



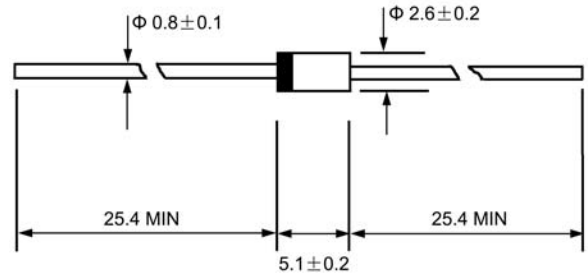
DO - 41

Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ Easily cleaned with freon, Alcohol, Isopropand and similar solvents

Mechanical Data

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



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%.

| | | EU1Z | EU1 | EU1A | EU1C | UNITS |
|--|-----------------|------------------|-----|------|------|--------------------|
| Maximum peak repetitive reverse voltage | V_{RRM} | 200 | 400 | 600 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 140 | 280 | 420 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 200 | 400 | 600 | 1000 | V |
| Maximum average forward rectified current 9.5mm lead length @ $T_A=75^\circ\text{C}$ | $I_{F(AV)}$ | 0.25 | | | 0.5 | A |
| Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$ | I_{FSM} | 15.0 | | | | A |
| Maximum instantaneous forward voltage @ $I_F=I_{F(AV)}$ | V_F | 2.5 | | | | V |
| Maximum reverse current @ $T_A=25^\circ\text{C}$ at Rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | I_R | 10.0 150.0 | | | | μA |
| Maximum reverse recovery time (Note1) | t_{rr} | 100 | | | | ns |
| Typical junction capacitance (Note2) | C_J | 20 | | 15 | | pF |
| Typical thermal resistance (Note3) | $R_{\theta JL}$ | 17 | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | - 55 ----- + 150 | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | - 55 ----- + 150 | | | | $^\circ\text{C}$ |

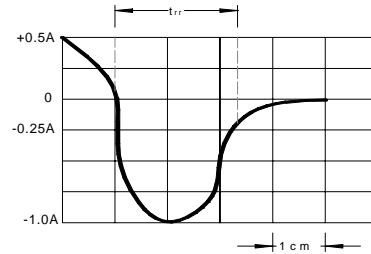
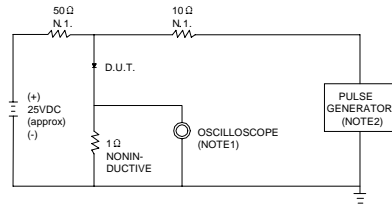
NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

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

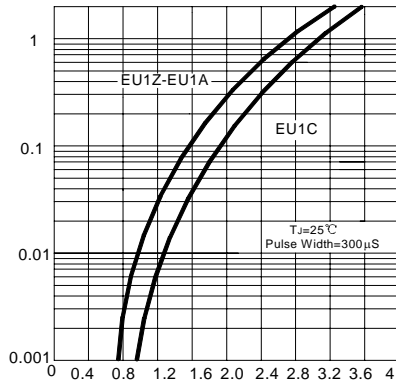


SET TIME BASE FOR 10/20 ns/cm

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

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

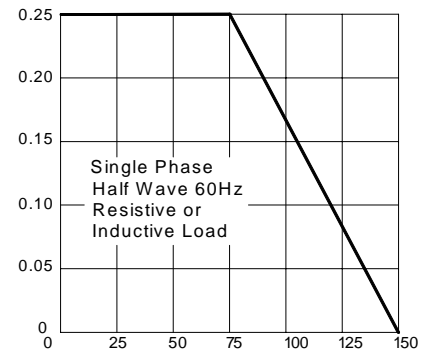
INSTANTANEOUS FORWARD CURRENT
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 – FORWARD DERATING CURVE

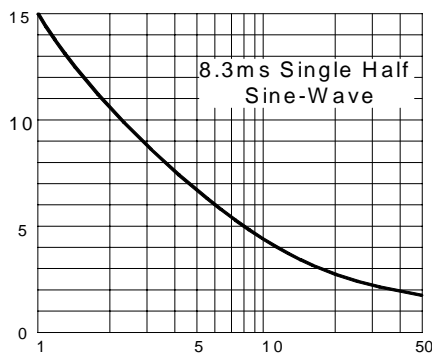
AVERAGE FORWARD RECTIFIED CURRENT
AMPERES



AMBIENT TEMPERATURE, °C

FIG.4 – PEAK FORWARD SURGE CURRENT

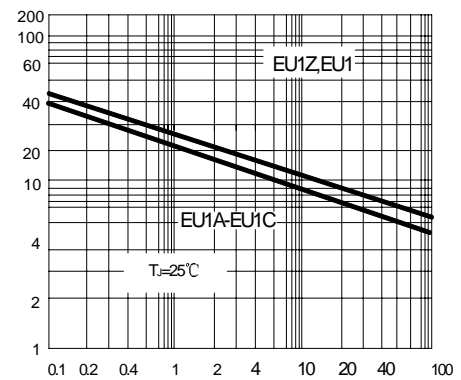
PEAK FORWARD SURGE CURRENT
AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.3–TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE,pF



REVERSE VOLTAGE, VOLTS