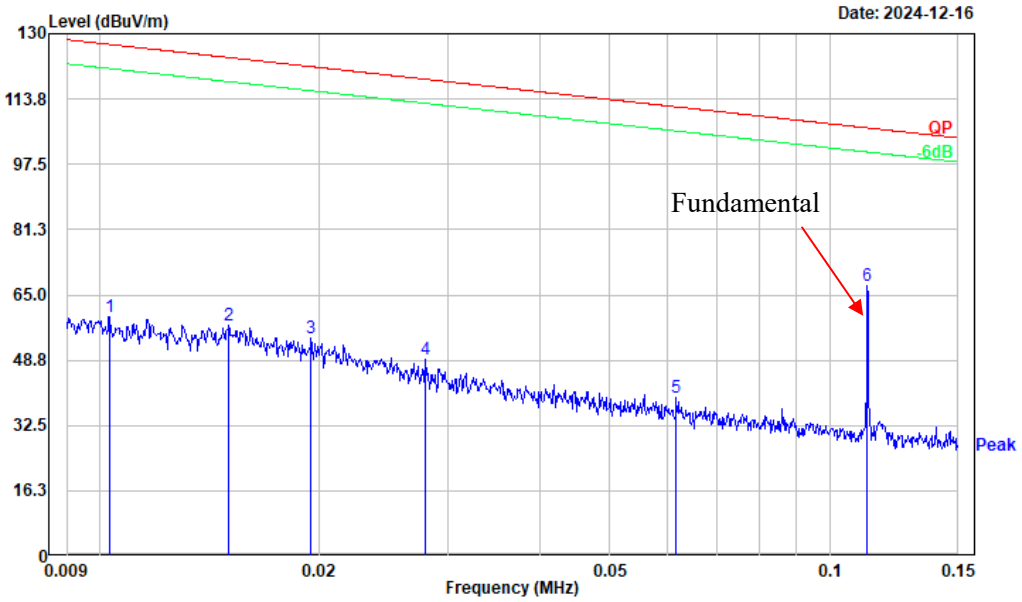
Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: vertical
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.638	26.68	-4.18	22.50	40.00	17.50	Peak
2	53.131	37.12	-17.56	19.56	40.00	20.44	Peak
3	75.711	35.77	-17.13	18.64	40.00	21.36	Peak
4	126.329	27.06	-11.05	16.01	43.50	27.49	Peak
5	290.017	27.79	-10.21	17.58	46.00	28.42	Peak
6	986.072	27.39	1.47	28.86	54.00	25.14	Peak

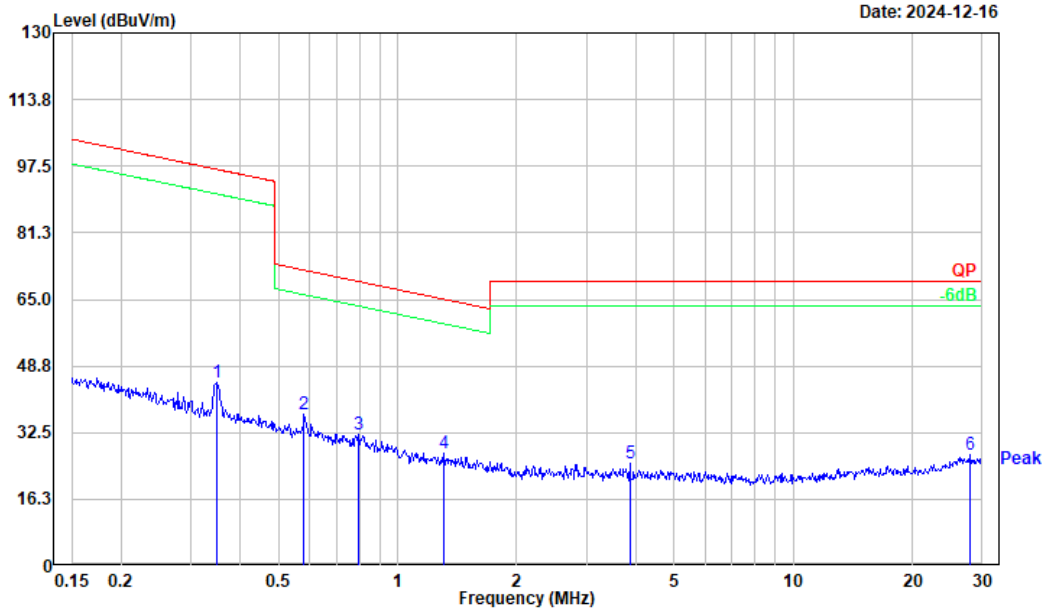
Type 2:
1)9k-30MHz
Parallel

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.010	25.39	34.28	59.67	127.35	67.68	Peak
2	0.015	25.37	31.97	57.34	124.07	66.73	Peak
3	0.019	24.36	29.80	54.16	121.83	67.67	Peak
4	0.028	23.36	25.62	48.98	118.67	69.69	Peak
5	0.062	20.52	18.84	39.36	111.80	72.44	Peak
6	0.113	53.20	14.06	67.26	106.58	39.32	Peak

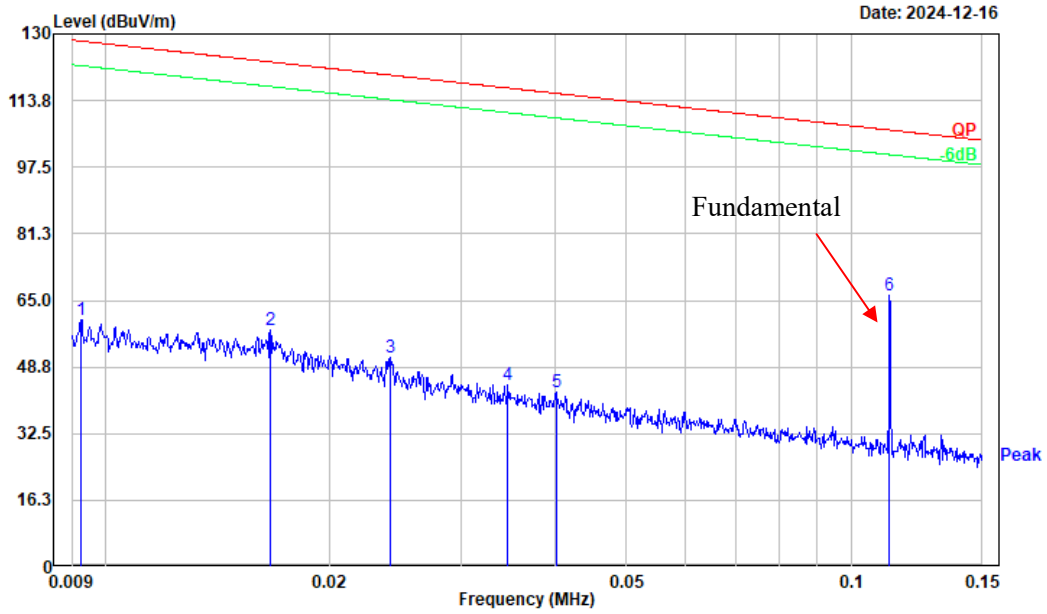
Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.350	40.55	4.25	44.80	96.72	51.92	Peak
2	0.579	36.98	0.05	37.03	72.32	35.29	Peak
3	0.796	34.62	-2.47	32.15	69.50	37.35	Peak
4	1.310	32.87	-5.31	27.56	65.08	37.52	Peak
5	3.860	33.77	-8.80	24.97	69.54	44.57	Peak
6	27.855	34.59	-7.45	27.14	69.54	42.40	Peak

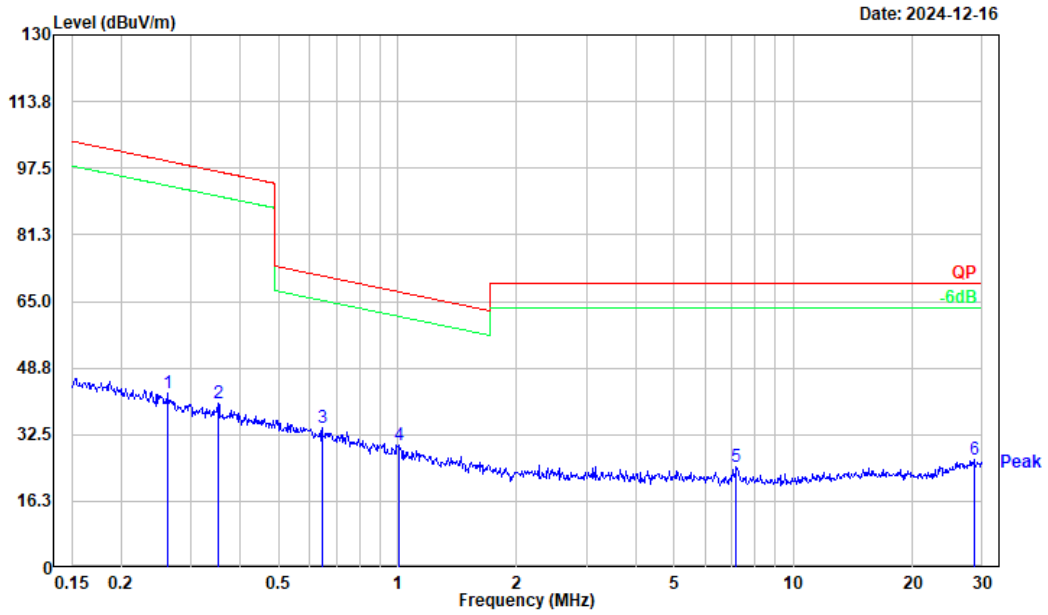
Perpendicular

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Perpendicular
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.009	24.92	35.39	60.31	128.27	67.96	Peak
2	0.017	26.42	31.19	57.61	123.19	65.58	Peak
3	0.024	23.40	27.53	50.93	119.97	69.04	Peak
4	0.035	20.79	23.66	44.45	116.82	72.37	Peak
5	0.040	20.25	22.49	42.74	115.52	72.78	Peak
6	0.113	52.11	14.06	66.17	106.58	40.41	Peak

