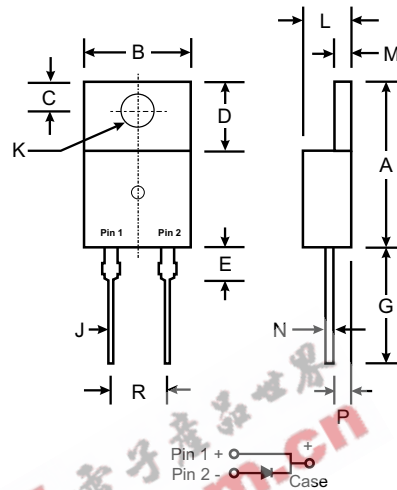


Features

- Glass Passivated Die Construction
- Diffused Junction
- Super-Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 100A Peak
- Low Reverse Leakage Current
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



TO-220AC		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
J	0.51	1.14
K	3.53 $\varnothing$	4.09 $\varnothing$
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
R	4.83	5.33
All Dimensions in mm		

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

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

Characteristic	Symbol	STPR 805DB	STPR 810DB	STPR 815DB	STPR 820DB	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	V
Average Rectified Output Current (Note 1) @ $T_C = 125^\circ\text{C}$	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}	100				A
Forward Voltage @ $I_F = 8.0\text{A}$	V_{FM}	1.3				V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C = 100^\circ\text{C}$	I_{RM}	10 500				μA
Reverse Recovery Time (Note 2)	t_{rr}	25				ns
Typical Junction Capacitance (Note 3)	C_j	45				pF
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	3.1				$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150				$^\circ\text{C}$

- Notes:
1. Case mounted on heatsink.
 2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$.
 3. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.

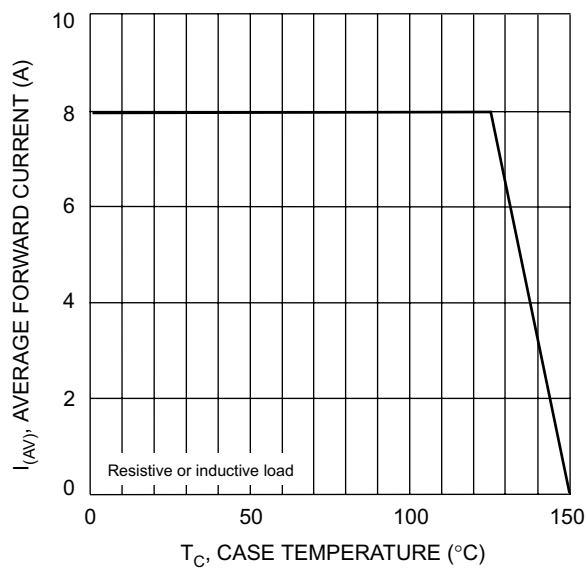


Fig. 1 Forward Current Derating Curve

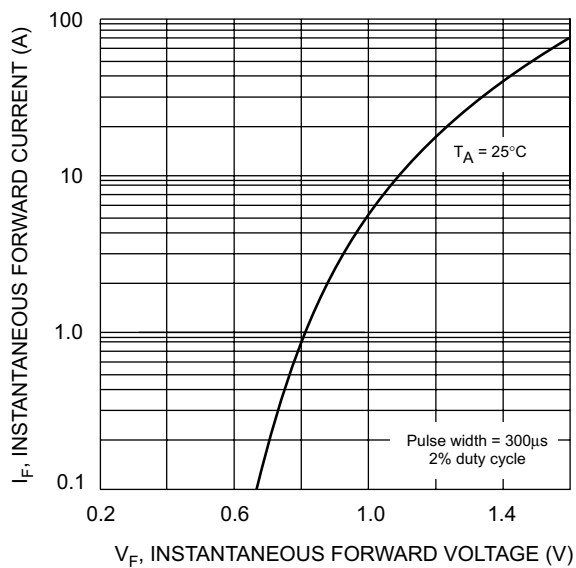


Fig. 2 Typical Forward Characteristics

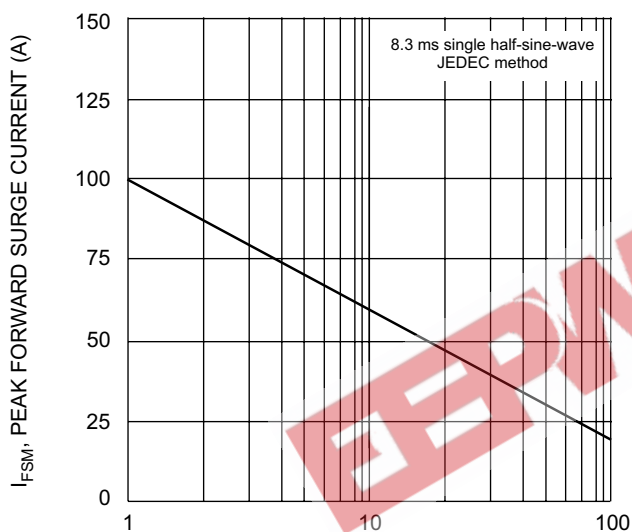


Fig. 3 Maximum Non-Repetitive Surge Current

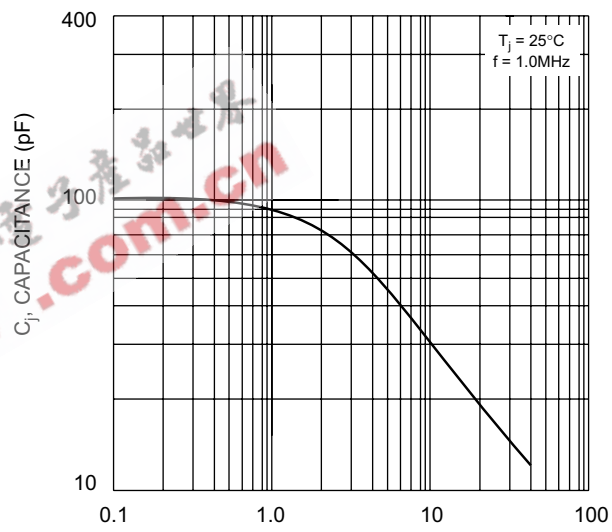


Fig. 4 Typical Junction Capacitance

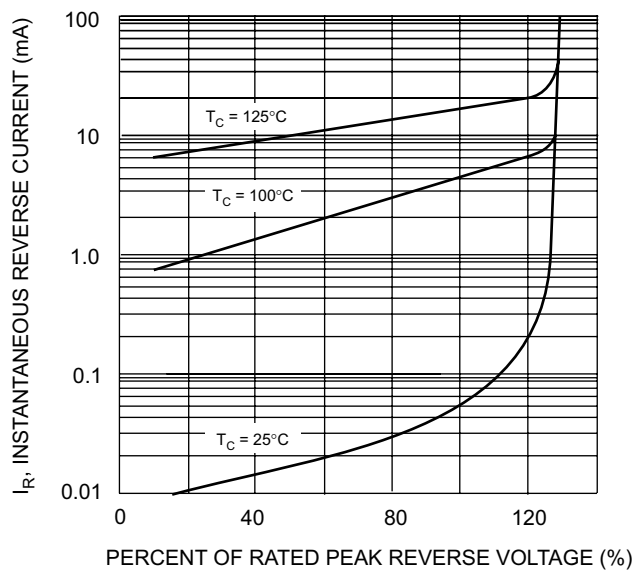


Fig. 5 Typical Reverse Characteristics