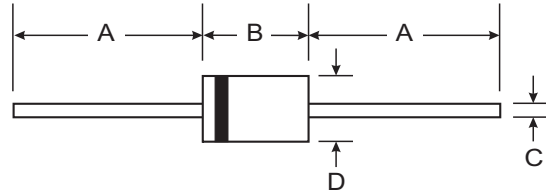


Features

- Glass Passivated Die Construction
- Diffused Junction
- Super-Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 125A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 4)**



Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting Position: Any
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 1.12 grams (approximate)

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°C unless otherwise specified

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

Characteristic	Symbol	SF30 AG	SF30 BG	SF30 CG	SF30 DG	SF30 FG	SF30 GG	SF30 HG	SF30 JG	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	300	400	500	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	100	140	210	280	350	420	V
Average Rectified Output Current (Note 1) @ $T_A = 55^{\circ}C$	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 @ $I_F = 3.0A$	V_{FM}	0.95				1.3		1.5		V
Peak Reverse Current @ $T_A = 25^{\circ}C$ at Rated DC Blocking Voltage @ $T_A = 100^{\circ}C$	I_{RM}	5.0 100								μA
Reverse Recovery Time (Note 3)	t_{rr}	35				40		50		ns
Typical Junction Capacitance (Note 2)	C_j	75						50		pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	32								K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150								$^{\circ}C$

- 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 = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See Figure 5.
 4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

