

## 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

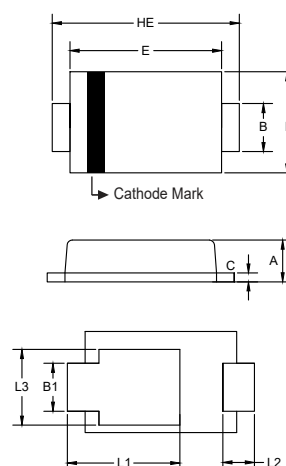
Average Forward Current	$I_{F(AV)}$	3.0A	See Fig.1
Peak Forward Surge Current	$I_{FSM}$	80A	8.3ms, Half Sine
Instantaneous Forward Voltage	$V_F$		
SMD34HE1		0.52V(Max) 0.47V(Typ)	$I_F=3.0A; T_J=25^\circ C$
SMD36HE1		0.65V(Max) 0.60V(Typ)	$I_F=3.0A; T_J=25^\circ C$
SMD310HE1		0.80V(Max) 0.77V(Typ)	$I_F=3.0A; T_J=25^\circ C$
SMD320HE1		0.85V(Max) 0.82V(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.

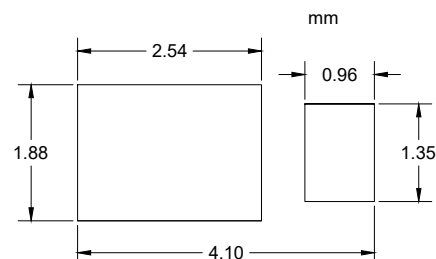
# 3 Amp Schottky Rectifier 40~200 Volts

## SOD-123HE1



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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

