

# THIN FILM CHIP RESISTORS

## MCW AT Professional and Precision

### Professional and Precision Wide Terminal Thin Film Chip Resistors



#### KEY BENEFITS

- Size 0406 and 0612 thin film chip resistor with wide side termination
- High power dissipation in compact case sizes:  $P_{85}$  up to 1 W
- Resistance range down to 1  $\Omega$
- Extraordinary thermal cycling robustness up to 3000 cycles
- Operating temperature up to 175 °C
- Robust design provides long-term stability and resistance against humidity and corrosive atmospheres
- AEC-Q200 qualified (under preparation for 0612)

#### APPLICATIONS

- High-power and high-temperature applications
- Automotive and industrial applications
- Replacement for larger case sizes

#### END PRODUCTS

- Automotive electronics: control units, braking systems, lighting
- Industrial electronics: energy management, power supply, measurement
- Inverters for automotive, industrial, and home appliances
- High-end computers

#### RESOURCES

- Datasheet: MCW AT – Professional - [www.vishay.com/doc?28796](http://www.vishay.com/doc?28796)
- Datasheet: MCW 0406 AT – Precision - [www.vishay.com/doc?28847](http://www.vishay.com/doc?28847)
- For technical questions contact [thinfilmttechsupport@vishay.com](mailto:thinfilmttechsupport@vishay.com)



# THIN FILM CHIP RESISTORS

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### Professional and Precision Wide Terminal Thin Film Chip Resistors



MCW AT Professional and Precision wide terminal resistors are the perfect choice for most fields of modern professional power measurement electronics where reliability, stability, power dissipation, and robust design are of major concern.

Besides extremely high power ratings, the MCW AT resistors are characterized by extraordinary temperature cycling robustness, verified through extensive testing. Typical applications include power electronics in automotive and industrial systems.

#### FEATURES

- Rated dissipation  $P_{85}$  up to 1 W
- Superior temperature cycling robustness
- Operating temperature up to 175 °C
- AEC-Q200 qualified (under preparation for 0612)
- Advanced sulfur resistance verified according to ASTM B 809



#### APPLICATIONS

- Automotive
- Industrial
- High-power and high-temperature applications
- Replacement for larger case sizes

#### TECHNICAL SPECIFICATIONS

DESCRIPTION	MCW 0406 AT Precision	MCW 0406 AT Professional	MCW 0612 AT Professional
Imperial size	0406		0612
Metric size code	RR1016M		RR1632M
Resistance range	1 $\Omega$ to 100 k $\Omega$		10 $\Omega$ to 100 k $\Omega$
Resistance tolerance	$\pm 0.1 \%$	$\pm 0.5 \%$ ; $\pm 1 \%$	
Temperature coefficient	$\pm 15$ ppm/K; $\pm 25$ ppm/K	$\pm 25$ ppm/K; $\pm 50$ ppm/K	
Rated dissipation $P_{70}$ or $P_{85}$ <sup>(1)</sup>	0.25 W	0.3 W	1.0 W
Operating voltage, $U_{max}$ , AC <sub>RMS</sub> /DC	50 V		75 V
Permissible film temperature, $\vartheta_{Fmax}$ <sup>(1)</sup>	155 °C	175 °C	
Operating temperature range <sup>(1)</sup>	-55 °C to 155 °C	-55 °C to 175 °C	
Insulation voltage: 1 min; $U_{ins}$	75 V		100 V

**Note:** <sup>(1)</sup> Please refer to APPLICATION INFORMATION, please see [www.vishay.com/doc?28796](http://www.vishay.com/doc?28796) (professional) or [www.vishay.com/doc?28847](http://www.vishay.com/doc?28847) (precision). Rated dissipation  $P_{85}$  applies to MCW AT - Professional Series.