

## 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

| 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

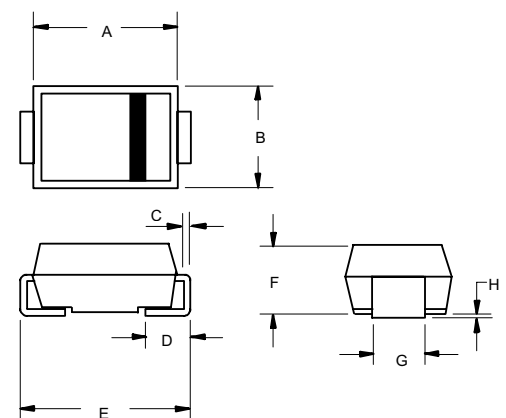
|   |             |                         |   |
|---|-------------|-------------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 5.0A                    | $T_L = 75^\circ\text{C}$                              |
| Peak Forward Surge Current                              | $I_{FSM}$   | 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 | $I_R$       | 10 $\mu\text{A}$<br>1mA | $T_a = 25^\circ\text{C}$<br>$T_a = 100^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 100pF                   | Measured at 1.0MHz, $V_R = 4.0\text{V}$               |

\*Pulse test: Pulse width 200  $\mu\text{sec}$ , 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

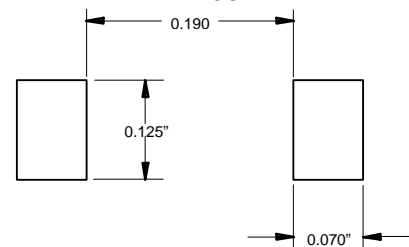
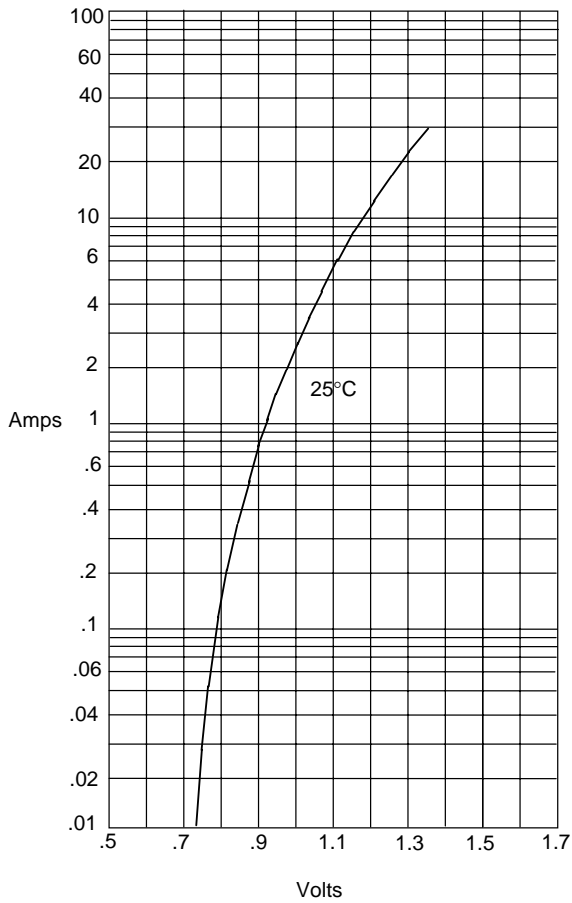


Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve

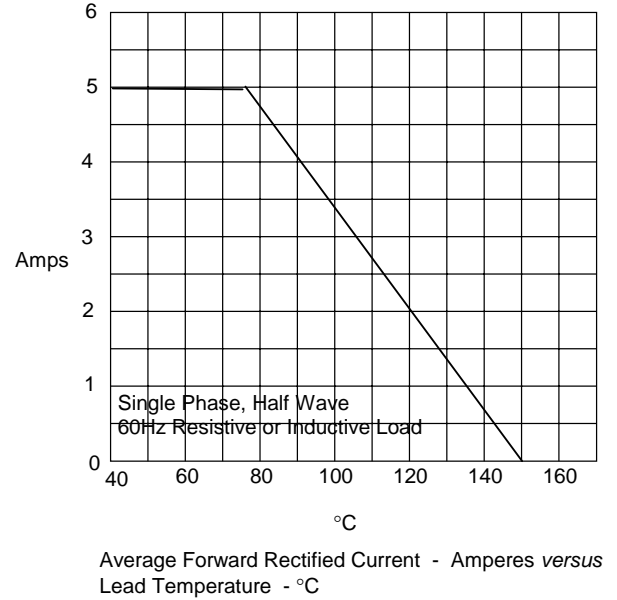
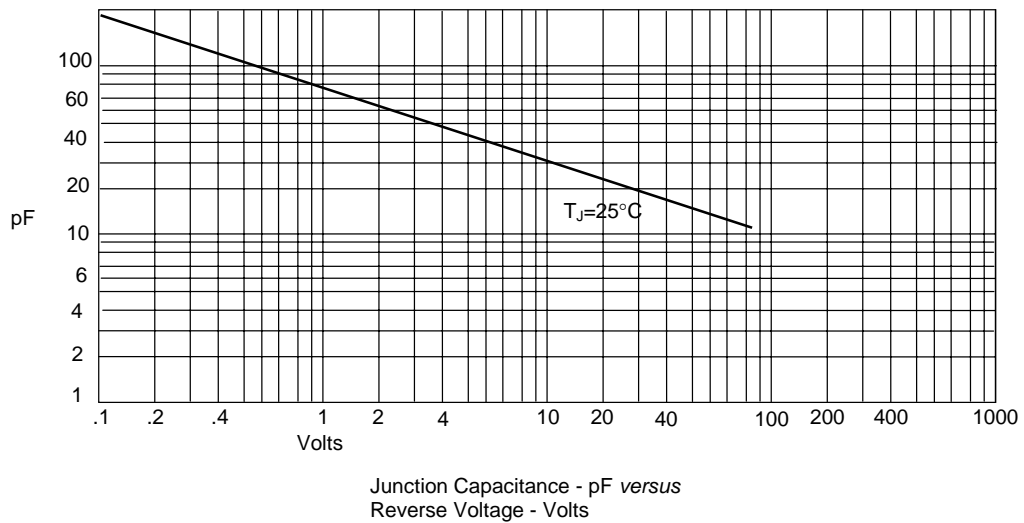


Figure 3  
Junction Capacitance



**Ordering Information :**

| <b>Device</b>  | <b>Packing</b>        |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel; 3Kpcs/Reel |

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