

Appendix 5

RF Exposure Information

Maximum transmitter power:

Frequency (MHz)	Maximum peak output power (dBm)	Output power(mW)
2402	-0.42	0.91
2440	-0.56	0.88
2480	-0.83	0.83

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

- $f_{\text{(GHz)}}$ 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:

$$(0.91/5) \cdot \sqrt{2.402} = 0.281 < 3.0$$

$$(0.88/5) \cdot \sqrt{2.440} = 0.275 < 3.0$$

$$(0.83/5) \cdot \sqrt{2.480} = 0.260 < 3.0$$

Overall 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:

$$\text{max. power of channel} = -0.42\text{dBm} = 0.91\text{mW} < 4\text{mW}$$

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