



### **DATA SHEET**

## SB120~SB1100

# 1 AMPERE SCHOTTKY BARRIER RECTIFIERS VOLTAGE 50 to 100 Volts CURRENT - 1.0 Ampere

#### **FEATURES**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- 1 ampere operation at T<sub>A</sub>=75°C with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters ,free wheeling , and polarity protection applications .

#### **MECHANICAL DATA**

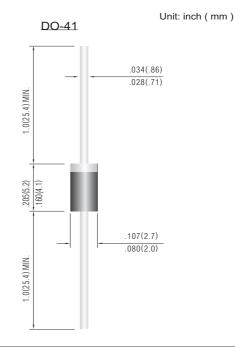
Case: DO-41 Molded plastic

Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.012 ounces, 0.34grams



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

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|--|----------------|-------|-------|-------|-------|-------|--------|----------|
|  | SB120          | SB130 | SB140 | SB150 | SB160 | SB180 | SB1100 | UNIT     |
| Peak Reverse Voltage,Repetitive ; V <sub>RM</sub>  | 20             | 30    | 40    | 50    | 60    | 80    | 100    | V        |
| Maximum RMS Voltage  | 14             | 21    | 28    | 35    | 42    | 56    | 70     | V        |
| DC Reverse Voltage; V <sub>R</sub>   | 20             | 30    | 40    | 50    | 60    | 80    | 100    | V        |
| Maximum Forward Voltage at 1.0A  | 0.50 0.70 0.85 |       |       |       |       | V     |        |          |
| Maximum Average Forward Rectified Current .375" Lead Length at T <sub>A</sub> =75°C                          | 1.0            |       |       |       |       |       | А      |          |
| Peak Forward Surge Current, IFM (surge):8. 3ms single half sine-wave superimposedon rated load(JEDEC method) | 30.0           |       |       |       |       |       |        | А        |
| Maximum Full Load Reverse Current,Full Cycle Average at T <sub>A</sub> =75°C                                 | 30.0           |       |       |       |       |       |        | mA       |
| Maximum DC Reverse Current at T <sub>A</sub> =25°C At Rated DC Blocking Voltage T <sub>A</sub> =100°C        | 0.5<br>10.0    |       |       |       |       |       |        | mA<br>mA |
| Typical Thermal Resistance RθJA(Note 1)  | 110            |       |       |       |       |       |        | pF       |
| Typical Junction capacitance (Note 2)  | 80             |       |       |       |       |       |        | °C /W    |
| Operating Temperature Range T <sub>J</sub>   | -50 to +125    |       |       |       |       |       |        | °C       |

#### NOTES:

- 1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2. Thermal Resistance from Junction to Ambient .

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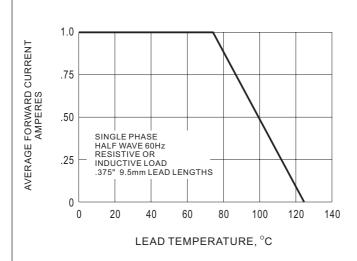
50-60V

80-100V

TJ=25°C Pulse Width=300us 1% Duty Cycle

1.1 1.3 1.5 1.7 1.9

#### RATING AND CHARACTERISTIC CURVES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

20-40V

50

20

10

1.0

0.1

.6 .7 .9

INSTANTANEOUS FORWARD CURRENT AMPERES

Fig.1-FORWARD CURRENT DERATING CURVE



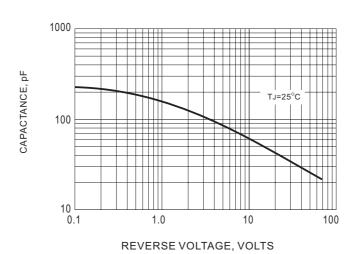
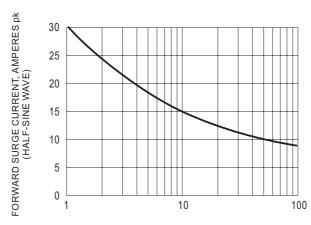


Fig.3-TYPICAL JUNCTION CAPACITANCE



NUMBER OF CYCLES AT 60Hz

Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

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