

# Maximum Permissible Exposure Evaluation

## FCC ID: 2AP7K-H100

### 1. Client Information

<b>Applicant</b>	:	Shenzhen Holloo Technology Co.,Ltd.
<b>Address</b>	:	103,105, Building6, 1980 Industrial Park, Minzhi Street, Longhua New District, Shenzhen, China
<b>Manufacturer</b>	:	Shenzhen Holloo Technology Co.,Ltd.
<b>Address</b>	:	103,105, Building6, 1980 Industrial Park, Minzhi Street, Longhua New District, Shenzhen, China

### 2. General Description of EUT

<b>EUT Name</b>	:	Vehicle Wireless Terminal(GSM)
<b>Models No.</b>	:	H100A, H100B, H100C
<b>Model Difference</b>	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name for commercial.
<b>Product Description</b>	:	Frequency Bands: GSM850; PCS1900;
	:	GSM 850 Power :      Cond:29.97dBm    ERP:28.54dBm
	:	PCS 1900 Power :      Cond:29.80dBm    EIRP:27.97dBm
	:	Antenna Gain:              3.8 dB Dipole Antenna
	:	Modulation Type:        GPRS:GMSK
<b>FCC Operating Frequency</b>	:	GSM 850: 824.20MHz-848.80MHz PCS1900: 1850.20MHz-1909.80MHz
<b>Emission Designator</b>	:	GPRS 850: 248KG7W; GPRS 1900: 250KG7W
<b>Power Rating</b>	:	DC 9~36V
<b>Software Version</b>	:	N/A
<b>Hardware Version</b>	:	V1.3
<b>Connecting I/O Port(S)</b>	:	Please refer to the User's Manual

**Note:** More test information about the EUT please refer the RF Test Report.

TB-RF-075-1.0



## MPE Calculations for GSM

### 1. Antenna Gain:

GPRS 850: 3.8dBi Dipole Antenna

GPRS 1900: 3.8dBi Dipole Antenna

### 2. EUT Operation Condition:

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

### 3. Exposure Evaluation:

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

Where

**S:** power density

**P:** power input to the antenna

**G:** power gain of the antenna in the direction of interest relative to an isotropic radiator.

**R:** distance to the center of radiation of the antenna

### 4. Test Result:

Worst Maximum MPE Result							
Mode	N <sub>TX</sub>	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm <sup>2</sup> ) [S]
GPRS 850	1	29.97	29±1	30	3.8	20	0.477
GPRS 1900	1	29.80	29±1	30	3.8	20	0.477
Note: (1) N <sub>TX</sub> = Number of Transmit Antennas RF Output power specifies that Maximum Conducted Peak Output Power.							

**5. Conclusion:**

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

**Limits for General Population/ Uncontrolled Exposure**

Frequency Range (MHz)	Power density (mW/ cm <sup>2</sup> )
300-1,500	F/1500
1,500-100,000	1.0

**300-1500MHz:**

The worst MPE is calculated as  $0.477 \text{ mW} / \text{cm}^2 < \text{limit } 824.0/1500=0.5494 \text{ mW/cm}^2$ . So, RF exposure limit warning or SAR test are not required.

**1500-100000MHz:**

The worst MPE is calculated as  $0.477 \text{ mW} / \text{cm}^2 < \text{limit } 1\text{mW/cm}^2$ . So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

**Note**

For a more detailed features description, please refer to the RF Test Report.

-----END OF THE REPORT-----