



RF Exposure Report

Applicant : Sariana LLC

Address : 7365 Mission Gorge Road, Suite G, San Diego , CA 92120, USA

Equipment : 3-in-1 Foldable Qi2 Wireless Charging Stand

Model No. : ST-Q31FM, ST-Q31FM-EA, ST-Q31FM-AP,
CT-Q31FM, CT-Q31FM-EA, CT-Q31FM-AP

Trade Name : S A T E C H I

FCC ID : ZE9-ST-Q31FM

Standard : FCC CFR 47 part1, 1.1310
KDB680106 D01v04

I HEREBY CERTIFY THAT :

The sample was received on Jan. 25, 2024 and the test items were conducted Feb. 08, 2024 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Leevin Li / Supervisor



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1. Test Configuration of Equipment under Test

1.1. Feature of Equipment under Test

Product	3-in-1 Foldable Qi2 Wireless Charging Stand
Test Model	ST-Q31FM, ST-Q31FM-EA, ST-Q31FM-AP, CT-Q31FM, CT-Q31FM-EA, CT-Q31FM-AP
Model Discrepancy	All the models are identical except for model names, adapter plugs and sales companies. ST-Q31FM and CT-Q31FM are not equipped with adapter plugs. ST-Q31FM-EA and CT-Q31FM-EA are equipped with European and British adapter plugs. ST-Q31FM-AP and CT-Q31FM-AP are equipped with Korean and Australian adapter plugs. ST and CT represent different sales companies.
Frequency Range	Output Wireless 1: MPP: 360KHz, BPP: 120~148.5KHz Output Wireless 2: 110KHz~148KHz Output Wireless 3 (Apple Watch): 326.5KHz and 1.778MHz
Antenna Type	Coil Antenna
Modulation Type	Output Wireless 1: ASK Output Wireless 2: ASK Output Wireless 3: ASK
Power Rating	Input: 9V 3A/12V 3A/15V 3A, 45W(Max) Output Wireless 1: 15W(Max)/Qi MPP; 5W (Max)/Qi BPP Output Wireless 2: 5W(Max)/Qi BPP Output Wireless 3(Apple Watch): 5W(Max)
Temperature	Operating Temp: 0°C ~+35°C Storage Temp: -20°C ~+60°C

Note: For more details, please refer to the User's manual of the EUT.

1.2. Test Mode and Test Software

Test Mode	Operating Description
Mode 1	Wireless Charging for Wireless 1(Standby mode) +Wireless 2(Standby mode) + Wireless 3(Standby mode)
Mode 2	Wireless Charging for Wireless 1(15W/7.5W for Wireless Load, Operating @MPP 360KHz +Wireless 2(5W for AirPods) +Wireless 3(5W for Apple watch 3, Operating @326.5KHz)
Mode 3	Wireless Charging for Wireless 1(5W/2.5W for Wireless Load, Operating @ BPP: 120~148.5KHz) +Wireless 2(5W for AirPods) +Wireless 3(5W for Apple watch 7, Operating @1.778MHz)
Mode 4	Wireless Charging for Wireless 1(15W/7.5W for Wireless Load, Operating @MPP 360KHz +Wireless 2(5W for AirPods) + Wireless 3(5W for Apple watch 7, Operating @1.778MHz)
Mode 5	Wireless Charging for Wireless 1(5W/2.5W for Wireless Load, Operating @ BPP: 120~148.5KHz) +Wireless 2(5W for AirPods) +Wireless 3(5W for Apple watch 3, Operating @326.5KHz)
Worst test Mode	
Mode 1	Wireless Charging for Wireless 1(Standby mode) +Wireless 2(Standby mode) + Wireless 3(Standby mode)
Mode 2	Wireless Charging for Wireless 1(15W/7.5W for Wireless Load, Operating @MPP 360KHz +Wireless 2(5W for AirPods) +Wireless 3(5W for Apple watch 3, Operating @326.5KHz)
Mode 3	Wireless Charging for Wireless 1(5W/2.5W for Wireless Load, Operating @



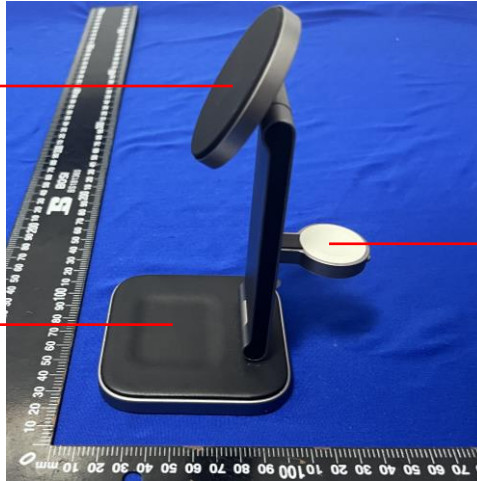
	BPP: 120~148.5KHz) +Wireless 2(5W for AirPods) +Wireless 3(5W for Apple watch 7, Operating @1.778MHz)
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Note: 1) For mode 2,3.The AirPods and Watchwere respectively evaluation Low, medium and high charge status evaluation.

