

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz transmitter (Musical Tree Lighting Snowman). The EUT is powered by 4.5V DC (3 x 1.5V AAA batteries). The EUT is operating at 2407MHz, 2445MHz and 2477MHz. After switching on the EUT, it will transmit a signal to turn on the light on receiver.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 95.9 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 98.9dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 2.329\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 2.329mW.

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \text{sqrt}(2.477)$ mW

= 9.53 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.