

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: ± 5 ppm/°C and ± 10 ppm/°C
- Very tight tolerances: down to ± 0.1 %
- Electrical insulation $> 10^7$ M Ω
- 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



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	

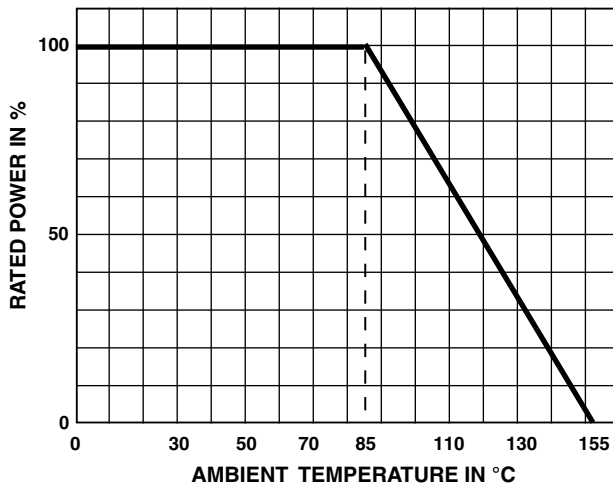
STANDARD ELECTRICAL SPECIFICATIONS					
MODEL	RESISTANCE RANGE Ω	RATED POWER $P_{85\text{ °C}}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE \pm %	TEMPERATURE COEFFICIENT \pm ppm/°C
RCME02	100 to 750K	0.125	300	0.1, 0.2, 0.5, 1	5, 10
RCME05	100 to 750K	0.25	350	0.1, 0.2, 0.5, 1	5, 10

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 Ω	
Voltage Coefficient	0.0001 %/V	
Environmental Specifications	-65 °C / +155 °C / 56 days	

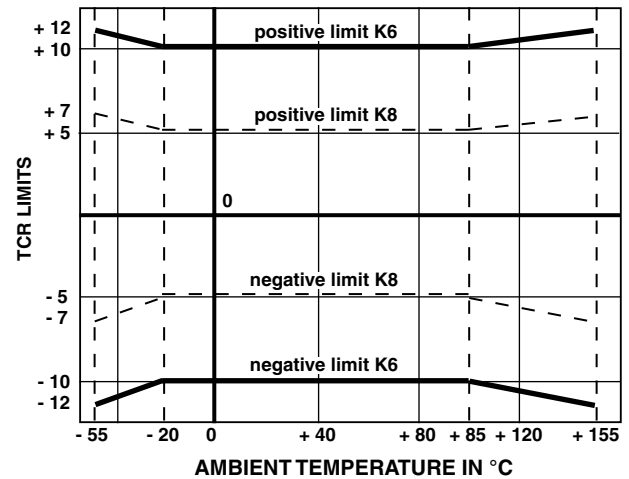


PERFORMANCE		
EN140-100		MAXIMUM VALUES AND DRIFTS
TESTS	CONDITIONS	
Load Life at Maximum Category Temperature	1000 h at +155 °C / 0 % of P_n	± 0.15 % or 0.05 Ω
Short Time Overload	2.5 U_n / 5 s Limited to 2 U_m	± 0.01 % or 0.05 Ω
Damp Heat Humidity (Steady State)	56 days with low load	± 0.15 % or 0.05 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 ⁶ 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:

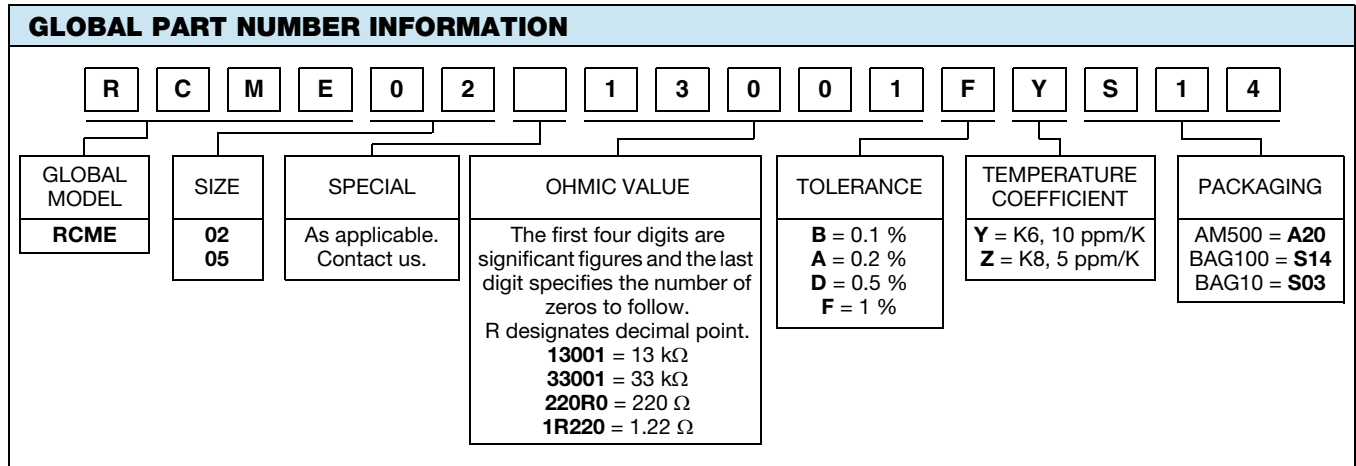
K 8 ± 5 ppm/°C and K 6 ± 10 ppm/°C

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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