

## 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 this rule: the criteria listed in the following tables shall be used to evaluate the environmental impact of human exposure to radio-frequency radiation.

Table1. FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	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	...	...	<u>1.0</u>	30

### 2. EUT INFORMATION

- Applicant : M Seven System Ltd.
- Name : Digital Enhanced Cordless Telephone (mPERS)
- Model Name : HDS10B
- FCC ID : XOEHDS10B
- Tx Frequency Band : 1921.536 MHz ~ 1928.448 MHz

### 3. PROCEDURES

The procedure used to determine the RF power density was based upon a calculation for determining compliance with the MPE requirements. This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering the limit of uncontrolled exposure limit. 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 the band.

### Formula

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

Where,

$P_d$ = Power Density (mW/cm<sup>2</sup>)

P= Power input to the antenna (in appropriate units, e.g., mW)

G= Power gain of the antenna in the direction of interest relative to an isotropic radiator

$\pi=3.1416$

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

### **4. 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 at the Maximum Power frequency channel.

Table2. UPCS Calculated MPE Data

<b>Frequency</b>	1921.536 MHz (1ch)
<b>Limit</b>	1mW/cm <sup>2</sup>
<b>Distance (cm), R</b>	20 cm
<b>Ant. Gain, G</b>	2.15 dBi
<b>Conducted Power</b>	19.20 dBm (83.18 mW)
<b>Power Density (mW/cm<sup>2</sup>)</b>	<b>0.02715</b>
<b>Minimum Distance</b>	1.7 cm

### **5. MPE Results**

Based on the above calculation for 20cm separation, the power density does not exceed FCC limit of 1mW/ cm<sup>2</sup>  
And the minimum distance satisfying the FCC limit is 1.7 cm.