

# BY396 THRU BY399

## SOFT RECOVERY, FAST SWITCHING PLASTIC RECTIFIER VOLTAGE - 100 to 800 Volts CURRENT - 3.0 Amperes

### FEATURES DO-201AD

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Void-free molded plastic package
- 3.0 Ampere operation at  $T_A=55\text{ }^{\circ}\text{C}$  with no thermal runaway
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic

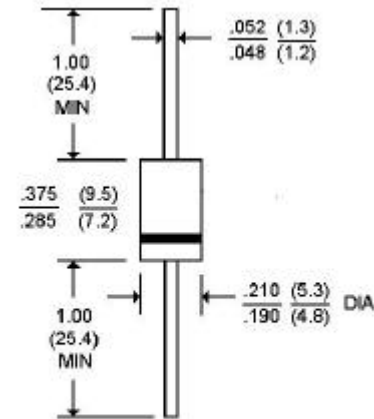
Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color Band denotes end

Mounting Position: Any

Weight: .04 ounce, 1.1gram

### DO-201AD



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}\text{C}$  ambient temperature unless otherwise specified.

Resistive or inductive load.

	SYMBOLS	BY396	BY397	BY398	BY399	UNITS
Maximum Recurrent 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 .375"(9.5mm) lead lengths at $T_A=50\text{ }^{\circ}\text{C}$	$I_{(AV)}$	3.0				Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load at $T_A=25\text{ }^{\circ}\text{C}$	$I_{FSM}$	100.0				Amps
Maximum Repetitive Peak Forward Surge (Note 1)	$I_{FRM}$	10.0				Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.30				Volts
Maximum DC Reverse Current $T_A=25\text{ }^{\circ}\text{C}$ At Rated DC Blocking Voltage $T_A=100\text{ }^{\circ}\text{C}$	$I_R$	10.0 500				$\mu\text{g A}$
Maximum Reverse Recovery Time (Note 3) $T_J=25\text{ }^{\circ}\text{C}$	$T_{RR}$	150				ns
Typical Junction Capacitance (Note 2)	$C_J$	60				pf
Typical Thermal Resistance (Note 4)	$R_{\theta KJA}$	22.0				$^{\circ}\text{C/W}$
Operating Temperature Range	$T_J$	-50 to +125				$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-50 to +150				$^{\circ}\text{C}$

### NOTES:

1. Repetitive Peak Forward Surge Current at  $f<15\text{KHz}$ .
2. Measured at 1 MHz. And applied reverse voltage of 4.0 volts.
3. Reverse Recovery Test Conditions;  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$ .
4. Thermal Resistance from Junction to Ambient at .375" lead lengths with both leads to heat sink.

RATING AND CHARACTERISTIC CURVES

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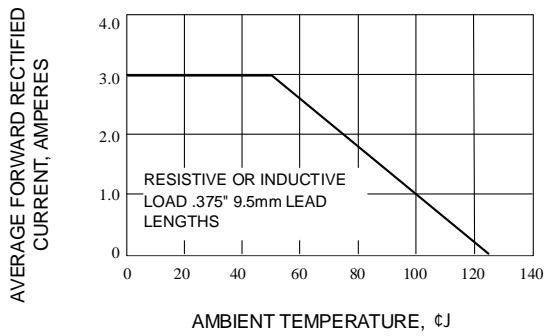


Fig. 1-FORWARD CURRENT DERATING CURVE

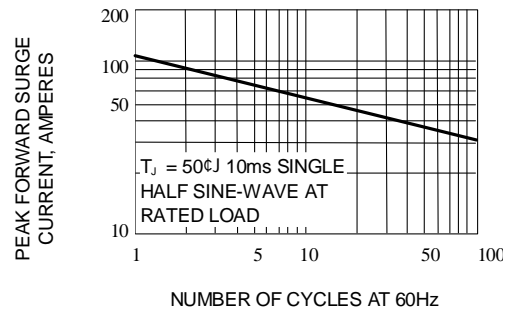


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

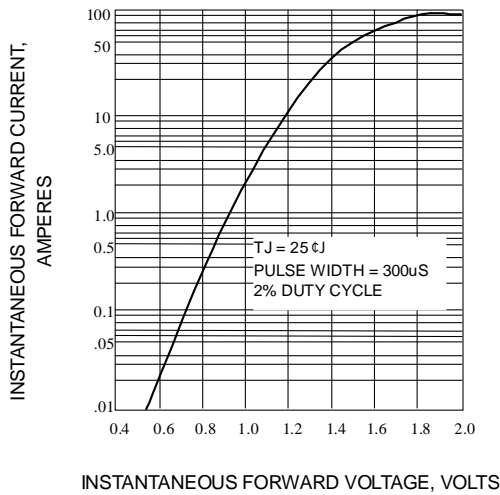


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

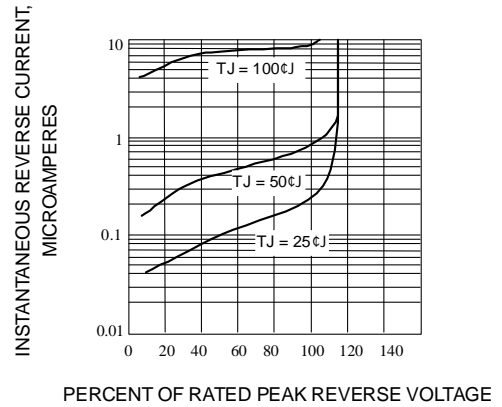


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

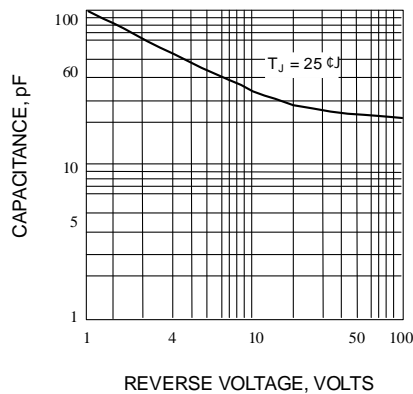


Fig. 5-TYPICAL JUNCTION CAPACITANCE

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Datasheets for electronics components.