Molded Metal Film Resistors

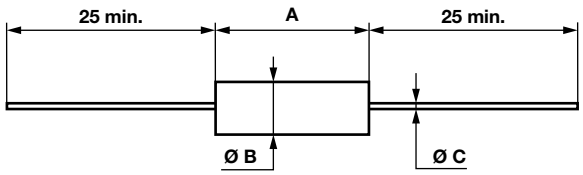
FEATURES

- 0.25 W to 1 W at 70 °C
- According to NF C 83-230 (RC21U-31U-41U-32)
- According to CECC 40 100
- High insulation > 10^7 MΩ
- Great mechanical strength
- 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 max.	Ø B max.	Ø C	WEIGHT in g
RCMM02	6.5 ± 0.2	$2.5^{\ -0}_{\ -0.2}$	0.6	0.26
RCMM05	10.2 ± 0.2	3.65 ± 0.1	0.6	0.46
RCMM1	16 ± 0.5	6.2 ± 0.2	0.8	1.30

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	RESISTANCE RANGE Ω	RATED POWER $P_{70\ °C}$ W	LIMITING ELEMENT VOLTAGE V	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C
RCMM02	1 to 332K	0.25	300	2, 5	50, 100
	1 to 332K	0.50	350	2, 5	50, 100
RCMM05	1 to 1M	0.50	350	2, 5	50, 100
RCMM1	1 to 2.26M	1.0	500	2, 5	50, 100

TECHNICAL SPECIFICATIONS

VISHAY SFERNICE SERIES		RCMM02		RCMM05	RCMM1
CECC 83-230 (for information)		RC21U	RC32	RC31U	RC41U
CECC 40 100-802 (for information)		BV	-	CV	-
Power rating at 70 °C		0.25 W	0.50 W	0.50 W	1 W
Resistance value range in relation to tolerance	± 5 %	1 Ω to 330 kΩ E24	1 Ω to 330 kΩ E24	1 Ω to 1 MΩ E24	1 Ω to 2.2 MΩ E24
	± 2 %	1 Ω to 332 kΩ E48	1 Ω to 332 kΩ E48	1 Ω to 1 MΩ E48	1 Ω to 2.26 MΩ E48
Maximum voltage		300 V	350 V	350 V	500 V
Critical resistance		-	245 kΩ	245 kΩ	250 kΩ
Temperature coefficient	Rated in the range -55 °C +155 °C	K2 ≤ ± 100 ppm/°C			
	Typical in the range -10 °C +70 °C	≤ ± 50 ppm/°C			
Insulation resistance (typical)		≥ 10^7 MΩ (500 V_{DC})			
Voltage coefficient		≤ ± 10 ppm/V			
Environmental specifications		-65 °C / +155 °C / 56 days			

For technical questions, contact: sferfixedresistors@vishay.com

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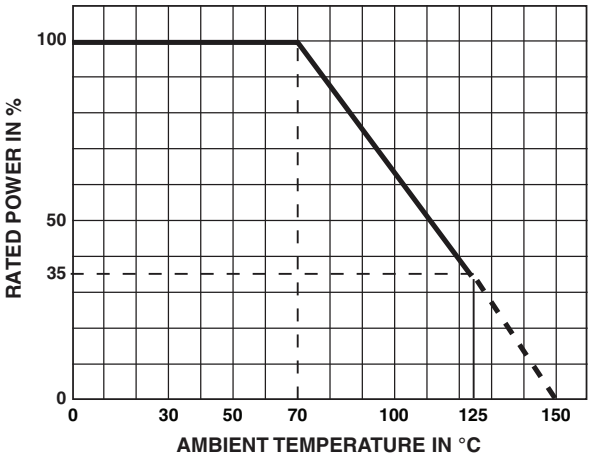
PERFORMANCE

TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES AND DRIFTS
Load life at max. category temperature	1000 h at 125 °C 35 % of P_n	≤ ± (2 % + 0.1 Ω) Insulation resist. > 1 GΩ	± 0.75 % or 0.05 Ω Insulation resist. 10^6 MΩ
Short time overload	2.5 Un / 5 s Limited to 2 Um	≤ ± (0.5 % + 0.05 Ω)	± 0.2 % or 0.05 Ω
Damp heat humidity (steady state)	56 days with low load	≤ ± (2 % + 0.1 Ω) Insulation resist. > 100 MΩ	± 0.5 % or 0.05 Ω Insulation resist. 10^6 MΩ
Rapid temperature change	-55 °C +125 °C	≤ ± (0.5 % + 0.05 Ω)	± 0.1 % or 0.05 Ω
Climatic sequence	-55 °C +125 °C	≤ ± (2 % + 0.1 Ω) Insulation resist. > 100 MΩ	± 0.1 % or 0.05 Ω Insulation resist. 10^6 MΩ
Terminal strength	Pull - twist - 2 bends	≤ ± (0.5 % + 0.05 Ω)	± 0.05 % or 0.05 Ω
Vibration	10 Hz to 500 Hz	≤ ± (0.5 % + 0.05 Ω)	± 0.05 % or 0.05 Ω
Soldering (thermal shock)	+260 °C, 10 s	≤ ± (0.5 % + 0.05 Ω)	± 0.1 % or 0.05 Ω
Load life	Cycle 90'/30' 1000 h at P_n at 70 °C	≤ ± (2 % + 0.1 Ω) Insulation resist. > 1 GΩ	± 0.5 % or 0.05 Ω Insulation resist. 10^6 MΩ
Shelf life	1 year ambient temperature	-	± 0.1 % or 0.05 Ω

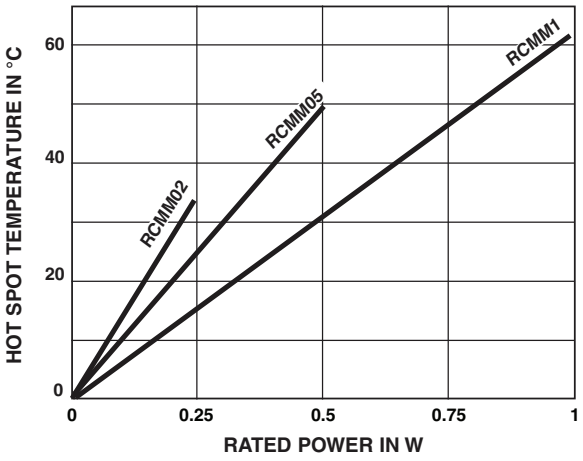
Note

- RC41: 15 s

POWER RATING



TEMPERATURE RISE



MARKING

Printed: Vishay Sfernice trademark, series, ohmic value (in Ω), tolerance (in %), temperature coefficient, manufacturing date. Due to lack of space RCMM02 is printed MM02.

GLOBAL PART NUMBER INFORMATION

R	C	M	M	0	2		1	3	0	1	J	K	S	1	4

GLOBAL MODEL	SIZE	SPECIAL	OHMIC VALUE	TOLERANCE	TEMPERATURE COEFFICIENT	PACKAGING
RCMM	**02** **05** **10**	As applicable. Contact us.	The first three digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. **1301** = 1.3 kΩ **3301** = 3.3 kΩ **22R0** = 22.0 Ω **1R22** = 1.22 Ω	**G** = 2 % **J** = 5 %	**K** = K2, 100 ppm/K	AM500 = **A20** AM1000 = **A22** BAG100 = **S14** BAG50 = **S09**

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