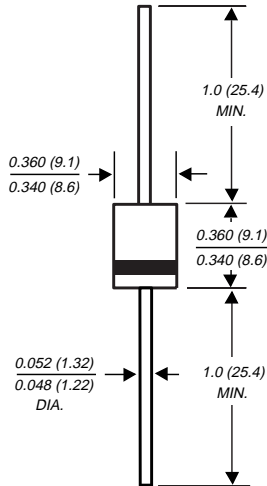


# GI820 THRU GI828

## FAST SWITCHING PLASTIC RECTIFIER

*Reverse Voltage - 50 to 800 Volts      Forward Current - 5.0 Amperes*

### Case Style P600



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ High forward current operation
- ◆ Fast switching for high efficiency
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Uniform molded body
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** Void-free molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.07 ounce, 2.1grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	GI820	GI821	GI822	GI824	GI826	GI828	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	Volts
Maximum non-repetitive peak reverse voltage	$V_{RSM}$	75	150	250	450	650	880	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	5.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	300.0						Amps
Maximum instantaneous forward voltage at 5.0A $T_J=25^\circ\text{C}$ at 15.7A $T_J=150^\circ\text{C}$	$V_F$	1.10 1.05						Volts
Maximum reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	10.0 1.0						$\mu\text{A}$ mA
Typical junction capacitance (NOTE 1)	$C_J$	300.0						pF
Maximum reverse recovery time (NOTE 2)	$t_{rr}$	200.0						ns
Maximum reverse recovery current (NOTE 2)	$I_{RM(REC)}$	2.0						Amps
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	10.0						$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150						$^\circ\text{C}$

### NOTES:

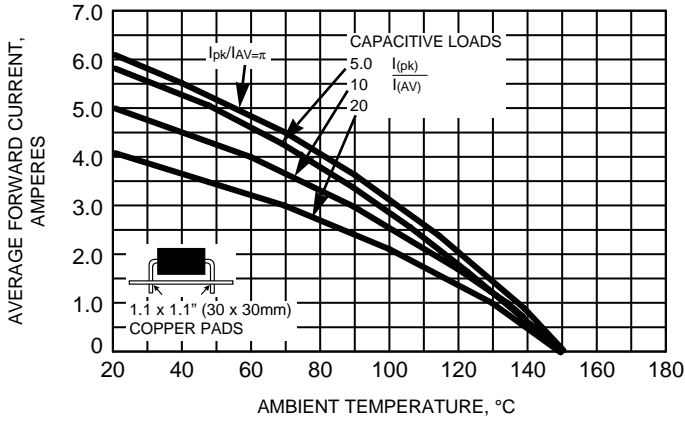
(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(2) Reverse recovery test conditions:  $I_F=1.0\text{A}$ ,  $V_R=30\text{V}$ ,  $di/dt=50\text{A}/\mu\text{s}$ , and  $I_{rr}=10\% I_{RM}$  for measurement of  $t_{rr}$

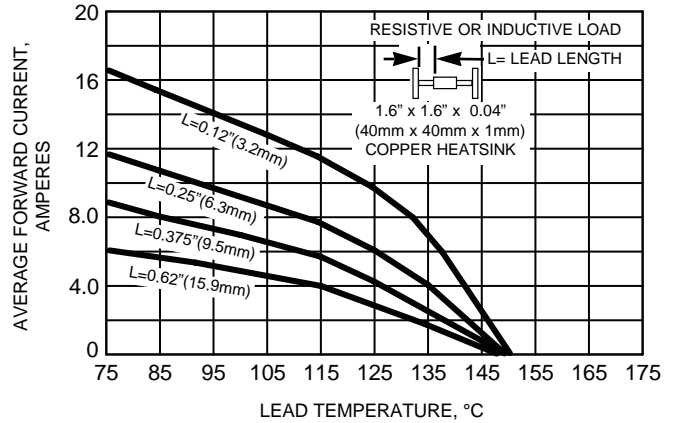
(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, with both leads equally to heat sink

# RATINGS AND CHARACTERISTIC CURVES G1820 THRU G1828

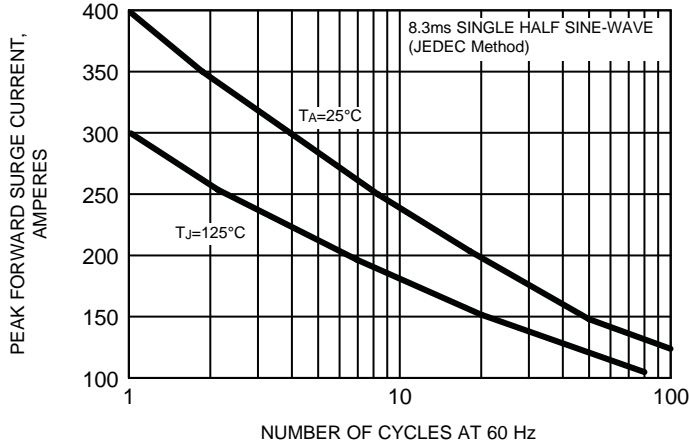
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



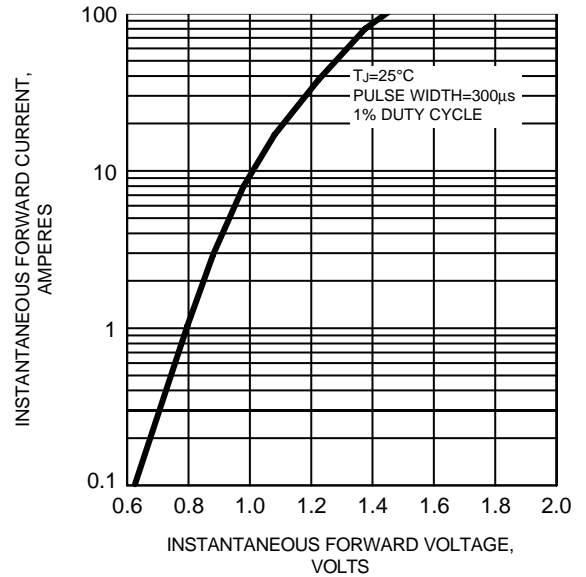
**FIG. 2 - FORWARD CURRENT DERATING CURVE**



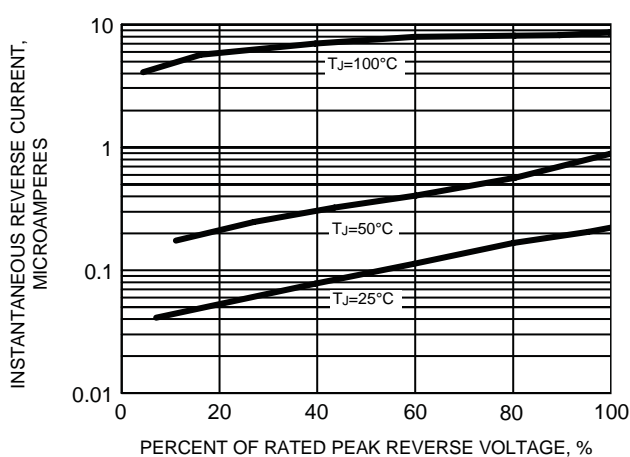
**FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 5 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 6 - TYPICAL THERMAL RESISTANCE**

