

## 1. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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FCC ID: 2AV39XVV-6620S-P1

### Client Information

Applicant: Macro-video Technologies Co.,Ltd.  
Address of applicant: 9th floor,building No.22, TIANAN-TEP,Panyu Road North No. 555, Panyu District,Guangzhou, Guangdong, China

Manufacturer: Macro-video Technologies Co.,Ltd.  
Address of manufacturer: 9th floor,building No.22, TIANAN-TEP,Panyu Road North No. 555, Panyu District,Guangzhou, Guangdong, China

| General Description of EUT                                                                    |                                                                                |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Product Name:                                                                                 | Temperature measuring camera                                                   |
| Trade Name:                                                                                   | /                                                                              |
| Model No.:                                                                                    | B12                                                                            |
| FCC ID:                                                                                       | 2AV39B12                                                                       |
| Rated Voltage:                                                                                | DC 12V                                                                         |
| Power Adapter:                                                                                | KA1201A-1201000EU<br>INPUT: ACV100-240~50/60Hz, 0.4A, Max;<br>OUTPUT: DC12V,1A |
| Software Version:                                                                             | V1.3.0.0#TICxx                                                                 |
| Hardware Version:                                                                             | MVM6130G_E V5.0                                                                |
| Equipment Type:                                                                               | Fixed                                                                          |
|                                                                                               |                                                                                |
| <i>Note: The test data is gathered from a production sample provided by the manufacturer.</i> |                                                                                |

### 1.2 Standard Applicable

According to § 1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

(a) Limits for Occupational / Controlled Exposure

| Frequency range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                  | 6                                                                      |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f)*                                | 6                                                                      |
| 30-300                | 61.4                              | 0.163                             | 1.0                                     | 6                                                                      |
| 300-1500              | /                                 | /                                 | F/300                                   | 6                                                                      |
| 1500-100000           | /                                 | /                                 | 5                                       | 6                                                                      |

(b) Limits for General Population / Uncontrolled Exposure

| Frequency range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                  | 30                                                                     |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                                | 30                                                                     |
| 30-300                | 27.5                              | 0.073                             | 0.2                                     | 30                                                                     |
| 300-1500              | /                                 | /                                 | F/1500                                  | 30                                                                     |
| 1500-100000           | /                                 | /                                 | 1                                       | 30                                                                     |

Note: f = frequency in MHz: \* = Plane-wave equivalents power density

### 1.3 MPE Calculation Method

$$S = (30 \cdot P \cdot G) / (377 \cdot R^2)$$

S = power density (in appropriate units, e.g., 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,  
the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

### 1.4 MPE Calculation Result

Fixed device

Wi-Fi:

Maximum Tune-Up output power: 15 (dBm)

Maximum peak output power at antenna input terminal: 31.62(mW)

Prediction distance: >20(cm)

Prediction frequency: 2437(MHz)

Antenna gain: 5.0(dBi)

Directional gain (numeric gain): 3.16

The worst case is power density at prediction frequency at 20cm: 0.020 (mW/cm<sup>2</sup>)

MPE limit for general population exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)

Result: Pass