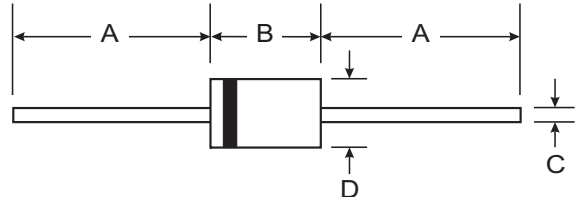


Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 25A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- High Temperature Soldering: 260°C/10 Second at Terminal
- **Lead Free Finish, RoHS Compliant (Note 3)**



Mechanical Data

- Case: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish — Bright Tin. Plated Leads - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Mounting Position: Any
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 0.3 grams (approximate)

DO-41		
Dim	Min	Max
A	25.4	—
B	4.1	5.2
C	0.71	0.86
D	2.0	2.7
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	SB170	SB180	SB190	SB1100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	80	90	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectified Output Current @ T _T = 85°C	I _O	1.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	25				A
Forward Voltage @ I _F = 1.0A @ T _A = 25°C	V _{FM}	0.80				V
Peak Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 100°C	I _{RM}	0.5 10				mA
Typical Junction Capacitance (Note 2)	C _j	80				pF
Typical Thermal Resistance Junction to Lead	R _{θJL}	15				K/W
Typical Thermal Resistance Junction to Ambient (Note 1)	R _{θJA}	50				K/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +125				°C

- Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

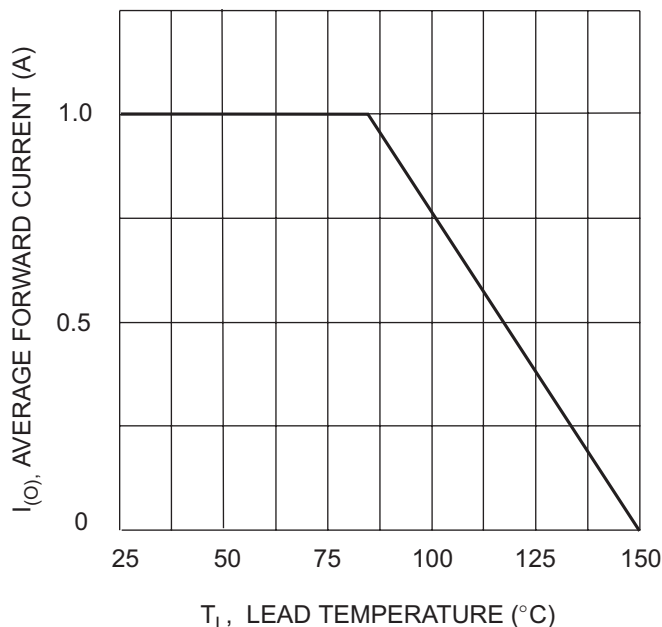


Fig. 1 Forward Current Derating Curve

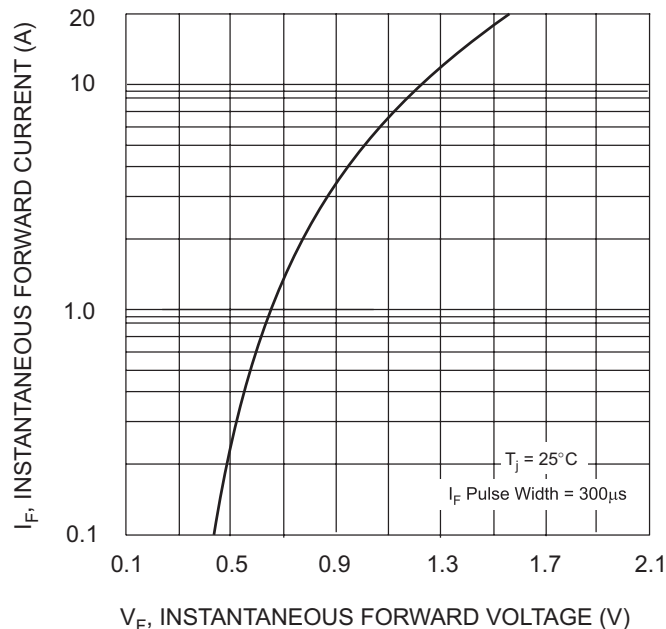


Fig. 2 Typical Forward Characteristics

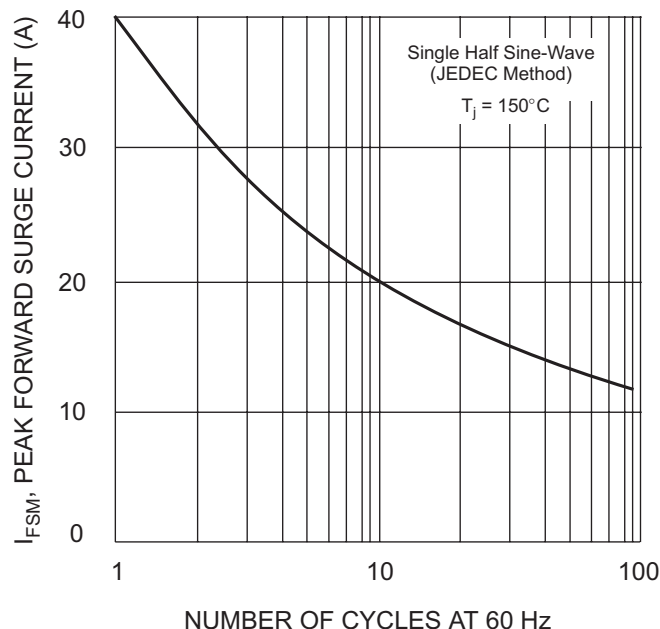


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

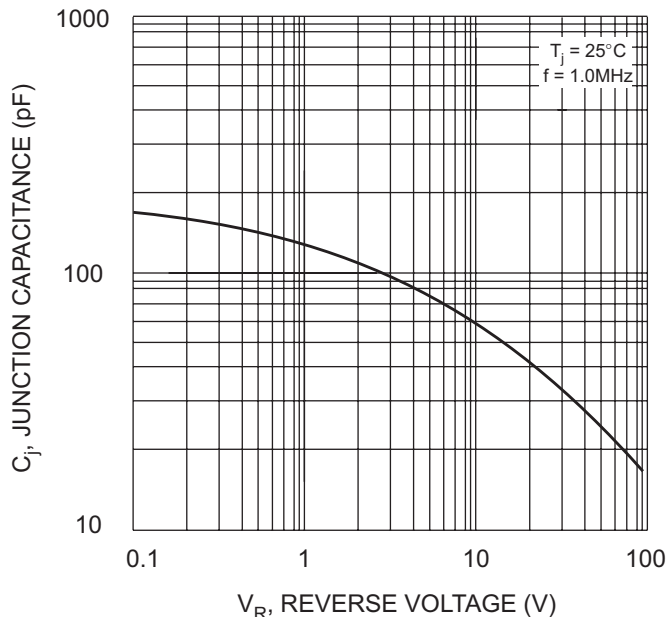


Fig. 4 Typical Junction Capacitance

Ordering Information (Note 4)

Device	Packaging	Shipping
SB170-A	DO-41	5K/Ammo Pack
SB170-B	DO-41	1K/Bulk
SB170-T	DO-41	5K/Tape & Reel, 13-inch
SB180-A	DO-41	5K/Ammo Pack
SB180-B	DO-41	1K/Bulk
SB180-T	DO-41	5K/Tape & Reel, 13-inch
SB190-A	DO-41	5K/Ammo Pack
SB190-B	DO-41	1K/Bulk
SB190-T	DO-41	5K/Tape & Reel, 13-inch
SB1100-A	DO-41	5K/Ammo Pack
SB1100-B	DO-41	1K/Bulk
SB1100-T	DO-41	5K/Tape & Reel, 13-inch

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>