

INTERTEK TESTING SERVICES

RF Exposure

The Equipment under Test (EUT) is a Car unit for XS RUNNER model: 81153 (14167/15004/15903) operating at 2.4GHz band. It is powered by DC 6.4V (1 x 6.4V Rechargeable 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: 1.0dBm (tolerance: +/- 3dB).

The normal conducted output power is: 1.0dBm (tolerance: +/- 3dB).

Modulation Type: GFSK.

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 96.5dB μ V/m at 3m in the frequency 2408MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 1.27dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 95.5dB μ V/m at 3m in the frequency 2472MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = -0.27dBm
which is within the production variation.

The maximum conducted output power specified is 4.0dBm = 2.5mW

The source- based time-averaging conducted output power
= 2.5 * Duty Cycle mW < 2.5mW (Duty Cycle < 100%)

The SAR Exclusion Threshold Level:

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

= 3.0 * 5 / sqrt (2.472) mW

= 9.5mW

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 = 1.1900ms

Effective period of the cycle = 0.3100ms x 1 = 0.3100ms

DC = 0.3100ms / 1.1900ms = 0.2605 or 26.05%