



Micro Commercial Components

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S1A THRU S1M

Features

- 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

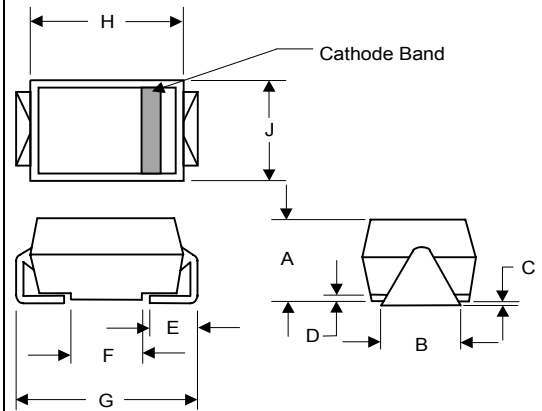
1 Amp Silicon Rectifier 50 to 1000 Volts

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 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 (SMBJ) (Round Lead)



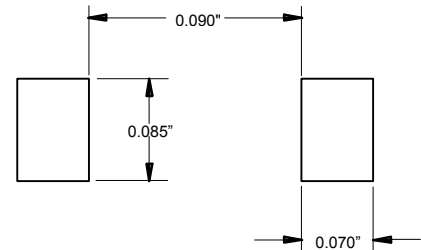
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.078	.116	1.98	2.95	
B	.075	.089	1.90	2.25	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.035	.055	.90	1.40	
F	.065	.091	1.65	2.32	
G	.205	.224	5.21	5.69	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

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 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 μs , Duty cycle 2%

