

FEATURES

- | Plastic package has underwriters laboratory
- | Flammability classification 94V-0
- | Glass passivated junction
- | 8000W 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} Min
- | 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 ~ +150	$^{\circ}\text{C}$
Peak pulse power dissipation at 10/1000μs waveform	P_{PP}	8000	W
Steady state power dissipation at $T_L=75^{\circ}\text{C}$	$P_{M(AV)}$	8.0	
Peak forward surge current, 8.3ms single half sine-wave for unidirectional only	I_{FSM}	400	A
Typical thermal resistance, junction to ambient	$R_{\theta JA}$	40	$^{\circ}\text{C/W}$

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)
TP8KP33CA	8KP33CA	33.0	36.7	40.6	5	53.3	150.1	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 IPP

I_R : Reverse leakage current

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

Figure 1: Pulse waveform

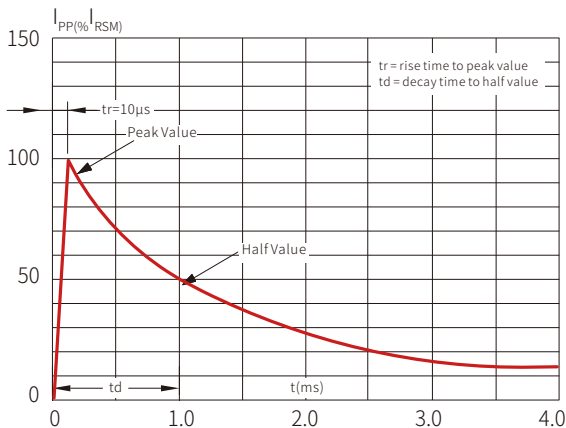


Figure 2: V- I curve characteristics

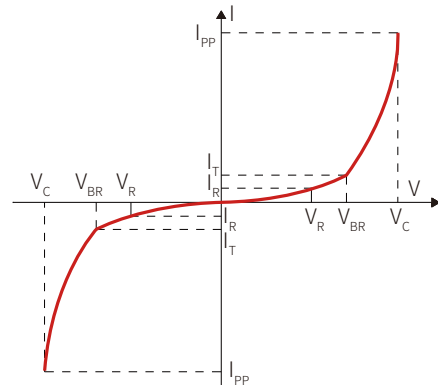
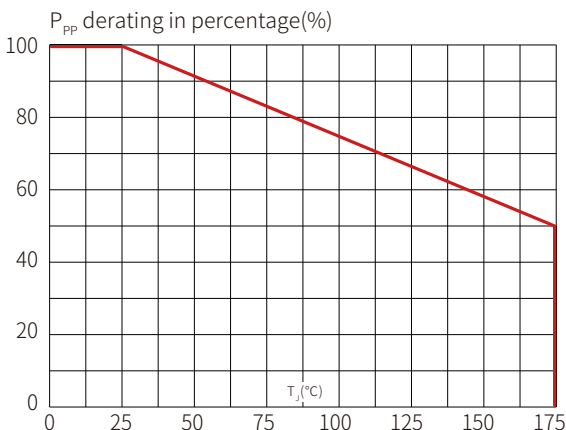
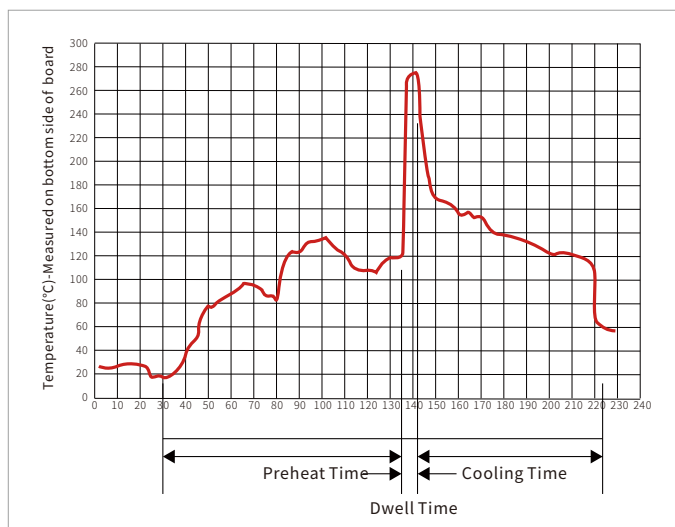


Figure 3: Power derating curve

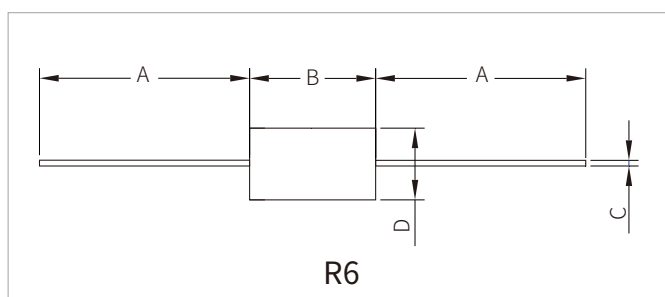


WAVE SOLDERING



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
TP8KP33CA	R6/P600	300	3000	Box

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

To find your local partner within Semiware' s global website: www.semiware.com

© 2022 Semiware Semiconductor Inc.

The content of this document has been carefully checked and understood. However, neither Semiware nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Semiware does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Chinese law and resulting disputes shall be settled by the courts at the place of business of Semiware. Latest publications and a complete disclaimer can be downloaded from the Semiware website. All trademarks recognized.