

## GLASS PASSIVATED RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V

CURRENT: 6.0 A

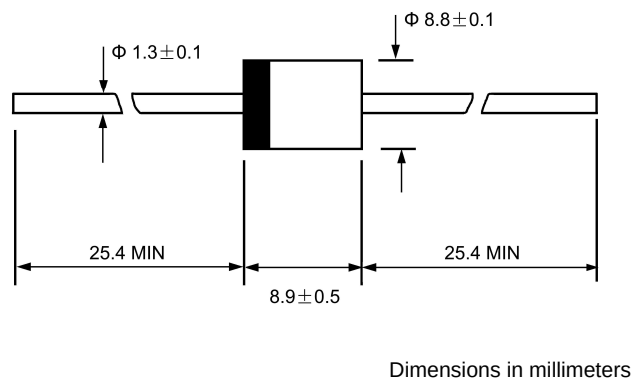
### FEATURES

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

### MECHANICAL DATA

- ◇ Case: JEDEC R-6, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.072 ounces, 2.04 grams
- ◇ Mounting position: Any

R - 6



### 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%.

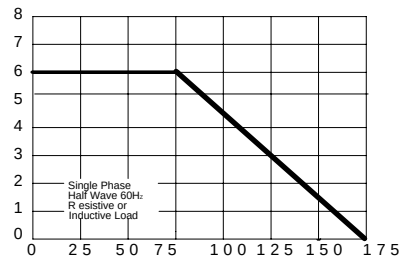
|                                                                                                                   |                 | 6A05G           | 6A1G | 6A2G | 6A4G | 6A6G | 6A8G | 6A10G | UNITS              |
|-------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|------|------|------|------|------|-------|--------------------|
| 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, @ $T_A=75^\circ\text{C}$                          | $I_{F(AV)}$     | 6.0             |      |      |      |      |      |       | A                  |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ\text{C}$ | $I_{FSM}$       | 400.0           |      |      |      |      |      |       | A                  |
| Maximum instantaneous forward voltage<br>@ 6.0 A                                                                  | $V_F$           | 1.0             |      |      |      |      |      |       | 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>100.0   |      |      |      |      |      |       | $\mu\text{A}$      |
| Typical junction capacitance (Note1)                                                                              | $C_J$           | 120             |      |      |      |      |      |       | pF                 |
| Typical thermal resistance (Note2)                                                                                | $R_{\theta JA}$ | 10              |      |      |      |      |      |       | $^\circ\text{C/W}$ |
| Operating junction temperature range                                                                              | $T_J$           | - 55 ---- + 175 |      |      |      |      |      |       | $^\circ\text{C}$   |
| Storage temperature range                                                                                         | $T_{STG}$       | - 55 ---- + 175 |      |      |      |      |      |       | $^\circ\text{C}$   |

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

2. Thermal resistance from junction to ambient.

FIG.1 – FORWARD DERATING CURVE

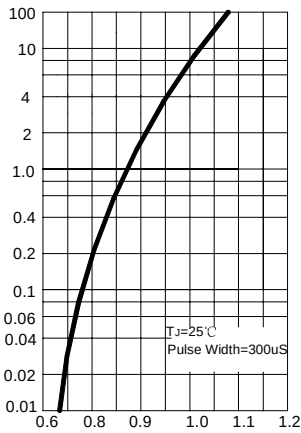
AVERAGE FORWARD RECTIFIED CURRENT  
AMPERES



AMBIENT TEMPERATURE, °C

FIG.2 – TYPICAL FORWARD CHARACTERISTICS

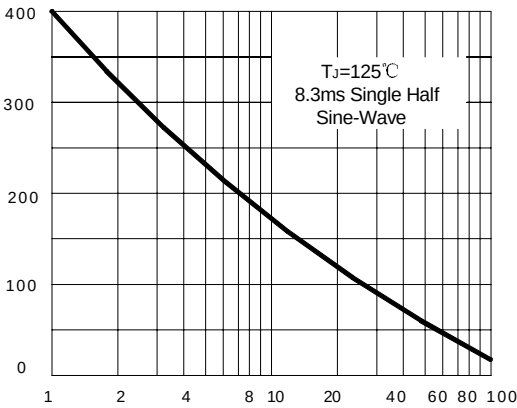
INSTANTANEOUS FORWARD CURRENT  
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 –MAXIMUM NON-REPETITIVE FORWARD  
SURGE CURRENT

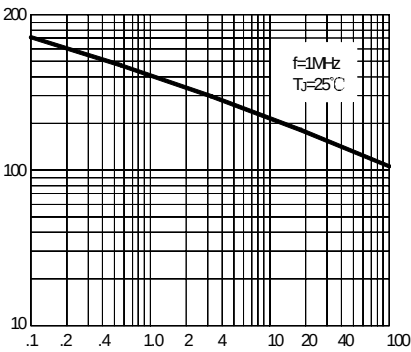
PEAK FORWARD SURGE CURRENT  
AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.4 – TYPICAL JUNCTION CAPACITANCE

CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS