| ELECTRICAL CHARACTERISTICS ($T_A$ = 25 °C unless otherwise noted) | | | | | | |
|---|---|---|---|---|---|---|
| **PARAMETER** | **TEST CONDITIONS** | | **SYMBOL** | **TYP.** | **MAX.** | **UNIT** |
| Instantaneous forward voltage | $I_F$ = 7.5 A | $T_A$ = 25 °C | $V_F$ (1) | 0.43 | - | V |
| | $I_F$ = 15 A | | | 0.50 | 0.57 | |
| | $I_F$ = 7.5 A | $T_A$ = 125 °C | | 0.32 | - | |
| | $I_F$ = 15 A | | | 0.42 | 0.49 | |
| Reverse current | $V_R$ = 30 V | $T_A$ = 25 °C | $I_R$ (2) | 150 | 1000 | µA |
| | | $T_A$ = 125 °C | | 59 | 120 | mA |
| Typical junction capacitance | 4.0 V, 1 MHz | | $C_J$ | 930 | - | pF |

**Notes**

(1) Pulse test: 300 µs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

| THERMAL CHARACTERISTICS ($T_A$ = 25 °C unless otherwise noted) | | | |
|---|---|---|---|
| **PARAMETER** | **SYMBOL** | **VALUE** | **UNIT** |
| Typical thermal resistance | $R_{\theta JA}$ (1) | 100 | °C/W |
| | $R_{\theta JM}$ (2) | 3 | |

**Notes**

(1) Free air, mounted on recommended copper pad area. Thermal resistance $R_{\theta JA}$ - junction to ambient.

(2) Mounted on 30 mm x 30 mm Al PCB with 50 mm x 25 mm x 100 mm fin heat sink. Thermal resistance $R_{\theta JM}$ - junction to mount.

| ORDERING INFORMATION (Example) | | | | |
|---|---|---|---|---|
| **PREFERRED P/N** | **UNIT WEIGHT (g)** | **PREFERRED PACKAGE CODE** | **BASE QUANTITY** | **DELIVERY MODE** |
| SS15P3S-M3/86A | 0.10 | 86A | 1500 | 7" diameter plastic tape and reel |
| SS15P3S-M3/87A | 0.10 | 87A | 6500 | 13" diameter plastic tape and reel |

## RATINGS AND CHARACTERISTICS CURVES ($T_A$ = 25 °C unless otherwise noted)

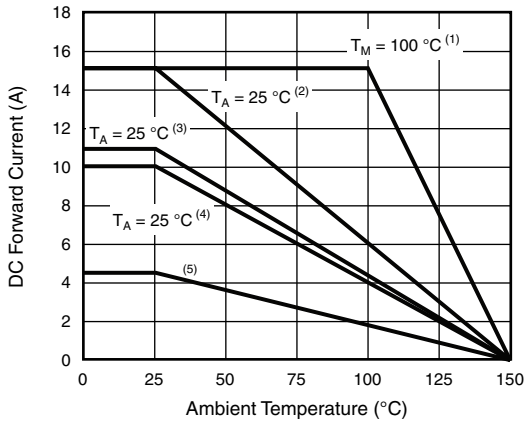



Fig. 1 - Maximum Current Derating Curve

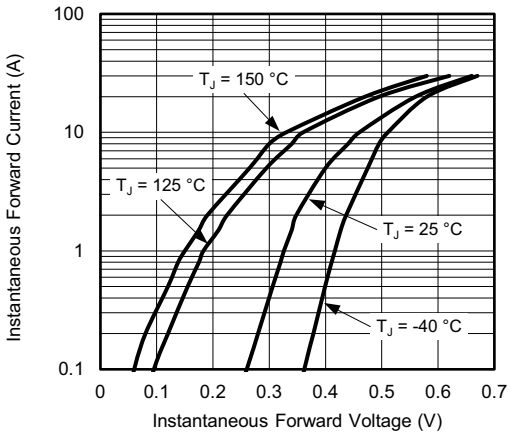



Fig. 3 - Typical Instantaneous Forward Characteristics

### Notes

(1) Mounted on 30 mm x 30 mm Al PCB with 50 mm x 25 mm x 100 mm fin heat sink, $T_M$ measured at the terminal of cathode band

(2) Mounted on 30 mm x 30 mm Al PCB ($R_{\theta JA}$ = 20 °C/W)

(3) Mounted on 30 mm x 30 mm x 2 copper pad areas FR4 PCB ($R_{\theta JA}$ = 30 °C/W)

(4) Mounted on 25 mm x 25 mm x 2 copper pad areas FR4 PCB ($R_{\theta JA}$ = 30 °C/W)

(5) Free air, mounted on recommended copper pad area ($R_{\theta JA}$ = 100 °C/W)

