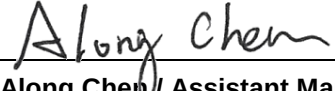


FCC RF Exposure Report

FCC ID : MXF-WLTFQT141GN
Equipment : Cat4 Indoor CPE
Model No. : WLTFQT-141GN
Brand Name : Gemtek
Multiple Listing : Refer to item 1.1.1 for more details.
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 : May 17, 2018
Tested Date : Nov. 22 ~ Nov. 25, 2016
May 24 ~ May 30, 2018

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:

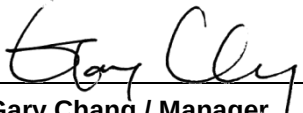

Gary Chang / Manager



Table of Contents

1	GENERAL DESCRIPTION	4
1.1	INFORMATION	4
2	MPE EVALUATION OF MOBILE DEVICES	5
2.1	LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE.....	5
2.2	MPE EVALUATION FORMULA	5
2.3	MPE EVALUATION RESULTS	6
3	TEST LABORATORY INFORMATION	9

Release Record

Report No.	Version	Description	Issued Date
FA851703	Rev. 01	Initial issue	Jun. 27, 2018

1 General Description

1.1 INFORMATION

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
Gemtek	WLTFQT-141GN	Cat4 Indoor CPE	Main tested model.
Blu-Castle	BC-4GMCPGa		For marketing purpose.
✦ All models are electrically identical, different model names are for marketing purpose.			

2 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.

2.1 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

2.2 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

2.3 MPE EVALUATION RESULTS

GPRS / EGPRS: Frequency band: 850 MHz

Mode	Maximum Peak Conducted Power (dBm)	Rated Power (dBm)	Time slot	Maximum Average Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio
GPRS 8 (GMSK, 1 slot)	32.93	33	1	23.97	1.56	20	0.071	0.549	0.129
GPRS 10 (GMSK, 2 slots)	32.88	33	2	26.98	1.56	20	0.142	0.549	0.259
GPRS 11 (GMSK, 3 slots)	32.75	33	3	28.74	1.56	20	0.213	0.549	0.388
GPRS 12 (GMSK, 4 slots)	32.57	33	4	29.99	1.56	20	0.284	0.549	0.517
EDGE 8 (8PSK, 1 slot)	29.90	30	1	20.97	1.56	20	0.036	0.549	0.065
EDGE 10 (8PSK, 2 slots)	29.80	30	2	23.98	1.56	20	0.071	0.549	0.130
EDGE 11 (8PSK, 3 slots)	29.76	30	3	25.74	1.56	20	0.107	0.549	0.194
EDGE 12 (8PSK, 4 slots)	29.72	30	4	26.99	1.56	20	0.142	0.549	0.259
GPRS 30 (GMSK, 1 slot)	32.91	33	1	23.97	1.56	20	0.071	0.549	0.129
GPRS 31 (GMSK, 2 slots)	32.88	33	2	26.98	1.56	20	0.142	0.549	0.259
GPRS 32 (GMSK, 3 slots)	32.75	33	3	28.74	1.56	20	0.213	0.549	0.388
GPRS 33 (GMSK, 4 slots)	32.57	33	4	29.99	1.56	20	0.284	0.549	0.517
EDGE 30 (8PSK, 1 slot)	29.88	30	1	20.97	1.56	20	0.036	0.549	0.065
EDGE 31 (8PSK, 2 slots)	29.81	30	2	23.98	1.56	20	0.071	0.549	0.130
EDGE 32 (8PSK, 3 slots)	29.78	30	3	25.74	1.56	20	0.107	0.549	0.194
EDGE 33 (8PSK, 4 slots)	29.71	30	4	26.99	1.56	20	0.142	0.549	0.259

GPRS / EGPRS: Frequency band: 1900 MHz

Mode	Maximum Peak Conducted Power (dBm)	Rated Power (dBm)	Time slot	Maximum Average Conducted Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio
GPRS 8 (GMSK, 1 slot)	30.17	30.5	1	21.47	2.5	20	0.050	1.000	0.050
GPRS 10 (GMSK, 2 slots)	30.13	30.5	2	24.48	2.5	20	0.099	1.000	0.099
GPRS 11 (GMSK, 3 slots)	30.06	30.5	3	26.24	2.5	20	0.149	1.000	0.149
GPRS 12 (GMSK, 4 slots)	29.93	30.5	4	27.49	2.5	20	0.198	1.000	0.198
EDGE 8 (8PSK, 1 slot)	28.24	30	1	20.97	2.5	20	0.044	1.000	0.044
EDGE 10 (8PSK, 2 slots)	28.21	30	2	23.98	2.5	20	0.088	1.000	0.088
EDGE 11 (8PSK, 3 slots)	28.11	30	3	25.74	2.5	20	0.133	1.000	0.133
EDGE 12 (8PSK, 4 slots)	28.07	30	4	26.99	2.5	20	0.177	1.000	0.177
GPRS 30 (GMSK, 1 slot)	30.15	30.5	1	21.47	2.5	20	0.050	1.000	0.050
GPRS 31 (GMSK, 2 slots)	30.11	30.5	2	24.48	2.5	20	0.099	1.000	0.099
GPRS 32 (GMSK, 3 slots)	30.02	30.5	3	26.24	2.5	20	0.149	1.000	0.149
GPRS 33 (GMSK, 4 slots)	29.95	30.5	4	26.99	2.5	20	0.198	1.000	0.198
EDGE 30 (8PSK, 1 slot)	28.22	30	1	20.97	2.5	20	0.044	1.000	0.044
EDGE 31 (8PSK, 2 slots)	28.17	30	2	23.98	2.5	20	0.088	1.000	0.088
EDGE 32 (8PSK, 3 slots)	28.12	30	3	25.74	2.5	20	0.133	1.000	0.133
EDGE 33 (8PSK, 4 slots)	28.04	30	4	26.99	2.5	20	0.177	1.000	0.177

WCDMA

Mode	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio
WCDMA 850	25.85	26	1.56	20	0.113	0.551	0.206
WCDMA 1900	25.59	26	2.5	20	0.141	1	0.141

LTE

Frequency range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio
1850~1910 LTE Band 2	25.39	26	2.5	20	0.141	1	0.141
1710~1755 LTE Band 4	24.75	25	3.14	20	0.130	1	0.130

Wi-Fi

Frequency range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio
2412~2462 (Wi-Fi)	20.16	20.5	2	20	0.035	1	0.035

MPE Evaluation of Simultaneous Transmission

The device supports simultaneous transmission as below configurations

- 1) Wi-Fi 2.4GHz and WWAN 2G
- 2) Wi-Fi 2.4GHz and WWAN 3G
- 3) Wi-Fi 2.4GHz and WWAN 4G

MPE evaluation is as below formula

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

CPD = Calculation power density

LPD = Limit of power density

MPE Evaluation for Wi-Fi 2.4GHz and WWAN 2G = $0.035 / 1 + 0.284 / 0.549 = 0.552$

MPE Evaluation for Wi-Fi 2.4GHz and WWAN 3G = $0.035 / 1 + 0.113 / 0.551 = 0.241$

MPE Evaluation for Wi-Fi 2.4GHz and WWAN 4G = $0.035 / 1 + 0.141 / 1 = 0.176$

Conclusion

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

3 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

Tel: 886-2-2601-1640

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.

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

==END==