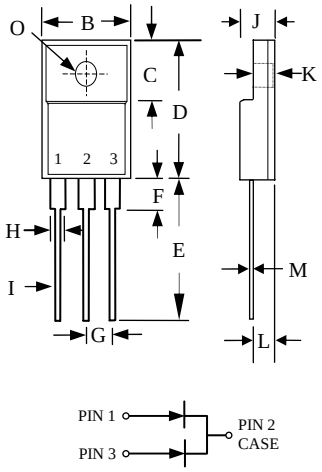
SFF1602 THRU SFF1606

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

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		

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

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60H_Z, 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)	Trr	35			nS
Typical Junction Capacitance (Note 2)	Cj	80		60	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	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=0.5A, 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 3" x 5" x 0.25" Al-Plate.

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

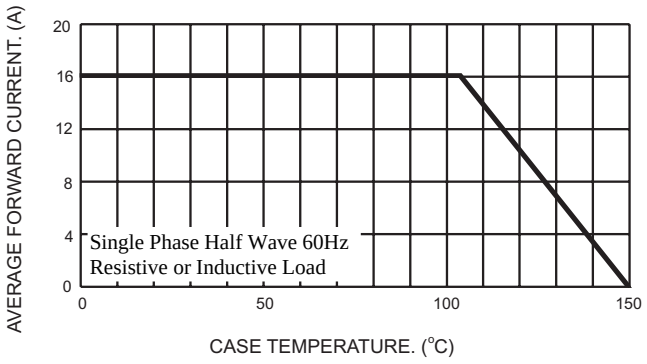


FIG.2- TYPICAL REVERSE CHARACTERISTICS

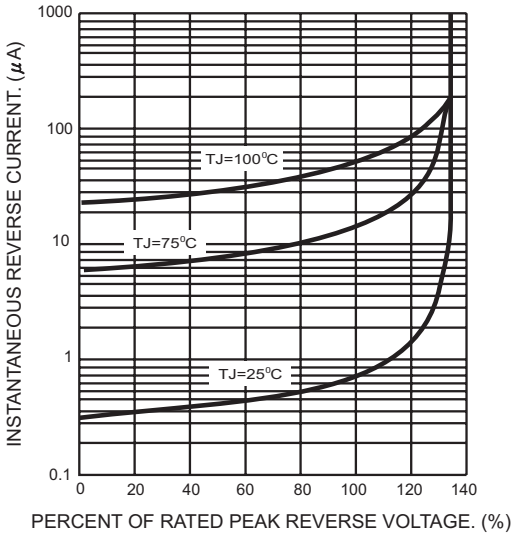


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

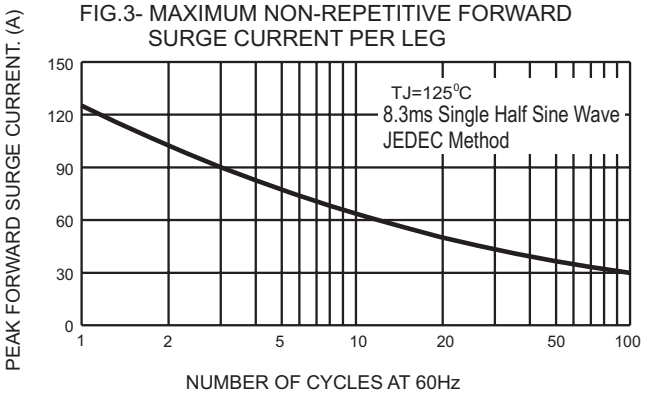


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER LEG

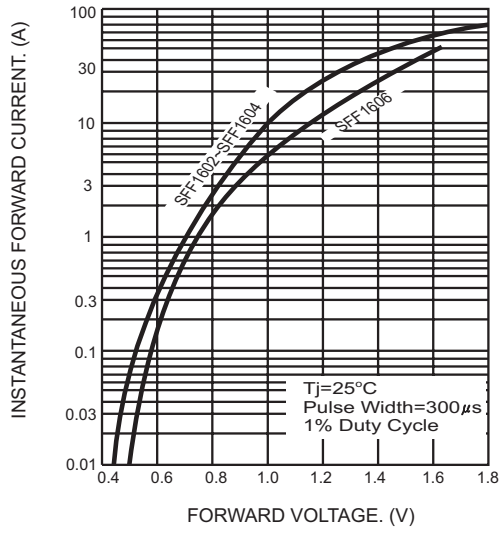


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

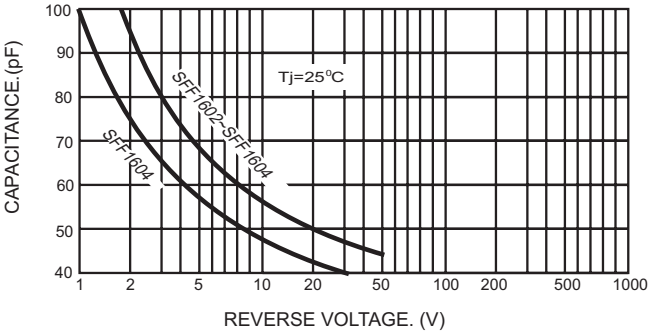
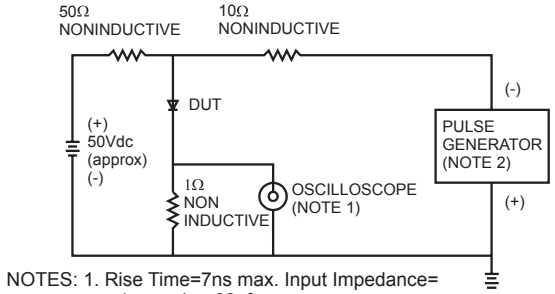
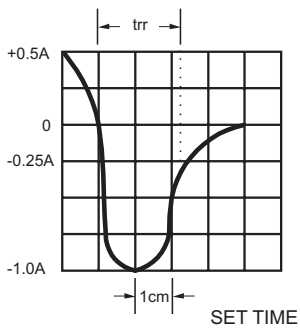


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms



SET TIME BASE FOR
5/ 10ns/ cm