



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
TEL: 2790-0314 FAX: 2790-0206



SUPER FAST RECOVERY RECTIFIER

SF81 THRU SF86

VOLTAGE RANGE
CURRENT

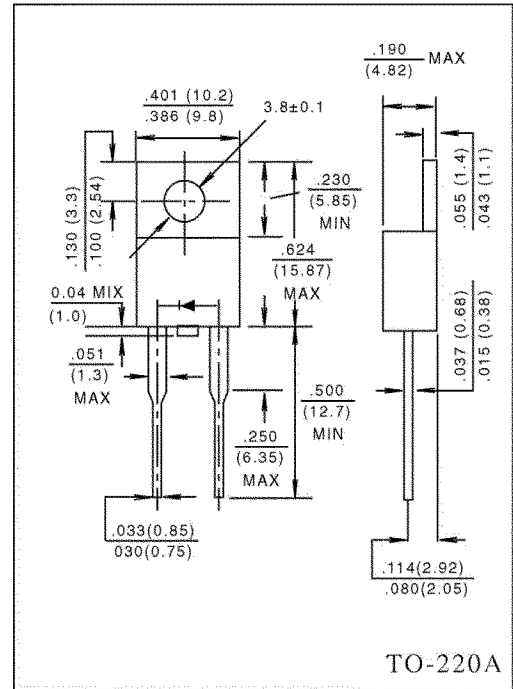
50 to 400 Volts
8.0 Ampere

FEATURES

- Glass passivated chip, junction
- Super fast switching speed.
- Low leakage.
- High current capability.
- High surge capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.16" (4.06mm) lead length
from case.

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: As marked
- Lead: Plastic axial lead, solderable per MIL - STD - 202E
method 208C
- Mounting torque : 5in. - lbs. max.
- Weight: 0.064 ounce, 1.81 gram



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	10	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 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		Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	T _A = 25°C	I _R	10						μ A
	T _C = 100°C		500						
Maximum Reverse Recovery Time (Note 1)		t _{rr}	35				50		nS
Typical Junction Capacitance (Note 2)		C _j	50				30		pF
Typical Thermal Resistance (Note 3)		R _{θJA}	3.0						°C/W
Operating and Storage Temperature Range		T _J , T _{STG}	(-65 to +150)						°C

NOTES:

1. Test condition: $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$.
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.
3. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length P.C.B. mounted.
4. Suffix "R" for reverse polarity.



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RATINGS AND CHARACTERISTIC CURVES SF81 THRU SF86

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

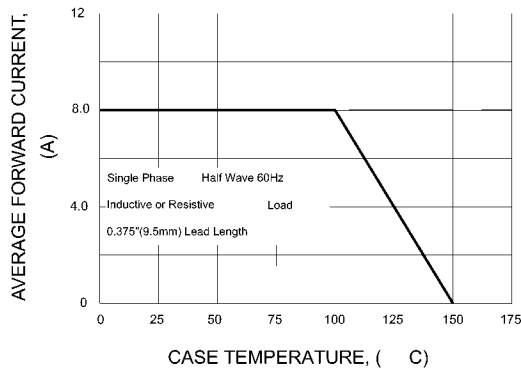


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

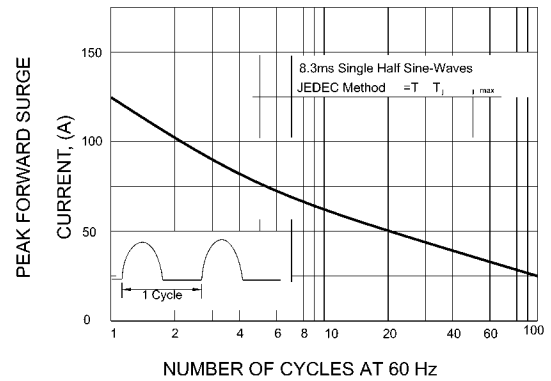


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

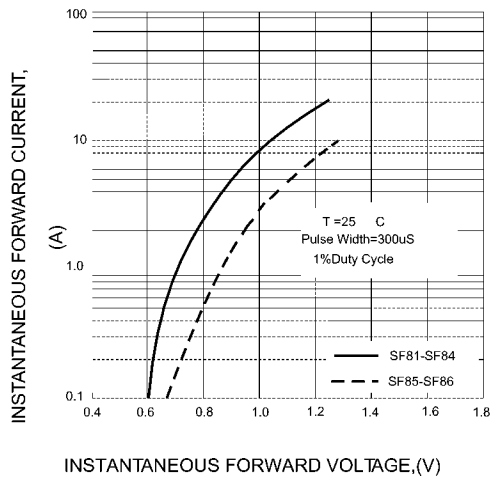


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

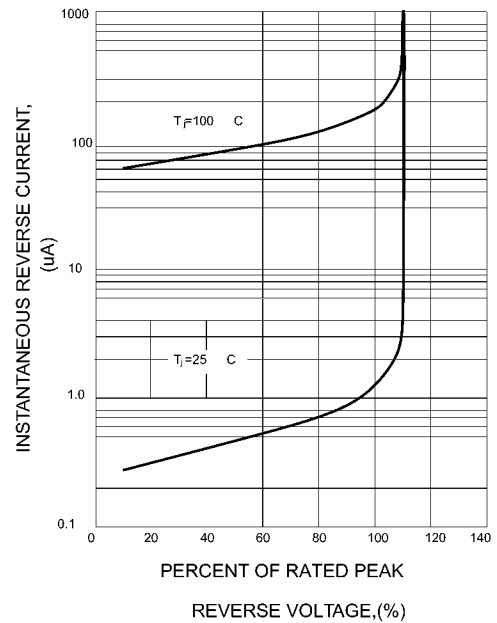


FIG.5-TYPICAL JUNCTION CAPACITANCE

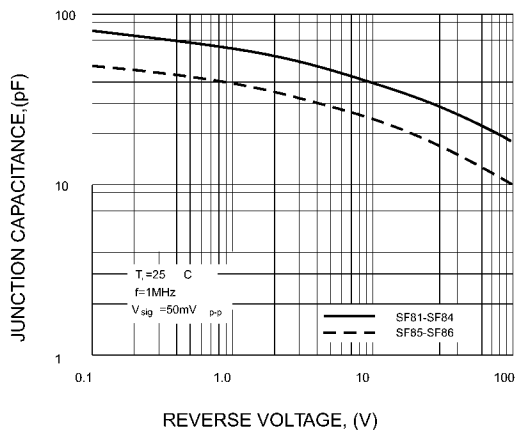


FIG.6-TEST CIRCUIT DIAGRAM AND
REVERSE RECOVERY TIME CHARACTERISTIC

