

RF Exposure Report

Report No.: SA160421D16

FCC ID: RFHIKARPC07AA9

Test Model: IKARPC-07A-A9

Received Date: Apr. 21, 2016

Test Date: May 11 ~ 30, 2016

Issued Date: Jun. 14, 2016

Applicant: IEI Integration Corp.

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

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Release Control Record

Issue No.	Description	Date Issued
SA160421D16	Original release.	Jun. 14, 2016

1 Certificate of Conformity

Product: Panel PC

Brand: iEi

Test Model: IKARPC-07A-A9

Sample Status: Engineering sample

Applicant: IEI Integration Corp.

Test Date: May 11 ~ 30, 2016

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03

KDB 447498 D01

IEEE C95.1

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 EMC characteristics under the conditions specified in this report.

Prepared by :

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, Date:

Jun. 14, 2016

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, Date:

Jun. 14, 2016

Rex Lai / Assistant 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				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

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

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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 30cm away from the body of the user.
So, this device is classified as **Mobile Device**.

3 Calculation Result Of Maximum Conducted Power

For 2.4GHz:

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412 ~ 2462	20.11	1.28	20	0.0274	1.00
2402 ~ 2480	-0.03	1.28	20	0.0003	1.00

For 3.75G:

Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
GPRS (824.2 ~ 848.8)	28.68	30.83	20	0.2408	0.55
WCDMA (826.4 ~ 846.6)	21.50	23.65	20	0.0461	0.55

Note: EIRP = ERP + 2.15

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
GPRS (1850.2 ~ 1909.8)	25.71	20	0.0741	1.00
WCDMA (1852.4 ~ 1907.6)	20.83	20	0.0241	1.00

NOTE: 2.4GHz, 3.75G can transmit simultaneously.

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

WLAN (2.4GHz) + GPRS (824.2 ~ 848.8)

$= 0.0274/1 + 0.2408/0.55 = 0.4652$

Therefore the maximum calculation of this situation is 0.4652, which is less than the "1" limit.

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