

RF Exposure requirements

Product name	SMART KEY TAG
Model number	SMK-HWF-02
FCC ID	ZE8-SMK-HWF-02
Radio specification	2.4 GHz ZigBee transceiver, 125 kHz RFID receiver
Antenna	2.4 GHz, integral SMD chip antenna, 125 kHz, Resonance coil
Power source	DC 3 V lithium battery

According to the KDB 447498, the following standalone SAR test exclusion was considered to qualify for the SAR test exclusion.

Tx frequency range	2405 MHz
Device category	Handheld portable device
Maximum conducted output power	2.25 mW (3.53 dBm)
Limit	10 mW (distance = 5 mm)

SAR test exclusion thresholds:

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

MHz	5	10	15	20	25	30	35	40	45	50	test separation distance (mm)
2450	10	19	29	38	48	57	67	77	86	96	SAR test exclusion threshold (mW)

The source-based time-averaged maximum conducted output power of the RF channel is less than 10 mW, and therefore the transmitter complies with the RF exposure requirements and the SAR is not required.