



# THE DATASHEET OF S1A-TP



**NOT RECOMMENDED FOR NEW DESIGNS  
USE S1A-LTP~S1M-LTP SERIES**



Micro Commercial Components



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**S1A  
THRU  
S1M**

**1 Amp  
Silicon Rectifier  
50 to 1000 Volts**

**Features**

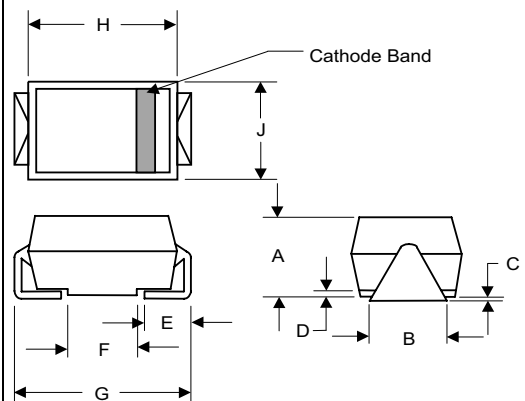
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 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	S1A	50V	35V	50V
S1B	S1B	100V	70V	100V
S1D	S1D	200V	140V	200V
S1G	S1G	400V	280V	400V
S1J	S1J	600V	420V	600V
S1K	S1K	800V	560V	800V
S1M	S1M	1000V	700V	1000V

**DO-214AA  
(SMB) (Round Lead)**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.078	.116	1.98	2.95	
B	.075	.089	1.90	2.25	
C	.002	.008	.05	.20	
D	----	.02	----	.51	
E	.035	.055	.90	1.40	
F	.065	.091	1.65	2.32	
G	.205	.224	5.21	5.69	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

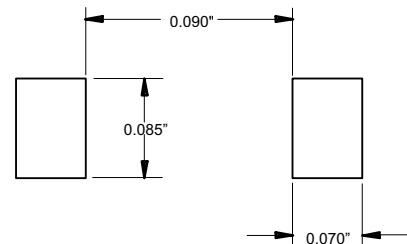
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

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	$I_{FM} = 1.0A;$ $T_J = 25^\circ\text{C}^*$
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, $V_R=4.0V$
Maximum Reverse Recovery Time	$T_{rr}$	2.0 $\mu\text{s}$	$I_F = 0.5A; I_R = 1.0A;$ $I_{rr} = 0.25A;$

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

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

**SUGGESTED SOLDER  
PAD LAYOUT**



# S1A thru S1M

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Figure 1  
Typical Forward Characteristics

