

Analysis Report

The Equipment Under Test (EUT), is a portable 13MHz RFID device for a Drop Trivia. The sample supplied operated on a single channel, 13.56MHz.

The EUT is powered by 3 x 1.5V AAA batteries. After switching on the EUT, the Drop Trivia will emit different sound based on different tags inserted into the Drop Trivia.

13.56MHz NFC portion (single channel)

Antenna Type: Internal, Integral

Antenna Gain: 0dBi

Nominal field strength: 58.2 dB μ V/m @ 3m

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 61.2 dB μ V/m at 3m in frequency 13.56MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.00040 \text{ mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.00040 mW.

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

= $[474 \cdot (1 + \log_{10}(100/f(\text{MHz})))]/2$

= 442.7 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.