INTERNATIONAL SEMICONDUCTOR, INC.

SF11 thru SF19

SUPER FAST RECOVERY, GLASS PASSIVATED, PLASTIC RECTIFIERS

VOLTAGE - 50 TO 800 Volts **CURRENT** - 1.0 Ampere

FEATURES

- Plastic Package carries Underwriters Laboratory Flammability Classification 94V-O
- Low cost construction utilizing void-free transfer molding technique
- Typical Recovery 35 nanoseconds
- Diffused, Glass Passivated Junction
- Low Leakage
- High Current Capability
- Easily cleaned with Freon, Alcohol, Chloroethane, and similar solvents
- High temperature soldering guaranteed: 265°C/10 seconds/.375"(9.5mm) lead lengths at 5 lbs(2.3kg) tension

MECHANICAL DATA

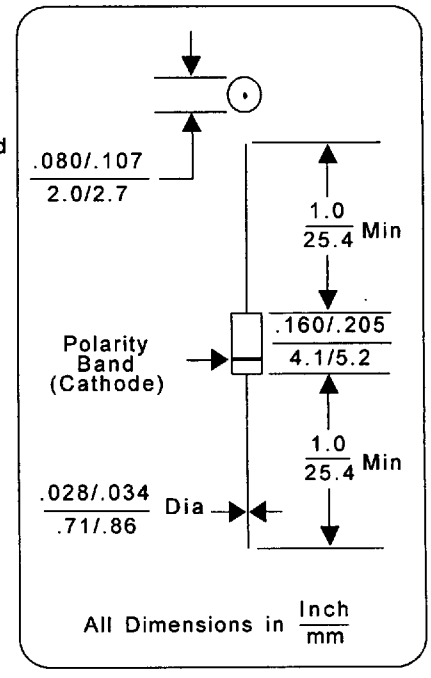
Case: JEDEC DO-41, molded plastic case

TERMINALS: Plated axial leads, solderable per MIL-S-202, Method 208

WEIGHT: 0.012 ounce, 0.3 gram

MOUNTING POSITION: Any

HANDLING PRECAUTIONS: None



DO-41

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	SF11	SF12	SF13	SF14	SF16	SF18	SF19	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	400	600	800	V
Maximum RMS Input Voltage	V_{RMS}	35	70	105	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	400	600	800	V
Maximum Average Forward Rectified Current at T_L = 55°C	$I_{(AV)}$	1.0							A
Maximum Forward Surge Current 8.3 ms single half sine wave superimposed on rated load	I_{FSM}	30.0							A
Maximum Instantaneous Forward Voltage at 1.0A	V_F	0.975				1.250			V
Maximum DC Reverse Current at Rated T_J=25°C DC Blocking Voltage T_J=125°C	I_R I_R	5.0 100							ua ua
Maximum Reverse Recovery (Note 1)	T_{RR}	30				50	60		ns
Typ Junction Capacitance T_J=25°C (Note 2)	C_J	10.0				2.5	5.5		pf
Typical Thermal Resistance (Note 3)	R0JA	41.0							°C\W
Operating Temperature Range	T_J	-50 to +150							°C
Storage Temperature Range	T_{STG}	-50 to +150							°C

Note 1: T_{RR} Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
Note 2: Measured at 1.0 MHz and 10.0 Volt Bias Voltage
Note 3: Thermal Resistance from Junction to Ambient at .375"(9.5mm) lead lengths, P.C. Board mounted

