

## Features

- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Low Forward Voltage Drop and High Current Capability
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 10°C/W Junction to Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| S3AB            | S3AB           | 50V                                    | 35V                 | 50V                         |
| S3BB            | S3BB           | 100V                                   | 70V                 | 100V                        |
| S3DB            | S3DB           | 200V                                   | 140V                | 200V                        |
| S3GB            | S3GB           | 400V                                   | 280V                | 400V                        |
| S3JB            | S3JB           | 600V                                   | 420V                | 600V                        |
| S3KB            | S3KB           | 800V                                   | 560V                | 800V                        |
| S3MB            | S3MB           | 1000V                                  | 700V                | 1000V                       |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

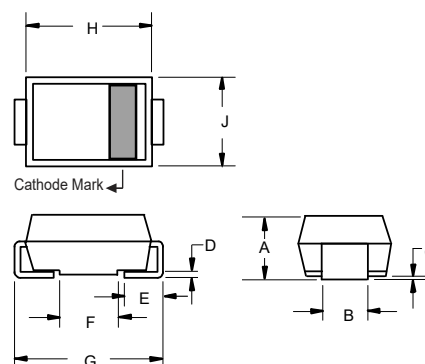
|   |           |               |   |
|---|-----------|---------------|---|
| Average Forward Current                                 | $I_O$     | 3.0A          | $T_T=75^\circ\text{C}$                              |
| Non-Repetitive Peak Forward Surge Current               | $I_{FSM}$ | 100A<br>200A  | 8.3ms, Half Sine Wave<br>1ms, Square Wave           |
| Repetitive Peak Forward Surge Current                   | $I_{FRM}$ | 150A          | 300us Surge Duration<br>900 ms Between Surges       |
| Maximum Instantaneous Forward Voltage                   | $V_F$     | 1.15V         | $I_{FM}=3.0A$ ;<br>$T_J=25^\circ\text{C}$           |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$     | 10μA<br>125μA | $T_J=25^\circ\text{C}$ ;<br>$T_J=125^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$     | 40pF          | Measured at 1.0MHz<br>$V_R=4.0V$                    |

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.

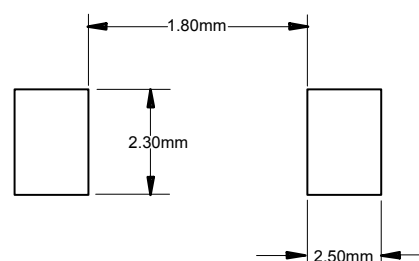
# 3 Amp Glass Passivated Rectifier 50 to 1000 Volts

## SMB (DO-214AA)



| DIM | DIMENSIONS |       |      |      | NOTE |
|-----|------------|-------|------|------|------|
|     | INCHES     |       | MM   |      |      |
|     | MIN        | MAX   | MIN  | MAX  |      |
| A   | 0.079      | 0.103 | 2.00 | 2.62 |      |
| B   | 0.075      | 0.087 | 1.91 | 2.21 |      |
| C   | 0.002      | 0.008 | 0.05 | 0.20 |      |
| D   | 0.006      | 0.012 | 0.15 | 0.31 |      |
| E   | 0.030      | 0.060 | 0.76 | 1.52 |      |
| F   | 0.065      | 0.091 | 1.65 | 2.32 |      |
| G   | 0.200      | 0.220 | 5.08 | 5.59 |      |
| H   | 0.160      | 0.191 | 4.06 | 4.85 |      |
| J   | 0.130      | 0.155 | 3.30 | 3.94 |      |

