MPE Calculations : (WLAN: 802.11b)

- Frequency range : 2412 MHz ~ 2462 MHz
- Measured RF output power : 18.03 dBm
- Target Power & Tolerance : 17.50 dBm ± 1 dB (Max. 18.5 dBm & Min. 16.5 dBm)
- Maximum antenna peak gain : 2.46 dBi

- **Maximum output power for the calculation : 18.50 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 = 18.50 dBm + 2.46 dBi = **20.96 dBm** = **124.739 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) = **124.739** / (4 X 20^2 X π) = **0.024817** 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 : 22.02 dBm
- Target Power & Tolerance : 21.50 dBm ± 1 dB (Max. 22.5 dBm & Min. 20.5 dBm)
- Maximum antenna peak gain : 2.46 dBi

- **Maximum output power for the calculation : 22.50 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 = 22.50 dBm + 2.46 dBi = **24.96 dBm** = **313.329 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) = **313.329** / (4 X 20^2 X π) = **0.062335** 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 : 21.94 dBm
- Target Power & Tolerance : 21.00 dBm ± 1 dB (Max. 22 dBm & Min. 20 dBm)
- Maximum antenna peak gain : 2.46 dBi

- **Maximum output power for the calculation : 22.00 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 = 22.00 dBm + 2.46 dBi = **24.46 dBm** = **279.255 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) = **279.255** / (4 X 20^2 X π) = **0.055557** 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 : 2.19 dBm
- Target Power & Tolerance : 3.00 dBm ± 1.5 dB (Max. 4.5 dBm & Min. 1.5 dBm)
- Maximum antenna peak gain : 0.77 dBi
- **Maximum output power for the calculation : 4.50 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 = 4.50 dBm + 0.77 dBi = **5.27 dBm** = **3.366 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) = **3.366** / (4 X 20^2 X π) = **0.000670** 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)	0.024817	**0.062335**	0.055557	**0.00067**	
Configuration 1		**O 0.062335**		**O 0.00067**	**0.063005**

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