KOA SPEER ELECTRONICS, INC.

TPR

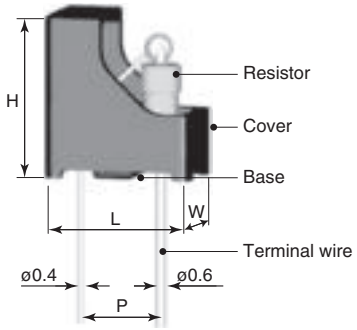
anti-surge fusing resistor

EU RoHS COMPLIANT

features

- Quickly fuses to the overload
- Circuit is completely isolated after fusing
- Lightning surge test (IEC61000-4-5) effective
- Can be used in high temperature environment

dimensions and construction



Type	Dimensions inches (mm)			
	W	D	H	P
TPR1	.354±.004 (9.0±0.1)	.197±.004 (5.0±0.1)	.394±.004 (10.0±0.1)	.197±.02 (5.0±0.5)

ordering information

New Part #

TPR	1	C	T	A	100	J
Type	Power Rating	Terminal Surface Material	Taping	Packaging	Nominal Resistance	Resistance Tolerance
	1: 1W	C: Sn-Cu	T: Taping Blank: Bulk	A: AMMO Blank: Bulk	J: 3 digits	J: ±5%

applications and ratings

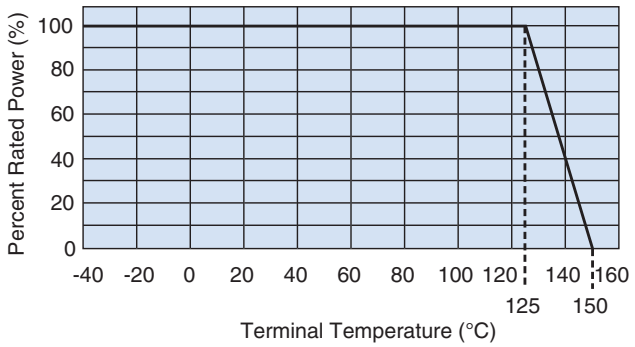
Part Designation	Power Rating	Resistance Range J: ±5% E24	T.C.R. (x 10^{-6}/K)	Terminal Temperature Under Rated Load	Operating Temperature Range	Maximum Open-Circuit Voltage	Lightning Surge Test*	Maximum Working Voltage	Maximum Overload Voltage
TPR1	1W	2Ω ~ 10kΩ	~51Ω: 200 56Ω~: 350	+125°C and less	-40°C ~ +150°C	320V a.c.	1.5kV	$E=\sqrt{(PxR)}$	$E=\sqrt{(PxRx2)}$

* Lightning surge test at 10Ω

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

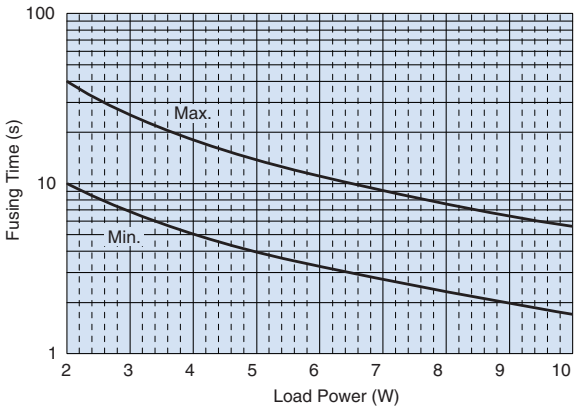
environmental applications

Derating Curve

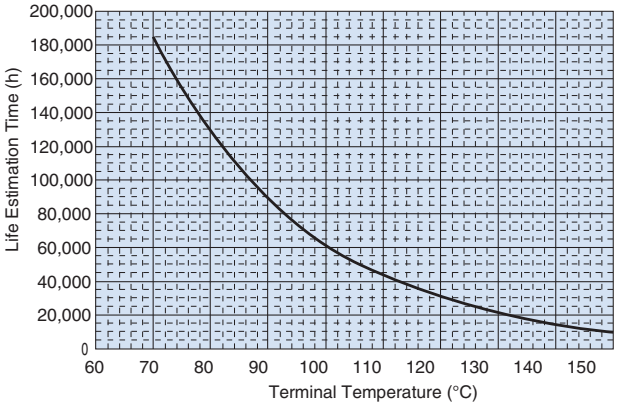


For resistors operated at a terminal temperature of 125°C or above, a power rating shall be derated in accordance with the above derating curve.

Fusing Characteristics



Life Estimation Curve



Performance Characteristics

Parameter	Requirement		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/-40°C and +25°C/+125°C
Fusing Characteristics	Within 6 seconds	—	Rated power x 10
Rapid Change of Temperature	±(5%+0.05Ω)	2%	-40°C/0.5 hr, +125°C/0.5 hr, 1000 cycles
Overload (Short Time)	±(5%+0.05Ω)	2%	Rated power x 2 for 5 seconds
Resistance to Soldering Heat	±(1%+0.05Ω)	0.3%	260°C ± 5°C, 10 ± 1 second
Endurance at 125°C and Less of Terminal Temperature	±(5%+0.05Ω)	3%	Terminal temperature: 125°C, 1.5 hr ON, 0.5 hr OFF cycle, 1000 hours