Client	**Kaba**
Product	**BLE-5100 Bluetooth Module**
Standard(s)	FCC KDB 447498, RSS-102

Maximum Permissible Exposure.

This device has an effective isotropic radiated power of 2.5 dBm (worst case), or 1.8 mW at 2402 MHz to 2480 MHz

This device is designed to be operated at a distance exceeding 20 cm, with a very low duty cycle over a 6 minute period, however for the purpose of demonstrating compliance with MPE requirements and SAR exemption; we present a worst case 5mm distance and 100 % duty cycle.

As per RSS-102, Section 2.5.1, the limit for 2450 MHz is 4 mW at 5mm or less.

This device is significantly under the RSS-102 limit for 5 mm.

As per FCC KDB 447498 D01, 4.3.1a, the equation is
(max power of channel, including tune - up tolerance, mW) / (min. test separation distance, mm)· [√f (GHz)] ≤3.0

Therefore:
(1.8 mW / 5 mm) x (2.45)^0.5 ≤ 3.0
0.36 x 1.57 = 0.56 ≤ 3.0

This device, in individual operation therefore complies with FCC requirements at 5 mm or greater.

This device may also be operated (co-located) with FCC ID "SAPMESSENGER2GHZ". When this module is co-located with this zigbee module, a minimum of 20cm distance. from all persons and must not be collocated or operating in conjunction with any other antenna or transmitters.

For the 20 cm distance configuration
FCC:
Bluetooth = 0.000354 (mW/cm^2)
Zigbee = 0.031530 (mW/cm^2)
Total = 0.03153 + 0.000354 = 0.031884 (mW/cm^2), which is less then the 1 mW/cm^2 limit at 20 cm.

RSS-102
The EIRP limit is $1.31 \times 10^{-2} f^{0.6834}$ W, 0.0131x207.1W = 2.7W, or 34.3 dBm.
Bluetooth = 2.5 dBm
Zigbee = 22 dBm
Total = 22 + 2.5 = 24.5 dBm, which is less than the 34.3 dBm EIRP requirement at 20 cm.