

Analysis Report

The Equipment Under Test (EUT) is a toy baby set, which contains a 13MHz RFID module. The RFID is for the tag function. After placing the tags on the EUT, the EUT will recognize the tags by giving different sound and motor effects. The EUT is powered by DC 4.5V (3 X 1.5V AA batteries).

The Model: E5242 and E5243 are the same as the Model: E5241 in hardware aspect as declared by client. The difference in model number serves as marketing strategy as declared by client. The models are different in model number, item name, color, packaging and non-conductive accessories only as declared by client.

Antenna Type: Internal, Integral

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Antenna Gain: 0dBi

Nominal rated field strength is 60.0 dB μ V/m at 3m

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 63.0 dB μ V/m at 3m in frequency 13.56 MHz, thus;

The EIRP = $[(FS \times D)^2 \times 1000 \div 30] = \underline{0.001 \text{ mW}}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.001 mW.

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

$$\begin{aligned} &= [474 \times (1 + \log_{10} f(\text{MHz}))] \div 2 \\ &= \underline{272.0 \text{ mW}} \end{aligned}$$

Since the above conducted output power is well below the SAR Exclusion threshold level, therefore, the EUT is considered to comply with SAR requirement without testing.