NOT RECOMMENDED FOR NEW DESIGN

SF10AG - SF10JG

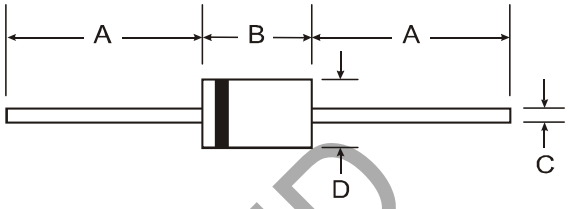
1.0A SUPER-FAST GLASS PASSIVATED RECTIFIER

Features

- Glass Passivated Die Construction
- Super-Fast Switching for High Efficiency
- Surge Overload Rating to 30A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 4)**

Mechanical Data

- Case: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Tin. Plated Leads Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Cathode Band
- Marking: Type Number
- Ordering Information: See Page 3
- Weight: 0.3 grams (approximate)



DO-41		
Dim	**Min**	**Max**
A	25.40	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
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	SF10 AG	SF10 BG	SF10 CG	SF10 DG	SF10 FG	SF10 GG	SF10 HG	SF10 JG	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 5)	V_{RRM} V_{RWM} V_R	50	100	150	200	300	400	500	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	350	420	V
Average Rectified Output Current @ T_A = 75°C (Note 1)	I_O	1.0								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I_{FSM}	30								A
Forward Voltage @ I_F = 1.0A	V_{FM}	0.95				1.3		1.5		V
Peak Reverse Current @ T_A = 25°C at Rated DC Blocking Voltage (Note 5) @ T_A = 100°C	I_{RM}	10 100								μA
Reverse Recovery Time (Note 3)	t_{rr}	35				40		50		ns
Typical Total Capacitance (Note 2)	C_T	75						50		pF
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	75								°C/W
Operating and Storage Temperature Range	$T_{j, TSTG}$	-65 to +150								°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. High temperature solder exemption applied, see *EU Directive Annex Note 7.*
5. Short duration pulse test used to minimize self-heating effect.

