

Analysis Report

Report No.: 14030540HKG-002

The Equipment Under Test (EUT) is a 2.4GHz Bluetooth 4.0 Loop ChargeCase. The Bluetooth 4.0 portion is operating between 2402MHz and 2480MHz (40 channels with 2MHz channel spacing). The EUT is powered by 1 x 3.7V rechargeable battery. It has a USB port (for charging only) charging the rechargeable battery. And It can charge iPhone when plug connector cable to iPhone and the case. When the EUT is switched ON, The corresponding Bluetooth device would be searched and connected to the EUT. After pairing, a “bit” sound will come out.

Simultaneous transmission SAR evaluation between iPhone and ChargeCase is not required as the maximum duration of overlapping transmissions between iPhone and the ChargeCase is not greater than 30 seconds.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 89.2dB μ V/m at 3m

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

According to the KDB 447498:

Based on the Maximum allowed field strength of production tolerance was 92.2dB μ V/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS^2 * D) / 30] = 0.498mW$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.498mW

The SAR Exclusion Threshold Level:

= $3.0 * (\text{min. test separation distance, mm}) / \sqrt{\text{freq. in GHz}}$

= $3.0 * 5 / \sqrt{2.480} mW$

= 9.53 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.