

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a transmitter unit for the FINDING DORY-FINDING DORY ECHOLOCATION BAILEY + DORY model: 36560 operating at 2.4GHz band. It is powered by DC 3.0V (2 x 1.5V AA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna.

Antenna Gain: 0dBi.

Modulation Type: GFSK.

The normal radiated output power (e.i.r.p) is: 9.0dBm (tolerance: +/- 3dB).

The normal conducted output power is 9.0dBm (tolerance: +/- 3dB).

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 105.9dBμV/m at 3m in the frequency 2473MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 10.67dBm

which is within the production variation.

The maximum conducted output power specified is 12.0dBm = 15.85mW

The source- based time-averaging conducted output power

= 15.85* Duty cycle mW = 15.85 x 7.51% mW

= 1.19mW

The SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \sqrt{(2.473)}$ mW

= 9.54 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.

The duty cycle is simply the on-time divided by the period:

The duration of one cycle = 18.3333ms

Effective period of the cycle = 1.3768ms

DC = 1.3768ms / 18.3333ms = 0.0751 or 7.51%