

# Silicon Diode

## **BYW29-50**

Fast Efficient Rectifier

50V / 8A

# DATASHEET

from

[www.web-bcs.com](http://www.web-bcs.com)

OEM – General Semiconductor

Source: General Semiconductor Databook 1998

# BYW29-50 THRU BYW29-200

## FAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts      Forward Current - 8.0 Amperes

### FEATURES

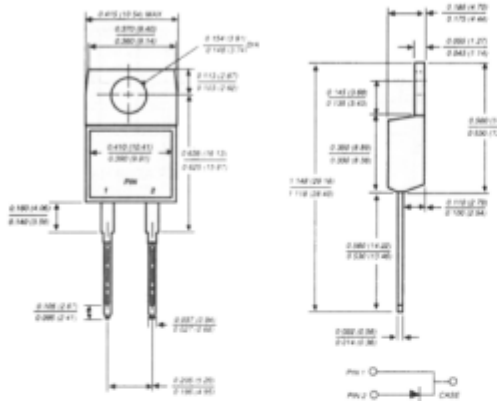
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Low power loss
- ◆ Low leakage current
- ◆ High surge current capability
- ◆ Superfast recovery time for high efficiency
- ◆ High temperature soldering guaranteed: 250°C, 0.16" (4.06mm)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



### 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

### TO-220AC



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

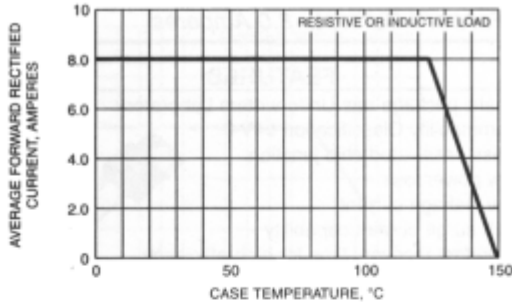
	SYMBOLS	BYW29-50	BYW29-100	BYW29-150	BYW29-200	UNITS
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	Volts
Maximum average forward rectified current at T <sub>C</sub> =125°C	I <sub>(AV)</sub>	8.0				Amps
Peak forward surge current 10ms single half sine-wave superimposed at T <sub>J</sub> =150°C	I <sub>FSM</sub>	100.0				Amps
Maximum instantaneous forward voltage at: I <sub>F</sub> =20A, T <sub>J</sub> =25°C I <sub>F</sub> =8A, T <sub>J</sub> =150°C	V <sub>F</sub>	1.3 0.8				Volts
Maximum DC reverse current at rated DC blocking voltage T <sub>C</sub> =25°C T <sub>C</sub> =100°C	I <sub>R</sub>	10.0 500.0				µA
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	25.0				ns
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	45.0				pF
Maximum thermal resistance (NOTE 3) (NOTE 4)	R <sub>θJA</sub> R <sub>θJC</sub>	20.0 3.0				°C/W
Operating and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150				°C

**NOTES:**

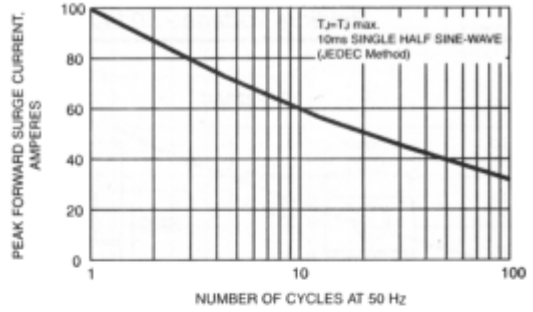
- (1) Reverse recovery test conditions: I<sub>F</sub>=1A, V<sub>R</sub>=30V, di/dt=100A/µs, I<sub>R</sub>=10%, I<sub>sm</sub> for measurement of t<sub>rr</sub>
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient in free air; no heatsink
- (4) Thermal resistance from junction to case mounted on heatsink

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

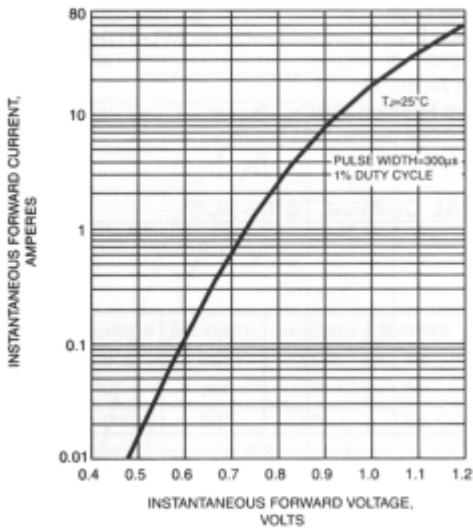
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



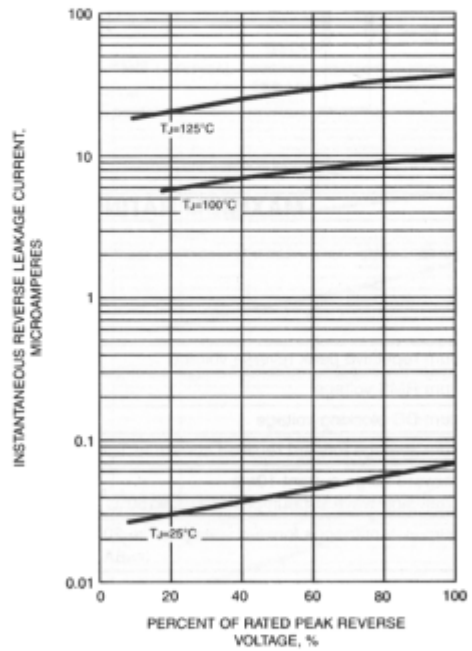
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



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



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

