

Maximum Permissible Exposure Evaluation

FCC ID: 2AQ7C-M650A

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-A	
Model Difference	:	N/A	
Product Description	:	Frequency Bands: UMTS Band II: 1852.40MHz-1907.60MHz UMTS Band V: 826.40MHz-846.60MHz LTE Band 2: TX: 1850MHz-1910MHz, RX: 1930MHz-1990MHz LTE Band 4: TX: 1710MHz-1755MHz, RX: 2110MHz-2155MHz LTE Band 12: TX: 699MHz -716MHz, RX: 729MHz-746MHz	
		Antenna Type:	Dipole Antenna
		Antenna Gain:	3dBi
Power Rating	:	DC 12*1.5V AA Battery. DC 6V from USB Port.	
Software Version	:	N/A	
Hardware Version	:	N/A	
Connecting I/O Port(S)	:	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:

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

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

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 _{TX}	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 ²) [S]
WCDMA Band II	1	22.29	22±1	23	3	20	0.0792
WCDMA Band V	1	22.13	22±1	23	3	20	0.0792
LTE BAND 2	1	24.46	24±1	25	3	20	0.1255
LTE BAND 4	1	24.38	24±1	25	3	20	0.1255
LTE BAND 12	1	25.66	25±1	26	3	20	0.1580
Note: (1) N _{TX} = 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 ²)
300-1,500	F/1500
1,500-100,000	1.0

300-1500MHz:

The worst MPE is calculated as $0.1580 \text{ mW} / \text{cm}^2 < \text{limit } 846.6/1500=0.5644 \text{ mW/cm}^2$. So, RF exposure limit warning or SAR test are not required.

1500-100000MHz:

The worst MPE is calculated as $0.1255 \text{ mW} / \text{cm}^2 < \text{limit } 1 \text{ mW/cm}^2$. 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-----