

# Analysis Report

Report No.: 14050180HKG-006

The Equipment Under Test (EUT) is a 433.92MHz wireless transmitter (remote controller) for its associated receiver (ELF Light unit). It uses discrete radio carriers rather than the conventional FM multiplex system. Transmit carrier is generated by a SAW resonator. The operating frequency is 433.92MHz in one channel.

It is powered by one "23A" size 12V battery. A POWER key is on keypad. The LED (red colour) on top of keypad will flash one time when any key is pressed.

Antenna Type: external telescope type antenna

Antenna Gain: 0dBi

Nominal rated field strength: 82.5dB $\mu$ 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 85.5dB $\mu$ V/m at 3m in frequency 433.92MHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.106\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.106mW.

The SAR Exclusion Threshold Level:

=  $3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

=  $3.0 \cdot 5 / \sqrt{0.43392} \text{ mW}$

= 22.77 mW

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.