



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

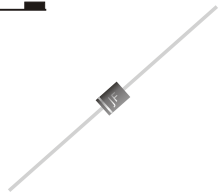
# SF101 THRU SF106

**SUPER FAST RECTIFIER**  
Reverse Voltage: 50 to 400 Volts  
Forward Current: 1.0Ampere

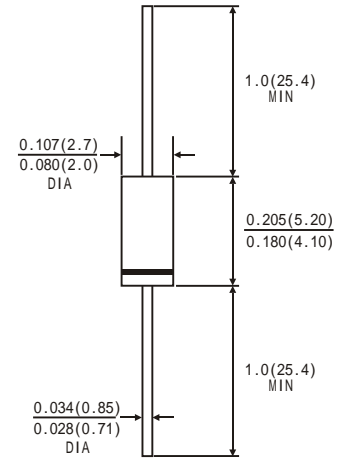
SILICON RECTIFIER

## 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



## DO-41



## MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012ounce, 0.34 gram

## 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 101	SF 102	SF 103	SF 104	SF 105	SF 106	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead Length at T <sub>a</sub> =55 °C	I(AV)	1.0						Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30.0						Amps
Maximum Instantaneous Forward Voltage at 1.0 A	V <sub>F</sub>	0.95					1.25	Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage	T <sub>A</sub> =25°C	5.0						µA
	T <sub>A</sub> =100°C	50						
Maximum Reverse Recovery Time(Note 1)	T <sub>rr</sub>	35						ns
Typical Junction Capacitance(Note 2)	C <sub>J</sub>	50					25	Pf
Operating Junction and Storage Temperature Range	T <sub>J</sub>	-65 to +125						°C
	T <sub>STG</sub>	-65 to +150						

Note: 1. Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>= 1.0A, I<sub>RR</sub>=0.25A.

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

# RATINGS AND CHARACTERISTIC CURVES SF101 THRU SF106

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

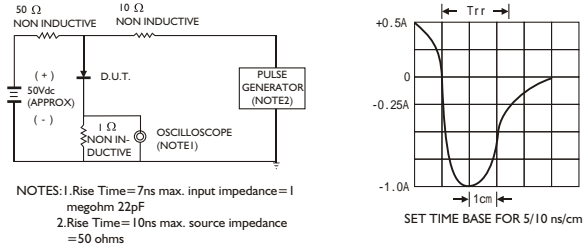


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

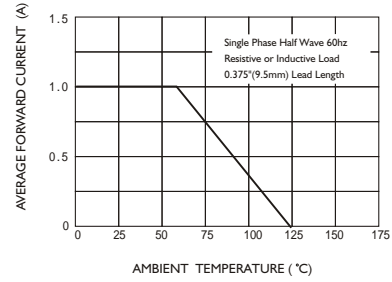


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

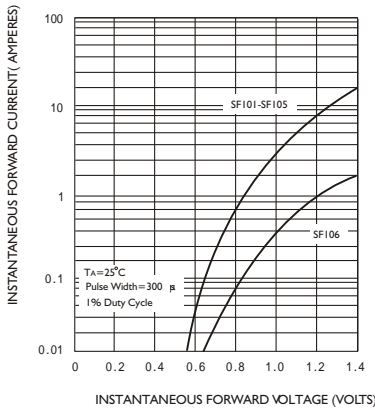


FIG.4-TYPICAL REVERSE CHARACTERISTICS

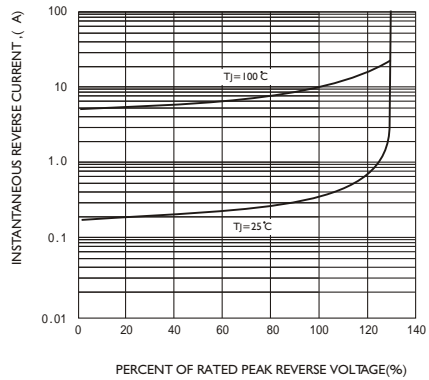


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

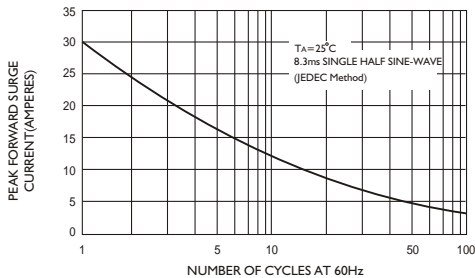


FIG.6-TYPICAL JUNCTION CAPACITANCE

