

Analysis Report

Report No.: 14101201HKG-001

The Equipment Under Test (EUT) is a transceiver for a toy Push-to-Talk operating at 27.145 MHz as dictated by a crystal. The EUT is powered by a 6.0 V DC source (4 x 1.5V AG13 batteries). After switched ON the EUT, the user can transmit voice to other transceiver by pressing the PTT button and speaking to the loudspeaker, while release the PTT button to listen voice of other transceiver from the loudspeaker.

Antenna Type: External integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 48.5dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 51.5dB μ V/m at 3m in frequency 27.145MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.00004 \text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.00004mW.

The SAR Exclusion Threshold Level for 27.145MHz when the minimum test separation distance is < 50mm:

$$= [474 \cdot (1 + \log_{10}(100/f(\text{MHz})))]/2$$

$$= 371.2 \text{mW}$$

Since the above conducted output power is well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.