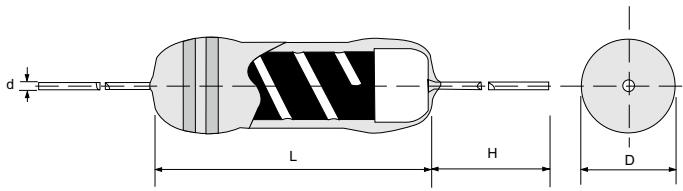


PPR Pulse Protective Resistor

*Quality • Reliability
Cost-Down via Innovation.*

PPR



Features

- Application: high-frequency, sharp-impulse circuits.
- To protect active components in missile detonators, triac switching circuits, etc.
- Offer every better aspect of performance than carbon composition resistor.
- No "sintering effect" caused by high surge that greatly decreases resistance value.
- Replaces carbon composition resistor.
- Conformal multi-layer non-flammable coating.
- Products meet RoHS requirements and do not contain substances of very high concern identified by European Chemicals Agency

DIMENSIONS

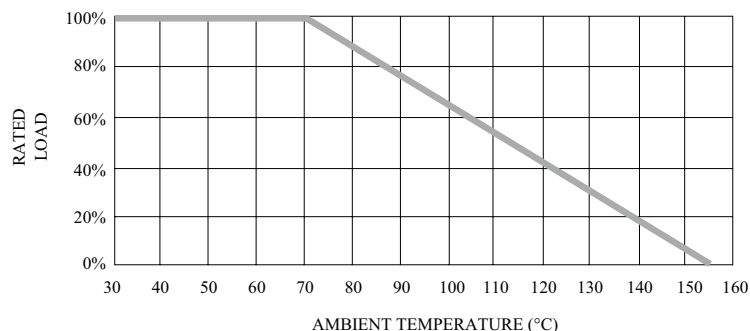
Type	Body Length (L, mm)	Body Diameter (D, mm)	Lead Wire Length (H, mm)	Lead Wire Diameter (d, mm)	Net Weight Per 1000 Pcs
PPR25	6.50 ± 1.0	2.6 ± 0.3	26 ± 3.0	0.55 ± 0.02	300 Grams
PPR52	6.50 ± 1.0	2.6 ± 0.3	26 ± 3.0	0.55 ± 0.02	300 Grams
PPR51	9.00 ± 1.0	3.2 ± 0.2	26 ± 3.0	0.70 ± 0.03	340 Grams
PPR100	11.0 ± 1.0	4.0 ± 0.5	28 ± 3.0	0.70 ± 0.03	500 Grams
PPR200	13.5 ± 1.0	5.0 ± 0.5	30 ± 3.0	0.80 ± 0.03	1050 Grams

GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Maximum Permissible Surge Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
PPR25	1/4W	250V	7KV	10Ω	4.7MΩ	±5%	E-24
PPR52	1/2W	250V	7KV	10Ω	4.7MΩ	±5%	E-24
PPR51	1/2W	350V	10KV	2.2Ω	4.7MΩ	±5%	E-24
PPR100	1W	350V	15KV	10Ω	4.7MΩ	±5%	E-24
PPR200	2W	400V	20KV	10Ω	4.7MΩ	±5%	E-24

Special sizes, values, and specifications not listed available on special order.

