

Features

- Halogen Free. "Green" Device (Note 1)
- 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)
- For Surface Mount Application
- High Current Capability

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value										Unit
		SK 52 B-L	SK 53 B-L	SK 54 B-L	SK 55 B-L	SK 56 B-L	SK 58 B-L	SK 510 B-L	SK 5150 B-L	SK 520 B-L		
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V	
Working Peak Reverse Voltage	V_{RWM}											
DC Blocking Voltage	V_R											
RMS Reverse Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	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 ² s	

Marking Code

Part Number	Marking Code
SK52B-L	SK52B
SK53B-L	SK53B
SK54B-L	SK54B
SK55B-L	SK55B
SK56B-L	SK56B
SK58B-L	SK58B
SK510B-L	SK510B
SK5150B-L	SK5150
SK520B-L	SK520B

Internal Structure

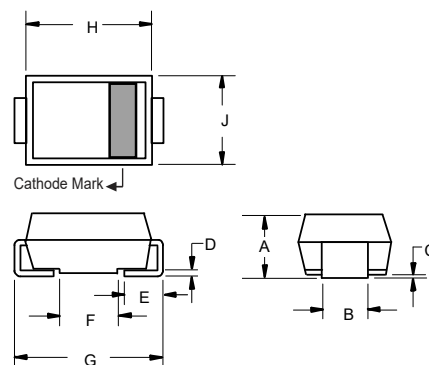
Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	<p>XXXX = Marking Code</p>	
2	Anode		

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.

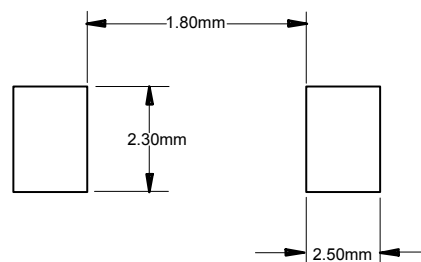
5 Amp
80 to 800 Volts

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



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
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		20		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		75		°C/W

Note:

1. Mounted on P.C.B. with 8mm*8mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SK52B-L ~ SK54B-L SK55B-L ~ SK56B-L SK58B-L ~ SK510B-L SK5150B-L SK520B-L	V_F	$I_F=5A; T_J=25^{\circ}C$			0.55 0.70 0.85 0.87 0.90	V
Reverse Current SK52B-L ~ SK56B-L SK58B-L ~ SK520B-L	I_R	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$ at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			0.1 20 0.01 2	mA
Junction Capacitance SK52B-L ~ SK54B-L SK55B-L ~ SK56B-L SK58B-L ~ SK510B-L SK5150B-L ~ SK520B-L	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		275 195 135 95		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

