

# SGS-CSTC Standards Technical Services Co., Ltd.

Application No.: GLEMO1004001149RF Page: 1 of 2 FCC ID: U28TVBOX02

# **RF Exposure Compliance Requirement**

## 1. Standard requirement

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

# (a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm <sup>2</sup> )	Averaging Times  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100000			5	6

#### (b) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm <sup>2</sup> )	Averaging Times  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/500	30
1500-100000			1.0	30

Note: f=frequency in MHz; \*Plane-wave equivalent power density



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## 2. MPE Calculation Method

E  $(V/m)=(30*P*G)^{0.5}/d$  Power Density: Pd $(W/m^2)=E^2/377$ E=Electric Field (V/m)P=Peak RF output Power (W)G=EUT Antenna numeric gain (numeric) d= Separation distance between radiator and human body (m) The formula can be changed to Pd=  $(30*P*G)/(377*d^2)$ From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

### 3. Calculated Result and Limit

Normal mode:

Frequenc y (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
2.402	1.9	-0.02	0.995	0.00376	1	Complies
2.441	1.9	0.46	1.111	0.00420	1	Complies
2.480	1.9	0.22	1.052	0.00398	1	Complies

EDR mode:

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
2.402	1.9	1.07	1.279	0.00483	1	Complies
2.441	1.9	1.51	1.416	0.00535	1	Complies
2.480	1.9	1.22	1.324	0.00500	1	Complies

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