

**PLASTIC SILICON RECTIFIER**

**VOLTAGE RANGE: 100 --- 600 V**  
**CURRENT: 0.5 A**

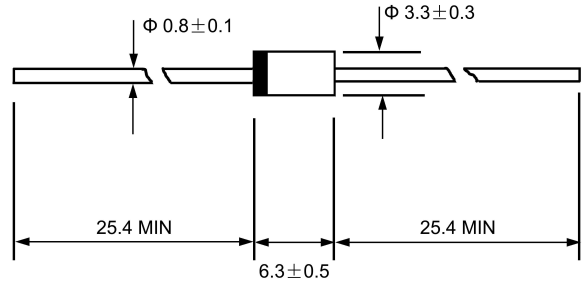
**FEATURES**

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

**MECHANICAL DATA**

- ◇ Case: JEDEC DO--15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL- STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting position: Any

**DO - 15**



Dimensions in millimeters

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

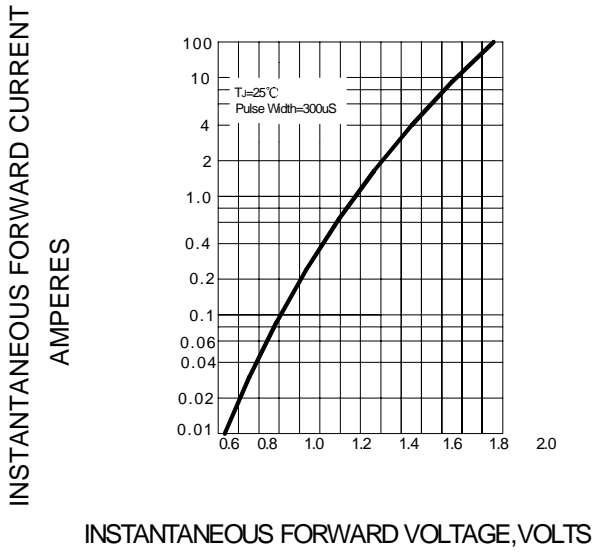
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

|   |                 | 1S<br>1941      | 1S<br>1942 | 1S<br>1943 | 1S<br>1944 | UNITS        |
|---|-----------------|-----------------|------------|------------|------------|--------------|
| Maximum recurrent peak reverse voltage  | $V_{RRM}$       | 100             | 200        | 400        | 600        | V            |
| Maximum RMS voltage   | $V_{RMS}$       | 70              | 140        | 280        | 420        | V            |
| Maximum DC blocking voltage   | $V_{DC}$        | 100             | 200        | 400        | 600        | V            |
| Maximum average forward rectified current<br>9.5mm lead length, @ $T_A=75^\circ C$                          | $I_{F(AV)}$     | 0.5             |            |            |            | A            |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ C$ | $I_{FSM}$       | 35.0            |            |            |            | A            |
| Maximum instantaneous forward voltage<br>@ 0.5 A  | $V_F$           | 1.2             |            |            |            | V            |
| Maximum reverse current @ $T_A=25^\circ C$<br>at rated DC blocking voltage @ $T_A=100^\circ C$              | $I_R$           | 5.0<br>50.0     |            |            |            | $\mu A$      |
| Typical junction capacitance (Note1)  | $C_J$           | 20              |            |            |            | pF           |
| Typical thermal resistance (Note2)  | $R_{\theta JA}$ | 40              |            |            |            | $^\circ C/W$ |
| Operating junction temperature range  | $T_J$           | - 55 ---- + 150 |            |            |            | $^\circ C$   |
| Storage temperature range   | $T_{STG}$       | - 55 ---- + 150 |            |            |            | $^\circ C$   |

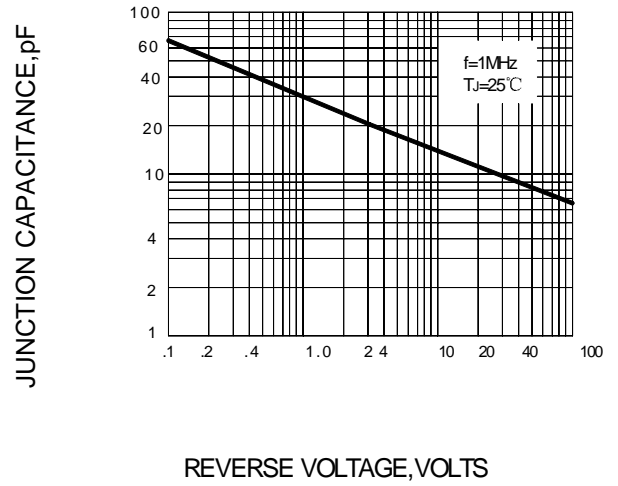
NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient.

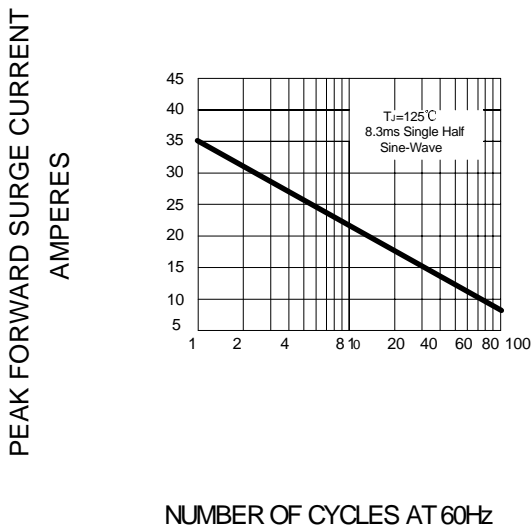
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



**FIG.3 – PEAK FORWARD SURGE CURRENT**



**FIG.4 – FORWARD DERATING CURVE**

