

RF EXPOSURE INFORMATION

1. MPE Limits

The limit for Maximum Permissible Exposure (MPE), specified in FCC §1.1310, is listed in Table 1

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

Table1. Limits for Maximum

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits For Occupational / Control Exposures (f= frequency)				
30-300	61.4	0.163	1.0	6
300-1500	...	...	...	6
1500-100,000	...	...	...	6
(B) Limits For General Population / Uncontrolled Exposure (f=frequency)				
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

EUT information

Type of equipment : Quad band GSM/GPRS Vehicle Tracker

Model Name : ST210

FCC ID : WA2ST210

Tx Frequency Band : 824.2 ~ 848.8 MHz (GSM850)
1850.2 ~ 1909.8 MHz(GMS1900)

GPRS Multi-slot class : 12

Procedure

The procedure used to determine the RF power density was based upon a calculation for determining compliance with the MPE requirements.

The power generated by each transmitter used in this was initially measured as a ERP (EIRP). The power density level is calculated at a distance of 20 cm. And Minimum distance is also calculated.

MPE calculations are calculated under Maximum Power condition in each band.

Formula

$$P_d = (ERP) / (4\pi r^2)$$

Where,

P_d = Power Density (mW/cm²)

π = 3.1416

r = distance between observation point and centre of the radiator(cm)

Calculated MPE

The power density limit for General Population/Uncontrolled Exposure at each frequency is determined based on the information in Table 1. MPE calculations are calculated under Maximum Power condition in each band.

Table 2. GSM850 Calculated MPE Data

Frequency	824.2 MHz
Limit	0.549 mW/cm ²
Distance (cm), R	20 cm
ERP	30.50 dBm (1,122.0 mW)
Power Density (mW/cm²)	0.223
Minimum Distance	12.75 cm

Table 3. GSM1900 Calculated MPE Data

Frequency	1909.8 MHz
Limit	1 mW/cm ²
Distance (cm), R	20 cm
ERP	31.45 dBm (1,396.4 mW)
Power Density (mW/cm²)	0.278
Minimum Distance	10.54 cm