



## WBFBP-03B Plastic-Encapsulate Diodes

### DS54NN03

SCHOTTKY BARRIER DIODE

#### DESCRIPTION

- Epitaxial Planar Silicon Diode

#### FEATURES

Ultra-Small Surface Mount Package

Low Forward Voltage Drop

Fast Switching

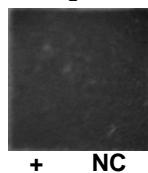
PN Junction Guard Ring for Transient and ESD Protection

Available in Lead Free Version

#### WBFBP-03B

(1.2×1.2×0.5)  
unit: mm

TOP



- ANODE
- NC
- CATHODE

BACK



#### APPLICATION

Ultra High Speed Switching

For Portable Equipment:(i.e. Mobile Phone,MP3, MD,CD-ROM,  
DVD-ROM, Note Book PC, etc.)

#### MARKING: L1



#### Maximum Ratings @Ta=25°C

| Parameter  | Symbol           | Value    | Unit |
|--|------------------|----------|------|
| Peak Repetitive Reverse Voltage                  | V <sub>RRM</sub> |          |      |
| Working Peak Reverse Voltage                     | V <sub>RWM</sub> | 30       | V    |
| DC Blocking Voltage                              | V <sub>R</sub>   |          |      |
| Forward Continuous Current (Note 1)              | I <sub>FM</sub>  | 200      | mA   |
| Repetitive Peak Forward Current                  | I <sub>FRM</sub> | 300      | mA   |
| Forward Surge Current @ t < 1.0s                 | I <sub>FSM</sub> | 600      | mA   |
| Power Dissipation (Note 1)                       | P <sub>d</sub>   | 150      | mW   |
| Thermal Resistance, Junction to Ambient (Note 1) | R <sub>θJA</sub> | 667      | °C/W |
| Junction Temperature                             | T <sub>J</sub>   | 125      | °C   |
| Storage Temperature Range                        | T <sub>STG</sub> | -55~+150 | °C   |

Notes 1: Device mounted on FR-4 PC board with recommended pad layout

**ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)**

| Parameter                 | Symbol     | Test conditions   | Min | Max                              | Unit    |
|---------------------------|------------|---|-----|----------------------------------|---------|
| Reverse breakdown voltage | $V_{(BR)}$ | $I_R = 100\mu A$  | 30  |                                  | V       |
| Reverse leakage current   | $I_R$      | $V_R = 25V$   |     | 2                                | $\mu A$ |
| Forward voltage           | $V_F$      | $I_F = 0.1mA$<br>$I_F = 1mA$<br>$I_F = 10mA$<br>$I_F = 30mA$<br>$I_F = 100mA$ |     | 240<br>320<br>400<br>500<br>1000 | mV      |
| Total capacitance         | $C_T$      | $V_R = 1V, f = 1MHz$  |     | 10                               | pF      |
| Reverse recovery time     | $t_{rr}$   | $I_F = 10mA, I_R = 1mA \sim 10mA$<br>$R_L = 100\Omega$                        |     | 5                                | ns      |