

Analysis Report

Report No.: 14010935HKG-001

The Equipment Under Test (EUT) is a transmitter of a RC system, which is operating at 49.860MHz as dictated by a crystal. The EUT is powered by 1 x 9V Block size battery. The EUT has a power ON/OFF switch and control key.

After switching ON the EUT and the corresponding pitching machine (ie. Receiver), the pitching machine receive the transmission from the bat and then project the plastic ball for baseball practicing. Activation for projecting the plastic ball is determined by selection of the switch to "BAT" position.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 70.8dBμV/m at 3m

Maximum allowed field strength of production tolerance: +/- 2dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 72.8dBμV/m at 3m in frequency 49.860MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.0057\text{mW}$

Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.0057mW.

The SAR Exclusion Threshold Level for 49.860MHz when the minimum test separation distance is < 50mm:

= $[474 \cdot (1 + \log_{10}(100/f(\text{MHz})))]/2$

= 308.6mW

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.