RF Exposure

The equipment under test (EUT) is a Bluetooth Wireless Presenter with 2.4GHz BT function operating in 2402-2480MHz and a 2.4GHz wireless transmitter function operating in 2402-2480MHz. The EUT is powered by DC 1.5V battery. 2.4G wireless transmitter function and BT function cannot be simultaneous transmission. For more detail information pls. refer to the user manual.

Bluetooth Version: 5.1 BLE (Single Mode)
Antenna Type: Integral antenna
Modulation Type: GFSK
Antenna Gain: 1dBi Max
The nominal conducted output power specified: -11dBm (+/-2dB)
The nominal radiated output power (e.i.r.p) specified: -10dBm (+/-2dB)

According to the KDB 447498:

The maximun peak radiated emission for the EUT is 85.2dBμV/m at 3m in the frequency 2480MHz
The EIRP = [(FS*D) ^2 / 30] mW = -10.03dBm
which is within the production variation.

The minimum peak radiated emission for the EUT is 84.1dBμV/m at 3m in the frequency 2402MHz
The EIRP = [(FS*D) ^2 / 30] mW = -11.13dBm
which is within the production variation.

The maximun conducted output power specified is -9 dBm = 0.13 mW
The source- based time-averaging conducted output power
= 0.13 * Duty factor mW (where Duty Factor≤1)
= 0.13 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.

2.4GHz wireless transmitter function:

Antenna Type: Integral antenna

Modulation Type: GFSK

Antenna Gain: 1dBi Max

The nominal conducted output power specified: -11dBm (+/-2dB)

The nominal radiated output power (e.i.r.p) specified: -10dBm (+/-2dB)

According to the KDB 447498:

The maximun peak radiated emission for the EUT is 84.9dBμV/m at 3m in the frequency 2480MHz

The EIRP = [(FS*D) ^2 / 30] mW = -10.33dBm

which is within the production variation.

The minimum peak radiated emission for the EUT is 84.1dBμV/m at 3m in the frequency 2402MHz

The EIRP = [(FS*D) ^2 / 30] mW = -11.133dBm

which is within the production variation.

The maximun conducted output power specified is -9 dBm = 0.13 mW

The source- based time-averaging conducted output power

= 0.13 * Duty factor mW (where Duty Factor≤1)

= 0.13 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.