

DID YOU KNOW? HIGH POWER THIN FILM CHIP RESISTORS

Nowadays, many fields of modern electronics require advanced power dissipation, reliability, and a robust design, all in ever-smaller case sizes. MC HP high power thin film chip resistors are the perfect choice to meet these requirements, since they combine a high power rating with the advantages of thin film technology.

High Power Rating: The significantly increased power rating allows for component count reduction by replacing up to three standard components in the same case size. Since the power rating even exceeds that of standard components, in the next largest case size board space savings can also be achieved by 1:1 replacement to a smaller component size.



Excellent Long Term Stability: An advanced trimming geometry allows the resistor to homogeneously dissipate power and distribute thermal energy across the entire resistive element. Thereby the temperature rise in the resistive film for a given power load is limited, resulting in an excellent long term stability, even at full rated dissipation. Furthermore, due to component count reduction, cumulative drift effects induced by the use of multiple resistors can be eliminated.

Temperature Cycling Stability: Temperature variations cause mechanical stress on the solder joints due to different thermal expansion of the resistor and the PCB. This temperature cycling stress leads to a degradation, and finally cracking, of the solder joint. High power chip resistors allow for smaller case sizes, for which the distance between solder joints is reduced, lowering the stress and resulting in higher temperature cycling stability.

High power thin film chip resistors are the optimum choice for industrial and automotive applications that require components with an advanced power rating, face space restrictions, or experience high operating temperatures:

- Engine and onboard power supply control units
- Electronic transmission controls
- DC/DC converters

- Industrial drives
- Power electronic systems
- Electronic interfaces
- Inverters