



Micro Commercial Components

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# S10A THRU S10M

## 10 Amp Silicon Rectifier 50 to 1000 Volts

### Features

- High Current Capability
- For Surface Mount Applications
- Extremely Low Thermal Resistance
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

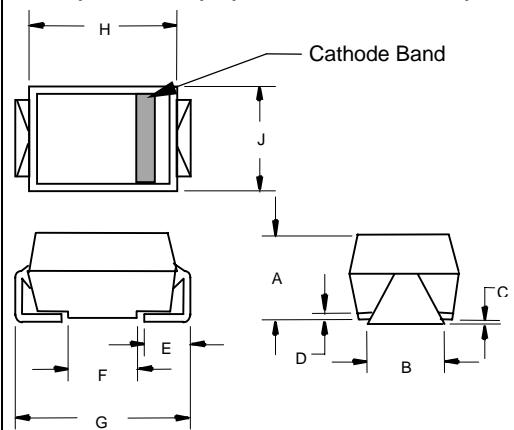
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S10A	S10A	50V	35V	50V
S10B	S10B	100V	70V	100V
S10D	S10D	200V	140V	200V
S10G	S10G	400V	280V	400V
S10J	S10J	600V	420V	600V
S10K	S10K	800V	560V	800V
S10M	S10M	1000V	700V	1000V

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

Average Forward Current	$I_{F(AV)}$	10.0A	$T_J = 75^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	200A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.20V	$I_{FM} = 10.0A;$ $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10 $\mu$ A	$T_J = 25^\circ\text{C}$

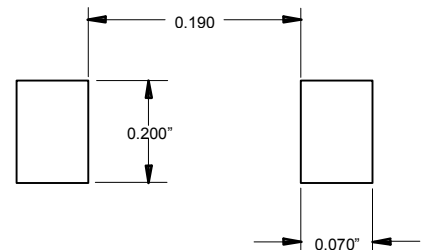
\*Pulse test: Pulse width 200  $\mu$ sec, Duty cycle 2%

### DO-214AB (SMCJ) (Round Lead)



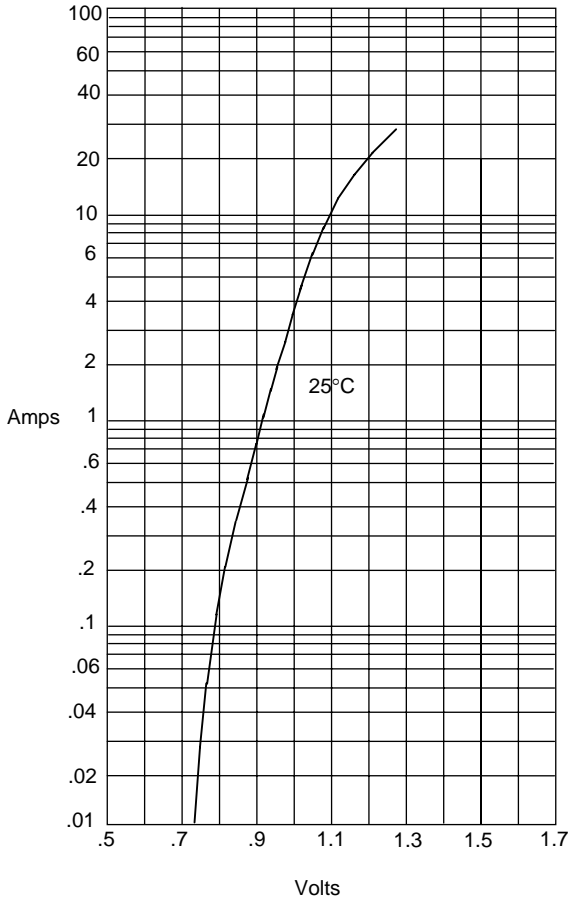
DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.200	.214	5.08	5.43	
B	.177	.203	4.70	5.30	
C	.002	.005	.05	.13	
D	—	.02	—	.51	
E	.047	.056	1.20	1.42	
F	.168	.179	4.27	4.55	
G	.309	.322	7.85	8.18	
H	.239	.243	6.08	6.18	
J	.234	.240	5.95	6.10	

