

RF Exposure Evaluation

SAR Evaluation

The EUT is a wireless device used in an application, close to any body part of the user or nearby persons.

The maximum peak conducted power is 22.7 dBm or 186.2 mW; therefore, to comply with RF Exposure Requirement, the SAR evaluation is considered.

The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances ≤ 50 mm is determined by:

$$\begin{aligned} &[(\text{max. power of channel(average), including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] * [\text{SQRT}(f(\text{GHz}))] \\ &= [(9.387)/5] * [\text{SQRT}(2.48)] \\ &= 2.96 \end{aligned}$$

Since the above calculation is less than 3.0, the product fulfils the RF exposure requirement without SAR testing.

Remark:

1. Average conducted power is $186.2 \text{ mW} \times 0.05047$ (duty cycle factor) = 9.387 mW
2. When the minimum test separation distance is $< 5\text{mm}$, a distance of 5mm is applied to determine SAR test exclusion.