

SF100 THRU SF106

SUPERFAST RECOVERY RECTIFIER
VOLTAGE - 50 to 600 Volts CURRENT - 1.0 Ampere

FEATURES

- Superfast recovery times – epitaxial construction.
- Low forward voltage, high current capability.
- Exceeds environmental standards of MIL-S-19500/228.
- Hermetically sealed.
- Low leakage.
- High surge capability.
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.

MECHANICAL DATA

Case: Molded plastic, DO-41

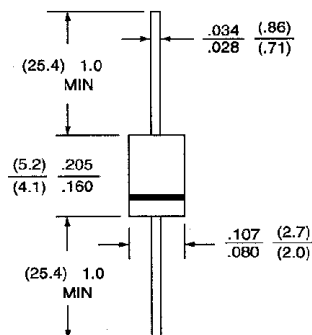
Terminals: Axial leads, solderable to MIL-STD-202, Method 208

Polarity: Color band denotes cathode end.

Mounting position: Any

Weight: 0.012 ounce, 0.3 gram

DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Resistive or inductive load, 60 Hz.

| | SF100 | SF101 | SF101A | SF102 | SF103 | SF104 | SF106 | UNITS |
|---|-------------|-------|--------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Current .375", (9.5mm) Lead Length at TA = 55°C | 1.0 | | | | | | | A |
| Peak Forward Surge Current, IFM (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 30.0 | | | | | | | A |
| Maximum Forward Voltage at 1.0 ADC | .95 | | | 1.25 | | 1.7 | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | 5.0 | | | | | | | μA |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 125°C | 150 | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | 35.0 | | | | | | | ns |
| Typical Junction Capacitance (Note 2) | 17 | | | | | | | pF |
| Typical Junction Resistance (NOTE 3) RθJA | 50 | | | | | | | °C/W |
| Operating and Storage Temperature Range Tj | -55 to +150 | | | | | | | °C |

NOTES:

1—Reverse Recovery Test Conditions: IF = .5A, IR = 1A, Irr = .25A.

2—Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

3—Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) P.C.B. mounted.

RATING AND CHARACTERISTIC CURVES SF100 THRU SF106

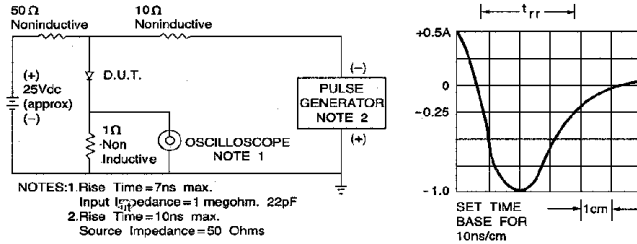


Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

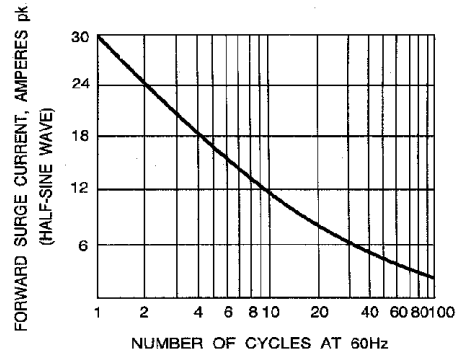


Fig. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

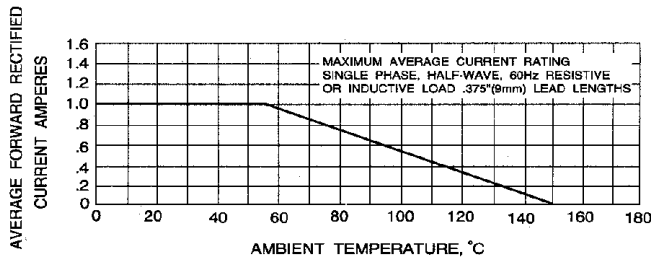


Fig. 3 - MAXIMUM AVERAGE FORWARD CURRENT RATING

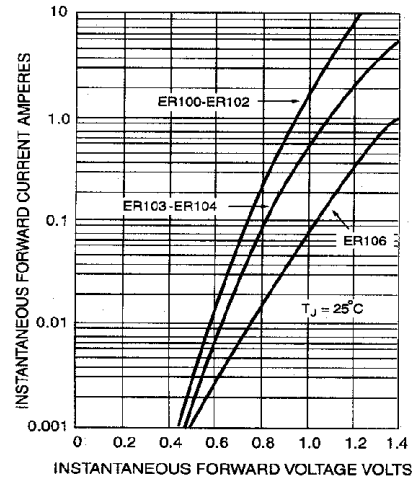


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

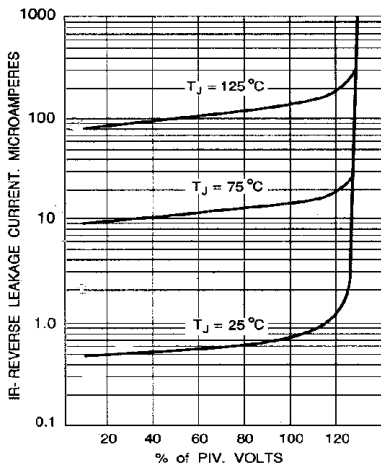


Fig. 5 - TYPICAL REVERSE CHARACTERISTICS

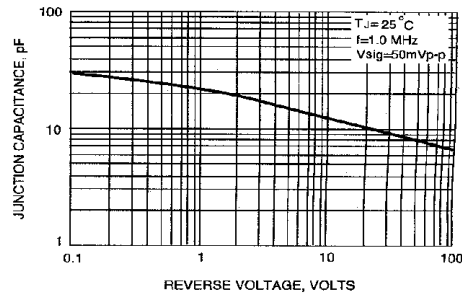


Fig. 6 - TYPICAL JUNCTION CAPACITANCE