

Analysis Report

Report No.: 15051545HKG-001

The equipment under test (EUT) is a transmitter of chime extender for Remote door bell operating at 315MHz which is operated by a crystal. The EUT is powered by DC6.0V (4x1.5V AAA batteries). There are a test button and a microphone inside the EUT. The transmitter will be activated and then transmit a signal to corresponding door bell receiver once either the microphone can be received the chime sound from other door bell or the test button is pressed by the user. For microphone portion, the transmitter will cease transmission within 5 seconds after activation. For test button, the manually operated transmitter will automatically deactivate the transmitter within not more than 5 seconds of being released.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 81.8dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +3dB / - 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 84.8dB μ V/m at 3m in frequency 315MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.091\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.091mW

The SAR Exclusion Threshold Level:

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

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

= 26.7 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.