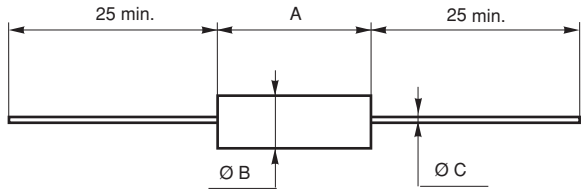
Molded Metal Film High Stability Resistors

FEATURES

- 0.125W to 1W at 70°C
- NF C 83-230
- CECC 40 100
- High long term stability drift <0.5% after 1000 hours
- High reliability
- Tight temperature coefficient
- Excellent initial precision
- Accurate dimensions, high insulation
- Great mechanical strength

DIMENSIONS in millimeters



DIMENSIONS / SERIES	A	Ø B	Ø C	UNIT WEIGHT IN G.
RCMS02	6.5 ± 0.2	$2.5^{\ -0}_{\ -0.2}$	0.6	0.26
RCMS05	10.2 ± 0.2	3.65 ± 0.1	0.6	0.46
RCMS1	16 ± 0.5	6.2 ± 0.2	0.8	1.30

TECHNICAL SPECIFICATIONS

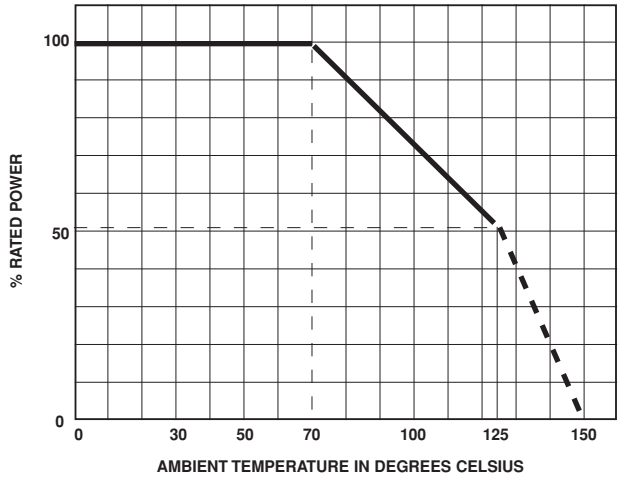
VISHAY SFERNICE SERIES	RCMS02			RCMS05		RCMS1
NF C / CECC 83-230	RS58Y	RS64Y	RS71Y	RS63Y	RS69Y	RS68Y
CECC 40 100-803	BC	–	–	CC	–	DC
MIL-R-10509 F (Conformity)	RN55C	–	–	RN60C	–	RN65C
Power Rating at 70°C	0.125W	0.250W	0.500W	0.250W	0.500W	0.500W
Resistance Value Range in Relation to Tolerance ± 1% E96	1Ω 332kΩ	1Ω 332kΩ	1Ω 332kΩ	1Ω 1MΩ	1Ω 1MΩ	1Ω to 2.21MΩ
Maximum Voltage	300V	300V	350V	350V	350V	400V
Critical Resistance	–	–	–	490kΩ	245kΩ	320kΩ
Temperature Coefficient — Rated in the range – 55°C + 155°C	K3 ≤ ± 50ppm/°C					
Temperature Coefficient — Typical in the range – 10°C + 70°C	K3 ≤ ± 30ppm/°C					
Insulation Resistance (Typical)	≥ 10^7MΩ (500VDC)					
Voltage Coefficient	10ppm/Volt					
Environmental Specification	– 65°C/+ 155°C/56 days					

Undergoes European Quality Insurance System (CECC)

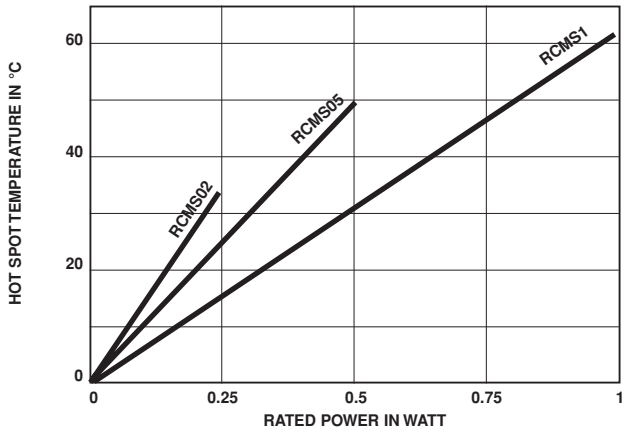
PERFORMANCE

NF C 83-230 - CECC 40 100			TYPICAL VALUES AND DRIFTS
TESTS	**CONDITIONS**	**REQUIREMENTS**	
Load Life at max. Category Temperature	1000h at 125°C 50% of Pn	≤ ± (1% + 0.05Ω) Insulation resist. >1GΩ	± 0.5% or 0.05Ω Insulation resist. 10^6MΩ
Short Time Overload	2.5Um/5 s limited to 2Un	≤ ± (0.25% + 0.05Ω)	± 0.1% or 0.05Ω
Damp Heat Humidity (Steady State)	56 days with low load	≤ ± (1% + 0.05Ω) Insulation resist. >1GΩ	± 0.5% or 0.05Ω Insulation resist. 10^6MΩ
Rapid Temperature Change	–55°C +125°C	≤ ± (0.25% + 0.05Ω)	± 0.1% or 0.05Ω
Climatic Sequence	– 55°C + 125°C severity 1	≤ ± (0.5% + 0.05Ω) Insulation resist. >1GΩ	± 0.1% or 0.05Ω Insulation resist. 10^6MΩ
Terminal Strength	Pull - Twist - 2 bends	≤ ± (1% + 0.05Ω)	± 0.05% or 0.05Ω
Vibration	10 - 500Hz	≤ ± (0.25% + 0.05Ω)	± 0.05% or 0.05Ω
Soldering (Thermal Shock)	+ 260°C 10 s	≤ ± (0.25% + 0.05Ω)	± 0.1% or 0.05Ω
Load Life	cycle 90'/30' 1000 h at Pn at 70°C	≤ ± (1% + 0.05Ω) Insulation resist. > 1GΩ	± 0.2% or 0.05Ω Insulation resist. 10^6MΩ
Shelf Life	1 year ambient temperature	–	± 0.1% or 0.05Ω

POWER RATING CHART



TEMPERATURE RISE



PRACTICAL OPERATING TOLERANCES

Tables 2 and 3 show the basic characteristics and max. values under different stresses. In fact, the values and drifts are maintained to within narrower limits.

Temperature coefficient between – 10°C and + 70°C	K3 ≤ 30ppm/°C	
LONG LIFE 90'/30' cycles ambient temperature 70°C	1000 hours at Pr	± 0.25%
	10.000 hours at Pr	± 0.5%

Thus, in operation under the specified conditions (Pr at 70°C) the total drift (load life + T.C.) of a RCMS K3 does not exceed ± 0.5%.

NOISE LEVEL

In a frequency decade, the average noise level increases with ohmic value and can reach 0.3 µ V/V for the highest values. It is non measurable for Rn < 2 kΩ.

MARKING

Printed: SFERNICE trademark, series, style NF style (if applicable), ohmic value (in Ω), tolerance (in %), temperature coefficient, manufacturing data. Due to lack of space RCMS 02 is printed MS 02.

ORDERING INFORMATION

RCMS	**02**		**332kΩ**	**1%**	**K3**	
SERIES	STYLE	SPECIAL DESIGN Method N° Optional	OHMIC VALUE	TOLERANCE	TEMPERATURE COEFFICIENT	PACKAGING Optional