

SFP81 THRU SFP87

CURRENT 8.0 Amperes
VOLTAGE 50 to 600 Volts

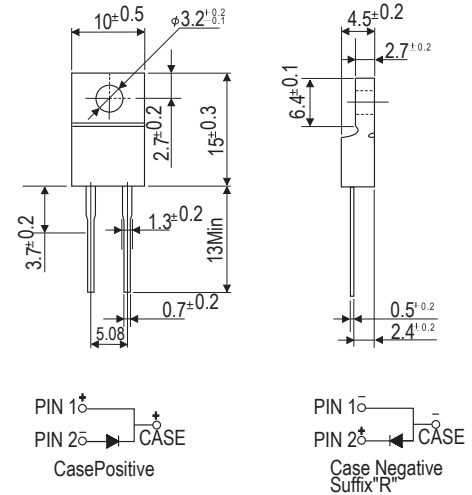
Features

- 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 ITO-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

ITO-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	SFP81	SFP82	SFP83	SFP84	SFP85	SFP86	SFP87	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	I _R	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 T _{STG}	-55 to +150 -55 to +150							°C

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 SFP81 THRU SFP87

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

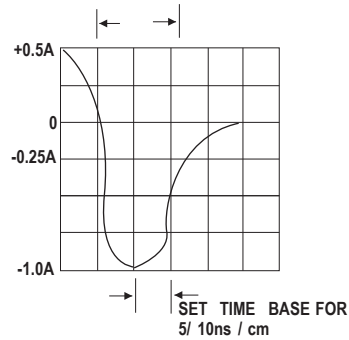
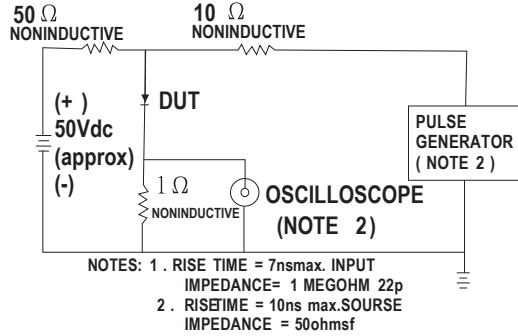


FIG . 2 -MAXIMUM AVERAGE FORWARD CURRENT DERATING

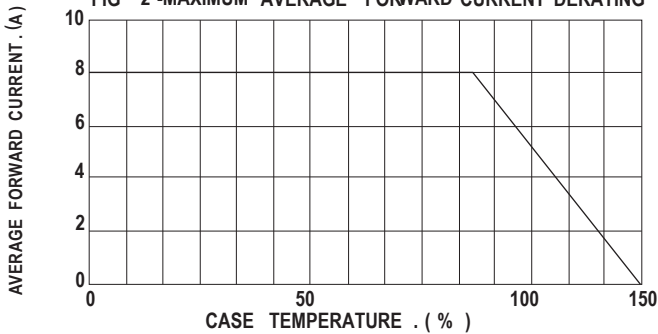


FIG . 4 -MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

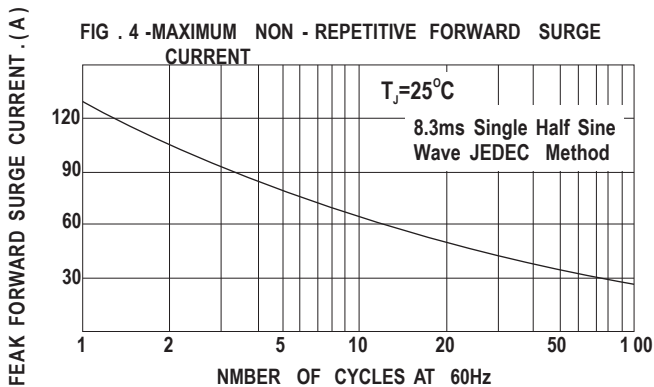


FIG . 5 -TYPICAL JUNCTION CAPACITANCE

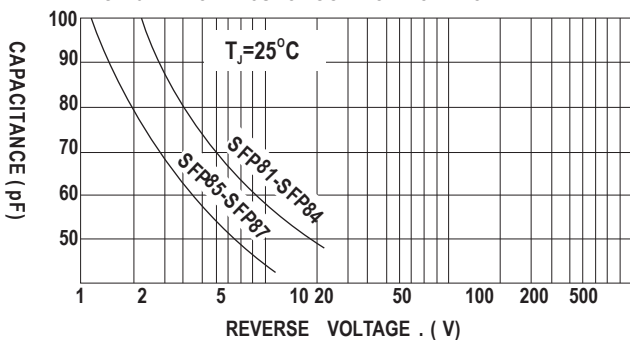


FIG . 3 -TYPICAL REVERSE CHARACTERISTICS

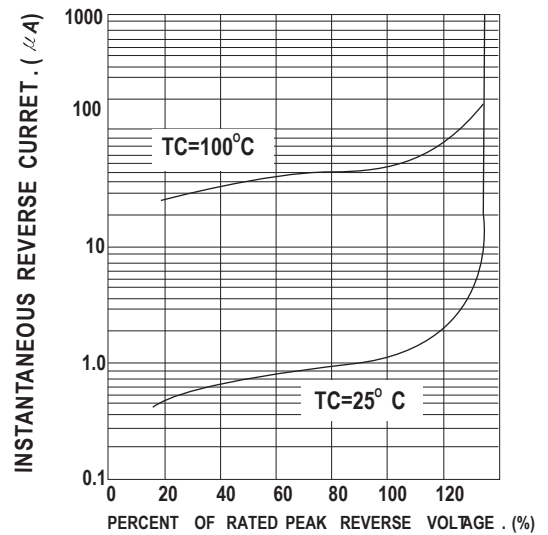


FIG . 6 -TYPICAL FORWARD CHARACTERISTICS