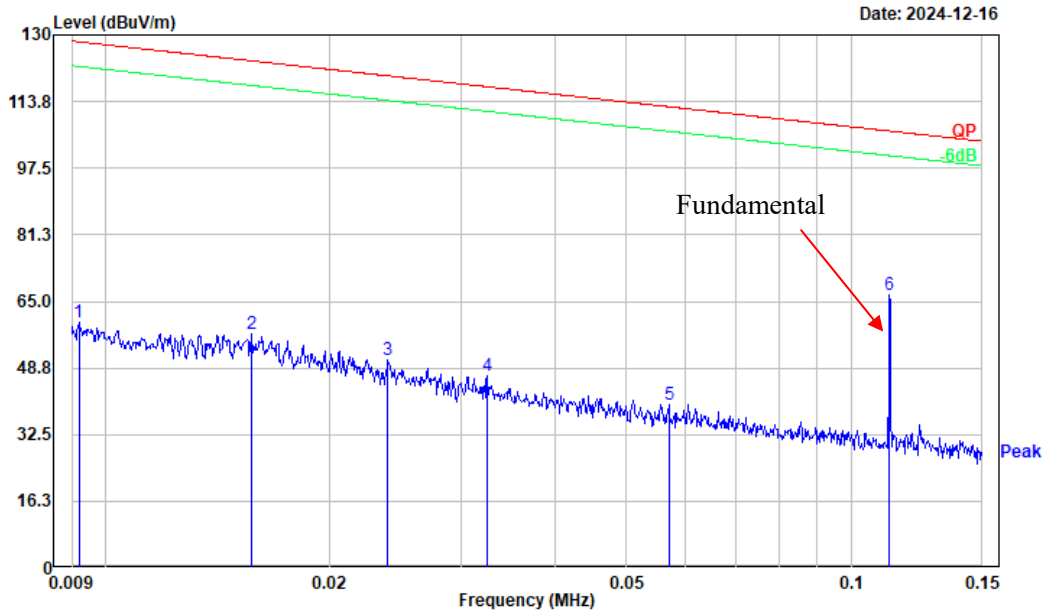
Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Perpendicular
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.262	35.66	7.13	42.79	99.25	56.46	Peak
2	0.352	35.91	4.21	40.12	96.67	56.55	Peak
3	0.644	34.83	-0.71	34.12	71.38	37.26	Peak
4	1.010	34.35	-4.25	30.10	67.38	37.28	Peak
5	7.175	33.43	-8.79	24.64	69.54	44.90	Peak
6	28.603	33.83	-7.34	26.49	69.54	43.05	Peak

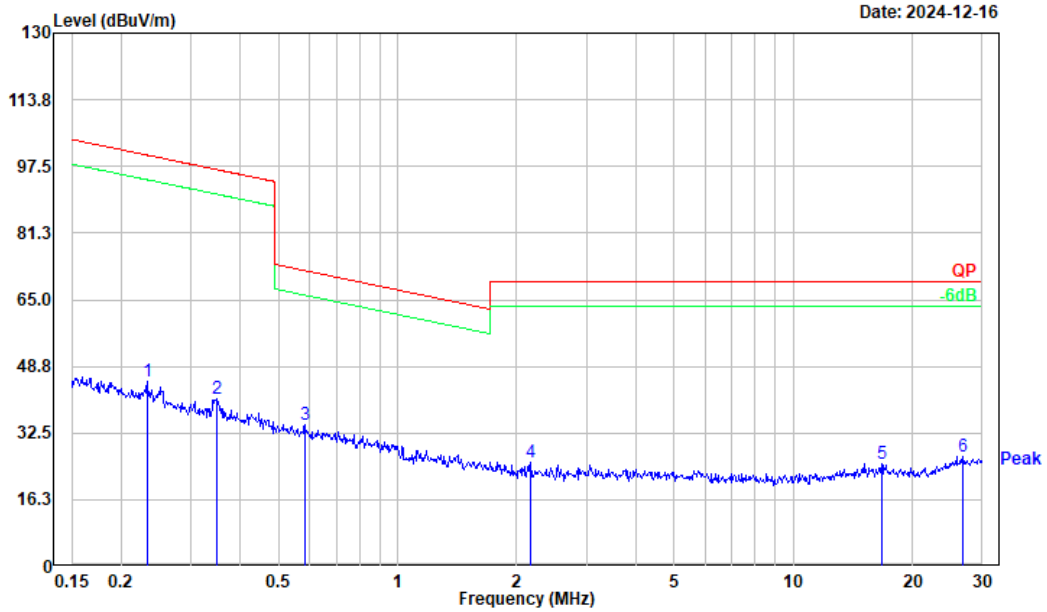
Ground-parallel

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Ground-parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.009	24.26	35.47	59.73	128.33	68.60	Peak
2	0.016	25.37	31.65	57.02	123.70	66.68	Peak
3	0.024	23.07	27.62	50.69	120.04	69.35	Peak
4	0.032	22.70	24.11	46.81	117.38	70.57	Peak
5	0.057	20.46	19.47	39.93	112.49	72.56	Peak
6	0.113	52.48	14.06	66.54	106.58	40.04	Peak

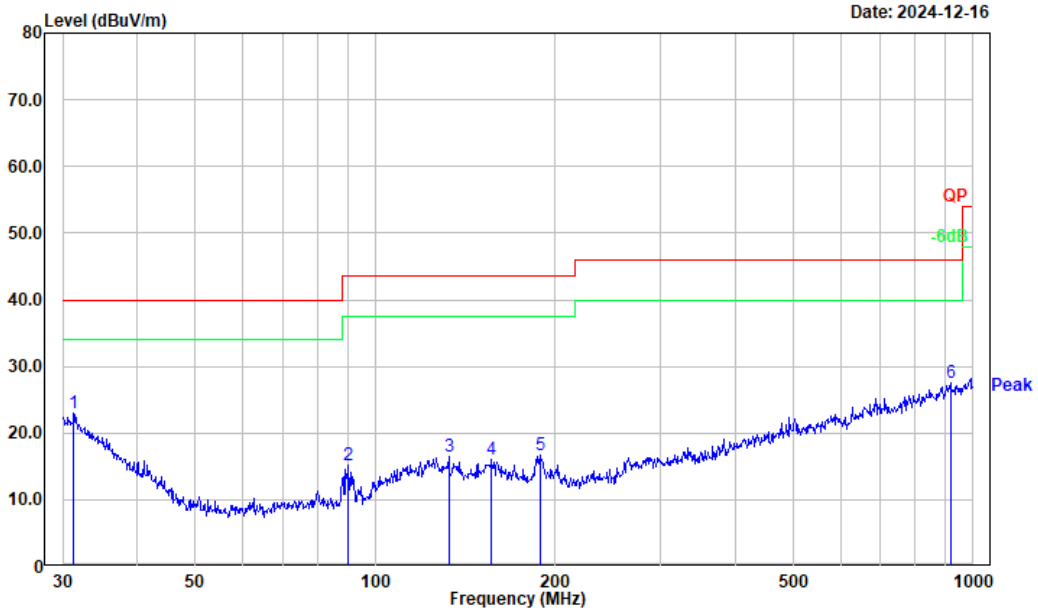
Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: Ground-parallel
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.233	36.55	8.46	45.01	100.26	55.25	Peak
2	0.348	36.53	4.29	40.82	96.76	55.94	Peak
3	0.582	34.52	0.01	34.53	72.27	37.74	Peak
4	2.167	33.19	-7.85	25.34	69.54	44.20	Peak
5	16.750	32.79	-7.60	25.19	69.54	44.35	Peak
6	26.699	34.34	-7.52	26.82	69.54	42.72	Peak

