



HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

SFF81 THRU SFF86

VOLTAGE RANGE

50 to 400 Volts

CURRENT

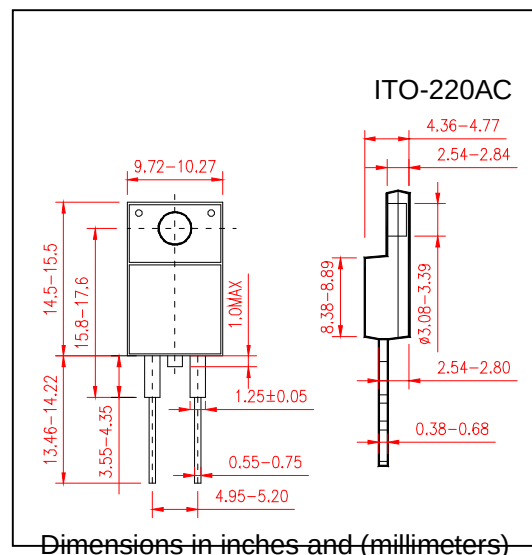
8.0 Ampere

FEATURES

- Glass passivated chip junction
- Low power loss, high efficiency
- Low leakage
- Super fast switching speed
- High current capacity, high surge capacity
- High temperature soldering guaranteed
- 200°C/10 second, 0.16" (4.06mm) lead length from case
- Also available in reverse polarity, add the "R" Suffix, i.e. SFF81R
- Also available in the single chip version, SF81

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color Band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.08ounce, 2.24 gram



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 current by 20%

		SYMBOLS	SF81	SF82	SF83	SF84	SF85	SF86	UNIT
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Voltage		V _{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current At Tc=100℃		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				1.4		Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	T _A = 25℃	I _R	10						μA
	T _A = 125℃		500						
Maximum Reverse Recovery Time Test conditions I _F =0.5A, I _R =1.0A, I _{RR} =0.25A		t _{rr}	35				50		nS
Typical Junction Capacitance (Note 2)		C _J	40						pF
Typical Thermal Resistance (Note 1)		R _{θJC}	3.0						℃/W
Operating Junction Temperature Range		T _J	(-55 to +150)						℃
Storage Temperature Range		T _{STG}	(-55 to +150)						℃

Notes:

1. Unit mounted on heatsink
2. measured at 1.0MHz and applied reverse voltage of 4.0V



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RATING AND CHARACTERISTIC CURVES SFF81 THRU SFF86

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

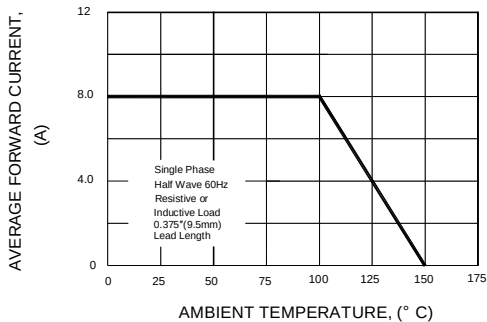


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

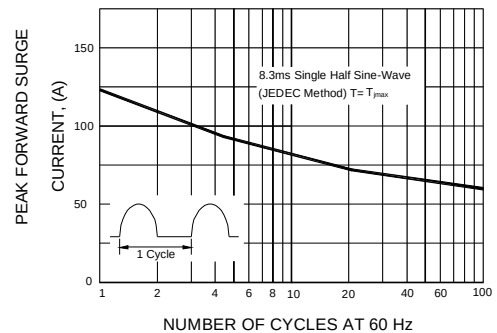


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

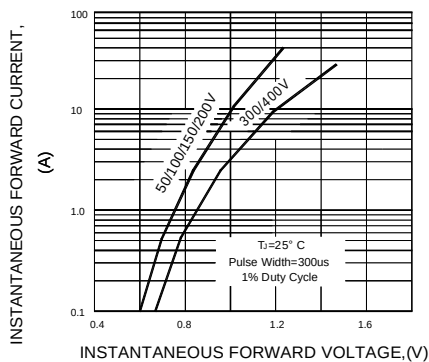


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER LEG

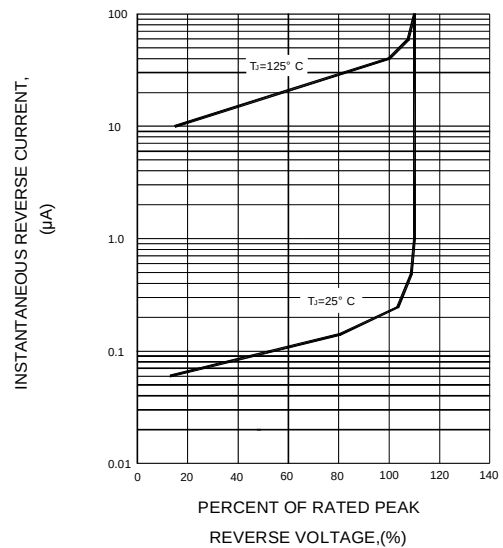


FIG.5-TYPICAL JUNCTION CAPACITANCE

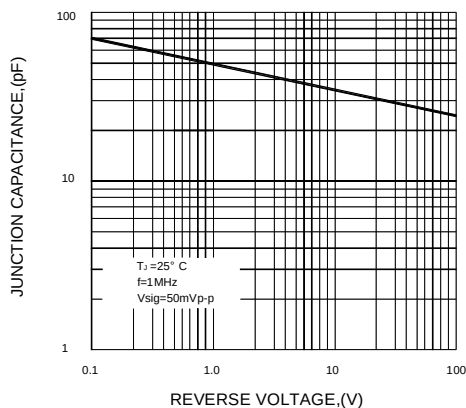
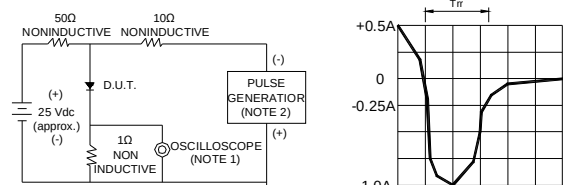


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES : 1. Rise Time = 7ns max. Input Impedance = 1 magohm. 22pF
2. Rise time = 10ns max. Source Impedance = 50 ohms

SET TIME BASE FOR 50/100ns/cm