

# INTERTEK TESTING SERVICES

---

## Analysis Report

The equipment under test (EUT) is a transmitter for an RC FF Tuner Racer operating at 27.145 MHz which is controlled by a crystal. The EUT is powered by two 1.5V AA battery. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Antenna Gain: 0dBi

Modulation Type: Pulse modulation

The nominal conducted output power specified: -43.0dBm (+/- 3dB)

The nominal radiated output power (e.r.p) specified: -45.15dBm (+/- 3dB)

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 51.3dBuV/m at 3m in the frequency 27.145MHz

The EIRP =  $[(FS \cdot D)^2 / 30]$  mW = -43.93dBm

The ERP = EIRP - 2.15 = -46.08dBm

which is within the production variation.

The maximum conducted output power specified is -40.0dBm = 0.0001mW

The source-based time-averaging conducted output power

= 0.0001 \* Duty Cycle mW < 0.0001mW (Duty Cycle < 100%)

Since the source-based time-averaging conducted output power is well below the SAR low threshold level of 1mW, so the EUT is considered to comply with SAR requirement without testing.

### Transmitter Duty Cycle Calculation

The duration of one cycle = 66.203ms

Effective period of the cycle =  $1.507\text{ms} \times 4 + 0.58\text{ms} \times 58 = 39.6680\text{ms}$

DC =  $39.6680\text{ms} / 66.203\text{ms} = 0.5992$  or 59.92%