



Test Report No.: FM2010WDG0293



RF EXPOSURE TEST REPORT



Applicant	Belkin International, Inc.
Address	12045 East Waterfront Drive, Playa Vista, CA 90094 USA

Manufacturer or Supplier	Belkin International, Inc.
Address	12045 East Waterfront Drive, Playa Vista, CA 90094 USA
Product	BOOST↑CHARGE™ Wireless Charging Pad 15W
Additional Product	Wireless Charging Pad 15W, see items 1.1
Brand Name	belkin, playa
Model	WIA002V2
Additional Model & Model Difference	PW0004V2, see items 1.1
Date of tests	Nov. 11, 2020 ~ Nov. 27, 2020

The submitted sample of the above equipment has been tested according to the requirements of the following standard:

- 47 CFR PART 1, Subpart I, Section 1.1310
- KDB 680106 D01

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Lucas Chen Project Engineer / EMC Department	Approved by Glyn He Assistant Manager/ EMC Department
	
	Data: Dec. 23, 2020

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Test Report No.: FM2010WDG0293

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2010WDG0293	Original release	Dec. 23, 2020



1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

FCC ID	K7SWIA002V2
PRODUCT	BOOST ↑ CHARGE™ Wireless Charging Pad 15W
ADDITIONAL PRODUCT	Wireless Charging Pad 15W
MODEL NO.	WIA002V2
ADDITIONAL MODEL	PW0004V2
POWER SUPPLY	Input: 5.0V=2.0A, Output: 5.0W; Input: 9.0V=2.0A, Output: 7.5W; Input: 9.0V=2.0A, Output: 10.0W; Input: 12.0V=1.67A, Output: 15.0W
MODULATION TECHNOLOGY	FSK
OPERATING FREQUENCY RANGE	110KHz ~ 148KHz
ANTENNA TYPE	Loop Antenna
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB-C to USB-C cable: Shielded, detachable 1.2m

NOTES:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- For the test results, the EUT had been tested with all conditions, but only the worst case was shown in test report.
- Please refer to the EUT photo document (Reference No.: 2010WDG0293-1) for detailed product photo.
- Additional model PW0004V2 is identical with test model WIA002V2 except the model no. and brand name for trading purpose.
- The EUT can be powered by adapter as list as attach:

ADAPTER	
BRAND:	N/A
MODEL:	HKAP3231B-20US
INPUT:	AC 100-240V, 50/60Hz, 0.6A
OUTPUT:	5.0V=3.0A 15.0W, 9.0V=2.22A 20.0W, 12.0V=1.67A 20.0W
DC LINE:	N/A

- Model list:

Product	Brand	Model no.
BOOST↑CHARGE™ Wireless Charging Pad 15W	belkin	WIA002V2
Wireless Charging Pad 15W	playa	PW0004V2



2. RF EXPOSURE MEASUREMENT

2.1 LIMITS

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

TABLE 1—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 Exposures				
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
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	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
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

Reference KDB 680106 D01 RF Exposure Wireless Charging App v03

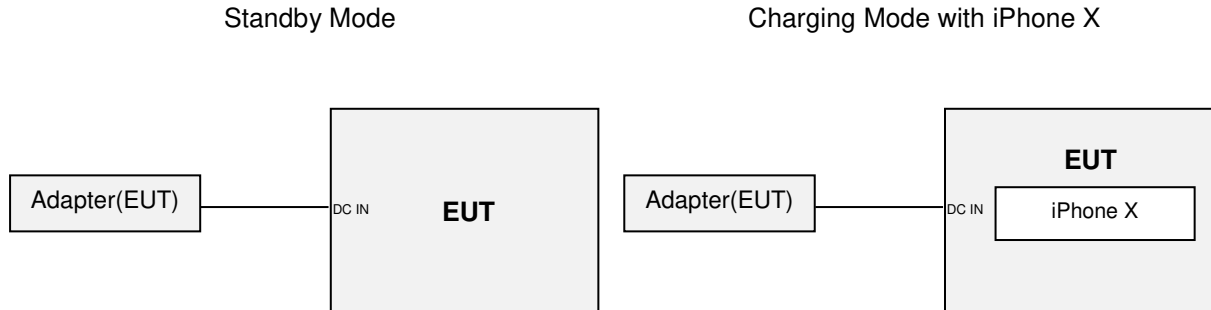
The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

