DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SF301 THRU SF304

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

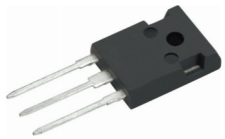
VOLTAGE RANGE - 50 to 200 Volts *CURRENT - 30 Amperes*

FEATURES

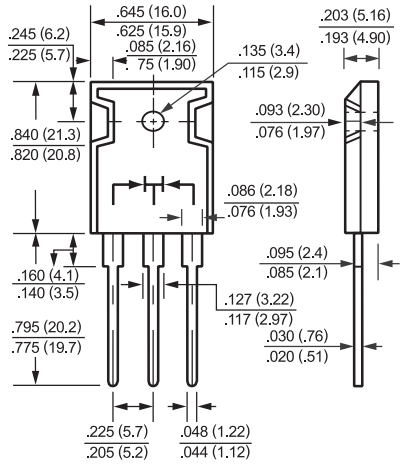
* Low switching noise
* Low forward voltage drop
* Low thermal resistance
* High current capability
* Super fast switching speed
* High reliability
* Good for switching mode circuit

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



TO-3P



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

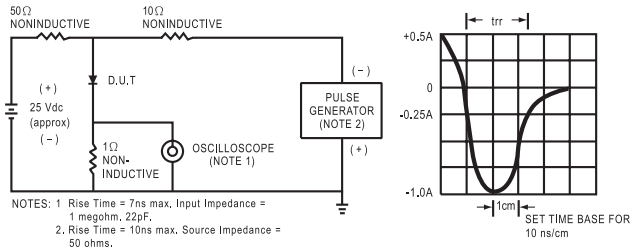
Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

		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	@T_C = 25°C	I_R	10				uAmps
at Rated DC Blocking Voltage	@T_C = 100°C		500				uAmps
Maximum Reverse Recovery Time (Note 1)		trr	35				nSec
Typical Thermal Resistance		RθJC	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: IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Suffix "A" =Common Anode.

NEXT BACK EXIT

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



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

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

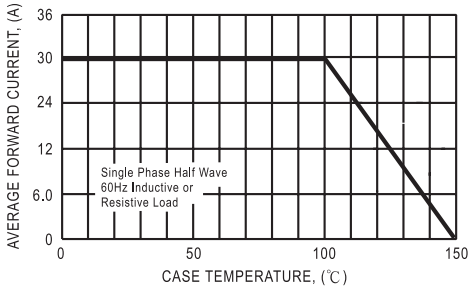


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

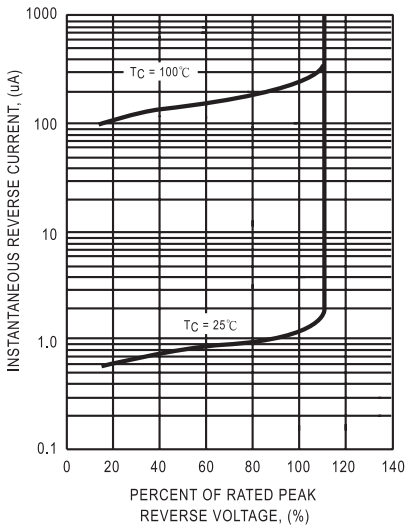


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

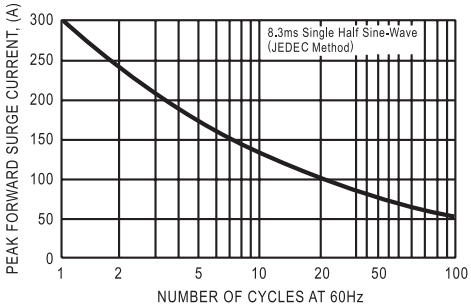


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

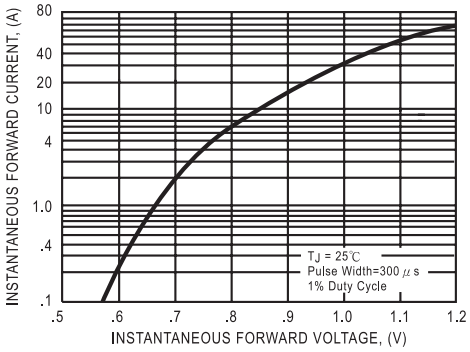


FIG. 6 - TYPICAL JUNCTION CAPACITANCE