MPE Calculations : (WLAN: 802.11b)

- Frequency range : 2412 MHz ~ 2462 MHz
- Measured RF output power : 14.41 dBm
- Target Power & Tolerance : 14.00 dBm ± 1 dB (Max. 15 dBm & Min. 13 dBm)
- Maximum antenna peak gain : 3.91 dBi

- **Maximum output power for the calculation : 15.00 dBm**

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the

The MPE calculation for this exposure is shown below.

▪ **EIRP** = P + G = 15.00 dBm + 3.91 dBi = **18.91 dBm** = **77.804 mW**	- **Note** P = Power input to the antenna(dBm) G = Power gain of the antenna(dBi)

- **Power density at the specific separation**

▪ **S** = EIRP / (4 R^2 π) = **77.804** / (4 X 20^2 X π) = **0.015479** mW/cm^2	- **Note** S = Maximum power dencity(mW/cm^2) EIRP = Equivalent Isotropic Radiated Power(mW) R = Distance to the center of the radiation of the antenna(20cm)

Conclusion : The exposure condition of this device is compliant with FCC rules.

The maximum permissible exposure(MPE) of the general population/Uncontrolled for this device is 1.0 mW/cm^2.

MPE Calculations : (WLAN: 802.11g)

- Frequency range : 2412 MHz ~ 2462 MHz
- Measured RF output power : 13.22 dBm
- Target Power & Tolerance : 13.00 dBm ± 1 dB (Max. 14 dBm & Min. 12 dBm)
- Maximum antenna peak gain : 3.91 dBi

- **Maximum output power for the calculation : 14.00 dBm**

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the

The MPE calculation for this exposure is shown below.

▪ **EIRP** = P + G = 14.00 dBm + 3.91 dBi = **17.91 dBm** = **61.802 mW**	- **Note** P = Power input to the antenna(dBm) G = Power gain of the antenna(dBi)

- **Power density at the specific separation**

▪ **S** = EIRP / (4 R^2 π) = **61.802** / (4 X 20^2 X π) = **0.012296** mW/cm^2	- **Note** S = Maximum power dencity(mW/cm^2) EIRP = Equivalent Isotropic Radiated Power(mW) R = Distance to the center of the radiation of the antenna(20cm)

Conclusion : The exposure condition of this device is compliant with FCC rules.

The maximum permissible exposure(MPE) of the general population/Uncontrolled for this device is 1.0 mW/cm^2.

MPE Calculations : (WLAN: 802.11n HT20)

- Frequency range : 2412 MHz ~ 2462 MHz
- Measured RF output power : 11.47 dBm
- Target Power & Tolerance : 11.00 dBm ± 1 dB (Max. 12 dBm & Min. 10 dBm)
- Maximum antenna peak gain : 3.91 dBi
- **Maximum output power for the calculation : 12.00 dBm**

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the

The MPE calculation for this exposure is shown below.

▪ **EIRP** = P + G = 12.00 dBm + 3.91 dBi = **15.91 dBm** = **38.995 mW**	- **Note** P = Power input to the antenna(dBm) G = Power gain of the antenna(dBi)

- **Power density at the specific separation**

▪ **S** = EIRP / (4 R^2 π) = **38.995** / (4 X 20^2 X π) = **0.007758** mW/cm^2	- **Note** S = Maximum power dencity(mW/cm^2) EIRP = Equivalent Isotropic Radiated Power(mW) R = Distance to the center of the radiation of the antenna(20cm)

Conclusion : The exposure condition of this device is compliant with FCC rules.

The maximum permissible exposure(MPE) of the general population/Uncontrolled for this device is 1.0 mW/cm^2.

MPE Calculations : (Bluetooth)

- Frequency range : 2402 MHz ~ 2480 MHz
- Measured RF output power : -7.19 dBm
- Target Power & Tolerance : -7.00 dBm ± 1 dB (Max. -6 dBm & Min. -8 dBm)
- Maximum antenna peak gain : -0.22 dBi
- **Maximum output power for the calculation : -6.00 dBm**

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the

The MPE calculation for this exposure is shown below.

▪ **EIRP** = P + G = -6.00 dBm + -0.22 dBi = **-6.22 dBm** = **0.239 mW**	- **Note** P = Power input to the antenna(dBm) G = Power gain of the antenna(dBi)

- **Power density at the specific separation**

▪ **S** = EIRP / (4 R^2 π) = **0.239** / (4 X 20^2 X π) = **0.000048** mW/cm^2	- **Note** S = Maximum power dencity(mW/cm^2) EIRP = Equivalent Isotropic Radiated Power(mW) R = Distance to the center of the radiation of the antenna(20cm)

Conclusion : The exposure condition of this device is compliant with FCC rules.

The maximum permissible exposure(MPE) of the general population/Uncontrolled for this device is 1.0 mW/cm^2.

RF Exposure Compliance for simultaneous operations

▪ Configurations for simultaneous operations

- **Configuration 1:** 2.4GHz WLAN + Bluetooth

▪ Result

RF function	802.11b	802.11g	802.11n (HT20)	BT	Total Power Density (mW/cm^2)
MODE	2.4GHz	2.4GHz	2.4GHz	2.4GHz	
Power Density (mW/cm^2)	0.015479	**0.012296**	0.007758	**0.000048**	
Configuration 1	**O 0.015479**			**O 0.000048**	**0.015527**

Note 1: The maximum power density in each RF function was used for above table.