

Analysis Report

Report No.: 14110700HKG-001

The Equipment Under Test (EUT) is a Beacon Transmitter which is placed inside a vehicle. The EUT broadcasts a Bluetooth BLE signal. The corresponding Metromile Apps program running in an IOS device (e.g. Apple iphone) uses this signal to know when the driver driving in the vehicle and records driving statistics and location data. The EUT can only support Bluetooth 4.0 BLE only. The Bluetooth portion occupies a frequency range of 2402MHz to 2480MHz (40 channels with channel spacing of 2MHz). The EUT is powered by a CR2032 3V Lithium battery.

Antenna Type: Internal integral antenna

Antenna Gain: 0dBi

Nominal rated field strength: 99.8dBμV/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 102.8dBμV/m at 3m in frequency 2.4GHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 5.716\text{mW}$

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 5.716mW.

The SAR Exclusion Threshold Level:

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

= $3.0 \cdot 5 / \sqrt{2.480} \text{ mW}$

= 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.