

RF exposure information

FCC ID: 2AFO8520109X46X

1. Introduction:

The EUT is designed to be used in portable exposure conditions.

This product integrates a transmitter operated in 433.92 MHz frequency band.

2. Output power considerations:

Worst case output power transmitter (E_{max}): 70.35 dB μ V/m@3m

$P_t = (E \cdot d) / (30 \times g_t) = 0.0003 \text{ mW}$

g_t = numeric gain of the transmitting antenna (unitless) = 1

E = electric field strength in V/m = $10^{-6} \times 10^{(70.35/20)}$ V/m = 0.003 V/m

d = measurement distance in meters (m) = 3 (m)

3. Compliance criteria:

According to 447498 D01 G/1000 General RF Exposure Guidance v05 The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

Calculate:

$(0.003/5) / \sqrt{f(0.43392)} = 0.0009 < 3 \text{ for 1g SAR}$

Then SAR evaluation is not required.