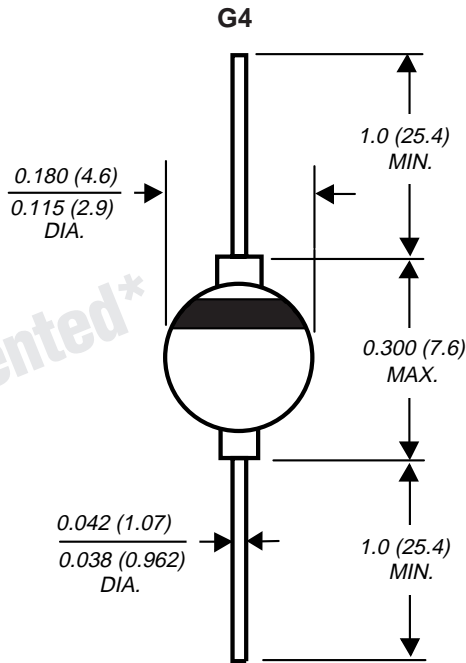


## Glass Passivated Ultrafast Rectifier

Reverse Voltage 50 to 200 V  
Forward Current 3.5 A



Dimensions in inches and (millimeters)

\* Brazed-lead assembly is covered by Patent No. 3,930,306

### Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Capable of meeting environmental standards of MIL-S-19500
- Hermetically sealed package
- Low leakage current
- High surge current capability
- High temperature soldering guaranteed:  
350°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### Mechanical Data

- Case:** Solid glass body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.037 ounce, 1.04 grams

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

Parameter	Symbols	BYV28-50	BYV28-100	BYV28-150	BYV28-200	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	V
Minimum reverse breakdown voltage at 100 μA	V <sub>BR</sub>	55	110	165	220	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>L</sub> =85°C	I <sub>F(AV)</sub>	3.5				A
Peak forward surge current 10ms single half sine-wave superimposed on rated load at T <sub>J</sub> =175°C	I <sub>FSM</sub>	90				A
Typical thermal resistance <sup>(1, 2)</sup>	R <sub>θJA</sub> R <sub>θJL</sub>	55 20				°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175				°C

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

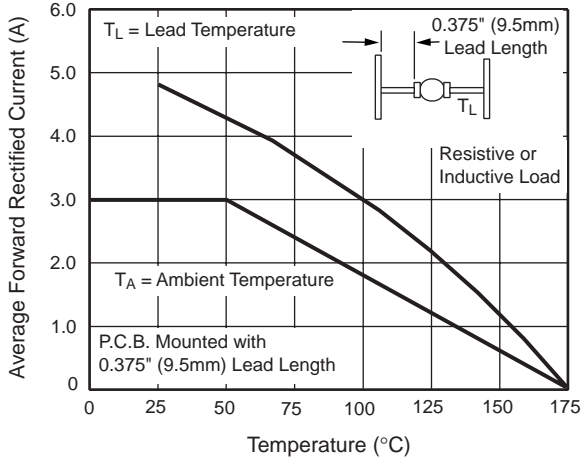
Maximum instantaneous forward voltage at 3.5A	T <sub>J</sub> =25°C T <sub>J</sub> =175°C	V <sub>F</sub>	1.1 0.89	V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25°C T <sub>A</sub> =165°C	I <sub>R</sub>	1.0 150	μA
Maximum reverse recovery time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A		t <sub>rr</sub>	30	ns
Typical junction capacitance at 4.0V, 1MHz		C <sub>J</sub>	100	pF

### Notes:

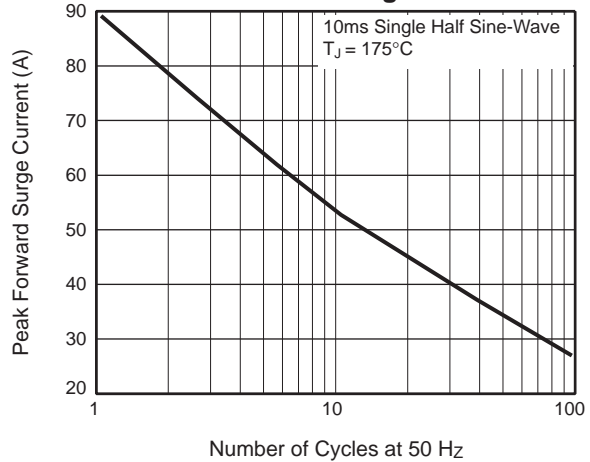
- (1) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsink  
(2) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, and mounted on P.C.B.

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

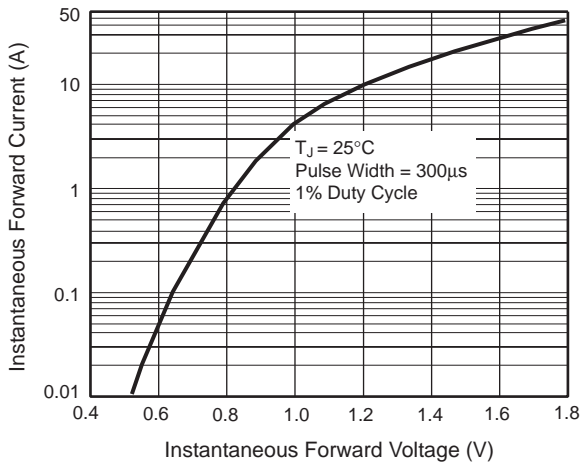
**Fig. 1 — Maximum Forward Current Derating Curves**



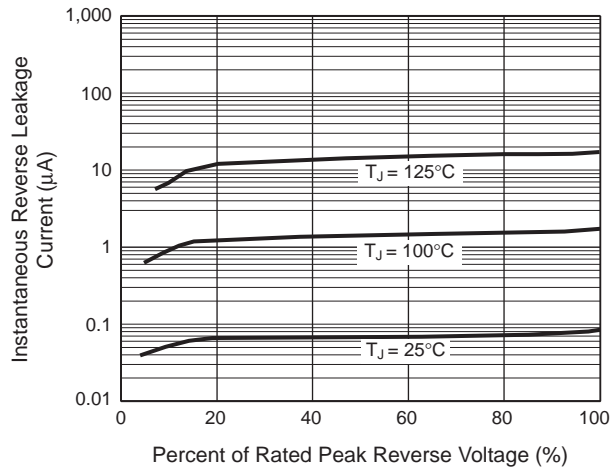
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 — Typical Instantaneous Forward Characteristics**



**Fig. 4 — Typical Reverse Leakage Characteristics**



**Fig. 5 — Typical Junction Capacitance**

