



Micro Commercial Components



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**S5AL  
 THRU  
 S5ML**

## Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- For Surface Mount Applications
- High Current Capability
- Extremely Low Thermal Resistance
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Halogen free available upon request by adding suffix "-HF"
- 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
- Thermal Resistance: 10°C/W Junction to Lead  
 18°C/W Junction to Case  
 50°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S5AL	S5AL	50V	35V	50V
S5BL	S5BL	100V	70V	100V
S5DL	S5DL	200V	140V	200V
S5GL	S5GL	400V	280V	400V
S5JL	S5JL	600V	420V	600V
S5KL	S5KL	800V	560V	800V
S5ML	S5ML	1000V	700V	1000V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

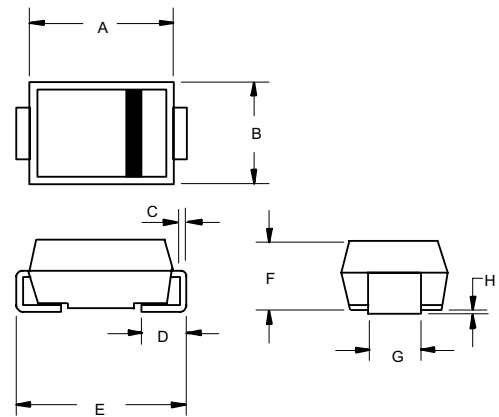
Average Forward Current	$I_{F(AV)}$	5.0A	$T_L = 75^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.20V	$I_{FM} = 5.0\text{A}; T_a = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10µA 1mA	$T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$
Typical Junction Capacitance	$C_J$	100pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

\*Pulse test: Pulse width 200 µsec, Duty cycle 2%

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

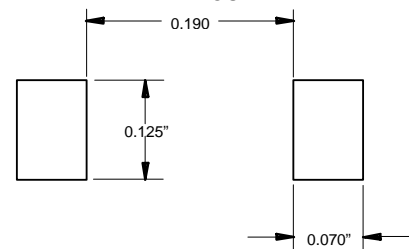
**5 Amp  
 Silicon Rectifier  
 50 to 1000 Volts**

**DO-214AB  
 (SMC) (LEAD FRAME)**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.260	.280	6.60	7.11	
B	.220	.245	5.59	6.22	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.305	.320	7.75	8.13	
F	.079	.103	2.00	2.62	
G	.108	.128	2.75	3.25	
H	.002	.008	0.050	0.203	

**SUGGESTED SOLDER  
 PAD LAYOUT**



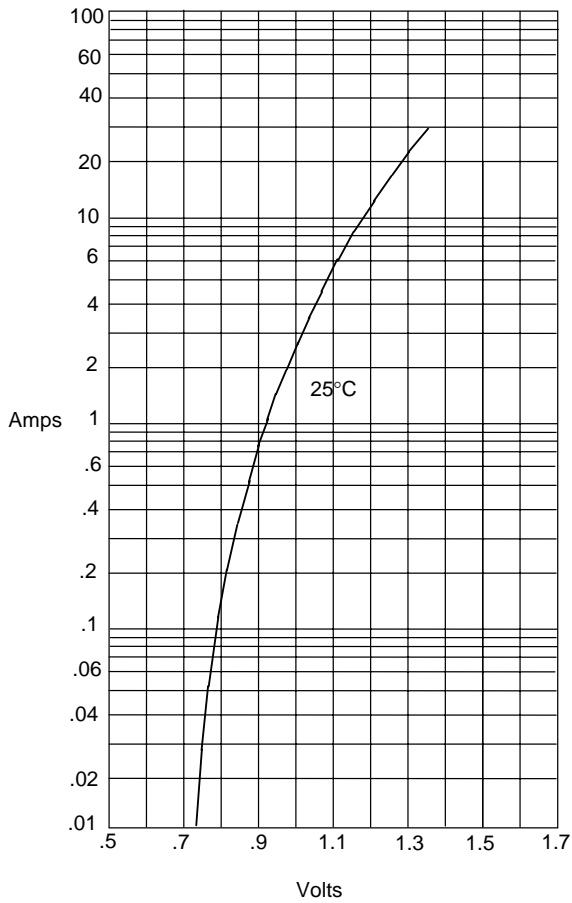
[www.mccsemi.com](http://www.mccsemi.com)

# S5AL thru S5ML



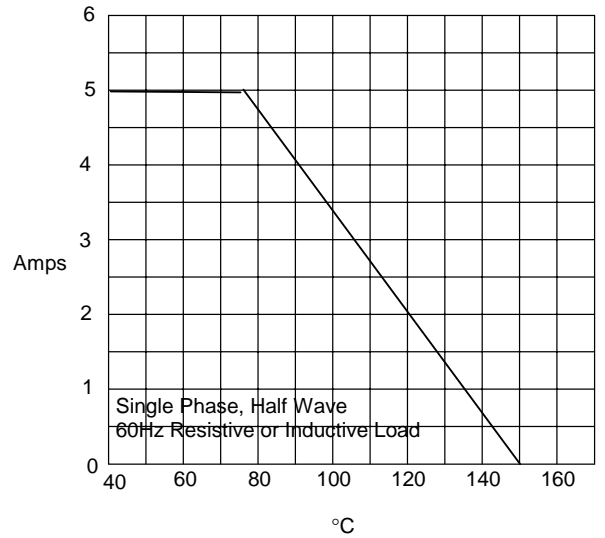
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Figure 1  
Typical Forward Characteristics



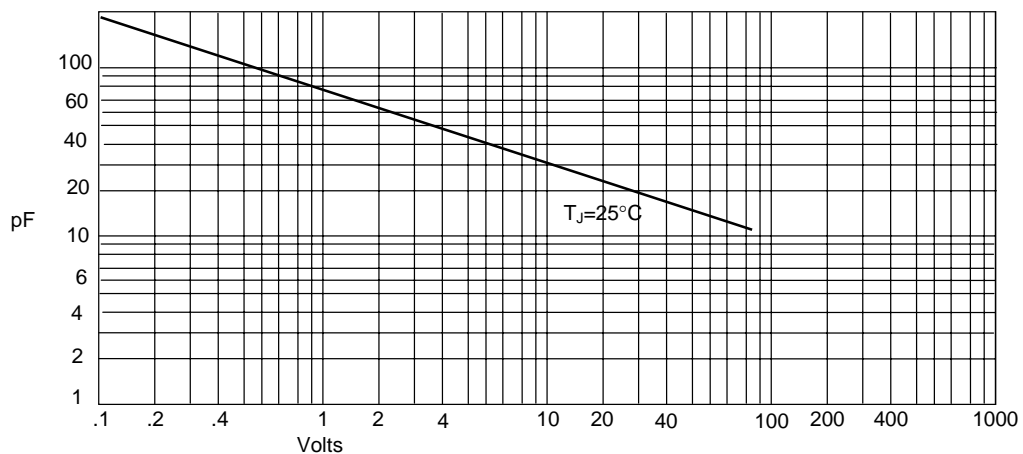
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts



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### Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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