

# EU01Z-EU01A

High Efficiency Rectifiers

**VOLTAGE RANGE: 200--- 600 V**

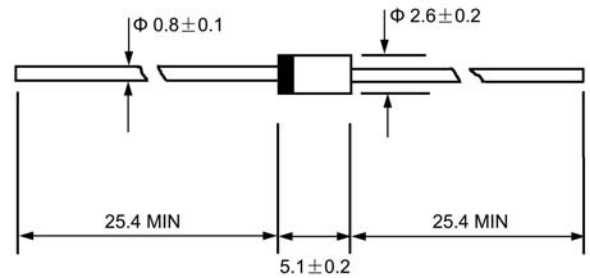
**CURRENT: 0.25A**



**DO - 41**

## Features

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



Dimensions in millimeters

## Mechanical Data

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

## 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%.

|  |                 | EU01Z            | EU01 | EU01A | UNITS                     |
|--|-----------------|------------------|------|-------|---------------------------|
| Maximum peak repetitive reverse voltage  | $V_{RRM}$       | 200              | 400  | 600   | V                         |
| Maximum RMS voltage  | $V_{RMS}$       | 140              | 280  | 420   | V                         |
| Maximum DC blocking voltage  | $V_{DC}$        | 200              | 400  | 600   | V                         |
| Maximum average forward rectified current<br>9.5mm lead length @ $T_A=75^\circ\text{C}$                          | $I_{F(AV)}$     | 0.25             |      |       | A                         |
| Peak forward surge current<br>10ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ\text{C}$ | $I_{FSM}$       | 15.0             |      |       | A                         |
| Maximum instantaneous forward voltage<br>@ 0.25A   | $V_F$           | 2.5              |      |       | V                         |
| Maximum reverse current @ $T_A=25^\circ\text{C}$<br>at Rated DC blocking voltage @ $T_A=100^\circ\text{C}$       | $I_R$           | 10.0<br>150.0    |      |       | $\mu\text{A}$             |
| Maximum reverse recovery time (Note1)  | $t_{rr}$        | 100              |      |       | ns                        |
| Typical junction capacitance (Note2)   | $C_J$           | 20               | 15   |       | pF                        |
| Typical thermal resistance (Note3)   | $R_{\theta JL}$ | 20               |      |       | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range   | $T_J$           | - 55 ----- + 150 |      |       | $^\circ\text{C}$          |
| Storage temperature range  | $T_{STG}$       | - 55 ----- + 150 |      |       | $^\circ\text{C}$          |

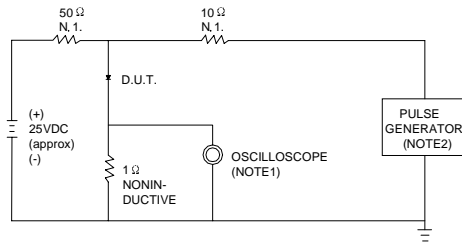
Note: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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

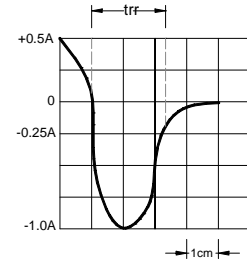
3. Thermal resistance from junction to ambient.

## Ratings AND Characteristic Curves

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

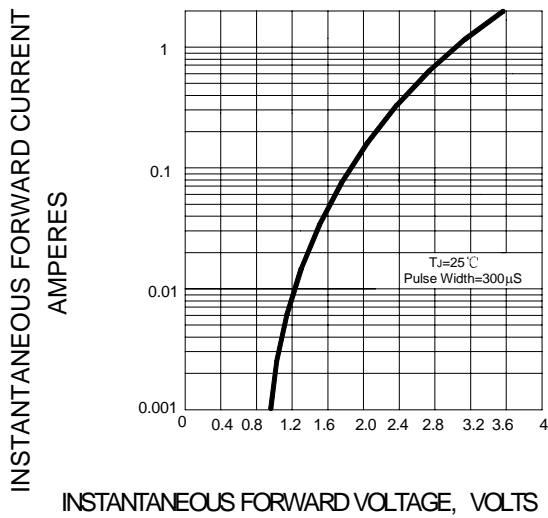


NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1M $\Omega$ , 22pF.  
 2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50  $\Omega$ .

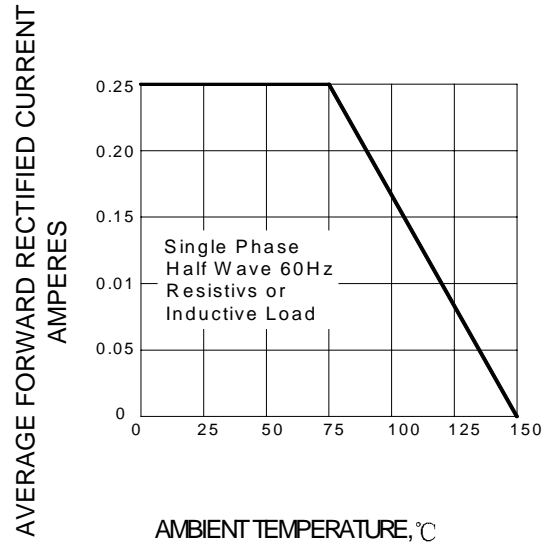


SET TIME BASE FOR 10/20 ns/cm

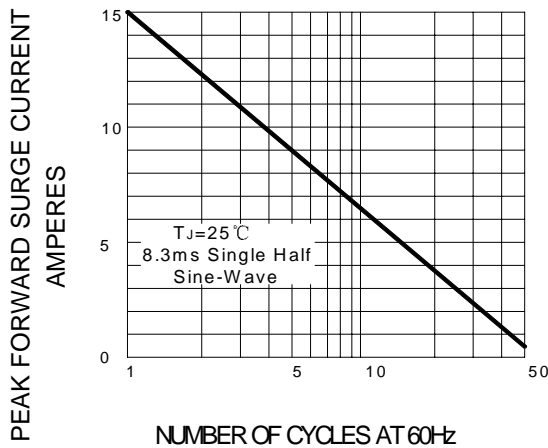
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



**FIG.4 – PEAK FORWARD SURGE CURRENT**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

