

17 RF Exposure

General SAR test reduction and exclusion guidance

KDB 447498

Section 4.3 General SAR test reduction and exclusion guidance

For Standalone SAR exclusion consideration, when SAR Exclusion Threshold requirement in KDB 447498 is satisfied, standalone SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.

In the frequency range below 100 MHz to 6 GHz and test separation distance of 50mm, the SAR Test Exclusion Threshold for operation in the 2400 – 2483.5 MHz band will be determined as follows

SAR Exclusion Threshold (SARET)

The SAR Test Exclusion Threshold for frequencies in the range 100 MHz to 6 GHz, and for test separation distance of ≤ 50 mm, is determined as follows.

$$\text{SAR Exclusion Threshold (SARET)} = (\text{NT} \times \text{TSD}_A) / \sqrt{f_{\text{GHz}}}$$

Where,

NT = Numeric Threshold (3.0 for 1-g SAR and 7.5 for 10-g SAR)

TSD_A = Minimum Test separation distance or 50 mm (whichever is lower)

f_{GHz} = Transmit frequency in GHz

Evaluation Frequency	2402 MHz	2440 MHz	2480 MHz	
SAR Exclusion Threshold	9.7	9.6	9.5	mW
Radiated Field Strength	96.06	86.70	82.75	dBuV/m (@3m)
Antenna Gain	0.5	0.5	0.5	dBi
Conducted Power	0.27	0.13	0.05	mW
SAR Evaluation	<i>Exempt</i>			

Therefore standalone SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.