

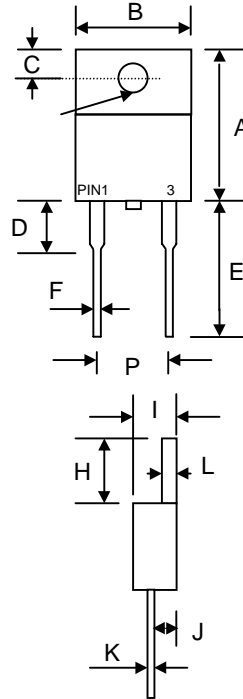
Features

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

Mechanical Data

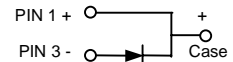
- Case: TO-220AC, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 1.81 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 11.5 cm·kg (10 in·lbs) Max.
- **Lead Free: For RoHS / Lead Free Version**

TO-220AC



TO-220AC		
Dim	Min	Max
A	13.90	15.90
B	9.80	10.70
C	2.54	3.43
D	3.56	4.56
E	12.70	14.73
F	0.51	1.14
G	3.55 Ø	4.09 Ø
H	5.75	6.85
I	3.56	4.83
J	2.03	2.92
K	0.30	0.64
L	1.10	1.40
P	4.80	5.35

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	STTH 8005D	STTH 801D	STTH 802D	STTH 803D	STTH 805D	STTH 806D	STTH 808D	STTH 810D	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}									V	
Working Peak Reverse Voltage	V_{RWM}	50	100	200	300	400	600	800	1000		
DC Blocking Voltage	V_R										
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	210	280	420	560	700	V	
Average Rectified Output Current @ $T_C = 105^\circ\text{C}$	I_O	8.0								A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150								A	
Forward Voltage @ $I_F = 8.0\text{A}$	V_{FM}	0.95			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}	50					75				nS
Typical Junction Capacitance (Note 2)	C_j	65					55				pF
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150								$^\circ\text{C}$	

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

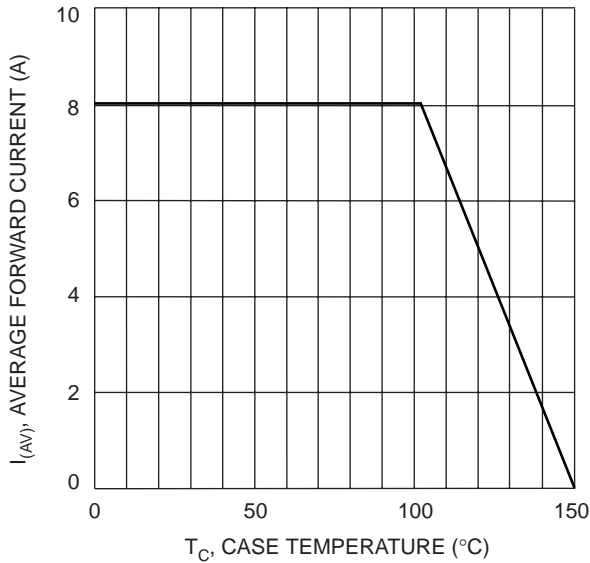


Fig. 1 Forward Current Derating Curve

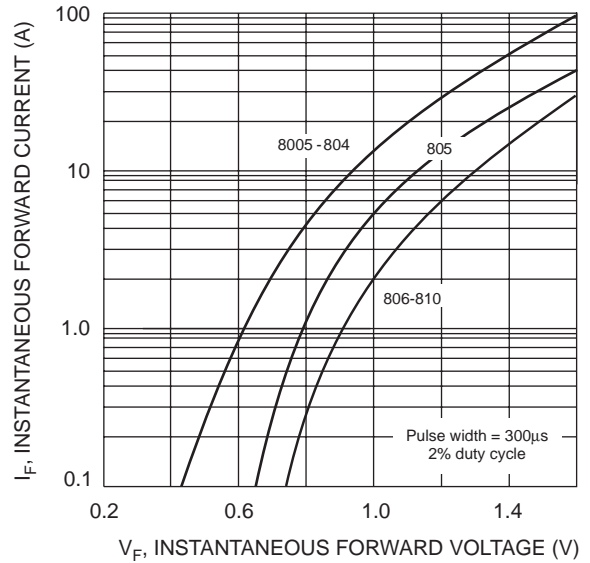


Fig. 2 Typical Forward Characteristics

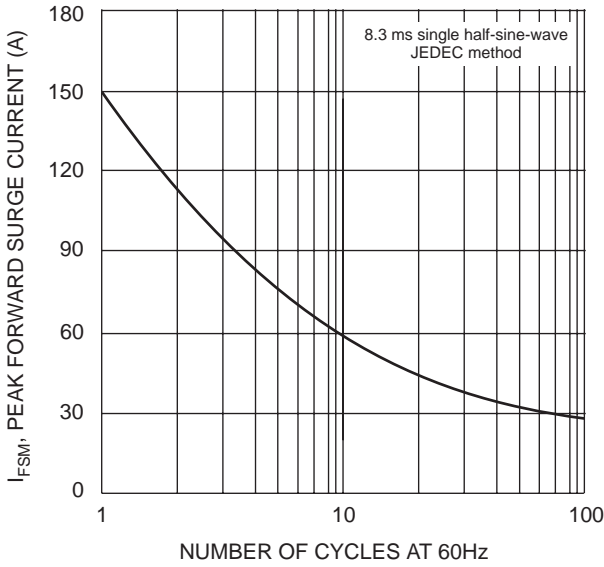


Fig. 3 Max Non-Repetitive Surge Current

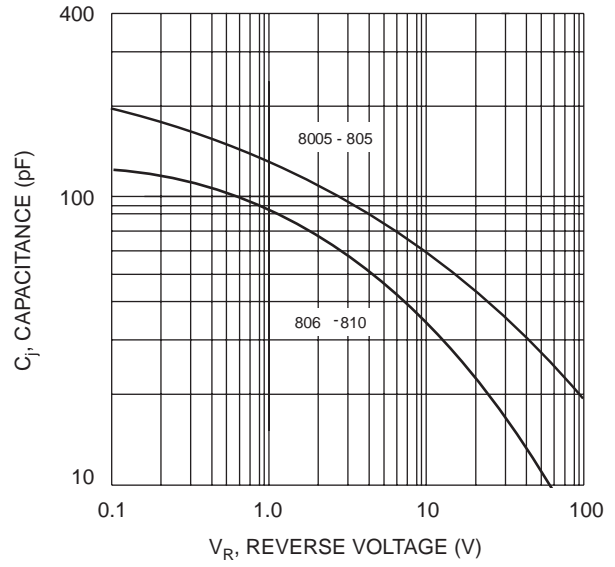


Fig. 4 Typical Junction Capacitance