

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:

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

$$\text{EIRP} = E_{\text{Meas}} + 20 \log(d_{\text{Meas}}) - 104.7$$

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 BT

| Field strength (dB μ V/m) | EIRP (dBm) | Max tune-up (mW) | Frequency (MHz) | Min. distance(mm) | Calc. thresholds | limit |
|----------------------------------|---------------|---------------------|--------------------|----------------------|---------------------|-------|
| 84.27 | -10.89 | 0.08 | 2480 | 5 | 0.03 | 3.0 |

For wifi 2.4G

| Max Power(dBm) | Max Power(mW) | Frequency(MHz) | Min. distance(mm) | Calc. thresholds | limit |
|----------------|---------------|----------------|-------------------|------------------|-------|
| 4.732 | 2.97 | 2437 | 5 | 0.94 | 3.0 |

BT and WIFI cannot transmit simultaneously,

So a SAR test is not required