

Micro Commercial Components

Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

Phone: (818) 701-4933 (818) 701-4939 Fax:

S1A-L **THRU** S1M-L

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- For Surface Mount Applications
- Halogen free available upon request by adding suffix "-HF" Extremely Low Thermal Resistance Easy Pick And Place

- High Temp Soldering:260°C for 10Seconds At Terminals Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

1 Amp Silicon Rectifier 50 to 1000 Volts

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	Device	Maximum	Maximum	Maximum
Catalog	Marking	Recurrent	RMS	DC
Number		Peak Reverse	Voltage	Blocking
		Voltage		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 _J = 100°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°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I _R	5μΑ 50μΑ	T _J = 25°C T _J = 125°C
Typical Junction Capacitance	С	12pF	Measured at 1.0MHz, V _R =4.0V
Maximum Reverse Recovery Time	T _{rr}	2.0μs	$I_F = 0.5A; I_R = 1.0A;$ $I_{rr} = 0.25A;$

^{*}Pulse test: Pulse width 300 µsec, Duty cycle 2%

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

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

DIM	MIN	MAX	MIN	MAX	NOTE	
Α	.075	.095	1.91	2.41		
В	.077	.083	1.96	2.10		
С	.002	.008	.05	.20		
D		.02		.51		
E	.030	.060	.76	1.52		
G	.200	.220	5.08	5.59		
Н	.160	.187	4.06	4.75		
J	.130	.155	3.30	3.94		
SUGGESTED SOLDER PAD LAYOUT						
0.090"						
0.085"						

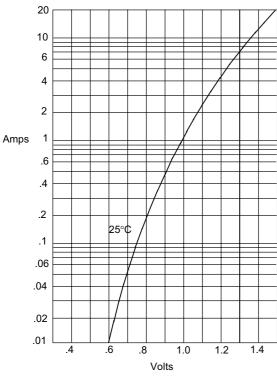
0.070"

INCHES

S1A-L thru S1M-L

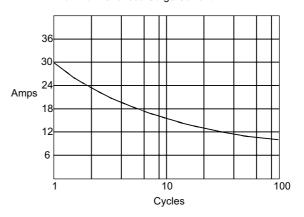


Figure 1
Typical Forward Characteristics



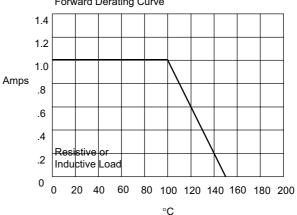
Instantaneous Forward Current - Amperesversus Instantaneous Forward Voltage - Volts

Figure 3 Micro Commercial Components
Maximum Overload Surge Current



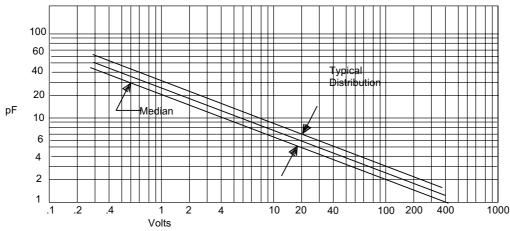
Peak Forward Current - Amperes*versus* Number of Cycles at 60Hz

Figure 4
Forward Derating Curve



Average Forward Rectified Current - Amperes/ersus Ambient Temperature - $^{\circ}$ C

Figure 2 Junction Capacitance



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



Micro Commercial Components

Ordering Information:

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

Note: Adding "-HF" suffix for halogen free, eg. S1A-LTP-HF~S1M-LTP-HF

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.