

FCC ID : 2BCZ2-SQN-018

➤ Test Standards and Limits

1. According to KDB 447498 D01 v06, Section 4.3.1

2. FCC Radiofrequency radiation exposure limits:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max power of channel})/(\text{min test separation distance})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

For 2.4G band device, the limit of worse case is

$$P_{\text{max}} \leq 3.0 \cdot D_{\text{min}} / \sqrt{f} = 3.0 \cdot 5 / \sqrt{2.474} = 9.537 \text{mW}$$

➤ Measurement and Calculation

1. Maximum transmit power

2.4G SRD, Antenna Gain: 0.59dBi

Operation Mode	Channel Number	Channel Frequency (MHz)	Emission Level(dBuV/m)	EIRP (dBm)
2.4G SRD	0	2430	85.61	-9.62
	14	2446	80.89	-14.34
	32	2470	82.24	-12.99
* EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77				

2. MPE Calculation

According to the formula. calculate the EIRP test result:

$$\text{EIRP} = 0.11 \text{mW} < 9.525 \text{mW}$$

So the SAR report is not required.

-End of the Report-