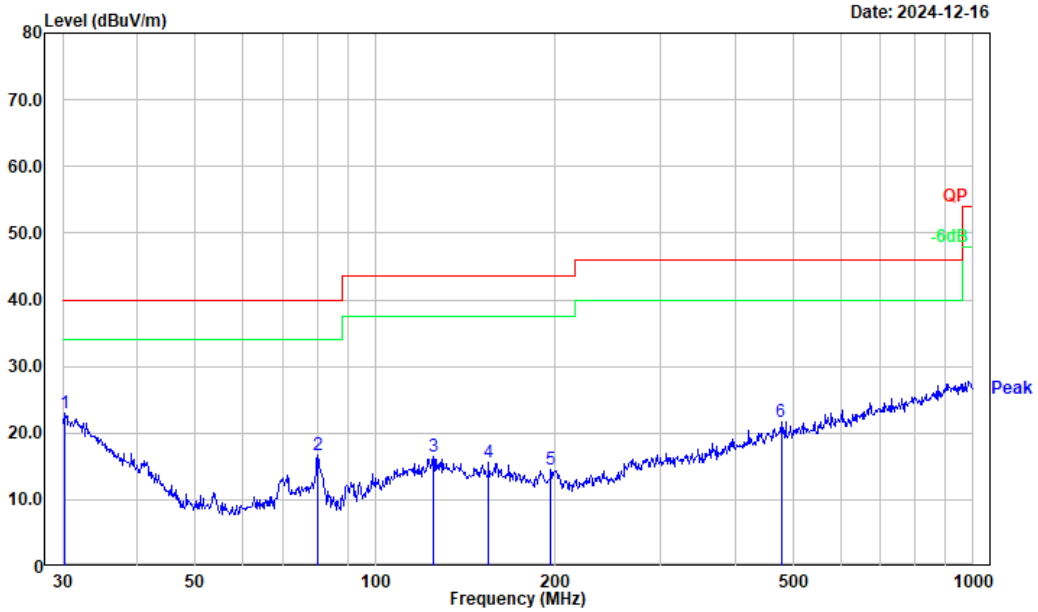
2)30MHz- 1GHz

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: horizontal
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.289	27.75	-4.68	23.07	40.00	16.93	Peak
2	90.220	32.11	-17.02	15.09	43.50	28.41	Peak
3	132.685	27.85	-11.44	16.41	43.50	27.09	Peak
4	156.458	27.96	-11.90	16.06	43.50	27.44	Peak
5	188.413	30.39	-13.80	16.59	43.50	26.91	Peak
6	916.069	27.34	0.21	27.55	46.00	18.45	Peak

Project No.: 2403Y36748E-RF
Tester: Roinin Fu
Polarization: vertical
Note: Wireless Charging



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.317	27.02	-4.00	23.02	40.00	16.98	Peak
2	80.081	33.93	-17.29	16.64	40.00	23.36	Peak
3	125.007	27.37	-11.00	16.37	43.50	27.13	Peak
4	154.821	27.68	-12.16	15.52	43.50	27.98	Peak
5	196.510	27.55	-13.11	14.44	43.50	29.06	Peak
6	477.169	27.90	-6.27	21.63	46.00	24.37	Peak

4.3 20 dB Emission Bandwidth

Sample Number:	2TEK-1, 2TEK-3	Test Date:	2024/11/8~2024/12/16
Test Site:	966-2	Test Mode:	Wireless Charging
Tester:	Roinin Fu	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.2-25.9	Relative Humidity: (%)	56-57	ATM Pressure: (kPa)	100.3-101.7

Test Equipment List and Details:

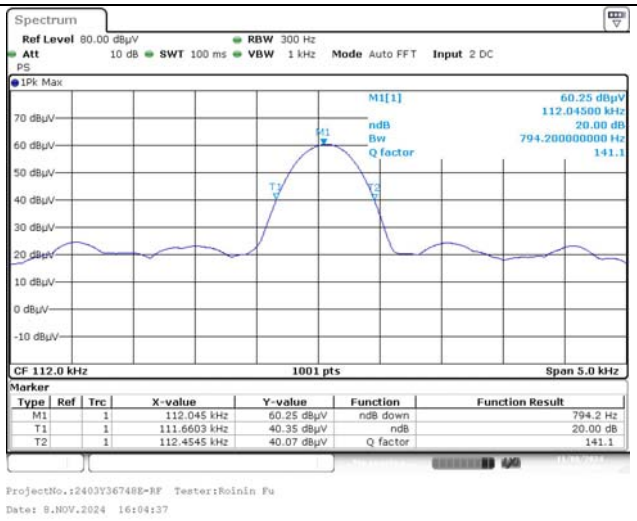
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
BACL	Loop Antenna	1313-1A	3110611	2023/2/15	2026/2/14
R&S	EMI Test Receiver	ESR3	102724	2024/2/29	2025/2/28
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0300-01	2024/1/11	2025/1/10
Daruikang	Coaxial Cable	BNC-JJ-RG58	C-0500-01	2024/1/11	2025/1/10

**** Statement of Traceability:*** *China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

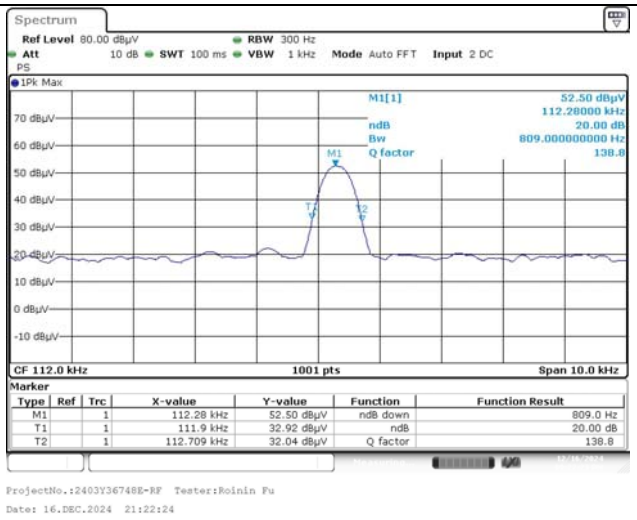
Test Data:

Test Frequency (kHz)	20 dB Emission Bandwidth (Hz)
112	794
112	809

Type 1:

20 dB Bandwidth	
112 kHz	

Type 2:

20 dB Bandwidth	
112 kHz	

5 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

5.1 Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According with 680106 D01 Wireless Power Transfer v04 clause 3.2

Accordingly, for § 2.1091-Mobile devices, the MPE limits between 100 kHz to 300 kHz are to be considered the same as those at 300 kHz in Table 1 of § 1.1310, that is, 614 V/m and 1.63 A/m, for the electric field and magnetic field, respectively. For § 2.1093-Portable devices below 4 MHz and down to 100 kHz, the MPE limits in § 1.1310 (with the 300 kHz limit applicable all the way down to 100 kHz) can be used for the purpose of equipment authorization in lieu of SAR evaluations.

According to 680106 D01 Wireless Power Transfer v04 clause 5.2

There might be situations where the WPT RF emissions are limited enough that even operations in a "crowded" environment, where many similar WPT devices are present, do not pose significant EMC and RF exposure concerns. In this scenario, and for devices operating within a one-meter distance from the receiver, as defined above, a manufacturer will not have to submit an "Equipment Compliance Review" KDB, and receive FCC concurrence before proceeding with equipment authorization. This exception to the requirement of submitting the ECR to obtain FCC concurrence only applies when all the following criteria (1) through (6) are met:

(1) The power transfer frequency is below 1 MHz.

(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.

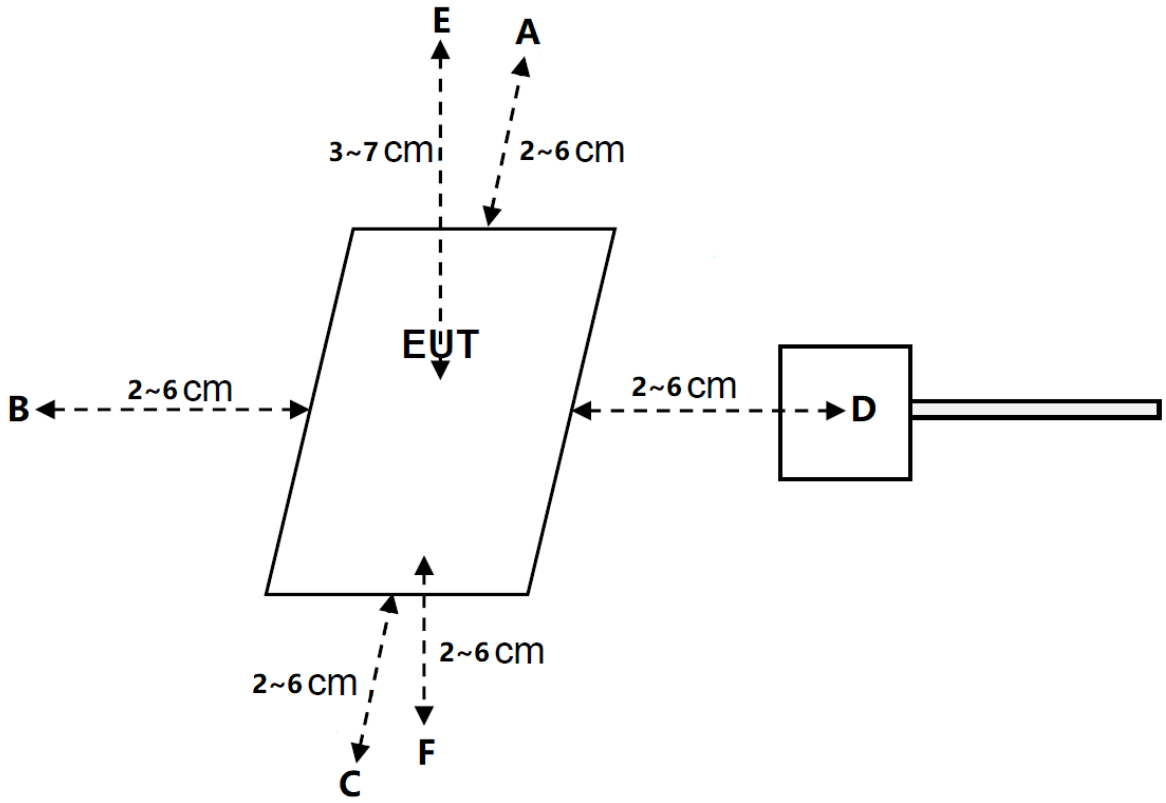
(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)

(4) Only § 2.1091-*Mobile* exposure conditions apply (i.e., this provision does not cover § 2.1093-*Portable* exposure conditions).

