



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SF301

THRU

SF308

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts

CURRENT - 30 Amperes

FEATURES

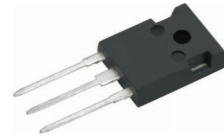
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

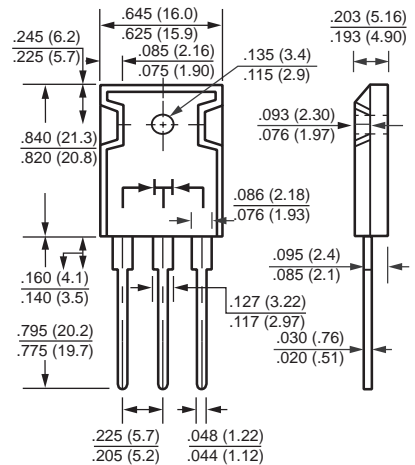
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 5.60 grams

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



Dimensions in inches and (millimeters)

	SYMBOL	SF301	SF302	SF303	SF304	SF305	SF306	SF307	SF308	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current at T _A = 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}	250								Amps
Maximum Instantaneous Forward Voltage at 15.0A DC	V _F	0.975			1.35		1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T _c = 25°C	10								µAmps
	@T _c = 125°C	700								µAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	35			50					nSec
Typical Junction Capacitance (Note 2)	C _J	250			150		120			pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 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.

RATING AND CHARACTERISTIC CURVES (SF301 THRU SF308)

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

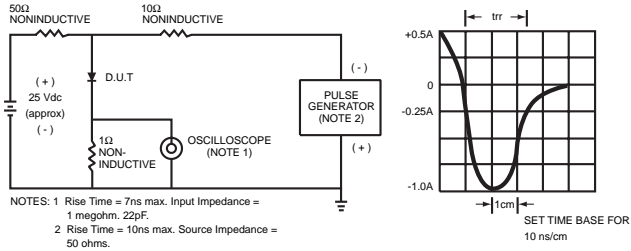


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

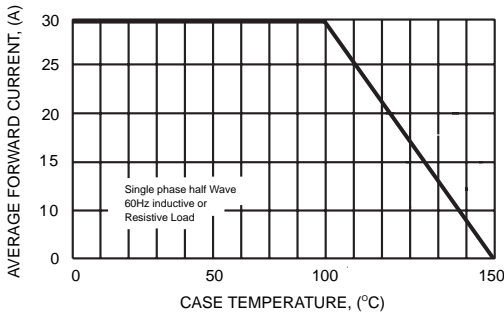


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

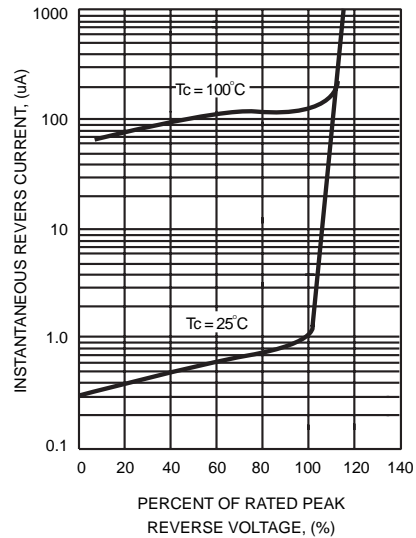


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

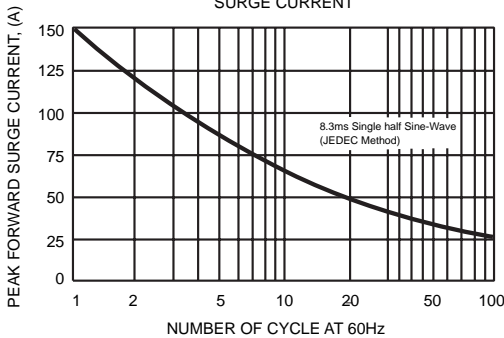


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

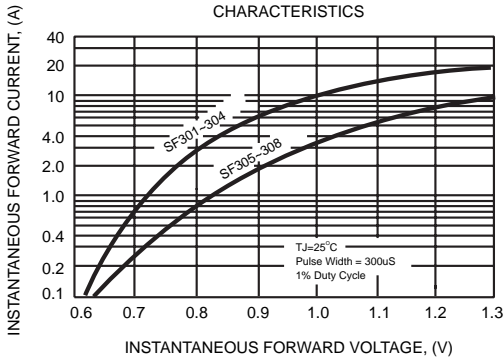
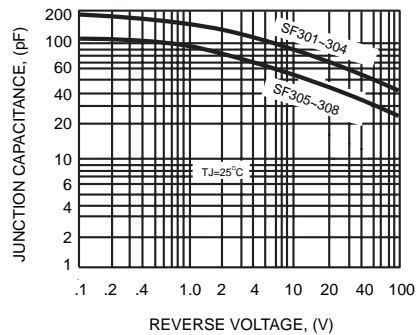


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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