# **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<sub>A</sub>=55 <sup>¢</sup>J 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

# $\begin{array}{c} & \underbrace{1.00} \\ (25.4) \\ MIN \\ & \underbrace{375}_{285} & \underbrace{(9.5)} \\ 1.00 \\ (25.4) \\ \hline \\ 1.00 \\ (25.4) \\ \hline \\ 1.00 \\ (25.4) \\ \hline \\ MIN \\ & \underbrace{1.00} \\ (25.4) \\ \hline \\ MIN \\ & \underbrace{1.00} \\ (4.8) \\ \hline \\ MIN \\ & \underbrace{1.00} \\ (4.8) \\ \hline \\ \\ MIN \\ & \underbrace{1.00} \\ (4.8) \\ \hline \\ \\ MIN \\ & \underbrace{1.00} \\ (4.8) \\ \hline \\ \\ \\ \end{array}$

Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J ambient temperature unless otherwise specified.

Resistive or inductive load.

Weight: .04 ounce, 1.1gram

	SYMBOLS	BY396	BY397	BY398	BY399	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	100	200	400	800	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	70	140	280	560	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	400	800	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) lead lengths at $T_A=50$ <sup>¢</sup> J	1 <sub>(AV)</sub>	3.0				Amps
Peak Forward Surge Current 10ms single half sine- wave superimposed on rated load at $T_A=25$ ¢J	1 <sub>FSM</sub>	100.0				Amps
Maximum Repetitive Peak Forward Surge (Note 1)	1 <sub>FRM</sub>	10.0				Amps
Maximum Instantaneous Forward Voltage at 3.0A	V <sub>F</sub>	1.30				Volts
Maximum DC Reverse Current T <sub>A</sub> =25 ¢J	I <sub>R</sub>	10.0				£g A
At Rated DC Blocking Voltage T <sub>A</sub> =100 ¢J		500				
Maximum Reverse Recovery Time (Note 3) TJ=25 CJ	T <sub>RR</sub>	150				ns
Typical Junction Capacitance (Note 2)	CJ	60				pf
Typical Thermal Resistance (Note 4)	R £KJA	22.0				¢J/W
Operating Temperature Range	TJ	-50 to +125				¢J
Storage Temperature Range	T <sub>STG</sub>	-50 to +150				¢J

### NOTES:

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



### DO-201AD

# RATING AND CHARACTERISTIC CURVES

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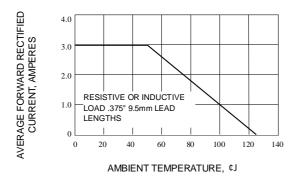
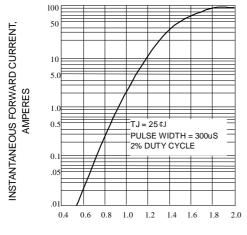


Fig. 1-FORWARD CURRENT DERATING CURVE



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

### Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

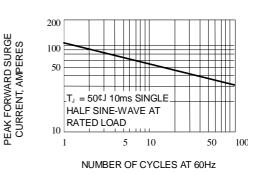
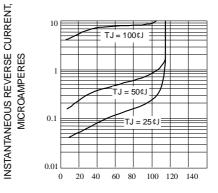
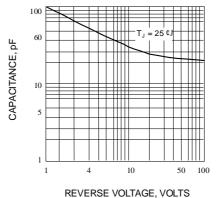


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



PERCENT OF RATED PEAK REVERSE VOLTAGE

### Fig. 4-TYPICAL REVERSE CHARACTERISTICS







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