RF Exposure

The equipment under test (EUT) is a Wireless Receiver with 2.4GHz wireless transmitter function operating in 2403-2480MHz. The EUT is powered by DC 5V. For more detail information pls. refer to the user manual.

2.4GHz wireless transmitter function:
Antenna Type: Integral antenna
Modulation Type: GFSK
Antenna Gain: 2.24dBi Max
The nominal conducted output power specified: -9.24dBm (+/-2dB)
The nominal radiated output power (e.i.r.p) specified: -7dBm (+/-2dB)

According to the KDB 447498:

The maximun peak radiated emission for the EUT is 88.7dBμV/m at 3m in the frequency 2403MHz
The EIRP = [(FS*D) ^2 / 30] mW = -6.53dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 87.4dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -7.83dBm
which is within the production variation.

The maximun conducted output power specified is -7.24 dBm = 0.19 mW
The source- based time-averaging conducted output power
= 0.19 * Duty factor mW (where Duty Factor≤1)
= 0.19 mW

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.480) mW
= 9.53 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.