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.

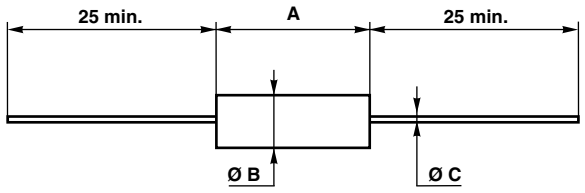
FEATURES

- 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 MΩ
- 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

Pb-free

RoHS COMPLIANT

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

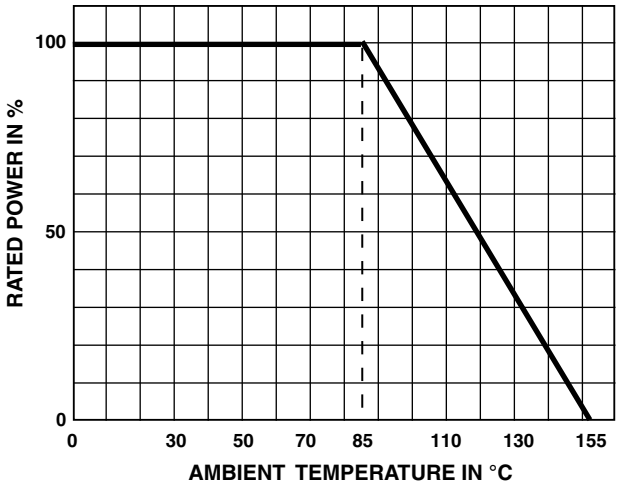
MODEL	RESISTANCE RANGE Ω	RATED POWER $P_{85\,°C}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
RCME02	100 to 750K	0.125	300	0.1, 0.2, 0.5, 1	5, 10
RCME05	100 to 750K	0.25	350	0.1, 0.2, 0.5, 1	5, 10

TECHNICAL SPECIFICATIONS

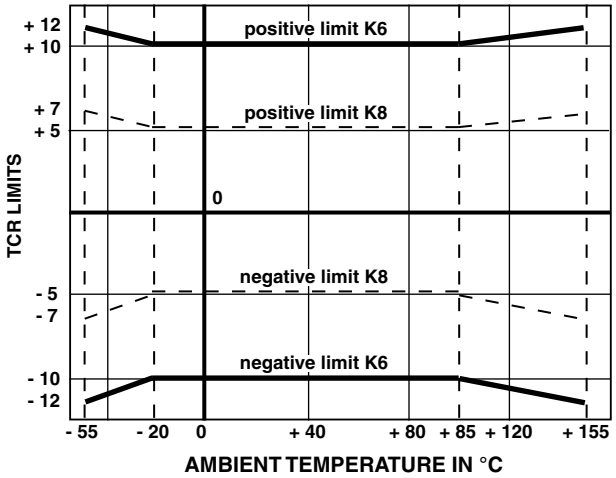
VISHAY SFERNICE SERIES	RCME02	RCME05
Nominal Temperature Coefficient in the Range - 20 °C to + 85 °C	K6 ≤ ± 10 ppm/°C K8 ≤ ± 5 ppm/°C	
Insulation Resistance	> 10^7 MΩ	
Voltage Coefficient	0.0001 %/V	
Environmental Specifications	- 65 °C/+ 155 °C/56 days	

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_m/5 s limited to 2 U_n	± 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.

GLOBAL PART NUMBER INFORMATION

R	C	M	E	0	2		1	3	0	0	1	F	Y	S	1	4

GLOBAL MODEL	SIZE	SPECIAL	OHMIC VALUE	TOLERANCE	TEMPERATURE COEFFICIENT	PACKAGING
RCME	**02** **05**	As applicable. Contact us.	The first four digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. **13001** = 13 kΩ **33001** = 33 kΩ **220R0** = 220 Ω **1R220** = 1.22 Ω	**B** = 0.1 % **A** = 0.2 % **D** = 0.5 % **F** = 1 %	**Y** = K6, 10 ppm/K **Z** = K8, 5 ppm/K	AM500 = **A20** BAG100 = **S14** BAG10 = **S03**

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