



**THE DATASHEET OF  
SMD36HE1-TP**



## Features

- Halogen Free. "Green" Device (Note 1)
- For Surface Mount Applications
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Extremely Low Thermal Resistance
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C(34HE1)
- Operating Junction Temperature Range: -55°C to +150°C(36HE1~320HE1)
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 6°C/W Junction to Lead(Note 3)
- Typical Thermal Resistance: 60°C/W Junction to Ambient(Note 3)
- Typical Thermal Resistance: 28°C/W Junction to Case(Note 4)

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SMD34HE1	H34	40V	28V	40V
SMD36HE1	H36	60V	42V	60V
SMD310HE1	H310	100V	70V	100V
SMD320HE1	H320	200V	140V	200V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

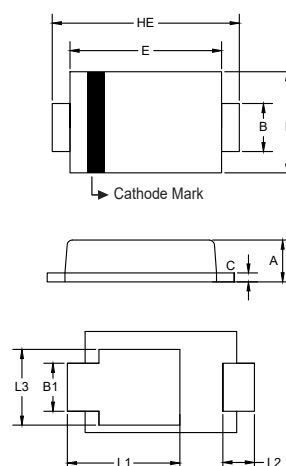
Average Forward Current	$I_{F(AV)}$	3.0A	See Fig.1
Peak Forward Surge Current	$I_{FSM}$	80A	8.3ms, Half Sine
Instantaneous Forward Voltage	$V_F$		
SMD34HE1		0.1 V(Max) 0.1 V(Typ)	$I_F=3.0A; T_J=25^\circ C$
SMD36HE1		0.65V(Max) 0.60V(Typ)	$I_F=3.0A; T_J=25^\circ C$
SMD310HE1		0.1 V(Max) 0.1 V(Typ)	$I_F=3.0A; T_J=25^\circ C$
SMD320HE1		0.15V(Max) 0.1 V(Typ)	$I_F=3.0A; T_J=25^\circ C$
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$		
SMD34HE1~SMD36HE1		50µA 20mA	$T_J=25^\circ C$ $T_J=125^\circ C$
SMD310HE1~SMD320HE1		10µA 10mA	$T_J=25^\circ C$ $T_J=125^\circ C$

Note :

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Mounted on P.C.B with 5x5mm Copper Pads, 2 OZ, FR4 PCB.
4. Mounted on P.C.B with Recommended Copper Pads, 2 OZ, FR4 PCB.

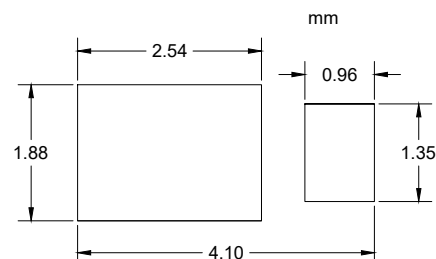
# 3 Amp Schottky Rectifier 40~200 Volts

## SOD-123HE1



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.030	0.035	0.75	0.90	
B	0.033	0.041	0.85	1.05	
B1	0.033	0.041	0.85	1.05	
C	0.004	0.010	0.10	0.25	
D	0.075	0.083	1.90	2.10	
E	0.114	0.122	2.90	3.10	
L1	0.079	0.096	2.00	2.45	
L2	0.016	0.033	0.40	0.85	
L3	0.051	0.067	1.30	1.70	
HE	0.138	0.154	3.50	3.90	

