

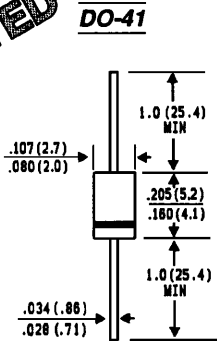
# BYW27-50GP THRU BYW27-1000GP

## GLASS PASSIVATED JUNCTION PLASTIC MINIATURE RECTIFIER

**Voltage - 50 to 1000 Volts    Current - 1.0 Ampere**

### FEATURES

**PATENTED\***



Dimensions in inches and (millimeters)

\* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 of 1976; brazed-lead assembly to Patent No. 3,930,306 of 1976 and glass composition by Patent No. 3,752,701 of 1973



- ◆ High temperature metallurgically bonded constructed rectifiers
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated cavity-free junction in DO-41 package
- ◆ 1.0 Ampere operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway
- ◆ Typical  $I_R$  less than  $0.1 \mu\text{A}$
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ High temperature soldering guaranteed:  $350^\circ\text{C}/10$  seconds/.375", (9.5mm) lead length at 5 lbs., (2.3kg) tension

### MECHANICAL DATA

**Case:** Molded plastic over glass

**Terminals:** Plated Axial leads, solderable per MIL-STD-202, Method 208

**Polarity:** Color band denotes cathode

**Mounting Position:** Any

**Weight:** 0.012 ounce, 0.3 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	SYMBOLS	BYW27	BYW27	BYW27	BYW27	BYW27	BYW27	UNITS	
		50GP	-100GP	-200GP	-400GP	-800GP	-1000GP		
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current .375", (9.5mm) Lead Lengths at $T_A = 70^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 10ms single half sine-wave no load	$I_{FSM}$	50.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$	$I_R$	200							nA
Maximum Full Load Reverse Current, Full Cycle Average .375", (9.5mm) Lead Length $T_A = 100^\circ\text{C}$	$I_{R(AV)}$	15.0							$\mu\text{A}$
Typical Reverse Recovery Time (Note 1)	$T_{RR}$	20.0							$\mu\text{s}$
Typical Junction Capacitance (Note 2)	$C_J$	8.0							pf
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	45.0							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

- NOTES:
1. Measured on Tektronix Type S recovery plug-in. Tektronix 545 Scope (or equiv.).  $I_{FM} = 20\text{mA}$ ,  $I_{RM} = 1.0\text{mA}$ .
  2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
  3. Thermal Resistance from Junction to Ambient at .375" (9.5mm) Lead Lengths, P.C. Board Mounted.

# RATINGS AND CHARACTERISTIC CURVES BYW27-50GP THRU BYW27-100GP

