

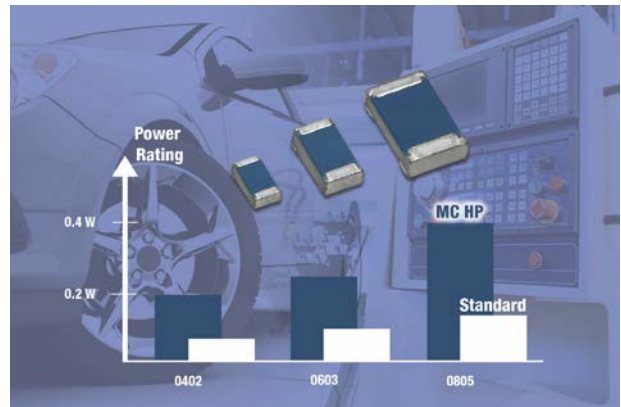
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New MC HP Series High Power Thin Film Chip Resistors Replace Larger Devices or Multiple Same-Size Resistors to Lower Costs and Save Space

Available in 0402, 0603, and 0805 Case Sizes, Automotive Grade Devices Deliver Industry's Highest Power Dissipation Up to 0.4 W

Product Benefits:

- High power dissipation up to 0.4 W
- Small 0402, 0603, and 0805 case sizes
- High operating temperatures up to +175 °C
- Low load life drift $\leq 0.2\%$ after 1,000 hours of operation at rated dissipation
- Resistance range from 1 Ω to 100 k Ω
- TCR down to ± 25 ppm/K
- Tolerances down to $\pm 0.1\%$
- AEC-Q200 qualified
- Lead (Pb)-free and RoHS-compliant



Market Applications:

- DC/DC converters
- Power supplies
- Motor control units
- Electronic control units
- Inverters
- Test and measurement equipment

The News:

Vishay Intertechnology introduces a new series of Automotive Grade thin film chip resistors that features the industry's highest rated power dissipation in the compact 0402, 0603, and 0805 case sizes. For electronics in automotive, industrial, and renewable energy applications, Vishay Beyschlag MC HP series devices combine high operating temperatures up to +175 °C with low load life drift $\leq 0.2\%$ after 1,000 hours of operation at rated dissipation.

- Perfect choice for most fields of modern electronics in which power dissipation, reliability, stability, and robust design are major concerns



- Deliver over two times the dissipation of standard thin film chip resistors in their respective case size, while also exceeding the ratings of components in the next largest case size
- To save space, reduce component counts, and lower costs, designers can use these compact resistors in place of larger devices, or replace multiple resistors of the same case size
- Superior temperature cycling robustness and advanced sulfur resistance as verified according to ASTM B 809
- Suitable for processing on automatic SMD assembly systems

The Key Specifications:

Part number	MCS 0402 HP	MCT 0603 HP	MCU 0805 HP
Case size	0402	0603	0805
Resistance range (Ω)	47 to 100 k	1 to 100 k	1 to 100 k
Resistance tolerance (%)	$\pm 0.1; \pm 0.5 \pm 1$		
TCR (ppm/K)	$\pm 25; \pm 50$		
Rated dissipation P_{85} (W)	0.200	0.250	0.400
Operating voltage (V)	50	75	150
Operating temp. range ($^{\circ}\text{C}$)	-55 to +175		

Availability:

Samples and production quantities of the new thin film chip resistors are available now, with lead times of six to eight weeks for large orders.

To access the product datasheet on the Vishay Website, go to:
<http://www.vishay.com/ppg?28916> (MCS 0402 HP).

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