

Appendix 5

RF Exposure Information

Maximum transmitter power:

Frequency (MHz)	Maximum peak output power (dBuV/m)	Output power (mW)
2405	87.54	0.171
2449	83.26	0.064
2481	87.69	0.177

For FCC

According to KDB 447498 D01:

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:

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

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 before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

Result:

$$(0.171/5) \cdot \sqrt{2.405} = 0.053 < 3.0$$

$$(0.064/5) \cdot \sqrt{2.449} = 0.020 < 3.0$$

$$(0.177/5) \cdot \sqrt{2.481} = 0.056 < 3.0$$

Conclusion:

No SAR is required.

For IC

According to table 1 in RSS-102 Issue 5, below exemption limit is applied

Frequency: 2450MHz

At separation distance of ≤ 5mm

Exemption limits: 4mW

Results:

max. power of channel = 87.69 dBuV/m = 0.177 mW < 4mW

Conclusion:

The maximum peak output power of the transmitter is less than the SAR evaluation exemption threshold and hence it complies with the RSS-102 RF exposure requirement