

INTERTEK TESTING SERVICES

RF Exposure

The equipment under test (EUT) is a MOGA XP5-A Plus (Orion) with Bluetooth 5.0 BLE function operating in 2402-2480MHz. The EUT is powered by DC 7.4V(2 piece of 3.7V rechargeable batteries). Once a USB cable is inserted into the standard USB port or micro USB port, the Bluetooth function will be closed. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 2dBi Max

The normal radiated output power (e.i.r.p) is: 2.0dBm (tolerance: +/- 3dB).

The normal conducted output power is 0.0dBm (tolerance: +/- 3dB).

According to the KDB 447498:

The Maximum peak radiated emission for the EUT is 100 dBμV/m at 3m in the frequency 2480MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 4.77dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 99.6dBμV/m at 3m in the frequency 2440MHz

The EIRP = $[(FS \cdot D)^2 / 30]$ mW = 4.37dBm
which is within the production variation.

The maximum conducted output power specified is 3.0dBm= 2.0mW

The source- based time-averaging conducted output power
=2.0* Duty cycle mW =2.0 mW(Duty cycle =100%)

The SAR Exclusion Threshold Level:

= $3.0 * (\text{min. test separation distance, mm}) / \text{sqrt}(\text{freq. in GHz})$
= $3.0 * 5 / \text{sqrt} (2.480)$ mW
= 9.53 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.