

# BYW29-50 THRU BYW29-200

## FAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts

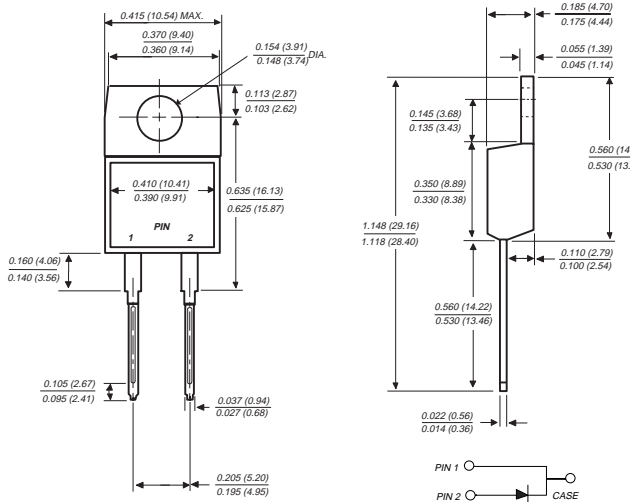
Forward Current - 8.0 Amperes

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Low power loss
- ◆ Low leakage current
- ◆ High surge current capability
- ◆ Superfast recovery time for high efficiency
- ◆ High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds



### TO-220AC



### MECHANICAL DATA

**Case:** JEDEC TO-220AC molded plastic body over passivated chip

**Terminals:** Plated lead solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Mounting Position:** Any

**Weight:** 0.064 ounce, 1.81 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

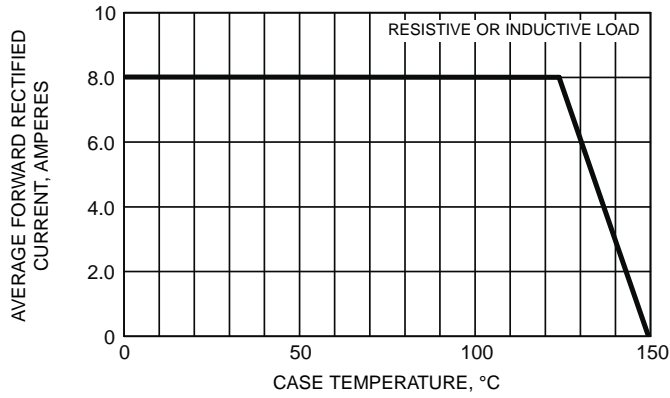
	SYMBOLS	BYW29-50	BYW29-100	BYW29-150	BYW29-200	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	Volts
Maximum average forward rectified current at $T_C=125^\circ\text{C}$	$I_{(AV)}$	8.0				Amps
Peak forward surge current 10ms single half sine-wave superimposed at $T_J=150^\circ\text{C}$	$I_{FSM}$	100.0				Amps
Maximum instantaneous forward voltage at: $I_F=20\text{A}$ , $T_J=25^\circ\text{C}$ $I_F=8\text{A}$ , $T_J=150^\circ\text{C}$	$V_F$	1.3 0.8				Volts
Maximum DC reverse current at rated DC blocking voltage $T_C=25^\circ\text{C}$ $T_C=100^\circ\text{C}$	$I_R$	10.0 500.0				$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	25.0				ns
Typical junction capacitance (NOTE 2)	$C_J$	45.0				pF
Maximum thermal resistance (NOTE 3) (NOTE 4)	$R_{\theta JA}$ $R_{\theta JC}$	20.0 3.0				$^\circ\text{C/W}$
Operating and storage temperature range	$T_J, T_{STG}$	-65 to +150				$^\circ\text{C}$

