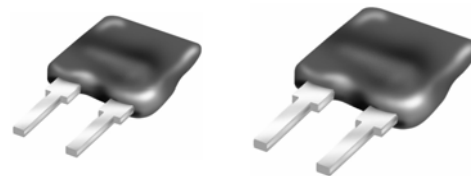
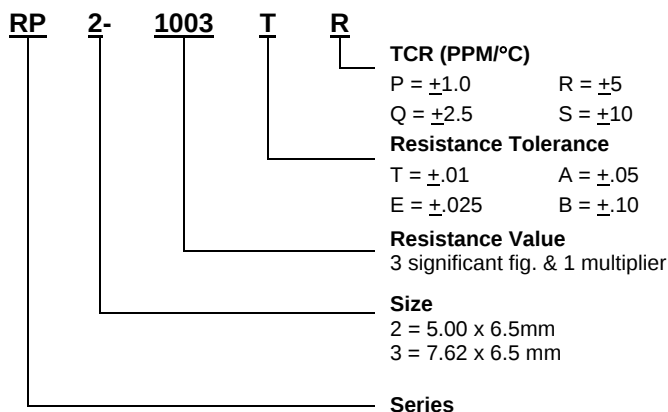


The content of this specification may change without notification 08/17/06
Custom solutions are available.

HOW TO ORDER



FEATURES

- Ultra Stable Thin Film Resistor
- Working temperature -50°C to +150°C
- Excellent to performance of absolute tolerance as .01% and absolute TCR at 1ppm
- Applicable Specifications: EIA575, CECC 40300, and MIL-R-55182E

RESISTANCE RANGE

Type	TCR/ppm°C	Resistance Ω	Tolerance %
RP2	± 10	10.0 – 50.0	± 0.10
	$\pm 1, \pm 2.5, \pm 5, \pm 10$	50.0 – 100K	$\pm 0.01, \pm 0.05, \pm 0.25, \pm 0.10$
RP3	± 10	10.0 – 50.0	± 0.10
	$\pm 1, \pm 2.5, \pm 5, \pm 10$	50.0 – 200K	$\pm 0.01, \pm 0.05, \pm 0.25, \pm 0.10$
	$\pm 5, \pm 10$	200K – 1.0M	$\pm 0.05, \pm 0.10$

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATION		CONDITIONS
Material	Passivated Nichrome		
Absolute TCR	$\pm 1.0\text{ppm}/^\circ\text{C}$ to $\pm 10\text{ppm}/^\circ\text{C}$		0°C to +70°C
Tolerance Absolute	$\pm 0.01\%$ to 0.10%		
Power Rating	RP2	125mW	@ +70°C
	RP3	250mW	@ +70°C
Working Voltage (Max)	RP2	112 volts	
	RP3	250 volts	
Overload Voltage (Max)	RP2	250 volts	
	RP3	500 volts	
Operating Temp. Range	-55°C to +150°C		

DIMENSIONS (mm)

Style	L	H	I	P	W	D	F
RP2	5.00 Max	6.50 Max	3.0 $\pm$ 0.5	2.54 $\pm$ 0.2	2.5 Max	0.25+0.15-0.5	0.50+0.15-0.5
RP3	7.62 Max	6.50 Max	3.0 $\pm$ 0.5	5.08 $\pm$ 0.2	2.5 Max	0.25+0.15-0.5	0.50+0.15-0.05

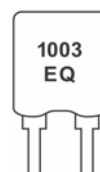
PERFORMANCE

TEST	REQUIREMENTS			CONDITIONS
	CECC 40300	MIL-R-55182E	Drifts Max.	
Overload	$\pm 0.01\%$	$\pm 0.05\%$	0.01%	2.5Un/5sec; U Max. <2Un
Temperature Cycling	$\pm 0.01\%$	$\pm 0.05\%$	0.01%	-55°C to +155°C for 5 cycles CEI 68-2-14
Terminal Strength	$\pm 0.01\%$	$\pm 0.02\%$	0.01%	CEI 68-2-21 Test Ua (Pulling), Ub (Bending), Uc (Twisting)
Resistance to Solder Heat	$\pm 0.01\%$	$\pm 0.02\%$	$\pm 0.01\%$	+260°C/10 sec
Vibration	$\pm 0.01\%$	$\pm 0.02\%$	0.01%	10Hz to 500Hz 10g 6hrs. Met B4; CEI 68-2-6 Test Fc
Climatic Sequence	$\pm 0.05\%$ Insulation Resistance > $10^2\text{M}\Omega$	--	0.05%	-55°C/+155°C for 6 cycles 95% RH RH85mbar CEI68-2-61
Moisture	$\pm 0.05\%$ Insulation Resistance > $10^2\text{M}\Omega$	--	0.02%	56 Days 95% RH +40°C; CEI 68-2-3
Load Life	$\pm 0.05\%$	$\pm 0.05\%$	0.05%	1000 hrs. Pn at 70°C 90°/30'
High Temp. Storage	$\pm 0.05\%$	--	0.05%	1000 hrs./+155°C; CEI 68-2; Test B

MECHANICAL SPECIFICATIONS

Resistive Material	Nichrome
Substrate Material	Alumina
Terminals	SnPb on Cu Alloy
Protection	Epoxy Coating

MARKING



1003 = Resistance Value (Ω)

E = Tolerance of ± 0.025

Q = TCR of ± 2.5

SCHEMATIC