(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/*d* (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.

(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.

5.2 Block Diagram of Test Setup



5.3 MAGPy Probe Information

The full MAGPy-8H3D+E3D V2 probe consists of eight isotropic H-field subprobes and one isotropic E-field subprobe that are all integrated inside the probe head with a flat tip. Each isotropic H-field subprobe comprises three concentric orthogonal loop coil sensors. The isotropic E-field subprobe is composed of three orthogonal sensors (x and y sensors are dipoles and the sensor measuring the z component is a monopole). In total, the MAGPy-8H3D+E3D V2 probe is thus composed of nine subprobes and 27 single sensors that measure in the time-domain. The flat-tip probe design brings the sensors closer to the tip (e.g., the closest H-field sensors are now 7.5mm from the tip). The probe specifications are provided in Table 2.1.

Parameter	Specs
PROBE DESIGN	
Diameter	60 mm
8 isotropic *H*-field sensors	concentric loops of 1 cm^2 arranged at the corner of a cube of 22 mm side length
1 isotropic *E*-field sensor	orthogonal dipole/monopole (arm length: 50 mm)
Measurement center	18.5 mm from the probe tip
Temperature range	0–40 °C
Dimensions	110 × 635 × 35 mm (MAGPy-8H3D+E3D V2 & MAGPy-DAS V2)
H-FIELD SPECIFICATION	
Frequency range	3 kHz–10 MHz
Measurement range	0.1–3200 A/m, 0.12 µT–4 mT
Gradient range	0–80 T/m/T
E-FIELD SPECIFICATION	
Frequency range	3 kHz–10 MHz
Measurement range	0.08–2000 V/m

Table 2.1: MAGPy-8H3D+E3D V2 probe specifications

5.4 Test Procedures

1) The measuring distance from the center of the probe to the tip of the probe is 1.85cm, so the minimum measurement distance is 1.85cm. To obtain the H-field and E-field at 0cm, perform the following steps.
2) Perform H-field and E-field measurements for each all sides of the EUT surface at 2~6cm, along all the principal axes defined with respect to the orientation of the transmitting element(e.g., coil or antenna). Step is 1cm. For top side, The measuring distance is 3~7cm, because the wireless charging load has a thickness, and the measuring distance cannot be set to 2cm.
3) The highest emission level was recorded.
4) According to the measurement data, the curve is fitted with the measured distance as the horizontal coordinate and the measured H-field or E- field as the vertical coordinate.
5) The fitted curve needs to be validated through the probe measurements for the two closest points to the device surface. The difference needs to be less than 30%.
6) The H-field or E-field at 0cm is estimated from the fitted curve and compared with limit.

5.5 Test Data:

Sample Number:	2TEK-1	Test Date:	2024/11/06-2024/12/18
Test Site:	MPE	Test Mode:	Wireless Charging
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	23.5-25.1	Relative Humidity: (%)	42-49	ATM Pressure: (kPa)	101.5

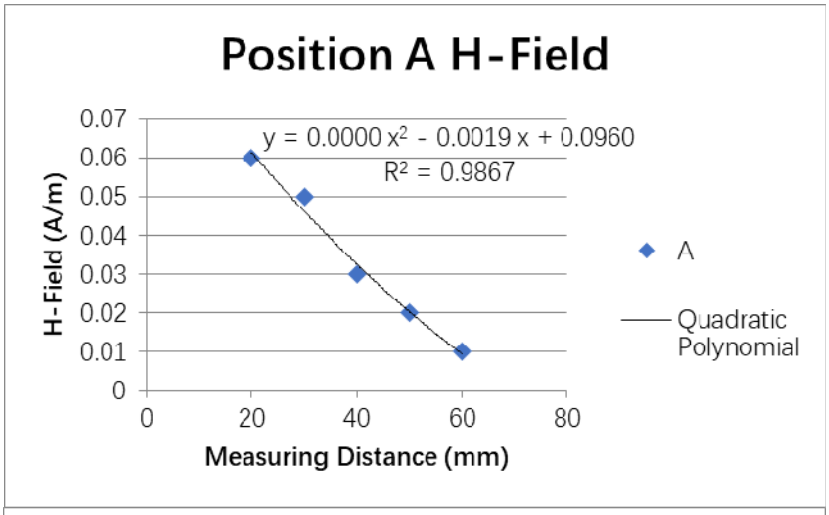
Test Equipment List and Details:

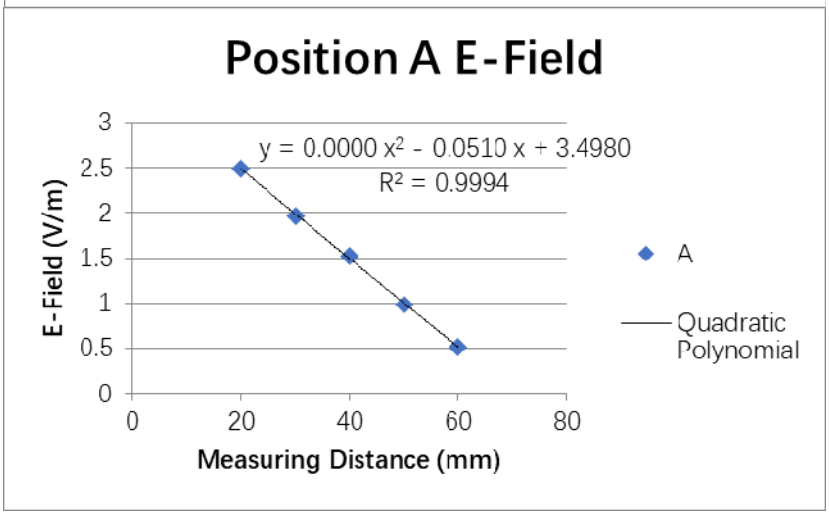
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
speag	Probe	MAGPY-8H3D+E3D	3081	2024/9/14	2025/9/13
speag	Data Acquisition System	MAPGPY-DAS	1018	2024/9/14	2025/9/13

**** Statement of Traceability:*** *China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

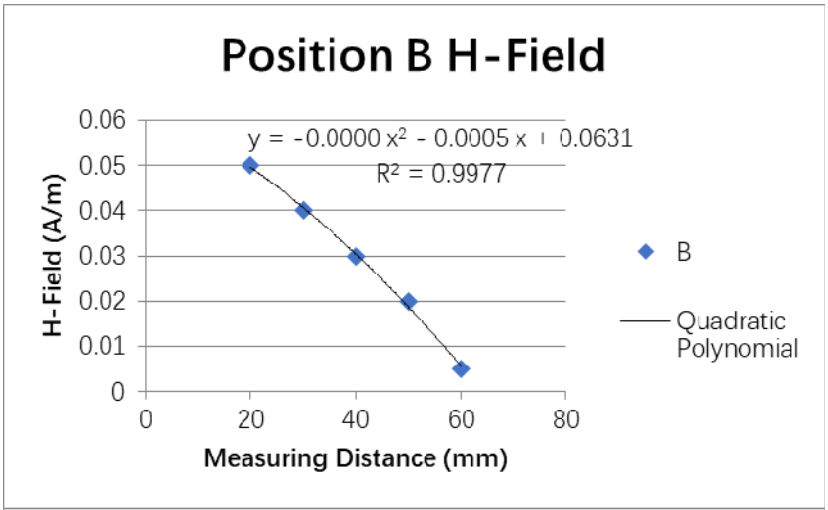
Test Data:
Type 1:

