



# BY396 THRU BY399

## 3.0 AMPS. FAST RECOVERY RECTIFIERS

**Voltage Range**  
100 to 800 Volts  
**Current**  
3.0 Amperes

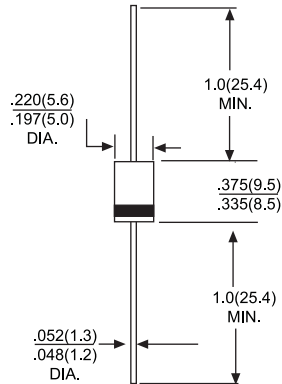
### DO-201AD

#### Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

#### Mechanical Data

- Cases: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: 1.2 grams



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Type Number		BY396	BY397	BY398	BY399	UNITS
Maximum Repetitive Peak Reverse Voltage	VRRM	100	200	400	800	V
Maximum RMS Voltage	VRMS	70	140	280	560	V
Maximum DC Blocking Voltage	VDC	100	200	400	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @TA = 55°C	IF(AV)	3.0				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	IFSM	150				A
Maximum Instantaneous Forward Voltage @3.0A	VF	1.2				V
Maximum DC Reverse Current @ TA = 25°C at Rated DC Blocking Voltage @ TA = 100°C	IR	10 150				µA µA
Maximum Reverse Recovery Time (Note 1)	TRR	250				nS
Typical Junction Capacitance (Note 2)	CJ	60				pF
Operating Temperature Range	TJ	-55 to +125				°C
Storage Temperature Range	TSTG	-55 to +150				°C

NOTES: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

# RATING AND CHARACTERISTIC CURVES BY396 THRU BY399



FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

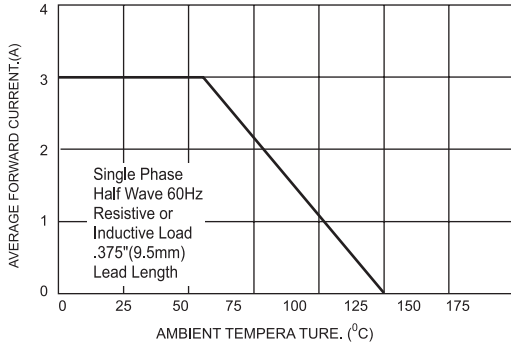


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

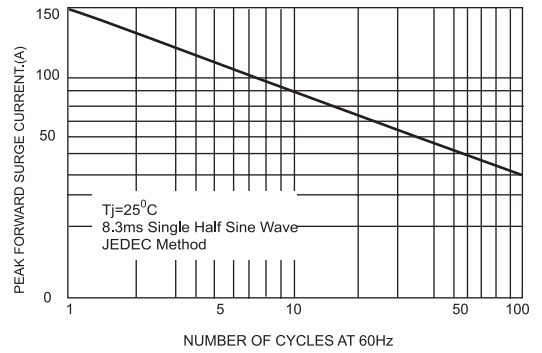


FIG.3-TYPICAL FORWARD CHARACTERISTICS

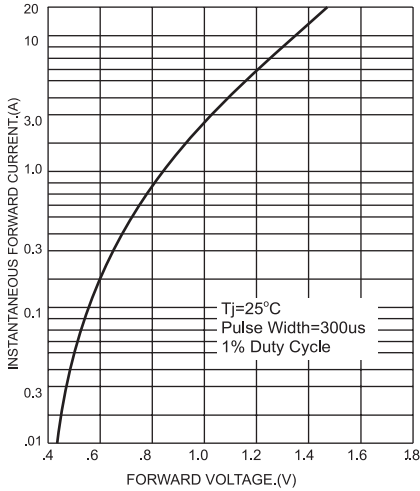


FIG.4- TYPICAL JUNCTION CAPACITANCE

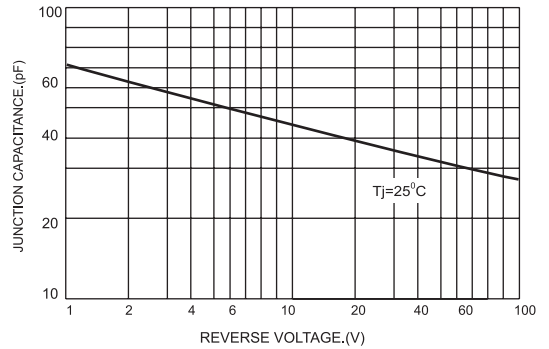
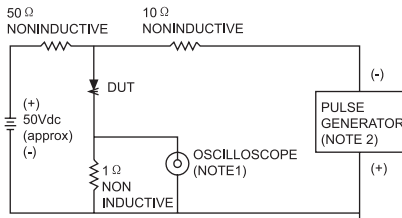


FIG.5- REVERSE RECOVER TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



- NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance= 50 ohms

