



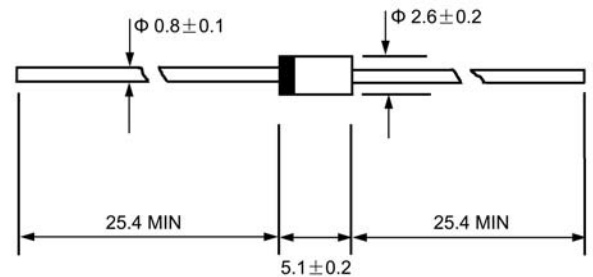
Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

Mechanical Data

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any

DO - 41



Dimensions in 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%.

| | | ER101 | ER102 | ER103 | ER104 | ER106 | UNITS |
|---|-----------------|------------------|-------|-------|-------|-------|---------------------------|
| Maximum recurrent peak reverse voltage | V_{RRM} | 100 | 200 | 300 | 400 | 600 | V |
| Maximum RMS voltage | V_{RMS} | 70 | 140 | 210 | 280 | 420 | V |
| Maximum DC blocking voltage | V_{DC} | 100 | 200 | 300 | 400 | 600 | V |
| Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | A |
| Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$ | I_{FSM} | 30.0 | | | | | A |
| Maximum instantaneous forward voltage @ 1.0A | V_F | 0.95 | | 1.25 | | 1.7 | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | I_R | 5.0 150.0 | | | | | μA |
| Maximum reverse recovery time (Note 1) | t_{rr} | 35 | | | | | ns |
| Typical junction capacitance (Note 2) | C_J | 22 | | | | | pF |
| Typical thermal resistance (Note 3) | $R_{\theta JA}$ | 50 | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | - 55 ----- + 150 | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | - 55 ----- + 150 | | | | | $^\circ\text{C}$ |

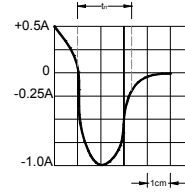
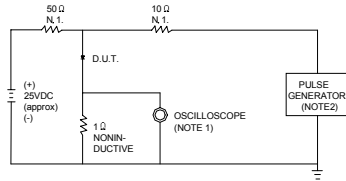
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.

Ratings AND Characteristic Curves

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



NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ. 22pF.
 2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 10/20 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

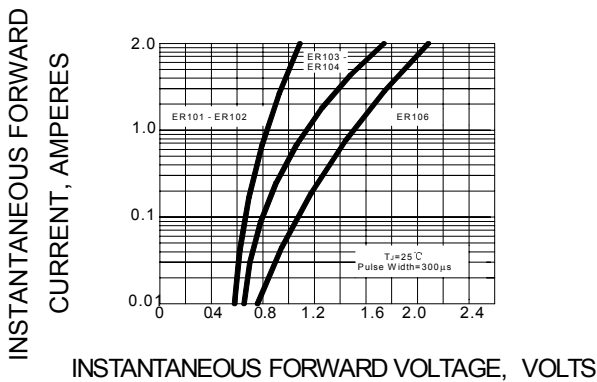


FIG.3 – FORWARD DERATING CURVE

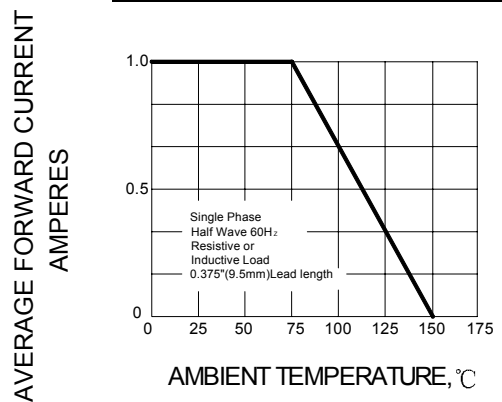


FIG.4 – TYPICAL JUNCTION CAPACITANCE

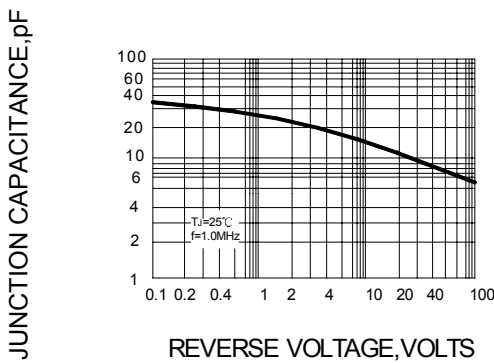


FIG.5 – PEAK FORWARD SURGE CURRENT

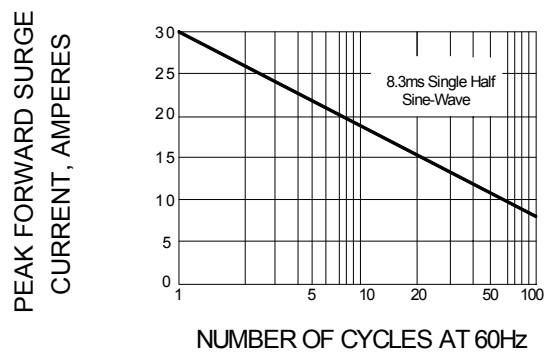


FIG.6 – TYPICAL REVERSE CHARACTERISTICS

