

5.0 A Super Fast Recovery Rectifier
Rectifier Reverse Voltage 50 to 600V



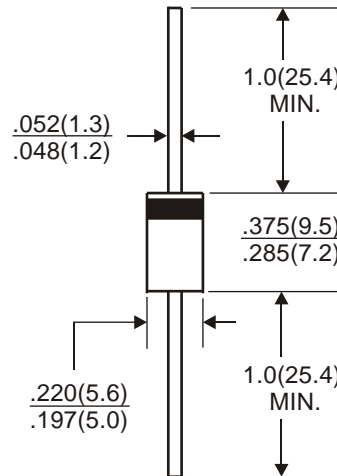
Features

- Diffused junction
- Fast switching for high efficiency
- High current capability and low Forward Voltage Drop
- Surge overload rating to 150A peak
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

Mechanical Data

Case: Molded plastic
 Terminals: Solder plated solderable per MIL-STD-202, Method 208
 Polarity: Cathode band
 Mounting Position: Any
 Weight: 1.10 grams (approx)

DO-27



All dimensions inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
 For Capacitive load derate current by 20%.

Parameter	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF57	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	150	200	300	400	600	V
Maximum RMS bridge input voltage	VRMS	35	70	105	140	210	280	420	v
Maximum DC blocking voltage	VDC	50	100	150	200	300	400	600	v
Maximum average forward rectified output current at TA=55°C	IF(AV)	5.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	150							A
Maximum reverse recovery time TJ=25°C	Trr	35							nS
Typical thermal resistance per element	ReJA	30							°C/W
Typical junction capacitance per element	Cj	50							pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
 For Capacitive load derate by 20 %.

Parameter	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF57	Unit
Maximum instantaneous forward voltage drop per leg at 5.0A	VF	0.95			1.25		1.50		v
Maximum DC reverse current at rated DC blocking voltage per element	IR	10			100				μA

Rating and Characteristic Curves ($T_A=25^{\circ}\text{C}$ Unless otherwise noted) SF51 thru SF57

Fig. 1 Reverse Recovery Time and Test Circuit Diagram

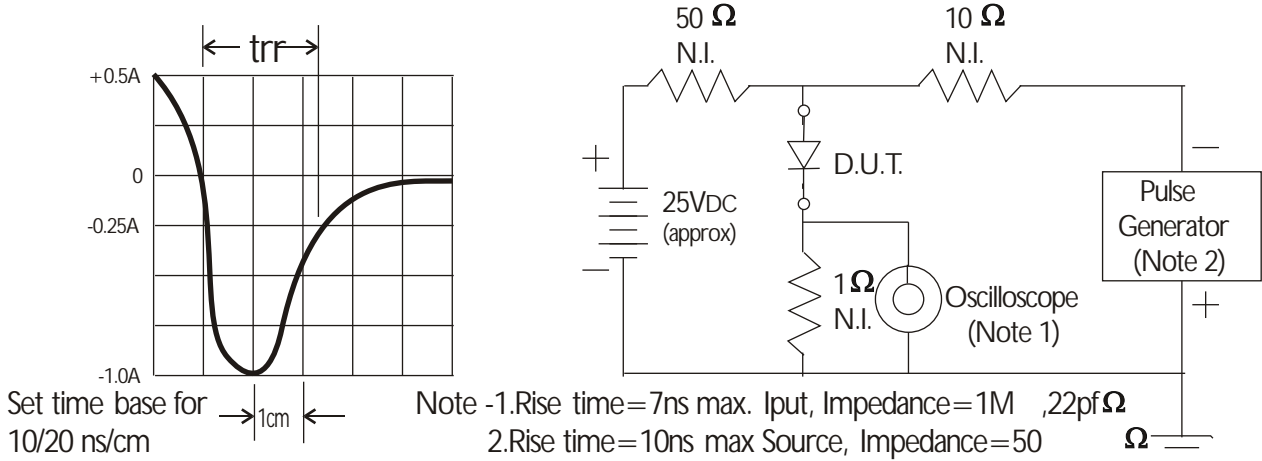


Fig. 2 Derating Curve for Output Rectified Current

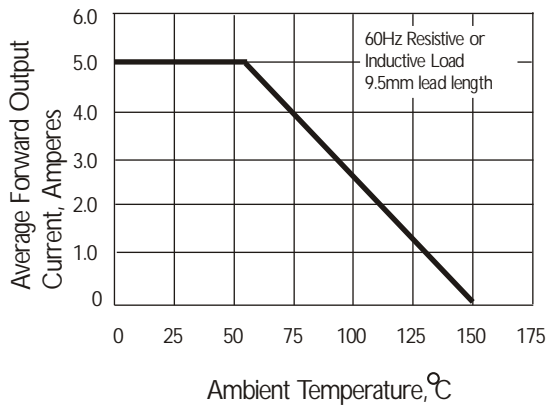


Fig. 3 Peak Forward Surge Current

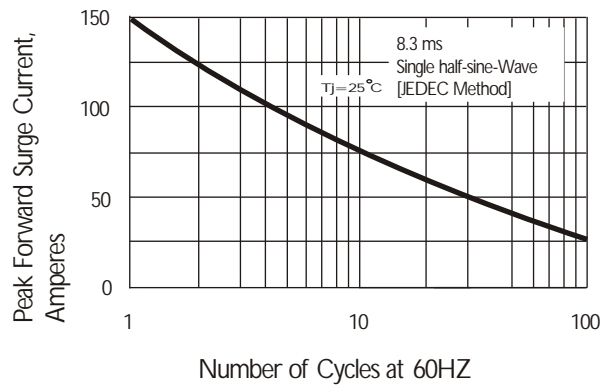


Fig. 4 Typical Instantaneous Forward Characteristics

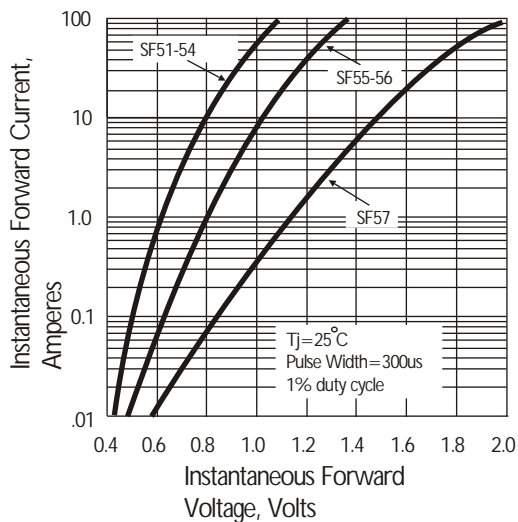


Fig. 5 Typical Junction Capacitance