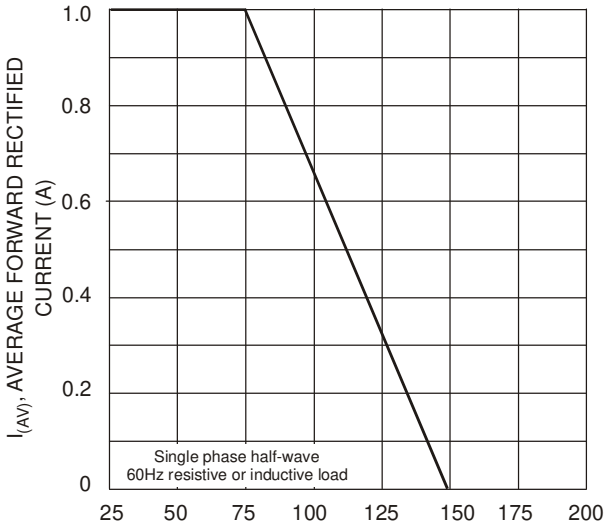


Fig. 1 Forward Current Derating Curve

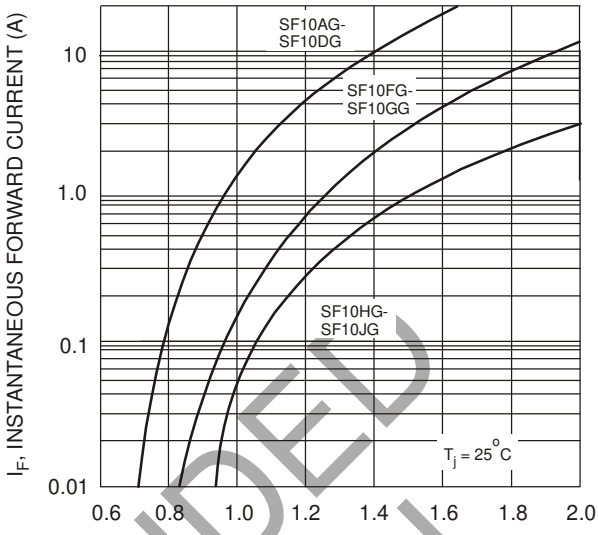


Fig. 2 Typical Forward Characteristics

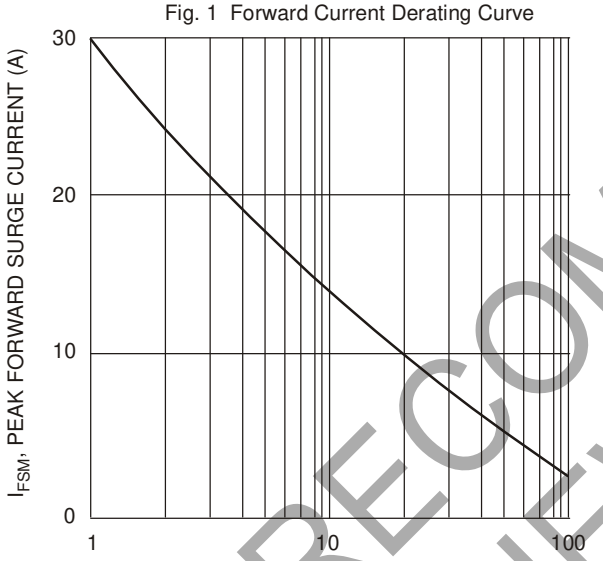


Fig. 3 Peak Forward Surge Current

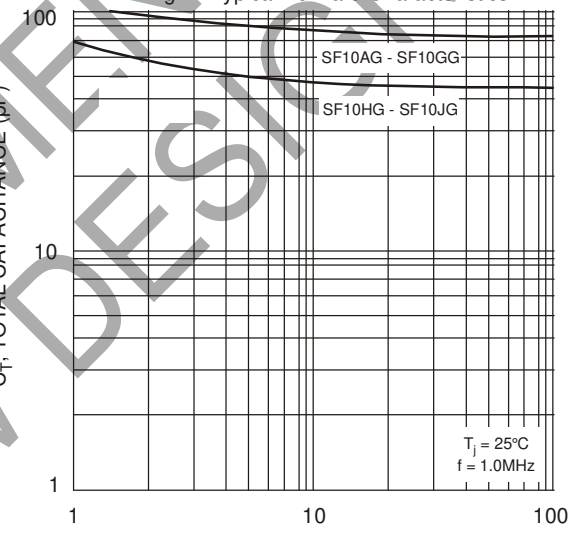
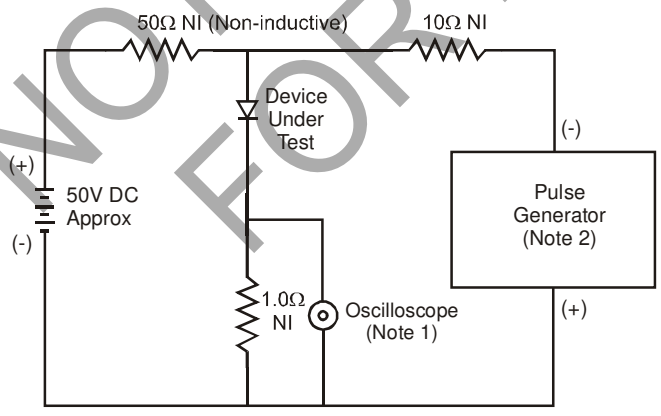
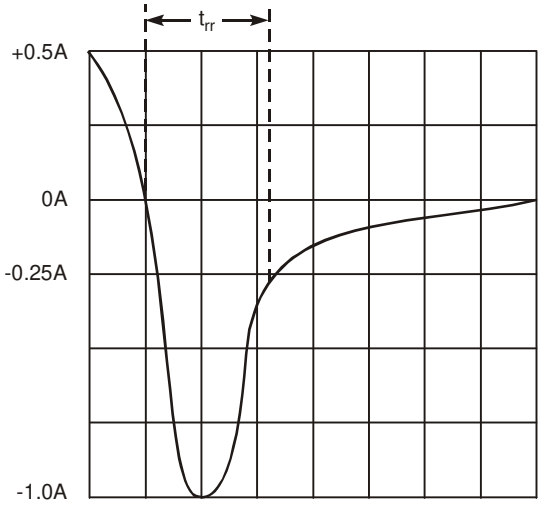


Fig. 4 Typical Total Capacitance





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

Ordering Information (Note 6)

Device	Packaging	Shipping
SF10AG-A	DO-41	5K/Ammo Pack
SF10AG -B	DO-41	1K/Bulk
SF10AG -T	DO-41	5K/Tape & Reel, 13-inch
SF10BG -A	DO-41	5K/Ammo Pack
SF10BG -B	DO-41	1K/Bulk
SF10BG -T	DO-41	5K/Tape & Reel, 13-inch
SF10CG -A	DO-41	5K/Ammo Pack
SF10CG -B	DO-41	1K/Bulk
SF10CG -T	DO-41	5K/Tape & Reel, 13-inch
SF10DG -A	DO-41	5K/Ammo Pack
SF10DG -B	DO-41	1K/Bulk
SF10DG -T	DO-41	5K/Tape & Reel, 13-inch
SF10FG -A	DO-41	5K/Ammo Pack
SF10FG -B	DO-41	1K/Bulk
SF10FG -T	DO-41	5K/Tape & Reel, 13-inch
SF10GG -A	DO-41	5K/Ammo Pack
SF10GG -B	DO-41	1K/Bulk
SF10GG -T	DO-41	5K/Tape & Reel, 13-inch
SF10HG -A	DO-41	5K/Ammo Pack
SF10HG -B	DO-41	1K/Bulk
SF10HG -T	DO-41	5K/Tape & Reel, 13-inch
SF10JG -A	DO-41	5K/Ammo Pack
SF10JG -B	DO-41	1K/Bulk
SF10JG -T	DO-41	5K/Tape & Reel, 13-inch

Notes: 6. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf.

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