

SAR test exclusion

According to KDB 447498 D01 General RF Exposure Guidance v05, section 4.3.1

At 100 MHz to 6 GHz and for test separation distances ≤ 50 mm, the SAR test exclusion threshold is determined according to the following;

a) $\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] \times [\sqrt{f(\text{GHz})}] \leq 3.0$

1. SAR test exclusion threshold

Frequency : 2480 MHz (min. separation distances = 5 mm)

SAR test exclusion thresholds(5 mm) = $\left[\frac{0.01}{5} \times \sqrt{2.480} \right] = 0.00315 \leq 3.0$.

Mode	Frequency (MHz)	Tune up output Power (dBm)	Measured max output power (dBm)	Separation Distance (mm)	≤ 3.0
Bluetooth	2402	-26 ± 3	-23.21	5	0.00155
Bluetooth	2440	-27 ± 3	-24.02	5	0.00125
Bluetooth	2480	-24 ± 3	-21.67	5	0.00315

$[\text{Tune up power, dBm}] = [\text{Target power, dBm} \pm \text{tune-up tolerance, dBm}]$

Maximum tuned up power = $(-24 \text{ dBm} \pm 3 \text{ dBm}) = -21.0 \text{ dBm} = 0.01 \text{ mW}$

Measured max output power = -21.67 dBm

2. Conclusion : Bluetooth SAR was not required

