

## P1CH3.3A ~ P1CH36A Series

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

**Voltage**

**3.3~36 V**

**Power**

**150 W**

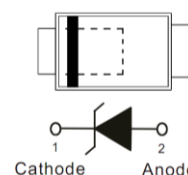
#### Features

- Ultra thin profile package for space constrained utilization.
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case: Molded plastic, SOD-323HE
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end

SOD-323HE



### Maximum Ratings and Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation( $t_p = 10/1000\text{ us}$ )	$P_{PP}^{(1,2)}$	150	W
Peak Pulse Current on $t_p = 10/1000\text{ us}$ waveform <sup>(Fig.2)</sup>	$I_{PPM}^{(1)}$	See table 1	A
ESD IEC61000-4-2(Air)	$V_{ESD}$	$\pm 30$	kV
ESD IEC61000-4-2(Contact)		$\pm 30$	
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}^{(3)}$	300	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-55~150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~150	$^\circ\text{C}$



## P1CH3.3A ~ P1CH36A Series

### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Part Number	V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub> @V <sub>RWM</sub>	V <sub>C</sub> @I <sub>PP</sub>		Marking Code
		Min.	Max.	I <sub>T</sub>				
	V	V	V	mA	uA	V	A	
150W Transient Voltage Suppressor								
P1CH3.3A	3.3	5.2	6	10	50	8.5	17.6	2E1
P1CH5.0A	5	6.4	7	10	5	9.2	16.3	2E2
P1CH6.0A	6	6.67	7.37	10	5	10.3	14.5	2E3
P1CH6.5A	6.5	7.22	7.98	10	4	11.2	13.4	2E4
P1CH7.0A	7	7.78	8.6	10	4	12	12.5	2E5
P1CH7.5A	7.5	8.33	9.21	1	3	12.9	11.6	2E6
P1CH8.0A	8	8.89	9.83	1	2	13.6	11	2E7
P1CH8.5A	8.5	9.44	10.4	1	2	14.4	10.4	2E8
P1CH9.0A	9	10	11.1	1	1	15.4	9.7	2E9
P1CH10A	10	11.1	12.3	1	1	17	8.8	2EA
P1CH11A	11	12.2	13.5	1	1	18.2	8.2	2EC
P1CH12A	12	13.3	14.7	1	1	19.9	7.5	2ED
P1CH13A	13	14.4	15.9	1	0.5	21.5	7	2EE
P1CH14A	14	15.6	17.2	1	0.5	23.2	6.5	2EF
P1CH15A	15	16.7	18.5	1	0.5	24.4	6.1	2EH
P1CH16A	16	17.8	19.7	1	0.5	26	5.8	2EJ
P1CH17A	17	18.9	20.9	1	0.5	27.6	5.3	2EK
P1CH18A	18	20	22.1	1	0.5	29.2	5.1	2EL
P1CH20A	20	22	24.5	1	0.5	32.4	4.6	2EM
P1CH22A	22	24.4	26.9	1	0.5	35.5	4.2	2EN
P1CH24A	24	26.7	29.5	1	0.5	38.9	3.9	2EP
P1CH26A	26	28.9	31.9	1	0.5	42.1	3.6	2ER
P1CH28A	28	31.1	34.4	1	0.5	45.4	3.3	2ET
P1CH30A	30	33.3	36.8	1	0.5	48.4	3.1	2EU
P1CH33A	33	36.7	40.6	1	0.5	53.3	2.8	2EV
P1CH36A	36	40	44.2	1	0.5	58.1	2.6	2EW

#### NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A = 25^\circ\text{C}$  per Fig.2
2. Mounted on a FR-4 PCB, single-sided copper, with  $100\text{cm}^2$  copper pad area
3. Mounted on a FR4 PCB, single-sided copper, mini pad
4. TVS is a transient protection device, it is strongly recommended not to use as a Zener.