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

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

SF11 thru SF19
RATING AND CHARACTERISTIC CURVES

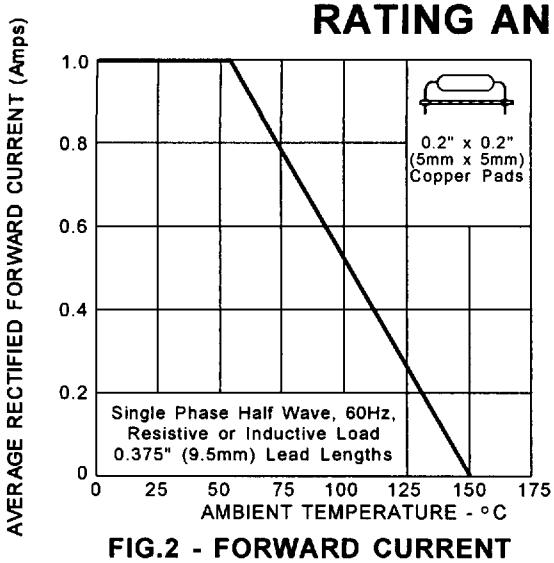


FIG.2 - FORWARD CURRENT DERATING CURVE

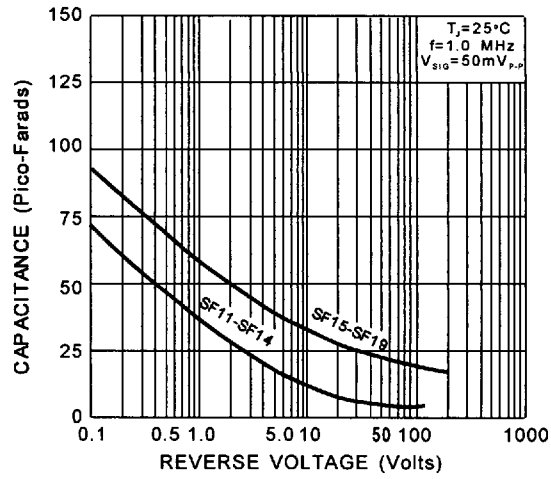


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

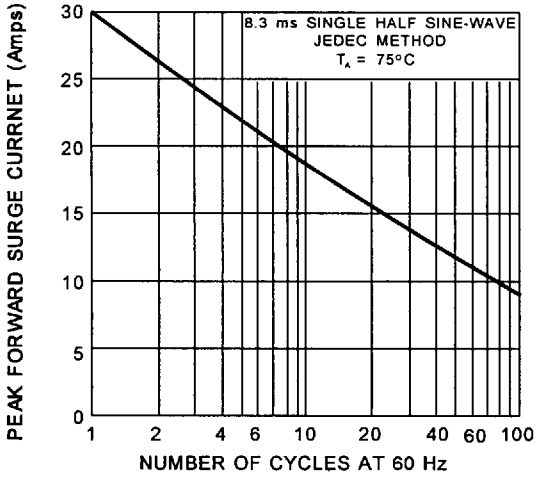


FIG. 4 - MAXIMUM NON-REPETETIVE SURGE CURRENT

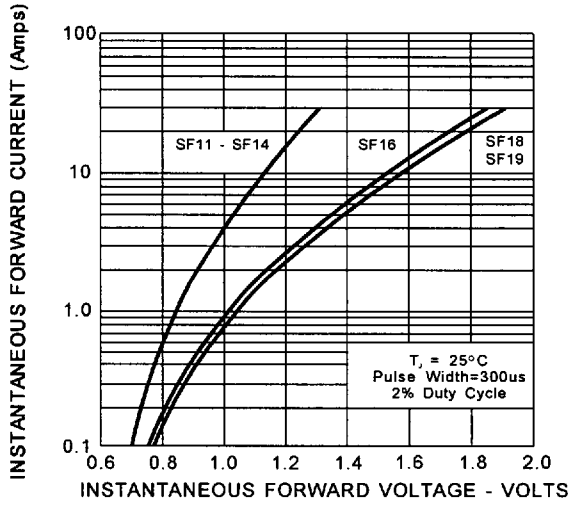


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

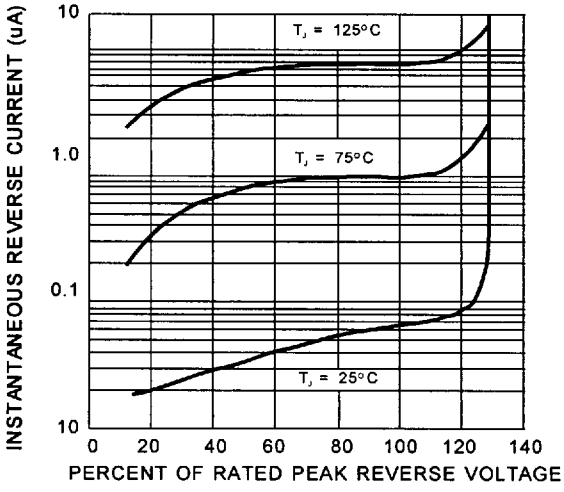


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

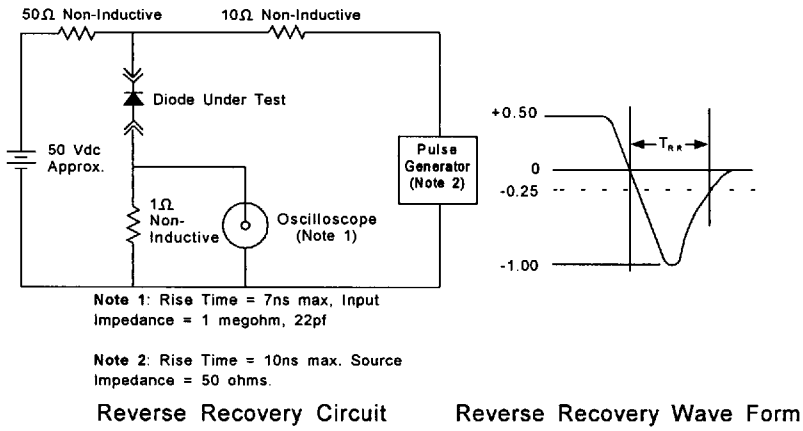


Fig. 7 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRUIT DIAGRAM

INTERNATIONAL SEMICONDUCTOR, INC.