### NOTES:

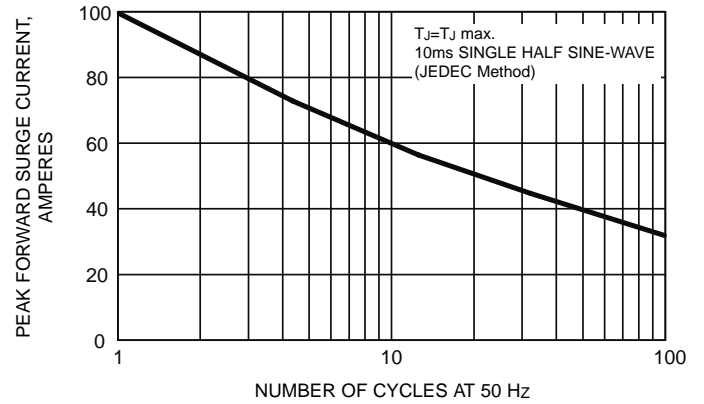
- (1) Reverse recovery test conditions:  $I_F=1\text{A}$ ,  $V_R=30\text{V}$ ,  $di/dt=100\text{A}/\mu\text{s}$ ,  $I_{rr}=10\%$ ,  $I_{RM}$  for measurement of  $t_{rr}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient in free air; no heatsink
- (4) Thermal resistance from junction to case mounted on heatsink

# RATINGS AND CHARACTERISTIC CURVES BYW29-50 THRU BYW29-200

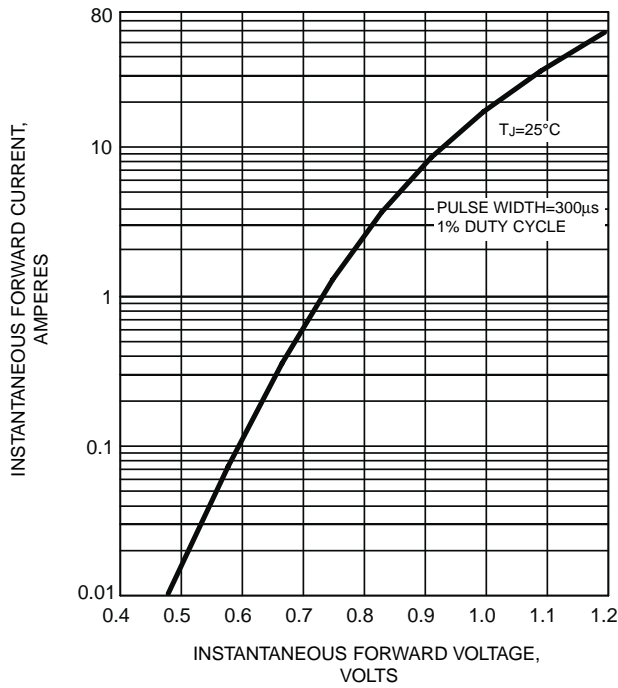
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



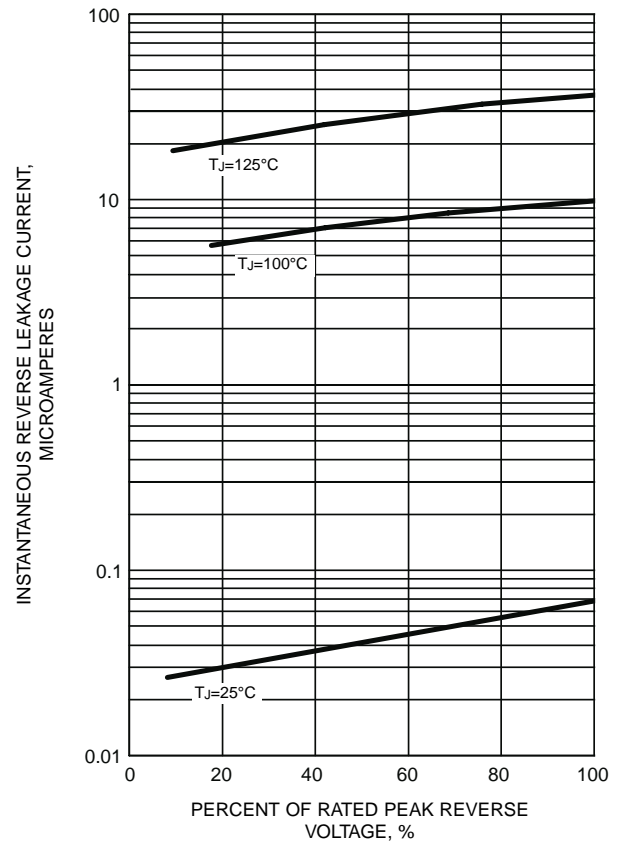
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



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



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

