

FCC RF Exposure Report

FCC ID : U6Y-M120000017
Equipment : 802.11a/n/ac 4x4 WiFi module
Model No. : M120000017
Brand Name : Panasonic
Applicant : Panasonic Avionics Corporation
Address : 26200 ENTERPRISE WAY, LAKE FOREST, CA
92630-8400 USA
Standard : 47 CFR FCC Part 2.1091
Received Date : Nov. 24, 2016
Tested Date : Dec. 05, 2016 ~ Mar. 17, 2017

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:


Along Chen / Assistant Manager

Approved by:


Gary Chang / Manager



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Release Record

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FA6N2402	Rev. 01	Initial issue	Mar. 30, 2017

1 MPE EVALUATION OF MOBILE DEVICES

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

1.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm ²)	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

1.2 MPE EVALUATION FORMULA

$$Pd = \frac{Pt}{4 * \pi * R^2}$$

Where

Pd= Power density in mW/cm²
Pt= EIRP in mW
Pi= 3.1416
R= Measurement distance

1.3 MPE EVALUATION RESULTS

MPE Evaluation of Single Transmission

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
Non-beamforming mode					
5180~5240	21.14	5.9	20	0.101	1
5260~5320	21.21	5.6	20	0.095	1
5500~5700	23.23	5.7	20	0.155	1
5745~5825	24.65	5.6	20	0.211	1
Beamforming mode					
5180~5240 ^{Note}	18.21	11.33	20	0.179	1
5260~5320 ^{Note}	18.58	11.08	20	0.184	1
5500~5700 ^{Note}	19.19	10.77	20	0.197	1
5745~5825 ^{Note}	24.00	10.72	20	0.590	1

Note:

- For beamforming mode:

For 5150~5250 MHz band

Directional gain = $10 * \log((10^{4/20} + 10^{5.4/20} + 10^{5.9/20} + 10^{5.8/20})^2 / 4) = 11.33$ dBi

For 5250 ~ 5350 MHz band

Directional gain = $10 * \log((10^{4.4/20} + 10^{5.4/20} + 10^{4.8/20} + 10^{5.6/20})^2 / 4) = 11.08$ dBi

For 5470 ~ 5725MHz band

Directional gain = $10 * \log((10^{4.2/20} + 10^{4.5/20} + 10^{4.5/20} + 10^{5.7/20})^2 / 4) = 10.77$ dBi

For 5745~5850 MHz band

Directional gain = $10 * \log((10^{4.8/20} + 10^{4.1/20} + 10^{4.2/20} + 10^{5.6/20})^2 / 4) = 10.72$ dBi

2 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

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No. 30-2, Ding Fwu Tsuen, Lin
Kou District, New Taipei City,
Taiwan, R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd St.,
Kwei Shan District, Tao Yuan City
333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

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