

## Analysis Report

**The Equipment Under Test (EUT) which is a portable 2.4GHz BLE 4.2 Transceiver for a Bluetooth Sketcher. The sample supplied operated on 40 channels, normally at 2402 - 2480MHz. The channels are separated with 2MHz spacing.**

**The EUT is powered by 4 x 1.5V AA batteries. After switching on the EUT, the EUT, the Sketcher will be projects images based on the image plugin and images received from paired smartphone.**

Antenna Type: Internal, Integral antenna

Antenna Gain: 5.3dBi

Nominal rated field strength is 106.3dB $\mu$ V/m at 3m (Peak), 63.2dB $\mu$ V/m at 3m (Average)

Maximum allowed production tolerance: +/- 3dB

According to the KDB 447498:

Based on the maximum average field strength of production tolerance was 66.2dB $\mu$ V/m at 3m in frequency 2.440GHz.

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

The worst case of SAR Exclusion Threshold Level:

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

$$= 3.0 * 5 / \sqrt{2.483.5} \text{ mW}$$

$$= 9.52 \text{ mW}$$

According to the KDB 412172 D01:

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

Calculated Field Strength for 9.52mW is 105dB $\mu$ V/m @3m

Since maximum average field strength plus production tolerance  $\leq$  105dB $\mu$ V/m @3m and antenna gain is  $\geq$  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.