

## Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates Compliant. See Ordering Information)
- For Surface Mount Applications
- Low Thermal Resistance
- High Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 47°C/W Junction to Ambient
- Maximum Thermal Resistance: 13°C/W Junction to Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| S3AHE3          | S3A            | 50V                                    | 35V                 | 50V                         |
| S3BHE3          | S3B            | 100V                                   | 70V                 | 100V                        |
| S3DHE3          | S3D            | 200V                                   | 140V                | 200V                        |
| S3GHE3          | S3G            | 400V                                   | 280V                | 400V                        |
| S3JHE3          | S3J            | 600V                                   | 420V                | 600V                        |
| S3KHE3          | S3K            | 800V                                   | 560V                | 800V                        |
| S3MHE3          | S3M            | 1000V                                  | 700V                | 1000V                       |

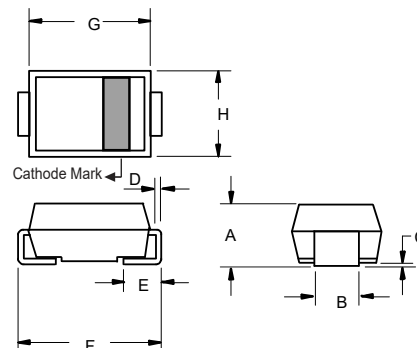
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                         |             |                           |                                                     |
|---------------------------------------------------------|-------------|---------------------------|-----------------------------------------------------|
| Power Dissipation                                       | $P_D$       | 2.6W                      |                                                     |
| Average Forward Current                                 | $I_{F(AV)}$ | 3.0A                      | $T_L=105^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 100A                      | 8.3ms, Half Sine                                    |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.2V                      | $I_{FM}=3.0A$ ;<br>$T_J=25^\circ\text{C}$ (Note3)   |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 10 $\mu$ A<br>250 $\mu$ A | $T_J=25^\circ\text{C}$ ;<br>$T_J=125^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 60pF                      | Measured at<br>1.0MHz, $V_R=4.0V$                   |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
2. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.  
3. Pulse Test: Pulse Width 200  $\mu$ sec, Duty Cycle 2%

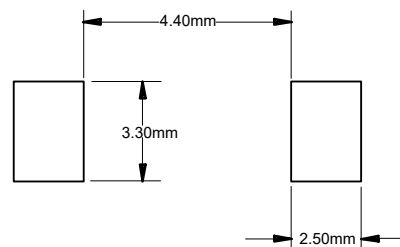
# 3 Amp Silicon Rectifier 50 to 1000 Volts

## SMC (DO-214AB)



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | 0.079  | 0.103 | 2.00  | 2.62  |      |
| B   | 0.108  | 0.128 | 2.75  | 3.25  |      |
| C   | 0.002  | 0.008 | 0.051 | 0.203 |      |
| D   | 0.006  | 0.012 | 0.152 | 0.305 |      |
| E   | 0.030  | 0.060 | 0.76  | 1.52  |      |
| F   | 0.305  | 0.320 | 7.75  | 8.13  |      |
| G   | 0.260  | 0.280 | 6.60  | 7.11  |      |
| H   | 0.220  | 0.245 | 5.59  | 6.22  |      |

