

T-03-09

# BY206GP THRU BY207GP

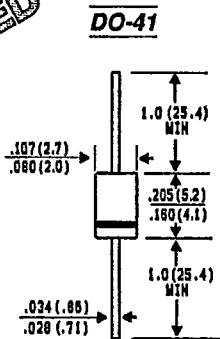
## MINIATURE GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

Voltage - 350 to 600 Volts Current - 0.4 Amperes

### FEATURES

- ◆ High temperature metallurgically bonded constructed rectifiers
- ◆ For use in high frequency rectifier circuits
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Fast switching for high efficiency
- ◆ Glass passivated cavity-free junction in D0-41 package
- ◆ 0.4 Ampere operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway
- ◆ Typical  $I_R$  less than  $1 \mu\text{A}$
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ High temperature soldering guaranteed  $350^\circ\text{C}/10 \text{ seconds}/.375"$ , (9.5mm) lead length at 5 lbs., (2.3kg) tension

**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

### MECHANICAL DATA

- Case:** Molded plastic over glass  
**Terminals:** Axial leads, solderable per MIL-STD-202, Method 208  
**Polarity:** Color band denotes cathode  
**Mounting Position:** Any  
**Weight:** 0.012 ounce, .3 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

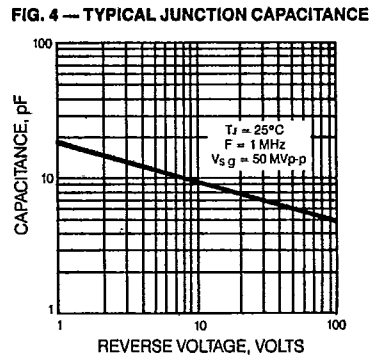
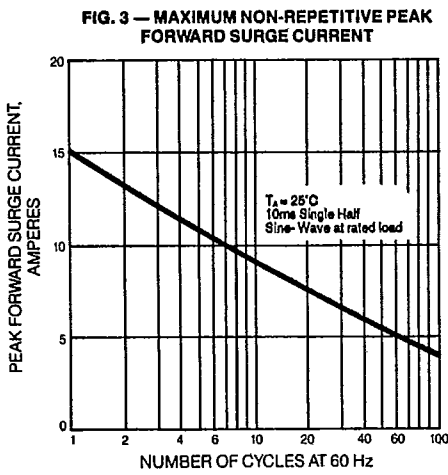
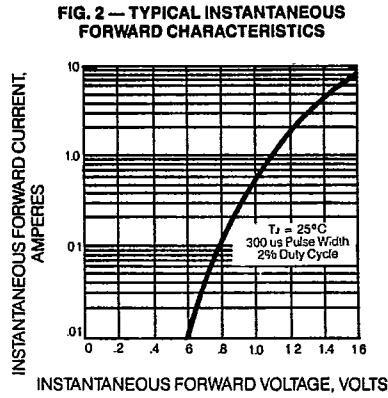
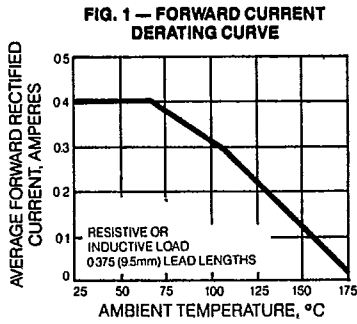
Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified. Resistive or inductive load. For capacitive load, derate current by 20%.

	SYMBOLS	BY206GP	BY207GP	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	350	600	Volts
Maximum RMS Voltage	$V_{RMS}$	210	350	Volts
Maximum DC Blocking Voltage	$V_{DC}$	300	500	Volts
Maximum Average Forward Rectified Current .375", (9.5mm) Lead Lengths at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	0.4		Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load at $T_A = 25^\circ\text{C}$	$I_{FSM}$	15		Amps
Maximum Instantaneous Forward Voltage at 2.0A $T_J = 150^\circ\text{C}$	$V_F$	1.5		Volts
Maximum Full Load Reverse Current $T_A=55^\circ\text{C}$ Full Cycle Average at $T_J = 125^\circ\text{C}$	$I_R$	2.0 200	2.0 125	$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	1.0		$\mu\text{s}$
Typical Junction Capacitance (Note 2)	$C_J$	15.0		pf
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	45.0		$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175		$^\circ\text{C}$

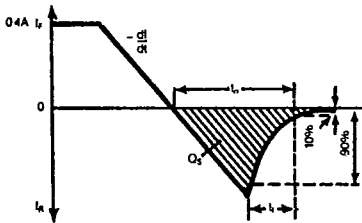
**NOTES:**

1. Reverse Recovery Test Conditions :  $I_F = 0.4\text{A}$ ,  $V_R = 50\text{V}$   $di/dt = 0.4/\mu\text{s}$ .
2. Measured at 1 MHz and applied reverse voltage of 4.0 Vdc.
3. Thermal Resistance from Junction to Ambient at .375" (9.5mm) Lead Lengths, P.C. Board Mounted.

**RATINGS AND CHARACTERISTIC CURVES BY206GP THRU BY207GP**



**FIG. 5 — REVERSE RECOVERY TIME CHARACTERISTIC**



**FIG. 6 — SUPERRECTIFIER**

