

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (Machine Unit) for a RC Dog Trainer Machine. The sample supplied operated on 20 channels, normally at 2420 - 2462MHz. The channels are shown in below table.

2420	2422	2424	2426
2428	2430	2434	2436
2438	2440	2442	2444
2446	2450	2452	2454
2456	2458	2460	2462

The EUT is powered by 1 x 9.6V Rechargeable battery. After switching on the EUT, the machine will shoot out tennis balls based on the switches pressed on the controller.

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 97.1dBμV/m at 3m (Peak), 67.7dBμV/m at 3m (Average)

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the maximum average field strength of production tolerance was 70.7dBμV/m at 3m in frequency 2.462GHz.

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

The worst case of SAR Exclusion Threshold Level:

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

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

$= 9.52 \text{ mW}$

According to the KDB 412172 D01:

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

Calculated Field Strength for 9.52mW is 105dBuV/m @3m

Since maximum average field strength plus production tolerance $\leq 105\text{dBuV/m @3m}$ and antenna gain is $\geq 0.0\text{dBi}$, 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.