INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is an Toy RC Porsche Taycan Turbo S 1:20 operating at 2.4G Band. The EUT can be powered by DC 3.0V (2 x 1.5V AAA batteries). For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Modulation Type: GFSK
Antenna Gain: 0dBi
The nominal conducted output power specified: 6.0 dBm (±3dB)
The nominal radiated output power (e.i.r.p) specified: 6.0 dBm (±3dB)

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is   104.2   dBµV/m at 3m in the frequency 2410MHz
The EIRP = [(FS*D) ^2 / 30] mW = 8.97dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is   103.5   dBµV/m at 3m in the frequency 2473MHz
The EIRP = [(FS*D) ^2 / 30] mW = 8.27dBm
which is within the production variation.

The maximum conducted output power specified is   9.0dBm=   7.943mW
The source- based time-averaging conducted output power
=7.943* Duty cycle mW =7.943 mW*0.0683=0.54mW

The SAR Exclusion Threshold Level:

$$P_{th}(mW) = ERP_{20cm} * (d/20cm)^{x} \quad (X= {-\log_{10}\left(\frac{60}{ERP_{20\,cm}\sqrt{f}}\right)})$$

$$= 3060 * (0.5/20)^{1.9} \text{ mW}$$

$$= 2.72 \text{ mW}$$

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 = 12.087ms
Effective period of the cycle =   826.1µs x1 = 0.8261ms
DC =0.8261ms   / 12.087ms   =0.0683 or 6.83%

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