

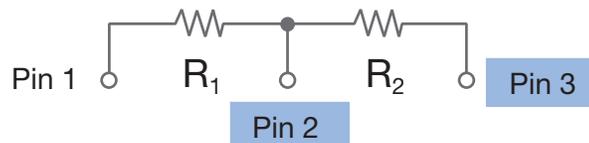


DID YOU KNOW? THICK FILM VOLTAGE DIVIDER NETWORKS

There is an increased interest in the current electronics component market for high voltage divider networks. They offer the following advantages:

1. Save board space (multiple components built into one network)
2. Improved board-level reliability due to decreased solder joints
3. Reduce assembly costs
4. Better performance (better tolerance and ratio matching within the network) compared to individual components

A typical schematic of a voltage divider circuit is shown below. A high voltage is applied along the pins 1 and 2 of the circuit. Since the current (I) in a series circuit is the same in both the resistors, the resistor with the largest value (R_1) has a higher voltage drop and the second resistor (R_2) has a much lower voltage drop. The voltage drop in each of these resistors (V_1 and V_2 respectively) will be calculated as $V_1 = I \times R_1$ and $V_2 = I \times R_2$. The output voltage is recorded between the pins 2 and 3. This is usually much lower than the input voltage. Hence, the term voltage divider.



Vishay Dale offers multiple industrial high voltage divider networks in SMT and through-hole configurations and tin-lead and lead (Pb)-free combinations to serve various customer applications and design needs. In addition to standard offerings, Vishay Dale also has the capability to fully customize the products to the customer's needs.

Voltage Divider Product Series:

1. [CDMV Series](#): SMT; industrial; maximum working voltage rating of 1415 V; multiple ratios available
2. [CDHV Series](#): SMT; industrial; maximum working voltage rating of 3000 V; multiple ratios available
3. [TD Series](#): through-hole; industrial; planar/radial leads; maximum working voltage rating up to 30 kV

Thick Film Voltage Dividers Are Frequently Used in Applications That Involve High Voltages:

- Voltage monitoring and control
- Over-voltage protection

Typical End Products:

- High voltage power supplies
- Medical and test equipment