Analysis Report

The Equipment Under Test (EUT) is a 2.4GHz Transmitter (Controller) for a Car Set. The EUT is powered by 2 x 1.5V AA batteries. The 2.4GHz module is operating on 8 channels, normally at 2408 - 2467 MHz. The channel table is shown below.

2408	**2414**	**2428**	**2434**
2440	**2455**	**2461**	**2467**

After switch on the EUT, the car will be moved forward or backward and turned left and right based on the switches pressed in the controller.

The Model: 400001B and 400002B are the same as the Model: 400000B in hardware aspect as declared by client. The models are different in non-conductive outer casing only as declared by client.

Antenna Type: Internal, Integral antenna
Antenna Gain: 0dBi
Nominal rated field strength is 96.1 dBµV/m at 3m
Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 99.1dBµV/m at 3m in frequency 2.467GHz.

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 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.4835) mW
= 9.52 mW

According to the KDB 412172 D01:
EIRP = [(FS*D) ^2*1000 / 30]

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

Since maximum field strength plus production tolerance < = 105dBuV/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.