

SUPER FAST RECTIFIER DIODES

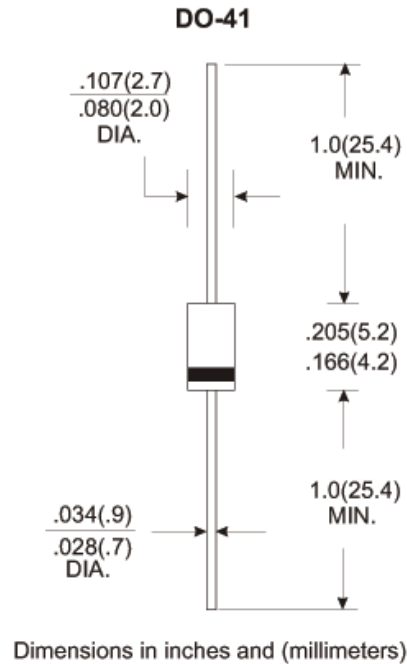
SF11 THRU SF18 50 to 600 V 1.0 A

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-O rate flame retardant
- Lead: Axial leads, solderable per MIL- STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed:
250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: 0.34 grams



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 | SF11 | SF12 | SF13 | SF14 | SF15 | SF16 | SF18 | 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 @ $T_A=55^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | | | | | Amp |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 30 | | | | | | | Amp |
| Maximum Forward Voltage @ 1.0A | V_F | 0.95 | | | | 1.3 | | 1.7 | Volts |
| Maximum Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$ | I_R | | | | | 5.0 | | 100 | uAmp |
| Maximum Reverse Recovery Time (Note 1) | TRR | 35 | | | | | | | nS |
| Typical Junction Capacitance (Note 2) | C_J | 50 | | | | 25 | | | pF |
| Operating Temperature Range T_J | T_J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range T_{STG} | T_{STG} | -55 to +150 | | | | | | | °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.
3. Thermal Resistance Junction To Ambient ◦

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RATINGS AND CHARACTERISTIC CURVES (SF11 THRU SF18)

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

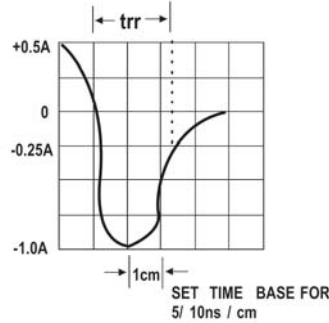
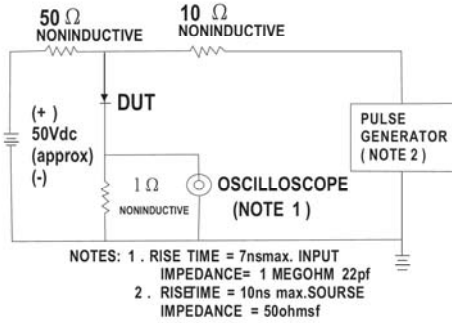


FIG. 2 -MAXIMUM AVERAGE FORWARD CURRENT DERATING

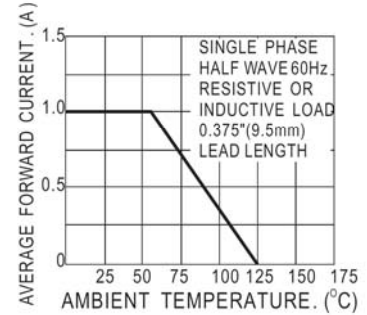


FIG. 3 -TYPICAL REVERSE CHARACTERISTICS

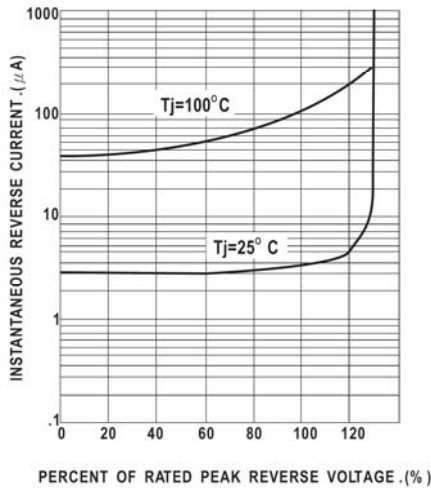


FIG. 4 -TYPICAL REVERSE CHARACTERISTICS

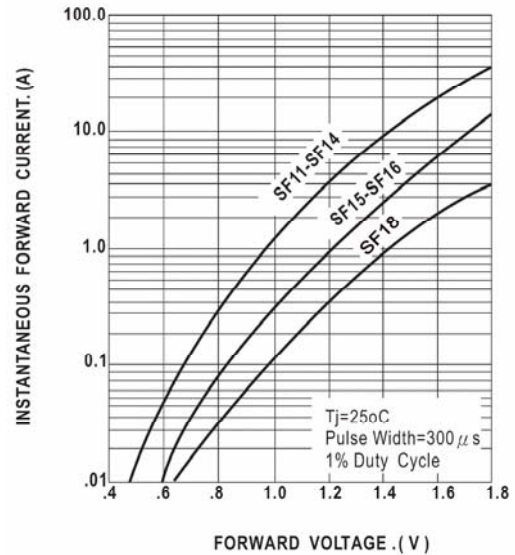


FIG. 5 - MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

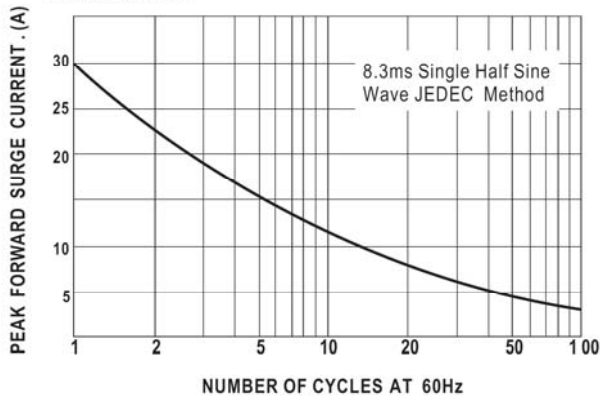


FIG. 6 -TYPICAL REVERSE CHARACTERISTICS

