SEMICONDUCTOR

SF501 THRU SF506

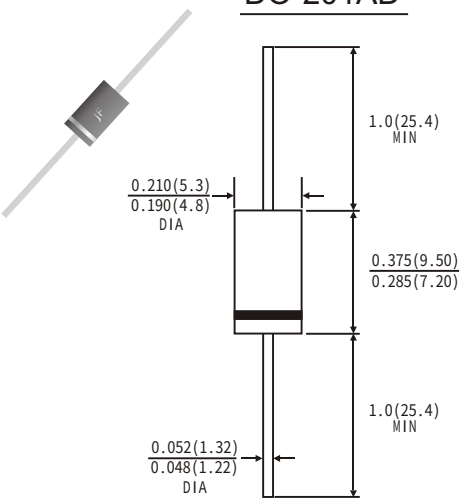
SUPER FAST RECTIFIER

Reverse Voltage: 50 to 400 Volts
Forward Current:5.0Amperes

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Super fast recovery time
- Good for use in switching mode circuits
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

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*: 0.042ounce, 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	SF 501	SF 502	SF 503	SF 504	SF 505	SF 506	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at T_A=55 C °	$I_{(AV)}$	3.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150						Amps
Maximum Instantaneous Forward Voltage at 5.0 A	V_F	0.95					1.25	Volts
Maximum DC Reverse Current at rated DC blocking voltage T_A=25°C	I_R	5.0						μA
T_A=100°C		50						
Maximum reverse recovery time(Note1)	T_{rr}	35						ns
Typical junction capacitance(Note2)	C_J	50					30	PF
Operating Junction And Storage Temperature Range	T_J T_{STG}	-55 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.

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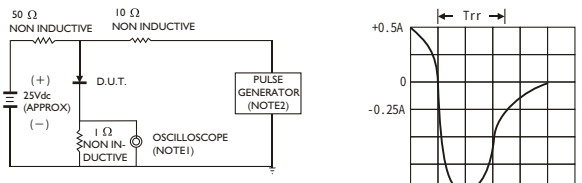
RATINGS AND CHARACTERISTIC CURVES SF501 THRU SF506

FIG.1-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

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

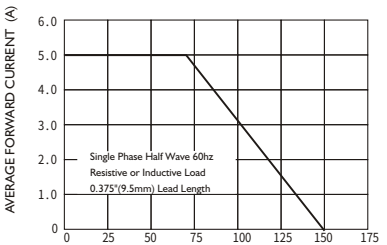


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

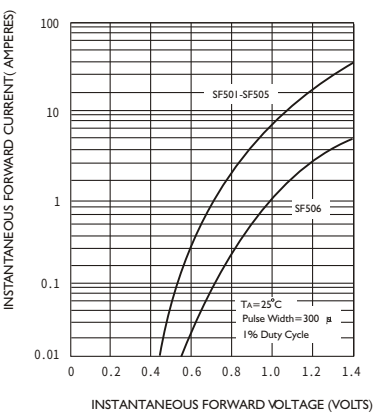


FIG.4-TYPICAL REVERSE CHARACTERISTICS

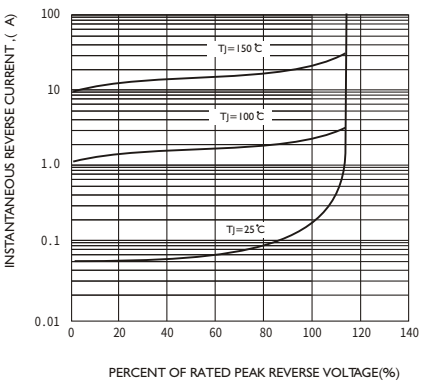


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

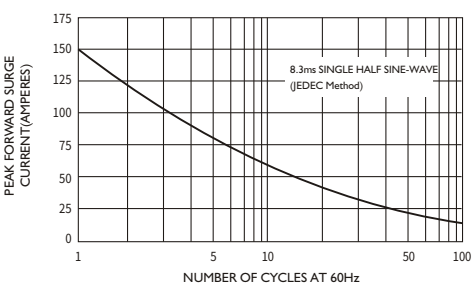
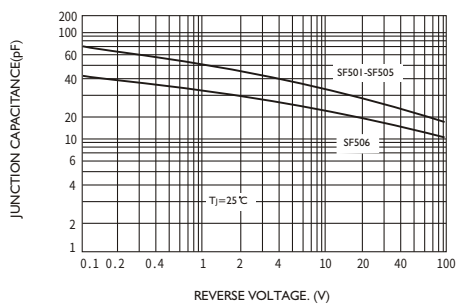


FIG.6-TYPICAL JUNCTION CAPACITANCE



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