

SF51 THRU SF58

SUPERFAST RECOVERY RECTIFIERS

Reverse Voltage – 50 to 600 Volts

Forward Current – 5.0 Amperes

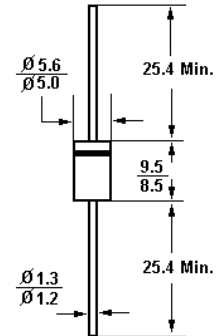
DO-201AD

Features

- Low forward voltage drop
- Low leakage
- High current capability
- Super fast switching speed
- High forward surge capability
- High reliability.

Mechanical Data

- **Case:** JEDEC DO-201AD molded plastic body
- **Epoxy :** UL 94V-O rate flame retardant
- **Lead:** Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any



Dimnsions in mm

Absolute Maximum Ratings and Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single-phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	SF51	SF52	SF53	SF54	SF55	SF56	SF58	Units
Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Average Forward Rectified Current 0.375"(9.5mm) Lead Length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	5.0							A
Peak Forward Surge Current , 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Instantaneous Forward Voltage @ 5.0A DC and 25°C	V_F	0.95			1.25		1.7		V
Reverse Current @ $T_A = 25^\circ\text{C}$	I_R	5.0							uA
at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_R	500							uA
Reverse Recovery Time (Note 1)	T_{rr}	35					50		ns
Typical Junction Capacitance (Note 2)	C_J	45							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	25							°C/W
Operating Junction Temperature Range	T_J	-55 to +125							°C
Storage Temperature Range	T_{Stg}	-55 to +150							°C

- Note: (1) Reverse recovery test conditions: $I_F = 0.5A$, $I_R = 1A$, $I_{RR} = 0.25A$.
 (2) Measured at 1 MHz and applied reverse voltage of 4 Volts D.C
 (3) Thermal resistance junction to ambient and form junction to lead at 0.375" (9.5mm) lead length, P. C. B. mounted.

TOP DYNAMIC



ISO14001 : 2004 Certificate No. 121505007
 ISO 9001 : 2008 Certificate No. 50114012
 OHSAS 18001 : 2007 Certificate No. 0513150808
 IECQ QC 080000 Certificate No. 824100074102

Dated : 25/04/2012 H

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FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

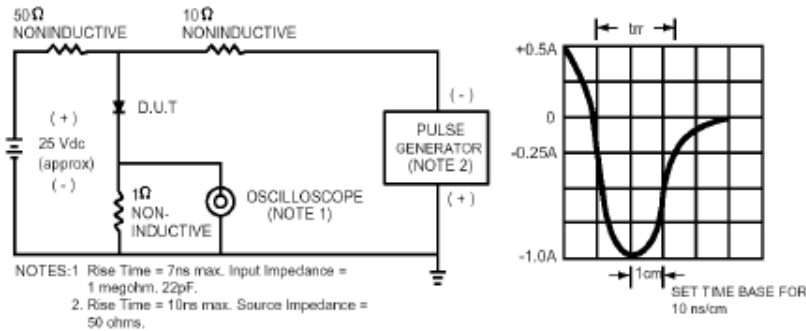


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

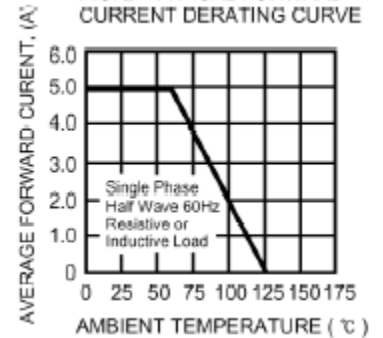


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

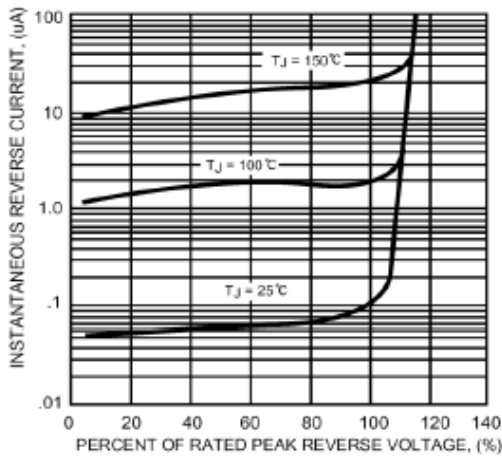


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

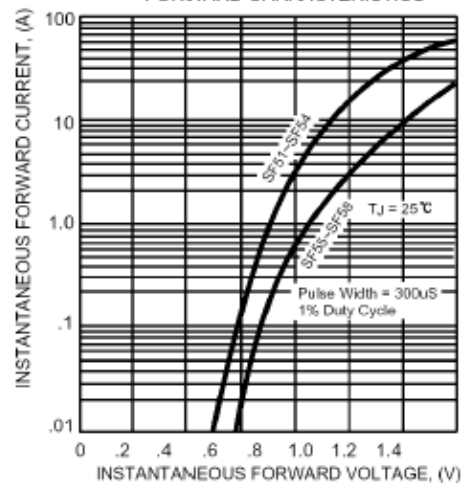


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

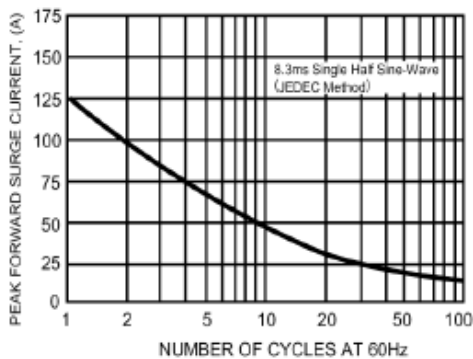
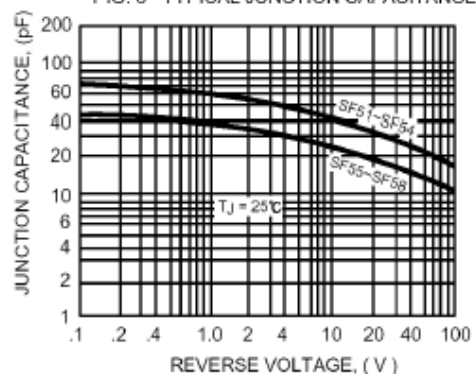


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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