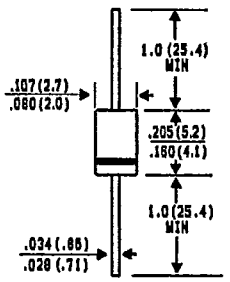
BY206GP THRU BY207GP

MINIATURE GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

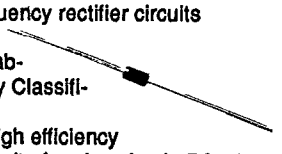
***Voltage** - 350 to 600 Volts **Current** - 0.4 Amperes*

PATENTED*

DO-41



Dimensions in inches and (millimeters)



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°C with no thermal runaway
- Typical I_R less than 1 µA
- Capable of meeting environmental standards of MIL-S-19500
- High temperature soldering guaranteed 350°C/10 seconds/.375", (9.5mm) lead length at 5 lbs., (2.3kg) tension

** 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*

SUPERECTIFIER®

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°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°C	$I_{(AV)}$	0.4		Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load at T_A = 25°C	I_{FSM}	15		Amps
Maximum Instantaneous Forward Voltage at 2.0A T_J = 150°C	V_F	1.5		Volts
Maximum Full Load Reverse Current T_A=55°C Full Cycle AVerage at T_J = 125°C	I_R	2.0 200	2.0 125	µA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	1.0		µs
Typical Junction Capacitance (Note 2)	C_J	15.0		pf
Typical Thermal Resistance (Note 3)	RΘJA	45.0		°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	-65 to +175		°C

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

FIG. 1 — FORWARD CURRENT DERATING CURVE

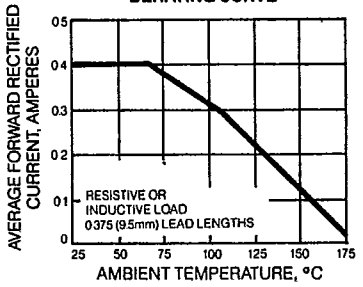


FIG. 2 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

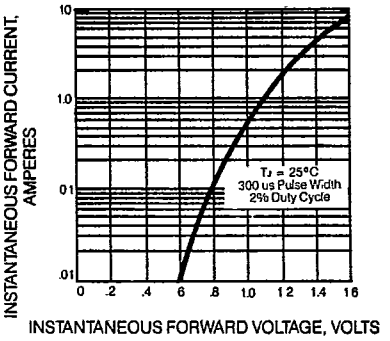


FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

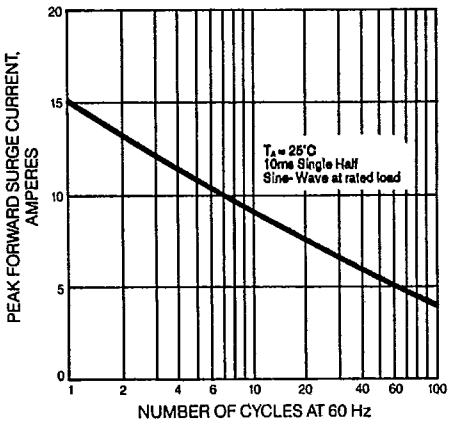


FIG. 4 — TYPICAL JUNCTION CAPACITANCE

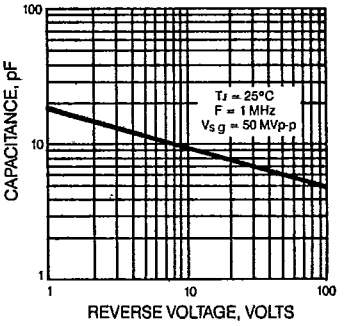


FIG. 5 — REVERSE RECOVERY TIME CHARACTERISTIC

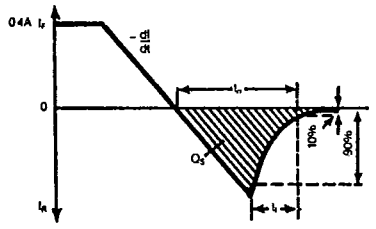


FIG. 6 — SUPERECTIFIER