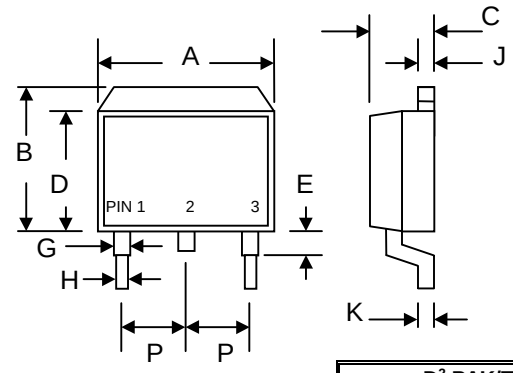
SB820D – SB8100D

8.0A D²PAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

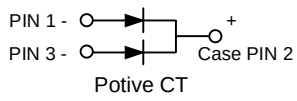
Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

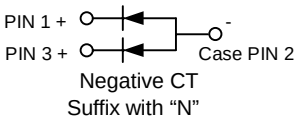


Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.7 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Standard Packaging: 24mm Tape (EIA-481)



Potive CT



Negative CT
Suffix with "N"

D² PAK/TO-263		
Dim	**Min**	**Max**
A	9.8	10.4
B	9.6	10.6
C	4.4	4.8
D	8.5	9.1
E	—	0.7
G	1.0	1.4
H	—	0.9
J	1.2	1.4
K	0.3	0.7
P	2.35	2.75
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	SB 820D	SB 830D	SB 840D	SB 850D	SB 860D	SB 880D	SB 8100D	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	50	60	80	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	56	70	V
Average Rectified Output Current @T_C = 100°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 = 8.0A	V_{FM}	0.55			0.75		0.85		V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	0.5 50							mA
Typical Junction Capacitance (Note 1)	C_j	400							pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	60							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-50 to +150							°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

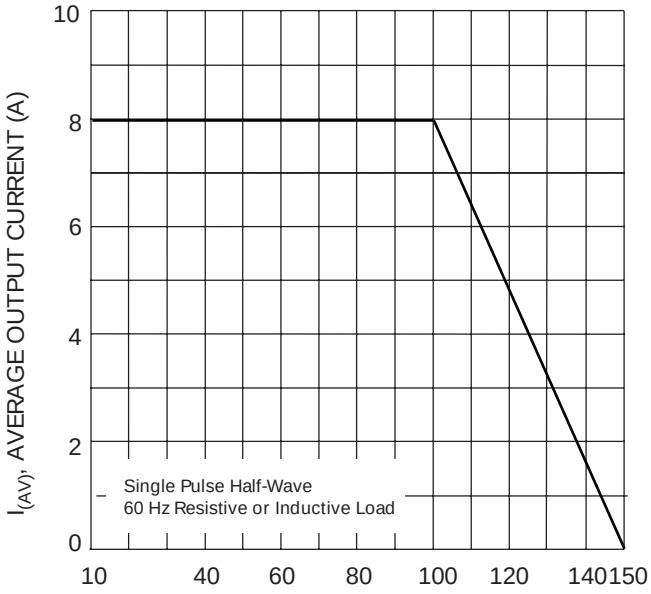


Fig. 1 Forward Current Derating Curve

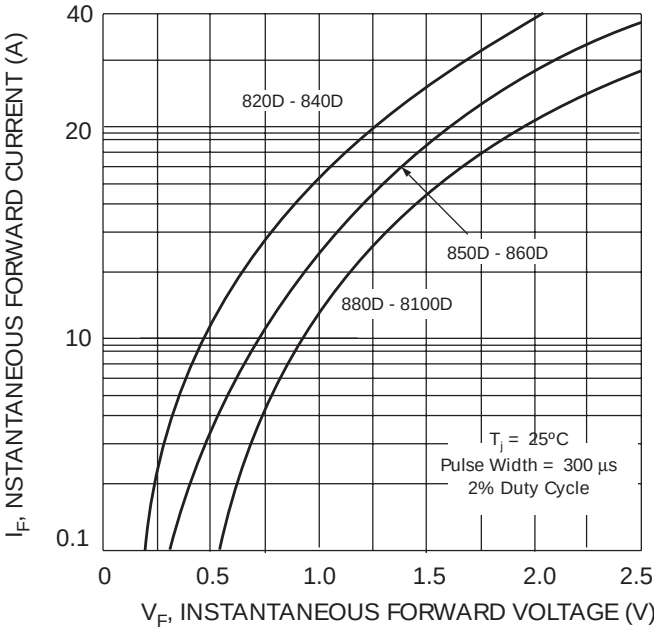


Fig. 2 Typical Forward Characteristics

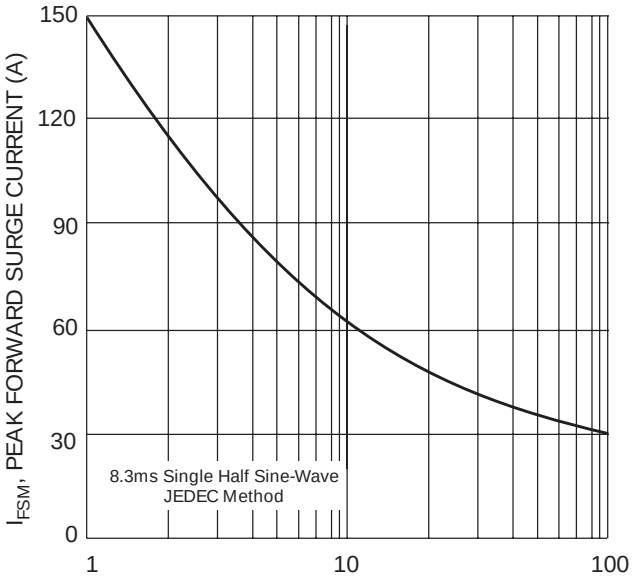


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

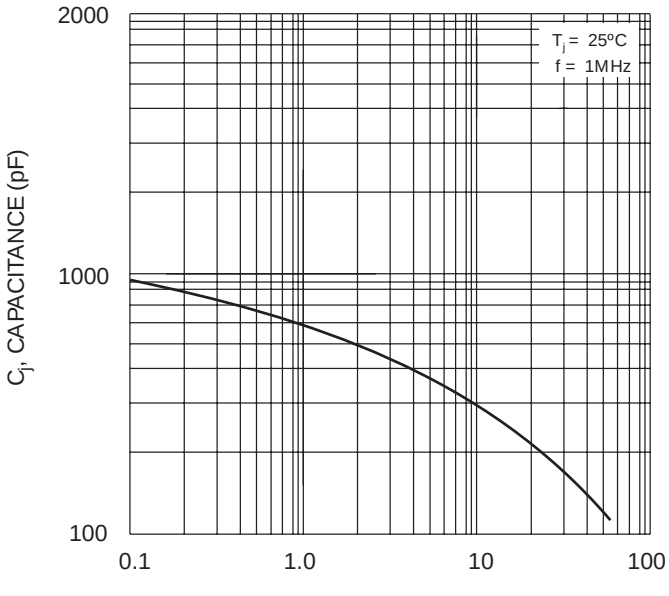


Fig. 4 Typical Junction Capacitance

