RF exposure evaluation

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

According to KDB 680106 D01 RF Exposure Wireless Charging Apps, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm for devices designed for typical desktop applications. E and H field strength measurements or numerical modelling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device

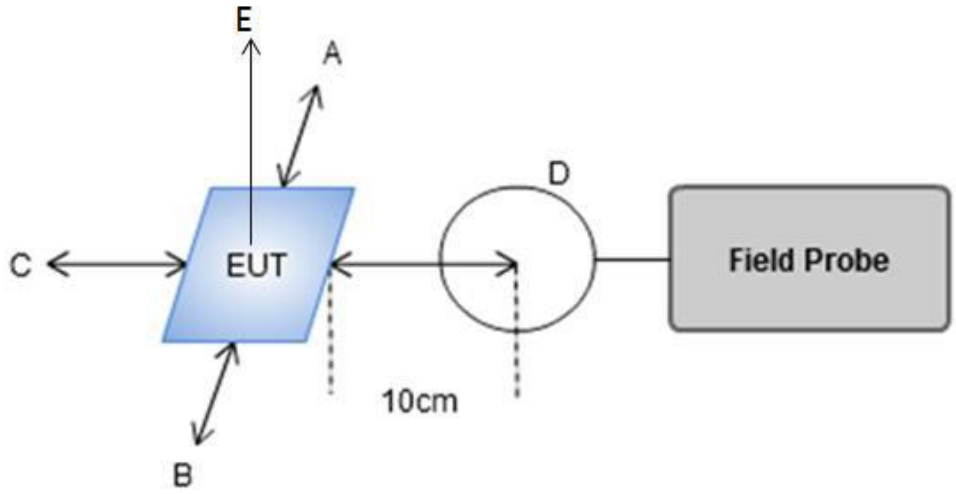
1. Limits For General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW /cm$_2$)	Averaging Time (minutes)
0.3 ~ 3.0	614	1.63	(100)*	30
3.0 ~ 30	824/f	2.19/f	(180/f$_2$)*	30
30 ~ 300	27.5	0.073	0.2	30
300~1500	-	-	f/1500	30
1500~100000	-	-	1.0	30

2. The Equipment List

Instrument	Manufacturer	Model No.	Serial No.	Calibration Until
B-Field Probe	Narda	B-Field Probe 100 cm^2	B-0137	Jun. 19, 2017
Magnetic field meter	Narda	ELT-400	B-0137	Jun. 19, 2017
Broadband field meter	Narda	NBM-550	B-0959	Nov. 18, 2017
B-Field Probe	Narda	EF0391	A-1034	Nov. 18, 2017

3. Test Setup Block



4. MPE EVALUATION RESULTS

a) 50% charging load mode

Electric Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (V/m)	50 % of Limit (V/m)	Limit (V/m)
A	15	1.85	307.00	614
B	15	1.84	307.00	614
C	15	1.85	307.00	614
D	15	1.74	307.00	614
E	15	1.69	307.00	614

Magnetic Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (A/m)	50 % of Limit (A/m)	Limit (A/m)
A	15	0.284	0.815	1.63
B	15	0.287	0.815	1.63
C	15	0.274	0.815	1.63
D	15	0.268	0.815	1.63
E	15	0.287	0.815	1.63

b) 100% charging load mode

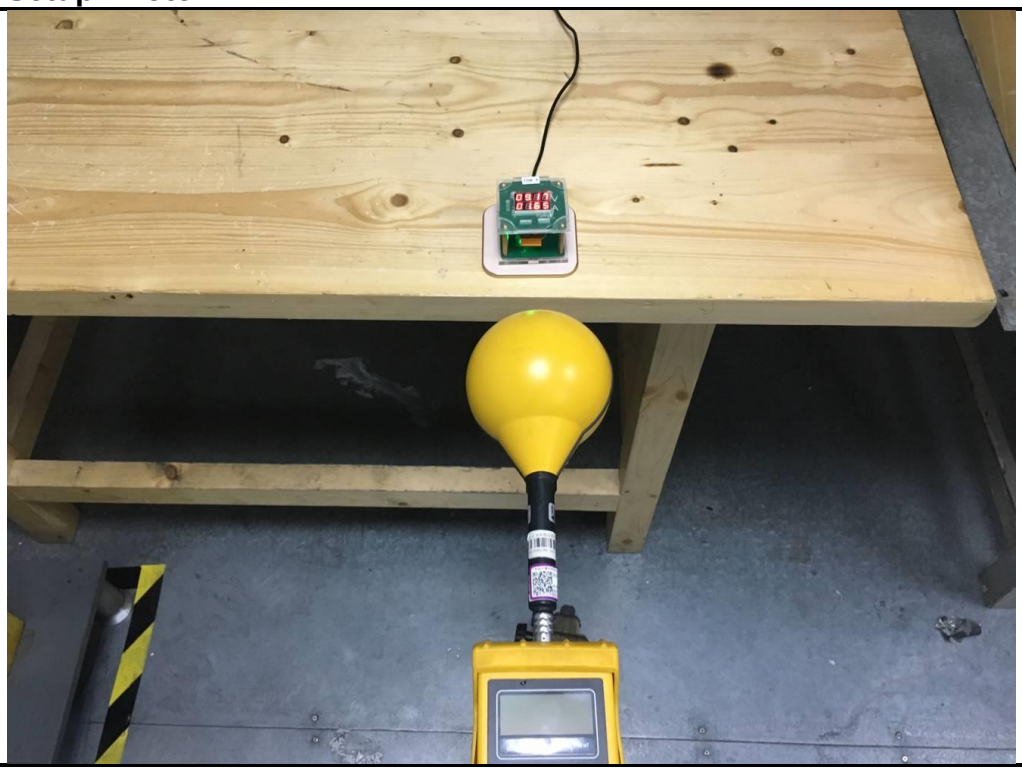
Electric Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (V/m)	50 % of Limit (V/m)	Limit (V/m)
A	15	2.54	307.00	614
B	15	2.36	307.00	614
C	15	2.41	307.00	614
D	15	2.12	307.00	614
E	15	2.48	307.00	614

Magnetic Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (A/m)	50 % of Limit (A/m)	Limit (A/m)
A	15	0.546	0.815	1.63
B	15	0.531	0.815	1.63
C	15	0.542	0.815	1.63
D	15	0.498	0.815	1.63
E	15	0.526	0.815	1.63

5. Test Setup Photo



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