

# Maximum Permissible Exposure Evaluation

## FCC ID:2BC24-P5

### 1. Client Information

<b>Applicant</b>	:	The Techno Creatives
<b>Address</b>	:	Room A579, Nanshan Medical Equipment Industrial Park, No.1019 Nanhai Ave, Nanshan District, Shenzhen.China.
<b>Manufacturer</b>	:	The Techno Creatives
<b>Address</b>	:	Room A579, Nanshan Medical Equipment Industrial Park, No.1019 Nanhai Ave, Nanshan District, Shenzhen.China.

### 2. General Description of EUT

<b>EUT Name</b>	:	Elevate Telematic Unit
<b>Model(s) No.</b>	:	p5, TBD
<b>Model Difference</b>	:	All PCB boards and circuit diagrams are the same, the only difference is that model names.
<b>Product Description</b>	:	Operation Frequency: LTE Band 4/5/12/13/26
<b>Power Supply</b>	:	Adapter 1# (JS012SPS-050200VH) Input: 100-240V~ 50/60Hz 0.4A MAX Output: 5.0V---2A, 10W
<b>Li-ion Polymer Battery</b>	:	DC 3.7V by 1800mAh Rechargeable Li-ion battery
<b>Software Version</b>	:	V1.0
<b>Hardware Version</b>	:	V1.0
<b>Remark:</b> The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.		

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



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## MPE Calculations for WIFI

### 1. Antenna Gain:

GSM PCB Antenna: 5dBi

LTE PCB Antenna: 5dBi

### 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:

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]	limit (mW/cm <sup>2</sup> )
GSM	1	30.1	30±1	31	5	20	0.7920	1
LTE Band 4 (M1)	1	24.83	25±1	26	5	20	0.2505	1
LTE Band 5 (M1)	1	21.49	21±1	22	5	20	0.0997	0.55
LTE Band 12 (M1)	1	20.11	20±1	21	5	20	0.0792	0.47
LTE Band 13 (M1)	1	22.92	23±1	24	5	20	0.1580	0.52
LTE Band 26A (M1)	1	23.67	24±1	25	5	20	0.1989	0.54
LTE Band 26B (M1)	1	23.59	24±1	25	5	20	0.1989	0.54

Note: 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

For GSM, LTE

MPE limit S: 1mW/ cm<sup>2</sup>

The MPE is calculated as  $0.7920\text{mW} / \text{cm}^2 < \text{limit } 1\text{mW} / \text{cm}^2$

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.

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