


RCHK $\leq$ 02N
02A

hermetically sealed high precision resistor metal foil

– bulk metal®

 0,3 W at 125°C
 NF C 83-220
 CECC 40300
 MIL-R-55182J


The association of bulk metal® technology with glass-metal encapsulation technique makes the RCHK series hermetically sealed resistors particularly insensitive to environmental conditions while retaining the precision and stability properties of the RCK series.

- VERY TIGHT TOLERANCE
- VERY HIGH STABILITY
- CLIMATIC STABILITY
- HERMETIC SEALING
- VERY LOW TEMPERATURE COEFFICIENT
- MECHANICAL STRENGTH

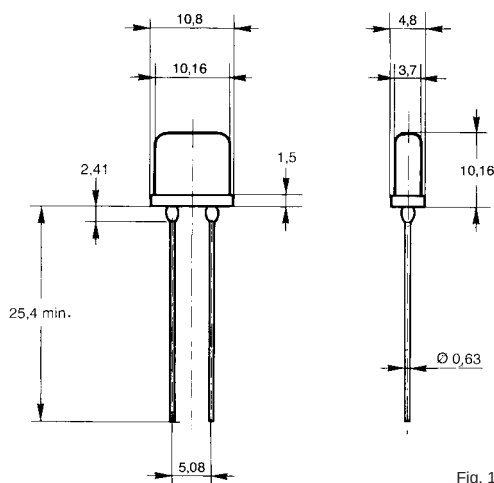
RCHK02


Fig. 1

Dimensions in mm

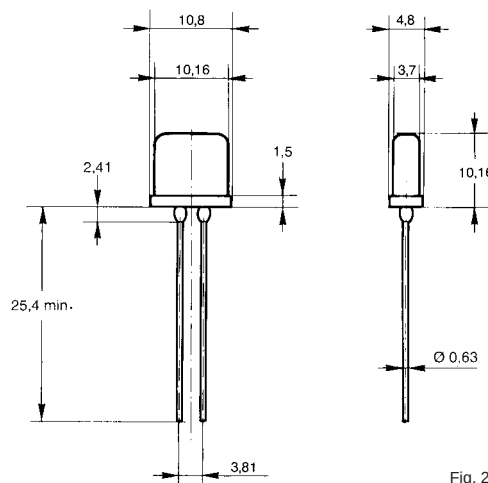
RCHK02A


Fig. 2

SPECIFICATIONS

MECHANICAL

MECHANICAL PROTECTION...	metal housing
RESISTIVE ELEMENT...	nickel-chromium
TERMINAL LEADS...	tinned copper
UNIT WEIGHT...	1,4 g max.

ENVIRONMENTAL

TEMPERATURE LIMITS...	–55°C +175°C
CLIMATIC CATEGORY...	55 / 155 / 56

ELECTRICAL

RESISTANCE VALUE RANGE...	35 Ω... 250 kΩ
RESISTANCE TOLERANCE...	to ± 0,005 %
POWER RATING...	0,3 W at 125°C 0,5 W at 70°C
TEMPERATURE COEFFICIENT	<± 5 ppm/°C in the range –55°C +155°C (max.) <±1 ppm/°C in the range 0°C +60°C (typical) typical ±3 ppm/°C in the range –55°C +155°C
DIELECTRIC VOLTAGE...	500 V RMS
INSULATION RESISTANCE...	9 x 10 ⁴ MΩ typical
LIMITING ELEMENT VOLTAGE...	200 V
CRITICAL RESISTANCE...	80 kΩ for 0,5 W, 120 kΩ for 0,3 W
NOISE...	non measurable
TYPICAL CAPACITANCE...	0,5 pF
RISE TIME...	1 nanosecond