2.2 DESCRIPTION OF SUPPORT UNITS

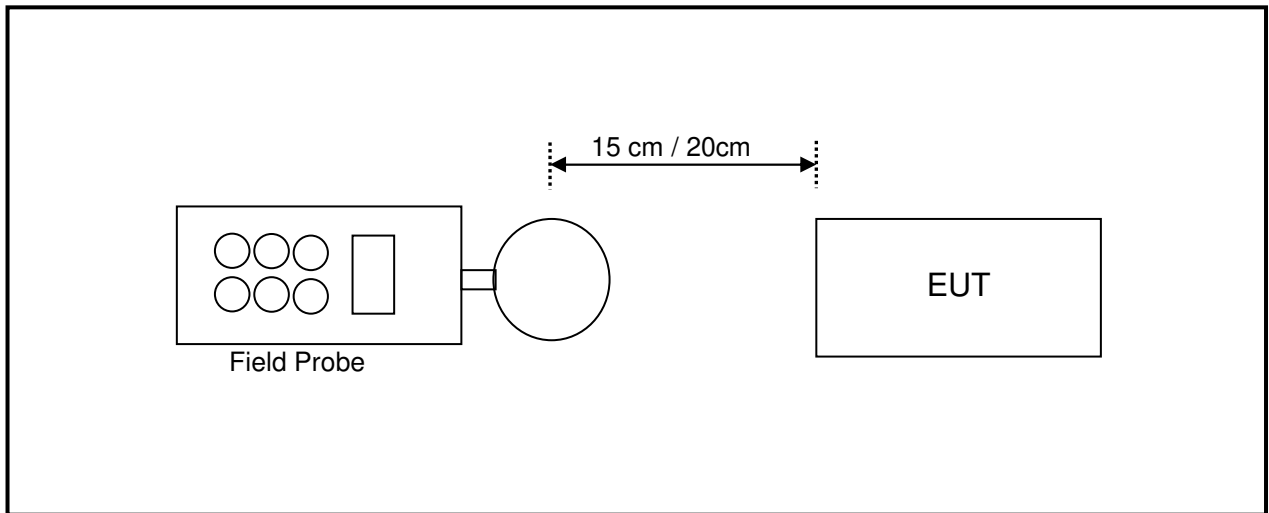
The EUT has been tested with associated equipment below

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	iPhone X	Apple	MQA52CH/A	N/A	N/A

2.3 CONFIGURATION OF SYSTEM UNDER TEST



2.4 TEST SETUP FOR WPC



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device.

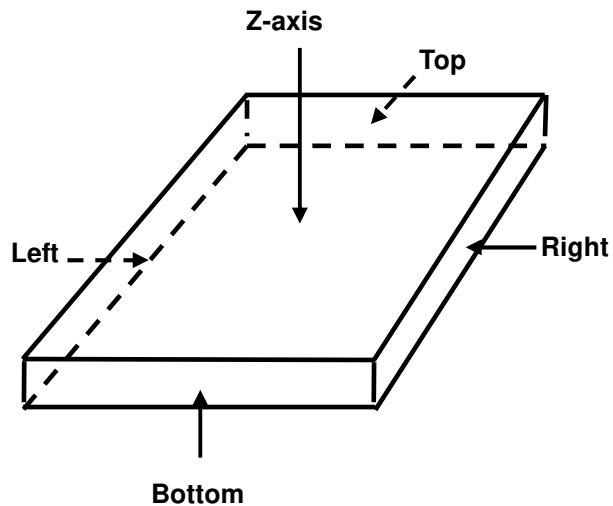


2.5 EQUIPMENTS USED DURING TEST

Item	Test Equipment	Manufacturer	Model No.	S/No	Due date.
1	3m Semi-Anechoic Chamber	ETS-LINDGRE N	7m*4m*3m	NSEMC003	2021-03-19
2	B-field Probe	Narda	Y2006	L-0017	2020-12-23
3	E-Field probe	Narda	NBM-520	2403/01B	2020-12-23

