



RAK1HR

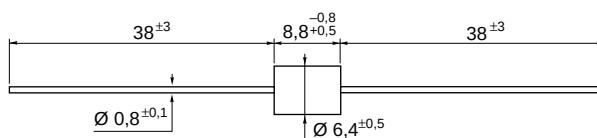
very high precision and
stability wirewound
resistors

ESA SCC 4002

This axial lead resistor is potted in a high temperature resistant plastic package.

Two levels of screening are available:

- level B for serialized parts,
- level C for parts without serialization.



Dimensions in mm

Fig. 1

SPECIFICATIONS

Table 1

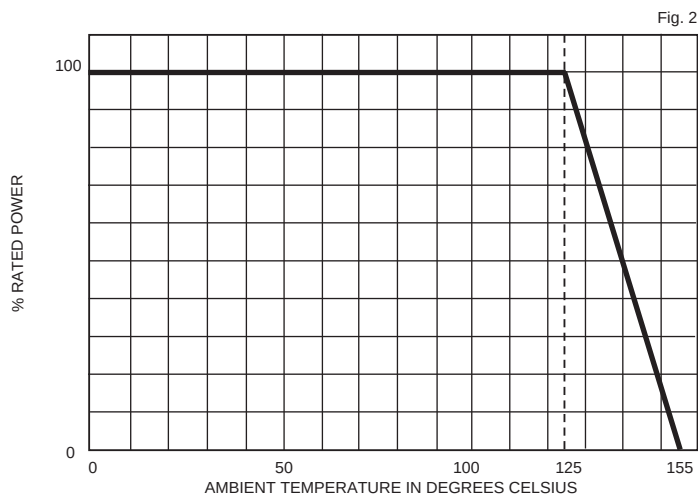
SFERNICE DESIGNATION	RAK 1
QUALIFIED DESIGNATION	RBR 56
ESA SPECIFICATION	4002/001
POWER RATING AT +125°C	0,125 W
LIMITING ELEMENT VOLTAGE	150 V
TEMPERATURE COEFFICIENT	± 5 ppm/°C (–55°C +155°C)
OHMIC VALUE RANGE	500 Ω to 300 k Ω
TOLERANCE	$\pm 0,05\%$
TEMPERATURE LIMITS	–55°C ... +155°C
DIELECTRIC VOLTAGE	750 V RMS
SOLDERING TEMPERATURE	245°C, immersion 10 s at 3 mm of the body

PERFORMANCES

Table 2

TESTS	CONDITIONS	REQUIREMENTS		TYPICAL VALUES
		ESA / SCC 4002/001	MIL-R-39005	
OVERLOAD	$2 P_n$ $V_{max} < 2 U_m/10 \text{ mn}$	$\pm(0,25\% + \frac{0,05 \times 100}{R_n})$	$\pm 0,05 \%$	$\pm 0,002 \%$
RAPID TEMPERATURE CHANGE	$-55^\circ\text{C} / +155^\circ\text{C}$ 5 cycles CEI 66-2-14 Test Na	$\pm (0,05\% + 0,01 \Omega)$	$\pm 0,05 \%$	$\pm 0,002 \%$
TERMINAL STRENGTH	CEI 68-2-21 Test Ua (pulling), Ub (bending), Uc (twisting)	$\pm (0,01\% + 0,01 \Omega)$	$\pm 0,02 \%$	$\pm 0,001 \%$
SOLDERING (Thermal shocks)	$260^\circ\text{C} / 10 \text{ s}$ CEI 68-2-20 A Test Tb (met.1A)	$\pm (0,01\% + 0,01 \Omega)$	$\pm 0,02 \%$	$\pm 0,002 \%$
VIBRATION	10 Hz to 55 Hz 1,5 mm CEI 68-2-6	$\pm (0,01\% + 0,01 \Omega)$	$\pm 0,02 \%$	$\pm 0,002 \%$
CLIMATIC SEQUENCE	$-55^\circ\text{C} / +155^\circ\text{C}$ 6 cycles 20 mbar CEI 115/1	$\pm (0,01\% + 0,01 \Omega)$	—	$\pm 0,003 \%$ Insulation resistance $> 10^4 \text{ M}\Omega$
LOAD LIFE	1000 hours P_n at $+125^\circ\text{C}$ 90' / 30' cycle	$\pm (0,07\% + 0,01 \Omega)$	$\pm 0,1 \%$	$\pm 0,01 \%$
	2000 hours P_n at $+125^\circ\text{C}$ 90' / 30' cycle	$\pm (0,1\% + 0,01 \Omega)$		

POWER RATING CHART



MARKING

The following information are printed on the resistor :
SFERNICE logo, ESA specification reference, ohmic value : 1R000 = 1Ω

10R00 = 10Ω

100R0 = 100Ω

10000 = 1 kΩ

10002 = 100 kΩ

or 5 digits code : 12121 = 12,12 kΩ,
tolerance (letter code W = $\pm 0,05 \%$), temperature coefficient of resistance (code1 = $\pm 5 \text{ ppm}/^\circ\text{C}$), manufacturing date (year, week), one letter for sublots.

PACKAGING

Resistors are packed in blister pack, up to 10 resistors per blister.

The following information are printed on the packaging : Item #, date code, ESA/SCC specification, testing level.

ORDERING PROCEDURE

QUALIFIED
DESIGNATION

RBR 56

ESA
DESIGNATION

4002/001

TESTING
LEVEL

B

OHMIC VALUE

10 kΩ

TOLERANCE

$\pm 0,05\%$



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