



6A05G THRU 6A10G

GLASS PASSIVATED JUNCTION RECTIFIER

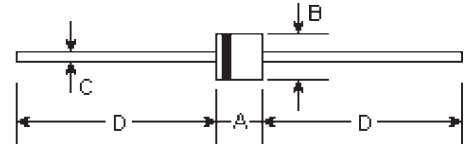
Reverse Voltage - 50 to 1000 Volts

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°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°C	I_R	10							μA
Maximum DC reverse current at rated DC blocking voltage and 100°C	I_R	500							μA
Typical junction capacitance (Note 2)	C_J	150.0							μF
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

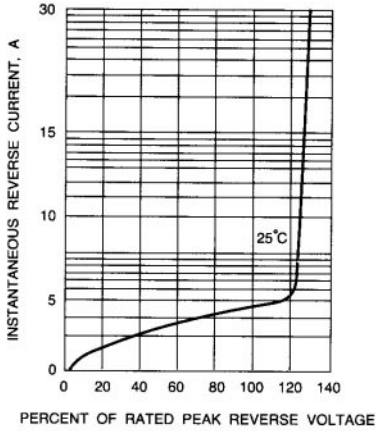
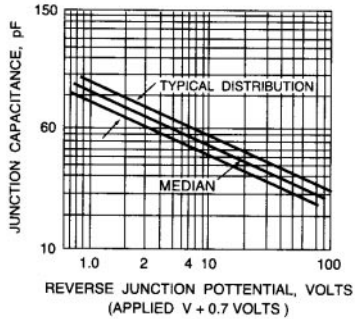


Fig. 1 - TYPICAL REVERSE CHARACTERISTICS



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

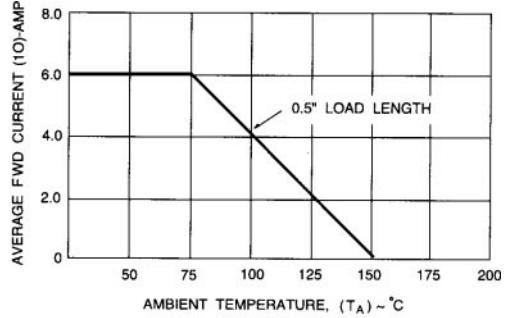


Fig. 2 - FORWARD DERATING CURVE

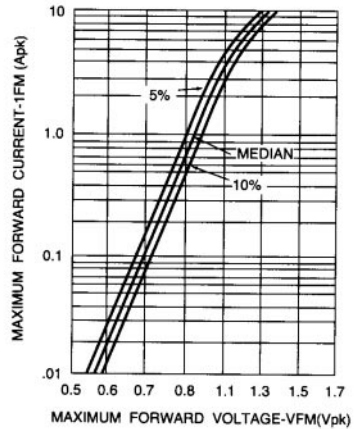


Fig. 4 - TYPICAL FORWARD CHARACTERISTICS

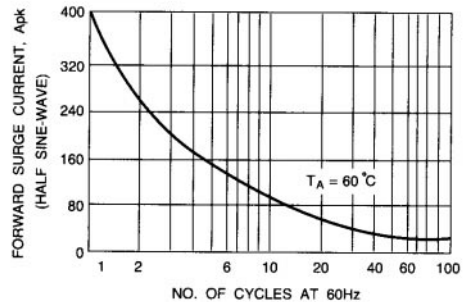


Fig. 5 - MAXIMUM OVERLOAD SURGE CURRENT