

SAR test exclusion according to KDB447498 (General RF Exposure Guidance v05)

Equation from Chapter 4.3.1: Standalone SAR test exclusion considerations page 11 and ff.

(1) Standalone SAR test exclusion for 100 MHz to 6 GHz at test separation distances $\leq 50\text{mm}$

$$(\text{Threshold}_{1\text{-g};10\text{-g}}) \times d_{\text{separation}} / f^{0.5}$$

where

$\text{Threshold}_{1\text{-g};10\text{-g}}$ is 3 for 1-g; 7.5 for 10-g
 $d_{\text{separation}}$ is the min. test separation distance; 5mm is used if the distance is less
 f is the RF channel transmit frequency

The table below gives the calculated maximal power that could be used for source based time averaged conducted power, adjusted for tune up tolerance. If this is below the calculated value SAR testing is obsolete.

f in [MHz]	$d_{\text{separation}}$ [mm]	$\text{Threshold}_{1\text{-g};10\text{-g}}$	Powerlimit [mW]	$P_{\text{max-declared}}$ [mW]	Exclusion
2480.00	5	3	9.53	2.51	yes

(2) Standalone SAR test exclusion below 100 MHz < 50mm

$$0.5 \times (\text{Threshold}_{100\text{MHz}}) \times (1 + \log(100/f))$$

$$[0.5 \times \text{Threshold}_{100\text{MHz}} \times (1 + \log(100/f))]$$

where

$\text{Threshold}_{1\text{-g};10\text{-g}}$ is 3 for 1-g; 7.5 for 10-g
 f is the RF channel transmit frequency
 $\text{Threshold}_{100\text{MHz},50\text{mm}}$ is $\text{Threshold}_{1\text{-g};10\text{-g}} \times d / f^{0.5}$; with $f = 100\text{MHz}$ and $d=50\text{mm}$

The table below gives the calculated maximal power that could be used for source based time averaged conducted power, adjusted for tune up tolerance. If this is below the calculated value SAR testing is obsolete.

f in [MHz]	$\text{Threshold}_{1\text{-g};10\text{-g}}$	$\text{Threshold}_{100\text{MHz},50\text{mm}}$	Powerlimit [mW]	$P_{\text{max-declared}}$ [mW]	Exclusion
3.28	3	474.34	589.16	2.5	yes



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