

## Features

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

## Maximum Ratings

- Operating Junction Temperature Range(32PL-34PL): -55°C to +125°C
- Operating Junction Temperature Range(36PL-320PL):-55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 20°C/W Junction to Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| SMD32PL         | SM32           | 20V                                    | 14V                 | 20V                         |
| SMD34PL         | SM34           | 40V                                    | 28V                 | 40V                         |
| SMD36PL         | SM36           | 60V                                    | 42V                 | 60V                         |
| SMD38PL         | SM38           | 80V                                    | 56V                 | 80V                         |
| SMD310PL        | SM310          | 100V                                   | 70V                 | 100V                        |
| SMD315PL        | SM315          | 150V                                   | 105V                | 150V                        |
| SMD320PL        | SM320          | 200V                                   | 200V                | 200V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

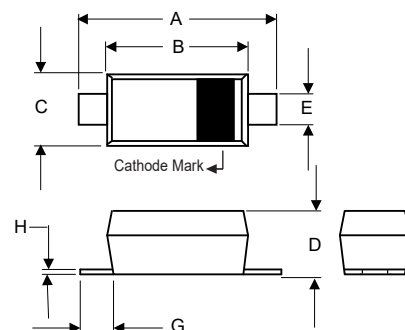
|   |             |               |   |
|---|-------------|---------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 3.0A          | See Fig 1   |
| Peak Forward Surge Current                              | $I_{FSM}$   | 80A           | 8.3ms, Half Sine                                  |
| Maximum Instantaneous Forward Voltage                   | $V_F$       |               |   |
| SMD32PL~34PL  |             | 0.50V         | $I_{FM}=3.0A;$<br>$T_J=25^\circ C$                |
| SMD36PL   |             | 0.65V         |   |
| SMD38PL-310PL   |             | 0.85V         |   |
| SMD315PL-320PL  |             | 0.90V         |   |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$       | 0.1mA<br>10mA | $T_J=25^\circ C$<br>$T_J=100^\circ C$             |
| Typical Junction Capacitance                            | $C_J$       |               |   |
| SMD32PL~34PL  |             | 140pF         | Measured at<br>1.0MHz VR=4.0V<br>$T_J=25^\circ C$ |
| SMD36PL   |             | 130pF         |   |
| SMD38PL-310PL   |             | 95pF          |   |
| SMD315PL-320PL  |             | 65pF          |   |

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 Exemption Applied, see EU Directive Annex Notes 7a.

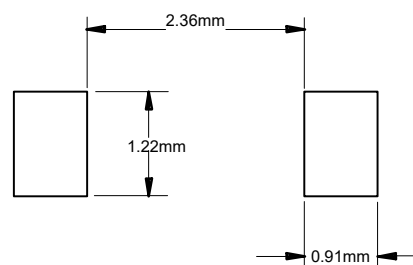
# 3 Amp Schottky Rectifier 20 to 200 Volts

## SOD-123FL



| DIM | DIMENSIONS |       |      |      | NOTE |
|-----|------------|-------|------|------|------|
|     | INCHES     |       | MM   |      |      |
|     | MIN        | MAX   | MIN  | MAX  |      |
| A   | 0.130      | 0.152 | 3.30 | 3.85 |      |
| B   | 0.100      | 0.122 | 2.55 | 3.10 |      |
| C   | 0.055      | 0.075 | 1.40 | 1.90 |      |
| D   | 0.035      | 0.053 | 0.90 | 1.35 |      |
| E   | 0.020      | 0.041 | 0.50 | 1.05 |      |
| G   | 0.010      | ----  | 0.25 | ---- |      |
| H   | ----       | 0.010 | ---- | 0.25 |      |

