



SFF1602 THRU SFF1606

Superfast Recovery Rectifiers

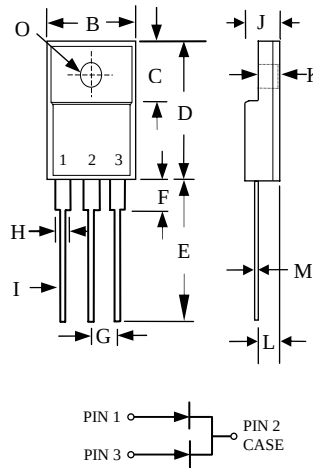
FEATURES

- ◆ Ultrafast 35 Nanosecond Recovery Time
- ◆ 175° C Operating Junction Temperature
- ◆ Popular ITO-220AB 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
- Weight: 1.9 grams (approximately)
- 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
B	9.72	10.27
C	6.30	6.90
D	14.50	15.50
E	13.00	13.80
F	3.0	3.65
G	2.40	2.65
H	1.05	1.30
I	0.6	0.8
J	4.35	4.8
K	2.55	3.1
L	2.5	2.9
M	0.5	0.8
O	Ø 3.1	Ø 3.4
All Dimensions in mm		

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	SFF1602	SFF1604	SFF1606	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 @T _C = 100 °C	I _(AV)	16			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	125			A
Maximum Instantaneous Forward Voltage @ 8.0A	V _F	0.975	1.30	1.70	V
Maximum DC Reverse Current @T _A =25 °C at Rated DC Blocking Voltage @ T _A =100 °C	I _R	10 400			uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35			nS
Typical Junction Capacitance (Note 2)	C _j	80	60		pF
Typical Thermal Resistance (Note 3)	R _{θJC}	1.5			°C/W
Operating Temperature Range	T _J	-65 to +150			°C
Storage Temperature Range	T _{STG}	-65 to +150			°C

- Notes:
1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
 3. Mounted on Heatsink Size of 3" x 5" x 0.25" Al-Plate.





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

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

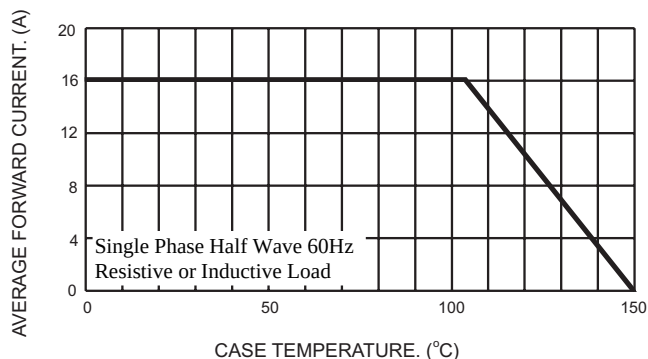


FIG.2- TYPICAL REVERSE CHARACTERISTICS

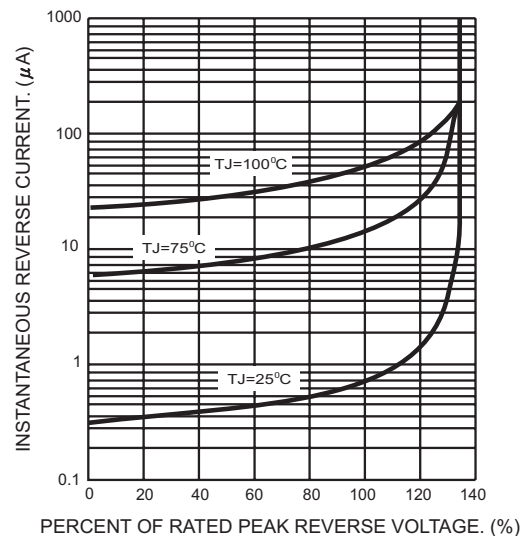


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

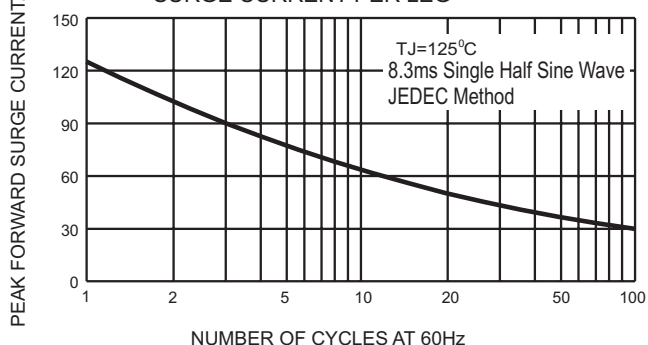


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER LEG

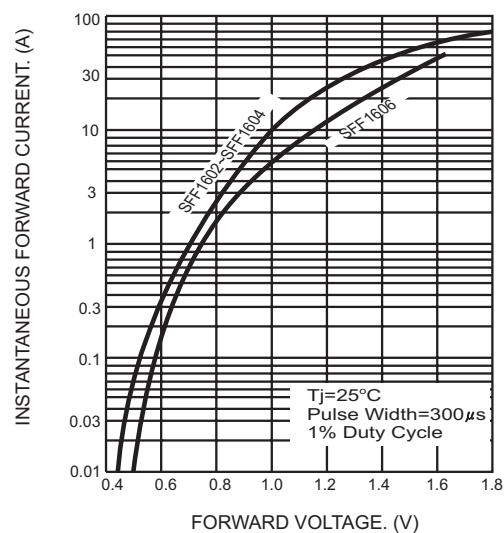


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

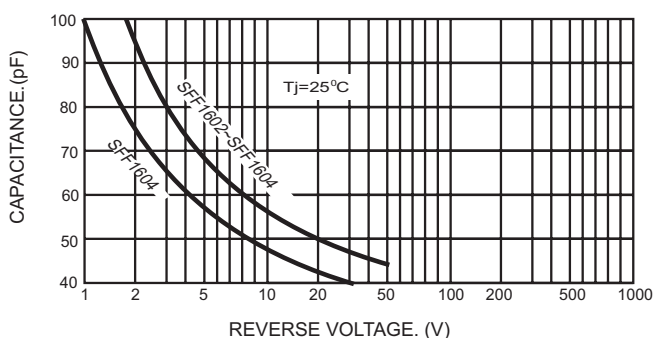


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

