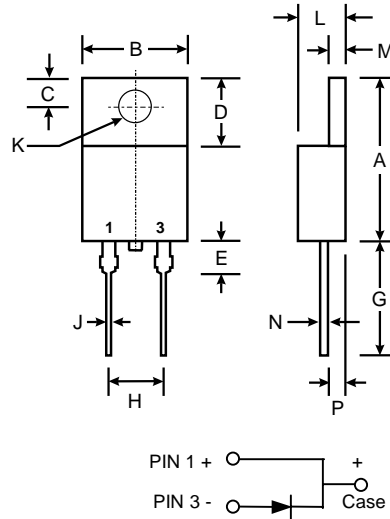


Features

- 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 1010	SF 1020	SF 1030	SF 1040	SF 1050	SF 1060	Unit
Peak Repetitive Reverse Voltage	V_{RRM}							
Working Peak Reverse Voltage	V_{RWM}	100	200	300	400	500	600	V
DC Blocking Voltage	V_R							
RMS Reverse Voltage	$V_{R(RMS)}$	70	140	210	280	350	420	V
Average Rectified Output Current @ $T_C = 100^\circ\text{C}$	I_o	10.0						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	90						A
Forward Voltage @ $I_f = 10.0\text{A}$	V_{FM}	1.0		1.3		1.7		V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}				10 400			μA
Reverse Recovery Time (Note 1)	t_{rr}				35			nS
Typical Junction Capacitance (Note 2)	C_j				200			pF
Operating and Storage Temperature Range	T_j, T_{STG}				-55 to +150			$^\circ\text{C}$

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

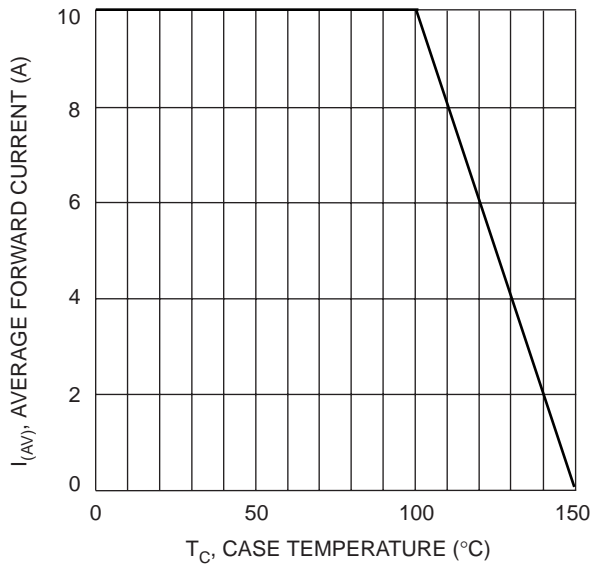


Fig. 1 Forward Current Derating Curve

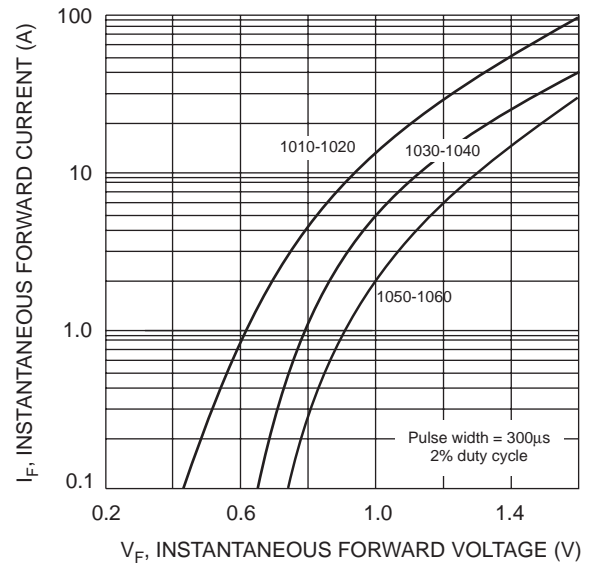


Fig. 2 Typical Forward Characteristics

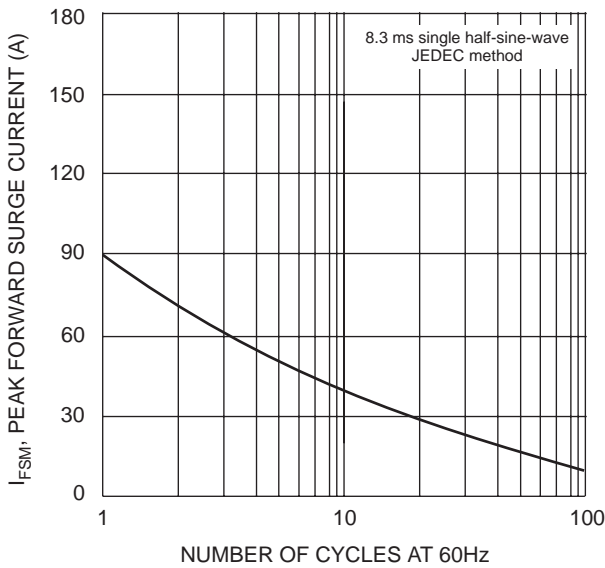


Fig. 3 Max Non-Repetitive Surge Current

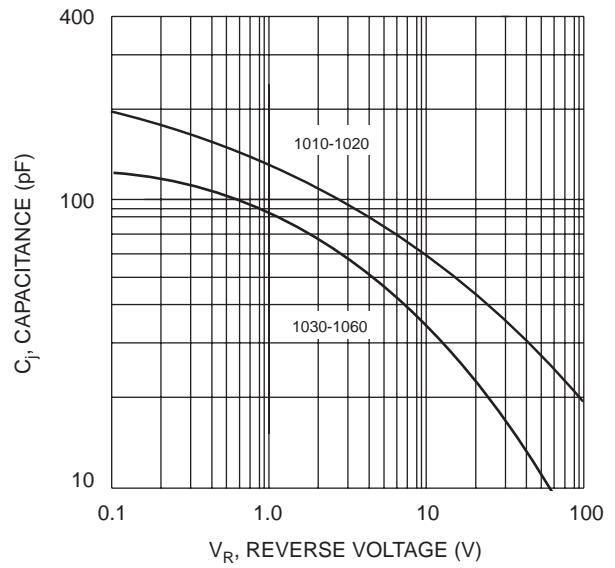


Fig. 4 Typical Junction Capacitance