## Suggested Solder Pad Layout



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

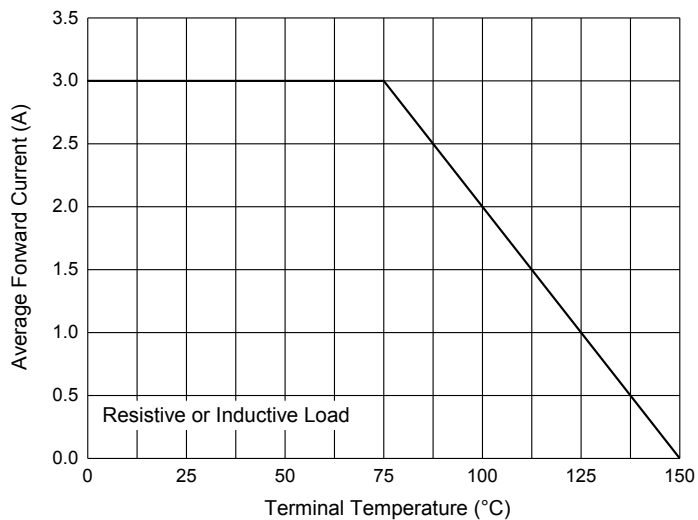


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

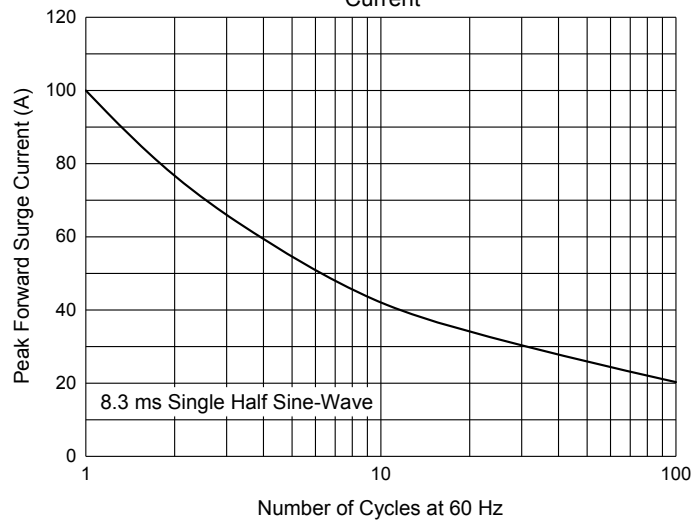


Fig. 3 - Typical Instantaneous Forward Characteristics

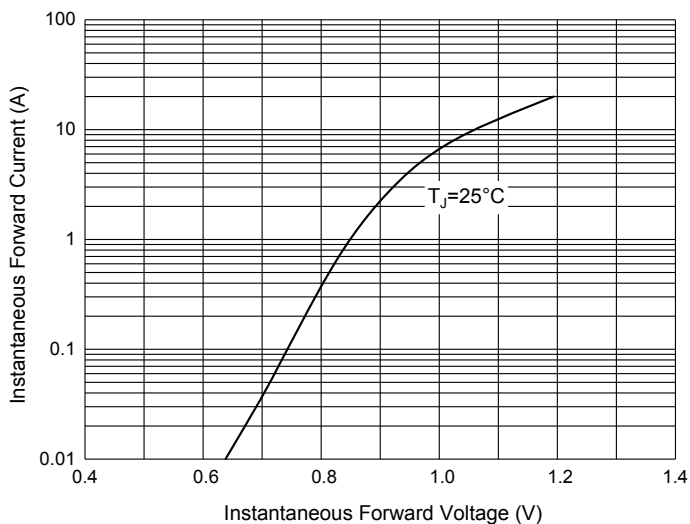
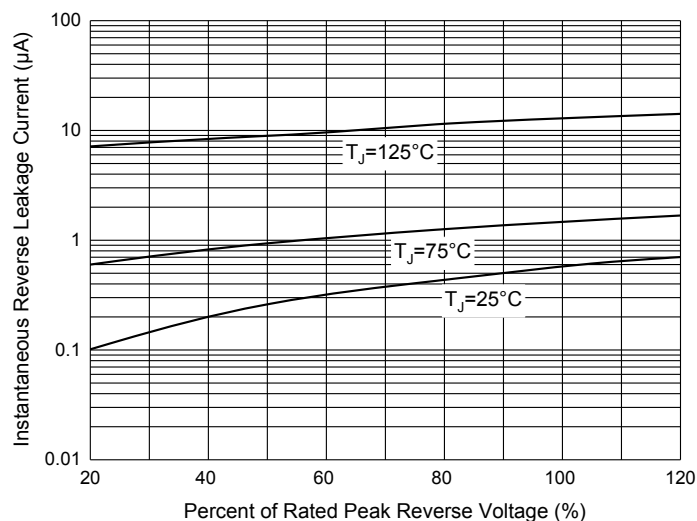


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

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

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