High Voltage Resistor Notes

- **Resistance Voltage Coefficient**: Be sure to check the effect of the applied voltage on the resistance, as this could be significant. What appears to be negligible can result in a major non-linear error.

- **Effects of transients:** When an arc occurs, or a trigger occurs, as with an arc lamp, resistors in series with the arc can be severely stressed. Of course the resistors should be characterized for transient current surges that could occur. A less obvious point is when a rapid dV/dt occurs across a string of resistors, the instantaneous voltage most likely not divide equally across each resistor. This can cause permanent damage in the resistors. For more information regarding this issue, please contact us.

- **Parasitics:** It can be important to compare resistor construction in order to understand the parasitic inductance and capacitance. With a serpentine pattern, there can be significant inductance, unless steps are taken in the resistor design to eliminate it. Also, there can be enough capacitance between adjacent potions of the resistor to result in problems during transients.