



# DID YOU KNOW? HIGH VOLTAGE THICK FILM CHIP RESISTORS

Most thick film chip resistors have very low voltage handling capability. A chip resistor with high voltage handling capability can present the following potential advantages to all new product designs:

1. Reduce component count on the PC board (use one HV resistor instead of five or six resistors in series)
2. Increased design flexibility (PC board layout with one or two components offers more flexibility than multiple components)
3. Reduce the overall weight of the PC board and the overall size of the finished product
4. Reduce the assembly (placement) costs
5. Improved board-level reliability due to fewer solder joints

Vishay Dale offers the AEC-Q200 qualified high voltage [CRMA](#) series for automotive / high reliability applications and two industrial thick film chip resistor families (CRHV and CRMV) in multiple case sizes and terminal configurations to meet various customer needs. The CRMA (AEC-Q200 qualified) series offers up to 1415 V of continuous voltage handling capability, along with the [CRMV](#) series industrial version.

The [CRHV](#) series offers up to 3000 V of continuous voltage handling capability.

## Some Highlights Include:

1. AEC-Q200 qualified (CRMA series)
2. Multiple case sizes
3. Standard tin / lead and lead (pb)-free terminations for easy usage
4. Also offered in epoxy-bondable and wire bondable-terminations

More details on the performance of these high voltage resistors can be found in the infographic titled "[High Voltage Chip Resistors](#)." High voltage thick film chip resistors are frequently used in applications that involve high voltages:

- Voltage monitoring
- Battery monitoring
- Over-voltage protection
- High voltage power supplies

### VOLTAGE HANDLING

