Analysis Report

The Equipment Under Test (EUT) is a portable transceiver for a electronic toy operating at 0.125MHz. The EUT is powered by 2 X 1.5V AAA batteries. The EUT is equipped with four buttons. After power on the EUT and press suitable buttons to the “Bump” function, the EUT will transmit or receive RF signal from the corresponding transceiver and thus causing it beeping and exchanging data.

Antenna Type: Integral antenna
Antenna Gain: 0dBi

The nominal conducted output power specified: -30.00dBm (+ 3dB)

The nominal radiated output power (e.r.p) specified: -32.15dBm (+3dB)

Modulation Type: Pulse modulation

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 66.1dBμV/m at 3m in the frequency 0.125MHz
The EIRP = [(FS*D) ^2 / 30] mW= -29.13dBm
The ERP = EIRP – 2.15 = -31.28 dBm
which is within the production variation.

The maximun conducted output power specified is -27dBm =0.002mW

The SAR Exclusion Threshold Level for 0.125MHz when the minimum test separation distance is < 50mm:
= 474 * [1 + log(100/f(MHz)]/2
= 925.0 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.