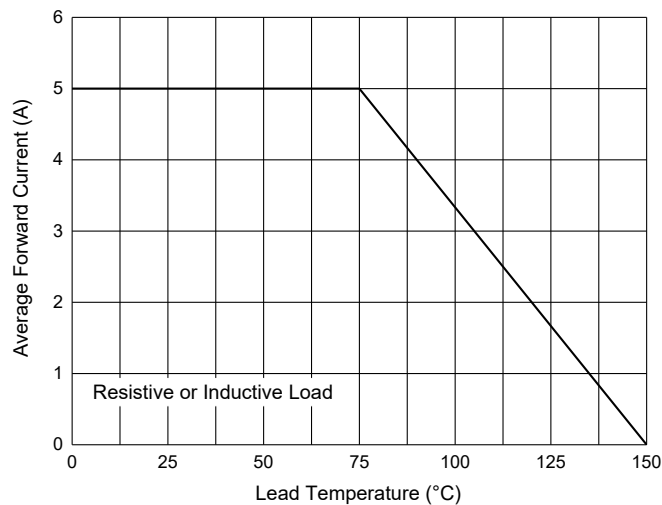


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

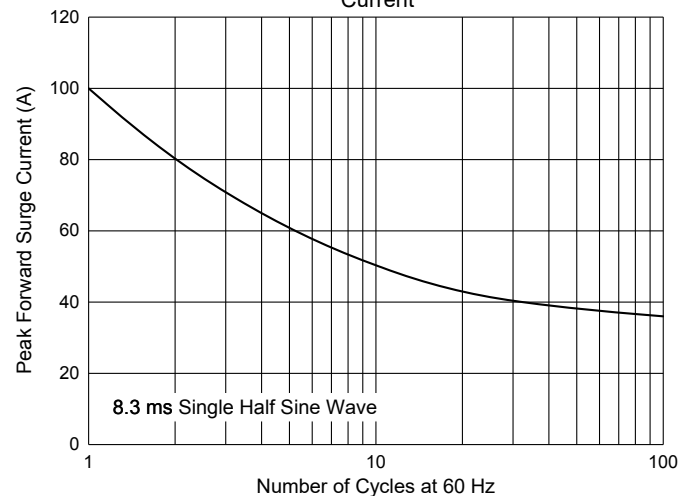


Fig. 3 - Typical Forward Characteristics

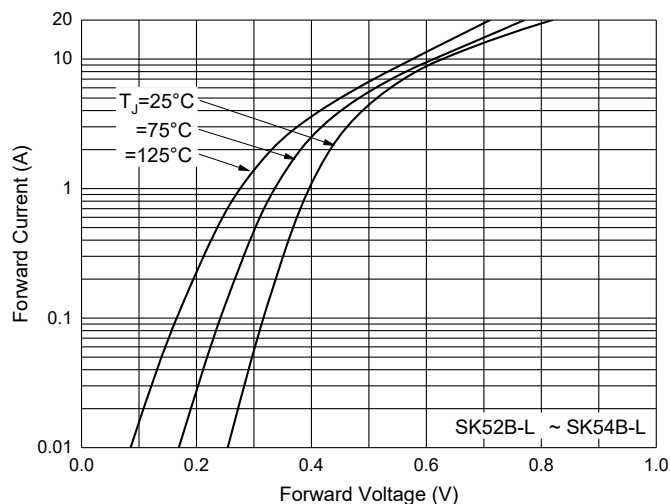


Fig. 4 - Typical Reverse Leakage Characteristics

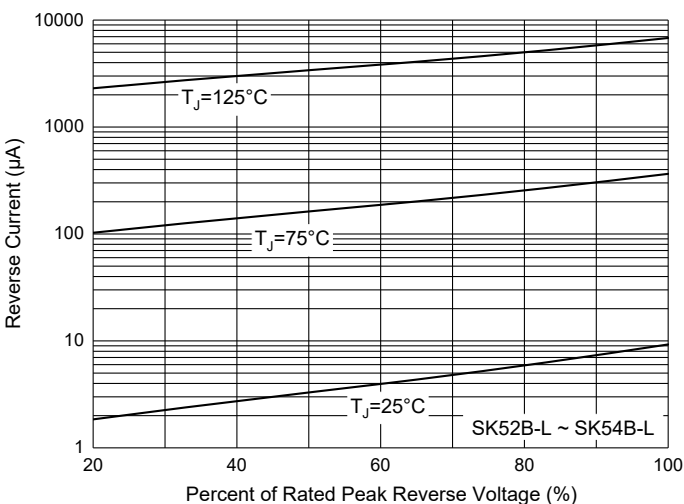


Fig. 5 - Typical Forward Characteristics

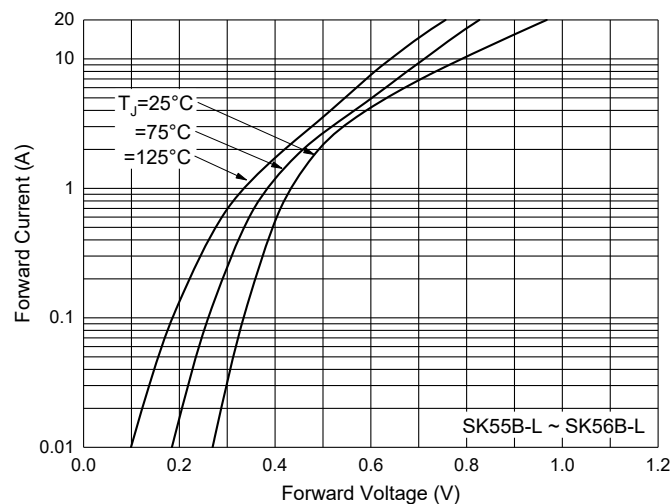
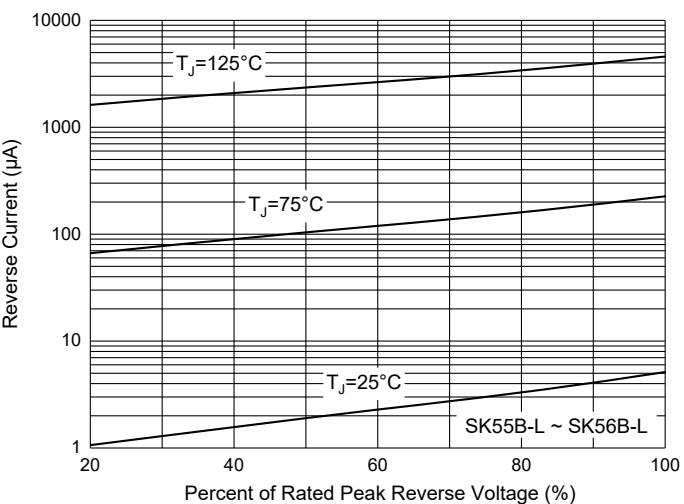


