

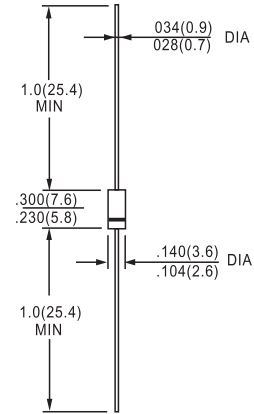
FEATURES

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.40 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

DO-15



Dimensions in inches and (millimeters)

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, derate by 20%.

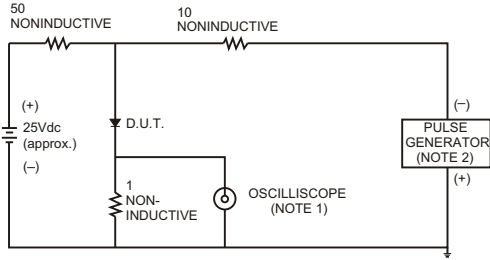
| | | SF21 | SF22 | SF23 | SF24 | SF25 | SF26 | SF27 | SF28 | UNITS |
|---|-----------------|------------------|------|------|------|------|------|------|------|--------------------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 350 | 420 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$ | $I_{F(AV)}$ | 2.0 | | | | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$ | I_{FSM} | 50 | | | | | | | | A |
| Maximum instantaneous forward voltage @ 2.0A | V_F | 0.95 | | | 1.3 | | 1.7 | | | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$ | I_R | 5.0 | | | | 50.0 | | | | μA |
| Maximum reverse recovery time (Note1) | t_{rr} | 35 | | | | | | | | ns |
| Typical junction capacitance (Note2) | C_J | 60 | | | | 30 | | | | pF |
| Typical thermal resistance (Note3) | $R_{\theta JA}$ | 20 | | | | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | - 55 ----- + 175 | | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | - 55 ----- + 175 | | | | | | | | $^\circ\text{C}$ |

NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance from junction to ambient.



RATING AND CHARACTERISTIC CURVES (SF21 THRU SF28)

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



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

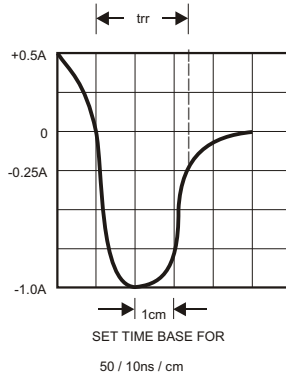


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

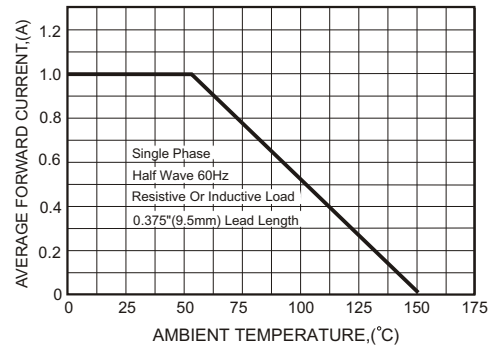


FIG.3-TYPICAL FORWARD CHARACTERISTICS

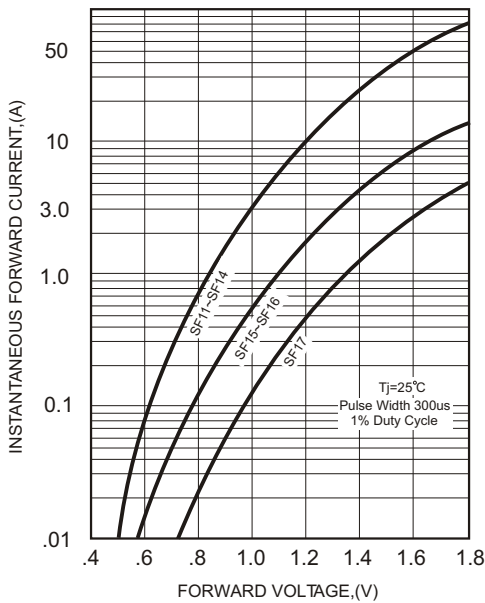


FIG.4-TYPICAL REVERSE CHARACTERISTICS

