

Appendix G:

General SAR test reduction and exclusion guidance

KDB 447498, KDB 865664 D02

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 5mm, the SAR Test Exclusion Threshold (SARET) for operation in the 1920 – 1930 MHz band will be determined as follows

$$NT \geq [(MP/TSD^A) * \sqrt{f_{GHz}}]$$

NT = Numeric Threshold (3.0 for 1-g SAR and 7.5 for 10-g SAR)
 MP = Max Power of channel (mW) (inc tune up)
 TSD^A = Min Test separation Distance = 5

We can transpose this formula to allow us to find the maximum power of a channel allowed and compare this to the measured maximum power.

$$= [(NT \times TSD^A) / \sqrt{f_{GHz}}]$$

Operating Frequency 1928.448MHz

SARET = $[(3.0 \times 5) / \sqrt{1.928448}]$
 SARET = $[15 / 1.4]$
 SARET = 10.7mW

Channel Frequency (MHz)	Maximum Conducted power (dBm)	Maximum source-based time averaging duty factor (%)	Maximum Conducted Time based Average power (dBm)	SAR Exclusion Threshold (mW)	SAR Evaluation
1921.536	19.57	8.4% (2/24 x100%)	7.60	10.7	Not Required
1924.992	19.46		7.42	10.7	Not Required
1928.448	19.35		7.23	10.7	Not Required

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