**Super Fast Silicon Rectifiers**

**Reverse Voltage - 100 to 600 V**
**Forward Current - 1 A**

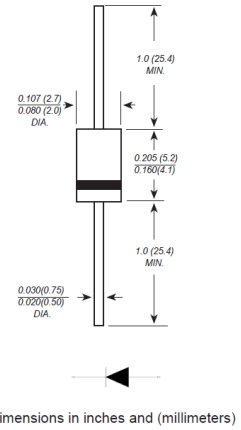
lead-free ROHS

## 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-41
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.25g / 0.0088oz




Dimensions in inches and (millimeters)

**DO-41**

### 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 | SF12 | SF13 | SF14 | SF16 | SF17 | SF18 | Units |
|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 100 | 150 | 200 | 400 | 500 | 600 | V |
| Maximum RMS voltage | $V_{RMS}$ | 70 | 105 | 140 | 280 | 350 | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 100 | 150 | 200 | 400 | 500 | 600 | V |
| Maximum Average Forward Rectified Current at $T_c$ = 100 °C | $IF_{(AV)}$ | 1.0 | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | $I_{FSM}$ | 35.0 | | | | | | A |
| Maximum Instantaneous Forward Voltage at 1.0A | $V_F$ | 0.95 | | | 1.25 | 1.7 | | V |
| Maximum DC Reverse Current $T_a$ = 25 °C<br>at Rated DC Blocking Voltage $T_a$=125 °C | $I_R$ | 10<br>500 | | | | | | μA |
| Maxinum reverse recovery time(Note 1) | Trr | 35 | | | | | | nS |
| Typical Junction Capacitance( Note 2) | $C_j$ | 30.0 | | | | | | pF |
| Typical Thermal Resistance | $R_{\theta JA}$ | 65 | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | | | | | | °C |

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

**(2) Reverse recovery time test condition: IF=0.5A IR=1.0A Irr=0.25A**



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## Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

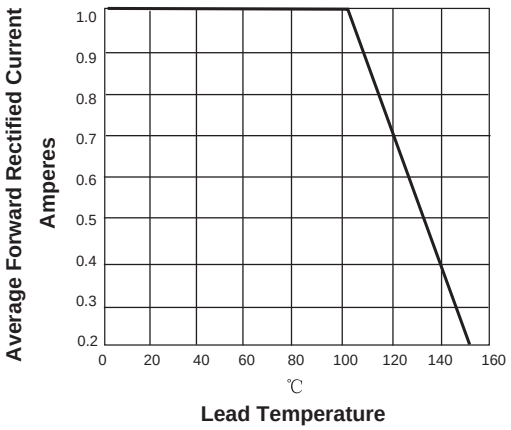



FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

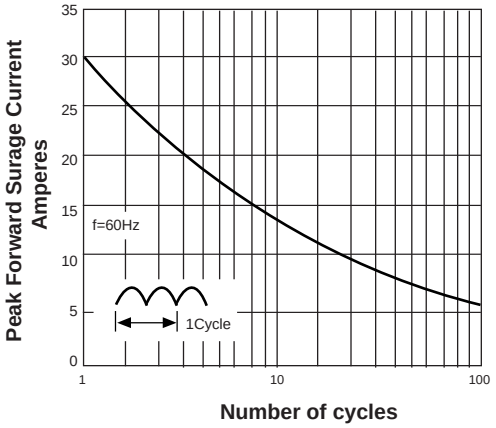



FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

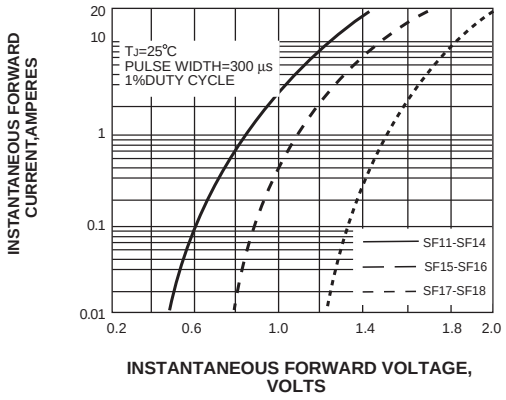
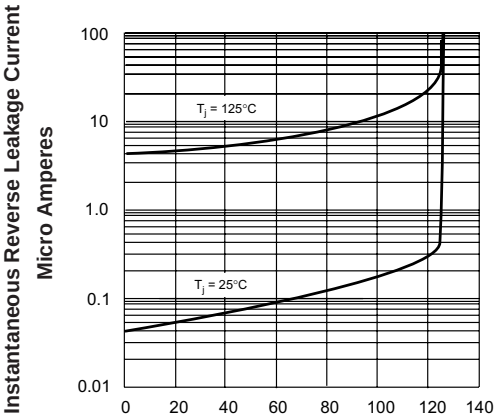


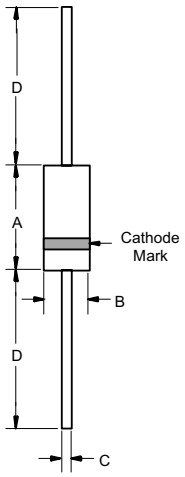

FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS






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## Package Outline DO-41




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| | INCHES | | MM | | |
| DIM | MIN | MAX | MIN | MAX | NOTE |
| A | .166 | .205 | 4.10 | 5.20 | |
| B | .080 | .107 | 2.00 | 2.70 | |
| C | .028 | .034 | .70 | .90 | |
| D | 1.000 | --- | 25.40 | --- | |

## Summary of Packing Options

| Package | Packing Description | Packing Quantity | Industry Standard |
|---|---|---|---|
| DO-41 | BOX | 1000/5000 | EIA-481-1 |


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