



Excellence in Compliance Testing

Certification Exhibit

**FCC ID: R7PEG1R1S5
IC: 5294A-EG1R1S5**

**FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-210**

ACS Project Number: 14-0179

**Manufacturer: Landis+Gyr Technology, Inc.
Model: G5 26-1905**

RF Exposure

General Information:

Applicant: Landis+Gyr Technology, Inc.
 Environment: General Population/Uncontrolled Exposure
 Exposure Conditions: Mobile

Technical Information – 900MHz Gridstream Radio:

Antenna Type: Inverted F
 Antenna Gain: 3dBi
 Maximum Transmitter Conducted Power: 29.63 dBm, 918.33 mW
 Maximum System EIRP: 32.63 dBm, 1832.32 mW

Technical Information – Zigbee Radio:

Antenna Type: Inverted F
 Antenna Gain: 5dBi
 Maximum Transmitter Conducted Power: 20.71 dBm, 117.76 mW
 Maximum System EIRP: 25.71 dBm, 372.39 mW

MPE Calculation

The Power Density (mW/cm²) 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)
902.2	29.63	0.60	918.33	3	1.995	20	0.365
2405	20.71	1.00	117.76	5	3.162	20	0.074

Summation of Power Densities – Simultaneous Transmissions

This device contains multiple transmitters which can operate simultaneously; therefore the maximum RF exposure is determined by the summation of MPE ratios. The limit is such that the summation of MPE ratios is ≤ 1.0.

The summation of MPE ratios is as follows:

$$\begin{aligned}
 &900 \text{ LAN MPE Ratio} + \text{Zigbee MPE Ratio} \\
 &(0.365 / 0.60) + (0.074 / 1.0) = (0.608) + (0.074) = 0.682 \\
 &0.682 < 1
 \end{aligned}$$

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.