



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**BY396  
THRU  
BY399**

**TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE - 100 to 800 Volts**

**CURRENT - 3.0 Amperes**

**FEATURES**

- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High current surge
- \* High reliability

**MECHANICAL DATA**

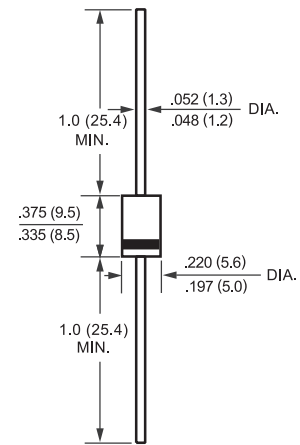
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 1.18 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



DO-27



Dimensions in inches and (millimeters)

	SYMBOL	BY396	BY397	BY398	BY399	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	100	200	400	800	Volts
Maximum RMS Voltage	VRMS	70	140	280	560	Volts
Maximum DC Blocking Voltage	Vdc	100	200	400	800	Volts
Maximum Average Forward Rectified Current at TA= 75°C	Io	3.0				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	200				Amps
Maximum Instantaneous Forward Voltage at 3.0A DC	VF	1.3				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	IR	10				uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at T L = 55°C		150				uAmps
Maximum Reverse Recovery Time (Note 1)	trr	150			500	nSec
Typical Junction Capacitance (Note 2)	CJ	65				pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 150				°C

NOTES : 1. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

# RATING AND CHARACTERISTIC CURVES ( BY396 THRU BY399 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

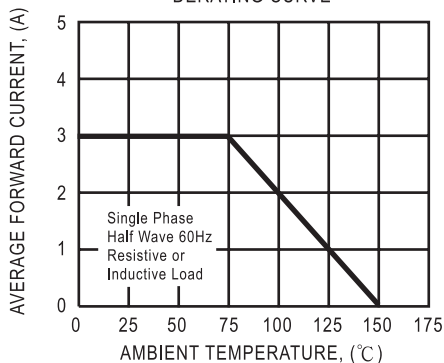


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

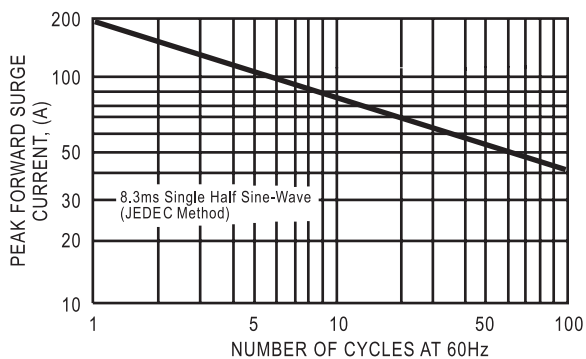


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

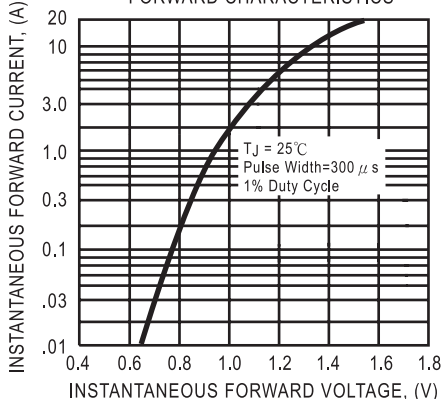


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

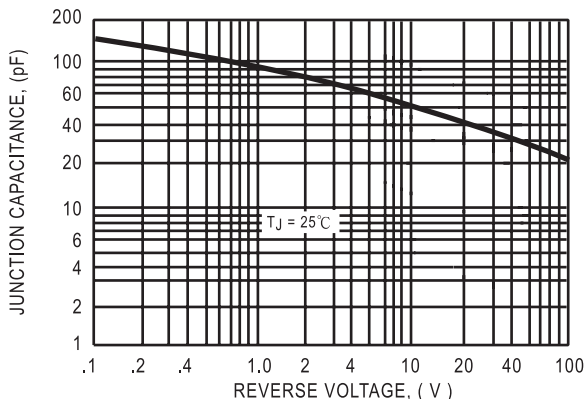
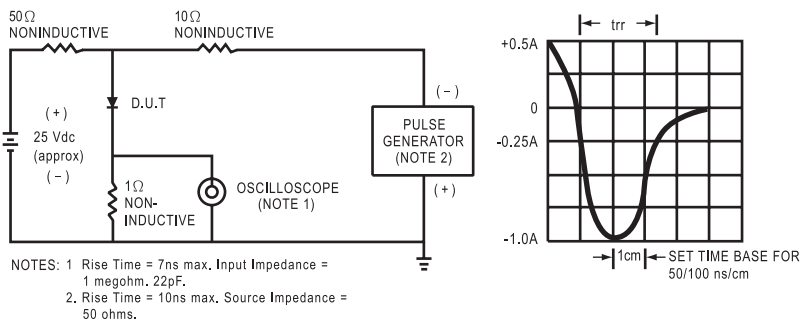


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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