#### SUGGESTED SOLDER PAD LAYOUT



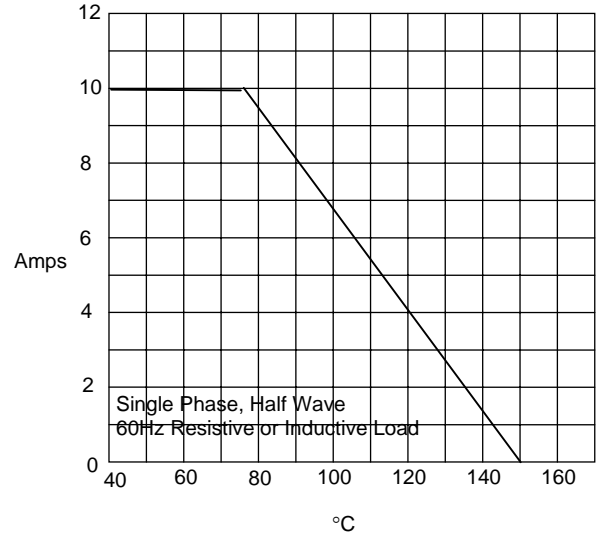
# S10A thru S10M

Figure 1  
Typical Forward Characteristics



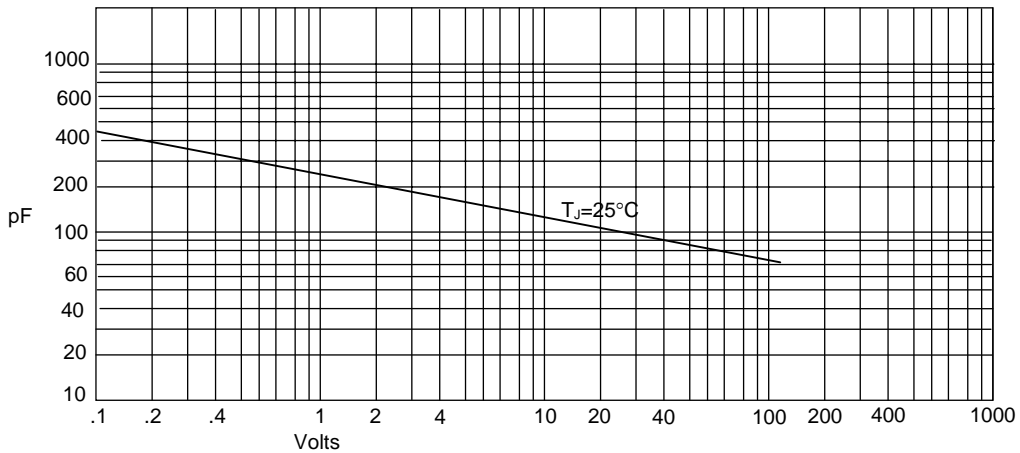
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

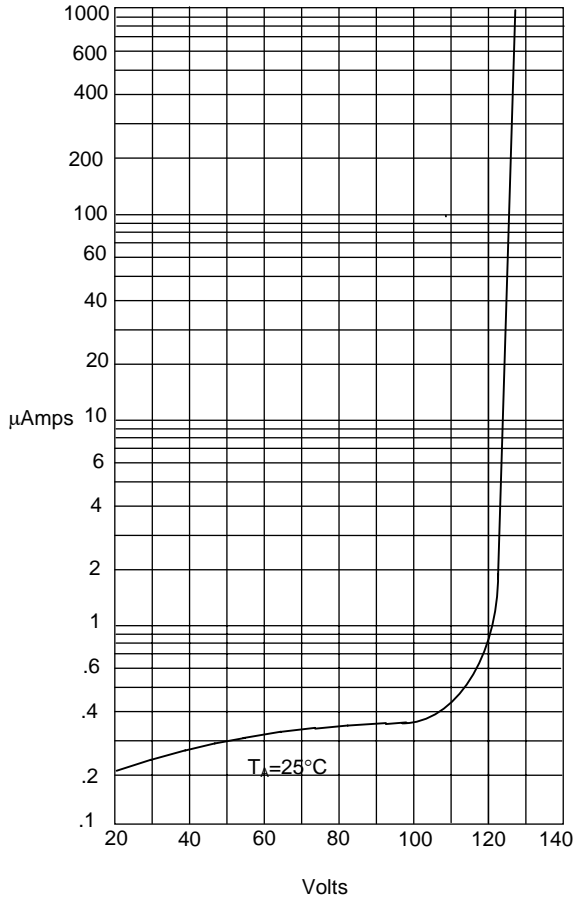
Figure 3  
Junction Capacitance



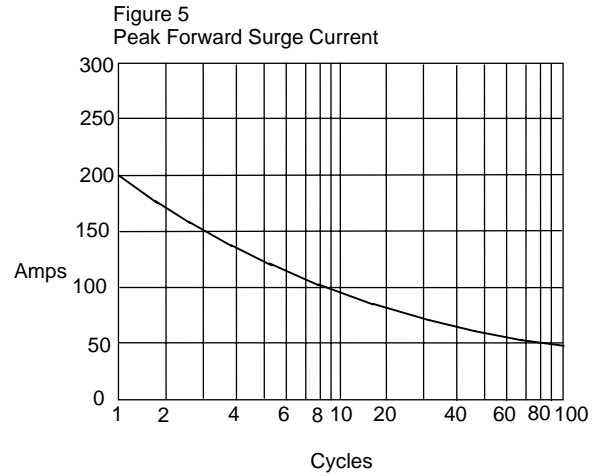
Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

# S10A thru S10M

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles



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