



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

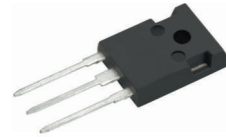
- \* Low switching noise
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* Super fast switching speed
- \* High reliability
- \* Good for switching mode circuit

MECHANICAL DATA

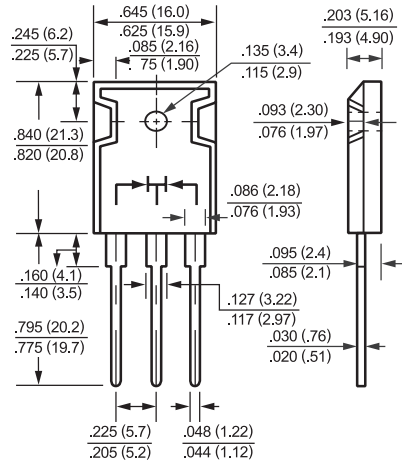
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 5.60 grams

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



	SYMBOL	SF301	SF302	SF303	SF304	SF305	SF306	SF307	SF308	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current at T <sub>c</sub> = 100°C	I <sub>O</sub>	30								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300								Amps
Maximum Instantaneous Forward Voltage at 15.0A DC	V <sub>F</sub>	0.975			1.35		1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>c</sub> = 25°C	10								μAmps
	@T <sub>c</sub> = 100°C	500								μAmps
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	35			50					nSec
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	250			150		120			pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150								°C

- NOTES: 1. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 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 SF308 )

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

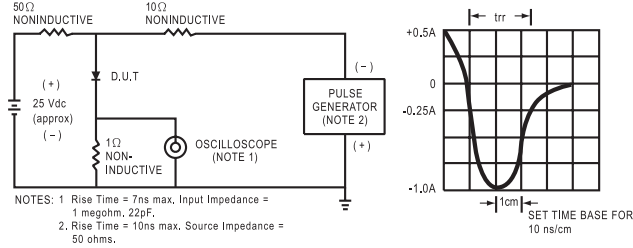


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

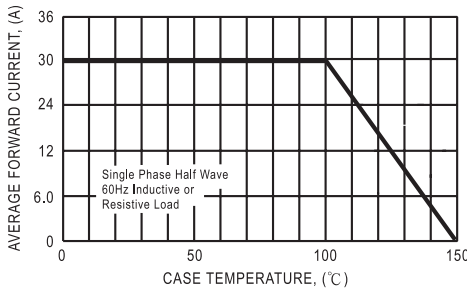


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

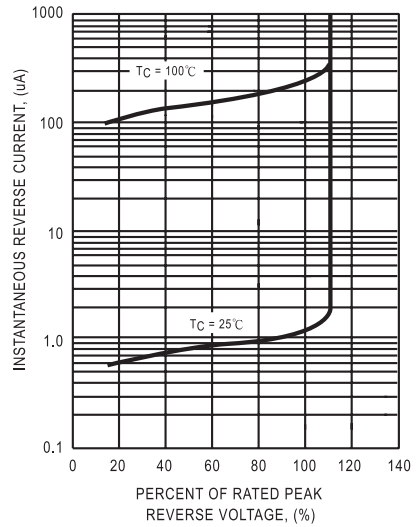


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

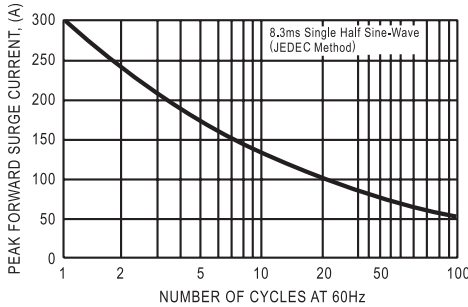


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

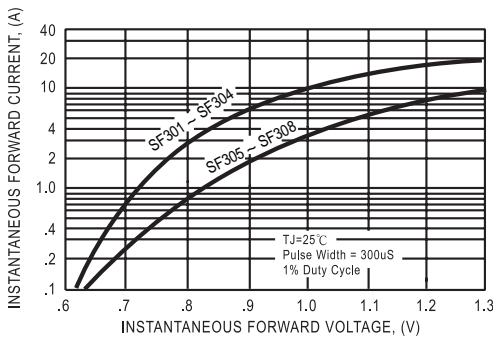


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

