

FCC RF Exposure Report

FCC ID : MXF-WLTFQR121GN

Equipment : LTE router

Model No. : WLTFQR-121GN

Brand Name : Gemtek

Applicant : Gemtek Technology Co., Ltd.

Address : No. 15-1 Zhonghua Road, Hsinchu Industrial

Park, Hukou, Hsinchu, Taiwan, 30352.

Standard : 47 CFR FCC Part 2.1091

Received Date : Jun. 14, 2014

Tested Date : Jun. 21 ~ Jul. 02, 2014

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.

Approved & Reviewed by:

Gary Chang / Manager

Iac-MRA



Page: 1 of 5

Report No.: FA461401 Report Version: Rev. 01



Table of Contents

MPE EVALUATION OF MOBILE DEVICES	4
LIMITS FOR GENERAL POPULATION/LINCONTROLLED EXPOSURE	4
MPE EVALUATION RESULTS	4
TEST LABORATORY INFORMATION	_
	MPE EVALUATION OF MOBILE DEVICES LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE MPE EVALUATION FORMULA MPE EVALUATION RESULTS TEST LABORATORY INFORMATION

Report No.: FA461401

Page : 2 of 5



Release Record

Report No.	Version	Description	Issued Date
FA461401	Rev. 01	Initial issue	Aug. 04, 2014

Report No.: FA461401 Page: 3 of 5



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 /cm²)	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

Mode	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm²)	Limit (mW/cm²)
WLAN 2.4G	20.99	4.02	20	0.063	1
LTE Band 13	22.73	1.28	20	0.050	0.52

MPE Evaluation of Simultaneous Transmission

Wi-Fi 2.4 and LTE can transmit at the same time, MPE evaluation is as below formula

PD1 / Limit1 + PD2 / Limit 2 + < 1, PD = Power density

MPE Evaluation = Maximum MPE of 2.4GHz + Maximum MPE of LTE = 0.063 / 1 + 0.05 / 0.52 = 0.159 < 1

Conclusion

MPE evaluations of single and simultaneous transmission meet the requirement of standard.

Report No.: FA461401 Page: 4 of 5



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, 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 Hsiang. Location map can be found on our website http://www.icertifi.com.tw.

Linkou Kwei Shan

Tel: 886-2-2601-1640 Tel: 886-3-271-8666

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

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

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

Tel: 886-3-271-8666 Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

==END==

Report No.: FA461401 Page: 5 of 5