

## 1 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

### 1.1 Standard Applicable

According to §1.1307(b)(1) and , systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to §1.1310 and §2.1093 RF exposure is calculated.

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

**FCC KDB 680106**

### 1.2 Limits for Maximum Permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength(E) (V/m)	Magnetic Field Strength(H) (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for Occupational / Controlled Exposure				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-15000	/	/	5	6
Frequency Range (MHz)	Electric Field Strength(E) (V/m)	Magnetic Field Strength(H) (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
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 <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-15000	/	/	1.0	30

F = frequency in MHz

\* = Plane-wave equipment power density

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### 1.3 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model /Type No.	Series No.	Data Cable	Power Cord
1.	NA	---	---	---	---	---

### 1.4 The Worst Charging Condition:

Ancillary Equipment	Charging Condition	Verdict
Load	Full Loading	PASS
Load	99% Loading	PASS
Load	50% Loading	PASS
Load	1% Loading	PASS

Note: For Wireless Power Consortium Qi specification, a lower operating frequency or high duty cycle result in the transfer of a higher amount of power and charging current.

### 1.5 Measurement Procedure:

- For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 10 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.

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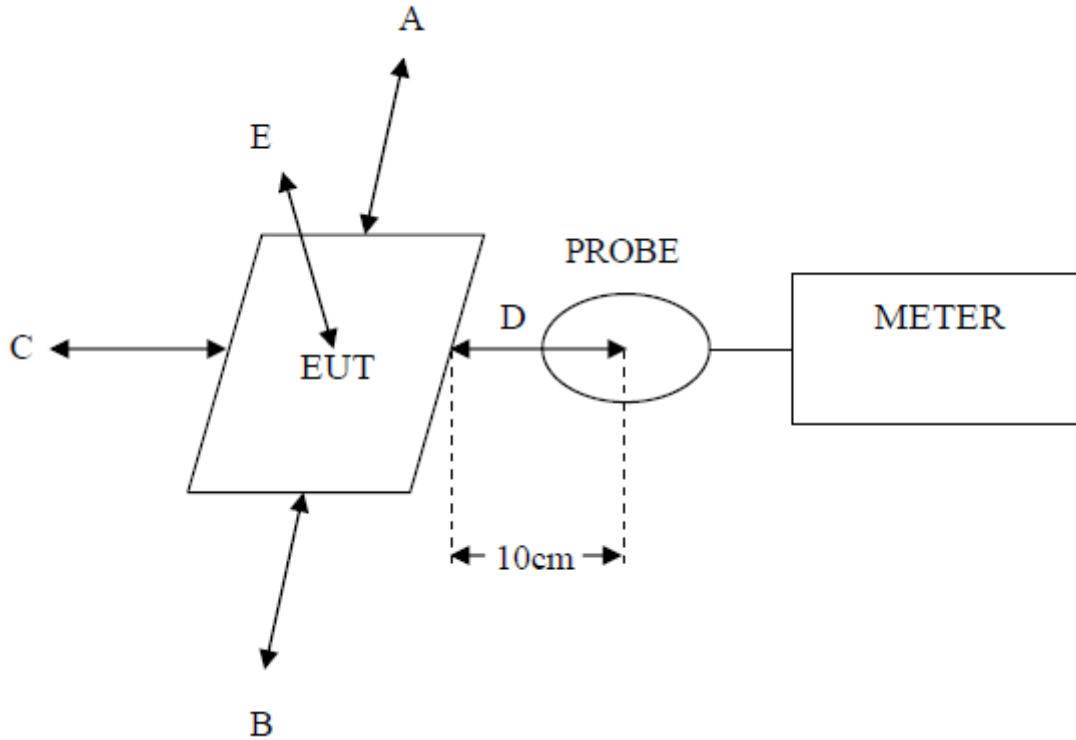
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**1.6 Measurement Equipment Used:**

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EM RADIATION METER	Wandel & Goltermann	EMR-30	M-0006	10/14/2017	10/13/2018

**1.7 Test Set-up:**



**1.8 Maximum Permissible Exposure (MPE) Evaluation:**

Full Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	E-field	H-field
Front	10 cm	4.45	0.183
Left	10 cm	4.47	0.131
Right	10 cm	4.54	0.143
Top	10 cm	4.46	0.142
Bottom	10 cm	4.41	0.143
Limit		614	1.63

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99% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	E-field	H-field
Front	10 cm	4.45	0.18
Left	10 cm	4.44	0.134
Right	10 cm	4.55	0.145
Top	10 cm	4.44	0.14
Bottom	10 cm	4.42	0.144
Limit		614	1.63

50% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	E-field	H-field
Front	10 cm	4.47	0.184
Left	10 cm	4.45	0.132
Right	10 cm	4.52	0.145
Top	10 cm	4.46	0.14
Bottom	10 cm	4.43	0.142
Limit		614	1.63

1% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	E-field	H-field
Front	10 cm	4.45	0.182
Left	10 cm	4.46	0.13
Right	10 cm	4.52	0.144
Top	10 cm	4.47	0.143
Bottom	10 cm	4.42	0.141
Limit		614	1.63

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