

# Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Bluetooth 2.1 + EDR transceiver for a RC car with speaker. The EUT is power by 4 x 1.5V AA batteries. The Bluetooth module in the EUT is operating in the frequency range from 2402MHz to 2480MHz (79 channels with 1MHz channel spacing). After pairing with iPad/Android device, the Car can be controlled to run forward, backward, turn left/ right directions and any motions. Also, the audio signal can be fed to the speaker.

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 100.8 dB $\mu$ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 2dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 102.8dB $\mu$ V/m at 3m in frequency 2.4GHz, thus;

The EIRP =  $[(FS \cdot D)^2 \cdot 1000 / 30] = 5.716 \text{ mW}$

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

Conducted Power =  $5.716 \text{ mW}$ .

The SAR Exclusion Threshold Level:

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

$= 3.0 * 5 / \sqrt{2.480} \text{ mW}$

$= 9.53 \text{ mW}$

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.