

FEATURES

- | Plastic package has underwriters laboratory
- | Flammability classification 94V-0
- | Glass passivated junction
- | 5000W peak pulse power capability on 10/1000μs waveform
- | Excellent clamping capability
- | Low incremental surge resistance
- | Fast response time: typically less than 1.0ps from 0 Volts to V_{BR}
- | Typical IR less than 2μA above 10V
- | Molded plastic over glass passivated junction
- | Polarity: Color band denoted cathode except bidirec
- | Mounting Positing: Any
- | Meet AEC-Q101 Requirements



R-6/P-600



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +175	$^{\circ}\text{C}$
Peak pulse power dissipation at 10/1000μs waveform	P_{PP}	5000	W
Steady state power dissipation at $T_L=75^{\circ}\text{C}$	$P_{M(AV)}$	8.0	
Typical thermal resistance junction to lead	$R_{\theta JL}$	8.0	$^{\circ}\text{C/W}$
Typical thermal resistance, junction to ambient	$R_{\theta JA}$	40	

ELECTRICAL CHARACTERISTICS($T_A=25^\circ\text{C}$)

Part Number	Marking	V_R	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{①}$	$I_R@V_R$
		V	Min.(V)	Max.(V)	mA	V	A	Max.(μA)
TP5KP48CA	5KP48CA	48.0	53.3	58.9	5	77.4	65.9	2

Note:

①.Surge waveform:10/1000 μs

V_R : Stand-off voltage -- Maximum voltage that can be applied

V_{BR} : Breakdown voltage

V_C : Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

I_R : Reverse leakage current

RATINGS AND CHARACTERISTICS CURVES($T_A=25^\circ\text{C}$)

Figure 1: V- I curve characteristics (Bi-directional)

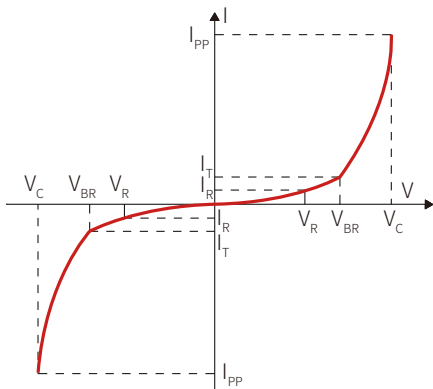


Figure 2: Power derating curve

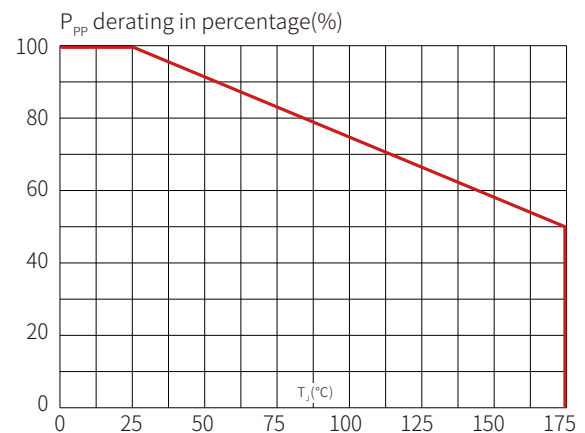
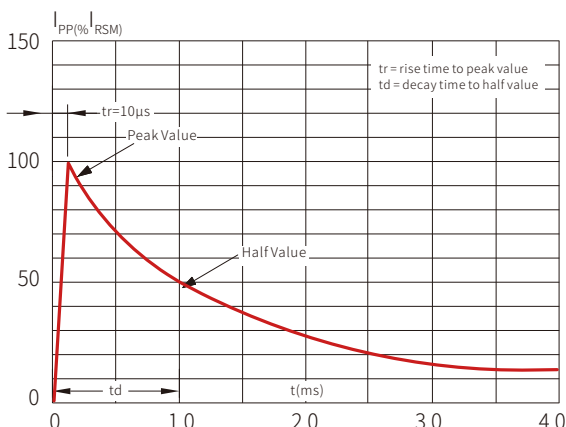
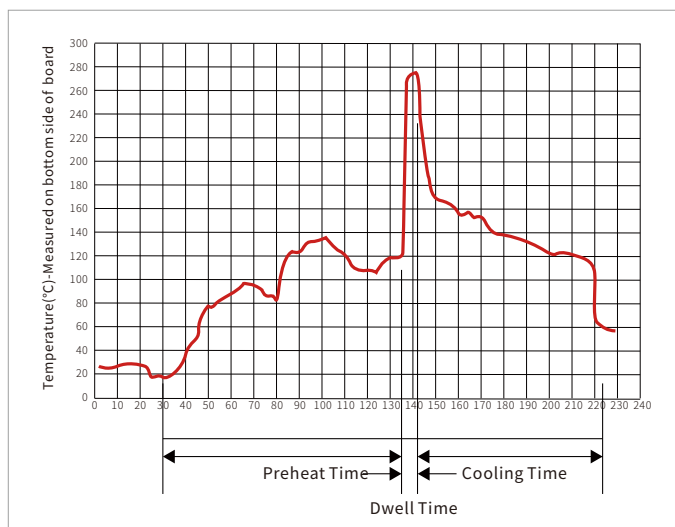


Figure 3: Pulse waveform

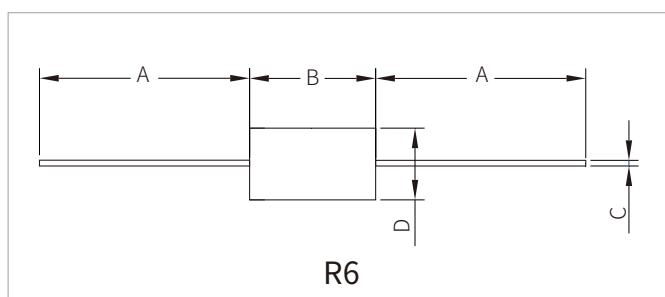


WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	8.60	9.40	0.339	0.370
C	1.20	1.40	0.047	0.055
D	8.60	9.10	0.339	0.358

ORDERING INFORMATION

Part Number	Component Package	PER BOX (pcs)	Per Carton (Pcs)	Description
TP5KP48CA	R6/P600	300	3000	Box

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