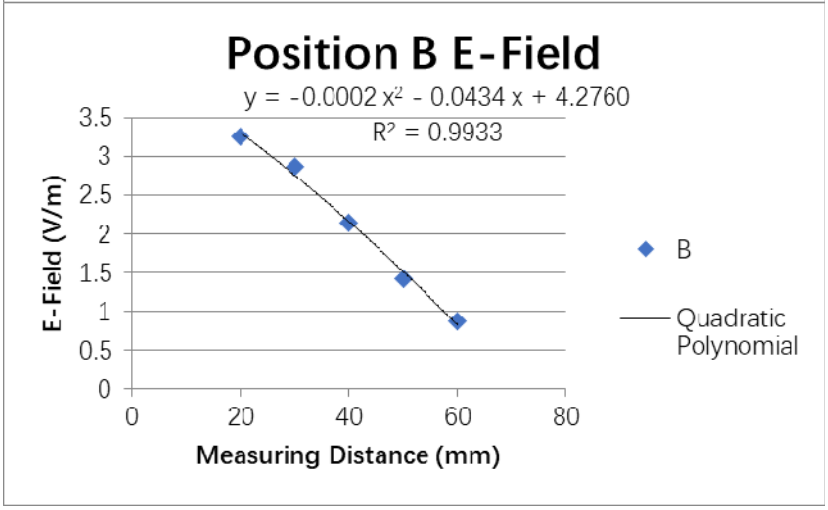
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	A	20	0.06	2.49
		30	0.05	1.97
		40	0.03	1.52
		50	0.02	0.98
		60	0.01	0.52



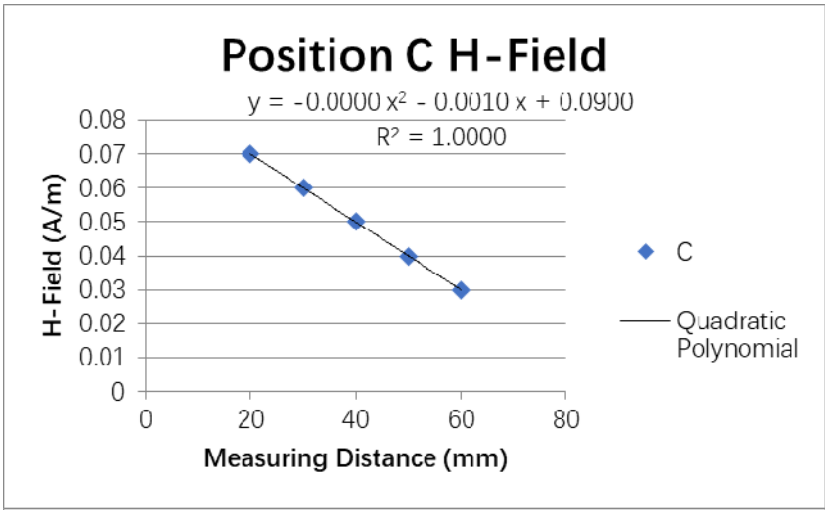


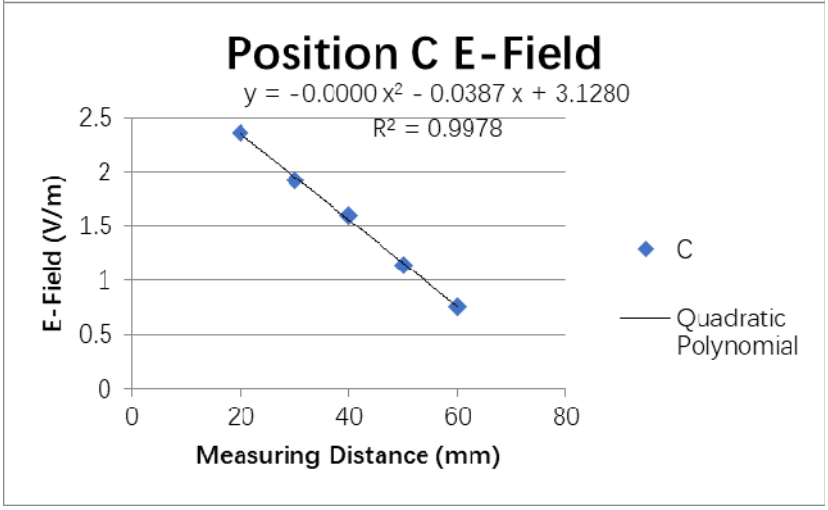
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	B	20	0.05	3.26
		30	0.04	2.87
		40	0.03	2.15
		50	0.02	1.42
		60	0.0051	0.87



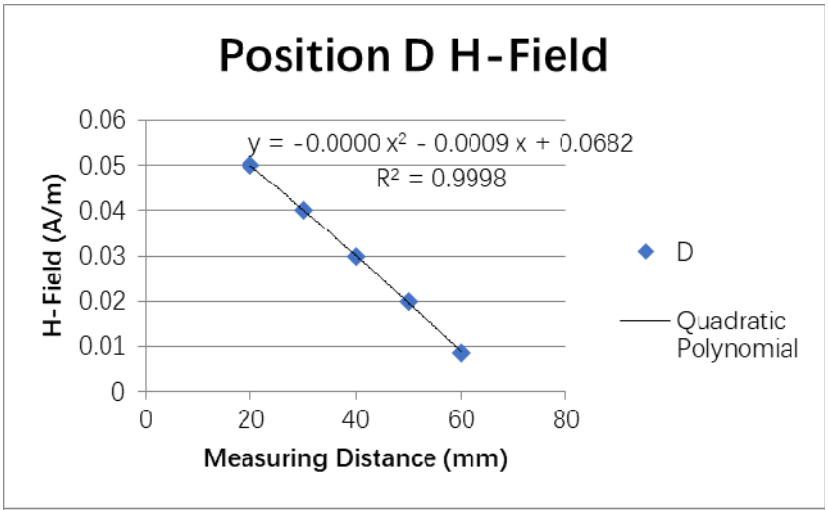


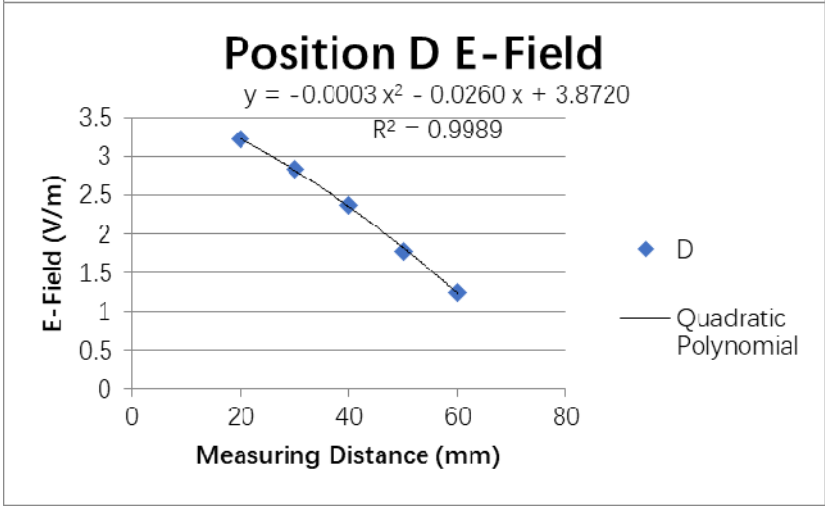
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	C	20	0.07	2.36
		30	0.06	1.92
		40	0.05	1.6
		50	0.04	1.14
		60	0.03	0.76



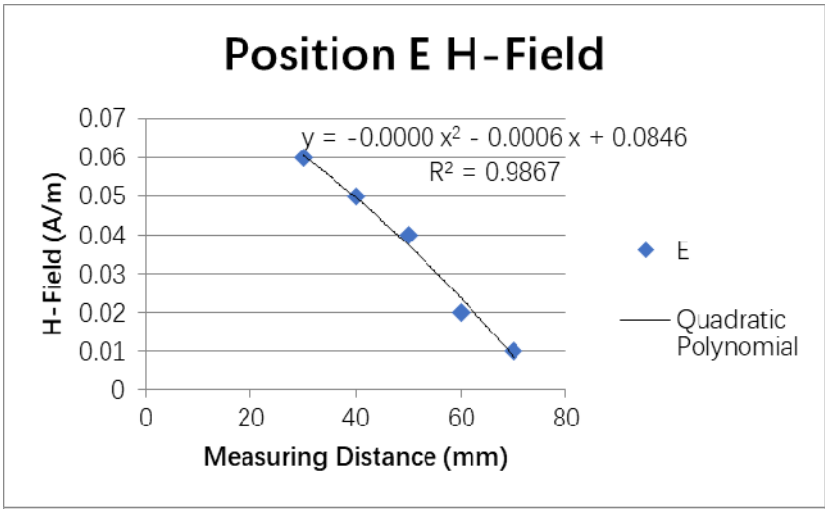


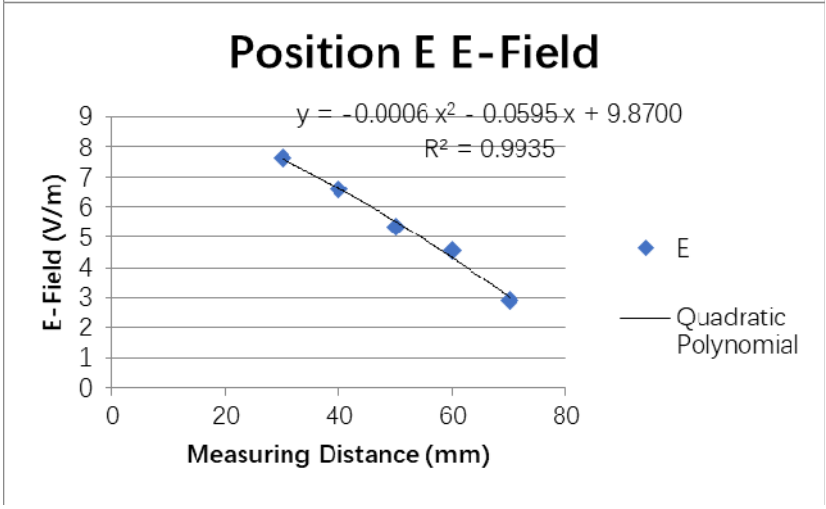
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	D	20	0.05	3.22
		30	0.04	2.84
		40	0.03	2.37
		50	0.02	1.78
		60	0.0087	1.25



