

Analysis Report

The Equipment Under Test (EUT) is a doll with a 13MHz reader. The EUT is powered by 4 X 1.5V C batteries. After placing the tags to the mouth sensor, the tags can be recognised (through 13MHz reader).

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 56.0 dBμV/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 59.0 dBμV/m at 3m in frequency 13.56MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.0002\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.0002mW.

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.