

FCC SAR exemption letter according KDB 447498 D01 v06

For Ortovox Sportartikel GmbH, Product Avalanche Transceiver, Model DIRACT VOICE with FCC ID KF5DIR1..

Declared minimum distance to human body according to customer = 0 mm according external document "MPE Information Requirements 19-1-01300.pdf" 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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{GHz}}}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR,³⁰ 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 19-1-01300.pdf provided by customer.

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

$P_{\text{threshold_DUT}} = 1 \text{ mW} \cdot 10^{(0\text{dBm}/10)} \leq 1 \text{ mW}$

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
2402.0	1.0000	0.3100	0.3100	yes	yes
2440.0	1.0000	0.3124	0.3124	yes	yes
2480.0	1.0000	0.3150	0.3150	yes	yes

The user manual must list the given usage position.

Ninovic Perez
2021.03.11
13:27:39 +
01'00'

Dipl.-Ing. Ninovic Perez

martin.
nunier@cetecom.com
2021.03.11 13:
21:00 +01'00'

B. Eng. Martin Nunier