

# Analysis Report

The equipment under test (EUT) is a transmitter for remote holiday lighting set. The transmitter is operating at 315MHz and it is powered by a 4.5VDC (3 x 1.5V AA batteries. Blowing into the sensor located on the candle once, the candle light and the holiday lighting will turn on. The transmitter will cease transmission within 5 seconds after activation.

**Antenna Type: Internal antenna**

**Antenna Gain: 0dBi**

**Nominal rated field strength: 59.4 dB $\mu$ 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 62.4dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.001 \text{ mW}$

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

Conducted Power = 0.001 mW.

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.