

RF EXPOSURE REPORT

Applicant: ^{OF} Cal-Comp Big Data, Inc.
5F., No.99, Sec. 5, Nanjing E. Rd., Songshan Dist., Taipei City
10571, Taiwan (R.O.C.)

Product Name: HiMirror Mini Premium X

Brand Name: HiMirror

Model No.: BM688

Model Difference: N/A

Report Number: T190711W03-MF

FCC ID: 2AJTF-BM688

FCC Rule Part: Part 2.1091

Issue Date: Aug. 01, 2019

Date of Test: Jul. 17, 2019

Date of EUT Received: Jul. 11, 2019

Issued by: Compliance Certification Services Inc. Wugu Lab.
No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891,
Taiwan. (R.O.C.)
service@ccsrf.com

Note: The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards. The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory).

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Henry Chiang

Tested By:

Henry Chiang / Engineer

Kevin Tsai

Approved By:

Kevin Tsai / Deputy Manager



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Revision History

Report Number	Revision	Description	Effected Page	Issue Date	Revised By
T190711W03-MF	Rev.00	Initial creation of document	All	Jul. 25, 2018	Elle Chang
T190711W03-MF	Rev.01	Updated signature of Approver	2	Aug. 01, 2018	Elle Chang

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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 D01 RF Exposure Wireless Charging App v03

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 ²)	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 ²)	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 ²)	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 ²)	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	90% Loading	PASS
Load	50% Loading	PASS
Load	10% 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, 15 cm and 20 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, 15 cm and 20 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.

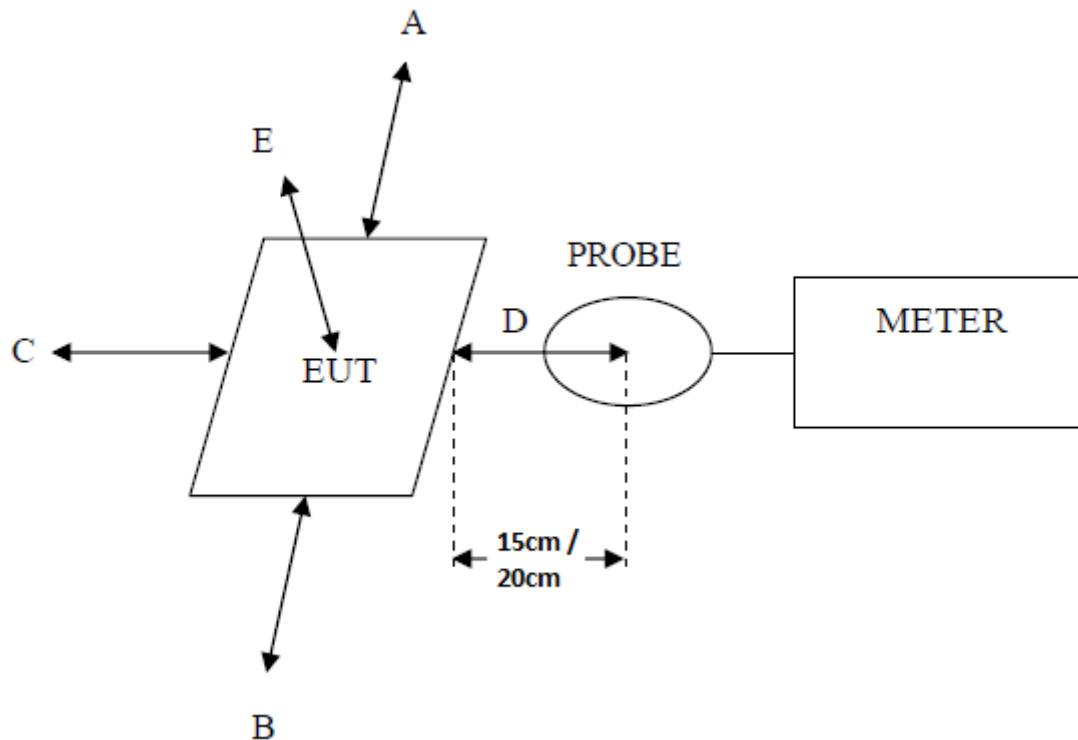
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1.6 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
BROADBAND FIELD METER	NARDA	NBM-520	D-0924	10/26/2018	10/26/2019

1.7 Test Set-up:

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1.8 Maximum Permissible Exposure (MPE) Evaluation:

Ambient temperature: 19.9°C Relative humidity: 59% Test Date: 07/17/2019

Full Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	10 cm	0.96	0.0045
Back	10 cm	0.59	0.0031
Left	10 cm	0.74	0.0037
Right	10 cm	0.69	0.003
Top	10 cm	0.52	0.0034
Bottom	10 cm	0.47	0.0025
Limit		614	0.815

99% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	10 cm	0.98	0.0055
Back	10 cm	0.79	0.0034
Left	10 cm	0.75	0.0047
Right	10 cm	0.72	0.0029
Top	10 cm	0.52	0.0024
Bottom	10 cm	0.52	0.0025
Limit		614	0.815

90% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	10 cm	0.96	0.0038
Back	10 cm	0.82	0.0041
Left	10 cm	0.82	0.0041
Right	10 cm	0.69	0.0026
Top	10 cm	0.48	0.004
Bottom	10 cm	0.54	0.0029
Limit		614	0.815

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50% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	10 cm	1	0.0042
Back	10 cm	0.79	0.0037
Left	10 cm	0.78	0.0045
Right	10 cm	0.73	0.0027
Top	10 cm	0.61	0.0042
Bottom	10 cm	0.52	0.0034
Limit		614	0.815

10% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	10 cm	0.96	0.0036
Back	10 cm	0.68	0.0047
Left	10 cm	0.74	0.0033
Right	10 cm	0.78	0.004
Top	10 cm	0.51	0.0033
Bottom	10 cm	0.53	0.0029
Limit		614	0.815

1% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	10 cm	0.89	0.0055
Back	10 cm	0.79	0.0041
Left	10 cm	0.75	0.0035
Right	10 cm	0.67	0.0035
Top	10 cm	0.43	0.0032
Bottom	10 cm	0.56	0.0029
Limit		614	0.815

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Full Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	15 cm	0.74	0.003
Back	15 cm	0.49	0.0024
Left	15 cm	0.63	0.0025
Right	15 cm	0.54	0.0021
Top	15 cm	0.42	0.0015
Bottom	15 cm	0.35	0.002
Limit		614	0.815

99% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	15 cm	0.77	0.0029
Back	15 cm	0.68	0.003
Left	15 cm	0.57	0.0033
Right	15 cm	0.45	0.0011
Top	15 cm	0.47	0.0005
Bottom	15 cm	0.44	0.0023
Limit		614	0.815

90% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	15 cm	0.82	0.0029
Back	15 cm	0.54	0.0025
Left	15 cm	0.58	0.0025
Right	15 cm	0.54	0.0022
Top	15 cm	0.36	0.0019
Bottom	15 cm	0.45	0.001
Limit		614	0.815

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50% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	15 cm	0.7	0.0037
Back	15 cm	0.66	0.003
Left	15 cm	0.68	0.0026
Right	15 cm	0.44	0.0026
Top	15 cm	0.41	0.0009
Bottom	15 cm	0.28	0.0026
Limit		614	0.815

10% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	15 cm	0.68	0.0034
Back	15 cm	0.66	0.0032
Left	15 cm	0.6	0.0018
Right	15 cm	0.59	0.0022
Top	15 cm	0.42	0.0015
Bottom	15 cm	0.45	0.0026
Limit		614	0.815

1% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	15 cm	0.67	0.0021
Back	15 cm	0.55	0.0025
Left	15 cm	0.53	0.0028
Right	15 cm	0.47	0.0025
Top	15 cm	0.4	0.001
Bottom	15 cm	0.28	0.0025
Limit		614	0.815

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Full Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	20 cm	0.53	0.0017
Back	20 cm	0.31	0.0015
Left	20 cm	0.44	0.0018
Right	20 cm	0.37	0.0013
Top	20 cm	0.34	0.0014
Bottom	20 cm	0.28	0.0017
Limit		614	0.815

99% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	20 cm	0.44	0.0026
Back	20 cm	0.36	0.0009
Left	20 cm	0.35	0.0026
Right	20 cm	0.41	0.0011
Top	20 cm	0.24	0.0004
Bottom	20 cm	0.38	0.0011
Limit		614	0.815

90% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	20 cm	0.48	0.0022
Back	20 cm	0.36	0.0011
Left	20 cm	0.44	0.0014
Right	20 cm	0.27	0.0014
Top	20 cm	0.28	0.0017
Bottom	20 cm	0.3	0.0009
Limit		614	0.815

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50% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	20 cm	0.6	0.0008
Back	20 cm	0.48	0.0011
Left	20 cm	0.36	0.0015
Right	20 cm	0.43	0.0011
Top	20 cm	0.37	0.0007
Bottom	20 cm	0.24	0.0021
Limit		614	0.815

10% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	20 cm	0.51	0.0008
Back	20 cm	0.44	0.0018
Left	20 cm	0.47	0.0015
Right	20 cm	0.29	0.0011
Top	20 cm	0.31	0.0012
Bottom	20 cm	0.22	0.0011
Limit		614	0.815

1% Loading

Maximum Permissible Exposure			
Probe from EUT Side	Test Distance	V/m	A/m
Front	20 cm	0.63	0.0007
Back	20 cm	0.46	0.0014
Left	20 cm	0.51	0.0015
Right	20 cm	0.32	0.0012
Top	20 cm	0.39	0.001
Bottom	20 cm	0.24	0.0012
Limit		614	0.815

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