



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**SF81
THRU
SF86**

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 400 Volts

CURRENT - 8.0 Amperes

FEATURES

- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

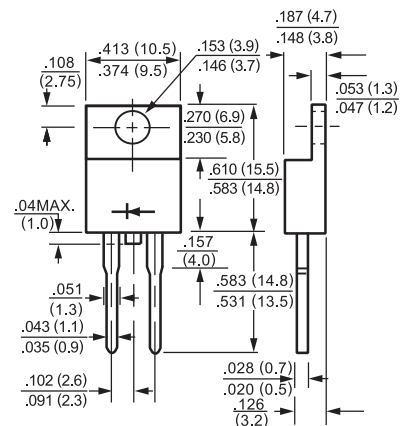
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



TO-220A



Dimensions in inches and (millimeters)

	SYMBOL	SF81	SF82	SF83	SF84	SF85	SF86	UNITS	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	Volts	
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	Volts	
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	Volts	
Maximum Average Forward Rectified Current at Tc = 100°C	IO	8.0						Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	150						Amps	
Maximum Instantaneous Forward Voltage at 8.0A DC		VF	1.0			1.35		Volts	
Maximum DC Reverse Current	IR	10						uAmps	
at Rated DC Blocking Voltage		500							
Maximum Reverse Recovery Time (Note 1)		trr	35			50		nSec	
Typical Thermal Resistance		RθJC	3						°C/W
Typical Junction Capacitance (Note 2)		CJ	50			30		pF	
Operating and Storage Temperature Range		TJ, TSTG	-65 to + 150						°C

NOTES : 1. Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Suffix "R" for Reverse Polarity.

RATING AND CHARACTERISTIC CURVES (SF81 THRU SF86)

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

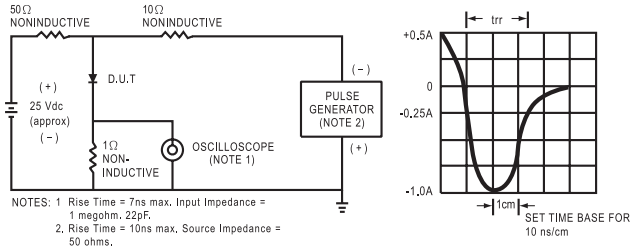


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

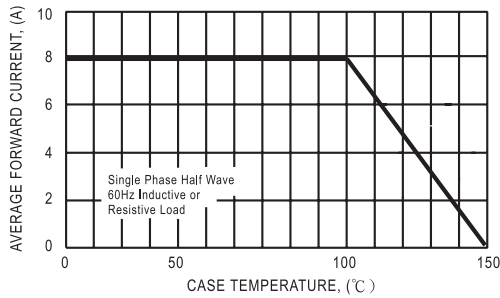


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

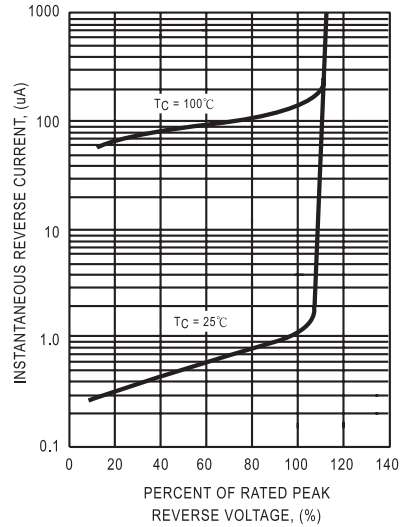


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

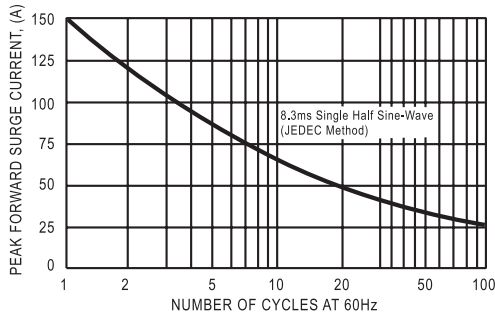


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

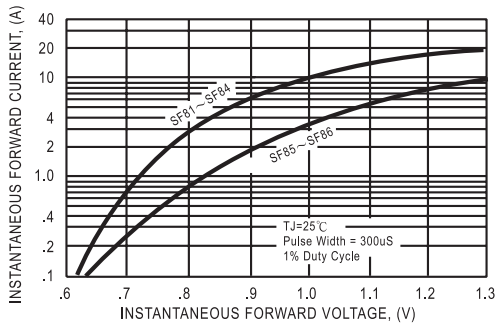
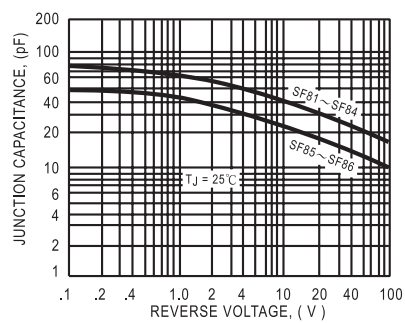


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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