

RF EXPOSURE REPORT

Applicant:	<i>OF</i> 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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Chiang envy

Tested By:

Henry Chiang / Engineer

Konil

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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MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Standard Applicable 1.1

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

2 Limits for Iviax	Limits for Maximum Permissive Exposure (MPE)						
Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time			
Range	Strength(E) (V/m)	Strength(H) (A/m)	(mW/cm2)	(minute)			
(MHz)							
	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	Electric Field	Magnetic Field	Power Density	Averaging Time			
Range	Strength(E) (V/m)	Strength(H) (A/m)	(mW/cm ²)	(minute)			
(MHz)							
	Limits for Generation	al Population/Uncon	trolled 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			

Limits for Maximum Permissive Exposure (MPE) 1 2

F = frequency in MHz

* = Plane-wave equipment power density

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1.3 Equipment Used in Tested System

ltem	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:

1. 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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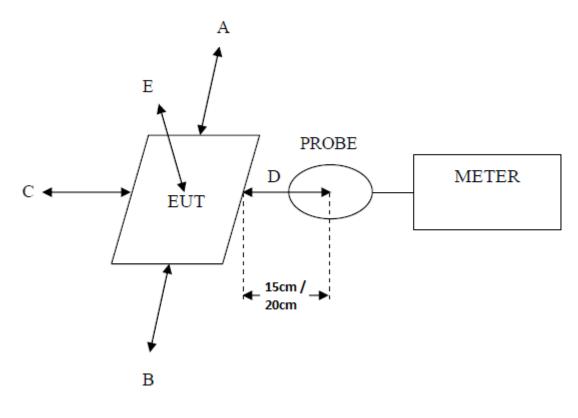
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1.6 **Measurement Equipment Used:**

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
BROADBAND FIELD METER	NARDA	NBM-520			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	
Тор	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	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				
Тор	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		
Тор	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		
Тор	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	
Тор	10 cm	0.51	0.0033	
Bottom	10 cm	0.53	0.0029	
Limit		614	0.815	

1% Loading

Max	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			
Тор	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
Тор	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
Тор	15 cm	0.47	0.0005
Bottom	15 cm	0.44	0.0023
Limit		614	0.815

90% Loading

Max	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	
Тор	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
Тор	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
Тор	15 cm	0.42	0.0015
Bottom	15 cm	0.45	0.0026
Limit		614	0.815

1% Loading

Max	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	
Тор	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
Тор	20 cm	0.34	0.0014
Bottom	20 cm	0.28	0.0017
Limit		614	0.815

99% Loading

Max	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	
Тор	20 cm	0.24	0.0004	
Bottom	20 cm	0.38	0.0011	
Limit		614	0.815	

90% Loading

Max	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	
Тор	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
Тор	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
Тор	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
Тор	20 cm	0.39	0.001
Bottom	20 cm	0.24	0.0012
Limit		614	0.815

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