SEMICONDUCTOR

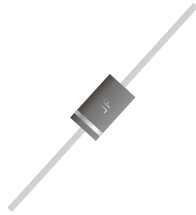
BY396 THRU BY399S

FAST RECOVERY RECTIFIER

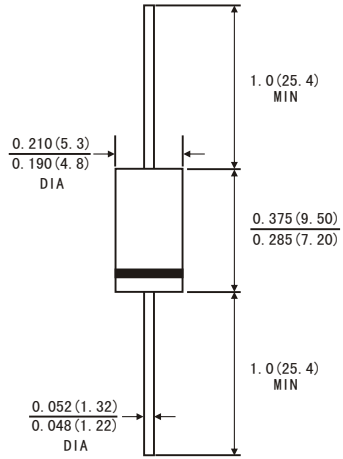
Reverse Voltage: 100 to 1000 Volts
Forward Current:3.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Diffused junction
- High current capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



DO-201AD



Dimensions in inches and (millimeters)

MECHANICAL DATA

- *Case*: JEDEC DO-201AD molded plastic body
- *Terminals*: Plated axial leads, solderable per MIL-STD-750,method 2026
- *Polarity*: Color band denotes cathode end
- *Mounting Position*: Any
- *Weight*: 0.041ounce, 1.18 grams

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%.)

	Symbols	BY396	BY397	BY398	BY399	BY399S	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	200	400	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	70	140	280	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	100	200	400	800	1000	Volts
Maximum Average Forward Rectified Current load at T_A=55°C	$I_{(AV)}$	3.0					Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load at T_A=25°C	I_{FSM}	150					Amps
Maximum Instantaneous Forward Voltage at 3.0 A	V_F	1.2					Volts
Maximum DC Reverse Current at rated DC blocking voltage T_A=25°C	I_R	10					μA
Maximum DC Reverse Current at rated DC blocking voltage T_A=100°C	I_R	150					μA
Maximum reverse recovery time(Note1)	t_{rr}	250					ns
Max.thermal resistance(Note 3)	$R_{\theta JA}$	30					℃/W
Typical junction capacitance(Note2)	C_J	60					pF
Operating junction and storage temperature range	T_J T_{STG}	-65 to+150					℃

Note: 1.Test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts D.C.

3.Mount on Cu-Pad size 5mmx5mm on P.C.B.

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RATINGS AND CHARACTERISTIC CURVES BY396 THRU BY399S

FIG.1 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

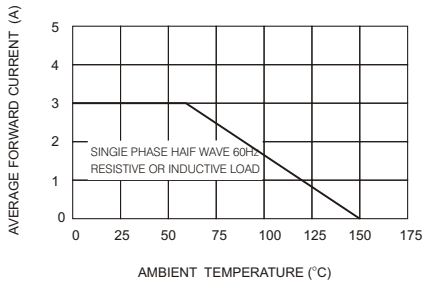


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

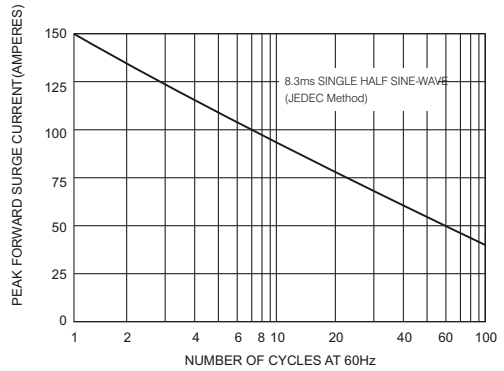


FIG.3-TYPICAL THERMAL IMPEDANCE

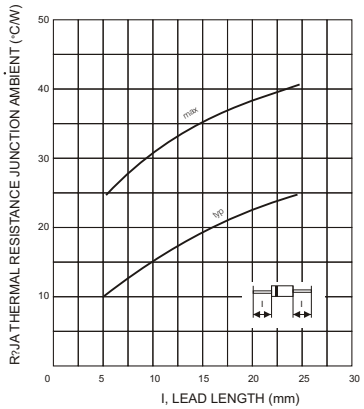


FIG.4-TYPICAL JUNCTION CAPACITANCE

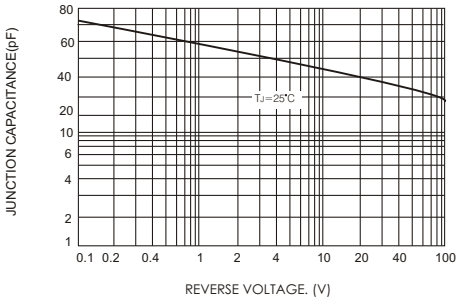


FIG.5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

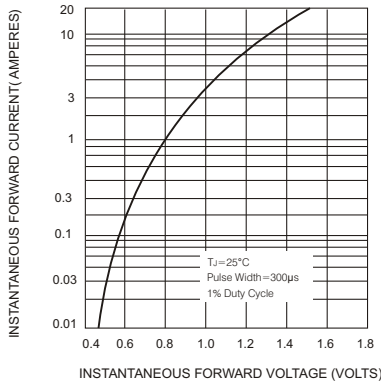
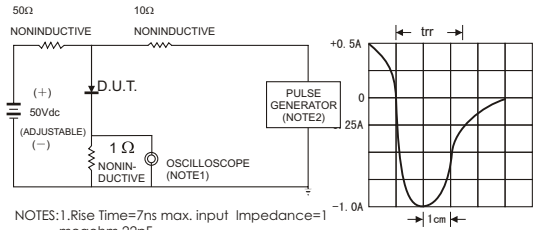


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.Rise Time=7ns max. input Impedance=1 megohm 22pF
2.Rise Time=10ns max. source Impedance =50 ohms

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