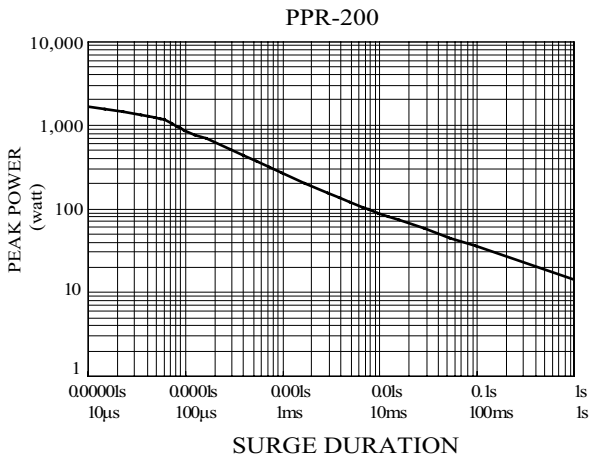
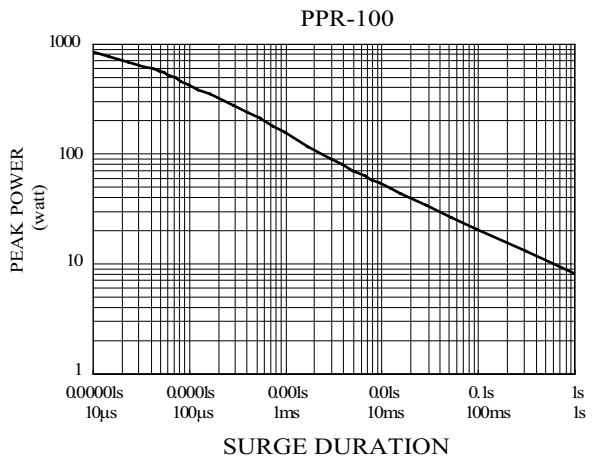
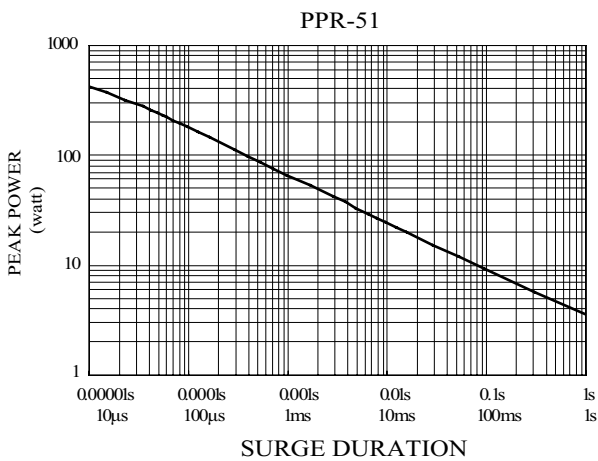
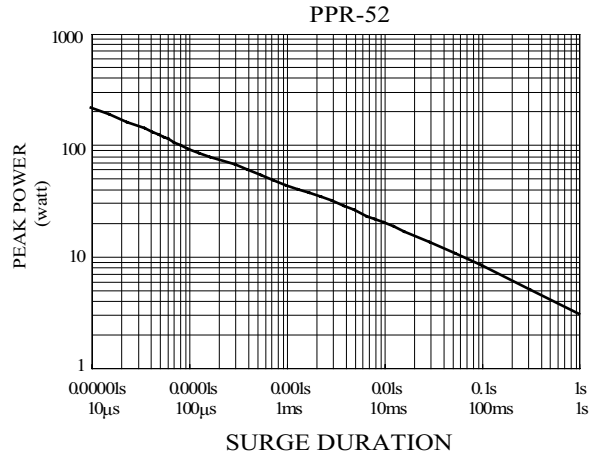
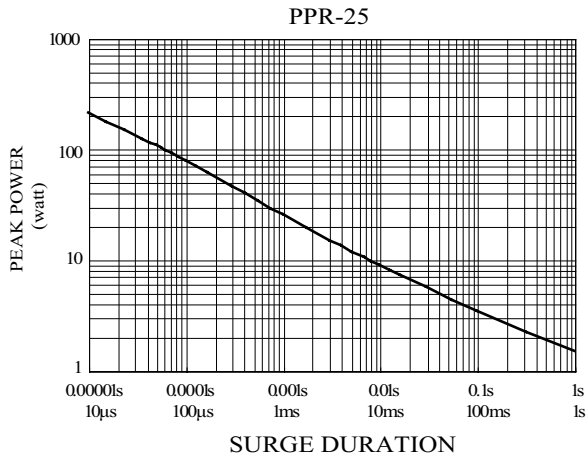
POWER DERATING CURVE



Quality • Reliability
Cost-Down via Innovation.