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Forward Characteristics

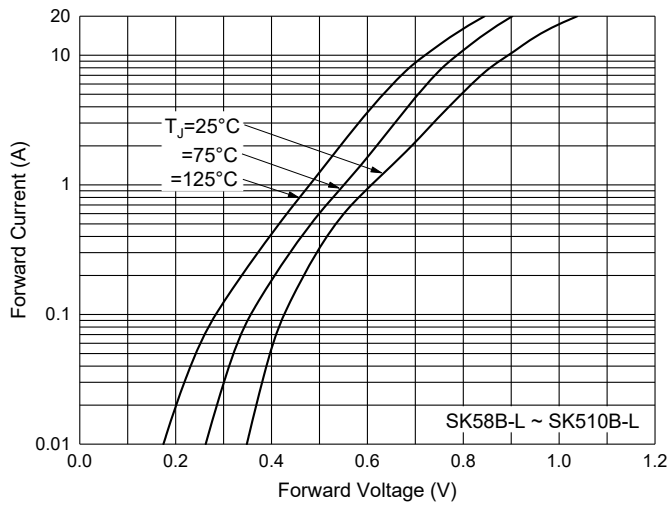


Fig. 8 - Typical Reverse Leakage Characteristics

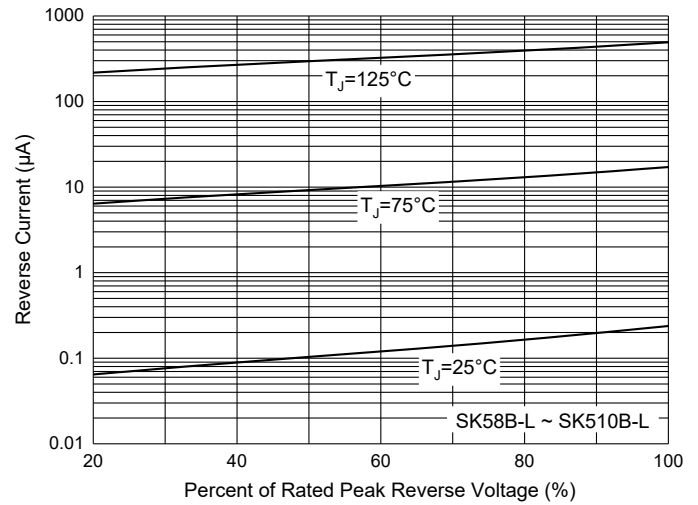


Fig. 9 - Typical Forward Characteristics

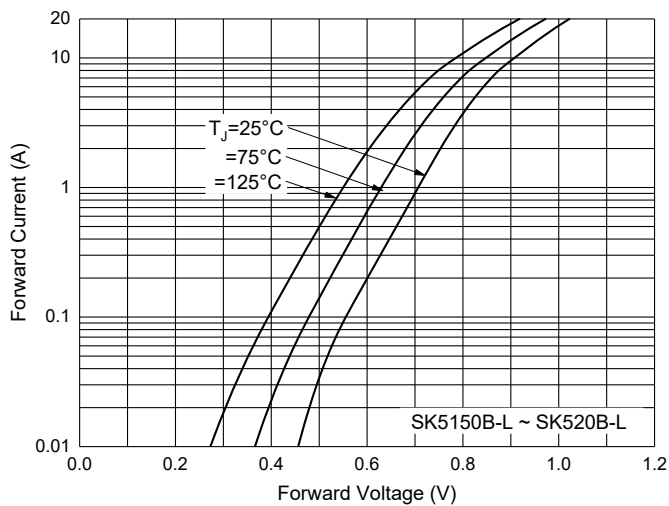


Fig. 10 - Typical Reverse Leakage Characteristics

