

# Analysis Report

The Equipment Under Test (EUT) is a 13.56MHz Transmitter (RFID). The EUT is powered by 4 x 1.5V AA batteries. After Placing the corresponding "Sugar Cube" on the EUT, Different mode will be applied to EUT such as dance, move quickly and get different sound effects.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 51.9dB $\mu$ 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 54.9 dB $\mu$ V/m at 3m in frequency 13.56MHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.000093\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.000093mW.

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.