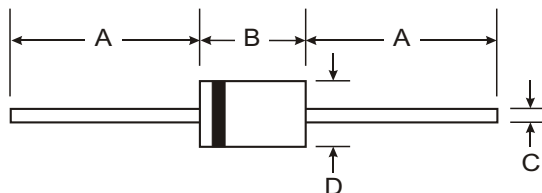


### Features

- Glass Passivated Die Construction
- Diffused Junction
- Ultra-Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 125A Peak
- Low Reverse Leakage Current
- Plastic Material: UL Flammability Classification Rating 94V-0



### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 1.1 grams (approx.)
- Mounting Position: Any

DO-201AD		
Dim	Min	Max
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	UG3001	UG3002	UG3003	UG3004	UG3005	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	V
Average Rectified Output Current (Note 1) @ $T_A = 55^{\circ}\text{C}$	$I_O$	3.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	125					A
Forward Voltage @ $I_F = 3.0\text{A}$	$V_{FM}$	0.95			1.25	1.7	V
Peak Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^{\circ}\text{C}$ @ $T_A = 100^{\circ}\text{C}$	$I_{RM}$	5.0 100					$\mu\text{A}$
Reverse Recovery Time (Note 3)	$t_{rr}$	50				75	ns
Typical Junction Capacitance (Note 2)	$C_j$	60				30	pF
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	35					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 with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ . See figure 5.

