



**中认信通**

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



# MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

**Applicant:** Quanzhou Sifang Communication Device Co.,Ltd.

**Address:** Yuxia Community ,Jinlong Street No.45 Yuantaiyi Road, Quanzhou, China

**FCC ID:** 2A4R6-TM8118

**Product Name:** Mobile Radio

**Model Number:** TM-8118,TM-618

**Standard(s):** 47 CFR §1.1310, 47 CFR §2.1091

The above equipment has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

**Report Number:** CR22030048-00D

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**Reviewed By:** Sun Zhong

*Sun Zhong*

**Title:** Manager

**Test Laboratory:** China Certification ICT Co., Ltd (Dongguan)

No. 113, Pingkang Road, Dalang Town, Dongguan,

Guangdong, China

Tel: +86-769-82016888

**Test Facility**

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

**Declarations**

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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## 1.1 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

### 1.1.1 Applicable Standard

FCC §1.1310 & §2.1091

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 levels in excess of the Commission's guidelines. See §1.1307(b)(1) of this chapter.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

| (B) Limits for General Population/Uncontrolled Exposure |                               |                               |                                     |                          |
|---------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| Frequency Range (MHz)                                   | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Averaging Time (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                       |
| 1500–100,000                                            | /                             | /                             | 1.0                                 | 30                       |

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

According to §1.1310 and §2.1091 RF exposure is calculated.

### 1.1.2 Procedure

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$  = 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 (appropriate units, e.g., cm);

**1.1.3 EUT Information ▲ :**

| Channels                                               | Conducted output power<br>including Tune-up Tolerance<br>(dBm) | Maximum Antenna Gain<br>(dBi) |
|--------------------------------------------------------|----------------------------------------------------------------|-------------------------------|
| 462 MHz Main Channels                                  | 44                                                             | 3.0                           |
| 462 MHz interstitial channels                          | 33                                                             | 3.0                           |
| 467 MHz Main Channels                                  | 44                                                             | 3.0                           |
| The Above Parameters were provided by the manufacturer |                                                                |                               |

**1.1.4 Calculated Result:**

| Operation Bands               | Frequency (MHz)   | Antenna Gain |           | Maximum Conducted output power including Tune-up Tolerance |          | Evaluation Distance (cm) | Duty Cycle (%) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|-------------------------------|-------------------|--------------|-----------|------------------------------------------------------------|----------|--------------------------|----------------|-------------------------------------|-----------------------------|
|                               |                   | (dBi)        | (numeric) | (dBm)                                                      | (mW)     |                          |                |                                     |                             |
| 462 MHz Main Channels         | 462.55-462.7250   | 3            | 2.00      | 44                                                         | 31622.78 | 100                      | 50             | 0.20                                | 0.31                        |
| 462 MHz interstitial channels | 462.5625-462.7125 | 3            | 2.00      | 33                                                         | 3162.28  | 100                      | 50             | 0.02                                | 0.31                        |
| 467 MHz Main Channels         | 467.55-467.725    | 3            | 2.00      | 44                                                         | 31622.78 | 100                      | 50             | 0.20                                | 0.31                        |

**Result:** The device meet FCC MPE at 100 cm distance.

**===== END OF REPORT =====**