

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a controller unit for the BATTERY OPERATED RIDE-ON model: 82700 operating at 2.4GHz band. It is powered by DC 9.0V (1 x 9.0V 6F22 battery). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

The normal radiated output power (e.i.r.p) is: -4dBm (tolerance: +/- 3dB).

The normal conducted output power is: -4dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 92.3dB μ V/m at 3m in the frequency 2405MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -2.93dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 89.7dB μ V/m at 3m in the frequency 2437MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -5.53dBm
which is within the production variation.

The maximum conducted output power specified is -1dBm = 0.79mW

The source- based time-averaging conducted output power
= 0.79* Duty Cycle mW <0.79mW (Duty Cycle<100%)

The SAR Exclusion Threshold Level:

= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)

= 3.0 * 5 / sqrt (2.470) mW

= 9.54mW

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.

The duration of one cycle = 4.0870ms

Effective period of the cycle = 304.3 μ s = 0.3043ms

DC = 0.304.3ms/4.0870ms = 0.0745 or 7.45%

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