INTERNATIONAL SEMICONDUCTOR, INC.

SUPER FAST RECOVERY, GLASS PASSIVATED, PLASTIC RECTIFIERS
VOLTAGE - 50 TO 400 Volts **CURRENT** - 30.0 Ampere

SF301 thru SF306

FEATURES:

- Dual rectifier construction, positive centertap
- Plastic material used carries Underwriters Laboratory recognition 94 V-O
- High Surge Capability
- Superfast recovery times, high voltage
- Low forward voltage, high current capability
- Low thermal resistance
- Low Power Loss, high efficiency
- High temperature soldering guaranteed - 250 °C for 10 seconds

MECHANICAL DATA:

CASE: Transfer molded plastic case

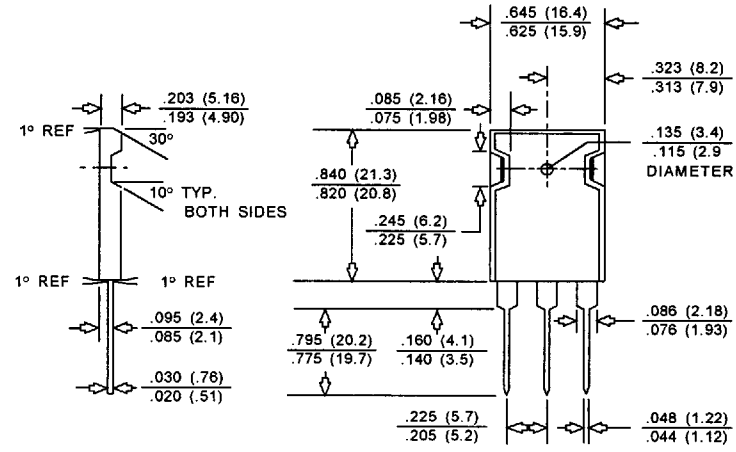
TERMINALS: Plated terminals, solderable per MIL-STD-202, Method 208

POLARITY: As marked

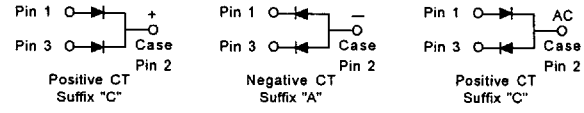
MOUNTING POSITION: Any

WEIGHT: 0.198 Ounce (5.60 Gram)

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	SF305	SF306	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	V
Maximum RMS Input Voltage	V_{RMS}	35	70	105	140	210	280	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	V
Maximum Average Forward Current .375"(9.5mm) Lead Length, T_L = 90°C	$I_{(AV)}$	30						A
Peak Forward Surge Current - 8.3 ms single half sine wave superimposed on rated load	I_{FSM}	300						A
Maximum Instantaneous Forward Voltage at 15A	V_F	0.975				1.3		V
Maximum DC Reverse Current at Rated DC Blocking Volatege T_A=25°C	I_R	10						uA
T_A=100°C	I_R	200						uA
Maximum Recovery Time (Note 1)	T_{RR}	35						ns
Typ Junction Capacitance T_J=25°C (Note 2)	C_J	170				130		pf
Typical Thermal Resistance (Note 3)	R0JC	1.00						°C\W
Operating Temperature Range	T_J	-65 to +150						°C
Storage Temperature Range	T_{STG}	-65 to +150						°C

Note 1: Reverse Recovery Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
Note 2: Measured at 1.0 MHz and 4.0 Volt Bias Voltage
Note 3: Thermal Resistance from Junction to case per element

