

RF Exposure

The equipment under test (EUT) is a RF 2.4G module with 2.4GHz transmitter functions. It is powered by DC 3.3V. This module is only used for battery-powered products. For more detail information pls refer to the user manual.

Antenna Type: PCB antenna.

Antenna Gain: 0dBi.

Modulation Type: O-QPSK

The nominal conducted output power specified: -8.93dBm (Tolerance: +/- 3dB)

The nominal radiated output power (e.i.r.p) specified: -8.93dBm (+/- 3dB)

According to the KDB 447498:

The peak radiated emission for the EUT is $86.3 \text{ dB}\mu\text{V/m}$ at 3m in the frequency 2430MHz

The EIRP = $[(\text{FS} * \text{D})^2 / 30] \text{ mW} = -8.93 \text{ dBm}$

which is within the production variation.

The maximum conducted output power specified is $-5.93 \text{ dBm} = 0.255 \text{ mW}$

The source- based time-averaging conducted output power

$= 0.255 * \text{Duty factor mW}$ (where Duty Factor ≤ 1)

$= 0.255 \text{ mW}$

The SAR Exclusion Threshold Level:

$= 3.0 * (\text{min. test separation distance, mm}) / \text{sqrt(freq. in GHz)}$

$= 3.0 * 5 / \text{sqrt}(2.430) \text{ mW}$

$= 9.62 \text{ mW}$

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.