



## MC AT Precision Series of Automotive Grade Thin Film Chip Resistors Combines Extended Resistance Value Range With TCR of $\pm 25$ ppm/K and Tight Tolerance of $\pm 0.1$ % in 0402, 0603, and 0805 Case Sizes

### Product Benefits:

- Compact 0402, 0603, and 0805 case sizes
- Resistance up to 7.5 M $\Omega$
- TCR of  $\pm 25$  ppm/K
- Tight tolerances of  $\pm 0.1$  %
- Operating voltages from 50 V to 200 V
- Power ratings from 100 mW to 400 mW at +70 °C ambient temperature
- Operate over a -55 °C to +155 °C temperature range
- AEC-Q200 qualified and RoHS-compliant



### Market Applications:

- DC/DC converters, DC-Linking, and voltage dividers for battery management systems; on-board and on-wall chargers; power inverters; e-compressors; and transimpedance amplifier networks for automotive, industrial, medical, and telecommunications equipment

### The News:

Vishay Intertechnology announces that the company has enhanced its MC AT precision series of Automotive Grade thin film chip resistors with a wider range of resistance values in the 0402, 0603, and 0805 case sizes.

- The MCS 0402 AT, MCT 0603 AT, and MCU 0805 AT combine their high resistance values with TCR of  $\pm 25$  ppm/K, tight tolerances of  $\pm 0.1$  %, and thin film stability
- The devices join the previously enhanced MCA 1206 AT, which offers resistance up to 10 M $\Omega$
- By providing higher resistance values in smaller case sizes, the thin film chip resistors save space by replacing larger components and reduce costs by eliminating the need for multiple lower ohmic resistors connected in series
- With excellent moisture resistivity, superior temperature cycling robustness, and advanced sulfur resistance in accordance with ASTM B 809, the MCS 0402 AT, MCT 0603 AT, and MCU 0805 AT are designed to deliver stable performance under harsh environmental conditions



## The Key Specifications:

Part number	MCS 0402 AT	MCT 0603 AT	MCU 0805 AT	MCA 1206 AT
Case size	0402	0603	0805	1206
Resistance range ( $\Omega$ )	47 to 1 M	47 to 2 M	47 to 7.5 M	47 to 10 M
Resistance tolerance (%)	$\pm 0.1$			
Temp. coefficient (ppm/K)	$\pm 25; \pm 15; \pm 10$	$\pm 25; \pm 15; \pm 10; \pm 5$	$\pm 25; \pm 15; \pm 10$	
Rated dissipation $P_{70}$ (W)	0.100	0.125	0.200	0.400
Operating voltage (V)	50	75	150	200
Operating temp. range ( $^{\circ}\text{C}$ )	-55 to +155			
Internal thermal resistance (K/W)	90	63	38	32

### Availability:

Samples and production quantities of the enhanced resistors are available now, with lead times of 14 weeks.

To access the product datasheet on the Vishay Website, go to

<http://www.vishay.com/ppg?28785> (MCS 0402 AT, MCT 0603 AT, MCU 0805 AT, MCA 1206 AT - Precision)

### Contact Information:

#### THE AMERICAS

Paulo Adabo  
Vishay Americas  
[paulo.adabo@vishay.com](mailto:paulo.adabo@vishay.com)

#### EUROPE

Michael Hettrich  
Vishay Electronic GmbH  
[michael.hettrich@vishay.com](mailto:michael.hettrich@vishay.com)

#### ASIA/PACIFIC

Victor Goh  
Vishay Intertechnology Asia Pte Ltd.  
[victor.goh@vishay.com](mailto:victor.goh@vishay.com)