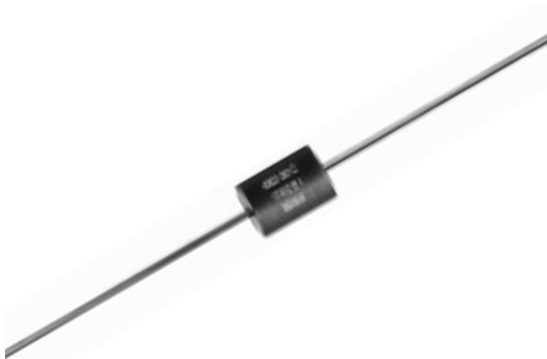




RAK

very high precision and stability wirewound resistor axial leads

0,1 W to 0,5 W
at 125°C
NF C 93-217
(RK52... RK57)
MIL-R-39005
CECC 40 300



- VERY HIGH STABILITY
- EXCELLENT MECHANICAL AND CLIMATIC PROTECTION
- VERY LOW TEMPERATURE COEFFICIENT
K9 : ± 2 ppm/°C - K8 : ± 5 ppm/°C - K6 : ± 10 ppm/°C
- LOW SELF-INDUCTANCE
- EXTENDED RESISTANCE RANGE (5 Ω ... 10 M Ω)
- VERY TIGHT TOLERANCE ($\pm 0,01$ % to ± 1 %)

Table 1

SFERNICE series	$\varnothing B \pm 0,5$	$\pm 0,5$ A -0,8	Unit weight (in g)
RAK M	3,6 max.	7,1 max.	0,3
RAK 01	4,8	9,5	0,45
RAK 1	6,4	8,8	0,95
RAK 2	6,4	12,7	1,25
RAK 3	6,4	19	1,65
RAK 4	9,5	19	2,85
RAK 5	9,5	25,4	3,90

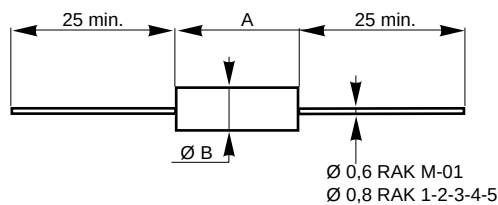


Fig. 1

Dimensions in mm

SPECIFICATIONS

Table 2

SFERNICE SERIES AND STYLE		RAKM	€ RAK01	€ RAK1 €	€ RAK2	€ RAK3	€ RAK4	€ RAK5
MIL-R-31005 TYPE		—	—	RBR56	RBR55	RBR54	RBR53	RBR52
NF C 93-217 TYPE		—	RK57	RK56	RK55	RK54	RK53	RK52
POWER RATING AT +125°C		0,1 W	0,125 W	0,125 W	0,15 W	0,25 W	0,33 W	0,5 W
LIMITING ELEMENT VOLTAGE		150 V	200 V	150 V	200 V	300 V	350 V	600 V
CRITICAL RESISTANCE		—	320 k Ω	178 k Ω	261 k Ω	375 k Ω	365 k Ω	715 k Ω
DIELECTRIC WITHSTAND VOLTAGE AND INSULATION RESISTANCE		750 V RMS			10 ⁶ M Ω (500 V DC)			
OHMIC VALUE IN RELATION TO T.C. TOLERANCE	K4 : ± 25 ppm/°C 0°C +100°C ± 50 ppm/°C +100°C +155°C ± 100 ppm/°C 0°C - 55°C	5 Ω	5 Ω	5 Ω	5 Ω	5 Ω	10 Ω	10 Ω
		50 Ω	50 Ω	50 Ω	100 Ω	100 Ω	200 Ω	200 Ω
	K6 : ± 10 ppm/°C K8 : ± 5 ppm/°C K9 : ± 2 ppm/°C	50 Ω	50 Ω	50 Ω	100 Ω	100 Ω	200 Ω	200 Ω
		200 k Ω	600 k Ω	1 M Ω	2 M Ω	3 M Ω	8 M Ω	10 M Ω
	± 1 %	5 Ω	5 Ω	5 Ω	5 Ω	5 Ω	10 Ω	10 Ω
	$\pm 0,5$ %	200 k Ω	600 k Ω	1 M Ω	2 M Ω	3 M Ω	8 M Ω	10 M Ω
	$\pm 0,1$ %							
	$\pm 0,05$ % $\pm 0,02$ % $\pm 0,01$ %	≥ 500 Ω ≥ 2 k Ω ≥ 5 k Ω	100 Ω 600 k Ω	100 Ω 1 M Ω	100 Ω 2 M Ω	100 Ω 3 M Ω	200 Ω 8 M Ω	200 Ω 10 M Ω