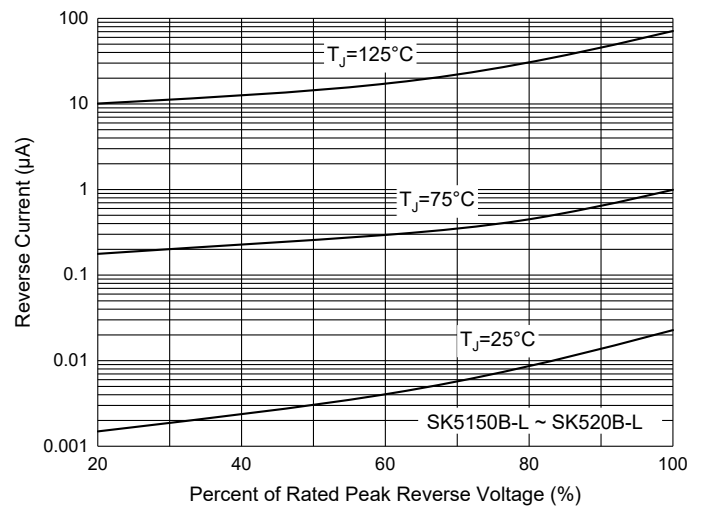


Fig. 11 - Typical Capacitance Characteristics

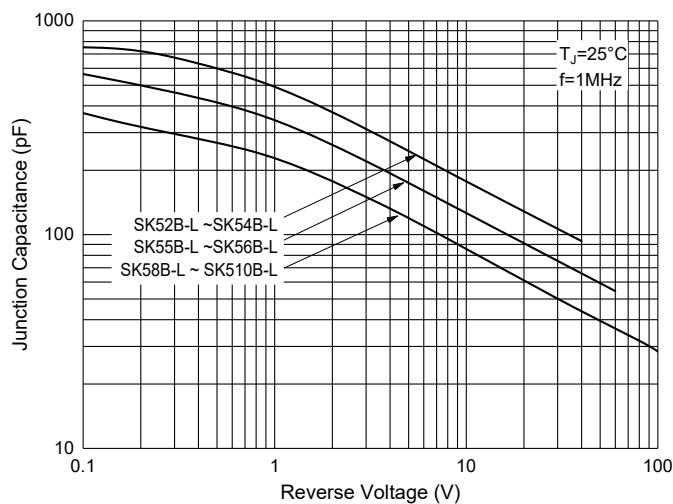
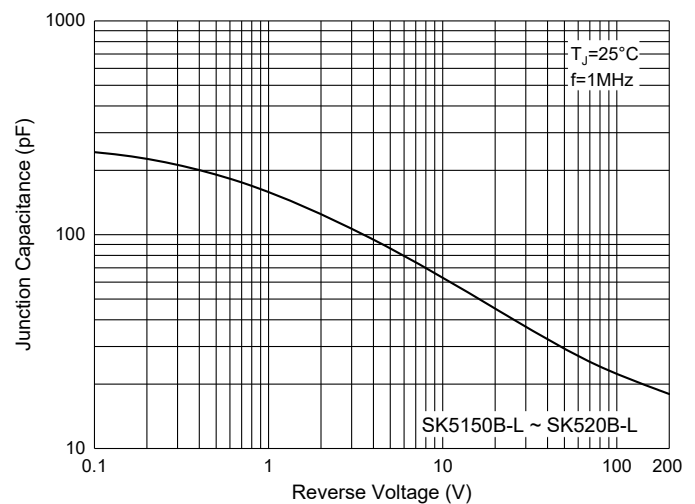


Fig. 12 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
SK52B-LTP ~ SK520B-LTP	Tape&Reel:3Kpcs/Reel

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