



# 1G1 THRU 1G7

## MINIATURE GLASS PASSIVATED JUNCTION RECTIFIER

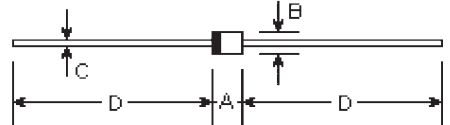
Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.0 Ampere

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound
- Glass passivated junction version of 1G1 thru 1G7 in R-1 package
- 1.0 ampere operation at  $T_A=75^\circ\text{C}$  with no thermal runaway

### R-1



### Mechanical Data

- **Case:** Molded plastic, R-1
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.007 ounce, 0.205 gram

DIMENSIONS					Note
DIM	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.114	0.138	2.9	3.5	
B	0.095	0.099	2.42	2.51	φ
C	0.020	0.024	0.5	0.6	φ
D	1.000	-	25.40	-	

### Maximum Ratings and Electrical Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.

	Symbols	1G1	1G2	1G3	1G4	1G5	1G6	1G7	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 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current, $I_{FSM}$ (surge): 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	$I_{FSM}$	30.0							Amps
Maximum forward voltage at 1.0A	$V_F$	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	5.0 100.0							$\mu\text{A}$
Typical junction capacitance (Note 1)	$C_j$	15.0							$\mu\text{F}$
Typical thermal resistance (Note 2)	$R_{\theta JA}$	50.0							$^\circ\text{C/W}$
Operating and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

#### Notes:

- (1) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
- (2) Thermal resistance junction to ambient

# RATINGS AND CHARACTERISTIC CURVES

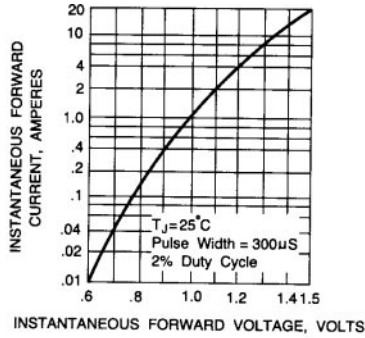


Fig. 1 - TYPICAL FORWARD CHARACTERISTICS

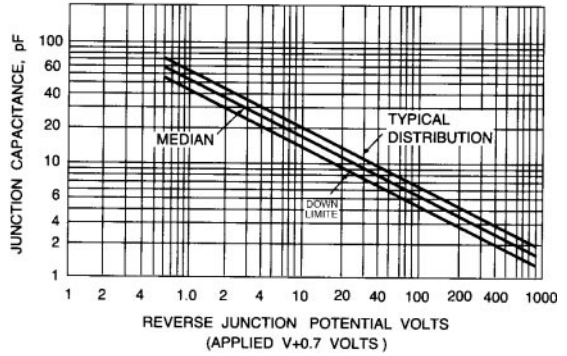


Fig. 2 - JUNCTION CAPACITANCE

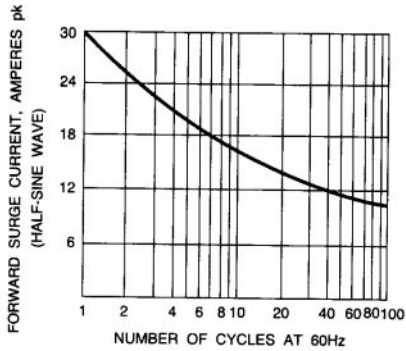


Fig. 3 - PEAK FORWARD SURGE CURRENT

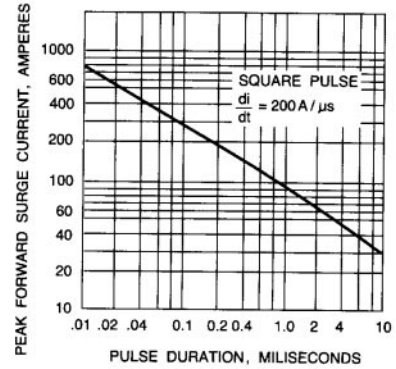


Fig. 4 - PEAK FORWARD SURGE CURRENT

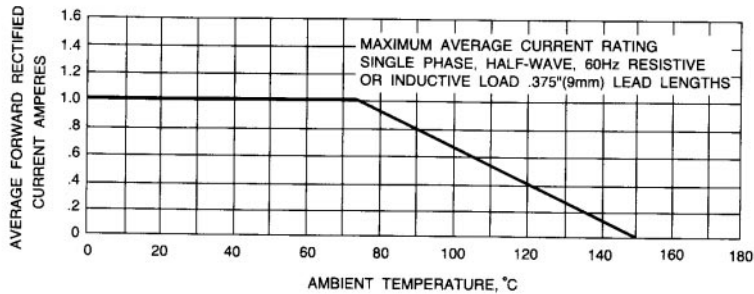


Fig. 5 - FORWARD DERATING CURVE