

## II. Schottky Rectifier

### 3.0A Surface Mount Schottky Rectifier SB32~SB320

(Package: SMB (DO-214AA))

|   |   |
|---|---|
| <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• The plastic package carries Underwriters Laboratory flammability classification 94V-0</li> <li>• Metal silicon junction, majority carrier conduction</li> <li>• Low power loss, high efficiency</li> <li>• High forward surge current capability</li> <li>• High temperature soldering guaranteed : 250 /10 seconds at terminals</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : JEDEC DO-214AA molded plastic body</li> <li>• Terminals : Solder plated, solderable per MIL-STD-750, method 2026</li> <li>• Polarity : Color band denotes cathode end</li> <li>• Mounting Position : Any</li> <li>• Weight : 0.090 grams</li> </ul> | <p>Case: SMB<br/>Dimensions in inches and (millimetres)</p> |
|---|---|

### Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

| Characteristic   | Symbol      | SB 32       | SB 33 | SB 34 | SB 35 | SB 36       | SB 38 | SB 310 | SB 315 | SB 320      | Units         |
|--|-------------|-------------|-------|-------|-------|-------------|-------|--------|--------|-------------|---------------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$   | 20          | 30    | 40    | 50    | 60          | 80    | 100    | 150    | 200         | Volts         |
| Maximum RMS voltage  | $V_{RMS}$   | 14          | 21    | 28    | 35    | 42          | 56    | 70     | 105    | 140         | Volts         |
| Maximum DC blocking voltage  | $V_{DC}$    | 20          | 30    | 40    | 50    | 60          | 80    | 100    | 150    | 200         | Volts         |
| Maximum average forward rectified current at TL (see Fig. 1)   | $I_o$       | 3.0         |       |       |       |             |       |        |        |             | Amps          |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)       | $I_{FSM}$   | 70          |       |       |       |             |       |        |        |             | Amps          |
| Maximum instantaneous forward voltage at 3.0A DC   | $V_F$       | 0.55        |       | 0.70  |       | 0.85        |       | 0.95   |        | Volts       |               |
| Maximum DC reverse current at rated DC blocking voltage<br>$T_a = 25^{\circ}C$<br>$T_a = 100^{\circ}C$ | $I_R$       | 0.5         |       |       |       |             |       |        | 1.0    |             | mA            |
|  |             | 20          |       | 10    |       |             |       |        |        |             |               |
| Typical junction capacitance (Note 1)  | $C_j$       | 500         |       |       |       |             | 300   |        |        |             | PF            |
| Typical thermal resistance (Note 2)  | $R_{th-JA}$ | 55          |       |       |       |             |       |        | 62     |             | $^{\circ}C/W$ |
| Operating junction temperature range   | $T_j$       | -65 to +125 |       |       |       | -65 to +150 |       |        |        | $^{\circ}C$ |               |
| Storage temperature range  | $T_{stg}$   | -65 to +150 |       |       |       |             |       |        |        |             | $^{\circ}C$   |

Notes:

1. Measured at 1 MHz and applied reverse voltage of 4.0 volts D.C.

2. P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

# Ratings and Characteristic Curves of SB32~SB320

