

# Analysis Report

Report No.: 14041841HKG-002

Model: 78429

The equipment under test (EUT) is a 13MHz RFID for a Portal (RFID toy reader) operating at 13.560MHz which is controlled by a crystal. The EUT is powered by 4 x AA size batteries. This product consists of a controller, a Portal (RFID tag reader) and six Teenage Mutant Ninja Turtles Figures (passive type powered tags). The EUT has an ON/OFF switch and a RFID tag sensor on the Portal. It can also connect to the monitor for game playing. After switched on the EUT, the TV monitor can show the game mode while the Hero Figure (passive tags) was placed on the Portal.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 68.8dBμV/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 71.8 dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.005mW$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.005mW.

The SAR Exclusion Threshold Level for 13.56MHz when the minimum test separation distance is < 50mm:

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

= 442.7mW

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.