INTERTEK TESTING SERVICES

Analysis Report

The equipment under test (EUT) is a portable transmitter for a 1:14 Radio Control Vehicle Ferrari R/C operating at 27.145 MHz which is controlled by a crystal. The EUT is powered by two 1.5V AAA size batteries. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Antenna Gain: 0dBi

The nominal conducted output power specified: -18.00dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -20.15dBm (+/- 3dB)

Modulation Type: Pulse modulation

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 76.40dBµV/m at 3m in the frequency 27.145MHz
The EIRP = [(FS*D) ^2 / 30] mW= -18.83dBm
The ERP = EIRP – 2.15 = -20.98 dBm
which is within the production variation.

The maximun conducted output power specified is -15dBm = 0.03mW
The source- based time-averaging conducted output power
= 0.03 * Duty Cycle mW= 0.004380 mW < 0.03 mW

The SAR Exclusion Threshold Level for 27.145MHz when the minimum test separation distance is < 50mm:
= 474 * [1 + log(100/f(MHz)]/2
= 371.2 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 = 100ms
Effective period of the cycle= 800µs x 6 + 1.6ms x 3 + 2.5ms x 2 = 14.6ms
DC = 14.6ms / 100ms = 0.146 or 14.6%

FCC ID: PKG12049RC27A