

# SB120 THRU SB1100

## Schottky Barrier Rectifier

Reverse Voltage – 20 to 100 Volts

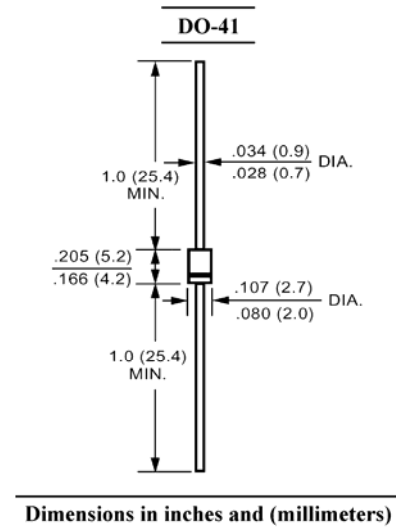
Forward Current – 1.0 Amperes

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability

### Mechanical Data

- **Case:** Molded plastic, DO-41
- **Epoxy:** UL 94V-0 rate flame retardant
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any



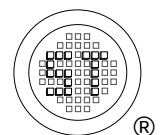
### Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter                                                                                                  | Symbols           | SB120        | SB130 | SB140 | SB150 | SB160        | SB180 | SB1100 | Units |
|------------------------------------------------------------------------------------------------------------|-------------------|--------------|-------|-------|-------|--------------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                     | V <sub>RRM</sub>  | 20           | 30    | 40    | 50    | 60           | 80    | 100    | V     |
| Maximum RMS Voltage                                                                                        | V <sub>RMS</sub>  | 14           | 21    | 28    | 35    | 42           | 56    | 80     | V     |
| Maximum DC Blocking Voltage                                                                                | V <sub>DC</sub>   | 20           | 30    | 40    | 50    | 60           | 80    | 100    | V     |
| Maximum Average Forward Rectified Current<br>0.375" (9.5 mm) Lead Length                                   | I <sub>(AV)</sub> | 1            |       |       |       |              |       |        | A     |
| Peak Forward Surge Current 8.3 ms Single Half<br>Sine-Wave<br>Superimposed on Rated Load (JEDEC Method)    | I <sub>FSM</sub>  | 40           |       |       |       |              |       |        | A     |
| Maximum Forward Voltage at 1 A and 25°C                                                                    | V <sub>F</sub>    | 0.5          |       |       | 0.7   |              | 0.85  |        | V     |
| Maximum Reverse Current<br>T <sub>A</sub> = 25°C<br>at Rated DC Blocking Voltage<br>T <sub>A</sub> = 100°C | I <sub>R</sub>    | 0.5<br>10    |       |       |       |              |       |        | mA    |
| Typical Junction Capacitance <sup>1)</sup>                                                                 | C <sub>J</sub>    | 110          |       |       |       |              |       |        | pF    |
| Typical Thermal Resistance <sup>2)</sup>                                                                   | R <sub>θJA</sub>  | 50           |       |       |       |              |       |        | °C/W  |
| Operating Junction Temperature Range                                                                       | T <sub>j</sub>    | - 55 to +125 |       |       |       | - 55 to +150 |       |        | °C    |
| Storage Temperature Range                                                                                  | T <sub>stg</sub>  | - 55 to +150 |       |       |       |              |       |        | °C    |

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 VDC.

<sup>2)</sup> Thermal resistance from junction to ambient 0.375" (9.5 mm) lead length P.C.B mounted .



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