

FCC ID: 2AD5KMWB300

According to KDB 447498 D01 General RF Exposure Guidance

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

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

1. SAR test exclusion threshold

Frequency: 2 480 MHz (min. separation distances = 0 mm)

Calculation value: $2 \text{ (mW)} / 5 \text{ (mm)} \times \sqrt{2.480} = 0.630$

So, Calculation value ≤ 3.0

Remark;

-Max. conducted power (mW): maximum tolerance power of EUT (2 dBm)

-Max. conducted power 2 (mW) was calculated.

- When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2. SAR test exclusion threshold

Frequency : 433.92 MHz (min. separation distances = 0 mm)

Calculation value: $1 \text{ (mW)} / 5 \text{ (mm)} \times \sqrt{0.433 \text{ 92}} = 0.132$

So, Calculation value ≤ 3.0

Remark:

-Max. Radiated field strength 68.86 (dBμV): Max. E.I.R.P. of EUT (-26.37 dBm)

-Max. E.I.R.P. 0.002 (mW) is less than 1 (mW), so 1 (mW) was calculated.

-When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

3. Simultaneous transmission SAR test exclusion considerations.

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \times \sqrt{f(\text{GHz})} / \chi \right] \text{ where } \chi = 7.5 \text{ for 1-g SAR}$$

Bluetooth Low Energy

$$2 \text{ (mW)} / 5 \text{ (mm)} \times \sqrt{2.480} / 7.5 = 0.084$$

Transmitter

$$1 \text{ (mW)} / 5 \text{ (mm)} \times \sqrt{0.433 \text{ 92}} / 7.5 = 0.018$$

Confirm the sum result of individual SAR estimation is < 1.6 ;

Bluetooth Low Energy + Transmitter: $0.084 + 0.018 = 0.102 < 1.6$

4. Conclusion: No SAR is required.