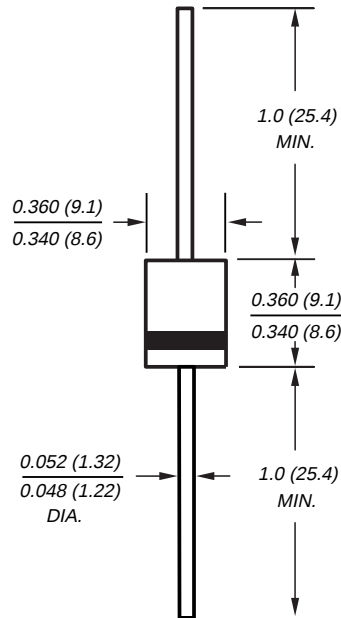




Fast Switching Rectifier

Reverse Voltage 500 to 800 V
Forward Current 5.0 A

Case Style P600



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories 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 oz., 2.1 g**Packaging codes/options:**

1/750 EA. per Bulk Box

4/800 EA. per 13" Reel (52mm Tape)

23/300 EA. per Ammo Box (52mm Tape)

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GI820	GI821	GI822	GI824	GI826	GI828	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum non-repetitive peak reverse voltage	V_{RSM}	75	150	250	450	650	880	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	5.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300						A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	10						°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150						°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 5.0A $T_J=25^\circ\text{C}$ at 15.7A $T_J=100^\circ\text{C}$	V_F	1.10 1.05	V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	10 1.0	μA
Typical junction capacitance at 4.0V, 1MHz	C_J	300	pF
Maximum reverse recovery time $I_F=1.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$, $I_{rr} = 10\% I_{RM}$	t_{rr}	200	ns
Maximum reverse recovery current $I_F=1.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$,	$I_{RM(REC)}$	2.0	ns

Notes:

(1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curves

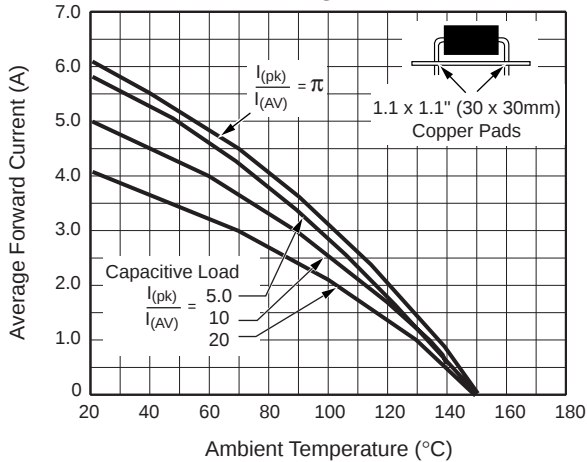


Fig. 2 – Forward Current Derating Curve

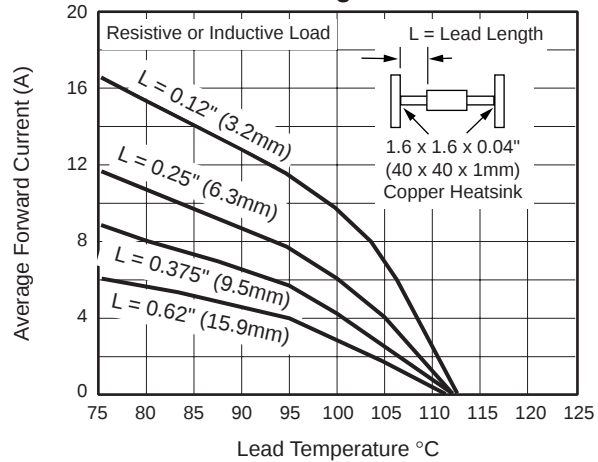


Fig. 3 – Maximum Non-Repetitive Peak Forward Surge Current

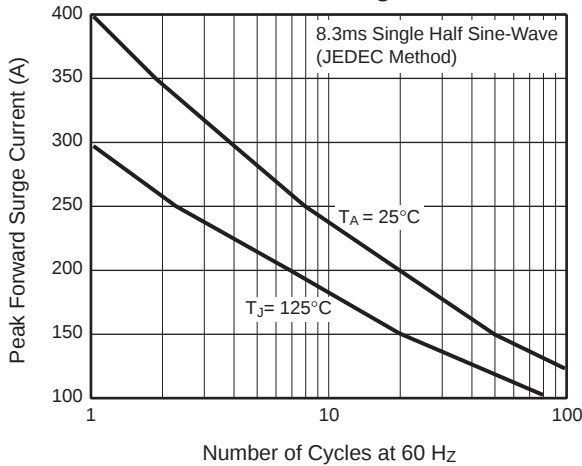


Fig. 4 – Typical Instantaneous Forward Characteristics

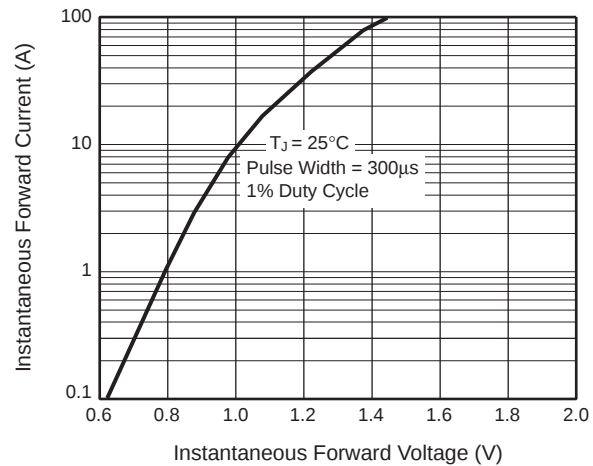


Fig. 5 – Typical Reverse Characteristics

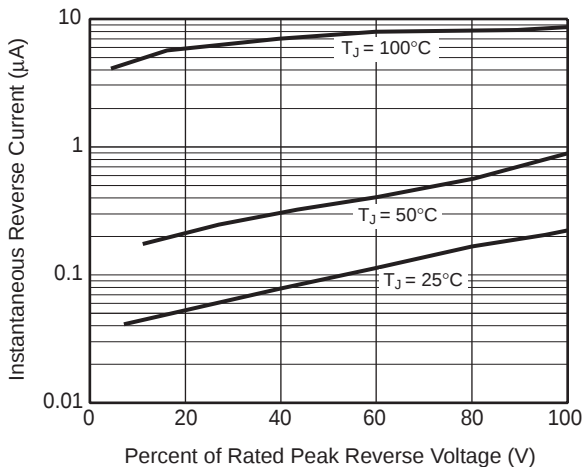


Fig. 6 – Typical Thermal Resistance

