

FCC RF Exposure Report

FCC ID : MXF-WLTMQ117
Equipment : LTE Mini Card
Model No. : WLTMQ-117
Brand Name : Gemtek
Applicant : Gemtek Technology Co., Ltd.
Address : No. 15-1 Zhanghua Road, Hsinchu Industrial
Park, Hukou, Hsinchu, Taiwan, 30352
Standard : 47 CFR FCC Part 2.1091
Received Date : Dec. 30, 2015
Tested Date : Jan. 14 ~ Feb. 02, 2016

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



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Release Record

Report No.	Version	Description	Issued Date
FA5D3001	Rev. 01	Initial issue	Feb. 22, 2016

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

π= 3.1416

R= Measurement distance

1.3 MPE EVALUATION RESULTS

Mode	Frequency Range (MHz)	Maximum Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE Band 26	831.5	22.82	1.1	20	0.049	0.554
	836.5	22.81	1.1	20	0.049	0.558
	841.5	22.79	1.1	20	0.049	0.561
LTE Band 26	819	22.88	1.1	20	0.050	0.546
LTE Band 25	1860.0	23.44	8	20	0.277	1.000
	1882.5	23.30	8	20	0.268	1.000
	1905.0	23.29	8	20	0.268	1.000
LTE Band 41	2506	26.38	6	20	0.344	1.000
	2533	25.77	6	20	0.299	1.000
	2560	25.46	6	20	0.278	1.000
LTE Band 41	2630	26.35	6	20	0.342	1.000
	2655	26.07	6	20	0.320	1.000
	2680	26.16	6	20	0.327	1.000

1.4 MAXIMUM ANTENNA GAIN EVALUATION

Mode	Freq. (MHz)	Conducted power (dBm)	Maximum tune up power (dBm)	Max Gain to comply with MPE			Max Gain to comply with ERP	
				Antenna Gain (dBi)	Distance (cm)	Limit (mW/cm ²)	Antenna Gain (dBi)	Limit (ERP,W)
LTE Band 26	831.5	22.82	23.00	11.45	20	0.554	17.60	7
	836.5	22.81	23.00	11.48	20	0.558	17.60	7
	841.5	22.79	23.00	11.50	20	0.561	17.60	7

Note: In order to comply with both Maximum Permissible Exposure and ERP limit, the maximum antenna gain shall not be greater than 11.45 dBi in LTE band 26.

Mode	Freq. (MHz)	Conducted power (dBm)	Maximum tune up power (dBm)	Max Gain to comply with MPE			Max Gain to comply with ERP	
				Antenna Gain (dBi)	Distance (cm)	Limit (mW/cm ²)	Antenna Gain (dBi)	Limit (ERP,W)
LTE Band 26	819	22.88	23.00	11.38	20	0.546	29.15	100

Note: In order to comply with both Maximum Permissible Exposure and ERP limit, the maximum antenna gain shall not be greater than 11.38 dBi in LTE band 26.

Mode	Freq. (MHz)	Conducted power (dBm)	Maximum tune up power (dBm)	Max Gain to comply with MPE			Max Gain to comply with EIRP	
				Antenna Gain (dBi)	Distance (cm)	Limit (mW/cm ²)	Antenna Gain (dBi)	Limit (EIRP,W)
LTE Band 25	1860.0	23.44	23.5	13.51	20	1.000	9.51	2
	1882.5	23.30	23.5	13.51	20	1.000	9.51	2
	1905.0	23.29	23.5	13.51	20	1.000	9.51	2

Note: In order to comply with both Maximum Permissible Exposure and EIRP limit, the maximum antenna gain shall not be greater than 9.51 dBi in LTE band 25.

Mode	Freq. (MHz)	Conducted power (dBm)	Maximum tune up power (dBm)	Max Gain to comply with MPE			Max Gain to comply with EIRP	
				Antenna Gain (dBi)	Distance (cm)	Limit (mW/cm ²)	Antenna Gain (dBi)	Limit (EIRP,W)
LTE Band 41	2506	26.38	26.5	10.51	20	1.000	6.51	2
	2533	25.77	26.5	10.51	20	1.000	6.51	2
	2560	25.46	26.5	10.51	20	1.000	6.51	2

Note: In order to comply with both Maximum Permissible Exposure and EIRP limit, the maximum antenna gain shall not be greater than 6.51 dBi in LTE band 41.

Mode	Freq. (MHz)	Conducted power (dBm)	Maximum tune up power (dBm)	Max Gain to comply with MPE			Max Gain to comply with EIRP	
				Antenna Gain (dBi)	Distance (cm)	Limit (mW/cm ²)	Antenna Gain (dBi)	Limit (EIRP,W)
LTE Band 41	2630	26.35	26.5	10.51	20	1.000	6.51	2
	2655	26.07	26.5	10.51	20	1.000	6.51	2
	2680	26.16	26.5	10.51	20	1.000	6.51	2

Note: In order to comply with both Maximum Permissible Exposure and EIRP limit, the maximum antenna gain shall not be greater than 6.51 dBi in LTE band 41.

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

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