

## 5. RF EXPOSURE EVALUATION

### 5.1 Applicable Standard

According to §15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

### 5.2 Measurement Result

| Frequency<br>(MHz) | Maximum Conducted<br>Power |      | Distance<br>(mm) | Calculated<br>value | Threshold<br>(1-g) | SAR Test<br>Exclusion |
|--------------------|----------------------------|------|------------------|---------------------|--------------------|-----------------------|
|                    | (dBm)                      | (mW) |                  |                     |                    |                       |
| 2403-2478          | 0.95                       | 1.24 | 5                | 0.4                 | 3                  | Yes                   |

Note:

1. This device maximum E-Field level is 96.15 dB $\mu$ V/m at 3m, so the EIRP power is 0.95 dBm,

Antenna Gain is 0 dBi, so the Maximum Conduct Power is 0.95 dBm.

2. EIRP (dBm) = Field Strength of Fundamental(dBuV/m)-95.2

Maximum Conduct Power (dBm)= EIRP (dBm)- Antenna Gain(dBi)

Result: Compliant. The stand-alone SAR test is not necessary.