

Analysis Report

Report No.: 14050776HKG-001

The Equipment Under Test (EUT) is a transceiver for a toy Push-to-Talk (PTT) type Walkie-Talkie operating at 49.860MHz governed by a crystal. The EUT is powered by a 9V battery. After switched ON the EUT, the user can transmit voice to other transceiver by pressing the PTT button and speaking to the integrated speaker-microphone, while release the PTT button to listen voice of other transceiver from the loudspeaker.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 50.6dBμV/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 53.6dBμV/m at 3m in frequency 49.860MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.000069\text{mW}$

Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.000069mW.

The SAR Exclusion Threshold Level for 49.860MHz when the minimum test separation distance is < 50mm:

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

= 308.6mW

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.