



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**SF301
THRU
SF304**

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 200 Volts

CURRENT - 30 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

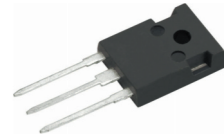
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 5.60 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

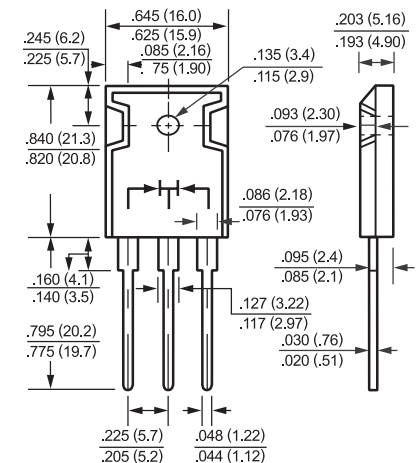
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



TO-3P



	SYMBOL	SF301	SF302	SF303	SF304	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	Volts
Maximum Average Forward Rectified Current at T _c = 100°C	I _O	30				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	300				Amps
Maximum Instantaneous Forward Voltage at 15.0A DC	V _F	1.0				Volts
Maximum DC Reverse Current	I _R	@T _c = 25°C				uAmps
at Rated DC Blocking Voltage		@T _c = 100°C				uAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	35				nSec
Typical Thermal Resistance	R _{θJC}	1				°C/W
Typical Junction Capacitance (Note 2)	C _J	120				pF
Operating and Storage Temperature Range	T _J , T _{STG}	-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 "A" =Common Anode.

RATING AND CHARACTERISTIC CURVES (SF301 THRU SF304)

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

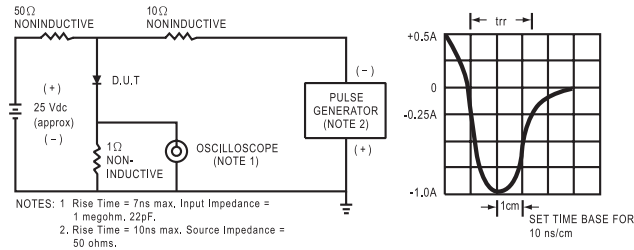


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

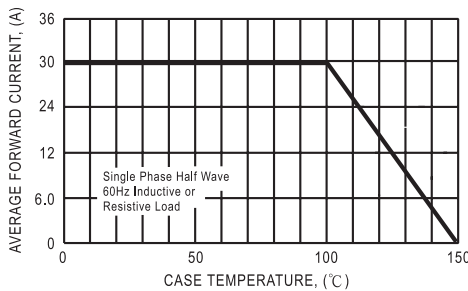


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

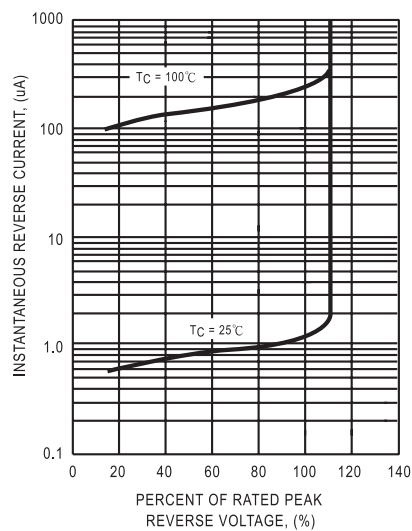


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

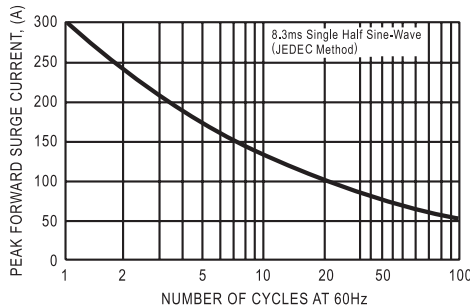


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

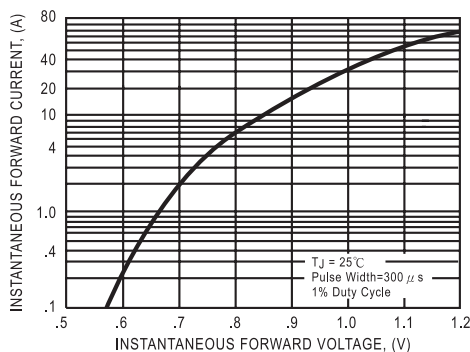
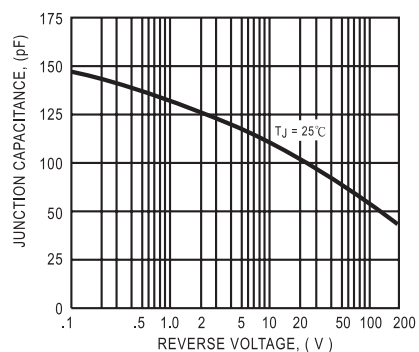


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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