



S E M I C O N D U C T O R

SF301 THRU SF306

SUPER FAST RECTIFIER
 Reverse Voltage: 50 to 400 Volts
 Forward Current: 3.0 Amperes

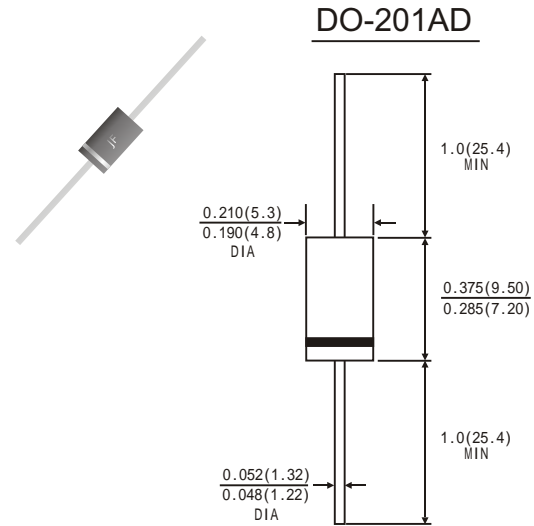
SILICON RECTIFIER

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

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



Dimensions in inches and (millimeters)

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 301	SF 302	SF 303	SF 304	SF 305	SF 306	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 $T_A=55\text{ }^\circ\text{C}$	$I_{(AV)}$	3.0						Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125						Amps	
Maximum Instantaneous Forward Voltage at 3.0 A	V_F	0.95					1.25	Volts	
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25\text{ }^\circ\text{C}$	IR						5.0	μA
	$T_A=100\text{ }^\circ\text{C}$								
Maximum reverse recovery time(Note1)	T_{rr}	35						ns	
Typical junction capacitance(Note2)	C_j	100					50	Pf	
Operating junction and storage temperature range	T_J T_{STG}	-65 to +125 -65 to +150						$^\circ\text{C}$	

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.

RATINGS AND CHARACTERISTIC CURVES SF301 THRU SF306

FIG.1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

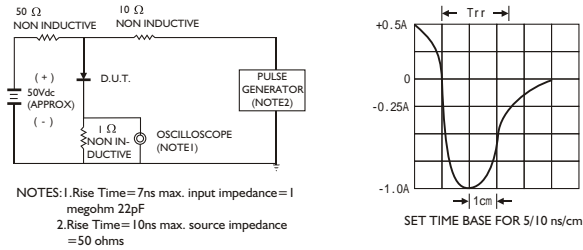


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

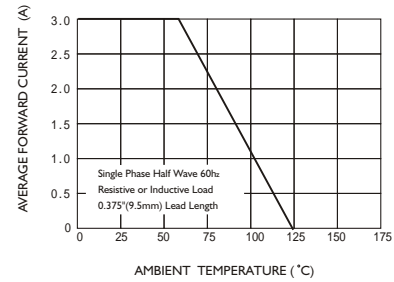


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

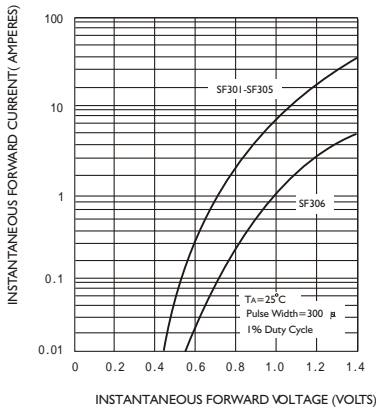


FIG.4-TYPICAL REVERSE CHARACTERISTICS

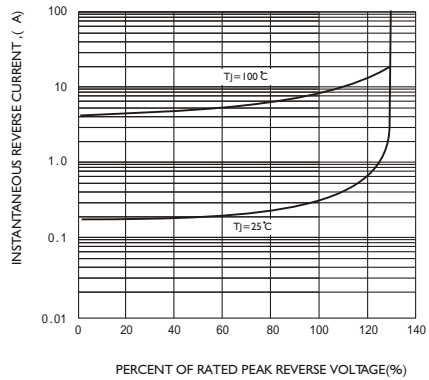


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

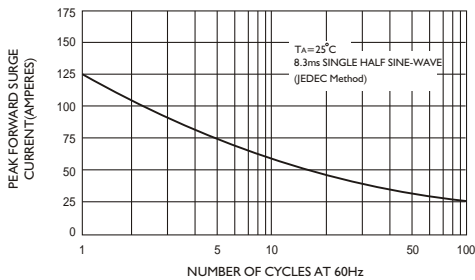


FIG.6-TYPICAL JUNCTION CAPACITANCE

