

### PLASTIC SILICON RECTIFIER

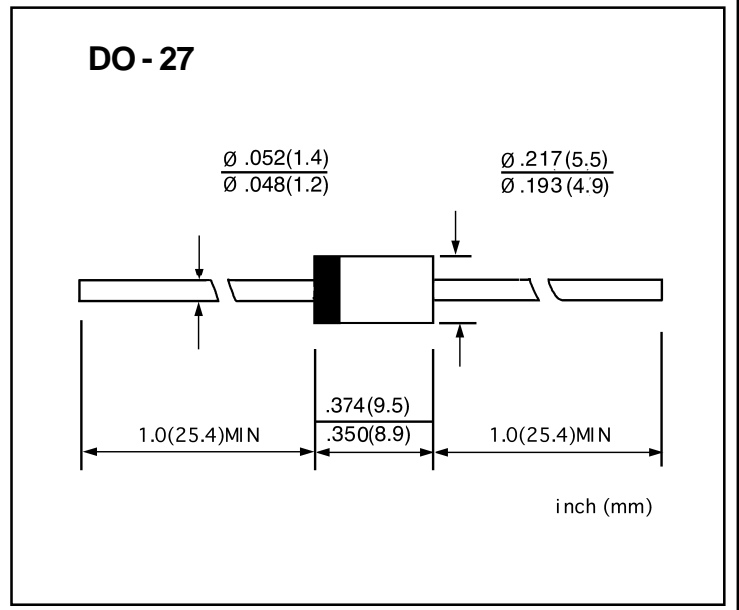
VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 5.0 A

#### 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-27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: 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%.

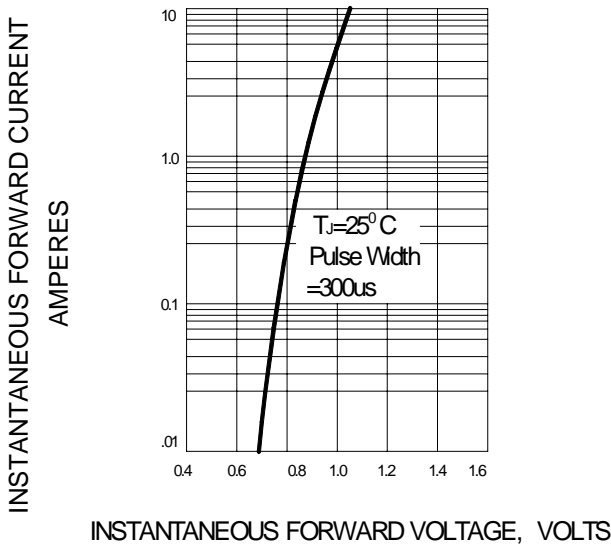
|   |                 | BY<br>550-50    | BY<br>550-100 | BY<br>550-200 | BY<br>550-400 | BY<br>550-600 | BY<br>550-800 | BY<br>550-1000 | UNITS        |
|---|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|----------------|--------------|
| Maximum recurrent peak reverse voltage  | $V_{RRM}$       | 50              | 100           | 200           | 400           | 600           | 800           | 1000           | V            |
| Maximum RMS voltage   | $V_{RMS}$       | 35              | 70            | 140           | 280           | 420           | 560           | 700            | V            |
| Maximum DC blocking voltage   | $V_{DC}$        | 50              | 100           | 200           | 400           | 600           | 800           | 1000           | V            |
| Maximum average forward rectified current<br>9.5mm lead length, @ $T_A=75^\circ C$                          | $I_{F(AV)}$     | 5.0             |               |               |               |               |               |                | A            |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ C$ | $I_{FSM}$       | 300.0           |               |               |               |               |               |                | A            |
| Maximum instantaneous forward voltage<br>@ 5.0 A  | $V_F$           | 1.1             |               |               |               |               |               |                | V            |
| Maximum reverse current @ $T_A=25^\circ C$<br>at rated DC blocking voltage @ $T_A=100^\circ C$              | $I_R$           | 10.0<br>100.0   |               |               |               |               |               |                | $\mu A$      |
| Typical junction capacitance (Note1)  | $C_J$           | 80              |               |               |               |               |               |                | pF           |
| Typical thermal resistance (Note2)  | $R_{\theta JA}$ | 15              |               |               |               |               |               |                | $^\circ C/W$ |
| 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.

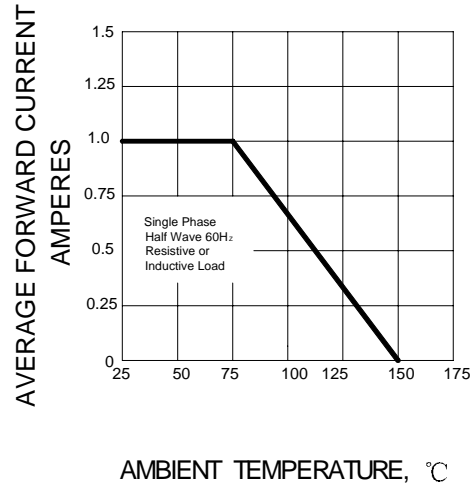
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2. Thermal resistance from junction to ambient.

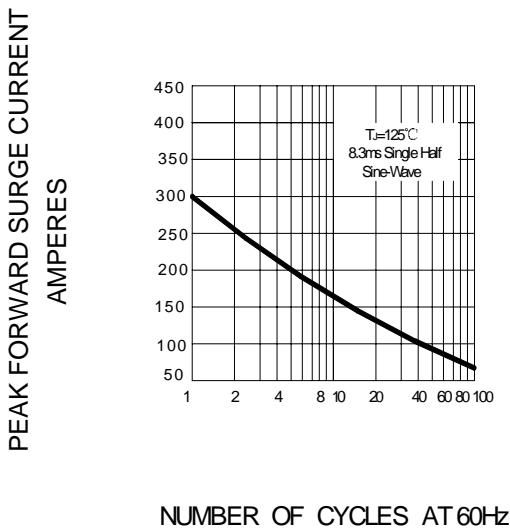
**FIG.1 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.2 – TYPICAL FORWARD DERATING CURVE**



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



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