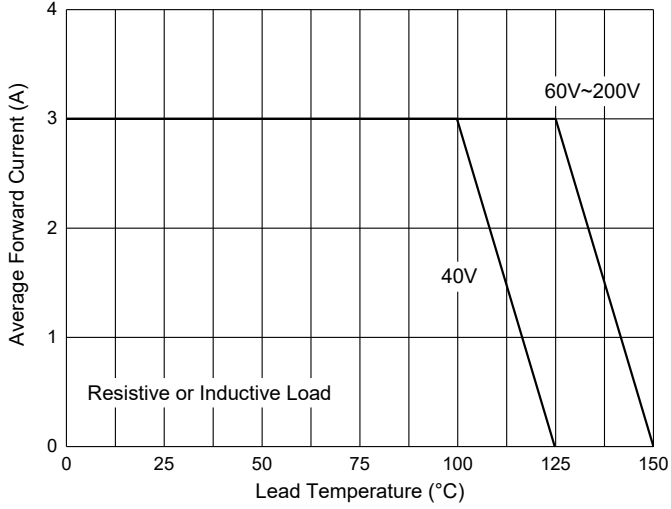


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

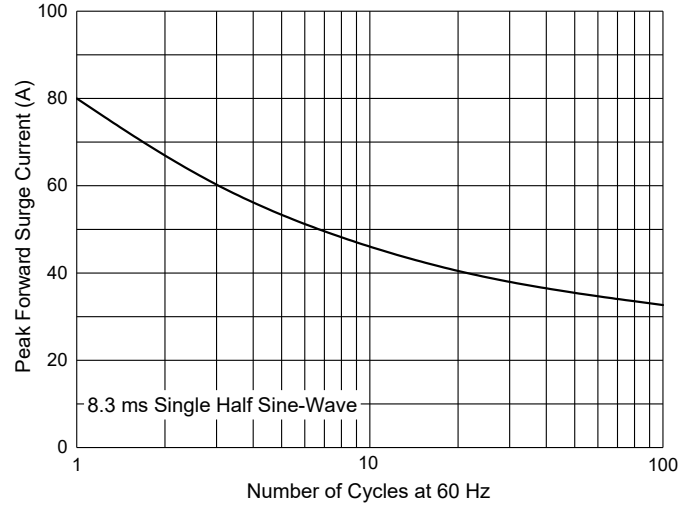


Fig. 3 - Typical Instantaneous Forward Characteristics

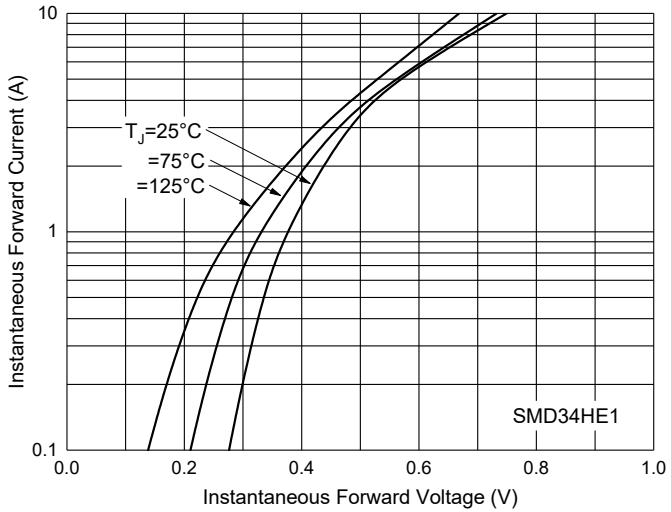


Fig. 4 - Typical Reverse Leakage Characteristics

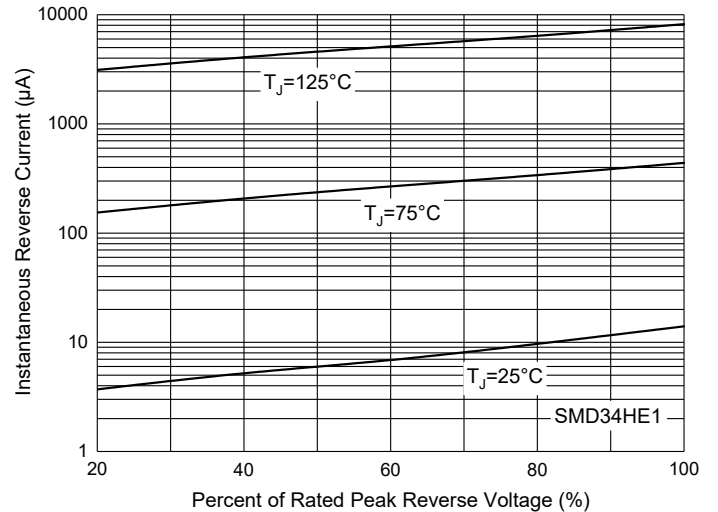


Fig. 5 - Typical Instantaneous Forward Characteristics

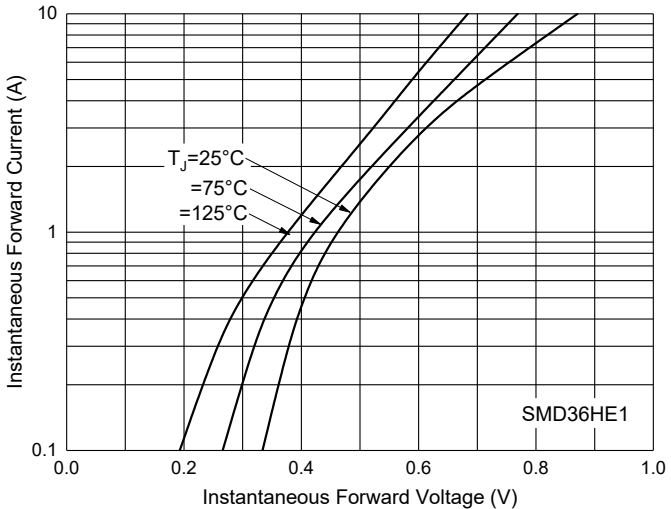
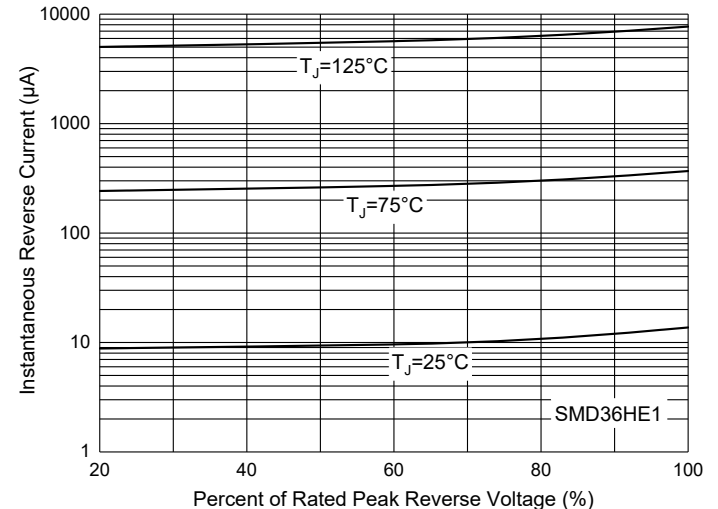


Fig. 6 - Typical Reverse Leakage Characteristics



**Curve Characteristics**

Fig. 7 - Typical Instantaneous Forward Characteristics

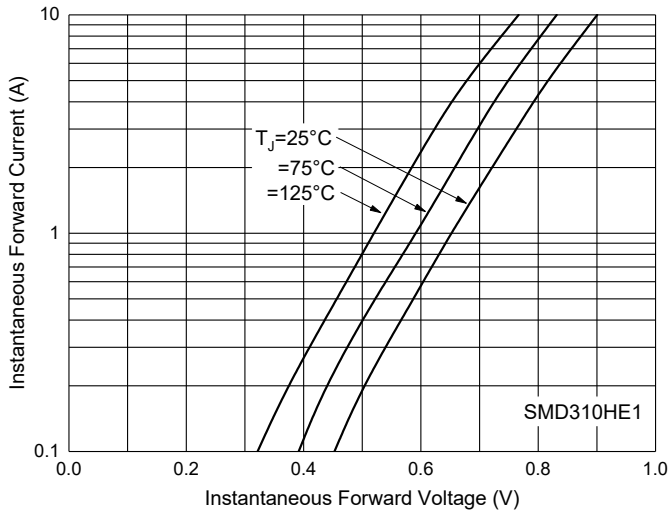


Fig. 8 - Typical Reverse Leakage Characteristics

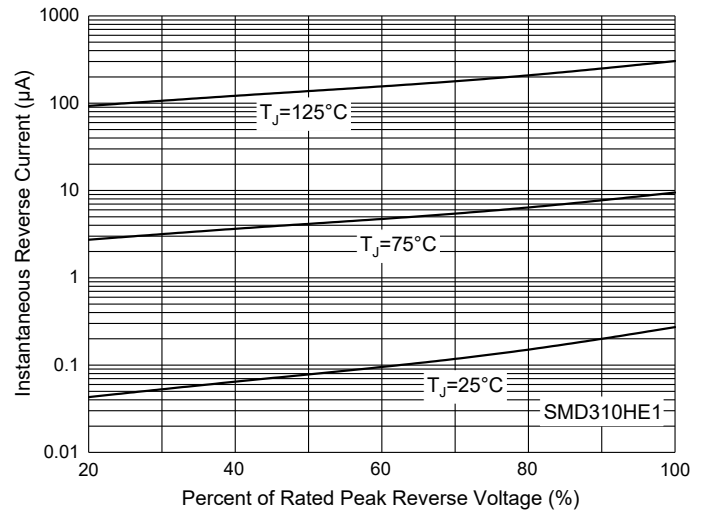


Fig. 9 - Typical Instantaneous Forward Characteristics

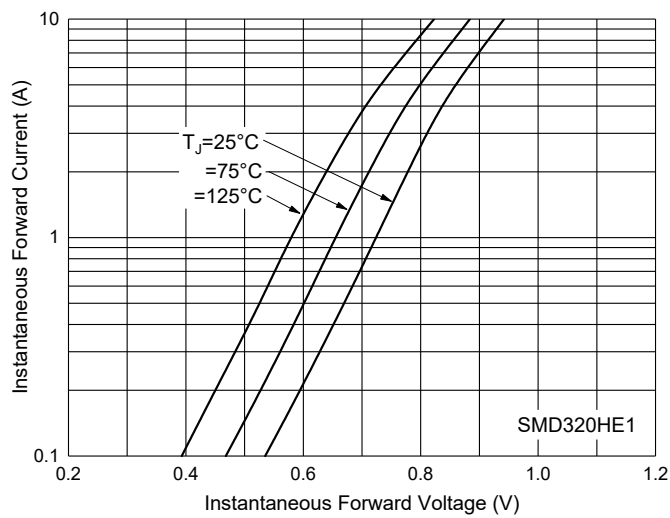
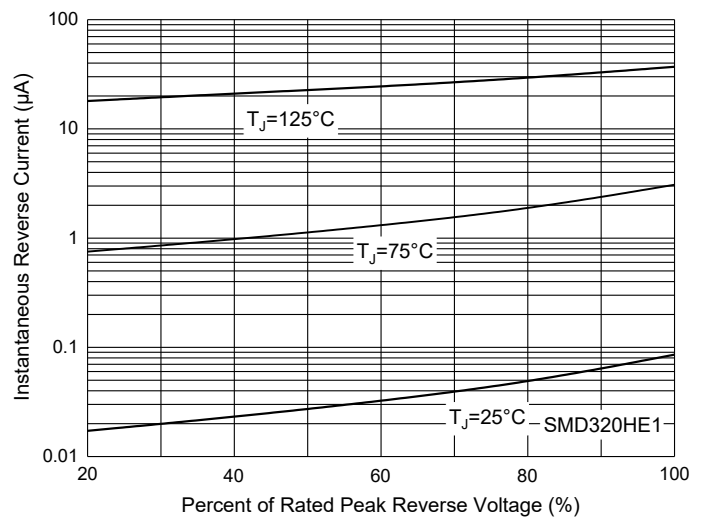


Fig. 10 - Typical Reverse Leakage Characteristics



## Ordering Information

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

**\*\*\*IMPORTANT NOTICE\*\*\***

*Micro Commercial Components Corp.* reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . *Micro Commercial Components Corp* . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp* . and all the companies whose products are represented on our website, harmless against all damages. *Micro Commercial Components Corp.* products are sold subject to the general terms and conditions of commercial sale, as published at <https://www.mccsemi.com/Home/TermsAndConditions>.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.