



Maximum Permissible Exposure Evaluation

FCC ID: 2BB6E-GLMM24A01

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b).

EUT Specification

Product Name:	LTE Module
Trade Mark:	GlocalMe
Model/Type Reference:	GLMM24A01
Listed Model(s):	/
Model Differences:	/
Frequency Band (Operating)	WLAN: 2412MHz ~ 2462MHz LTE Band 2: UL: 1850.7MHz~1909.3MHz, DL: 1930.7MHz~1989.3MHz LTE Band 4: UL: 1710.7MHz~1754.3MHz, DL: 2110.7MHz~2154.3MHz LTE Band 5: UL: 824.7MHz~848.3MHz, DL: 869.7MHz~893.3MHz LTE Band 7: UL: 2502.5MHz~2567.5MHz, DL: 2622.5MHz~2687.5MHz LTE Band 12: UL: 699.7MHz~715.3MHz, DL: 729.7MHz~745.3MHz LTE Band 13: UL: 779.5MHz~784.5MHz, DL: 748.5MHz~751.0MHz LTE Band 17: UL: 706.5MHz~713.5MHz, DL: 736.5MHz~743.5MHz LTE Band 25: UL: 1850.7MHz~1914.3MHz, DL: 1930.7MHz~1994.3MHz LTE Band 26 (814~824MHz): UL: 814MHz~824MHz, DL: 859MHz~869MHz LTE Band 26 (824~849MHz): UL: 824MHz~849MHz, DL: 869MHz~894MHz LTE Band 38: UL: 2570MHz~2620MHz, DL: 2570MHz~2620MHz LTE Band 41: UL: 2498.5MHz~2687.5MHz, DL: 2498.5MHz~2687.5MHz LTE Band 66: UL: 1710.7MHz~1779.3MHz, DL: 2110.7MHz~2179.3MHz
Device Category	☐ Portable (<5mm separation) ☐ Mobile (>20cm separation) ☒ Fixed (>20cm separation) ☐ Others ____
Exposure Classification	☐ Occupational/Controlled exposure (S=5mW/cm ²) ☒ General Population/Uncontrolled exposure (S=1mW/cm ²)
Antenna Diversity	☒ Single antenna ☐ Multiple antennas ☐ TX diversity ☐ RX diversity ☐ TX/RX diversity
Antenna Gain (Max)	WLAN: 0.3dBi Max LTE Band 2/4/7/25/38/41/66: 0.84dBi Max LTE Band 5/12/13/17/26: -6.56dBi Max
Evaluation Applied	☒ MPE Evaluation ☐ SAR Evaluation

**Limits for Maximum Permissible Exposure (MPE)**

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposure				
300-1500	--	--	F/300	<6
1500-100000	--	--	5	<6
(B) Limits for General Population/Uncontrolled Exposure				
300-1500	--	--	F/1500	<30
1500-100000	--	--	1	<30

Note: F = MHz

Calculation MethodFriis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where:

Pd= Power density in mW/cm²P_{out}= output power to antenna in mW

G= gain of antenna in linear scale

Pi= 3.1416

R= distance between observation point and center of the radiator in cm

Pd limit of MPE is 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

**Measurement Result**

Mode	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Tune Up Tolerance (dB)	Max. Tune Up Power (dBm)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
WLAN 802.11g	2462	0.3	15.47	± 1	16.50	0.0095	1
LTE Band 2	1857	0.84	25.09	± 1	26.00	0.0961	1
LTE Band 4	1745	0.84	23.97	± 1	25.00	0.0763	1
LTE Band 5	836.5	-6.56	24.65	± 1	25.50	0.0141	0.56
LTE Band 7	2560	0.84	22.99	± 1	24.00	0.0606	1
LTE Band 12	699.7	-6.56	24.83	± 1	26.00	0.0159	0.48
LTE Band 13	779.5	-6.56	24.14	± 1	25.00	0.0126	0.52
LTE Band 17	710	-6.56	25.80	± 1	27.00	0.0200	0.47
LTE Band 25	1910	0.84	23.28	± 1	24.00	0.0606	1
LTE Band 26	847.5	-6.56	25.59	± 1	26.50	0.0178	0.57
LTE Band 38	2580	0.84	24.14	± 1	25.00	0.0763	1
LTE Band 41	2506	0.84	23.09	± 1	24.00	0.0606	1
LTE Band 66	1779.3	0.84	23.12	± 1	24.00	0.0606	1

The LTE and WIFI can transmit simultaneously.

LTE Power density at 20cm (mW/cm ²)	WLAN Power density at 20cm (mW/cm ²)	Total Power density at 20cm (mW/cm ²)	Power density Limit (mW/cm ²)
0.0961	0.0095	0.1056	1

Note:

1. Calculate in the worst-case mode.
2. Max. Tune Up Power is declared by manufacturer, and used to calculate.
3. For a more detailed features description, please refer to the RF Test Report.

*****THE END*****