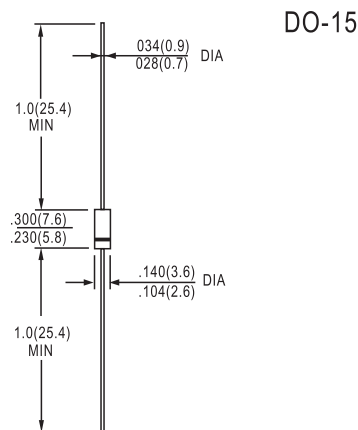


**FEATURES**

- Diffused Junction
- Ultra-Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 60A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 4)**

**Mechanical Data**

- Case: Molded Plastic
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish – Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Mounting Position: Any
- Weight: 0.4 grams (approximate)



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

Characteristic	Symbol	UF 2001	UF 2002	UF 2003	UF 2004	UF 2005	UF 2006	UF 2007	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ $T_A = 50^{\circ}\text{C}$	$I_O$	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	60							A
Forward Voltage @ $I_F = 2.0\text{A}$	$V_{FM}$	1.0			1.3	1.7			V
Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^{\circ}\text{C}$	$I_{RM}$	5.0 100							$\mu\text{A}$
Reverse Recovery Time (Note 3)	$t_{rr}$	50				75			ns
Typical Junction Capacitance (Note 2)	$C_j$	50				30			pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	50							K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150							$^{\circ}\text{C}$

- Notes:
1. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  3. Measured at  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ . See figure 5.
  4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

