47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091
Maximum Permissible Exposure Calculations

For FCC ID: 2AJAC-C4LUX1

EUT Device Category = General Population/Uncontrolled Exposure

MPE Summary:

According subpart 1.1307 (b)(1) and 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm2)**	**Averaging Time (Minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	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

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)
PG = EIRP

PROPRIETARY

MPE and Limit are calculated for this device as follows:

ZigBee Transceiver Antenna Gain 1.84 dBi						
Freq	Conducted Power (dBm)	EIRP (dBm)	EIRP (mW)	Power Density at 20 cm (mW/cm^2)	Limit (mW/cm^2)	Margin (mW)
2405	16.2	18.04	63.7	0.01267	1.000	0.98733
2440	15.9	17.74	59.4	0.01182	1.000	0.98818
2480	15.8	17.64	58.1	0.01156	1.000	0.98844

Result: The device meets FCC MPE limit at 20 cm for General Population/Uncontrolled Exposure as specified in 47 CRF §1.1310 and §2.1091.

PROPRIETARY