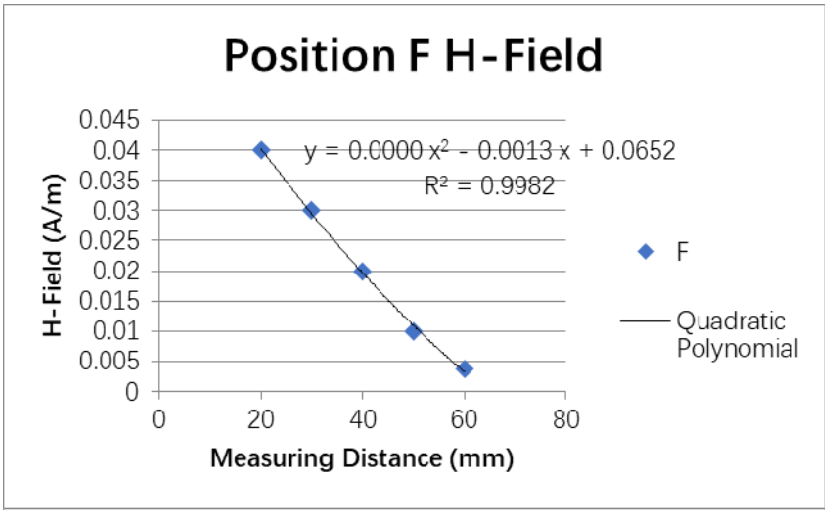


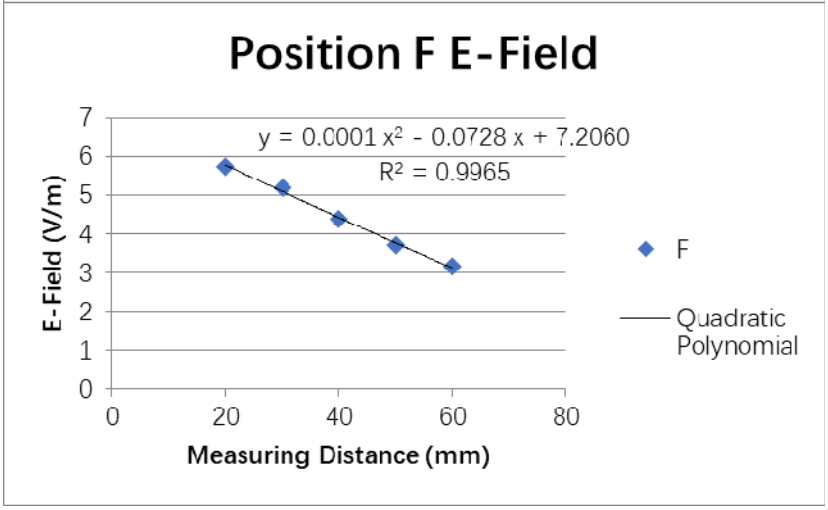
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	E	30	0.06	7.63
		40	0.05	6.58
		50	0.04	5.37
		60	0.02	4.55
		70	0.01	2.92





Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	F	20	0.04	5.74
		30	0.03	5.19
		40	0.02	4.38
		50	0.01	3.72
		60	0.0037	3.15





Verify The Fitted Curve

Measuring Position	Measuring Distance (mm)	Estimated H-Field (A/m)	Measured H-Field (A/m)	Agreement Between Estimated and Measured (%)	Limit (%)
A	20	0.06	0.06	0.00	±30
	30	0.04	0.05	-20.00	±30
B	20	0.05	0.05	0.00	±30
	30	0.05	0.04	25.00	±30
C	20	0.07	0.07	0.00	±30
	30	0.06	0.06	0.00	±30
D	20	0.05	0.05	0.00	±30
	30	0.04	0.04	0.00	±30
E	30	0.07	0.06	16.67	±30
	40	0.06	0.05	20.00	±30
F	20	0.04	0.04	0.00	±30
	30	0.03	0.03	0.00	±30

Note: Agreement Between Estimated and Measured(%) = (Estimated E-Field (V/m) - Measured E-Field (V/m)) / Measured E-Field (V/m) x 100

Measuring Position	Measuring Distance (mm)	Estimated E-Field (V/m)	Measured E-Field (V/m)	Agreement Between Estimated and Measured (%)	Limit (%)
A	20	2.48	2.49	-0.40	±30
	30	1.97	1.97	0.00	±30
B	20	3.33	3.26	2.15	±30
	30	2.79	2.87	-2.79	±30
C	20	2.35	2.36	-0.42	±30
	30	1.97	1.92	2.60	±30
D	20	3.23	3.22	0.31	±30
	30	2.82	2.84	-0.70	±30
E	30	7.55	7.63	-1.05	±30
	40	6.53	6.58	-0.76	±30
F	20	5.79	5.74	0.87	±30
	30	5.11	5.19	-1.54	±30

Note: Agreement Between Estimated and Measured(%) = (Estimated E-Field (V/m) - Measured E-Field (V/m)) / Measured E-Field (V/m) x 100

Conclusion: The validation is considered sufficient, because within 30% agreement between the estimated model and the (E-Field and H-Field) probe measurements is demonstrated

Test Distance: 0cm(estimated from the fitted curve)

H-Field Strength:

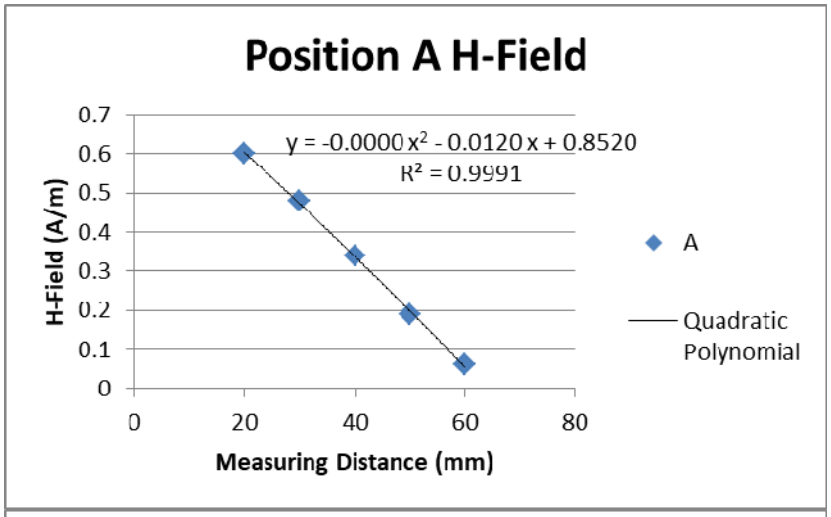
Test Frequency (kHz)	Test Position (A/m)						Limit (A/m)
	A	B	C	D	E	F	
112	0.1	0.06	0.09	0.07	0.08	0.07	1.63

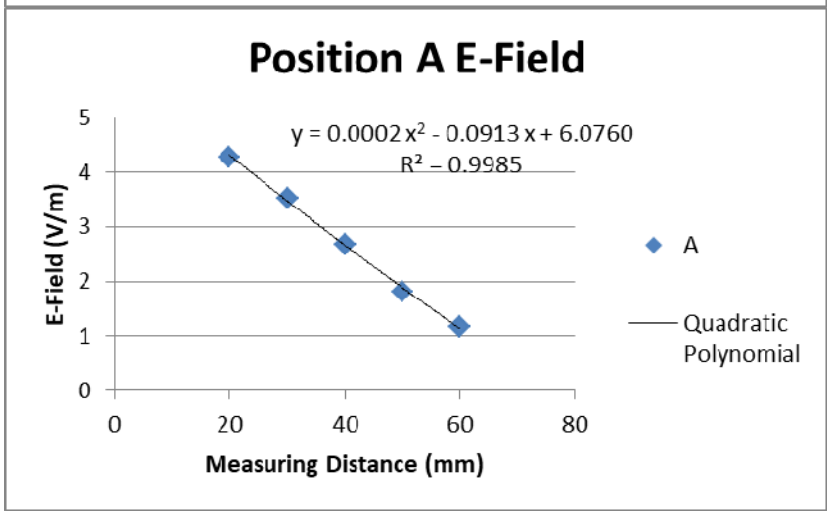
E-Field Strength:

Test Frequency (kHz)	Test Position (V/m)						Limit (V/m)
	A	B	C	D	E	F	
112	3.5	4.28	3.13	3.87	9.87	7.21	614

