RF Exposure

The equipment under test (EUT) is a 2.1CH Soundbar with Built-in Subwoofer. The EUT is powered by 100-240~ 50/60Hz. For more detail information pls. refer to the user manual.

Bluetooth Version: 4.2 (EDR single mode)
Antenna Type: Integral antenna
Antenna Gain: -2.0 dBi max
Modulation Type: GFSK, π/4-DQPSK

The nominal conducted output power specified: -1dBm (+/-2dB).
The nominal radiated output power (e.i.r.p) specified: -3dBm (+/- 2dB).

The maximum conducted output power for the EUT is -0.39dBm in the frequency 2402MHz which is within the production variation.

The minimum conducted output power for the EUT is -1.26dBm in the frequency 2480MHz which is within the production variation.

According to FCC Part 2.1091, this unlicensed transmitting devices is categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use, According to the KDB 447498 and OET 65, the simple calculation as below:

The source-based time averaged maximum radiated power = -1dBm+2dB +(-2dBi)= -1dBm = 0.794mW

From above data, the exposed power density at a distance (R) of 20cm from the center of radiation of the antenna for 2.4GHz BT band can be calculated according to OET 65 as follow:
= 0.794mW/ 4πR^2
= 0.0002mW/cm^2
<1mW/cm^2

The MPE limit is 1.0 mW/cm^2 for general population and uncontrolled exposure in the 2.4GHz frequency range according to FCC Part 1.1310. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structure and body of the user or nearby persons.