



P4HE3.3A~P4HE14A

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Voltage

3.3~14 V

Power

400 W

SOD-123HE

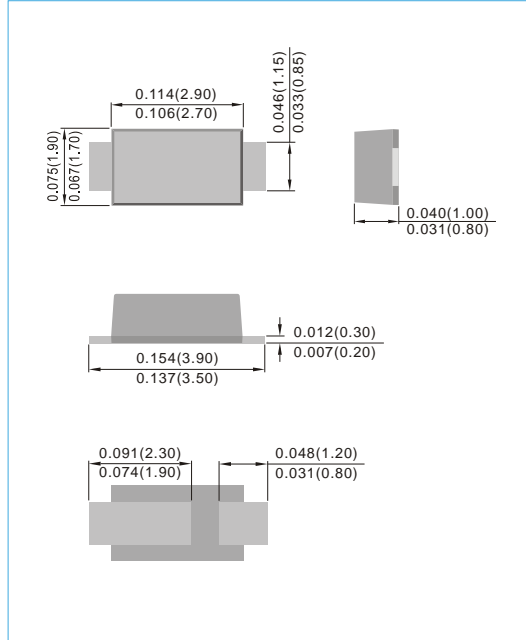
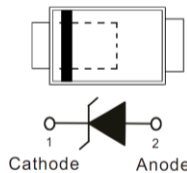
Unit : inch(mm)

Features

- For surface mounted applications in order to optimize board space.
- Ultra thin profile package for space constrained utilization.
- Package suitable for automated handling
- Low inductance
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std.(Halogen Free)

Mechanical Data

- Case: SOD-123HE, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0006 ounces, 0.0184 grams



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

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation($t_p=10/1000\mu\text{s}$) ^(NOTE 1,2)	P_{PP}	400	W
Peak Forward Surge Current (8.3ms single half sine-wave)	I_{FSM}	40	A
Peak Pulse Current on $t_p=10/1000\mu\text{s}$ waveform ^(NOTE1, Fig.2)	I_{PPM}	See table 1	A
ESD IEC61000-4-2(Air)	V_{ESD}	± 30	kV
ESD IEC61000-4-2(Contact)		± 30	
Typical Thermal Resistance Junction to Ambient ^(NOTE2)	$R_{\theta JA}$	107	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Notes :

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ per Fig.2
2. Mounted on 5mm^2 copper pads to each terminal.
3. A transient suppressor is selected according to the working peak reverse voltage(V_{RWM}), which should be equal to or greater than the DC or continuous peak operation voltage level.
4. TVS is a transient protection device, it is strongly recommended not to use as a Zener.



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

Part Number	V_{RWM}	V_{BR}			$I_R@V_{RWM}$	$V_C@I_{PP}$		Marking Code
		Min.	Max.	I_T		V	A	
	V	V	V	mA	μA			
P4HE3.3A	3.3	5.2	6	10	600	8.5	47	4F1
P4HE5.0A	5	6.40	7	10	400	9.2	43.5	4F2
P4HE6.0A	6	6.67	7.37	10	400	10.3	38.8	4F3
P4HE6.5A	6.5	7.22	7.98	10	250	11.2	35.7	4F4
P4HE7.0A	7	7.78	8.6	10	100	12	33.3	4F5
P4HE7.5A	7.5	8.33	9.21	1	50	12.9	31	4F6
P4HE8.0A	8	8.89	9.83	1	25	13.6	29.4	4F7
P4HE8.5A	8.5	9.44	10.4	1	10	14.4	27.8	4F8
P4HE9.0A	9	10	11.1	1	5	15.4	26	4F9
P4HE10A	10	11.1	12.3	1	2.5	17	23.5	4FA
P4HE11A	11	12.2	13.5	1	2.5	18.2	22	4FB
P4HE12A	12	13.3	14.7	1	2.5	19.9	20.1	4FC
P4HE13A	13	14.4	15.9	1	0.1	21.5	18.6	4FD
P4HE14A	14	15.6	17.2	1	0.1	23.2	17.2	4FE



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TYPICAL CHARACTERISTIC CURVES

