RF Exposure

The equipment under test (EUT) is an 6.5 ft Grave & Bones ANIMATED LED App Controlled Ultra Skelly with Bluetooth 5.3(EDR and BLE) function operating in 2402-2480MHz. The EUT is powered by DC 5.9V by adaptor. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna
Modulation Type: GFSK, π/4-DQPSK and 8-DPSK
Antenna Gain: -0.58dBi Max
Bluetooth Version: 5.3 (EDR and BLE)

For EDR
The normal radiated output power (e.i.r.p) is: 0dBm (tolerance: +/- 3dB).
The normal conducted output power is -0.58dBm (tolerance: +/- 3dB).

According to the KDB 447498 V06:

The Maximum peak radiated emission for the EUT is 96.5dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = 1.27dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 94.5dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -0.73dBm
which is within the production variation.

The maximum conducted output average power specified is 2.42dBm= 1.746mW
The source- based time-averaging conducted output power
=1.746 mW

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

For BLE
The normal radiated output power (e.i.r.p) is: 0dBm (tolerance: +/- 3dB).
The normal conducted output power is -0.58dBm (tolerance: +/- 3dB).

According to the KDB 447498 V06:

The Maximum peak radiated emission for the EUT is 96.7dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = 1.47dBm
which is within the production variation.

The Minimum peak radiated emission for the EUT is 94.9dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -0.33dBm
which is within the production variation.

The maximum conducted output average power specified is 2.42dBm= 1.746mW
The source- based time-averaging conducted output power
=1.746 mW

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

For ERD and BLE
The maximum conducted output average power specified is 3.492mW,
The source- based time-averaging conducted output power is 3.492mW.