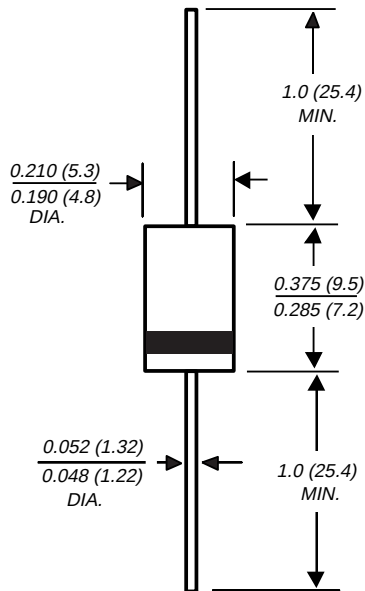


Soft Recovery Fast-Switching Plastic Rectifier

Reverse Voltage 100 to 800 V
Forward Current 3.0 A

DO-201AD



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Construction utilizes void-free molded plastic technique
- 3.0 Ampere operation at $T_A=50^\circ\text{C}$ with no thermal runaway
- Fast switching for high efficiency
- 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 oz., 1.1 g**Packaging codes/options:**

1/Bulk - 1.5K per container, 15K per box

4/1.4K per 13" reel, 5.6K per box

23/1K per Ammo. mag., 9K per box

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	BY396P	BY397P	BY398P	BY399P	Units
Maximum repetitive peak reverse voltage	V_{RRM}	100	200	400	800	V
Maximum RMS voltage	V_{RMS}	70	140	280	560	V
Maximum DC blocking voltage	V_{DC}	100	200	400	800	V
Maximum average forward rectified current 0.375" (9.5mm) lead lengths at $T_A=50^\circ\text{C}$	$I_{F(AV)}$	3.0				A
Peak forward surge current 10ms single half sine-wave superimposed on rated load at $T_A=50^\circ\text{C}$	I_{FSM}	100				A
Maximum repetitive peak forward surge at $f < 15$ KHz	I_{FRM}	10				A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	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				$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 3.0A	V_F	1.25	V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10 500	μA
Maximum reverse recovery time at $I_F=10\text{mA}$, $I_R=10\text{mA}$, $I_{rr}=1.0\text{mA}$	t_{rr}	500	ns
Maximum forward recovery time at 100mA, $di/dt = 50\text{A}/\mu\text{s}$	t_{fr}	1.0	μs
Typical junction capacitance at 4.0V, 1MHz	C_J	28	pF

Notes:

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

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

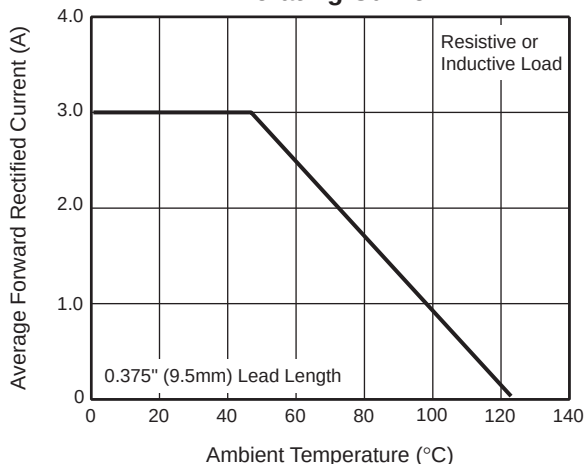


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

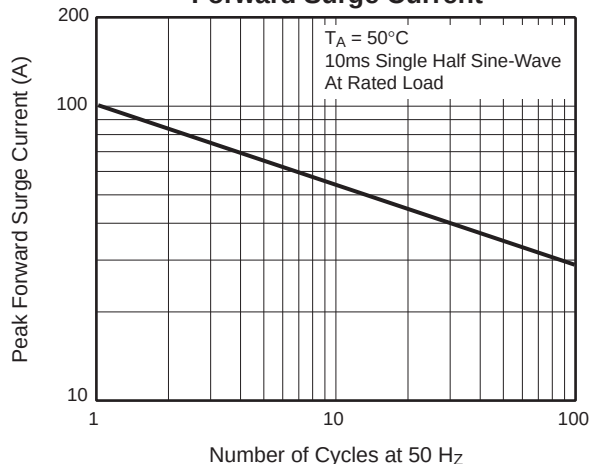


Fig. 3 – Typical Instantaneous Forward Characteristics

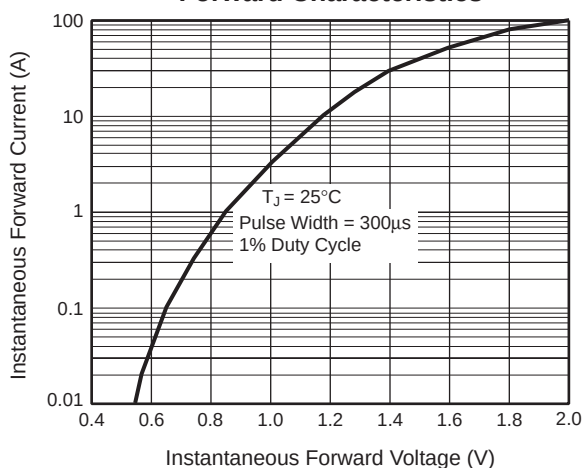


Fig. 4 – Typical Reverse Characteristics

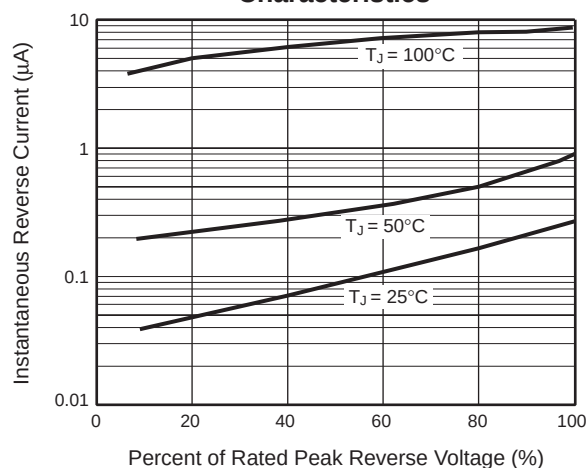


Fig. 5 – Typical Junction Capacitance

