



SFF1002 THRU SFF1006

Superfast Recovery Rectifiers

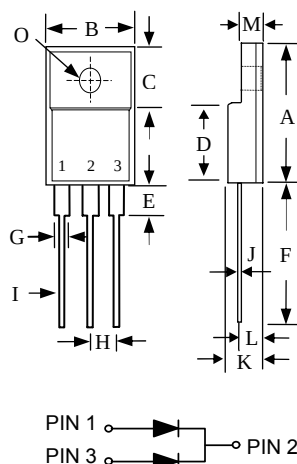
FEATURES

- ◆ Ultrafast 35 Nanosecond Recovery Time
- ◆ 150° C Operating Junction Temperature
- ◆ Popular ITO-220 Package
- ◆ Epoxy Meets UL94 ,V0 @ 1/8"
- ◆ High Temperature Glass Passivated Junction
- ◆ Low Forward Voltage
- ◆ Low Leakage Current
- ◆ Reverse Voltage to 600 Volts
- ◆ Pb-Free Packages are Available

MECHANICAL DATA

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260° C Max. for 10 Seconds
- Shipped 50 units per plastic tube

ITO-220AB



ITO-220AB		
DIM.	MIN.	MAX.
A	14.90	15.90
B	9.90	10.40
C	6.45	7.15
D	7.85	8.75
E	2.90	3.90
F	12.8	—
G	1.10	1.4
H	2.35	2.55
I	0.45	0.95
J	0.40	0.65
K	4.35	4.75
L	2.55	3.15
M	2.60	3.10
O	Ø3.00	Ø3.50

All Dimensions in millimeter

Maximum Ratings and Electrical Characteristics

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%.

Type Number	Symbol	SFF1002	SFF1004	SFF1006	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_C = 100^\circ C$	$I_{(AV)}$	10			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	80			A
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	1.0	1.3	1.7	V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$	I_R	10 400			μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35			nS
Typical Junction Capacitance (Note 2)	C_j	150		110	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	3.5			$^\circ C/W$
Operating Temperature Range	T_J	-65 to +150			$^\circ C$
Storage Temperature Range	T_{STG}	-65 to +150			$^\circ C$

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

3. Mounted on Heatsink Size of 2" x 3" x 0.25" Al-plate.





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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 FORWARD CURRENT DERATING CURVE

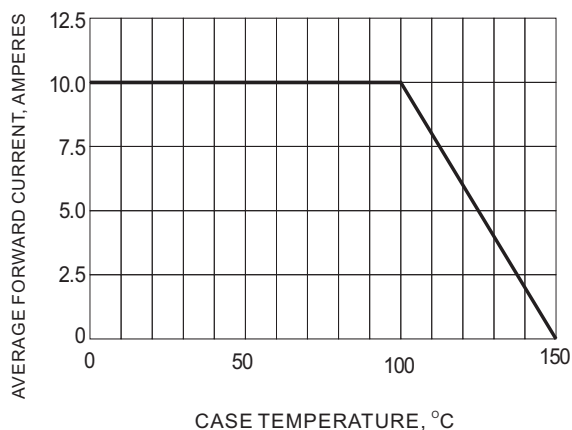


Fig.2 TYPICAL JUNCTION CAPACITANCES

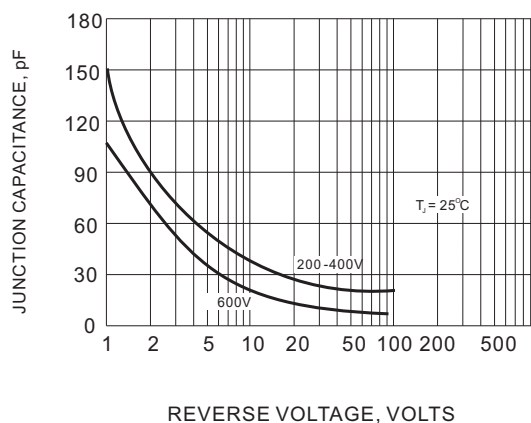


Fig.3 FORWARD CHARACTERISTICS

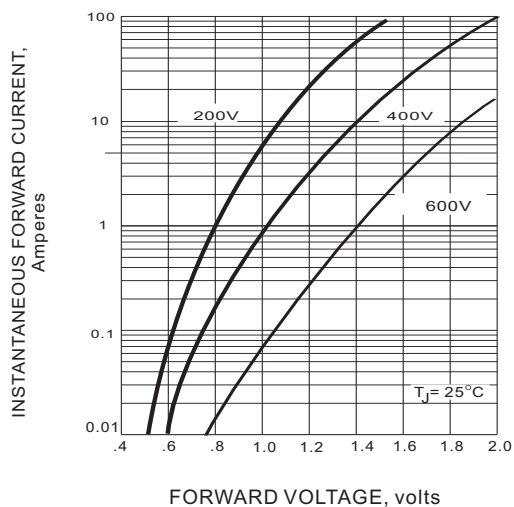


Fig.4 TYPICAL REVERSE CHARACTERISTICS

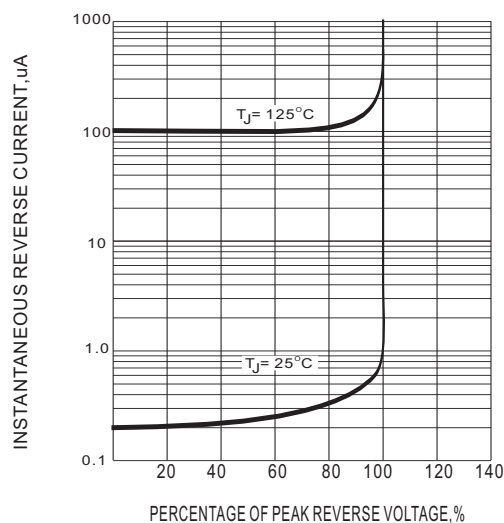


Fig.5 PEAK FORWARD SURGE CURRENT