## Suggested Solder Pad Layout



**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

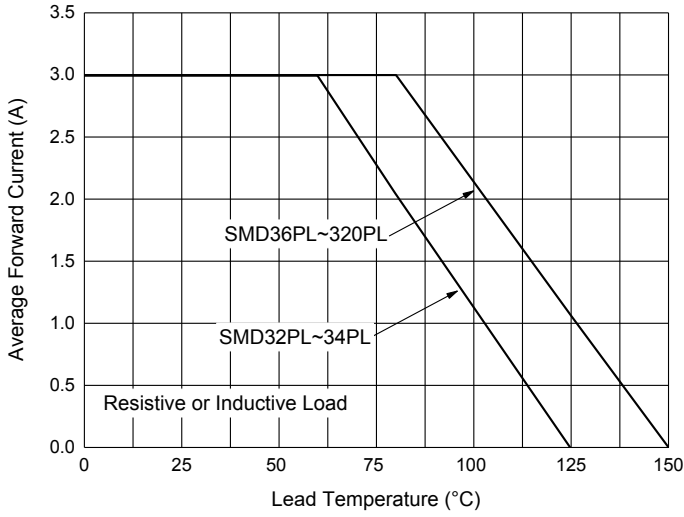


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

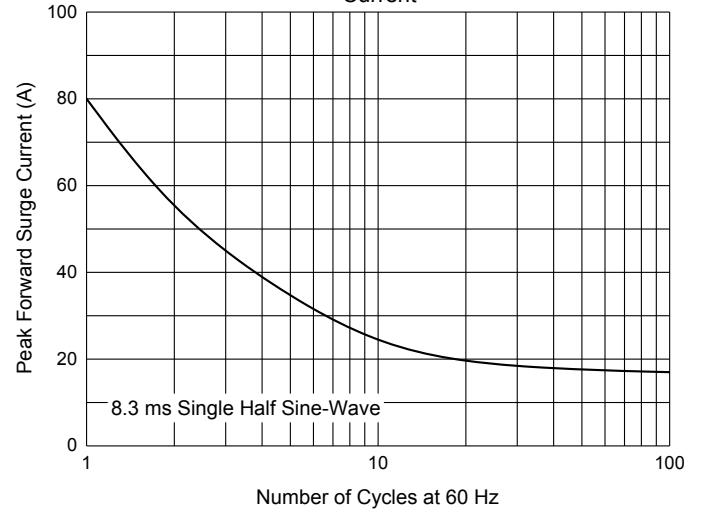


Fig. 3 - Typical Instantaneous Forward Characteristics

