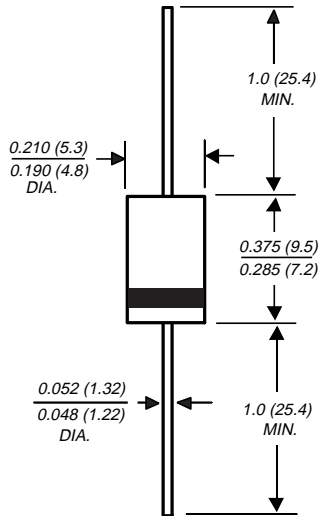


BY500-100 THRU BY500-800

SOFT RECOVERY FAST SWITCHING PLASTIC RECTIFIER

Reverse Voltage - 100 to 800 Volts Forward Current - 5.0 Amperes

DO-201AD



Dimension are in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Fast switching for high efficiency
- ◆ High forward current operation at $T_L=45^\circ\text{C}$
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Especially designed for applications such as switch mode power supplies, inverters, converters, TV scanning, Ultrasonic-systems, speed controlled DC motors, low RF interference and free wheeling diode circuits
- ◆ High temperature soldering guaranteed: $250^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	SYMBOLS	BY500-100	BY500-200	BY500-400	BY500-600	BY500-800	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	100	200	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	Volts
Maximum DC blocking voltage	V_{DC}	100	200	400	600	800	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=45^\circ\text{C}$	$I_{(AV)}$	5.0					Amps
Peak forward surge current 10ms single half sine-wave superimposed on rated load at $T_A=25^\circ\text{C}$	I_{FSM}	200.0					Amps
Maximum repetitive peak forward surge	I_{FRM}	10.0					Amps
Maximum instantaneous forward voltage at 5.0A	V_F	1.35					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 1.0					μA mA
Maximum reverse recovery time (NOTE 1)	t_{rr}	200.0					ns
Maximum reverse recovery current (NOTE 1)	$I_{RM(REC)}$	2.0					Amps
Typical junction capacitance (NOTE 2)	C_J	28.0					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	22.0					$^\circ\text{C}/\text{W}$
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) Reverse recovery test conditions: $I_F=1.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$, $I_{rr}=10\%I_{RM}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length with both leads to heat sink

RATINGS AND CHARACTERISTIC CURVES BY500-100 THRU BY500-800

