

Analysis Report

The equipment under test (EUT) is a Doorbell Push Button operating at 315MHz. The EUT is powered by a 3.0VDC Lithium battery. The EUT will transmit RF signal to the corresponding receiver (i.e. Doorbell).

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 74.4 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 77.4dB μ V/m at 3m in frequency 315MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.016\text{mW}$

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

Conducted Power = 0.016mW.

The SAR Exclusion Threshold Level:

$$\begin{aligned} &= 3.0 * (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}} \\ &= 3.0 * 5 / \sqrt{0.315} \text{ mW} \\ &= 26.7 \text{ mW} \end{aligned}$$

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.