



SFF2002 THRU SFF2006

Superfast Recovery Rectifiers

TO-220AB

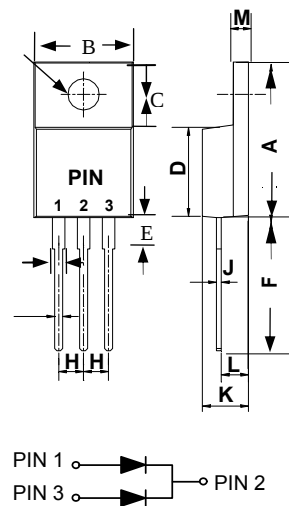
FEATURES

- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High forward surge capability
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in comply with EU ROHS 2011/65/EU directives



Mechanical Data

- **Case** : TO-220AB
- **Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity** : Cathode line denotes the cathode end
- **Mounting Position** : Any



TO-220AB		
DIM.	MIN.	MAX.
A	15.00	16.00
B	9.90	10.40
C	6.35	6.65
D	8.55	9.35
E	3.00	—
F	12.80	—
G	1.10	1.40
H	2.45	2.65
I	0.45	0.95
J	0.35	0.45
K	4.35	4.75
L	2.55	3.15
M	1.25	1.45
O	Ø3.65	Ø3.95
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load. For capacitive load, derate current by 20%

CHARACTERISTICS	Symbols	SFF2002	SFF2003	SFF2004	SFF2006	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	300	400	600	V
Maximum RMS Bridge Input Voltage	V_{RMS}	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	300	400	600	V
Maximum Average Forward Rectified Current	$I_{(AV)}$	20.0				A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	160				A
Maximum Forward Voltage at 10A DC	V_F	1.0	1.30	1.70		V
Maximum DC Reverse Current $T_A=25^{\circ}C$ at Rated DC Blocking Voltage $T_A=125^{\circ}C$	I_R	10 400				μA
Maximum Reverse Recovery Time (Note1)	TRR	35				ns
Typical Thermal Resistance	$R_{\theta JC}$	2.5				$^{\circ}C/W$
Operating Temperature Range	T_J	-55 to +150				$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150				$^{\circ}C$

NOTES: 1. Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$



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

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

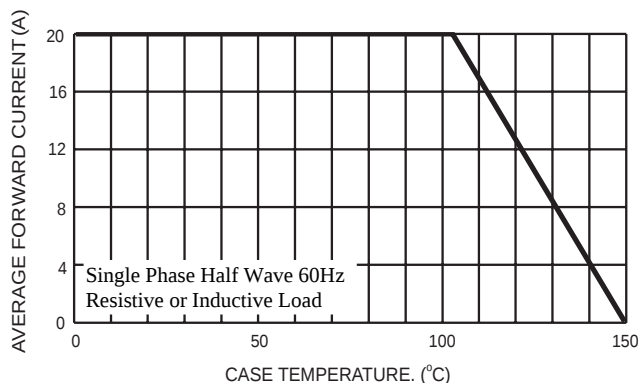


FIG.2- TYPICAL REVERSE CHARACTERISTICS

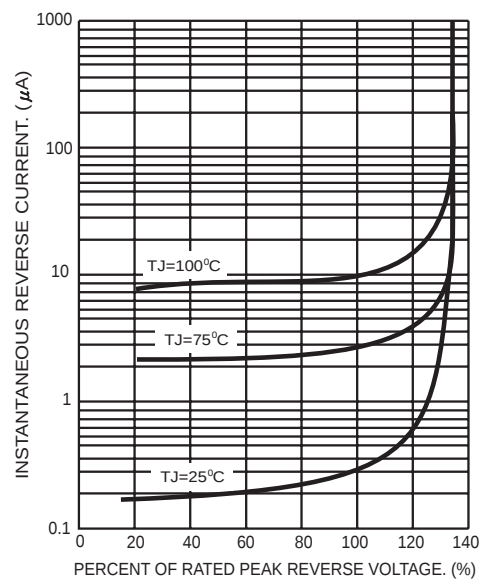


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

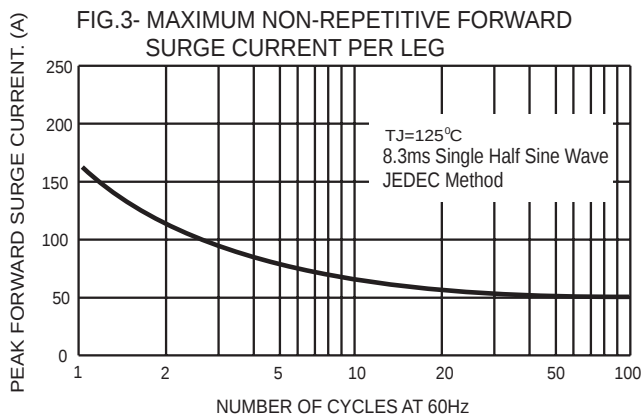


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER LEG

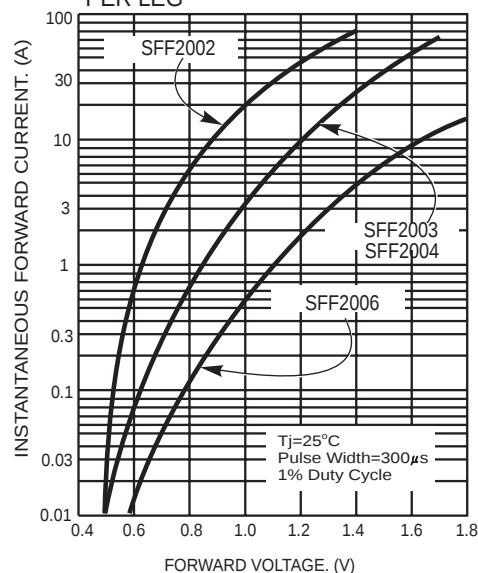


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

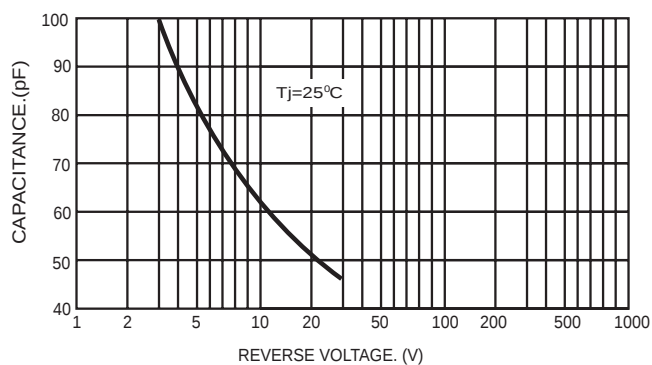


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

