Analysis Report

Report No.: 18121224HKG-001

The equipment under test (EUT) is a portable BLE cube, which is designed to be operated at the frequency range of 2402 – 2480 MHz with 2 MHz spacing. The EUT is power by 3.7V rechargeable battery, after being paired with the mobile app, the movements of the cube can be detected and recorded.

Antenna Type: Internal, Integral

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Antenna Gain: 0dBi
Nominal rated field strength: 86.8dBμV/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 89.8dBμV/m at 3m.

Thus, it below calculated field strength according to minimum SAR exclusion threshold level as follows:

The worst case of SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.483.5) mW
= 9.52 mW

According to the KDB 412172 D01:
EIRP = [(FS*D) ^2*1000 / 30]

Calculated Field Strength for 9.52mW is 105dBuV/m at 3m

Since maximum field strength plus production tolerance < = 105dBuV/m at 3m and antenna gain is > = 0.0dBi, it is concluded that maximum Conducted Power and Field Strength are well below the SAR Exclusion threshold level, so the EUT is considered to comply with SAR requirement without testing.