

FCC SAR exemption letter according KDB 447498 D01 v06

For SOMMER Antriebs- und Funktechnik GmbH, Hans-Boeckler Straße 27, 73230 Kirchheim/Teck, Germany, garage door opener, 2110 pro+

Declared minimum distance to human body according to customer = 1 mm according external document "MPE Information Requirements (GTA 2110 pro+ S10255)" provided by customer.

According to KDB 447498 D01 General RF Exposure Guidance V06 SAR testing can be exempted if the following exclusion threshold are met:

4.3. General SAR test exclusion guidance

4.3.1. Standalone SAR test exclusion considerations

- a) 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{GHz}}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR,}^{30} \text{ where}$$

- f_{GHz} is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation³¹
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as *numeric thresholds* in step b) below

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

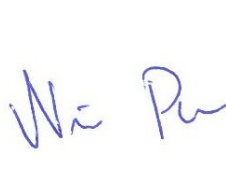
$P_{\text{threshold}}$ calculation based on external document "MPE Information Requirements (GTA 2110 pro+ S10255)" provided by customer.

$P_{\text{threshold}} = \text{Maximum Rated Conducted Output Power (dBm)} + \text{Tune-Up Tolerance} - \text{Maximum Path Loss to Antenna}$

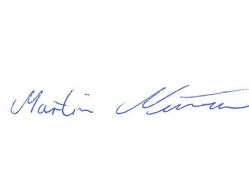
$$P_{\text{threshold_DUT}} = 1 \text{ mW} * 10^{((-1 \text{ dBm} + 1 \text{ dB} - 0 \text{ dB})/10)} \leq 1 \text{ mW}$$

FCC General SAR test exclusion acc. KDB 447498 D01 v06					
Frequency (MHz)	Max. power incl. Tune-up tolerance (mW)	Threshold 1-g SAR Limit < 3.0	Threshold 10-g SAR Limit < 7.5	1-G SAR Exemption fulfilled	10-g SAR Exemption fulfilled
922.5	1.0000	0.1921	0.1921	yes	yes
min. test separation distance (mm)			5		

The user manual must list the given usage position.


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