Excellence in Compliance Testing

Certification Exhibit

FCC ID: KDZLXEATH

FCC Rule Part: 15E

ACS Report Number: 08-0264-15E

Applicant: LXE Inc.
Equipment: 802.11 a/g Module

RF Exposure

General Information:

Applicant: LXE Inc.
ACS Project: 08-0264-15E
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

Technical Information: KDZLXEATH (DTS)

Antenna Type: Directional Dipole
Antenna Gain: 2.15 dBi
Maximum Transmitter Conducted Power: 23 dBm
Maximum System EIRP: 25.15 dBm, 321 mW
Exposure Conditions: Greater than 20 centimeters

Technical Information: KDZLXEATH (NII)

Antenna Type: Directional Dipole
Antenna Gain: 2.15 dBi
Maximum Transmitter Conducted Power: 20 dBm
Maximum System EIRP: 22.15 dBm, 166 mW
Exposure Conditions: Greater than 20 centimeters

Technical Information: KDZLXEBLUE (DSS)

Antenna Type: Omni Directional Monopole
Antenna Gain: 0 dBi
Maximum Transmitter Conducted Power: 13.4 dBm
Maximum System EIRP: 13.14 dBm, 22 mW
Exposure Conditions: Greater than 20 centimeters

MPE Calculation

The Power Density (mW/cm^2) is calculated as follows:

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

Where:
S = power density (in appropriate units, e.g. mW/cm2)
P = power input to the antenna (in appropriate units, e.g., mW)
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 (appropriate units, e.g., cm)

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Frequency (MHz)	**Radio Power (dBm)**	**Power Density Limit (mW/Cm2)**	**Radio Power (mW)**	**Antenna Gain (dBi)**	**Antenna Gain (mW eq.)**	**Distance (cm)**	**Power Density (mW/cm^2)**
2437	23	1.00	199.53	2.15	1.641	20	0.065
5775	20	1.00	100.00	2.15	1.641	20	0.033
2440	13.4	1.00	21.88	0	1.000	20	0.004

Summation of Power Densities – Simultaneous Transmissions

As described in this filing, this module is used in a host configuration in which it is co-located with another transceiver. Both transceivers, the 802.11a/g (FCC ID: KDZLXEATH) and 2.4 GHz Bluetooth (FCC ID: KDZLXEBLUE), can operate simultaneously and therefore the maximum RF exposure is determined by the summation of power densities.

The maximum power density is calculated by a summation of power densities for each simultaneous transmission combination as follows. The maximum power density of the 802.11a/g radio was from the g mode of operation and therefore used in the following calculation.

802.11g Mode:	0.065 (mW/cm^2)
2.4GHz Bluetooth:	0.004 (mW/cm^2)
TOTAL:	**0.069 (mW/cm^2)**

Installation Guidelines

The installation manual should contain text similar to the following advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

RF Exposure

In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 centimeters will be maintained.

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.