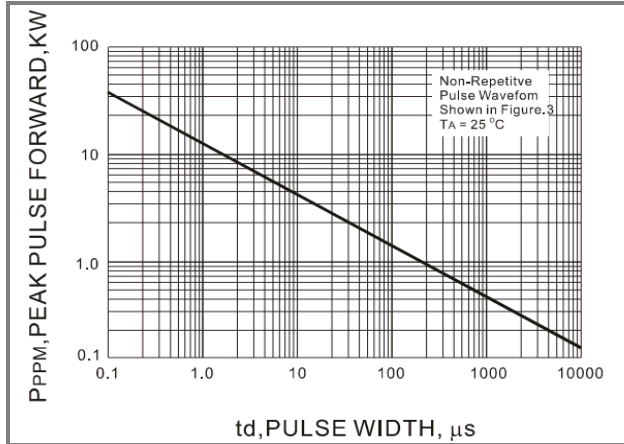


Fig.1 Peak Pulse Power Rating Curve

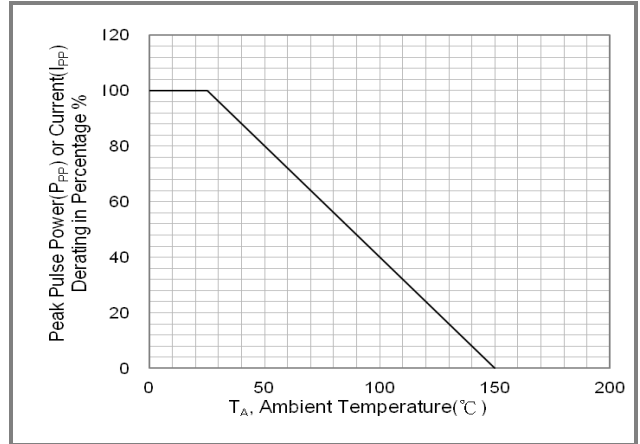


Fig.2 Derating Curve

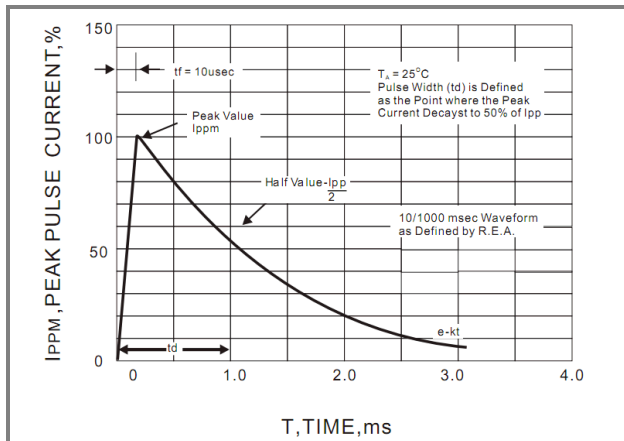


Fig.3 Pulse Waveform

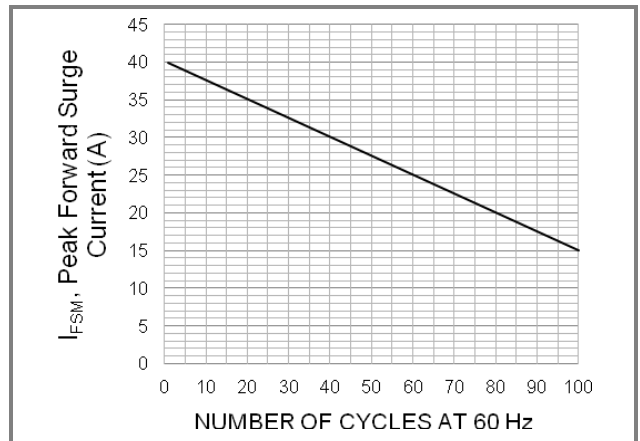


Fig.4 Maximum Non-repetitive Peak Forward Surge Current



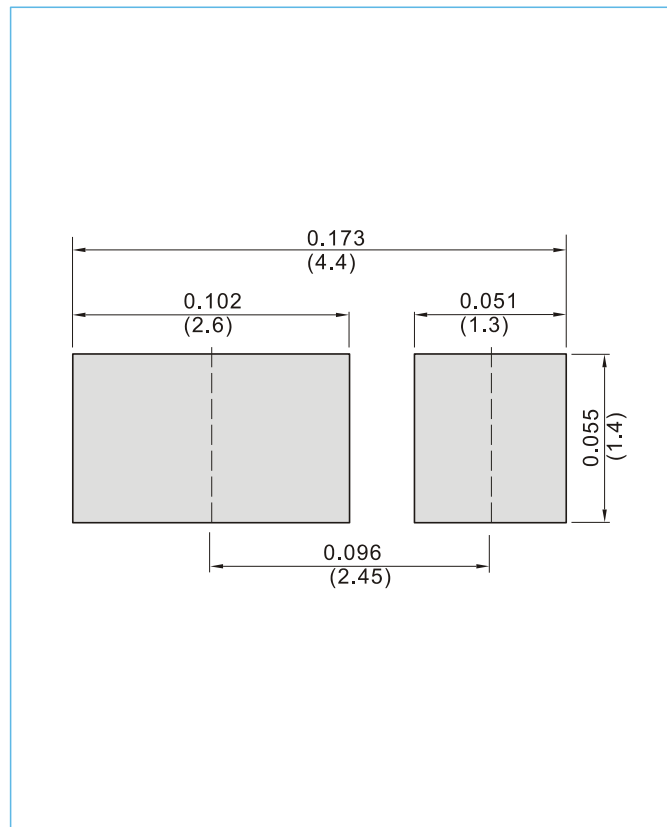
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PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
P4HE3.3A_R1_00001	SOD-123HE	3K pcs / 7" reel	4F1	Halogen free
P4HE3.3A_R2_00001	SOD-123HE	10K pcs / 13" reel	4F1	Halogen free

MOUNTING PAD LAYOUT

SOD-123HE Unit : inch(mm)





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