Features

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

5 Amp Surface Mount Schottky Rectifier 20 to 100 Volts

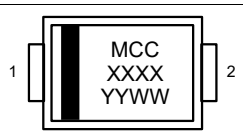
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		SK52B HE3-L	SK53B HE3-L	SK54B HE3-L	SK55B HE3-L	SK56B HE3-L	SK58B HE3-L	SK510B HE3-L	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	V_{RMS}	14	21	28	35	42	56	70	V
Average Rectified Forward Current	$I_{F(AV)}$	5							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	100							A
Current Squared Time @1ms≤t≤8.3ms	I^2t	41.5							A^2s

Marking Code

Part Number	Marking Code
SK52BHE3-L	SK52B
SK53BHE3-L	SK53B
SK54BHE3-L	SK54B
SK55BHE3-L	SK55B
SK56BHE3-L	SK56B
SK58BHE3-L	SK58B
SK510BHE3-L	SK510B

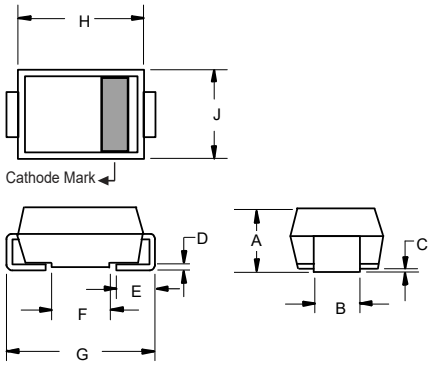
Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 XXXX = Marking Code YYWW = Date Code	
2	Anode		

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.

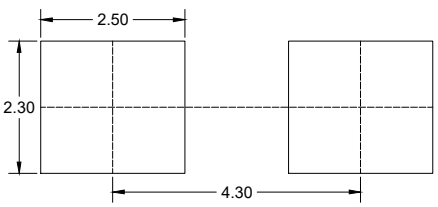
SMB(DO-214AA)



DIMENSIONS					
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

Unit:mm



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$Rth_{(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		20		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		75		°C/W

Note:
1.Mounted on P.C.B. with 8 mm x 8 mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage						
SK52BHE3-L ~ SK54BHE3-L	V_F	I_F=5A;T_J=25°C			0.55	V
SK55BHE3-L ~ SK56BHE3-L					0.75	
SK58BHE3-L ~ SK510BHE3-L					0.85	
Reverse Current						
SK52BHE3-L ~ SK56BHE3-L	I_R	at Rated V_R;T_J=25°C			0.1	mA
		at Rated V_R;T_J=125°C			20	
SK58BHE3-L ~ SK510BHE3-L		at Rated V_R;T_J=25°C			0.05	
		at Rated V_R;T_J=125°C			5	
Junction Capacitance						
SK52BHE3-L ~ SK54BHE3-L	C_J	V_R=4V;f=1MHz;T_J=25°C		265		pF
SK55BHE3-L ~ SK56BHE3-L				215		
SK58BHE3-L ~ SK510BHE3-L				150		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

