BYW27GP SERIES

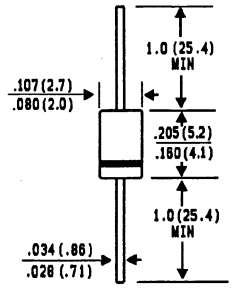
GLASS PASSIVATED JUNCTION PLASTIC MINIATURE RECTIFIER

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

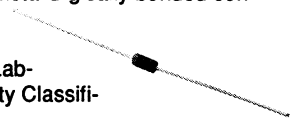
FEATURES

PATENTED*

DO-41



Dimensions in inches and (millimeters)



- High temperature metallurgically bonded constructed rectifiers
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated cavity-free junction in D0-41 package
- 1.0 Ampere operation at T_A = 55°C with no thermal runaway
- Typical I_R less than 0.1 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: 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°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 50GP	BYW27 -100GP	BYW27 -200GP	BYW27 -400GP	BYW27 -600GP	BYW27 -800GP	BYW27 -1000GP	UNITS
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°C	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 10ms single half sine-wave no load at T_A = 25°C	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°C	I_R	200							nA
Maximum Full Load Reverse Current, Full Cycle Average .375", (9.5mm) Lead Length T_A = 100°C	I_R	15.0							μA
Typical Reverse Recovery Time (Note 1)	T_{RR}	20							μs
Typical Junction Capacitance (Note 2)	C_J	8.0							pf
Typical Thermal Resistance (Note 3)	$R\Theta JA$	45.0							°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	-65 to +150							°C

NOTES: 1. Measured on Tektronix Type S recovery plug-in. Tektronix 545 Scope (or equiv.). I_{FM} = 20mA, I_{RM} = 1.0mA.
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.

FIG. 1 — FORWARD CURRENT DERATING CURVE

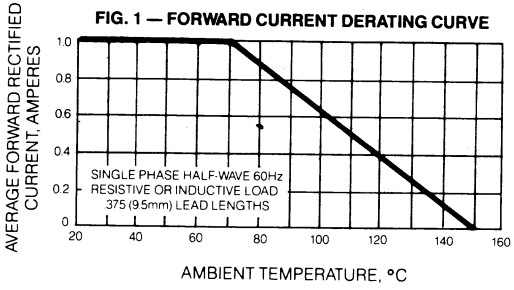


FIG. 2 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

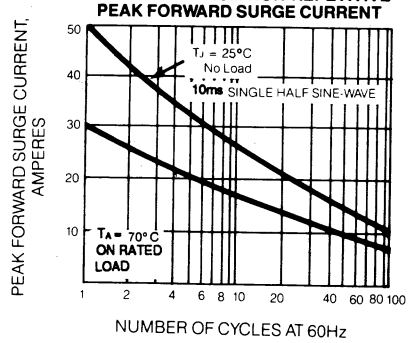


FIG. 3 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

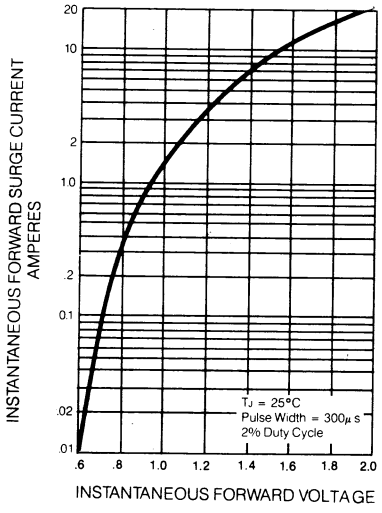


FIG. 4 — TYPICAL REVERSE CHARACTERISTICS

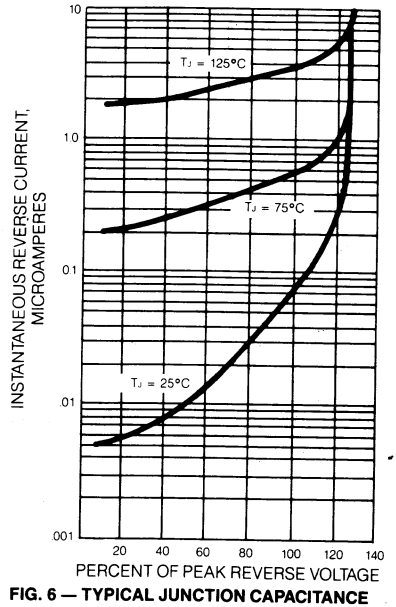


FIG. 5 — PEAK FORWARD SURGE CURRENT

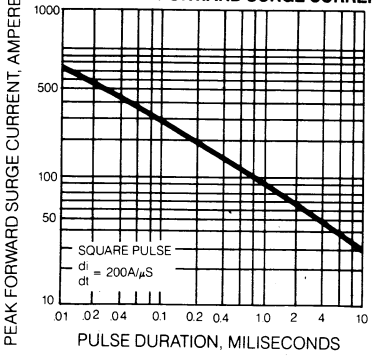


FIG. 6 — TYPICAL JUNCTION CAPACITANCE