



FAST RECOVERY RECTIFIER

BY396 THRU BY399

VOLTAGE RANGE
CURRENT

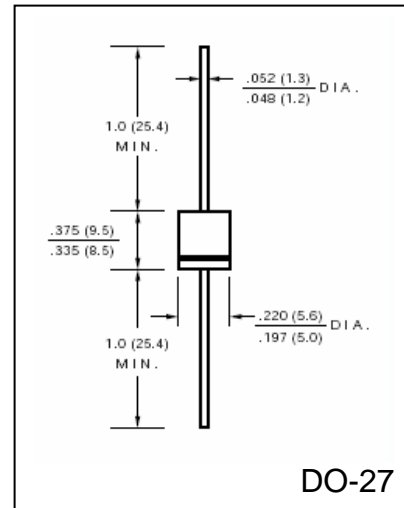
100 to 800 Volts
3.0 Ampere

FEATURES

- Fast Switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High Temperature soldering guaranteed:
260°C / 10 second, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Polarity: Color band denotes cathode end
- Mounting Position: any
- Weight: 0.014 ounce, 0.3 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	BY396	BY397	BY398	BY399	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	800	Volts
Maximum RMS Voltage	V_{RMS}	70	140	280	560	Volts
Maximum DC Blocking Voltage	V_{DC}	100	200	400	800	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length At $T_C = 50^\circ\text{C}$	$I_{(AV)}$	3.0				Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	70				Amps
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	1.3				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	I_R	$T_A = 25^\circ\text{C}$ 10.0				μA
		$T_A = 100^\circ\text{C}$ 500				
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	t_{rr}	500				nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	28				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	22				$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	(-50 to +150)				$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-50 to +150)				$^\circ\text{C}$

Notes:

1. Thermal resistance from Junction to ambient at 0.375" (9.5mm) lead length mounted on PCB



RATINGS AND CHARACTERISTIC CURVES BY396 THRU BY399

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

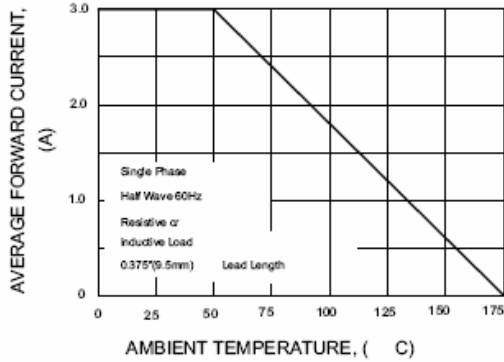


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

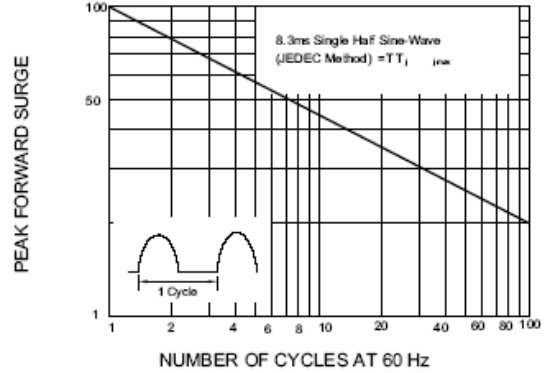


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

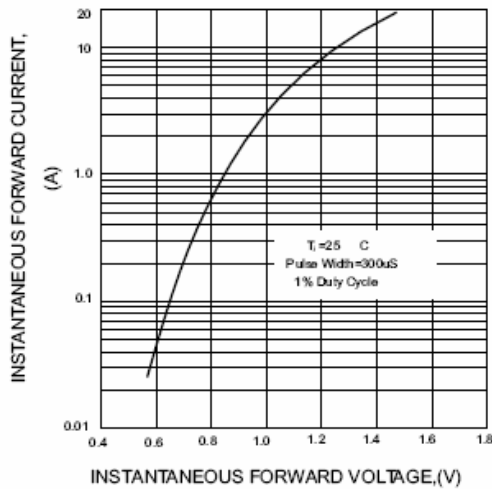


FIG.4-TYPICAL REVERSE CHARACTERISTICS

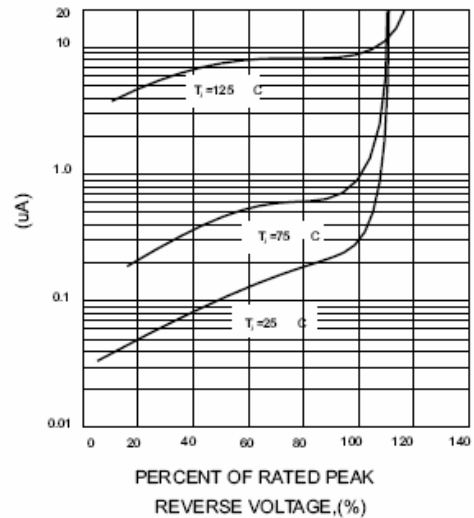


FIG.5-TYPICAL JUNCTION CAPACITANCE

