

## Molded Metal Film Resistors Low Temperature Coefficient, High Precision



The RCME range of metal film resistors represents a significant technical advancement in resistive technology, combining low temperature coefficients with high environmental stabilities, and high frequency performance.

Laser beam trimming gives tolerance accuracies from 0.1 % to 1 %.

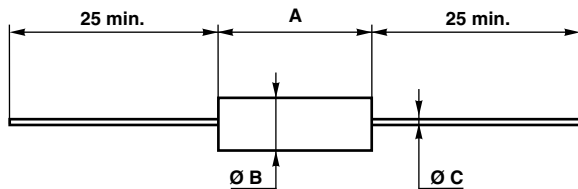
The RCME range effectively bridges the gap that has hitherto existed between the high precision, high stability foil or wirewound technology and conventional film technology.

### FEATURES

- 0.125 W to 0.25 W at 85 °C
- Very low temperature coefficient:  $\pm 5$  ppm/°C and  $\pm 10$  ppm/°C
- Very tight tolerances: down to  $\pm 0.1$  %
- Electrical insulation  $> 10^7$  M $\Omega$
- Climatic category -65 °C / +155 °C / 56 days
- Excellent frequency performance
- Termination = pure matte tin
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### DIMENSIONS in millimeters



SERIES	A	Ø B	Ø C	WEIGHT in g
RCME02	6.5 ± 0.2	2.4 ± 0.1	0.6	0.26
RCME05	10.2 ± 0.2	3.65 ± 0.1	0.6	0.46

### STANDARD ELECTRICAL SPECIFICATIONS

MODEL	RESISTANCE RANGE $\Omega$	RATED POWER $P_{85\text{ °C}}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE $\pm$ %	TEMPERATURE COEFFICIENT $\pm$ ppm/°C
RCME02	100 to 750K	0.125	300	0.1, 0.2, 0.5, 1	5, 10
RCME05	100 to 750K	0.25	350	0.1, 0.2, 0.5, 1	5, 10

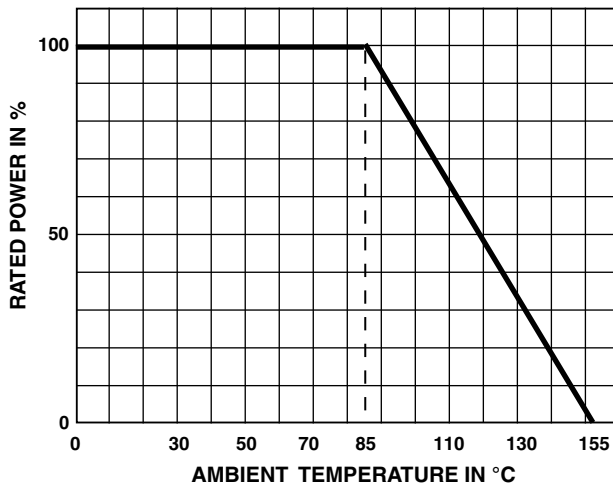
### TECHNICAL SPECIFICATIONS

VISHAY SFERNICE SERIES	RCME02	RCME05
Nominal Temperature Coefficient in the Range -20 °C to +85 °C	K6 $\leq \pm 10$ ppm/°C K8 $\leq \pm 5$ ppm/°C	
Insulation Resistance	$> 10^7$ M $\Omega$	
Voltage Coefficient	0.0001 %/V	
Environmental Specifications	-65 °C / +155 °C / 56 days	

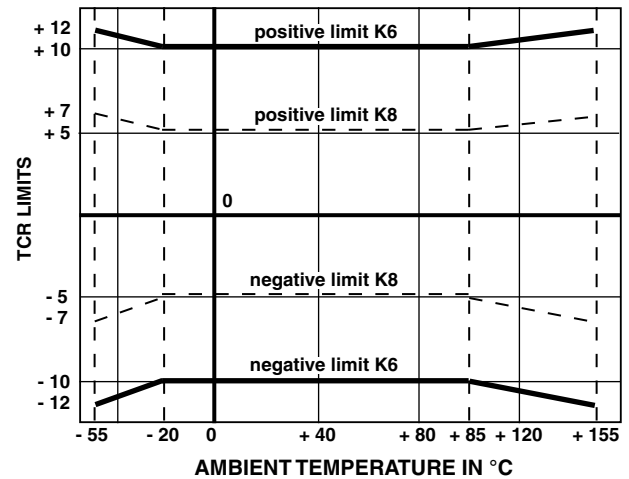


PERFORMANCE		
EN140-100		MAXIMUM VALUES AND DRIFTS
TESTS	CONDITIONS	
Load Life at Maximum Category Temperature	1000 h at +155 °C / 0 % of $P_n$	± 0.15 % or 0.05 Ω
Short Time Overload	2.5 $U_n$ / 5 s Limited to 2 $U_m$	± 0.01 % or 0.05 Ω
Damp Heat Humidity (Steady State)	56 days with low load	± 0.15 % or 0.05 Ω
Rapid Temperature Change	-55 °C to +155 °C	± 0.05 % or 0.05 Ω
Climatic Sequence	-55 °C to +155 °C severity 1	± 0.15 % or 0.05 Ω Insulation resistance > 10 <sup>6</sup> MΩ
Terminal Strength	Pull - twist - 2 bends	± 0.05 % or 0.05 Ω
Vibration	Severity 55B	± 0.05 % or 0.05 Ω
Soldering (Thermal Shock)	+260 °C 10 s	± 0.05 % or 0.05 Ω
Load Life	Cycle 90'/30' 1000 h at $P_n$ at 85 °C	± 0.05 % or 0.05 Ω
Shelf Life	1 year ambient temperature	± 0.03 % or 0.05 Ω

**POWER RATING**



**TEMPERATURE COEFFICIENT**



The temperature coefficient is guaranteed between -20 °C to +85 °C.

The limits of TCR are:

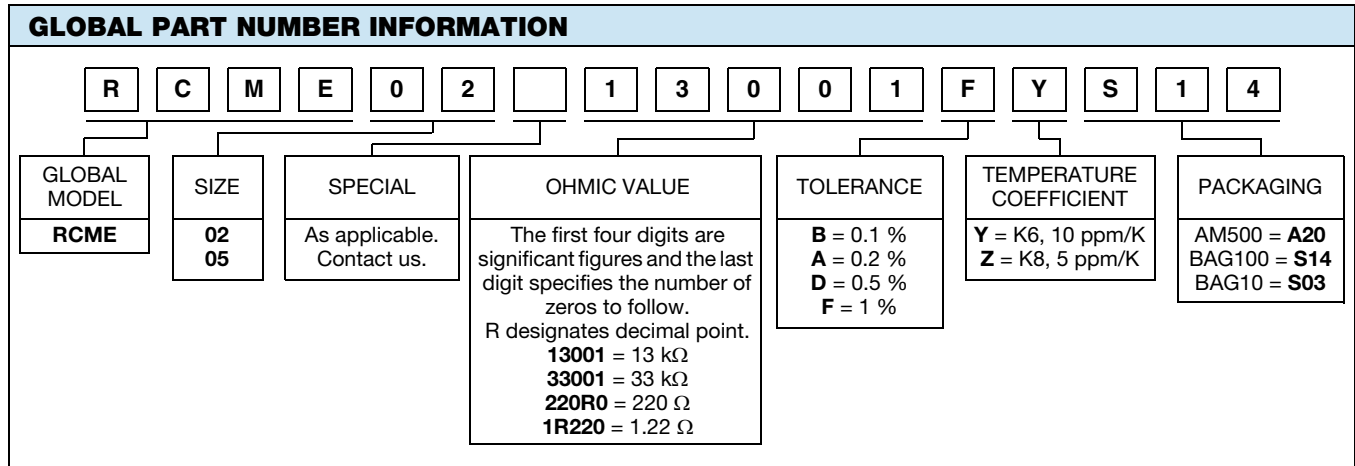
K 8 ± 5 ppm/°C and K 6 ± 10 ppm/°C

For use outside the range -20 °C or +85 °C, limiting values of temperature coefficient are given in the graph above.



**MARKING**

Printed: Vishay Sfernice trademark, series, style (in full or abbreviated), ohmic value (in Ω), tolerance (in %), temperature coefficient, manufacturing date.





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