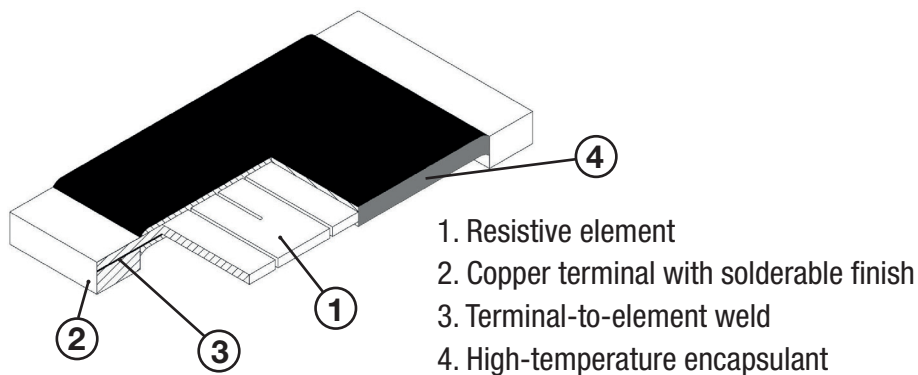




# DID YOU KNOW? POWER METAL STRIP® PULSE CAPABILITY

A short-term pulse is any electrical transient that has such a short duration that the heat energy is entirely limited to the resistor element because the heat does not have enough time to move into the surroundings, such as a copper terminal, substrate, or circuit board.

Not all resistor technologies are created equal when it comes to short-term pulse capability because performance in this time frame depends entirely on the mass of the resistor element. Typical thick film and commodity foil resistor elements require a substrate for support, which is the largest portion of the mass. The resistive element of these products is very small. The Power Metal Strip® resistor is different in that there is no substrate; the resistor element is sufficiently massive that it is self-supporting. The large mass provides superior short-term pulse capability over other resistor technologies. The illustrations below highlight the differences in construction between the different types of resistor technologies that are available for current sensing and a comparison of the thicknesses of the resistor elements.



Resistor  
Element  
Volume



Power Metal Strip resistors are frequently used in applications that experience high-energy, short-term pulse transients:

- Motor controllers in locked rotor conditions
- Battery management for short circuit conditions
- Capacitor inrush
- Hot swap inrush