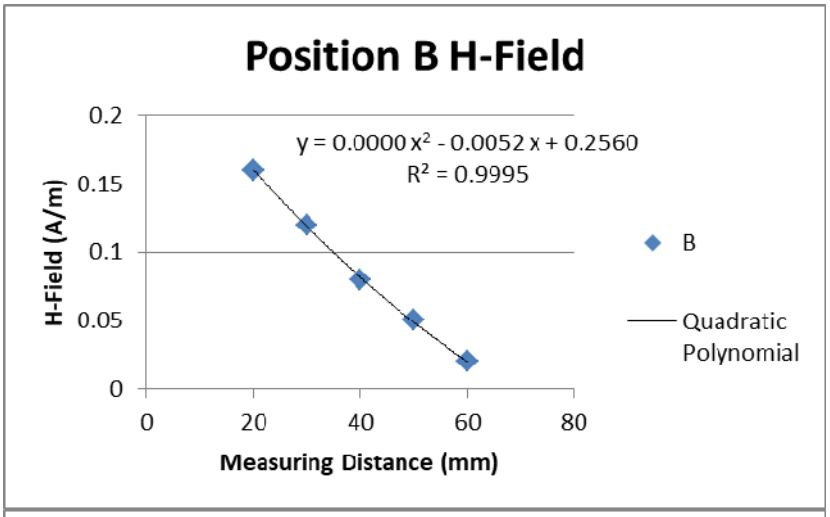
Type 2:

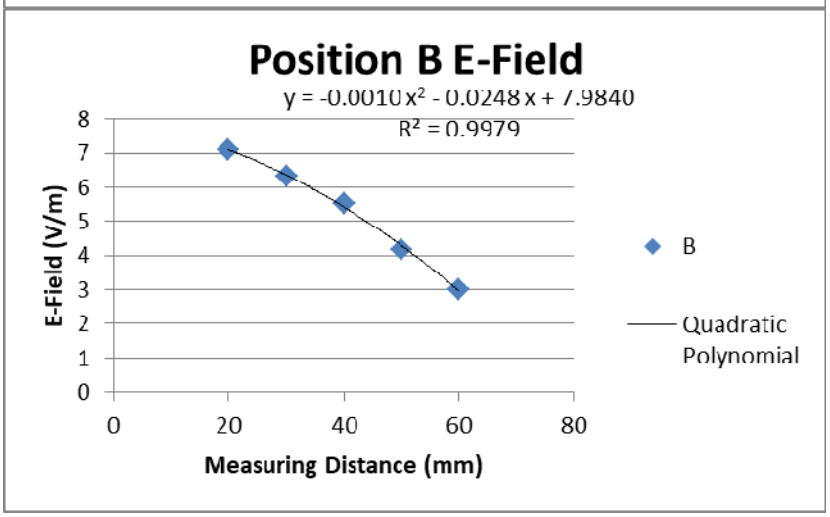
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	A	20	0.6	4.28
		30	0.48	3.53
		40	0.34	2.67
		50	0.19	1.82
		60	0.06	1.17



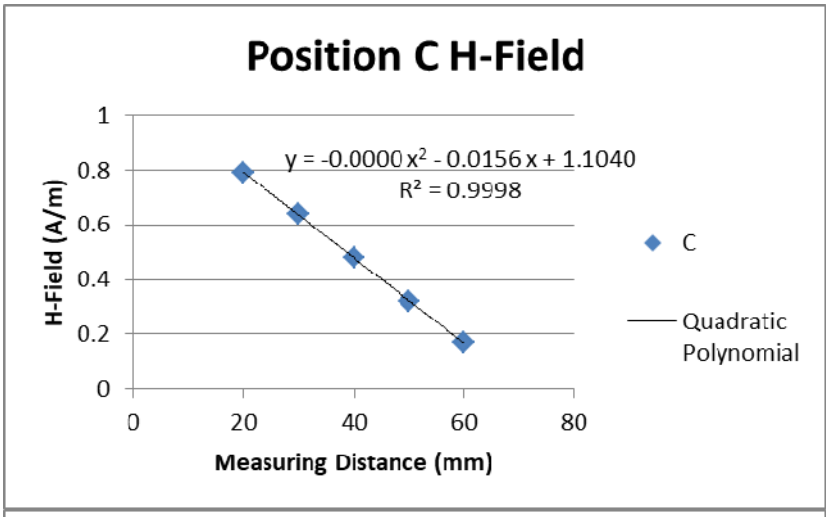


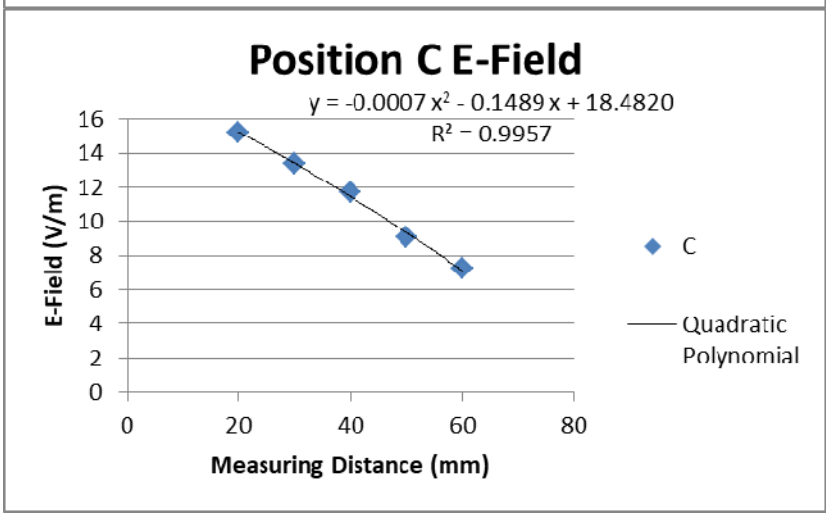
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	B	20	0.16	7.09
		30	0.12	6.34
		40	0.08	5.52
		50	0.05	4.19
		60	0.02	3.01



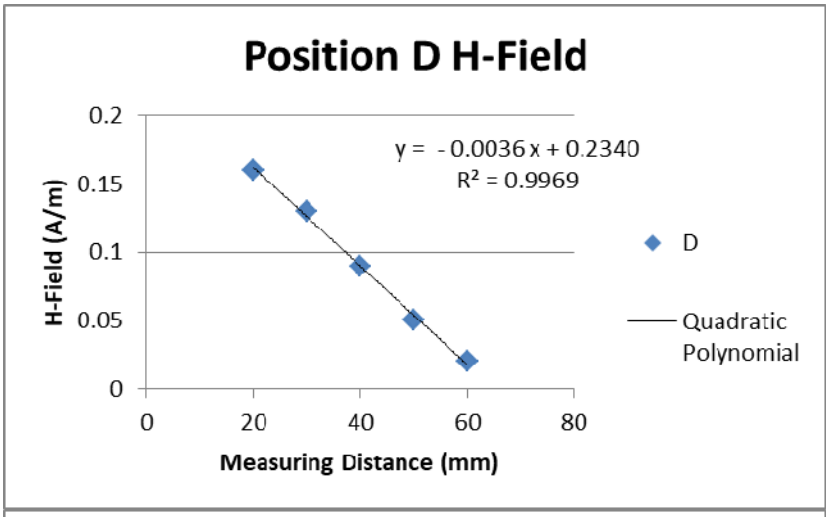


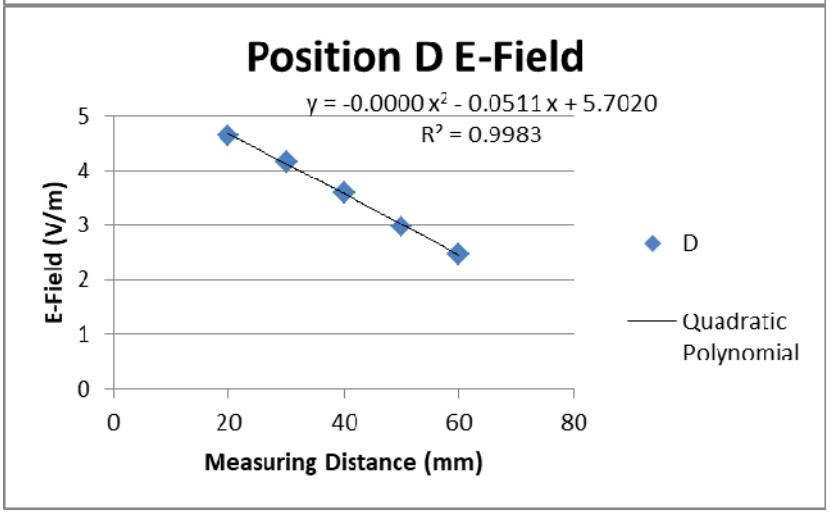
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	C	20	0.79	15.2
		30	0.64	13.4
		40	0.48	11.7
		50	0.32	9.04
		60	0.17	7.25



