

Analysis Report

The Equipment Under Test (EUT) is a 13.56MHz Transceiver (RFID). The EUT is powered by 3 x 1.5V AAA batteries. After Placing the corresponding tag (Piano or Cello) on the EUT, different background music will be played.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 50.5dB μ 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 53.5 dB μ V/m at 3m in frequency 13.56MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.0000672\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.0000672mW.

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

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

= 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.