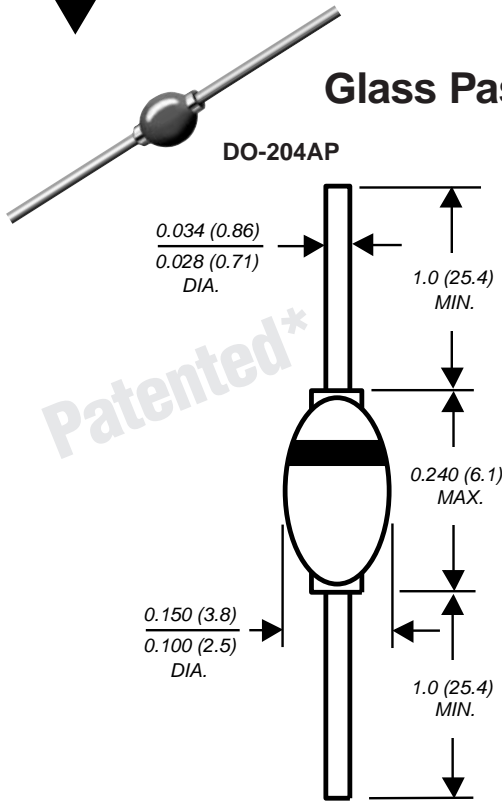


## Glass Passivated Ultrafast Rectifier

DO-204AP

Reverse Voltage 800 to 1000 V  
Forward Current 1.0 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
- Specified reverse surge capability
- High temperature soldering guaranteed:  
350°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### Mechanical Data

**Case:** JEDEC DO-204AP, solid glass body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.02 ounce, 0.56 gram

### Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	BYV26D	BYV26E	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig. 1)	I <sub>F(AV)</sub>	1.0		A
Peak forward surge current 10ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30		A
Non repetitive peak reverse energy <sup>(1)</sup>	E <sub>RSM</sub>	10		mj
Typical thermal resistance <sup>(2,3)</sup>	R <sub>θJA</sub> R <sub>θJL</sub>	70 16		°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.

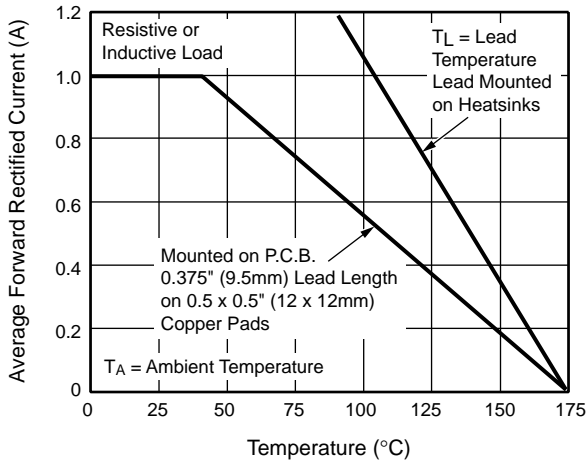
Parameter	Symbols	BYV26D	BYV26E	Unit
Minimum avalanche breakdown voltage at 100μA	V <sub>BR</sub>	900	1100	V
Maximum instantaneous forward voltage at 1.0A T <sub>J</sub> =25°C T <sub>J</sub> =175°C	V <sub>F</sub>	2.5 1.3		V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> =25°C T <sub>A</sub> =165°C	I <sub>R</sub>	5.0 150		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>	75		ns
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	15		pF

#### Notes:

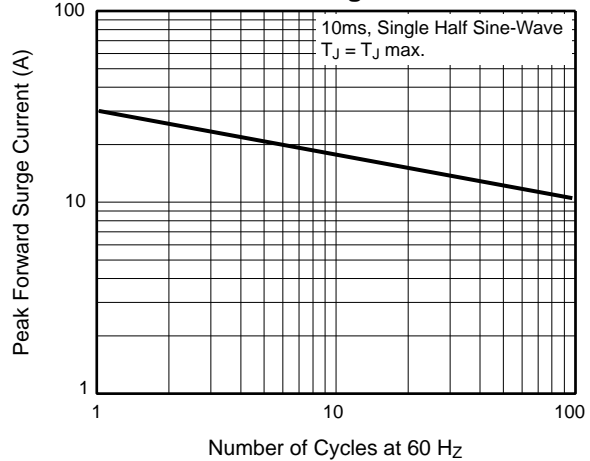
- (1) Peak reverse energy measured at I<sub>R</sub>=400mA, T<sub>J</sub>=T<sub>J</sub> max. on inductive load, t=20μs
- (2) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads
- (3) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsink

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

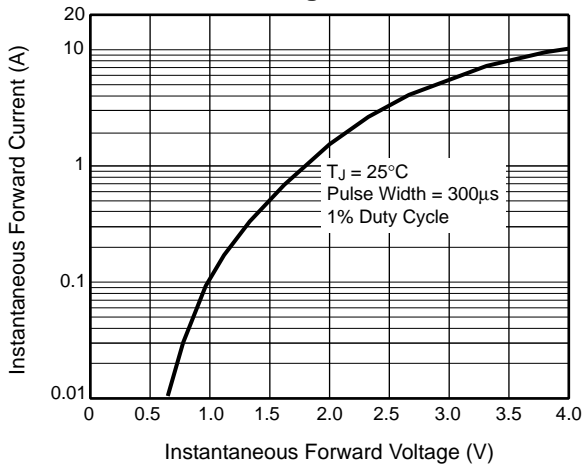
**Fig. 1 – Maximum Forward Current Derating Curve**



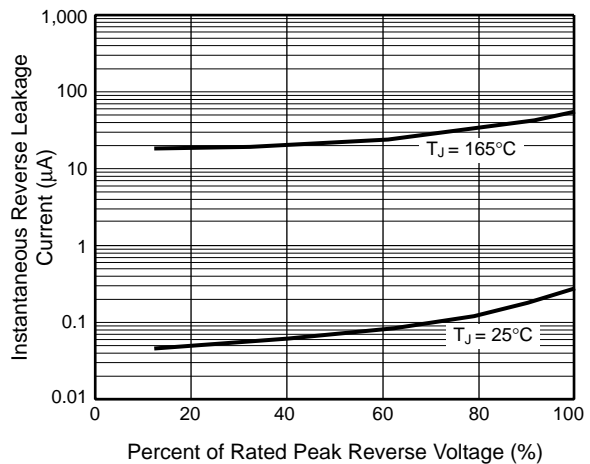
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



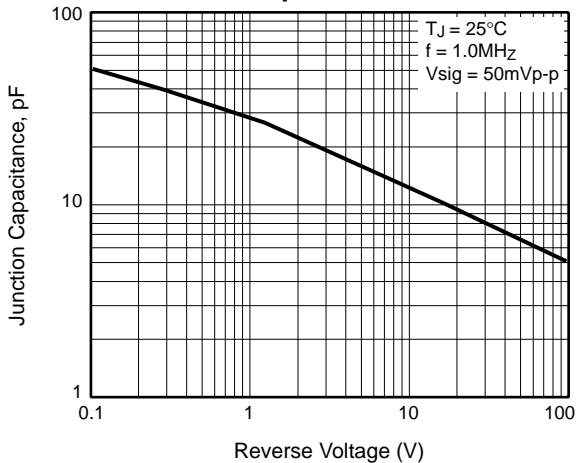
**Fig. 3 – Typical Instantaneous Forward Voltage Characteristics**



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



**Fig. 5 – Typical Junction Capacitance**



**Fig. 6 – Typical Transient Thermal Impedance**