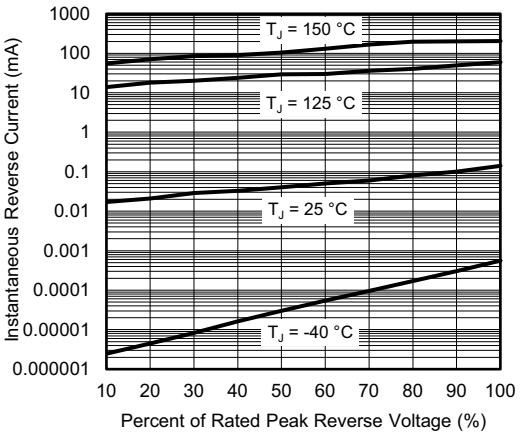



Fig. 4 - Typical Reverse Leakage Characteristics

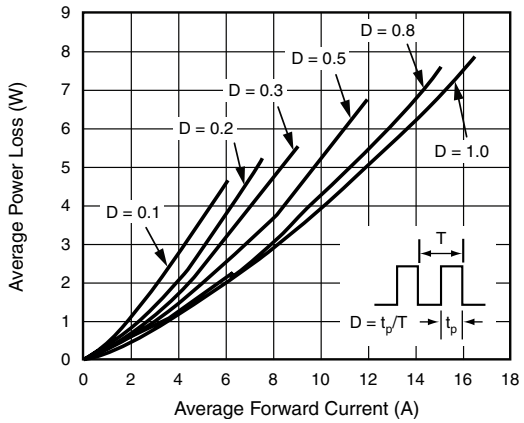



Fig. 2 - Forward Power Loss Characteristics

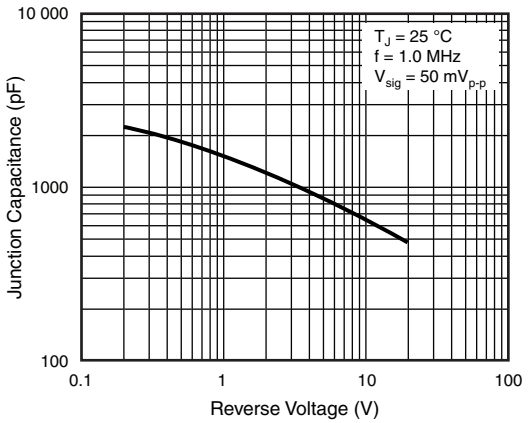
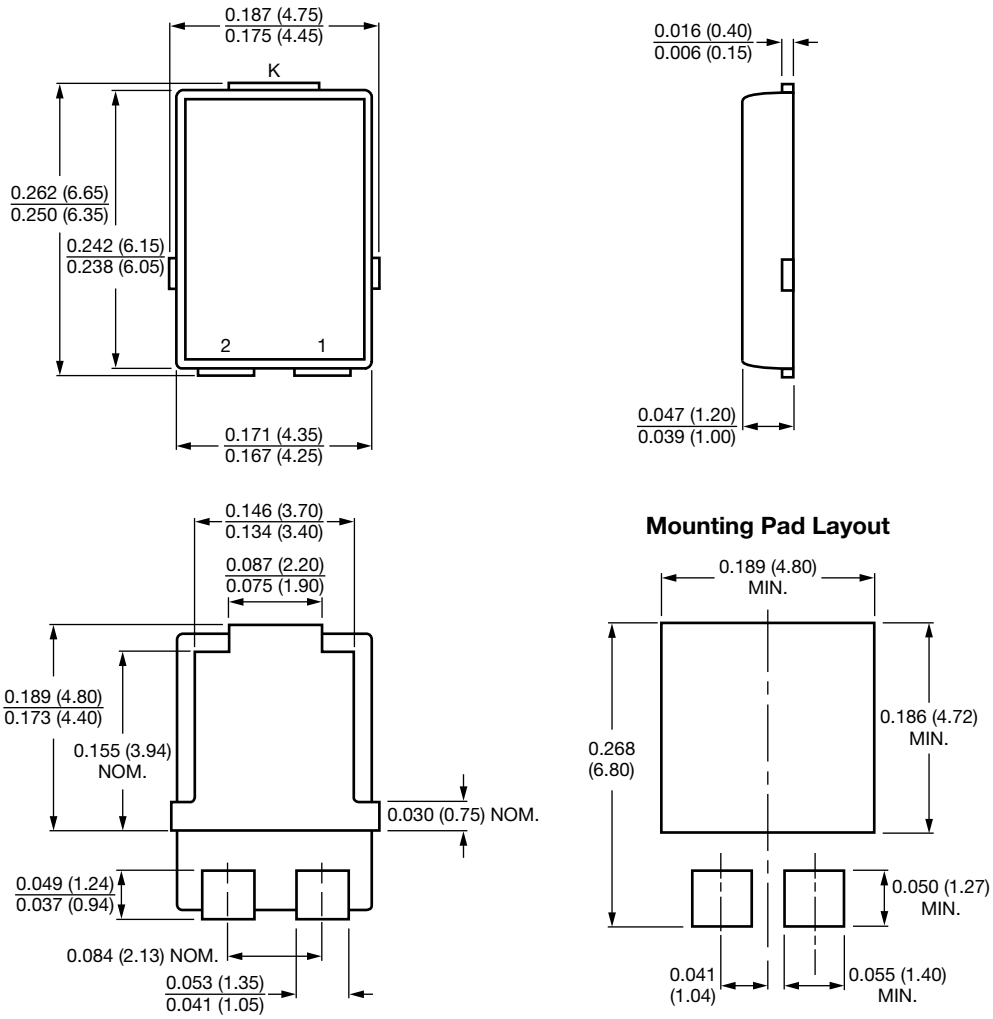



Fig. 5 - Typical Junction Capacitance

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**SMPC (TO-277A)**




Conform to JEDEC® TO-277A

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