■ SINGLE SURGE PERFORMANCE

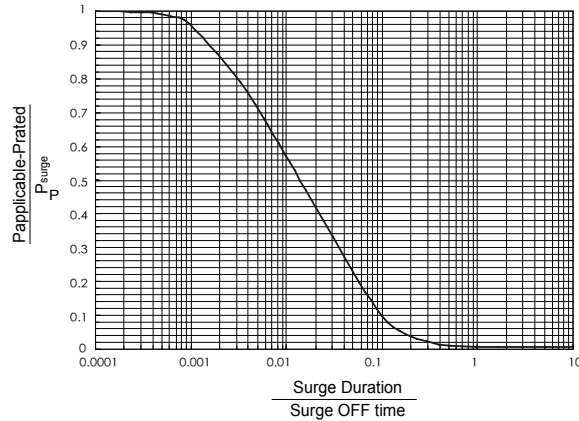
PPR



Quality • Reliability
Cost-Down via Innovation.

PPR

■ SURGE POWER DERATING CURVE



Notes:

- SINGLE SURGE PERFORMANCE graph is good for NON REPETITIVE applications operating in an ambient temperature of 70°C or less. For temperatures above 70°C, the graph power must be derated further linearly down to zero at 155°C.
- To determine applicable surge power in continuous-surge applications:
 1. Identify allowable duration and peak power P_{surge} of single surge;
 2. Determine ratio of surge duration/surge OFF time in application;
 3. Calculate $P_{\text{applicable}}$ backwardly according to Y-axis of SURGE POWER DERATING CURVE.

■ TECHNICAL SUMMARY

Characteristics	Limits	
Dielectric Withstanding Voltage, VAC or DC	PPR25/ 52/ 51/ 100 :	600
	PPR200:	700
Temperature Coefficient, PPM / °C*	±750, ±1200	
Operating Temperature Range, °C	-55 ~ +155	
Insulation Resistance, MΩ	>10 ⁴	

* Not applicable to all resistance values. Please check with us regarding the PPM of specific resistance value(s).

■ PART NUMBER

Example: PPR200J10K0TKZTB500

PPR200	J	10K0	TKZ	TB500
Type	Tolerance	Resistance	TCR	Packaging
	J (5%)	10KΩ 4-character code containing - 3 significant digits 1 letter multiplier <u>OHM MULTIPLIER</u> R = 1 K = 10 ³ M = 10 ⁶ G = 10 ⁹	3-character code TKZ = Default Product Temperature Coefficient. Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.*	5-character code TB = Tape Box (pieces per box) <u>PPR25/PPR52/</u> <u>PPR51</u> 2K0 = 2,000 <u>PPR100</u> 1K0 = 1,000 <u>PPR200</u> 500 = 500

* For the availabilities of non-default temperature coefficient, please check with us. Reference for TCR letter codes can be found in section (4) of Part Number Construction in the Appendices.

■ PERFORMANCE SPECIFICATIONS

Characteristics	Test Conditions	Limits		
Short Time Over Load	IEC 60115-1 4.13 5 seconds 2.5x rated voltage (not over 2X max. working voltage)	±1%		
Load Life In Humidity	IEC 60115-1 4.24 56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity	±5%		
Load Life 1,000 hours	IEC 60115-1 4.25.1 Rated load (not over max. working voltage) with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C	±5%		
Resistance To Soldering Heat	IEC 60115-1 4.18.2 Leads immersed till 3mm from the body in (260±5)°C solder for 10±1 seconds	±1%		
Solderability	IEC 60115-1 4.17.2 Solder area covered after (235±3)°C/(2±0.2) seconds with flux applied	95% Min.		
Vibration	IEC 60115-1 4.22 Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz.	±1%		
Thermal Endurance	IEC 60115-1 4.25.3 1000 hours at 155°C without load	±1%		
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +155°C 30minutes, 5 cycles	±2%		
Surge Test	Surge voltage = $\sqrt{(2400 \times P \times R)}$ DC P is power rating, R is resistance value, surge voltage is not more than listed at right. Surge spec = 1.2/50µs Period = 12 sec Number of surges = 50	PPR25	7KV	5%
		PPR52	7KV	
		PPR51	10KV	
		PPR100	15KV	
		PPR200	20KV	