



RIK

precision bulk metal® resistor – industrial grade

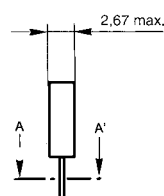
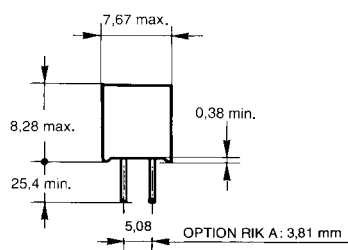


The RIK resistor is the industrial version of the world patented RCK02 resistor retaining the stability, high frequency response, rapid rise times and low noise of the RCK02 series at highly economical pricing.

The RIK resistors have been designed to enable compact side by side mounting on a 2,54 mm PCB pitch and are designed for circuits that require very fast rise times and high stability with temperature and time such as in analog computing devices, process control, weighing machines.

- VERY HIGH STABILITY (<50 ppm/year (shelf life)
- TOLERANCE : $\pm 0,1\%$ to $\pm 1\%$
- RISE TIMES : down to 1 nanosecond
- LOW TEMPERATURE COEFFICIENT <10 ppm/°C from -55°C to +125°C
< 5 ppm/°C from 0°C to +60°C
- CLIMATIC CATEGORY : -55°C/+125°C/56 days

RIK



Standard step 5,08 mm (.200)
An option, step 3,81 mm (.150)

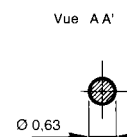


Fig. 1

Dimensions in mm

SPECIFICATIONS

MECHANICAL

MECHANICAL PROTECTION...	insulated case
RESISTIVE ELEMENT...	nickel-chromium
TERMINAL LEADS...	tinned copper weldable, solderable
UNIT WEIGHT...	0,3 g max.

ENVIRONMENTAL

TEMPERATURE LIMITS...	-55°C +155°C
CLIMATIC CATEGORY...	55 / 125 / 56

ELECTRICAL

RESISTANCE VALUE RANGE	1 Ω... 250 kΩ
RESISTANCE TOLERANCE...	$\pm 0,1\%$ $\pm 1\%$
POWER RATING...	0,25 W at 70°C
TEMPERATURE COEFFICIENT	< ± 10 ppm/°C in the range (-55°C +125°C) < ± 5 ppm/°C in the range (0°C +60°C)
DIELECTRIC VOLTAGE...	750 V RMS
INSULATION RESISTANCE...	10 ⁶ MΩ
LIMITING ELEMENT VOLTAGE...	300 V
THERMO-ELECTRIC EFFECT...	<0,5 μV for 1°C of difference between leads
THERMAL RESISTANCE...	0,14°C/MΩ

PERFORMANCES

Table 1

TESTS	CONDITIONS	SFERNICE REQUIREMENTS	TYPICAL DRIFTS
OVERLOAD	2,5 Un / 5 s U max. < 2 Un	± 0,01%	± 0,002 %
TEMPERATURE CYCLING	-55°C +155°C 5 cycles CEI 68-2-14 Test Na	± 0,05 %	± 0,002 %
TERMINALS STRENGTH	CEI 68-2-21 Test Ua (pulling) Ub (bending) Uc (twisting)	± 0,01%	± 0,002 %
RESISTANCE TO SOLDERING HEAT	260°C/10 s CEI 68-2-20A Test T6 (Met.1A)	± 0,01%	± 0,002 %
VIBRATIONS	10 Hz to 50 Hz 0,75 mm or 10 g 6 h Met. B4 CEI 68-2-6 Test Fc	± 0,01%	± 0,002 %
CLIMATIC SEQUENCE	-55°C +155°C 6 cycles 95% R.H. 85 mbar CEI 68-1	± 0,05 % Insulation R >10 ² MΩ	± 0,003 % Insulation R >10 ⁴ MΩ
HUMIDITY (STEADY STATE)	56 days 95% R.H. 40°C CEI 68-2-3	± 0,05 % Insulation R >10 ² MΩ	± 0,003 % Insulation R >10 ⁴ MΩ
MOISTURE RESISTANCE	Method 106 MIL-STD-202	—	± 0,02 % Insulation R >10 ⁴ MΩ
LOAD LIFE	1000 h Pr at 70°C 90°/30° cycle	± 0,05 %	± 0,05 %
HIGH TEMPERATURE EXPOSURE	1000 h at 155°C CEI-68-2-20A Test B	± 0,05 %	± 0,05 %

POWER RATING CHART

Fig. 3



NOISE

Tested according to MIL-STD 202, Method 308, the noise level is below the resolution of the test equipment.

HIGH FREQUENCY CHARACTERISTICS

- Capacitance shunt <0,5 pF
- Total inductances <0,1 μH
- Rise time - approximately 1 nanosecond - permits very high performance in the field of fast electronics (totally oscillation-free).

MARKING

SFERNICE trademark, series, nominal resistance (in Ω, kΩ), tolerance (in %), manufacturing date.

ORDERING PROCEDURE

SERIES	OPTION	OHMIC VALUE	TOLERANCE
RIK	A	34 kΩ	0,1%



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