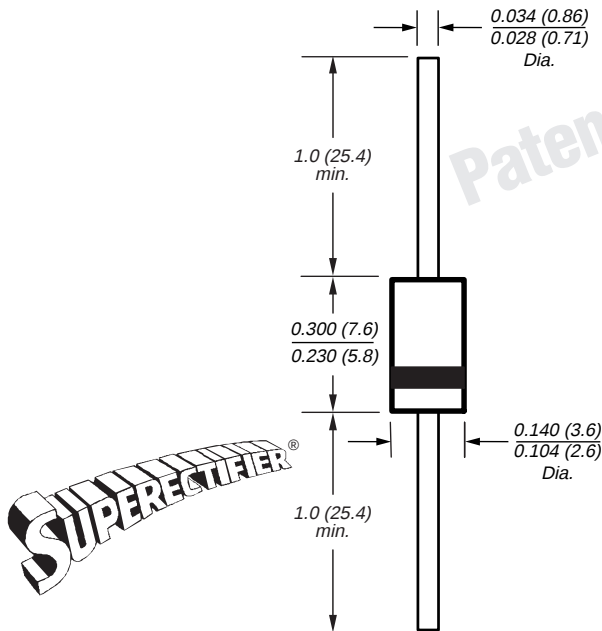




Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 500 to 1000 V
Forward Current 1.0 A

DO-204AC (DO-15)



Dimensions in inches and (millimeters)

*Glass-plastic encapsulation technique is covered by

Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- Fast switching for high efficiency
- 1.0 Ampere operation at $T_A=75^\circ\text{C}$ with no thermal runaway
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AC, molded plastic over glass body

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.015 ounce, 0.4 gram

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GI810	GI811	GI812	GI814	GI816	GI817	GI818	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A=75^\circ\text{C}$	I_{FSM}	30							A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	45							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GI810	GI811	GI812	GI814	GI816	GI817	GI818	Unit
Maximum instantaneous forward voltage at 1.0A	V_F	1.2							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10 100							μA
Maximum reverse recovery time $I_F=1.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$	t_{rr}	750							ns
Typical junction capacitance at 4.0V, 1MHz	C_J	25							pF

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 Curve

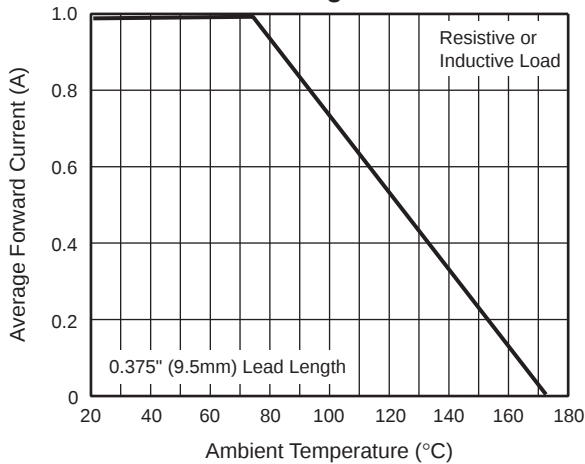


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

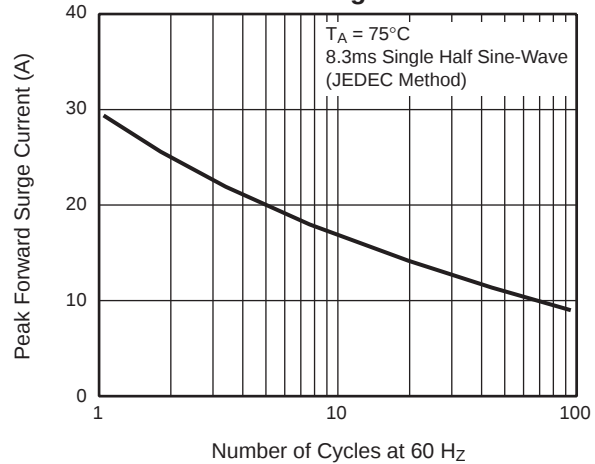


Fig. 3 – Typical Instantaneous Forward Characteristics

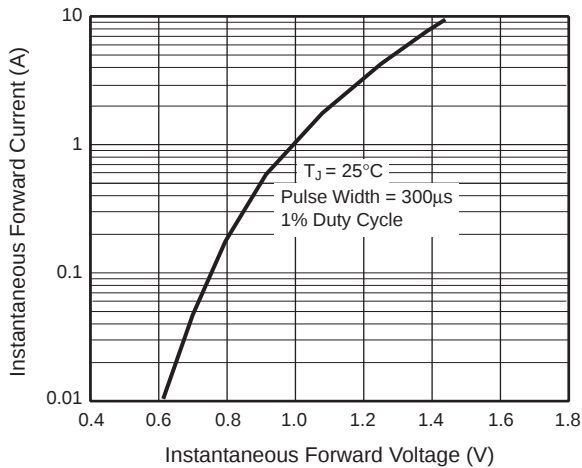


Fig. 4 – Typical Reverse Characteristics

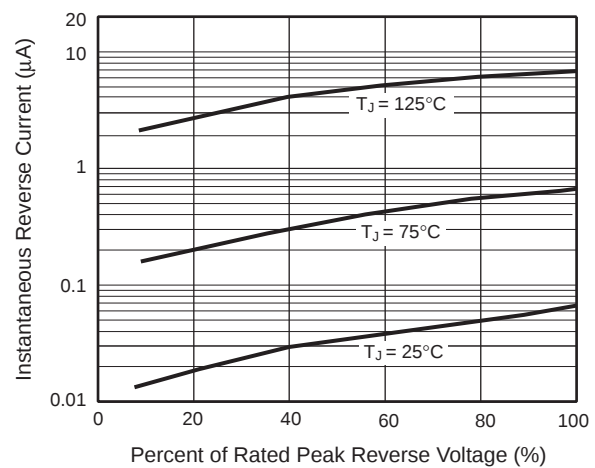


Fig. 5 – Typical Junction Capacitance

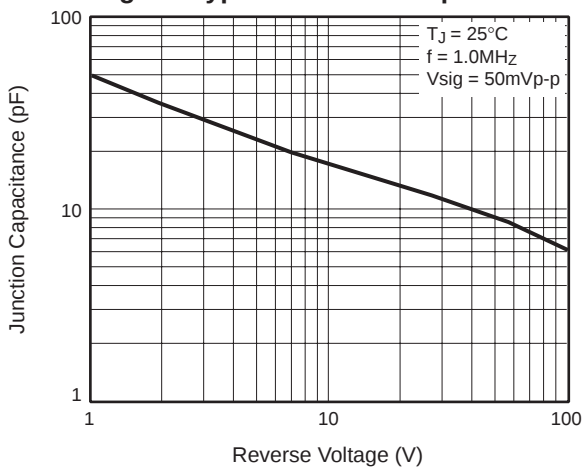


Fig. 6 – Typical Transient Thermal Impedance

