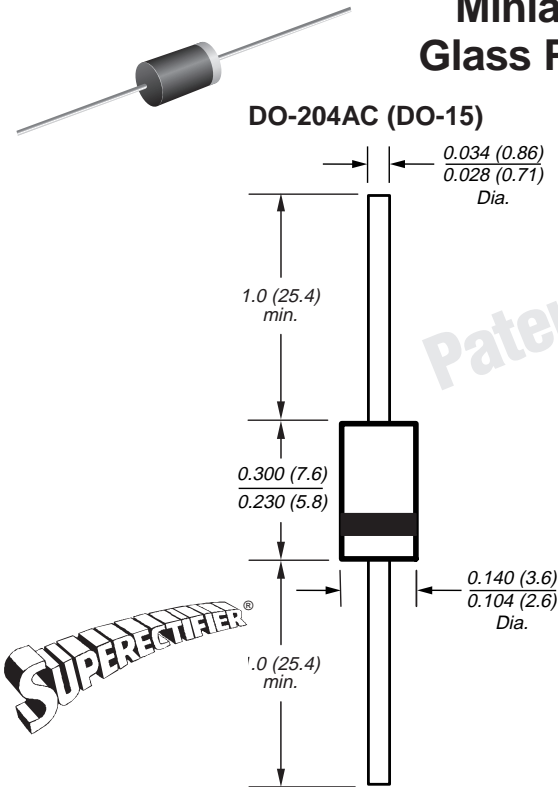




Miniature High Voltage Glass Passivated Rectifier

Reverse Voltage 1200 to 1600 V
Forward Current 1.0 A



Patented*

* 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 Laboratory Flammability Classification 94V-0.
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- 1.0 ampere operation at $T_A=75^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- Hermetically sealed package
- Capable of meeting environmental standards of MIL-S-19500
- 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 oz., 0.4 g

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

Parameter	Symbol	GI1-1200GP	GI1-1400GP	GI1-1600GP	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	1200	1400	1600	V
Maximum RMS voltage	V_{RMS}	840	980	1120	V
Maximum DC blocking voltage	V_{DC}	1200	1400	1600	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)	I_{FSM}	30			A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	55			$^\circ\text{C}/\text{W}$
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	GI1-1200GP	GI1-1400GP	GI1-1600GP	Unit
Maximum instantaneous forward voltage at 1.0A at 3.14A	V_F		1.1 1.3		V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R		10 100		μA
Maximum reverse recovery time at $I_{FM}=20\text{mA}$, $I_{RM}=2\text{mA}$	t_{rr}		25		μs
Maximum reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$ typical maximum	t_{rr}		0.7 1.5		μs
Maximum forward recovery time at $I_{FM}=20\text{mA}$	t_{fr}		1.0		μs
Typical junction capacitance at 4.0V, 1MHz	C_J		15		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

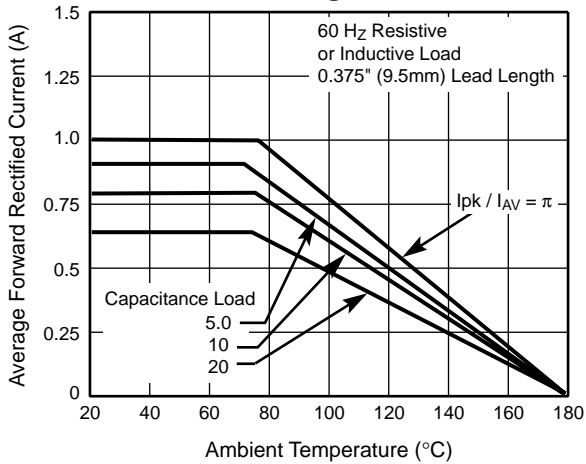


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

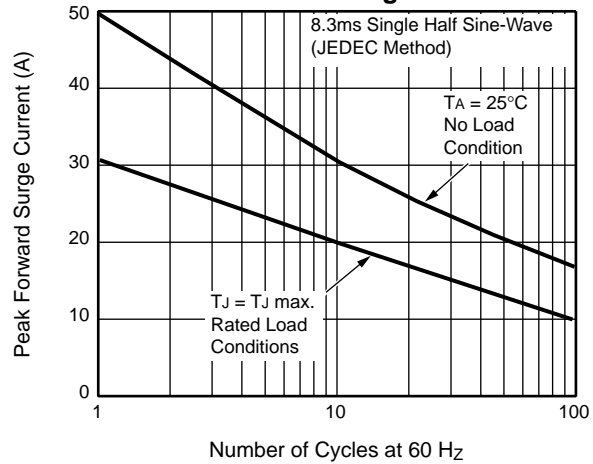


Fig. 3 – Typical Instantaneous Forward Characteristics

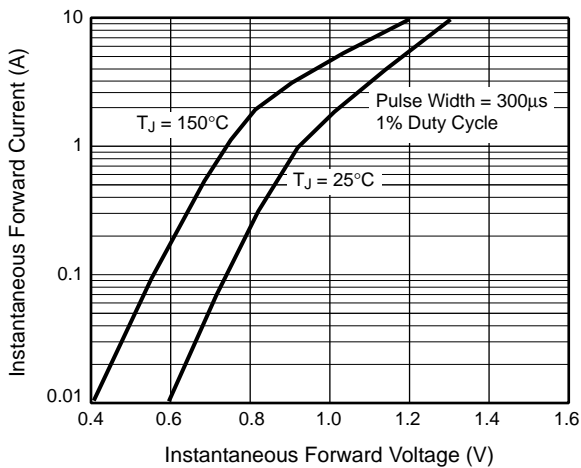


Fig. 4 – Typical Reverse Characteristics

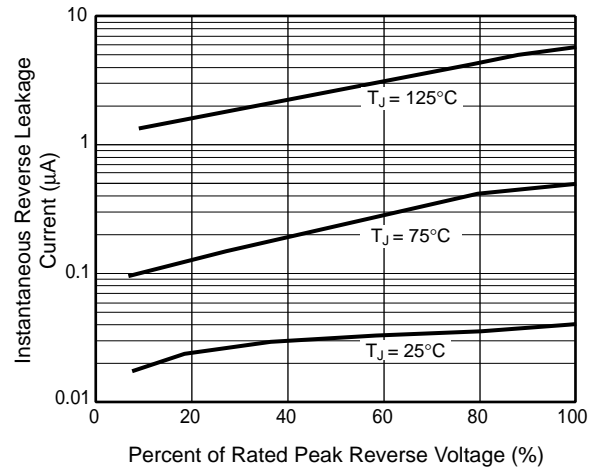


Fig. 5 – Typical Junction Capacitance

