

Analysis Report

The equipment under test (EUT) is a Mail Box Sensor operating at 315MHz. The EUT is powered by a 3.0VDC Lithium battery. While the EUT is rotated to the horizontal position, it will transmit RF signal to the corresponding receiver (i.e. Doorbell). The button on the EUT can reset the status display on the Doorbell.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 74.5 dB 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 77.5dB μ V/m at 3m in frequency 315MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.017\text{mW}$

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

Conducted Power = 0.017mW.

The SAR Exclusion Threshold Level:

$= 3.0 \cdot (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

$= 3.0 \cdot 5 / \sqrt{0.315} \text{ mW}$

$= 26.7 \text{ mW}$

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.