

## FCC ID: TMGG1JDDMN010

According to KDB 447498 D04 Interim General RF Exposure Guidance v01

### 1. MPE-Based Exemption

An alternative to the SAR-based exemption is provided in § 1.1307(b)(3)(i)(C), for a much wider frequency range, from 300 kHz to 100 GHz, applicable for separation distances greater or equal to  $\lambda/2\pi$ , where  $\lambda$  is the free-space operating wavelength in meters. The MPE-based test exemption condition is in terms of ERP, defined as the product of the maximum antenna gain and the delivered maximum time-averaged power. For this case, a RF source is an RF exempt device if its ERP (watts) is no more than a frequency-dependent value, as detailed tabular form in Appendix B. These limits have been derived based on the basic specifications on Maximum Permissible Exposure (MPE) considered for the FCC rules in § 1.1310(e)(1).

**Table 1 to 1.1307(b)(3)(i)(c) – Single RF Sources Subject to Routine Environmental Evaluation**

| RF Source Frequency (MHz) | Threshold ERP (watts)                |
|---------------------------|--------------------------------------|
| 0.3-1.34                  | 1 920 R <sup>2</sup>                 |
| 1.34-30                   | 3 450 R <sup>2</sup> /f <sup>2</sup> |
| 30-300                    | 3.83 R <sup>2</sup>                  |
| 300-1 500                 | 0.012 8 R <sup>2</sup> f             |
| 1 500-100 000             | 19.2 R <sup>2</sup>                  |

### 2. RF Exposure Test Exemptions for Single Source

| Mode      | Frequency Range (MHz) | Minimum Separation Distance (cm) | Maximum Average Target Power (dBm) | Maximum Tune up (dB) | Maximum Average Output Power (dBm) | Antenna Gain (dBi) | ERP   |      | P <sub>th</sub> | Ratio | Result |
|-----------|-----------------------|----------------------------------|------------------------------------|----------------------|------------------------------------|--------------------|-------|------|-----------------|-------|--------|
|           |                       |                                  |                                    |                      |                                    |                    | (dBm) | (mW) |                 |       |        |
| Bluetooth | 2 402 ~ 2 480         | 20                               | 7.00                               | 2.00                 | 9.00                               | 1.33               | 8.18  | 6.58 | 768             | 0.009 | Pass   |

**Note ;**

- ERP (dBm) = EIRP (dBm) -2.15 (dB) = ( AVG PWR + Antenna Gain ) – 2.15 = (9 + 1.33) -2.15 = 8.18
- Maximum average target power is the manufacturer's declared rated power.
- Maximum average output power = Maximum average target power (dBm) + Maximum tune up (dB).

### 3. Conclusion: No SAR is required.