- NOTE:**
1. The test was performed in RS chamber.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2.6 TEST POINT DESCRIPTION





2.7 TEST RESULTS

Mode 1 Standby

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.4	1.35	1.37	1.43	0.72
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.6	-612.65	-612.63	-612.57	-613.28
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-305.6	-305.65	-305.63	-305.57	-306.28

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.28	0.26	0.26	0.26	0.29
Max H-field (A/m)	0.223	0.207	0.207	0.207	0.231
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.407	-1.423	-1.423	-1.423	-1.399
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.592	-0.608	-0.608	-0.608	-0.584

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode2 Charging Mode with iPhone X 10% Charger (at center)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.43	2.55	2.23	1.69	2.66
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.57	-611.45	-611.77	-612.31	-611.34
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.57	-304.45	-304.77	-305.31	-304.34

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.27	0.26	0.27	0.27	0.25
Max H-field (A/m)	0.215	0.207	0.215	0.215	0.199
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.415	-1.423	-1.415	-1.415	-1.431
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.600	-0.608	-0.600	-0.600	-0.616

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode3 Charging Mode with iPhone X 50% Charger (at center)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.46	2.62	2.38	1.77	2.69
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.54	-611.38	-611.62	-612.23	-611.31
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.54	-304.38	-304.62	-305.23	-304.31

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.37	0.42	0.44	0.42	0.28
Max H-field (A/m)	0.295	0.334	0.350	0.334	0.223
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.335	-1.296	-1.280	-1.296	-1.407
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.520	-0.481	-0.465	-0.481	-0.592

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode4 Charging Mode with iPhone X 90% Charger (at center)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.45	2.59	2.28	1.7	2.67
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.55	-611.41	-611.72	-612.3	-611.33
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.55	-304.41	-304.72	-305.3	-304.33

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.32	0.31	0.3	0.3	0.28
Max H-field (A/m)	0.255	0.247	0.239	0.239	0.223
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.375	-1.383	-1.391	-1.391	-1.407
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.560	-0.568	-0.576	-0.576	-0.592

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode5 Charging Mode with iPhone X 10% Charger (shift 5mm to right)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.5	2.68	2.32	1.79	2.72
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.5	-611.32	-611.68	-612.21	-611.28
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.5	-304.32	-304.68	-305.21	-304.28

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.28	0.31	0.28	0.32	0.27
Max H-field (A/m)	0.223	0.247	0.223	0.255	0.215
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.407	-1.383	-1.407	-1.375	-1.415
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.592	-0.568	-0.592	-0.560	-0.600

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode6 Charging Mode with iPhone X 50% Charger (shift 5mm to right)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.51	2.64	2.35	1.8	2.75
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.49	-611.36	-611.65	-612.2	-611.25
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.49	-304.36	-304.65	-305.2	-304.25

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.27	0.3	0.27	0.32	0.26
Max H-field (A/m)	0.215	0.239	0.215	0.255	0.207
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.415	-1.391	-1.415	-1.375	-1.423
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.600	-0.576	-0.600	-0.560	-0.608

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode 7 Charging Mode with iPhone X 90% Charger (shift 5mm to right)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.58	2.67	2.38	1.76	2.79
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.42	-611.33	-611.62	-612.24	-611.21
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.42	-304.33	-304.62	-305.24	-304.21

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.29	0.28	0.3	0.28	0.27
Max H-field (A/m)	0.231	0.223	0.239	0.223	0.215
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.399	-1.407	-1.391	-1.407	-1.415
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.584	-0.592	-0.576	-0.592	-0.600

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode8 Charging Mode with iPhone X 10% Charger (shift 5mm to left)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.55	2.58	2.32	1.77	2.81
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.45	-611.42	-611.68	-612.23	-611.19
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.45	-304.42	-304.68	-305.23	-304.19

