



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**SF51
THRU
SF56**

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 400 Volts

CURRENT- 5.0 Amperes

FEATURES

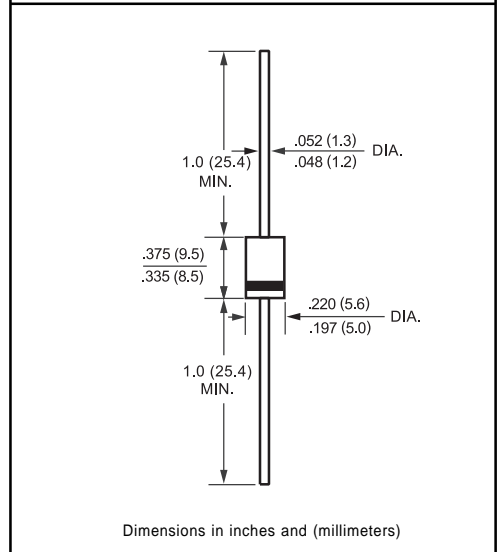
- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 1.18 grams



DO-27



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

| | SYMBOL | SF51 | SF52 | SF53 | SF54 | SF55 | SF56 | UNITS |
|---|-------------|--------------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 150 | 200 | 300 | 400 | Volts |
| Maximum RMS Volts | VRMS | 35 | 70 | 105 | 140 | 210 | 280 | Volts |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 150 | 200 | 300 | 400 | Volts |
| Maximum Average Forward Current at TA = 55°C | Io | 5.0 | | | | | | Amps |
| Peak Forward Surge Current IFM (surge):8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 150 | | | | | | Amps |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @TA = 25°C | 5.0 | | | | | | uAmps |
| | @TA = 125°C | 150 | | | | | | |
| Maximum Forward Voltage at 5.0A DC | VF | 0.95 | | | | 1.25 | | Volts |
| Maximum Reverse Recovery Time (Note 1) | trr | 35 | | | | | | nSec |
| Typical Junction Capacitance (Note 2) | CJ | 50 | | | | 30 | | pF |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to + 150 | | | | | | °C |

NOTES : 1. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.



RATING AND CHARACTERISTIC CURVES (SF51 THRU SF56)

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

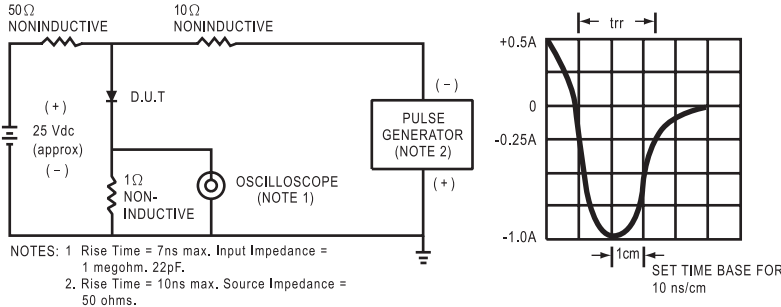


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

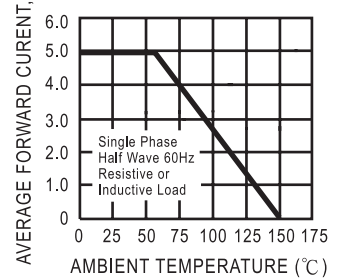


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

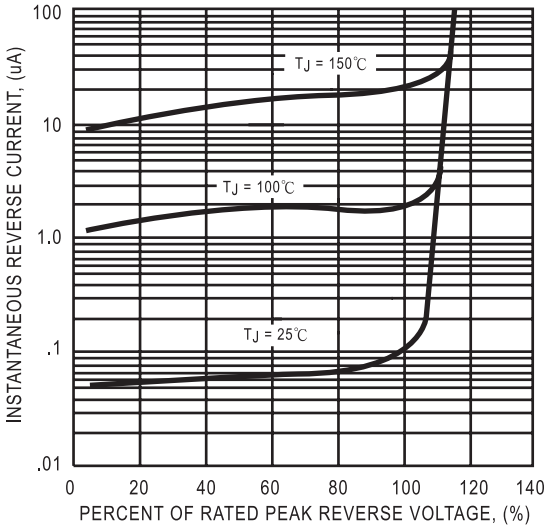


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

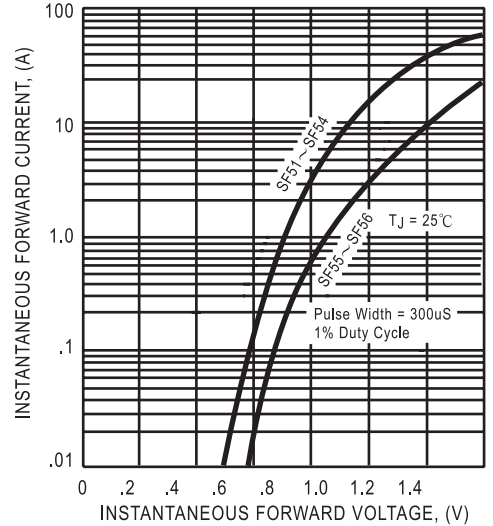


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

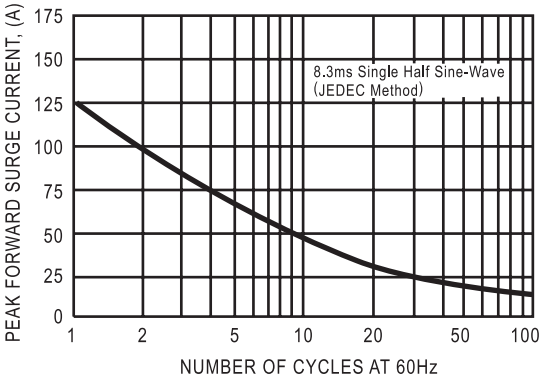
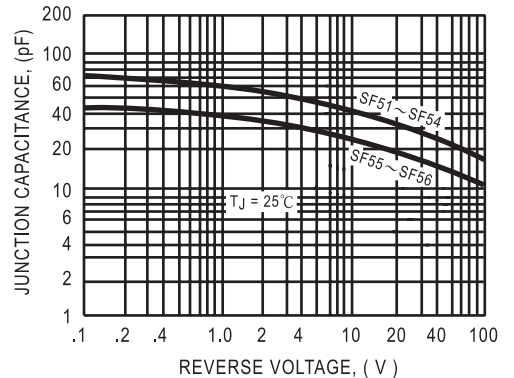


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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NEXT

BACK

EXIT