

FCC RF Exposure Evaluation

According to KDB 447498 D01 General RF Exposure Guidance v06 and part 2.1093, Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition(s), listed below, is (are) satisfied.

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

≤ 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

Routine SAR evaluation refers to that specifically required by §2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

One antenna is available for the EUT. The minimum separation distance is 5mm.

$$\text{EIRP} = \text{Field strength} + 20 \log(d_{\text{meas}}) - 104.7$$

EIRP is the equivalent isotropically radiated power, in dBm

Field strength is the field strength of the emission at the measurement distance, in dBuV/m

d_{meas} is the measurement distance, in m

FCC Exposure Evaluation

Frequency (MHz)	Field strength (dBuV/m)	EIRP (dBm)	Max Power (mW)	Min. Distance (mm)	Calc. thresholds	limit
433.92	81.87	-14.23	0.037757	5.00	0.003	3.0

According to KDB 447498 D01 General RF Exposure Guidance v06, no stand-alone required for PCB antenna, and no simultaneous SAR measurement is required.

