

# BYV26D AND BYV26E

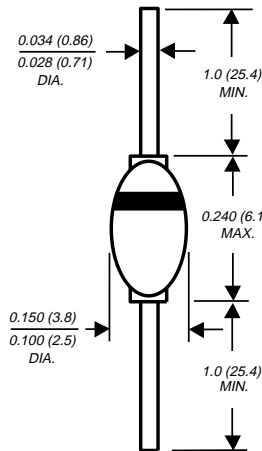
## GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 800 to 1000 Volts

Forward Current - 1.0 Ampere

**PATENTED\***

DO-204AP

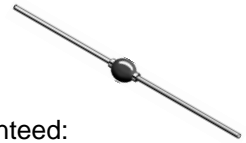


Dimensions in inches and (millimeters)

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

### FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ Superfast recovery times for high efficiency
- ◆ Low forward voltage, high current capability
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ Hermetically sealed package
- ◆ Low Leakage
- ◆ High surge 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 AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYV26D	BYV26E	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	560	700	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	800	1000	Volts
Minimum avalanche breakdown voltage at 100µA	V <sub>BR</sub>	900	1100	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length (SEE FIG. 1)	I <sub>(AV)</sub>	1.0		Amp
Peak forward surge current 10ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30.0		Amps
Maximum instantaneous forward voltage at 1.0A T <sub>J</sub> =25°C T <sub>J</sub> =175°C	V <sub>F</sub>	2.50 1.30		Volts
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>	5.0 150.0		µA
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	75.0		ns
Non repetitive peak reverse energy (NOTE 2)	E <sub>RSM</sub>	10.0		mj
Typical junction capacitance (NOTE 3)	C <sub>J</sub>	15.0		pF
Typical thermal resistance (NOTE 4) (NOTE 5)	R <sub>θJA</sub> R <sub>θJL</sub>	70.0 16.0		°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175		°C

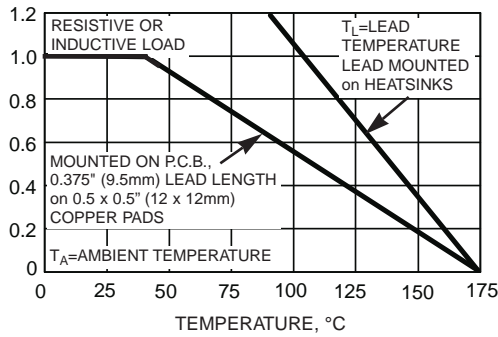
**NOTES:**

- (1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A
- (2) Peak reverse energy measured at I<sub>R</sub>=400mA, T<sub>J</sub>=T<sub>J</sub> max. on inductive load, t=20µs
- (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (4) 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
- (5) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsink

# RATINGS AND CHARACTERISTIC CURVES BYV26D AND BYV26E

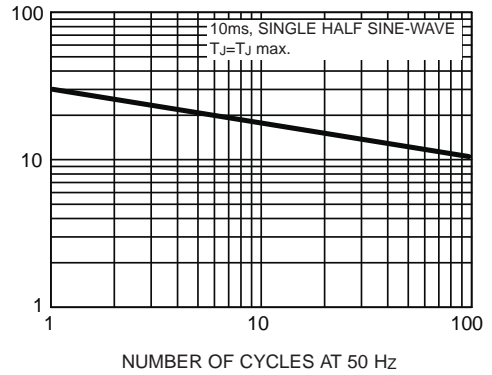
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



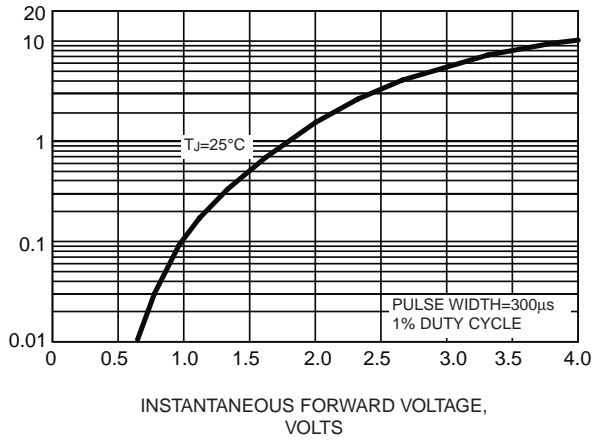
PEAK FORWARD SURGE CURRENT, AMPERES

**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



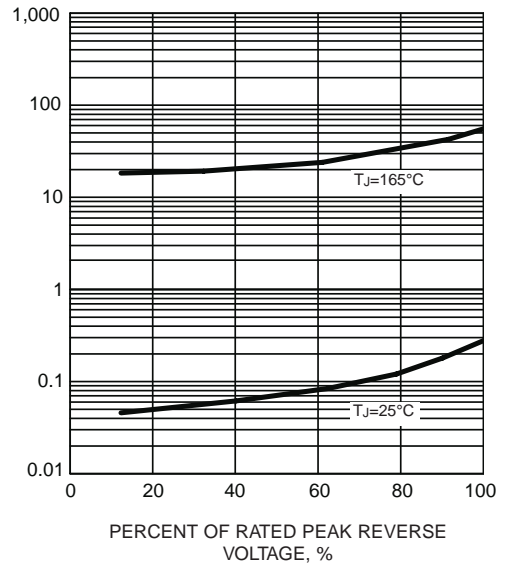
INSTANTANEOUS FORWARD CURRENT, AMPERES

**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD VOLTAGE CHARACTERISTICS**



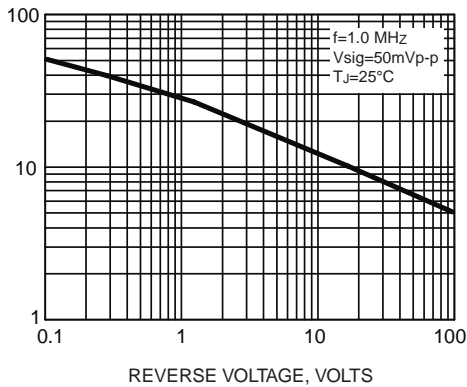
INSTANTANEOUS REVERSE LEAKAGE CURRENT, MICROAMPERES

**FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



JUNCTION CAPACITANCE, pF

**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**



TRANSIENT THERMAL IMPEDANCE, °C/W

**FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE**

