

Analysis Report

Report No.: 18121037HKG-004

The Equipment Under Test (EUT) is a Wireless Door Chime Transmitter (315MHz Wireless push button). When the button of the EUT is activated, the corresponding 315MHz remote door bell receiver (Wireless Plug-in Chime) will sound. No battery is needed as the EUT is powered by the electro-motive force generated by the induction coil activated by mechanical bouncing energy at the releasing moment of the push button. The EUT will be deactivated after the button bouncing.

315MHz portion:

Modulation Type: OOK (On-Off Keying)

Antenna Type: Integral, Internal

Frequency Range: 315MHz, single channel

Antenna gain: 0dBi

Nominal rated field strength: 70.2 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 73.2 dB μ V/m at 3m in frequency 315 MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.0063 \text{ mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.0063 mW

The SAR Exclusion Threshold Level:

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

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

= 26.73 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.