

## RF Exposure Statement

### 1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

| Frequency range<br>(MHz) | Electric field<br>Strength (V/m) | Magnetic field<br>Strength (A/m) | Power density<br>(mW/cm <sup>2</sup> ) | Averaging time<br>(minutes) |
|--------------------------|----------------------------------|----------------------------------|----------------------------------------|-----------------------------|
| 0.3 - 1.34.....          | 614                              | 1.63                             | *(100)                                 | 30                          |
| 1.34 - 30.....           | 824/f                            | 2.19/f                           | *(180/ f <sup>2</sup> )                | 30                          |
| 30 - 300.....            | 27.5                             | 0.073                            | 0.2                                    | 30                          |
| 300 - 1500.....          | .....                            | .....                            | f/1500                                 | 30                          |
| 1500 - 100.000.....      | .....                            | .....                            | 1.0                                    | 30                          |

F = frequency in MHz

\* = Plane-wave equivalent power density

### 2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

### 3. RESULTS (BT BAND)

#### 3-1. BT BAND

|                                                                                   |          |
|-----------------------------------------------------------------------------------|----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 3.9400   |
| Max Peak output Power at antenna input terminal (mW)                              | 2.477    |
| Prediction distance (cm)                                                          | 20.0000  |
| Prediction frequency (MHz)                                                        | 2402.0   |
| Antenna Gain(typical) (dBi)                                                       | 3.46     |
| Antenna Gain(numeric)                                                             | 2.21820  |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.001093 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000  |

### 4.RESULTS (DTS BAND)

#### 4-1. DTS (802.11b BAND)

|                                                                                   |          |
|-----------------------------------------------------------------------------------|----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 23.18    |
| Max Peak output Power at antenna input terminal (mW)                              | 207.970  |
| Prediction distance (cm)                                                          | 20.0000  |
| Prediction frequency (MHz)                                                        | 2412.000 |
| Antenna Gain(typical) (dBi)                                                       | 3.46     |
| Antenna Gain(numeric)                                                             | 2.21820  |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.091776 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000  |

4-2. DTS (802.11g BAND)

|                                                                                   |           |
|-----------------------------------------------------------------------------------|-----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 23.33     |
| Max Peak output Power at antenna input terminal (mW)                              | 215.278   |
| Prediction distance (cm)                                                          | 20.0000   |
| Prediction frequency (MHz)                                                        | 2412.0000 |
| Antenna Gain(typical) (dBi)                                                       | 3.46      |
| Antenna Gain(numeric)                                                             | 2.21820   |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.095001  |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000   |

4-3. DTS (802.11n 20MHz BAND)

|                                                                                   |          |
|-----------------------------------------------------------------------------------|----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 23.19    |
| Max Peak output Power at antenna input terminal (mW)                              | 208.449  |
| Prediction distance (cm)                                                          | 20.000   |
| Prediction frequency (MHz)                                                        | 2412.00  |
| Antenna Gain(typical) (dBi)                                                       | 3.46     |
| Antenna Gain(numeric)                                                             | 2.21820  |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.091988 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000  |

## 5.RESULTS (UNII 1 BAND)

### 5-1.802.11a BW(5180 MHz ~ 5240 MHz)

|                                                                                   |          |
|-----------------------------------------------------------------------------------|----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 16.66    |
| Max Peak output Power at antenna input terminal (mW)                              | 46.345   |
| Prediction distance (cm)                                                          | 20.0000  |
| Prediction frequency (MHz)                                                        | 2412.00  |
| Antenna Gain(typical) (dBi)                                                       | 3.2      |
| Antenna Gain(numeric)                                                             | 2.08930  |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.019263 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000  |

### 5-2 802.11n 20MHz BW (5180 MHz ~ 5240 MHz)

|                                                                                   |           |
|-----------------------------------------------------------------------------------|-----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 16.59     |
| Max Peak output Power at antenna input terminal (mW)                              | 45.604    |
| Prediction distance (cm)                                                          | 20.0000   |
| Prediction frequency (MHz)                                                        | 2412.00   |
| Antenna Gain(typical) (dBi)                                                       | 3.2       |
| Antenna Gain(numeric)                                                             | 2.08930   |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.0018955 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000   |

## 6.RESULTS (UNII 3 BAND)

### 6-1.802.11a BW(5765 MHz ~ 5825 MHz)

|                                                                                   |          |
|-----------------------------------------------------------------------------------|----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 18.53    |
| Max Peak output Power at antenna input terminal (mW)                              | 71.285   |
| Prediction distance (cm)                                                          | 20.0000  |
| Prediction frequency (MHz)                                                        | 2412.00  |
| Antenna Gain(typical) (dBi)                                                       | 4.08     |
| Antenna Gain(numeric)                                                             | 2.55859  |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.036285 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000  |

### 6-2 802.11n\_20MHz BW (5765 MHz ~ 5825 MHz)

|                                                                                   |          |
|-----------------------------------------------------------------------------------|----------|
| Max Peak output Power at antenna input terminal (dBm)                             | 18.37    |
| Max Peak output Power at antenna input terminal (mW)                              | 68.707   |
| Prediction distance (cm)                                                          | 20.000   |
| Prediction frequency (MHz)                                                        | 2412.00  |
| Antenna Gain(typical) (dBi)                                                       | 4.08     |
| Antenna Gain(numeric)                                                             | 2.55859  |
| Power density at prediction frequency (mW/cm <sup>2</sup> )                       | 0.034973 |
| MPE limit for uncontrolled exposure at prediction frequency (mW/cm <sup>2</sup> ) | 1.00000  |