**RATINGS AND CHARACTERISTIC CURVES**

**UF2001 THRU UF2007**

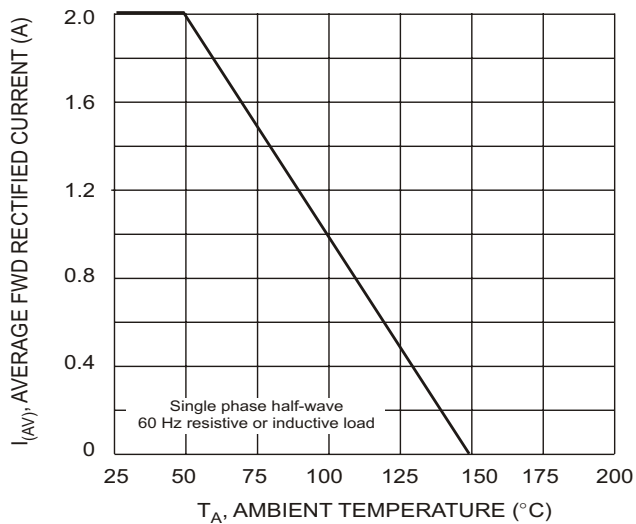


Fig. 1 Forward Current Derating Curve

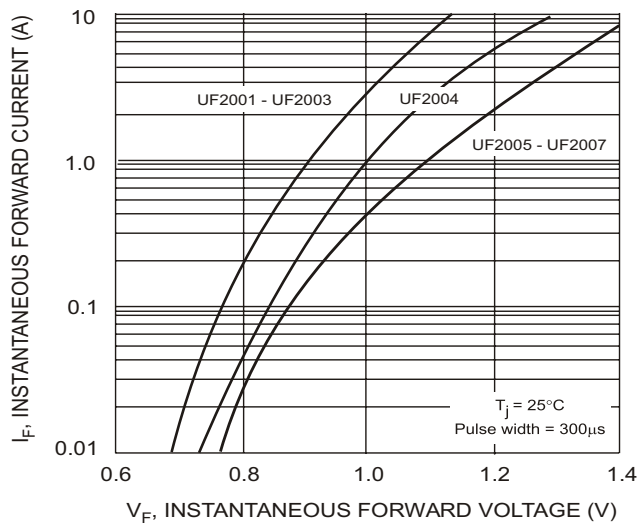


Fig. 2 Typical Forward Characteristics

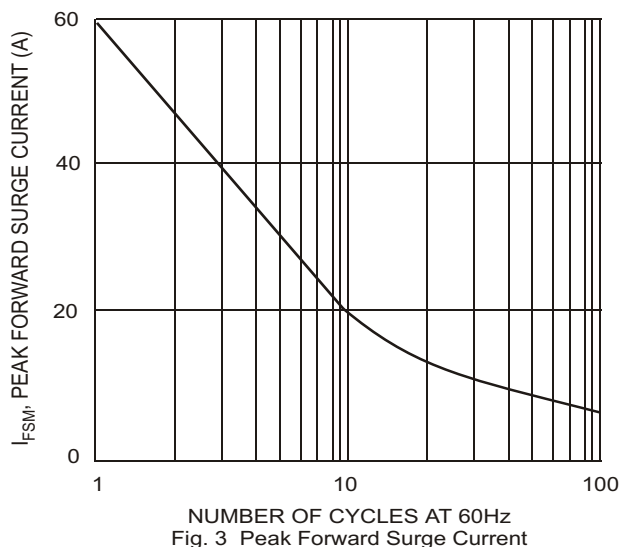


Fig. 3 Peak Forward Surge Current

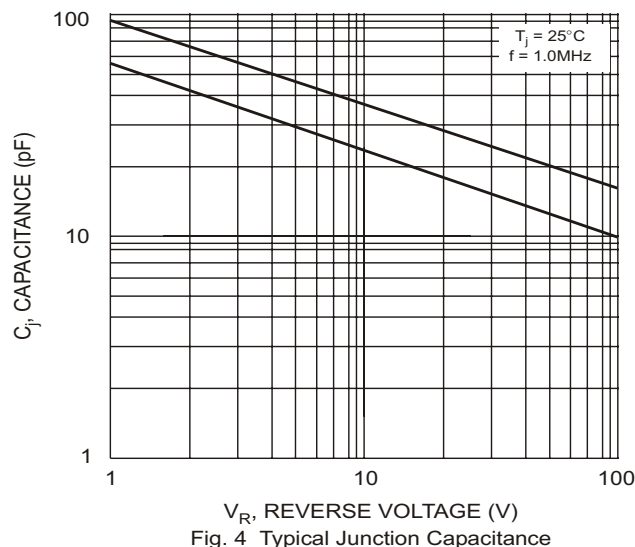
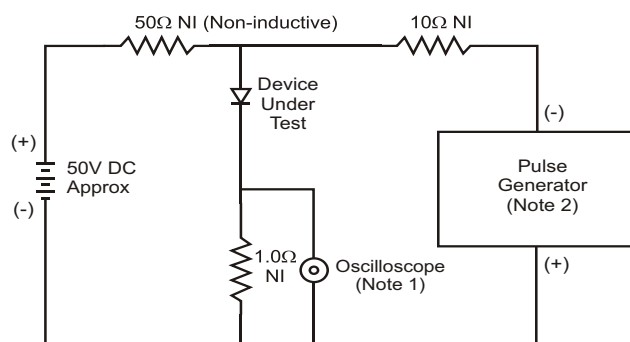


Fig. 4 Typical Junction Capacitance



- Notes:  
 1. Rise Time = 7.0ns max. Input Impedance = 1.0M $\Omega$ , 22pF.  
 2. Rise Time = 10ns max. Input Impedance = 50 $\Omega$ .

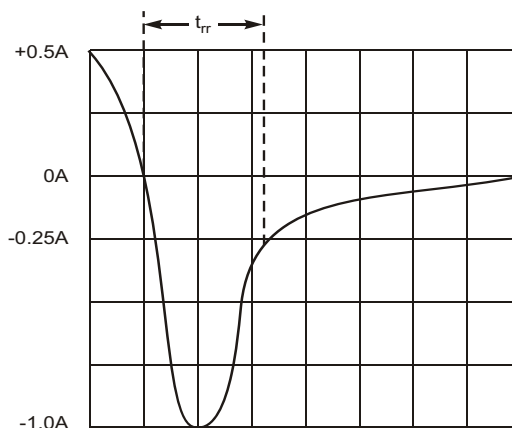


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit