

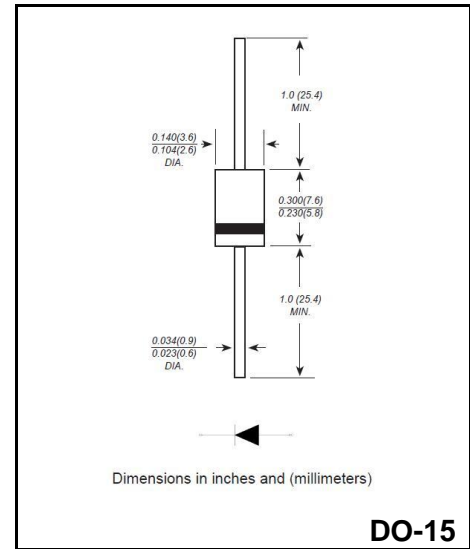
**Fast Recovery Silicon Rectifiers**  
**Reverse Voltage - 100 to 1000 V**  
**Forward Current – 2.5 A**

**FEATURES**

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Open Junction chip
- ◆ Ideal for automated placement
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆ Case: DO-15
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.33g / 0.0116oz



**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 current derate by 20 %.

| Parameter  | Symbols         | FR252      | FR253 | FR254 | FR255 | FR256 | FR257 | Units              |
|--|-----------------|------------|-------|-------|-------|-------|-------|--------------------|
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 100        | 200   | 400   | 600   | 800   | 1000  | V                  |
| Maximum RMS voltage  | $V_{RMS}$       | 70         | 140   | 280   | 420   | 560   | 700   | V                  |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 100        | 200   | 400   | 600   | 800   | 1000  | V                  |
| Maximum Average Forward Rectified Current at $T_c = 100\text{ }^\circ\text{C}$   | $I_{F(AV)}$     | 2.5        |       |       |       |       |       | A                  |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load   | $I_{FSM}$       | 100.0      |       |       |       |       |       | A                  |
| Maximum Instantaneous Forward Voltage at 2.5A  | $V_F$           | 1.28       |       |       |       |       |       | V                  |
| Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$ | $I_R$           | 10<br>500  |       |       |       |       |       | $\mu\text{A}$      |
| Maximum reverse recovery time <sup>(Note 1)</sup>  | $T_{rr}$        | 150        |       | 250   |       | 500   |       | nS                 |
| Typical Junction Capacitance <sup>(Note 2)</sup>   | $C_j$           | 40.0       |       |       |       |       |       | pF                 |
| Typical Thermal Resistance   | $R_{\theta JA}$ | 75.0       |       |       |       |       |       | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range  | $T_j, T_{stg}$  | -55 ~ +150 |       |       |       |       |       | $^\circ\text{C}$   |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Reverse recovery time test condition:  $I_F=0.5\text{A}$   $I_R=1.0\text{A}$   $I_{rr}=0.25\text{A}$

**Ratings And Characteristic Curves**

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

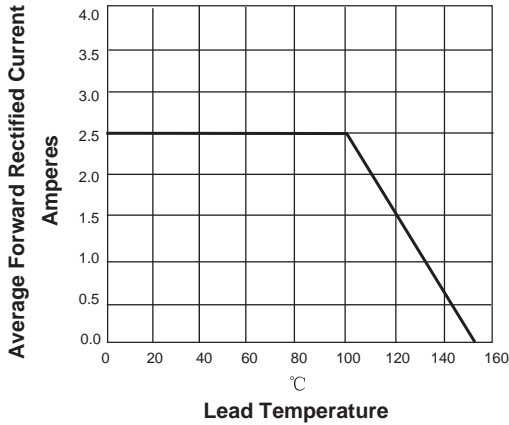


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

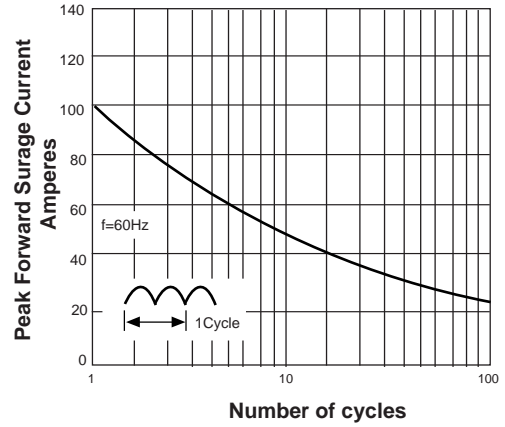


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

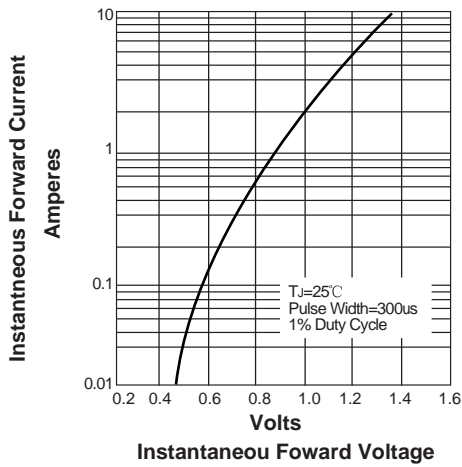
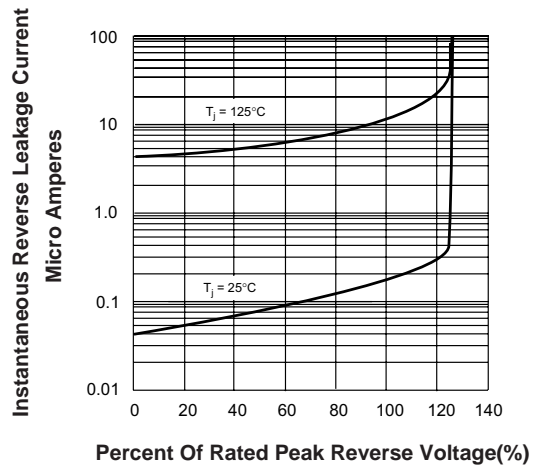


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Package Outline DO-15



| DIMENSIONS |        |      |       |      |      |
|------------|--------|------|-------|------|------|
| DIM        | INCHES |      | MM    |      | NOTE |
|            | MIN    | MAX  | MIN   | MAX  |      |
| A          | .230   | .300 | 5.8   | 7.6  |      |
| B          | .104   | .140 | 2.6   | 3.6  |      |
| C          | .028   | .034 | 0.71  | 0.86 |      |
| D          | 1.000  | ---  | 25.40 | ---  |      |

Summary of Packing Options

| Package | Packing Description | Packing Quantity | Industry Standard |
|---------|---------------------|------------------|-------------------|
| DO-15   | BOX                 | 500/3000         | EIA-481-1         |