

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 : Dual band WCDMA Vehicle Tracker
 Model Name : ST600
 FCC ID : WA2ST600
 Tx Frequency Band : 826.4 ~ 846.6 MHz (WCDMA Band 5)
 1852.4 ~ 1907.6 MHz(WCDMA Band 2)

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. WCDMA850 Calculated MPE Data

Frequency	846.6 MHz
Limit	0.549 mW/cm ²
Distance (cm), R	20 cm
Ant Gain	-1 dBi
Tune Up Max Power	23 dBm
ERP	22 dBm (158.5 mW)
Power Density (mW/cm²)	0.032
Minimum Distance	4.79 cm

Table 3. WCDMA1900 Calculated MPE Data

Frequency	1852.4 MHz
Limit	1 mW/cm ²
Distance (cm), R	20 cm
Ant Gain	2 dBi
Tune Up Max Power	23 dBm
EIRP	25 dBm (316.2 mW)
Power Density (mW/cm²)	0.063
Minimum Distance	5.02 cm