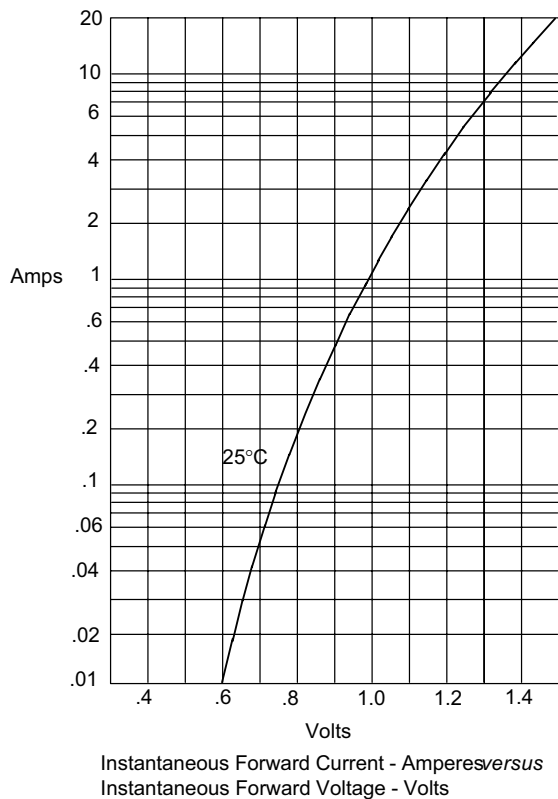


Figure 3  
Maximum Overload Surge Current

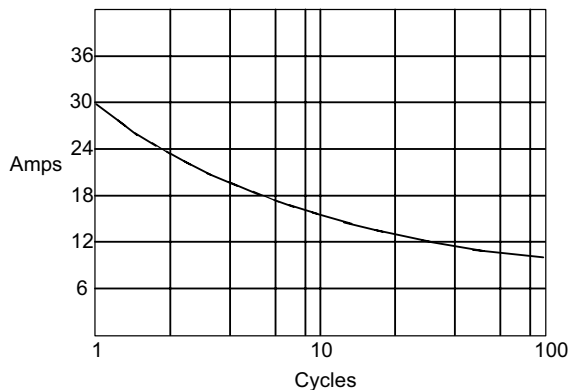


Figure 4  
Forward Derating Curve

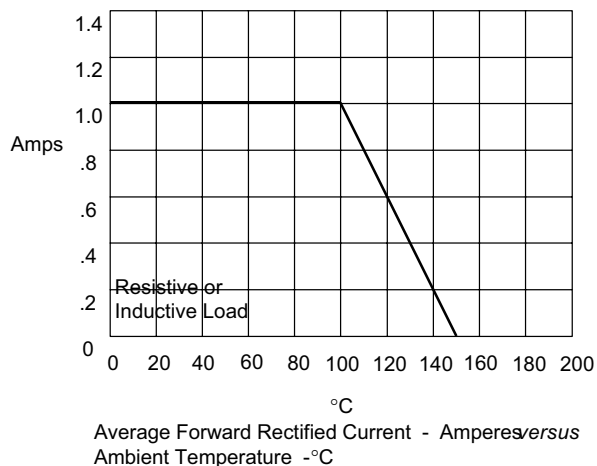
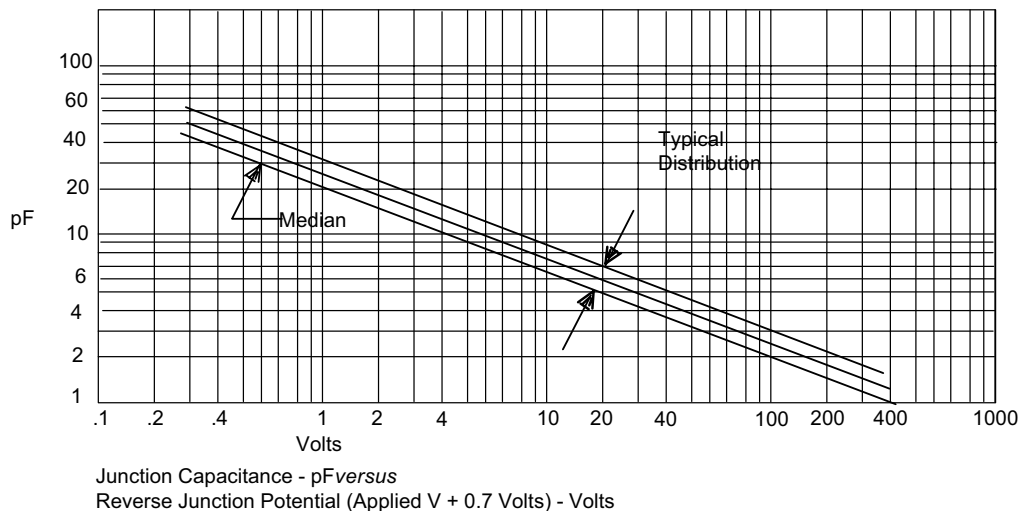
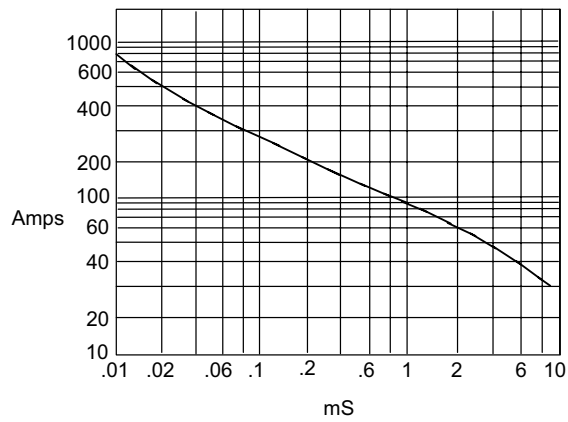


Figure 2  
Junction Capacitance



# S1A thru S1M

Figure 5  
Peak Forward Surge Current

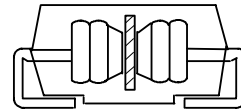


Peak Forward Surge Current - Amperes *versus*  
Pulse Duration - Milliseconds (mS)



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Figure 6  
New SMB Assembly



Round Lead  
Process



TM

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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