

Standalone SAR test exclusion considerations

August 30, 2017

- Device category = ☒ Portable device ☐ Mobile device
- Transmitting mode = ☒ Single Transmitting ☐ Simultaneous Transmitting
- Max. transmitting frequency = 2480 MHz
- Min. test separation distance = 0 mm
- Max. Antenna Gain = 4.08 dBi
- Max. power with turn-up tolerance = 1.50 dBm = 1.413 mW (Typical Power = Range: 0.50 dBm ± 1.00 dB

Note. Bluetooth LE

KDB 447498 D01 clause 4.3.1 Step 1) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances ≤ 50 mm

$$\left[\left(\text{max. power of channel, including tune-up tolerance, mW} \right) / \left(\text{min. test separation distance, mm} \right) \right] \cdot \left[\sqrt{f(\text{GHz})} \right] \leq 3.0 \text{ for 1g SAR and } \leq 7.5 \text{ for 10g extremity SAR}$$
$$= \left[\left(1.413\text{mW} / 5\text{mm} \right) \right] \times \left[\sqrt{2.48\text{GHz}} \right] = 0.445$$

Note. The calculation result was rounded to one decimal place for comparison.

→ SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.