## P1CH3.3A ~ P1CH36A Series

### TYPICAL CHARACTERISTIC CURVES

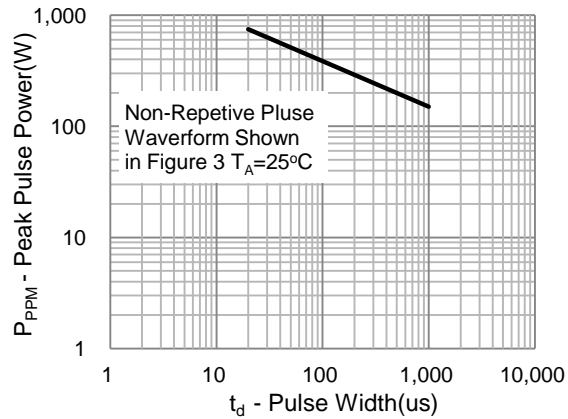


Fig.1 Pulse Power Rating Curve

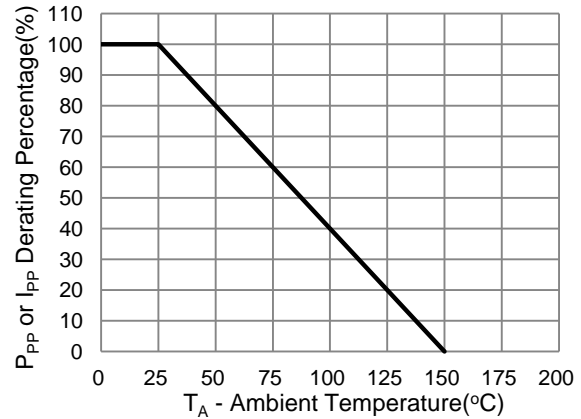


Fig.2 Derating Curve

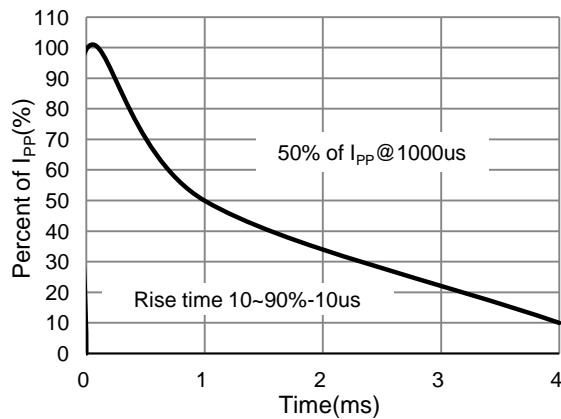


Fig.3 Pulse Waveform

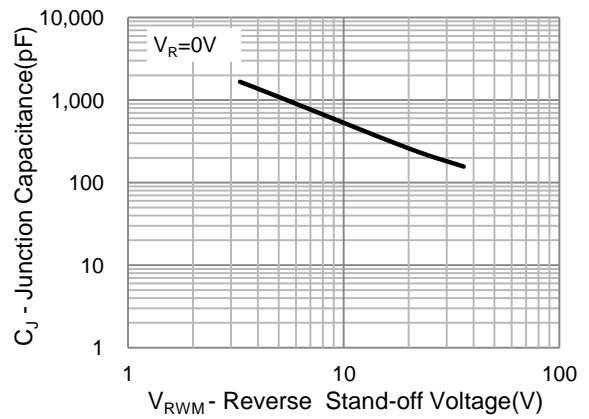


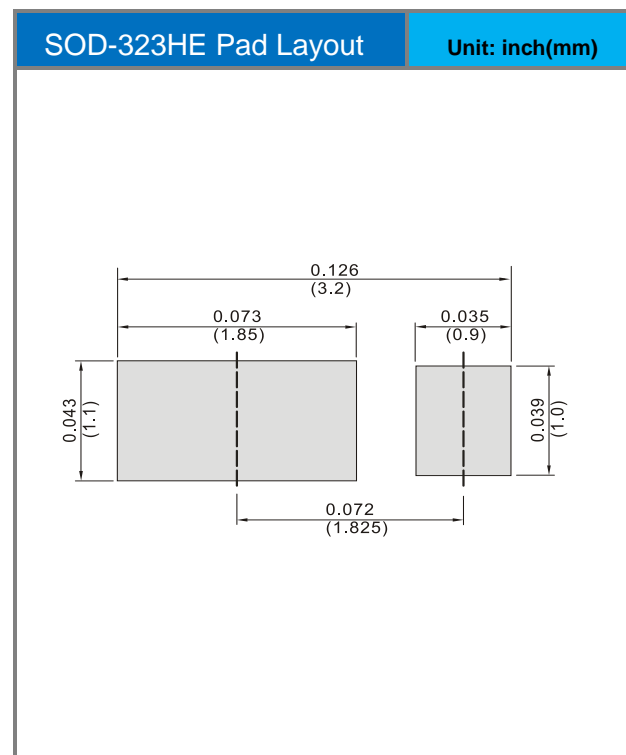
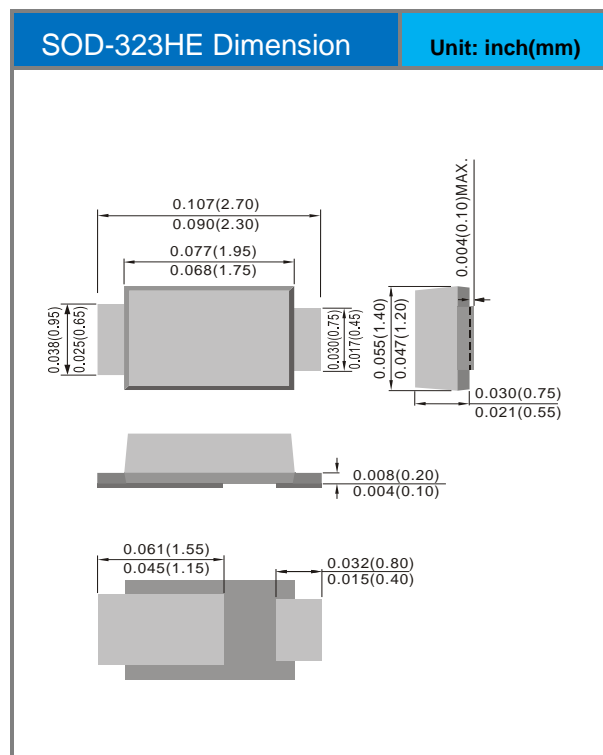
Fig.4 Typical Capacitance

## P1CH3.3A ~ P1CH36A Series

### Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
P1CHxxxA_R1_00001	SOD-323HE	5K pcs / 7" reel	See Table	Halogen free

### Packaging Information & Mounting Pad Layout





## **P1CH3.3A ~ P1CH36A Series**

### **Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Panjit:

P1CH14A\_R1\_00001