

Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz pure Transceiver (Controller Unit) for a GHB RC FUNNEL. The sample supplied operated on 40 channels, normally at 2425 - 2475 MHz. The channel table is shown below.

2425	2426	2427	2428	2429	2430
2434	2435	2436	2438	2439	2440
2441	2442	2443	2444	2445	2446
2450	2451	2452	2453	2454	2455
2456	2457	2458	2459	2460	2461
2462	2466	2467	2468	2469	2470
2471	2473	2474	2475		

The EUT is powered by 2 x 1.5V AA batteries. After switching on the EUT, the car will be moved forward or backward and turned left and right based on the switches pressed in the controller.

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 97.5dB μ V/m at 3m (Peak), 65.9dB μ V/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 68.9dB μ V/m at 3m in frequency 2.425GHz.

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

The worst case of SAR Exclusion Threshold Level:

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

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

$$= 9.52 \text{ mW}$$

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 105dBuV/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.