

Analysis Report

The Equipment Under Test (EUT), is a portable Bluetooth 2.1 Transceiver (Watch Unit) for a RC Smart Watch. The sample supplied operated on 79 channels, normally at 2402 - 2480MHz. The channels are separated with 1MHz spacing.

The EUT is powered by 1 x 3.7V Rechargeable battery. After switch on the EUT, the watch will provide recording and games functions based on the virtual button pressed on the watch.

Antenna Type: Internal, Integral antenna
Antenna Gain: 0dBi
Nominal rated field strength is 75.3dB 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 78.3dB μ V/m at 3m in frequency 2.440GHz.

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:
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 \leq 105dB μ V/m @3m and antenna gain is \geq 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.