

FCC 47 CFR MPE REPORT

HUIZHOU FORYOU GENERAL ELECTRONICS CO.,LTD.

Car Multimedia Player

Model Number: VX7012

Additional Model: VX4012

FCC ID: VIP-VX7012

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Maximum Permissible Exposure

1、Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

(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 ²) | Averaging Times E 2 , H 2 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 |
| 1500-10000 | | | 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 ²) | Averaging Times E 2 , H 2 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 |
| 1500-10000 | | | 1.0 | 30 |

Note: f=frequency in MHz; *Plane-wave equivalent power density

2、MPE Calculation Method

$$E \text{ (V/m)} = (30 \cdot P \cdot G) \cdot 0.5/d \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = E^2/377$$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = (30 \cdot P \cdot G) / (377 \cdot d^2)$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained



3、Calculated Result and Limit

| Mode | Frequency (MHz) | Peak output power (dBm) | Peak output power (mW) | Target power (dBm) | Antenna gain | | Power Density (S) (mW /cm ²) | Limited of Power Density (S) (mW /cm ²) | Test Result |
|--------|--------------------|----------------------------------|---------------------------------|--------------------------|--------------|----------|--|---|----------------|
| | | | | | (dBi) | (Linear) | | | |
| GFSK | 2402 | -1.963 | 0.636 | -2±2 | 0 | 1 | 0.00020 | 1 | Compiles |
| | 2441 | 1.729 | 1.489 | 0±2 | 0 | 1 | 0.00032 | 1 | Compiles |
| | 2480 | -0.571 | 0.877 | -2±2 | 0 | 1 | 0.00020 | 1 | Compiles |
| 8-DPSK | 2402 | -2.598 | 0.550 | -3±2 | 0 | 1 | 0.00016 | 1 | Compiles |
| | 2441 | 1.077 | 1.281 | 0±2 | 0 | 1 | 0.00032 | 1 | Compiles |
| | 2480 | -1.101 | 0.776 | -2±2 | 0 | 1 | 0.00020 | 1 | Compiles |