

Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- High Current Capability
- For Surface Mount Applications
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 16°C/W Junction to Lead
- Maximum Thermal Resistance: 55°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SK52BHE3-L	SK52B	20V	14V	20V
SK53BHE3-L	SK53B	30V	21V	30V
SK54BHE3-L	SK54B	40V	28V	40V
SK55BHE3-L	SK55B	50V	35V	50V
SK56BHE3-L	SK56B	60V	42V	60V
SK58BHE3-L	SK58B	80V	56V	80V
SK510BHE3-L	SK510B	100V	70V	100V

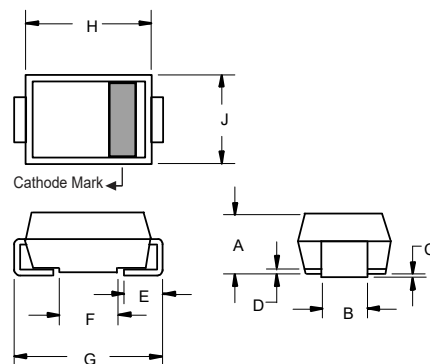
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	5.0A	$T_C=120^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage SK52BHE3-L~54BHE3-L SK55BHE3-L~56BHE3-L SK58BHE3-L~510BHE3-L	V_F	0.55V 0.75V 0.85V	$I_{FM}=5.0A$; $T_J=25^\circ\text{C}$ (Note 3)
Maximum DC Reverse Current at Rated DC Blocking Voltage SK52BHE3-L~56BHE3-L SK58BHE3-L~510BHE3-L	I_R	0.1mA 20mA 0.05mA 2mA	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$
Typical Junction Capacitance	C_J	200pF	Measured at 1.0MHz $V_R=4.0V$

- 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 Exemptions Applied, See EU Directive Annex 7a.
3. Pulse test: Pulse width 200 μsec , Duty cycle 2%

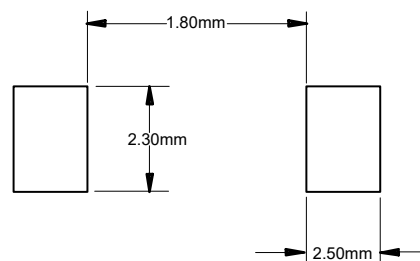
5 Amp Schottky Rectifier 20 to 100 Volts

SMB (DO-214AA)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.075	0.087	1.91	2.21	
C	0.002	0.008	0.05	0.20	
D	0.006	0.012	0.15	0.31	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.200	0.220	5.08	5.59	
H	0.160	0.191	4.06	4.85	
J	0.130	0.155	3.30	3.94	

