

Analysis Report

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

The EUT is powered by 120VAC. After placing the RFID tag at the tip and switching on the EUT, air with different strength and temperature will be exhausted based on the buttons pressed on the hair dryer.

13.56MHz NFC portion (single channel)

Antenna Type: 3 wire turn antenna

Antenna Gain: 0dBi

Output Power Range: -35.2 to -30.2 dBm

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was -30.2 dBm in frequency 13.56MHz, thus;

Conducted power = 0.00095 mW.

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

$$= [474 * (1 + \log_{10}(f(\text{MHz})))]/2$$
$$= 442.7 \text{ mW}$$

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.