

Analysis Report

Report No.: 13080432HKG-001

The Equipment Under Test (EUT) is a portable transmitter of a RC Helicopter operating at 27.145 MHz as dictated by a crystal. The EUT is powered by a 9.0 V DC source (6 x 1.5V AA batteries). The EUT has left steering trim adjustment, right steering trim adjustment, forward rapidity adjustment and backward rapidity adjustment to control the flying condition of the receiver of the helicopter.

After switching ON the EUT and the receiver of the helicopter, activating the left stick on the EUT can control the helicopter to ascend or to descend. Moreover, activating the right stick on the EUT can control the helicopter to turn left or right and move forward or backward.

Antenna Type: External dedicated antenna

Antenna Gain: 0dBi

Nominal rated field strength: 75.2dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 78.2dB μ V/m at 3m in frequency 27.145MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.0198\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.0198mW.

The SAR Exclusion Threshold Level for 27.145MHz when the minimum test separation distance is < 50mm:

= $[474 \cdot (1 + \log_{10}(f(\text{MHz})))]/2$

= 371.2mW

Since the above conducted output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.