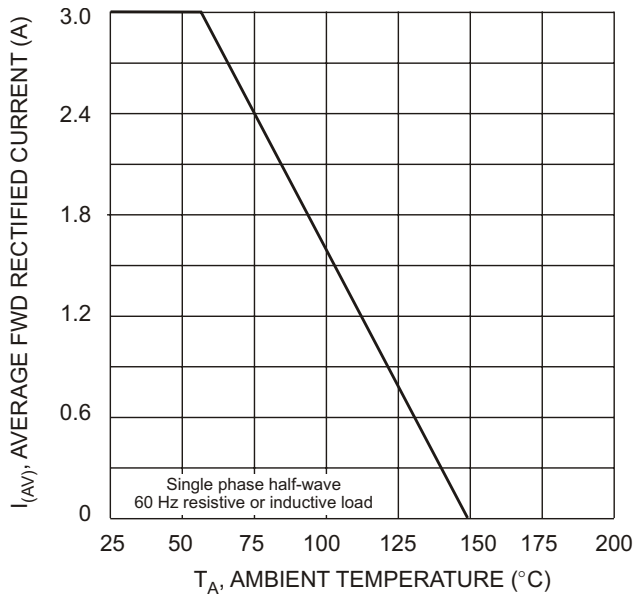


Fig. 1 Forward Current Derating Curve

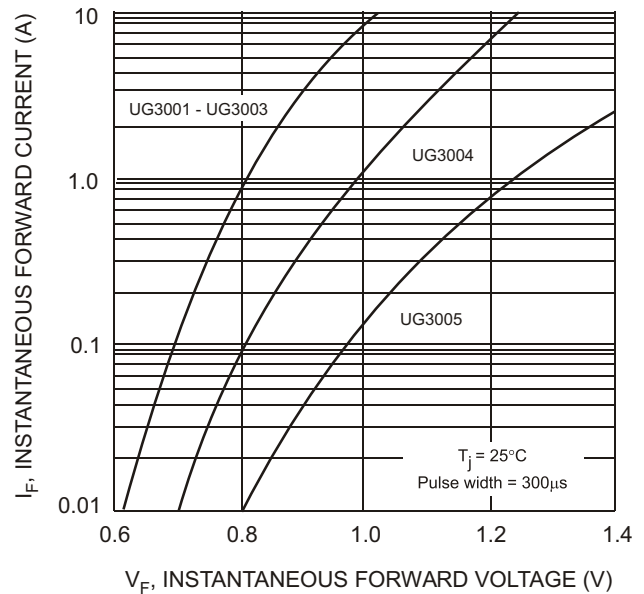


Fig. 2 Typical Forward Characteristics

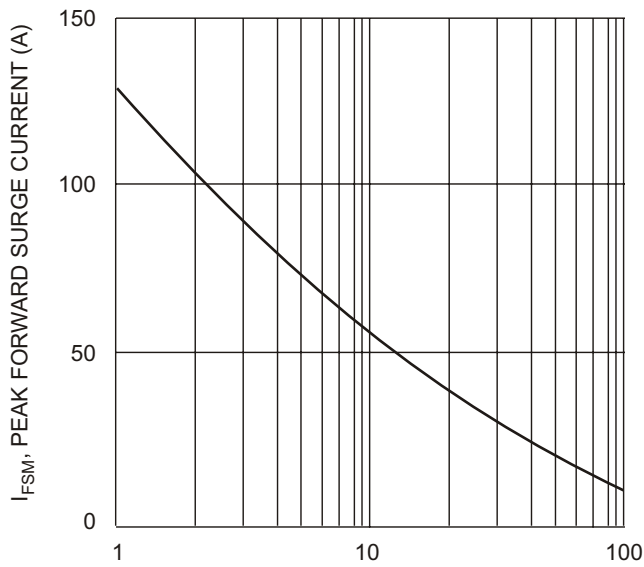


Fig. 3 Peak Forward Surge Current

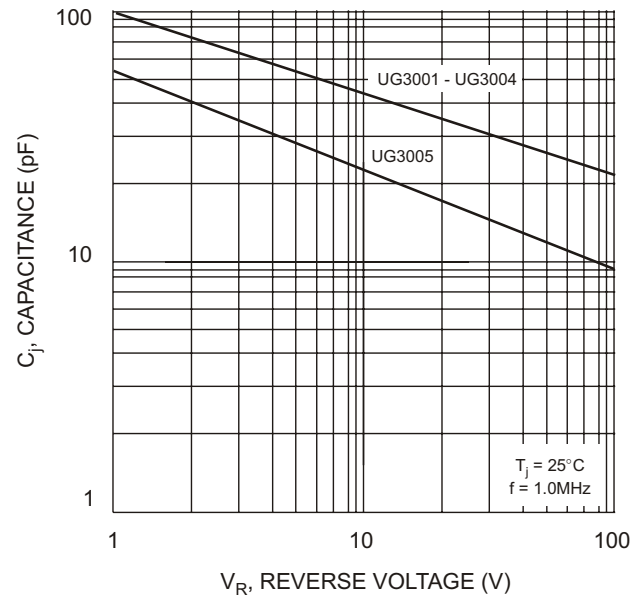
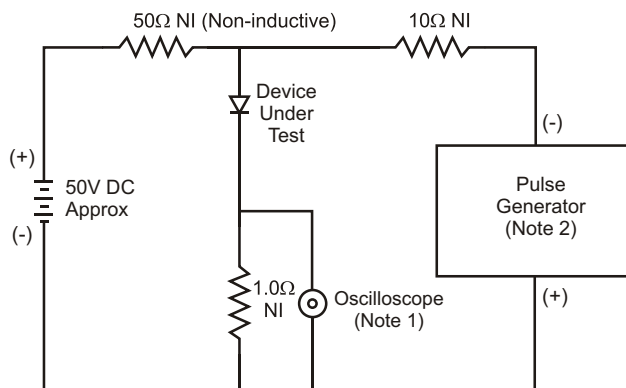


Fig. 4 Typical Junction Capacitance



Notes:

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

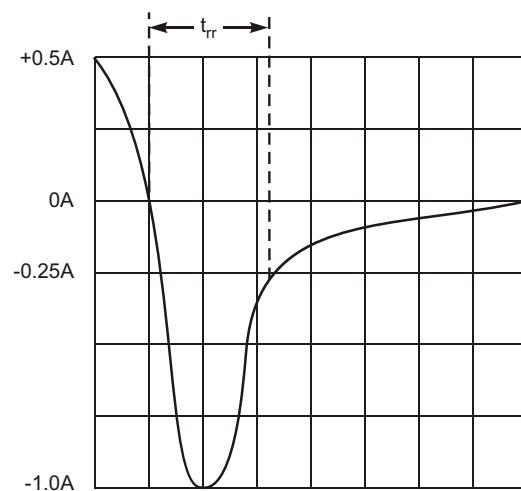


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit