

RF Exposure Evaluation

According to KDB 447498 D01 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

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

$$\text{EIRP} = \text{E}_{\text{Meas}} + 20\log(d_{\text{Meas}}) - 104.7$$
EIRP is the equivalent isotropically radiated power, in dBm
E_{Meas} is the field strength of the emission at the measurement distance, in dB μ V/m
d_{Meas} is the measurement distance, in m

Here,
For BLE

Field strength (dBuV/m)	EIRP (dBm)	Max tune-up (mW)	Frequency (MHz)	Min. distance(mm)	Calc. thresholds	limit
84.59	-10.6	0.1	2480	5	0.03	3.0

So a SAR test is not required