

## 3.0 AMP FAST RECOVERY RECTIFIERS

## BY396 THRU BY399 Vishaymas General Semiconductor

### FEATURES

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

### MECHANICAL DATA

**Case:** Molded plastic

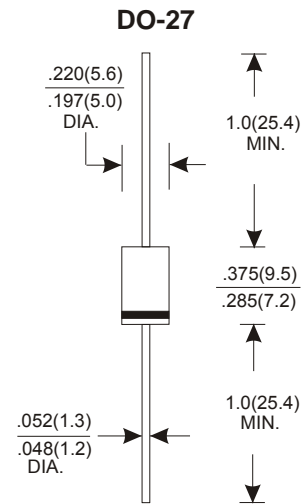
**Epoxy:** UL 94V-0 rate flame retardant

**Lead:** Axial leads, solderable per MIL-STD-202,method 208 guranteed

**Polarity:** Color band denotes cathode end

**Mounting position:** Any

**Weight:** 1.10 grams



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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 Recurrent Peak Reverse Voltage	100	200	400	800	V
Maximum RMS Voltage	70	140	280	560	V
Maximum DC Blocking Voltage	100	200	400	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=75°C	3.0				A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	200				A
Maximum Instantaneous Forward Voltage at 3.0A	1.25				V
Maximum DC Reverse Current Ta=25°C	5.0				A
at Rated DC Blocking Voltage Ta=100°C	150				A
Maximum Reverse Recovery Time (Note 1)	150		250		nS
Typical Junction Capacitance (Note 2)	60				pF
Operating and Storage Temperature Range Tj, TSTG	-65 — +150				°C

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

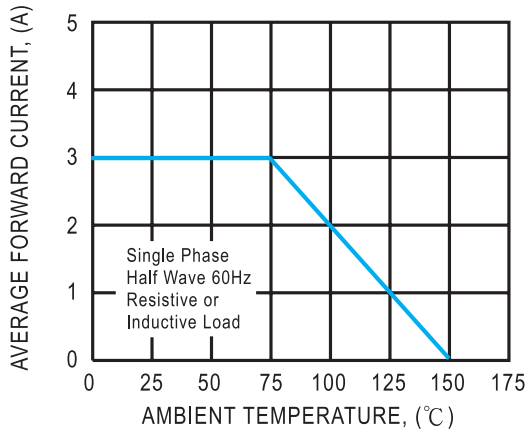


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

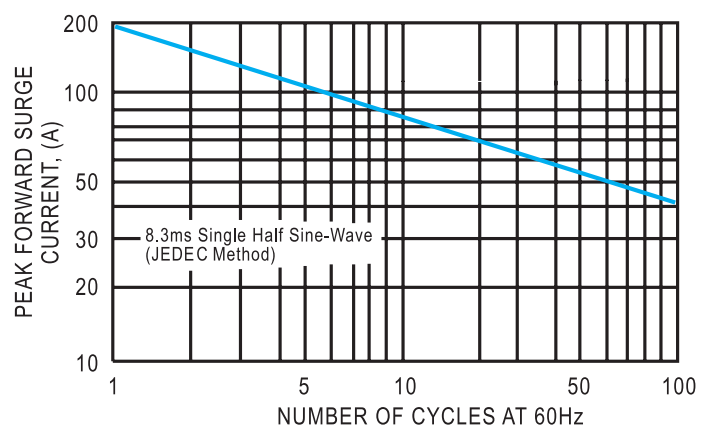


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

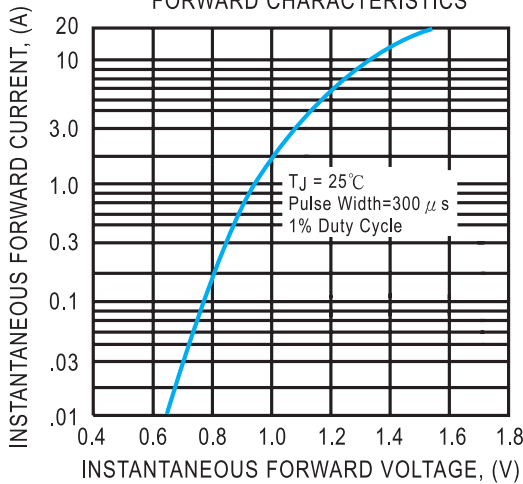


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

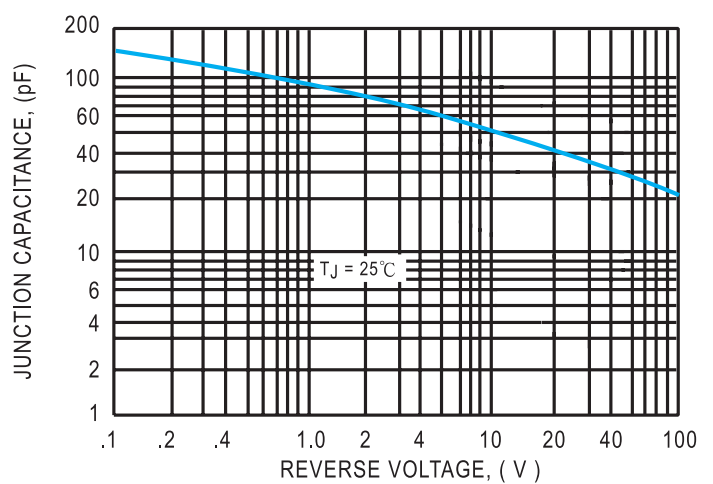


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

