

5.10 RF exposure consideration for SAR test exclusion

According to KDB 447498 D01 General RF Exposure Guidance v05r02 chapter 4.3.1 the 1-g SAR number is calculated for a distance of **1 mm** using the following formula.

$$\left(\frac{\text{max. Pchannel (mW)}}{\text{Distance (mm)}} \right) * \sqrt{f(\text{GHz})} \leq 3$$

Where:

Max. Pchannel = EIRP (mW)

EIRP = P + G + K_E

Distance = 1 mm

f (GHz) = Channel frequency (MHz) divided by thousand

K_E = Duty cycle correction factor (see paragraph 5.11.5)

5.10.1 Test result

Standard 802.15.4

Channel frequency (MHz)	P (dBm)	G (dBi)	K _E (dB)	EIRP (dBm)	EIRP (mW)	1-g SAR (1)	Limit 1-g SAR (1)
2405	11.1	3.5	-15.1	-0.5	0.89	1.39	3.0
2440	10.7	3.5	-15.1	-0.9	0.82	1.27	3.0
2475	10.3	3.5	-15.1	-1.3	0.74	1.17	3.0

The limits for SAR test exclusion threshold are given in KDB 447498 D01 General RF Exposure Guidance Appendix A.

Channel frequency (MHz)	P (dBm)	G (dBi)	K _E (dB)	EIRP (dBm)	EIRP (mW)	SAR exclusion limit (mW)
2405	11.1	3.5	-15.1	-0.5	0.89	20.0
2440	10.7	3.5	-15.1	-0.9	0.82	20.0
2475	10.3	3.5	-15.1	-1.3	0.74	20.0

The limits for SAR test exclusion threshold for devices radiating in the frequency range from 2.2 GHz up to 3.0 GHz are given in RSS-102 section 2.5.1 .

The requirements are **FULFILLED**.

Remarks:
