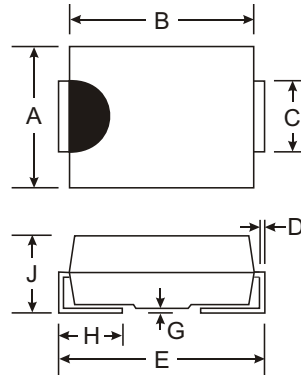


Features

- Glass Passivated Die Construction
- Diffused Junction
- Ultra-Fast Recovery Time for High Efficiency
- Low Forward Voltage Drop, High Current Capability, and Low Power Loss
- Surge Overload Rating to 30A Peak
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)
- Mounting Position: Any



| SMA | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 2.29 | 2.92 |
| B | 4.00 | 4.60 |
| C | 1.27 | 1.63 |
| D | 0.15 | 0.31 |
| E | 4.80 | 5.59 |
| G | 0.10 | 0.20 |
| H | 0.76 | 1.52 |
| J | 2.01 | 2.62 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | US1A | US1B | US1D | US1G | US1J | US1K | US1M | Unit | |
|--|-----------------------------------|-------------|------|------|------|------|------|------|------|----|
| Peak Repetitive Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | | | | |
| DC Blocking Voltage | V _R | | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Average Rectified Output Current @ T _T = 75°C | I _O | 1.0 | | | | | | | A | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method) | I _{FSM} | 30 | | | | | | | A | |
| Forward Voltage Drop @ I _F = 1.0A | V _{FM} | 1.0 | | | 1.3 | 1.7 | | | V | |
| Peak Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 100°C | I _{RM} | | | | | 5.0 | 100 | | | μA |
| Reverse Recovery Time (Note 2) | t _{rr} | 50 | | | | 75 | | | ns | |
| Typical Junction Capacitance (Note 1) | C _j | 20 | | | | 10 | | | pF | |
| Typical Thermal Resistance, Junction to Terminal | R _{θJT} | 30 | | | | | | | °C/W | |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | | | °C | |

- Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.

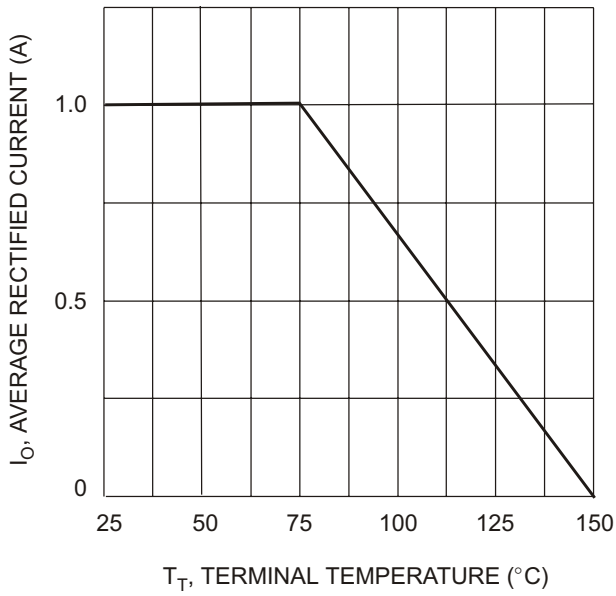


Fig. 1 Forward Current Derating Curve

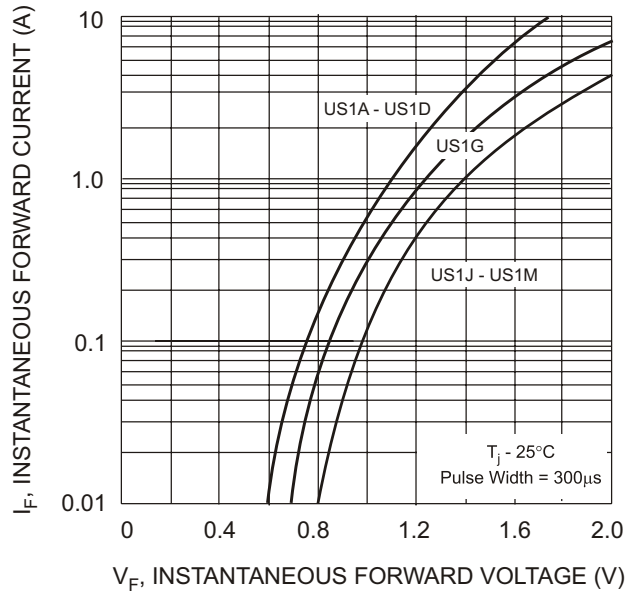


Fig. 2 Typical Forward Characteristics

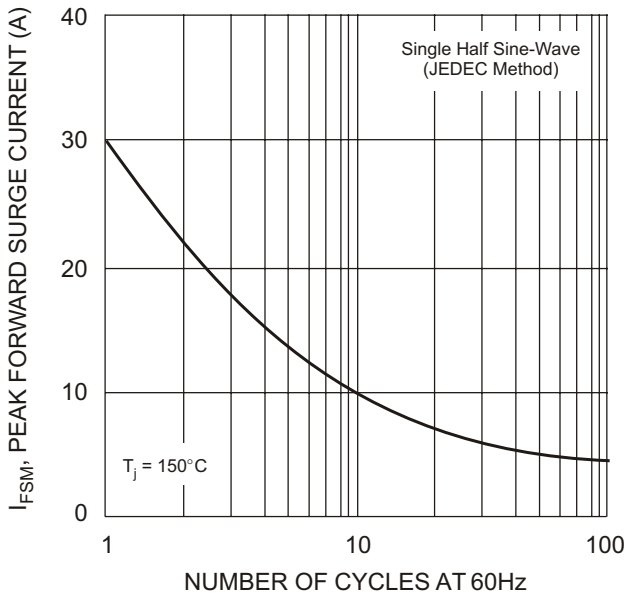


Fig. 3 Forward Surge Current Derating Curve

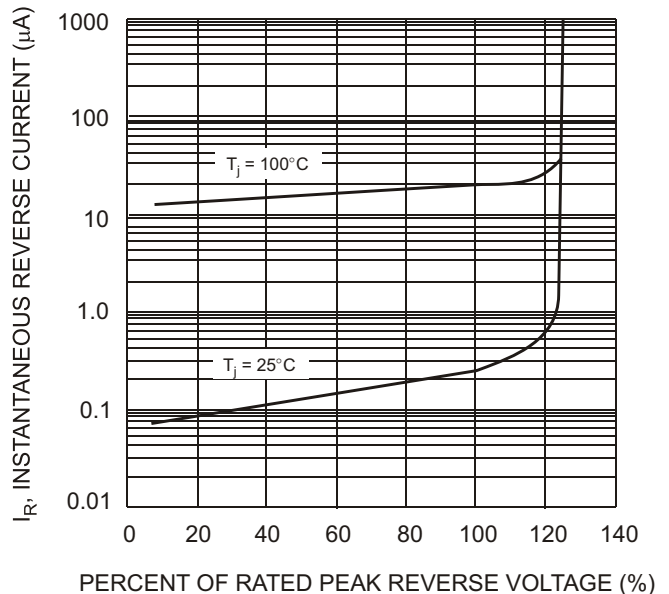
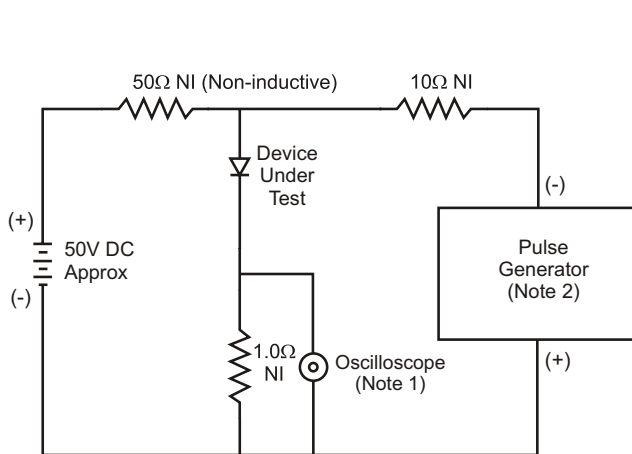


Fig. 4 Typical Reverse Characteristics



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