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.31	0.26	0.31	0.29	0.29
Max H-field (A/m)	0.247	0.207	0.247	0.231	0.231
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.383	-1.423	-1.383	-1.399	-1.399
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.568	-0.608	-0.568	-0.584	-0.584

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode9 Charging Mode with iPhone X 50% Charger (shift 5mm to left)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.58	2.57	2.28	1.76	2.71
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.42	-611.43	-611.72	-612.24	-611.29
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.42	-304.43	-304.72	-305.24	-304.29

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.28	0.29	0.29	0.31	0.29
Max H-field (A/m)	0.223	0.231	0.231	0.247	0.231
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.407	-1.399	-1.399	-1.383	-1.399
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.592	-0.584	-0.584	-0.568	-0.584

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode10 Charging Mode with iPhone X 90% Charger (shift 5mm to left)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.56	2.61	2.28	1.79	2.73
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.44	-611.39	-611.72	-612.21	-611.27
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.44	-304.39	-304.72	-305.21	-304.27

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.28	0.29	0.31	0.32	0.28
Max H-field (A/m)	0.223	0.231	0.247	0.255	0.223
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.407	-1.399	-1.383	-1.375	-1.407
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.592	-0.584	-0.568	-0.560	-0.592

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode11 Charging Mode with iPhone X 10% Charger (shift 5mm to top)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.58	2.66	2.39	1.85	2.69
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.42	-611.34	-611.61	-612.15	-611.31
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.42	-304.34	-304.61	-305.15	-304.31

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.3	0.3	0.3	0.31	0.27
Max H-field (A/m)	0.239	0.239	0.239	0.247	0.215
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.391	-1.391	-1.391	-1.383	-1.415
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.576	-0.576	-0.576	-0.568	-0.600

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode12 Charging Mode with iPhone X 50% Charger (shift 5mm to top)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.6	2.63	2.28	1.71	2.84
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.4	-611.37	-611.72	-612.29	-611.16
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.4	-304.37	-304.72	-305.29	-304.16

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.27	0.27	0.27	0.28	0.27
Max H-field (A/m)	0.215	0.215	0.215	0.223	0.215
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.415	-1.415	-1.415	-1.407	-1.415
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.600	-0.600	-0.600	-0.592	-0.600

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode13 Charging Mode with iPhone X 90% Charger (shift 5mm to top)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.57	2.57	2.23	1.87	2.72
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.43	-611.43	-611.77	-612.13	-611.28
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.43	-304.43	-304.77	-305.13	-304.28

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.29	0.29	0.31	0.3	0.29
Max H-field (A/m)	0.231	0.231	0.247	0.239	0.231
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.399	-1.399	-1.383	-1.391	-1.399
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.584	-0.584	-0.568	-0.576	-0.584

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode14 Charging Mode with iPhone X 10% Charger (shift 5mm to bottom)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.62	2.66	2.34	1.87	2.84
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.38	-611.34	-611.66	-612.13	-611.16
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.38	-304.34	-304.66	-305.13	-304.16

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.29	0.3	0.27	0.28	0.3
Max H-field (A/m)	0.231	0.239	0.215	0.223	0.239
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.399	-1.391	-1.415	-1.407	-1.391
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.584	-0.576	-0.600	-0.592	-0.576

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode15 Charging Mode with iPhone X 50% Charger (shift 5mm to bottom)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.56	2.72	2.44	1.69	2.9
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.44	-611.28	-611.56	-612.31	-611.1
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.44	-304.28	-304.56	-305.31	-304.1

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.34	0.31	0.28	0.32	0.32
Max H-field (A/m)	0.271	0.247	0.223	0.255	0.255
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.359	-1.383	-1.407	-1.375	-1.375
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.544	-0.568	-0.592	-0.560	-0.560

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode16 Charging Mode with iPhone X 90% Charger (shift 5mm to bottom)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.65	2.77	2.42	1.88	2.66
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.35	-611.23	-611.58	-612.12	-611.34
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.35	-304.23	-304.58	-305.12	-304.34