PERFORMANCES

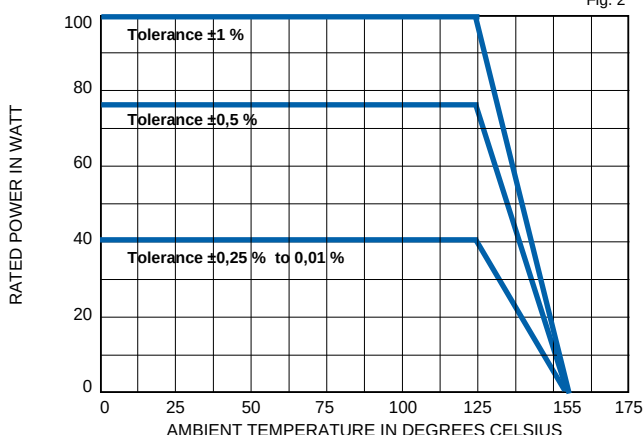
Table 3

TESTS	CONDITIONS	REQUIREMENTS		TYPICAL DRIFTS
		NF C 93-217	MIL-R-39005	
OVERLOAD	2 Pr V max. <2 Um / 10 mn	± 0,005 %	± 0,01 %	± 0,001 %
TEMPERATURE CYCLING	-55°C +155°C 5 cycles CEI 68-2-14 Test Na	± 0,01 %	± 0,05 %	± 0,005 %
TERMINALS STRENGTH	CEI 68-2-21 Test Ua (pulling) Ub (bending) Uc (twisting)	± 0,005 %	± 0,01 %	± 0,001 %
RESISTANCE TO SOLDERING HEAT	260°C / 10 s CEI 68-2-20A Test Tb (met. 1A)	± 0,01 %	± 0,01 %	± 0,002 %
VIBRATIONS	10 Hz to 55 Hz 1,5 mm CEI 68-2-6	± 0,01 %	± 0,01 %	± 0,002 %
CLIMATIC SEQUENCE	-55°C +125°C 6 cycles 20 mbar CEI 115/1	± 0,01 % Insulation R>10 ² MΩ	—	± 0,005 % Insulation R>10 ⁴ MΩ
HUMIDITY (STEADY STATE)	56 days 95% R.H. 40°C CEI 68-2-3	± 0,05 %	—	± 0,01 % Insulation R>10 ⁴ MΩ
LOAD LIFE	Un 90°/30° cycle 2000 h at 125°C	± 0,05 %	± 0,1 %	± 0,01 %
HIGH TEMPERATURE EXPOSURE	2000 h at 155°C	± 0,05 %	± 0,1 %	± 0,01 %

* Not applicable in MIL-R-31005

POWER RATING CHART

Fig. 2



In order to increase the stability, it is recommended to reduce the nominal power in relation to tolerance.

Tolerance ± 1% 100 % Pr
Tolerance ± 0,5 % 75 % Pr
Tolerances ± 0,25 % to ± 0,01 % 50 % Pr

TEMPERATURE COEFFICIENT

The variation curve of the resistance in relation with temperature is not linear.

In 0°C, +75°C temperature range, temperature coefficient is extremely low (practically not measurable).

In certain conditions of use, the temperature coefficient can be guaranteed ≤ ±2 ppm/°C.

Please consult SFERNICE.

SPECIAL REQUIREMENTS

Special matching in tolerance and T.C. Please consult SFERNICE.

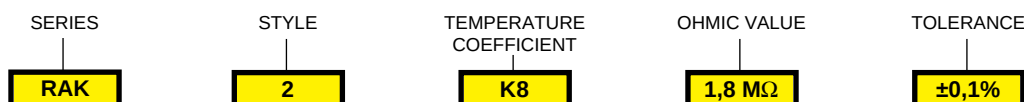
RECOMMENDATIONS FOR USE

The comparative measurements and in particular those carried out during initial and final measurements of a complex test must be effected at the same temperature (± 1°C) and under the same voltage (± 5%) between points at a 5 mm distance from the body of the component.

MARKING

SFERNICE trademark, series, style, NF style if applicable, nominal resistance (in Ω, kΩ, MΩ), tolerance (in %), temperature coefficient, manufacturing date.

ORDERING PROCEDURE



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