



THE DATASHEET OF S1B-LTP



Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- For Surface Mount Applications
- Halogen Free. "Green" Device (Note 2)
- 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 +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 30°C/W Junction to Lead

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S1A-L	S1A	50V	35V	50V
S1B-L	S1B	100V	70V	100V
S1D-L	S1D	200V	140V	200V
S1G-L	S1G	400V	280V	400V
S1J-L	S1J	600V	420V	600V
S1K-L	S1K	800V	560V	800V
S1M-L	S1M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_L=100^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM}=1.0A$; $T_J=25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5 μA 50 μA	$T_J=25^\circ\text{C}$; $T_J=125^\circ\text{C}$
Typical Junction Capacitance	C_J	12pF	Measured at 1.0MHz $V_R=4.0V$
Maximum Reverse Recovery Time	t_{rr}	2.0 μs	$I_F = 0.5A$; $I_R = 1.0A$; $I_{rr} = 0.25A$;

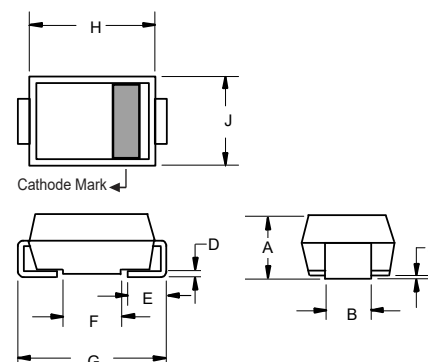
*Pulse Test: Pulse Width 300 μsec , Duty Cycle 2%

Note:

1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

1 Amp Silicon Rectifier 50 to 1000 Volts

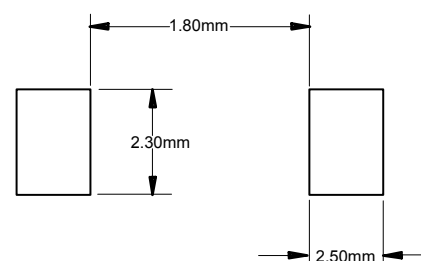
SMB (DO-214AA)



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



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

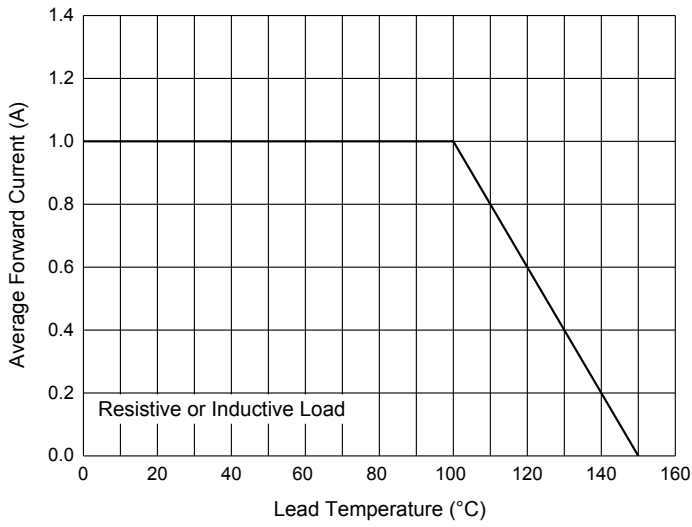


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

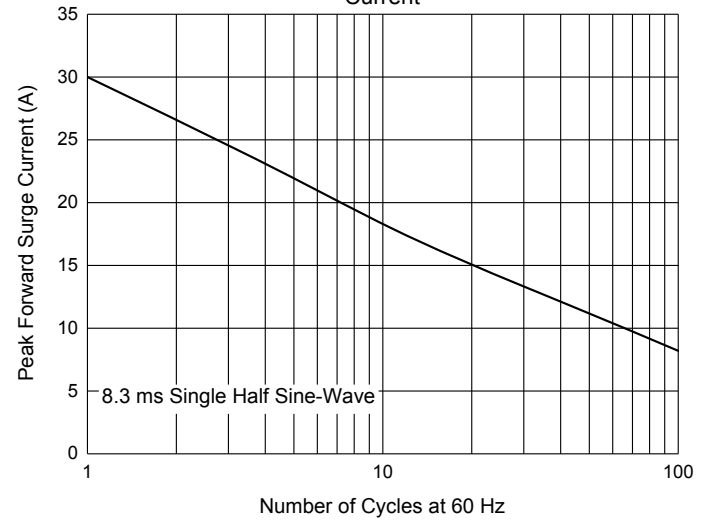


Fig. 3 - Typical Reverse Leakage Characteristics

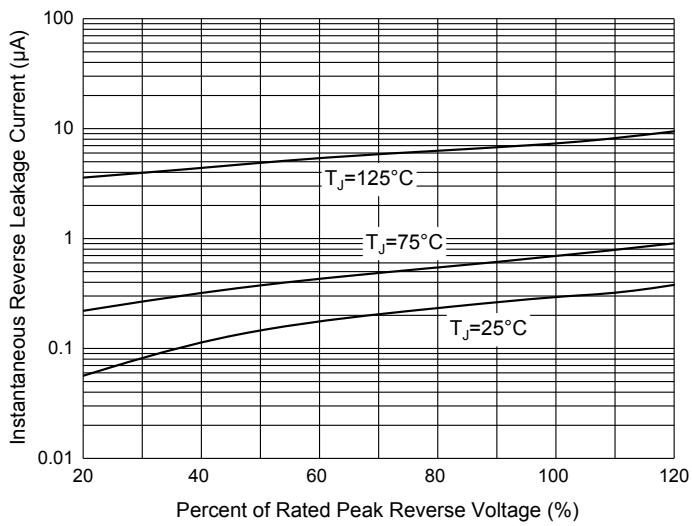
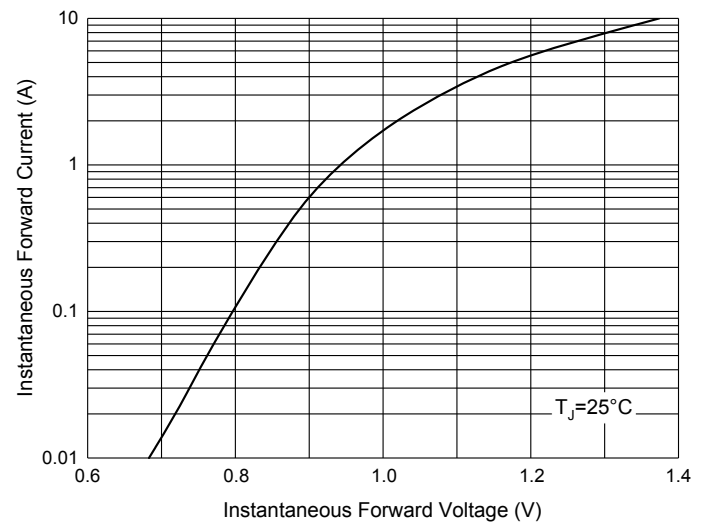


Fig. 4 - Typical Instantaneous Forward Characteristics



Ordering Information

Device	Packing
S1A-LTP~S1M-LTP	Tape&Reel: 3Kpcs/Reel

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