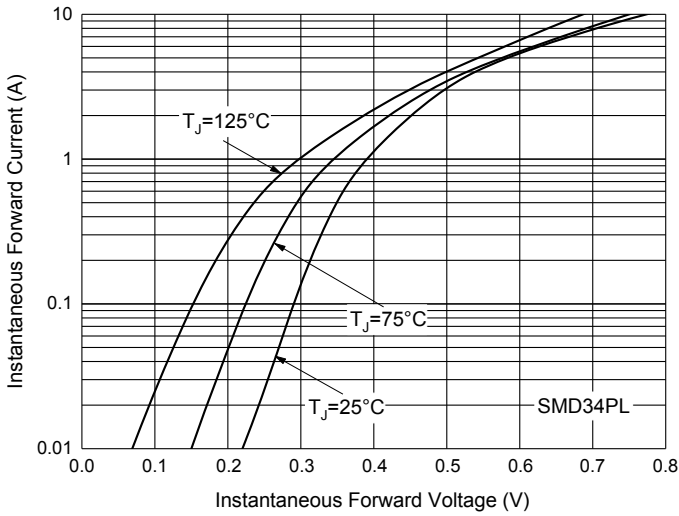


Fig. 4 - Typical Instantaneous Forward Characteristics

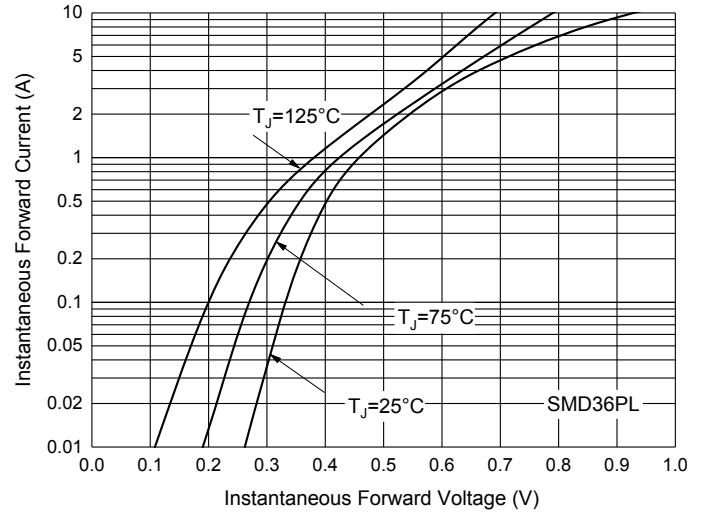


Fig. 5 - Typical Instantaneous Forward Characteristics

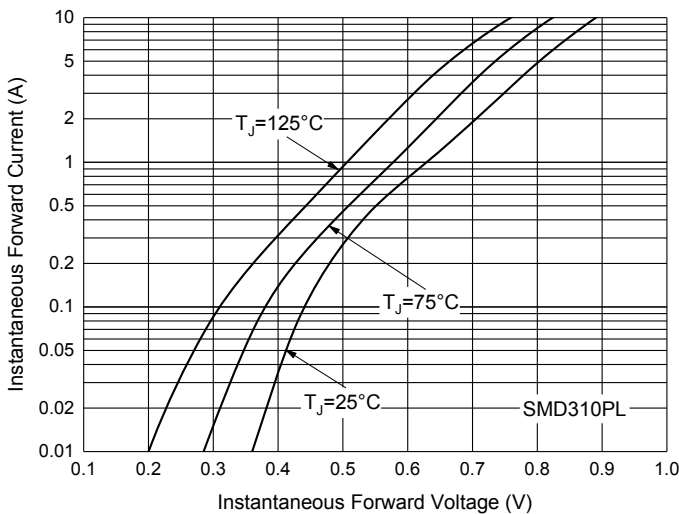
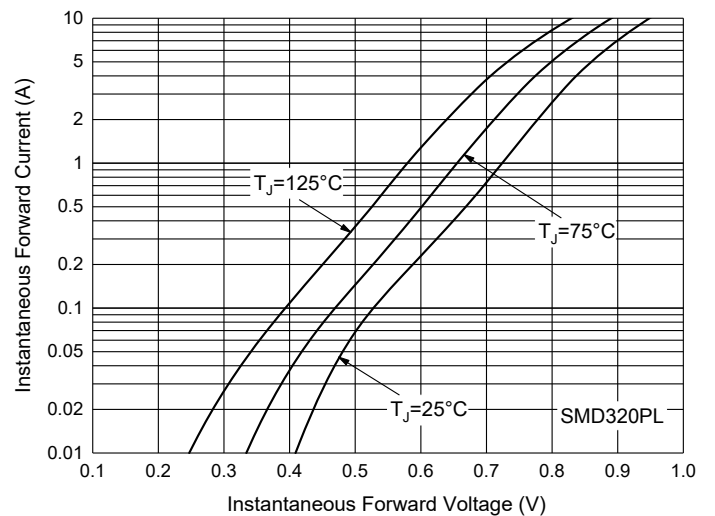


