SBD835L

8A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

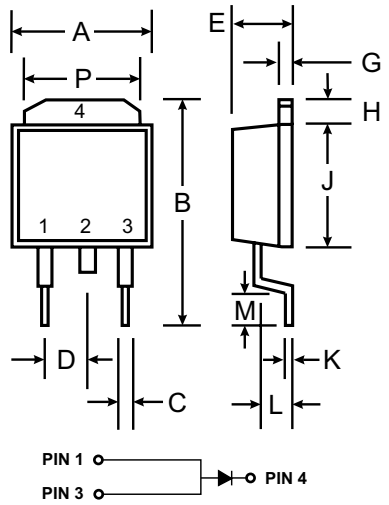
ADVANCE INFORMATION

Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Very Low Forward Voltage Drop
- Surge Overload Rating to 150A Peak
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: DPAK Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Type Number
- Weight: 0.4 grams (approx.)



Note: Pins 1 & 3 must be electrically connected at the printed circuit board.

DPAK		
Dim	**Min**	**Max**
A	6.3	6.7
B	—	10
C	0.3	0.8
D	2.3 Nominal	
E	2.1	2.5
G	0.4	0.6
H	1.2	1.6
J	5.3	5.7
K	0.5 Nominal	
L	1.3	1.8
M	1.0	—
P	5.1	5.5
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	SBD835L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	35	V
RMS Reverse Voltage	$V_{R(RMS)}$	25	V
Average Rectified Output Current @ T_C = 88°C	I_O	8	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 (Note 2) @ I_F = 8A, T_j = 25°C @ I_F = 8A, T_j = 125°C	V_{FM}	0.51 0.41	V
Voltage Rate of Change	dv/dt	10,000	V/μs
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 100°C	I_{RM}	1.4 35	mA
Typical Junction Capacitance (Note 3)	C_J	300	pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	6	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	80	°C/W
Operating Temperature Range	T_j	-65 to +125	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

Notes: 1. Thermal resistance: junction to case, unit mounted on PC board with 5.0 mm^2 (0.013 mm thick) copper pad as heat sink.
2. 300μs pulse width, 2% duty cycle.
3. f = 1 MHz, V_R = 5VDC.

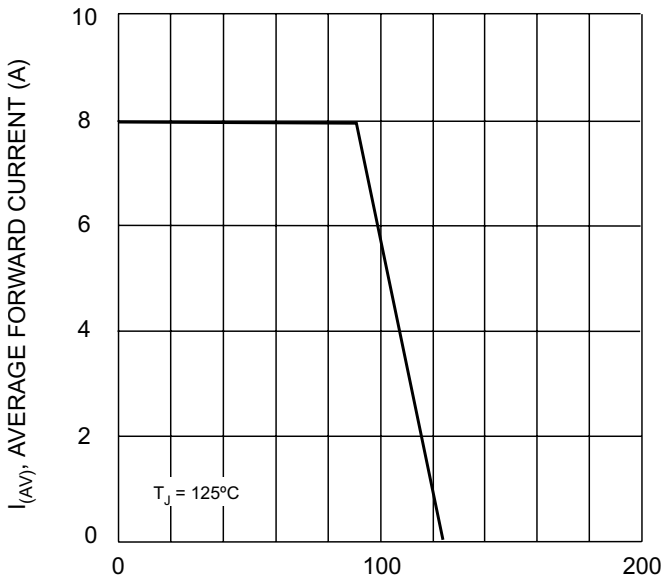


Fig. 1 Forward Current Derating Curve

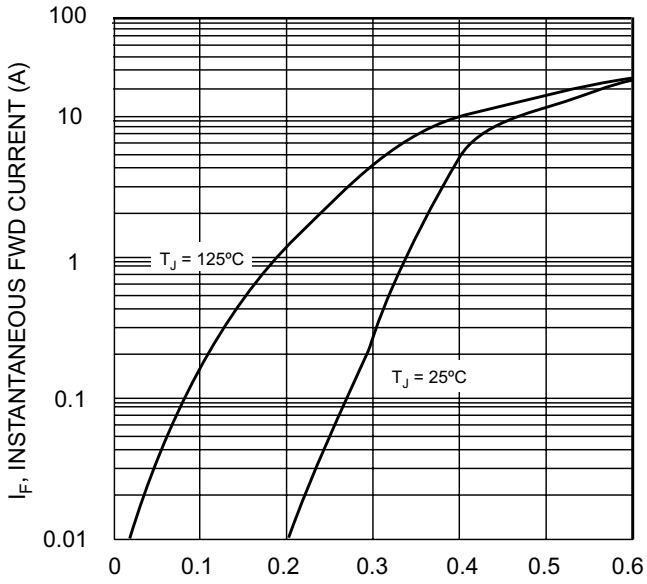


Fig. 2 Typical Fwd Characteristics per Element

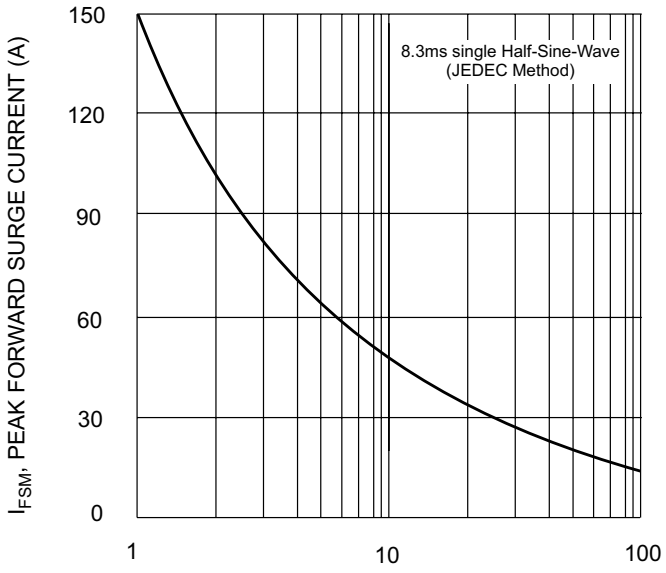


Fig. 3 Max Non-Repetitive Surge Current

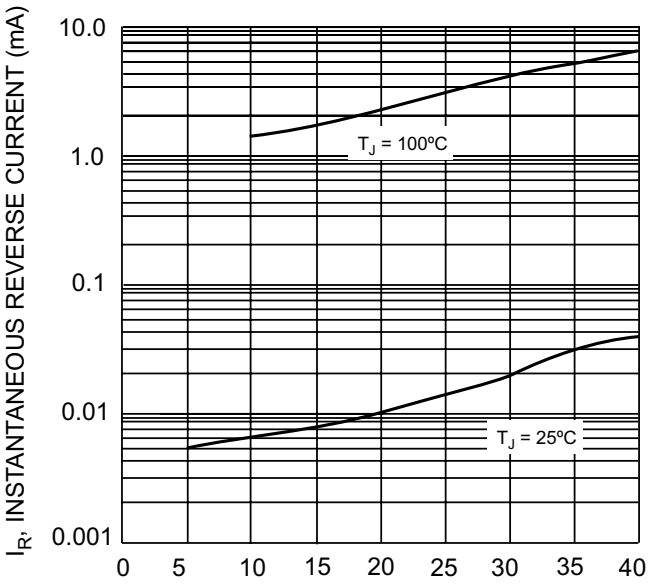


Fig. 4 Typical Reverse Characteristics