

Standalone SAR test exclusion considerations

May 17, 2024

- Device category = ☒ Portable device ☐ Mobile device
- Transmitting mode = ☒ Single Transmitting ☐ Simultaneous Transmitting
- Max. transmitting frequency = 433.92 MHz
- Min. test separation distance = 0 mm
- Max. Antenna Gain = -4.09 dBi
- Max. power with turn-up tolerance = 17.00 dBm = 50.2 mW (Typical Power = Max. 17.00 dBm)

Note. The max power includes a correction factor of $20\log(0.105)$ to cover an operational duty factor of 10.5% as the device transmit a maximum of 10.5ms in period 100 msec.

KDB 447498 D01v06 clause 4.3.1 a) SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances ≤ 50 mm

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1g SAR and ≤ 7.5 for 10g extremity SAR
 $= [(50.2\text{mW} / 5\text{mm})] \times [\sqrt{0.43392\text{GHz}}] = 6.6$

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.