

## Analysis Report

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (Piano Unit) for a RC Piano. The sample supplied operated on 1 channel, normally at 2470MHz.

The EUT is powered by 3 x 1.5V AA batteries. After switching on the EUT, the piano will emit sounds based on the keyboard button pressed.

Antenna Type: Internal, Integral antenna

Antenna Gain: 0dBi

Nominal rated field strength is 95.5dB $\mu$ V/m at 3m (Peak), 84.7dB $\mu$ 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 87.7dB $\mu$ V/m at 3m in frequency 2.470GHz.

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 (2.483.5) 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 average 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.