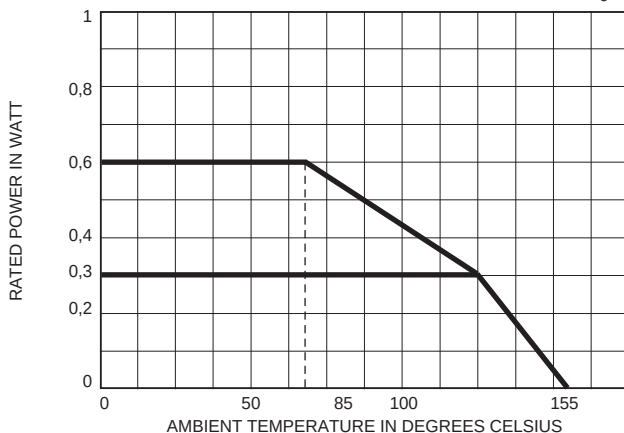
PERFORMANCES

Table 2

TESTS	CONDITIONS	REQUIREMENTS		TYPICAL DRIFTS
		NF C 83-220 CECC 40300	MIL-R-55182J	
OVERLOAD	2,5 un/5 s U max. <2 Un	± 0,01 %	± 0,2 %	± 0,03 %
TEMPERATURE CYCLING	-55°C +155°C 5 cycles CEI 68-2-14 Test Na	± 0,01 %	± 0,005 %	± 0,002 %
TERMINALS STRENGTH	CEI 68-2-21 Test Ua (pulling) Ub (bending) Uc (twisting)	± 0,01 %	± 0,2 %	± 0,002 %
RESISTANCE TO SOLDERING HEAT	260°C/10 s CEI 68-2-20A Test Tb (met. 1A)	± 0,01 %	± 0,1 %	± 0,002 %
VIBRATIONS	10 Hz to 55 Hz 0,75 mm or 10 g 6 h met. B4 CEI 68-2-6 Test Fc	± 0,01 %	± 0,2 %	± 0,002 %
CLIMATIC SEQUENCE	-55°C +125°C 6 cycles 95% R.H. 85 mbar CEI 68-1	± 0,05 % Insulation R>10 ² MΩ	—	± 0,003 % Insul. R>14.10 ⁵ MΩ
HUMIDITY (STEADY STATE)	56 days 95% R.H. 40°C CEI 68-2-3	± 0,05 % Insulation R>10 ² MΩ	—	± 0,003 % Insul. R>14.10 ⁵ MΩ
MOISTURE RESISTANCE	Method 106 MIL-STD-202	—	± 0,4 % Insulation R>10 ² MΩ	± 0,003 % Insul. R>14.10 ⁵ MΩ
LOAD LIFE	1000 h Pr at 70°C 90°/30° cycle	± 0,05 %	± 0,5 %	± 0,05 %
HIGH TEMPERATURE EXPOSURE	1000 h/155°C CEI 68-2-20A Test B	± 0,05 %	± 0,5 %	± 0,01 %
	100 h/175°C Sfernice RCK 02	—	± 0,5 %	± 0,05 %
HERMETICAL SEAL TEST	CEI 68-2-17 Test QK Helium 5 bars 1 h	10 ⁻⁷ atm cm ³ /s	—	10 ⁻⁷ atm cm ³ /s

POWER RATING CHART

Fig. 3



RESISTANCE OHMIC RANGE IN RELATION TO TOLERANCE

Table 2

Ohmic range	from 30 Ω to 250 kΩ	from 20 Ω to 250 kΩ	from 10 Ω to 250 kΩ	from 5 Ω to 250 kΩ	from 1 Ω to 250 kΩ
Tolerance up to	±0,005 %	±0,02 % ± 0,01 %	±0,05 %	±0,1 % ±0,2 % ±0,5 % ± 1 %	±0,25 % ± 0,5 % ± 1 %

MARKING

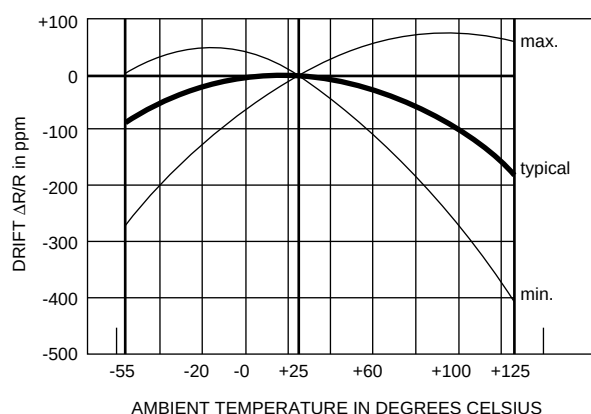
SFERNICE trademark, series, style, nominal resistance (in Ω, kΩ), tolerance (in %), manufacturing date.

RECOMMENDATION FOR USE

Soldering +220°C max. 5 seconds.

TEMPERATURE COEFFICIENT

Fig. 4



ORDERING PROCEDURE

SERIES	STYLE	OPTION	OHMIC VALUE	TOLERANCE
RCHK	02	A	32 kΩ	±0,005%



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