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

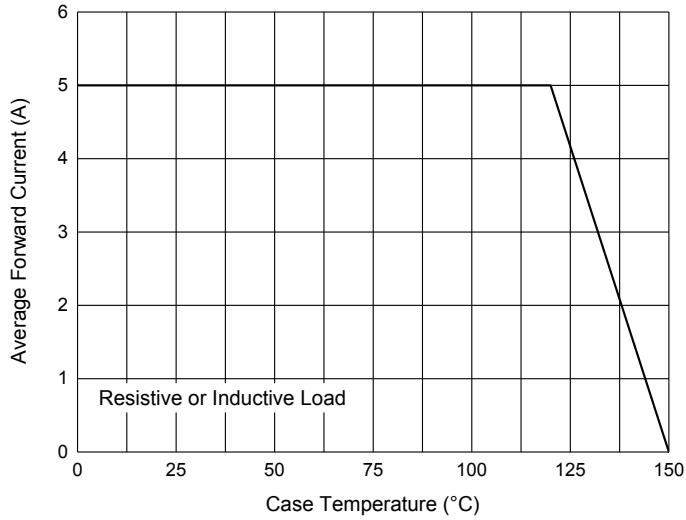


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

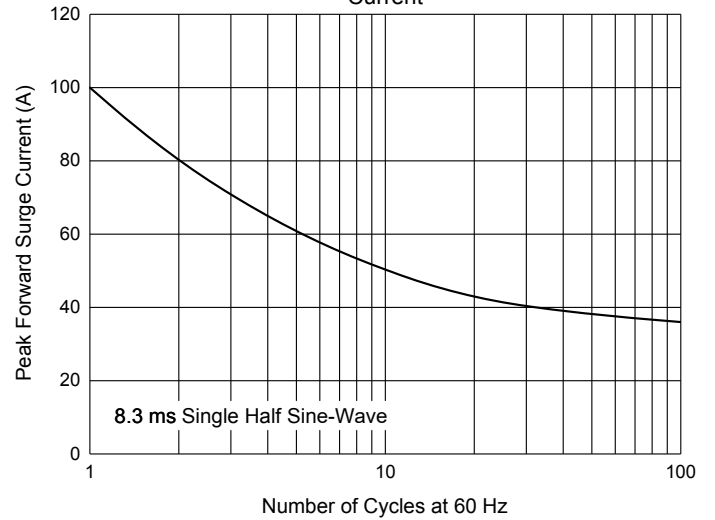


Fig. 3 - Typical Instantaneous Forward Characteristics

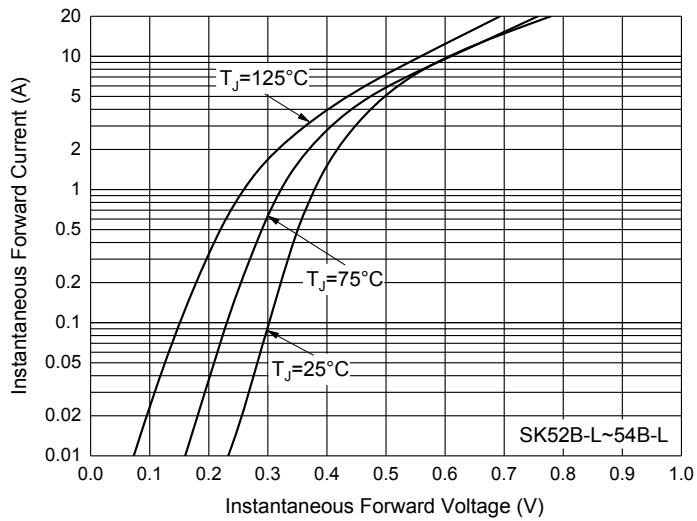


Fig. 4 - Typical Instantaneous Forward Characteristics

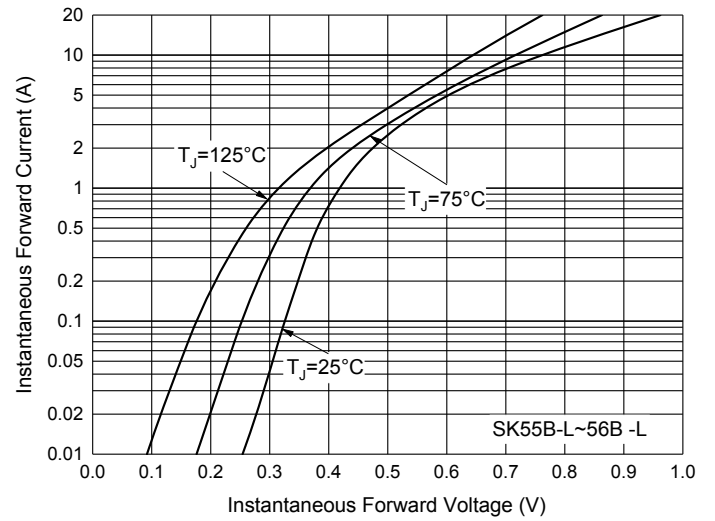


Fig. 5 - Typical Instantaneous Forward Characteristics

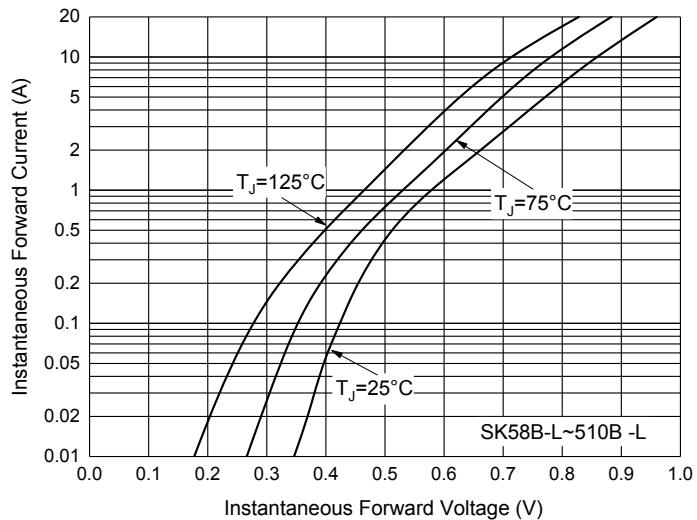
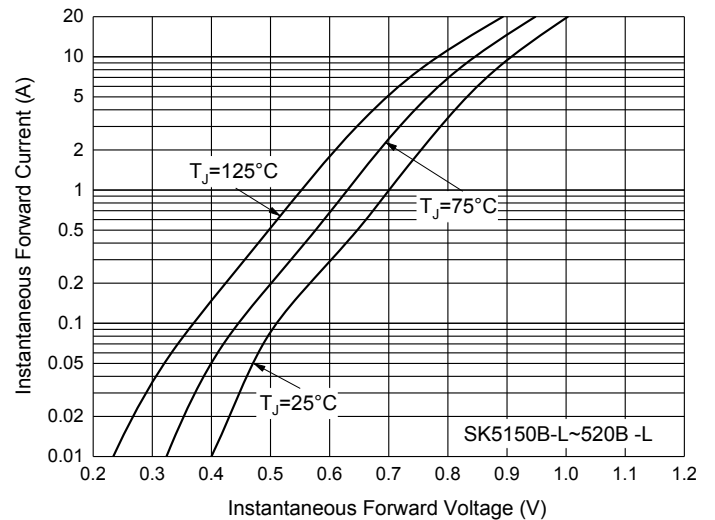


Fig. 6 - Typical Instantaneous Forward Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

