



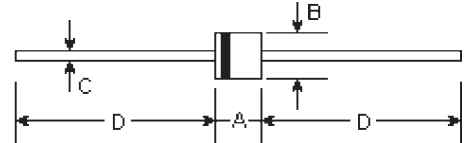
# 6A05G THRU 6A10G

**GLASS PASSIVATED JUNCTION RECTIFIER**  
**Reverse Voltage - 50 to 1000 Volts**  
**Forward Current - 6.0 Amperes**

## Features

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability classification 94V-0 utilizing Flame retardant epoxy molding compound
- Glass passivated junction in R-6 package
- High current operation 6.0 ampere @  $T_A=75^\circ\text{C}$

## R-6



## Mechanical Data

- **Case:** Molded plastic, R-6
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.074 ounce, 2.105 grams

DIMENSIONS					Note
DIM	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.339	0.358	8.6	9.1	
B	0.339	0.358	8.6	9.1	φ
C	0.047	0.052	1.2	1.3	φ
D	1.000	-	25.40	-	

## Maximum Ratings and Electrical Characteristics

\* @ $T_A=25^\circ\text{C}$  unless otherwise specified. Single phase, half-wave, 60Hz, resistive or inductive load.

	Symbols	6A05G	6A1G	6A2G	6A4G	6A6G	6A8G	6A10G	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $75^\circ\text{C}$	$I_{(AV)}$	6.0							Amps
Maximum overload surge current at 1 cycle (Note 1)	$I_{FSM}$	400.0							Amps
Maximum forward voltage at 6.0A DC	$V_F$	1.0							Volt
Maximum full load reverse current, full cycle average at $25^\circ\text{C}$	$I_R$	10							$\mu\text{A}$
Maximum DC reverse current at rated DC blocking voltage and $100^\circ\text{C}$	$I_R$	500							$\mu\text{A}$
Typical junction capacitance (Note 2)	$C_J$	150.0							$\mu\text{F}$
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	20.0 4.0							$^\circ\text{C/W}$
Operating temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +175							$^\circ\text{C}$

### Notes:

- (1) Peak forward surge current, per 8.3 ms single half sine-wave superimposed on rated load
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length P.C.B. mounted with 1.1X1.1" (30X30mm) copper pads

# RATINGS AND CHARACTERISTIC CURVES

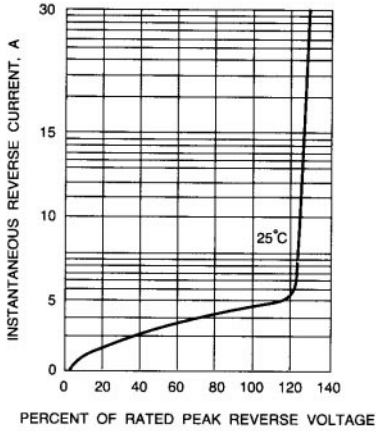
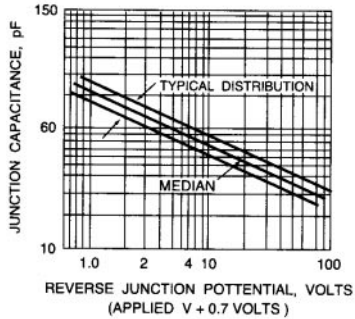


Fig. 1 - TYPICAL REVERSE CHARACTERISTICS



NOTE: WHEN PLOTTING CAPACITANCE VERSUS VOLTAGE IT IS CONVENIENT TO PLOT ON LOG-LOG PAPER AND TO PLOT APPLIED VOLTAGE PLUS BARRIER POTENTIAL (BARRIER POTENTIAL - 0.7 VOLTS) AS THE ABSCISSA. THIS WILL GIVE A STRAIGHT LINE OF SLOPE APPROXIMATELY 1/2 OF WHICH CAN BE EASILY EXTRAPOLATED. CAPACITANCE AT ZERO APPLIED VOLTS IS FOUND AT 0.7 VOLTS ON THE PLOT. THIS TECHNIQUE WAS USED FOR THE CURVE SHOWN.

Fig. 3 - CAPACITANCE CHARACTERISTICS

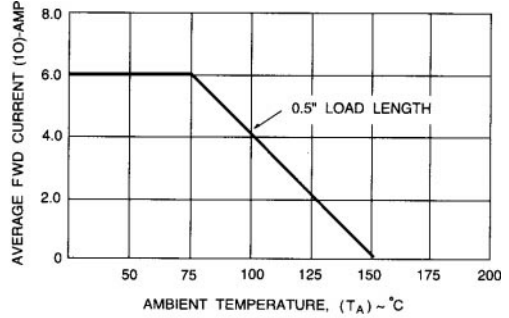


Fig. 2 - FORWARD DERATING CURVE

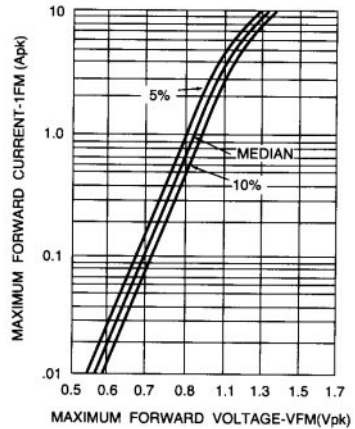


Fig. 4 - TYPICAL FORWARD CHARACTERISTICS

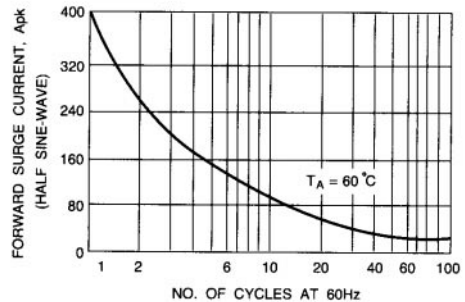


Fig. 5 - MAXIMUM OVERLOAD SURGE CURRENT