

FCC RF EXPOSURE REQUIREMENTS

General Information

FCC ID: G9H2-1008A 2.4GHz (Base and Handset)

Device Category:

EUT: Base Unit: Mobile per Part 2.1091

EUT: Handset Unit: Portable per Part 2.1093

Environment: General Population/Uncontrolled Exposure

Operating Configurations and Exposure Conditions:

The EUT base unit is normally operated at least 20 cm away from the human body.

The EUT handset is operated close to the head and to the body with belt clip. See Attached SAR Test Report Exhibit D(2)-3.

Maximum Permissible Exposure Calculation:

Base Unit

The minimum separation distance, for compliance with the limit, is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

The limit for general population/uncontrolled exposure environment above 1500MHz is 1mW/cm²

Separation Distance	Antenna Gain (dBi)	
	Integral	
Time Division Source Based Average Power EIRP (mW)	(in)	(cm)
27.1	0.7	1.8

RF Exposure Calculations

1. The limit for general population/uncontrolled environment above 1500 MHz is 1.0 mW/cm².
2. The Field Strength E V/M = $\sqrt{0.6309 \times 3770} = 48.8$
3. The distance d to achieve the 1.0 mW/cm² power density is as follows

$$d = \frac{\sqrt{30 \times P \times G}}{E}$$

$$d = \frac{\sqrt{30 \times 0.0271 \text{ W} \times 1}}{48.8} = \frac{0.901}{48.8} = 1.8 \text{ cm}$$

RF Field Strength Calculations:

1. F.S. = 116 dBuV/m
2. F.S. $\text{antilog } \frac{116}{20} = \text{antilog } 5.8 = 0.6309 \text{ V/M}$
3. ERP $\frac{(0.6309)^2 \times 9}{49.2} = 72.8 \text{ mW}$
4. EIRP = $72.8 \times 1.64 = 119.4 \text{ mW}$
5. Time Division Source Based Average Power
 $= 119.4 \times \frac{2.27 \text{ mS (ontime 2+ slots)}}{10 \text{ mS}} = 119.4 \times .227 = \underline{27.1 \text{ mW}}$

Conclusion:

The device complies with the MPE requirements by providing a safe separation distance between the antenna, including any radiating structure, and any persons (human body excluding hands, wrists, ankles, and feet).

Proposed RF Exposure Safety Information to Include in User's Manual:

WARNING: For compliance with the RF exposure requirements regulated by the FCC (Federal Communications Commission), the transmitter's antennae are contained within the EUT enclosure, and an additional separation distance of more than eight inches (20 cm) shall be maintained between the transmitter base enclosure and any part of the user's body.