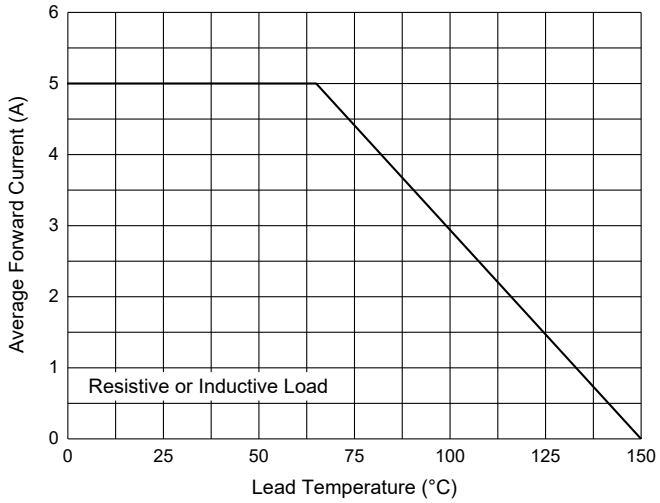


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

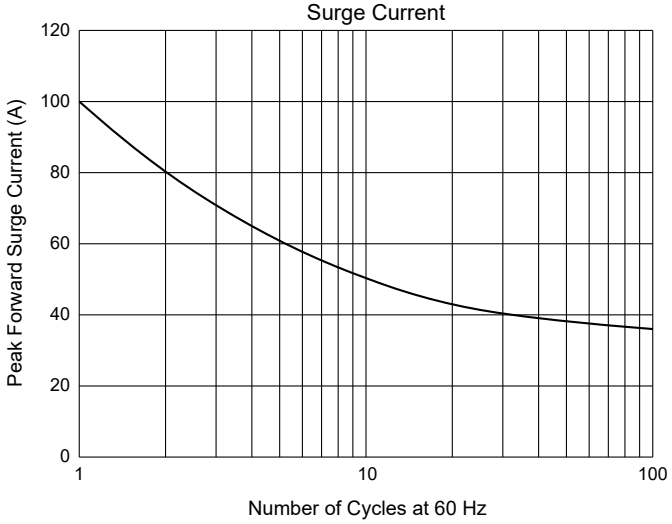


Fig. 3 - Typical Forward Characteristics

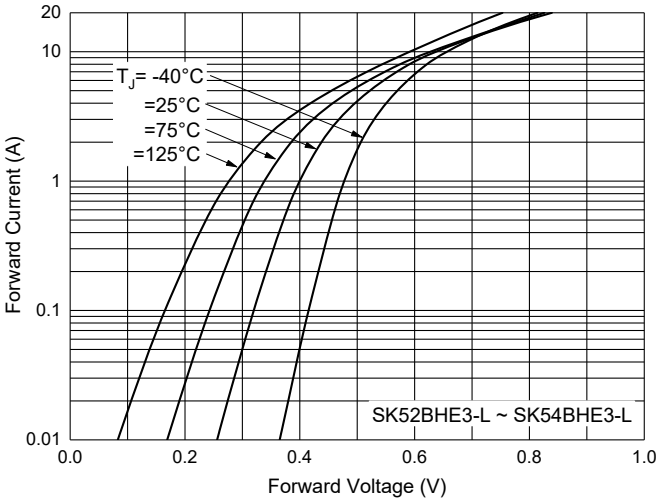


