RF Exposure / SAR / Health Hazard Statement

Regulations:

According to USA CFR 47 Part 15 §1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

For Canada, IC RSS-102 sets out the requirements and measurement techniques used to evaluate radio frequency (RF) exposure compliance of radiocommunication apparatus designed to be used within the vicinity of the human body.

MPE/SAR Testing Requirements:

Per FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v02, Section 3, Paragraph 3, RF exposure evaluation of wireless charging pads 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 distance 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 (175.8 dBuV/m) E-field and 1.63 A/m (124.2 dBuA/m) H-field in a 30 minute averaging time.

Per IC RSS-102, emissions between 3 kHz and 1 MHz for use in an uncontrolled environment should be assessed versus the limits in Table 4.2 of Section 4 : 280 V/m (169 dBuV/m) E-field and 2.19A/m (126.8 dBuA/m) H-field in a 6 minute averaging time.

Procedure:

Since the EUT transmits continuously while charging, the instantaneous measured field values are thus reported in demonstrating compliance. The highest field strengths measured at 0 cm separation from the EUT (as requested by the FCC) in both charging modes on all exposed sides are reported below. Measurements are made using UM OSHA's ETS-Lindgren / Holaday HI-3603 VLF Field Survey meter (UMHI3603), set in max-hold, rotated through three axes, and kept in contact with the surface of the EUT along each face.

RF Exposure Measurements Visteon Charger; FCC/IC							
	EUT	EUT	Ant.	E-Field	E-Field Limit	Pass	
#	Mode	Side	Orien.	V/m	V/m	dB	Comments
2	PowerMat	Тор	3-Axes	1.7	280.0	22.2	max, all polarizations
3		Left	3-Axes	2.7	280.0	20.2	max, all polarizations
4		Right	3-Axes	2.8	280.0	20.0	max, all polarizations
5		Bottom	3-Axes	2.0	280.0	21.5	max, all polarizations
6		Front	3-Axes	6.0	280.0	16.7	max, all polarizations
8	WPC	Тор	3-Axes	11.2	280.0	14.0	max, all polarizations
9		Left	3-Axes	7.7	280.0	15.6	max, all polarizations
10		Right	3-Axes	4.3	280.0	18.1	max, all polarizations
11		Bottom	3-Axes	8.0	280.0	15.4	max, all polarizations
12		Front	3-Axes	60.2	280.0	6.7	max, all polarizations
	EUT	EUT	Ant.	H-Field	H-Field Limit	Pass	
#	Mode	Side	Orien.	A/m	A/m	dB	Comments
13	PowerMat	Top	3-Axes	0.0064	1.63	24.1	max, all polarizations
14		Left	3-Axes	0.0520	1.63	15.0	max, all polarizations
15		Right	3-Axes	0.0802	1.63	13.1	max, all polarizations
16		Bottom	3-Axes	0.0620	1.63	14.2	max, all polarizations
17		Front	3-Axes	0.0185	1.63	19.5	max, all polarizations
18	WPC	Top	3-Axes	0.0126	1.63	21.1	max, all polarizations
19		Left	3-Axes	0.3860	1.63	6.3	max, all polarizations
20		Right	3-Axes	0.8380	1.63	2.9	max, all polarizations
21		Bottom	3-Axes	0.1920	1.63	9.3	max, all polarizations
22		Front	3-Axes	0.1096	1.63	11.7	max, all polarizations

TEST EQUIPMENT: ETS/Holaday HI-3603 OSHA VLF Meter (UMHI3603)

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