

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is an 20-Button RF Controller operating at 2.4G Band. The EUT can be powered by DC 3.7V (1 x 3.7V rechargeable battery). For more detail information pls. refer to the user manual.

Antenna Type: dedicated antenna.

Antenna Gain: -0.57dBi.

The normal radiated output power (e.i.r.p) is: 3.43dBm (tolerance: +/- 3dB).

The normal conducted output power is 4.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498 V06:

The Maximum peak radiated emission for the EUT is 102.1dB μ V/m at 3m in the frequency 2430MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 6.87dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 98.0 dB μ V/m at 3m in the frequency 2455MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 2.77dBm
which is within the production variation.

The maximum conducted output power specified is 7dBm= 5.012mW

The source- based time-averaging conducted output power
=5.012mW

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \text{sqrt} (2.455)$ mW

= 9.57 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.