

# BAS20

## SWITCHING DIODE

**I<sub>O</sub>**

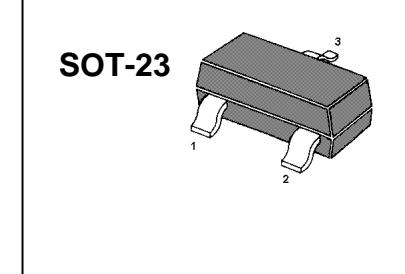
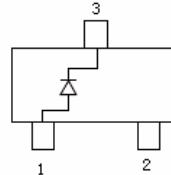
### FEATURES

Fast Switching Speed

Surface Mount Package Ideally Suited for Automatic Insertion

For General Purpose Switching Applications

High Conductance



**Marking: JR**

### Maximum Ratings @T<sub>A</sub>=25°C

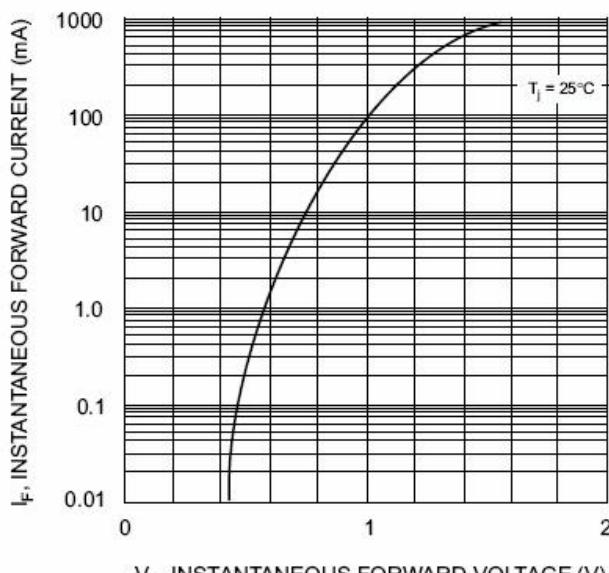
| Parameter  | Symbol           | Limits  | Unit |
|--|------------------|---------|------|
| <b>Non-Repetitive Peak reverse voltage</b>         | V <sub>RM</sub>  |         |      |
| <b>DC Blocking Voltage</b>                         | V <sub>R</sub>   | 150     | V    |
| <b>Average Rectified Output Current</b>            | I <sub>O</sub>   | 200     | mA   |
| <b>Power Dissipation</b>                           | P <sub>d</sub>   | 250     | mW   |
| <b>Thermal Resistance. Junction to Ambient Air</b> | R <sub>θJA</sub> | 500     | °C/W |
| <b>Junction temperature</b>                        | T <sub>J</sub>   | 150     | °C   |
| <b>Storage temperature range</b>                   | T <sub>STG</sub> | -65-150 | °C   |

### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

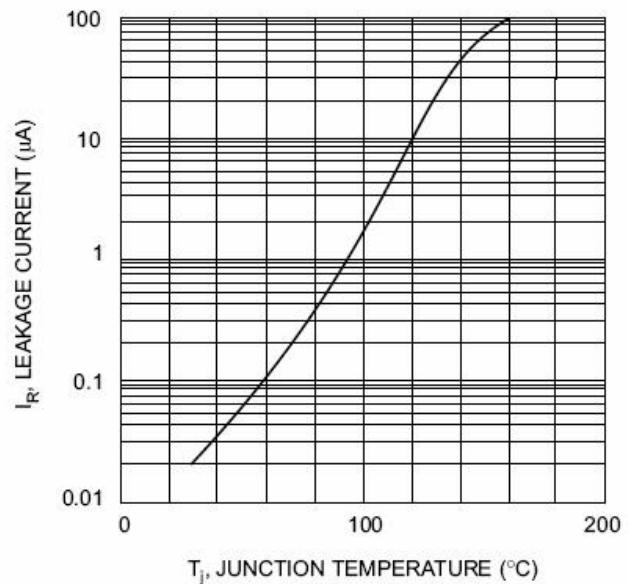
| Parameter                              | Symbol              | Test conditions   | MIN | MAX       | UNIT |
|--|---------------------|---|-----|-----------|------|
| <b>Reverse breakdown voltage</b>       | V <sub>(BR) R</sub> | I <sub>R</sub> = 100μA  | 150 |           | V    |
| <b>Reverse voltage leakage current</b> | I <sub>R</sub>      | V <sub>R</sub> =150V  |     | 0.1       | μA   |
| <b>Forward voltage</b>                 | V <sub>F</sub>      | I <sub>F</sub> =100mA<br>I <sub>F</sub> =200mA                            |     | 1<br>1.25 | V    |
| <b>Junction Capacitance</b>            | C <sub>J</sub>      | V <sub>R</sub> =0V, f=1MHz  |     | 5         | pF   |
| <b>Reveres recovery time</b>           | t <sub>rr</sub>     | I <sub>F</sub> =I <sub>R</sub> =30mA, I <sub>rr</sub> =0.1×I <sub>R</sub> |     | 50        | nS   |

# Typical Characteristics

**BAS20**



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 1 Forward Characteristics



$T_j$ , JUNCTION TEMPERATURE ( $^\circ\text{C}$ )  
Fig. 2 Leakage Current vs Junction Temperature

## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