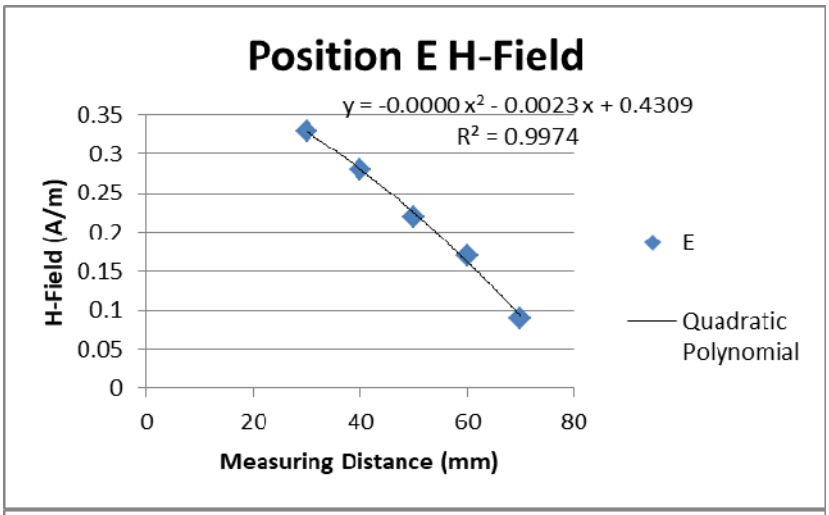


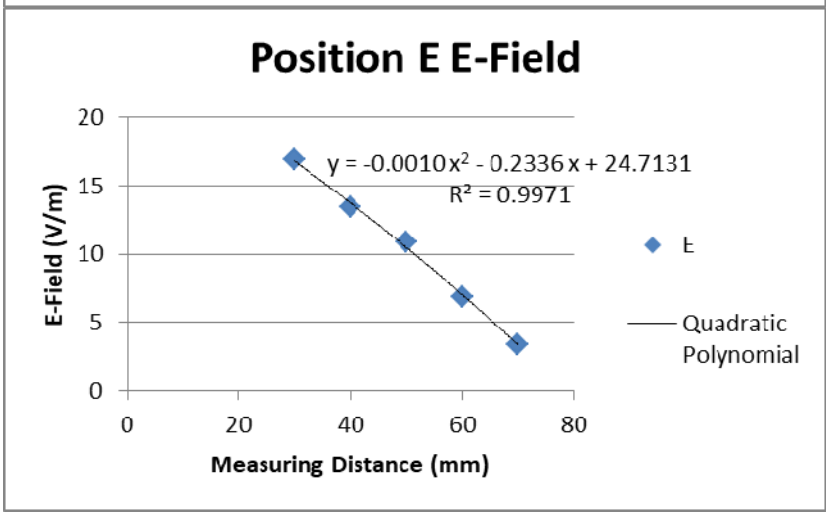
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	D	20	0.16	4.64
		30	0.13	4.16
		40	0.09	3.59
		50	0.05	2.97
		60	0.02	2.48



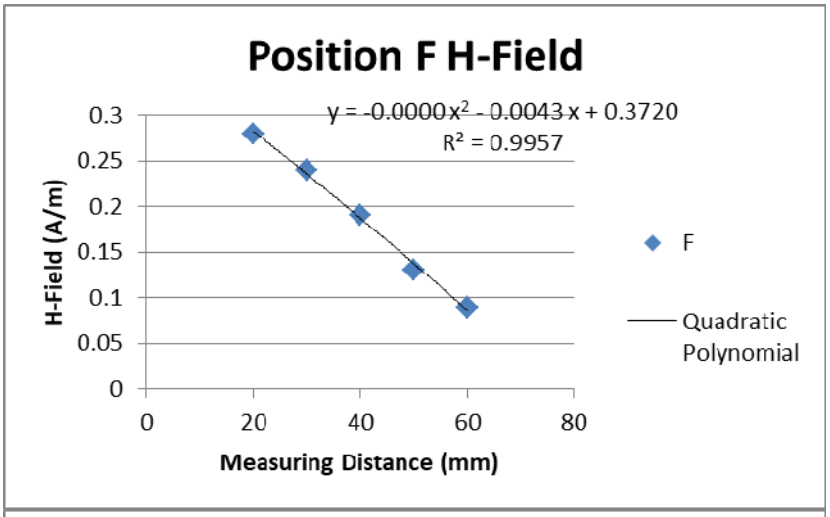


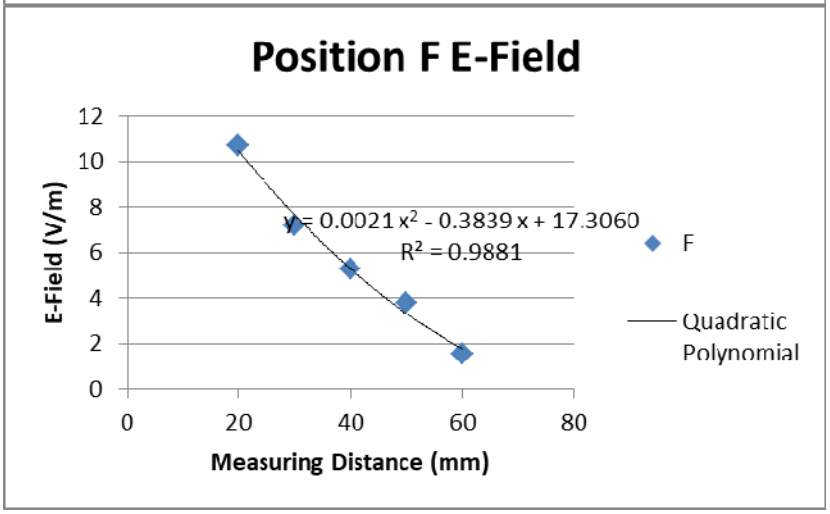
Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	E	30	0.33	16.9
		40	0.28	13.4
		50	0.22	10.9
		60	0.17	6.86
		70	0.09	3.42





Test Frequency (kHz)	Measuring Position	Measuring Distance (mm)	H-Field (A/m)	E-Field (V/m)
112	F	20	0.28	10.7
		30	0.24	7.2
		40	0.19	5.27
		50	0.13	3.82
		60	0.09	1.54





Verify The Fitted Curve

Measuring Position	Measuring Distance (mm)	Estimated H-Field (A/m)	Measured H-Field (A/m)	Agreement Between Estimated and Measured (%)	Limit (%)
A	20	0.61	0.6	1.67	±30
	30	0.49	0.48	2.08	±30
B	20	0.15	0.16	-6.25	±30
	30	0.1	0.12	-16.67	±30
C	20	0.79	0.79	0.00	±30
	30	0.64	0.64	0.00	±30
D	20	0.16	0.16	0.00	±30
	30	0.13	0.13	0.00	±30
E	30	0.36	0.33	9.09	±30
	40	0.34	0.28	21.43	±30
F	20	0.29	0.28	3.57	±30
	30	0.24	0.24	0.00	±30

Note: Agreement Between Estimated and Measured(%) = (Estimated E-Field (V/m) - Measured E-Field (V/m)) / Measured E-Field (V/m) x 100

Measuring Position	Measuring Distance (mm)	Estimated E-Field (V/m)	Measured E-Field (V/m)	Agreement Between Estimated and Measured (%)	Limit (%)
A	20	4.33	4.28	1.17	±30
	30	3.52	3.53	-0.28	±30
B	20	7.09	7.09	0.00	±30
	30	6.34	6.34	0.00	±30
C	20	15.22	15.2	0.13	±30
	30	13.39	13.4	-0.07	±30
D	20	4.64	4.64	0.00	±30
	30	4.08	4.16	-1.92	±30
E	30	16.81	16.9	-0.53	±30
	40	13.77	13.4	2.76	±30
F	20	10.47	10.7	-2.15	±30
	30	7.68	7.2	6.67	±30

Note: Agreement Between Estimated and Measured(%) = (Estimated E-Field (V/m) - Measured E-Field (V/m)) / Measured E-Field (V/m) x 100

Conclusion: The validation is considered sufficient, because within 30% agreement between the estimated model and the (E-Field and H-Field) probe measurements is demonstrated

Test Distance: 0cm(estimated from the fitted curve)

H-Field Strength:

Test Frequency (kHz)	Test Position (A/m)						Limit (A/m)
	A	B	C	D	E	F	
116	0.85	0.26	1.1	0.23	0.43	0.37	1.63

E-Field Strength:

Test Frequency (kHz)	Test Position (V/m)						Limit (V/m)
	A	B	C	D	E	F	
116	6.08	7.98	18.48	5.7	24.71	17.31	614

Considerations of compliance 680106 D01 Wireless Power Transfer v04 clause 5.2:

(1) Power transfer frequency is less than 1 MHz

Yes, the operation frequency is 112 kHz.

(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.

Yes, the maximum output power of primary coil is 4 Watts.

(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)

Yes, client device is placed directly in contact with the transmitter

(4) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).

No, portable exposure conditions.

(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.

No, the test result for H-field strength are not less than 50% of the MPE limit.

(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.

Yes,. all the radiating structures operating at maximum power at the same time.

6. EUT PHOTOGRAPHS

Please refer to the attachment 2403Y36748E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2403Y36748E-RF-INP EUT INTERNAL PHOTOGRAPHS

7. TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2403Y36748E-RF-00I-TSP TEST SETUP PHOTOGRAPHS.

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