

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) = $\left[\frac{0.158}{5} \times \sqrt{2.402} \right] = 0.05 < 3.0$.

Mode	Frequency (MHz)	Tune up output Power (dBm)	Measured max output Power (dBm)	Separation Distance (mm)	≤ 3.0
Bluetooth	2402	-9 ± 1	-8.95	5	0.05
Bluetooth	2440	-10 ± 2	-9.82	5	0.04
Bluetooth	2480	-10 ± 2	-9.84	5	0.04

[Tune up power, dBm] = [Target power, dBm $\pm$ tune-up tolerance, dBm)]

Maximum tuned up power = ($-10 \text{ dBm} \pm 2 \text{ dBm}$) = -8 dBm = 0.158 mW

Measured max output power = -8.95 dBm

2. Conclusion : Bluetooth SAR was not required

0

0.048975

0.040613

0.040945