



Micro Commercial Components

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# S1A-LT THRU S1M-LT

## 1 Amp Silicon Rectifier 50 to 1000 Volts

### Features

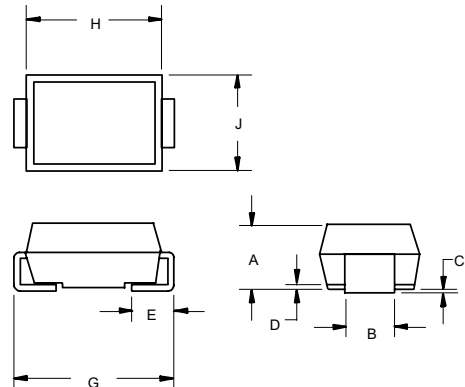
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

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

### DO-214AA (SMB) (Lead Frame)



### Electrical Characteristics @ 25°C Unless Otherwise Specified

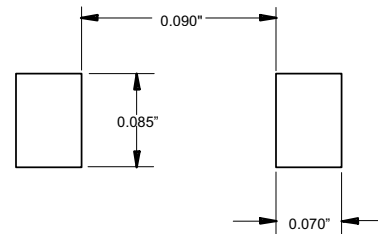
Average Forward current	$I_{F(AV)}$	1.0A	$T_J = 100^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, half sine,
Maximum Instantaneous Forward Voltage	$V_F$	1.1V	$I_{FM} = 1.0\text{A};$ $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu\text{A}$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

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.075	.095	1.91	2.41	
B	.077	.083	1.96	2.10	
C	.002	.008	.05	.20	
D	----	.02	----	.51	
E	.030	.060	.76	1.52	
G	.200	.220	5.08	5.59	
H	.160	.187	4.06	4.75	
J	.130	.155	3.30	3.94	

#### SUGGESTED SOLDER PAD LAYOUT

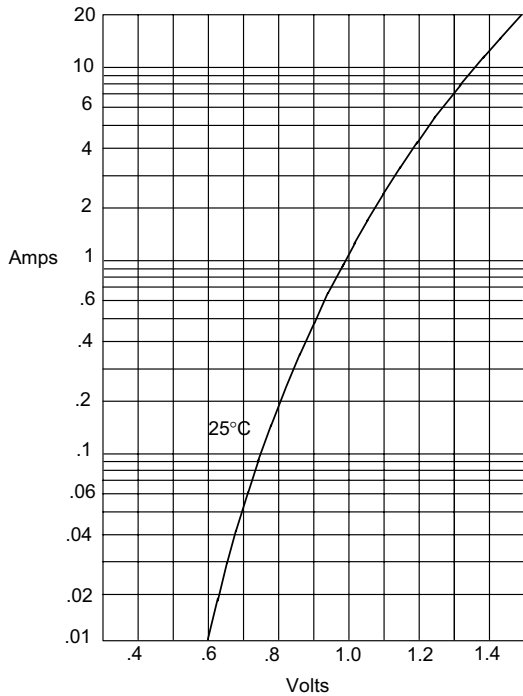


# S1A-LT thru S1M-LT



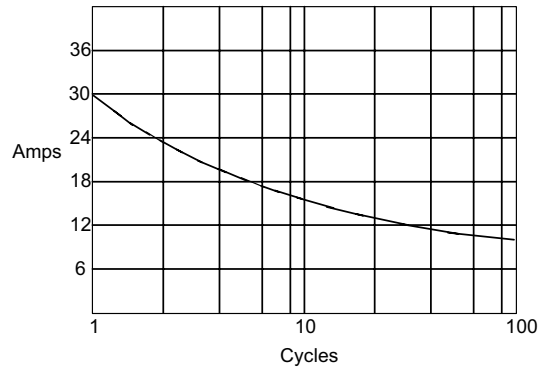
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Figure 1  
Typical Forward Characteristics



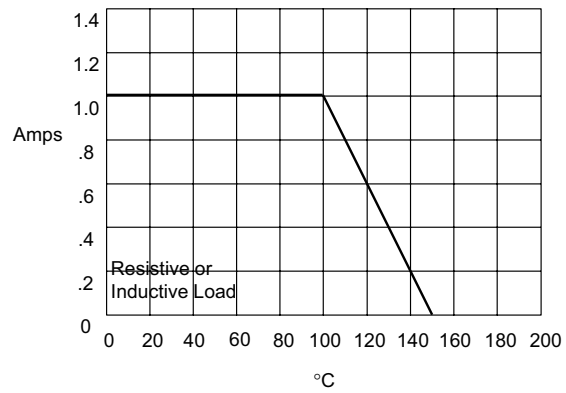
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 3  
Maximum Overload Surge Current



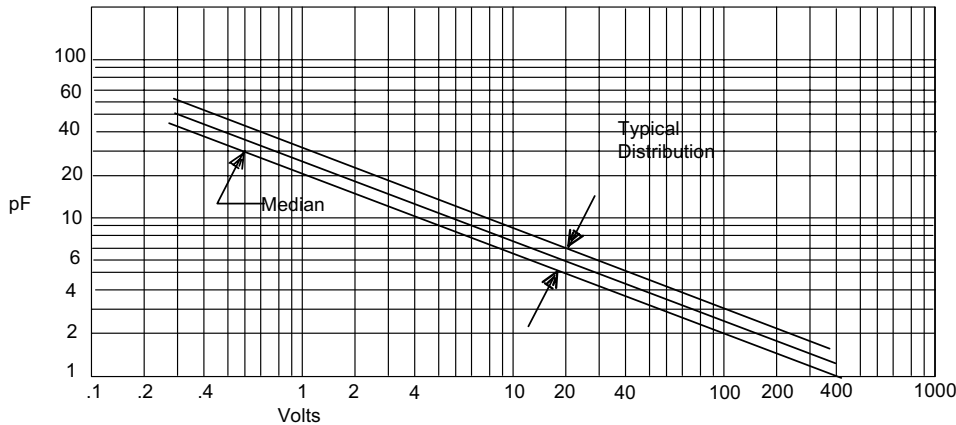
Peak Forward Current - Amperes versus  
Number of Cycles at 60Hz

Figure 4  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 2  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts



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## Ordering Information

Device	Packing
(Part Number)P	Tape&Reel;3Kpcs/Reel

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