

# Maximum Permissible Exposure Evaluation

## FCC ID: 2AQ7C-M650V

### 1. Client Information

Applicant	:	SHENZHEN TOVISION TECHNOLOGIES CO., LTD
Address	:	136A, Yangguang Zhonglv Garden, 2057# Qianhai Road, Nanshan District, Shenzhen City, China
Manufacturer	:	SHENZHEN TOVISION TECHNOLOGIES CO., LTD
Address	:	136A, Yangguang Zhonglv Garden, 2057# Qianhai Road, Nanshan District, Shenzhen City, China

### 2. General Description of EUT

EUT Name	:	Wireless trail camera
Models No.	:	M650-V
Model Difference	:	N/A
Product Description	Frequency Bands:	LTE Band 4:TX: 1710MHz-1755MHz, RX: 2110MHz-2155MHz LTE Band 13: TX: 777MHz -787MHz, RX: 746MHz-756MHz
	Antenna Type:	Dipole Antenna
	Antenna Gain:	LTE Band 4: 3dBi LTE Band 13: 3dBi
	Modulation Type:	QPSK, 16QAM
	Bandwidth:	LTE Band 4 : 1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz LTE Band 13 : 5MHz/10MHz
Power Rating	:	DC 12*1.5V AA Battery. DC 6V from USB Port.
Software Version	:	N/A
Hardware Version	:	N/A

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:

3 dBi 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

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

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]
LTE BAND 4	1	23.75	23±1	24	3	20	0.0997
LTE BAND 13	1	23.22	23±1	24	3	20	0.0997
<b>Note:</b> (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 **0.0997 mW / cm<sup>2</sup> < limit 784.5/1500=0.523 mW/cm<sup>2</sup>**. So, RF exposure limit warning or SAR test are not required.

**1500-100000MHz:**

The worst MPE is calculated as **0.0997 mW / cm<sup>2</sup> < limit 1mW/cm<sup>2</sup>**. 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-----