

5 A Super Fast Rectifiers

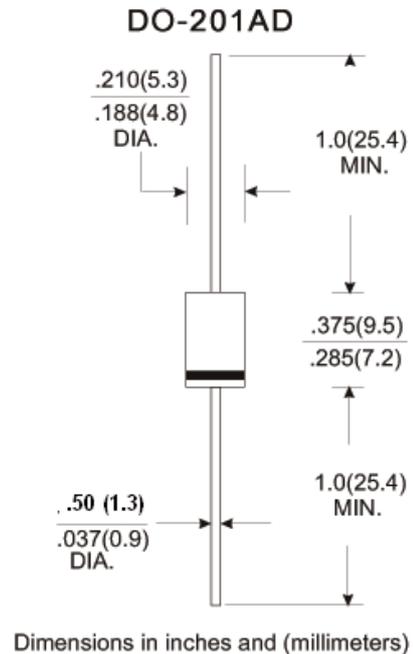
SF51 THRU SF58 50 to 600 V 5.0 A

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Good for switching mode application

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solder able per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 1.2 grams
- INK:SF57=SF58 of 600V



Maximum Ratings and Electrical Characteristics

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

Type Number	Symbols	SF51	SF52	SF53	SF54	SF55	SF56	SF58	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current. 375" (9.5mm) Lead Length @ $T_A=55^\circ\text{C}$	$I_{(AV)}$	5.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150							Amp
Maximum Instantaneous Forward Voltage @5.0A	V_F	0.95				1.25		1.5	Volts
Maximum Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	10 100							μAmp
Maximum Reverse Recovery Time (Note 1)	TRR	50							nS
Typical Junction Capacitance (Note 2)	C_J	50							pF
Operating Temperature Range T_J	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range T_{STG}	T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES:

1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

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RATINGS AND CHARACTERISTIC CURVES (SF51 THRU SF58)

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

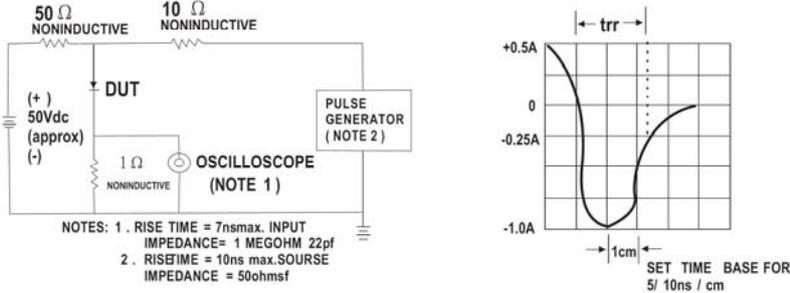


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

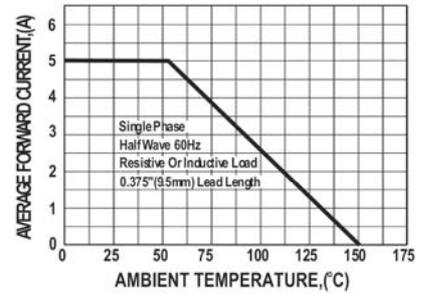


FIG.3-TYPICAL FORWARD CHARACTERISTICS

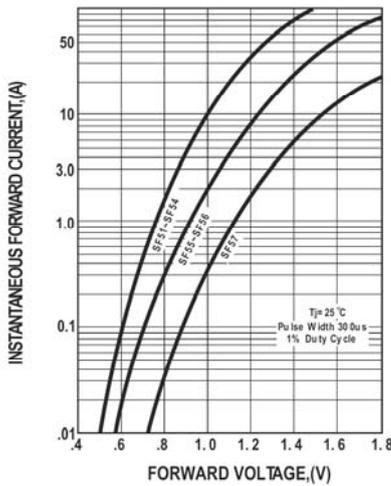


FIG.4-TYPICAL REVERSE CHARACTERISTICS

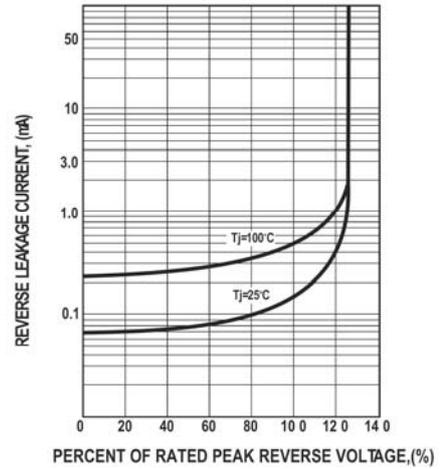


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

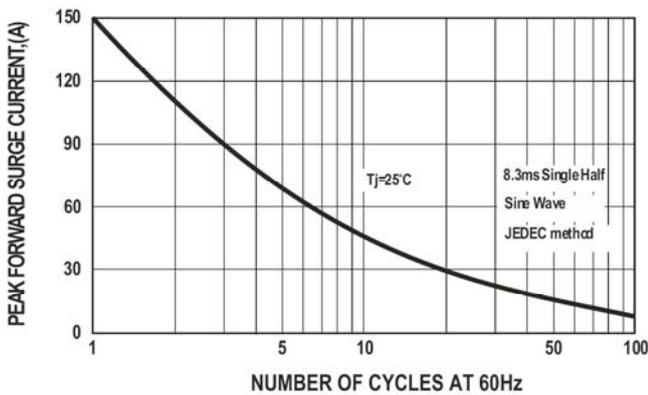


FIG.6-TYPICAL JUNCTION CAPACITANCE

