

BY206GP THRU BY207GP

SUPERRECTIFIER®

GENERAL INSTRUMENT

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 DO-41 package
- 0.4 ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway
- Typical I_n less than $1 \mu\text{A}$
- Capable of meeting environmental standards of MIL-S-19500
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds / .375" (9.5mm) lead length / 5 lbs., (2.3kg) tension

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

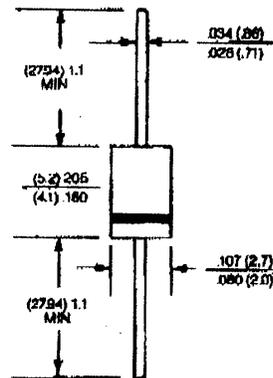
VOLTAGE RANGE

350 to 600 Volts

CURRENT

0.4 Amperes

DO-41



PATENTED

Glass-plastic encapsulation technique is covered by Patent No. 3,896,802 of 1976, brazed-lead assembly to Patent No. 3,930,306 of 1976 and glass composition by Patent No. 3,752,701 of 1973

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Relative or inductive load.
 For capacitive load, derate current by 20%.

	BY206GP	BY207GP	UNITS
Maximum Recurrent Peak Reverse Voltage	350	600	V_{rrm}
Maximum RMS Voltage	210	350	V_{rms}
Maximum DC Blocking Voltage	300	500	V_{DC}
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Lengths at $T_A = 55^\circ\text{C}$	0.4		A_{avg}
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	15		A_{pk}
Maximum Instantaneous Forward Voltage at 2.0A $T_J = 150^\circ\text{C}$	1.5		V_{pk}
Maximum Full Load Reverse Current Full Cycle Average at $T_A = 55^\circ\text{C}$ $T_J = 125^\circ\text{C}$	2.0 200	2.0 125	μA
Maximum Reverse Recovery Time (Note 1)	1.0		μs
Typical Junction Capacitance (Note 2)	15		pF
Operating and Storage Temperature Range T_J, T_{stg}	-65 to +175		$^\circ\text{C}$

NOTES:

1. Reverse Recovery Test Conditions: $I_r = 0.4\text{A}$, $V_r = 50\text{V}$ $di/dt = 0.4\text{A}/\mu\text{s}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC.

FIG. 1 — FORWARD CURRENT DERATING CURVE

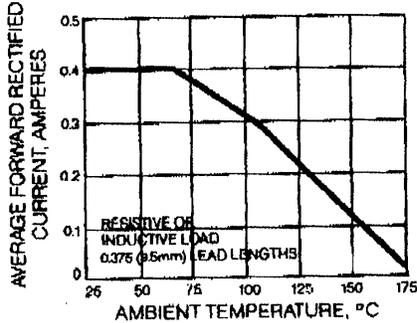


FIG. 2 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

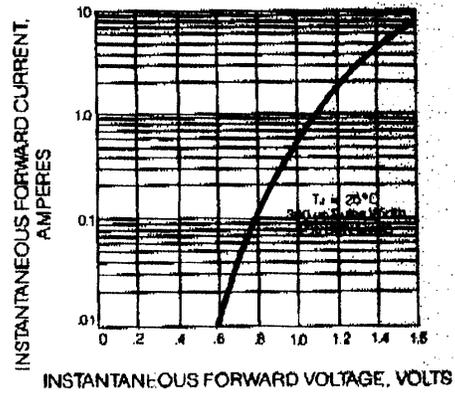


FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

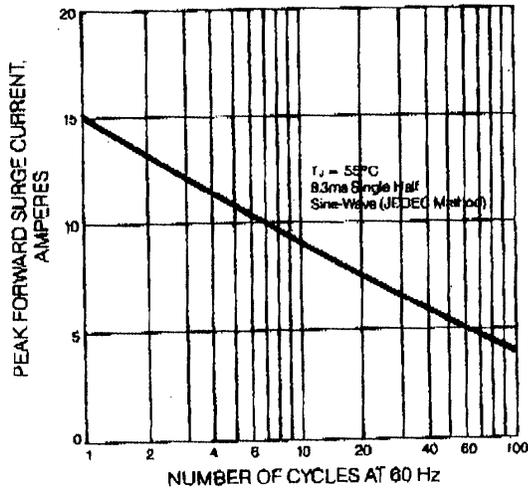


FIG. 4 — TYPICAL JUNCTION CAPACITANCE

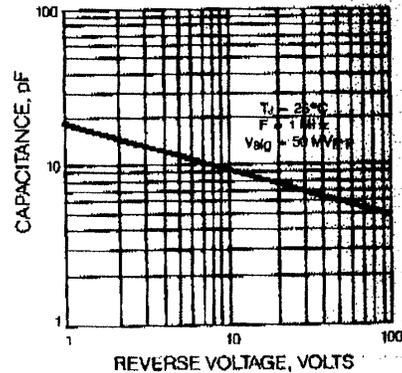


FIG. 5 — REVERSE RECOVERY TIME CHARACTERISTIC

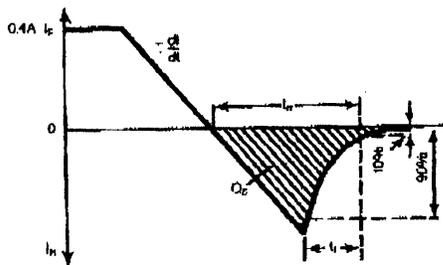
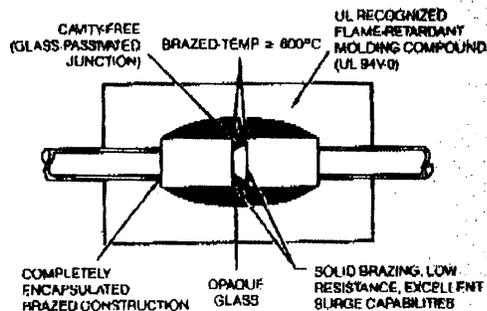


FIG. 6 — SUPERCTIFIER



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