

RF Exposure Report

Report No.: SA190417D14

FCC ID: PPQIC3S

Test Model: IC3-32A-H-A

Series Model: IC3-32A-N-A, SC3-32A-H, SC3-32A-N, IC3-32A-H-V, IC3-32A-N-V

Received Date: Apr. 17, 2019

Test Date: Apr. 26 to May 3, 2019

Issued Date: May 7, 2019

Applicant: Lite-On Technology Corporation

Address: 90,Chien I Road, Chung Ho, Taipei Hsien, Taiwan, R.O.C

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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**FCC Registration /
Designation Number:** 198487 / TW2021



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Release Control Record

Issue No.	Description	Date Issued
SA190417D14	Original release.	May 7, 2019

1 Certificate of Conformity

Product: Charging Station

Brand: LITEON

Test Model: IC3-32A-H-A

Series Model: IC3-32A-N-A, SC3-32A-H, SC3-32A-N, IC3-32A-H-V, IC3-32A-N-V

Sample Status: Engineering sample

Applicant: Lite-On Technology Corporation

Test Date: Apr. 26 to May 3, 2019

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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 :



Date: May 7, 2019

Jessica Cheng / Senior Specialist

Approved by :



Date: May 7, 2019

Rex Lai / Associate Technical Manager

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				
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
1500-100,000	...	...	1.0	30

f = Frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

$$Pd = (P_{out} * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

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 Calculation Result Of Maximum Conducted Power

The EUT contains WiFi module and LTE module, they can transmit at same time. For more details please refer to as below:

Model	Contains WIFI /LTE Certified Module
SC3-32A-H, SC3-32A-N	FCC ID: PPQSC3US (WiFi)
IC3-32A-H-A, IC3-32A-N-A	FCC ID: 2ADWC-AI7688H (WiFi), FCC ID: QIPELS61-US (LTE)
IC3-32A-H-V, IC3-32A-N-V	FCC ID: PPQIC3V (WiFi & LTE)

EUT (RFID):

Frequency Band (MHz)	Max Power (EIRP) (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
13.56	-16.9	20	0.00000406	0.978

NOTE:

1. Max Power: 78.30dBuV/m = -16.9dBm
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For Model: SC3-32A-N, SC3-32A-H

WLAN module FCC ID: PPQSC3US

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	17.92	2	20	0.0195	1

For Model: IC3-32A-H-A, IC3-32A-N-A

WLAN module FCC ID: 2ADWC-AI7688H

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	20	2	20	0.03	1

LTE module FCC ID: QIPELS61-US

Band 2

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WCDMA: 1850MHz ~ 1910MHz	23.68	20	0.05	1
LTE Band 2: 1850MHz ~ 1910MHz	23.10	20	0.04	1

Band 4

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WCDMA: 1710MHz ~ 1755MHz	23.63	20	0.05	1
LTE Band 4: 1710MHz ~ 1755MHz	23.11	20	0.04	1

Band 5

Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
WCDMA: 824MHz ~ 849MHz	23.93	26.08	20	0.08	0.55
LTE Band 5: 824MHz ~ 849MHz	23.12	25.27	20	0.07	0.55

Note: EIRP = ERP + 2.15

Band 12

Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 12: 698MHz ~ 711MHz	23.26	25.41	20	0.07	0.47

Note: EIRP = ERP + 2.15

For Model: IC3-32A-H-V, IC3-32A-N-V

WLAN & LTE module FCC ID: PPQIC3V

WLAN

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	17.92	2	20	0.0195	1

LTE Band 4

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 4: 1710MHz ~ 1755MHz	25.71	20	0.0741	1

LTE Band 13

Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 13: 777MHz ~ 787MHz	20.31	22.46	20	0.0351	0.52

Note: EIRP = ERP + 2.15

Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

For Model: SC3-32A-N, SC3-32A-H

RFID + WLAN module FCC ID: PPQSC3US

$0.00000406 / 0.978 + 0.0195 / 1 = 0.019504$

For Model: IC3-32A-H-A, IC3-32A-N-A

RFID + WLAN module FCC ID: 2ADWC-AI7688H + LTE module FCC ID: QIPELS61-US =

$0.00000406 / 0.978 + 0.03 / 1 + 0.07 / 0.47 = 0.044894$

For Model: IC3-32A-H-V, IC3-32A-N-V

RFID + WLAN & LTE module FCC ID: PPQIC3V =

$0.00000406 / 0.978 + 0.0195 / 1 + 0.0741 / 1 = 0.093604$

Therefore the maximum calculations of above situations are less than the "1" limit.

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