**Vishay Sfernice** 



# Molded Metal Film, High Ohmic Values High Voltage Resistors



The RCMY 2 and RCMY 4 resistors are particularly well suited for high voltage applications. The technology used ensures very good stability under the most severe and diverse operating conditions.

Due to their excellent performance, the RCMY2 and RCMY4

### **DIMENSIONS** in millimeters

#### FEATURES

- 0.5W to 1W at 70°C
- NF C 93-230
- · Very high ohmic values
- High insulation
- · Accurate dimensions
- · Great mechanical strength

are perfect for the design of high voltage and precision voltage divider networks. With two resistors only, voltage ratios of up to  $10^{-8}$  can be achieved in a wide range of ohmic values. Higher ratios can be obtained with a combination of several resistors.

25 min.	A		_	25 min.		
		_				
	t t			1		
_	ØВ			ØC		

DIMEN- SIONS SERIES	A max.	Ø B max.	Ø C ± 0.1	WEIGHT IN G
RCMY2	29	10.2	0.8	4.4
RCMY4	54	10.2	0.8	13

TECHNICAL SPECIFICATIONS				
SFERNICE SERIES AND STYLES	RCMY2	RCMY4		
Power Rating at 70°C (Pr)	0.5W	1W		
Resistance Value Range	$1M\Omega$ to $100M\Omega$	1M $\Omega$ to 250M $\Omega$		
Resistance Tolerance	± 1% ± 2% ± 5%			
Maximum Voltage	3kV	10kV		
Temperature Coefficient	$K2 \le \pm 100 ppm/^{\circ}C$			
Insulation Resistance (Typical)	> 10 <sup>7</sup> MΩ			
Critical Resistance	18MΩ	100ΜΩ		



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PERFORMANCE					
	TYPICAL VALUES				
TESTS	CONDITIONS	REQUIREMENTS	AND DRIFTS		
Dielectric Voltage	4.5kV RMS	± 0.5%	< ± 0.1%		
Short Time Overload	2.5 Um / 5 s limited to 2 Un	± 0.5%	± 0.1%		
Load Life at max. Category Temperature	1000 h at 125°C 0% of Pn	± 2%	± 0.5 %		
Damp Heat Humidity (Steady State)	56 days with low load	$\pm$ 1.5% Insulation resist. >10 <sup>3</sup> M $\Omega$	$\pm 0.5\%$ Insulation resist. >10 <sup>7</sup> M $\Omega$		
Rapid Temperature Change	– 55°C + 125°C	± 0.5%	± 0.1%		
Climatic Sequence	– 55°C + 125°C severity 1	$\pm$ 1% Insulation resist. >10 <sup>3</sup> M $\Omega$	$\pm 0.5\%$ Insulation resist. >10 <sup>7</sup> M $\Omega$		
Terminal Strength	Pull - Twist - 2 bends	Twist - 2 bends ± 0.5%			
Vibration	Severity 55 B	Severity 55 B ± 0.5%			
Soldering (Thermal Shock)	+ 260°C 10 s	± 0.5%	± 0.1%		
Load Life	cycle 90'/30' 1000 h at Pn at 70°C	± 1%	± 0.3%		
Shelf Life	1 year @ ambient temperature	_	$< \pm 0.2\%$ per year		

### **POWER RATING CHART**



#### NOISE

In a frequency decade, the average noise level is 0.2  $\mu$  V/V and can reach 0.5  $\mu$  V/V for the highest values.

#### **VOLTAGE COEFFICIENT**

< 1 ppm/V.

#### **TEMPERATURE RISE**



#### **PRACTICAL TOLERANCE FOR USE**

After 1000 hours load life at rated power 90'/30' cycles +70°C ambient temperature, the typical drifts, measured at 70°C, are as follows :

Typical total drift = drift due to T.C. (K2) + life drift :< $\pm 0.8\%$ .

Maximum deviation from rated ohmic value including 1% manufacturing tolerance  $\leq \pm 1.8\%.$ 

# RCMY

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### PACKAGING

In box.

#### MARKING

Printed: SFERNICE trademark, series, style, ohmic value (in MΩ), tolerance (in %), manufacturing date.

ORDERING	G INFORMATI	ON			
RCMY	2		<b>80M</b> Ω	<b>± 2%</b>	
SERIES	STYLE	SPECIAL DESIGN	OHMIC VALUE	TOLERANCE	PACKAGING
		Method N° Optional			Optional