

Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Bluetooth 4.0 Toy Gun, the EUT occupies a frequency range from 2402MHz to 2480MHz (40 channels with channel spacing of 2MHz).

The EUT pairs with Smart Device through Bluetooth by Application. EUT can be controlled to output sound effects under command listed. The EUT is powered by 4X1.5VDC AA batteries.

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 92.0dB 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 95.0dB μ V/m at 3m in frequency 2.480GHz, thus;

The EIRP = $[(FS * D)^2 * 1000 / 30] = 0.949\text{mw}$

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

Conducted Power = 0.949mW.

The SAR Exclusion Threshold Level:

= $3.0 * (\text{min. test separation distance, mm}) / \text{sqrt}(\text{freq. in GHz}) = 3.0 * 5 / \text{sqrt}(2.480) \text{ mW}$
= 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.