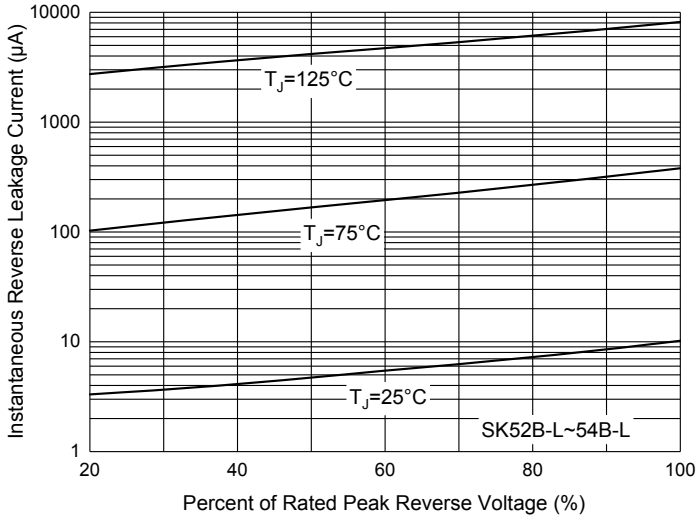


Fig. 8 - Typical Reverse Leakage Characteristics

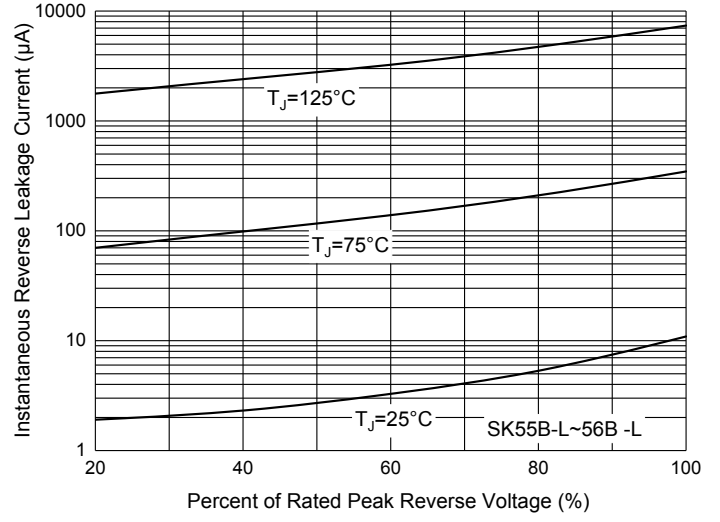


Fig. 9 - Typical Reverse Leakage Characteristics

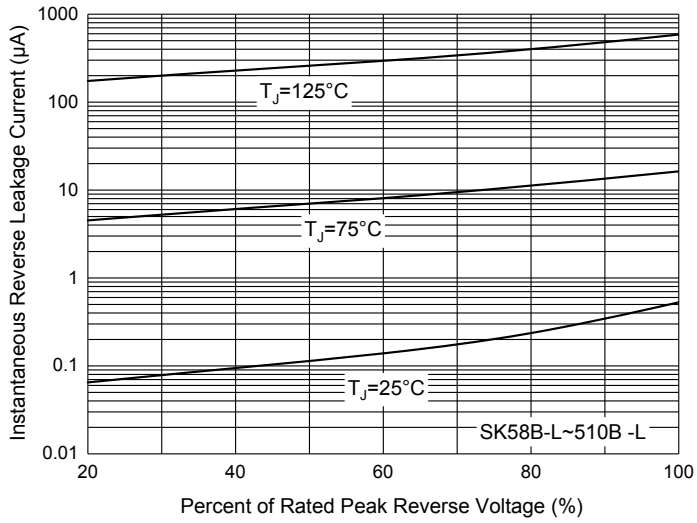
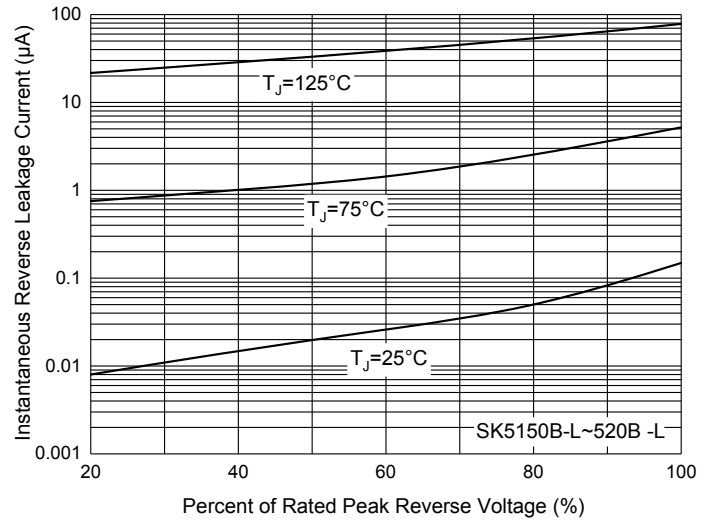


Fig. 10 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
SK52BHE3-LTP~SK520BHE3-LTP	Tape&Reel: 3Kpcs/Reel

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