



# DATA SHEET

SEMICONDUCTOR

SF801~SF807

VOLTAGE RANGE 50 to 600 Volts 8.0 Amperes

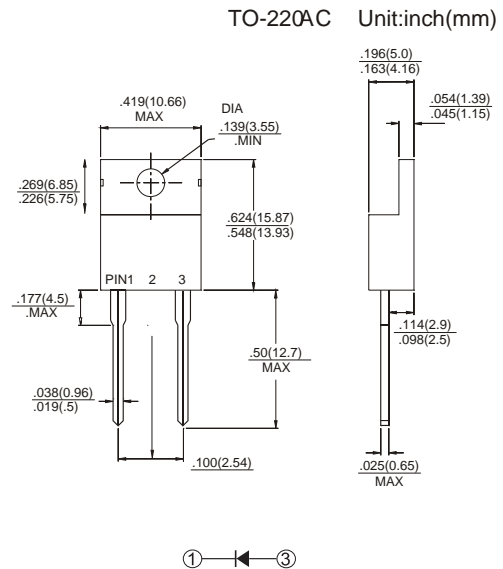


## FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Good for switching mode application
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

## MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202, method 208 guranteed
- Polarity: As Marked
- Mounting position: Any
- Weight: 2.24 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.

Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

TYPE NUMBER	SF801	SF802	SF803	SF804	SF805	SF806	SF807	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	320	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Tc=100°C	8.0							A
Peak Forward Surge Current , 8.3 ms single half sine-wave super imposed on rated load (JEDEC method)	125							A
Maximum Instantaneous Forward Voltage at 8.0A	0.95			1.30		1.70		V
Maximum DC Reverse Current Tc=25°C	10							µA
at Rated DC Blocking Voltage Tc=100°C	500							µA
Maximum Reverse Recovery Time (Note 1)	35			50				nS
Typical Junction Capacitance (Note 2)	50							pF
Operating and Storage Temperature Range TJ, TSTG	-55 +150							°C

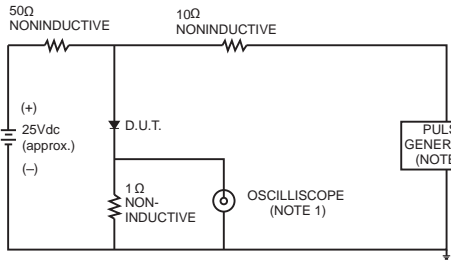
### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATINGS AND CHARACTERISTIC CURVES

## SF801~SF807

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.

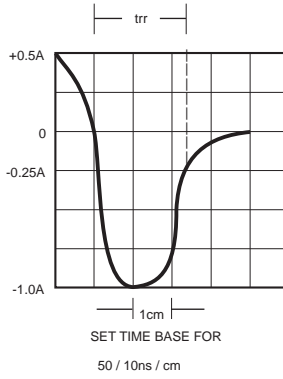


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

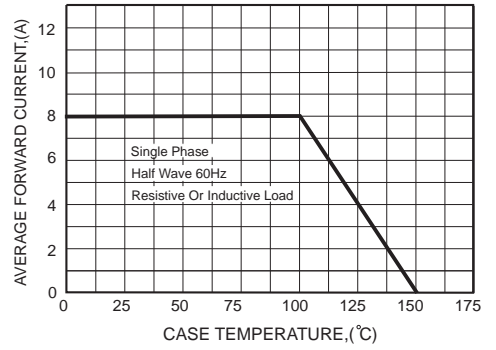


FIG.3-TYPICAL FORWARD CHARACTERISTICS

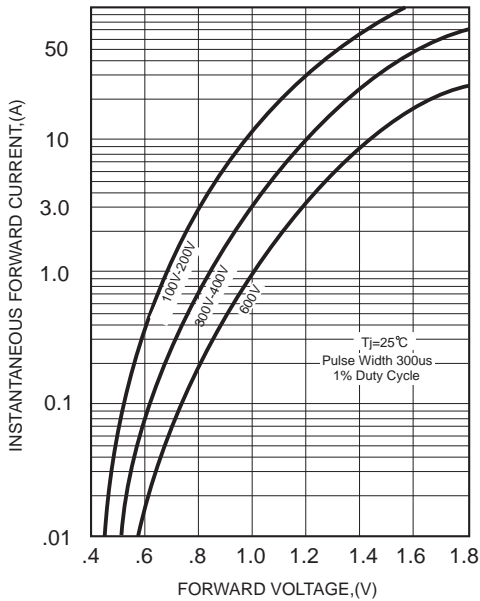


FIG.4-TYPICAL REVERSE CHARACTERISTICS

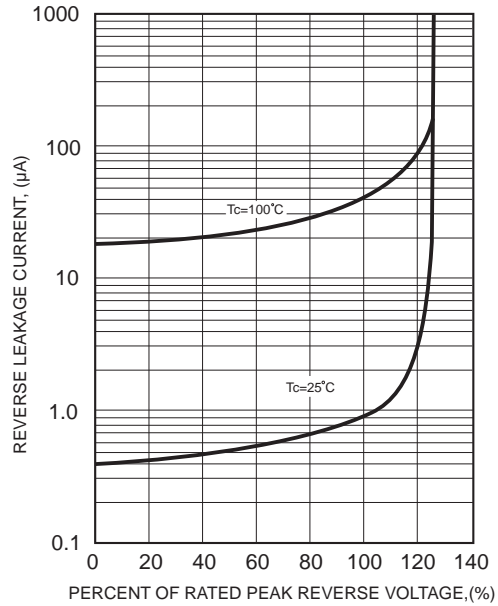


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

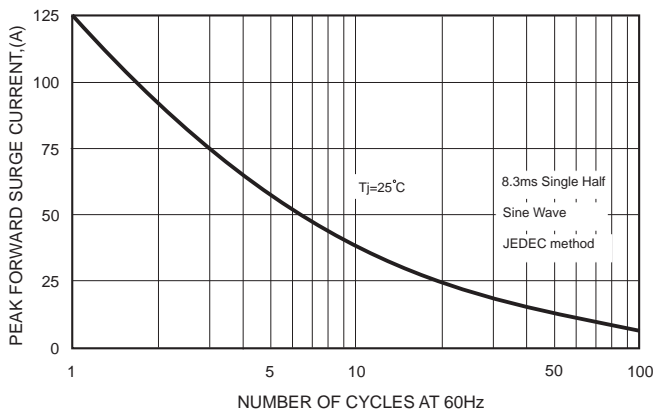


FIG.6-TYPICAL JUNCTION CAPACITANCE

