

Maximum Ratings and Electrical Characteristics (@TA = +25°C, unless otherwise specified.)

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

| Characteristic | Symbol | SB120 | SB130 | SB140 | SB150 | SB160 | Unit |
|---|---------------------|-------------|-------------|-------|--------|-------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | Vrrm Vrwm Vr | 20 | 30 | 40 | 50 | 60 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 14 | 21 | 28 | 35 | 42 | V |
| Average Rectified Output Current (See Figure 1) | lo | | | 1.0 | | | Α |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | I _{FSM} | | | 40 | | | Α |
| Forward Voltage (Note 6) @ I _F = 1.0A | VFM | | 0.50 | | 0. | 70 | V |
| Peak Reverse Current | I _{RM} | | 10 | 0.5 | 5 | .0 | mA |
| Typical Thermal Resistance Junction to Lead (Note 5) | R⊕JL | 15 | | °C/W | | | |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 50 | | °C/W | | | |
| Operating Temperature Range | TJ | | -65 to +125 | | -65 to | +150 | - °C |
| Storage Temperature Range | Tstg | -65 to +150 | | | | | |

Notes:

- 5. Measured at ambient temperature at a distance of 9.5mm from the case.
- 6. Short duration pulse test used to minimize self-heating effect.

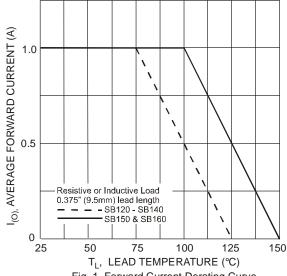


Fig. 1 Forward Current Derating Curve

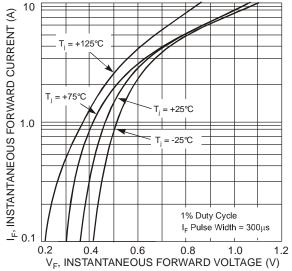
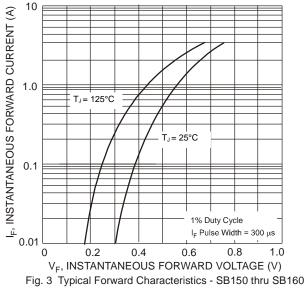
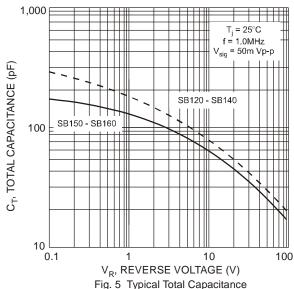
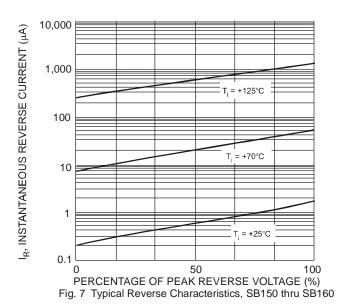


Fig. 2 Typical Forward Characteristics - SB120 thru SB140









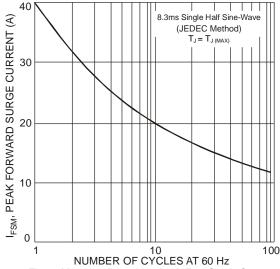
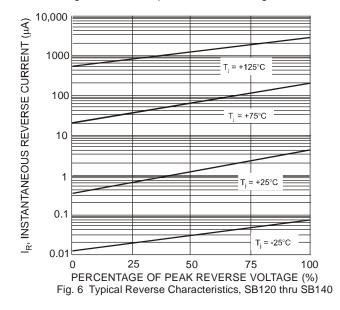


Fig. 4 Max Non-Repetitive Peak Fwd Surge Current

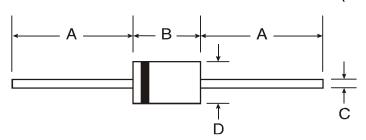




Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

DO-41 (Plastic)



| DO-41 (Plastic) | | | | |
|----------------------|-------|-------|--|--|
| Dim | Min | Max | | |
| Α | 25.40 | - | | |
| В | 4.06 | 5.21 | | |
| С | 0.71 | 0.864 | | |
| D | 2.00 | 2.72 | | |
| All Dimensions in mm | | | | |

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