

## SUPER FAST RECTIFIER

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Super fast speed switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.375"(9.5mm) lead length,  
5 lbs. (2.3kg) tension

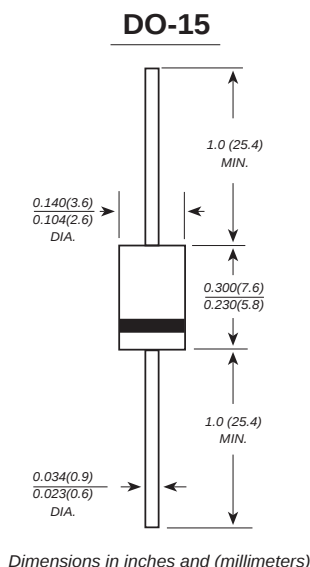
### Mechanical Data

**Case:** JEDEC DO-15 molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any



### 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 current derate by 20%.

|                                                                                                                 | SYMBOLS                           | SF21        | SF22 | SF23 | SF24 | SF25 | SF26 | SF28 | UNITS |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------|------|------|------|------|------|------|-------|
|                                                                                                                 | Marking                           | SF21        | SF22 | SF23 | SF24 | SF25 | SF26 | SF28 |       |
| Maximum repetitive peak reverse voltage                                                                         | V <sub>RRM</sub>                  | 50          | 100  | 150  | 200  | 300  | 400  | 600  | VOLTS |
| Maximum RMS voltage                                                                                             | V <sub>RMS</sub>                  | 35          | 70   | 105  | 140  | 210  | 280  | 420  | VOLTS |
| Maximum DC blocking voltage                                                                                     | V <sub>DC</sub>                   | 50          | 100  | 150  | 200  | 300  | 400  | 600  | VOLTS |
| Maximum average forward rectified current<br>0.375”(9.5mm) lead length at T <sub>A</sub> =55°C                  | I <sub>(AV)</sub>                 | 2.0         |      |      |      |      |      |      | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)          | I <sub>FSM</sub>                  | 50.0        |      |      |      |      |      |      | Amps  |
| Maximum instantaneous forward voltage at 2.0A                                                                   | V <sub>F</sub>                    | 0.95        |      |      |      | 1.25 |      | 1.7  | Volts |
| Maximum DC reverse current      T <sub>A</sub> =25°C<br>at rated DC blocking voltage      T <sub>A</sub> =100°C | I <sub>R</sub>                    | 5.0<br>50.0 |      |      |      |      |      |      | μA    |
| Maximum reverse recovery time      (NOTE 1)                                                                     | t <sub>rr</sub>                   | 35          |      |      |      |      |      |      | ns    |
| Typical junction capacitance (NOTE 2)                                                                           | C <sub>J</sub>                    | 60.0        |      |      |      | 30.0 |      |      | pF    |
| Typical thermal resistance (NOTE 3)                                                                             | R <sub>θJA</sub>                  | 50.0        |      |      |      |      |      |      | °C/W  |
| Operating junction and storage temperature range                                                                | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 |      |      |      |      |      |      | °C    |

**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $t_{rr}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

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FIG. 1- FORWARD CURRENT DERATING CURVE

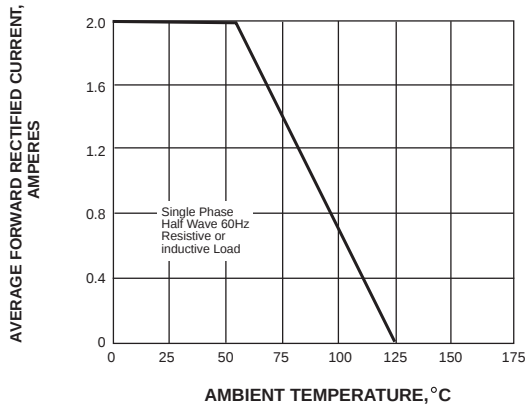


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

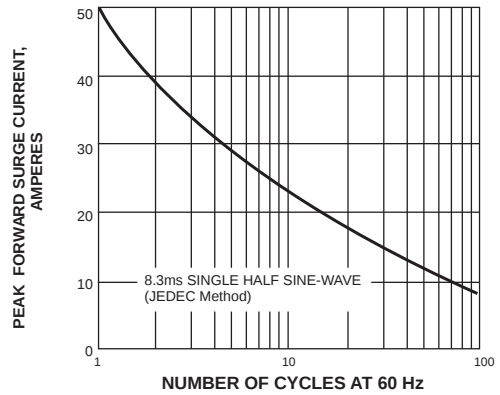


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

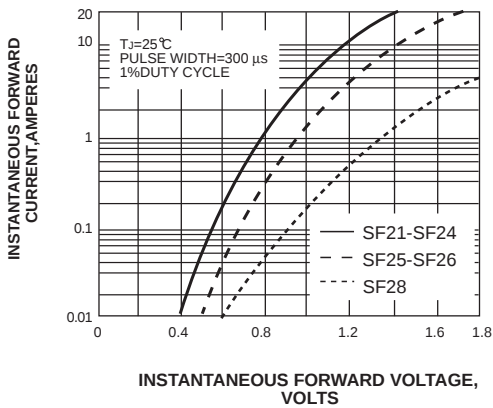


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

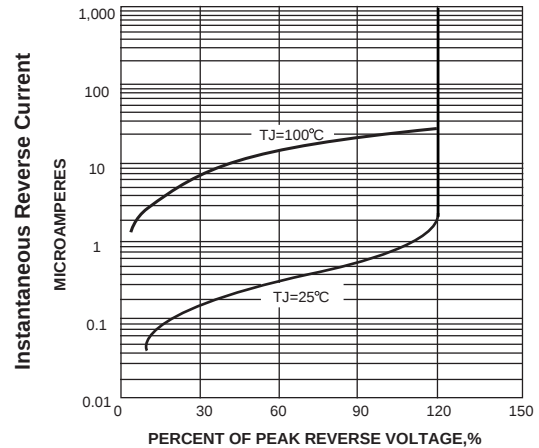


FIG. 5-TYPICAL JUNCTION CAPACITANCE

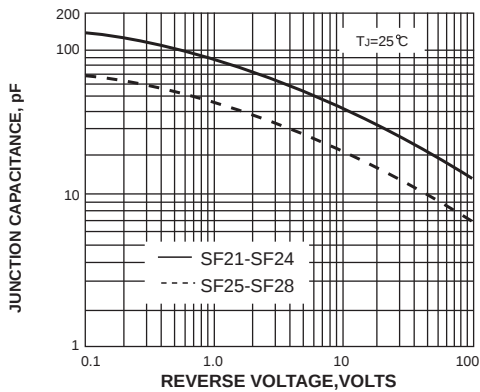


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

