

Analysis Report

Report No.: 18071063HKG-001

The Equipment Under test (EUT) is a Blix Blender which equips with a 13.56MHz RFIC tag reader. The 13.56MHz RFID tag reader reads the tag on the corresponding Cup to determine the Blending program using for the particular ingredient inside the Cup. The EUT is powered by 120VAC only.

13.56MHz RFIC reader portion (single channel)

Antenna Type: Internal, Integral

Antenna Gain: 0dBi

Nominal field strength: 56 dB μ V/m @ 3m

Maximum allowed production tolerance: +3dB/-3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 59 dB μ V/m at 3m in frequency 13.56MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.00024 \text{ mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain
So;

Conducted Power = 0.00024 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.