252 Cox Street, Roselle, NJ, USA, 07203-1704 ■ 908 245-2233

Toll-Free (800) 392-2474 Fax: (908) 245-5541

SF301 thru SF306
RATING AND CHARACTERISTIC CURVES

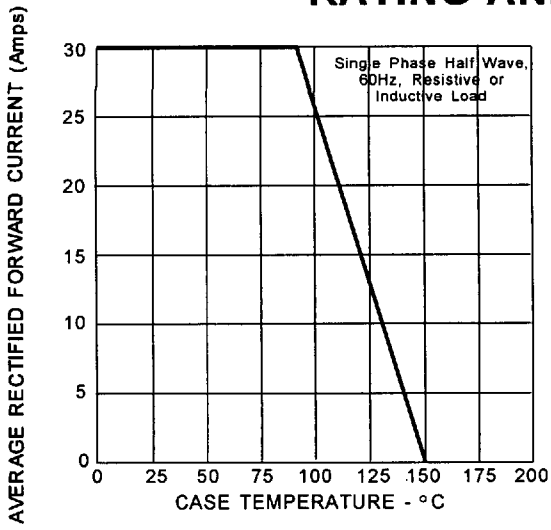


FIG.2 - FORWARD CURRENT DERATING CURVE

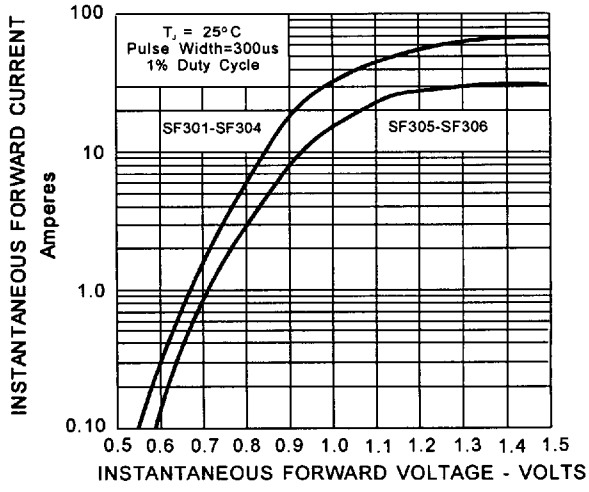


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

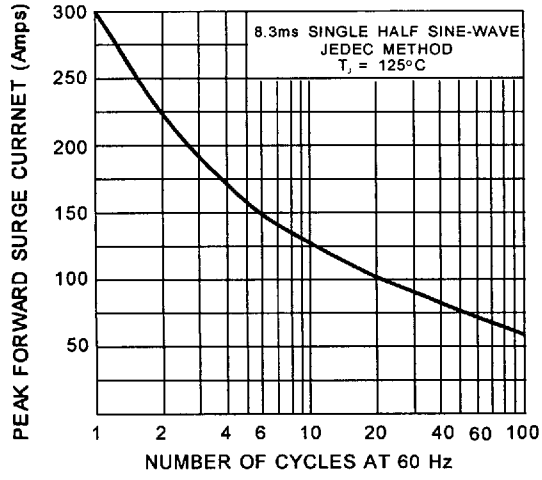


FIG. 4 - MAXIMUM NON-REPETETIVE PEAK SURGE CURRENT

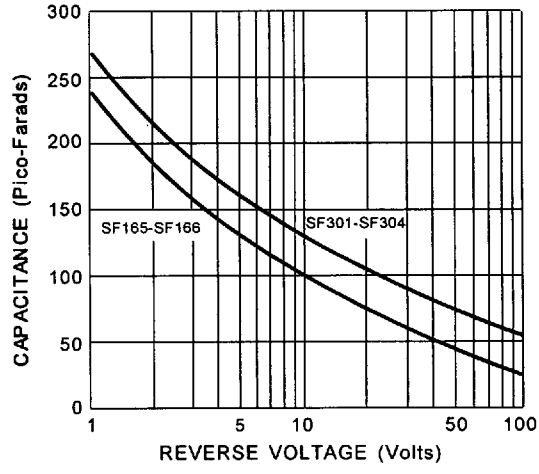


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

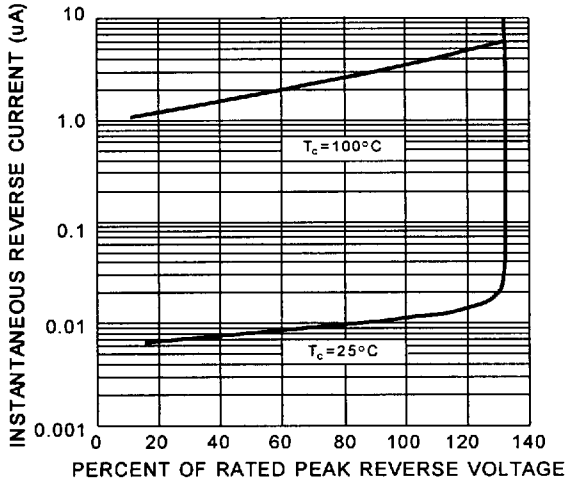


FIG. 5 TYPICAL REVERSE CHARACTERISTICS

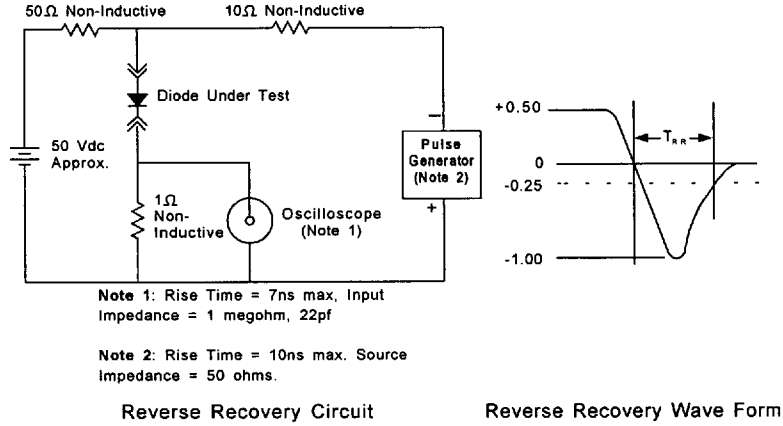


Fig. 7 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRUIT DIAGRAM