

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz BLE Transceiver (Car Unit) for a Bluetooth Car. The sample supplied operated on 40 channels, normally at 2402 - 2480MHz. The channels are separated with 2MHz spacing.

The Equipment Under Test (EUT), is a portable 2.4GHz Bluetooth 4.2 Transceiver (Car Unit) for a Bluetooth Car. The sample supplied operated on 79 channels, normally at 2402 - 2480MHz. The channels are separated with 1MHz spacing

The EUT is powered by 3.7V Rechargeable battery. After switching on the EUT, the car will be moving forward and backward based on buttons pressed on App controller.

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 89.1dB μ V/m at 3m

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the maximum field strength of production tolerance was 92.1dB μ V/m at 3m in frequency 2.402GHz.

Thus, it below calculated field strength according to minimum SAR exclusion threshold level as follows:

The worst case of SAR Exclusion Threshold Level:

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

= $3.0 * 5 / \sqrt{2.483.5}$ mW

= 9.52 mW

According to the KDB 412172 D01:

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

Calculated Field Strength for 9.52mW is 105dB μ V/m @3m

Since maximum average field strength plus production tolerance <= 105dB μ V/m @3m and antenna gain is >= 0.0dBi, it is concluded that maximum Conducted Power and Field Strength are well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.