



Certificate Number: Q10561



Certificate Number: E17276

## SB520S - SB5B0S

**PRV : 20 - 100 Volts**  
**I<sub>o</sub> : 5.0 Amperes**

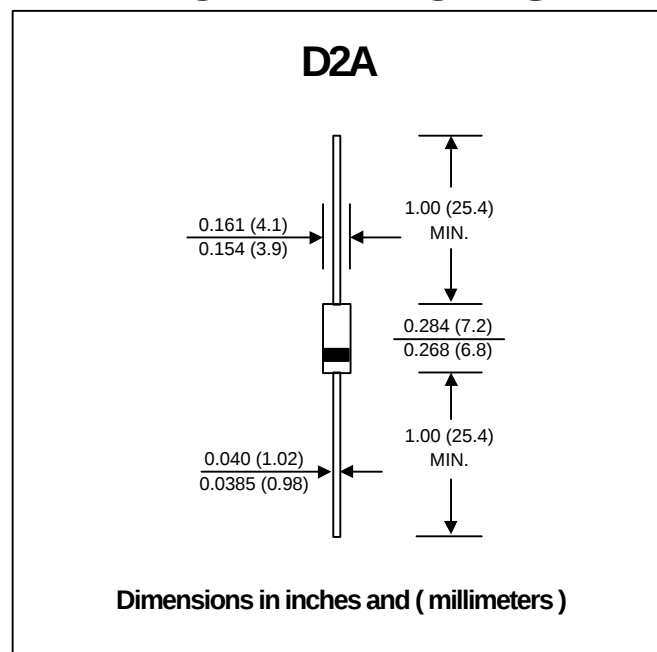
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low cost
- \* Low forward voltage drop

### MECHANICAL DATA :

- \* Case : D2A Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.645 gram

## SCHOTTKY BARRIER RECTIFIER DIODES



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

| RATING                                                                                               | SYMBOL             | SB<br>520S    | SB<br>530S | SB<br>540S | SB<br>550S    | SB<br>560S | SB<br>570S | SB<br>580S | SB<br>590S | SB<br>5B0S | UNITS |
|------------------------------------------------------------------------------------------------------|--------------------|---------------|------------|------------|---------------|------------|------------|------------|------------|------------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                               | V <sub>RRM</sub>   | 20            | 30         | 40         | 50            | 60         | 70         | 80         | 90         | 100        | Volts |
| Maximum RMS Voltage                                                                                  | V <sub>RMS</sub>   | 14            | 21         | 28         | 35            | 42         | 49         | 56         | 63         | 70         | Volts |
| Maximum DC Blocking Voltage                                                                          | V <sub>DC</sub>    | 20            | 30         | 40         | 50            | 60         | 70         | 80         | 90         | 100        | Volts |
| Maximum Average Forward Current<br>0.375", 9.5mm Lead Length See Fig.1                               | I <sub>F(AV)</sub> | 5.0           |            |            |               |            |            |            |            |            | Amps. |
| Peak Forward Surge Current, 8.3ms single half sine wave<br>superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>   | 150           |            |            |               |            |            |            |            |            | Amps. |
| Maximum Forward Voltage at I <sub>F</sub> = 5 Amps. (Note 1)                                         | V <sub>F</sub>     | 0.5           |            |            | 0.67          |            |            | 0.79       |            |            | Volt. |
| Maximum Reverse Current at Ta = 25 °C                                                                | I <sub>R</sub>     | 0.5           |            |            |               |            |            |            |            |            | mA    |
| Rated DC Blocking Voltage (Note 1) Ta = 100 °C                                                       | I <sub>R(H)</sub>  | 50            |            |            | 25            |            |            |            |            |            | mA    |
| Junction Temperature Range                                                                           | T <sub>J</sub>     | - 65 to + 125 |            |            | - 65 to + 150 |            |            |            |            |            | °C    |
| Storage Temperature Range                                                                            | T <sub>STG</sub>   | - 65 to + 150 |            |            |               |            |            |            |            |            | °C    |

### Notes :

(1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.

UPDATE : MAY 10, 1999

## RATING AND CHARACTERISTIC CURVES (SB520S - SB5B0S)

FIG.1 - FORWARD CURRENT DERATING CURVE

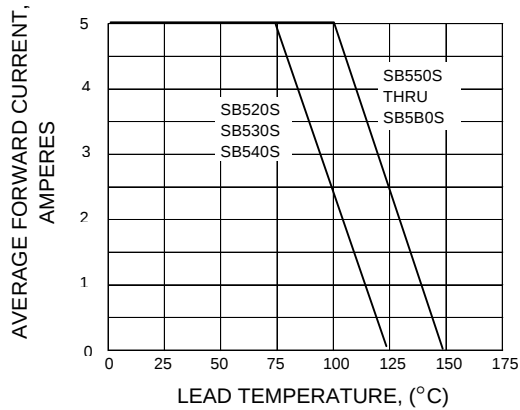


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

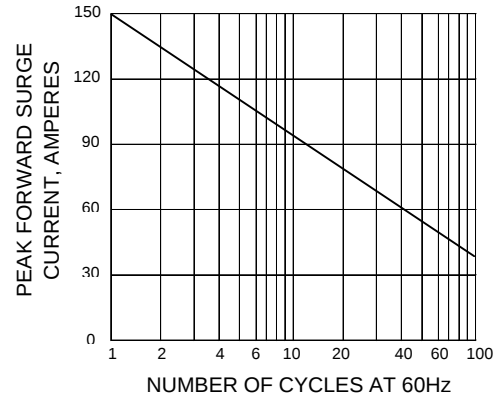


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

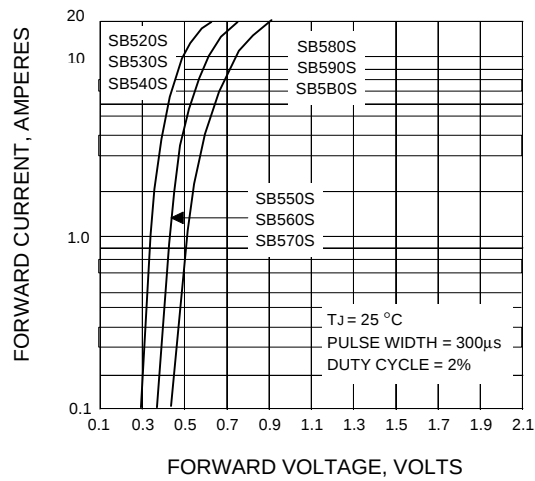


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

