



SYNSEMI SEMICONDUCTOR

BY396 thru BY399

3.0 Amps. Fast Recovery Rectifiers
Voltage Range 100 to 800 Volts Forward Current 3.0 Amperes

Features

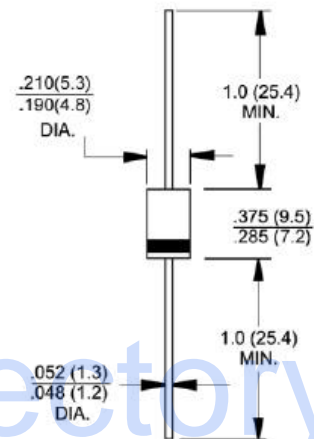
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Construction utilizes void-free molded plastic technique
- ◆ 3.0 Amperes operation at $T_A=50^\circ\text{C}$ with no thermal runaway
- ◆ Fast switching for high efficiency
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension



DO-201AD

Mechanical Data

- ◆ Case: JEDEC DO-201AD, molded plastic body
- ◆ Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting Position: Any
- ◆ Weight: 0.04 ounce, 1.1 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	BY396	BY397	BY398	BY399	Units
Maximum repetitive peak reverse voltage	V_{RRM}	100	200	400	800	Volts
Maximum RMS voltage	V_{RMS}	70	140	280	560	Volts
Maximum DC blocking voltage	V_{DC}	100	200	400	800	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=50^\circ\text{C}$	$I_{F(AV)}$	3.0				Amps
Peak forward surge current 10ms single half sine-wave superimposed on rated load at $T_A=50^\circ\text{C}$	I_{FSM}	100.0				Amps
Maximum repetitive peak forward surge at $f < 15\text{KHz}$	I_{FRM}	10				Amps
Maximum instantaneous forward voltage @ 3.0A	V_F	1.25				Volts
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	10.0 500				μA
Maximum reverse recovery time at $I_F=1.0\text{mA}$, $I_R=1.0\text{mA}$, $I_T=1.0\text{mA}$	t_r	500				nS
Maximum forward recovery time at 100mA, $di/dt = 50\text{A}/\mu\text{s}$	t_f	1.0				μS
Typical junction capacitance at 4.0V, 1MHz	C_j	28				pF
Typical thermal resistance (Note 1)	$R_{\theta JK}$	22				$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-50 to +125				$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 to +150				$^\circ\text{C}$

Notes: 1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length with both leads to heat sink

Datasheet.Directory

BY396 thru BY399

RATINGS AND CHARACTERISTIC CURVES