Fig. 4 - Typical Reverse Leakage Characteristics

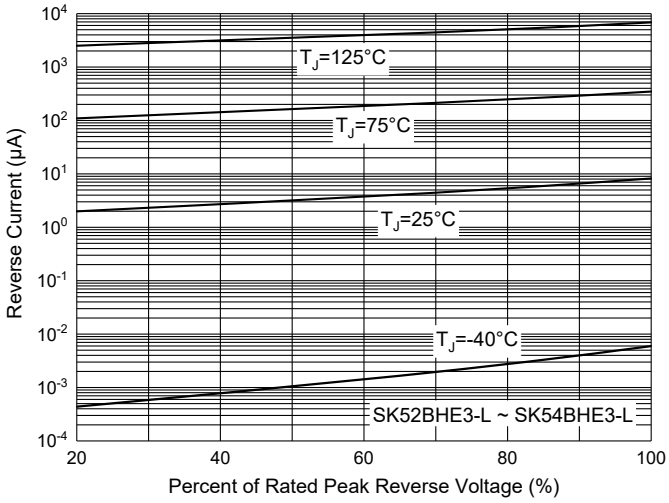


Fig. 5 - Typical Forward Characteristics

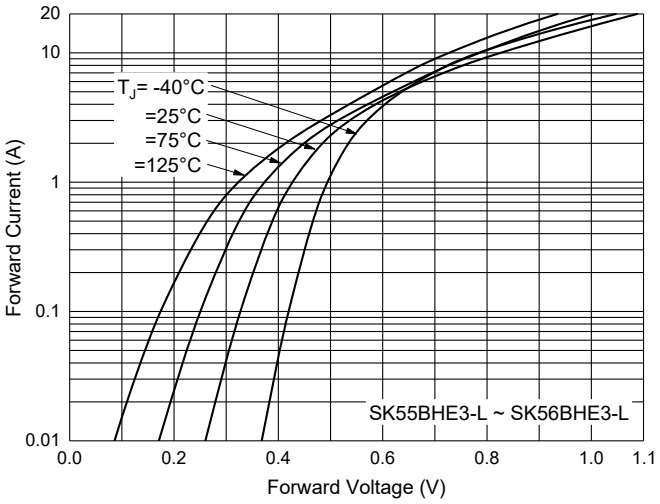
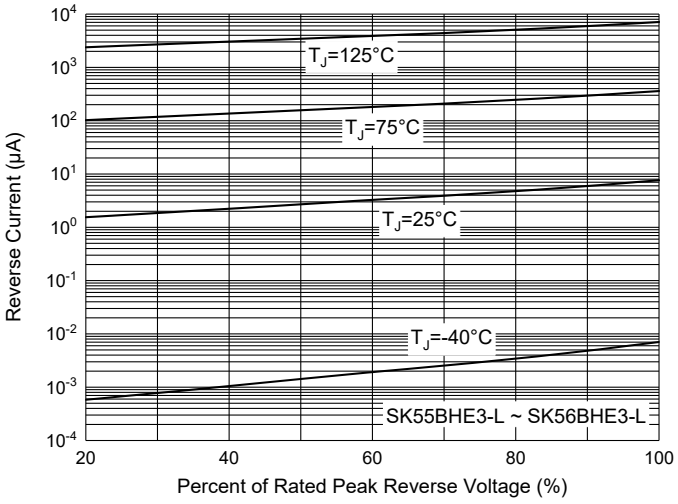