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.3	0.26	0.29	0.3	0.27
Max H-field (A/m)	0.239	0.207	0.231	0.239	0.215
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.391	-1.423	-1.399	-1.391	-1.415
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.576	-0.608	-0.584	-0.576	-0.600

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode17 Charging Mode with iPhone X 10% 3mm airgap Charger (at center)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.22	1.96	1.96	1.68	2.03
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.78	-612.04	-612.04	-612.32	-611.97
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.78	-305.04	-305.04	-305.32	-304.97

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.27	0.26	0.26	0.27	0.25
Max H-field (A/m)	0.215	0.207	0.207	0.215	0.199
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.415	-1.423	-1.423	-1.415	-1.431
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.600	-0.608	-0.608	-0.600	-0.616

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode18 Charging Mode with iPhone X 50% 3mm airgap Charger (at center)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.29	2.21	2.04	1.71	2.24
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.71	-611.79	-611.96	-612.29	-611.76
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.71	-304.79	-304.96	-305.29	-304.76

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.34	0.28	0.31	0.33	0.32
Max H-field (A/m)	0.271	0.223	0.247	0.263	0.255
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.359	-1.407	-1.383	-1.367	-1.375
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.544	-0.592	-0.568	-0.552	-0.560

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode19 Charging Mode with iPhone X 90% 3mm airgap Charger (at center)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.45	2.11	2.2	1.8	2.26
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.55	-611.89	-611.8	-612.2	-611.74
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.55	-304.89	-304.8	-305.2	-304.74

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.29	0.3	0.27	0.34	0.28
Max H-field (A/m)	0.231	0.239	0.215	0.271	0.223
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.399	-1.391	-1.415	-1.359	-1.407
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.584	-0.576	-0.600	-0.544	-0.592

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode20 Charging Mode with iPhone X 10% 3mm airgap Charger (shift 5mm to right)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.3	2.06	2.06	1.69	2.06
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.7	-611.94	-611.94	-612.31	-611.94
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.7	-304.94	-304.94	-305.31	-304.94

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.3	0.27	0.29	0.3	0.27
Max H-field (A/m)	0.239	0.215	0.231	0.239	0.215
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.391	-1.415	-1.399	-1.391	-1.415
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.576	-0.600	-0.584	-0.576	-0.600

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode21 Charging Mode with iPhone X 50% 3mm airgap Charger (shift 5mm to right)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.3	2.17	2.07	1.85	2.12
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.7	-611.83	-611.93	-612.15	-611.88
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.7	-304.83	-304.93	-305.15	-304.88

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.29	0.31	0.27	0.31	0.29
Max H-field (A/m)	0.231	0.247	0.215	0.247	0.231
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.399	-1.383	-1.415	-1.383	-1.399
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.584	-0.568	-0.600	-0.568	-0.584

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode22 Charging Mode with iPhone X 90% 3mm airgap Charger (shift 5mm to right)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.29	1.96	1.97	1.74	2.25
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.71	-612.04	-612.03	-612.26	-611.75
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.71	-305.04	-305.03	-305.26	-304.75

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.34	0.31	0.28	0.31	0.31
Max H-field (A/m)	0.271	0.247	0.223	0.247	0.247
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.359	-1.383	-1.407	-1.383	-1.383
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.544	-0.568	-0.592	-0.568	-0.568

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode23 Charging Mode with iPhone X 10% 3mm airgap Charger (shift 5mm to left)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.28	2.03	2.02	1.78	2.09
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.72	-611.97	-611.98	-612.22	-611.91
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.72	-304.97	-304.98	-305.22	-304.91

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.35	0.41	0.39	0.37	0.26
Max H-field (A/m)	0.279	0.326	0.311	0.295	0.207
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.351	-1.304	-1.319	-1.335	-1.423
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.536	-0.489	-0.504	-0.520	-0.608

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode24 Charging Mode with iPhone X 50% 3mm airgap Charger (shift 5mm to left)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.22	2.04	2.05	1.82	2.18
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.78	-611.96	-611.95	-612.18	-611.82
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.78	-304.96	-304.95	-305.18	-304.82