SUGGESTED SOLDER PAD LAYOUT



S1A thru S1M

Figure 1
Typical Forward Characteristics

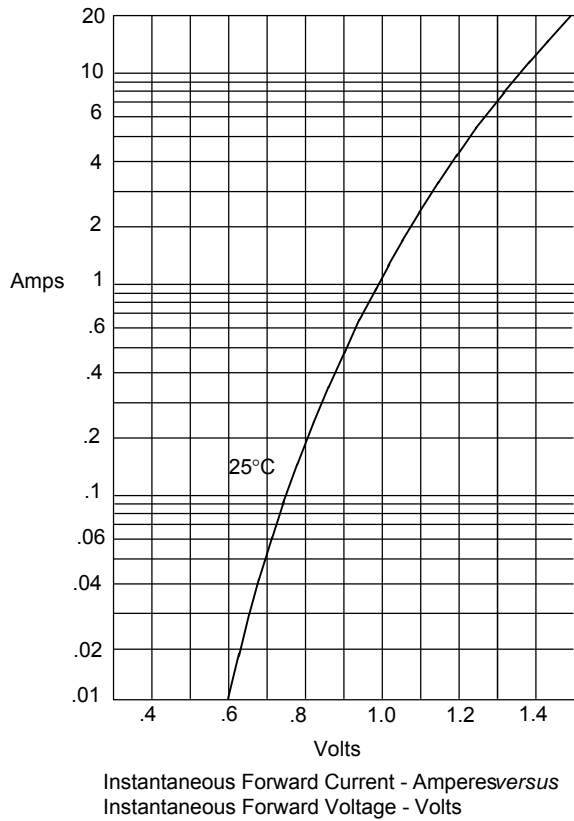


Figure 3
Maximum Overload Surge Current

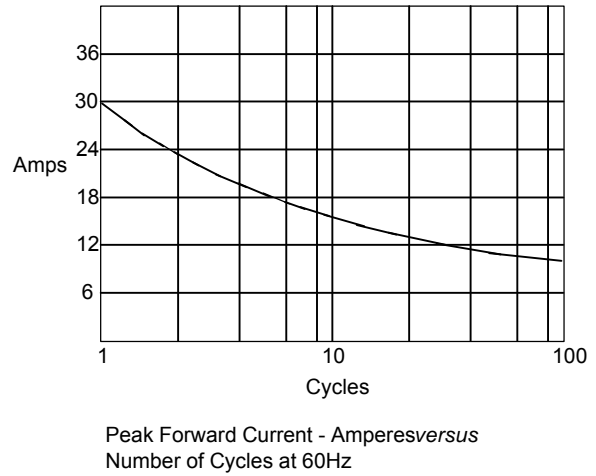


Figure 4
Forward Derating Curve

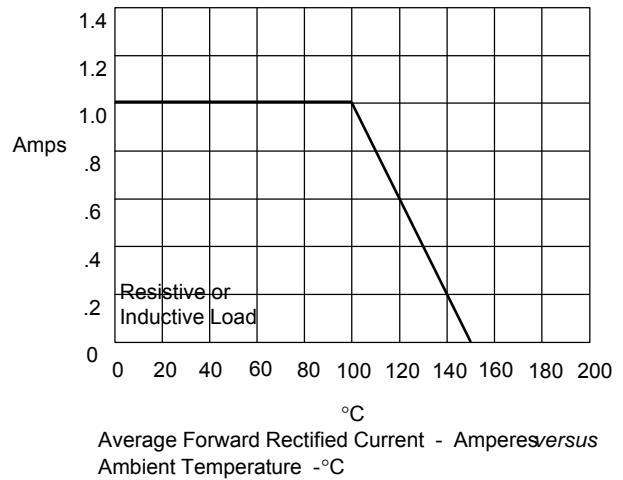
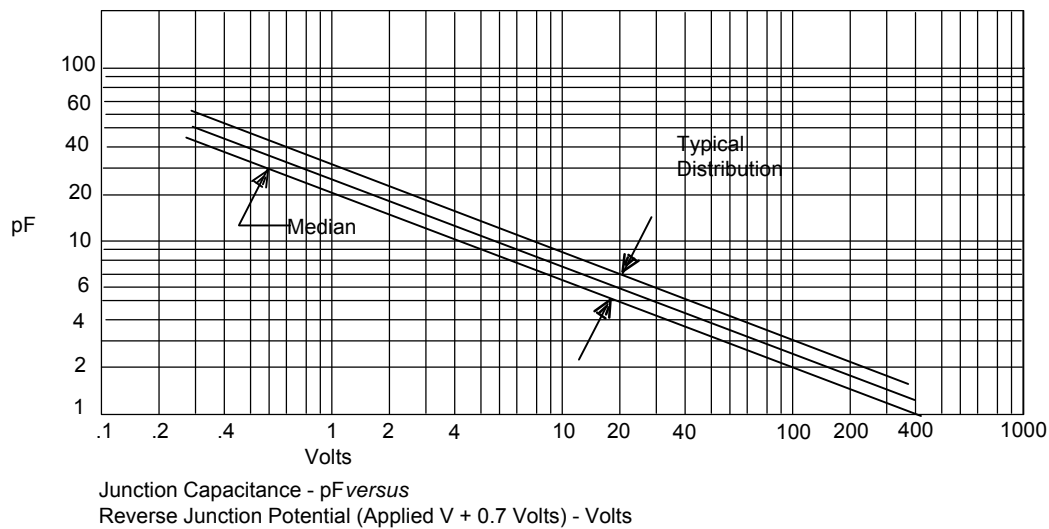


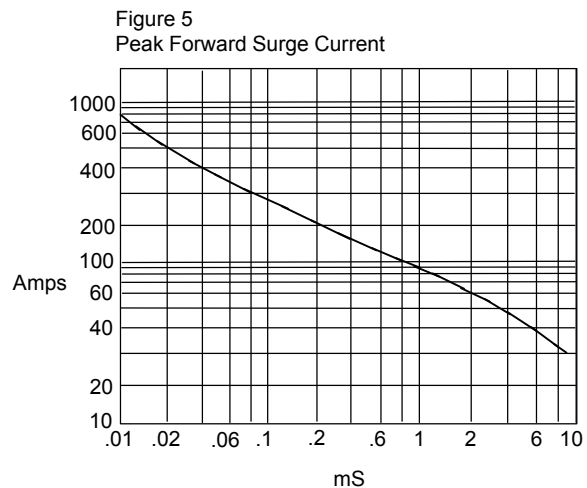
Figure 2
Junction Capacitance



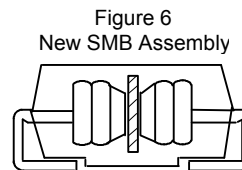
S1A thru S1M



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



Round Lead
Process



TM

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