## Suggested Solder Pad Layout



**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

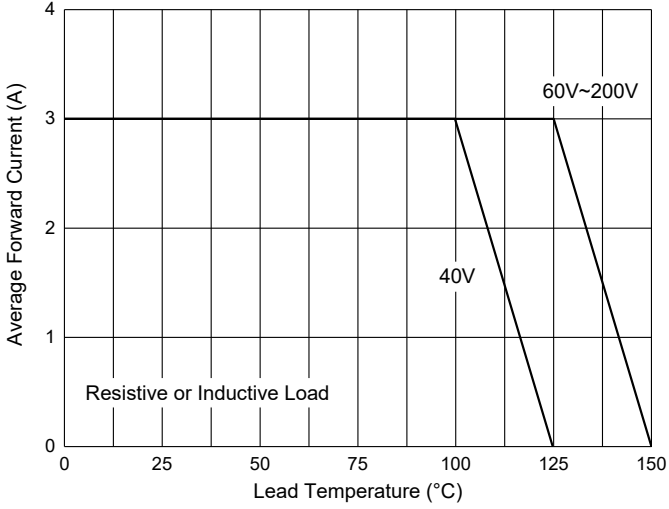


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

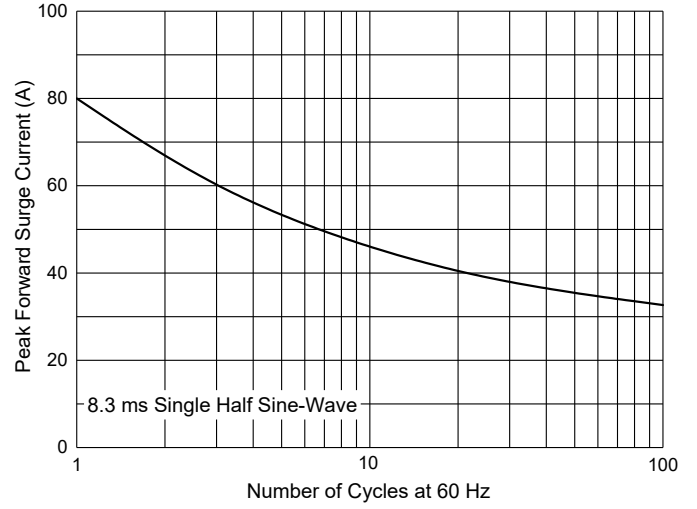


Fig. 3 - Typical Instantaneous Forward Characteristics

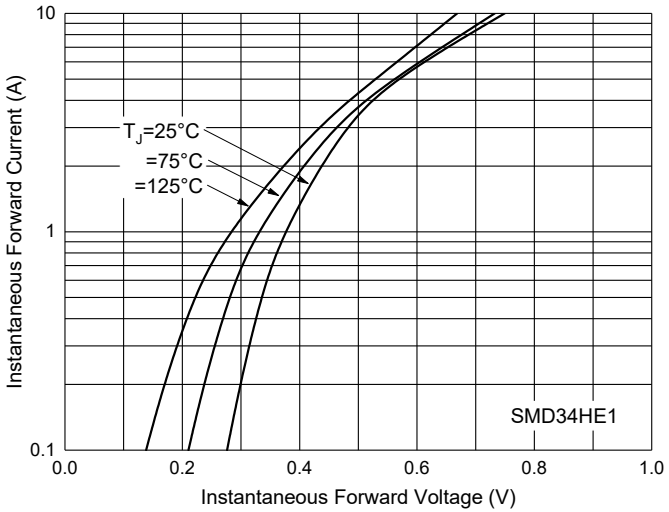


Fig. 4 - Typical Reverse Leakage Characteristics

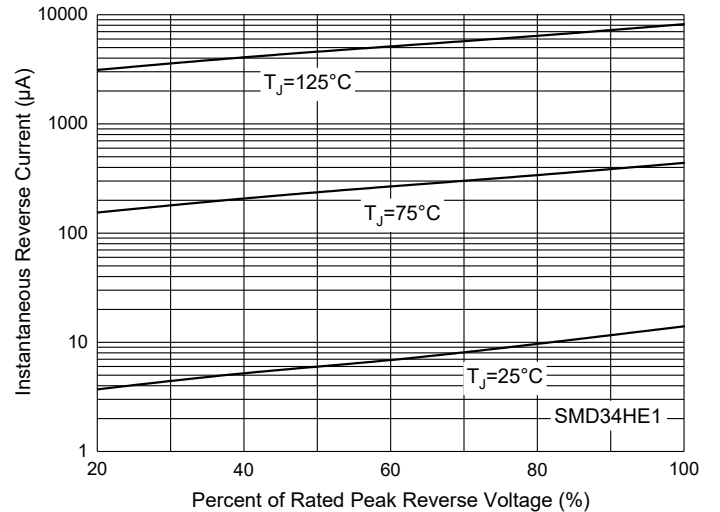


Fig. 5 - Typical Instantaneous Forward Characteristics

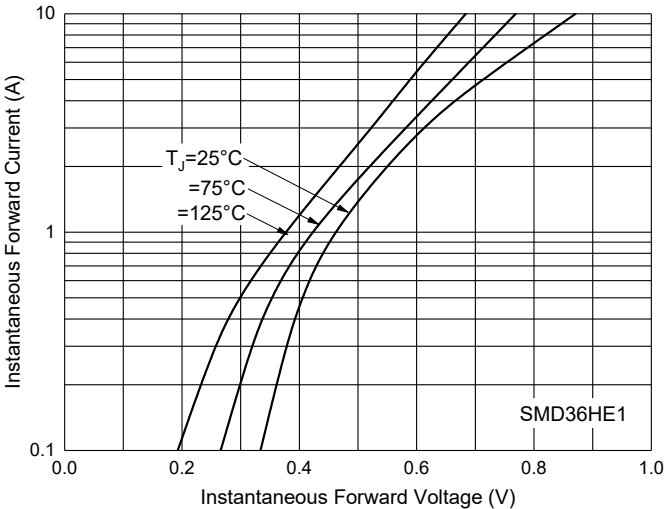
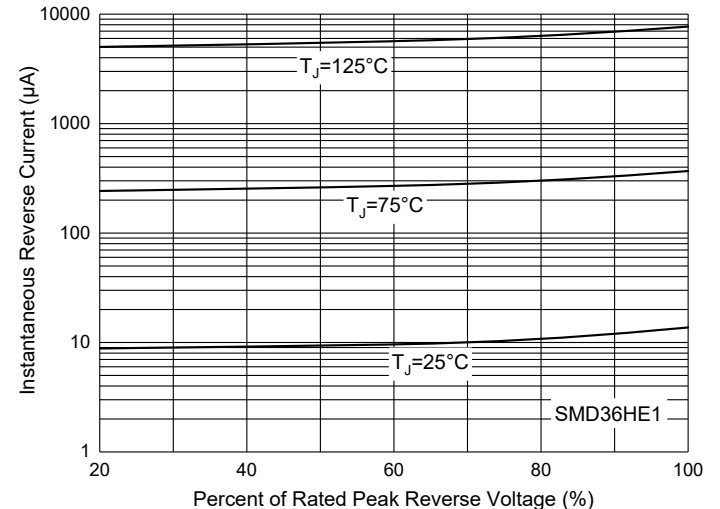


Fig. 6 - Typical Reverse Leakage Characteristics



**Curve Characteristics**

Fig. 7 - Typical Instantaneous Forward Characteristics

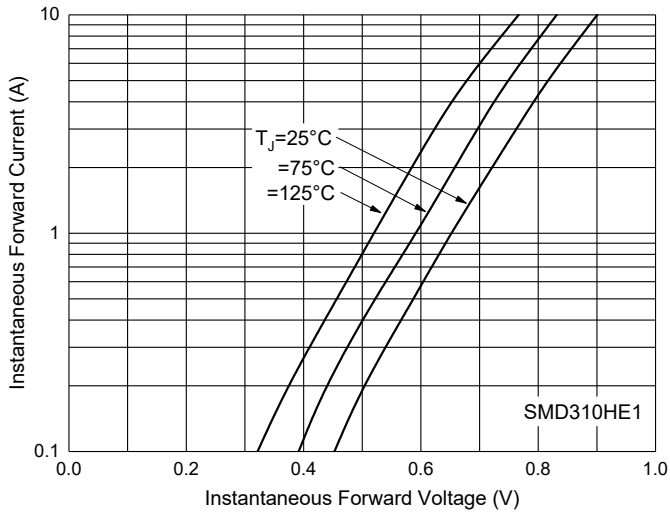


Fig. 8 - Typical Reverse Leakage Characteristics

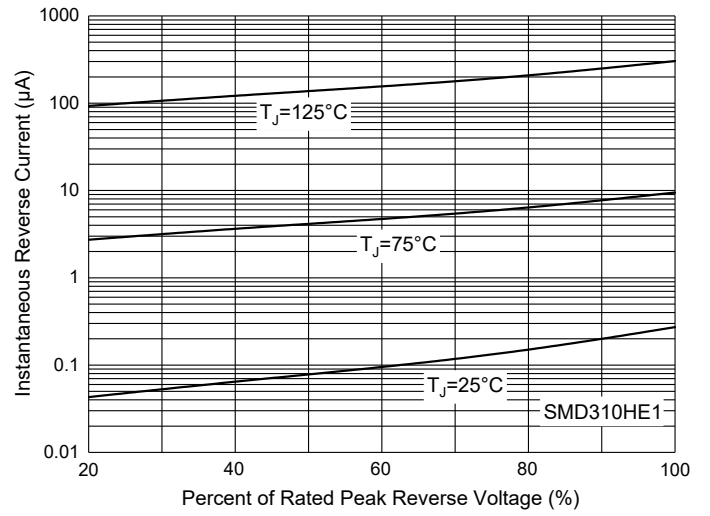


Fig. 9 - Typical Instantaneous Forward Characteristics

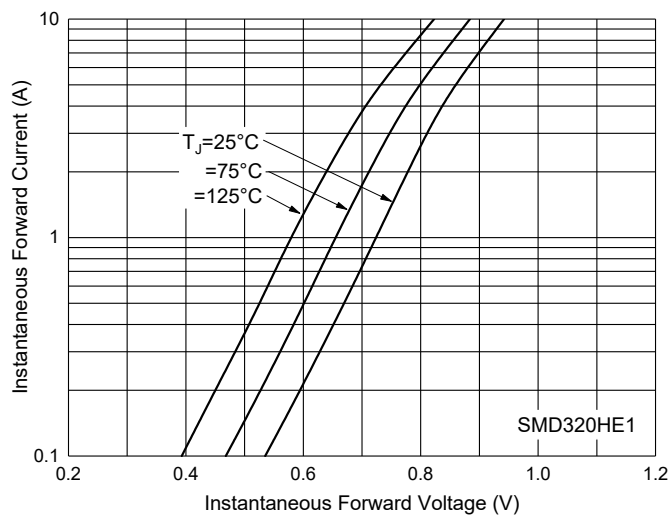
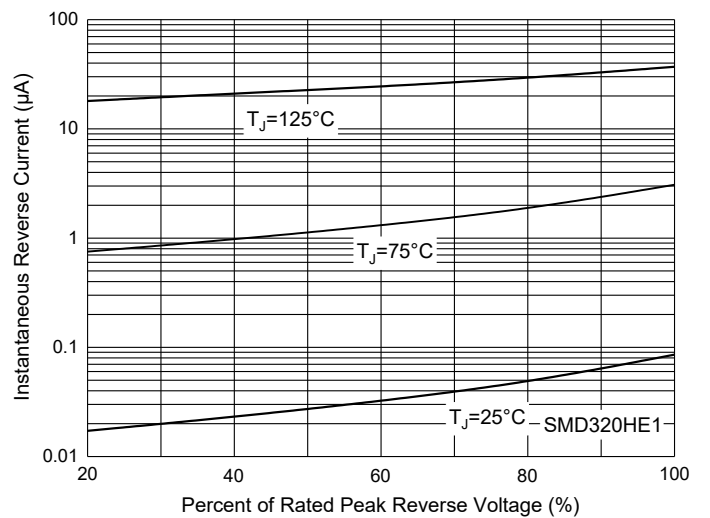


Fig. 10 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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