

RF exposure information according to FCC CFR 47 part 15, §15.247(i)

The Pet Tag transmitter is used as a portable device operating in 2402 – 2480 MHz band. It is equipped with an internal antenna.

Maximum measured transmitter power:

P _{out} conducted		Maximum antenna gain, dBi	P _{out} EIRP	
dBm	mW		dBm	mW
8.7	7.4	0.8	8.7	8.9

The minimum separation distance is assured by the typical device usage and the internal construction of the antenna and plastic case elements. The distance between the antenna and the back surface or the side walls of the device exceeds 7 mm. The minimum distance between the antenna element and the push button on the front side of the device is 2.8 mm. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion according to section 4.3.1(a) of KDB 447498 D01 General RF Exposure Guidance v06. Based on the above the SAR exclusion evaluation was performed at 2.8 mm separation distance for 10-g extremity threshold and at 5 mm separation distance for 1-g body threshold.

The 1-g body SAR test exclusion threshold at frequency 2.48 GHz and test separation distances 5.0 mm was determined as follows:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] \leq 3.0$$

$$[8.7 \text{ mW} / 5.0 \text{ mm}] \times \sqrt{2.48} = 1.78 \times 1.57 = 2.74 < 3.0$$

The 10-g extremity SAR test exclusion threshold at frequency 2.48 GHz and test separation distances 5.0 mm was determined as follows:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] \leq 3.0$$

$$[8.7 \text{ mW} / 2.8 \text{ mm}] \times \sqrt{2.48} = 1.78 \times 1.57 = 4.89 < 7.5$$

Upon this the device is excluded from SAR evaluation according to KDB 447498 D01 v06.