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.3	0.27	0.3	0.31	0.31
Max H-field (A/m)	0.239	0.215	0.239	0.247	0.247
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.391	-1.415	-1.391	-1.383	-1.383
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.576	-0.600	-0.576	-0.568	-0.568

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode25 Charging Mode with iPhone X 90% 3mm airgap Charger (shift 5mm to left)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.28	2.04	2.1	1.68	2.17
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.72	-611.96	-611.9	-612.32	-611.83
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.72	-304.96	-304.9	-305.32	-304.83

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.32	0.28	0.32	0.32	0.26
Max H-field (A/m)	0.255	0.223	0.255	0.255	0.207
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.375	-1.407	-1.375	-1.375	-1.423
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.560	-0.592	-0.560	-0.560	-0.608

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode26 Charging Mode with iPhone X 10% 3mm airgap Charger (shift 5mm to top)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.37	1.99	2.04	1.76	2.09
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.63	-612.01	-611.96	-612.24	-611.91
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.63	-305.01	-304.96	-305.24	-304.91

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.33	0.3	0.33	0.28	0.25
Max H-field (A/m)	0.263	0.239	0.263	0.223	0.199
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.367	-1.391	-1.367	-1.407	-1.431
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.552	-0.576	-0.552	-0.592	-0.616

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode27 Charging Mode with iPhone X 50% 3mm airgap Charger (shift 5mm to top)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.3	2.01	2.05	1.8	2.17
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.7	-611.99	-611.95	-612.2	-611.83
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.7	-304.99	-304.95	-305.2	-304.83

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.28	0.31	0.31	0.32	0.3
Max H-field (A/m)	0.223	0.247	0.247	0.255	0.239
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.407	-1.383	-1.383	-1.375	-1.391
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.592	-0.568	-0.568	-0.560	-0.576

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode28 Charging Mode with iPhone X 90% 3mm airgap Charger (shift 5mm to top)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.3	2.05	1.99	1.73	2.16
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.7	-611.95	-612.01	-612.27	-611.84
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.7	-304.95	-305.01	-305.27	-304.84

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.34	0.29	0.3	0.32	0.32
Max H-field (A/m)	0.271	0.231	0.239	0.255	0.255
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.359	-1.399	-1.391	-1.375	-1.375
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.544	-0.584	-0.576	-0.560	-0.560

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode29 Charging Mode with iPhone X 10% 3mm airgap Charger (shift 5mm to bottom)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.28	1.97	2.04	1.7	2.05
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.72	-612.03	-611.96	-612.3	-611.95
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.72	-305.03	-304.96	-305.3	-304.95

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.29	0.28	0.28	0.28	0.29
Max H-field (A/m)	0.231	0.223	0.223	0.223	0.231
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.399	-1.407	-1.407	-1.407	-1.399
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.584	-0.592	-0.592	-0.592	-0.584

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode30 Charging Mode with iPhone X 50% 3mm airgap Charger (shift 5mm to bottom)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.27	2.04	2.01	1.7	2.11
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.73	-611.96	-611.99	-612.3	-611.89
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.73	-304.96	-304.99	-305.3	-304.89

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.3	0.28	0.28	0.28	0.25
Max H-field (A/m)	0.239	0.223	0.223	0.223	0.199
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.391	-1.407	-1.407	-1.407	-1.431
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.576	-0.592	-0.592	-0.592	-0.616

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



Charging Mode31 Charging Mode with iPhone X 90% 3mm airgap Charger (shift 5mm to bottom)

E-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.27	1.97	1.97	1.77	2.08
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-611.73	-612.03	-612.03	-612.23	-611.92
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.73	-305.03	-305.03	-305.23	-304.92

H-Field Measurement					
Distance	15cm				20cm
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.28	0.26	0.29	0.31	0.27
Max H-field (A/m)	0.223	0.207	0.231	0.247	0.215
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.407	-1.423	-1.399	-1.383	-1.415
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.592	-0.608	-0.584	-0.568	-0.600

Measurements was made from all sides and the top of the primary/client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.



**BUREAU
VERITAS**

Test Report No.: FM2010WDG0293

3. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

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