



SF11 THRU SF18

Superfast Recovery Rectifier

Reverse Voltage – 50 to 600 V Forward Current – 1 A

Features

- High Surge Capability
- Low Forward Voltage, high current capability
- Hermetically sealed
- Superfast recovery times
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.

Mechanical Data

Case: Molded plastic, DO-41

Epoxy: UL 94V-O rate flame retardant

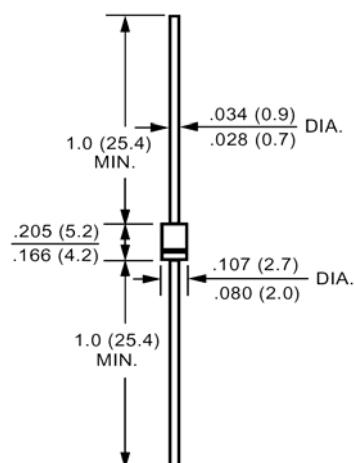
Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.012ounce, 0.33gram

DO-41



Dimensions in inches and (millimeters)

Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at T _A =55°C	I _(AV)	1.0								A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30								A
Maximum Forward Voltage at 1.0A DC and 25°C	V _F	0.95				1.25		1.7		V
Maximum Reverse Current at T _A =25°C at Rated DC Blocking Voltage T _A =100°C	I _R	5.0 50								uA
Typical Junction Capacitance (Note 1)	C _J	50				25				pF
Typical Thermal Resistance (Note 2)	R _{0JA}	50								°C/W
Maximum Reverse Recovery Time (Note 3)	T _{RR}	35							50	nS
Operating Junction Temperature Range	T _J	-55 to +125								°C
Storage Temperature Range	T _{stg}	-55 to +150								°C

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance from Junction to Ambient 0.375" (9.5mm) lead length P.C.B. Mounted.

3- Reverse Recovery Test Conditions: $I_F=.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=.25\text{A}$.

Rating and characteristic curves

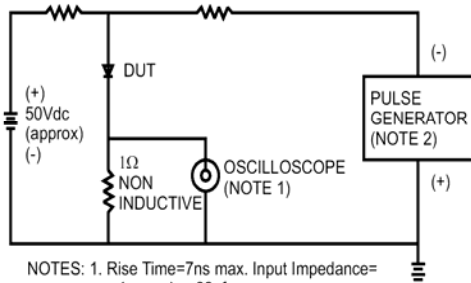


FIG.3- TYPICAL REVERSE CHARACTERISTICS

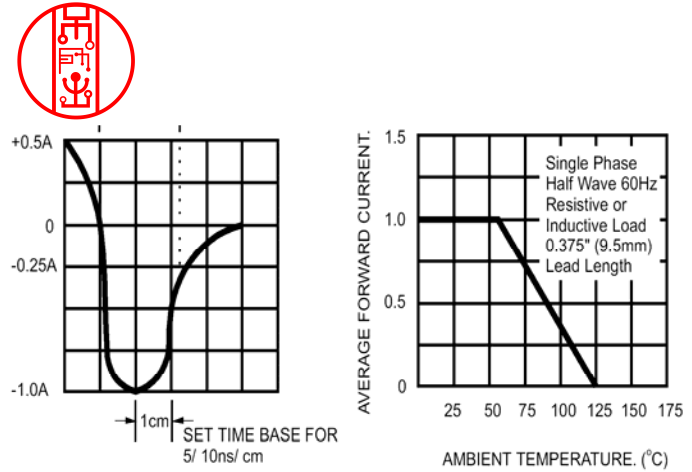


FIG.4- TYPICAL FORWARD CHARACTERISTICS

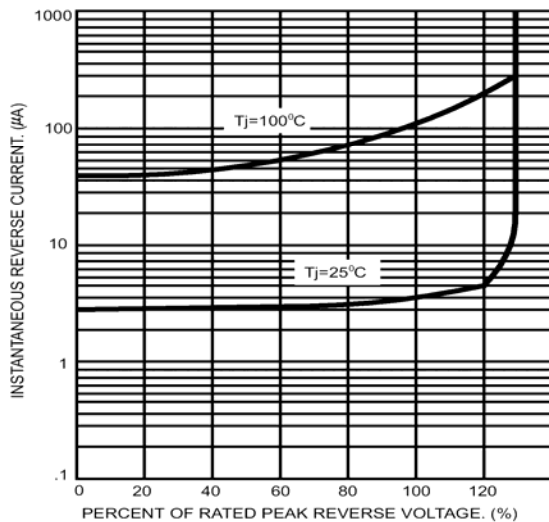


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

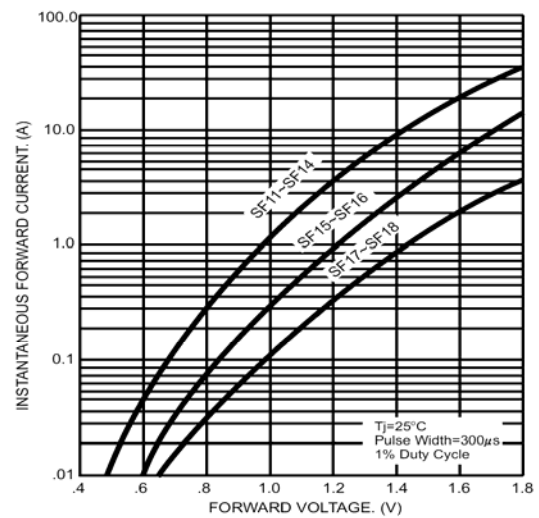
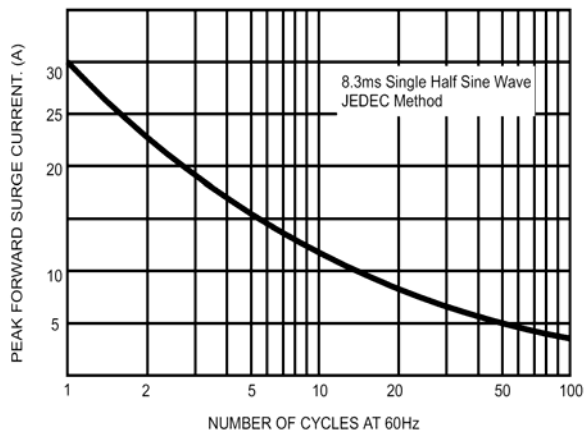


FIG.6- TYPICAL JUNCTION CAPACITANCE