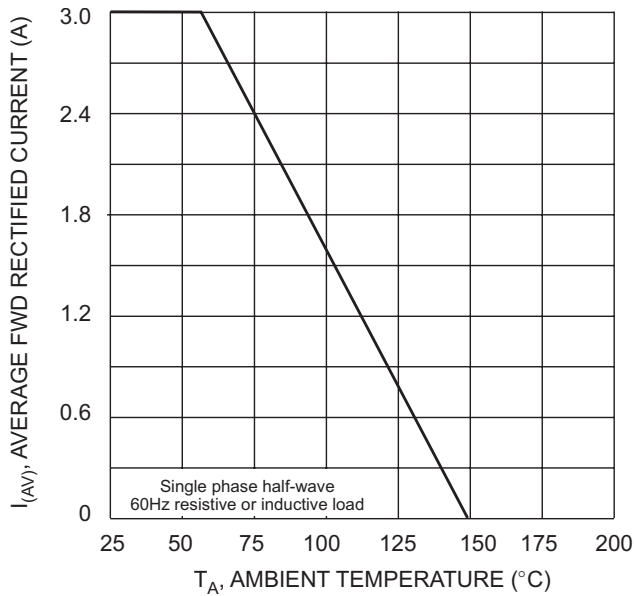


Fig. 1 Forward Current Derating Curve

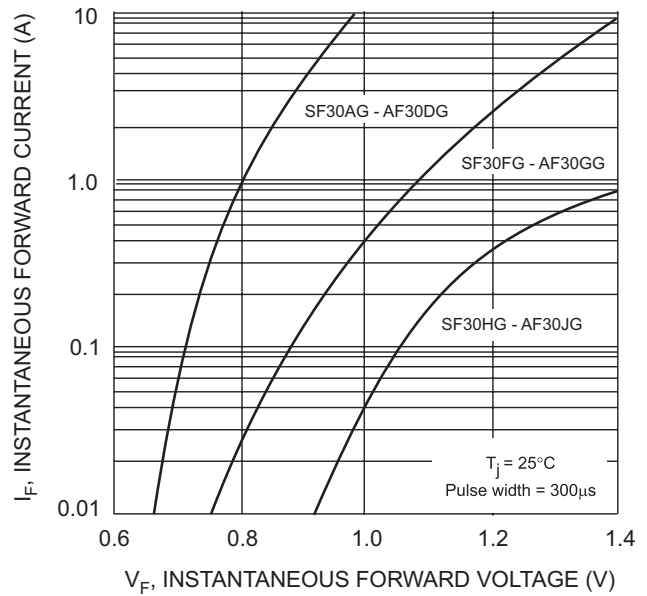


Fig. 2 Typical Forward Characteristics

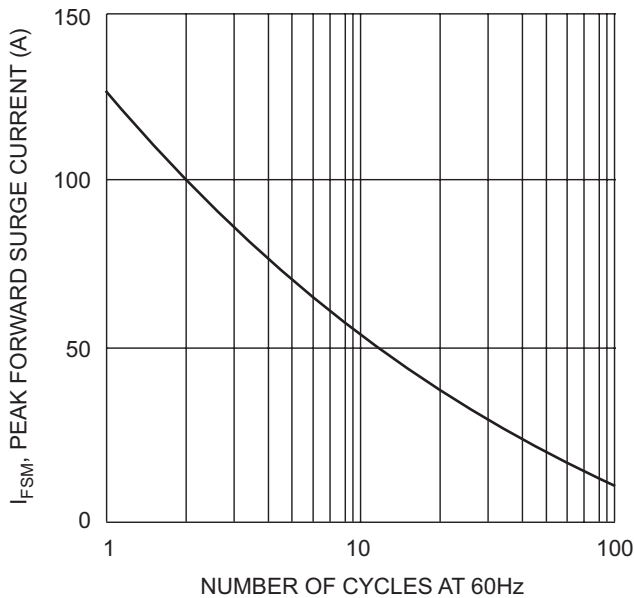


Fig. 3 Peak Forward Surge Current

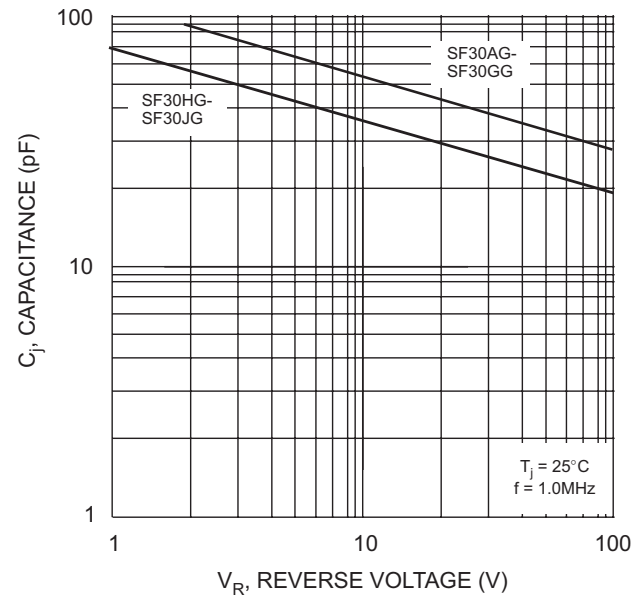
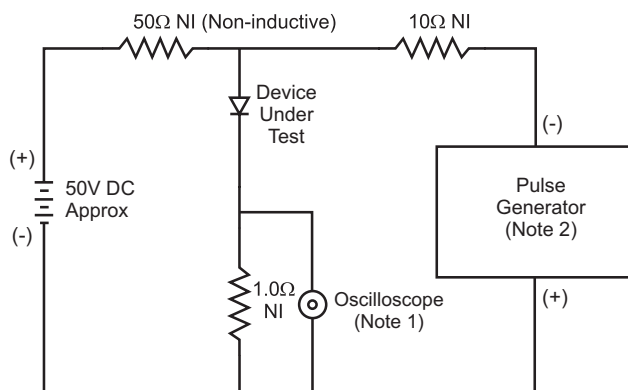
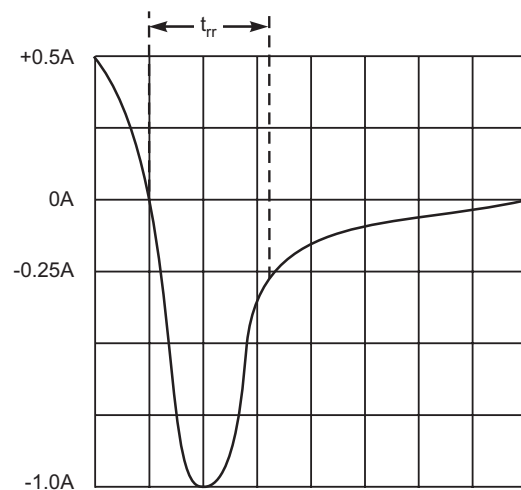


Fig. 4 Typical Junction Capacitance



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



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Ordering Information (Note 5)

Device	Packaging	Shipping
SF30AG-B	DO-201AD	500/Bulk
SF30AG-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SF30BG-B	DO-201AD	500/Bulk
SF30BG-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SF30CG-B	DO-201AD	500/Bulk
SF30CG-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SF30DG-B	DO-201AD	500/Bulk
SF30DG-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SF30FG-B	DO-201AD	500/Bulk
SF30FG-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SF30GG-B	DO-201AD	500/Bulk
SF30GG-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SF30HG-B	DO-201AD	500/Bulk
SF30HG-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SF30JG-B	DO-201AD	500/Bulk

Notes: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.