2) The EUT Have three coils, the specific location is shown below:

Wireless 1 for Qi2
Magnetic Wireless
Charger (15W/Qi
MPP: 5W/Qi BPP)

Wireless 2 for
AirPods(5W
Max)

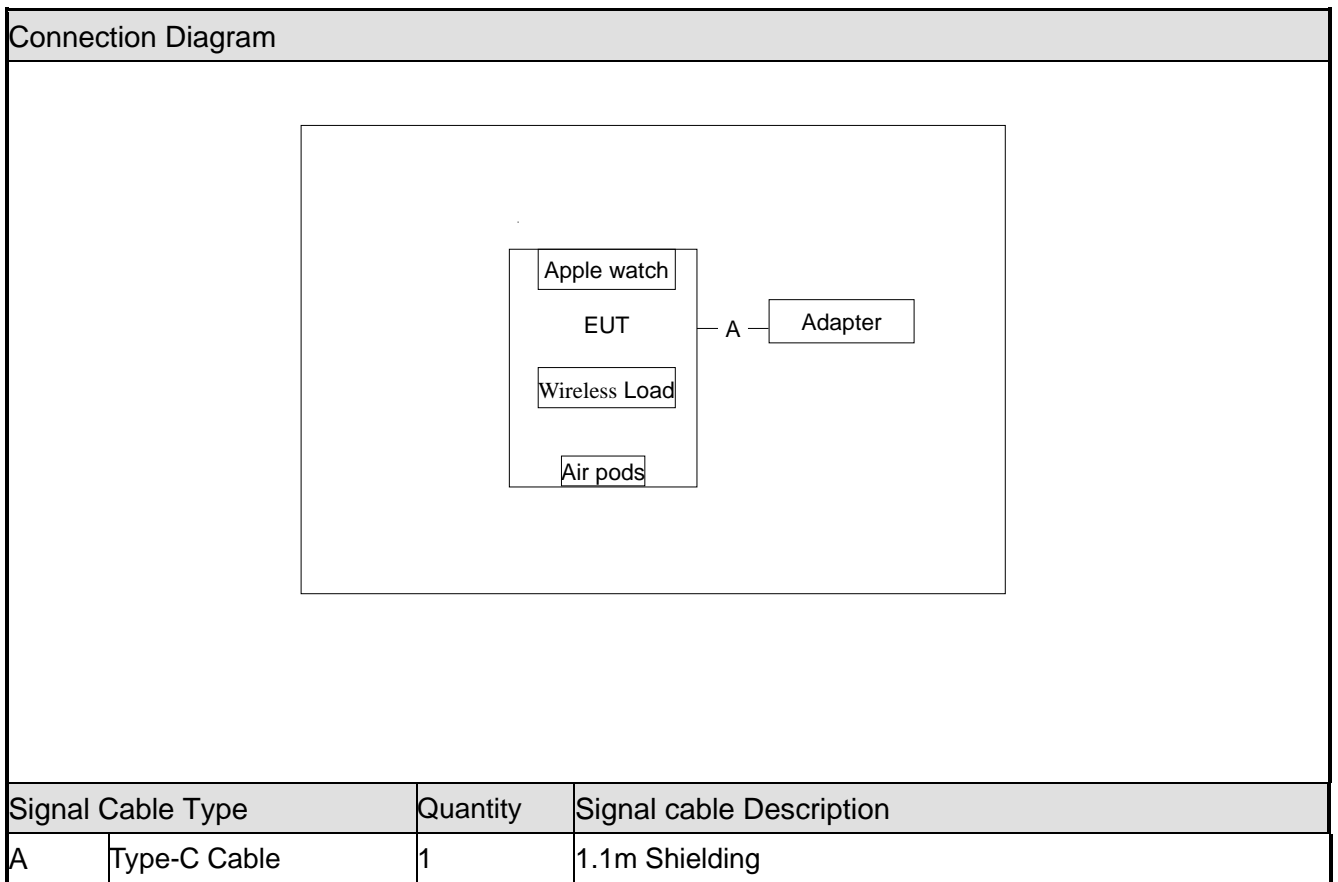


Wireless 3 for
Apple watch(5W)



1.3. Description of Test System

Product	Manufacturer	Model No.	Power Cord
1 Adapter	Xinspower	PN453I	N/A
2 Apple watch	Apple	Apple watch 7	N/A
3 Apple watch	Apple	Apple watch 3	N/A
4 Wireless Load	N/A	N/A	N/A
5 Air pods	Apple	A2190	N/A





1.4. General Information of Test

Test Site	Cerpass Technology Corporation(Cerpass Laboratory) Address: Room 102, No. 5, Xing'an Road, Chang'an Town, Dongguan City, Guangdong Province Tel: +86-769-8547-1212 Fax: +86-769-8547-1912
FCC Designation No.:	CN1288

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Exposure	3M01-DG	2024/02/08	24°C / 54%	Amos Zhang

1.5. Measurement Uncertainty

Measurement Item	Uncertainty
Magnetic Field measurements	±1.60
Electric Field measurements	±1.60



2. Summary Of Standards And Results

2.1. Measuring Standard

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Normative References	Remarks
RF Exposure	FCC CFR 47 part1, 1.1310 KDB680106 D01v04	PASS

2.2. Duty cycle

Limits

None; for reporting purposes only.

Procedure

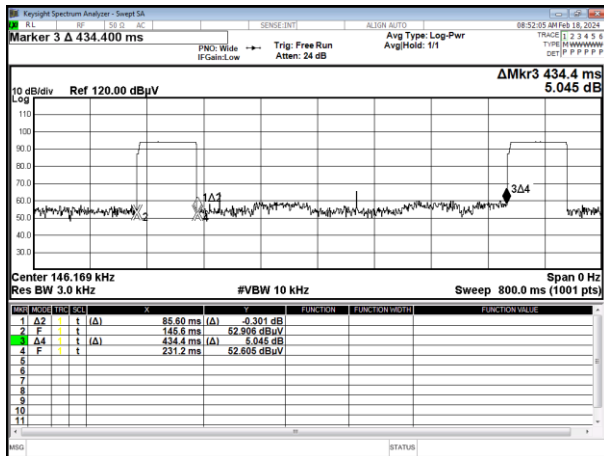
Duty cycle zero-span mode Method

Result

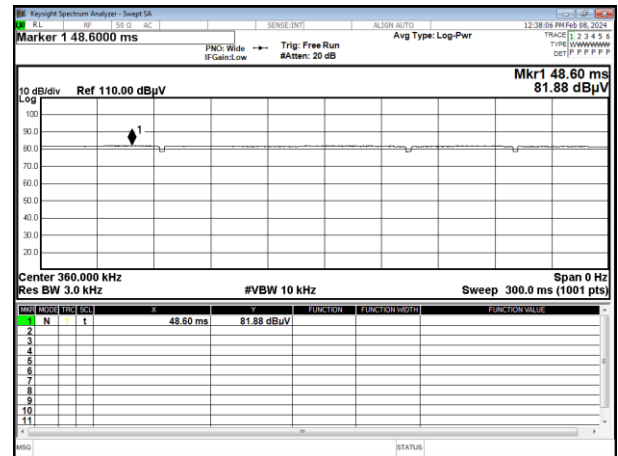
Mode	On Time (msec)	Period Time (msec)	Duty Cycle (%)
Wireless2, Standby @110KHz~148KHz	85.60	520	16.46%
Wireless 1, 15W/7.5W for Wireless Load, Operating @MPP 360KHz	100.00	100.00	100.00%
Wireless 1, 5W/2.5W for Wireless Load, Operating @ BPP: 120~148.5KHz)	100.00	100.00	100.00%
Wireless 2, 5W for AirPods Operating @ 110KHz~148KHz	100.00	100.00	100.00%
Wireless 3, 5W for Apple watch 3, Operating @326.5KHz	100.00	100.00	100.00%
Wireless 3, 5W for Apple watch 7, Operating @1.778MHz	100.00	100.00	100.00%



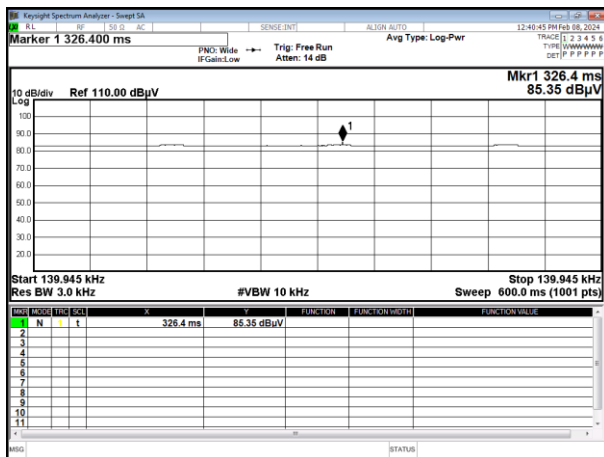
Wireless2, Standby @ 110KHz~148KHz



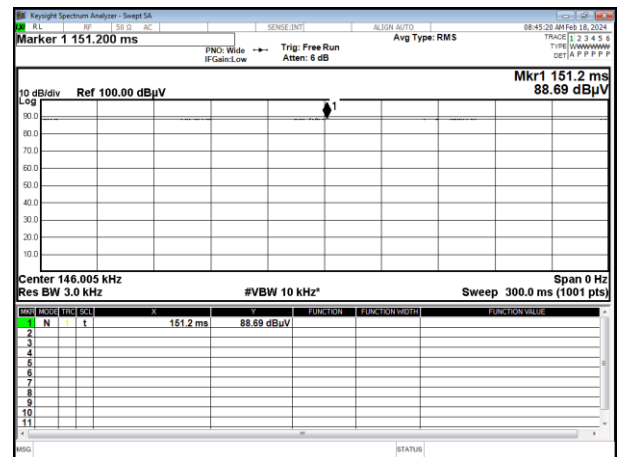
Wireless 1, Wireless 1, 15W/7.5W for Wireless Load, Operating @MPP 360KHz



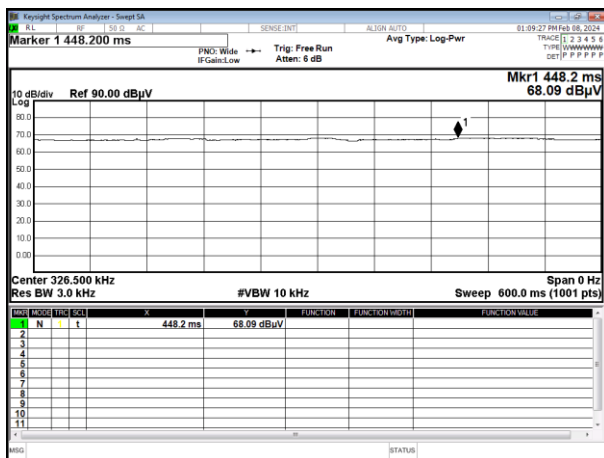
Wireless 1, 5W/2.5W for Wireless Load, Operating @ BPP: 120~148.5KHz)



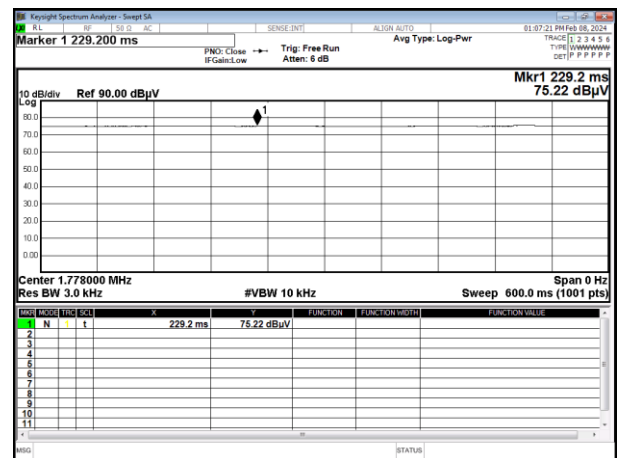
Wireless 2, 5W for AirPods Operating @ 110KHz~148KHz



Wireless 3, 5W for Apple watch 3, Operating @326.5KHz

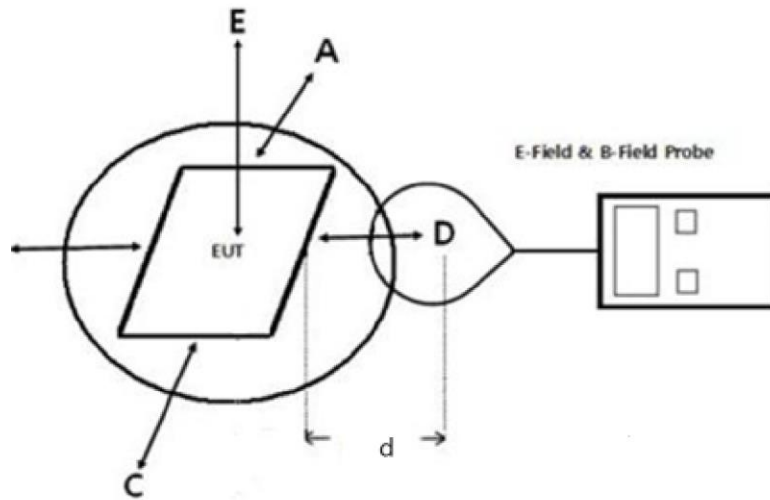


Wireless 3, 5W for Apple watch 7, Operating @1.778MHz





2.3. Typical test Setup



Note: Position A: Front of EUT; Position B: Left of EUT; Position C: back of EUT; Position D: Right of EUT; Position E: Top of EUT(20 cm measure distance);

2.4. Specification Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b) Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric field strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density
 Note 2: For the applicable limit, see FCC 1.1310



2.5. Test Equipment List and Details

Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Electric and Magnetic field probe-analyzer	Narda	EHP-200AC	180ZX00632	2023/08/03	2024/08/02
MXA Signal Analyzer	KEYSIGHT	N9020A	US46220290	2023/05/06	2024/05/05

2.6. Test Result

Mode 1: Wireless Charging for Wireless 1(Standby mode) +Wireless 2(Standby mode)+ Wireless 3(Standby mode)

Wireless2, Standby @110KHz~148KHz

a) Electric Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (V/m)			50% of Limit (V/m)	Limit (V/m)
		Peak	Duty Cycle %	AVG		
A	20	0.48	16.46	0.19	307.00	614.00
B	20	0.4	16.46	0.16	307.00	614.00
C	20	0.36	16.46	0.15	307.00	614.00
D	20	0.39	16.46	0.16	307.00	614.00
E	20	0.35	16.46	0.14	307.00	614.00
F	20	0.48	16.46	0.19	307.00	614.00

b) Magnetic Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (A/m)			50% of Limit (A/m)	Limit (A/m)
		Peak	Duty Cycle %	AVG		
A	20	0.019	16.46	0.008	0.815	1.63
B	20	0.017	16.46	0.007	0.815	1.63
C	20	0.018	16.46	0.007	0.815	1.63
D	20	0.016	16.46	0.006	0.815	1.63
E	20	0.019	16.46	0.008	0.815	1.63
F	20	0.023	16.46	0.009	0.815	1.63

Note: 1: Peak measurements were performed. RMS values were calculated from the peak measurement.

Please refer to the formula for calculating the RMS values: $[Filed\ Strength \cdot \sqrt{Duty\ cycle}]$

2: 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. Test results for the worst position (20cm) are reported.



Mode 2: Wireless Charging for Wireless 1(15W/7.5W for Wireless Load, Operating @MPP 360KHz +Wireless 2(5W for AirPods) +Wireless 3(5W for Apple watch 3, Operating @326.5KHz)

Mode 3: Wireless Charging for Wireless 1(5W/2.5W for Wireless Load, Operating @ BPP: 120~148.5KHz) +Wireless 2(5W for AirPods) +Wireless 3(5W for Apple watch 7, Operating @1.778MHz)

Wireless2-Operating @ 110KHz~148KHz

a) Electric Field Strength Measurement

Power <10% Charging						
Measured Side	Distance (cm)	Measured Value (V/m)			50% of Limit (V/m)	Limit (V/m)
		Peak	Duty Cycle %	AVG		
A	20	0.52	100	0.52	307	614.00
B	20	0.43	100	0.43	307	614.00
C	20	0.38	100	0.38	307	614.00
D	20	0.44	100	0.44	307	614.00
E	20	0.41	100	0.41	307	614.00
Power 20%~60% Charging						
Measured Side	Distance (cm)	Measured Value (V/m)			50% of Limit (V/m)	Limit (V/m)
		Peak	Duty Cycle %	AVG		
A	20	0.5	100	0.5	307.00	614.00
B	20	0.42	100	0.42	307.00	614.00
C	20	0.37	100	0.37	307.00	614.00
D	20	0.42	100	0.42	307.00	614.00
E	20	0.39	100	0.39	307.00	614.00
Power >75% Charging						
Measured Side	Distance (cm)	Measured Value (V/m)			50% of Limit (V/m)	Limit (V/m)
		Peak	Duty Cycle %	AVG		
A	20	0.48	100	0.48	307.00	614.00
B	20	0.4	100	0.4	307.00	614.00
C	20	0.34	100	0.34	307.00	614.00
D	20	0.4	100	0.4	307.00	614.00
E	20	0.36	100	0.36	307.00	614.00

1: Peak measurements were performed. RMS values were calculated from the peak measurement.

Please refer to the formula for calculating the RMS values: [Filed Strength*√Duty cycle]

2: 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. Test



results for the worst position (20cm) are reported.

b) Magnetic Field Strength Measurement

Power <10% Charging						
Measured Side	Distance (cm)	Measured Value (A/m)			50% of Limit (A/m)	Limit (A/m)
		Peak	Duty Cycle %	AVG		
A	20	0.021	100	0.021	0.815	1.63
B	20	0.018	100	0.018	0.815	1.63
C	20	0.019	100	0.019	0.815	1.63
D	20	0.017	100	0.017	0.815	1.63
E	20	0.02	100	0.020	0.815	1.63
Power 20%~60% Charging						
Measured Side	Distance (cm)	Measured Value (A/m)			50% of Limit (A/m)	Limit (A/m)
		Peak	Duty Cycle %	AVG		
A	20	0.02	100	0.02	0.815	1.63
B	20	0.016	100	0.016	0.815	1.63
C	20	0.017	100	0.017	0.815	1.63
D	20	0.014	100	0.014	0.815	1.63
E	20	0.018	100	0.018	0.815	1.63
Power >75% Charging						
Measured Side	Distance (cm)	Measured Value (A/m)			50% of Limit (A/m)	Limit (A/m)
		Peak	Duty Cycle %	AVG		
A	20	0.019	100	0.019	0.815	1.63
B	20	0.015	100	0.015	0.815	1.63
C	20	0.014	100	0.014	0.815	1.63
D	20	0.012	100	0.012	0.815	1.63
E	20	0.017	100	0.017	0.815	1.63

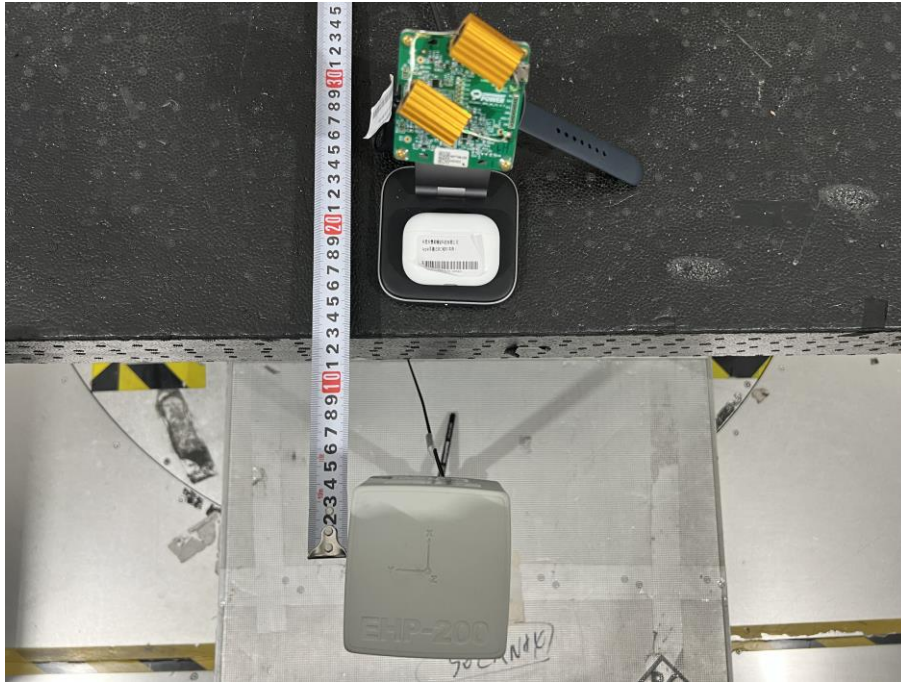
1: Peak measurements were performed. RMS values were calculated from the peak measurement.

Please refer to the formula for calculating the RMS values: [Filed Strength*√Duty cycle]

2: 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. Test results for the worst position (20cm) are reported.



2.7. Photographs of test setup



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