Fig. 6 - Typical Instantaneous Forward Characteristics



**Curve Characteristics**

Fig. 7 - Typical Reverse Leakage Characteristics

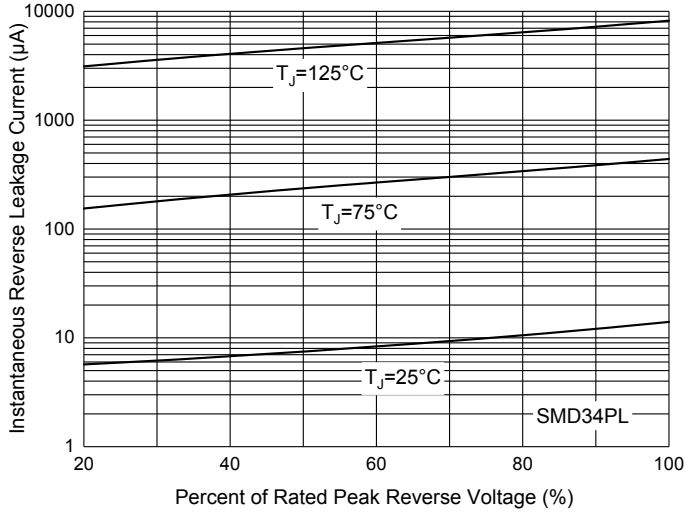


Fig. 8 - Typical Reverse Leakage Characteristics

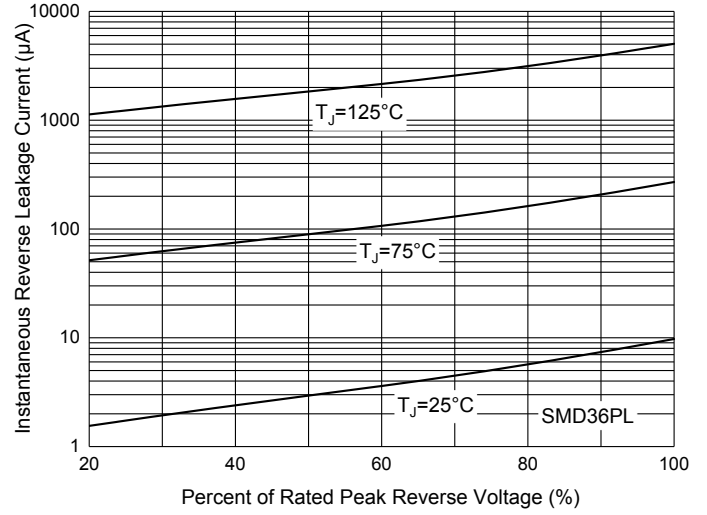


Fig. 9 - Typical Reverse Leakage Characteristics

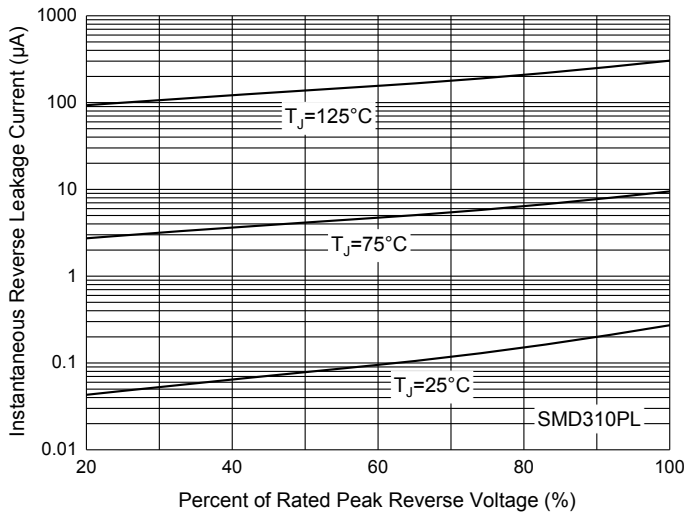
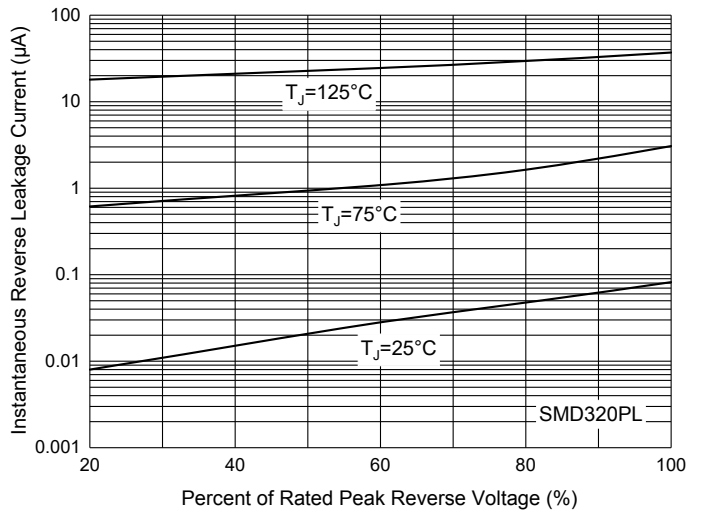


Fig. 10 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing                 |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

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