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## 1.0 Maximum Permissible Exposure Evaluation (Supplements the test report.)

The measured power is considered for the intended use of the device and resulting RF exposure to the user.

### 1.2 Criteria

| Section Reference  | Date        |
|--|-------------|
| KDB 447498 D01 Mobile Portable RF Exposure v05r01 // RSS-102 Issue 5 March 2015, Notice 2013 DRS0911 | 18 Sep 2020 |

### 1.3 Procedure

Using measurement of peak power and considering the intended application, determine the permissible exposure level, applicability of exclusion, or whether additional exposure tests (SAR) are indicated. When applicable justify conclusion for selected exposure level and separation distance.

### 1.4 Power to Exposure Calculation

Radio power is determined by conducted measurement. SAR exemption method was applied for general public exposure assuming limb exposure for worst-case applications in hand-held or hand-operated devices. Spacing assumed to be 25 mm and must be re-evaluated on a case-by-case basis.

**Table 1.4.1 Power Calculation for Exposure, 900 MHz Radio (Highest frequency 928 MHz)**

| Conducted Peak Power mW | Conducted Peak In dBm | Source Duty Cycle Factor dB | Antenna Gain dBi | Calculated EIRP dBm | EIRP In Linear Terms mW |
|-------------------------|-----------------------|-----------------------------|------------------|---------------------|-------------------------|
| 10.2                    | 10.1                  | 0*                          | 2.0              | 12.1                | 16.2                    |

### 1.5 SAR Exemption Calculation – FCC

*Applicable requirement: KDB 447498 Clause 4.3.1 Section 1*

Calculation (max power including tune up tolerance = 36.3 mW):

$$[(16.2 \text{ mW})/(25 \text{ mm})] \cdot [\sqrt{0.928 \text{ (GHz)}}] = 0.624$$

$$0.624 \leq 6.0 \text{ (Limb exposure)}$$

$$0.624 \leq 3.0 \text{ (Non-Limb exposure)}$$

Therefore, the device meets the applicable FCC SAR exemption requirements.

### 1.6 SAR Exemption Calculation – IC

This device meets the clause **2.5 Exemption Limits for Routine Evaluation – SAR Evaluation** criteria in RSS-102 Clause 2.5.1, Table 1, given power of 16.2 mW complies for any frequency row shown at 25 mm distance.

**Table 1: SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance<sup>4,5</sup>**

| Frequency (MHz) | Exemption Limits (mW)           |                                 |                                 |                                 |                                 |
|-----------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                 | At separation distance of ≤5 mm | At separation distance of 10 mm | At separation distance of 15 mm | At separation distance of 20 mm | At separation distance of 25 mm |
| ≤300            | 71 mW                           | 101 mW                          | 132 mW                          | 162 mW                          | 193 mW                          |
| 450             | 52 mW                           | 70 mW                           | 88 mW                           | 106 mW                          | 123 mW                          |
| 835             | 17 mW                           | 30 mW                           | 42 mW                           | 55 mW                           | 67 mW                           |
| 1900            | 7 mW                            | 10 mW                           | 18 mW                           | 34 mW                           | 60 mW                           |
| 2450            | 4 mW                            | 7 mW                            | 15 mW                           | 30 mW                           | 52 mW                           |
| 3500            | 2 mW                            | 6 mW                            | 16 mW                           | 32 mW                           | 55 mW                           |
| 5800            | 1 mW                            | 6 mW                            | 15 mW                           | 27 mW                           | 41 mW                           |

Signed:



Eric Lifsey

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