RF Exposure Report

Report No.:	SABDVW-WTW-P21100875
Test Model (Host):	LUCID CONNECTED HOME CHARGING STATION, LTE, NA / LUCID CONNECTED HOME CHARGING STATION, NA
Received Date:	Nov. 09, 2021
Test Date:	Mar. 16 ~ Mar. 25, 2022
Issued Date:	Jun. 08, 2022
Applicant:	LITE-ON Technology Corp.
Address:	Bldg. C, 90, Chien 1 Rd., Chung-Ho, New Taipei City, 23585, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
SABDVW-WTW-P21100875	Original release	Jun. 08, 2022

1 Certificate of Conformity

Product (Host):	LUCID CONNECTED HOME CHARGING STATION, LTE, NA / LUCID CONNECTED HOME CHARGING STATION, NA
Brand (Host):	Lucid
Test Model (Host):	LUCID CONNECTED HOME CHARGING STATION, LTE, NA / LUCID CONNECTED HOME CHARGING STATION, NA
Sample Status:	DVT
Applicant:	LITE-ON Technology Corp.
Test Date:	Mar. 16 ~ Mar. 25, 2022
Standards:	FCC Part 2 (Section 2.1091)
References Test Guidance:	KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Jun. 08, 2022

Celine Chou / Senior Specialist

Approved by : Jeremy Lin , **Date:** Jun. 08, 2022

Jeremy Lin / Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$
where
Pd = power density in mW/cm^2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
pi = 3.1416
r = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Description of Antenna

The antenna information for host is listed as below:

For WLAN

Type	Connector	Gain (dBi)
Dipole	I-PEX	2.20

For NFC

Type	Connector	Gain (dBi)
PCB Loop Antenna	NA	-

For WWAN

Type	Connector	Antenna gain (dBi)							
		GPRS 850	GPRS 1900	B2	B4	B5	B12	B13	B25
Monopole Coupling	Coaxial	1.0	0.5	0.5	2.0	1.0	2.3	0.6	0.5

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3 Calculation Result of Maximum Conducted Power

WLAN (EUT contains certified WLAN module (FCC ID: PPQLILYW131), max PK power was base on PHONENIX TESTTLAB GmbH report no.: F160785E3)

Frequency Band (MHz)	Max PK Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	21.50	2.20	20	0.047	1.000

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

NFC (EUT contains certified NFC module (FCC ID: PPQRYORR2L))

Frequency Band (MHz)	Field Strength (dBuV/m) @30m	Field Strength (dBuV/m) @3m	Max. Power EIRP (dBm)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
13.56	26.18	66.18	-29.05	20	0.00000025	0.978

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Max Power (dBm) = Field Strength of Fundamental (dBuV/m@3m) – 95.23,
   Max Power (mW) = $10^{(\text{Max power (dBm)}/10)}$
3. The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)
4. Only model: LUCID CONNECTED HOME CHARGING STATION, LTE, NA spport WWAN and NFC function.

WWAN (EUT contains certified WWAN module (FCC ID: XMR201707BG96))

Band	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
GPRS 850	29.80	31.95	20	0.312	0.549
GPRS 1900	-	28.70	20	0.147	1.000
Cat-M1 Band 2	-	23.80	20	0.048	1.000
Cat-M1 Band 4	-	24.21	20	0.052	1.000
Cat-M1 Band 5	21.95	24.10	20	0.051	0.549
Cat-M1 Band 12	23.45	25.60	20	0.072	0.466
Cat-M1 Band 13	21.75	23.90	20	0.049	0.519
Cat-M1 Band 25	-	23.79	20	0.048	1.000
NB-IoT Band 2	-	22.73	20	0.037	1.000
NB-IoT Band 4	-	24.21	20	0.052	1.000
NB-IoT Band 5	21.35	23.50	20	0.045	0.550
NB-IoT Band 12	23.15	25.30	20	0.067	0.466
NB-IoT Band 13	21.15	23.30	20	0.043	0.518
NB-IoT Band 25	-	22.67	20	0.037	1.000

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. EIPR Power (dBm) = ERP (dBm) + 2.15.
3. Only model: LUCID CONNECTED HOME CHARGING STATION, LTE, NA spport WWAN and NFC function.

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

2.4GHz + NFC + WWAN = 0.047 / 1 + 0.00000025 / 0.978 + 0.312 / 0.549 = 0.615 < 1

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