## Suggested Solder Pad Layout



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

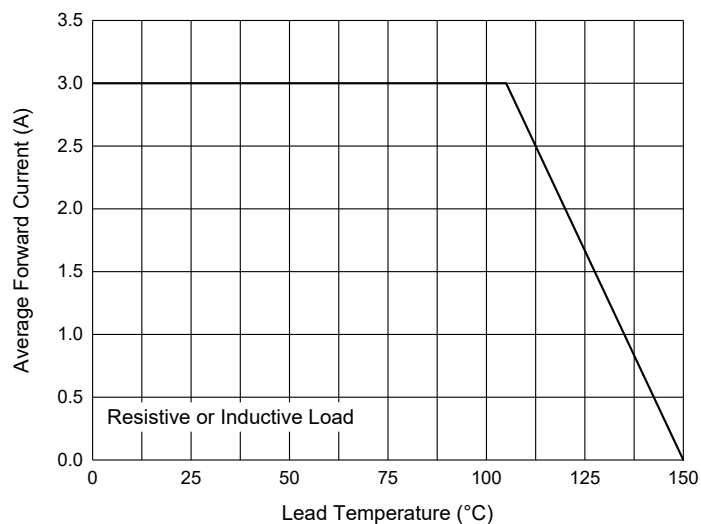


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

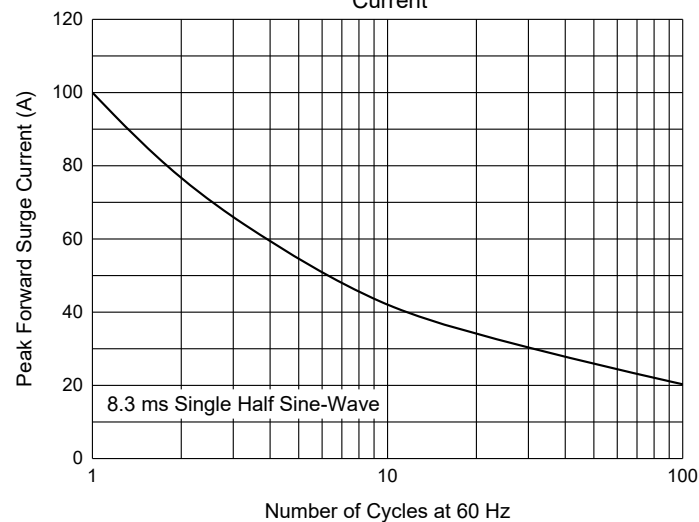


Fig. 3 - Typical Instantaneous Forward Characteristics

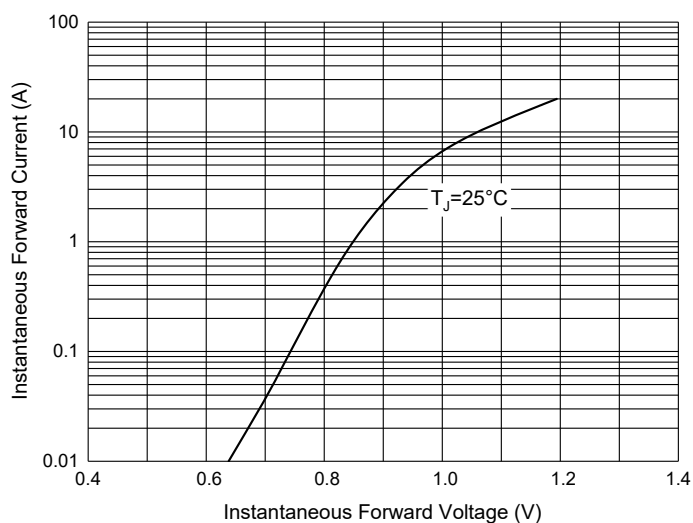
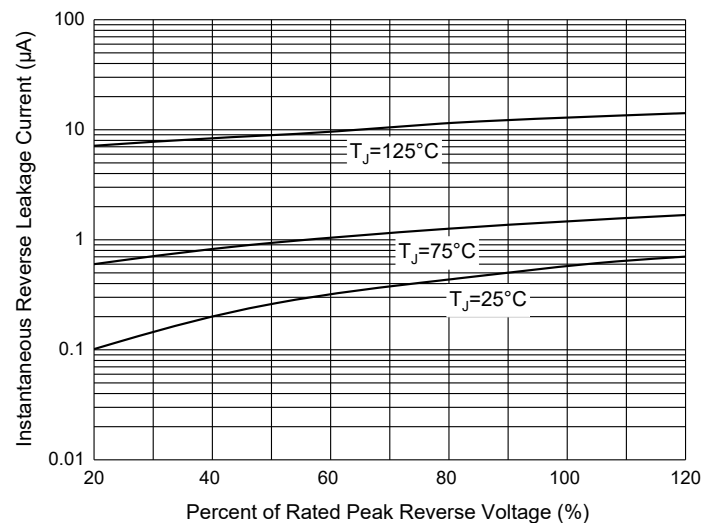


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

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

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