

SF81 THRU SF87

CURRENT 8.0 Amperes
VOLTAGE 50 to 600 Volts

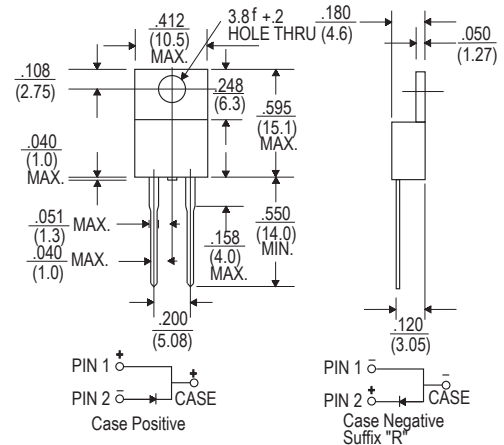
Features

- 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 Underwrites Laboratory Flammability Classification 94V-0

Mechanical Data

- Case : JEDEC TO-220A molded plastic body
- Terminals : Lead solderable per MIL-STD-750, method 2026
- Polarity : As marked
- Mounting Position : Any
- Weight : 0.08 ounce, 2.24 gram

TO-220A



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

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

	Symbols	SF81	SF82	SF83	SF84	SF85	SF86	SF87	Units	
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	Volts	
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	Volts	
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	Volts	
Maximum average forward rectified current at T _c =100°C	I _(AV)	8.0							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 8.0A	V _F	0.975			1.30		1.70		Volts	
Maximum DC reverse current at rated DC blocking voltage	T _A =25°C	10							μA	
	T _A =100°C	400								
Maximum reverse recovery time (Note 1)	T _{rr}	35							ns	
Typical junction capacitance (Note 2)	C _J	80				60				pF
Typical thermal resistance (Note 3)	R _{θJC}	2.2							°C/W	
Operating junction and storage temperature range	T _J	-55 to +125							°C	
	T _{STG}	-55 to +150								

Notes:

- (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.
- (3) Thermal resistance from junction to case mounting on heatsink.

RATINGS AND CHARACTERISTIC CURVES SF81 THRU SF87

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

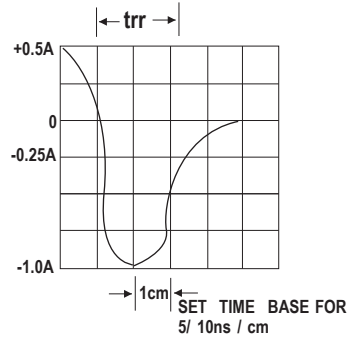
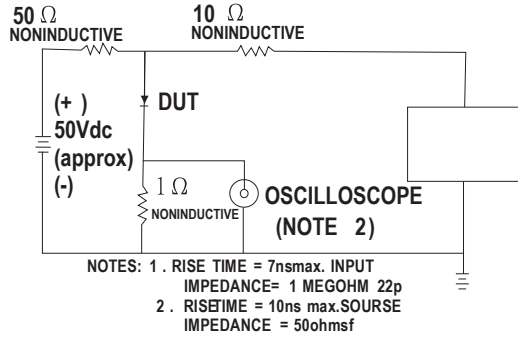


FIG. 2 -MAXIMUM AVERAGE FORWARD CURRENT DERATING

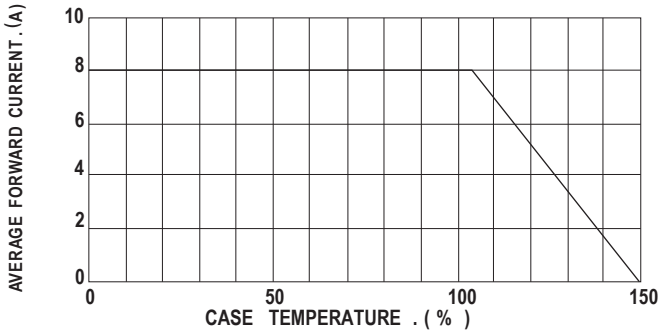


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

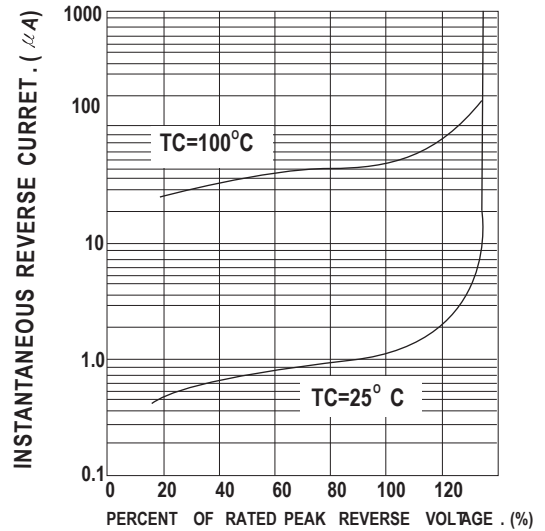


FIG. 4 -MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

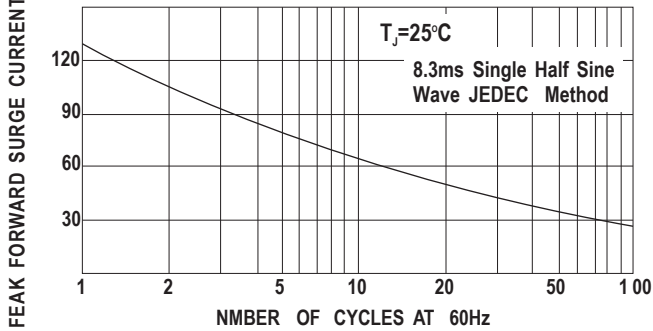


FIG. 6 -TYPICAL FRWARD CHARACTERISTICS

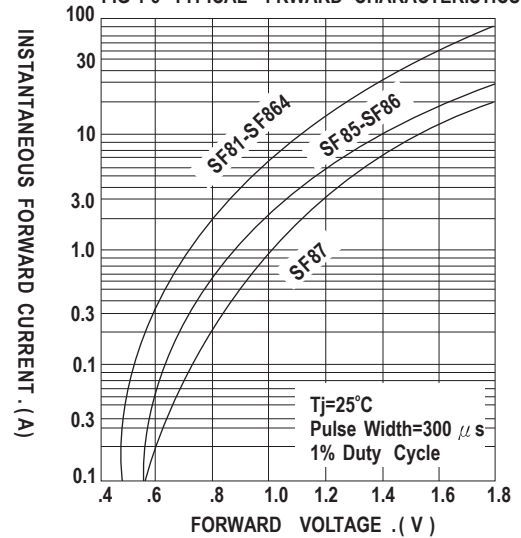


FIG. 5 -TYPICAL JUNCTIOON CAPACITANCE

