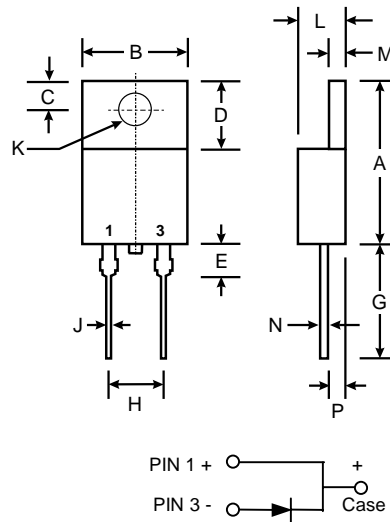


Features

- Glass Passivated Die Construction
- Super-Fast Switching
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0

Mechanical Data

- Case: TO-220AC, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version**



TO-220AC		
Dim	Min	Max
A	14.22	15.88
B	9.57	10.57
C	2.54	3.43
D	5.80	6.80
E	—	6.35
G	12.70	14.73
H	4.88	5.28
J	0.51	1.14
K	3.53 \varnothing	4.14 \varnothing
L	3.56	4.83
M	1.07	1.47
N	0.30	0.64
P	2.03	2.92
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	SF 810	SF 820	SF 830	SF 840	SF 850	SF 860	Unit
Peak Repetitive Reverse Voltage	VRRM							
Working Peak Reverse Voltage	VRWM	100	200	300	400	500	600	V
DC Blocking Voltage	VR							
RMS Reverse Voltage	VR(RMS)	70	140	210	280	350	420	V
Average Rectified Output Current @ $T_C = 100^\circ\text{C}$	Io	8.0						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	90						A
Forward Voltage @ $I_F = 8.0\text{A}$	VFM	1.0	1.3		1.7			V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	IRM	10				400		μA
Reverse Recovery Time (Note 1)	trr	35						nS
Typical Junction Capacitance (Note 2)	Cj	80				50		pF
Operating and Storage Temperature Range	Tj, TSTG	-55 to +150						$^\circ\text{C}$

Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

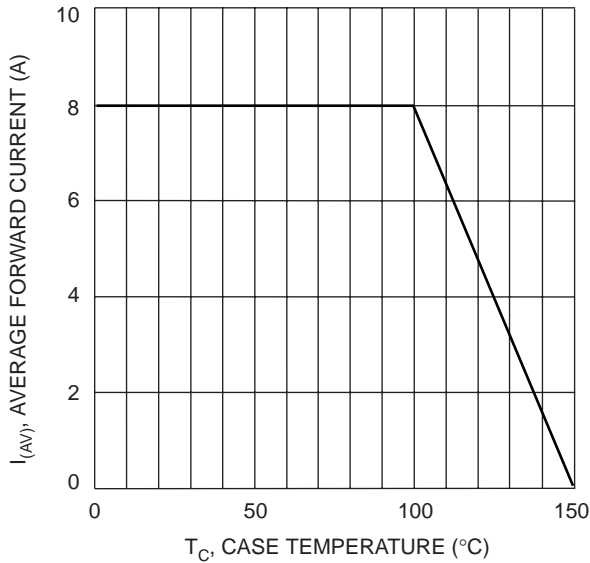


Fig. 1 Forward Current Derating Curve

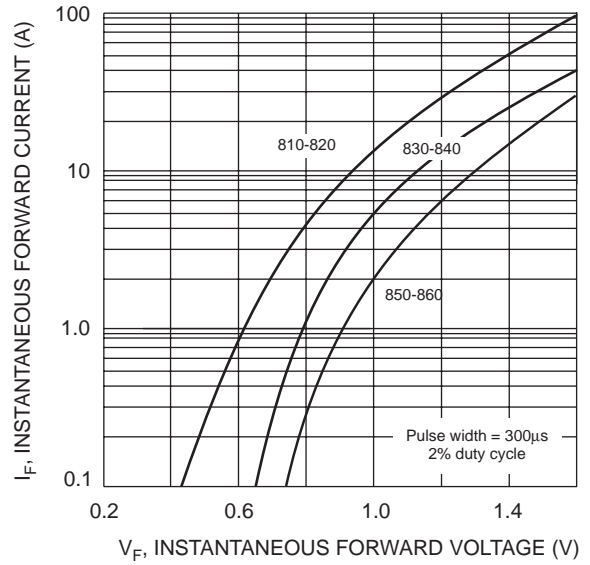


Fig. 2 Typical Forward Characteristics

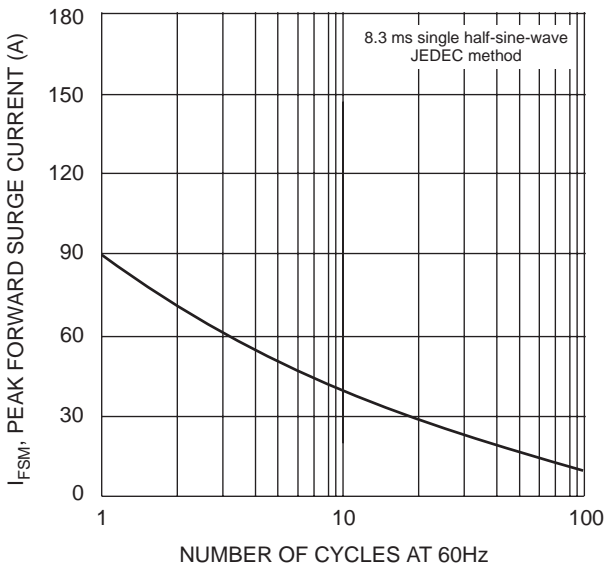


Fig. 3 Max Non-Repetitive Surge Current

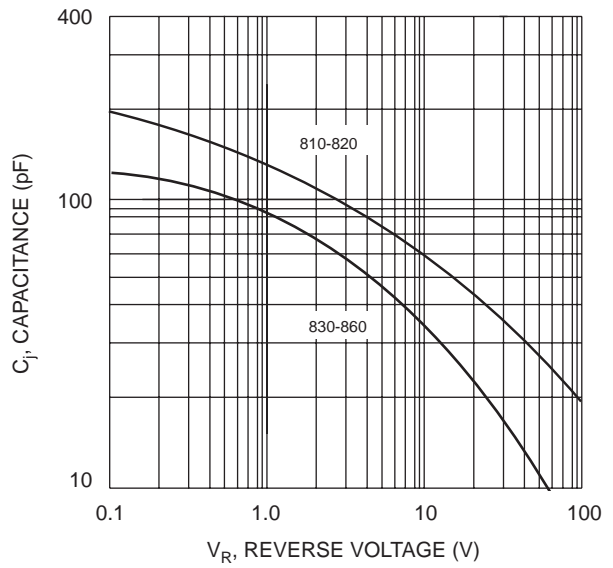


Fig. 4 Typical Junction Capacitance