



## BY396 ~ BY399

### SOFT RECOVERY, FAST SWITCHING PLASTIC RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 3.0 Amperes

DO-201AD

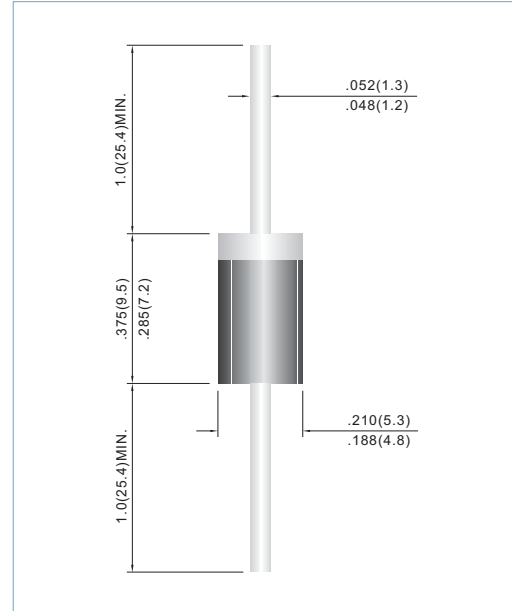
Unit: inch(mm)

#### FEATURES

- High current capability.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Void-free molded plastic package
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency.
- In compliance with EU RoHS 2002/95/EC directives

#### MECHANICAL DATA

- Case: Molded plastic, DO-201AD
- Terminals: Axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end
- Mounting Position: Any
- Weight: 0.0395 ounce, 1.122 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	BY396	BY397	BY398	BY399	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	200	400	800	V
Maximum RMS Voltage	$V_{RMS}$	70	140	280	560	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	800	V
Maximum Average Forward Current .375" (9.5mm) lead length at $T_A=50^\circ\text{C}$	$I_{F(AV)}$	3.0				A
Peak Forward Surge Current : 10ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100				A
Maximum Repetitive Peak Forward Surge (Note 1)	$I_{FRM}$	10				A
Maximum Forward Voltage at 3.0A	$V_F$	1.3				V
Maximum DC Reverse Current at $T_J=25^\circ\text{C}$ Rated DC Blocking Voltage $T_J=100^\circ\text{C}$	$I_R$	10 500				$\mu\text{A}$
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$	150				ns
Typical Junction capacitance (Note 3)	$C_J$	60				pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	22				$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150				$^\circ\text{C}$

NOTES: 1. Repetitive Peak Forward Surge Current at  $f < 15\text{KHz}$ .

2. Reverse Recovery Test Conditions:  $I_F = .5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = .25\text{A}$ .

3. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

4. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) P.C.B. mounted.



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## RATING AND CHARACTERISTIC CURVES

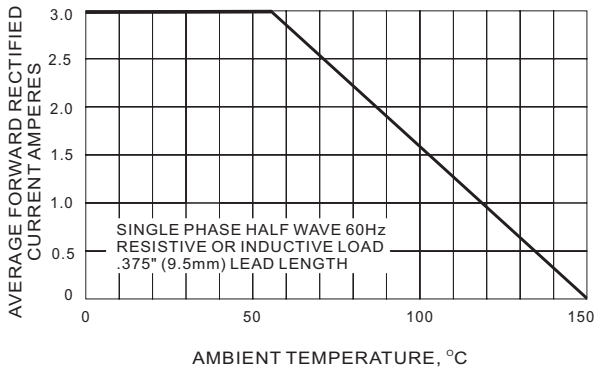


FIG. 1 FORWARD CURRENT DERATING CURVE

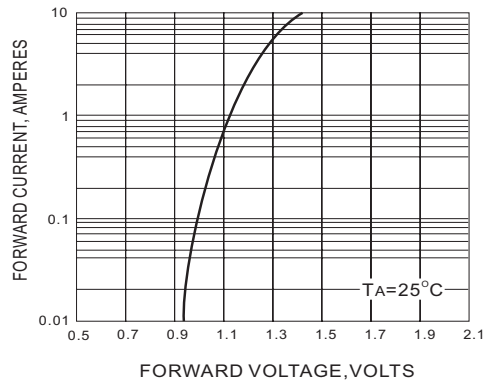


FIG. 2 TYPICAL FORWARD CHARACTERISTIC

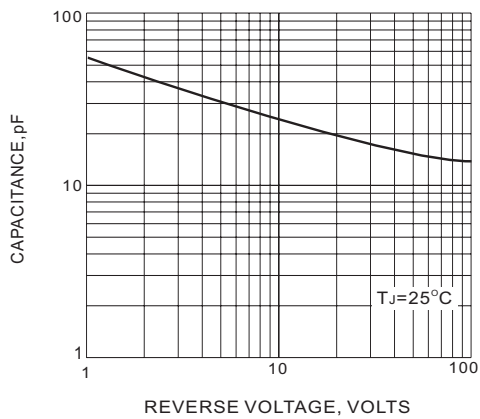


FIG. 3 TYPICAL JUNCTION CAPACITANCE

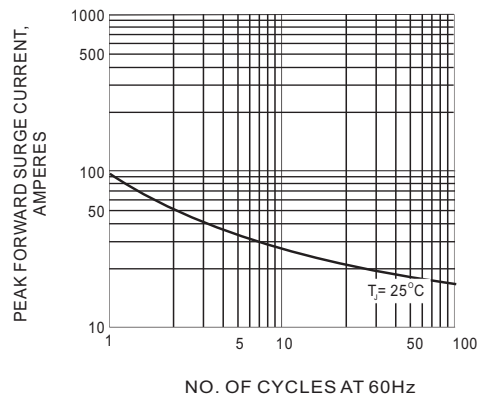


FIG. 4 PEAK FORWARD SURGE CURRENT

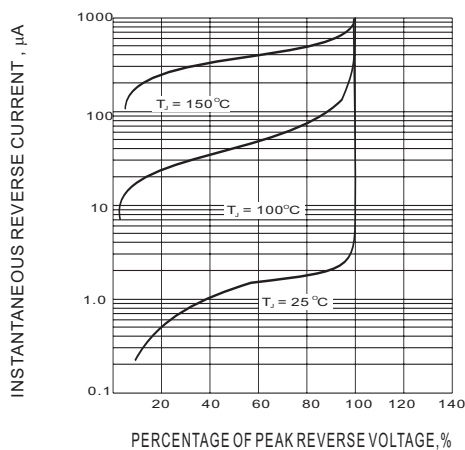


Fig. 5-TYPICAL REVERSE CHARACTERISTIC