

Analysis Report

Report No.: 13070461HKG-001

The Equipment Under Test (EUT) is a superregenerative Transceiver operating 49.860MHz. The EUT is power by 1 x 9.0VDC alkaline battery. The EUT has an ON/OFF switch, transmit button (PTT) and pulse generation button (code key). The communication method of the EUT is half duplex.

To transmit the signal, press and hold the transmit button. To send the pulse signal, press and hold the pulse generation button. The receiving mode will active after switching on the EUT.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 57.7dBμV/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 60.7dBμV/m at 3m in frequency 49.860MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30]$ = 0.000355mW

Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.000355mW.

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

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

$$= 308.6\text{mW}$$

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.