



SF51 THRU SF56

GLASS PASSIVATED SUPER FAST RECTIFIER

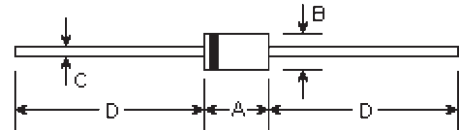
Reverse Voltage - 50 to 600 Volts

Forward Current - 5.0 Amperes

Features

- High reliability
- Low leakage
- Low forward voltage
- High current capability
- Super fast switching speed
- High surge capability
- Good for switching mode circuit
- Glass passivated junction

DO-201AD



Mechanical Data

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD-202E method 208C guaranteed
- **Mounting Position:** Any
- **Weight:** 0.042 ounce, 1.195 grams

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.283	0.374	7.20	9.50	
B	0.189	0.208	4.80	5.30	φ
C	0.048	0.051	1.20	1.30	φ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings 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	Units
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	300	400	600	Volts
Maximum RMS voltage	V _{RMS}	35	70	140	210	280	420	Volts
Maximum DC blocking voltage	V _{DC}	50	100	200	300	400	600	Volts
Maximum average forward current 0.375" (9.5mm) lead length at T _A =55°C	I _(AV)	5.0						Amps
Peak forward surge current, I _{FSM} (surge): 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I _{FSM}	150.0						Amps
Maximum forward voltage at 5.0A DC	V _F	0.95				1.27	1.75	Volts
Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =150°C	I _R	5.0 50.0						μA
Maximum reverse recovery time (Note 1)	T _{rr}	35.0						nS
Typical junction capacitance (Note 2)	C _j	50				30		pF
Operating and storage temperature range	T _J , T _{STG}	-65 to +150						°C

Notes:

(1) Test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

RATINGS AND CHARACTERISTIC CURVES

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

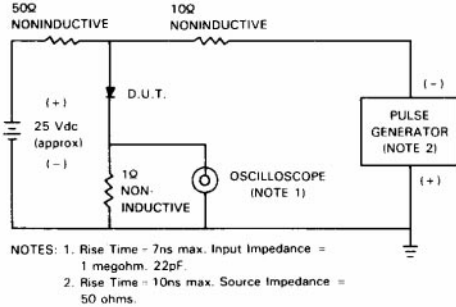


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

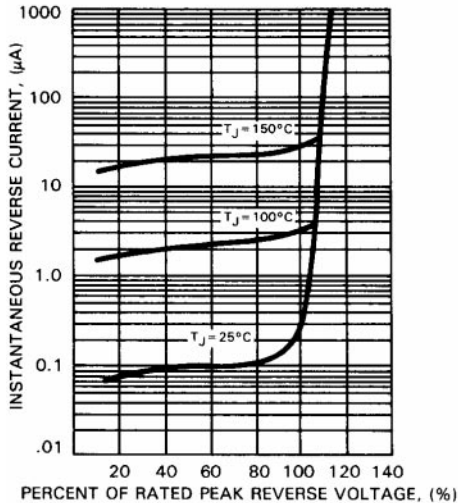


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

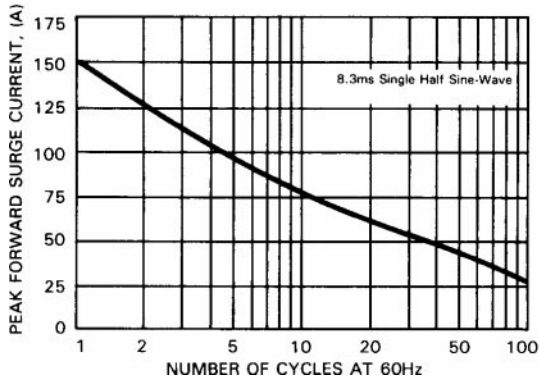


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

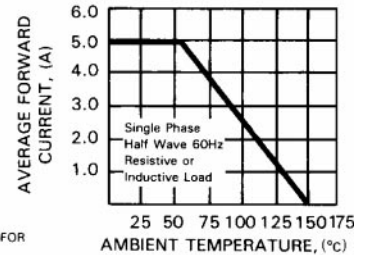


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

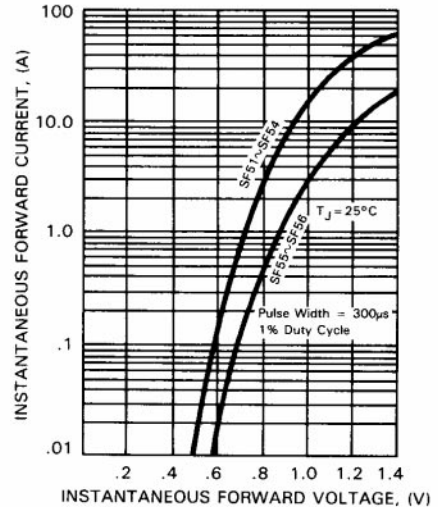


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