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Forward Characteristics

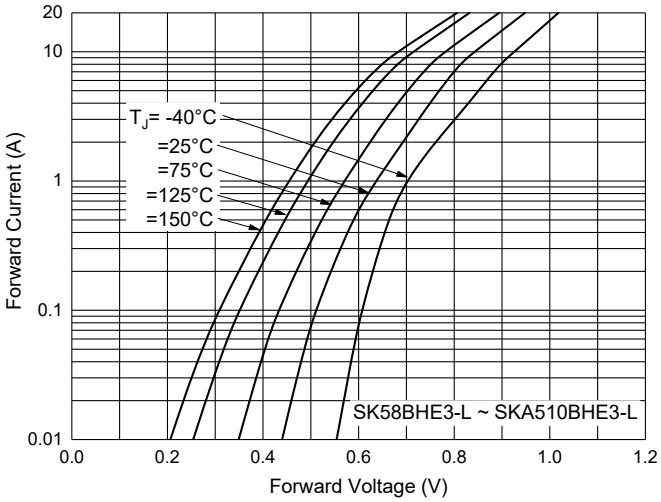


Fig. 8 - Typical Reverse Leakage Characteristics

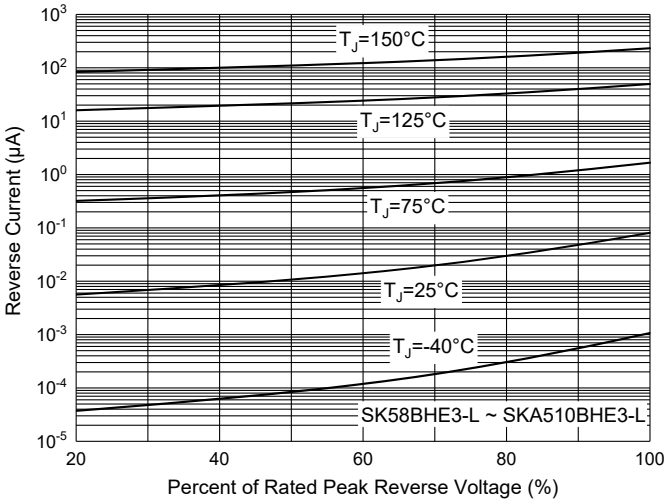


Fig. 9 - Capacitance Characteristics

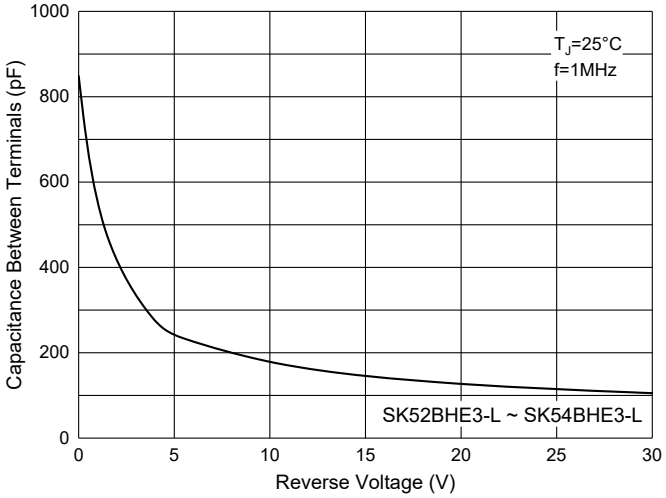


Fig. 10 - Capacitance Characteristics

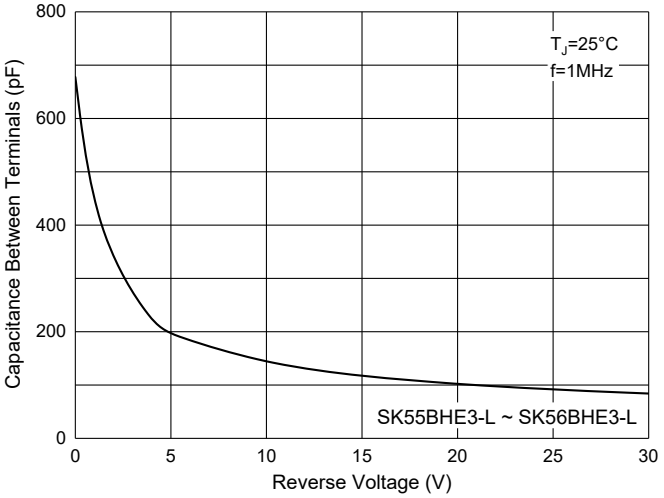
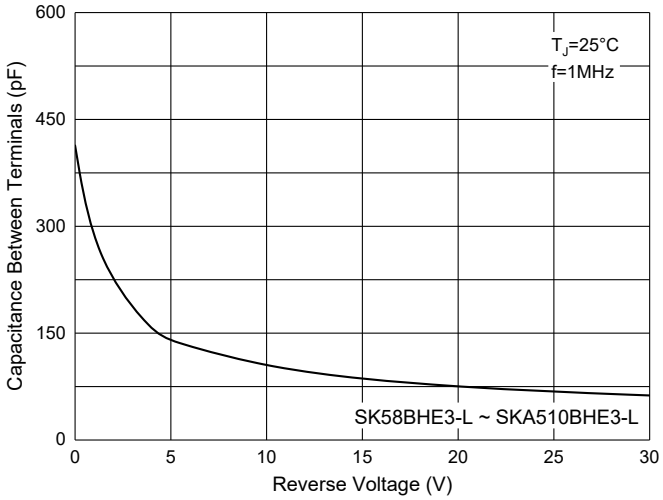


Fig. 11 - Capacitance Characteristics



Ordering Information

Device	Packing
SK52BHE3-LTP ~ SK510BHE3-LTP	Tape&Reel:3Kpcs/Reel